REQUEST FOR PROPOSAL

Bok Singing Tower
Roof Restoration and Replacement

BOK TOWER GARDENS 1151 TOWER BLVD
LAKE WALES, FL 33853

AUGUST 28, 2025

This project is being sponsored in part by the Department of State, Division of Historical Resources, and the State of Florida.

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1. SUMMARY AND BACKGROUND

Bok Tower Gardens is a National Historic Landmark located in Lake Wales, Florida. Originally a bird and wildlife sanctuary, the destination was created by Edward Bok in 1929 and has been open for public visitation for nearly a century. In addition to 250 acres of gardens and preserve lands, Bok Tower Gardens is home to the Singing Tower and its 60-bell carillon, Exedra, El Retiro (20-room historical estate), the Pine Ridge Preserve Trail, and a Visitor Center complex complete with a museum, cafe, and retail shop.

Bok Tower was built in the late 1920s with completion of the Tower in 1929. Bok Tower is a 205-foot carillon bell tower, which contains 60 bells ranging from 16 pounds to 11 tons. The tower is constructed of steel, coquina, and Georgia marble. The tower is adorned with colorful tile work and carvings. The tower houses the Bok Tower Gardens archives as well as the Guild of Carillonneurs music and carillon library.

The purpose of this Request for Proposals (RFP) is to solicit proposals for the restoration of the roof of the Singing Tower.

Bok Tower Gardens will solicit proposals from various candidate organizations; conduct a fair and extensive evaluation based on criteria listed herein. Bok Tower will guard against real and perceived favoritism by using an open and fair competitive bid process. Bok Tower Gardens will provide candidates with equal opportunities to participate in public business. Bok Tower Gardens encourages minority business enterprises (MBE) to participate in all RFP solicitations.

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2. PROPOSAL GUIDELINES

This Request for Proposal represents the requirements for an open and competitive process. Proposals will be accepted until **September 19, 2025**. Any proposals received after this date and time will be returned to the sender. An official agent or representative of the company submitting the proposal must sign all proposals.

If the organization submitting a proposal must outsource or contract any work to meet the requirements contained herein, this must be clearly stated in the proposal. Additionally, all costs included in proposals must be all-inclusive to include any outsourced or contracted work for the engineer study. Any proposals, which call for outsourcing or contracting work, must include a name and description of the organizations being contracted.

Contract terms and conditions will be negotiated upon selection of the winning bidder for this RFP. All contractual terms and conditions will be subject to review by Bok Tower Gardens' legal counsel and will include scope, budget, schedule, and other necessary items pertaining to the project.

All individuals, consultants, and contractors hired must agree to Department of State, Division of Historical Resources and the State of Florida:

- Pursuant to Section 286.25, Florida Statutes, in publicizing, advertising, or describing the sponsorship of the program the Grantee shall include the following statement:
    - "This project is sponsored in part by the Department of State, Division of Historical Resources and the State of Florida." Any variation in this language must receive prior approval in writing by the Division.
    - All site-specific projects must include a Project identification sign, with the aforementioned language, that must be placed on site. The cost of preparation and erection of the Project identification sign are allowable project costs. Routine maintenance costs of Project signs are not allowable project costs.

- An example of a project identification sign can be viewed here: https://dos.fl.gov/media/700668/site-specific-project-sign-example.jpg
- A jpg copy of the DHR Logo can be downloaded here: https://dos.fl.gov/media/700662/horizontal-dhr-logo.jpg
- All project work must be in compliance with the Secretary of the Interior's Standards and Guidelines available at: https://dos.myflorida.com/historical/grants/special-category-grants/

3. Project Purpose and Description

This project is supported through a State grant for historic preservation, through the Florida Division of Historical Resources. That grant is for the restoration and conservation of the Bok Tower.

The purpose of this project is to obtain a qualified historic preservation firm to create engineering plans, processes, and drawings to allow for the restoration and preservation of the Bok Tower roof. The objective is to obtain a firm to engineer, contract, and execute this scope of work. That engineering firm will hire and contract qualified subcontractors, then oversee the studies and restoration work as per the engineered plan. It is understood that the engineer findings and plan will dictate the level and cost of restoration work by subcontractors.

This project is being sponsored in part by the Department of State, Division of Historical Resources, and the State of Florida.

4. PROJECT SCOPE

The scope of this project includes all engineering and design for the replacement, restoration, and preservation of the Bok Tower roof:

- On-site survey of existing conditions
- Engineered drawings for upper roof and lower roof
- Engineered drawings for drainage in roof
- Design recommendations for material selection of upper roof replacement
- Repair/replacement of high roof structure and copper roof at the top of the Tower to match historic appearance
- Removal of rust; prime and paint steel structure and iron grills on the carillong in the Tower to match historic appearance
- On-site visits during restoration/construction by selected subcontractors to ensure adherence to plans and specifications - allow for 4 visits minimum
- On-site construction meetings - allow for 4 visits minimum
- Provide paper, digital and CAD drawings, notes, and all general information at close of project
- Provide project updates every 30 days for grant reporting purposes
- Provide professional support and communication(s) during engineering assessment and design phase
- Provide professional support and communication(s) during roof restoration/ replacement

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5. Request for Proposal and Project Timeline

Request for Proposal Timeline:

All proposals in response to this RFP are due no later than **September 19, 2025**. Evaluation of proposals will be conducted from **September 19, 2025,** until **September 26, 2025**. If additional information or discussions are needed with any bidders during this period, the bidder(s) will be notified.

The selection decision for the winning bidder will be made no later than **September 26, 2025.** Upon notification, the contract negotiation with the winning bidder will begin immediately. Notifications to bidders who were not selected will be completed by **October 3, 2025.**

Project Timeline:

Project must be completed and invoiced by **December 31, 2025.**

6. Bidder Qualifications

Bidders should provide the following items as part of their proposal for consideration:

- Description of experience in structural/civil engineering
- List of how many full time, part time, and contractor staff in your organization
- Examples of 3 or more structural/civil engineering restoration/preservation projects your organization has engineered or designed
- Testimonials from past clients that speak to the quality and expertise of your organization
- Timeframe for completion of project

6.1 Insurance Requirements

This project is being sponsored in part by the Department of State, Division of Historical Resources, and the State of Florida.

Insurance coverage with an insurance carrier that has an A.M. Best rating of "A" or better. All policies should include at least 60 days written notice prior to cancellation or termination of coverage.

Bok Tower Gardens listed as an additional insured or a waiver of subrogation is added in favor of Bok Tower Gardens.

Commercial General Liability

Bodily Injury and Property Damage Liability

Each Occurrence	$1,000,000
General Aggregate (other than Prod/Comp Ops Liability)	$2,000,000
Products/Completed Operations Aggregate	$2,000,000
Personal & Advertising Injury Liability	$1,000,000
Damage to Premises rented to you	$300,000
Medical Payments	$ 5,000

- Bok Tower Gardens named as Additional Insured on a primary basis noncontributory basis.
- Include Waiver of Subrogation in favor of Bok Tower Gardens

Workers Compensation and Employers Liability

Workers Compensation Statutory Benefits in Florida

Employer's Liability	
Bodily Injury by Accident Each Accident	$ 500,000
Bodily Injury by Disease Policy Limit	$ 500,000
Bodily Injury by Disease Each Employee	$ 500,000

- Include Waiver of Subrogation in favor of Bok Tower Gardens

Comprehensive Automobile Liability

This project is being sponsored in part by the Department of State, Division of Historical Resources, and the State of Florida.

Bodily Injury and Property Damage
Combined Single Limit Each Accident $1,000,000

- Include Waiver of Subrogation in favor of Bok Tower Gardens

Umbrella or Excess Liability

Each Occurrence and Aggregate $1,000,000

- Coverage to extend over the Comprehensive General Liability, Workers Compensation/Employers Liability and Comprehensive Automobile Liability
- Include Waiver of Subrogation in favor of Bok Tower Gardens

Professional Liability Insurance (for Architects, Engineers, Environmental Consultants, and other professional consultant services)

Each Occurrence $1,000,000
Each Policy Year $1,000,000

- Coverage will remain in effect for two years after completion of the project if policy is written on a Claims- Made basis

7. Proposal Evaluation Criteria

Bok Tower Gardens will evaluate all proposals based on the following criteria. To ensure consideration for this Request for Proposal, your proposal should be complete and include all of the following criteria:

- Overall proposal suitability: proposed solution(s) must meet the scope and needs included herein and be presented in a clear and organized manner
- Organizational Experience: Bidders will be evaluated on their experience as it pertains to the scope of this project

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- Previous work: Bidders will be evaluated on examples of their work pertaining to ornamental structure restoration/preservation and historical landmark restoration/preservation
- Value and cost: Bidders will be evaluated on the cost of their solution(s) based on the work to be performed in accordance with the scope of this project
- Technical expertise and experience: Bidders must provide descriptions and documentation of staff technical expertise

Each bidder must submit 2 copies of their proposal to the address and or email below by **September 19, 2025**. Bids may be submitted in person, by mail/courier, or email.

Bok Tower Gardens
c/o Gary Boivin
1151 Tower Blvd
Lake Wales, FL 33853
gboivin@boktower.org

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Buildings Sector

Bok Singing Tower Conditions Assessment Bok Tower Gardens

April 1, 2025

Bok Tower Gardens

1151 Tower Boulevard, Lake Wales, FL 33853

TYLin Project # 3010.0102385

TYLin

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Introduction

T.Y. Lin (formerly Silman) was contracted to perform a conditions assessment of the Bok Singing Tower at Bok Tower Gardens in Lake Wales, Florida. The Singing Tower stands 205 feet tall at the southwest corner of the gardens. A moat surrounds the base of the tower with two bridges to access the island. The tower houses a 60-bell carillon, associated carillonneur studio and library spaces, the Bok Tower Gardens Chao Research archive, and the Founder's Room. It is a steel frame construction clad in a masonry exterior of coquina and Georgia pink Etowah marble with brick masonry at the interior.

This assessment addresses two major concerns at the tower and moat. Ongoing water intrusion and leaks of unknown origin have been documented throughout the tower and are causing conditioning issues and deterioration of interior tower elements. At the moat, poor water quality and deterioration of the perimeter coping are also examined.

To perform the assessment, T.Y. Lin assembled a team of consultants which include Lord Aeck Sargent (LAS) as architect, Atkinson-Noland and Associates (ANA) for non-destructive evaluation, Vertical Access (VA) for industrial rope access documentation, and Satchell Engineering & Associates (SEA) as the water feature consultant. The team was on site from November 19th through 21st, 2024 to survey the existing conditions. Findings and resulting recommendations are presented in this report.

Tower History

Edward Bok was a successful publisher and author who spent winters in Mountain Lake, Florida. Bok appreciated the natural surrounds of the area and would often walk Iron Mountain, the future site of Bok Tower Gardens. In 1922, he purchased land for the gardens and contracted the Olmsted Brothers landscape architecture firm to design them. In 1926, Bok conceived of a bell tower for the gardens and hired Philadelphia architect Milton B. Medary who spent six months on the design. The Mountain Lake Singing Tower, now known as the Bok Singing Tower, was constructed between 1927 and 1929. Once the tower was complete, the Mountain Lake Sanctuary was formally dedicated to the American public.

When the tower was built, it was conceived as an open-air structure with limited enclosed spaces. The 1927 plans by Medary show the Founders room, which is capped with a domed concrete slab, and the playing Cabin on the seventh level as the only enclosed spaces. The third level housed two water tanks. Rainwater was collected by gutters at all floors above the second level and fed to drains and rainwater lines that exited through the basement.

Over time, additional programming was added to the tower which required alterations to structure, drainage, and mechanical systems. Conditioned spaces were added including the Carillon Studio, Anton Brees Carillon Library, keyboard practice room, and the Chao Research Center Archives. In 1969, the playing chamber was replaced, and the present roof was added above the Carillon.

Following the observation of significant vertical cracks in the masonry exterior in 1969, exterior stone was removed to clean areas of the embedded steel and the façade was repaired.

In 2009, as part of a project to repair steel framing at the parapets and decorative screens at the Carillon, cathodic protection system was installed to minimize further deterioration on the steel embedded in the brick and stone masonry.

Moat History

The moat design was by Medary and surrounding planting by the Olmsted Brothers. The moat is contemporary with the tower construction; design drawings for the moat walls and bridge are dated 1928. In about 1956, a coping stone was added to the perimeter of the moat to mitigate erosion of the bank. Other records of changes to the moat water systems were not available for this assessment.

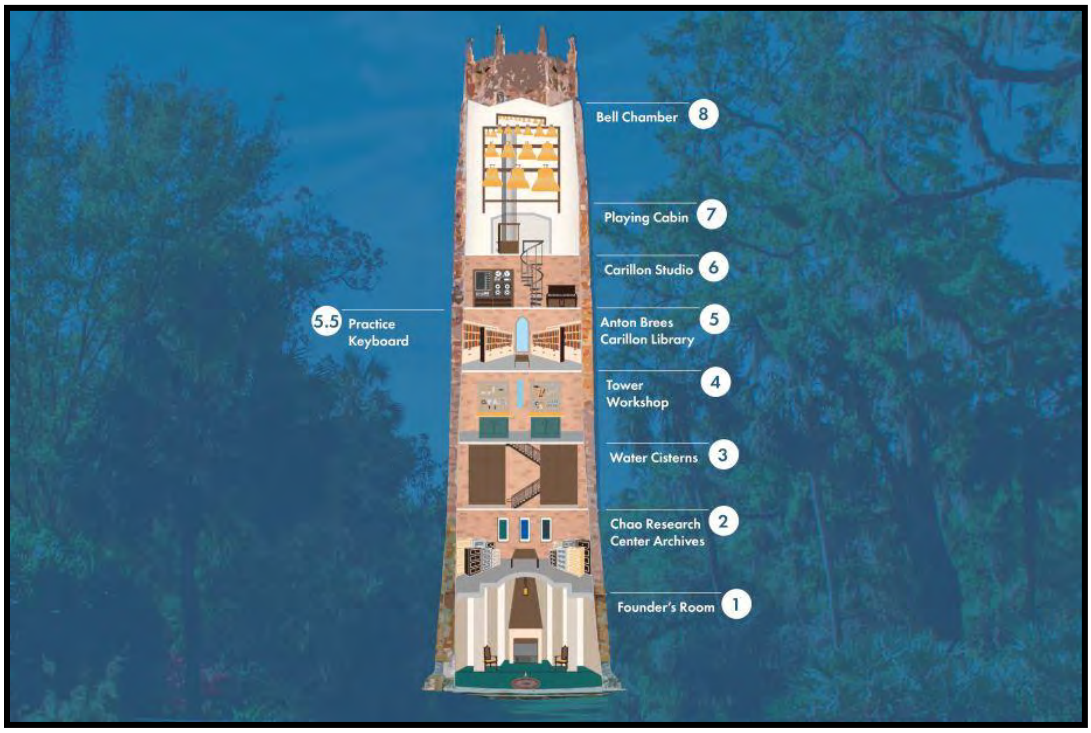


Figure 1 Overview of programming by level inside Bok Tower (image by Bok Tower Gardens)

Structural Description

Foundation

According to the report prepared by R.J. Heisenbottle Architects, the tower bears on a large, concrete pile cap that is two feet and six inches thick and supported on 160 reinforced concrete piles which very in depth from 13 to 24 feet. The available archival drawings do not include details on the foundation, but photos of the construction of the tower in the Bok Tower Gardens archive show installation of piles. The use of concrete piles is consistent with the sandy soil conditions at the site and the weight of the tower.

Superstructure

The tower consists of a steel frame embedded in a masonry shell. Brick masonry lines the interior of the tower and encases the steel frame, The back-up masonry helps support for the exterior masonry façade, which consists of Florida Coquina stone and pink Georgia Etowah Marble (**Figure 3**). During this era of construction, structures were often not formally designed for lateral loads (i.e., wind and seismic loads) but instead relied on empirical and historical construction methods. It is likely that the structure relies on the combined steel and masonry system to resist lateral loads.

The tower has a steel frame with twenty columns at its base, which step inward up the height of the tower. A series of small frames form vertical trusses at the projected face of the four cardinal elevations, as shown in the historic construction photo **Figure 2**. There are mid-height spandrel beams between each level, and larger braced frames span between them at the cardinal elevations from the second to fifth levels.

The floor construction is typically steel beams supporting a concrete slab (**Figure 4**). At the third level, steel dunnage runs over the top of the superstructure steel to support large water tanks, which are no longer in use. The floor framing at the fifth level was modified to support the addition of the Carillon library. The central hatch was filled with open web steel joists and a raised floor system was installed over the slab. At the sixth level of the tower, additional columns and transfer girders are provided to support the Carillon framing above.

The openings above the fifth level are filled with large cast iron grilles decorated with terra cotta mosaics (also called faience). The terra cotta tiles are set in large cast iron frames with a mortar or grout. Above the seventh floor, eight mosaics form the open-air enclosure of the Carillon level and playing cabin. They span two levels and contain doors for access to the exterior balconies at the seventh floor (**Figure 5**).

There is non-original roof framing above the Carillon that supports galvanized, metal deck and a standing-seam metal roofing assembly. The framing is modern steel tubes (called "hollow steel sections" or "HSS" in the industry) that pitch down from the exterior wall and down from the center of the tower to form an "annular" gutter, which slopes to a single roof drain (**Figure 6**). A circular beam and associated rotating derrick base, which was used during construction and, later, to hoist the bells in place, is located just above the modern roof. Modern beams have been added across the remains of the derrick to support a rooftop mechanical unit. The highest level of framing is approximately nine feet above the remains of the derrick and roofing. It braces the parapet columns and was used as a support for outriggers during construction of the tower.

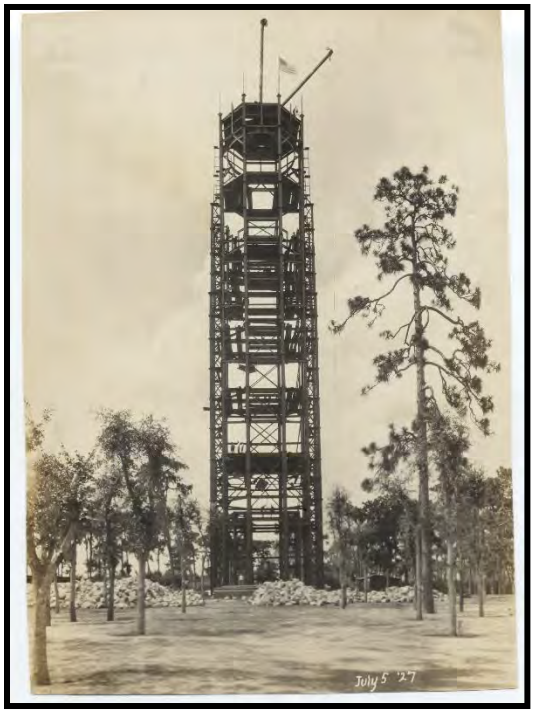


Figure 2 Archival construction photo of steel framing (image provided by Bok Tower Gardens)

Figure 3 Exterior coquina stone (left) and pink Georgia Etowah marble (right)

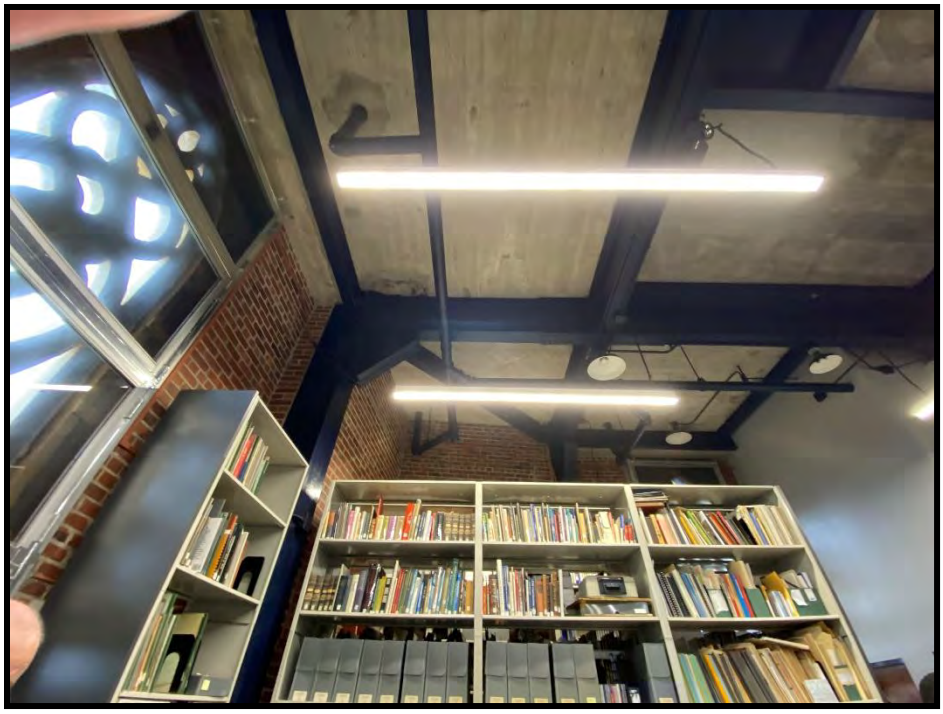


Figure 4 Steel floor framing and concrete slab supporting the Carillon Studio, above the Library

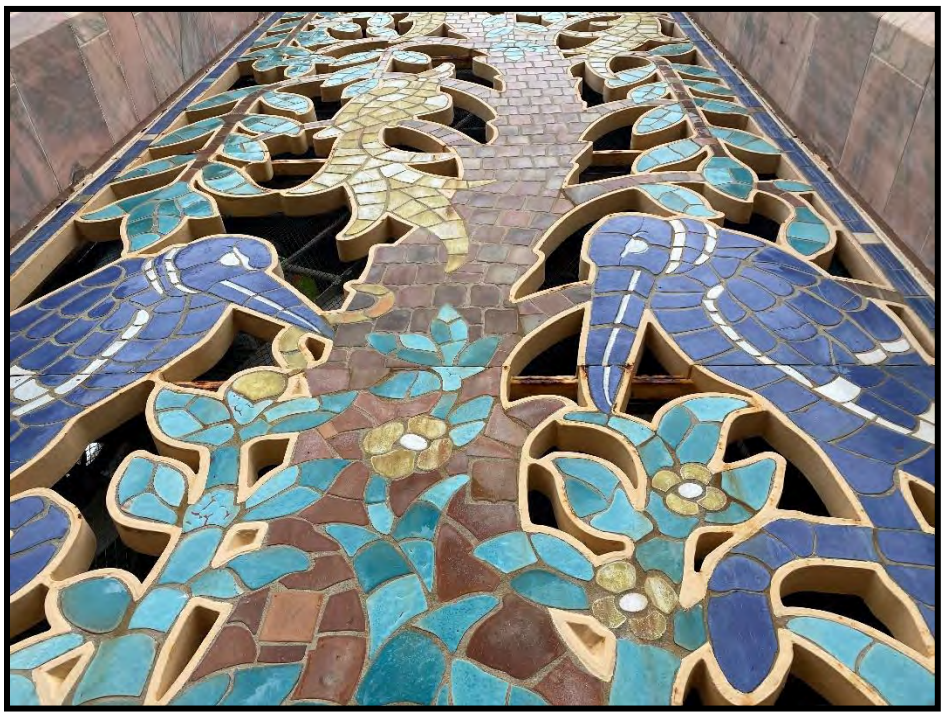


Figure 5 Terra cotta mosaic faiences that enclose the bell chamber

Figure 6 Upper roof framing

Carillon

The Carillon support is an independent steel frame that houses the tower bells. The frame starts at the sixth level with an upturned transfer girder running over the tower columns. The frame narrows at it ascends with a series of stepping transfer girders and columns. Braced frames span between columns for lateral resistance, and beams span between the girders to support the bells and playing mechanisms (**Figure 7** and **Figure 8**).

Moat Structural Description

Structurally, the moat is understood to be a concrete basin with retaining walls around the perimeter. The original design was clad in Coquina stone above the water line and allowed the planting to run over the top of the wall to the water's edge. Archival structural and architectural details were not available for review. In 1956, the gray Creole marble coping stone was added around the perimeter to limit erosion around the moat (**Figure 9** and **Figure 10**).

Figure 7 Carillon steel support frame

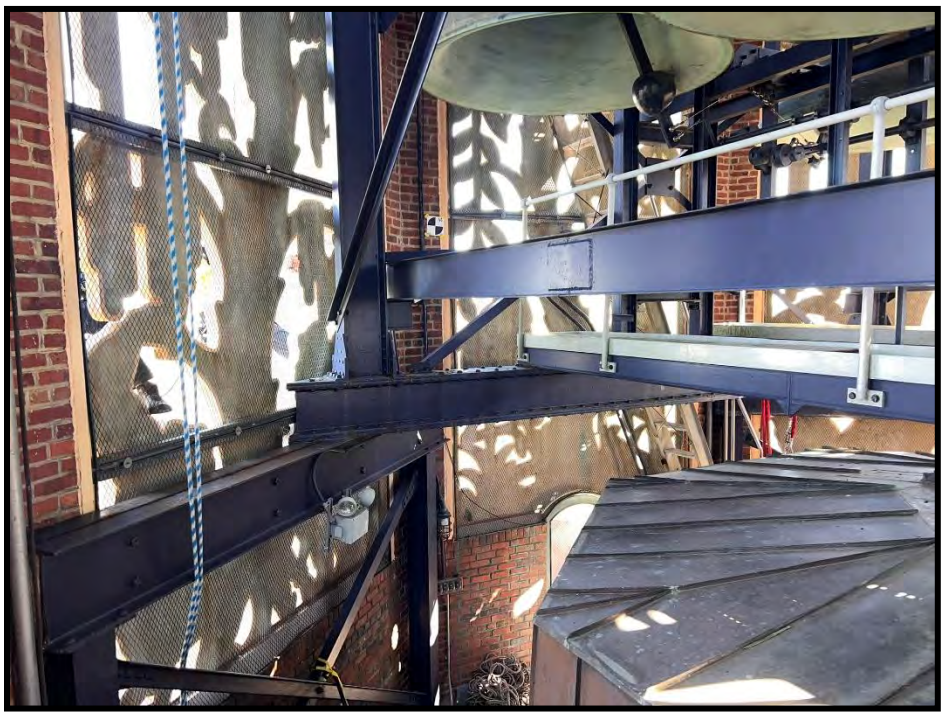


Figure 8 Carillon framing stepping columns and transfer girders

Figure 9 Gate and bridge over the tower moat

Figure 10 Moat around Bok Tower

Investigation

While on site in November 2024, T.Y. Lin and Lord Aeck Sargent (LAS) performed a walk through with David Price and Gary Boivin of Bok Tower Gardens and met with several staff who work in the Tower. Our objective was to understand locations of water intrusion and identify other areas of structural concern.

Vertical Access (VA) conducted an exterior survey via rope access to document deterioration at the façade used drain video scopes to characterize the condition of the tower's plumbing. Together, VA and Atkinson-Noland Associates (ANA) conducted nondestructive testing to measure water infiltration through the tower masonry. The findings are described in this section, and the full subconsultant reports are included in the Appendices.

Bok Tower Gardens provided the team with archival documentation and past reports on Bok Tower. These documents include:

- Architectural, Mechanical, Electrical and Plumbing drawings by the office of Milton B. Medary, dated February - September 1927
- Steel Shop Drawings by Ingalls Iron Works, dated March 1927
- Details for the support of Water Tanks by the office of Milton B. Medary, dated May 1927
- Planting drawings at the moat, by the Olmsted Brothers dated 1927
- Photographs of "Conspicuous Cracks in Stonework" by Mitchell/Giurgola Associates, c. 1969
- "MLS-2 Bok Tower" Playing Cabin and Roof Addition Documents Drawings by Mitchell/Giurgola Associates, c. 1969
- Library Addition and Keyboard Room Drawings by James A. Heim Architect, c. 1974
- *Bok Tower Building Assessment and Recommendations Report* by R.J. Heisenbottle Architects and subconsultants, dated September 30, 2015
- *Bok Olmsted Gardens Cultural Landscape Report & Management Plan* by Heritage Landscapes LLC, dated January 2024
- Archival Photographs

Nondestructive Evaluation

Spray Testing and Infrared Thermography

Tower occupants reported leaks throughout the tower from the second level Archive space to the Carillon Studio. To investigate the ability for water to permeate the tower masonry, ANA and VA conducted spray testing. VA applied pressurized water to the tower façade at two locations on the exterior of the tower using a spray rack that simulates a driven rain.

From the interior, ANA documented how long it took for water to appear on the interior of the masonry and used Infrared Thermography (IRT) to detect a change in temperature of the wall as water entered the masonry. In both locations, it took approximately an hour for the first leak to

appear, and additional leaks appeared shortly after. Infrared imaging confirmed the masonry became saturated at and below the spray rack (**Figure 11**). A full discussion of the test methods and results can be found in the ANA report included in the Appendix.

The test shows that the tower masonry is permeable enough for water to pass from the exterior to interior. Relatively brief, driven rains in the Florida climate are sufficient to transport water into the conditioned spaces of the tower. Water intrusion is not limited to plumbing, drainage and sealant failures in the tower.

Drain Investigation

VA conducted drain video scopes of the tower plumbing at Levels 2 through 8. At most drain locations, debris was present in the horizontal leaders. At five locations, the debris caused standing water to accumulate in the leader. The horizontal pipes have a low slope making them prone to accumulation of debris and, as debris builds up, ponding water. There is a risk that the blockages could cause water to back up into the tower and lead to corrosion of the cast iron pipe. Corrosion was observed typically at the interior and exterior of the drainpipes.

In addition, VA found that drains in the restrooms at Levels 4 and 6 connect to the overall stormwater management system, which should be addressed. The outlet of the tower drainage system was not found while on site, but we understand that it empties into the moat. Refer to the VA Drain Investigation report included in the Appendix for additional information.

Figure 11 Leaks on the interior masonry aligned with the spray rackVisual Conditions Assessment

T.Y. Lin and LAS performed a visual assessment of the tower from the interior to observe deterioration and locations of water intrusion. We observed the exterior from grade, balconies and accessible roof surfaces. VA performed a comprehensive survey of the exterior façade via rope access. This section documents the team's findings; recommendations are outlined in the following section.

Superstructure Steel

The exposed tower superstructure steel was observed to be in good condition with localized areas of deterioration. The deteriorated regions are typically in contact with the masonry or slab of the floor above (**Figure 12**) where water can sit on the steel surface.

While we did not open probes to observe the condition of the steel embedded in masonry during our visit, Vertical Access was able to review the exterior façade for cracks that often indicate embedded steel is corroding; this phenomena is often called "rust jacking." We did a comparison between cracks noted in a survey performed by Vertical Access in 2008 and the survey done in November 2024. Cracks observed in 2008 appear to have grown somewhat, and new vertical crack systems were observed, particularly at the fifth and sixth levels.

Growth of the cracks may indicate that the cathodic protection system needs maintenance and/or that it may not be sufficient to mitigate steel deterioration. Part of the cathodic protection system was observed to be loose and somewhat corroded. Rust stains were observed around the connection point in the wall (**Figure 13**). The cathodic protection system should be reviewed by a corrosion engineer to confirm it remains effective.

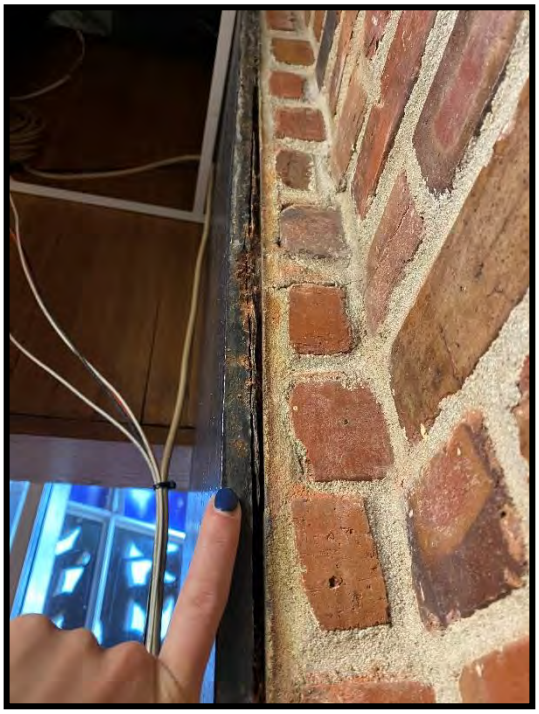


Figure 12 Deteriorated steel column flange permanently against interior masonry

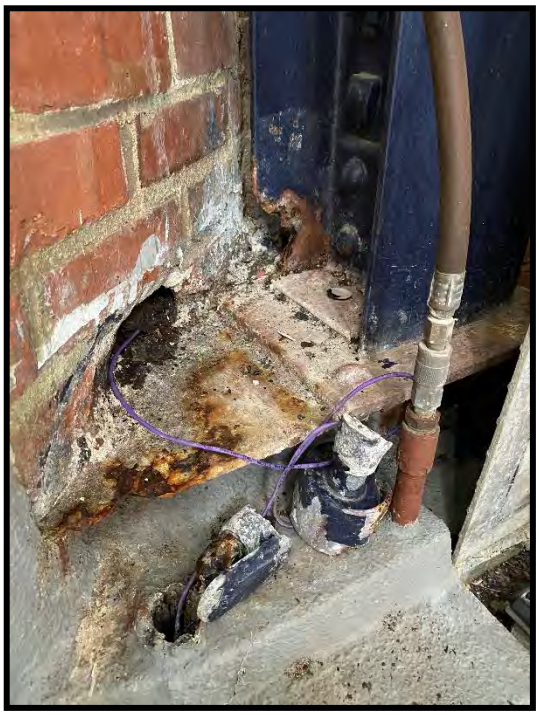


Figure 13 Part of the cathodic protection system visible at Level 7 outside of the Playing Cabin

Roof

There are two primary roof surfaces at the top of the tower. The slab at the seventh Level 7 serves as a Lower Roof that protects the conditioned spaces below the Playing Cabin. There is a standing-seam metal roofing system at the Upper Roof, above the open-air Carillon, that protects the bells and Playing Chamber from rain. There are mechanical units, a lightning protection system, and an access platform above the Upper Roof.

The Lower Roof slab also serves as a walking surface to access the playing cabin, bells, and surrounding balconies. The slab appears to be covered with a fluid-applied roof membrane. The membrane is delaminating and bubbling up in some locations, which allows water to penetrate the slab below.

The Upper Roof is octagonal and slopes to form a gutter that feeds to a single drain (**Figure 14**). Staining on the roofing may be an indicator that the single drain is not sufficient for the roof area; staining may be the result of water sitting or perching in the low gutter. The roofing has failed and is allowing water to sit on the steel (HSS) roof framing. The HSS members supporting the low point of the roof have significant section loss. Typically, the top flange is fully lost (**Figure 15**).

Above the roofs, steel with moderate corrosion supports grating and mechanical equipment (**Figure 17**). The grating exhibits corrosion and is missing bolts at its perimeter. The railing at the grating also exhibits limited corrosion and has missing or deteriorated bolt connections.

The stainless-steel parapet support installed circa 2011 is in good condition. There is limited corrosion on the end of the web plate of the built-up steel section that should be addressed (**Figure 18**).

Figure 14 Metal seam upper roof

Figure 15 Corrosion of roof steel framing

Figure 16 Corrosion of roof steel framing

Figure 17 Exposed steel framing above the roof level

Figure 18 Minor corrosion observed at ends of stainless-steel parapet columns

Water Intrusion

Evidence of water intrusion is visible at the underside of the Level 7 slab where efflorescence and stalactites have formed at corners and beam connections from water permeating the slab (**Figure 19**). At some locations, long term water exposure has caused concrete spalls at the beam-to-slab interface (**Figure 20**).

Leaks have been reported by tower staff throughout the tower where pipes penetrate slabs. Some pipes are corroded through and release water directly onto slabs (**Figure 21**). Refer to the Nondestructive Evaluation section for more information on water intrusion through drains.

We observed one location of efflorescence in the Founder's Room directly below the Level 2 exterior balcony (**Figure 22**). Water is likely permeating the roof membrane of the balcony above and flowing through the interior masonry. The condition of the roof membrane is discussed later in this section.

At Level 5, the Library Addition archival drawings show that rainwater from the exterior balconies is channeled inside and below a raised floor system to interior drains. This was confirmed on site through a hatch in the floor. The water is corroding steel elements of the raised floor system and effecting the conditioned environment of the library (**Figure 23** and **Figure 24**).

Figure 19 Efflorescence and stalactites forming below seventh level slab

Figure 20 Spalled concrete where steel meets underside of wet slab

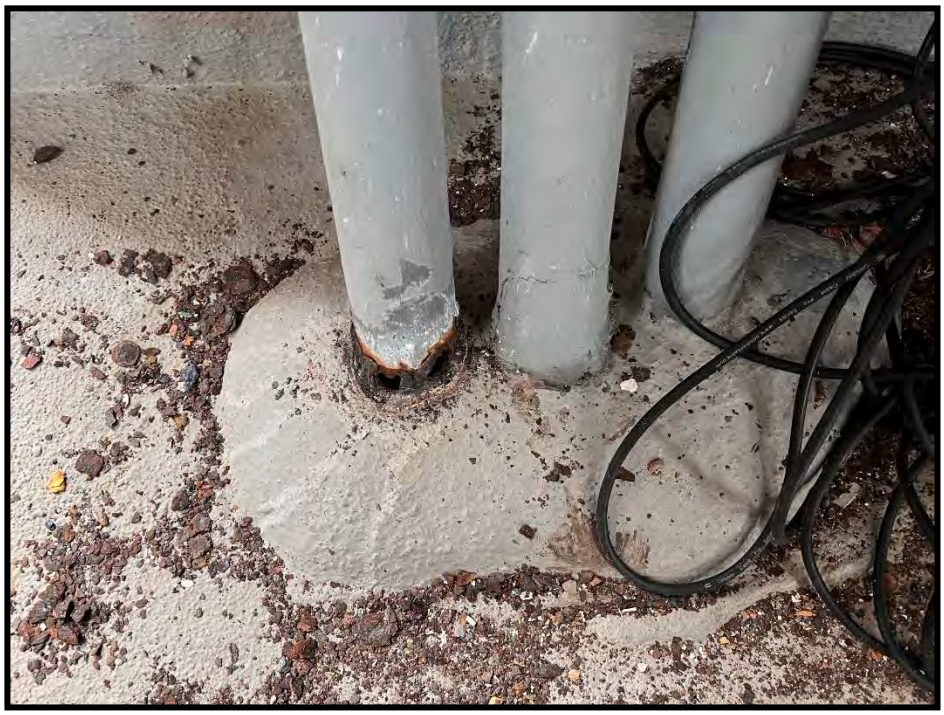


Figure 21 Drain pipes with complete section loss

Figure 22 Efflorescence in the Founders Room at Level 1, just below an exterior balcony

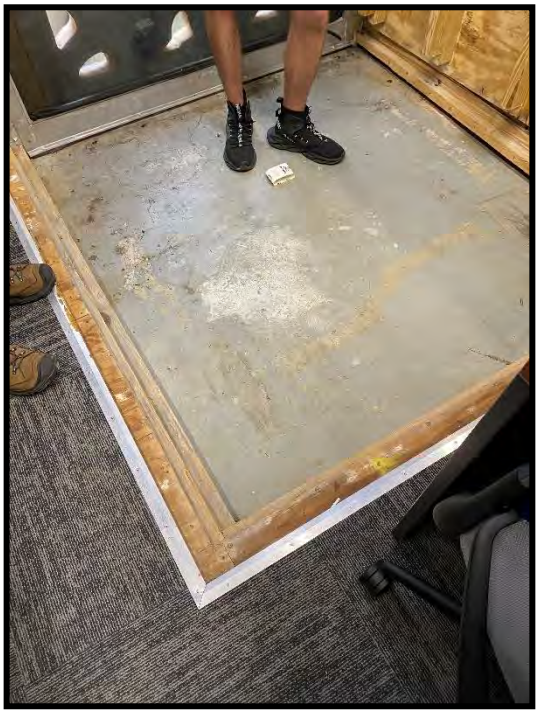


Figure 23 Hatch in the Library floor build up, water passes through storefront to reach interior drains

Figure 24 Demonstration of unsealed storefront

Interior Masonry

We observed flaking and spalling of the interior brick masonry in localized regions in the open-air Carillon chamber (**Figure 25** and **Figure 26**). This condition was observed in some locations where embedded steel was visible and at some locations where no steel is expected.

Figure 25 Spalled interior masonry within the Carillon chamber

Figure 26 Spalled interior masonry and exposed embedded steel

Carillon Framing

The Carillon Framing is in fair condition with localized areas of corrosion and section loss. The largest area of concern is significant section loss at the base of the columns where they bear on the transfer girder. Six columns had one to two square inches of loss at least one flange (**Figure 27**).

The transfer girders that support the columns exhibit rust staining indicative of corrosion (**Figure 28**). Water appears to pool on the flat surface of the girder and splash back onto the columns, causing the deterioration.

Some of the higher girders are also corroding (**Figure 29** and **Figure 30**). They appear to be built up sections with grout between them. We expect that water passes through the grout and stays saturated long enough that the interior of the sections and bottom flange are corroded.

Limited corrosion was observed on other horizontal surfaces and splash zones of the Carillon framing (**Figure 31**). The channel supporting the first run of stairs to access the bells is in poor condition with significant corrosion (**Figure 32**).

Figure 27 Section loss at base of bell tower column

Figure 28 Corrosion of Carillon framing transfer girder at Level 7.

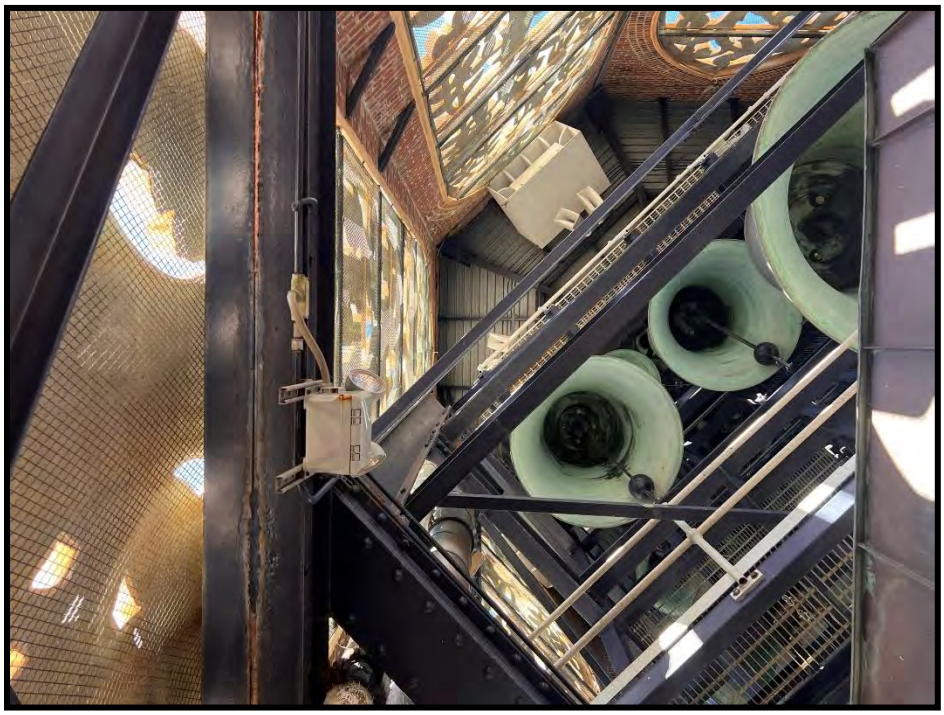


Figure 29 Carillon framing, at left built up girder at left exhibits corrosion between elements.

Figure 30 Close up view of deterioration of Carillon framing

Figure 31 Carillon framing above the Playing Cabin, viewed from above.

Figure 32 Corrosion at Carillon access stair

Exterior

VA performed a comprehensive survey of the exterior façade via rope access. They found the exterior masonry is in fair condition with local areas of deterioration. As discussed in the superstructure steel section, localized vertical crack systems were observed in the masonry at the Levels 5 and 6. We are concerned that this is an indicative of rust jacking of steel columns within the masonry, similar to what was identified by Mitchell/Giurgola Associates in the 1960s.

Smaller, more localized cracking was observed across the tower façade. Consistently, the horizontal sealant joints in the masonry have failed. Open mortar joints were also common. Several instances of minor biological growth and staining were observed.

Spalls and chips in the masonry are primarily concentrated above the seventh floor low roof, above which the tower is open air. VA removed any loose spalls and failed mortar. A portion of what was removed is shown in **Figure 33**.

T.Y. Lin and LAS observed the exterior from grade and from roof surfaces and balconies. A large vertical crack was observed in the marble guardrail at the Level 2 balcony (**Figure 34**). Cracks were observed in some of the exterior paving at the entrance to the tower (**Figure 35**) and bridge over the moat.

Figure 33 Loose material removed from the tower façade by Vertical Access

Figure 34 Crack in stone guardrail at 2nd level balcony

Figure 35 Cracks and staining of Creole marble at tower exterior

Non-Structural Elements

Storefront Doors and Window Coverings

Storefront glazing was added in front of window and door openings at upper levels of the tower (**Figure 36**). These coverings have primarily reached the end of their useful life. Staff who work in the building have reported leaks through the storefronts at some locations. In the Carillon Studio, seals in the storefront glazing have failed. At the Library, the storefront is designed to allow water into the building, as discussed in the Water Intrusion section of this report.

There are also several slot windows with failed seals. Further investigation is required to determine if these windows can be resealed or require replacement.

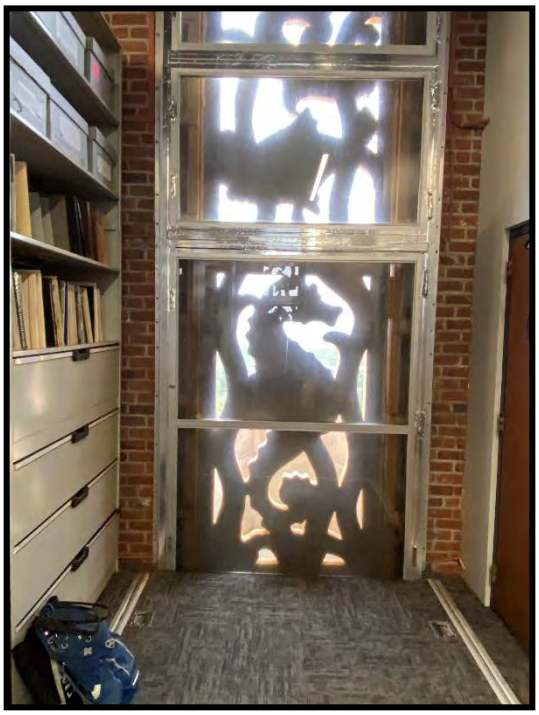


Figure 36 Library storefront window behind the mosaic window covering

Mosaic

The tower has distinctive polychrome terra cotta tile screens on the window openings at Levels 5 and 6. Full height screens enclose the open-air Carillon above Level 7. These screens are made of cast iron frames with the terra cotta tile set in thick grout beds.

The tiles are in good condition with localized areas of cracks, spalls, missing tiles, and glaze loss. Refer to the VA drawings included in the Appendix for detailed documentation of these conditions. The cast iron frames that surround the mosaics are typically corroded where the protective coating has failed. The corrosion is typical at horizontal joints between the cast iron pieces that make up the frames, as shown in **Figure 37**. Corrosion is also typical at the interior frame bases where water continually splashes off the floor onto the jamb (**Figure 38**).

A sealant joint was installed to protect the edges of the frame from corrosion. In some locations that joint has failed and requires replacement (**Figure 39**).

New fasteners in the new stainless-steel door frames have failed and need to be replaced (**Figure 40**). It appears that an incompatible fastener material was used. Stainless steel fasteners should be installed.

Figure 37 Terra cotta screens with cast iron frames. Corrosion is visible at the joint between cast iron frames pieces

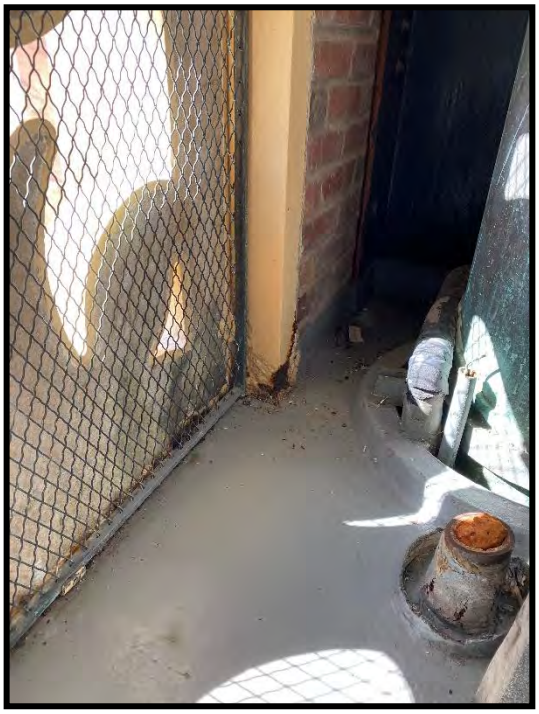


Figure 38 Corrosion at interior mosaic frame

Figure 39 Failed sealant joint at perimeter of the mosaic

Figure 40 Corroded fasteners require replacement

Roofing Material

A fluid applied membrane is used as a roof material at the balconies, low roof, and open-air slabs in the tower. The membrane has reached the end of its useful life and started to fail. Larger splits were observed in some locations (**Figure 41**). In other areas, there are bubbles and tight knit crack patterns (**Figure 42**). These failures are opportunities for water to make its way into the tower.

Figure 41 Large split in a balcony roof membrane

Figure 42 Cracked roof membrane at the low roof

Moat Observations

The moat around Bok Tower has an existing filtration system that is nearing the end of its useful life. We understand that Bok Tower Gardens would like to install a new system that helps clarify the water. This system is being evaluated by Satchell Engineering and will be further discussed in their forthcoming report.

The perimeter of the moat is typically surrounded by Creole gray marble coping stones that have been displaced and are out of plumb and need to be reset (**Figure 43**). In some areas, an alternate cast stone material is used as the coping or there is no coping, and the landscape runs into the edge of the moat (**Figure 44**).

The bridges to the moat are in fair condition with some minor cracking. There are cracks in the marble treads emanating from the inset gate posts (**Figure 45**). The bridge slab should be reviewed further when the moat is drained.

Figure 43 Displaced coping stones around the moat perimeter

Figure 44 Alternate material coping stone and unfinished edge of moat

Figure 45 Crack in Creole marble steps of the moat bridge

Conclusion

The conditions observed at Bok Tower warrants a phased approach to understand causes of distress, address immediate safety concerns and sources of ongoing deterioration, and to plan for larger scale restoration efforts. Our recommendations are grouped into three phases for planning purposes: Immediate Work, 10 Year Restoration Planning, and 50 Year Restoration Planning.

RECOMMENDATIONS

Immediate Work and Investigation

Based on conversations with Bok Tower Staff, the primary concern of tower occupants is façade maintenance and water infiltration as they relate to the conditioning of interior spaces and water damage to the tower. Most of the conditioned spaces in the tower are additions to the building and were not part of its original design. The porous nature of the façade stone allows water to freely enter these spaces, as seen through spray testing. This makes efficient conditioning of these spaces difficult.

We recommend that a holistic investigation is performed to understand water infiltration through the masonry façade. The design team has prepared a draft monitoring plan to track the relative moisture content of materials, air temperature, and relative humidity throughout the tower. This will be critical to protecting finished spaces such as the Founders Room, Carillon Studio, and Playing Cabin. Refer to the LAS report for full information on the proposed system. The system will include a weather station, moisture monitors, condensation monitors, and a data logger. A layout of these components is provided in the Appendix to the LAS report. Structurally, we propose adding a series of tiltmeters to understand movement of the tower and rule out movement as a source of cracking at the façade. The system should be installed with enough bandwidth that crack meters could also be tied to the data logger should it become necessary in the future.

From speaking with Bok Tower Gardens staff, one option is to remove sensitive spaces like the Archives and Library out of the tower. This is likely the easiest and most expedient way to protect these programs.

While data is collected to inform longer term intervention, straightforward steps should be taken to address water intrusion. These items have been identified as having relatively low mobilization and planning requirements, and should be performed as soon as possible to mitigate deterioration:

- Failed storefronts should be replaced anywhere that conditioned spaces will remain, such as the Carillon Studio.
- The steel at the bell tower should be scraped and painted. In areas of major corrosion, like the column bases, steel reinforcement will be added to reinstate the original section. All rust should be removed from the Carillon access stair framing. The steel should be evaluated for section loss and either recoated or replaced.
- The lower roof and balcony roofing membrane should be patched to prevent ongoing water infiltration while a holistic waterproofing plan is developed. Any pipes with holes or openings due to corrosion should be patched until permanent repairs commence. Refer to

the LAS report for further information.

- Review of the existing cathodic protection system by a corrosion engineer to determine if it requires repair or supplementation. This work should be performed within the context of the vertical cracks observed at Levels 5 and 6. These areas may require a more targeted approach.
- Surveys should be performed by Vertical Access on a five-year cycle to review conditions and remove spalls/potential fall hazards. In particular, the vertical cracks concentrated at Levels 5 and 6 should be reviewed so that water penetration of the exterior envelope can be managed and the cathodic protection system can be modified to address variations in observed deterioration of the steel.

Two larger-scale repairs have been identified as **high priority** work that should be performed in the near future. These will require a design phase and the preparation of construction documents. The scope of this work is as follows:

- The high roof requires full replacement. The roof steel poses a safety risk to people and to the bells in its current condition. The roof framing will be fully replaced, and a new standing-seam metal roof will be installed with additional roof drains. As part of this work, the existing rooftop HVAC system should be replaced with temporary split units to serve the conditioned spaces while work is ongoing.
- Restoration at the moat should be performed to secure the existing coping, improve the health of the water, and install new planters as directed by Bok Tower Gardens. A new filtration system will be installed under the forthcoming direction of Satchell Engineering. The existing coping should be removed, cleaned, and reset. While water system work is ongoing, the concrete retaining walls that form the moat should be evaluated for any necessary repairs. The new planters will be concrete retaining wall structures with new footings or doweled into an existing slab if present.

10 Year Restoration Planning

Medium term restoration projects should be prioritized following the "Immediate Work and Investigation." The work described in this section should be completed within the next ten years. Following the investigation phase, the behavior of the masonry façade will be better understood, and the final specified interventions will be informed by the results of that study.

- Treatment of the exterior façade should be determined based on the results of the monitoring investigation.
- Once an appropriate strategy is determined for the overall façade treatment, we recommend that a full-scale cleaning and repointing of the tower be undertaken. The existing failed sealant in horizontal joints should be carefully removed and reinstalled. Mortar joints should be raked and repointed across the full façade with a historically appropriate, compatible mortar. Spalls, stone unit displacement, and cracked units should be repaired at the same time. Full recommendations for these conditions are provided in the LAS report.

- The lower roof and balcony roofing membrane should be replaced to prevent ongoing water infiltration.
- Corroded or failed pipes should be sealed and replaced as necessary throughout the tower.
- The structure and finishes should be removed for spaces that currently house any programming that will be removed from the tower, such as the Archives and Library. This will allow the tower to return to its open-air state at these levels.
- At this time, a permanent mechanical equipment system should be designed and installed for the conditioned spaces to remain. We expect that local, split units can be used for efficiency. An MEP consultant will be required to design the new system.
- Any steel repairs or coatings that were not performed as part of the Immediate phase of work should be addressed.
- Localized repairs to the terra cotta tiles should be performed to address cracks, spalls, missing tiles, and minor glaze loss. Reglazing, repair mortar, and tile replacement and tile replacement will be prescribed as necessary to restore the mosaic. Failed fasteners, coatings, and sealant joints should be replaced to protect the frames in the short-term.

50 Year Restoration Planning

Based on the age and condition of the tower, we recommend that fundraising and planning should begin now for a large-scale restoration effort proposed to commence within the next 50 years. In particular, the cast iron frames that house the mosaics are deteriorating and corroding. Short-term interventions have been applied over the years, including scraping and painting the frames around the tile, sealant at the frame perimeter, and the introduction of weeps. These measures slow the rate of deterioration but are not long-term fixes for the mosaics. We foresee that a holistic restoration will be required in the years to come based on the recurring determination, which is to be expected as the tower and mosaics approach 100 years of age.

Bok Tower Gardens should begin planning for the mosaics to be fully removed and recast in new frames. This work can be done sequentially, such that a couple of the mosaics are addressed at a time. This will be a significant construction and conservation undertaking that will require a crane to remove the multi-story mosaics. A specialist in this form of artwork will need to consult on proper reconstruction and/or restoration of the mosaics.

The material and construction of the frames should be reviewed to determine if improvements can be made on their original design. For example, stainless steel may be an appropriate material for new frames that support the cast iron panels. The horizontal joints between mosaic panels that are observed to hold water and corrode; these joints could be revised to shed water more readily.

While the mosaic project is a significant undertaking that will need careful planning, other restoration work that is considered upkeep and maintenance should also be considered in long-term planning. The following work that is discussed in the Immediate and 10 Year Plans should be repeated regularly:

- All exposed steel should be cleaned and recoated on a regular basis. We recommend

coating the bell tower steel at least once every ten years. When this work is completed, exposed tower steel should be reviewed and recoated as necessary.

- Roofing materials should be observed regularly for cracks, bubbles, and broken seams. Patches should be applied when appropriate, and it should be expected that roofing materials will be replaced every 25 years.
- Similarly, we expect that new storefronts that are installed will have a limited lifespan. We should discuss this lifespan with the selected manufacturer such that Bok Tower Gardens can plan for replacement at the end of its useful life.
- Maintenance of the tower façade will be ongoing. We recommend that an exterior façade review be performed once every five years, which is in line with industry standards for buildings of this height. During these observations, spalls and loose material should be removed to prevent fall hazards. Any high priority safety items should be addressed after each inspection, and short-term planning should evolve to address other items identified during the reviews. Full cleaning and repointing of the façade should be expected every 15 years for planning purposes.

Care for a building of this size and significance is requires careful planning and consideration. The list for the 50 Year Plan is not inclusive of all work that will need to be performed in the next 50 Years, but it identifies work we know is upcoming or required for regular maintenance. Additional work will be identified over time and as future investigations take place. However, by planning for major restoration work and regular maintenance, we are well positioned to protect the condition and stability of the tower for years to come.

Appendix

Bok Tower
Focused Condition Assessment

LORD AECK SARGENT

Contents

Introduction

Project Understanding

This report includes findings and recommendations for the preservation of select areas of Bok Tower. The intent of this study is to assess the existing structure and provide recommendations for repairs and restoration.

The findings outlined in this report are based on field observations and concerns expressed by the ownership and staff of Bok Tower. TYLin / Silman Structural Solutions, Atkinson-Noland & Associates (ANA), Vertical Access (VA) and Lord Aeck Sargent Planning and Design (LAS) conducted a site visit between November 18-21, 2024.

Recommendations are based on industry best practices. Preservation work is to align with the Secretary of the Interior's Standards for the Treatment of Historic Properties. Recommendations align with available information from field observations and the existing drawings provided. In some cases, the design team consulted manufacturers and technical representatives to confirm or refine recommendations.

Historic Background and Significance

Bok Tower, previously known as Singing Tower, is a carillon located in Bok Tower Gardens. Bok Tower Gardens, previously known as Mountain Lake Sanctuary, was built by Edward W. Bok in 1922. Bok Tower was designed in 1926 and formally dedicated by President Calvin Coolidge in 1929. Edward W. Bok envisioned Bok Tower Gardens, as a gift for visitation to the American people.

Bok was the editor of The Ladies Home Journal, which became the first national publication to exceed one million subscribers and became the most successful publication in the mass circulation magazine field at the time. Bok was an immigrant from the Netherlands who proposed Bok Tower Gardens as an expression of gratitude and philanthropy to his adopted country.

The original 61 acres has grown to 130 acres of gardens, sanctuary areas, Pinewood House (also known as "El Retiro"), and functional elements for visitors such as a café, gift store, and parking. Located in Lake Wales, the gardens are situated at Iron Mountain, peninsular Florida's highest elevation of 198 feet above sea level. Bok Tower Gardens were designed by Frederick Law Olmsted, Jr. to highlight plants native to Florida and provided habitat for local and migratory birds.

Bok Tower was designed by architect Milton B, Medary, from Philadelphia. Bok asked Medary to design a tower as beautiful as the tower in Mechlin, Belgium, but adapted to the "gentler and warmer climate of Florida." Medary and Olmstead located Bok Tower at the highest point on the site and to align with existing pools and live oak trees. A moat surrounds the tower to reflect the image of the tower and harmonize with existing pools.

The 205-foot-tall tower is a steel frame structure sheathed in brick with an outer layer of Pink Etowah marble and coquina stone. The base of the tower is clad in Gray Creole marble. A combination of Gothic and Art Deco elements cover the tower, including stone sculpture, wrought-ironwork, brass repoussé and ceramic faience. Decorative elements include references to native flora and fauna of Florida.

The tower was not designed to be accessed by the public. The first seven levels of the tower are used by staff, including a Founder's Room, mechanical equipment, storage, maintenance and repair shop, the Anton Brees Carillon Library, carillonneur's office, and practice clavier. The upper third of the tower comprises the bell chamber. Today, the bell chamber consists of 60 bronze bells, ranging from 16 pounds to over 11 tons.

Bok Gardens and Tower (previously known as the Bok Mountain Lake Sanctuary and Singing Tower) were added to the National Register of Historic Places in 1972. Bok Tower Gardens was designated as a National Historic Landmark in 1993. Areas of significance noted in the National Historic Landmark application include Architecture, Art, Landscape Architecture, and Social History.

Project Methodology

Findings in this report are based on feedback from staff, assessments and testing by ANA and Vertical Access, as well as design team observations. LAS conducted a site visit on 11/20/24. The site visit was non-invasive in nature and included observations of the exterior of Bok Tower, occupied spaces, unoccupied spaces and the roof. The architectural assessment was focused on specific issues discussed by the team, mostly surrounding water intrusion. Existing drawings and copies of ANA and Vertical Access reports were provided to supplement our understanding of conditions and to inform proposed rehabilitation work scopes.

Project Planning and Prioritization

Our understanding is that Bok Tower has existing funding to spend on discreet projects. This report will identify potential projects to execute with this first pool of funding. It is prudent to consider the building holistically and identify the ideal restoration scenario. Best practice is to focus on getting the building weather-tight where interior spaces exist and effectively capturing and directing waterflow in the open air sections of the tower. Once that is addressed, any systems upgrades needed would take priority with interior finish rehabilitation to follow. This report will define a long-term prioritized plan for future planning.

Critical Priority Task

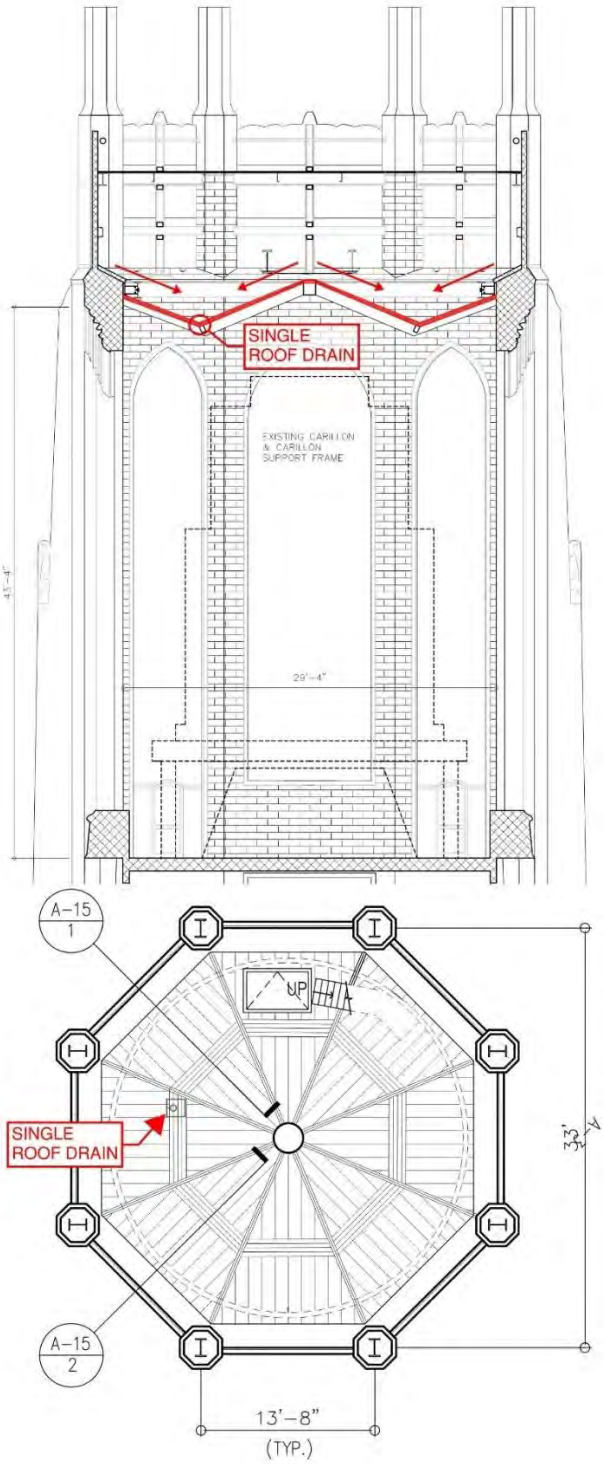
Replacement of Upper Roof

Existing Condition

The upper roof encloses the top of the tower and protects the bell chamber from rain. The upper roof is a traditional standing seam copper roof that may be single or double lock seams. The plan is an octagonal geometry with high points in the center and perimeter of the plan and slope to an internal gutter. A single drain exists, which is not sufficient.

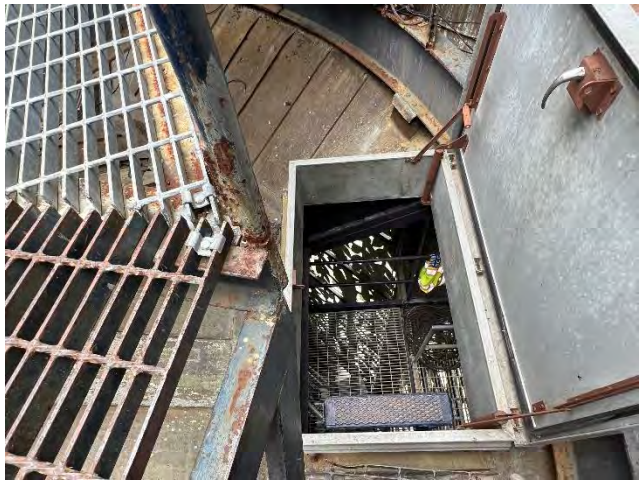
Recommendation

The upper copper roof is beyond its serviceable life and requires replacement. The same geometry is to be maintained, and additional drains are to be added. Details are to be used by the Copper Development Association, which represents the best industry standard. A flexible membrane product should be evaluated for the internal gutter.



1 Upper roof diagram

2 Upper Roof. Single drain visible.



3 Upper roof access

4 Underside of upper roof

5 Upper roof slopes to an internal gutter

6 Single upper roof drain

10 Year Restoration Planning

LAS has identified the following as High Priority Tasks listed in order of importance:

- Steel Framing Repairs
- Lower Roof Replacement
- Repair of Pipe Penetrations

Steel Framing Repairs

Existing Condition

The steel framing exhibits a variety of conditions. Most of the steel appears well coated and protected from corrosion. However, there are localized areas where the coatings have deteriorated, exposing bare metal to the elements and causing corrosion. Additionally, the structural engineer indicated some framing members in the upper portion of the tower may require replacement.

Recommendation

For areas where the coating has failed and where corrosion exists, the coatings and corrosion should be removed. The steel surface should be cleaned to meet the Society for Protective Coatings (SSPC) surface preparation standards. The exposed metal should be cleaned using a combination of SSPC-SP1 Solvent Cleaning and SSPC-SP2 Hand Tool Cleaning.

Once the corroded areas are clean and suitable for recoating, the design team recommends a high performance coating. More information on high performance coatings is described under “Bok Tower Medium Priority Tasks.” This work can be done incrementally as funds allow.

Lower Roof Replacement

Existing Condition

Bok Tower has unique roof conditions due to the open-air tower design. At Level 7, a lower roof deck assembly separates the enclosed, conditioned building area from the open bell chamber. The lower roof functions as a floor surface as well, with regular foot traffic for building maintenance and access to the Playing Cabin. The Playing Cabin roof is a galvanized, prefabricated standing steam roof. Seams may be clipped on, to be confirmed by further investigation. It is not visible from public areas on the site. The needs of this roof area are still to be determined. The interior floor of the Player Cabin is at a lower elevation than the lower roof surface. The Player Cabin floor area is not consider part of the lower roof area.

The lower roof surface is a membrane with a granular or slip resistant finish. The membrane appears to be failing, based on site observation. Delamination at vertical terminations and bubbling of the material was noted during the site visit. The delamination and bubbling indicate an application issue. The slab may not have been properly primed for appropriate adhesion. There are many penetrations and tight corners in the geometry of the lower roof area, adding complexity and more locations of potential failure.

Recommendation

A completely new lower roof is recommended. A PMMA (polymethyl-methacrylate) system is recommended. PMMA roof systems, which are liquid applied, are ideal for roofs with irregular geometry or multiple penetrations, and resist ponding. Kemper and Siplast are two manufacturers of PMMA roof systems. A roof surface is to be specified with a texture to prevent slipping.

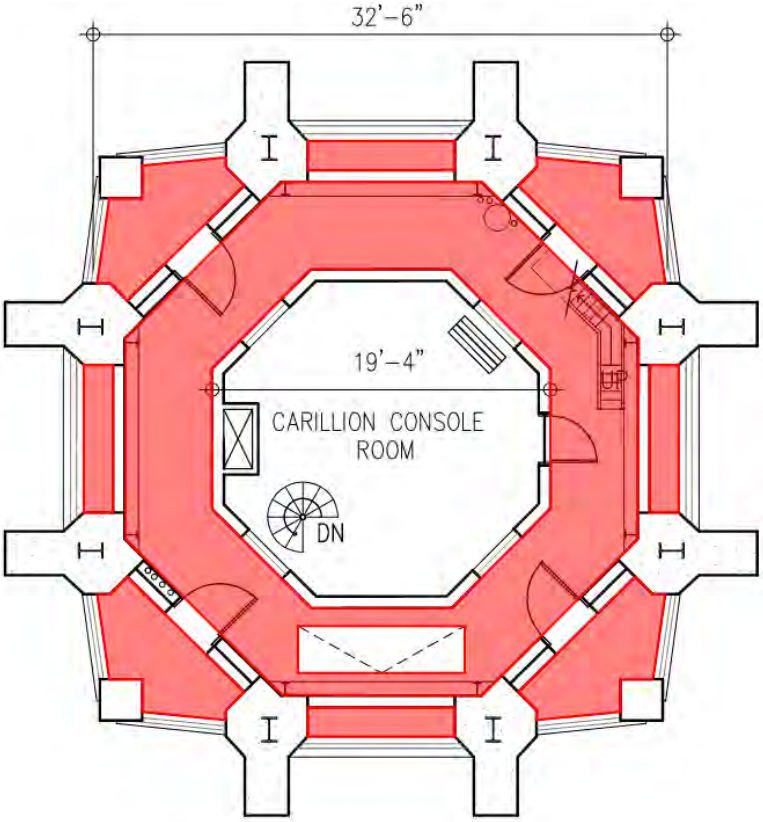
7 Lower Roof

8 Lower Roof

9 Lower roof connection to balcony

10 Playing cabin interior

11 Lower Roof surface degradation



12 Diagram of lower roof, highlighted in red.

Pipe Penetrations, Drains, Interior Water Management

Existing Conditions

Interior drains manage stormwater from the exterior balconies and upper roof, as well as the bathroom drain. The non-invasive testing by Vertical Access (VA) found that the interior water management system is in poor condition, especially at the horizontal leaders. Debris and clogs were identified by VA in many locations, particularly at horizontal leaders. Additional drains were not accessible and could not be scoped for evaluation.

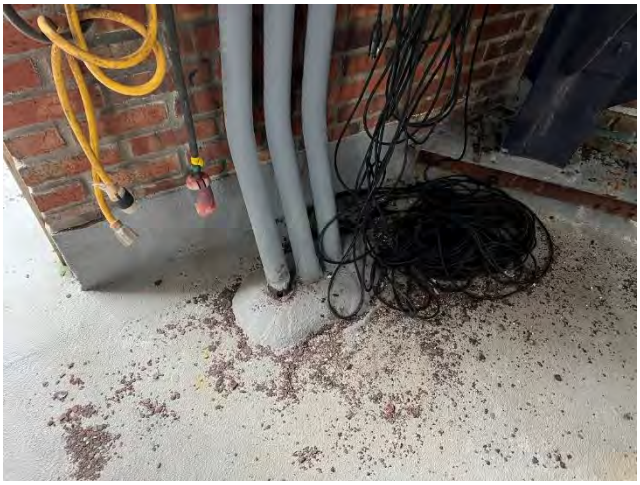
VA could not identify where the outlet of the stormwater drainage system. The system is reported to drain to the moat, but a pipe was not seen that empties into the moat.

Several pipe penetrations were observed, with a variety of sealing conditions. The Bok Tower staff noted to the design team that many of their more localized water infiltration issues may stem from poorly performing seals.

Recommendation
VA was not able to test all pipes. Further non-invasive testing is recommended to identify all deficiencies in the concealed conditions. Study is needed by a plumbing engineer to fully evaluate the system and determine if any concealed piping should be exposed for study and repair. Repairs and modifications could include reconfiguration of areas of piping to increase flow and decrease debris or the addition of clean outs.

All pipe penetrations should be properly sealed. The sealing method may vary depending on the condition. In some instances, it may be a sealant along the perimeter of the pipe. If the gap between the pipe and slab is wider, it may require backer rod, or a pipe sleeve. This work can be done independently as a stop gap measure.

When the lower roof is replaced, penetrations can be properly and robustly sealed to prevent leaks. Prefabricated boots can be installed to fully protect against water infiltration in conjunction with the lower roof installation.



13 Examples of roof penetrations

Figure 14 Examples of roof penetrations

15 Balcony drain

50 Year Restoration Planning

LAS has identified the following as Medium Priority Tasks listed in order of importance:

- Building Performance Analysis
- Façade Treatments
    - Marble and Coquina Stone
    - Brick Masonry
    - Terra Cotta Screens - Frames and Hinges only
- Steel Coating
- Mechanical Upgrades or Replacement
- Terra Cotta Screens
- Moat

Building Performance Analysis

The client has noted an inordinate amount of condensation forming on the steel of the upper tower. Based on the results of the spray bar testing, some of this run off may be coming from condensation on the interior face of the tower. Additionally, the client expressed their consideration of upgrading the mechanical system. Currently, a very large unit serving the occupied areas below sits on a framed platform above the roof.

With the testing protocol we prescribe in the “Short Term Project” section, valuable information about weather patterns and the resultant temperature, humidity and surface conditions of the building materials will give us a much better understanding about what is happening. This understanding and the use of this data in an energy model will help the design team to size the

mechanical system and look at ways we might use the mechanical system to mitigate any moisture intrusion that is happening through the wall assembly itself. For unique constructions like the tower, we cannot rely on anecdotal experience. Applying the latest in building science thinking and using the models to make data driven decisions is highly recommended for the long term health of the building.

Factors affecting the building performance include the historic construction, evolved use over time (including conditioning of occupied spaces), and local climate. Understanding the building performance of Bok Tower is based on analysis of the façade, thermal bridging, and the screened bell chamber. The coquina façade is porous material that holds moisture and humidity. That moisture may be affecting the steel and façade. There may be thermal bridges at the boundary between conditioned and unconditioned space. If a lower temperature is transmitting through the thermal bridges and intersecting with high humidity in the façade, condensation may be occurring within the façade. Thermal bridges reduce the efficiency of the HVAC in the occupied spaces. Additionally, the screens at the open bell chamber may be limiting the dispersion of moisture after a rain even or period of high humidity.

Façade Treatments: Marble and Coquina Masonry

Existing Condition

The Bok Tower façade consists of Pink Etowah marble, coquina masonry, and Gray Creole marble at the base of the tower. Vertical Access (VA) assessed the tower façade and found the stone cladding to be in overall good condition. VA noted the following deficiencies in isolated instances:

- Leached salts soiling in the carved and quoin Pink Etowah marble masonry. They note that leaching and encrustation may be a result of significant bulk water movement.
- Spalling, either completely released and removed or an incipient spalls
- Exposed steel at spalls
- Unit displacement.
- Cracked Units
- Mortar failure.
- Failed previous repair.
- Patterns of vertical crack systems in the coquina masonry.
- Failed elastomeric sealant failure was observed at the regularly spaced horizontal coquina joints.
- Shallow chipping was common around the edges of the Pink Etowah marble units, which VA suggested is likely a result of an incompatible mortar. The design team concurs that is the likely cause for the damage.

Recommendation

Condition	Recommended Treatment
Leached salts soiling	Starting with a general cleaning using an appropriate conservation grade cleaner suitable for masonry is recommended. This general cleaning will not remove all soiling, so a follow up targeted cleaning for leached salts, rust and copper staining are recommended. There are a variety of cleaners and poultices that can be tested for the more persistent staining and targeted towards the removal of efflorescence.

Spalling	All spalls except the bonded spalls should be removed. The spall void should be cut cleanly into a rectilinear shape for the best results for repair. Repair can either be done using a marble repair mortar (which can be tinted to match existing) or a compatible stone. Newly installed patches or dutchman repairs will likely require the use of stainless steel or fiberglass pins. Bonded spalls will need to be evaluated on a case by case basis for treatment.
Exposed steel at spalls	The exposure of steel pins at spalls will need to be treated on a case by case basis. If corrosion exists, the corrosion needs to be removed and fully cleaned to get to a bare metal. The bare metal can be coated with a rust prohibitive coating. Once the steel is properly coated, it may remain and become encapsulated if a mortar patch is being used. If a Dutchman repair is more appropriate, the steel pins may be removed or adjusted, and the use of stainless steel pins and other reinforcements may be required.
Unit displacement	These units should be carefully removed and rest plumb with stone anchors securing them in place as needed. If any substrate material shas shifted so that the panel cannot be set plumb, the substrate will need to be repaired to allow a typical plumb reinstallation.
Cracked Units	The treatment of cracks will vary. Cracks that do not threaten the structural integrity of the stone may be repaired with an appropriate marble or limestone repair mortar. Some cracks may require injection grout repairs to strengthen the bond between two cracked components. Other cracks may be so extensive that it deems the unit unsuitable for reinstallation.
Mortar failure	Areas of mortar failure will need to be repointed. It is important to design a mortar mix that is not exponentially stronger than the marble and coquina. The appropriate mix needs to have a high level of permeability to work in harmony with the exterior wall assembly as a whole. Mortars with poor permeability do not give the water vapor moving through the mass masonry wall an avenue to escape and condense at the mortar joint surface. Instead, the moisture vapor is pushed through the stone which contributes to spalling, surface erosion and other detrimental conditions. Note the extent and sequencing of the repointing needs to be carefully considered in conjunction with other treatments recommended to the façade. A more holistic view of the façade treatment needs to be established to determine how a repointing effort will fit within the treatment plan.
Failed previous repair	Remove any previously failed repairs and repair using the specified techniques.
Patterns of vertical crack systems in the coquina masonry	A pattern of vertical crack systems was identified in the Vertical Access report. More information about this condition needs to be provided for further evaluation.
Failed elastomeric sealant and sealants in general	In conjunction with the evaluation of the vertical cracks mentioned above, the reinstallation of the elastomeric sealant or any other type of sealant should be considered holistically with other treatment so to determine the extent of replacement or whether these become mortared joints in the future.

Shallow chipping	See mortar failure. This is an example of deterioration caused by a strong and incompatible mortar. The surrounding mortar will need to be removed and replaced with a compatible mortar. The chipped edges need to be evaluated further, but our first instinct is that the chips are not significant enough to prevent reuse of the panel.

While not identified as a topic in the VA assessment, the client mentioned that the building façade had previously been treated with siloxane. Whether or not this is recommended for this repair campaign is still being studied. This topic supports the idea of gathering the building performance data because all of these treatments and conditions create very unique envelope properties that need to be fully understood.

Façade Treatments: Interior Masonry

Existing Condition

For context and clarity, the tower has multiple masonry conditions including interior brick masonry in an open air condition, interior brick masonry in conditioned space, and exterior masonry of coquina and marble. The steel structure of Bok Tower is sheathed with brick backup masonry. Brick is visible in the interior of the tower in some occupied spaces and within the bell chamber as well as in the open air areas. Vertical Access (VA) assessed the brick masonry at the interior of the bell chamber. VA observed the brick masonry to be in good condition with isolated instances of deterioration, including:

- Leached salts, and copper and rust staining.
- Failed mortar
- Minor crack systems
- Missing brick units, leached salts, and copper and rust staining.

Recommendation

Condition	Recommended Treatment
Leached salts soiling, copper and rust staining	Starting with a general cleaning using an appropriate conservation grade cleaner suitable for masonry is recommended. This general cleaning will not remove all soiling, so a follow up targeted cleaning for leached salts, rust and copper staining are recommended. There are a variety of cleaners and poultices that can be tested for the more persistent staining and targeted towards the removal of efflorescence.
Failed mortar	Areas of mortar failure will need to be repointed. It is important to design a mortar mix that is not exponentially stronger than the brick masonry. The appropriate mix needs to have a high level of permeability to work in harmony with the exterior wall assembly.
Minor crack systems	The minor crack systems will need to be evaluated to confirm they are not part of a larger systemic issue. If not, these areas should be repointed. If the cracks have created significant gaps in the collar joints, some resetting of brick to better knit the crack back together may be required.
Missing brick units,	Missing brick units will need to be replaced with matching new replacement brick. Replacement bricks should match the existing in every respect. New bricks should be presoaked for a minimum of 10 days prior to use.

Terra Cotta Screens -Frames and Hinges only

Existing Condition

Polychrome glazed terra cotta, also known as faience, panels are located on the upper portion of Bok Tower. The panel screens enclose balconies and the bell chamber. On the balconies, specific faience tile panel doors are framed with cast iron members and swing open on hinges. Surface corrosion of the framing into which the polychrome tiles are set may also be contributing to the deterioration of the tile. The mild steel channels used to frame the perimeter of the decorative tile panel opening also exhibited surface and pitted corrosion. Some rusted fasteners were also noted.

Recommendation

The steel panel frames should be removed and repaired or replaced. If the structural integrity of the steel frames is intact, the framing could be cleaned to meet the Society for Protective Coatings (SSPC) surface preparation standards. The exposed metal should be cleaned using a combination of SSPC-SP1 Solvent Cleaning and SSPC-SP2 Hand Tool Cleaning. Once the steel is clean and suitable for recoating, the design team recommends a high-performance coating. More information on high performance coatings is described under “Bok Tower Medium Priority Tasks.”

The hinges appear to be insufficient to properly carry the load of the panel doors causing them to drag along the flooring and not open fully. The hinges need to be replaced with a heavier duty hinge with greater load capacity.

See more information on the Terra Cotta Screen work scopes in the Lower Priority section.

Steel Coatings

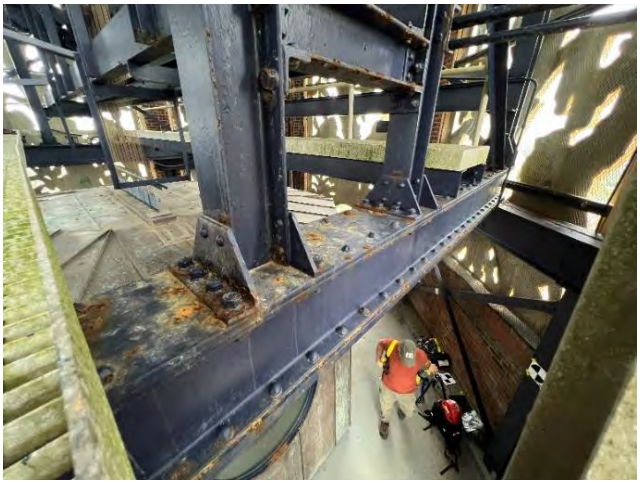
Existing Condition

The Bok Tower structure is an internal steel frame that is inset from the multi-wythe brick construction of the exterior façade. Bok Tower staff noted that the steel needs recoating and requested advice on an appropriate coating system. Localized areas of surface corrosion were visually observed. Additionally, Bok Tower staff noted that the steel commonly experiences condensation and is often dripping wet on foggy mornings. This condition is almost constant, due to the hot, humid climate of central Florida.

The steel inside the open portion of the tower is only partially exposed to dappled sunlight through the decorative screen panels, and steel at the upper roof receives direct sun exposure. There is no exposure to salt water, but there is exposure to rain and condensation.

Recommendation

A high-performance coating is recommended for the exposed steel to prevent corrosion. A high-performance coating that meets The American Architectural Manufacturers Association (AAMA) 2605-05 standards is recommended. AAMA is a recognized body in the industry that has established numerous performance-based standards to ensure high-quality products. AAMA 2605-05 represents the most stringent requirements for long-term performance and weather resistance.



16 Corrosion at bell chamber steel structure

17 Corrosion at roof steel structure

Mechanical Upgrades or Replacement

Existing Condition

At the site visit, we understood the client is considering upgrading the mechanical system. There is one large unit elevated over the upper roof, which is a remote distance from the conditioned spaces of the tower. The mechanical system should meet the needs of both the archival material located in the Archives Department and the thermal comfort of the staff working in Bok Tower.

Recommendation

Utilizing the building performance data can inform an efficient strategy for building envelope and the mechanical systems to work in harmony. The spray bar testing confirmed water is infiltrating the building at seams and obvious paths as well as migrating through the wall assembly itself. The mechanical system should be responsive to moisture movement through the building envelope. A possible strategy to create positive pressure in the occupied spaces should be studied. Increased ventilation and air change in unconditioned spaces might help mitigate the moisture migration through the wall assembly.

Ideally, the new system would locate equipment closer to the occupied spaces.

For the archival material, a mechanical system needs to maintain temperature and humidity within the accepted norms for archives. The archives will be zoned separately to achieve an appropriate environment. HEPA filters are recommended to provide a clean environment free of particulates for the archives.

Terra Cotta Screens

Existing Condition

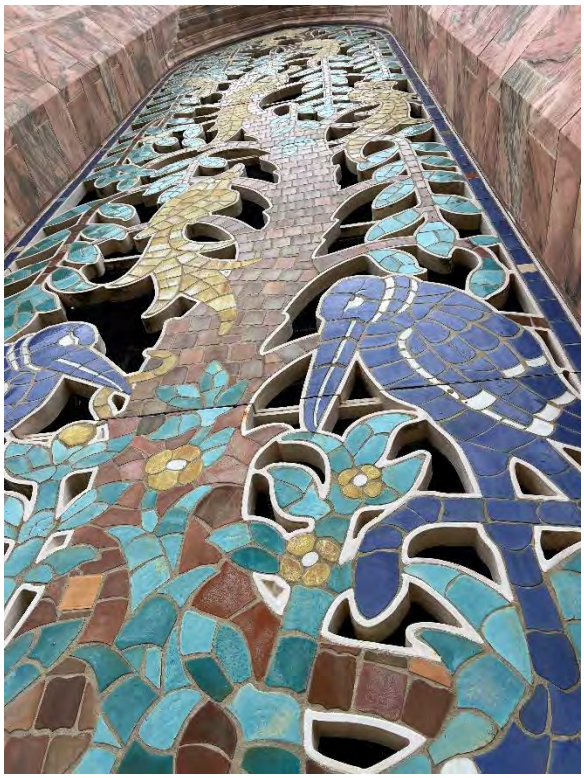
Polychrome glazed terra cotta, also known as faience, panels are located on the upper portion of Bok Tower. The panel screens enclose balconies and the bell chamber. On the balconies, specific faience tile panel doors swing open on hinges.

The individual polychrome terra cotta tiles that make up the decorative tile panel assemblies were observed to be in good condition. Isolated deficiencies were noted and included:

- Cracks through single units
- Spalls
- Missing tiles
- Minor glaze loss
- Rusted fasteners

Recommendation

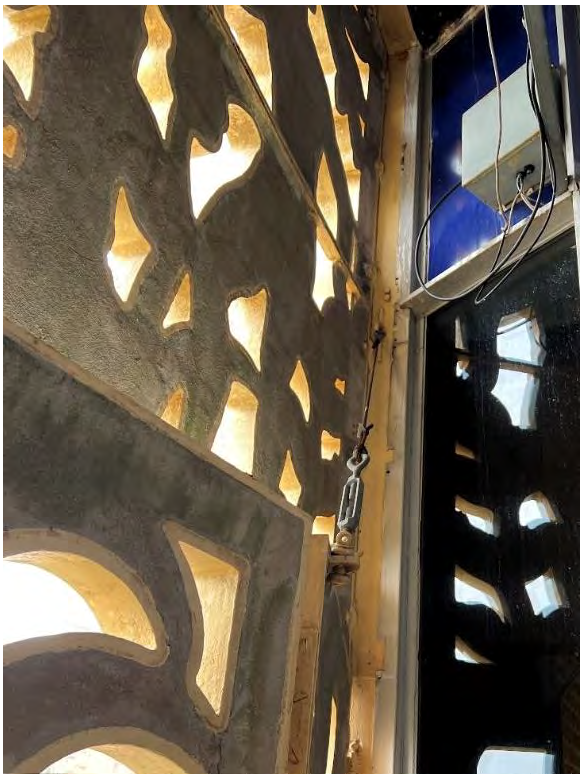
Condition	**Recommended Treatment**
Cracks	The tile cracking includes a variety of conditions including surface cracking which may only be in the finished glaze. These cracks would require reglazing only. There are cracks which are more open and would require repair through either a terra cotta repair mortar or injection grouting. Once the substrate terra cotta is repaired, the cracked area can be reglazed. Finally, there are cracks that appear to be full depth. A number of these occur at intersections or abutments of tiles. The preferred course of action for these areas would be to use the same repair technique suggested for the open cracks. However, some cracks may be extensive enough to require the cracked portion to be removed and repaired as a spalled area.
Spalls	Small spalls are occurring where tiles abut the panel framing which includes intermediate horizontal members required for the height of the screens. The adjacent corrosion is causing small corners terra cotta to spall. The void of the spall will need to be cut cleanly to form a linear shape. The spalls would require repair with a terra cotta repair mortar. Once the substrate terra cotta is repaired, the cracked area can be reglazed.
Missing tiles	If the tile forms are repetitive, we can find an intact tile shape for any missing tiles and have it recast. Terra cotta has a very long lead time (6-8 months), so some alternative materials may want to be explored for replication of missing tiles.
Minor glaze loss	An architectural conservator may need to be engaged to reglaze and repair surface glaze issues such as pitting.



18 Faience example

19 Faience swinging panel

20 Faience panel hinge



21 Faience panel hinge

Moat

Existing Condition

Moat reinforces Bok Tower's connection to the site. The moat was part of the original design of the site and remains today. The railings across the moat to the tower were crafted by Samuel Yellin. Today, some of the coping stones are displaced and out of plumb. TYLin also engaged Satchell Engineering to assess the moat from an environmental perspective.

Recommendation

To reset out of plumb coping stones, stones are to be documented, removed, cleaned. The displaced coping stones seem worse at outside and inside corners of the moat perimeter. The supporting walls need to be investigated to make sure they are plumb and have sufficient capacity to receive the re-laid coping stones. The moat wall is to be repaired before replacing the coping stones.

Satchell Engineering investigated the existing filtration system which may be nearing the end of its serviceable life and recommend a replacement system. The design parameters for the new system was to support the moat habitat and to provide filtration to the extent possible for a clearer appearance of the water.

22 Moat and Railings.

23 Cracked stone at moat edge.

24 Moat edge stones out of plumb.

25 Moat coping stones out of plumb.

26 Moat coping stones out of plumb.

Immediate Work and Investigations

Another goal of the site visit and assessment was to identify some smaller, easier work scopes that could be tackled in the short term. Outlined below are a few discreet scopes of work that could be implemented within the existing funding and would have a significant impact on wither current water infiltration of project planning. :

Option 1: Storefront and Windows
Replace the storefront and any of the deficient slot windows.

Option 2: Building Performance Monitoring
This scope of work would include installing monitoring devices to better understand the environmental conditions and the material response during seasonal changes. This understanding and data will influence recommended façade treatments and mechanical system approaches.

Note: This data could inform some energy modeling to develop mechanical systems that address the unique needs to the structure and deal with the condensation issues. Energy modeling and associated analysis is not included for this short-term project, but it could be if funds allow and that is identified as a priority.

Option 3: Consider Partial Pipe Penetration Repairs since this is a direct source of water intrusion that can be dealt with independently. All pipe penetrations should be resealed. However, some pipes penetrating the lower roof will require integrated boots or flanges, these accessories are best installed in conjunction with the lower roof membrane roofing. The installation of accessories would be deferred to occur with the installation if the new lower roofing material.

We have included the descriptions of these suggested work scopes below:

Option 1: Storefront and Windows

Existing Conditions

Slot windows and storefront glazing are located at the lower levels of Bok Tower in staff areas. The storefront glazing encloses areas adjacent to the exterior balconies. Staff have reported leaks at some locations of storefront and slot windows. Portions of the storefront glazing seal have failed.

Recommendation

The slot windows and storefront glazing are recommended to be repaired or replaced. In this case, it is likely to be more cost effective for the storefront to be replaced than repaired. The level of wind resistance of the new storefront is to be confirmed to adequately meet requirements. The condition at the slot windows requires further investigation to determine if this window type can be resealed or is to be replaced.

27 Slot window with reported leaks

28 Interior storefront seal

29 Interior storefront glazing

Option 2: Building Performance Monitoring

To make informed decisions about how the façade might be treated for water infiltration and how the mechanical system can work in concert with the inherent permeability of the wall construction, environmental monitoring would provide invaluable information. There are several factors that are unique to the Bok Tower that contribute to how it performs. Factors include:

- The multi-wythe brick construction with marble and coquina cladding (and moisture movement through it, not just at seams and joints)
- Treatment to the façade that can mitigate or exacerbate permeability.
- The balance of conditioned versus unconditioned spaces
- The impact of local weather conditions
- The stratification of conditions inherent in tower construction.
- Mechanical and passive systems that can encourage ventilation and air changes to reduce condensation

To understand how all these factors can influence a more integrated and holistic approach to managing the moisture infiltration, the design team proposes a monitoring system which would include the installation of a weather station and a series of sensors throughout the structure. These sensors will log the relative moisture content of materials, air temperature, and relative humidity.

System details are as follows:

- Weather Station: a weather station would monitor temperature, relative humidity, solar radiation, wind speed and direction, and rainfall.
- Moisture Monitors: Moisture monitors will be installed on the inside face of the walls or the underside of slabs. One monitor type will measure temperature, humidity and moisture levels near the surface of the assemblies being studied. Another monitor type will gather the same information but will include leads that allow for connection of deeper penetrating probes to measure moisture levels at both the material core and the interior face of the exterior wall.

- Condensation Monitors: Installation of sensors which mount directly to the steel will read ambient temperature, ambient relative humidity and temperature the surface the sensor is mounted to. When surface temp is below the dew point, this indicates the presence of condensation. Understanding the frequency of occurrence and conditions which create the condensation will help determine if the approach should be to control environmental conditions to avoid condensation or protect the structure from resultant water run-off.
- Data Logger: These sensors and the weather station will communicate wirelessly to a data logger. The sensor readings are logged at preset intervals, from every five minutes to one reading per hour. Data can be downloaded and processed to study trends in the readings. Comparing the trends in readings from the in-wall and slab sensors in relation to the information from the weather station will allow us to empirically study moisture movement through the structure.

Mark-ups on the original plans are included in Appendix A to identify specific locations in plan and section for the monitoring strategy outlined above.

Option 3: Consider Partial Pipe Penetration Repairs

The existing unsealed or poorly sealed pipe penetrations are a source of water infiltration. In order to address this immediate vulnerability, an initial robust sealing effort at each pipe penetration is recommended. The methods of sealing will be determined on a case by case basis the pipe penetration conditions vary. The main determining factor for treatment will be the size of the gap between the floor opening and pipe size. Additionally, some areas of the piping could be modified to address accumulation of debris and to provide more clean-outs.

In the “Bok Tower High Priority Tasks” section above, pipe penetrations repairs are described in conjunction with the lower roof replacement. Prefabricated boots at all piping locations are recommended and should be installed integrally with the lower roof. The sealing of the pipe penetrations recommended for the Short Term tasks is an intermediate (or partial) repair that will stop the leakage until the lower roof can be installed in a future phase and the integral accessories such as boots can be added to the repair areas.

Quality Control Recommendations

As project planning continues, there are measures the client and design team can take to manage and improve the quality of the project execution.

- The first recommendation would be to develop a prequalification process for the contractor. Further discussion can be had to explore a variety of contractor procurement methods such as the traditional design-bid-build or construction manager at risk. Each method has their advantages and disadvantages. Regardless of the procurement method, there is a process where bidders will be required to provide project examples and project references of projects they have completed of a similar scale and complexity.
- Once construction begins, ensuring the design team is engaged to monitor the construction activities and respond to field questions is recommended. These Construction Administration Services establish contractual relationships and requirements about how construction is managed. The technical specifications that are developed as part of the construction documents will require the following:

- Submittals: The technical specifications will require submittals which could be product data, shop drawings and all sorts of documentation that serve as a checks and balance between what is specified versus what the contractor is provided.
- Mock-ups: The technical specifications will also require mock-ups so that the contractor can demonstrate their ability to execute the work in a satisfactory manner. The objective is that the mockup demonstrates the ability to construct a sample that functions per the design, meets the desired aesthetic and demonstrates quality workmanship. These mockups remain in place for the rest of construction and serve as a standard that must be met as construction continues. The mockup can become an opportunity to collaborate with the design and tradespeople to achieve the bst possible outcome.

Next Steps

If the building performance data monitoring is desired, as suggested, for the short term funding, the earlier it can be implemented, the better. Seeing the moisture conditions change as the seasons change will be important information. A six to eight month period of study is recommended to capture seasonal change. The monitoring equipment is not very expensive, and a rough order of magnitude can be provided upon request.

For the more long-term work scopes, the team will need to be expanded to include some additional disciplines to fully design solutions. The new disciplines recommended for future projects would include a landscape architect, civil engineer, and materials conservator.

Sources

NPS, National Historic Landmark Nomination, Bok Tower Gardens
https://npgallery.nps.gov/NRHP/GetAsset/NHLS/72000350_text

Florida SP Bok Mountain Lake Sanctuary and Singing Tower
https://catalog.archives.gov/id/77843776

National Register of Historic Places Inventory – Nomination Form
https://s3.amazonaws.com/NARAprodstorage/lz/electronic-records/rg-079/NPS_FL/72000350.pdf

Bok Gardens Website
https://boktowergardens.org/the-singing-tower/

EXTERIOR AND PARTIAL INTERIOR INVESTIGATION

Bok Tower

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Report Narrative

Report Narrative

Bok Tower
Lake Wales, FL

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Vertical Access LLC (VA) was retained by TYLin / Silman Structural Solutions to assist the project team with multiple investigations at Bok Tower. These include the documentation of existing exterior conditions, assistance identifying potential paths of water infiltration, and assessing the steel carillon structure and interior masonry at the bell chamber level. VA technicians also conducted a complete terrestrial laser scan of the surrounding moat for the preparation of a single registered point cloud and the development plan drawings (to be completed by VA). Terrestrial laser scanning was also performed in the interior of the bell chamber level to develop a registered point cloud for import into Rhino or Revit (to be completed by VA). Additionally, high resolution wireless projected light scanning was performed at two decorative tile panel assemblies located at the bell chamber level for the preparation of registered point clouds and 3D PDFs (to be completed by VA).

VA technicians Patrick Capruso, Matthew Clawson, Dan Gordeyeva, and Tuli Kuckes were on site November 18 through November 21, 2024 to document existing conditions and identify potential paths of infiltration. VA's Mike Fritz was on site from November 19 to November 21, 2024 to perform the terrestrial laser scanning at the moat and inside the bell chamber level. Fritz was also available to assist with the projected light scanning at the two decorative tile panel assemblies. Project team members Derek Trelstad and Anna Blyth of TYLin / Silman Structural Solutions, Nic Cargill of Atkinson-Noland & Associates, and Julie Arnold of Lord Aeck Sargent were also on site during the investigation and were available to discuss initial observations. David Price, Gary Boivin, and the Bok Tower Gardens staff assisted with site access and logistics.

Overall, the exterior marble and coquina stone cladding was found to be in good condition. However, isolated instances of spalling, unit displacement, mortar failure and failed previous repairs were documented along with and patterns of vertical crack systems in the coquina masonry adjacent to the 5th level balconies. Elastomeric sealant failure was also observed at the regularly spaced horizontal coquina joints. Shallow chipping, likely a result of an incompatible mortar, was common around the edges of the Pink Etowah marble units. The individual polychrome terra cotta tiles that make up the decorative tile panel assemblies were observed to be in good condition exhibiting isolated instances of cracks through single units, missing tile,

and minor glaze loss. Surface corrosion of the framing into which the polychrome tiles are set may also be contributing to the deterioration of the tile. The mild steel channels used to frame the perimeter of the decorative tile panel opening also exhibited surface and pitted corrosion. The brick backup masonry visible from the interior of the bell chamber was observed to be in good condition exhibiting only isolated instances of deterioration which include failed mortar, minor crack systems, and missing brick units. Finally, instances of mild surface corrosion and coating failure were documented on the structural steel supporting the carillon.

This *Report Narrative* with photographs, annotated AutoCAD drawings and extracted condition quantities constitute VA's *Condition Survey Report* of Bok Tower. A users' manual for VA's Tablet PC Annotation System (TPAS®) is also included along with VA's *Conditions Glossary*. A digital copy of the *Condition Survey Report* is provided as a download via VA's file sharing site. The findings of the drain survey conducted as part of the water infiltration investigation will be issued as a separate report. The registered point clouds of the moat and bell chamber level and associated plan drawings and 3D PDFs will also be issued separately.

Description of Deliverables

Report Narrative

This *Report Narrative* includes a description of the project deliverables, the scope of work and this narrative summarizing the conditions noted during the exterior façade and interior bell chamber level inspections. Conditions documented by Vertical Access and described in the *Report Narrative* use terminology based on VA's *Conditions Glossary*. The *Conditions Glossary* is provided digitally as part of the project deliverables. Supporting photographs illustrating representative and notable conditions are cited in the *Report Narrative*. The last section of the *Report Narrative* includes conclusions and preliminary interpretations of the survey findings.

TPAS Users' Manual

The *TPAS Users' Manual* follows the *Report Narrative*. While printed photographs and drawings are presented as part of this report, the most efficient way to analyze the survey data is by using the features available in the digital drawing files. Readers are encouraged to refer to the *TPAS Users' Manual* before using the report to develop recommendations.

TPAS utilizes a library of previously drawn material condition symbols to annotate digital survey drawings in the field. The severity and amount of each condition are recorded within the annotations.

The *Users' Manual* describes key TPAS features:

- Enabling hyperlinks and opening digital photographs directly from the AutoCAD and PDF drawings
- Viewing and editing survey data embedded within condition annotations
- Creating views within AutoCAD or within the PDF drawing to visually display information about specific conditions, by turning layers on and off
- Extracting numerical survey information contained in the AutoCAD drawing for export into a spreadsheet or database

Photographs

The *Photographs* section of the report includes images of representative and notable conditions taken during the survey. Each photograph is hyperlinked to a condition code within the AutoCAD drawing so that it can be viewed easily as a digital file. Each photograph has a three-part name including the Cartesian (x-y) coordinates corresponding to the condition's location within the AutoCAD drawing, the type of material and condition documented, and the year in which the photograph was taken. The Cartesian grid used to name the photographs is shown on the drawings. For reference, the table below lists the x-coordinates of the elevation views:

X-Coordinate	Elevation View	Sheet and Drawing Number
0 to 100	Northeast Tile Panels	Sheet 1, Drawing 1A
0 to 100	North Elevation	Sheet 1, Drawing 1B
0 to 100	North Tile Panels	Sheet 1, Drawing 1C
110 to 200	Northwest Tile Panels	Sheet 2, Drawing 2A
110 to 200	West Elevation	Sheet 2, Drawing 2B
110 to 200	West Tile Panels	Sheet 2, Drawing 2C
210 to 300	Southwest Tile Panels	Sheet 3, Drawing 3A
210 to 300	South Elevation	Sheet 3, Drawing 3B
210 to 300	South Tile Panels	Sheet 3, Drawing 3C
310 to 300	Southeast Tile Panels	Sheet 4, Drawing 4A
310 to 400	East Elevation	Sheet 4, Drawing 4B
310 to 400	East Tile Panels	Sheet 4, Drawing 4C
520 to 580	Inboard Parapet and Tower Bell Chamber North Interior Elevation	Sheet 5, Drawing 5A
620 to 680	Inboard Parapet and Tower Bell Chamber West Interior Elevation	Sheet 5, Drawing 5B
720 to 780	Inboard Parapet and Tower Bell Chamber South Interior Elevation	Sheet 5, Drawing 5C
820 to 880	Inboard Parapet and Tower Bell Chamber East Interior Elevation	Sheet 5, Drawing 5D

Annotated Drawings

Drawings documenting the condition of the exterior façades and interior of the bell chamber level are provided in the *Annotated Drawings* section. For use as base drawings for the survey, VA used drawings originally provided by Silman in AutoCAD DWG format for an exterior survey of Bok Tower conducted in 2008. VA inserted the base drawings into a single AutoCAD drawing with each exterior elevation view placed to have a unique set of x-y coordinates.

Spreadsheet of Survey Conditions

A *Spreadsheet of Extracted Survey Conditions* is included with this report. The spreadsheet contains three sheets:

- A Data Key shows the layer, condition, code, and unit of measurement for the quantities and severity of each condition;
- The Condition Totals provides overall counts and quantities for each type of condition;
- And the Extracted Survey Conditions sheet catalogs each individual condition identified during the survey, including location, photograph, quantity, and severity data extracted from the annotated AutoCAD drawings.

Digital Files

All the documents composing this *Condition Survey Report* are provided in digital format via a download from VA's file sharing site. Digital files include a full *Condition Survey Report* in PDF format, the Report Narrative in PDF format, JPG image files of survey photographs, annotated elevation drawings in AutoCAD DWG and PDF formats, and spreadsheet quantities in Microsoft Excel XLS and PDF formats.

The evaluations and recommendations in this report and its exhibits regarding the condition of building materials and the potential effect on the safety of persons and property are made in the opinion of the VA technical personnel who observed the materials on site and are based on their judgment, knowledge, and prior experience of similar conditions; however, VA makes no warranty or guarantee regarding the accuracy of these evaluations and recommendations.

Scope of Work

Industrial rope access techniques were used to investigate the existing condition of the exterior façades of Bok Tower. In general terms, technicians are suspended on one rope termed the "work positioning line" with a separate "fall protection line" used as backup. Descent controllers equipped with hands-free stopping and panic locking functions and industry-specific fall protection devices are integrated into site-specific rigging systems along with industry-specific climbing and suspension harnesses. Vertical Access technicians are third-party certified for industrial rope access work by SPRAT, the Society of Professional Rope Access Technicians.

Exterior Existing Conditions Survey

VA technicians performed a total of twelve inspection drops down the exterior façades of Bok Tower. One inspection drop was performed down each of the four tower facets that correspond with a cardinal direction (N, S, E, W). Two inspection drops were performed down each of the ordinal facets (NE, SE, SW, NW) to access both sides of the projecting corners located below the bell chamber level. VA technicians utilized hammer sounding techniques and probed with hand tools as necessary to determine the condition of the building materials. Loose masonry observed during the investigation was removed using hand tools. The removals were left on a bench located in the tower workshop on the 4th level (see "removals" photograph). Typical and notable conditions of deterioration were identified, documented, and quantified using digital still color photography keyed to annotated elevation drawings.

Interior Bell Chamber Level Existing Conditions Survey

VA technicians assessed the steel carillon structure and brick masonry at the interior of the bell chamber level documenting existing conditions using digital photography hyperlinked to annotated partial elevation drawings. Detailed drawings of the steel carillon structure were not provided prior to the investigation. As a result, VA technicians included a note providing the level (1 through 6), steel member alignment ("H" for horizontal, "V" for vertical, and "D" for diagonal), and a compass direction (e.g., N, NE, NW) to assist with orientation.

Water Infiltration Investigation

To identify potential paths of water infiltration, VA technicians utilized drain investigation video cameras to inspect a total of 26 internal leaders located on levels 2, 3, 4, 5, 6, 7, and the roof. Video recordings, still images, and an interpretation of the drain investigation findings will be issued by VA as a separate report. VA also

worked with Atkinson-Noland & Associates to conduct two spray rack tests located below the northwest and northeast balconies on the 7th level of the tower. The results and an interpretation of the spray rack testing will be submitted by Atkinson-Noland & Associates.

Terrestrial Laser and Projected Light Scanning

VA technicians conducted a complete terrestrial laser scan of the moat surrounding Bok Tower for the preparation of a single registered point cloud and plan drawings (to be completed by VA). Terrestrial laser scanning was also performed in the interior of the bell chamber level to develop a registered point cloud for import into Rhino or Revit (to be completed by VA). Additionally, high resolution wireless projected light scanning was performed at the north and northeast decorative tile panel assemblies located at the bell chamber level for the preparation of registered point clouds and 3D PDFs (to be completed by VA). The registered point clouds and subsequent plan drawings and 3D PDFs will be submitted separately from this *Condition Survey Report*.

Building Description

Bok Tower, also known as the Singing Tower, is the architectural centerpiece of Bok Tower Gardens which was conceived by publisher and author Edward W. Bok to preserve the beauty, serenity, and peace of the hilltop where he enjoyed taking evening walks. The tower was designed in 1926 by Philadelphia architect Milton B. Medary and includes decorative ironwork by Samuel Yellin, carved stone designed by Lee Lawrie, and tilework fabricated by J.H. Dulles Allen of the Enfield Pottery and Tile Works. Construction began in 1927 and the tower was dedicated in February of 1929.

Square at the base, the 203-foot-tall tower transitions to an octagonal tower at 142 feet above grade. The tower was constructed with a steel frame clad in marble and coquina stone with brick backup masonry. Gray Creole marble from Georgia was used at the base of the tower. Georgian Pink Etowah marble was used for the decorative carving, quoining, buttresses, and at the masonry surrounds of the decorative panel openings. Florida Coquina stone carved into ashlar blocks and set in random coursing comprises most of the cladding at the square portion of the tower. Bok Tower incorporates Gothic elements such as the pointed arch opening and tall corner buttresses with Art Deco embellishments like the decorative polychrome tile panels and geometric parapet carvings.

Findings

Conditions of deterioration such as cracks, spalls and failed repairs in the masonry were documented by VA technicians. The location and quantities of conditions were documented using TPAS. Each TPAS annotation includes a description of the condition, numerical values for the amount or severity of the condition and an assigned priority level. The priority level is a rating of public safety concern. Priority 1 items present a potentially unsafe condition that may be a public safety concern. Vertical Access did not identify any Priority 1 conditions during the investigation. Priority 2 conditions are not imminently hazardous but should be repaired in the near future. These conditions include bonded and incipient spalls, cracks and some failed repairs. All other conditions are NA (not applicable) or Priority 3, indicating an observation that does not have an immediate safety or waterproofing implication, or that is mainly aesthetic in nature, such as soiling.

For the purposes of this report, the following definitions are provided: *Excellent* condition refers to a system, material, or item that shows minimal to no deterioration and continues to serve its intended structural, waterproofing, or aesthetic function. *Good* condition is used for a system, material, or item that generally continues to serve its intended structural, waterproofing, or aesthetic function although patterns or specific instances of deterioration are present. *Fair* condition indicates that a system, material, or item has lost some of its structural, waterproofing, or aesthetic function due to deterioration or deferred maintenance. *Poor* condition refers to a system, material, or item that has lost most of its intended structural, waterproofing, or aesthetic function.

Marble and Coquina Masonry

- Overall, the exterior marble and coquina cladding was found to be in good condition. However, isolated instances and patterns of deterioration were observed. During the investigation, VA technicians documented spalls, vertical crack systems, displacement, failed previous repairs, and instances of surface loss. Mortar and elastomeric sealant failure were also observed along with areas of soiled or stained masonry.
- Missing spalls, labeled “M” on the annotated drawings, mark locations where spalled material was missing at the time of the investigation. Where substrate steel was observed, the annotation “MS” was used. Spalls that have not completely formed, resulting in an incipient spall, are labeled “I” on the annotated drawings. Where incipient or loose material was removed during the investigation, the drawings are labeled “R” for “removed.” At spalls where the removal of material resulted in exposed steel, the drawings are labeled “RS” for “removed and [exposed] steel.” Finally, spalls that are fully-

formed but held firmly in place by mortar, sealant, or building geometry are labeled "B" for "bonded." Most of the spalls documented in the marble and coquina masonry measured 10 square inches or less (see photographs 35-163, 48-108, and 355-38).

- A notable bonded spall measuring approximately 30 square inches was documented at the top voussoir of the pointed arch located above the 7th level balcony on the southwest facet of the tower (see photographs 239-178). After probing with hand tools, it was determined that the spall remains firmly adhered to the façade.
- A bonded spall measuring approximately 50 square inches was observed propagating through two Pink Etowah marble buttress units above the 2nd level on the tower's northeast facet. Portions of the spall sounded hollow when struck with a 16 oz. acrylic mallet. However, the spalling marble remains firmly adhered to the façade (see photographs 340-45).
- Cracks through single units ("C") are differentiated from system cracks that extend through joints ("CJ"), units ("CU"), and units and joints ("CUJ"). Most of the cracks observed in the marble and coquina masonry exhibited widths of 1/16 of an inch or less (see photographs 137-113, 273-11, and 235-33).
- A pattern of vertical system cracks extending through units and joints was noted at the coquina ashlar units located adjacent to the Pink Etowah marble arch surrounds at the 5th level balconies. These crack systems exhibited widths ranging from 1/16 of an inch to 3/16 of an inch and lengths ranging from roughly 5.5 feet to 19 feet (see photographs 47-110, 146-108, 255-111, and 346-104).
- Failed crack repairs ("CRprF") were documented at locations where a crack or crack system has been routed and filled with a cementitious repair material that exhibits signs of failure or deterioration such as cracking, separation, or total loss. Failed crack repairs were typically observed at the Pink Etowah marble quoin units and decorative carvings (see photographs 135-108, 333-132, and 644-206).
- A pattern of horizontal unit displacement ("Hor") was observed at the Pink Etowah marble buttress units located next to the inboard side of the decorative parapets at the top of the tower. Three units at this level exhibited horizontal displacement of roughly 1/8 of an inch (see photographs 633-196, 664-197, and 847-198).
- An isolated instance of horizontal unit displacement measuring approximately 3/16 of an inch was noted at a carved Pink Etowah marble corner unit located on the 2nd level of the northwest facet (see photographs 134-30). An associated vertical crack system through units and joints was

documented at the coquina masonry units located directly above the displaced Pink Etowah marble (see photographs 135-32).

- Failed cementitious patch repairs ("PF") were documented at locations where the patch material applied to address spalling masonry was cracked, separated, eroded, or otherwise failing (see photographs 138-17, 335-134, and 637-193). Two failed patch repairs, measuring 3 and 6 square inches respectively, were removed ("PR") during the investigation (see photographs 60-139 and 162-15). A failed dutchman repair ("DF") measuring roughly 9 square inches was documented at the decorative pelican carving located atop the northwest buttress (see photographs 134-96).
- In general, the mortar at the marble and coquina masonry joints was observed to be in good condition. However, instances of failed ("MorF"), missing ("MorM"), and removed ("MorR") mortar were documented at locations where the mortar has eroded, cracked, or was otherwise deteriorated. Instances of mortar failure were commonly documented at joints between the Pink Etowah marble buttress and decorative carving units and at the Creole marble at the base of the tower (see photographs 55-1, 136-200, and 245-185).
- Sealant failure ("SlntF") was documented at regularly spaced horizontal joints in the coquina masonry where the elastomeric sealant exhibited cracks, separations, or total loss (see photographs 146-101, 150-41, and 150-90). The horizontal sealant joints are spaced roughly ten feet apart on each of the tower facets. David Price of Bok Tower Gardens suggested that the sealant may have been applied when the I beams located behind the coquina cladding were replaced during a repair campaign in the 1980s.
- Shallow chipping ("Chp") was common around the edges of the Pink Etowah marble units. The amount of surface loss typically measured 1/16 of an inch or less and is likely the result of an incompatible mortar (see photographs 133-139, 133-148, and 133-161).
- Leached salts soiling ("Lch") was common in the carved and quoin Pink Etowah marble masonry (see photographs 125-164, 136-170, and 138-179). The hard encrustations of salts on the surface of the masonry are typically caused by solubilized salts seeping out of the mortar or brick backup masonry through the effects of significant bulk water movement.

Decorative Terra Cotta Tile Panel Assemblies

- Overall, the individual polychrome terra cotta tiles that make up the decorative tile panel assemblies located at the 5th, 6th, and 7th levels were observed to be in good condition exhibiting isolated instances of cracks through single units ("C"), missing tile ("M"), and glaze loss ("Glz") (see photographs 10-155, 9-164, and 313-164 respectively).

- Surface ("Srf") and pitted ("Pit") corrosion and paint coating failure ("CtF") were widespread on what appears to be cast iron framing into which the polychrome tiles are set (see photographs 13-173, 16-158, and 18-169). Three rusted fasteners ("FstRst") were also documented (see photographs 15-173, 17-163, and 85-154). In several instances corrosion at the framing is contributing directly to the deterioration of the polychrome terra cotta tiles. The mild steel channels used to frame the perimeter of the decorative tile panel opening also exhibited surface and pitted corrosion (see photographs 181-158, 182-146, and 541-144).

Interior Bell Chamber Masonry and Steel Investigation

- In general, the brick backup masonry visible from the interior of the bell chamber was observed to be in good condition exhibiting only isolated instances of deterioration which include failed mortar, minor crack systems, and missing brick units (see photographs 547-178, 546-181, and 553-149 respectively). Isolated instances of leached salts ("Lch") were also documented along with copper ("Cpr") and rust ("Rst") staining (see photographs 548-180, 857-140, and 867-140).
- Mild instances of surface corrosion ("Srf") and associated coating failure ("Ctf") were documented at the steel structure supporting the carillon bells (see representative photographs 559-169, 560-148, and 562-172). Multiple rusted fasteners ("FstRst") were also documented (see photographs 844-147).
- Surface corrosion ("Srf") was observed on the bottom flange of a horizontal I beam supporting a large bell on the northeast portion of the 3rd level of the carillon steel support structure (see photographs 540-158, 555-160, and 561-160).
- Perforations ("Prf") and surface corrosion ("Srf") were noted in the corrugated steel roof deck located directly above the carillon along with ponding water at the base of the shallow octagonal roof and an active leak in the interior of the bell chamber (see photographs 640-182 and 848-180).

Conclusions and Preliminary Interpretations

Vertical Access performed a comprehensive investigation of the exterior of Bok Tower and the interior of the bell chamber level using industrial rope access techniques. As part of the investigation, VA techniques documented conditions of deterioration by means of annotated elevation drawings and still photographs. VA also assisted the project team with the water infiltration investigation and provided

terrestrial laser and projected light scanning services at designated areas (these deliverables will not be submitted as part of this *Condition Survey Report* but will follow shortly).

Overall, the exterior marble and coquina stone cladding was found to be in good condition. However, isolated instances of spalling, unit displacement, mortar failure and failed previous repairs were documented along with and patterns of vertical crack systems in the coquina masonry adjacent to the 5th level balconies. Elastomeric sealant failure was also observed at the regularly spaced horizontal coquina joints. Shallow chipping, likely a result of an incompatible mortar, was common around the edges of the Pink Etowah marble units. The individual polychrome terra cotta tiles that make up the decorative tile panel assemblies were observed to be in good condition exhibiting isolated instances of cracks through single units, missing tile, and minor glaze loss. Surface corrosion of the framing into which the polychrome tiles are set may also be contributing to the deterioration of the tile. The mild steel channels used to frame the perimeter of the decorative tile panel opening also exhibited surface and pitted corrosion. The brick backup masonry visible from the interior of the bell chamber was observed to be in good condition exhibiting only isolated instances of deterioration which include failed mortar, minor crack systems, and missing brick units. Finally, instances of mild surface corrosion and coating failure were documented on the structural steel supporting the carillon.

Vertical Access remains available to the project team to discuss our findings and to demonstrate the functionality and utility of TPAS for evaluating the conditions of Bok Tower.

Respectfully submitted for Vertical Access LLC by:

Patrick Capruso

and

Evan Kopelson

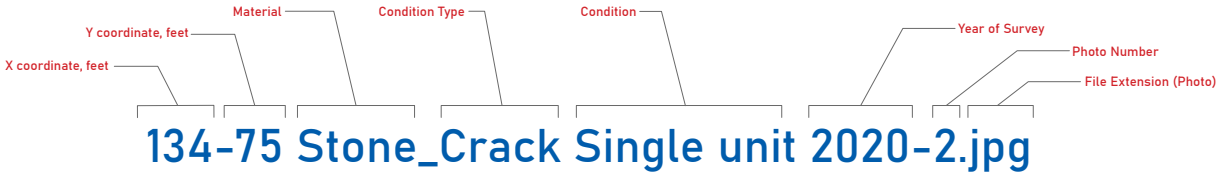
Partner-in-charge

Photographs

VA Photo Name Key

Vertical Access surveyors use TPAS during field evaluations to methodically name photographs. Within the standard TPAS photo naming convention, key attributes of each survey condition are used to create unique, descriptive file names.

Please use the accompanying diagram to understand and break down the typical layout of a VA photo name:



9-164 TerraCotta_Spall Missing + Steel 2024-1.jpg

9-164 TerraCotta_Spall Missing + Steel 2024-2.jpg

9-164 TerraCotta_Spall Missing + Steel 2024-3.jpg

9-173 TerraCotta_Spall Missing 2024-1.jpg

9-173 TerraCotta_Spall Missing 2024-2.jpg

10-154 TerraCotta_Spall Missing 2024-1.jpg

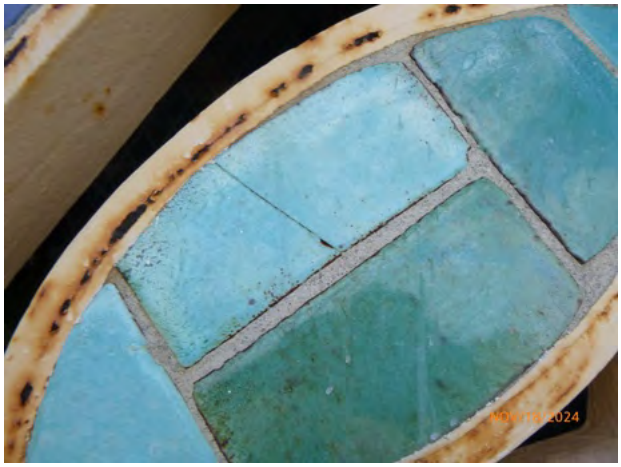
10-154 TerraCotta_Spall Missing 2024-2.jpg

10-155 TerraCotta_Crack Single unit 2024-1.jpg

10-155 TerraCotta_Crack Single unit 2024-2.jpg

10-173 TerraCotta_Crack System units and joints 2024-1.jpg

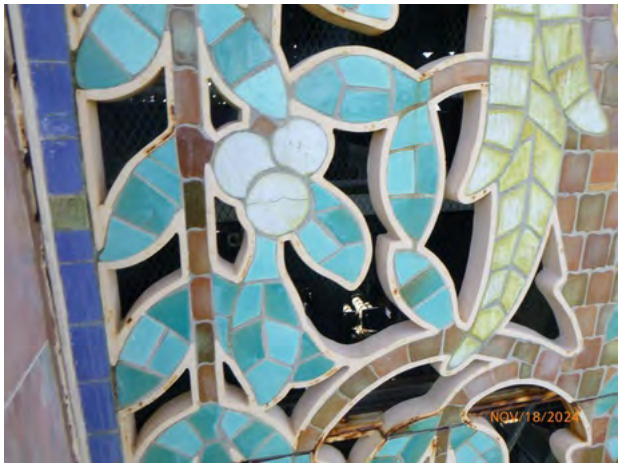
10-173 TerraCotta_Crack System units and joints 2024-2.jpg



10-175 TerraCotta_Crack Single unit 2024-1.jpg

10-175 TerraCotta_Crack Single unit 2024-2.jpg

11-160 TerraCotta_Crack Single unit 2024-1.jpg



11-160 TerraCotta_Crack Single unit 2024-2.jpg

11-173 TerraCotta_Crack Single unit 2024-1.jpg

11-173 TerraCotta_Crack Single unit 2024-2.jpg

12-163 ArchMetal_Corrosion Pitted 2024-1.jpg

12-163 ArchMetal_Corrosion Pitted 2024-2.jpg

12-163 ArchMetal_Corrosion Pitted 2024-3.jpg


12-168 ArchMetal_Corrosion Pitted 2024-1.jpg


12-168 ArchMetal_Corrosion Pitted 2024-2.jpg


12-168 ArchMetal_Corrosion Pitted 2024-3.jpg


13-163 TerraCotta_Crack Single unit 2024-1.jpg

13-163 TerraCotta_Crack Single unit 2024-2.jpg

13-173 ArchMetal_Corrosion Pitted 2024-1.jpg

13-173 ArchMetal_Corrosion Pitted 2024-2.jpg

13-173 ArchMetal_Corrosion Pitted 2024-3.jpg

13-173 TerraCotta_Spall Missing 2024-1.jpg

13-173 TerraCotta_Spall Missing 2024-2.jpg

13-173 TerraCotta_Spall Missing 2024-3.jpg

13-175 TerraCotta_Crack Single unit 2024-1.jpg

13-175 TerraCotta_Crack Single unit 2024-2.jpg

14-158 ArchMetal_Corrosion Pitted 2024-1.jpg

14-158 ArchMetal_Corrosion Pitted 2024-2.jpg

14-158 ArchMetal_Corrosion Pitted 2024-3.jpg


15-158 ArchMetal_Corrosion Fastener rusted 2024-1.jpg


15-163 ArchMetal_Corrosion Pitted 2024-1.jpg

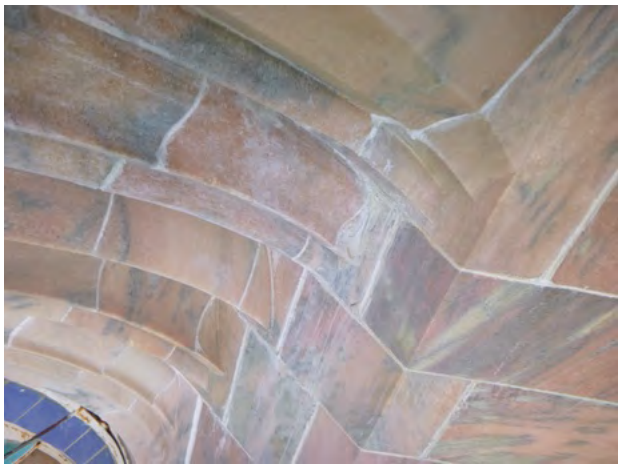

15-164 TerraCotta_Spall Missing 2024-1.jpg


15-167 ArchMetal_Corrosion Pitted 2024-1.jpg


15-172 ArchMetal_Corrosion Pitted 2024-1.jpg


15-173 ArchMetal_Corrosion Fastener rusted 2024-1.jpg


15-179 Stone_SoilStain Efflorescence 2024-1.jpg

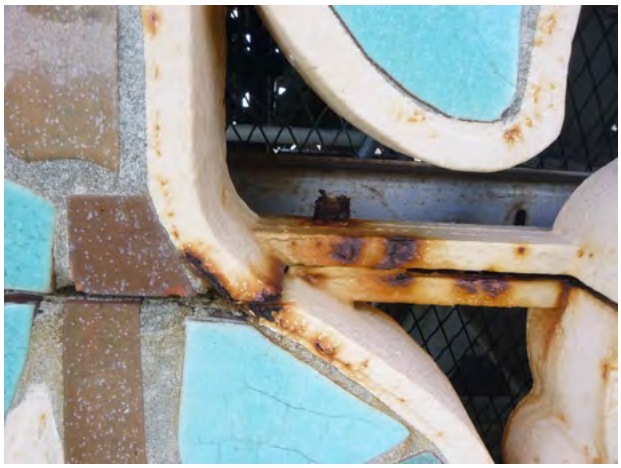

15-179 Stone_SoilStain Efflorescence 2024-2.jpg


16-149 ArchMetal_Corrosion Pitted 2024-1.jpg


16-158 ArchMetal_Corrosion Pitted 2024-1.jpg


16-158 ArchMetal_Corrosion Pitted 2024-2.jpg


16-164 TerraCotta_Crack Single unit 2024-1.jpg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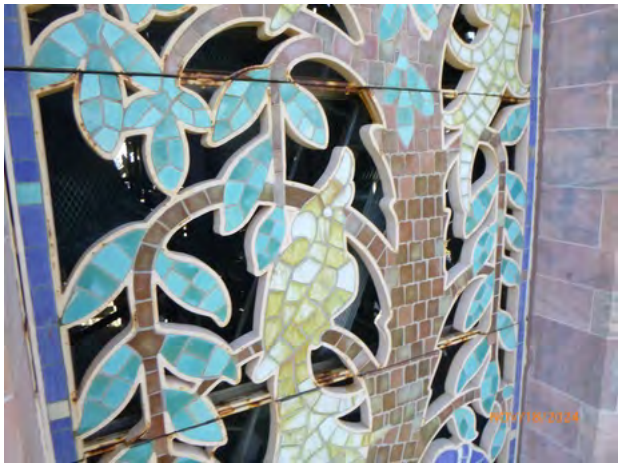
17-179 Stone_SoilStain Leached Salts 2024-1.jpg


18-145 ArchMetal_Corrosion Pitted 2024-1.jpg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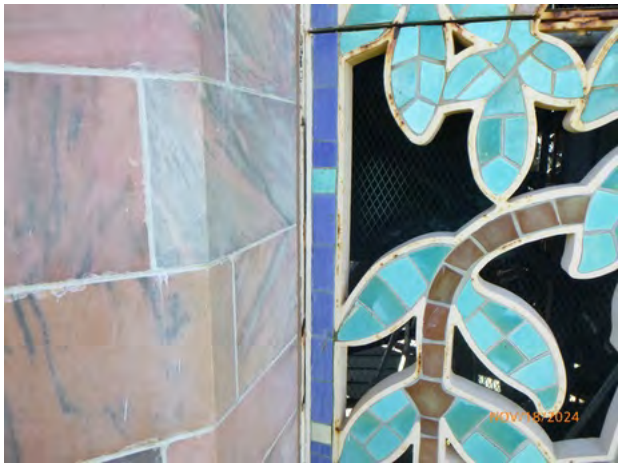
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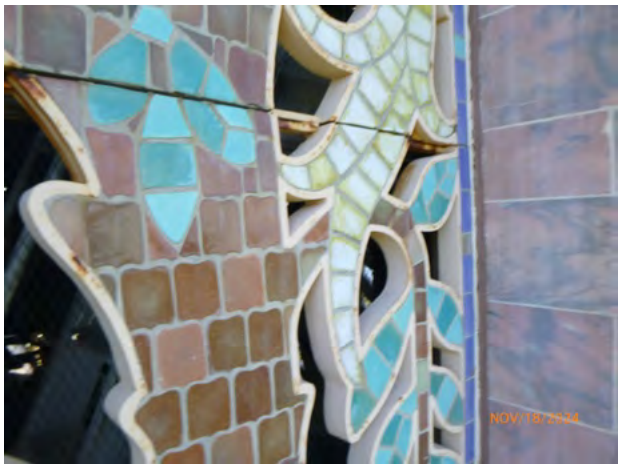
18-154 ArchMetal_Note Photo-general 2024-3.jpg



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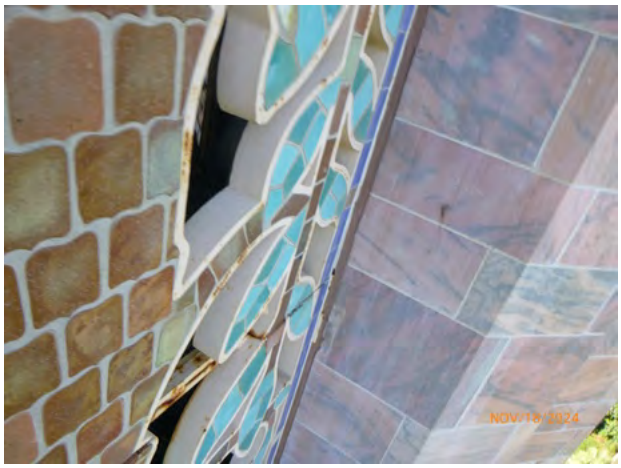
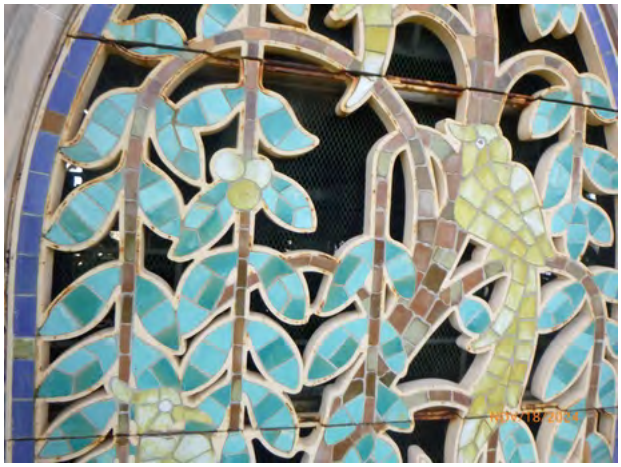


18-154 ArchMetal_Note Photo-general 2024-5.jpg


18-169 ArchMetal_Corrosion Pitted 2024-1.jpg


18-169 ArchMetal_Corrosion Pitted 2024-2.jpg


18-169 ArchMetal_Corrosion Pitted 2024-3.jpg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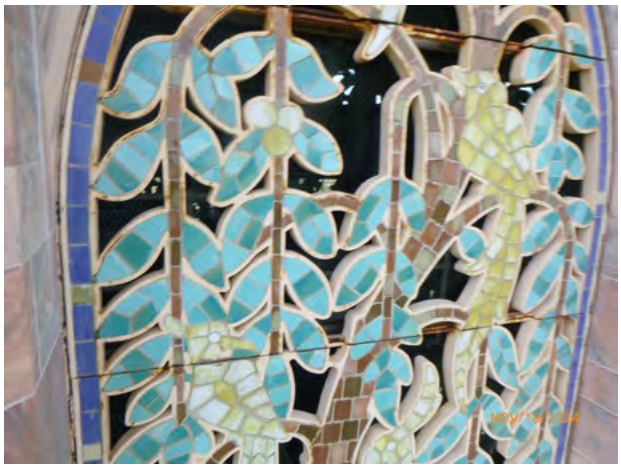
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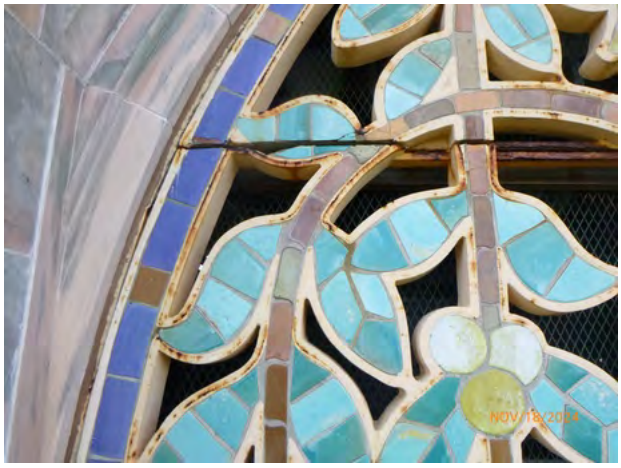
18-169 ArchMetal_Note Photo-general 2024-3.jpg


18-169 ArchMetal_Note Photo-general 2024-4.jpg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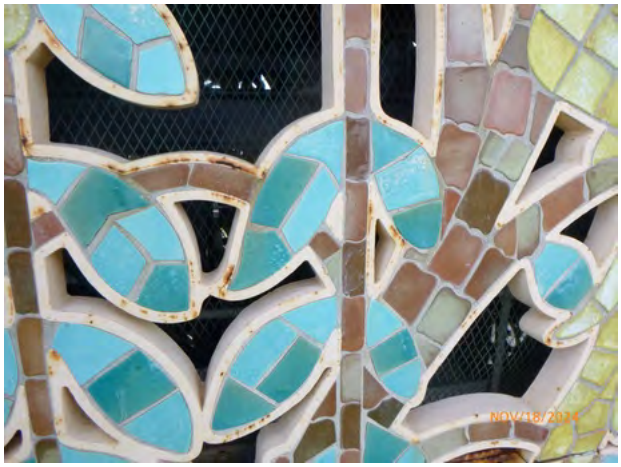
18-169 ArchMetal_Note Photo-general 2024-6.jpg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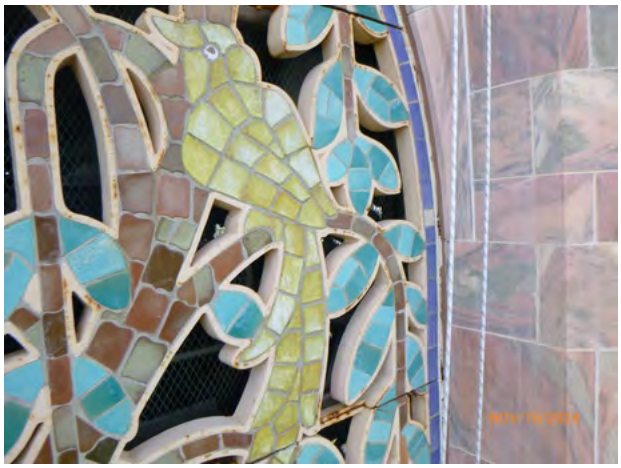
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18-175 ArchMetal_Note Photo-general 2024-1.jpg

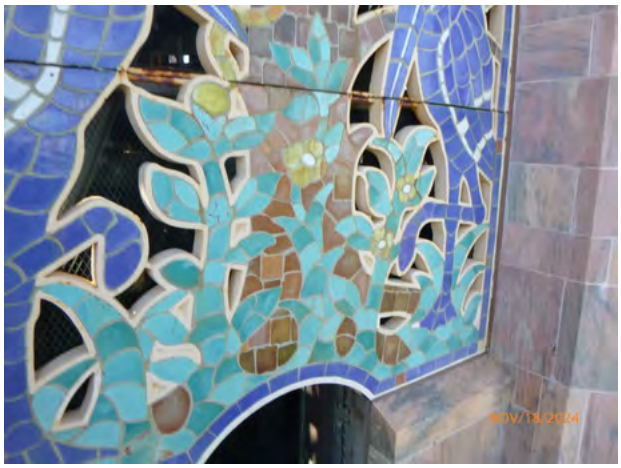

18-175 ArchMetal_Note Photo-general 2024-2.jpg


18-175 ArchMetal_Note Photo-general 2024-3.jpg


18-175 ArchMetal_Note Photo-general 2024-4.jpg


18-175 ArchMetal_Note Photo-general 2024-5.jpg

18-175 ArchMetal_Note Photo-general 2024-6.jpg



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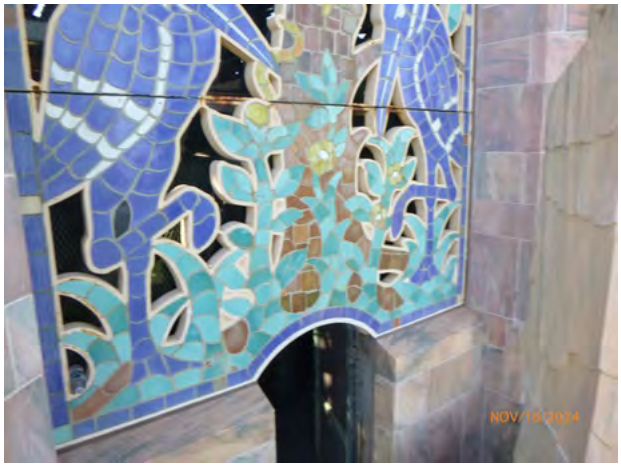

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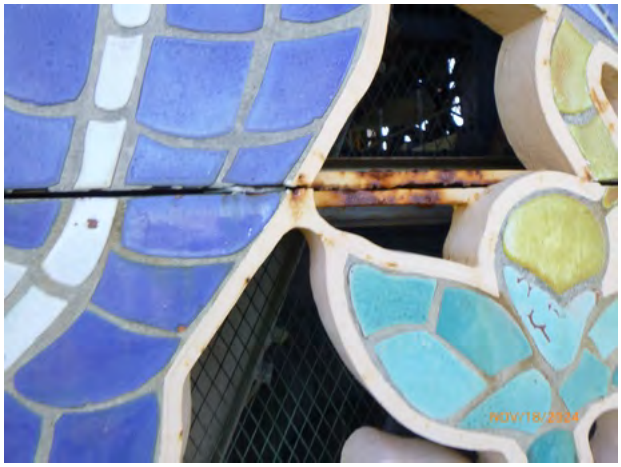

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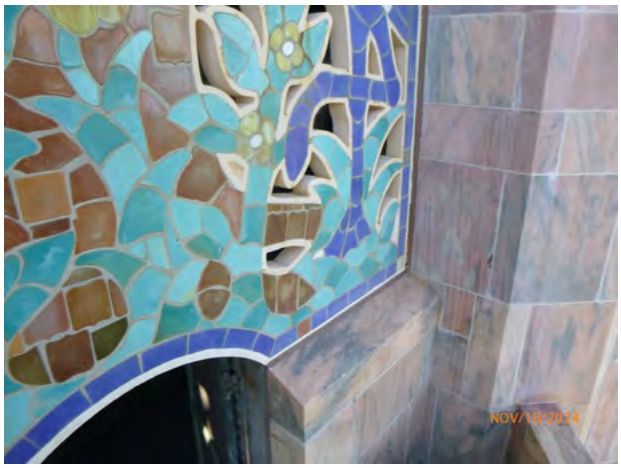

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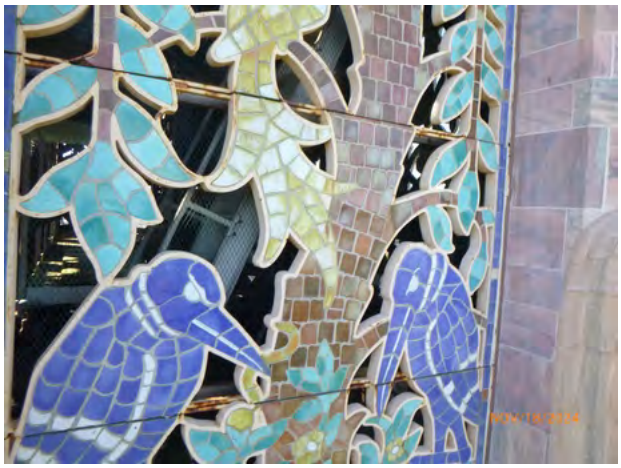

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19-150 ArchMetal_Note Photo-general 2024-4.jpg

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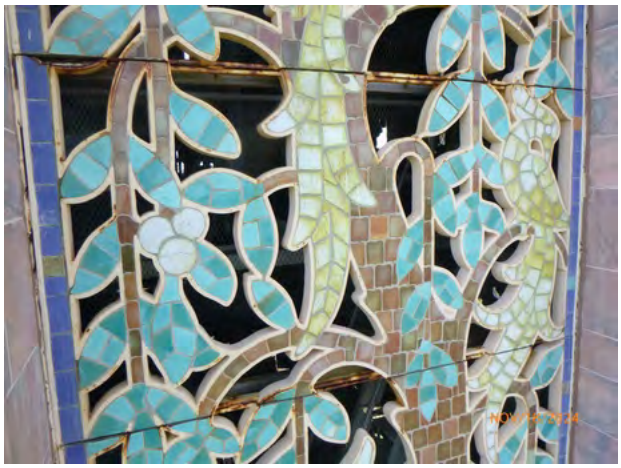

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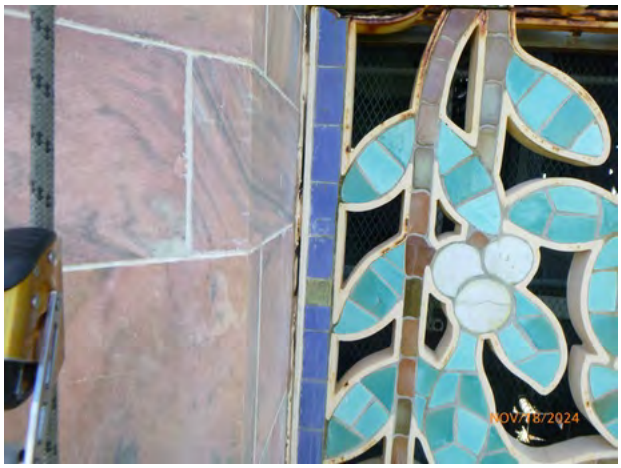

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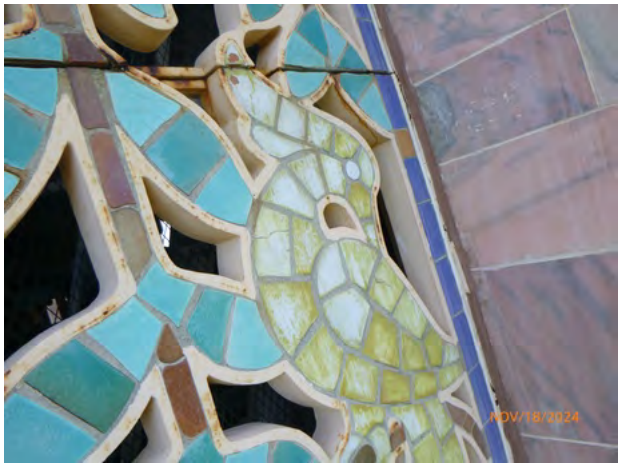

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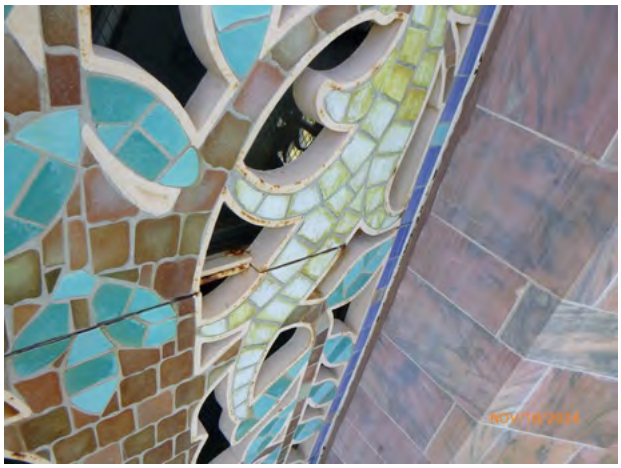
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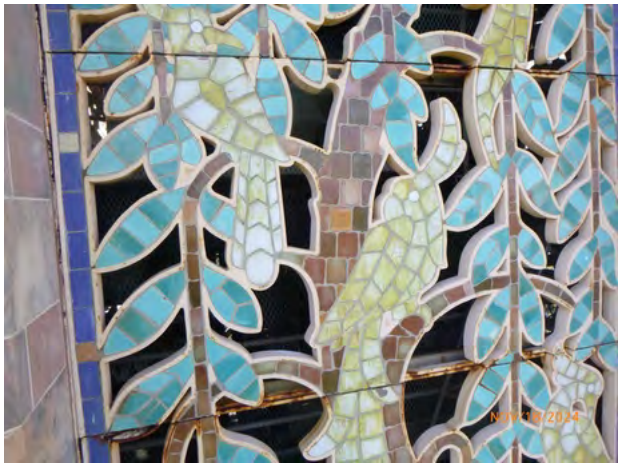
19-159 ArchMetal_Corrosion Pitted 2024-1.jpg


19-159 ArchMetal_Corrosion Pitted 2024-2.jpg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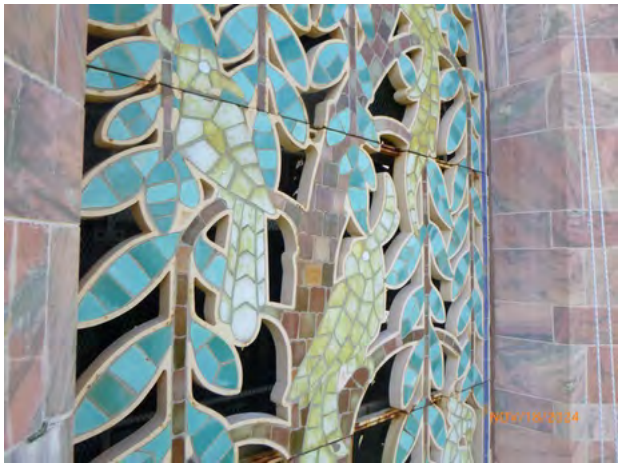

19-164 ArchMetal_Note Photo-general 2024-2.jpg


19-164 ArchMetal_Note Photo-general 2024-3.jpg


23-146 Stone_Spall Removed 2024-1.jpg

28-102 Stone_SoilStain Leached Salts 2024-1.jpg

28-103 Stone_Crack Single unit 2024-1.jpg

28-103 Stone_Crack Single unit 2024-2.jpg

29-119 Stone_SurfLoss Chipped 2024-1.jpg

29-119 Stone_SurfLoss Chipped 2024-2.jpg


30-44 Stone_Crack Single unit 2024-1.jpg


30-136 Stone_SoilStain Leached Salts 2024-1.jpg


31-1 Stone_Repair Patch Failed 2024-1.jpg


31-59 Stone_SoilStain Leached Salts 2024-1.jpg


31-59 Stone_SoilStain Leached Salts 2024-2.jpg


31-59 Stone_SoilStain Leached Salts 2024-3.jpg

31-158 Stone_Joints Mortar Failed 2024-1.jpg

31-158 Stone_Joints Mortar Failed 2024-2.jpg

31-158 Stone_Joints Mortar Failed 2024-3.jpg

31-158 Stone_Joints Mortar Failed 2024-4.jpg


31-158 Stone_Joints Mortar Failed 2024-5.jpg


32-136 Stone_SoilStain Leached Salts 2024-1.jpg

32-136 Stone_SoilStain Leached Salts 2024-2.jpg

32-157 Stone_SurfLoss Chipped 2024-1.jpg

32-157 Stone_SurfLoss Chipped 2024-2.jpg

32-169 Stone_SurfLoss Chipped 2024-1.jpg

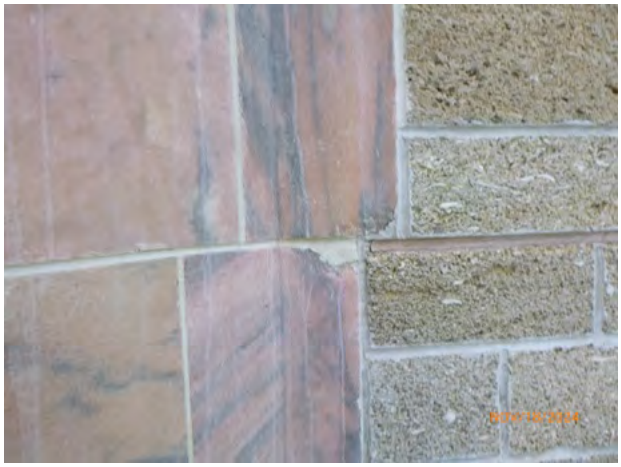
32-169 Stone_SurfLoss Chipped 2024-2.jpg

32-169 Stone_SurfLoss Chipped 2024-3.jpg


32-181 Stone_Joints Mortar Failed 2024-1.jpg


32-181 Stone_Joints Mortar Failed 2024-2.jpg


33-50 Stone_SoilStain Leached Salts 2024-1.jpg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33-80 Stone_SurfLoss Chipped 2024-3.jpg

33-142 Stone_SurfLoss Chipped 2024-1.jpg

33-142 Stone_SurfLoss Chipped 2024-2.jpg

33-146 Stone_Spall Bonded 2024-1.jpg

33-146 Stone_Spall Bonded 2024-2.jpg

33-148 Stone_SoilStain Leached Salts 2024-1.jpg

33-150 Stone_SoilStain Leached Salts 2024-1.jpg

33-150 Stone_SoilStain Leached Salts 2024-2.jpg

33-150 Stone_SoilStain Leached Salts 2024-3.jpg

33-176 Stone_SurfLoss Chipped 2024-1.jpg

33-176 Stone_SurfLoss Chipped 2024-2.jpg

33-176 Stone_SurfLoss Chipped 2024-3.jpg

33-180 Stone_SurfLoss Chipped 2024-1.jpg

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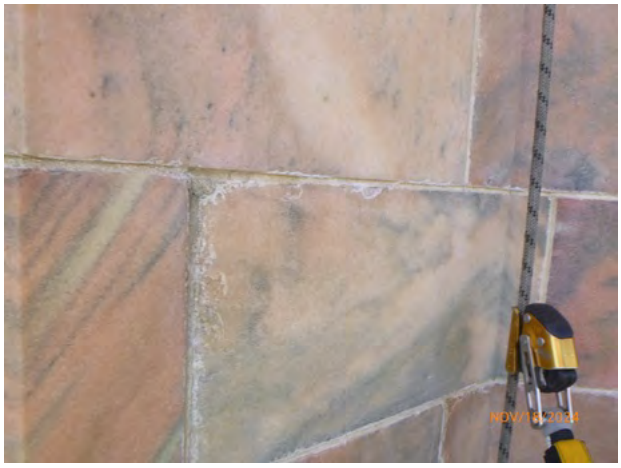
33-180 Stone_SurfLoss Chipped 2024-3.jpg

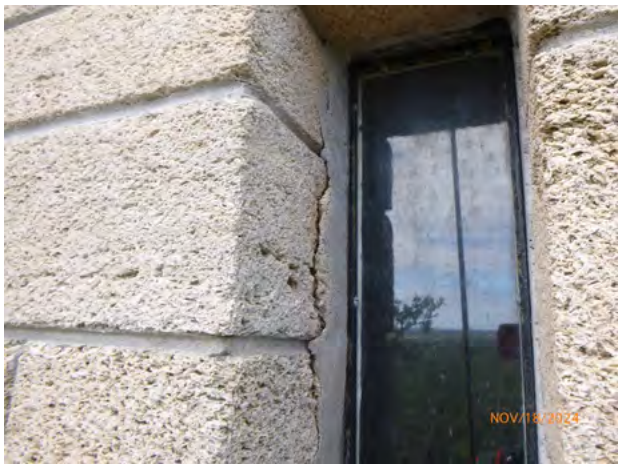
33-181 Stone_SurfLoss Chipped 2024-1.jpg


33-181 Stone_SurfLoss Chipped 2024-2.jpg

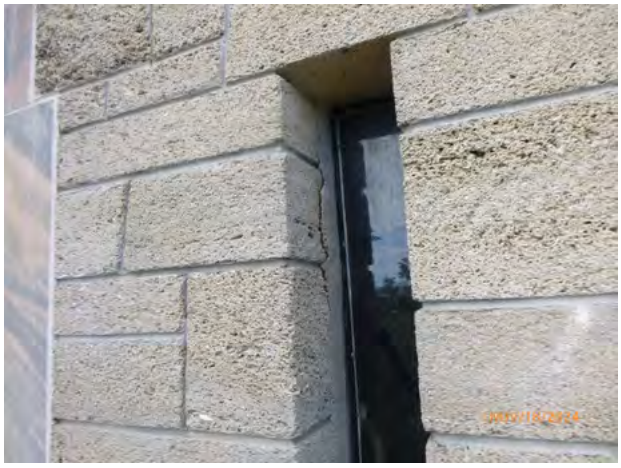

33-188 Stone_Spall Missing 2024-1.jpg

33-188 Stone_Spall Missing 2024-2.jpg

33-188 Stone_Spall Missing 2024-3.jpg



34-56 Stone_Joints Mortar Failed 2024-1.jpg



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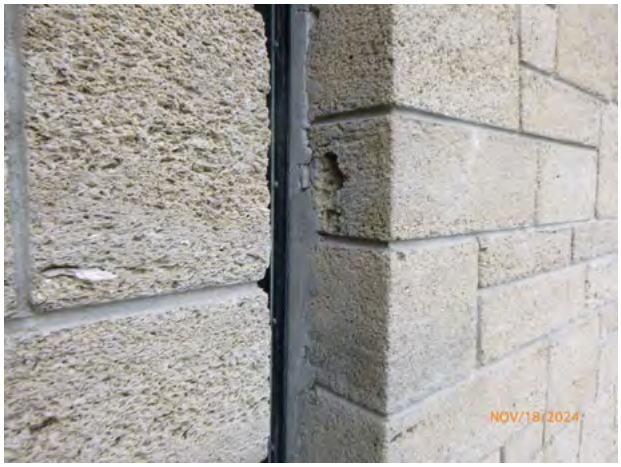
34-56 Stone_Joints Mortar Failed 2024-3.jpg



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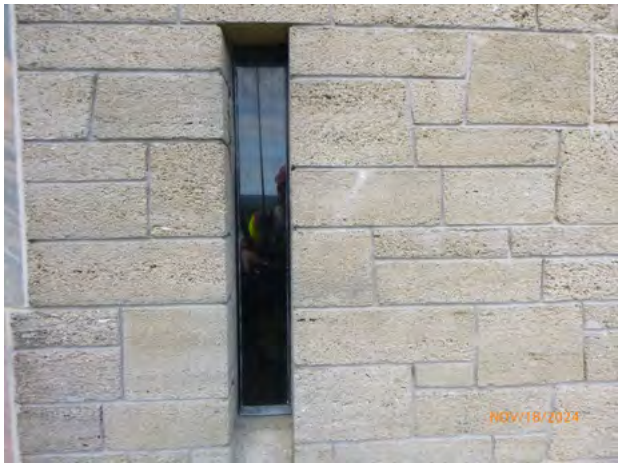


34-56 Stone_Joints Mortar Failed 2024-5.jpg

34-152 Stone_SurfLoss Chipped 2024-1.jpg

34-152 Stone_SurfLoss Chipped 2024-2.jpg

34-156 Stone_SurfLoss Chipped 2024-1.jpg

34-156 Stone_SurfLoss Chipped 2024-2.jpg

34-157 Stone_SoilStain Leached Salts 2024-1.jpg

34-157 Stone_SoilStain Leached Salts 2024-2.jpg


34-157 Stone_SoilStain Leached Salts 2024-3.jpg


34-157 Stone_SoilStain Leached Salts 2024-4.jpg


34-172 Stone_Repair Patch Sound 2024-1.jpg


34-172 Stone_Repair Patch Sound 2024-2.jpg


34-186 Stone_SoilStain Leached Salts 2024-1.jpg


35-114 Stone_Spall Bonded 2024-1.jpg


35-122 Stone_Crack Repair failed 2024-1.jpg


35-122 Stone_Crack Repair failed 2024-2.jpg


35-124 Stone_Crack Repair failed 2024-1.jpg


35-138 Stone_Spall Bonded 2024-1.jpg

35-160 Stone_Spall Removed 2024-1.jpg


35-160 Stone_Spall Removed 2024-2.jpg

35-160 Stone_Spall Removed 2024-3.jpg

35-160 Stone_Spall Removed 2024-4.jpg


35-163 Stone_Spall Missing 2024-1.jpg


35-163 Stone_Spall Missing 2024-2.jpg


35-163 Stone_Spall Missing 2024-3.jpg


35-164 Stone_SurfLoss Chipped 2024-1.jpg

35-164 Stone_SurfLoss Chipped 2024-2.jpg

35-184 Stone_SurfLoss Chipped 2024-1.jpg

35-184 Stone_SurfLoss Chipped 2024-2.jpg

35-191 Stone_Joints Mortar Failed 2024-1.jpg

35-191 Stone_Joints Mortar Failed 2024-2.jpg

35-191 Stone_Joints Mortar Failed 2024-3.jpg

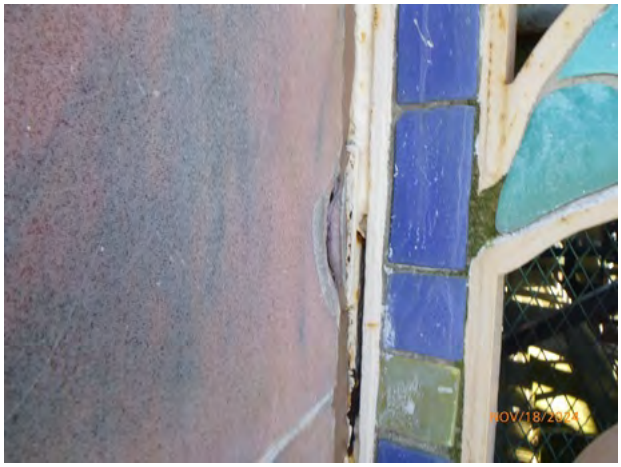
35-195 Stone_SurfLoss Chipped 2024-1.jpg


35-195 Stone_SurfLoss Chipped 2024-2.jpg


35-198 Stone_Spall Missing 2024-1.jpg


35-198 Stone_Spall Missing 2024-2.jpg


36-154 Stone_Spall Bonded 2024-1.jpg


36-154 Stone_Spall Bonded 2024-2.jpg

36-154 Stone_Spall Bonded 2024-3.jpg

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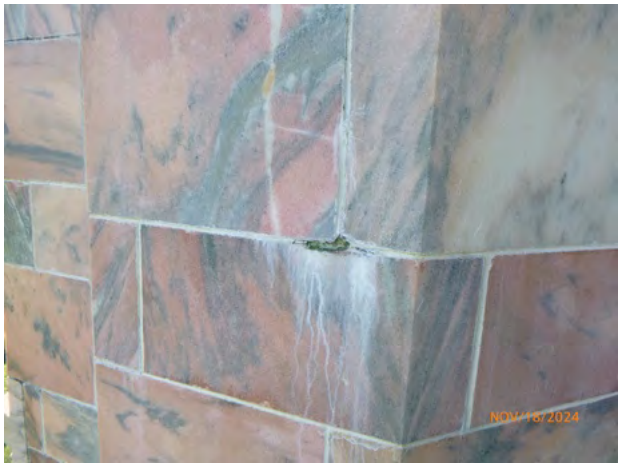
36-162 Stone_SurfLoss Chipped 2024-2.jpg



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36-165 Stone_SoilStain Leached Salts 2024-2.jpg

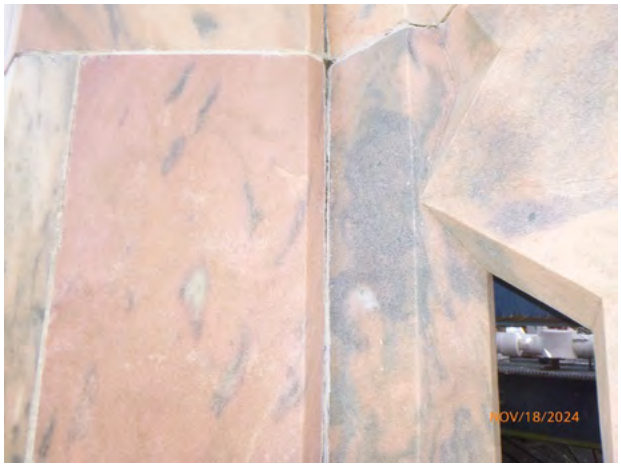
36-165 Stone_SoilStain Leached Salts 2024-3.jpg

36-179 Stone_SoilStain Leached Salts 2024-1.jpg

36-179 Stone_SoilStain Leached Salts 2024-2.jpg

36-185 Stone_Joints Mortar Failed 2024-1.jpg

36-185 Stone_Joints Mortar Failed 2024-2.jpg



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36-185 Stone_Joints Mortar Failed 2024-4.jpg

36-185 Stone_Joints Mortar Failed 2024-5.jpg


37-15 Stone_Crack Single unit 2024-1.jpg


37-43 Stone_Joints Sealant Failed 2024-1.jpg


37-43 Stone_Joints Sealant Failed 2024-2.jpg


37-63 Stone_Joints Sealant Failed 2024-1.jpg


37-63 Stone_Joints Sealant Failed 2024-2.jpg


37-71 Stone_Joints Sealant Failed 2024-1.jpg


37-82 Stone_Joints Sealant Failed 2024-1.jpg


37-82 Stone_Joints Sealant Failed 2024-2.jpg


37-90 Stone_Joints Sealant Failed 2024-1.jpg


37-90 Stone_Joints Sealant Failed 2024-2.jpg


37-95 Stone_Note Photo-general 2024-1.jpg


37-95 Stone_Note Photo-general 2024-2.jpg


37-95 Stone_Note Photo-general 2024-3.jpg

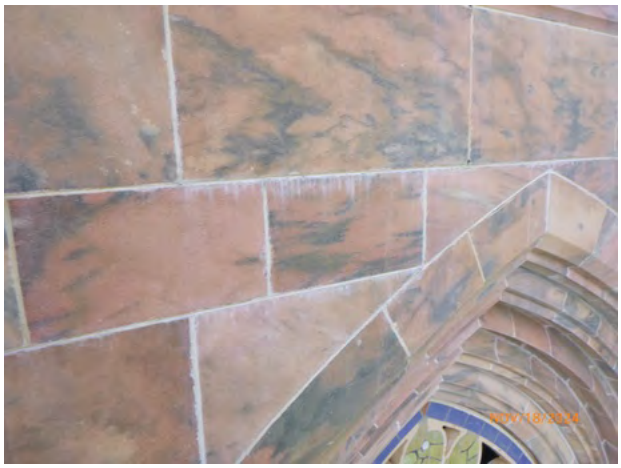

37-137 Test_Area Water test 2024-1.jpg

37-180 Stone_SoilStain Leached Salts 2024-1.jpg

37-180 Stone_SoilStain Leached Salts 2024-2.jpg

37-182 Stone_SoilStain Leached Salts 2024-1.jpg

37-182 Stone_SoilStain Leached Salts 2024-2.jpg



37-182 Stone_SoilStain Leached Salts 2024-3.jpg

37-184 Stone_Joints Mortar Failed 2024-1.jpg

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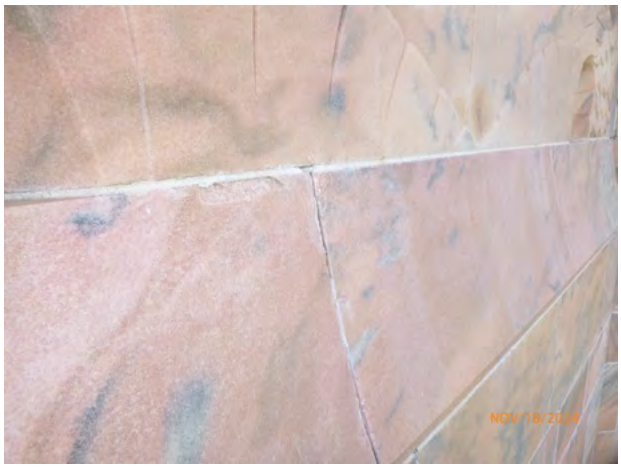
37-184 Stone_SurfLoss Chipped 2024-1.jpg

37-184 Stone_SurfLoss Chipped 2024-2.jpg


37-184 Stone_SurfLoss Chipped 2024-3.jpg


38-35 Stone_Note Photo-general 2024-1.jpg

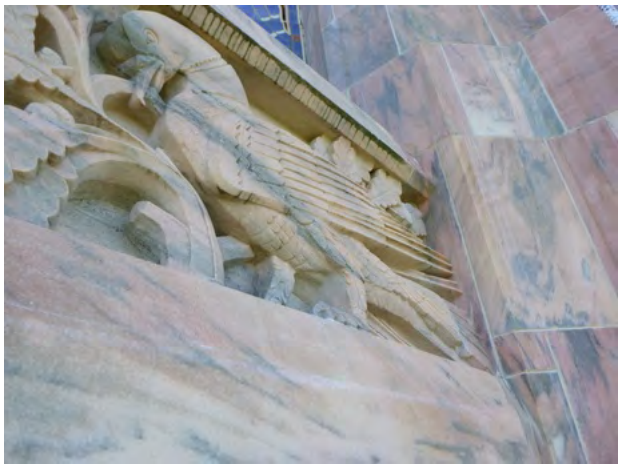

38-35 Stone_Note Photo-general 2024-2.jpg


38-35 Stone_Note Photo-general 2024-3.jpg


38-53 Stone_Joints Sealant Failed 2024-1.jpg


38-140 Stone_Note Photo-general 2024-1.jpg


38-140 Stone_Note Photo-general 2024-2.jpg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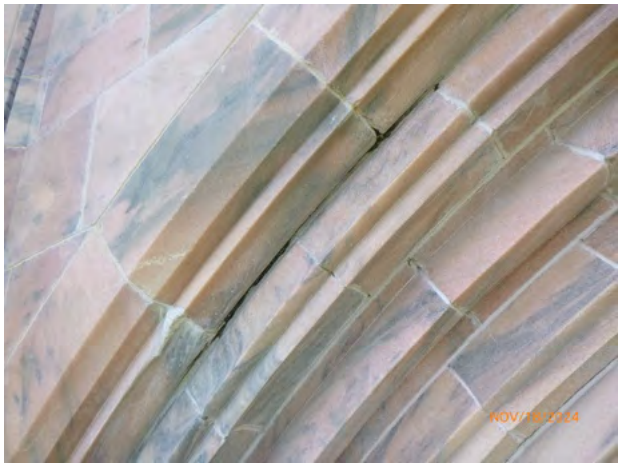
38-140 Stone_Note Photo-general 2024-4.jpg


38-181 Stone_Joints Mortar Failed 2024-1.jpg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38-181 Stone_Joints Mortar Failed 2024-3.jpg

38-188 Stone_Joints Mortar Failed 2024-1.jpg

38-188 Stone_Joints Mortar Failed 2024-2.jpg

38-188 Stone_Joints Mortar Failed 2024-3.jpg

38-188 Stone_Joints Mortar Failed 2024-4.jpg


39-91 Stone_Spall Bonded 2024-1.jpg


40-82 Stone_Spall Bonded 2024-1.jpg


40-183 Stone_SurfLoss Chipped 2024-1.jpg


40-183 Stone_SurfLoss Chipped 2024-2.jpg


40-188 Stone_Note Photo-general 2024-1.jpg


40-188 Stone_Note Photo-general 2024-2.jpg


40-188 Stone_Note Photo-general 2024-3.jpg


40-188 Stone_Note Photo-general 2024-4.jpg


40-193 Stone_Joints Mortar Failed 2024-1.jpg


41-83 Stone_Crack Single unit 2024-1.jpg


41-138 Stone_SurfLoss Chipped 2024-1.jpg


41-160 Stone_SurfLoss Chipped 2024-1.jpg


41-163 Stone_Spall Missing 2024-1.jpg


41-168 Stone_Spall Missing 2024-1.jpg


41-169 Stone_Crack Single unit 2024-1.jpg

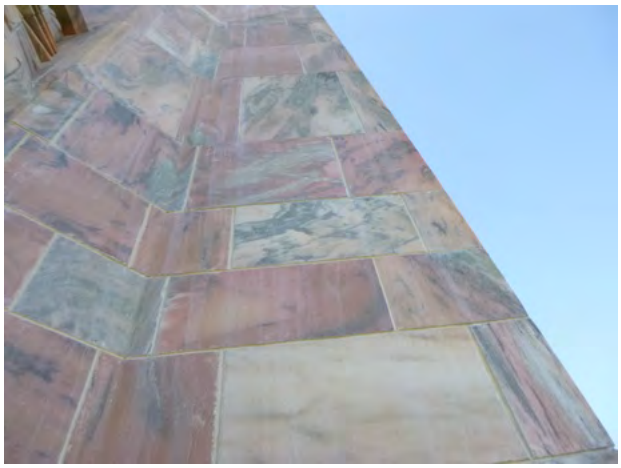

41-172 Stone_Spall Bonded 2024-1.jpg


41-172 Stone_Spall Bonded 2024-2.jpg


41-180 Stone_SurfLoss Friable 2024-1.jpg


41-185 Stone_Joints Mortar Failed 2024-1.jpg


41-190 Stone_SurfLoss Chipped 2024-1.jpg


42-128 Stone_SoilStain Efflorescence 2024-1.jpg


42-128 Stone_SoilStain Efflorescence 2024-2.jpg


42-128 Stone_SoilStain Efflorescence 2024-3.jpg


42-147 Stone_SurfLoss Chipped 2024-1.jpg


42-152 Stone_Spall Bonded 2024-1.jpg


42-169 Stone_SurfLoss Chipped 2024-1.jpg


42-171 Stone_Spall Bonded 2024-1.jpg


42-172 Stone_SoilStain Leached Salts 2024-1.jpg


42-180 Stone_Spall Missing 2024-1.jpg


42-184 Stone_SoilStain Efflorescence 2024-1.jpg


42-184 Stone_SoilStain Efflorescence 2024-2.jpg


42-192 Stone_Joints Mortar Failed 2024-1.jpg


42-192 Stone_Joints Mortar Failed 2024-2.jpg


43-26 Stone_SoilStain Biological 2024-1.jpg


43-154 Stone_Joints Mortar Failed 2024-1.jpg


43-154 Stone_Joints Mortar Failed 2024-2.jpg


45-0 Stone_Crack Repair failed 2024-1.jpg


45-93 Stone_Embedment Ferrous Embedment 2024-1.jpg


45-185 Stone_Joints Mortar Failed 2024-1.jpg

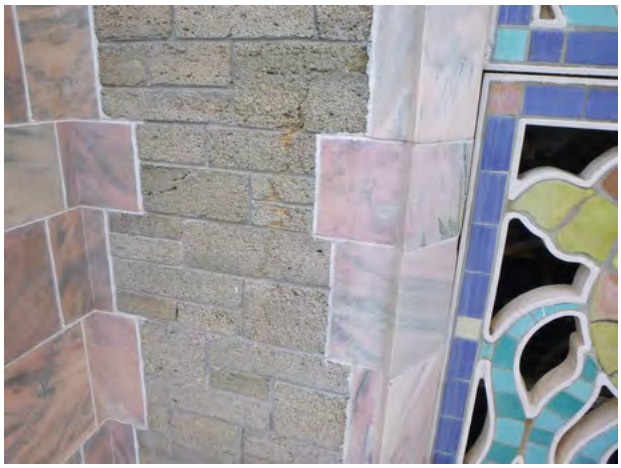

45-191 Stone_SurfLoss Chipped 2024-1.jpg


46-101 Stone_Spall Bonded 2024-1.jpg


47-110 Stone_Crack System units and joints 2024-1.jpg


47-110 Stone_Crack System units and joints 2024-2.jpg

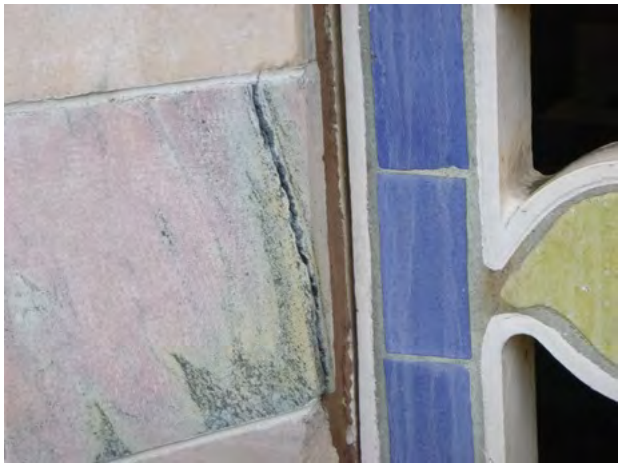

47-110 Stone_Crack System units and joints 2024-3.jpg


47-110 Stone_Crack System units and joints 2024-4.jpg


48-14 Stone_Crack Single unit 2024-1.jpg


48-101 Stone_Crack Single unit 2024-1.jpg


48-105 Stone_Crack Single unit 2024-1.jpg


48-108 Stone_Crack Single unit 2024-1.jpg


48-108 Stone_Spall Missing 2024-1.jpg

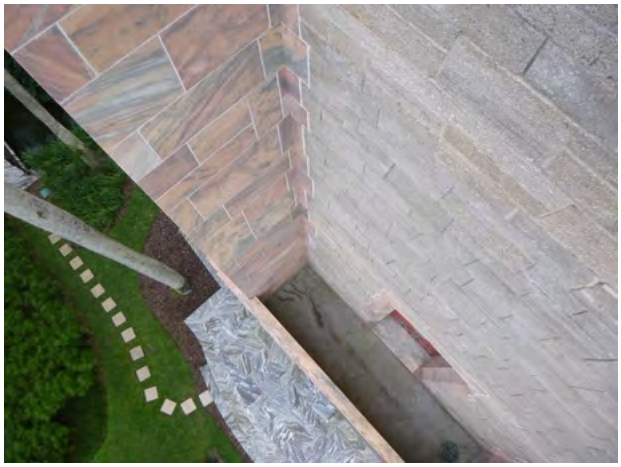

49-30 Stone_Crack Repair failed 2024-1.jpg


49-30 Stone_Crack Repair failed 2024-2.jpg


49-30 Stone_Crack Repair failed 2024-3.jpg


50-53 Stone_Note Photo-general 2024-1.jpg


50-53 Stone_Note Photo-general 2024-2.jpg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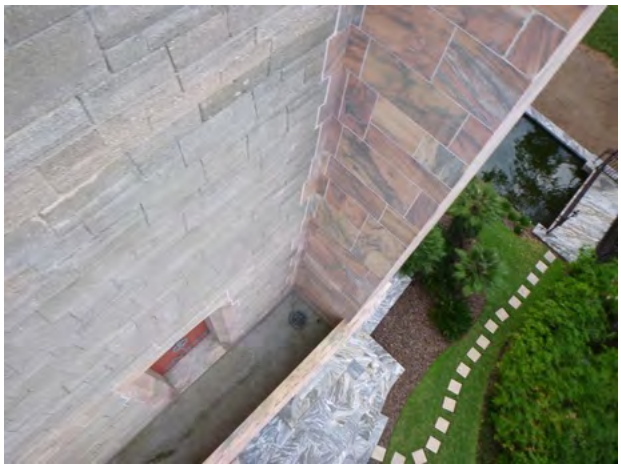
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50-87 Stone_Spall Bonded 2024-2.jpg


50-87 Stone_Spall Bonded 2024-3.jpg


50-88 Stone_Spall Removed 2024-1.jpg


50-88 Stone_Spall Removed 2024-2.jpg


50-88 Stone_Spall Removed 2024-3.jpg


50-92 Stone_Joints Sealant Failed 2024-1.jpg


50-187 Stone_SoilStain Biological 2024-1.jpg


50-187 Stone_SoilStain Biological 2024-2.jpg


50-189 Stone_Note Photo-general 2024-1.jpg


50-189 Stone_Note Photo-general 2024-2.jpg


50-189 Stone_Note Photo-general 2024-3.jpg


50-189 Stone_Note Photo-general 2024-4.jpg


51-87 Stone_Spall Removed + Steel 2024-1.jpg

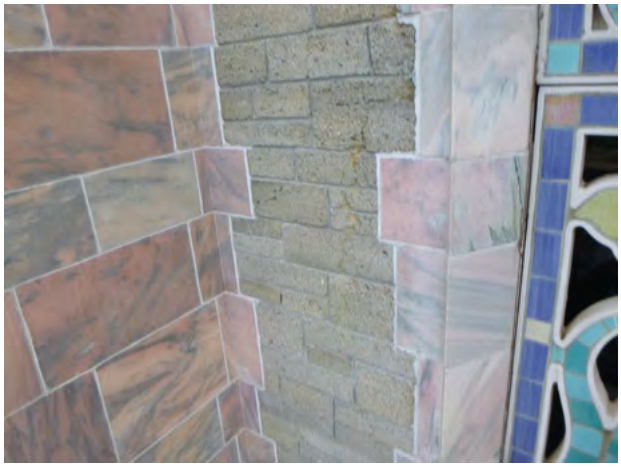

51-87 Stone_Spall Removed + Steel 2024-2.jpg


51-87 Stone_Spall Removed + Steel 2024-3.jpg


51-87 Stone_Spall Removed + Steel 2024-4.jpg


51-111 Stone_Note Photo-general 2024-1.jpg


51-111 Stone_Note Photo-general 2024-2.jpg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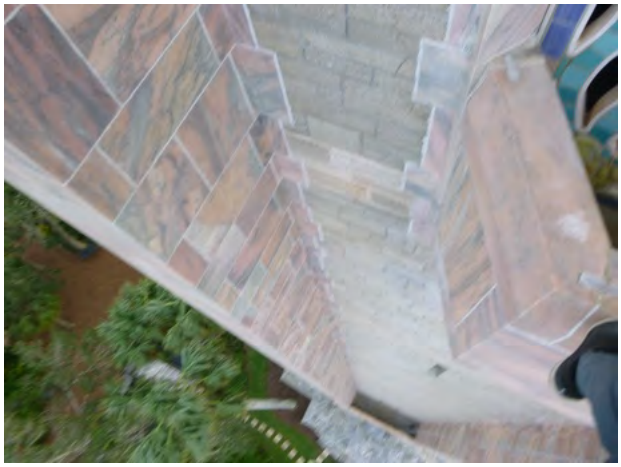
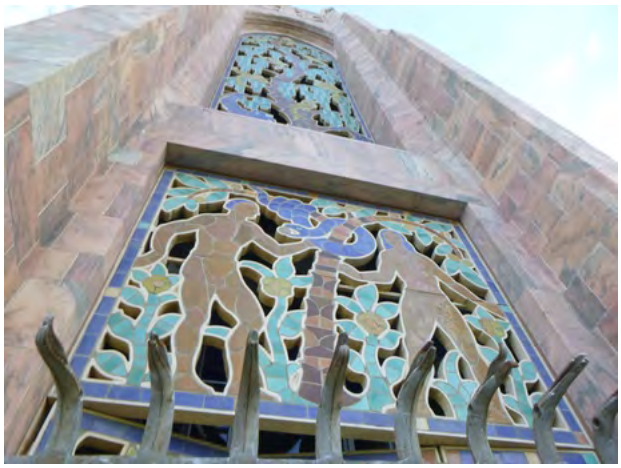

51-111 Stone_Note Photo-general 2024-4.jpg


51-111 Stone_Note Photo-general 2024-5.jpg


51-111 Stone_Note Photo-general 2024-6.jpg


51-122 Stone_Note Photo-general 2024-1.jpg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51-122 Stone_Note Photo-general 2024-4.jpg


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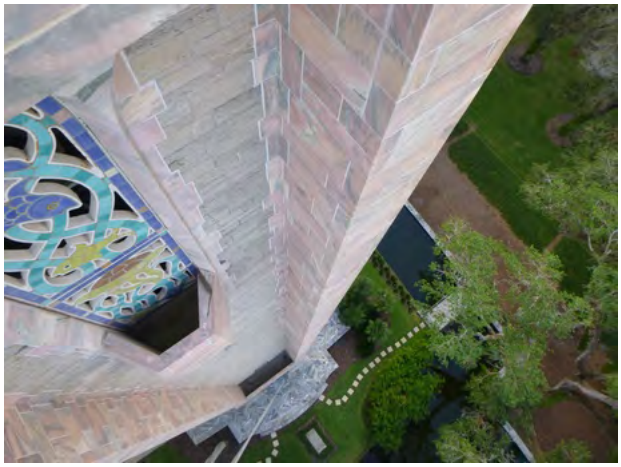

51-122 Stone_Note Photo-general 2024-6.jpg


51-193 Stone_SoilStain Biological 2024-1.jpg


52-31 Stone_SoilStain Biological 2024-1.jpg


52-31 Stone_SoilStain Biological 2024-2.jpg


52-104 Stone_SoilStain Biological 2024-1.jpg


53-103 Stone_Crack System units and joints 2024-1.jpg


54-105 Stone_Spall Missing 2024-1.jpg


54-138 Stone_Crack Single unit 2024-1.jpg


55-1 Stone_Joints Mortar Failed 2024-1.jpg


55-1 Stone_Joints Mortar Failed 2024-2.jpg


55-1 Stone_Joints Mortar Failed 2024-3.jpg


55-1 Stone_Joints Mortar Failed 2024-4.jpg


55-1 Stone_Joints Mortar Failed 2024-5.jpg


55-85 Stone_Spall Bonded 2024-1.jpg

57-161 Stone_Crack Single unit 2024-1.jpg

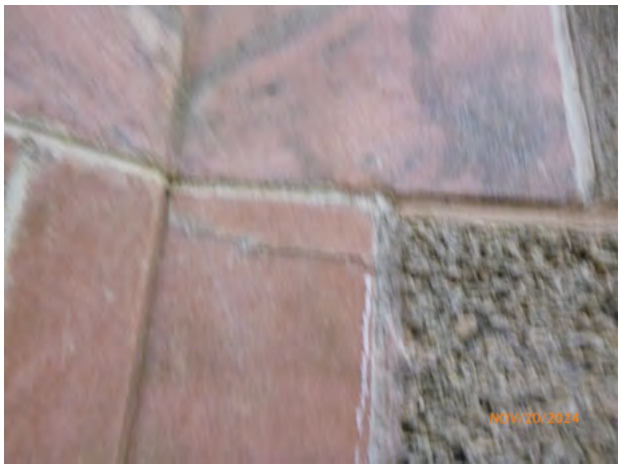
58-157 Stone_Joints Mortar Failed 2024-1.jpg

58-157 Stone_Joints Mortar Failed 2024-2.jpg

58-157 Stone_Joints Mortar Failed 2024-3.jpg


59-26 Stone_SoilStain Biological 2024-1.jpg


59-128 Stone_Crack Single unit 2024-1.jpg


59-128 Stone_Crack Single unit 2024-2.jpg


59-128 Stone_Crack Single unit 2024-3.jpg


59-142 Stone_SurfLoss Chipped 2024-1.jpg


59-142 Stone_SurfLoss Chipped 2024-2.jpg


59-177 Stone_SoilStain Leached Salts 2024-1.jpg

59-177 Stone_SoilStain Leached Salts 2024-2.jpg

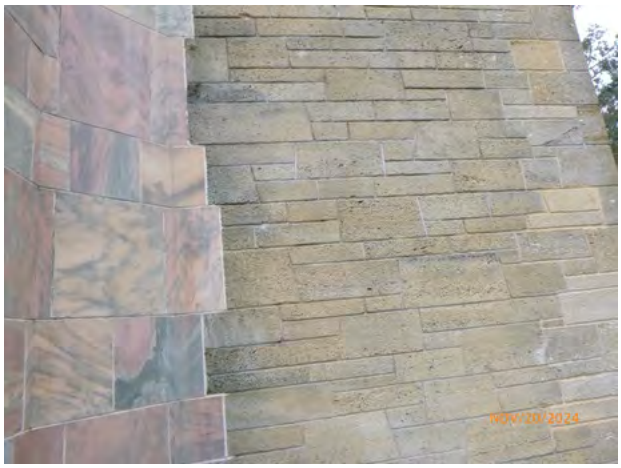

60-70 Stone_Crack Single unit 2024-1.jpg


60-70 Stone_Crack Single unit 2024-2.jpg


60-70 Stone_Crack Single unit 2024-3.jpg

60-139 Stone_Repair Patch Removed 2024-1.jpg

60-139 Stone_Repair Patch Removed 2024-2.jpg


61-13 Stone_SoilStain Biological 2024-1.jpg


61-13 Stone_SoilStain Biological 2024-2.jpg


61-13 Stone_SoilStain Biological 2024-3.jpg


61-13 Stone_SoilStain Biological 2024-4.jpg

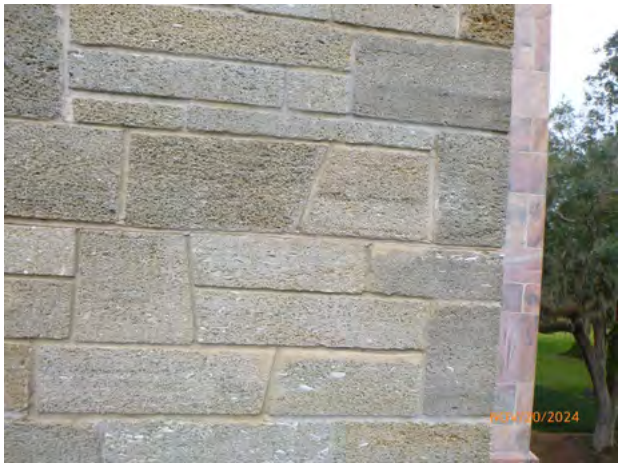

61-33 Stone_SoilStain Biological 2024-1.jpg


61-33 Stone_SoilStain Biological 2024-2.jpg


61-37 Stone_Joints Sealant Failed 2024-1.jpg


61-37 Stone_Joints Sealant Failed 2024-2.jpg


61-37 Stone_Joints Sealant Failed 2024-3.jpg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61-59 Stone_Joints Sealant Failed 2024-1.jpg


61-59 Stone_Joints Sealant Failed 2024-2.jpg


61-59 Stone_Joints Sealant Failed 2024-3.jpg


61-59 Stone_Joints Sealant Failed 2024-4.jpg


61-71 Stone_Joints Sealant Failed 2024-1.jpg


61-71 Stone_Joints Sealant Failed 2024-2.jpg


61-71 Stone_Joints Sealant Failed 2024-3.jpg


61-90 Stone_Joints Sealant Failed 2024-1.jpg


61-90 Stone_Joints Sealant Failed 2024-2.jpg


61-90 Stone_Joints Sealant Failed 2024-3.jpg


61-90 Stone_Joints Sealant Failed 2024-4.jpg


61-101 Stone_Joints Sealant Failed 2024-1.jpg


61-101 Stone_Joints Sealant Failed 2024-2.jpg


61-101 Stone_Joints Sealant Failed 2024-3.jpg


61-101 Stone_Joints Sealant Failed 2024-4.jpg


61-109 Stone_Joints Sealant Failed 2024-1.jpg


61-109 Stone_Joints Sealant Failed 2024-2.jpg


61-109 Stone_Joints Sealant Failed 2024-3.jpg


61-109 Stone_Joints Sealant Failed 2024-4.jpg


61-121 Stone_Joints Sealant Failed 2024-1.jpg


61-121 Stone_Joints Sealant Failed 2024-2.jpg


61-121 Stone_Joints Sealant Failed 2024-3.jpg


61-121 Stone_Joints Sealant Failed 2024-4.jpg


61-121 Stone_Joints Sealant Failed 2024-5.jpg


61-127 Stone_Joints Sealant Failed 2024-1.jpg


61-127 Stone_Joints Sealant Failed 2024-2.jpg


61-127 Stone_Joints Sealant Failed 2024-3.jpg

62-26 Stone_SoilStain Biological 2024-1.jpg


62-26 Stone_SoilStain Biological 2024-2.jpg


62-26 Stone_SoilStain Biological 2024-3.jpg


62-46 Stone_Joints Sealant Failed 2024-1.jpg


62-46 Stone_Joints Sealant Failed 2024-2.jpg


62-46 Stone_Joints Sealant Failed 2024-3.jpg

62-46 Stone_Joints Sealant Failed 2024-4.jpg


62-81 Stone_Joints Sealant Failed 2024-1.jpg


62-81 Stone_Joints Sealant Failed 2024-2.jpg

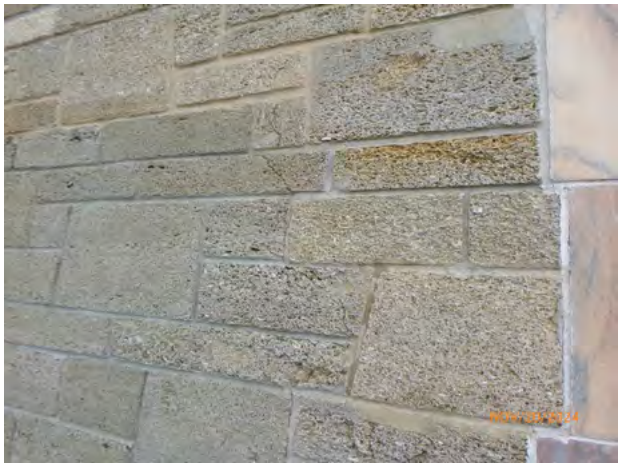

62-81 Stone_Joints Sealant Failed 2024-3.jpg


62-81 Stone_Joints Sealant Failed 2024-4.jpg

63-83 Stone_Repair Patch Sound 2024-1.jpg

64-70 Stone_Repair Patch Sound 2024-1.jpg

65-116 Stone_Crack System units and joints 2024-1.jpg



65-116 Stone_Crack System units and joints 2024-2.jpg

65-116 Stone_Crack System units and joints 2024-3.jpg

65-116 Stone_Crack System units and joints 2024-4.jpg


65-116 Stone_Crack System units and joints 2024-5.jpg


65-116 Stone_Crack System units and joints 2024-6.jpg


65-136 Stone_SoilStain Biological 2024-1.jpg


65-136 Stone_SoilStain Biological 2024-2.jpg


65-136 Stone_SoilStain Biological 2024-3.jpg


66-32 Stone_Crack System units and joints 2024-1.jpg

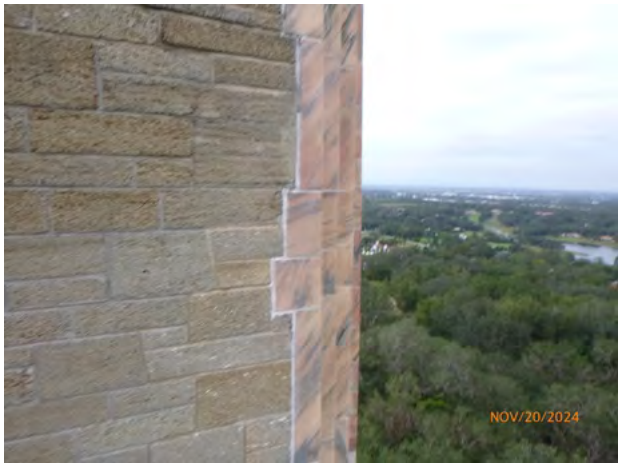

66-32 Stone_Crack System units and joints 2024-2.jpg

66-77 Stone_Crack Single unit 2024-1.jpg


66-77 Stone_Crack Single unit 2024-2.jpg


66-77 Stone_Crack Single unit 2024-3.jpg


66-77 Stone_Crack Single unit 2024-4.jpg



66-132 Stone_Crack System units and joints 2024-1.jpg

66-132 Stone_Crack System units and joints 2024-2.jpg

66-132 Stone_Crack System units and joints 2024-3.jpg

66-132 Stone_Crack System units and joints 2024-4.jpg


66-132 Stone_Crack System units and joints 2024-5.jpg


66-132 Stone_Crack System units and joints 2024-6.jpg


67-101 Stone_Crack Repair failed 2024-1.jpg

67-101 Stone_Crack Repair failed 2024-2.jpg


67-108 Stone_Crack Repair failed 2024-1.jpg

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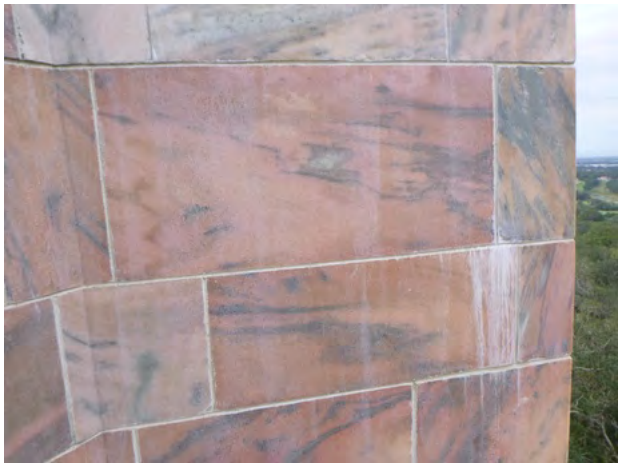
67-108 Stone_Crack Repair failed 2024-3.jpg


68-104 Stone_Note Photo-general 2024-1.jpg

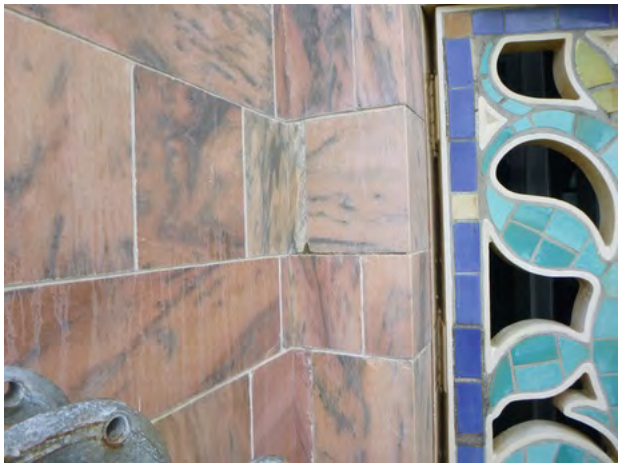

68-104 Stone_Note Photo-general 2024-2.jpg


68-104 Stone_Note Photo-general 2024-3.jpg


70-97 Stone_SoilStain Leached Salts 2024-1.jpg


72-46 Stone_Crack Single unit 2024-1.jpg


79-161 Stone_Spall Bonded 2024-1.jpg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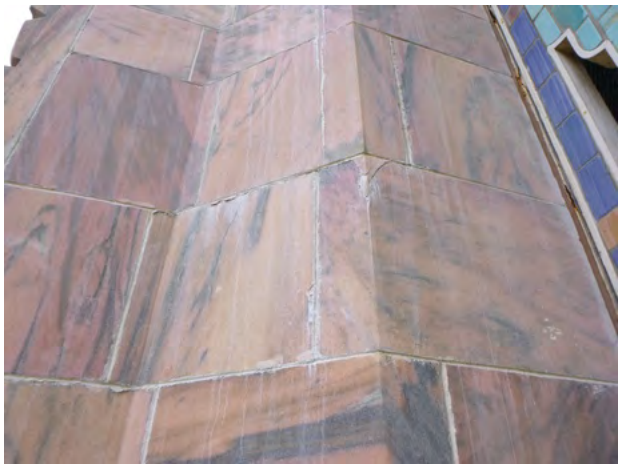
80-129 Stone_SurfLoss Chipped 2024-2.jpg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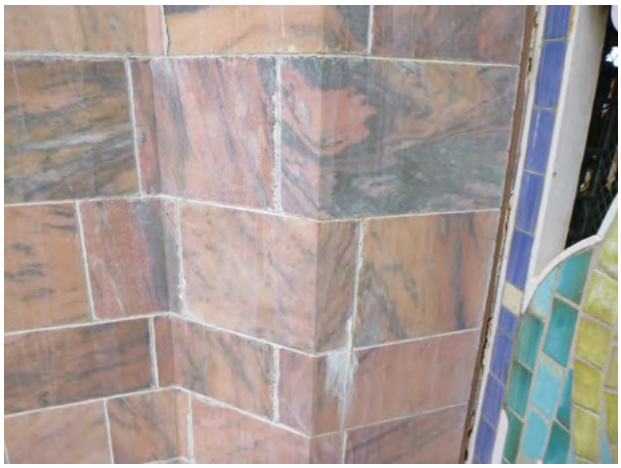
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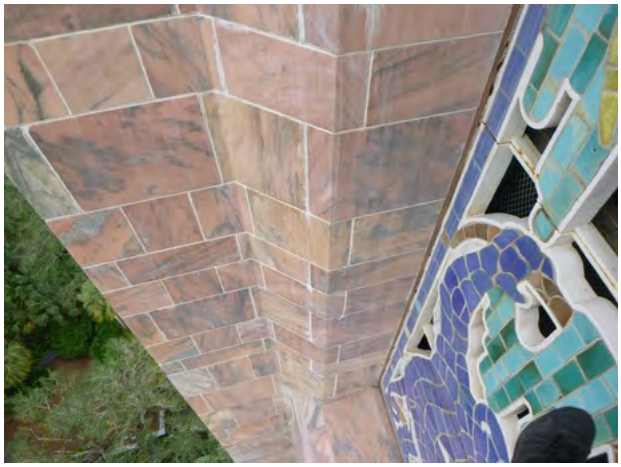
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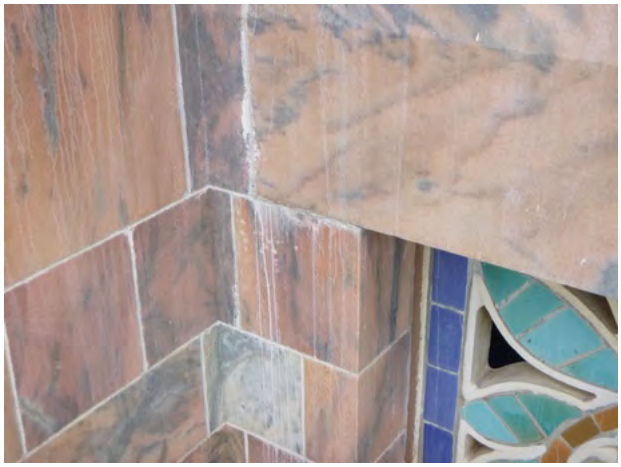
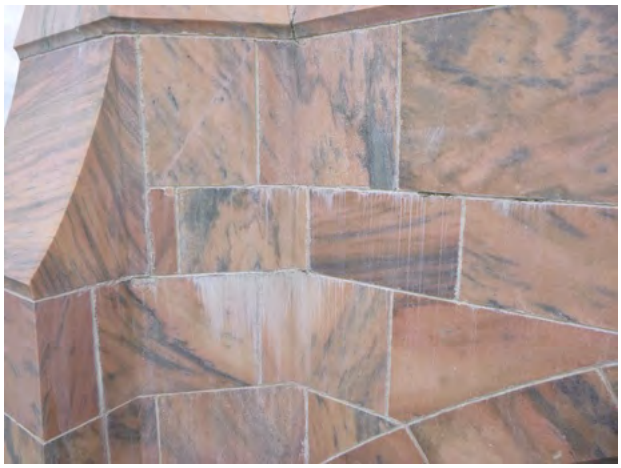

81-137 Stone_SoilStain Leached Salts 2024-1.jpg


82-162 ArchMetal_Corrosion Pitted 2024-1.jpg


82-162 ArchMetal_Corrosion Pitted 2024-2.jpg


83-173 ArchMetal_Corrosion Pitted 2024-1.jpg


84-181 Stone_SoilStain Leached Salts 2024-1.jpg


85-154 ArchMetal_Corrosion Fastener rusted 2024-1.jpg


85-154 ArchMetal_Corrosion Surface 2024-1.jpg


85-154 ArchMetal_Corrosion Surface 2024-2.jpg


85-159 ArchMetal_Corrosion Surface 2024-1.jpg


85-179 Stone_SoilStain Leached Salts 2024-1.jpg


86-149 ArchMetal_Corrosion Surface 2024-1.jpg


86-149 ArchMetal_Corrosion Surface 2024-2.jpg


86-175 TerraCotta_Crack Single unit 2024-1.jpg


87-127 ArchMetal_Corrosion Surface 2024-1.jpg


87-127 ArchMetal_Corrosion Surface 2024-2.jpg


87-133 ArchMetal_Corrosion Surface 2024-1.jpg


87-133 ArchMetal_Corrosion Surface 2024-2.jpg


87-167 ArchMetal_Coating Coating Failed 2024-1.jpg


87-167 ArchMetal_Coating Coating Failed 2024-2.jpg


88-111 TerraCotta_Spall Missing 2024-1.jpg


88-150 TerraCotta_Crack Single unit 2024-1.jpg


89-157 TerraCotta_Crack Single unit 2024-1.jpg


89-174 TerraCotta_Crack Single unit 2024-1.jpg


89-178 Stone_Joints Mortar Failed 2024-1.jpg


90-133 TerraCotta_Crack Single unit 2024-1.jpg


90-168 ArchMetal_Corrosion Surface 2024-1.jpg


90-173 ArchMetal_Corrosion Pitted 2024-1.jpg


90-181 Stone_SoilStain Leached Salts 2024-1.jpg


92-166 ArchMetal_Corrosion Pitted 2024-1.jpg


92-166 ArchMetal_Corrosion Pitted 2024-2.jpg


92-178 Stone_SoilStain Leached Salts 2024-1.jpg


94-138 Stone_SurfLoss Chipped 2024-1.jpg


95-138 Stone_SoilStain Leached Salts 2024-1.jpg

111-149 TerraCotta_SurfLoss Glaze loss 2024-1.jpg

111-149 TerraCotta_SurfLoss Glaze loss 2024-2.jpg

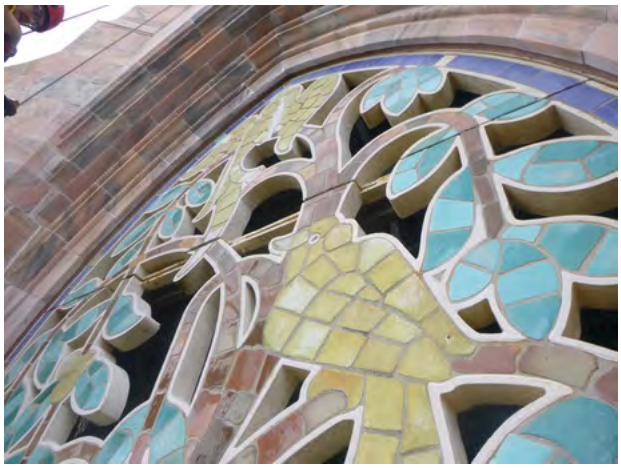
111-169 TerraCotta_SurfLoss Glaze loss 2024-1.jpg

113-161 TerraCotta_SurfLoss Glaze loss 2024-1.jpg


113-174 Stone_SoilStain Leached Salts 2024-1.jpg

114-159 TerraCotta_SurfLoss Glaze loss 2024-1.jpg

114-163 TerraCotta_SurfLoss Glaze loss 2024-1.jpg

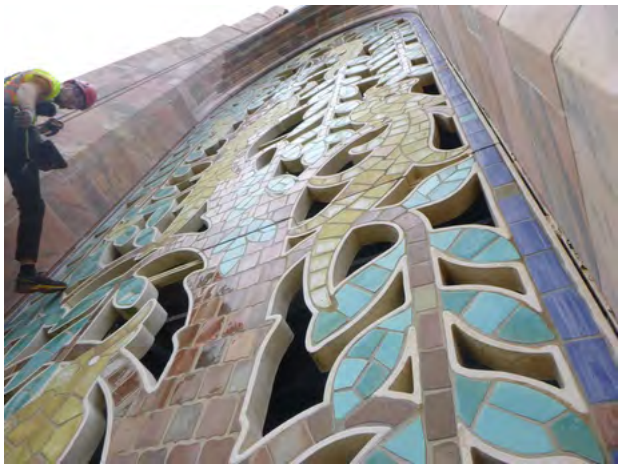

114-170 ArchMetal_Note Photo-general 2024-1.jpg


114-170 ArchMetal_Note Photo-general 2024-2.jpg


114-170 ArchMetal_Note Photo-general 2024-3.jpg


114-170 ArchMetal_Note Photo-general 2024-4.jpg


114-172 ArchMetal_Corrosion Surface 2024-1.jpg


115-150 TerraCotta_Note Photo-general 2024-1.jpg

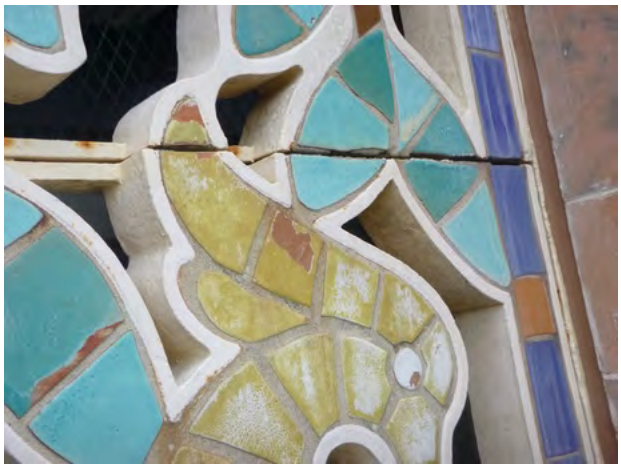

115-150 TerraCotta_Note Photo-general 2024-2.jpg


115-150 TerraCotta_Note Photo-general 2024-3.jpg


115-150 TerraCotta_Note Photo-general 2024-4.jpg


115-164 TerraCotta_Crack Single unit 2024-1.jpg


116-158 TerraCotta_SurfLoss Glaze loss 2024-1.jpg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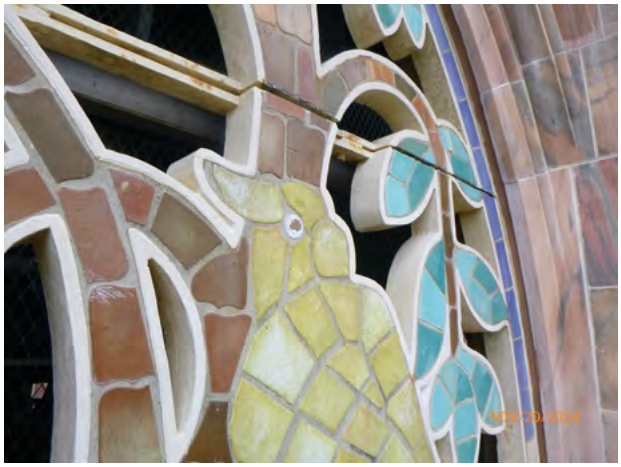
116-171 TerraCotta_SurfLoss Glaze loss 2024-1.jpg


116-171 TerraCotta_SurfLoss Glaze loss 2024-2.jpg


116-171 TerraCotta_SurfLoss Glaze loss 2024-3.jpg


117-169 TerraCotta_SurfLoss Chipped 2024-1.jpg


118-145 ArchMetal_Corrosion Pitted 2024-1.jpg


118-158 ArchMetal_Corrosion Pitted 2024-1.jpg


118-167 ArchMetal_Corrosion Pitted 2024-1.jpg

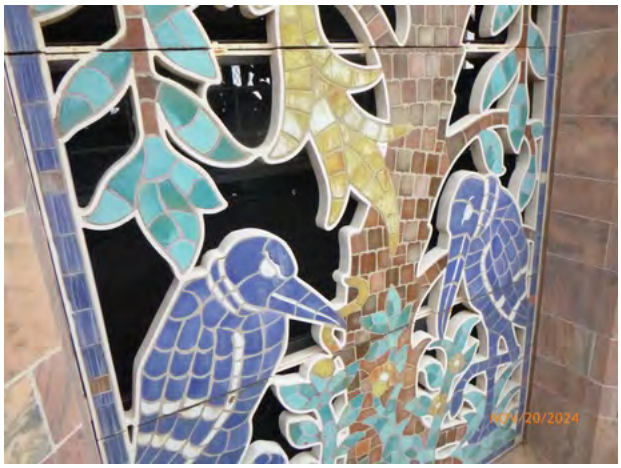

118-167 ArchMetal_Corrosion Pitted 2024-2.jpg


119-145 ArchMetal_Note Photo-general 2024-1.jpg


119-145 ArchMetal_Note Photo-general 2024-2.jpg


119-145 ArchMetal_Note Photo-general 2024-3.jpg

119-145 ArchMetal_Note Photo-general 2024-4.jpg



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119-150 ArchMetal_Note Photo-general 2024-2.jpg

119-150 ArchMetal_Note Photo-general 2024-3.jpg


119-150 ArchMetal_Note Photo-general 2024-4.jpg

119-150 ArchMetal_Note Photo-general 2024-5.jpg

119-155 ArchMetal_Note Photo-general 2024-1.jpg

119-155 ArchMetal_Note Photo-general 2024-2.jpg

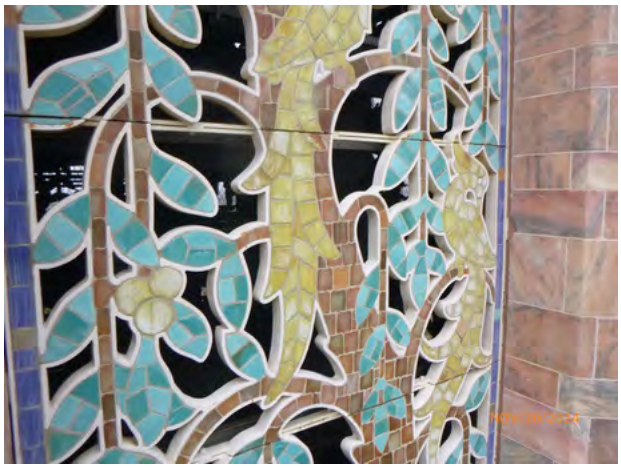
119-155 ArchMetal_Note Photo-general 2024-3.jpg

119-155 ArchMetal_Note Photo-general 2024-4.jpg

119-155 ArchMetal_Note Photo-general 2024-5.jpg

119-155 ArchMetal_Note Photo-general 2024-6.jpg

119-155 ArchMetal_Note Photo-general 2024-7.jpg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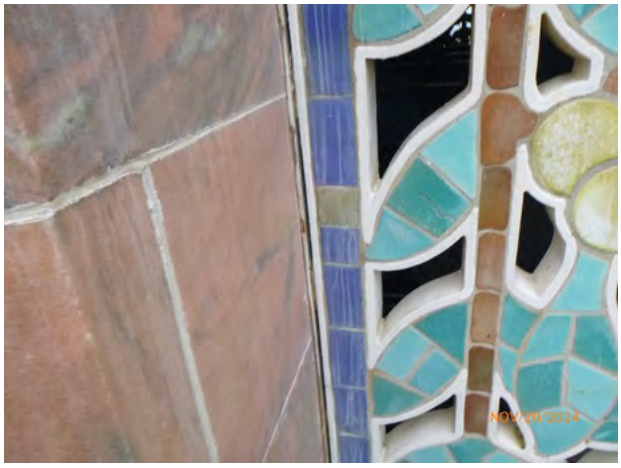
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119-159 ArchMetal_Note Photo-general 2024-3.jpg

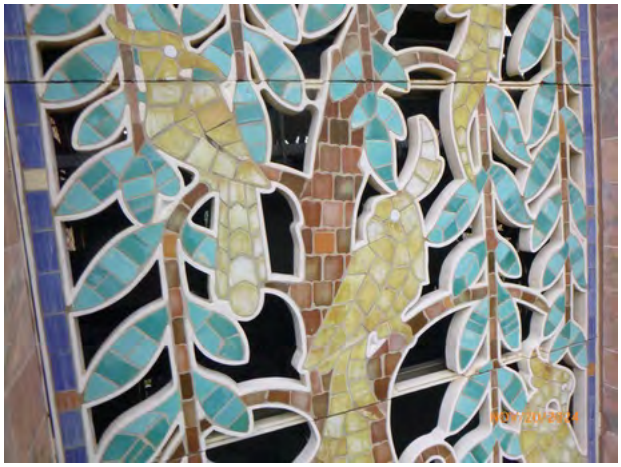

119-173 ArchMetal_Note Photo-general 2024-1.jpg


119-173 ArchMetal_Note Photo-general 2024-2.jpg


119-173 ArchMetal_Note Photo-general 2024-3.jpg


119-173 ArchMetal_Note Photo-general 2024-4.jpg


119-173 ArchMetal_Note Photo-general 2024-5.jpg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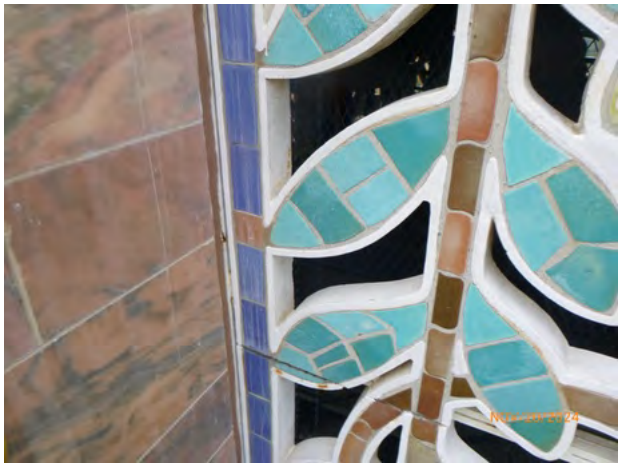
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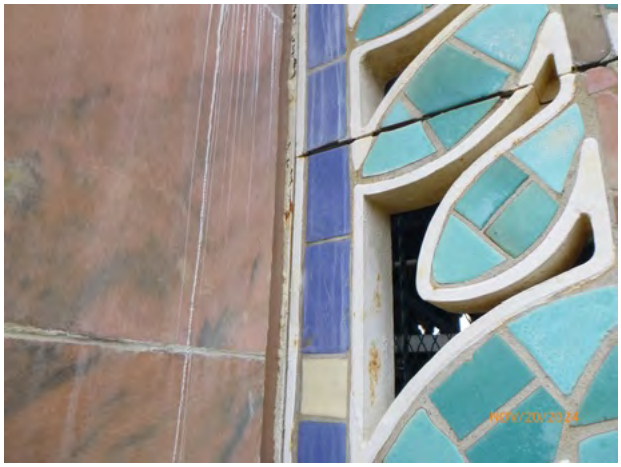
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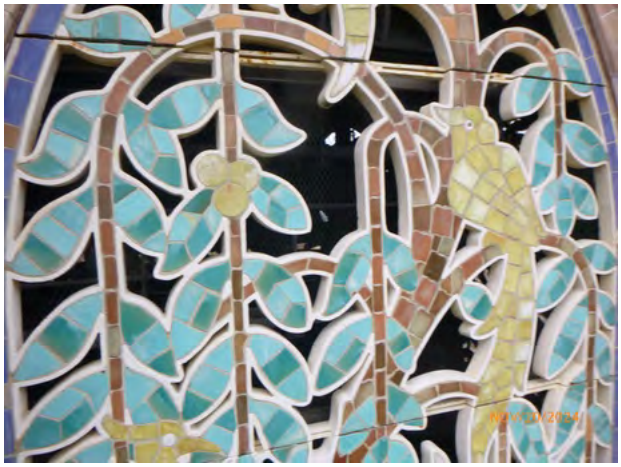
120-164 ArchMetal_Note Photo-general 2024-5.jpg


120-169 ArchMetal_Note Photo-general 2024-1.jpg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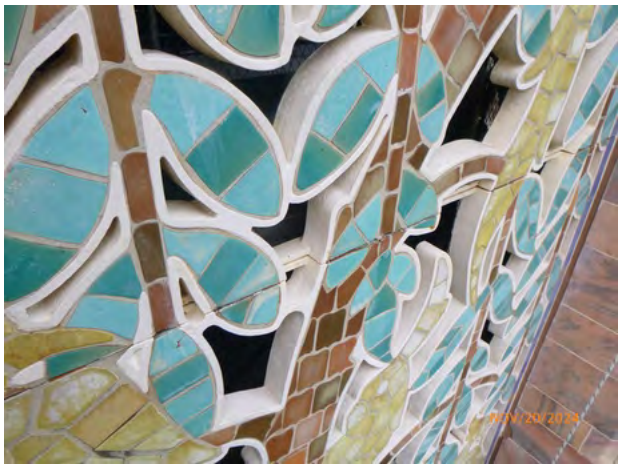
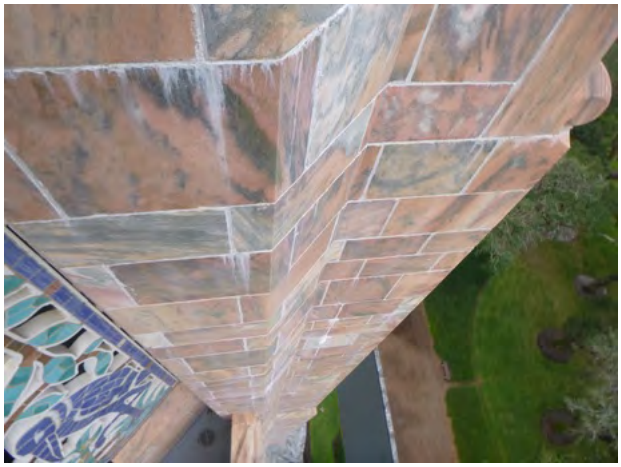
120-169 ArchMetal_Note Photo-general 2024-4.jpg



120-169 ArchMetal_Note Photo-general 2024-5.jpg


125-164 Stone_SoilStain Leached Salts 2024-1.jpg


125-164 Stone_SoilStain Leached Salts 2024-2.jpg


125-164 Stone_SoilStain Leached Salts 2024-3.jpg

128-4 Stone_Spall Missing 2024-1.jpg

128-4 Stone_Spall Missing 2024-2.jpg

128-4 Stone_Spall Missing 2024-3.jpg

129-70 Stone_Crack System units and joints 2024-1.jpg

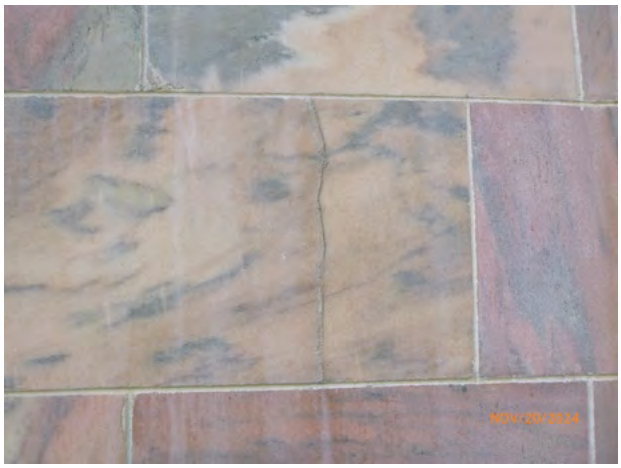
129-149 Stone_Spall Removed 2024-1.jpg

129-149 Stone_Spall Removed 2024-2.jpg

130-20 Stone_Crack Single unit 2024-1.jpg

130-20 Stone_Crack Single unit 2024-2.jpg

130-23 Stone_Crack Single unit 2024-1.jpg



130-74 Stone_Crack Repair sound 2024-1.jpg

130-74 Stone_Crack Repair sound 2024-2.jpg

130-74 Stone_Crack Repair sound 2024-3.jpg

130-123 Stone_Crack Repair sound 2024-1.jpg


130-123 Stone_Crack Repair sound 2024-2.jpg

131-162 Stone_SurfLoss Chipped 2024-1.jpg

131-162 Stone_SurfLoss Chipped 2024-2.jpg

131-162 Stone_SurfLoss Chipped 2024-3.jpg

132-71 Stone_Spall Removed + Steel 2024-1.jpg

132-71 Stone_Spall Removed + Steel 2024-2.jpg

132-71 Stone_Spall Removed + Steel 2024-3.jpg

132-71 Stone_Spall Removed + Steel 2024-4.jpg

132-71 Stone_Spall Removed + Steel 2024-5.jpg

132-161 Stone_Spall Removed 2024-1.jpg

132-161 Stone_Spall Removed 2024-2.jpg

132-181 Stone_Joints Mortar Removed 2024-1.jpg

132-181 Stone_Joints Mortar Removed 2024-2.jpg


132-181 Stone_Joints Mortar Removed 2024-3.jpg


133-46 Stone_Spall Bonded 2024-1.jpg


133-46 Stone_Spall Bonded 2024-2.jpg

133-139 Stone_SurfLoss Chipped 2024-1.jpg


133-139 Stone_SurfLoss Chipped 2024-2.jpg


133-139 Stone_SurfLoss Chipped 2024-3.jpg

133-141 Stone_Spall Bonded 2024-1.jpg

133-141 Stone_Spall Bonded 2024-2.jpg

133-141 Stone_Spall Bonded 2024-3.jpg

133-148 Stone_SurfLoss Chipped 2024-1.jpg

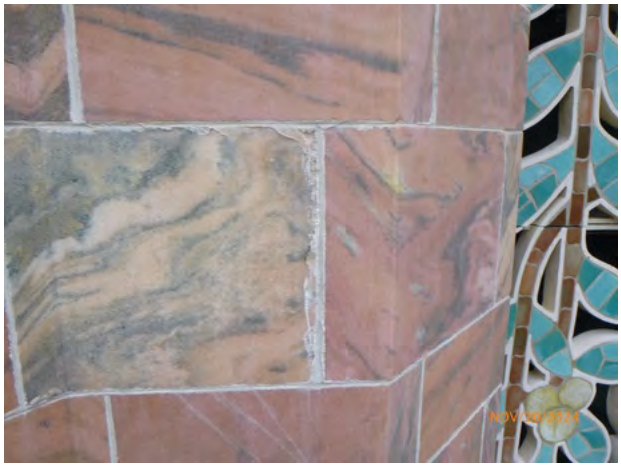
133-148 Stone_SurfLoss Chipped 2024-2.jpg

133-148 Stone_SurfLoss Chipped 2024-3.jpg

133-159 Stone_SurfLoss Chipped 2024-1.jpg

133-159 Stone_SurfLoss Chipped 2024-2.jpg

133-161 Stone_SurfLoss Chipped 2024-1.jpg



133-161 Stone_SurfLoss Chipped 2024-2.jpg

133-161 Stone_SurfLoss Chipped 2024-3.jpg

133-179 Stone_SurfLoss Chipped 2024-1.jpg


134-30 Stone_Displacement Horizontal 2024-1.jpg


134-30 Stone_Displacement Horizontal 2024-2.jpg


134-30 Stone_Displacement Horizontal 2024-3.jpg

134-102 Stone_Spall Removed 2024-1.jpg

134-102 Stone_Spall Removed 2024-2.jpg

134-102 Stone_Spall Removed 2024-3.jpg

134-105 Stone_Crack Single unit 2024-1.jpg

134-105 Stone_Crack Single unit 2024-2.jpg

134-105 Stone_Crack Single unit 2024-3.jpg


134-129 Stone_Crack Repair sound 2024-1.jpg

134-142 Stone_Spall Missing 2024-1.jpg

134-142 Stone_Spall Missing 2024-2.jpg

134-146 Stone_SurfLoss Chipped 2024-1.jpg

134-146 Stone_SurfLoss Chipped 2024-2.jpg

134-146 Stone_SurfLoss Chipped 2024-3.jpg

134-187 Stone_SurfLoss Chipped 2024-1.jpg

134-187 Stone_SurfLoss Chipped 2024-2.jpg

134-196 Stone_Repair Dutchman Failed 2024-1.jpg

134-196 Stone_Repair Dutchman Failed 2024-2.jpg

134-196 Stone_Repair Dutchman Failed 2024-3.jpg

134-200 Stone_Spall Missing 2024-1.jpg


134-200 Stone_Spall Missing 2024-2.jpg

134-200 Stone_Spall Missing 2024-3.jpg


135-10 Stone_Crack System units and joints 2024-1.jpg


135-10 Stone_Crack System units and joints 2024-2.jpg

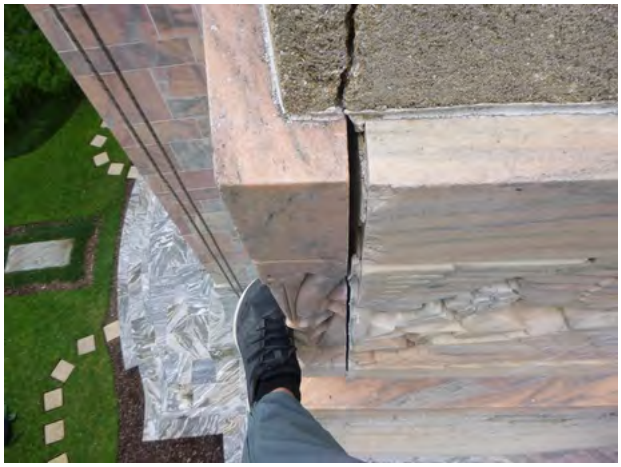

135-11 Stone_Spall Missing 2024-1.jpg


135-32 Stone_Crack System units and joints 2024-1.jpg


135-32 Stone_Crack System units and joints 2024-2.jpg


135-32 Stone_Crack System units and joints 2024-3.jpg


135-32 Stone_Crack System units and joints 2024-4.jpg


135-32 Stone_Crack System units and joints 2024-5.jpg


135-45 Stone_SurfLoss Eroded 2024-1.jpg


135-107 Stone_Repair Patch Failed 2024-1.jpg


135-108 Stone_Crack Single unit 2024-1.jpg


135-113 Stone_Crack Single unit 2024-1.jpg


135-123 Stone_Crack System units and joints 2024-1.jpg


135-123 Stone_Crack System units and joints 2024-2.jpg


135-123 Stone_Crack System units and joints 2024-3.jpg


135-123 Stone_Crack System units and joints 2024-4.jpg


135-133 Stone_Joints Mortar Failed 2024-1.jpg

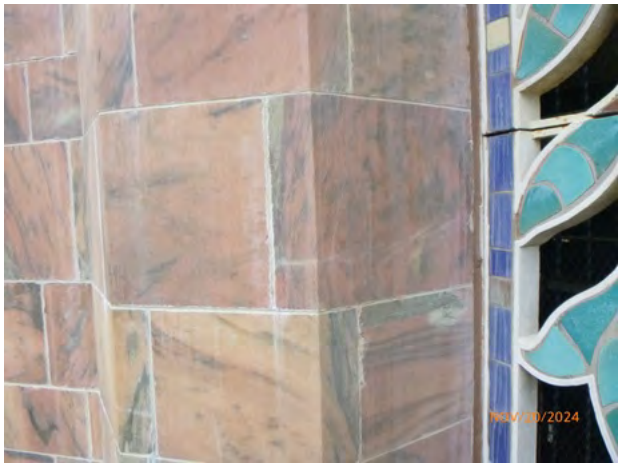

135-133 Stone_Joints Mortar Failed 2024-2.jpg


135-133 Stone_Joints Mortar Failed 2024-3.jpg

135-141 Stone_SoilStain Biological 2024-1.jpg

136-101 Stone_Crack Repair failed 2024-1.jpg

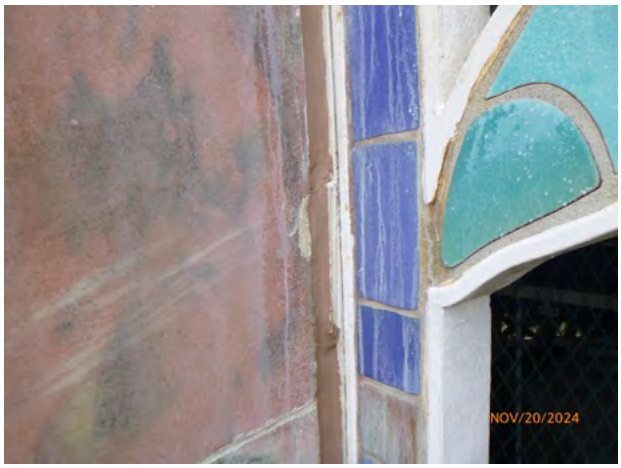
136-101 Stone_Crack Repair failed 2024-2.jpg



136-150 Stone_SoilStain Leached Salts 2024-1.jpg

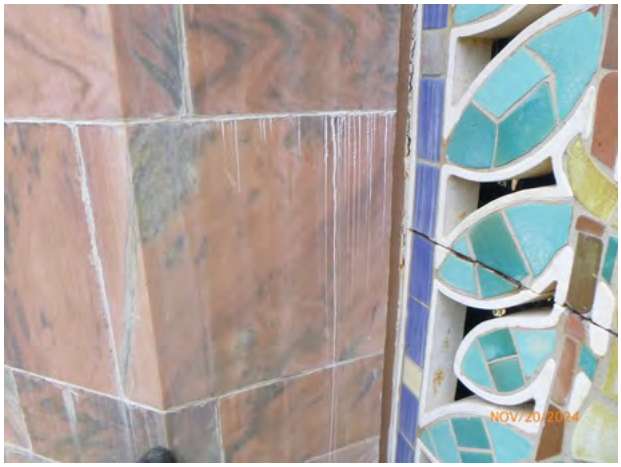
136-150 Stone_SoilStain Leached Salts 2024-2.jpg

136-150 Stone_SoilStain Leached Salts 2024-3.jpg



136-153 Stone_Repair Patch Sound 2024-1.jpg


136-170 Stone_SoilStain Leached Salts 2024-1.jpg


136-170 Stone_SoilStain Leached Salts 2024-2.jpg


136-170 Stone_SoilStain Leached Salts 2024-3.jpg


136-170 Stone_SoilStain Leached Salts 2024-4.jpg

136-184 Stone_SurfLoss Chipped 2024-1.jpg


136-184 Stone_SurfLoss Chipped 2024-2.jpg


136-200 Stone_Joints Mortar Missing 2024-1.jpg


136-200 Stone_Joints Mortar Missing 2024-2.jpg


136-200 Stone_Joints Mortar Missing 2024-3.jpg


137-15 Stone_Spall Bonded 2024-1.jpg

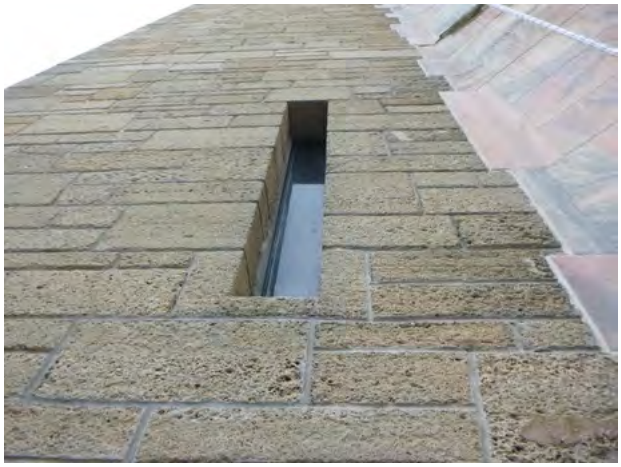

137-17 Stone_Spall Removed 2024-1.jpg


137-17 Stone_Spall Removed 2024-2.jpg


137-17 Stone_Spall Removed 2024-3.jpg


137-42 Stone_Joints Sealant Failed 2024-1.jpg


137-51 Stone_Joints Sealant Failed 2024-1.jpg


137-58 Stone_Note Photo-lancet window 2024-1.jpg


137-68 Stone_Joints Sealant Failed 2024-1.jpg


137-68 Stone_Joints Sealant Failed 2024-2.jpg


137-113 Stone_Crack System units 2024-1.jpg

137-157 Stone_SurfLoss Chipped 2024-1.jpg

137-182 Stone_Spall Removed 2024-1.jpg

137-182 Stone_Spall Removed 2024-2.jpg

137-182 Stone_Spall Removed 2024-3.jpg


138-16 Stone_Spall Bonded 2024-1.jpg


138-17 Stone_Repair Patch Failed 2024-1.jpg


138-80 Stone_Joints Sealant Failed 2024-1.jpg


138-106 Stone_Joints Sealant Failed 2024-1.jpg


138-106 Stone_Joints Sealant Failed 2024-2.jpg


138-118 Stone_Crack System units and joints 2024-1.jpg


138-118 Stone_Crack System units and joints 2024-2.jpg


138-118 Stone_Crack System units and joints 2024-3.jpg

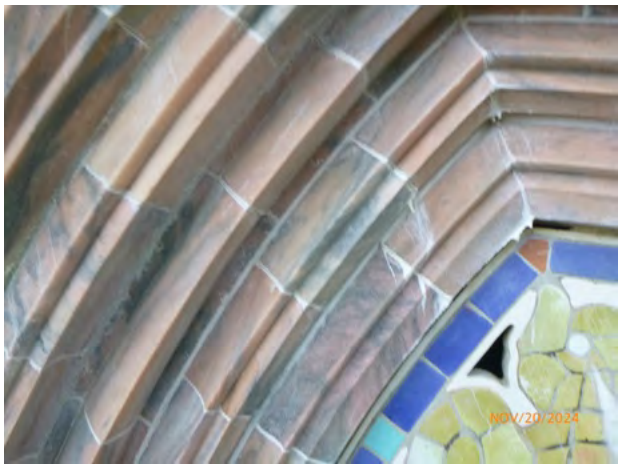

138-140 Test_Area Water test 2024-1.jpg

138-179 Stone_SoilStain Leached Salts 2024-1.jpg

138-179 Stone_SoilStain Leached Salts 2024-2.jpg

138-179 Stone_SoilStain Leached Salts 2024-3.jpg

138-179 Stone_SoilStain Leached Salts 2024-4.jpg



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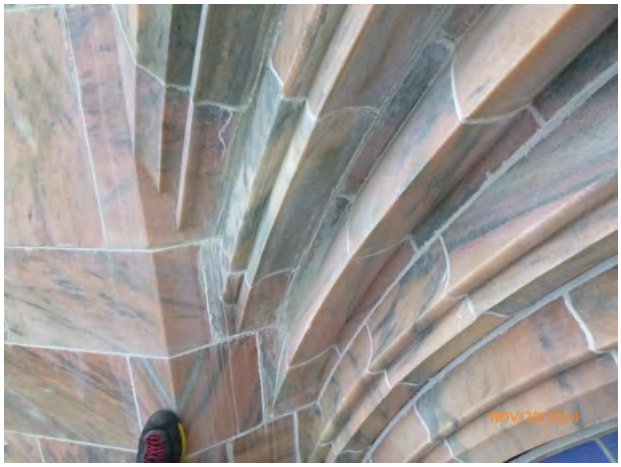

138-179 Stone_SoilStain Leached Salts 2024-7.jpg


138-194 Stone_SoilStain Biological 2024-1.jpg


139-89 Stone_Joints Sealant Failed 2024-1.jpg


139-89 Stone_Joints Sealant Failed 2024-2.jpg


139-121 Stone_Joints Sealant Failed 2024-1.jpg


139-121 Stone_Joints Sealant Failed 2024-2.jpg


139-128 Stone_Joints Sealant Failed 2024-1.jpg


139-195 Stone_Spall Missing 2024-1.jpg


140-69 Stone_Spall Missing 2024-1.jpg


140-178 Stone_SoilStain Leached Salts 2024-1.jpg


140-178 Stone_SoilStain Leached Salts 2024-2.jpg


140-178 Stone_SoilStain Leached Salts 2024-3.jpg


141-69 Stone_Spall Removed + Steel 2024-1.jpg


141-69 Stone_Spall Removed + Steel 2024-2.jpg


141-140 Stone_SurfLoss Chipped 2024-1.jpg


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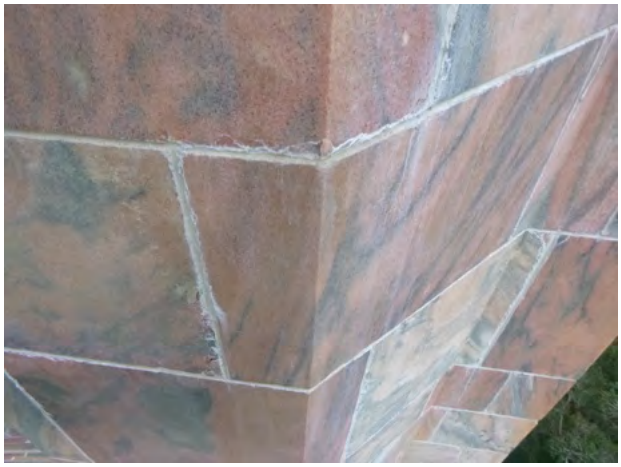
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141-185 Stone_SurfLoss Chipped 2024-1.jpg


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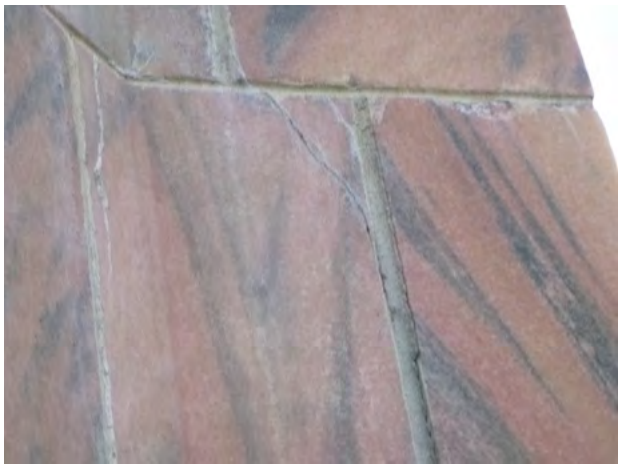
141-188 Stone_Joints Mortar Failed 2024-3.jpg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142-192 Stone_Crack Single unit 2024-1.jpg


142-194 Stone_Spall Bonded 2024-1.jpg


143-97 Stone_SoilStain Leached Salts 2024-1.jpg

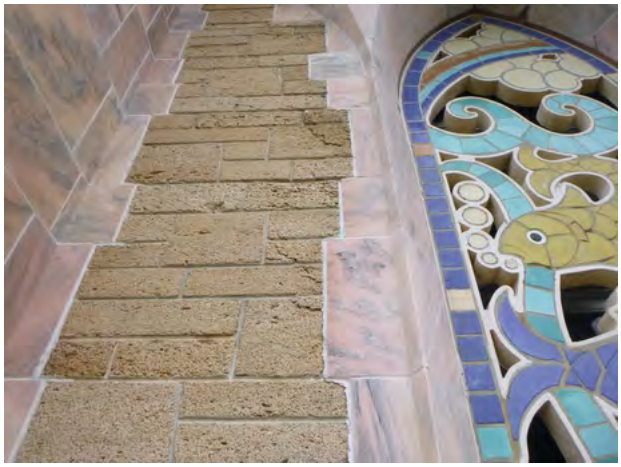

144-161 Stone_SoilStain Biological 2024-1.jpg


145-91 Stone_Spall Missing + Steel 2024-1.jpg


146-91 Stone_Spall Removed + Steel 2024-1.jpg


146-101 Stone_Joints Sealant Failed 2024-1.jpg


146-101 Stone_Joints Sealant Failed 2024-2.jpg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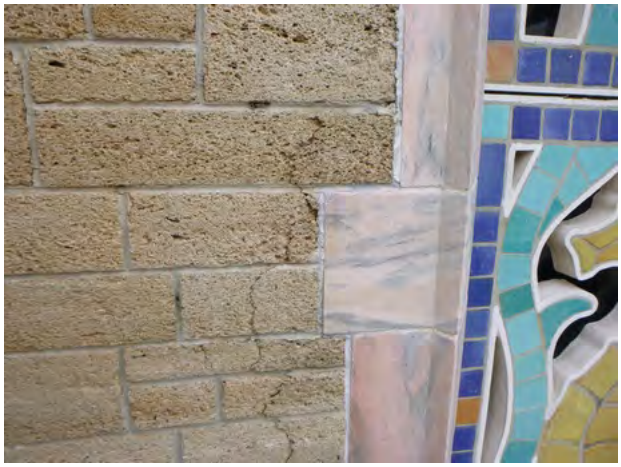

146-108 Stone_Crack System units and joints 2024-2.jpg


146-108 Stone_Crack System units and joints 2024-3.jpg


146-108 Stone_Crack System units and joints 2024-4.jpg


146-108 Stone_Crack System units and joints 2024-5.jpg


147-89 Stone_Embedment Ferrous Embedment 2024-1.jpg


147-91 Stone_Spall Missing + Steel 2024-1.jpg

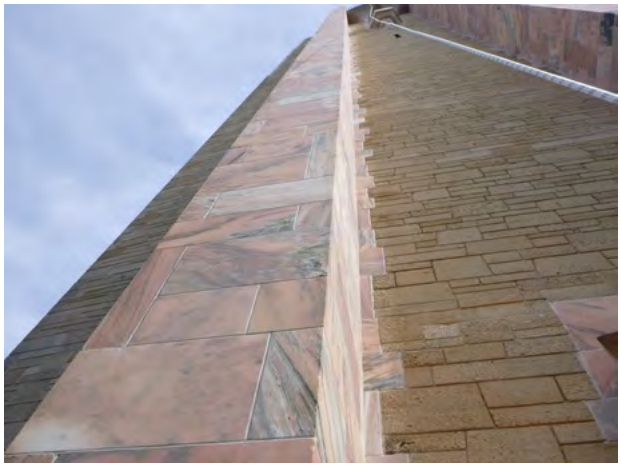

149-0 Stone_Joints Mortar Failed 2024-1.jpg


149-0 Stone_Joints Mortar Failed 2024-2.jpg


149-0 Stone_Joints Mortar Failed 2024-3.jpg


149-91 Stone_Spall Removed + Steel 2024-1.jpg


149-91 Stone_Spall Removed + Steel 2024-2.jpg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150-29 Stone_Note Photo-general 2024-2.jpg


150-29 Stone_Note Photo-general 2024-3.jpg


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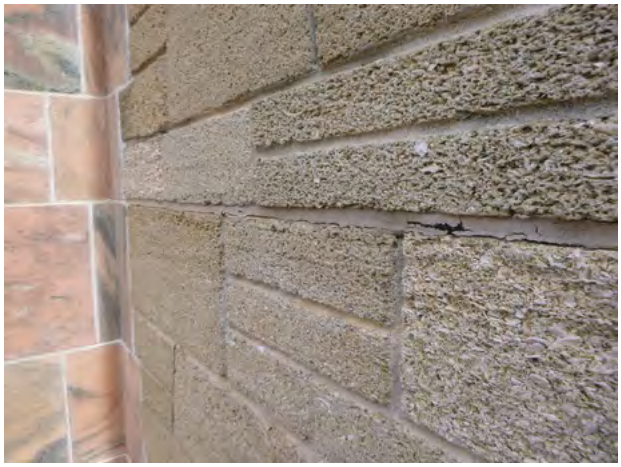
150-29 Stone_Note Photo-general 2024-5.jpg


150-29 Stone_Note Photo-general 2024-6.jpg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150-41 Stone_Joints Sealant Failed 2024-2.jpg


150-90 Stone_Joints Sealant Failed 2024-1.jpg


150-90 Stone_Joints Sealant Failed 2024-2.jpg


150-90 Stone_Joints Sealant Failed 2024-3.jpg


150-90 Stone_Joints Sealant Failed 2024-4.jpg


150-140 Stone_SurfLoss Chipped 2024-1.jpg


150-194 Stone_SoilStain Biological 2024-1.jpg


150-194 Stone_SoilStain Biological 2024-2.jpg


151-16 Stone_Note Photo-window 2024-1.jpg


151-16 Stone_Note Photo-window 2024-2.jpg


151-16 Stone_Note Photo-window 2024-3.jpg


151-67 Stone_Joints Sealant Failed 2024-1.jpg


151-79 Stone_Joints Sealant Failed 2024-1.jpg


151-79 Stone_Joints Sealant Failed 2024-2.jpg


151-91 Stone_Spall Missing + Steel 2024-1.jpg


151-118 Stone_Note Photo-general 2024-1.jpg


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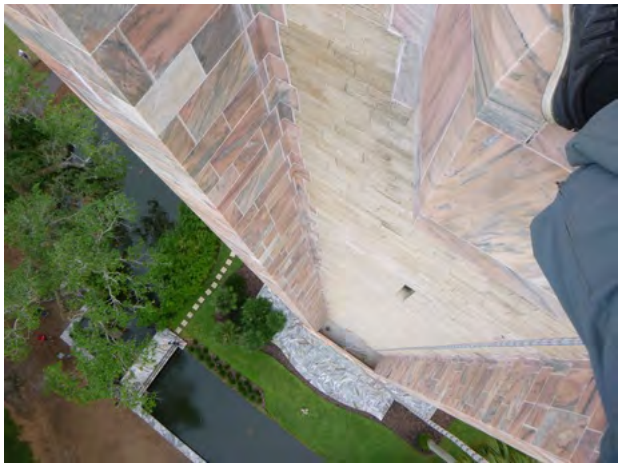
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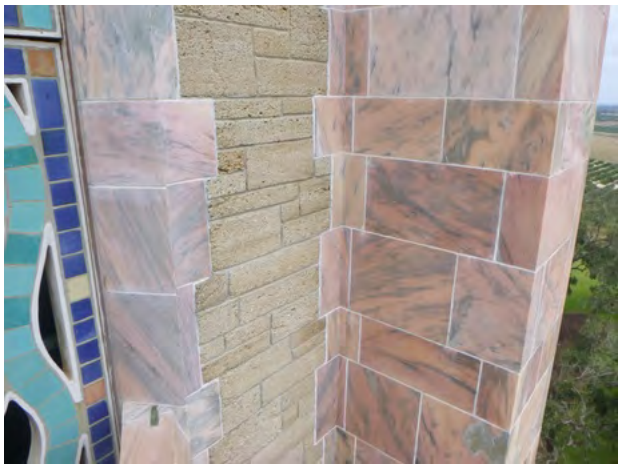
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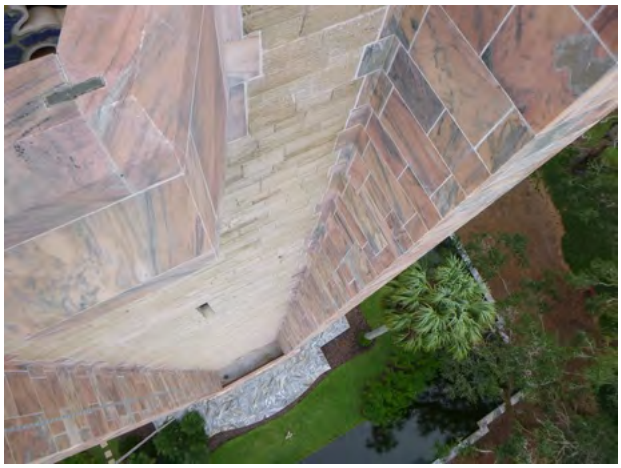

151-118 Stone_Note Photo-general 2024-6.jpg


151-182 Stone_SoilStain Guano 2024-1.jpg


151-193 Stone_SoilStain Guano 2024-1.jpg


151-193 Stone_SoilStain Guano 2024-2.jpg


151-193 Stone_SoilStain Guano 2024-3.jpg


152-76 Stone_Embedment Other Embedment 2024-1.jpg


154-91 Stone_Spall Missing + Steel 2024-1.jpg


154-101 Stone_Joints Sealant Failed 2024-1.jpg


154-142 Stone_Spall Missing 2024-1.jpg


155-100 Stone_Crack Single unit 2024-1.jpg


155-183 Stone_SurfLoss Chipped 2024-1.jpg


156-188 Stone_SurfLoss Chipped 2024-1.jpg


158-11 Stone_Spall Missing 2024-1.jpg


158-163 Stone_Spall Missing 2024-1.jpg


158-193 Stone_Crack Single unit 2024-1.jpg


160-46 Stone_Spall Removed + Steel 2024-1.jpg


160-46 Stone_Spall Removed + Steel 2024-2.jpg


160-66 Stone_Spall Removed + Steel 2024-1.jpg


160-66 Stone_Spall Removed + Steel 2024-2.jpg


160-137 Stone_Joints Mortar Failed 2024-1.jpg


161-46 Stone_Spall Removed 2024-1.jpg


161-46 Stone_Spall Removed 2024-2.jpg


162-15 Stone_Repair Patch Removed 2024-1.jpg


162-140 Stone_SoilStain Biological 2024-1.jpg


163-38 Stone_Spall Bonded 2024-1.jpg


163-46 Stone_Joints Sealant Failed 2024-1.jpg


163-46 Stone_Joints Sealant Failed 2024-2.jpg


163-57 Stone_Note Photo-lancet window 2024-1.jpg


163-66 Stone_Joints Sealant Failed 2024-1.jpg


163-109 Stone_Joints Sealant Failed 2024-1.jpg


163-115 Stone_Joints Sealant Failed 2024-1.jpg


163-130 Stone_Joints Sealant Failed 2024-1.jpg

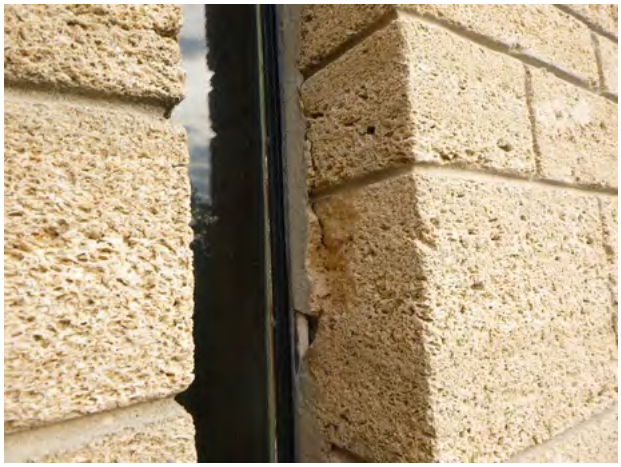

163-130 Stone_Joints Sealant Failed 2024-2.jpg


164-40 Stone_Joints Sealant Failed 2024-1.jpg


164-40 Stone_Joints Sealant Failed 2024-2.jpg


164-55 Stone_Spall Removed 2024-1.jpg


164-55 Stone_Spall Removed 2024-2.jpg

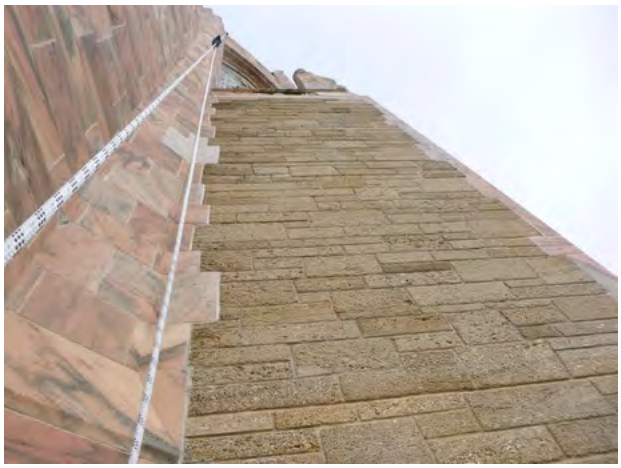

164-55 Stone_Spall Removed 2024-3.jpg


164-55 Stone_Spall Removed 2024-4.jpg


164-78 Stone_Joints Sealant Failed 2024-1.jpg


164-90 Stone_Joints Sealant Failed 2024-1.jpg


164-90 Stone_Joints Sealant Failed 2024-2.jpg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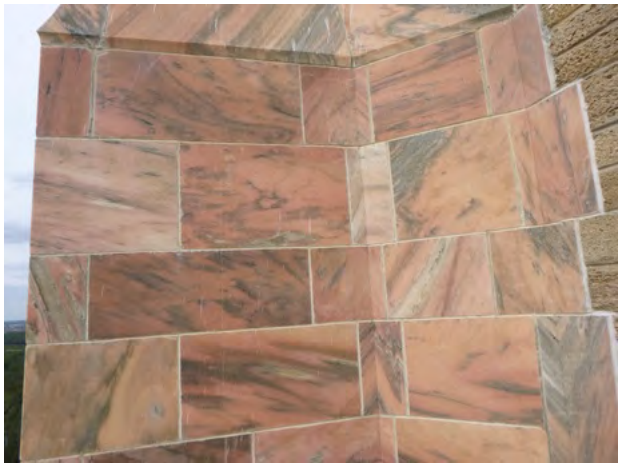
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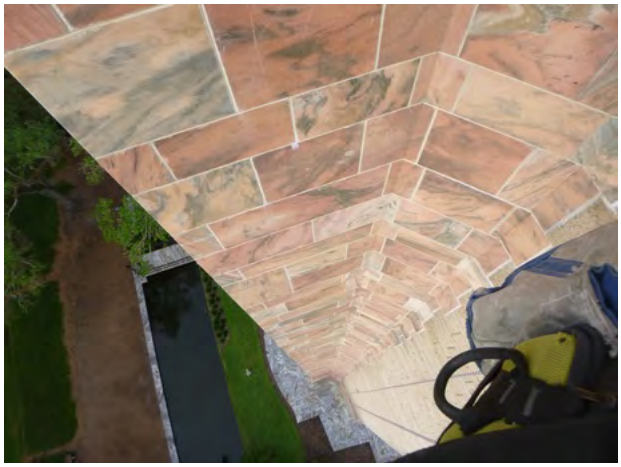
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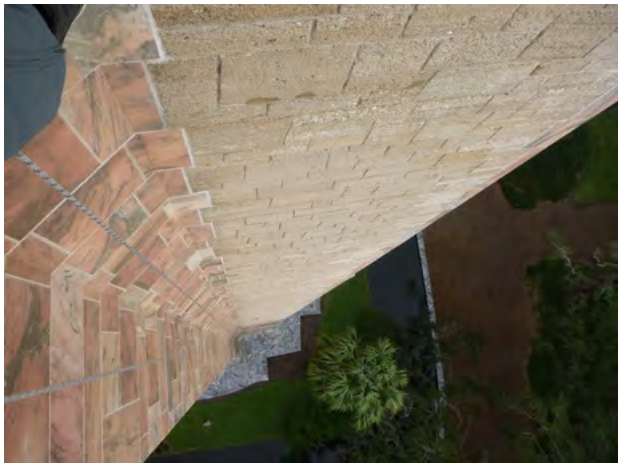

164-117 Stone_Note Photo-general 2024-5.jpg


164-142 Stone_Spall Removed 2024-1.jpg

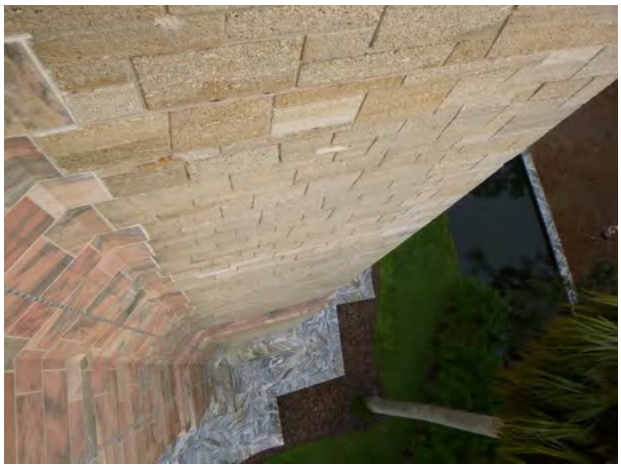

164-142 Stone_Spall Removed 2024-2.jpg


164-142 Stone_Spall Removed 2024-3.jpg


164-144 Stone_Spall Bonded 2024-1.jpg


165-48 Stone_Note Photo-general 2024-1.jpg


165-48 Stone_Note Photo-general 2024-2.jpg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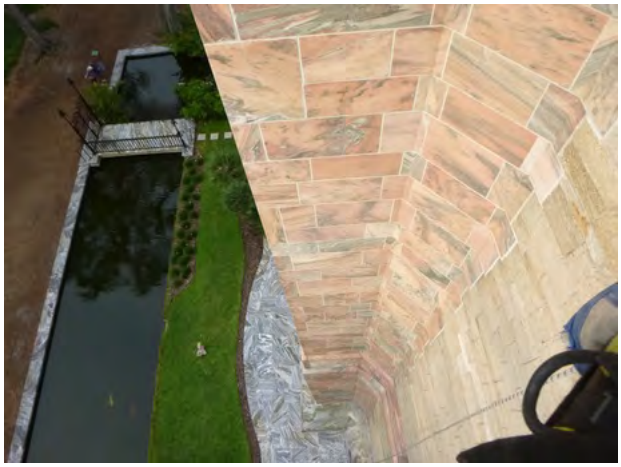
165-48 Stone_Note Photo-general 2024-4.jpg


165-48 Stone_Note Photo-general 2024-5.jpg


165-48 Stone_Note Photo-general 2024-6.jpg

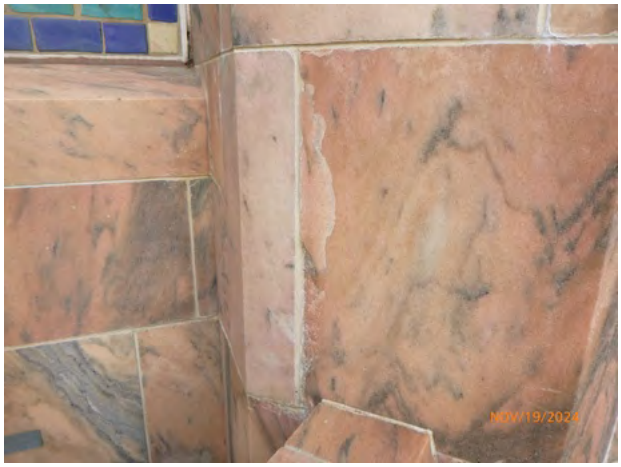

165-127 Stone_Crack Single unit 2024-1.jpg


166-33 Stone_Crack System units and joints 2024-1.jpg


166-33 Stone_Crack System units and joints 2024-2.jpg


166-33 Stone_Crack System units and joints 2024-3.jpg


167-29 Stone_Joints Mortar Failed 2024-1.jpg



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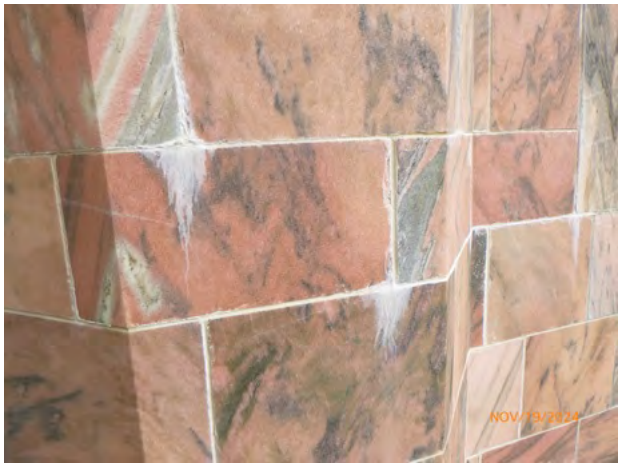
167-142 Stone_SurfLoss Chipped 2024-2.jpg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167-202 Stone_Repair Patch Failed 2024-1.jpg

170-170 Stone_SoilStain Leached Salts 2024-1.jpg

172-88 Stone_SoilStain Leached Salts 2024-1.jpg

172-125 Stone_SoilStain Leached Salts 2024-1.jpg

172-158 Stone_SurfLoss Chipped 2024-1.jpg

173-68 Stone_SoilStain Leached Salts 2024-1.jpg

174-26 Stone_SoilStain Leached Salts 2024-1.jpg

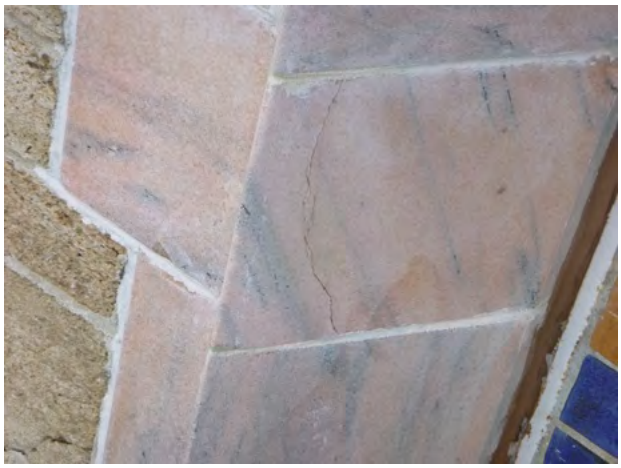

174-26 Stone_SoilStain Leached Salts 2024-2.jpg


179-178 Stone_Crack Single unit 2024-1.jpg


179-180 Stone_Spall Bonded 2024-1.jpg


180-170 Stone_Spall Missing 2024-1.jpg

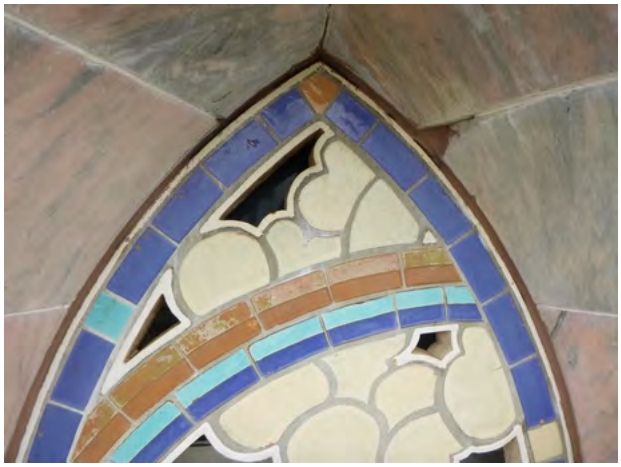

182-146 ArchMetal_Corrosion Pitted 2024-1.jpg


185-114 Stone_Crack Single unit 2024-1.jpg


186-128 ArchMetal_Corrosion Surface 2024-1.jpg


186-168 ArchMetal_Corrosion Surface 2024-1.jpg


186-168 ArchMetal_Corrosion Surface 2024-2.jpg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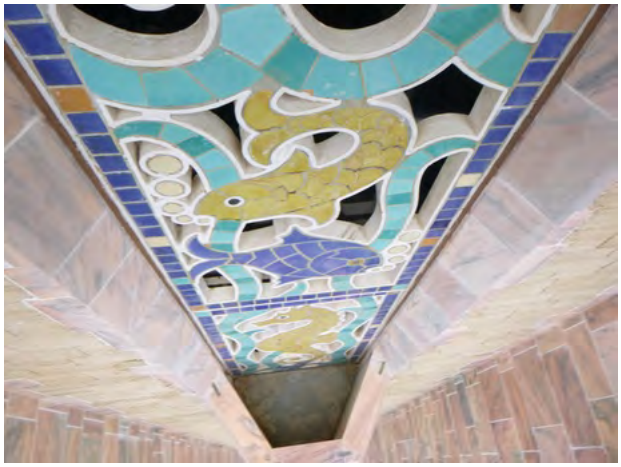

187-111 ArchMetal_Note Photo-general 2024-2.jpg


187-133 ArchMetal_Note Photo-general 2024-1.jpg


187-133 ArchMetal_Note Photo-general 2024-2.jpg


187-157 ArchMetal_Note Photo-general 2024-1.jpg


187-157 ArchMetal_Note Photo-general 2024-2.jpg


187-157 ArchMetal_Note Photo-general 2024-3.jpg


187-180 Stone_SoilStain Leached Salts 2024-1.jpg


187-180 Stone_SoilStain Leached Salts 2024-2.jpg


187-180 Stone_SoilStain Leached Salts 2024-3.jpg


188-163 ArchMetal_Coating Coating Failed 2024-1.jpg


190-131 ArchMetal_Corrosion Surface 2024-1.jpg


194-149 Stone_Spall Bonded 2024-1.jpg


194-154 Stone_Spall Removed + Steel 2024-1.jpg

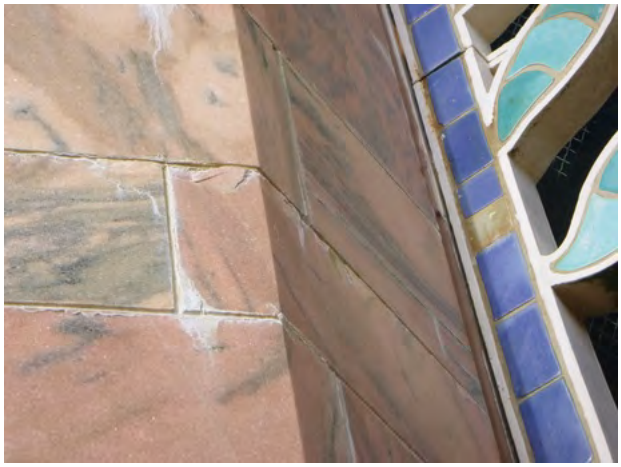

194-154 Stone_Spall Removed + Steel 2024-2.jpg


194-154 Stone_Spall Removed + Steel 2024-3.jpg


194-154 Stone_Spall Removed + Steel 2024-4.jpg


194-171 Stone_Spall Bonded 2024-1.jpg


196-138 Stone_Joints Mortar Failed 2024-1.jpg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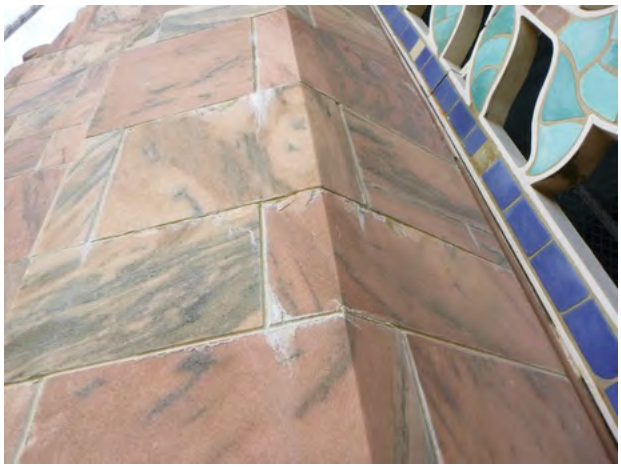
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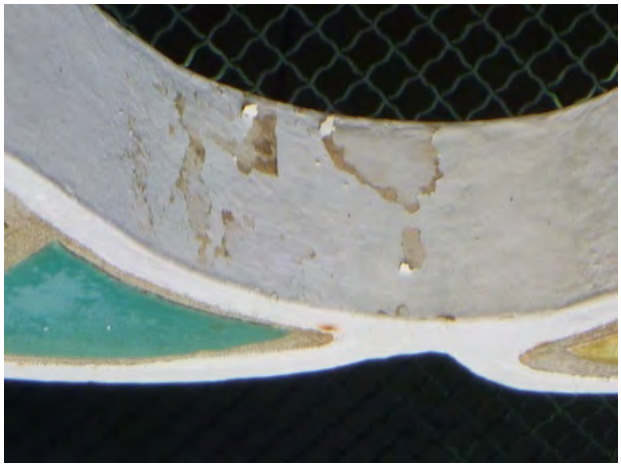
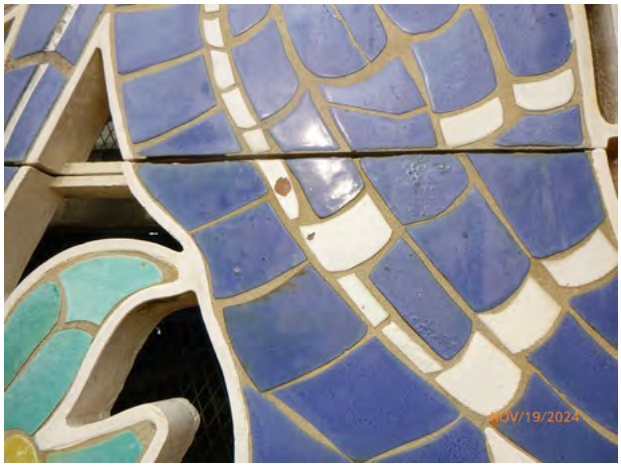
204-157 Stone_SoilStain Leached Salts 2024-3.jpg

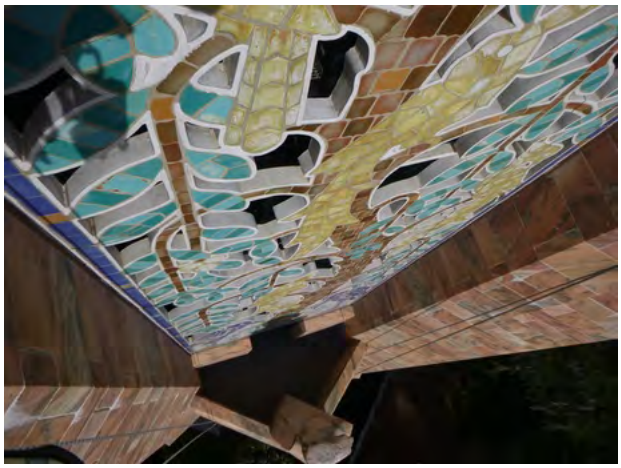

212-151 ArchMetal_Coating Coating Failed 2024-1.jpg



215-147 TerraCotta_SurfLoss Glaze loss 2024-1.jpg


215-170 TerraCotta_Note Photo-general 2024-1.jpg


215-170 TerraCotta_Note Photo-general 2024-2.jpg

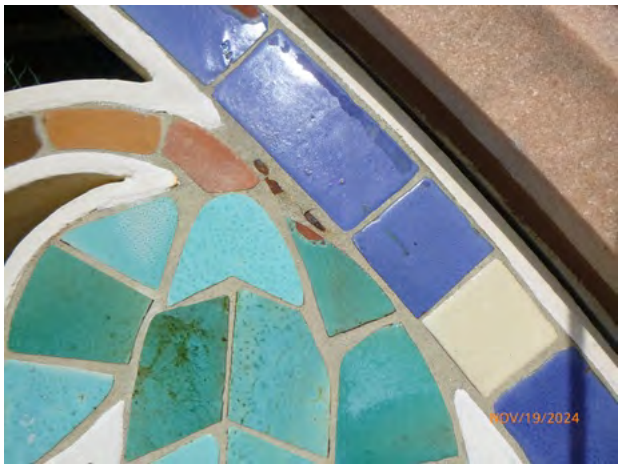

215-170 TerraCotta_Note Photo-general 2024-3.jpg


216-163 TerraCotta_SurfLoss Glaze loss 2024-1.jpg


216-166 TerraCotta_SurfLoss Glaze loss 2024-1.jpg


216-166 TerraCotta_SurfLoss Glaze loss 2024-2.jpg


217-157 TerraCotta_SurfLoss Glaze loss 2024-1.jpg



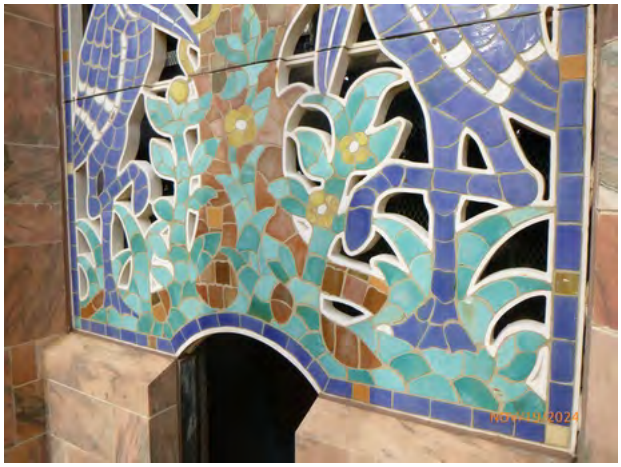
217-175 TerraCotta_SurfLoss Glaze loss 2024-1.jpg


218-155 ArchMetal_Note Photo-general 2024-1.jpg

218-161 TerraCotta_SurfLoss Glaze loss 2024-1.jpg

218-163 TerraCotta_SurfLoss Glaze loss 2024-1.jpg


219-1 Stone_Joints Mortar Failed 2024-1.jpg

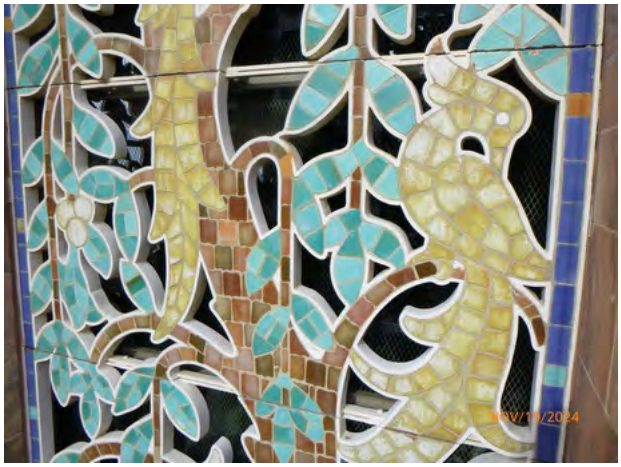

219-145 ArchMetal_Note Photo-general 2024-1.jpg

219-145 ArchMetal_Note Photo-general 2024-2.jpg

219-151 ArchMetal_Note Photo-general 2024-1.jpg

219-151 ArchMetal_Note Photo-general 2024-2.jpg

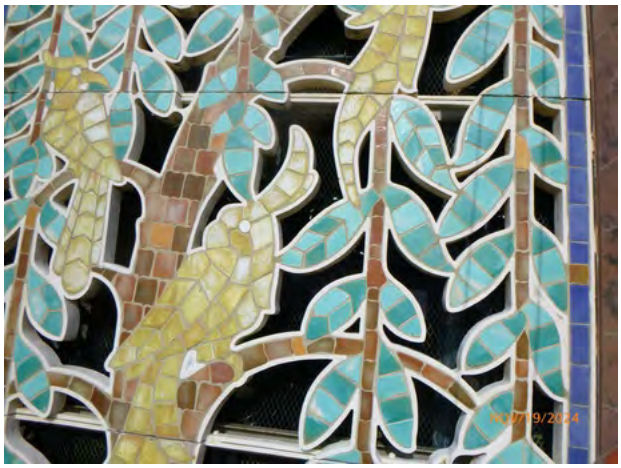
219-151 ArchMetal_Note Photo-general 2024-3.jpg



219-159 ArchMetal_Note Photo-general 2024-1.jpg

219-159 ArchMetal_Note Photo-general 2024-2.jpg

219-159 ArchMetal_Note Photo-general 2024-3.jpg



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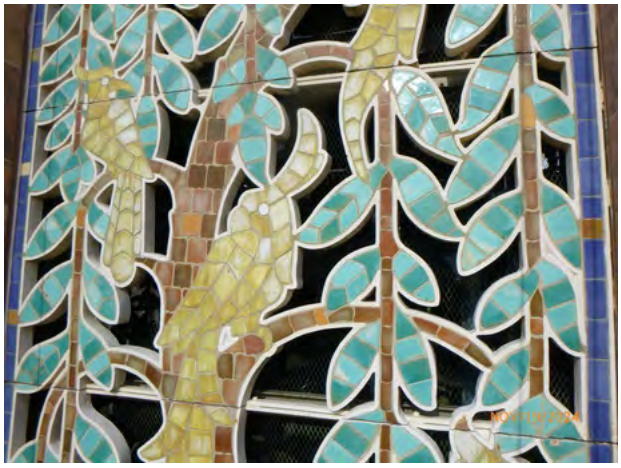
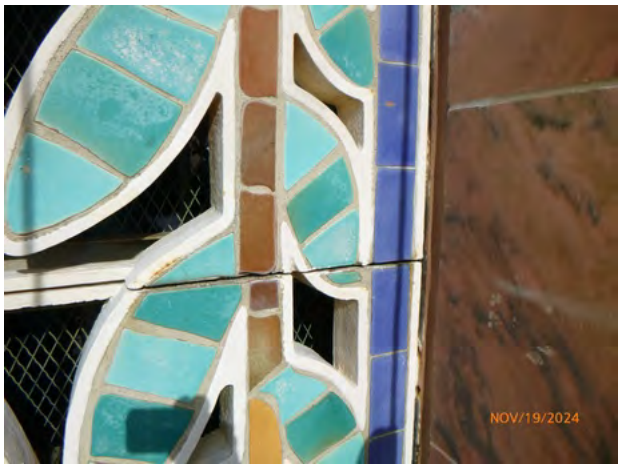


219-164 ArchMetal_Note Photo-general 2024-2.jpg

219-164 ArchMetal_Note Photo-general 2024-3.jpg

219-169 ArchMetal_Note Photo-general 2024-1.jpg

219-169 ArchMetal_Note Photo-general 2024-2.jpg



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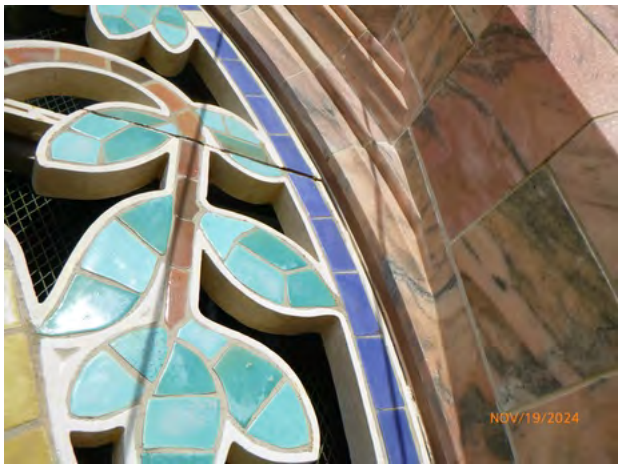
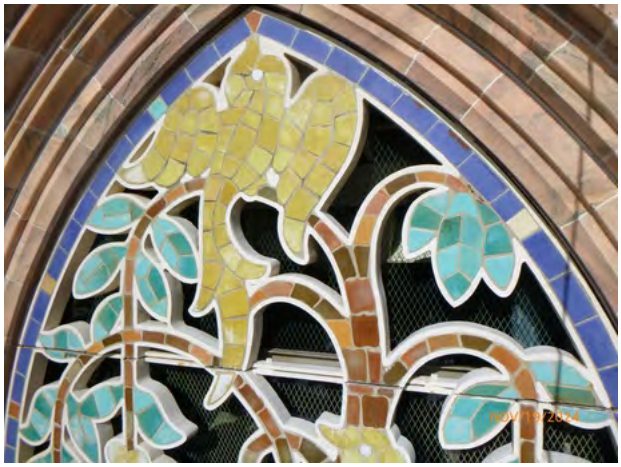


219-169 ArchMetal_Note Photo-general 2024-4.jpg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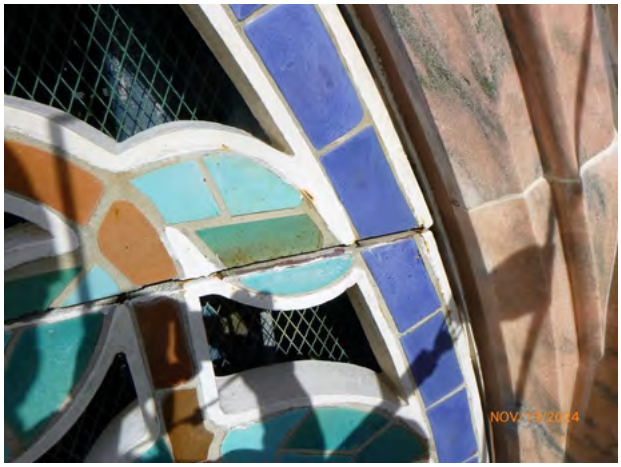
219-174 ArchMetal_Note Photo-general 2024-2.jpg


219-174 ArchMetal_Note Photo-general 2024-3.jpg

222-153 Stone_Spall Bonded 2024-1.jpg

222-153 Stone_Spall Bonded 2024-2.jpg

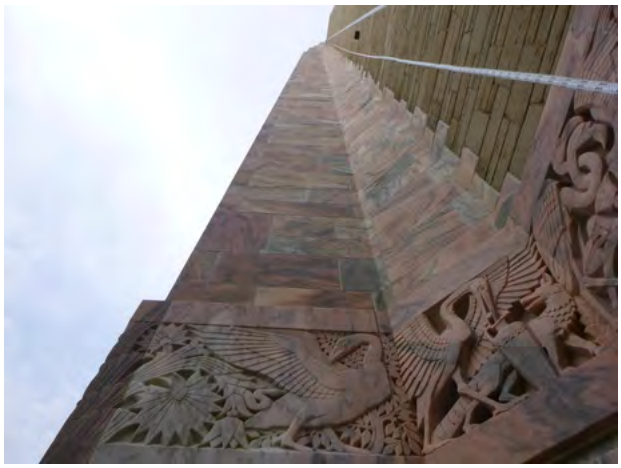

225-1 Stone_Joints Mortar Failed 2024-1.jpg


226-1 Stone_Crack Repair failed 2024-1.jpg


228-18 Stone_Spall Bonded 2024-1.jpg


228-27 Stone_Crack Single unit 2024-1.jpg


229-157 Stone_Spall Removed 2024-1.jpg


230-16 Stone_Note Photo-general 2024-1.jpg


230-16 Stone_Note Photo-general 2024-2.jpg


230-16 Stone_Note Photo-general 2024-3.jpg


230-16 Stone_Note Photo-general 2024-4.jpg

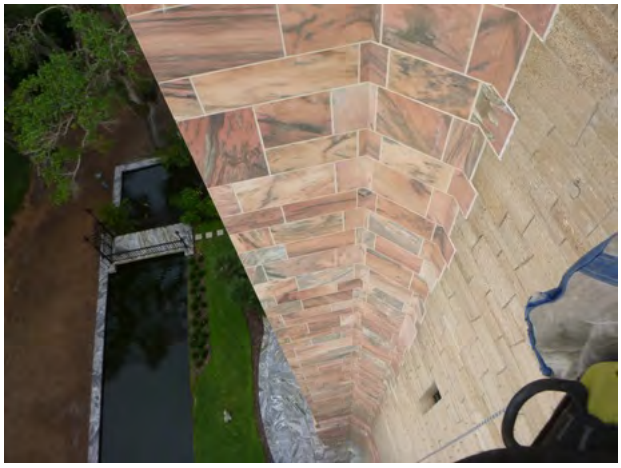

230-23 Stone_Crack Single unit 2024-1.jpg


230-51 Stone_Crack System units and joints 2024-1.jpg


230-51 Stone_Crack System units and joints 2024-2.jpg


230-71 Stone_Note Photo-general 2024-1.jpg


230-71 Stone_Note Photo-general 2024-2.jpg


230-71 Stone_Note Photo-general 2024-3.jpg


230-138 Stone_SoilStain Leached Salts 2024-1.jpg


230-158 Stone_SurfLoss Chipped 2024-1.jpg


234-0 Stone_Joints Mortar Failed 2024-1.jpg


234-26 Stone_Crack System units and joints 2024-1.jpg


234-26 Stone_Crack System units and joints 2024-2.jpg


234-80 Stone_Spall Bonded 2024-1.jpg


234-180 Stone_SurfLoss Chipped 2024-1.jpg


234-180 Stone_SurfLoss Chipped 2024-2.jpg


234-183 Stone_SoilStain Leached Salts 2024-1.jpg


234-187 Stone_Spall Bonded 2024-1.jpg


234-192 Stone_SurfLoss Chipped 2024-1.jpg

235-11 Stone_Crack Single unit 2024-1.jpg


235-28 Stone_Crack Single unit 2024-1.jpg


235-28 Stone_Crack Single unit 2024-2.jpg


235-33 Stone_Crack System units and joints 2024-1.jpg

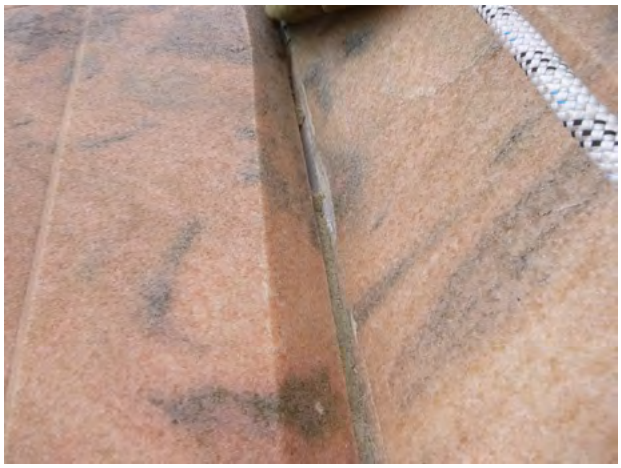

235-33 Stone_Crack System units and joints 2024-2.jpg


235-33 Stone_Crack System units and joints 2024-3.jpg


235-33 Stone_Crack System units and joints 2024-4.jpg


235-101 Stone_Repair Patch Sound 2024-1.jpg


235-181 Stone_SoilStain Leached Salts 2024-1.jpg


235-194 Stone_Joints Mortar Failed 2024-1.jpg


235-194 Stone_Joints Mortar Failed 2024-2.jpg


236-42 Stone_Crack Single unit 2024-1.jpg


236-42 Stone_Crack Single unit 2024-2.jpg


236-91 Stone_Repair Patch Sound 2024-1.jpg


237-15 Stone_Crack Single unit 2024-1.jpg


237-139 Stone_Spall Missing 2024-1.jpg


237-139 Stone_Spall Missing 2024-2.jpg


237-170 Stone_SoilStain Leached Salts 2024-1.jpg


237-176 Stone_SoilStain Leached Salts 2024-1.jpg


237-176 Stone_SoilStain Leached Salts 2024-2.jpg


237-182 Stone_SurfLoss Chipped 2024-1.jpg

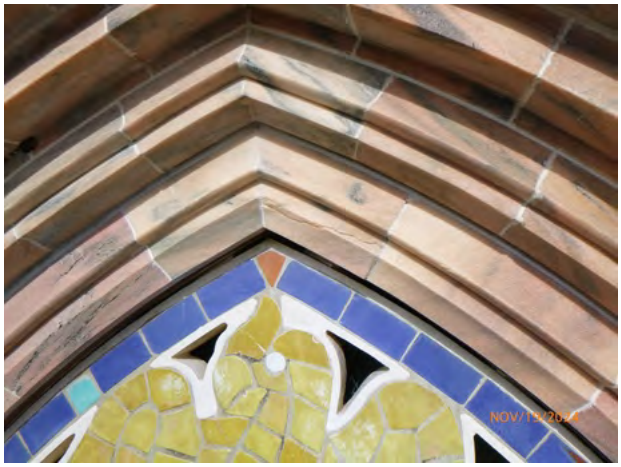

237-193 Stone_Spall Missing 2024-1.jpg


237-193 Stone_Spall Missing 2024-2.jpg


237-193 Stone_Spall Missing 2024-3.jpg


239-91 Stone_Repair Patch Sound 2024-1.jpg


239-178 Stone_Spall Bonded 2024-1.jpg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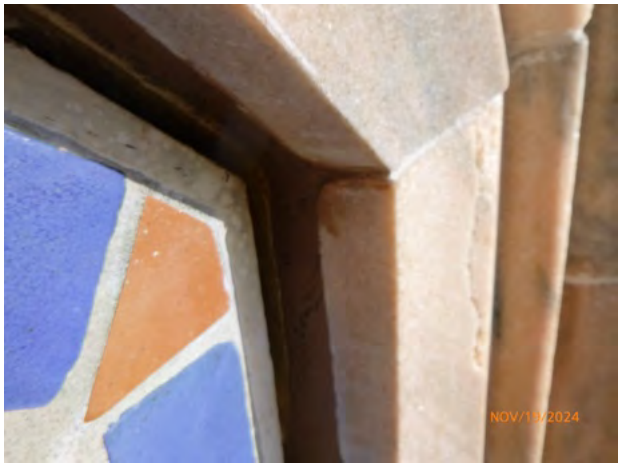
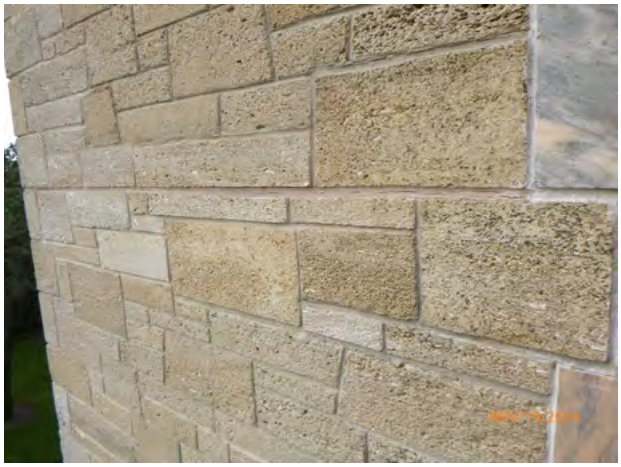
239-178 Stone_Spall Bonded 2024-4.jpg



239-178 Stone_Spall Bonded 2024-5.jpg

239-188 Stone_Spall Missing 2024-1.jpg


240-57 Stone_Joints Sealant Failed 2024-1.jpg


240-57 Stone_Joints Sealant Failed 2024-2.jpg

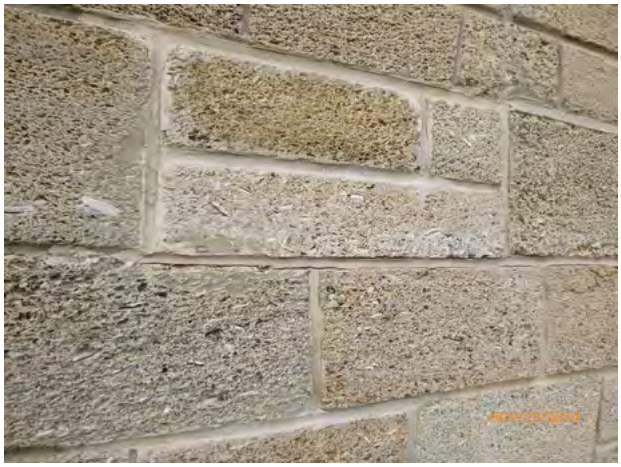

240-57 Stone_Joints Sealant Failed 2024-3.jpg


240-57 Stone_Joints Sealant Failed 2024-4.jpg


240-69 Stone_Joints Sealant Failed 2024-1.jpg


240-69 Stone_Joints Sealant Failed 2024-2.jpg


240-69 Stone_Joints Sealant Failed 2024-3.jpg


240-69 Stone_Joints Sealant Failed 2024-4.jpg

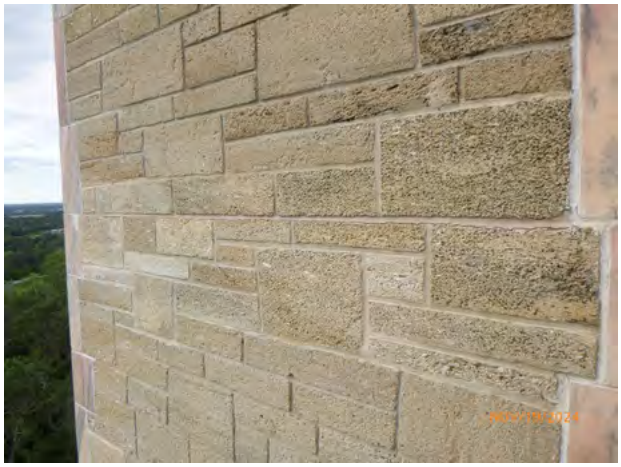

240-70 Stone_Repair Patch Failed 2024-1.jpg


240-90 Stone_Joints Sealant Failed 2024-1.jpg


240-90 Stone_Joints Sealant Failed 2024-2.jpg


240-90 Stone_Joints Sealant Failed 2024-3.jpg


240-90 Stone_Joints Sealant Failed 2024-4.jpg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240-101 Stone_Joints Sealant Failed 2024-2.jpg


240-101 Stone_Joints Sealant Failed 2024-3.jpg


240-101 Stone_Joints Sealant Failed 2024-4.jpg


240-112 Stone_Joints Sealant Failed 2024-1.jpg


240-112 Stone_Joints Sealant Failed 2024-2.jpg


240-112 Stone_Joints Sealant Failed 2024-3.jpg


240-112 Stone_Joints Sealant Failed 2024-4.jpg


240-122 Stone_Joints Sealant Failed 2024-1.jpg


240-122 Stone_Joints Sealant Failed 2024-2.jpg


240-122 Stone_Joints Sealant Failed 2024-3.jpg


240-122 Stone_Joints Sealant Failed 2024-4.jpg


240-137 Stone_SoilStain Leached Salts 2024-1.jpg

241-23 Stone_SoilStain Paint 2024-1.jpg


241-23 Stone_SoilStain Paint 2024-2.jpg

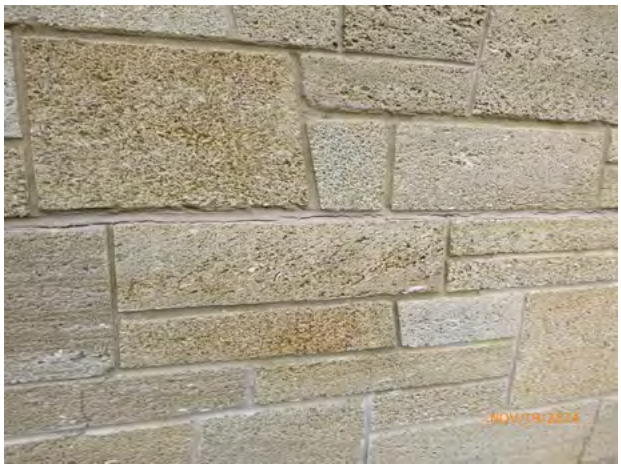

241-23 Stone_SoilStain Paint 2024-3.jpg

241-23 Stone_SoilStain Paint 2024-4.jpg


241-37 Stone_Joints Sealant Failed 2024-1.jpg


241-37 Stone_Joints Sealant Failed 2024-2.jpg


241-37 Stone_Joints Sealant Failed 2024-3.jpg


241-37 Stone_Joints Sealant Failed 2024-4.jpg


241-44 Stone_Joints Sealant Failed 2024-1.jpg


241-44 Stone_Joints Sealant Failed 2024-2.jpg


241-44 Stone_Joints Sealant Failed 2024-3.jpg


241-44 Stone_Joints Sealant Failed 2024-4.jpg


241-57 Stone_Spall Removed + Steel 2024-1.jpg


241-57 Stone_Spall Removed + Steel 2024-2.jpg

241-57 Stone_Spall Removed + Steel 2024-3.jpg


241-57 Stone_Spall Removed + Steel 2024-4.jpg


241-70 Stone_Crack System units and joints 2024-1.jpg


241-70 Stone_Crack System units and joints 2024-2.jpg


241-80 Stone_Joints Sealant Failed 2024-1.jpg


241-80 Stone_Joints Sealant Failed 2024-2.jpg


241-80 Stone_Joints Sealant Failed 2024-3.jpg


241-80 Stone_Joints Sealant Failed 2024-4.jpg

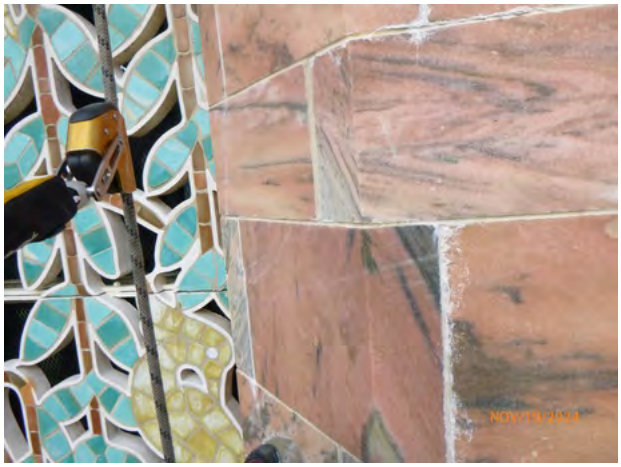

241-130 Stone_Joints Sealant Failed 2024-1.jpg


241-130 Stone_Joints Sealant Failed 2024-2.jpg


241-130 Stone_Joints Sealant Failed 2024-3.jpg


241-130 Stone_Joints Sealant Failed 2024-4.jpg


241-130 Stone_Joints Sealant Failed 2024-5.jpg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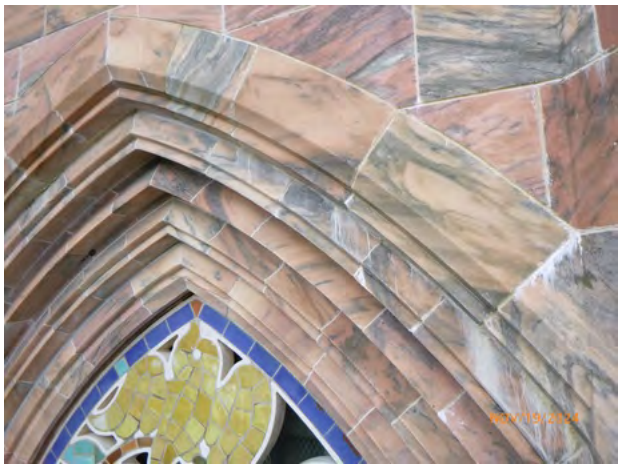
241-164 Stone_SurfLoss Chipped 2024-2.jpg


241-164 Stone_SurfLoss Chipped 2024-3.jpg



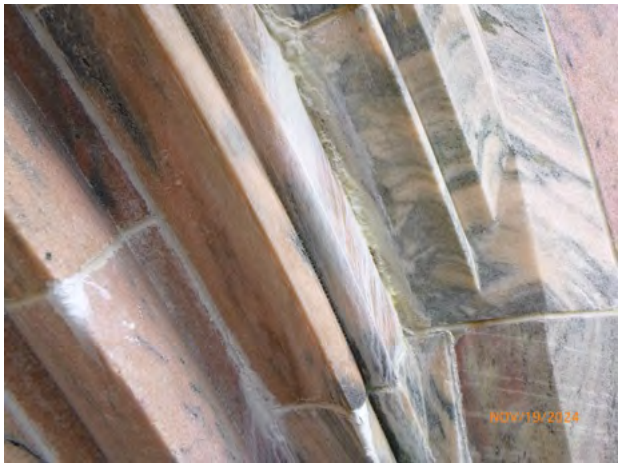
241-178 Stone_SoilStain Leached Salts 2024-1.jpg

241-178 Stone_SoilStain Leached Salts 2024-2.jpg

241-178 Stone_SoilStain Leached Salts 2024-3.jpg

241-178 Stone_SoilStain Leached Salts 2024-4.jpg

241-178 Stone_SoilStain Leached Salts 2024-5.jpg



241-178 Stone_SoilStain Leached Salts 2024-6.jpg


241-181 Stone_Crack Single unit 2024-1.jpg


241-181 Stone_Crack Single unit 2024-2.jpg


242-10 Stone_Joints Mortar Failed 2024-1.jpg


242-164 Stone_SoilStain Leached Salts 2024-1.jpg

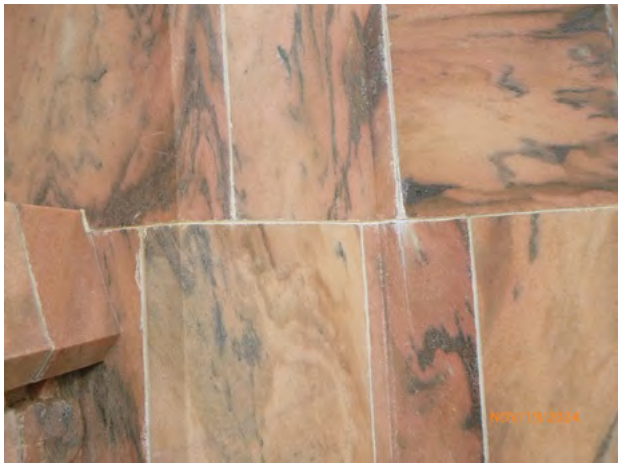

242-164 Stone_SoilStain Leached Salts 2024-2.jpg


242-164 Stone_SoilStain Leached Salts 2024-3.jpg


242-164 Stone_SoilStain Leached Salts 2024-4.jpg

242-188 Stone_SurfLoss Chipped 2024-1.jpg


243-1 Stone_Repair Patch Failed 2024-1.jpg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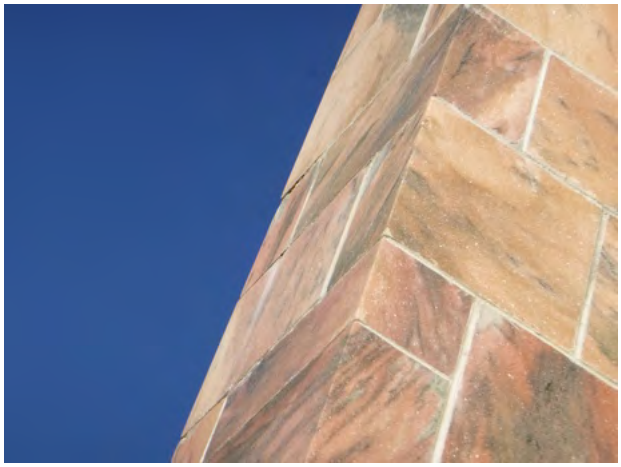
243-142 Stone_SoilStain Leached Salts 2024-2.jpg


243-151 Stone_Joints Mortar Failed 2024-1.jpg


243-154 Stone_SurfLoss Chipped 2024-1.jpg


243-189 Stone_Joints Mortar Failed 2024-1.jpg

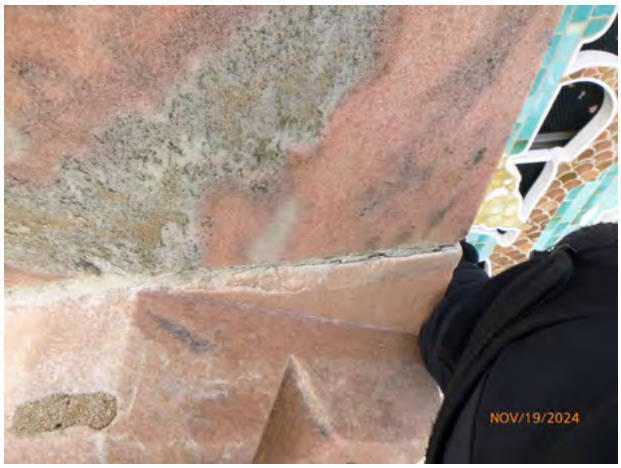
243-190 Stone_SurfLoss Chipped 2024-1.jpg

243-190 Stone_SurfLoss Chipped 2024-2.jpg


243-198 Stone_Spall Missing 2024-1.jpg


244-7 Stone_Crack System units 2024-1.jpg


244-72 Stone_SoilStain Leached Salts 2024-1.jpg

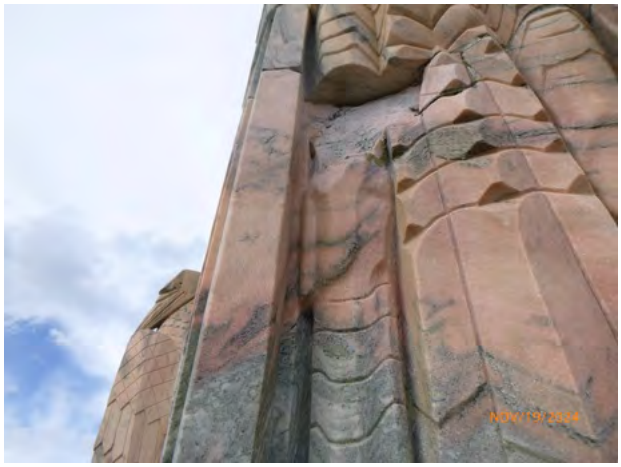


244-163 Stone_SurfLoss Chipped 2024-1.jpg


244-163 Stone_SurfLoss Chipped 2024-2.jpg


244-201 Stone_Spall Missing 2024-1.jpg


244-201 Stone_Spall Missing 2024-2.jpg


244-201 Stone_Spall Missing 2024-3.jpg


245-184 Stone_Joints Mortar Failed 2024-1.jpg

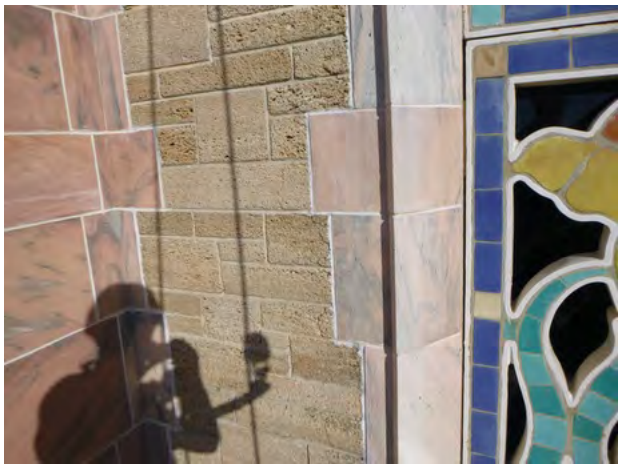
245-185 Stone_Joints Mortar Failed 2024-1.jpg


245-185 Stone_Joints Mortar Failed 2024-2.jpg

245-185 Stone_Joints Mortar Failed 2024-3.jpg

245-185 Stone_Joints Mortar Failed 2024-4.jpg


246-177 Stone_SoilStain Leached Salts 2024-1.jpg


247-104 Stone_Crack System units and joints 2024-1.jpg


247-104 Stone_Crack System units and joints 2024-2.jpg


248-138 Stone_Joints Mortar Failed 2024-1.jpg

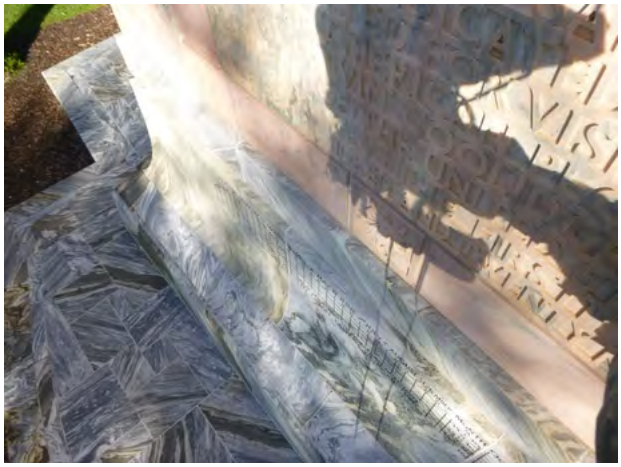

248-138 Stone_Joints Mortar Failed 2024-2.jpg


248-184 Stone_SurfLoss Chipped 2024-1.jpg


250-1 Stone_Joints Mortar Failed 2024-1.jpg


250-12 Stone_Note Photo-general 2024-1.jpg


250-12 Stone_Note Photo-general 2024-2.jpg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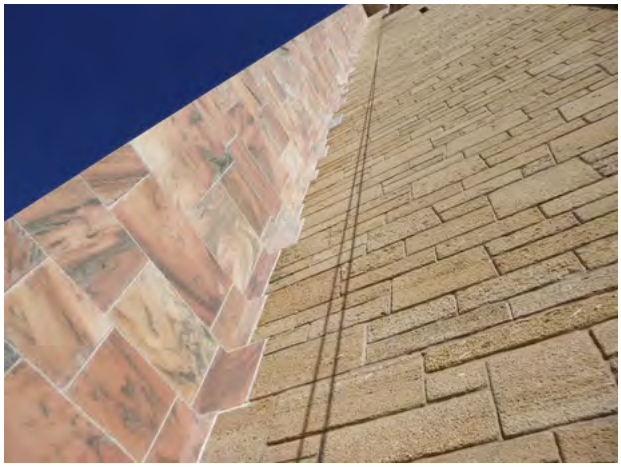
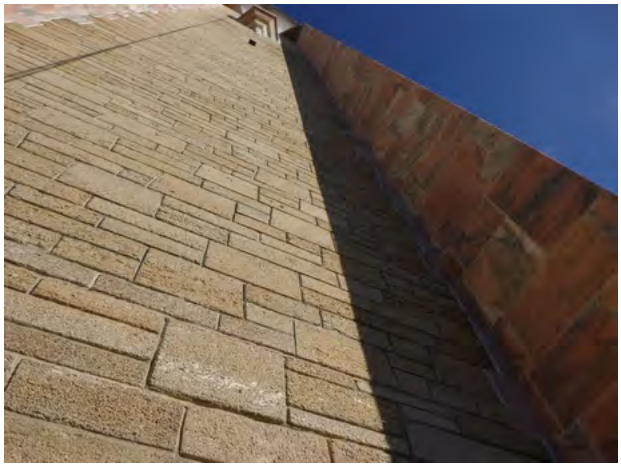

250-61 Stone_Note Photo-general 2024-1.jpg


250-61 Stone_Note Photo-general 2024-2.jpg

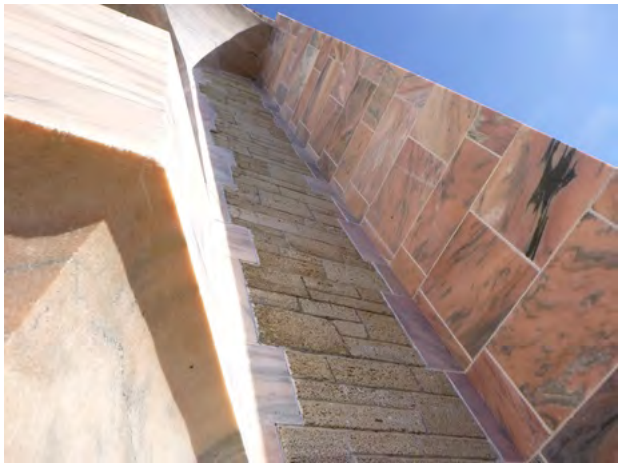

250-61 Stone_Note Photo-general 2024-3.jpg


250-61 Stone_Note Photo-general 2024-4.jpg


250-66 Stone_Joints Sealant Failed 2024-1.jpg


250-66 Stone_Joints Sealant Failed 2024-2.jpg


250-93 Stone_Note Photo-general 2024-1.jpg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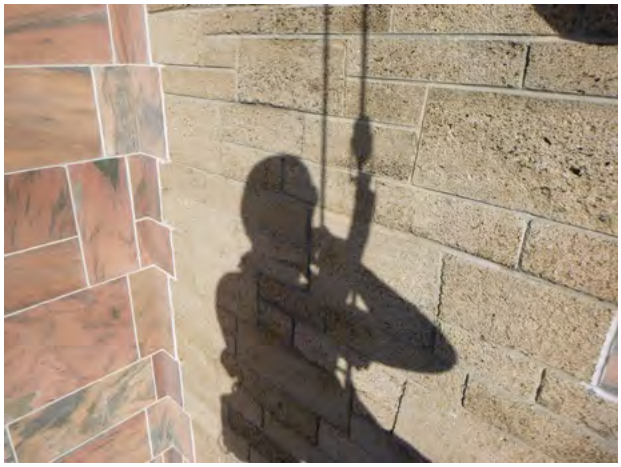
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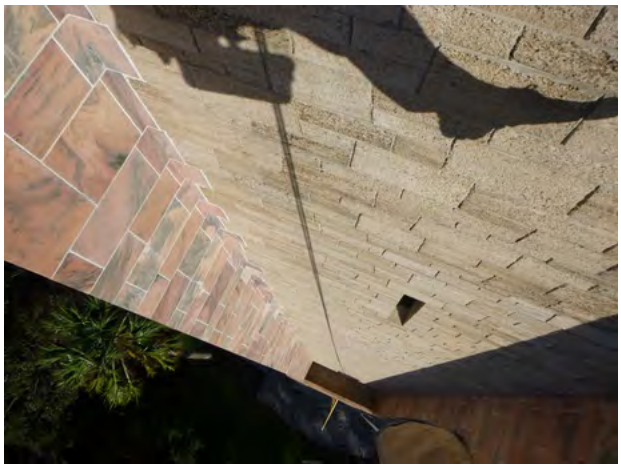
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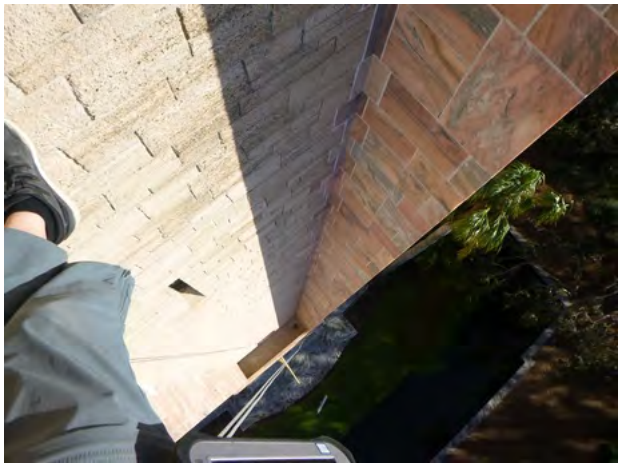
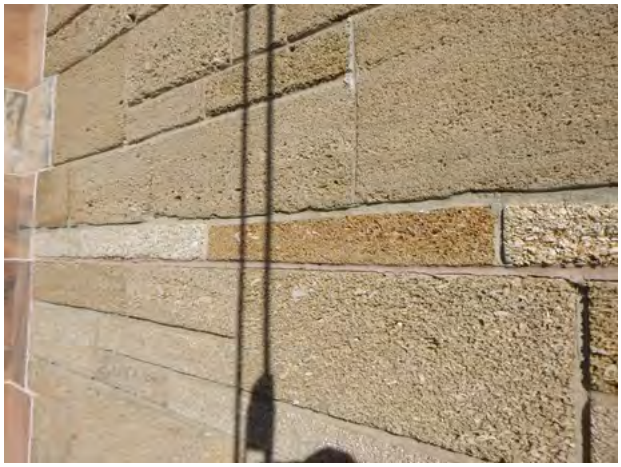
250-93 Stone_Note Photo-general 2024-5.jpg


250-93 Stone_Note Photo-general 2024-6.jpg


250-194 Stone_SoilStain Guano 2024-1.jpg


251-52 Stone_Joints Sealant Failed 2024-1.jpg


251-52 Stone_Joints Sealant Failed 2024-2.jpg

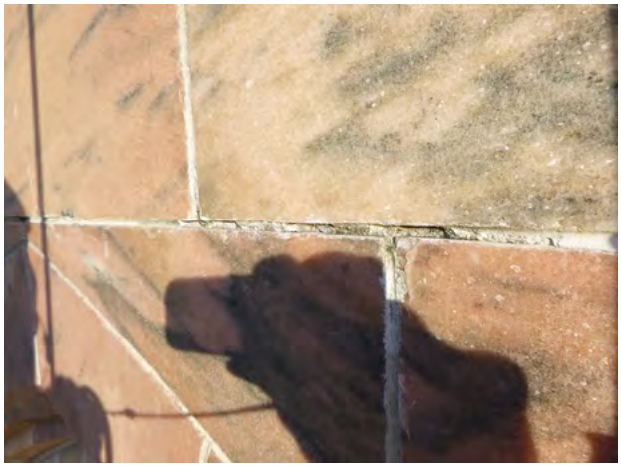

251-81 Stone_Joints Sealant Failed 2024-1.jpg


251-81 Stone_Joints Sealant Failed 2024-2.jpg


251-122 Stone_Crack System units and joints 2024-1.jpg


251-138 Stone_SoilStain Leached Salts 2024-1.jpg

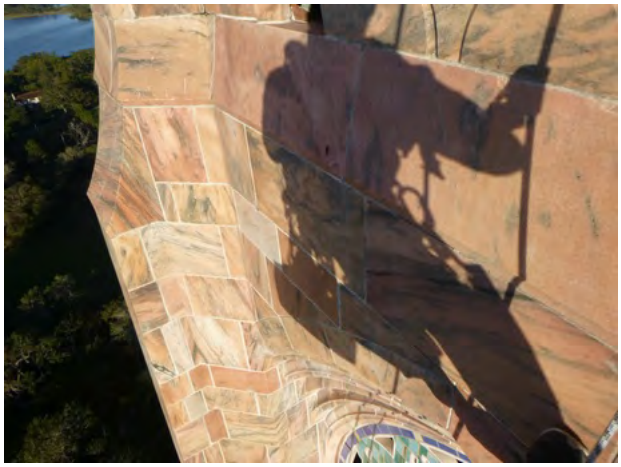

251-138 Stone_SoilStain Leached Salts 2024-2.jpg

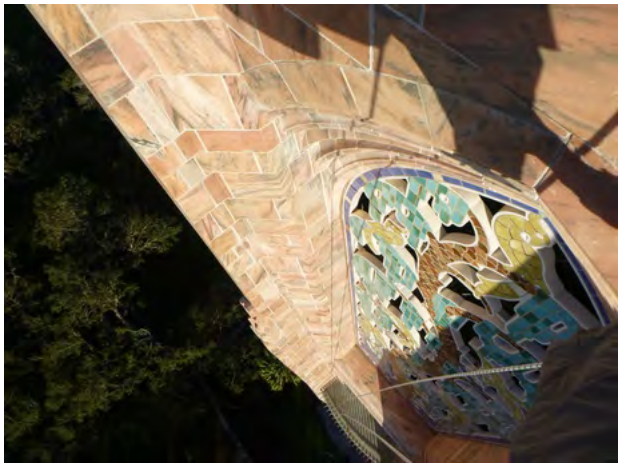

251-181 Stone_Joints Mortar Failed 2024-1.jpg


251-186 Stone_Note Photo-general 2024-1.jpg

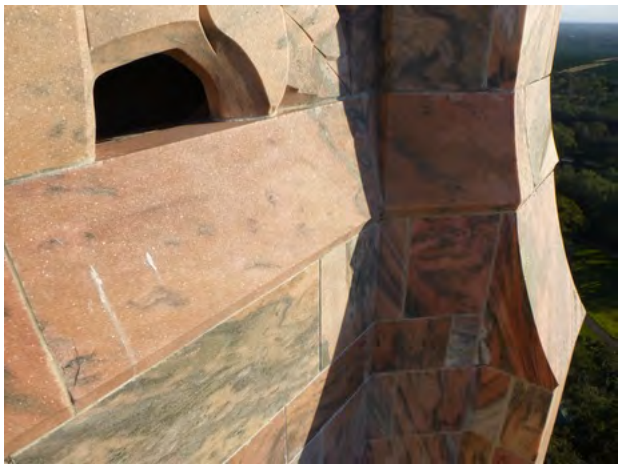

251-186 Stone_Note Photo-general 2024-2.jpg

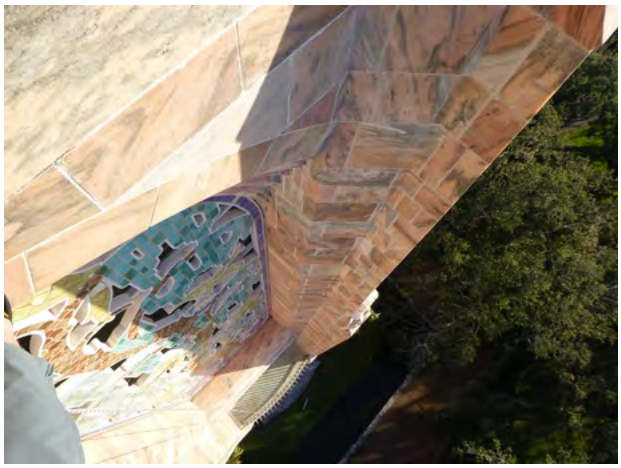

251-186 Stone_Note Photo-general 2024-3.jpg


251-186 Stone_Note Photo-general 2024-4.jpg


251-186 Stone_Note Photo-general 2024-5.jpg


251-186 Stone_Note Photo-general 2024-6.jpg


251-186 Stone_Note Photo-general 2024-7.jpg


251-186 Stone_Note Photo-general 2024-8.jpg


252-29 Stone_SoilStain Biological 2024-1.jpg


252-29 Stone_SoilStain Biological 2024-2.jpg


253-105 Stone_Crack Single unit 2024-1.jpg

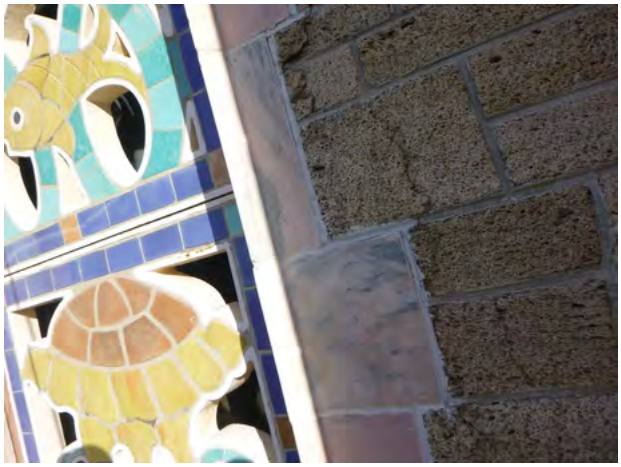

253-105 Stone_Crack Single unit 2024-2.jpg

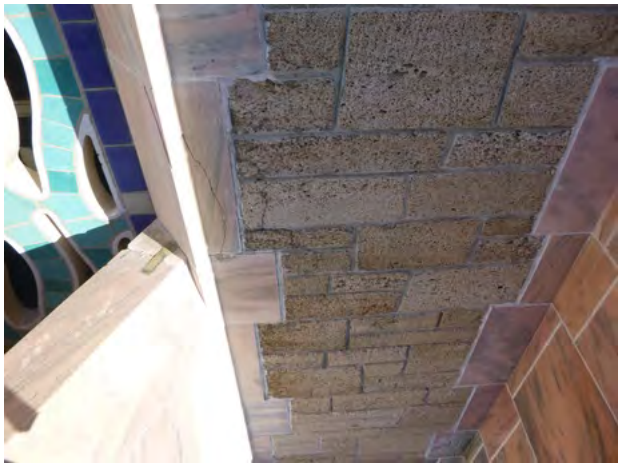

253-184 Stone_Spall Missing 2024-1.jpg


255-28 Stone_Joints Mortar Failed 2024-1.jpg


255-111 Stone_Crack System units and joints 2024-1.jpg


255-111 Stone_Crack System units and joints 2024-2.jpg


255-111 Stone_Crack System units and joints 2024-3.jpg


255-111 Stone_Crack System units and joints 2024-4.jpg


255-177 Stone_SoilStain Leached Salts 2024-1.jpg


255-188 Stone_Joints Mortar Failed 2024-1.jpg


255-195 Stone_Spall Missing 2024-1.jpg


256-7 Stone_Crack Single unit 2024-1.jpg


256-41 Stone_Crack System units 2024-1.jpg


256-72 Stone_Joints Mortar Failed 2024-1.jpg


256-138 Stone_Joints Mortar Failed 2024-1.jpg


257-28 Stone_Spall Bonded 2024-1.jpg


257-166 Stone_Joints Mortar Failed 2024-1.jpg


257-166 Stone_Joints Mortar Failed 2024-2.jpg


257-183 Stone_Joints Mortar Failed 2024-1.jpg


257-189 Stone_SurfLoss Chipped 2024-1.jpg


257-192 Stone_Joints Mortar Failed 2024-1.jpg


258-89 Stone_Joints Mortar Failed 2024-1.jpg


259-5 Stone_Crack Single unit 2024-1.jpg


262-11 Stone_Crack Single unit 2024-1.jpg


262-120 Stone_Repair Patch Failed 2024-1.jpg


262-121 Stone_Joints Sealant Failed 2024-1.jpg


262-121 Stone_Joints Sealant Failed 2024-2.jpg


263-100 Stone_Joints Sealant Failed 2024-1.jpg


263-125 Stone_Joints Sealant Failed 2024-1.jpg


264-66 Stone_Joints Sealant Failed 2024-1.jpg


264-82 Stone_Joints Sealant Failed 2024-1.jpg


264-82 Stone_Joints Sealant Failed 2024-2.jpg


264-132 Stone_Crack System units and joints 2024-1.jpg


264-132 Stone_Crack System units and joints 2024-2.jpg


264-132 Stone_Crack System units and joints 2024-3.jpg


265-1 Stone_Joints Mortar Failed 2024-1.jpg

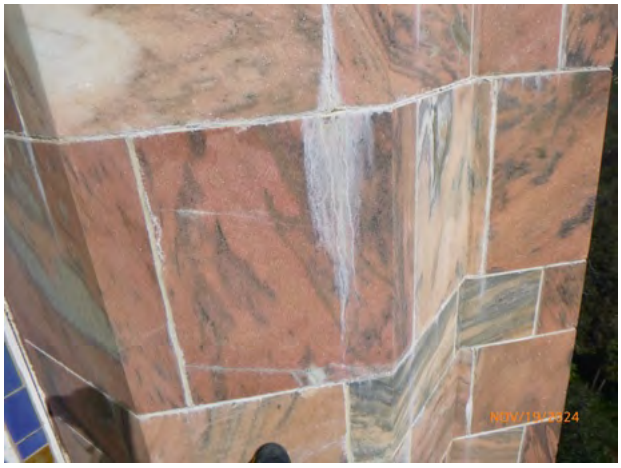

266-90 Stone_Crack System units and joints 2024-1.jpg


266-90 Stone_Crack System units and joints 2024-2.jpg

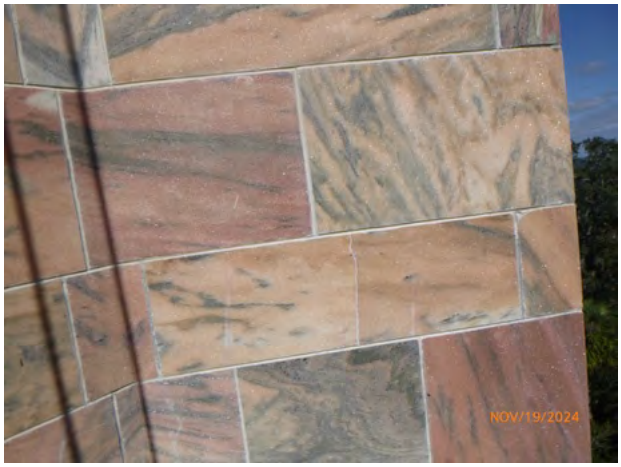

266-92 Stone_Joints Mortar Missing 2024-1.jpg


266-92 Stone_Joints Mortar Missing 2024-2.jpg

269-169 Stone_SoilStain Leached Salts 2024-1.jpg


269-169 Stone_SoilStain Leached Salts 2024-2.jpg

271-75 Stone_Crack Single unit 2024-1.jpg



271-75 Stone_Crack Single unit 2024-2.jpg

271-147 Stone_Crack Single unit 2024-1.jpg

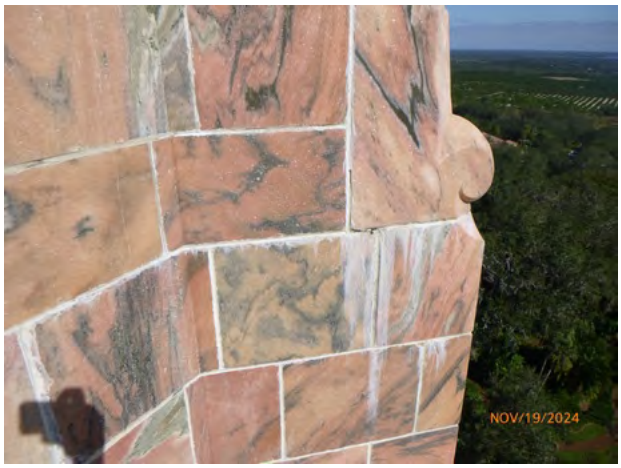
272-35 Stone_SoilStain Leached Salts 2024-1.jpg

272-35 Stone_SoilStain Leached Salts 2024-2.jpg

272-71 Stone_SoilStain Leached Salts 2024-1.jpg

272-121 Stone_Crack Single unit 2024-1.jpg

272-121 Stone_Crack Single unit 2024-2.jpg



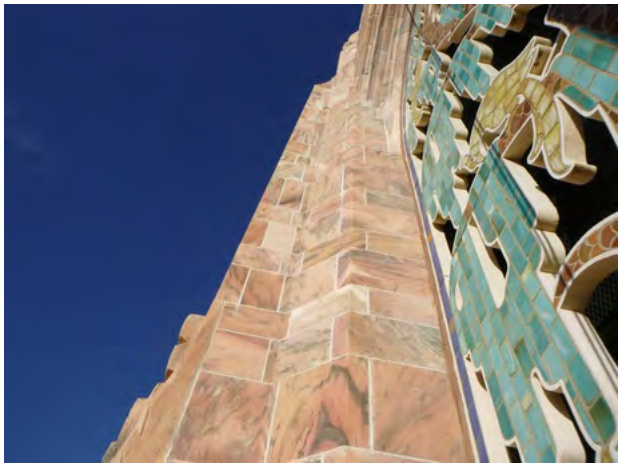
272-156 Stone_SoilStain Leached Salts 2024-1.jpg

272-156 Stone_SoilStain Leached Salts 2024-2.jpg

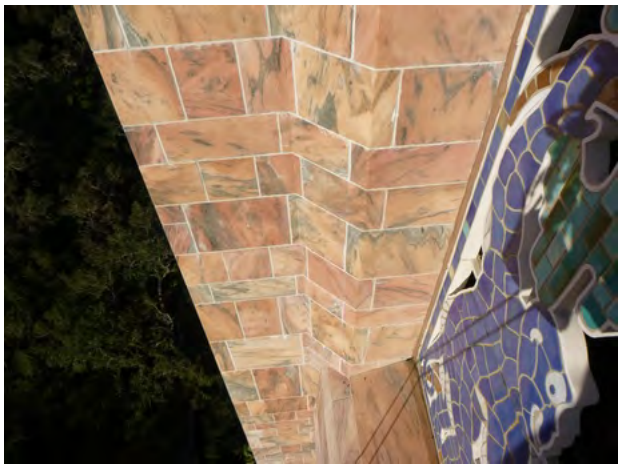
272-156 Stone_SoilStain Leached Salts 2024-3.jpg


273-11 Stone_Crack System units 2024-1.jpg


273-30 Stone_Spall Missing 2024-1.jpg


279-158 Stone_Note Photo-general 2024-1.jpg


279-158 Stone_Note Photo-general 2024-2.jpg


279-158 Stone_Note Photo-general 2024-3.jpg

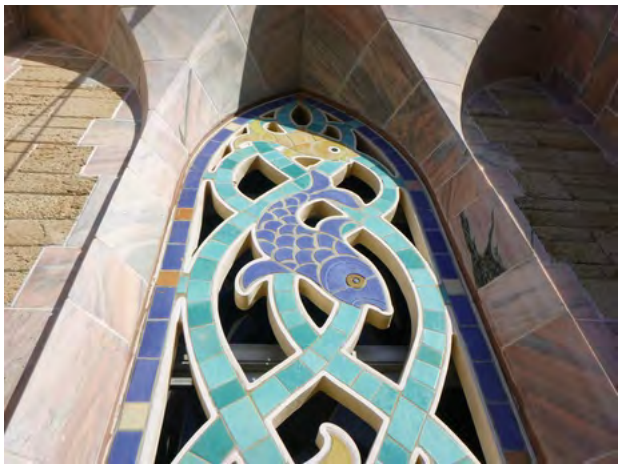

282-134 Stone_Spall Bonded 2024-1.jpg

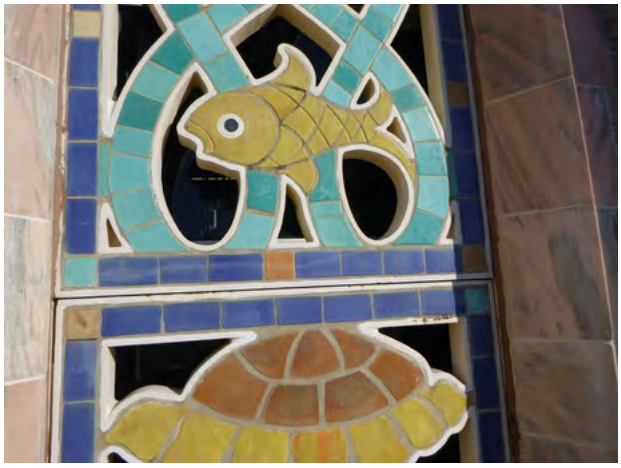

283-129 ArchMetal_Corrosion Pitted 2024-1.jpg


284-159 ArchMetal_Corrosion Surface 2024-1.jpg

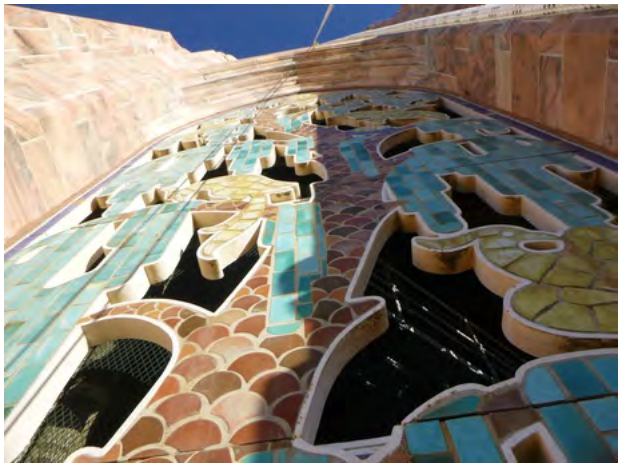

285-145 ArchMetal_Corrosion Surface 2024-1.jpg

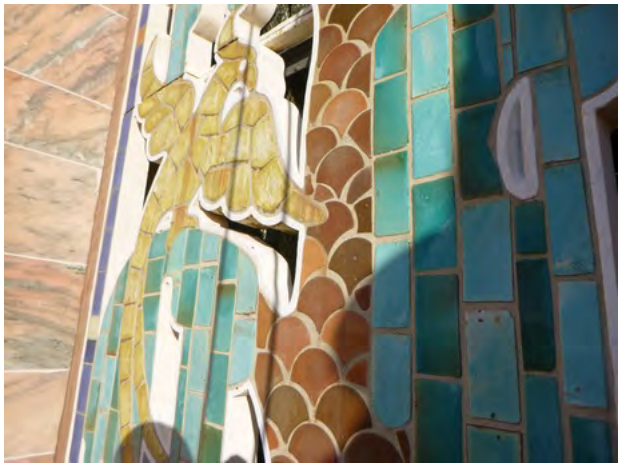

286-103 Stone_Crack Single unit 2024-1.jpg


286-115 TerraCotta_Note Photo-general 2024-1.jpg


286-115 TerraCotta_Note Photo-general 2024-2.jpg


286-115 TerraCotta_Note Photo-general 2024-3.jpg


286-153 ArchMetal_Note Photo-general 2024-1.jpg


286-153 ArchMetal_Note Photo-general 2024-2.jpg

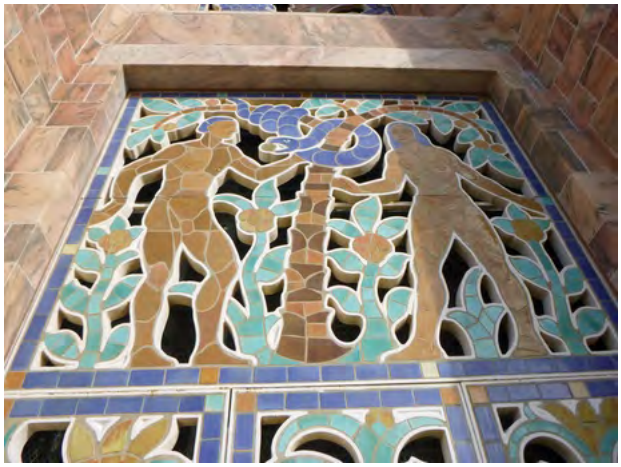

286-153 ArchMetal_Note Photo-general 2024-3.jpg

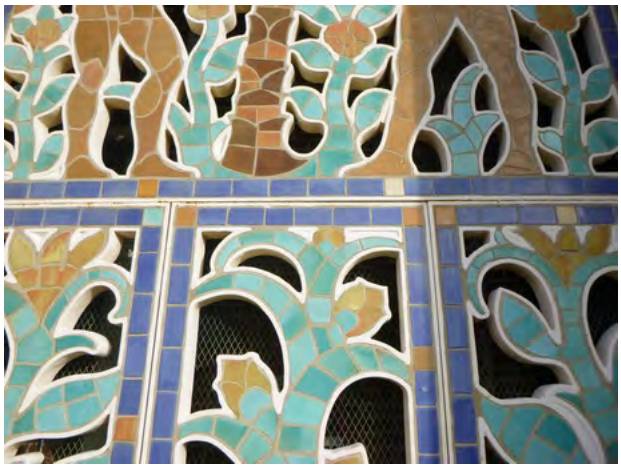

286-153 ArchMetal_Note Photo-general 2024-4.jpg


287-111 TerraCotta_Crack Single unit 2024-1.jpg


287-128 ArchMetal_Corrosion Surface 2024-1.jpg


287-128 ArchMetal_Corrosion Surface 2024-2.jpg


287-132 TerraCotta_Note Photo-general 2024-1.jpg


287-132 TerraCotta_Note Photo-general 2024-2.jpg

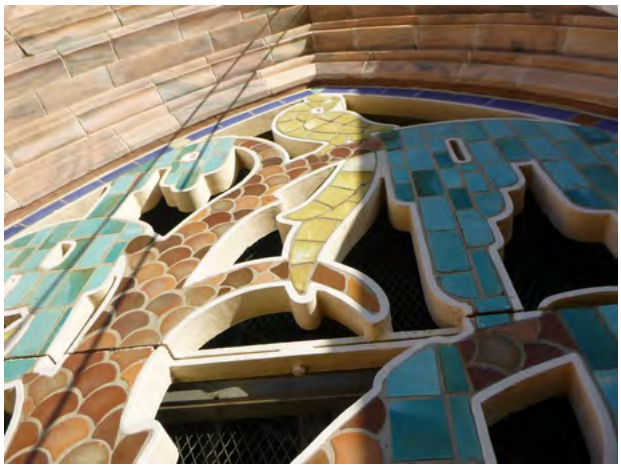

287-132 TerraCotta_Note Photo-general 2024-3.jpg


287-133 ArchMetal_Corrosion Surface 2024-1.jpg


287-133 ArchMetal_Corrosion Surface 2024-2.jpg


287-133 ArchMetal_Corrosion Surface 2024-3.jpg


287-149 ArchMetal_Corrosion Surface 2024-1.jpg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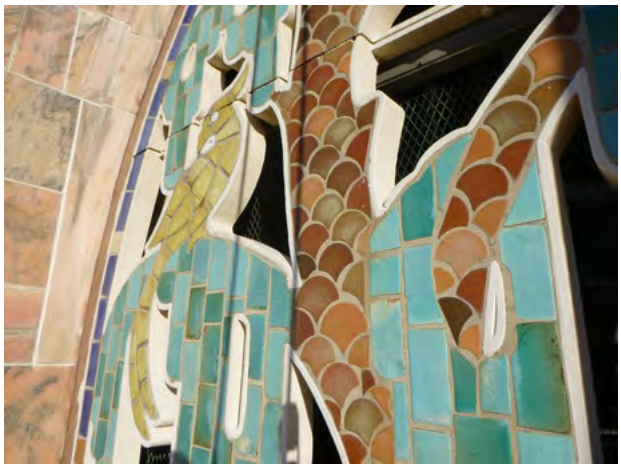
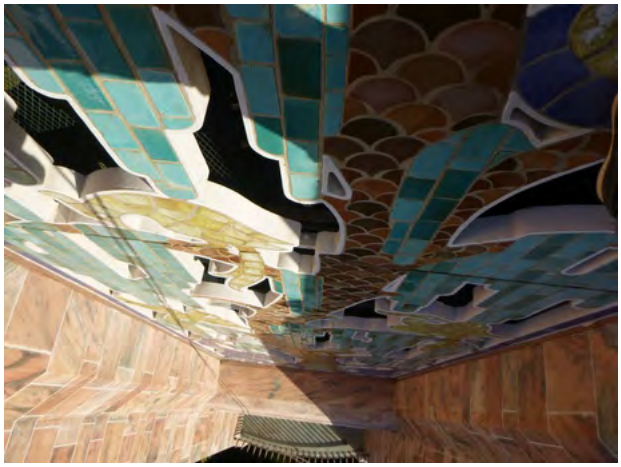

287-171 TerraCotta_Note Photo-general 2024-2.jpg


287-171 TerraCotta_Note Photo-general 2024-3.jpg


287-171 TerraCotta_Note Photo-general 2024-4.jpg


288-155 ArchMetal_Corrosion Surface 2024-1.jpg


288-169 ArchMetal_Coating Coating Failed 2024-1.jpg

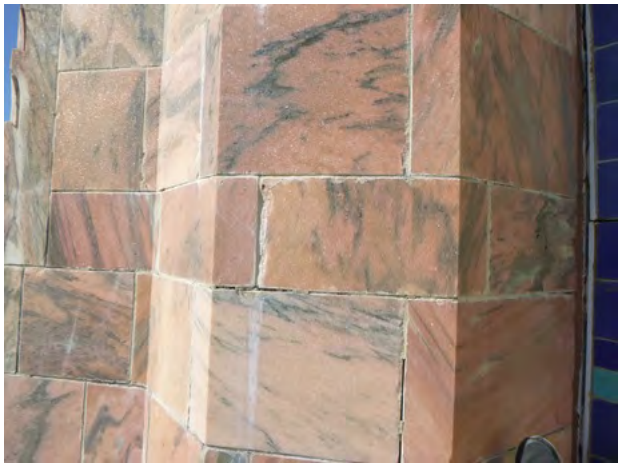

289-168 ArchMetal_Corrosion Surface 2024-1.jpg

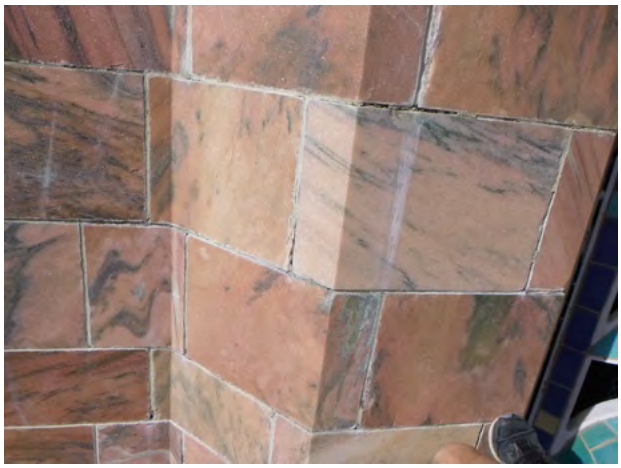

290-173 ArchMetal_Coating Coating Failed 2024-1.jpg


295-159 Stone_Note Photo-general 2024-1.jpg


295-159 Stone_Note Photo-general 2024-2.jpg


295-159 Stone_Note Photo-general 2024-3.jpg


305-156 Stone_Joints Mortar Failed 2024-1.jpg


305-156 Stone_Joints Mortar Failed 2024-2.jpg


308-145 ArchMetal_Corrosion Pitted 2024-1.jpg


308-145 ArchMetal_Corrosion Pitted 2024-2.jpg


309-158 TerraCotta_Spall Missing 2024-1.jpg


309-173 TerraCotta_Spall Missing 2024-1.jpg


310-173 ArchMetal_Corrosion Surface 2024-1.jpg

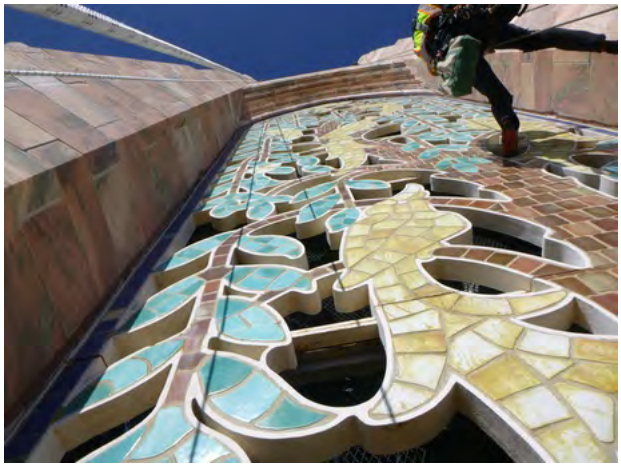

310-173 ArchMetal_Corrosion Surface 2024-2.jpg


311-158 ArchMetal_Coating Coating Failed 2024-1.jpg


311-172 ArchMetal_Coating Coating Failed 2024-1.jpg


311-172 ArchMetal_Coating Coating Failed 2024-2.jpg


311-172 ArchMetal_Coating Coating Failed 2024-3.jpg


313-146 ArchMetal_Note Photo-general 2024-1.jpg


313-146 ArchMetal_Note Photo-general 2024-2.jpg

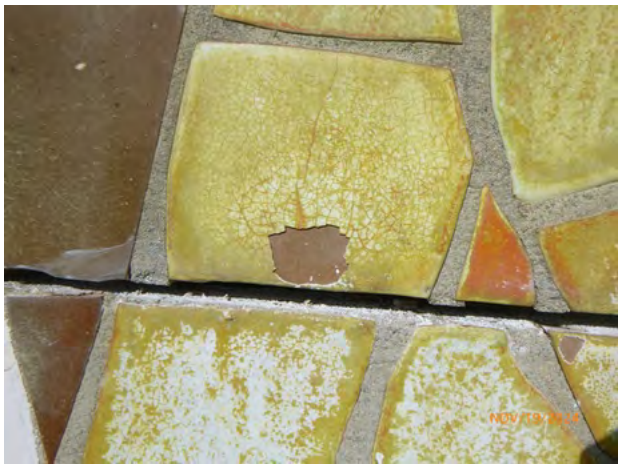

313-146 ArchMetal_Note Photo-general 2024-3.jpg


313-152 ArchMetal_Coating Coating Failed 2024-1.jpg


313-152 ArchMetal_Coating Coating Failed 2024-2.jpg

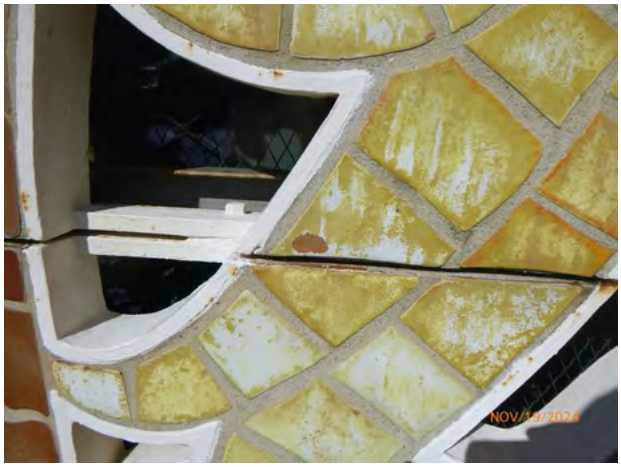

313-158 ArchMetal_Corrosion Surface 2024-1.jpg

313-164 TerraCotta_SurfLoss Glaze loss 2024-1.jpg


313-164 TerraCotta_SurfLoss Glaze loss 2024-2.jpg

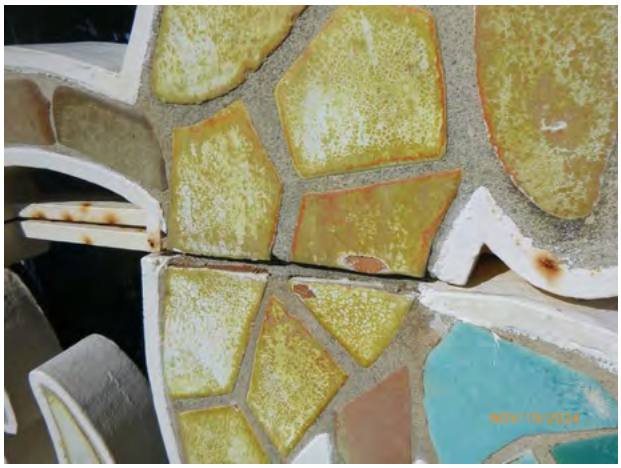
313-164 TerraCotta_SurfLoss Glaze loss 2024-3.jpg


313-168 ArchMetal_Corrosion Surface 2024-1.jpg


315-158 TerraCotta_SurfLoss Glaze loss 2024-1.jpg


315-160 TerraCotta_SurfLoss Glaze loss 2024-1.jpg

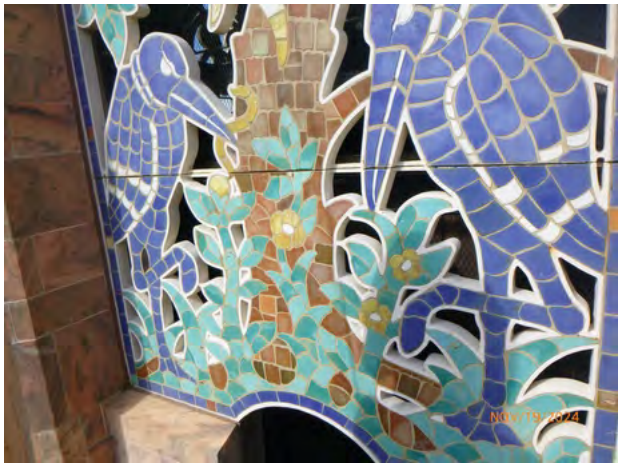
315-168 TerraCotta_SurfLoss Glaze loss 2024-1.jpg



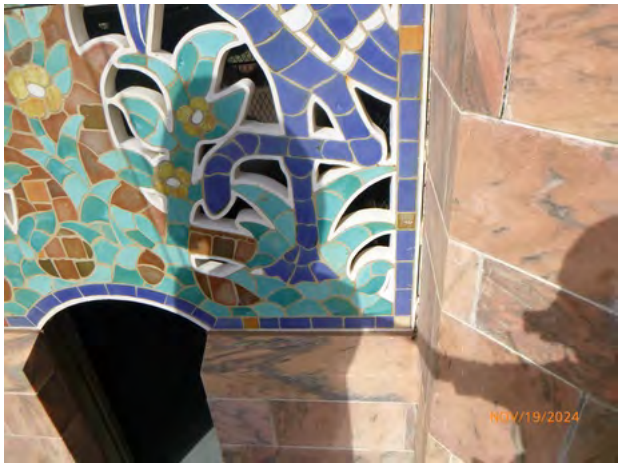
315-168 TerraCotta_SurfLoss Glaze loss 2024-2.jpg

317-168 TerraCotta_SurfLoss Glaze loss 2024-1.jpg

317-168 TerraCotta_SurfLoss Glaze loss 2024-2.jpg

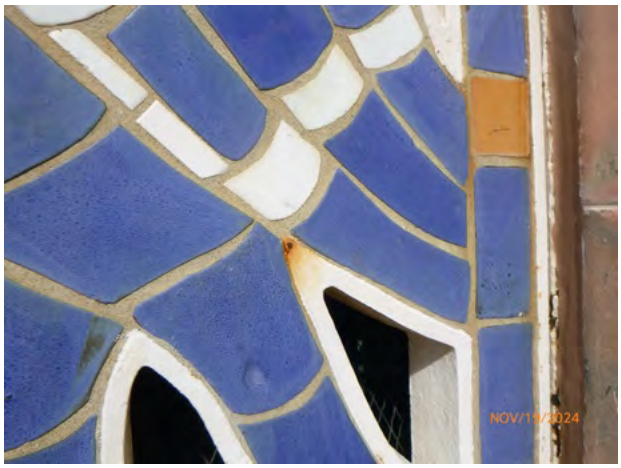


319-145 ArchMetal_Note Photo-general 2024-1.jpg



319-145 ArchMetal_Note Photo-general 2024-2.jpg

319-145 ArchMetal_Note Photo-general 2024-3.jpg

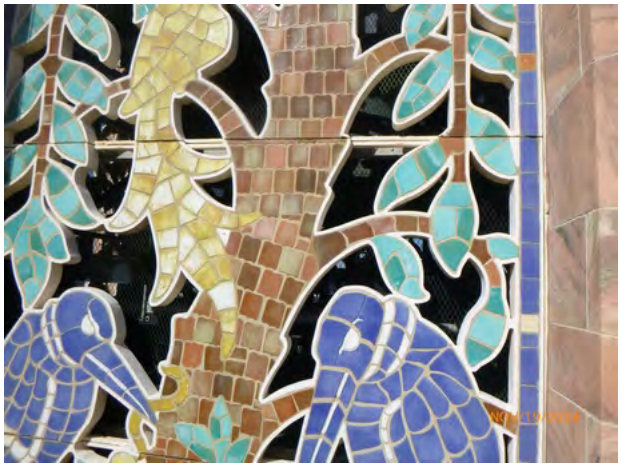


319-145 ArchMetal_Note Photo-general 2024-4.jpg

319-145 ArchMetal_Note Photo-general 2024-5.jpg

319-145 ArchMetal_Note Photo-general 2024-6.jpg

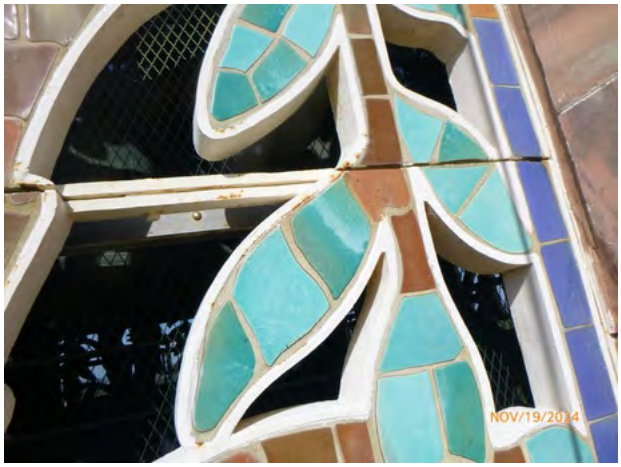
319-145 ArchMetal_Note Photo-general 2024-7.jpg


319-150 ArchMetal_Note Photo-general 2024-1.jpg

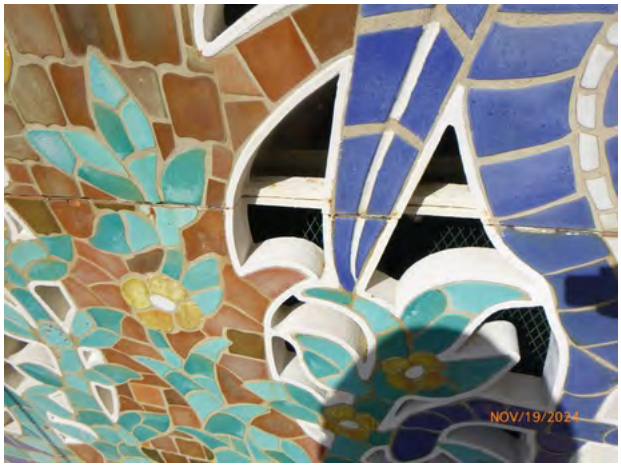

319-150 ArchMetal_Note Photo-general 2024-2.jpg

319-150 ArchMetal_Note Photo-general 2024-3.jpg

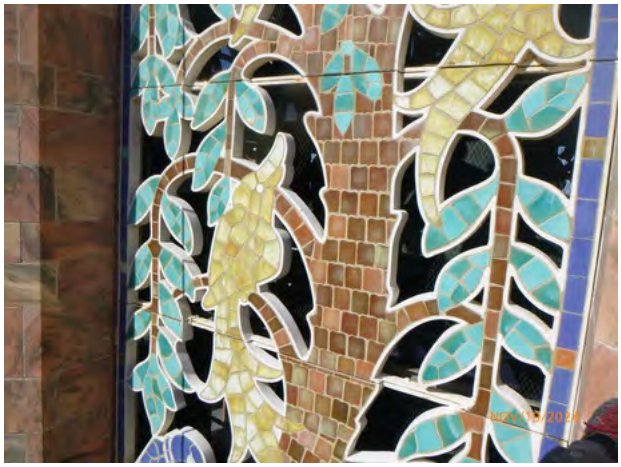
319-150 ArchMetal_Note Photo-general 2024-4.jpg



319-150 ArchMetal_Note Photo-general 2024-5.jpg

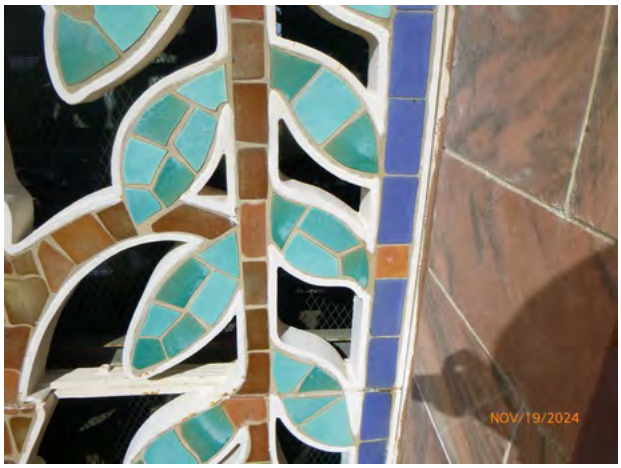


319-150 ArchMetal_Note Photo-general 2024-6.jpg

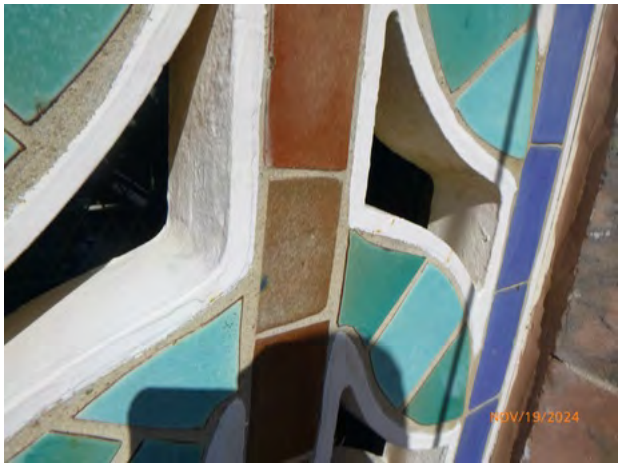

319-154 ArchMetal_Note Photo-general 2024-1.jpg


319-154 ArchMetal_Note Photo-general 2024-2.jpg

319-154 ArchMetal_Note Photo-general 2024-3.jpg



319-154 ArchMetal_Note Photo-general 2024-4.jpg



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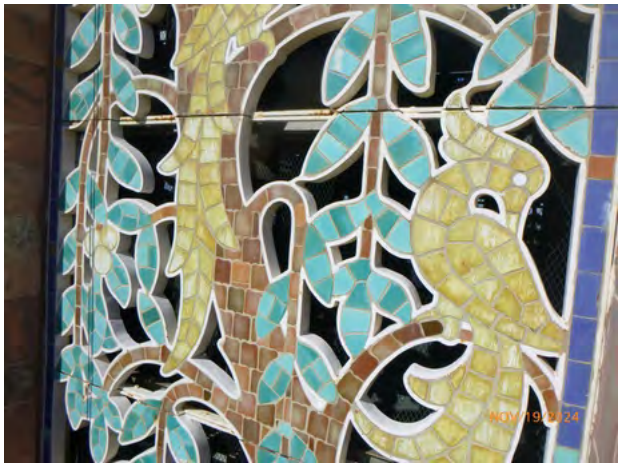
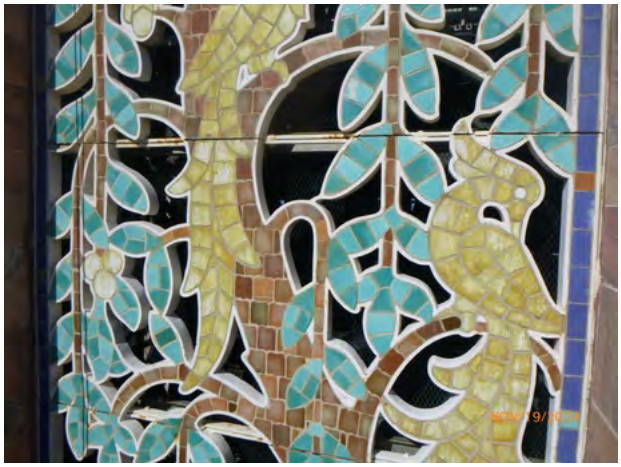
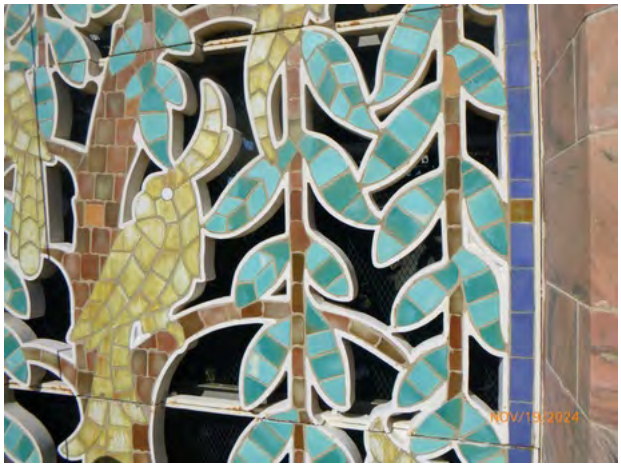

319-159 ArchMetal_Note Photo-general 2024-1.jpg


319-159 ArchMetal_Note Photo-general 2024-2.jpg

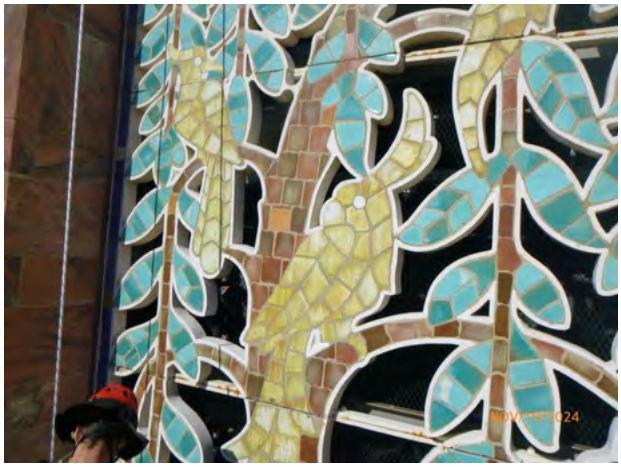

319-159 ArchMetal_Note Photo-general 2024-3.jpg

319-159 ArchMetal_Note Photo-general 2024-4.jpg

319-159 ArchMetal_Note Photo-general 2024-5.jpg



319-164 ArchMetal_Note Photo-general 2024-1.jpg



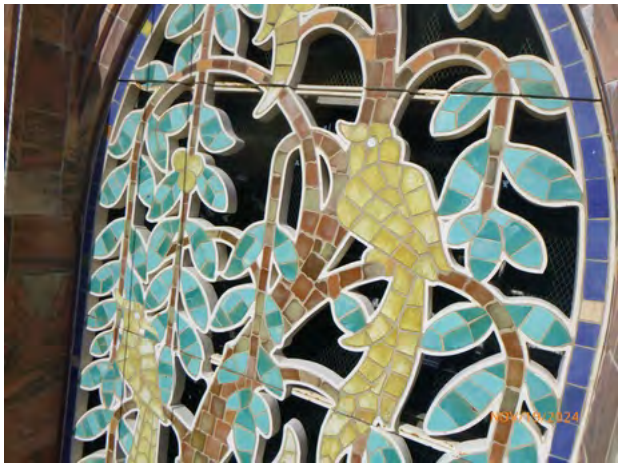
319-164 ArchMetal_Note Photo-general 2024-2.jpg

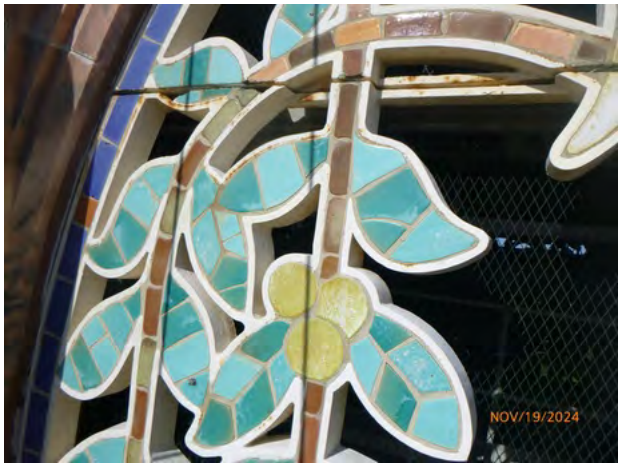
319-164 ArchMetal_Note Photo-general 2024-3.jpg

319-164 ArchMetal_Note Photo-general 2024-4.jpg

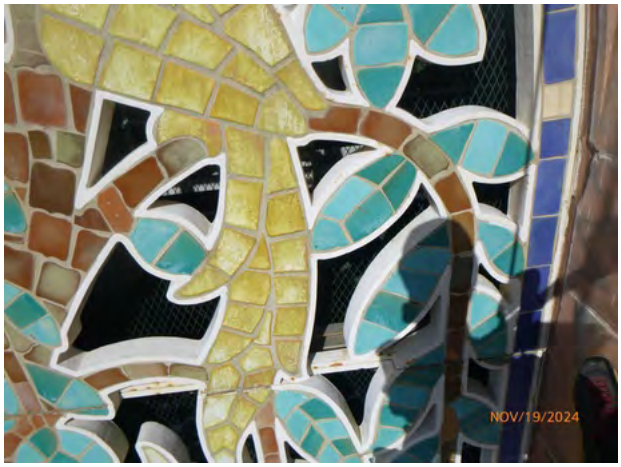

319-164 ArchMetal_Note Photo-general 2024-5.jpg

319-164 ArchMetal_Note Photo-general 2024-6.jpg


319-169 ArchMetal_Note Photo-general 2024-1.jpg



319-169 ArchMetal_Note Photo-general 2024-2.jpg



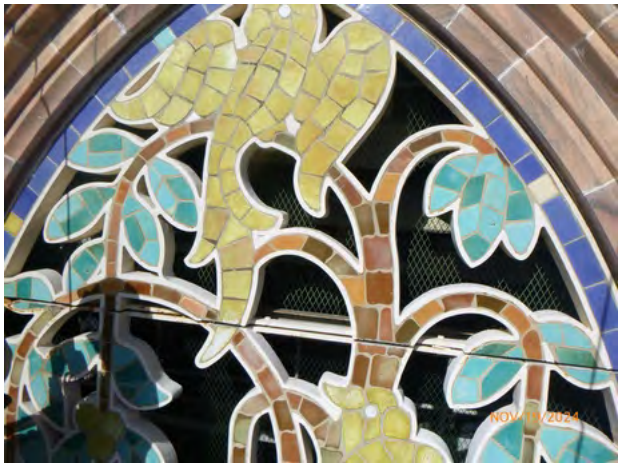
319-169 ArchMetal_Note Photo-general 2024-3.jpg


319-169 ArchMetal_Note Photo-general 2024-4.jpg

319-169 ArchMetal_Note Photo-general 2024-5.jpg


319-169 ArchMetal_Note Photo-general 2024-6.jpg


319-169 ArchMetal_Note Photo-general 2024-7.jpg


319-173 ArchMetal_Note Photo-general 2024-1.jpg

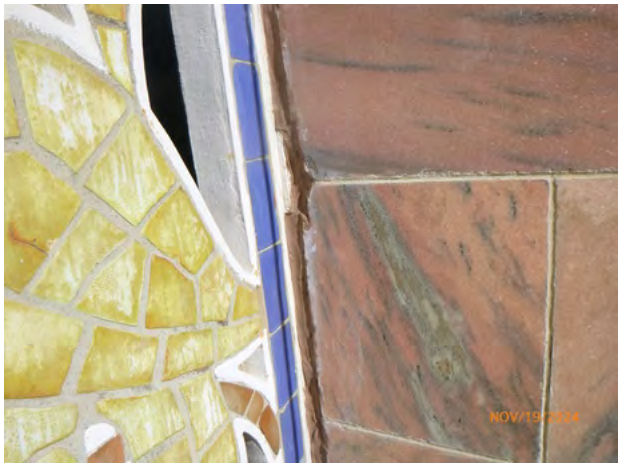

319-173 ArchMetal_Note Photo-general 2024-2.jpg

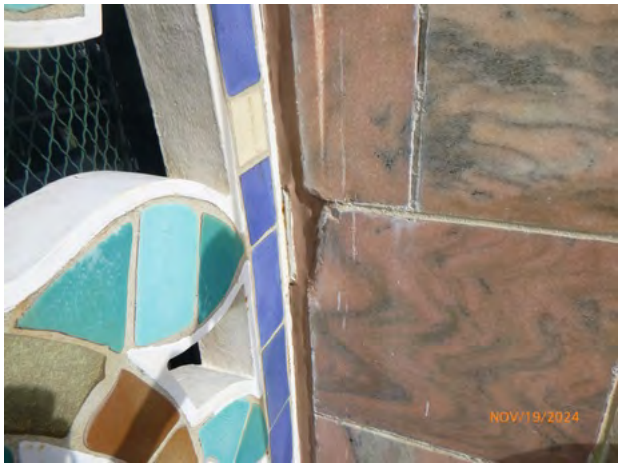
319-173 ArchMetal_Note Photo-general 2024-3.jpg

319-173 ArchMetal_Note Photo-general 2024-4.jpg

319-173 ArchMetal_Note Photo-general 2024-5.jpg


322-162 Stone_Repair Patch Sound 2024-1.jpg


322-162 Stone_Repair Patch Sound 2024-2.jpg



322-170 Stone_Repair Patch Sound 2024-1.jpg


322-170 Stone_Repair Patch Sound 2024-2.jpg

324-157 Stone_SurfLoss Chipped 2024-1.jpg


328-14 Stone_SurfLoss Chipped 2024-1.jpg


328-50 Stone_Spall Removed + Steel 2024-1.jpg


328-50 Stone_Spall Removed + Steel 2024-2.jpg


329-32 Stone_SoilStain Leached Salts 2024-1.jpg


329-41 Stone_Joints Mortar Failed 2024-1.jpg


330-23 Stone_Crack Single unit 2024-1.jpg


330-38 Stone_SoilStain Leached Salts 2024-1.jpg


330-115 Stone_SoilStain Leached Salts 2024-1.jpg


330-115 Stone_SoilStain Leached Salts 2024-2.jpg


330-128 Stone_Crack Single unit 2024-1.jpg


331-48 Stone_Spall Removed 2024-1.jpg


331-48 Stone_Spall Removed 2024-2.jpg


333-132 Stone_Crack Repair failed 2024-1.jpg


333-132 Stone_Crack Repair failed 2024-2.jpg

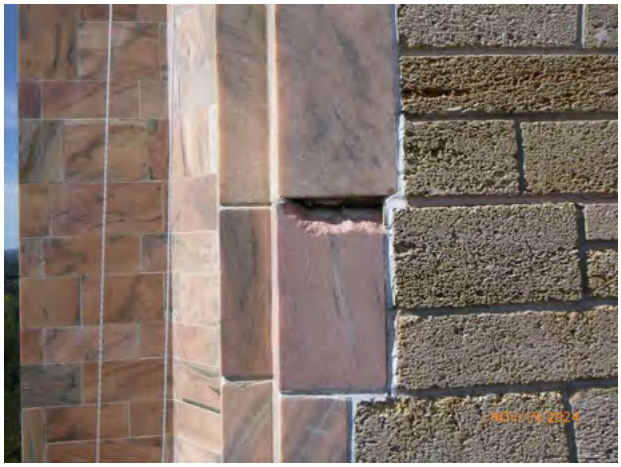

333-132 Stone_Crack Repair failed 2024-3.jpg

334-28 Stone_Crack Repair failed 2024-1.jpg


334-28 Stone_Crack Repair failed 2024-2.jpg


334-98 Stone_Spall Missing + Steel 2024-1.jpg


334-98 Stone_Spall Missing + Steel 2024-2.jpg


334-98 Stone_Spall Missing + Steel 2024-3.jpg


334-135 Stone_Spall Missing 2024-1.jpg


334-135 Stone_Spall Removed 2024-1.jpg


334-142 Stone_Spall Bonded 2024-1.jpg


334-182 Stone_SurfLoss Chipped 2024-1.jpg


334-182 Stone_SurfLoss Chipped 2024-2.jpg


334-183 Stone_Crack Single unit 2024-1.jpg

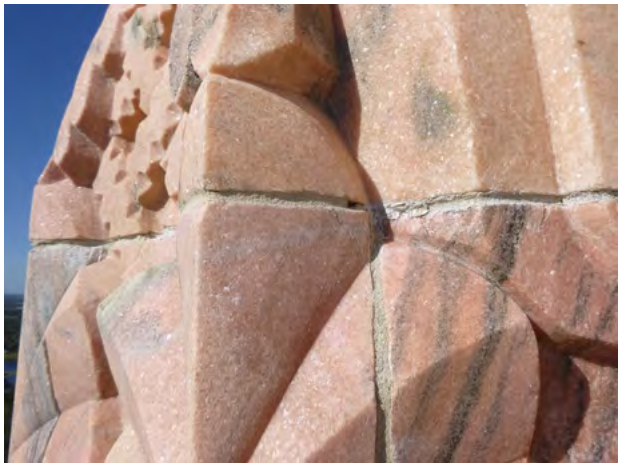

334-184 Stone_SurfLoss Chipped 2024-1.jpg


334-186 Stone_Joints Mortar Failed 2024-1.jpg


334-186 Stone_Joints Mortar Failed 2024-2.jpg


334-192 Stone_Joints Mortar Failed 2024-1.jpg


334-192 Stone_Joints Mortar Failed 2024-2.jpg


334-193 Stone_Crack Single unit 2024-1.jpg

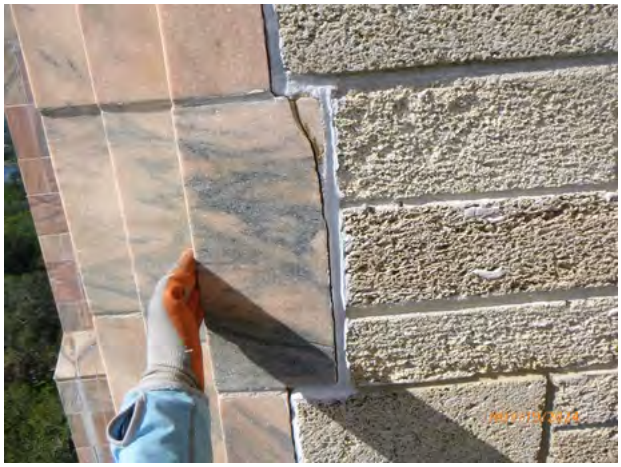

335-30 Stone_SurfLoss Chipped 2024-1.jpg


335-30 Stone_SurfLoss Chipped 2024-2.jpg


335-105 Stone_SurfLoss Chipped 2024-1.jpg


335-105 Stone_SurfLoss Chipped 2024-2.jpg


335-107 Stone_SurfLoss Chipped 2024-1.jpg


335-128 Stone_Crack Repair failed 2024-1.jpg


335-128 Stone_Crack Repair failed 2024-2.jpg


335-134 Stone_Repair Patch Failed 2024-1.jpg


335-134 Stone_Repair Patch Failed 2024-2.jpg


335-135 Stone_Spall Bonded 2024-1.jpg

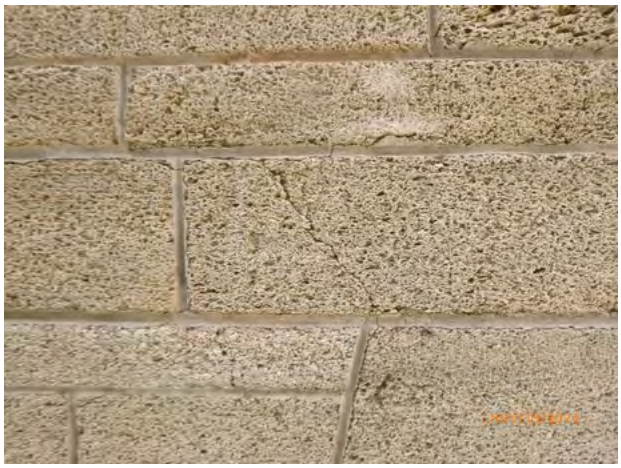

335-135 Stone_Spall Bonded 2024-2.jpg


335-135 Stone_Spall Bonded 2024-3.jpg


335-136 Stone_Joints Mortar Failed 2024-1.jpg


335-184 Stone_Spall Bonded 2024-1.jpg


336-13 Stone_Crack System units and joints 2024-1.jpg


336-13 Stone_Crack System units and joints 2024-2.jpg


336-13 Stone_Crack System units and joints 2024-3.jpg


336-82 Stone_Crack Single unit 2024-1.jpg


336-82 Stone_Crack Single unit 2024-2.jpg


336-125 Stone_Crack Single unit 2024-1.jpg

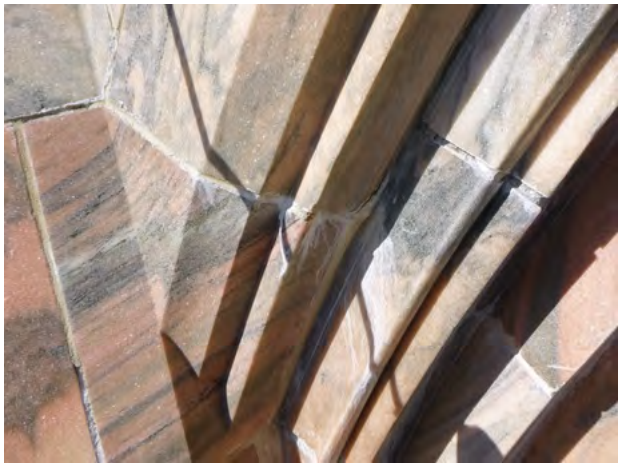

336-132 Stone_Crack Repair failed 2024-1.jpg


336-132 Stone_Crack Repair failed 2024-2.jpg


336-160 ArchMetal_Corrosion Pitted 2024-1.jpg


336-174 Stone_Joints Mortar Failed 2024-1.jpg


336-174 Stone_Joints Mortar Failed 2024-2.jpg


336-178 Stone_SoilStain Leached Salts 2024-1.jpg


336-188 Stone_Joints Mortar Failed 2024-1.jpg


336-188 Stone_Joints Mortar Failed 2024-2.jpg


336-188 Stone_Joints Mortar Failed 2024-3.jpg


337-181 Stone_Joints Mortar Failed 2024-1.jpg

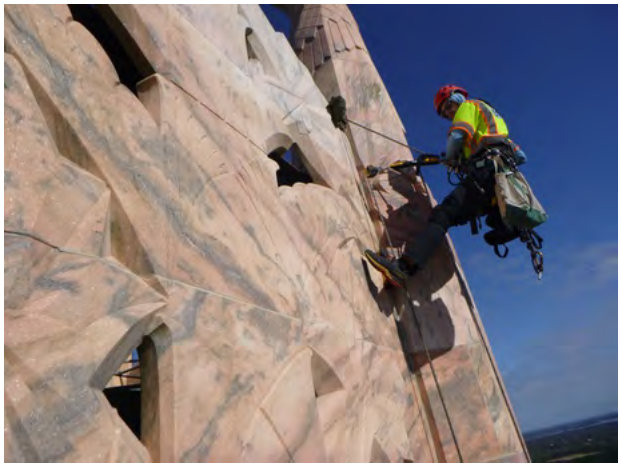

338-184 Stone_Joints Mortar Failed 2024-1.jpg

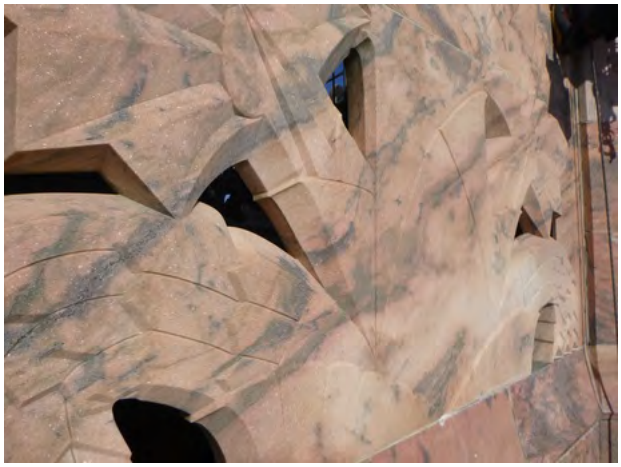

338-184 Stone_Joints Mortar Failed 2024-2.jpg


338-184 Stone_Joints Mortar Failed 2024-3.jpg


338-190 Stone_Note Photo-general 2024-1.jpg


338-190 Stone_Note Photo-general 2024-2.jpg


338-190 Stone_Note Photo-general 2024-3.jpg


338-190 Stone_Note Photo-general 2024-4.jpg


338-190 Stone_Note Photo-general 2024-5.jpg


338-190 Stone_Note Photo-general 2024-6.jpg


338-190 Stone_Note Photo-general 2024-7.jpg

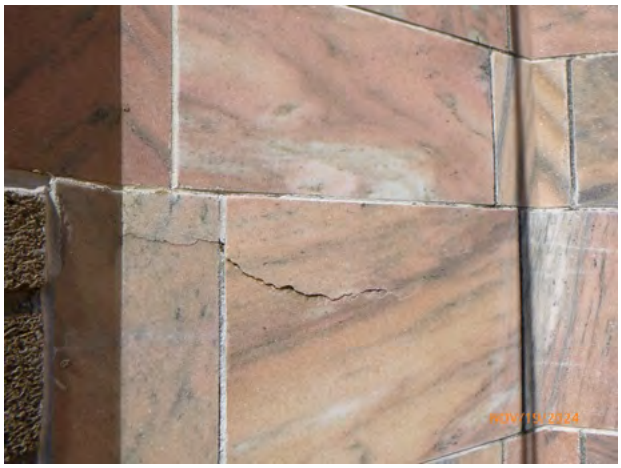

339-14 Stone_Crack System units and joints 2024-1.jpg

339-21 Stone_SoilStain Cementitious 2024-1.jpg


339-94 Stone_Note Photo-general 2024-1.jpg


339-94 Stone_Note Photo-general 2024-2.jpg


339-94 Stone_Note Photo-general 2024-3.jpg


340-45 Stone_Spall Bonded 2024-1.jpg


340-45 Stone_Spall Bonded 2024-2.jpg


340-45 Stone_Spall Bonded 2024-3.jpg

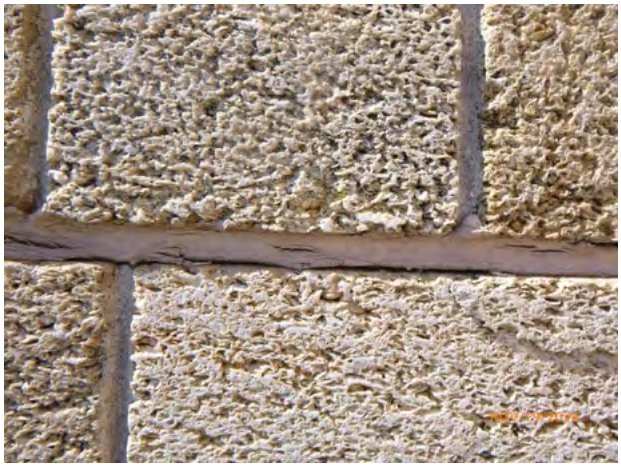

340-53 Stone_Joints Sealant Failed 2024-1.jpg


340-53 Stone_Joints Sealant Failed 2024-2.jpg


340-53 Stone_Joints Sealant Failed 2024-3.jpg


340-53 Stone_Joints Sealant Failed 2024-4.jpg


340-68 Stone_Joints Sealant Failed 2024-1.jpg


340-68 Stone_Joints Sealant Failed 2024-2.jpg


340-68 Stone_Joints Sealant Failed 2024-3.jpg


340-68 Stone_Joints Sealant Failed 2024-4.jpg


340-80 Stone_Joints Sealant Failed 2024-1.jpg

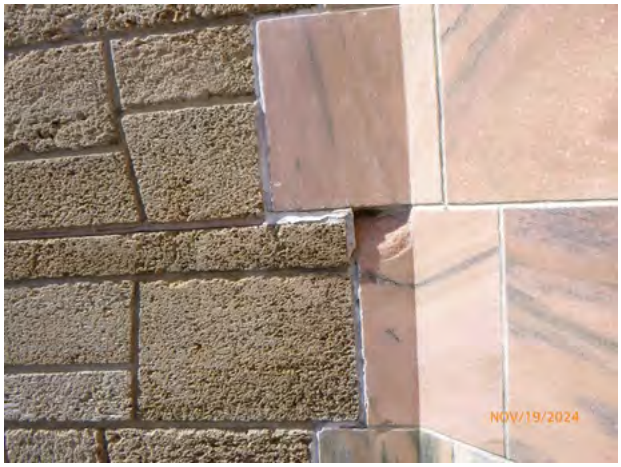

340-80 Stone_Joints Sealant Failed 2024-2.jpg


340-80 Stone_Joints Sealant Failed 2024-3.jpg


340-80 Stone_Joints Sealant Failed 2024-4.jpg


340-90 Stone_Spall Missing + Steel 2024-1.jpg


340-90 Stone_Spall Missing + Steel 2024-2.jpg

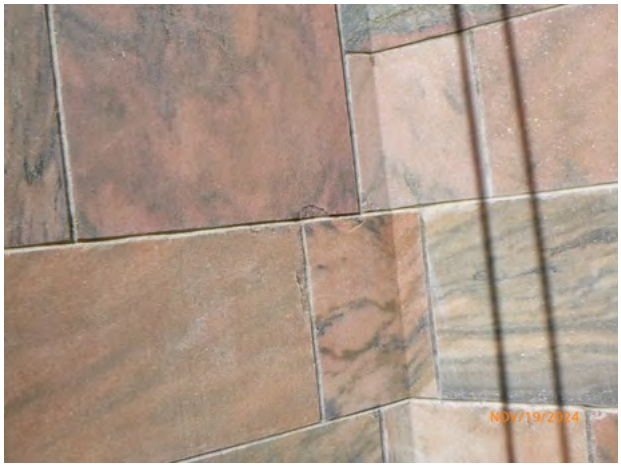

340-90 Stone_Spall Missing + Steel 2024-3.jpg

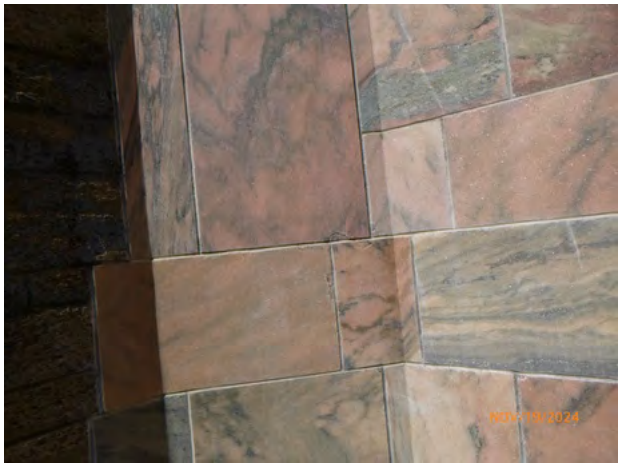

340-106 Stone_Joints Sealant Failed 2024-1.jpg


340-106 Stone_Joints Sealant Failed 2024-2.jpg


340-106 Stone_Joints Sealant Failed 2024-3.jpg


340-106 Stone_Joints Sealant Failed 2024-4.jpg


341-21 Stone_SurfLoss Chipped 2024-1.jpg

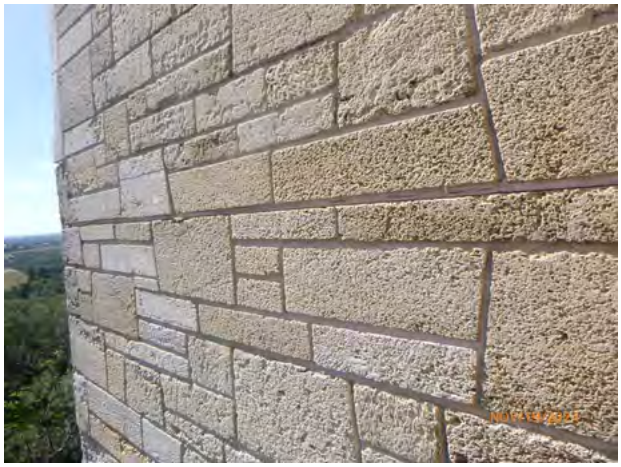

341-21 Stone_SurfLoss Chipped 2024-2.jpg


341-45 Stone_Joints Sealant Failed 2024-1.jpg


341-45 Stone_Joints Sealant Failed 2024-2.jpg


341-45 Stone_Joints Sealant Failed 2024-3.jpg

341-89 Stone_Joints Sealant Failed 2024-1.jpg


341-89 Stone_Joints Sealant Failed 2024-2.jpg

341-89 Stone_Joints Sealant Failed 2024-3.jpg


341-89 Stone_Joints Sealant Failed 2024-4.jpg


341-89 Stone_Joints Sealant Failed 2024-5.jpg


341-122 Stone_Joints Sealant Failed 2024-1.jpg


341-122 Stone_Joints Sealant Failed 2024-2.jpg


341-122 Stone_Joints Sealant Failed 2024-3.jpg


341-122 Stone_Joints Sealant Failed 2024-4.jpg

341-139 Stone_Joints Mortar Failed 2024-1.jpg

341-139 Stone_Joints Mortar Failed 2024-2.jpg

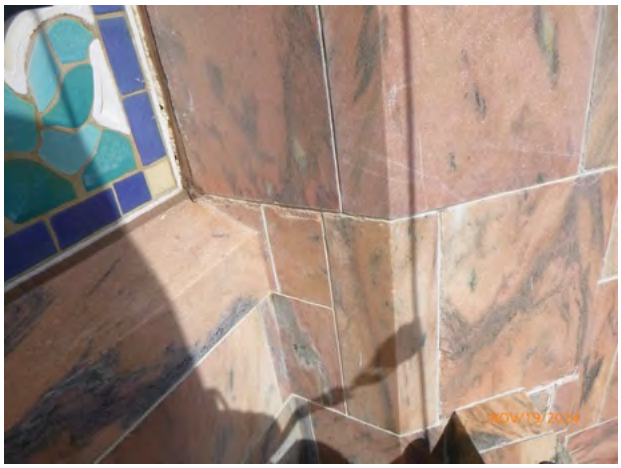
341-139 Stone_Joints Mortar Failed 2024-3.jpg

341-139 Stone_Joints Mortar Failed 2024-4.jpg


341-139 Stone_Joints Mortar Failed 2024-5.jpg

341-141 Stone_SurfLoss Chipped 2024-1.jpg

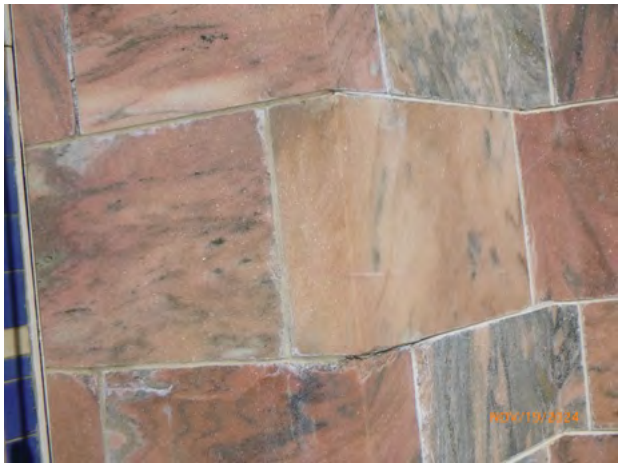
341-143 Stone_SurfLoss Chipped 2024-1.jpg



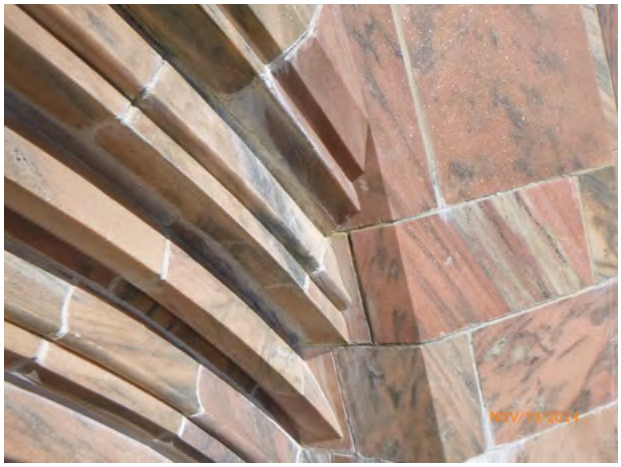
341-143 Stone_SurfLoss Chipped 2024-2.jpg

341-150 Stone_SurfLoss Chipped 2024-1.jpg

341-150 Stone_SurfLoss Chipped 2024-2.jpg

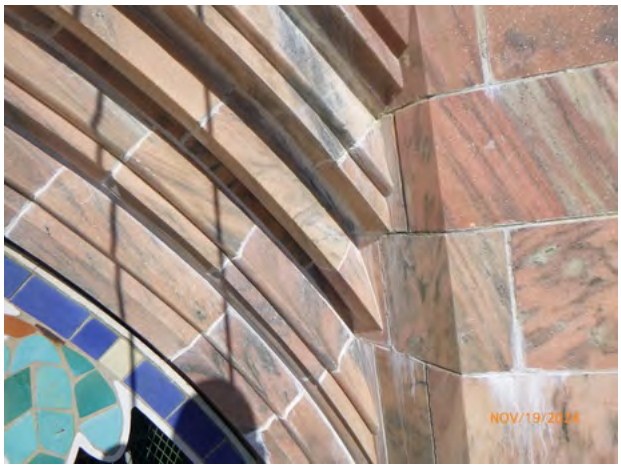


341-150 Stone_SurfLoss Chipped 2024-3.jpg

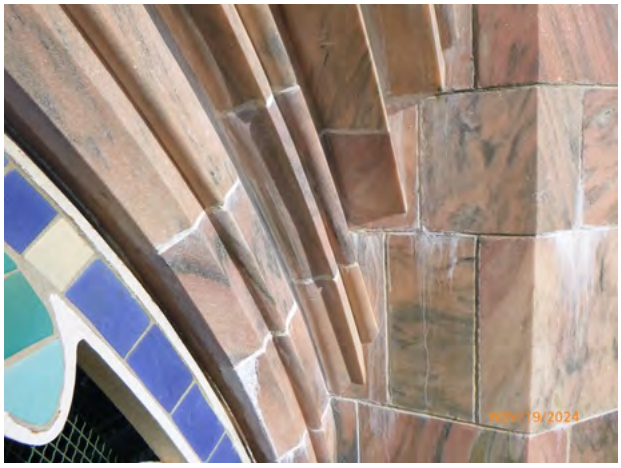


341-176 Stone_SoilStain Leached Salts 2024-1.jpg

341-176 Stone_SoilStain Leached Salts 2024-2.jpg



341-176 Stone_SoilStain Leached Salts 2024-3.jpg



341-176 Stone_SoilStain Leached Salts 2024-4.jpg

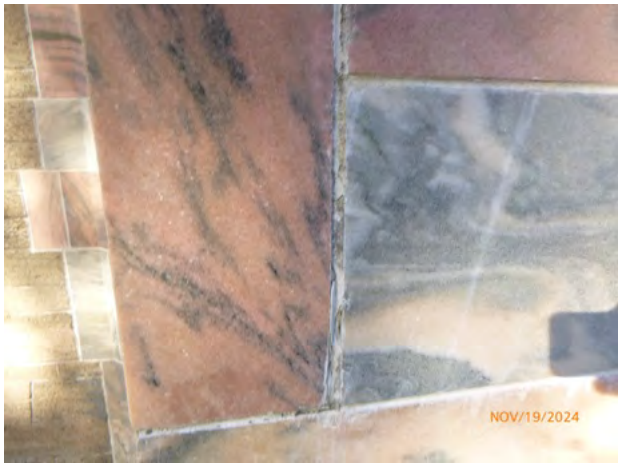
341-181 Stone_SurfLoss Chipped 2024-1.jpg

341-181 Stone_SurfLoss Chipped 2024-2.jpg

341-181 Stone_SurfLoss Chipped 2024-3.jpg

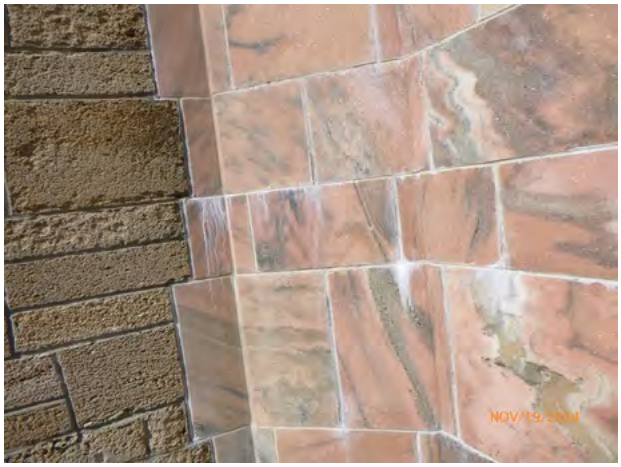
341-181 Stone_SurfLoss Chipped 2024-4.jpg

342-16 Stone_Joints Mortar Failed 2024-1.jpg



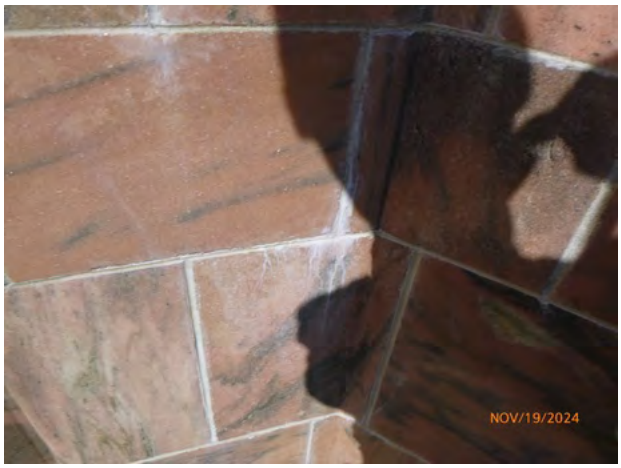
342-16 Stone_Joints Mortar Failed 2024-2.jpg

342-16 Stone_Joints Mortar Failed 2024-3.jpg

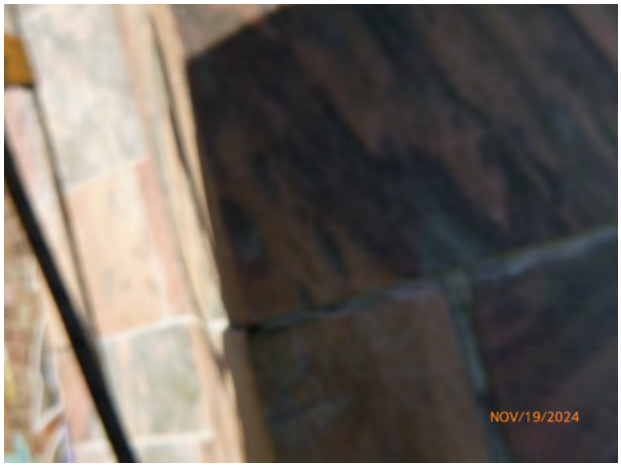

342-131 Stone_SoilStain Leached Salts 2024-1.jpg

342-131 Stone_SoilStain Leached Salts 2024-2.jpg

342-131 Stone_SoilStain Leached Salts 2024-3.jpg



342-131 Stone_SoilStain Leached Salts 2024-4.jpg



342-151 Stone_Spall Missing 2024-1.jpg

342-151 Stone_Spall Missing 2024-2.jpg


342-158 Stone_SurfLoss Chipped 2024-1.jpg


342-158 Stone_SurfLoss Chipped 2024-2.jpg


342-158 Stone_SurfLoss Chipped 2024-3.jpg

342-175 Stone_SoilStain Leached Salts 2024-1.jpg

342-181 Stone_Repair Patch Sound 2024-1.jpg


342-181 Stone_Repair Patch Sound 2024-2.jpg


342-182 Stone_Repair Patch Failed 2024-1.jpg

342-182 Stone_Repair Patch Failed 2024-2.jpg

342-182 Stone_Repair Patch Failed 2024-3.jpg

342-183 Stone_Repair Patch Failed 2024-1.jpg

342-183 Stone_Repair Patch Failed 2024-2.jpg

342-183 Stone_Repair Patch Failed 2024-3.jpg

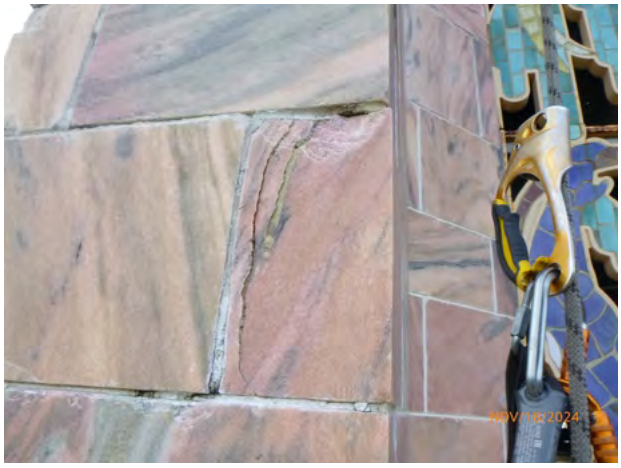

343-32 Stone_Repair Patch Failed 2024-1.jpg


343-32 Stone_Repair Patch Failed 2024-2.jpg

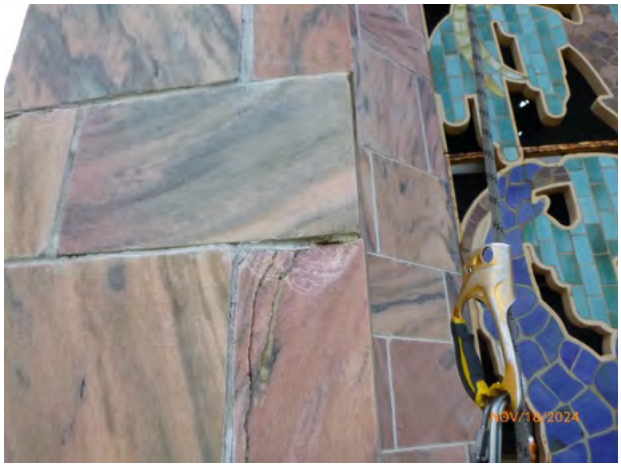
343-32 Stone_Repair Patch Failed 2024-3.jpg

343-117 Stone_Crack Single unit 2024-1.jpg

343-117 Stone_Crack Single unit 2024-2.jpg



343-150 Stone_Crack Single unit 2024-1.jpg



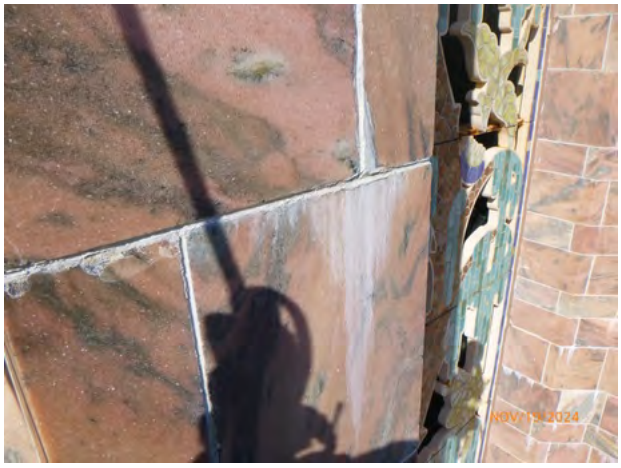
343-150 Stone_Crack Single unit 2024-2.jpg

343-150 Stone_Crack Single unit 2024-3.jpg

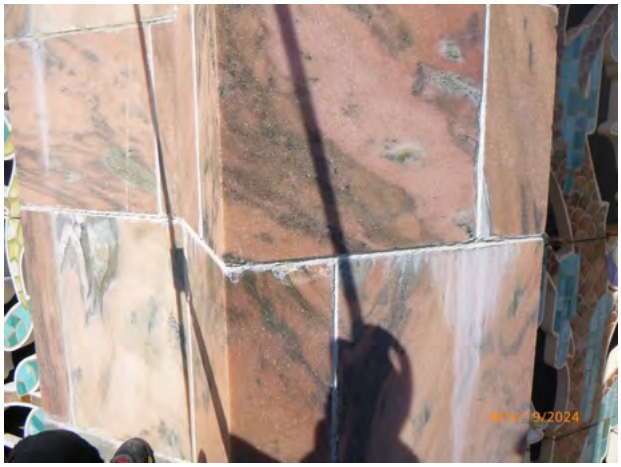
343-154 Stone_SoilStain Leached Salts 2024-1.jpg

343-154 Stone_SoilStain Leached Salts 2024-2.jpg


343-154 Stone_SoilStain Leached Salts 2024-3.jpg



343-168 Stone_SoilStain Leached Salts 2024-1.jpg



343-168 Stone_SoilStain Leached Salts 2024-2.jpg

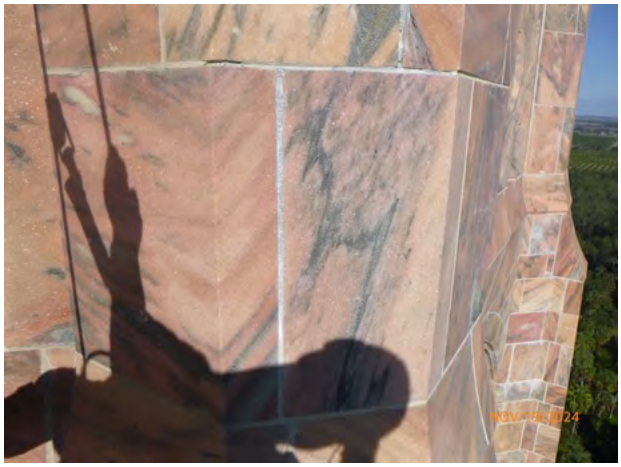

343-185 Stone_Joints Mortar Failed 2024-1.jpg

343-185 Stone_Joints Mortar Failed 2024-2.jpg

343-185 Stone_Joints Mortar Failed 2024-3.jpg

343-185 Stone_Joints Mortar Failed 2024-4.jpg

343-185 Stone_Joints Mortar Failed 2024-5.jpg

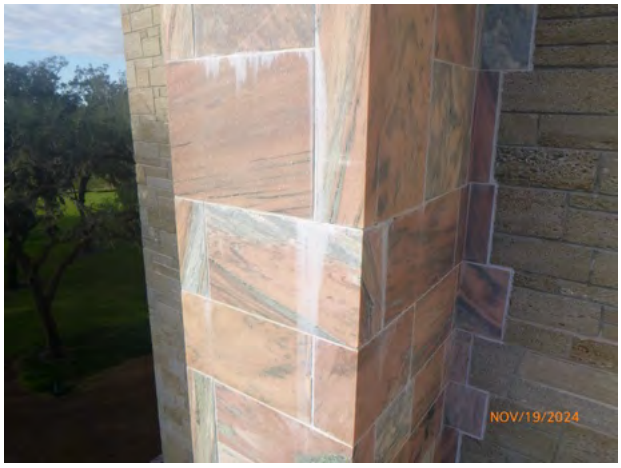


343-185 Stone_Joints Mortar Failed 2024-6.jpg

343-198 Stone_Spall Missing 2024-1.jpg

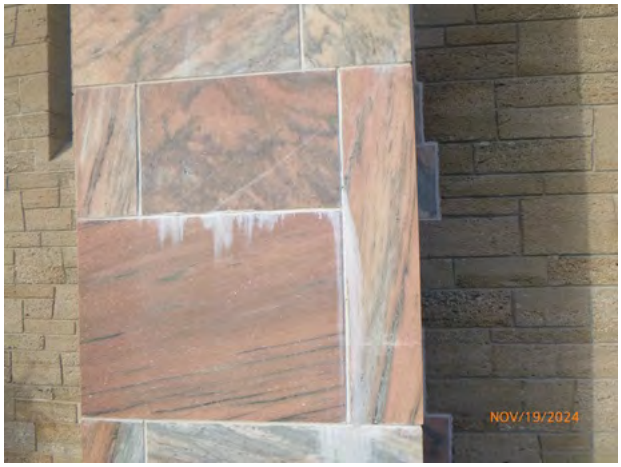

343-198 Stone_Spall Missing 2024-2.jpg

344-52 Stone_SoilStain Leached Salts 2024-1.jpg



344-52 Stone_SoilStain Leached Salts 2024-2.jpg


344-52 Stone_SoilStain Leached Salts 2024-3.jpg



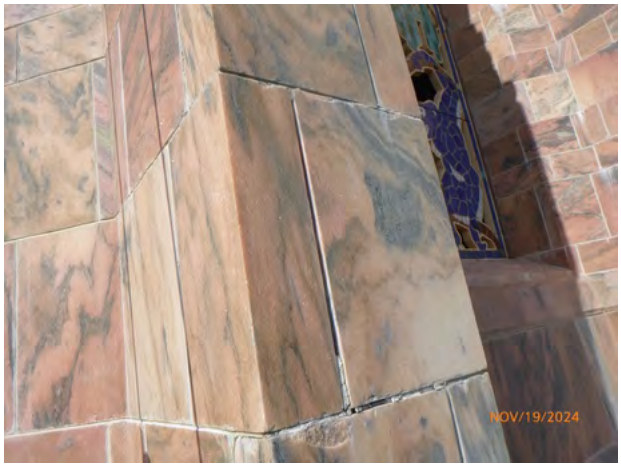
344-52 Stone_SoilStain Leached Salts 2024-4.jpg


344-52 Stone_SoilStain Leached Salts 2024-5.jpg

344-88 Stone_Crack System units and joints 2024-1.jpg

344-88 Stone_Crack System units and joints 2024-2.jpg

344-88 Stone_Crack System units and joints 2024-3.jpg



344-141 Stone_Joints Mortar Failed 2024-1.jpg

344-141 Stone_Joints Mortar Failed 2024-2.jpg

344-141 Stone_Joints Mortar Failed 2024-3.jpg

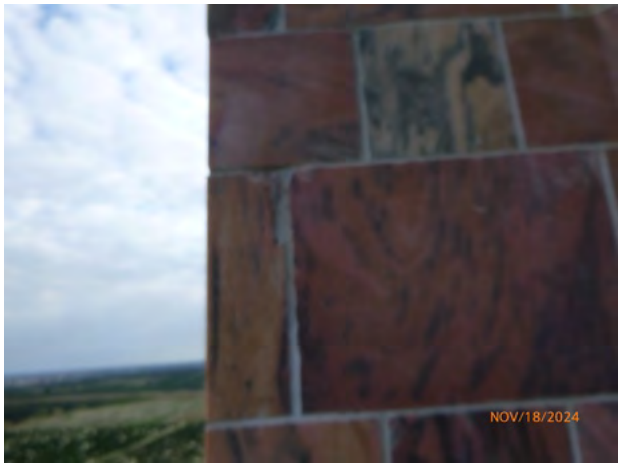
344-141 Stone_Joints Mortar Failed 2024-4.jpg

344-173 Stone_SurfLoss Chipped 2024-1.jpg

344-186 Stone_SurfLoss Chipped 2024-1.jpg

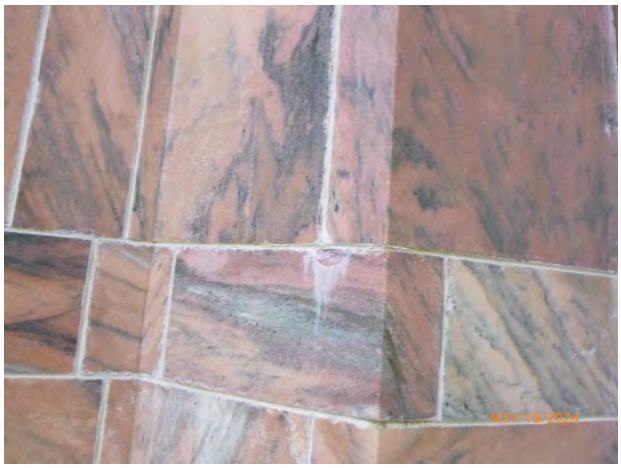
344-186 Stone_SurfLoss Chipped 2024-2.jpg


345-28 Stone_SoilStain Leached Salts 2024-1.jpg



345-148 Stone_Repair Patch Failed 2024-1.jpg

345-148 Stone_Repair Patch Failed 2024-2.jpg


345-168 Stone_SoilStain Leached Salts 2024-1.jpg


345-168 Stone_SoilStain Leached Salts 2024-2.jpg


345-171 Stone_SurfLoss Chipped 2024-1.jpg


345-171 Stone_SurfLoss Chipped 2024-2.jpg

345-181 Stone_Joints Mortar Failed 2024-1.jpg

345-181 Stone_Joints Mortar Failed 2024-2.jpg

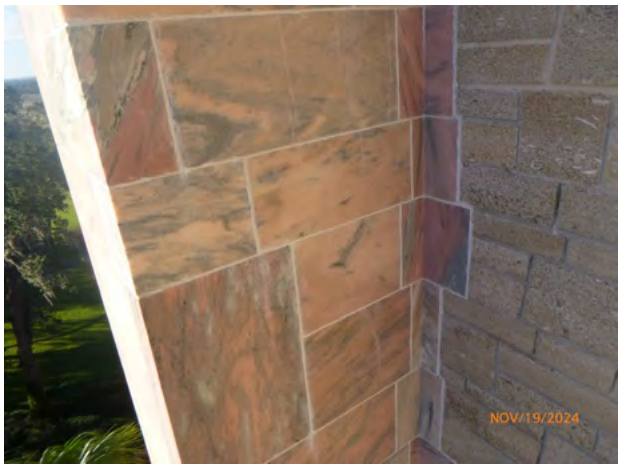
345-194 Stone_SurfLoss Chipped 2024-1.jpg

345-194 Stone_SurfLoss Chipped 2024-2.jpg

346-70 Stone_SoilStain Leached Salts 2024-1.jpg

346-70 Stone_SoilStain Leached Salts 2024-2.jpg

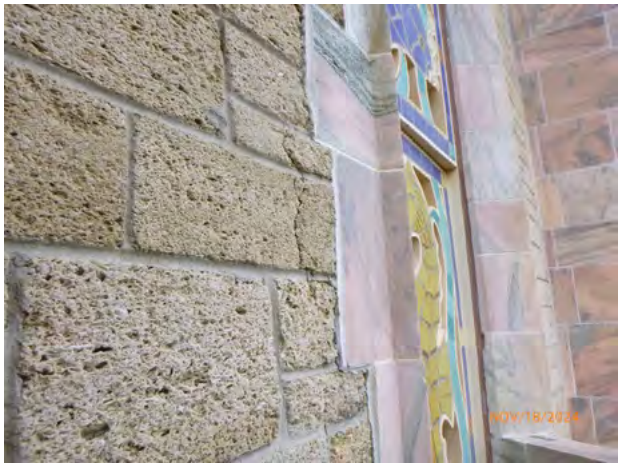
346-70 Stone_SoilStain Leached Salts 2024-3.jpg



346-78 Stone_SurfLoss Chipped 2024-1.jpg


346-78 Stone_SurfLoss Chipped 2024-2.jpg


346-104 Stone_Crack System units and joints 2024-1.jpg


346-104 Stone_Crack System units and joints 2024-2.jpg


346-104 Stone_Crack System units and joints 2024-3.jpg


346-104 Stone_Crack System units and joints 2024-4.jpg

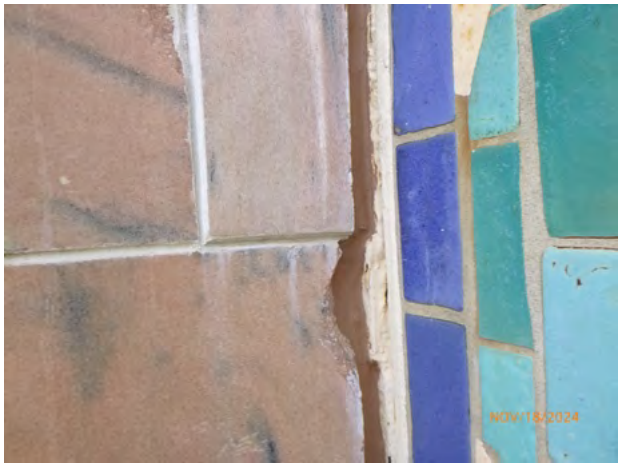
346-160 Stone_SurfLoss Chipped 2024-1.jpg

346-162 Stone_SurfLoss Chipped 2024-1.jpg

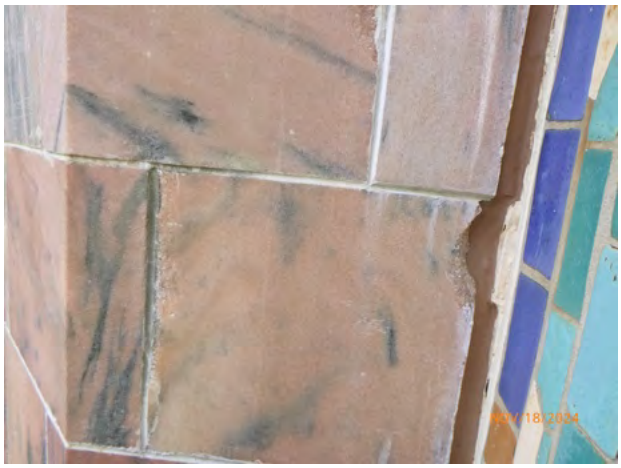
346-162 Stone_SurfLoss Chipped 2024-2.jpg

346-164 Stone_Repair Dutchman Sound 2024-1.jpg

346-164 Stone_Repair Dutchman Sound 2024-2.jpg

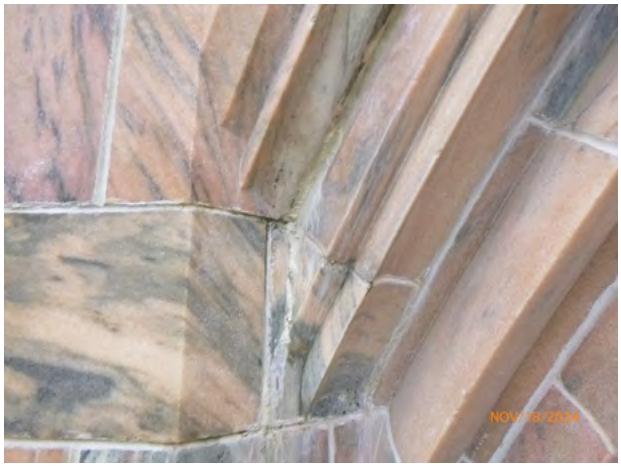


346-172 Stone_Repair Patch Sound 2024-1.jpg



346-172 Stone_Repair Patch Sound 2024-2.jpg

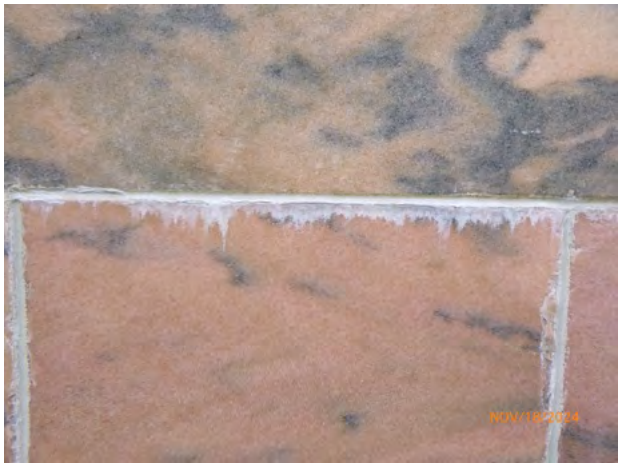
346-176 Stone_SoilStain Leached Salts 2024-1.jpg



346-176 Stone_SoilStain Leached Salts 2024-2.jpg

346-176 Stone_SoilStain Leached Salts 2024-3.jpg

350-182 Stone_SoilStain Leached Salts 2024-1.jpg



350-182 Stone_SoilStain Leached Salts 2024-2.jpg

350-182 Stone_SoilStain Leached Salts 2024-3.jpg

351-86 Stone_Joints Mortar Failed 2024-1.jpg

351-86 Stone_Joints Mortar Failed 2024-2.jpg

351-86 Stone_Joints Mortar Failed 2024-3.jpg


351-102 Stone_SurfLoss Chipped 2024-1.jpg


351-102 Stone_SurfLoss Chipped 2024-2.jpg

351-122 Stone_SurfLoss Chipped 2024-1.jpg

351-122 Stone_SurfLoss Chipped 2024-2.jpg

351-122 Stone_SurfLoss Chipped 2024-3.jpg

351-122 Stone_SurfLoss Chipped 2024-4.jpg

351-138 Stone_Crack Single unit 2024-1.jpg


351-138 Stone_Crack Single unit 2024-2.jpg


351-138 Stone_Crack Single unit 2024-3.jpg


351-181 Stone_Repair Patch Failed 2024-1.jpg


351-181 Stone_Repair Patch Failed 2024-2.jpg


352-184 Stone_SurfLoss Chipped 2024-1.jpg

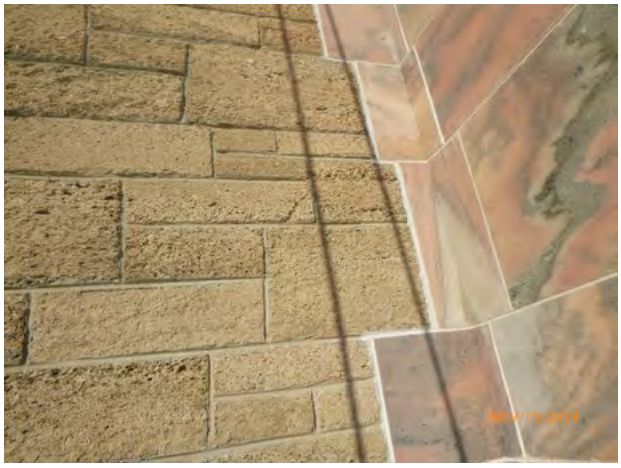

352-184 Stone_SurfLoss Chipped 2024-2.jpg


353-119 Stone_SurfLoss Chipped 2024-1.jpg


353-119 Stone_SurfLoss Chipped 2024-2.jpg


354-71 Stone_Repair Patch Failed 2024-1.jpg

354-71 Stone_Repair Patch Failed 2024-2.jpg


354-85 Stone_Crack System units and joints 2024-1.jpg


354-85 Stone_Crack System units and joints 2024-2.jpg


354-85 Stone_Crack System units and joints 2024-3.jpg


355-1 Stone_Joints Mortar Failed 2024-1.jpg


355-1 Stone_Joints Mortar Failed 2024-2.jpg

355-38 Stone_Spall Missing + Steel 2024-1.jpg

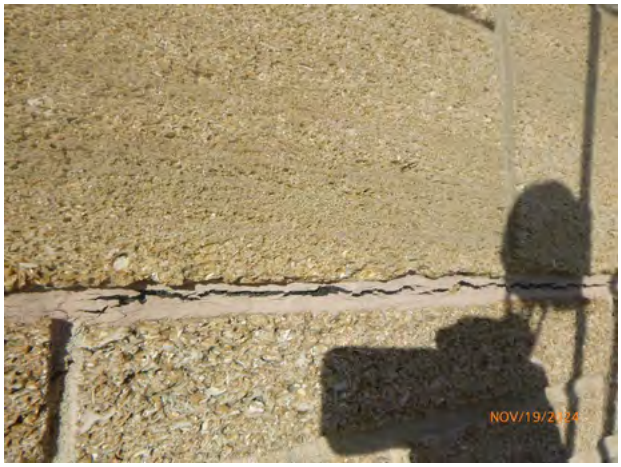
355-38 Stone_Spall Missing + Steel 2024-2.jpg

355-38 Stone_Spall Missing + Steel 2024-3.jpg


355-68 Stone_Joints Sealant Failed 2024-1.jpg

355-68 Stone_Joints Sealant Failed 2024-2.jpg

355-68 Stone_Joints Sealant Failed 2024-3.jpg



355-68 Stone_Joints Sealant Failed 2024-4.jpg


355-68 Stone_Joints Sealant Failed 2024-5.jpg

355-72 Stone_SurfLoss Chipped 2024-1.jpg

355-78 Stone_Crack Single unit 2024-1.jpg

355-78 Stone_Crack Single unit 2024-2.jpg

355-78 Stone_Crack Single unit 2024-3.jpg


355-78 Stone_Crack Single unit 2024-4.jpg

355-86 Stone_SoilStain Leached Salts 2024-1.jpg

355-86 Stone_SoilStain Leached Salts 2024-2.jpg


355-90 Stone_Spall Missing 2024-1.jpg

355-90 Stone_Spall Missing 2024-2.jpg

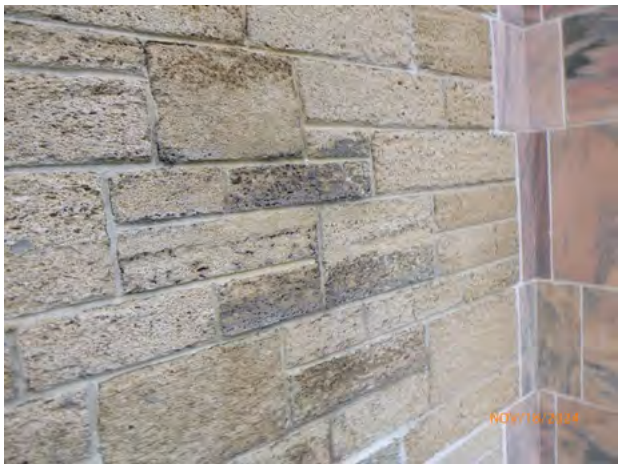
355-90 Stone_Spall Missing 2024-3.jpg


355-92 Stone_SoilStain Black Crusts 2024-1.jpg


355-92 Stone_SoilStain Black Crusts 2024-2.jpg


355-92 Stone_SoilStain Black Crusts 2024-3.jpg


355-92 Stone_SoilStain Black Crusts 2024-4.jpg


355-92 Stone_SoilStain Black Crusts 2024-5.jpg

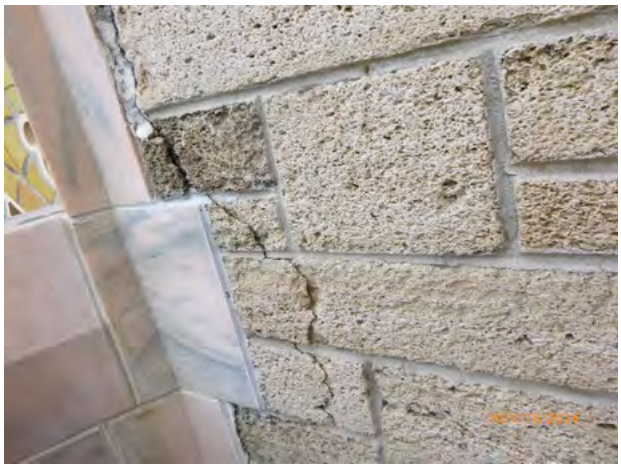

355-92 Stone_SoilStain Black Crusts 2024-6.jpg


355-108 Stone_Crack System units and joints 2024-1.jpg


355-108 Stone_Crack System units and joints 2024-2.jpg

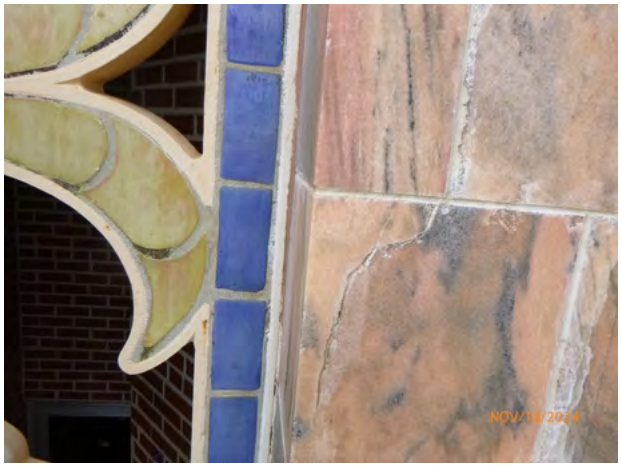

355-108 Stone_Crack System units and joints 2024-3.jpg


355-108 Stone_Crack System units and joints 2024-4.jpg


355-108 Stone_Crack System units and joints 2024-5.jpg

355-135 Stone_Crack Single unit 2024-1.jpg

355-135 Stone_Crack Single unit 2024-2.jpg

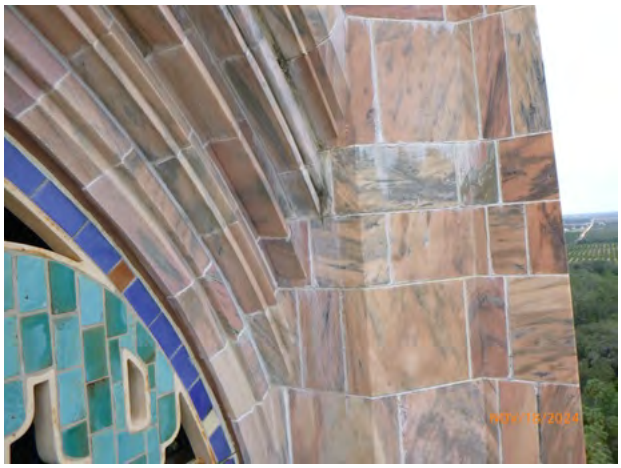


355-135 Stone_Crack Single unit 2024-3.jpg

355-144 Stone_SoilStain Leached Salts 2024-1.jpg


355-172 Stone_Repair Patch Failed 2024-1.jpg

355-176 Stone_SoilStain Leached Salts 2024-1.jpg



355-176 Stone_SoilStain Leached Salts 2024-2.jpg

355-176 Stone_SoilStain Leached Salts 2024-3.jpg

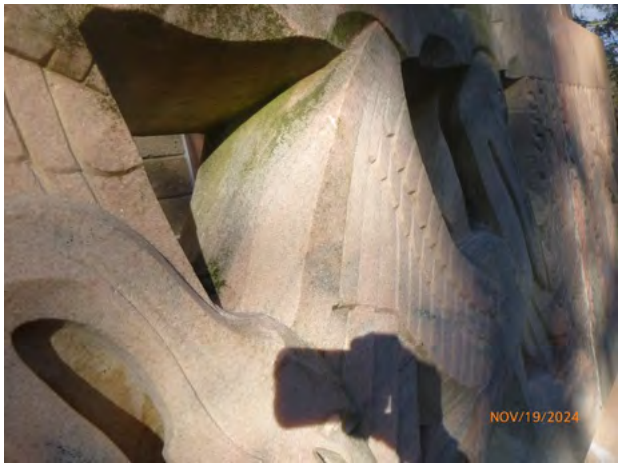
355-181 Stone_SurfLoss Chipped 2024-1.jpg

355-181 Stone_SurfLoss Chipped 2024-2.jpg

355-181 Stone_SurfLoss Chipped 2024-3.jpg

356-29 Stone_SoilStain Biological 2024-1.jpg

356-29 Stone_SoilStain Biological 2024-2.jpg



356-29 Stone_SoilStain Biological 2024-3.jpg

356-29 Stone_SoilStain Biological 2024-4.jpg

356-29 Stone_SoilStain Biological 2024-5.jpg

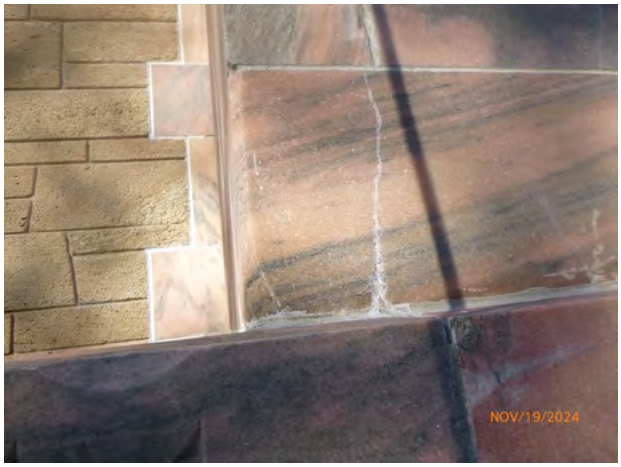
356-32 Stone_Crack Single unit 2024-1.jpg

356-32 Stone_Crack Single unit 2024-2.jpg

356-32 Stone_Spall Missing 2024-1.jpg

356-32 Stone_Spall Missing 2024-2.jpg


356-32 Stone_Spall Missing 2024-3.jpg



356-32 Stone_Spall Missing 2024-4.jpg

356-37 Stone_SurfLoss Chipped 2024-1.jpg

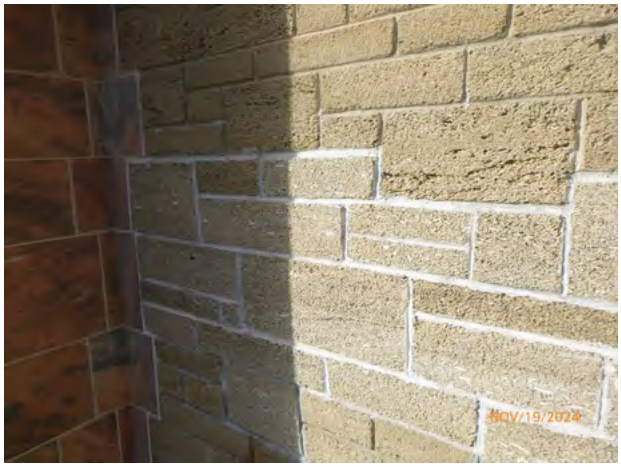
356-37 Stone_SurfLoss Chipped 2024-2.jpg

356-41 Stone_Crack Single unit 2024-1.jpg

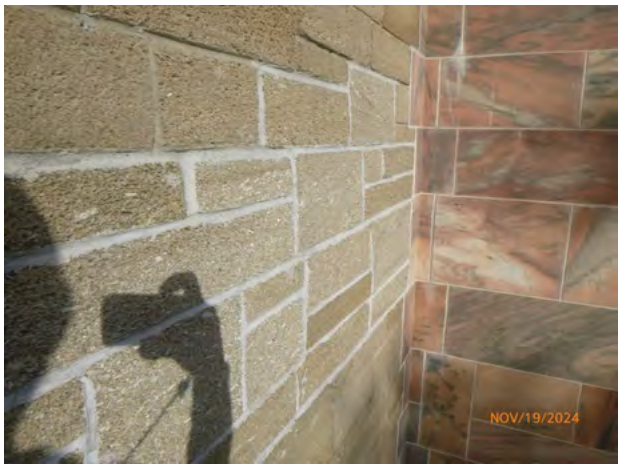
356-41 Stone_Crack Single unit 2024-2.jpg


356-41 Stone_Crack Single unit 2024-3.jpg

356-43 Stone_Note Photo-general 2024-1.jpg



356-43 Stone_Note Photo-general 2024-2.jpg

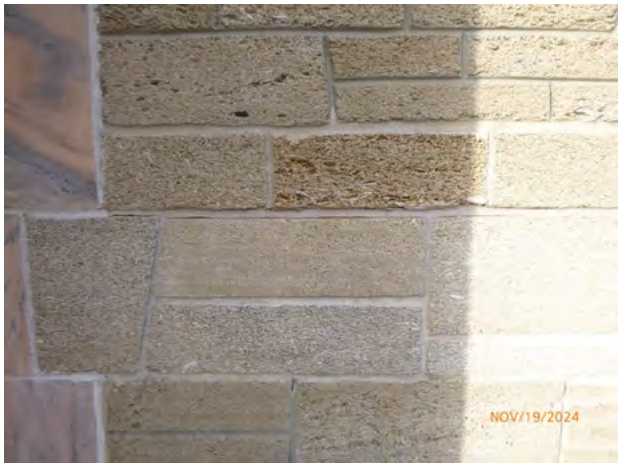


356-43 Stone_Note Photo-general 2024-3.jpg

356-52 Stone_Joints Sealant Failed 2024-1.jpg


356-52 Stone_Joints Sealant Failed 2024-2.jpg


356-52 Stone_Joints Sealant Failed 2024-3.jpg



356-52 Stone_Joints Sealant Failed 2024-4.jpg

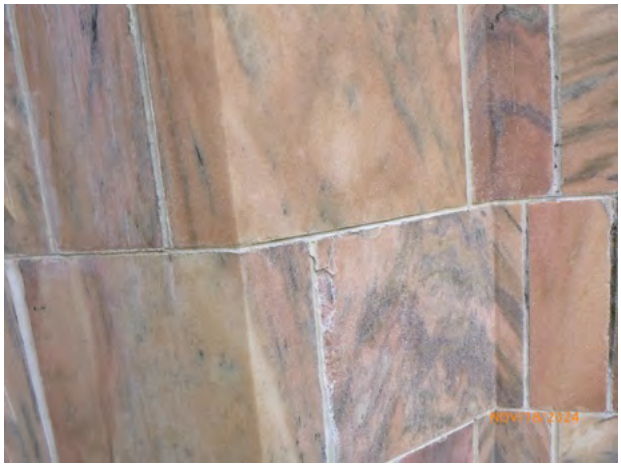
356-71 Stone_SoilStain Leached Salts 2024-1.jpg

356-71 Stone_SoilStain Leached Salts 2024-2.jpg

356-110 Stone_SoilStain Leached Salts 2024-1.jpg

356-137 Stone_SurfLoss Chipped 2024-1.jpg


356-137 Stone_SurfLoss Chipped 2024-2.jpg


356-174 Stone_SurfLoss Chipped 2024-1.jpg


356-174 Stone_SurfLoss Chipped 2024-2.jpg

356-174 Stone_SurfLoss Chipped 2024-3.jpg

356-185 Stone_SurfLoss Chipped 2024-1.jpg

356-185 Stone_SurfLoss Chipped 2024-2.jpg


356-187 Stone_SurfLoss Chipped 2024-1.jpg


356-187 Stone_SurfLoss Chipped 2024-2.jpg

356-197 Stone_Spall Missing 2024-1.jpg

356-197 Stone_Spall Missing 2024-2.jpg

356-201 Stone_Spall Missing 2024-1.jpg

356-201 Stone_Spall Missing 2024-2.jpg

357-45 Stone_SoilStain Leached Salts 2024-1.jpg

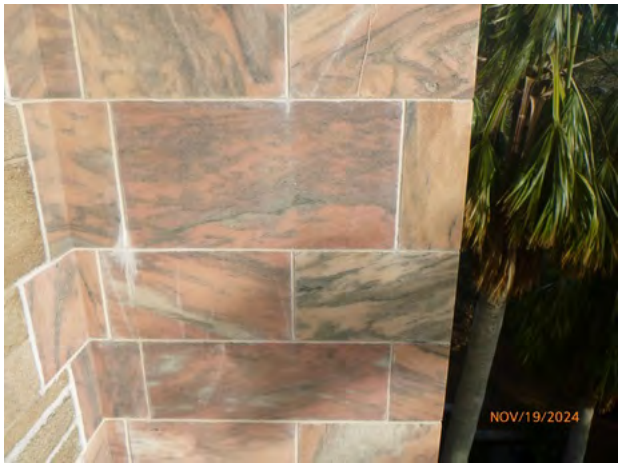
357-45 Stone_SoilStain Leached Salts 2024-2.jpg

357-45 Stone_SoilStain Leached Salts 2024-3.jpg

357-45 Stone_SoilStain Leached Salts 2024-4.jpg

357-45 Stone_SoilStain Leached Salts 2024-5.jpg

357-45 Stone_SoilStain Leached Salts 2024-6.jpg



357-45 Stone_SoilStain Leached Salts 2024-7.jpg

357-152 Stone_SoilStain Leached Salts 2024-1.jpg

357-152 Stone_SoilStain Leached Salts 2024-2.jpg

357-191 Stone_SurfLoss Chipped 2024-1.jpg

357-191 Stone_SurfLoss Chipped 2024-2.jpg

358-37 Stone_SoilStain Leached Salts 2024-1.jpg

358-37 Stone_SoilStain Leached Salts 2024-2.jpg

359-21 Stone_SoilStain Leached Salts 2024-1.jpg

359-21 Stone_SoilStain Leached Salts 2024-2.jpg


360-131 Stone_Repair Patch Failed 2024-1.jpg


360-131 Stone_Repair Patch Failed 2024-2.jpg


360-138 Stone_SoilStain Leached Salts 2024-1.jpg


360-138 Stone_SoilStain Leached Salts 2024-2.jpg


361-96 Stone_Joints Sealant Failed 2024-1.jpg


361-96 Stone_Joints Sealant Failed 2024-2.jpg


361-96 Stone_Joints Sealant Failed 2024-3.jpg


361-96 Stone_Joints Sealant Failed 2024-4.jpg


361-96 Stone_Joints Sealant Failed 2024-5.jpg

361-138 Stone_Crack Single unit 2024-1.jpg

361-138 Stone_Crack Single unit 2024-2.jpg


361-138 Stone_Crack Single unit 2024-3.jpg

362-90 Stone_Note Photo 2024-1.jpg

362-90 Stone_Note Photo 2024-2.jpg

362-126 Stone_Note Photo-general 2024-1.jpg

362-126 Stone_Note Photo-general 2024-2.jpg


362-131 Stone_Note Photo-general 2024-1.jpg

362-131 Stone_Note Photo-general 2024-2.jpg


362-131 Stone_Note Photo-general 2024-3.jpg


364-13 Stone_Crack System units and joints 2024-1.jpg


364-13 Stone_Crack System units and joints 2024-2.jpg


365-88 Stone_Note Photo-general 2024-1.jpg

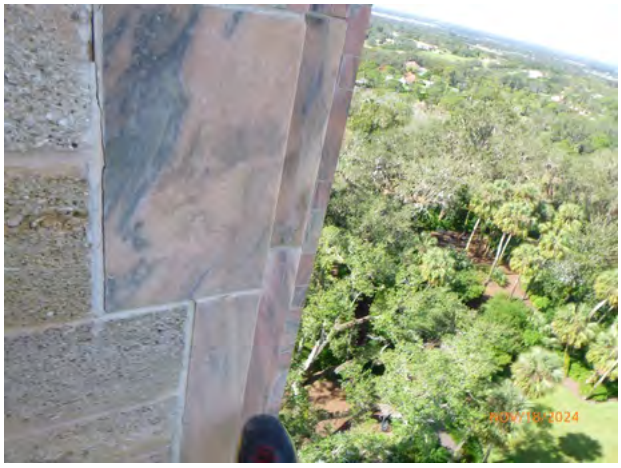

365-88 Stone_Note Photo-general 2024-2.jpg

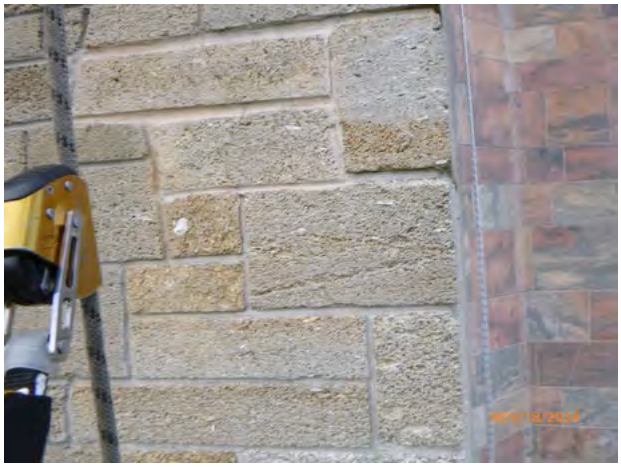

365-88 Stone_Note Photo-general 2024-3.jpg


365-107 Stone_Crack System units and joints 2024-1.jpg


365-107 Stone_Crack System units and joints 2024-2.jpg


365-107 Stone_Crack System units and joints 2024-3.jpg


365-107 Stone_Crack System units and joints 2024-4.jpg


366-55 Stone_Crack System units and joints 2024-1.jpg


366-55 Stone_Crack System units and joints 2024-2.jpg


366-55 Stone_Crack System units and joints 2024-3.jpg


366-55 Stone_Crack System units and joints 2024-4.jpg


366-55 Stone_Crack System units and joints 2024-5.jpg

366-97 Stone_Crack Repair failed 2024-1.jpg


366-97 Stone_Crack Repair failed 2024-2.jpg

368-32 Stone_Crack Repair failed 2024-1.jpg


368-32 Stone_Crack Repair failed 2024-2.jpg


372-11 Stone_SoilStain Leached Salts 2024-1.jpg


373-11 Stone_SurfLoss Chipped 2024-1.jpg


373-15 Stone_Spall Bonded 2024-1.jpg


380-154 Stone_Repair Dutchman Sound 2024-1.jpg


380-154 Stone_Repair Dutchman Sound 2024-2.jpg


380-154 Stone_Repair Dutchman Sound 2024-3.jpg


383-171 TerraCotta_SoilStain Biological 2024-1.jpg


383-171 TerraCotta_SoilStain Biological 2024-2.jpg


385-159 TerraCotta_Spall Missing 2024-1.jpg

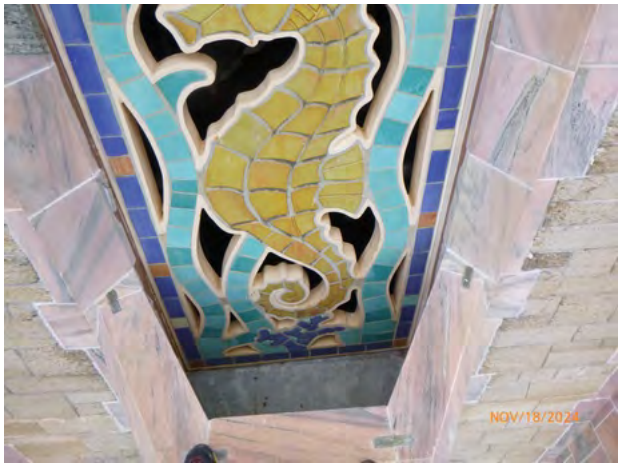

385-159 TerraCotta_Spall Missing 2024-2.jpg


385-159 TerraCotta_Spall Missing 2024-3.jpg

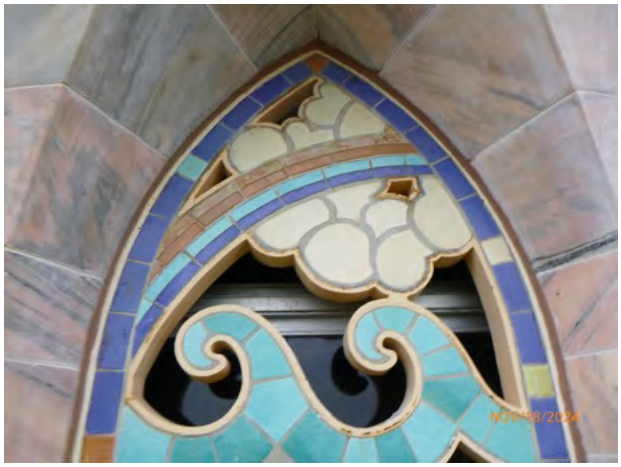
388-151 TerraCotta_Coating Coating Failed 2024-1.jpg

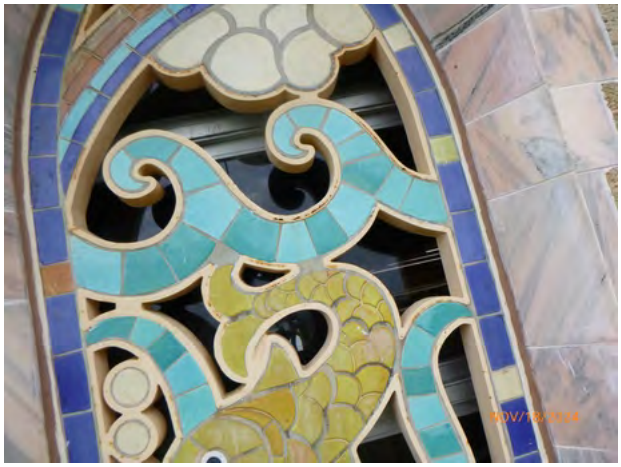
388-151 TerraCotta_Coating Coating Failed 2024-2.jpg

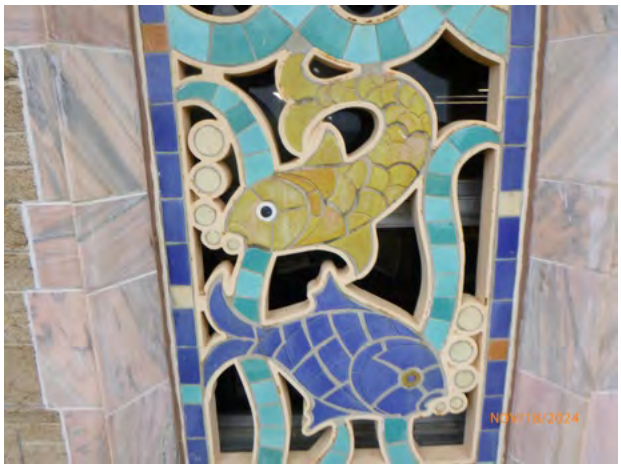
390-104 ArchMetal_Note Photo-general 2024-1.jpg



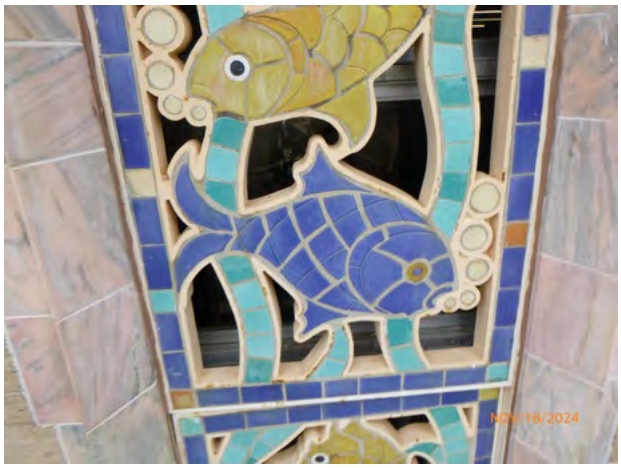
390-104 ArchMetal_Note Photo-general 2024-2.jpg


391-114 ArchMetal_Note Photo-general 2024-1.jpg

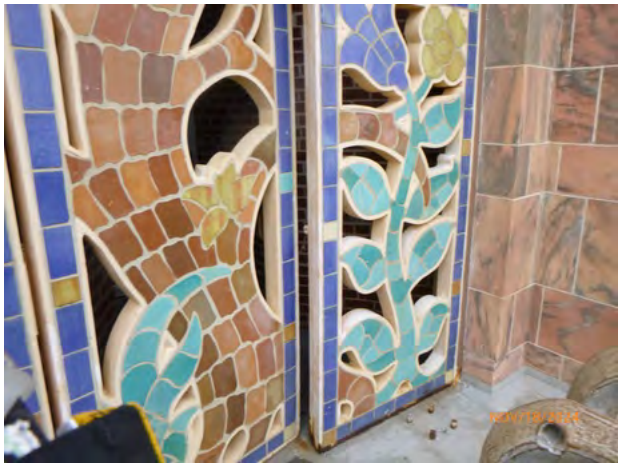

391-114 ArchMetal_Note Photo-general 2024-2.jpg



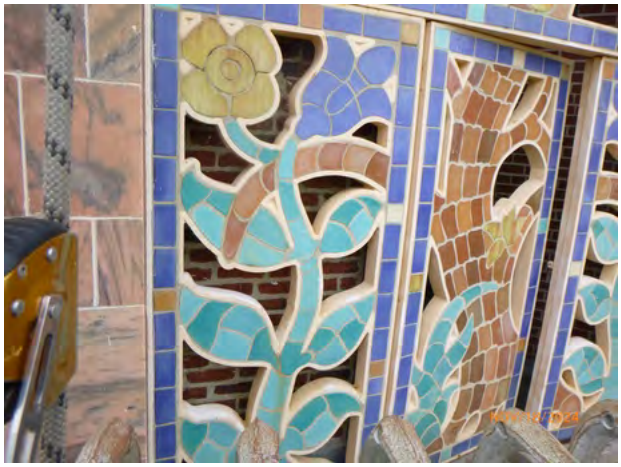
391-114 ArchMetal_Note Photo-general 2024-3.jpg

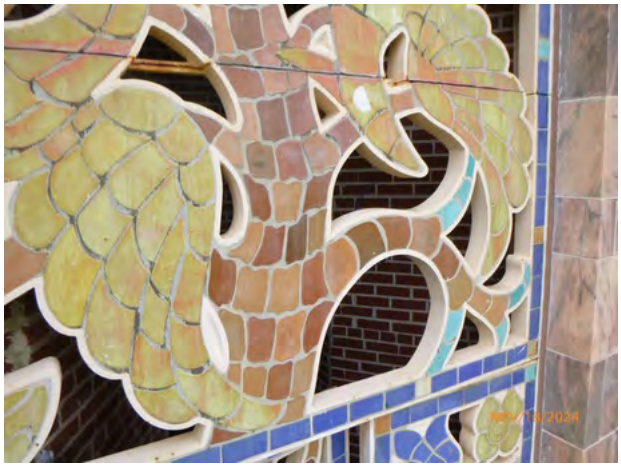


391-114 ArchMetal_Note Photo-general 2024-4.jpg


392-128 ArchMetal_Note Photo-general 2024-1.jpg


392-128 ArchMetal_Note Photo-general 2024-2.jpg


392-128 ArchMetal_Note Photo-general 2024-3.jpg

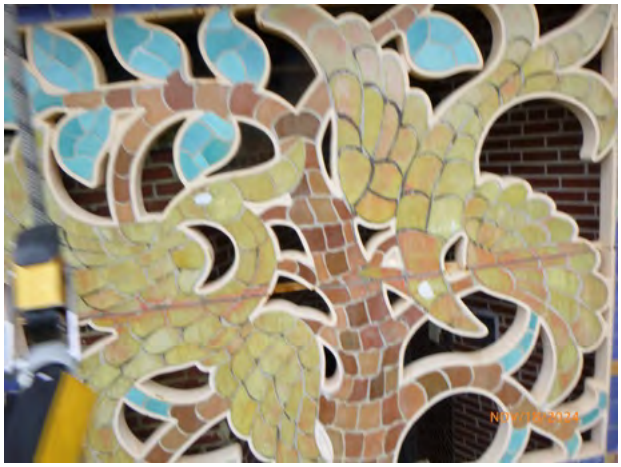

392-132 ArchMetal_Note Photo-general 2024-1.jpg

392-132 ArchMetal_Note Photo-general 2024-2.jpg

392-132 ArchMetal_Note Photo-general 2024-3.jpg

392-132 ArchMetal_Note Photo-general 2024-4.jpg

392-132 ArchMetal_Note Photo-general 2024-5.jpg


392-135 ArchMetal_Note Photo-general 2024-1.jpg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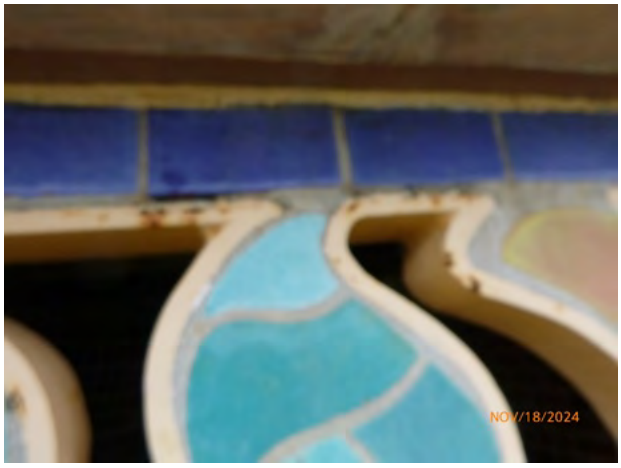
392-135 ArchMetal_Note Photo-general 2024-3.jpg


392-135 ArchMetal_Note Photo-general 2024-4.jpg



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392-135 ArchMetal_Note Photo-general 2024-6.jpg


392-145 ArchMetal_Note Photo-general 2024-1.jpg


392-145 ArchMetal_Note Photo-general 2024-2.jpg

392-145 ArchMetal_Note Photo-general 2024-3.jpg

392-145 ArchMetal_Note Photo-general 2024-4.jpg

392-145 ArchMetal_Note Photo-general 2024-5.jpg

392-153 TerraCotta_Displacement Horizontal 2024-1.jpg

392-153 TerraCotta_Displacement Horizontal 2024-2.jpg

392-153 TerraCotta_Displacement Horizontal 2024-3.jpg


392-153 TerraCotta_Displacement Horizontal 2024-4.jpg


392-154 ArchMetal_Note Photo-general 2024-1.jpg

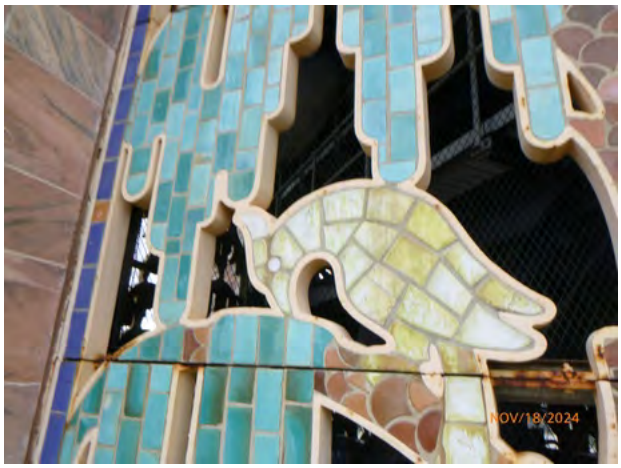

392-154 ArchMetal_Note Photo-general 2024-2.jpg


392-154 ArchMetal_Note Photo-general 2024-3.jpg


392-154 ArchMetal_Note Photo-general 2024-4.jpg


392-154 ArchMetal_Note Photo-general 2024-5.jpg

392-164 ArchMetal_Note Photo-general 2024-1.jpg



392-164 ArchMetal_Note Photo-general 2024-2.jpg


392-164 ArchMetal_Note Photo-general 2024-3.jpg


392-164 ArchMetal_Note Photo-general 2024-4.jpg


392-169 ArchMetal_Note Photo 2024-1.jpg


392-169 ArchMetal_Note Photo 2024-2.jpg


392-174 ArchMetal_Coating Coating Failed 2024-1.jpg


392-174 ArchMetal_Coating Coating Failed 2024-2.jpg


392-174 ArchMetal_Coating Coating Failed 2024-3.jpg


392-174 ArchMetal_Coating Coating Failed 2024-4.jpg


392-174 ArchMetal_Coating Coating Failed 2024-5.jpg

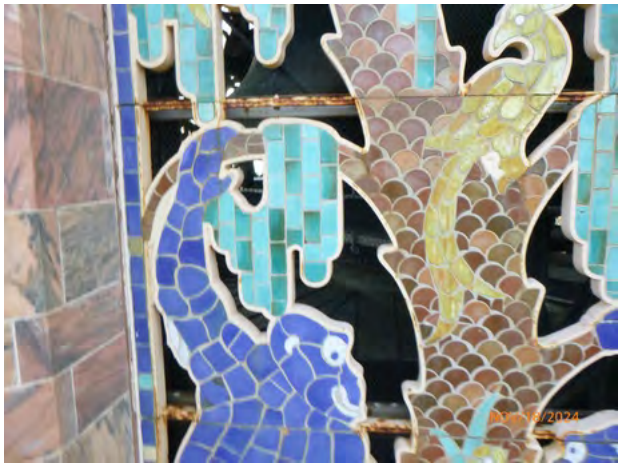

392-174 ArchMetal_Coating Coating Failed 2024-6.jpg

392-174 ArchMetal_Coating Coating Failed 2024-7.jpg


392-174 ArchMetal_Coating Coating Failed 2024-8.jpg


392-174 ArchMetal_Coating Coating Failed 2024-9.jpg


393-150 ArchMetal_Note Photo-general 2024-1.jpg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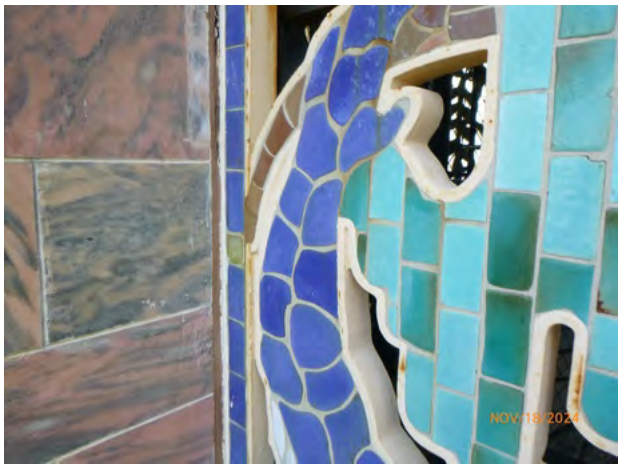
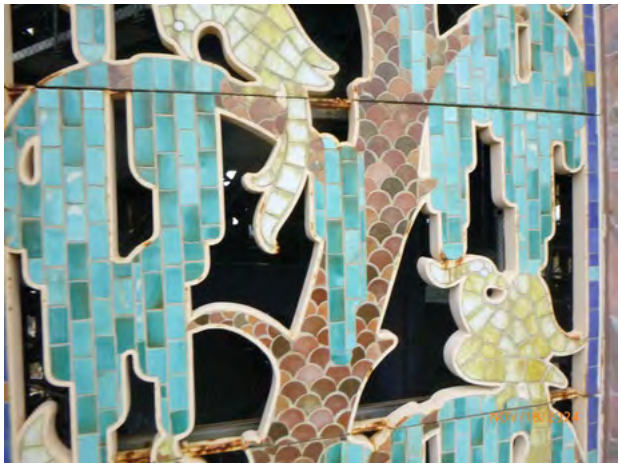
393-150 ArchMetal_Note Photo-general 2024-4.jpg



393-150 ArchMetal_Note Photo-general 2024-5.jpg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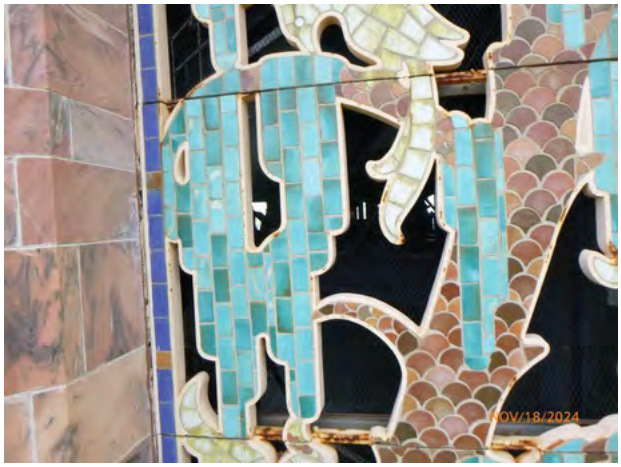

393-160 ArchMetal_Note Photo-general 2024-2.jpg

393-160 ArchMetal_Note Photo-general 2024-3.jpg


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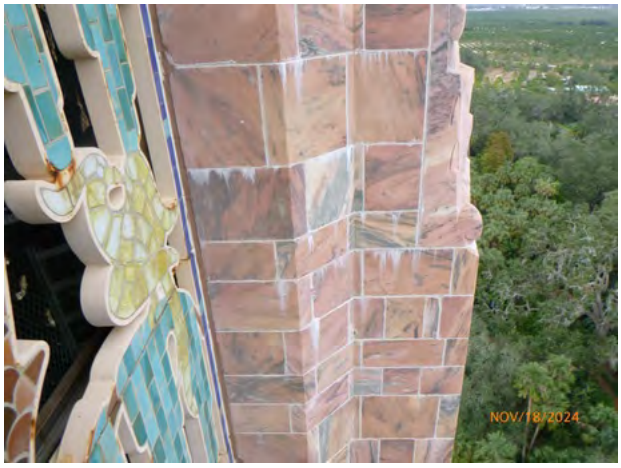
393-160 ArchMetal_Note Photo-general 2024-5.jpg

393-160 ArchMetal_Note Photo-general 2024-6.jpg



397-156 Stone_SoilStain Leached Salts 2024-1.jpg

397-156 Stone_SoilStain Leached Salts 2024-2.jpg


397-156 Stone_SoilStain Leached Salts 2024-3.jpg


530-204 Stone_Joints Mortar Failed 2024-1.jpg

531-191 Stone_Joints Mortar Failed 2024-1.jpg

531-191 Stone_Joints Mortar Failed 2024-2.jpg

532-193 ArchMetal_Corrosion Surface 2024-1.jpg

533-139 Brick_Spall Missing 2024-1.jpg

533-190 Stone_SoilStain Biological 2024-1.jpg

535-185 Brick_Joints Sealant Failed 2024-1.jpg


535-185 Brick_Joints Sealant Failed 2024-2.jpg


535-196 Stone_Spall Missing 2024-1.jpg


536-193 ArchMetal_Corrosion Surface 2024-1.jpg


536-197 Concrete_Crack Single unit 2024-1.jpg


536-197 Concrete_Crack Single unit 2024-2.jpg


536-197 Concrete_Crack Single unit 2024-3.jpg

536-197 Concrete_Crack Single unit 2024-4.jpg

537-138 Brick_Crack Single unit 2024-1.jpg

537-141 Brick_Spall Missing 2024-1.jpg

537-195 Stone_Crack Single unit 2024-1.jpg

537-195 Stone_Crack Single unit 2024-2.jpg

538-143 ArchMetal_Corrosion Pitted 2024-1.jpg

538-170 ArchMetal_Coating Coating Failed 2024-1.jpg


538-170 ArchMetal_Coating Coating Failed 2024-2.jpg

538-170 ArchMetal_Coating Coating Failed 2024-3.jpg

538-170 ArchMetal_Coating Coating Failed 2024-4.jpg

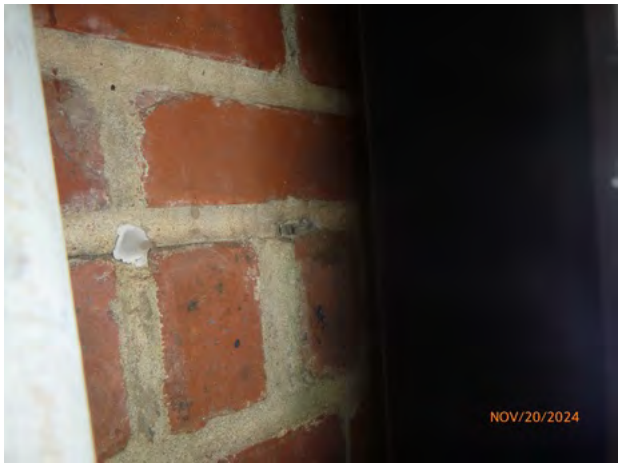

538-179 Brick_SoilStain Leached Salts 2024-1.jpg


538-201 Stone_Crack Repair failed 2024-1.jpg


538-201 Stone_Crack Repair failed 2024-2.jpg


538-201 Stone_Crack Repair failed 2024-3.jpg

539-144 Brick_Joints Mortar Failed 2024-1.jpg



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539-193 Stone_Joints Mortar Failed 2024-1.jpg


539-193 Stone_Joints Mortar Failed 2024-2.jpg


539-193 Stone_Joints Mortar Failed 2024-3.jpg


539-193 Stone_Joints Mortar Failed 2024-4.jpg

540-139 Brick_Note Photo-general 2024-1.jpg

540-139 Brick_Note Photo-general 2024-2.jpg

540-158 ArchMetal_Coating Coating Failed 2024-1.jpg

540-158 ArchMetal_Coating Coating Failed 2024-2.jpg

540-158 ArchMetal_Coating Coating Failed 2024-3.jpg


540-158 ArchMetal_Coating Coating Failed 2024-4.jpg


540-158 ArchMetal_Coating Coating Failed 2024-5.jpg

541-144 ArchMetal_Corrosion Pitted 2024-1.jpg

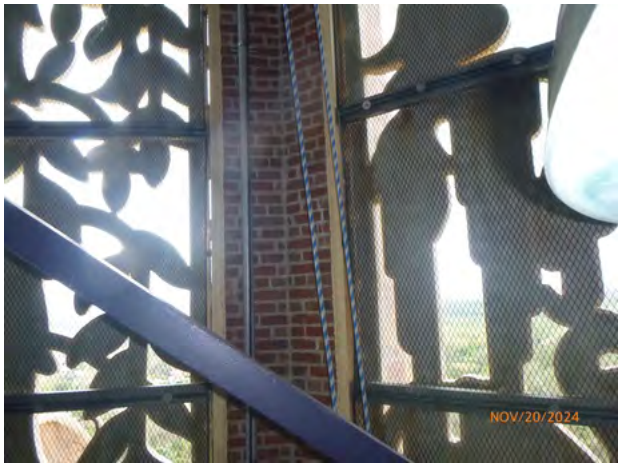
541-144 ArchMetal_Corrosion Pitted 2024-2.jpg

541-144 Brick_Crack Repair failed 2024-1.jpg

541-144 Brick_Crack Repair failed 2024-2.jpg

542-142 Brick_SoilStain Rust 2024-1.jpg

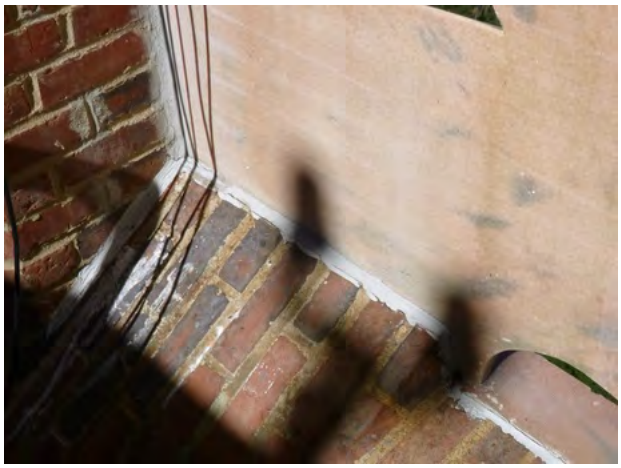

542-157 Brick_SoilStain Leached Salts 2024-1.jpg



542-157 Brick_SoilStain Leached Salts 2024-2.jpg


542-171 Brick_SoilStain Paint 2024-1.jpg


542-171 Brick_SoilStain Paint 2024-2.jpg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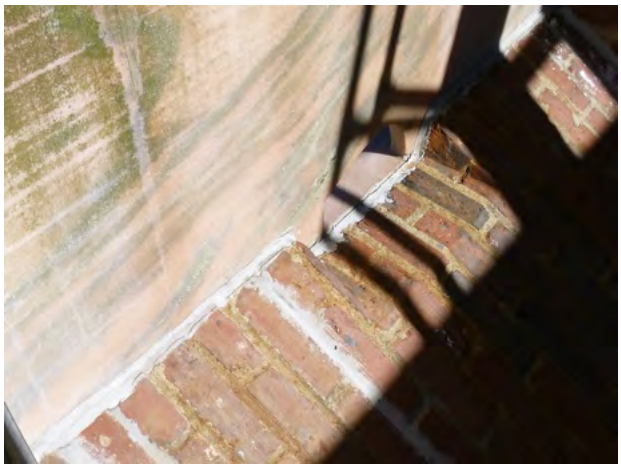

543-185 Brick_Joints Sealant Failed 2024-2.jpg


543-190 Stone_SoilStain Biological 2024-1.jpg


543-190 Stone_SoilStain Biological 2024-2.jpg

544-142 Brick_Crack Single unit 2024-1.jpg

544-142 Brick_Crack Single unit 2024-2.jpg

545-193 Stone_Repair Patch Failed 2024-1.jpg

546-181 Brick_Crack System units and joints 2024-1.jpg

546-181 Brick_Crack System units and joints 2024-2.jpg

546-181 Brick_Crack System units and joints 2024-3.jpg

547-143 Brick_Crack System units and joints 2024-1.jpg

547-143 Brick_Crack System units and joints 2024-2.jpg

547-143 Brick_Crack System units and joints 2024-3.jpg

547-178 Brick_Joints Mortar Failed 2024-1.jpg

547-178 Brick_Joints Mortar Failed 2024-2.jpg

547-178 Brick_Joints Mortar Failed 2024-3.jpg

548-143 Brick_Joints Mortar Failed 2024-1.jpg

548-143 Brick_Joints Mortar Failed 2024-2.jpg

548-143 Brick_Joints Mortar Failed 2024-3.jpg

548-180 Brick_SoilStain Leached Salts 2024-1.jpg


548-195 Stone_Crack Single unit 2024-1.jpg

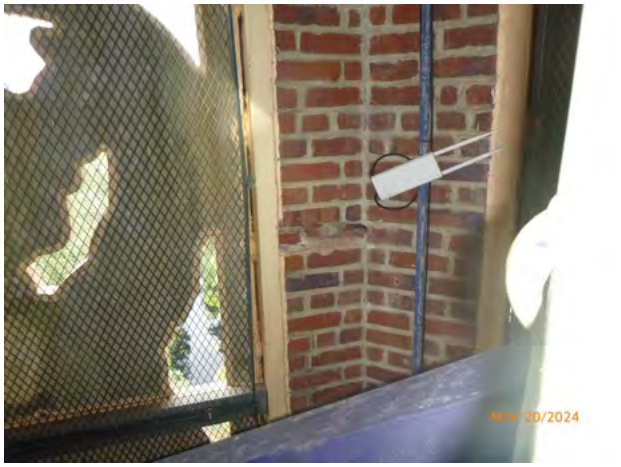

549-193 ArchMetal_Corrosion Surface 2024-1.jpg


549-193 ArchMetal_Corrosion Surface 2024-2.jpg

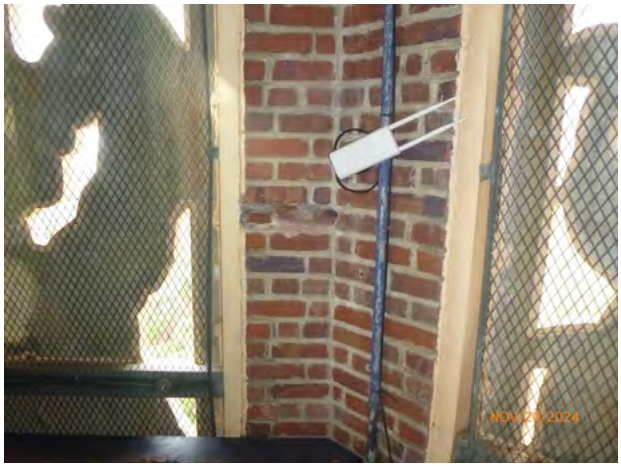
551-144 ArchMetal_Corrosion Pitted 2024-1.jpg

551-195 Stone_Spall Missing 2024-1.jpg

553-140 Brick_Crack Single unit 2024-1.jpg



553-149 Brick_Unsecured Missing 2024-1.jpg

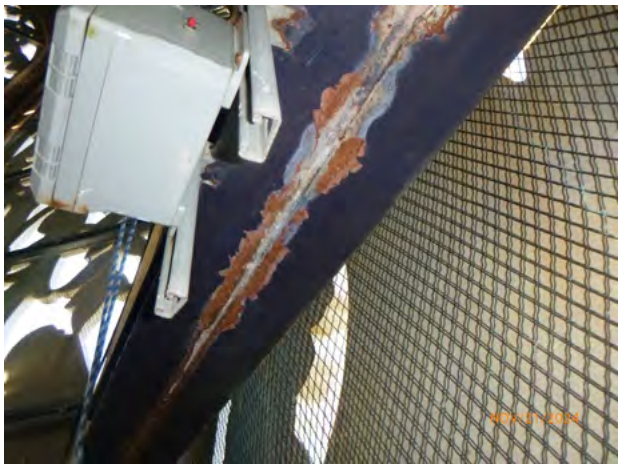


553-149 Brick_Unsecured Missing 2024-2.jpg

553-156 Brick_Joints Mortar Failed 2024-1.jpg

555-143 ArchMetal_Corrosion Pitted 2024-1.jpg

555-145 ArchMetal_Coating Coating Failed 2024-1.jpg



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555-145 ArchMetal_Coating Coating Failed 2024-3.jpg

555-160 ArchMetal_Coating Coating Failed 2024-1.jpg

555-160 ArchMetal_Coating Coating Failed 2024-2.jpg

555-160 ArchMetal_Coating Coating Failed 2024-3.jpg

556-140 Brick_Crack Single unit 2024-1.jpg


558-178 Brick_SoilStain Paint 2024-1.jpg

559-143 Brick_Crack Single unit 2024-1.jpg

559-162 ArchMetal_Coating Coating Failed 2024-1.jpg

559-162 ArchMetal_Coating Coating Failed 2024-2.jpg

559-162 ArchMetal_Coating Coating Failed 2024-3.jpg


559-162 ArchMetal_Coating Coating Failed 2024-4.jpg

560-143 ArchMetal_Corrosion Pitted 2024-1.jpg

560-148 ArchMetal_Corrosion Surface 2024-1.jpg

560-148 ArchMetal_Corrosion Surface 2024-2.jpg

560-148 ArchMetal_Corrosion Surface 2024-3.jpg


560-148 ArchMetal_Corrosion Surface 2024-4.jpg

561-157 ArchMetal_Coating Coating Failed 2024-1.jpg

561-157 ArchMetal_Coating Coating Failed 2024-2.jpg

561-157 ArchMetal_Coating Coating Failed 2024-3.jpg


561-157 ArchMetal_Coating Coating Failed 2024-4.jpg

561-157 ArchMetal_Coating Coating Failed 2024-5.jpg

561-157 ArchMetal_Coating Coating Failed 2024-6.jpg

561-157 ArchMetal_Coating Coating Failed 2024-7.jpg

561-157 ArchMetal_Coating Coating Failed 2024-8.jpg

561-157 ArchMetal_Coating Coating Failed 2024-9.jpg

561-160 ArchMetal_Coating Coating Failed 2024-1.jpg

561-160 ArchMetal_Coating Coating Failed 2024-2.jpg

561-160 ArchMetal_Coating Coating Failed 2024-3.jpg

562-170 ArchMetal_Coating Coating Failed 2024-1.jpg


562-170 ArchMetal_Coating Coating Failed 2024-2.jpg

562-170 ArchMetal_Coating Coating Failed 2024-3.jpg

562-170 ArchMetal_Coating Coating Failed 2024-4.jpg

562-170 ArchMetal_Coating Coating Failed 2024-5.jpg


562-170 ArchMetal_Coating Coating Failed 2024-6.jpg

562-172 ArchMetal_Corrosion Surface 2024-1.jpg


562-172 ArchMetal_Corrosion Surface 2024-2.jpg


633-196 Stone_Displacement Horizontal 2024-1.jpg


633-196 Stone_Displacement Horizontal 2024-2.jpg


633-196 Stone_Displacement Horizontal 2024-3.jpg


634-193 ArchMetal_Corrosion Surface 2024-1.jpg


635-185 Brick_Joints Mortar Failed 2024-1.jpg

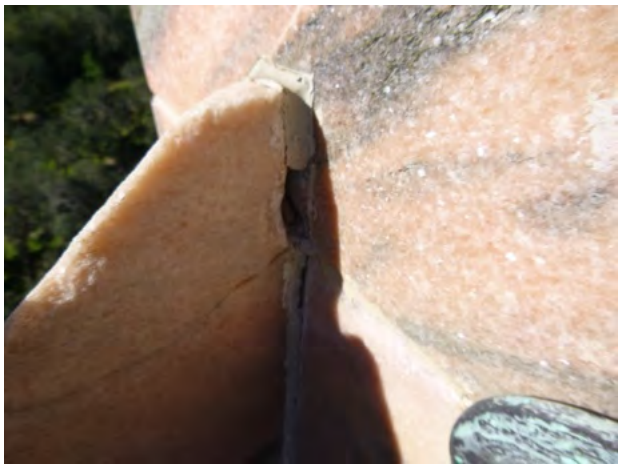

636-189 Brick_SoilStain Biological 2024-1.jpg


637-193 Stone_Repair Patch Failed 2024-1.jpg


637-193 Stone_Repair Patch Failed 2024-2.jpg

639-143 Brick_Spall Missing 2024-1.jpg


639-185 Brick_Joints Sealant Failed 2024-1.jpg


639-194 Stone_Joints Mortar Failed 2024-1.jpg


639-194 Stone_Joints Mortar Failed 2024-2.jpg

640-139 Brick_Crack Single unit 2024-1.jpg


640-182 SheetMetal_Note Photo-active leak 2024-1.jpg


640-182 SheetMetal_Note Photo-active leak 2024-2.jpg


640-198 Stone_Crack Single unit 2024-1.jpg

642-140 Brick_SoilStain Rust 2024-1.jpg

642-140 Brick_SoilStain Rust 2024-2.jpg

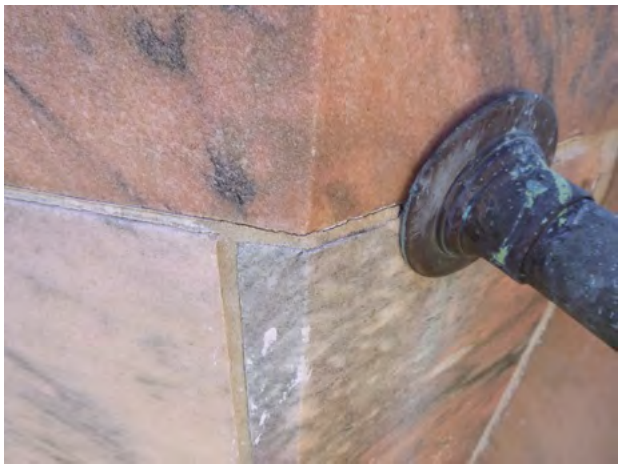

642-179 Brick_Spall Bonded 2024-1.jpg

643-143 Brick_Crack Single unit 2024-1.jpg


643-193 ArchMetal_Corrosion Surface 2024-1.jpg


643-193 ArchMetal_Corrosion Surface 2024-2.jpg


643-196 Stone_Joints Mortar Failed 2024-1.jpg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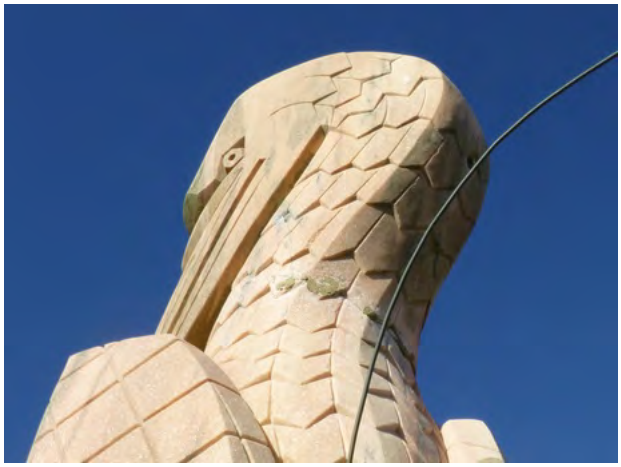
643-196 Stone_Joints Mortar Failed 2024-3.jpg


644-206 Stone_Crack Repair failed 2024-1.jpg

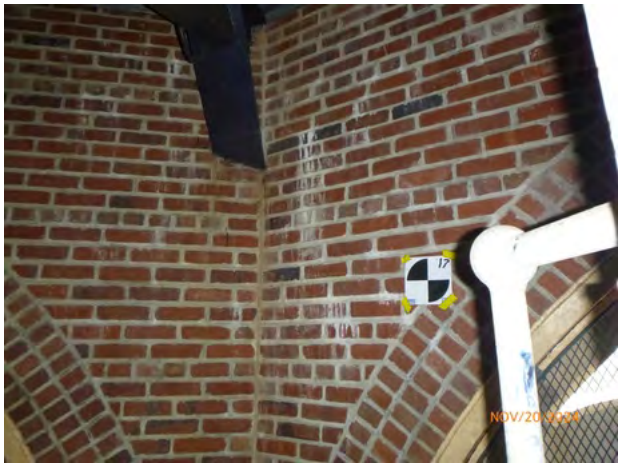

644-206 Stone_Crack Repair failed 2024-2.jpg

645-144 ArchMetal_Corrosion Surface 2024-1.jpg

645-185 Brick_Joints Sealant Failed 2024-1.jpg

646-139 Brick_SoilStain Leached Salts 2024-1.jpg

646-139 Brick_SoilStain Leached Salts 2024-2.jpg



646-177 Brick_SoilStain Paint 2024-1.jpg

646-190 Stone_SoilStain Biological 2024-1.jpg

649-189 ArchMetal_Note Photo-connections askew 2024-1.jpg


649-189 ArchMetal_Note Photo-connections askew 2024-2.jpg


649-189 ArchMetal_Note Photo-connections askew 2024-3.jpg


649-189 ArchMetal_Note Photo-connections askew 2024-4.jpg

650-142 Brick_Crack Single unit 2024-1.jpg

650-142 Brick_Crack Single unit 2024-2.jpg

651-142 Brick_Crack System units and joints 2024-1.jpg

651-142 Brick_Crack System units and joints 2024-2.jpg

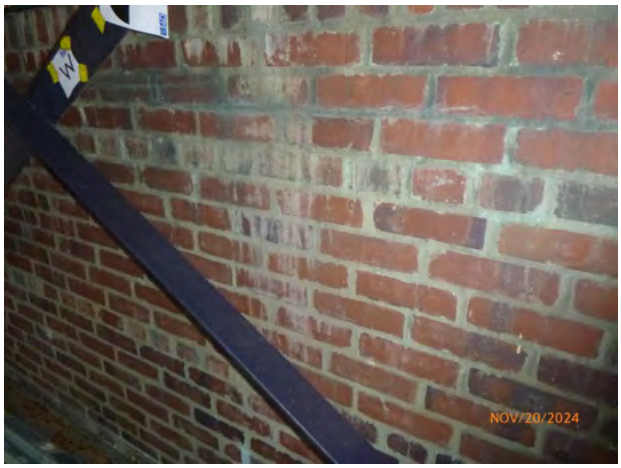
651-142 Brick_Crack System units and joints 2024-3.jpg

651-179 Brick_Crack System units and joints 2024-1.jpg

651-179 Brick_Crack System units and joints 2024-2.jpg

651-179 Brick_Crack System units and joints 2024-3.jpg


651-182 Brick_SoilStain Paint 2024-1.jpg



652-139 Brick_SoilStain Paint 2024-1.jpg

652-139 Brick_SoilStain Paint 2024-2.jpg

653-163 ArchMetal_Coating Coating Failed 2024-1.jpg

655-144 ArchMetal_Corrosion Pitted 2024-1.jpg

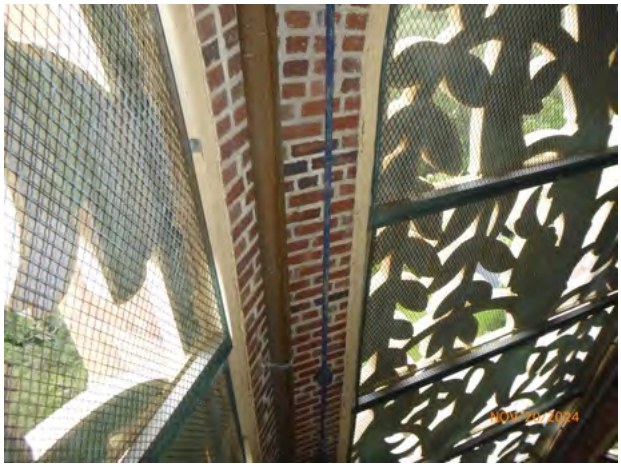
656-140 Brick_SoilStain Paint 2024-1.jpg

656-140 Brick_SoilStain Paint 2024-2.jpg

656-144 ArchMetal_Coating Coating Failed 2024-1.jpg

656-144 ArchMetal_Coating Coating Failed 2024-2.jpg


656-168 Brick_SurfLoss Face spalled 2024-1.jpg


656-168 Brick_SurfLoss Face spalled 2024-2.jpg


656-168 Brick_SurfLoss Face spalled 2024-3.jpg


657-144 ArchMetal_Coating Coating Failed 2024-1.jpg

657-144 ArchMetal_Coating Coating Failed 2024-2.jpg


657-144 ArchMetal_Coating Coating Failed 2024-3.jpg


657-144 ArchMetal_Coating Coating Failed 2024-4.jpg

657-144 ArchMetal_Coating Coating Failed 2024-5.jpg

657-178 Brick_SoilStain Paint 2024-1.jpg


657-182 SheetMetal_Note Photo-general 2024-1.jpg

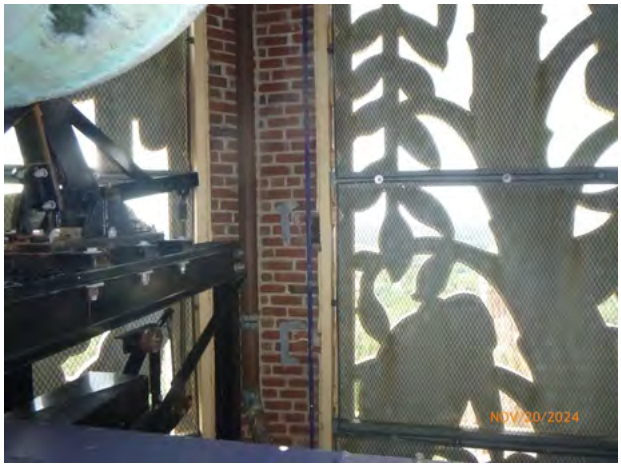

657-182 SheetMetal_Note Photo-general 2024-2.jpg


657-182 SheetMetal_Note Photo-general 2024-3.jpg

658-146 Brick_Unsecured Missing 2024-1.jpg

658-146 Brick_Unsecured Missing 2024-2.jpg

658-149 Brick_Unsecured Missing 2024-1.jpg



658-149 Brick_Unsecured Missing 2024-2.jpg

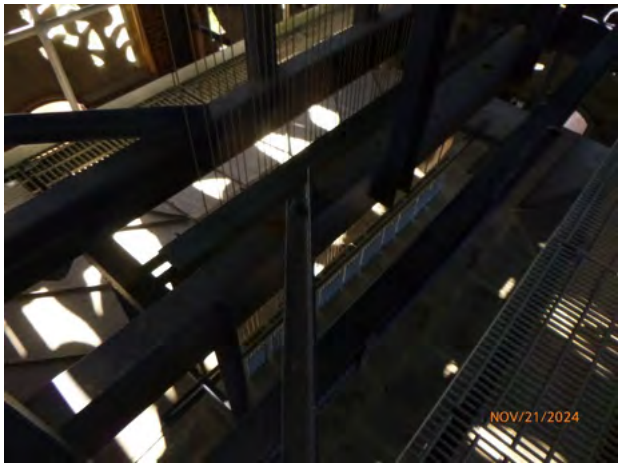
663-148 ArchMetal_Coating Coating Failed 2024-1.jpg

663-148 ArchMetal_Coating Coating Failed 2024-2.jpg

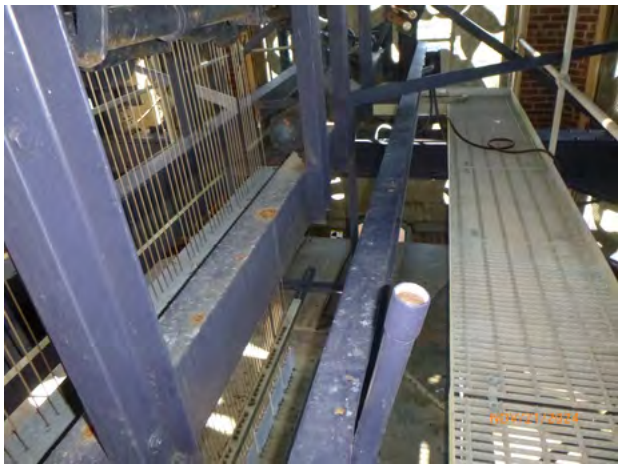
663-148 ArchMetal_Coating Coating Failed 2024-3.jpg

663-148 ArchMetal_Coating Coating Failed 2024-4.jpg

663-148 ArchMetal_Coating Coating Failed 2024-5.jpg



664-149 ArchMetal_Coating Coating Failed 2024-1.jpg



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664-149 ArchMetal_Coating Coating Failed 2024-3.jpg

664-149 ArchMetal_Coating Coating Failed 2024-4.jpg

664-151 ArchMetal_Coating Coating Failed 2024-1.jpg

664-151 ArchMetal_Coating Coating Failed 2024-2.jpg

664-151 ArchMetal_Coating Coating Failed 2024-3.jpg

664-151 ArchMetal_Coating Coating Failed 2024-4.jpg


664-194 Stone_SoilStain Biological 2024-1.jpg


664-197 Stone_Displacement Horizontal 2024-1.jpg


664-197 Stone_Displacement Horizontal 2024-2.jpg

734-190 Brick_Joints Mortar Failed 2024-1.jpg

734-190 Brick_Joints Mortar Failed 2024-2.jpg

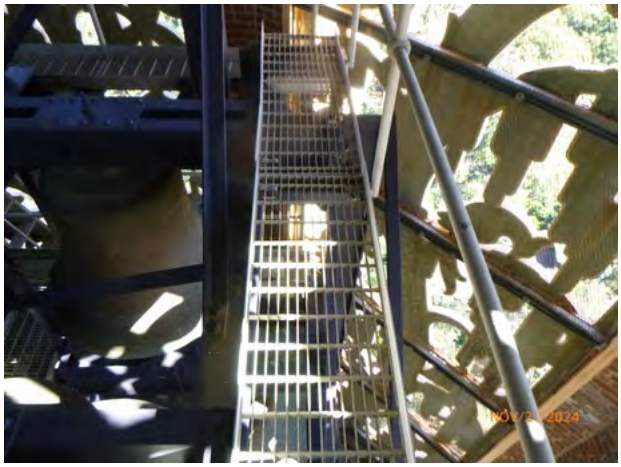
734-190 Brick_Joints Mortar Failed 2024-3.jpg

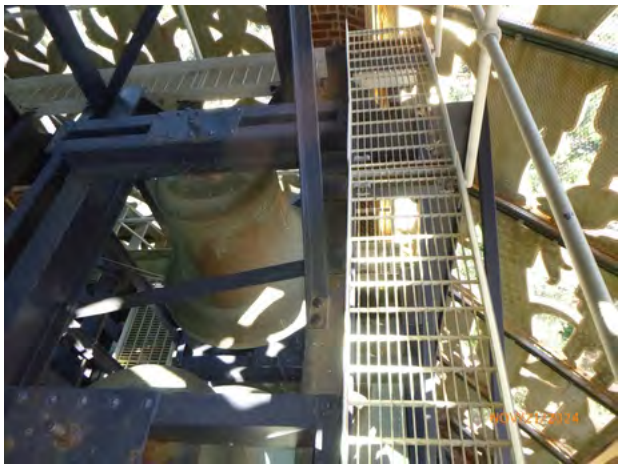
734-190 Brick_Joints Mortar Failed 2024-4.jpg

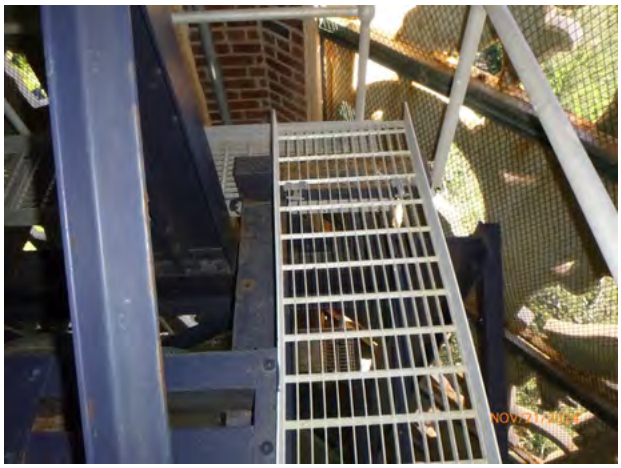
734-190 Brick_Joints Mortar Failed 2024-5.jpg


741-169 ArchMetal_Coating Coating Failed 2024-1.jpg


741-169 ArchMetal_Coating Coating Failed 2024-2.jpg


741-169 ArchMetal_Coating Coating Failed 2024-3.jpg


741-169 ArchMetal_Coating Coating Failed 2024-4.jpg


741-169 ArchMetal_Coating Coating Failed 2024-5.jpg


741-184 Brick_Joints Sealant Failed 2024-1.jpg

741-184 Brick_Joints Sealant Failed 2024-2.jpg


741-184 Brick_Joints Sealant Failed 2024-3.jpg


741-184 Brick_Joints Sealant Failed 2024-4.jpg

742-144 ArchMetal_Corrosion Pitted 2024-1.jpg


742-150 ArchMetal_Coating Coating Failed 2024-1.jpg


742-150 ArchMetal_Coating Coating Failed 2024-2.jpg

742-150 ArchMetal_Coating Coating Failed 2024-3.jpg

742-150 ArchMetal_Coating Coating Failed 2024-4.jpg

742-150 ArchMetal_Coating Coating Failed 2024-5.jpg

742-150 ArchMetal_Coating Coating Failed 2024-6.jpg

742-150 ArchMetal_Coating Coating Failed 2024-7.jpg

743-157 ArchMetal_Coating Coating Failed 2024-1.jpg

743-157 ArchMetal_Coating Coating Failed 2024-2.jpg

743-157 ArchMetal_Coating Coating Failed 2024-3.jpg

743-157 ArchMetal_Coating Coating Failed 2024-4.jpg


743-190 ArchMetal_Corrosion Surface 2024-1.jpg


743-190 ArchMetal_Corrosion Surface 2024-2.jpg

745-143 ArchMetal_Corrosion Surface 2024-1.jpg

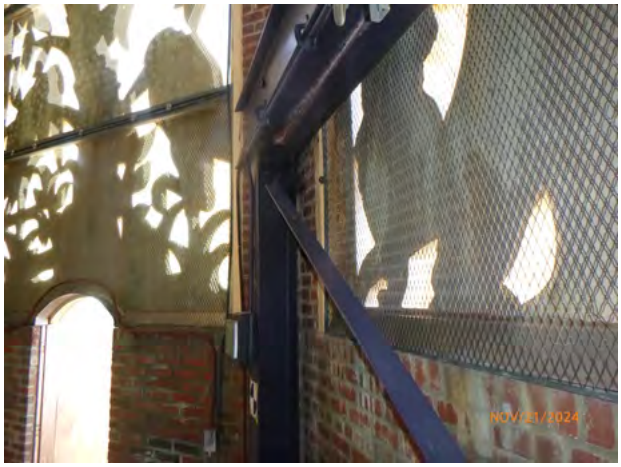

745-154 Brick_SoilStain Cementitious 2024-1.jpg

745-154 Brick_SoilStain Cementitious 2024-2.jpg


745-167 Brick_SoilStain Paint 2024-1.jpg

746-139 Brick_Spall Missing 2024-1.jpg

746-139 Brick_Spall Missing 2024-2.jpg



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746-144 ArchMetal_Coating Coating Failed 2024-2.jpg


746-144 ArchMetal_Coating Coating Failed 2024-3.jpg

751-143 Brick_Crack System units and joints 2024-1.jpg

751-143 Brick_Crack System units and joints 2024-2.jpg

753-143 Brick_Crack System units and joints 2024-1.jpg

753-143 Brick_Crack System units and joints 2024-2.jpg

755-143 ArchMetal_Corrosion Surface 2024-1.jpg

755-143 ArchMetal_Corrosion Surface 2024-2.jpg


755-178 Brick_SoilStain Leached Salts 2024-1.jpg

755-193 Stone_Joints Mortar Failed 2024-1.jpg

756-166 Brick_SoilStain Paint 2024-1.jpg

756-190 Brick_Repair Patch Failed 2024-1.jpg

756-190 Brick_Repair Patch Failed 2024-2.jpg

756-190 Brick_Repair Patch Failed 2024-3.jpg

756-190 Brick_Repair Patch Failed 2024-4.jpg

756-191 Brick_SurfLoss Face spalled 2024-1.jpg

757-150 Brick_Repair Patch Sound 2024-1.jpg

757-152 Brick_Repair Patch Sound 2024-1.jpg


757-184 Brick_Joints Sealant Failed 2024-1.jpg

757-184 Brick_Joints Sealant Failed 2024-2.jpg

757-184 Brick_Joints Sealant Failed 2024-3.jpg

757-184 Brick_Joints Sealant Failed 2024-4.jpg

757-184 Brick_Joints Sealant Failed 2024-5.jpg

757-184 Brick_Joints Sealant Failed 2024-6.jpg

758-143 ArchMetal_Corrosion Surface 2024-1.jpg

759-141 Brick_SoilStain Rust 2024-1.jpg

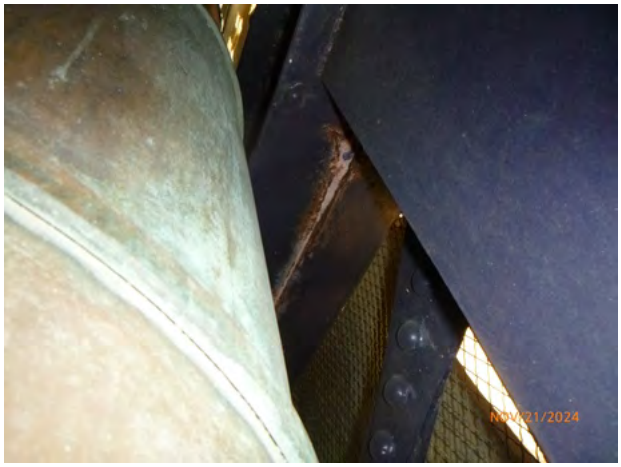
759-141 Brick_SoilStain Rust 2024-2.jpg

759-143 Brick_Joints Mortar Failed 2024-1.jpg

759-143 Brick_Joints Mortar Failed 2024-2.jpg

760-145 ArchMetal_Coating Coating Failed 2024-1.jpg


760-145 ArchMetal_Coating Coating Failed 2024-2.jpg



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760-145 ArchMetal_Coating Coating Failed 2024-4.jpg

763-147 ArchMetal_Coating Coating Failed 2024-1.jpg

763-147 ArchMetal_Coating Coating Failed 2024-2.jpg


763-147 ArchMetal_Coating Coating Failed 2024-3.jpg

763-147 ArchMetal_Coating Coating Failed 2024-4.jpg


763-147 ArchMetal_Coating Coating Failed 2024-5.jpg

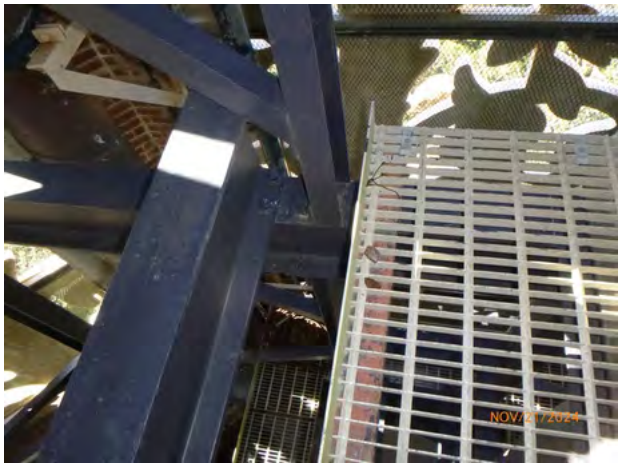
763-147 ArchMetal_Coating Coating Failed 2024-6.jpg

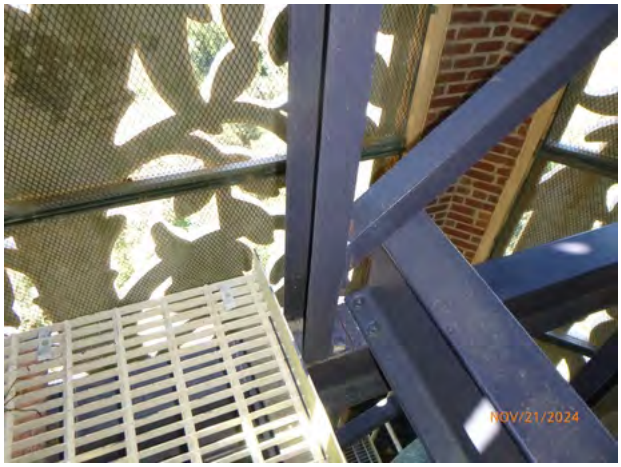
763-180 ArchMetal_Corrosion Surface 2024-1.jpg

763-180 ArchMetal_Corrosion Surface 2024-2.jpg


764-157 ArchMetal_Coating Coating Failed 2024-1.jpg

764-157 ArchMetal_Coating Coating Failed 2024-2.jpg


764-157 ArchMetal_Coating Coating Failed 2024-3.jpg



764-157 ArchMetal_Coating Coating Failed 2024-4.jpg

765-182 SheetMetal_Corrosion Perforated 2024-1.jpg


765-182 SheetMetal_Corrosion Perforated 2024-2.jpg

765-182 SheetMetal_Corrosion Perforated 2024-3.jpg

765-182 SheetMetal_Corrosion Perforated 2024-4.jpg

765-182 SheetMetal_Corrosion Perforated 2024-5.jpg

836-184 Brick_Spall Missing 2024-1.jpg

841-150 ArchMetal_Coating Coating Failed 2024-1.jpg

841-150 ArchMetal_Coating Coating Failed 2024-2.jpg

841-150 ArchMetal_Coating Coating Failed 2024-3.jpg

841-150 ArchMetal_Coating Coating Failed 2024-4.jpg

841-150 ArchMetal_Coating Coating Failed 2024-5.jpg

844-147 ArchMetal_Corrosion Fastener rusted 2024-1.jpg

844-147 ArchMetal_Corrosion Fastener rusted 2024-2.jpg

844-147 ArchMetal_Corrosion Fastener rusted 2024-3.jpg

844-147 ArchMetal_Corrosion Fastener rusted 2024-4.jpg

844-147 ArchMetal_Corrosion Fastener rusted 2024-5.jpg

844-147 ArchMetal_Corrosion Fastener rusted 2024-6.jpg

844-147 ArchMetal_Corrosion Fastener rusted 2024-7.jpg

844-184 Brick_Joints Sealant Failed 2024-1.jpg

844-184 Brick_Joints Sealant Failed 2024-2.jpg

844-184 Brick_Joints Sealant Failed 2024-3.jpg

844-184 Brick_Joints Sealant Failed 2024-4.jpg

844-184 Brick_Joints Sealant Failed 2024-5.jpg


844-193 Stone_Joints Mortar Failed 2024-1.jpg


844-193 Stone_Joints Mortar Failed 2024-2.jpg


844-205 Stone_Crack Single unit 2024-1.jpg

846-142 ArchMetal_Coating Coating Failed 2024-1.jpg

846-142 ArchMetal_Coating Coating Failed 2024-2.jpg

846-142 ArchMetal_Coating Coating Failed 2024-3.jpg

847-143 ArchMetal_Corrosion Pitted 2024-1.jpg

847-152 Brick_Crack System units and joints 2024-1.jpg

847-172 Brick_Repair Patch Sound 2024-1.jpg

847-178 Brick_SoilStain Leached Salts 2024-1.jpg

847-190 Brick_SurfLoss Face spalled 2024-1.jpg


847-198 Stone_Displacement Horizontal 2024-1.jpg


847-198 Stone_Displacement Horizontal 2024-2.jpg

848-180 ArchMetal_Corrosion Perforated 2024-1.jpg

848-180 ArchMetal_Corrosion Perforated 2024-2.jpg

848-180 ArchMetal_Corrosion Perforated 2024-3.jpg

848-180 ArchMetal_Corrosion Perforated 2024-4.jpg

848-180 ArchMetal_Corrosion Perforated 2024-5.jpg

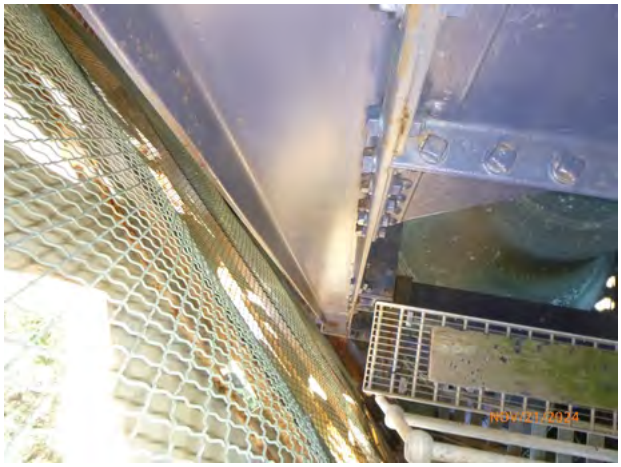

848-194 Stone_Joints Mortar Failed 2024-1.jpg

849-142 Brick_SoilStain Leached Salts 2024-1.jpg


849-142 Brick_SoilStain Leached Salts 2024-2.jpg

851-184 Brick_SoilStain Rust 2024-1.jpg


852-160 ArchMetal_Coating Coating Failed 2024-1.jpg


852-160 ArchMetal_Coating Coating Failed 2024-2.jpg

854-143 Brick_Crack System units and joints 2024-1.jpg

854-143 Brick_Crack System units and joints 2024-2.jpg

854-143 Brick_Crack System units and joints 2024-3.jpg


854-180 Brick_SoilStain Leached Salts 2024-1.jpg

856-143 Brick_Repair Patch Failed 2024-1.jpg

856-143 Brick_Repair Patch Failed 2024-2.jpg

857-139 Brick_Crack Single unit 2024-1.jpg

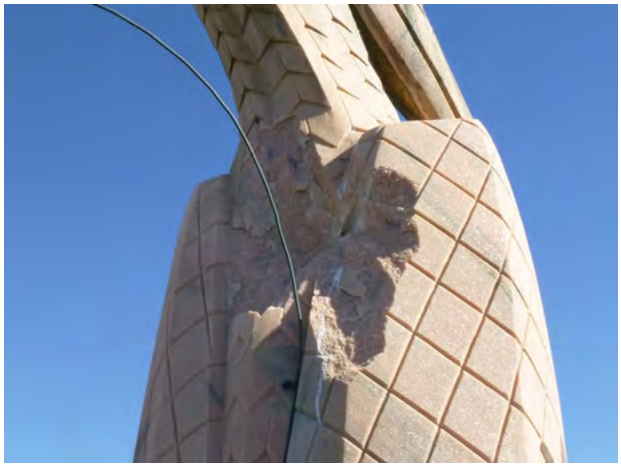
857-139 Brick_Crack Single unit 2024-2.jpg

857-140 Brick_SoilStain Rust 2024-1.jpg

857-140 Brick_SoilStain Rust 2024-2.jpg

857-143 ArchMetal_Corrosion Pitted 2024-1.jpg


857-202 Stone_Unsecured Missing 2024-1.jpg

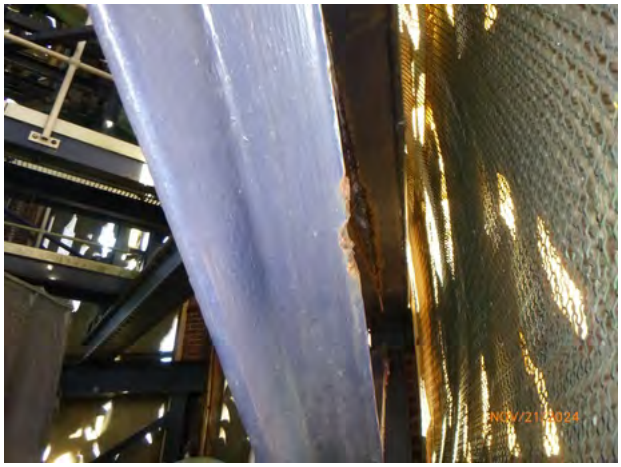

857-202 Stone_Unsecured Missing 2024-2.jpg

858-151 Brick_Repair Patch Failed 2024-1.jpg


858-188 Stone_SoilStain Biological 2024-1.jpg


858-188 Stone_SoilStain Biological 2024-2.jpg


859-145 ArchMetal_Damaged Dented 2024-1.jpg


859-145 ArchMetal_Damaged Dented 2024-2.jpg

859-145 ArchMetal_Damaged Dented 2024-3.jpg


859-202 Stone_Spall Incipient 2024-1.jpg


859-203 Stone_Spall Incipient 2024-1.jpg

860-177 Brick_SoilStain Leached Salts 2024-1.jpg

860-184 Brick_Joints Sealant Failed 2024-1.jpg

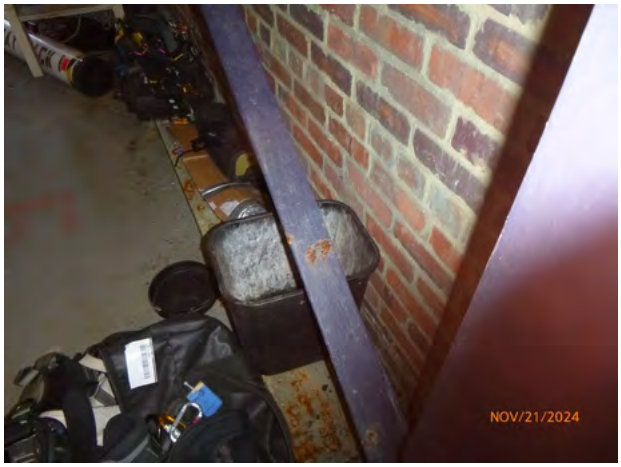
860-184 Brick_Joints Sealant Failed 2024-2.jpg

860-184 Brick_Joints Sealant Failed 2024-3.jpg

860-184 Brick_Joints Sealant Failed 2024-4.jpg

860-184 Brick_Joints Sealant Failed 2024-5.jpg


860-202 Stone_Spall Incipient 2024-1.jpg



861-137 ArchMetal_Coating Coating Failed 2024-1.jpg

861-137 ArchMetal_Coating Coating Failed 2024-2.jpg

861-137 ArchMetal_Coating Coating Failed 2024-3.jpg

861-143 ArchMetal_Corrosion Pitted 2024-1.jpg

861-143 ArchMetal_Corrosion Pitted 2024-2.jpg

861-143 ArchMetal_Corrosion Pitted 2024-3.jpg

861-145 ArchMetal_Coating Coating Failed 2024-1.jpg


861-145 ArchMetal_Coating Coating Failed 2024-2.jpg


861-145 ArchMetal_Coating Coating Failed 2024-3.jpg

861-145 ArchMetal_Coating Coating Failed 2024-4.jpg

861-145 ArchMetal_Coating Coating Failed 2024-5.jpg


862-194 Stone_Crack System joints 2024-1.jpg

866-141 Brick_Joints Sealant Failed 2024-1.jpg

866-141 Brick_Joints Sealant Failed 2024-2.jpg

866-143 Brick_Crack Single unit 2024-1.jpg

866-143 Brick_Crack Single unit 2024-2.jpg


866-193 Stone_Joints Mortar Failed 2024-1.jpg

867-140 Brick_SoilStain Copper 2024-1.jpg

867-140 Brick_SoilStain Copper 2024-2.jpg


867-200 Stone_Embedment Ferrous Embedment 2024-1.jpg


868-203 Stone_Repair Patch Failed 2024-1.jpg

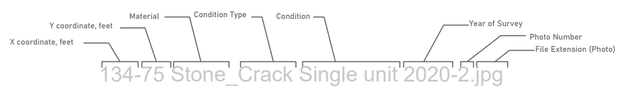
868-203 Stone_Repair Patch Failed 2024-2.jpg

removals.JPG

Annotated Drawings

KEY TO PHOTO NAMES

Vertical Access surveyors use TPAS during field evaluations to methodically name photographs. Within the standard TPAS photo naming convention, key attributes of each survey condition are used to create unique, descriptive file names. Please use the accompanying diagram to understand and break down the typical layout of a VA photo name:



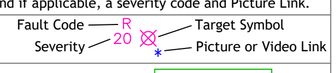
KEY TO SYMBOLS

Each TPAS annotation is comprised of a graphical symbol and text label.

Four types of graphical symbols are used:
--Target symbols depict faults having discrete locations, such as spalls or patch repairs.
--Box symbols are rectangular symbols delineating conditions that span an area too large to be effectively represented with target symbols.
--Polyline symbols depict cracks and specific joint conditions.
--Picture Link symbols indicate the location of survey photographs.

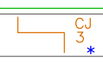
Text labels include a code describing the type of conditon, and if applicable, a severity code and Picture Link.

This target symbol indicates a 20 square inch spall, which was removed during the survey and photographed:



This box symbol indicates an area of biological soiling, which was not photographed:

This polyline indicates a crack system following a joint path, 3/16 inch wide, which was photographed:



KEY TO SURVEY CODES: MASONRY

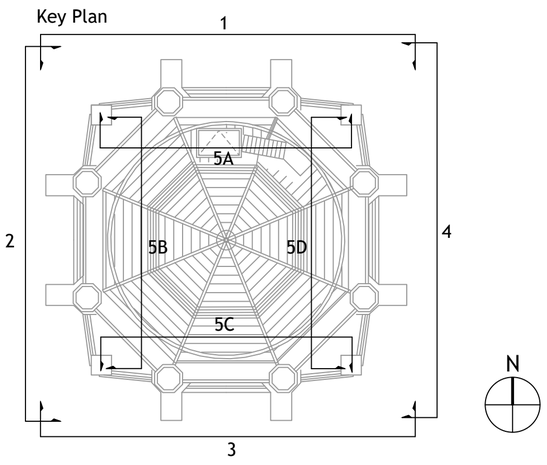
Condition	Symbol	Code	Fault Type	Severity	Amount
Coating		CtF	Coating Failed	N / A	Area in square feet
Crack		C	Single unit	Width in 1/16" increments	Length in linear feet
Crack		CJ	System joints	Width in 1/16" increments	Length in linear feet
Crack		CRpr	Repair sound	Width in 1/16" increments	Length in linear feet
Crack		CRprF	Repair failed	Width in 1/16" increments	Length in linear feet
Crack		CU	System units	Width in 1/16" increments	Length in linear feet
Crack		CUJ	System units and joints	Width in 1/16" increments	Length in linear feet
Displacement		Hor	Horizontal	1/8" increments	Number of units
Embedment		Fe	Ferrous Embedment	N / A	N / A
Embedment		Otr	Other Embedment	N / A	N / A
Joints		MorM	Mortar Missing	N / A	Length in linear feet
Joints		MorR	Mortar Removed	Percentage	Length in linear feet
Joints		SlntF	Sealant Failed	N / A	Length in linear feet
Joints		MorF	Mortar Failed	Percentage	Area in square feet
Previous Repairs		D	Dutchman Sound	N / A	Area in square inches
Previous Repairs		DF	Dutchman Failed	N / A	Area in square inches
Previous Repairs		P	Patch Sound	N / A	Area in square inches
Previous Repairs		PF	Patch Failed	N / A	Area in square inches
Previous Repairs		PR	Patch Removed	N / A	Area in square inches
Soiled/Stained		Bio	Biological	N / A	Area in square feet
Soiled/Stained		Blck	Black Crusts	N / A	Area in square feet
Soiled/Stained		Cem	Cementitious	N / A	Area in square feet
Soiled/Stained		Cpr	Copper	N / A	Area in square feet
Soiled/Stained		Eff	Efflorescence	N / A	Area in square feet
Soiled/Stained		Gua	Guano	N / A	Area in square feet
Soiled/Stained		Lch	Leached Salts	N / A	Area in square feet
Soiled/Stained		Pnt	Paint	N / A	Area in square feet
Soiled/Stained		Rst	Rust	N / A	Area in square feet
Spalls		B	Bonded	Size in square inches	N / A
Spalls		I	Incipient	Size in square inches	N / A
Spalls		M	Missing	Size in square inches	N / A
Spalls		MS	Missing + Steel	Size in square inches	N / A
Spalls		R	Removed	Size in square inches	N / A
Spalls		RS	Removed + Steel	Size in square inches	N / A
Surface Loss		Chp	Chipped	Depth in 1/8" increments	Area in square feet
Surface Loss		Erd	Eroded	N / A	Area in square feet
Surface Loss		Fce	Face spalled	Depth in 1/8" increments	Area in square feet
Surface Loss		Fri	Friable	Depth in 1/8" increments	Area in square feet
Surface Loss		Glz	Glaze loss	Depth in 1/8" increments	Area in square feet
Unsecured		M	Missing	N / A	Area in square feet

KEY TO SURVEY CODES: METALS

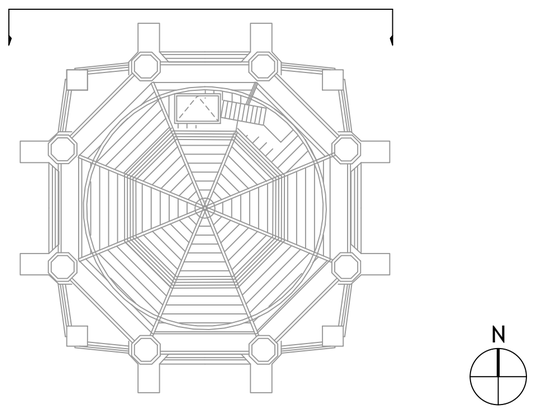
Condition	Symbol	Code	Fault Type	Severity	Amount
Coating		CtF	Coating Failed	N / A	Area in square feet
Corroded		FstRst	Fastener rusted	N / A	Count
Corroded		Pit	Pitted	N / A	Area in square feet
Corroded		Prf	Perforated	N / A	Area in square feet
Corroded		Srf	Surface	N / A	Area in square feet
Damage		Dnt	Dented	N / A	Area in square feet

Drawing List:
0 General : Keys to Codes
1 Elevations - North and Northeast
2 Elevations - West and Northwest
3 Elevations - South and Southwest
4 Elevations - East and Southeast
5 Elevations - Inboard Parapet and Bell Chamber Interior

Key Plan



Key Plan



1

Bok Tower
Exterior and Partial Interior Investigation
1151 Tower Boulevard
Lake Wales, FL

VA PROJECT NUMBER: 23-2701

ELEVATIONS

NORTH AND NORTHEAST

FROM DRAWINGS PROVIDED BY: TYLin / Silman Structural Solutions

SCALE: 1/8" = 1' when printed at 24" x 36"

SURVEYED USING tpas

SURVEY DATE: November 18-21, 2024 BY: PC, DG, TK, MC

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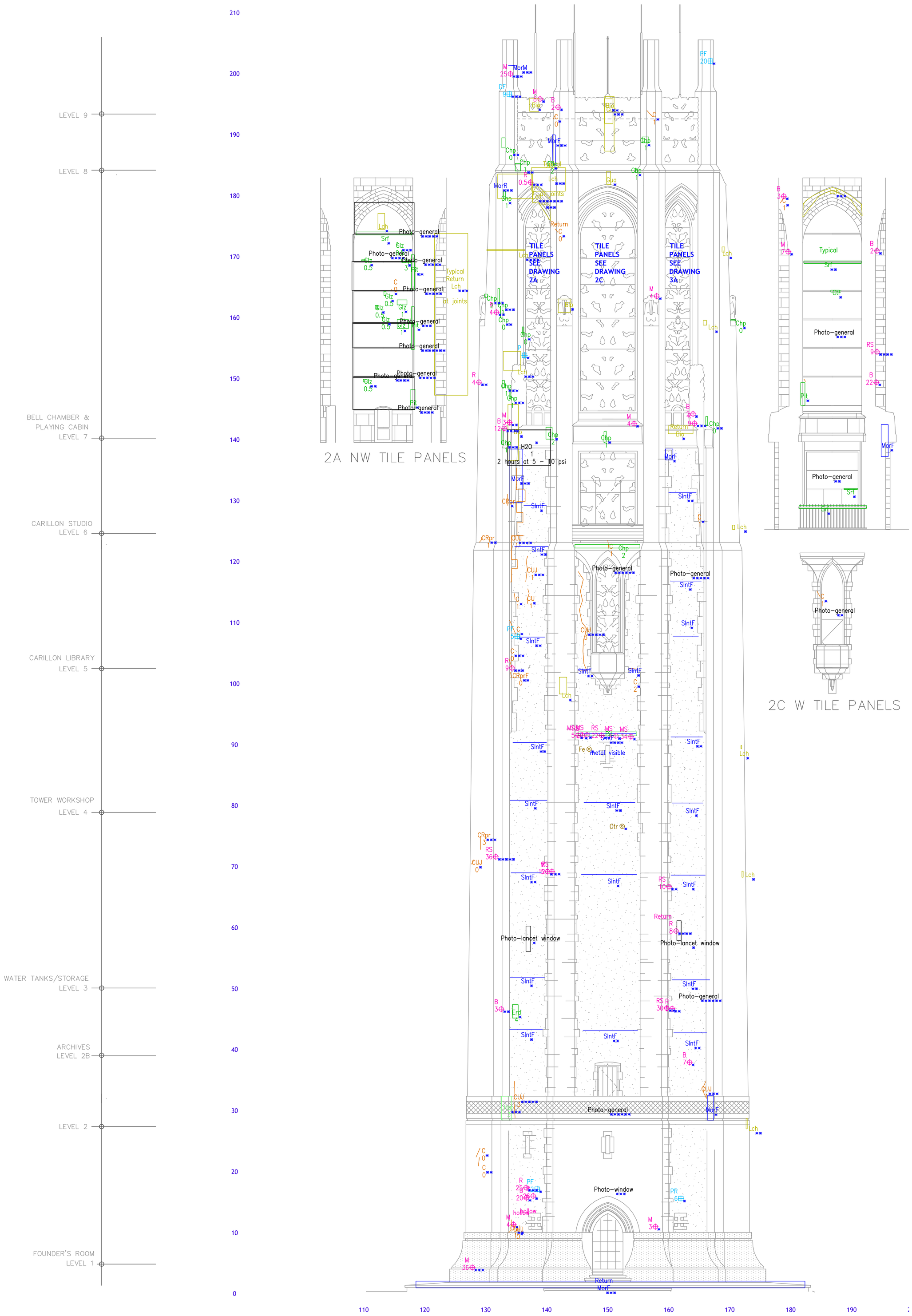
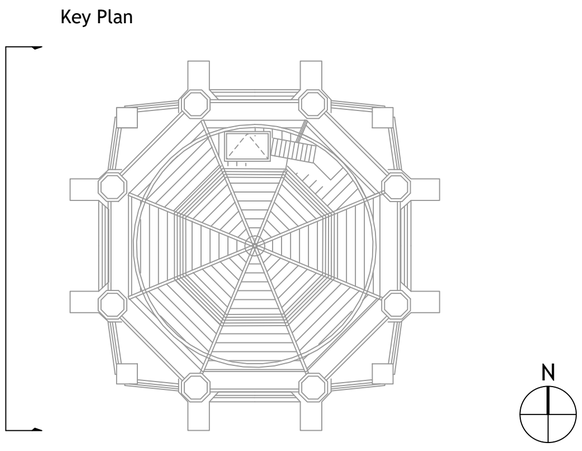
ISSUE DATE: December 6, 2024 CHECKED BY: EK



Key Plan



2

Bok Tower
Exterior and Partial Interior Investigation
1151 Tower Boulevard
Lake Wales, FL

VA PROJECT NUMBER: 23-2701

ELEVATIONS
WEST AND NORTHWEST

FROM DRAWINGS PROVIDED BY: TYLin / Silman Structural Solutions

SCALE: 1/8" = 1' when printed at 24" x 36"

SURVEYED USING tpas®
SURVEY DATE: November 18-21, 2024 BY: PC, DG, TK, MC

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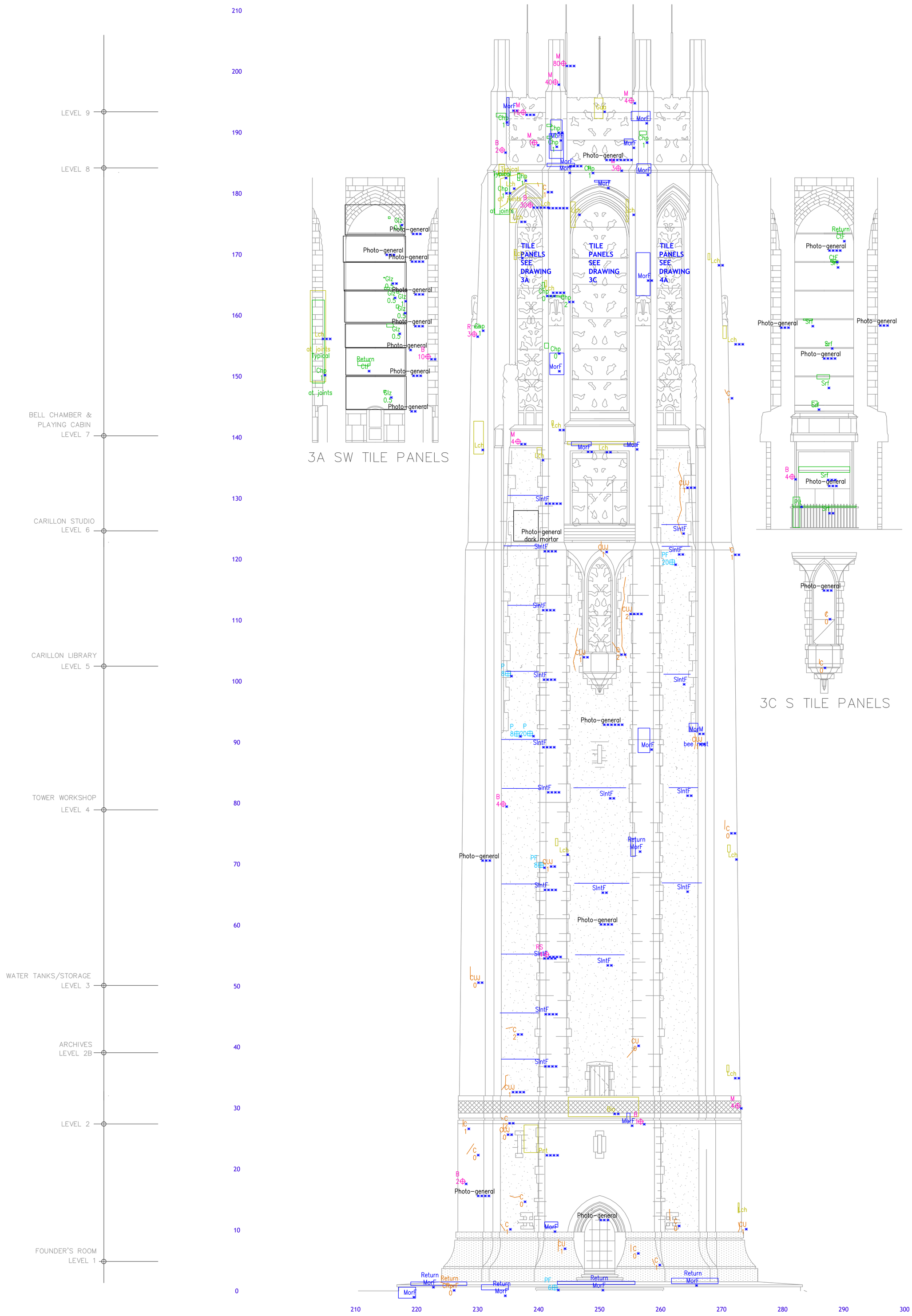
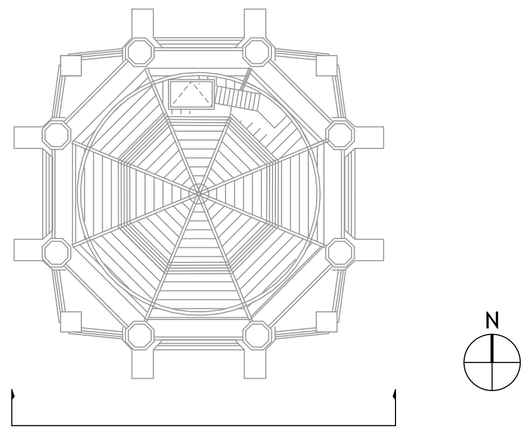
ISSUE DATE: December 6, 2024 CHECKED BY: EK

VERTICAL access



Key Plan



3

Bok Tower
Exterior and Partial Interior Investigation
1151 Tower Boulevard
Lake Wales, FL

VA PROJECT NUMBER: 23-2701

ELEVATIONS

SOUTH AND SOUTHWEST

FROM DRAWINGS PROVIDED BY: TYLin / Silman Structural Solutions

SCALE: 1/8" = 1' when printed at 24" x 36"

SURVEYED USING tpas®
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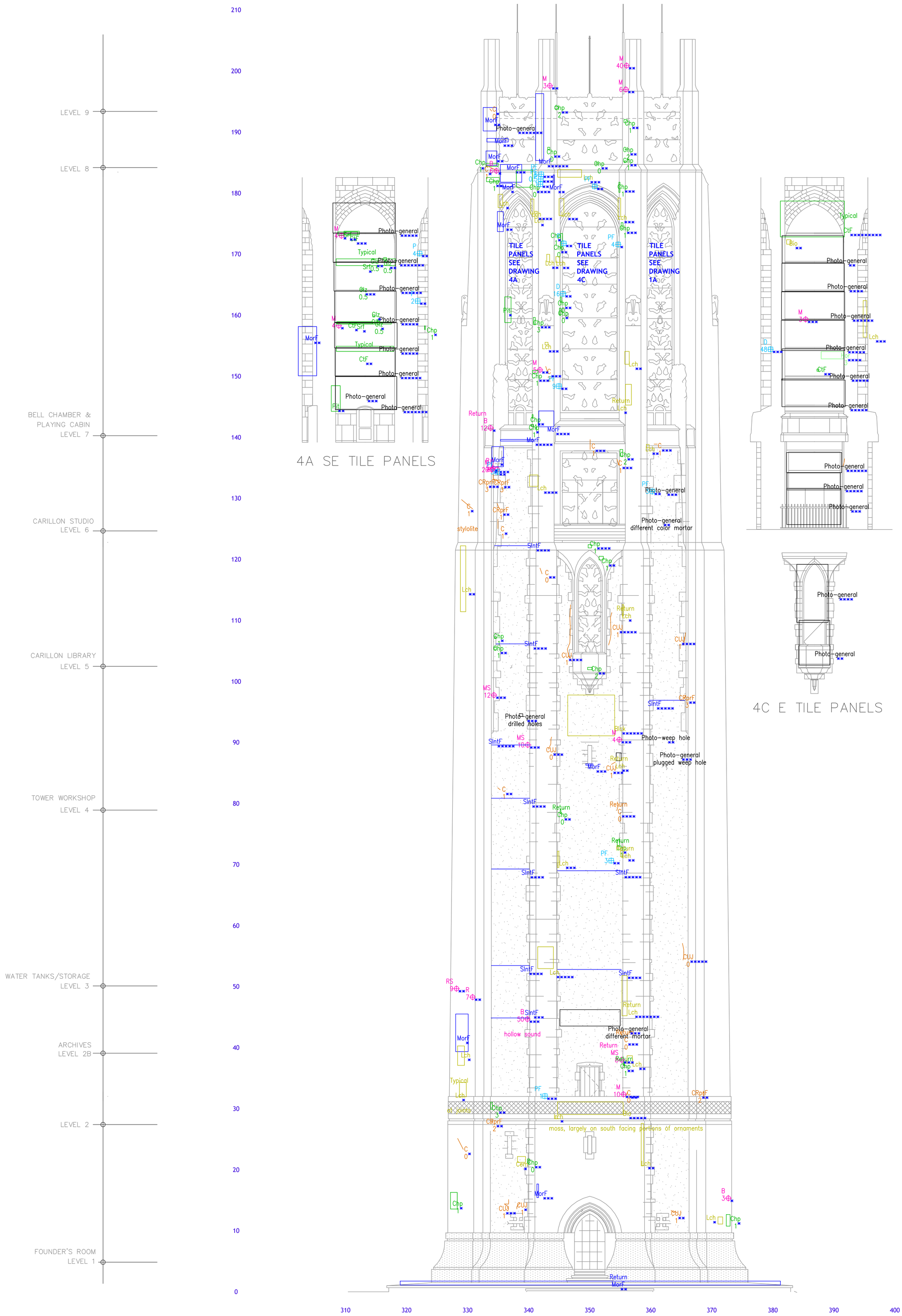
VERTICAL access

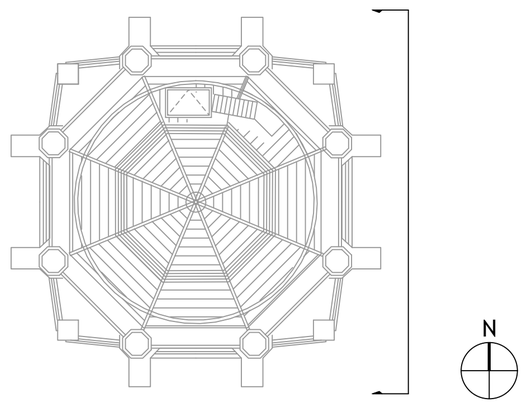


4A SE TILE PANELS

4C E TILE PANELS

4B EAST ELEVATION

Key Plan



4

Bok Tower
Exterior and Partial Interior Investigation
1151 Tower Boulevard
Lake Wales, FL

VA PROJECT NUMBER: 23-2701

ELEVATIONS
EAST AND SOUTHEAST

FROM DRAWINGS PROVIDED BY: TYLin / Silman Structural Solutions

SCALE: 1/8" = 1' when printed at 24" x 36"

SURVEYED USING tpas®
SURVEY DATE: November 18-21, 2024 BY: PC, DG, TK, MC

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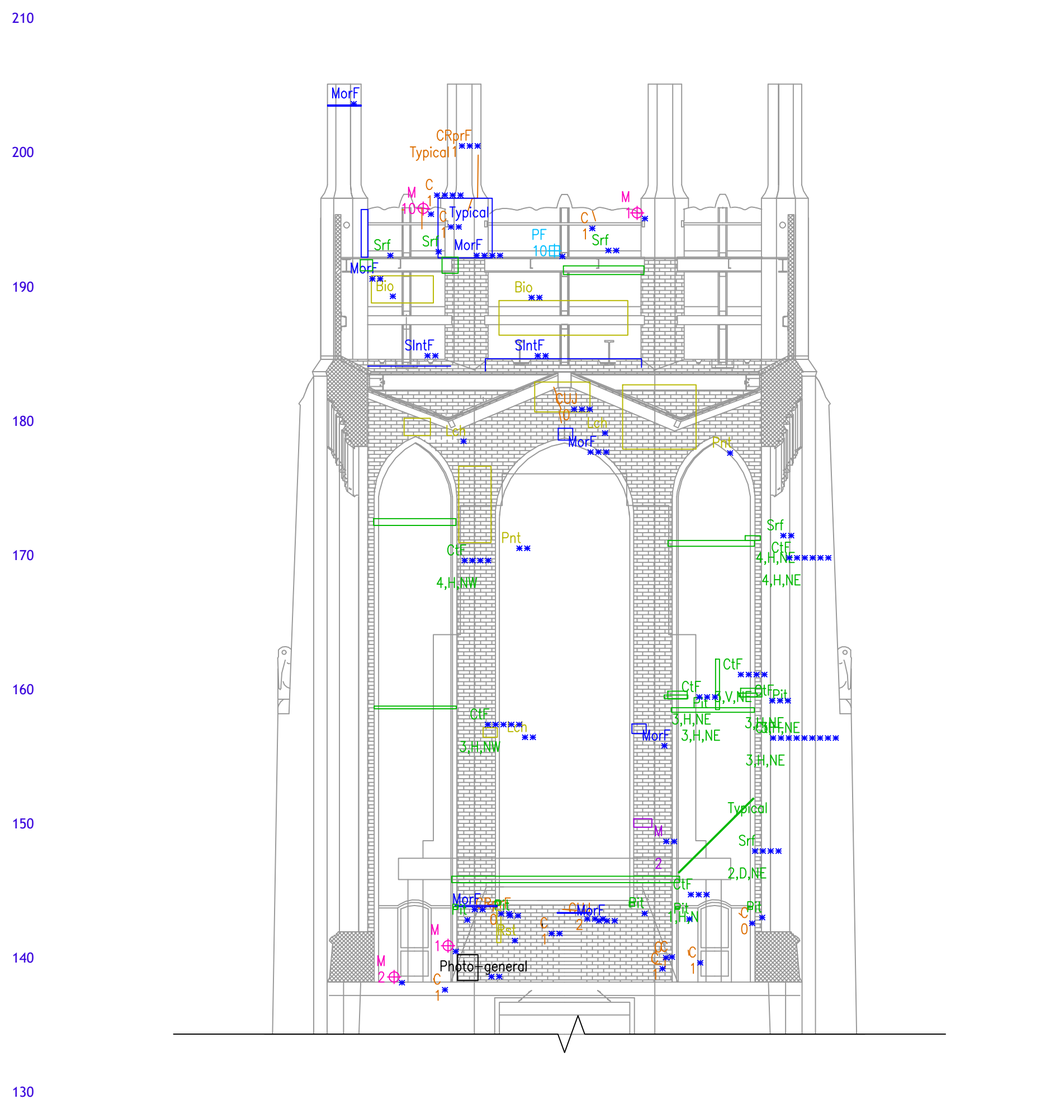
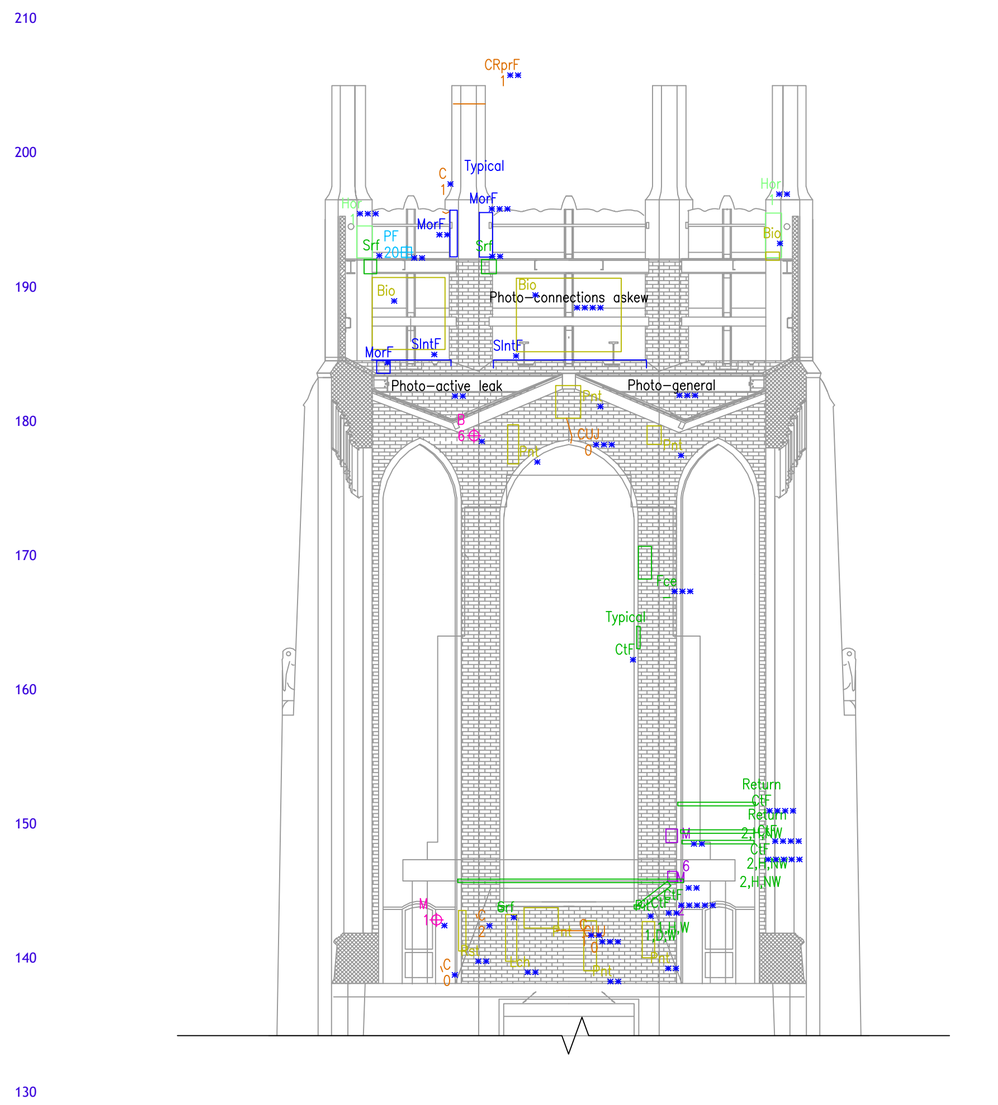
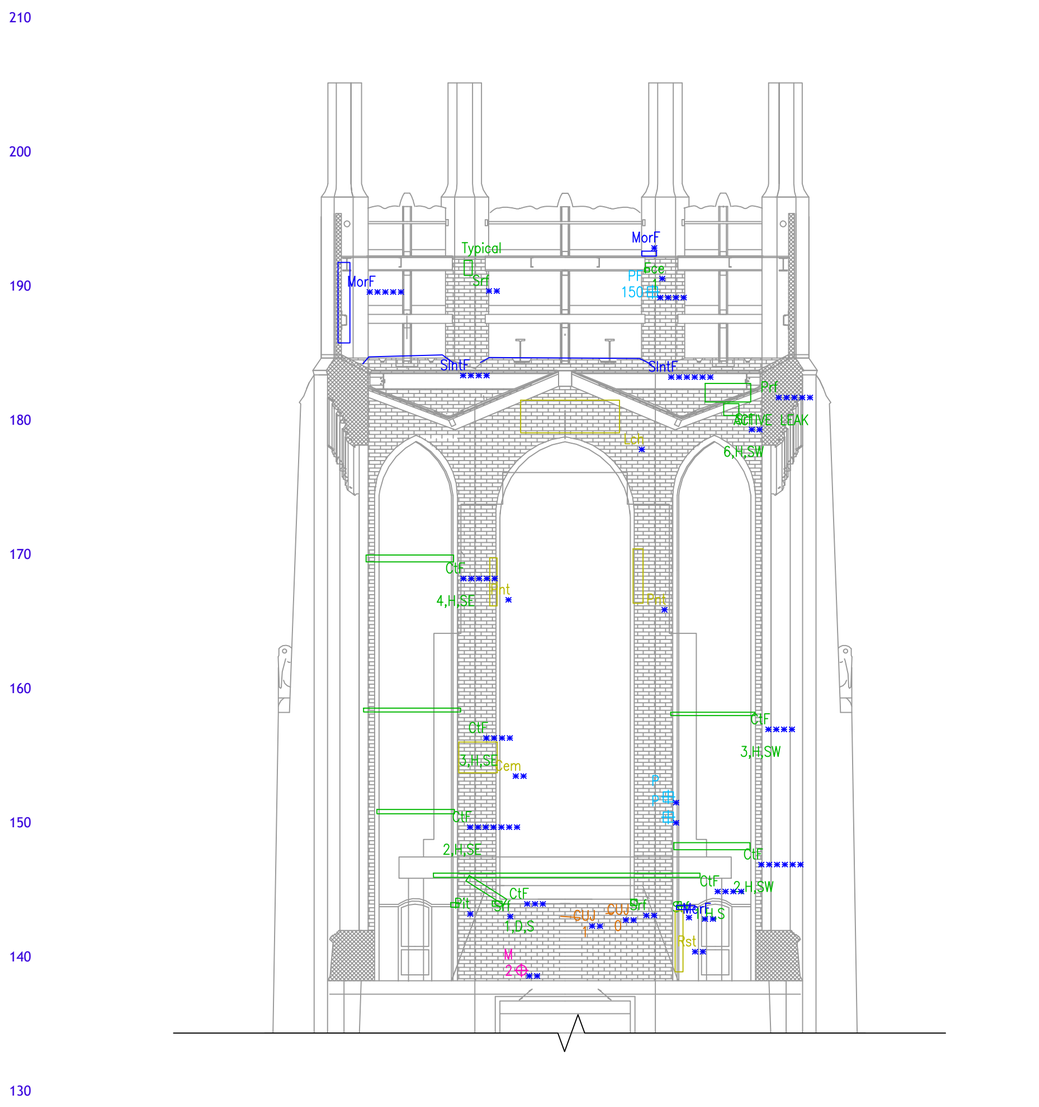
ISSUE DATE: December 6, 2024 CHECKED BY: EK



5A TOWER BELL CHAMBER NORTH INTERIOR ELEVATION



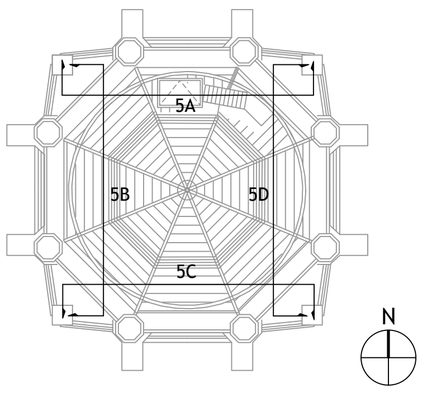
5B TOWER BELL CHAMBER WEST INTERIOR ELEVATION



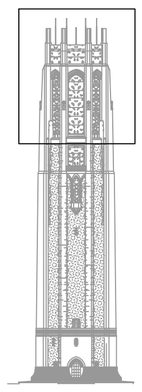
5C TOWER BELL CHAMBER SOUTH INTERIOR ELEVATION

5D TOWER BELL CHAMBER EAST INTERIOR ELEVATION

Key Plan



Key Elevation



5

Bok Tower
Exterior and Partial Interior Investigation
1151 Tower Boulevard
Lake Wales, FL

VA PROJECT NUMBER: 23-2701

PARTIAL ELEVATIONS
INBOARD PARAPET & BELL CHAMBER INTERIOR

FROM DRAWINGS PROVIDED BY: TYLin / Silman Structural Solutions

SCALE: 1/8" = 1' when printed at 24" x 36"

SURVEYED USING tpas®
SURVEY DATE: November 18-21, 2024 BY: PC, DG, TK, MC

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ISSUE DATE: December 6, 2024 CHECKED BY: EK

VERTICAL access

Spreadsheet of Survey Conditions

Block	Condition	Code	Severity Units	Amount Units
ArchMetal_Coating	Coating Failed	CtF	N / A	Area in square feet
ArchMetal_Corrosion	Pitted	Pit	N / A	Area in square feet
ArchMetal_Corrosion	Surface	Srf	N / A	Area in square feet
ArchMetal_Corrosion	Fastener rusted	FstRst	N / A	Count
ArchMetal_Corrosion	Perforated	Prf	N / A	Area in square feet
ArchMetal_Damaged	Dented	Dnt	N / A	Area in square feet
Brick_Crack	System units and joints	CUJ	Width in 1/16" increments	Length in linear feet
Brick_Crack	Single unit	C	Width in 1/16" increments	Length in linear feet
Brick_Crack	Repair failed	CRprF	Width in 1/16" increments	Length in linear feet
Brick_Joints	Mortar Failed	MorF	Percentage	Area in square feet
Brick_Joints	Sealant Failed	SlntF	Percentage	Length in linear feet
Brick_Repair	Patch Sound	P	N / A	Area in square inches
Brick_Repair	Patch Failed	PF	N / A	Area in square inches
Brick_SoilStain	Paint	Pnt	N / A	Area in square feet
Brick_SoilStain	Leached Salts	Lch	N / A	Area in square feet
Brick_SoilStain	Rust	Rst	N / A	Area in square feet
Brick_SoilStain	Biological	Bio	N / A	Area in square feet
Brick_SoilStain	Copper	Cpr	N / A	Area in square feet
Brick_SoilStain	Cementitious	Cem	N / A	Area in square feet
Brick_Spall	Missing	M	Size in square inches	N / A
Brick_Spall	Bonded	B	Size in square inches	N / A
Brick_SurfLoss	Face spalled	Fce	Depth in 1/8" increments	Area in square feet
Brick_Unsecured	Missing	M	N / A	Area in square feet
Concrete_Crack	Single unit	C	Width in 1/16" increments	Length in linear feet
SheetMetal_Corrosion	Perforated	Prf	N / A	Area in square feet
Stone_Crack	Single unit	C	Width in 1/16" increments	Length in linear feet
Stone_Crack	System units and joints	CUJ	Width in 1/16" increments	Length in linear feet
Stone_Crack	Repair failed	CRprF	Width in 1/16" increments	Length in linear feet
Stone_Crack	Repair sound	CRpr	Width in 1/16" increments	Length in linear feet
Stone_Crack	System units	CU	Width in 1/16" increments	Length in linear feet
Stone_Crack	System joints	CJ	Width in 1/16" increments	Length in linear feet
Stone_Displacement	Horizontal	Hor	1/8" increments	Number of units
Stone_Embedment	Ferrous Embedment	Fe	N / A	N / A

Block	Condition	Code	Severity Units	Amount Units
Stone_Embedment	Other Embedment	Otr	N / A	N / A
Stone_Joints	Mortar Failed	MorF	Percentage	Area in square feet
Stone_Joints	Sealant Failed	SlntF	N / A	Length in linear feet
Stone_Joints	Mortar Removed	MorR	Percentage	Length in linear feet
Stone_Joints	Mortar Missing	MorM	N / A	Length in linear feet
Stone_Repair	Patch Sound	P	N / A	Area in square inches
Stone_Repair	Patch Failed	PF	N / A	Area in square inches
Stone_Repair	Patch Removed	PR	N / A	Area in square inches
Stone_Repair	Dutchman Failed	DF	N / A	Area in square inches
Stone_Repair	Dutchman Sound	D	N / A	Area in square inches
Stone_SoilStain	Leached Salts	Lch	N / A	Area in square feet
Stone_SoilStain	Black Crusts	Blck	N / A	Area in square feet
Stone_SoilStain	Biological	Bio	N / A	Area in square feet
Stone_SoilStain	Paint	Pnt	N / A	Area in square feet
Stone_SoilStain	Cementitious	Cem	N / A	Area in square feet
Stone_SoilStain	Guano	Gua	N / A	Area in square feet
Stone_SoilStain	Efflorescence	Eff	N / A	Area in square feet
Stone_Spall	Missing	M	Size in square inches	N / A
Stone_Spall	Removed + Steel	RS	Size in square inches	N / A
Stone_Spall	Missing + Steel	MS	Size in square inches	N / A
Stone_Spall	Removed	R	Size in square inches	N / A
Stone_Spall	Bonded	B	Size in square inches	N / A
Stone_Spall	Incipient	I	Size in square inches	N / A
Stone_SurfLoss	Chipped	Chp	Depth in 1/8" increments	Area in square feet
Stone_SurfLoss	Friable	Fri	Depth in 1/8" increments	Area in square feet
Stone_SurfLoss	Eroded	Erd	N / A	Area in square feet
Stone_Unsecured	Missing	M	N / A	Area in square feet
TerraCotta_Coating	Coating Failed	CtF	N / A	Area in square feet
TerraCotta_Crack	Single unit	C	Width in 1/16" increments	Length in linear feet
TerraCotta_Crack	System units and joints	CUJ	Width in 1/16" increments	Length in linear feet
TerraCotta_Displacement	Horizontal	Hor	1/8" increments	Number of units
TerraCotta_SoilStain	Biological	Bio	N / A	Area in square feet
TerraCotta_Spall	Missing + Steel	MS	Size in square inches	N / A

Block	Condition	Code	Severity Units	Amount Units
TerraCotta_Spall	Missing	M	Size in square inches	N / A
TerraCotta_SurfLoss	Glaze loss	Glz	Depth in 1/8" increments	Area in square feet
TerraCotta_SurfLoss	Chipped	Chp	Depth in 1/8" increments	Area in square feet

Block	Condition	Code	Total Locations	Total Quantity/Amount
ArchMetal_Coating	Coating Failed	CtF	35	178.10
ArchMetal_Corrosion	Fastener rusted	FstRst	5	0.00
ArchMetal_Corrosion	Perforated	Prf	1	9.10
ArchMetal_Corrosion	Pitted	Pit	36	81.10
ArchMetal_Corrosion	Surface	Srf	33	72.20
ArchMetal_Damaged	Dented	Dnt	1	1.50
Brick_Crack	Repair failed	CRprF	1	0.30
Brick_Crack	Single unit	C	12	19.60
Brick_Crack	System units and joints	CUJ	8	14.40
Brick_Joints	Mortar Failed	MorF	7	8.80
Brick_Joints	Sealant Failed	SlntF	9	84.80
Brick_Repair	Patch Failed	PF	3	218.00
Brick_Repair	Patch Sound	P	3	40.00
Brick_SoilStain	Biological	Bio	1	29.20
Brick_SoilStain	Cementitious	Cem	1	6.60
Brick_SoilStain	Copper	Cpr	1	3.00
Brick_SoilStain	Leached Salts	Lch	9	50.40
Brick_SoilStain	Paint	Pnt	10	63.10
Brick_SoilStain	Rust	Rst	5	6.80
Brick_Spall	Bonded	B	1	6.00
Brick_Spall	Missing	M	5	12.00
Brick_SurfLoss	Face spalled	Fce	3	3.00
Brick_Unsecured	Missing	M	3	2.20
Concrete_Crack	Single unit	C	1	0.20
SheetMetal_Corrosion	Perforated	Prf	1	4.70
Stone_Crack	Repair failed	CRprF	16	33.60
Stone_Crack	Repair sound	CRpr	3	5.00
Stone_Crack	Single unit	C	61	78.80
Stone_Crack	System joints	CJ	1	3.20
Stone_Crack	System units	CU	4	8.20
Stone_Crack	System units and joints	CUJ	31	165.20
Stone_Displacement	Horizontal	Hor	4	3.00
Stone_Embedment	Ferrous Embedment	Fe	3	0.00
Stone_Embedment	Other Embedment	Otr	1	0.00

Block	Condition	Code	Total Locations	Total Quantity/Amount
Stone_Joints	Mortar Failed	MorF	69	527.50
Stone_Joints	Mortar Missing	MorM	2	6.90
Stone_Joints	Mortar Removed	MorR	1	1.30
Stone_Joints	Sealant Failed	SlntF	67	399.10
Stone_Repair	Dutchman Failed	DF	1	9.00
Stone_Repair	Dutchman Sound	D	2	64.00
Stone_Repair	Patch Failed	PF	19	155.50
Stone_Repair	Patch Removed	PR	2	9.00
Stone_Repair	Patch Sound	P	11	55.00
Stone_SoilStain	Biological	Bio	22	243.70
Stone_SoilStain	Black Crusts	Blck	1	51.40
Stone_SoilStain	Cementitious	Cem	1	1.30
Stone_SoilStain	Efflorescence	Eff	3	22.20
Stone_SoilStain	Guano	Gua	3	19.90
Stone_SoilStain	Leached Salts	Lch	85	451.90
Stone_SoilStain	Paint	Pnt	1	10.30
Stone_Spall	Bonded	B	35	358.00
Stone_Spall	Incipient	I	3	19.00
Stone_Spall	Missing	M	35	413.00
Stone_Spall	Missing + Steel	MS	7	80.00
Stone_Spall	Removed	R	14	108.50
Stone_Spall	Removed + Steel	RS	10	258.00
Stone_SurfLoss	Chipped	Chp	90	98.10
Stone_SurfLoss	Eroded	Erd	1	2.10
Stone_SurfLoss	Friable	Fri	1	0.70
Stone_Unsecured	Missing	M	1	3.80
TerraCotta_Coating	Coating Failed	CtF	1	0.10
TerraCotta_Crack	Single unit	C	14	11.10
TerraCotta_Crack	System units and joints	CUJ	1	0.30
TerraCotta_Displacement	Horizontal	Hor	1	0.00
TerraCotta_SoilStain	Biological	Bio	1	0.50
TerraCotta_Spall	Missing	M	8	28.00
TerraCotta_Spall	Missing + Steel	MS	1	12.00

Block	Condition	Code	Total Locations	Total Quantity/Amount
TerraCotta_SurfLoss	Chipped	Chp	1	0.00
TerraCotta_SurfLoss	Glaze loss	Glz	20	7.00

Block	Condition	X	Y	Code	Amount	Severity	Priority	Photo	Note
ArchMetal_Coating	Coating Failed	87.0	167.0	CtF	3.33	NaN	Pr2	Yes	
ArchMetal_Coating	Coating Failed	188.0	163.0	CtF	0.44	NaN	Pr2	Yes	
ArchMetal_Coating	Coating Failed	212.0	151.0	CtF	1.47	NaN	Pr2	Yes	
ArchMetal_Coating	Coating Failed	288.0	169.0	CtF	0.32	NaN	Pr2	Yes	
ArchMetal_Coating	Coating Failed	290.0	173.0	CtF	0.40	NaN	Pr2	Yes	
ArchMetal_Coating	Coating Failed	311.0	158.0	CtF	1.93	NaN	Pr2	Yes	
ArchMetal_Coating	Coating Failed	311.0	172.0	CtF	1.47	NaN	Pr2	Yes	
ArchMetal_Coating	Coating Failed	313.0	152.0	CtF	7.92	NaN	Pr2	Yes	
ArchMetal_Coating	Coating Failed	392.0	174.0	CtF	61.62	NaN	Pr2	Yes	
ArchMetal_Coating	Coating Failed	538.0	170.0	CtF	3.13	NaN	Pr2	Yes	4,H,NW
ArchMetal_Coating	Coating Failed	540.0	158.0	CtF	1.25	NaN	Pr2	Yes	3,H,NW
ArchMetal_Coating	Coating Failed	555.0	160.0	CtF	0.48	NaN	Pr2	Yes	3,H,NE
ArchMetal_Coating	Coating Failed	555.0	145.0	CtF	8.03	NaN	Pr2	Yes	1,H,N
ArchMetal_Coating	Coating Failed	559.0	162.0	CtF	1.09	NaN	Pr2	Yes	3,V,NE
ArchMetal_Coating	Coating Failed	561.0	157.0	CtF	2.10	NaN	Pr2	Yes	3,H,NE
ArchMetal_Coating	Coating Failed	561.0	160.0	CtF	0.37	NaN	Pr2	Yes	3,H,NE
ArchMetal_Coating	Coating Failed	562.0	170.0	CtF	2.81	NaN	Pr2	Yes	4,H,NE
ArchMetal_Coating	Coating Failed	653.0	163.0	CtF	0.43	NaN	Pr2	Yes	
ArchMetal_Coating	Coating Failed	656.0	144.0	CtF	1.15	NaN	Pr2	Yes	1,D,W
ArchMetal_Coating	Coating Failed	657.0	144.0	CtF	4.42	NaN	Pr2	Yes	1,H,W
ArchMetal_Coating	Coating Failed	663.0	148.0	CtF	1.41	NaN	Pr2	Yes	2,H,NW

Block	Condition	X	Y	Code	Amount	Severity	Priority	Photo	Note
ArchMetal_Coating	Coating Failed	664.0	151.0	CtF	1.52	NaN	Pr2	Yes	2,H,NW
ArchMetal_Coating	Coating Failed	664.0	149.0	CtF	1.45	NaN	Pr2	Yes	2,H,NW
ArchMetal_Coating	Coating Failed	741.0	169.0	CtF	3.38	NaN	Pr2	Yes	4,H,SE
ArchMetal_Coating	Coating Failed	742.0	150.0	CtF	1.82	NaN	Pr2	Yes	2,H,SE
ArchMetal_Coating	Coating Failed	743.0	157.0	CtF	2.06	NaN	Pr2	Yes	3,H,SE
ArchMetal_Coating	Coating Failed	746.0	144.0	CtF	1.56	NaN	Pr2	Yes	1,D,S
ArchMetal_Coating	Coating Failed	760.0	145.0	CtF	6.25	NaN	Pr2	Yes	1,H,S
ArchMetal_Coating	Coating Failed	763.0	147.0	CtF	2.98	NaN	Pr2	Yes	2,H,SW
ArchMetal_Coating	Coating Failed	764.0	157.0	CtF	1.53	NaN	Pr2	Yes	3,H,SW
ArchMetal_Coating	Coating Failed	841.0	150.0	CtF	0.65	NaN	Pr2	Yes	2,D,NE
ArchMetal_Coating	Coating Failed	846.0	142.0	CtF	0.49	NaN	Pr2	Yes	1,H,E
ArchMetal_Coating	Coating Failed	852.0	160.0	CtF	31.10	NaN	Pr2	Yes	2,V,E
ArchMetal_Coating	Coating Failed	861.0	145.0	CtF	9.31	NaN	Pr2	Yes	1,H,E
ArchMetal_Coating	Coating Failed	861.0	137.0	CtF	8.41	NaN	Pr2	Yes	1,D,E
ArchMetal_Corrosion	Fastener rusted	15.0	158.0	FstRst	NaN	NaN	Pr2	Yes	
ArchMetal_Corrosion	Fastener rusted	15.0	173.0	FstRst	NaN	NaN	Pr2	Yes	
ArchMetal_Corrosion	Fastener rusted	17.0	163.0	FstRst	NaN	NaN	Pr2	Yes	
ArchMetal_Corrosion	Fastener rusted	85.0	155.0	FstRst	NaN	NaN	Pr2	Yes	
ArchMetal_Corrosion	Fastener rusted	844.0	147.0	FstRst	NaN	NaN	Pr2	Yes	2,H,NE
ArchMetal_Corrosion	Perforated	848.0	180.0	Prf	9.09	NaN	Pr2	Yes	6,H,E
ArchMetal_Corrosion	Pitted	12.0	168.0	Pit	0.12	NaN	Pr2	Yes	
ArchMetal_Corrosion	Pitted	12.0	163.0	Pit	0.65	NaN	Pr2	Yes	
ArchMetal_Corrosion	Pitted	13.0	173.0	Pit	0.99	NaN	Pr2	Yes	

Block	Condition	X	Y	Code	Amount	Severity	Priority	Photo	Note
ArchMetal_Corrosion	Pitted	14.0	158.0	Pit	1.25	NaN	Pr2	Yes	
ArchMetal_Corrosion	Pitted	15.0	163.0	Pit	1.57	NaN	Pr2	Yes	
ArchMetal_Corrosion	Pitted	15.0	167.0	Pit	1.80	NaN	Pr2	Yes	
ArchMetal_Corrosion	Pitted	15.0	172.0	Pit	1.35	NaN	Pr2	Yes	
ArchMetal_Corrosion	Pitted	16.0	158.0	Pit	2.12	NaN	Pr2	Yes	
ArchMetal_Corrosion	Pitted	16.0	149.0	Pit	0.59	NaN	Pr2	Yes	
ArchMetal_Corrosion	Pitted	18.0	145.0	Pit	1.02	NaN	Pr2	Yes	
ArchMetal_Corrosion	Pitted	18.0	169.0	Pit	3.08	NaN	Pr2	Yes	
ArchMetal_Corrosion	Pitted	19.0	159.0	Pit	1.93	NaN	Pr2	Yes	
ArchMetal_Corrosion	Pitted	82.0	162.0	Pit	16.27	NaN	Pr2	Yes	
ArchMetal_Corrosion	Pitted	83.0	173.0	Pit	0.37	NaN	Pr2	Yes	
ArchMetal_Corrosion	Pitted	90.0	173.0	Pit	0.46	NaN	Pr2	Yes	
ArchMetal_Corrosion	Pitted	92.0	166.0	Pit	8.38	NaN	Pr2	Yes	
ArchMetal_Corrosion	Pitted	118.0	167.0	Pit	2.83	NaN	Pr2	Yes	
ArchMetal_Corrosion	Pitted	118.0	158.0	Pit	3.06	NaN	Pr2	Yes	
ArchMetal_Corrosion	Pitted	118.0	145.0	Pit	2.28	NaN	Pr2	Yes	
ArchMetal_Corrosion	Pitted	150.0	91.0	Pit	6.23	NaN	Pr2	No	
ArchMetal_Corrosion	Pitted	182.0	146.0	Pit	2.56	NaN	Pr2	Yes	
ArchMetal_Corrosion	Pitted	283.0	129.0	Pit	8.04	NaN	Pr2	Yes	
ArchMetal_Corrosion	Pitted	308.0	145.0	Pit	6.20	NaN	Pr2	Yes	
ArchMetal_Corrosion	Pitted	336.0	160.0	Pit	4.37	NaN	Pr2	Yes	
ArchMetal_Corrosion	Pitted	538.0	143.0	Pit	0.06	NaN	Pr2	Yes	
ArchMetal_Corrosion	Pitted	541.0	144.0	Pit	0.11	NaN	Pr2	Yes	
ArchMetal_Corrosion	Pitted	551.0	144.0	Pit	0.13	NaN	Pr2	Yes	
ArchMetal_Corrosion	Pitted	555.0	143.0	Pit	0.06	NaN	Pr2	Yes	
ArchMetal_Corrosion	Pitted	556.0	159.0	Pit	0.84	NaN	Pr2	No	3,H,NE
ArchMetal_Corrosion	Pitted	560.0	143.0	Pit	0.07	NaN	Pr2	Yes	
ArchMetal_Corrosion	Pitted	562.0	159.0	Pit	1.03	NaN	Pr2	No	3,H,NE
ArchMetal_Corrosion	Pitted	655.0	144.0	Pit	0.13	NaN	Pr2	Yes	
ArchMetal_Corrosion	Pitted	742.0	144.0	Pit	0.20	NaN	Pr2	Yes	
ArchMetal_Corrosion	Pitted	847.0	143.0	Pit	0.33	NaN	Pr2	Yes	
ArchMetal_Corrosion	Pitted	857.0	143.0	Pit	0.28	NaN	Pr2	Yes	
ArchMetal_Corrosion	Pitted	861.0	143.0	Pit	0.33	NaN	Pr2	Yes	
ArchMetal_Corrosion	Surface	85.0	159.0	Srf	2.27	NaN	Pr2	Yes	

Block	Condition	X	Y	Code	Amount	Severity	Priority	Photo	Note
ArchMetal_Corrosion	Surface	85.0	154.0	Srf	1.32	NaN	Pr2	Yes	
ArchMetal_Corrosion	Surface	86.0	149.0	Srf	4.54	NaN	Pr2	Yes	
ArchMetal_Corrosion	Surface	87.0	127.0	Srf	3.68	NaN	Pr2	Yes	
ArchMetal_Corrosion	Surface	87.0	133.0	Srf	4.78	NaN	Pr2	Yes	
ArchMetal_Corrosion	Surface	90.0	168.0	Srf	0.87	NaN	Pr2	Yes	
ArchMetal_Corrosion	Surface	114.0	172.0	Srf	4.54	NaN	Pr2	Yes	
ArchMetal_Corrosion	Surface	186.0	128.0	Srf	5.89	NaN	Pr2	Yes	
ArchMetal_Corrosion	Surface	186.0	168.0	Srf	3.92	NaN	Pr2	Yes	
ArchMetal_Corrosion	Surface	190.0	131.0	Srf	0.39	NaN	Pr2	Yes	
ArchMetal_Corrosion	Surface	284.0	159.0	Srf	0.36	NaN	Pr2	Yes	
ArchMetal_Corrosion	Surface	285.0	145.0	Srf	0.81	NaN	Pr2	Yes	
ArchMetal_Corrosion	Surface	287.0	149.0	Srf	1.46	NaN	Pr2	Yes	
ArchMetal_Corrosion	Surface	287.0	133.0	Srf	7.80	NaN	Pr2	Yes	
ArchMetal_Corrosion	Surface	287.0	128.0	Srf	2.12	NaN	Pr2	Yes	
ArchMetal_Corrosion	Surface	288.0	155.0	Srf	0.22	NaN	Pr2	Yes	
ArchMetal_Corrosion	Surface	289.0	168.0	Srf	0.21	NaN	Pr2	Yes	
ArchMetal_Corrosion	Surface	310.0	173.0	Srf	1.72	NaN	Pr2	Yes	
ArchMetal_Corrosion	Surface	313.0	158.0	Srf	2.98	NaN	Pr2	Yes	
ArchMetal_Corrosion	Surface	313.0	168.0	Srf	10.68	NaN	Pr2	Yes	
ArchMetal_Corrosion	Surface	532.0	193.0	Srf	0.77	NaN	Pr2	Yes	
ArchMetal_Corrosion	Surface	536.0	193.0	Srf	1.44	NaN	Pr2	Yes	
ArchMetal_Corrosion	Surface	549.0	193.0	Srf	3.88	NaN	Pr2	Yes	
ArchMetal_Corrosion	Surface	560.0	148.0	Srf	0.62	NaN	Pr2	Yes	2,D,NE
ArchMetal_Corrosion	Surface	562.0	172.0	Srf	0.40	NaN	Pr2	Yes	4,H,NE
ArchMetal_Corrosion	Surface	634.0	193.0	Srf	0.99	NaN	Pr2	Yes	
ArchMetal_Corrosion	Surface	643.0	193.0	Srf	1.17	NaN	Pr2	Yes	
ArchMetal_Corrosion	Surface	645.0	144.0	Srf	0.14	NaN	Pr2	Yes	
ArchMetal_Corrosion	Surface	743.0	190.0	Srf	0.66	NaN	Pr2	Yes	
ArchMetal_Corrosion	Surface	745.0	143.0	Srf	0.27	NaN	Pr2	Yes	
ArchMetal_Corrosion	Surface	755.0	143.0	Srf	0.23	NaN	Pr2	Yes	
ArchMetal_Corrosion	Surface	758.0	143.0	Srf	0.10	NaN	Pr2	Yes	
ArchMetal_Corrosion	Surface	763.0	180.0	Srf	0.99	NaN	Pr2	Yes	6,H,SW
ArchMetal_Damaged	Dented	859.0	145.0	Dnt	1.50	NaN	Pr2	Yes	
Brick_Crack	Repair failed	541.0	144.0	CRprF	0.33	0.00	Pr2	Yes	

Block	Condition	X	Y	Code	Amount	Severity	Priority	Photo	Note
Brick_Crack	Single unit	537.0	138.0	C	0.26	1.00	Pr2	Yes	
Brick_Crack	Single unit	544.0	142.0	C	16.36	1.00	Pr2	Yes	
Brick_Crack	Single unit	553.0	140.0	C	0.23	1.00	Pr2	Yes	
Brick_Crack	Single unit	553.0	140.0	C	0.28	1.00	Pr2	Yes	
Brick_Crack	Single unit	553.0	140.0	C	0.27	1.00	Pr2	Yes	
Brick_Crack	Single unit	556.0	140.0	C	0.38	1.00	Pr2	Yes	
Brick_Crack	Single unit	559.0	143.0	C	0.25	0.00	Pr2	Yes	
Brick_Crack	Single unit	640.0	139.0	C	0.42	0.00	Pr2	Yes	
Brick_Crack	Single unit	643.0	143.0	C	0.30	2.00	Pr2	Yes	
Brick_Crack	Single unit	650.0	142.0	C	0.36	1.00	Pr2	Yes	
Brick_Crack	Single unit	857.0	139.0	C	0.23	1.00	Pr2	Yes	
Brick_Crack	Single unit	866.0	143.0	C	0.28	1.00	Pr2	Yes	
Brick_Crack	System units and joints	546.0	181.0	CUJ	2.79	0.00	Pr2	Yes	
Brick_Crack	System units and joints	547.0	143.0	CUJ	1.07	2.00	Pr2	Yes	
Brick_Crack	System units and joints	651.0	179.0	CUJ	1.93	0.00	Pr2	Yes	
Brick_Crack	System units and joints	651.0	142.0	CUJ	2.52	0.00	Pr2	Yes	
Brick_Crack	System units and joints	751.0	143.0	CUJ	1.46	1.00	Pr2	Yes	
Brick_Crack	System units and joints	753.0	143.0	CUJ	0.57	0.00	Pr2	Yes	
Brick_Crack	System units and joints	847.0	152.0	CUJ	1.12	1.00	Pr2	Yes	
Brick_Crack	System units and joints	854.0	143.0	CUJ	2.90	1.00	Pr2	Yes	
Brick_Joints	Mortar Failed	539.0	144.0	MorF	0.31	NaN	Pr2	Yes	
Brick_Joints	Mortar Failed	547.0	178.0	MorF	0.95	NaN	Pr2	Yes	
Brick_Joints	Mortar Failed	548.0	143.0	MorF	0.13	NaN	Pr2	Yes	
Brick_Joints	Mortar Failed	553.0	156.0	MorF	0.75	NaN	Pr2	Yes	
Brick_Joints	Mortar Failed	635.0	185.0	MorF	0.94	75.00	Pr2	Yes	
Brick_Joints	Mortar Failed	734.0	190.0	MorF	5.34	NaN	Pr2	Yes	

Block	Condition	X	Y	Code	Amount	Severity	Priority	Photo	Note
Brick_Joints	Mortar Failed	759.0	143.0	MorF	0.42	NaN	Pr2	Yes	
Brick_Joints	Sealant Failed	535.0	185.0	SlntF	6.19	NaN	Pr2	Yes	
Brick_Joints	Sealant Failed	543.0	185.0	SlntF	13.20	NaN	Pr2	Yes	
Brick_Joints	Sealant Failed	639.0	185.0	SlntF	6.37	NaN	Pr2	Yes	
Brick_Joints	Sealant Failed	645.0	185.0	SlntF	12.63	NaN	Pr2	Yes	
Brick_Joints	Sealant Failed	741.0	184.0	SlntF	7.18	NaN	Pr2	Yes	
Brick_Joints	Sealant Failed	757.0	184.0	SlntF	12.95	NaN	Pr2	Yes	
Brick_Joints	Sealant Failed	844.0	184.0	SlntF	8.45	NaN	Pr2	Yes	
Brick_Joints	Sealant Failed	860.0	184.0	SlntF	13.60	NaN	Pr2	Yes	
Brick_Joints	Sealant Failed	866.0	141.0	SlntF	4.19	NaN	Pr2	Yes	
Brick_Repair	Patch Failed	756.0	190.0	PF	150.00	NaN	Pr2	Yes	
Brick_Repair	Patch Failed	856.0	143.0	PF	8.00	NaN	Pr2	Yes	
Brick_Repair	Patch Failed	858.0	151.0	PF	60.00	NaN	Pr2	Yes	
Brick_Repair	Patch Sound	757.0	152.0	P	NaN	NaN		Yes	
Brick_Repair	Patch Sound	757.0	150.0	P	NaN	NaN		Yes	
Brick_Repair	Patch Sound	847.0	172.0	P	40.00	NaN		Yes	
Brick_SoilStain	Biological	636.0	189.0	Bio	29.16	NaN	Pr3	Yes	
Brick_SoilStain	Cementitious	745.0	154.0	Cem	6.59	NaN	Pr3	Yes	
Brick_SoilStain	Copper	867.0	140.0	Cpr	3.02	NaN	Pr3	Yes	
Brick_SoilStain	Leached Salts	538.0	179.0	Lch	2.51	NaN	Pr3	Yes	
Brick_SoilStain	Leached Salts	542.0	157.0	Lch	0.75	NaN	Pr3	Yes	
Brick_SoilStain	Leached Salts	548.0	180.0	Lch	9.19	NaN	Pr3	Yes	
Brick_SoilStain	Leached Salts	646.0	139.0	Lch	2.89	NaN	Pr3	Yes	
Brick_SoilStain	Leached Salts	755.0	178.0	Lch	17.91	NaN	Pr3	Yes	

Block	Condition	X	Y	Code	Amount	Severity	Priority	Photo	Note
Brick_SoilStain	Leached Salts	847.0	178.0	Lch	2.26	NaN	Pr3	Yes	
Brick_SoilStain	Leached Salts	849.0	142.0	Lch	3.33	NaN	Pr3	Yes	
Brick_SoilStain	Leached Salts	854.0	180.0	Lch	3.33	NaN	Pr3	Yes	
Brick_SoilStain	Leached Salts	860.0	177.0	Lch	8.20	NaN	Pr3	Yes	
Brick_SoilStain	Paint	542.0	171.0	Pnt	13.70	NaN	Pr3	Yes	
Brick_SoilStain	Paint	558.0	178.0	Pnt	26.24	NaN	Pr3	Yes	
Brick_SoilStain	Paint	646.0	177.0	Pnt	2.37	NaN	Pr3	Yes	
Brick_SoilStain	Paint	649.0	142.0	Pnt	3.88	NaN	Pr3	No	
Brick_SoilStain	Paint	651.0	182.0	Pnt	4.54	NaN	Pr3	Yes	
Brick_SoilStain	Paint	652.0	139.0	Pnt	3.53	NaN	Pr3	Yes	
Brick_SoilStain	Paint	656.0	140.0	Pnt	2.47	NaN	Pr3	Yes	
Brick_SoilStain	Paint	657.0	178.0	Pnt	1.46	NaN	Pr3	Yes	
Brick_SoilStain	Paint	745.0	167.0	Pnt	1.94	NaN	Pr3	Yes	
Brick_SoilStain	Paint	756.0	166.0	Pnt	3.01	NaN	Pr3	Yes	
Brick_SoilStain	Rust	542.0	142.0	Rst	0.74	NaN	Pr3	Yes	
Brick_SoilStain	Rust	642.0	140.0	Rst	1.65	NaN	Pr3	Yes	
Brick_SoilStain	Rust	759.0	141.0	Rst	2.66	NaN	Pr3	Yes	
Brick_SoilStain	Rust	851.0	184.0	Rst	0.47	NaN	Pr3	Yes	
Brick_SoilStain	Rust	857.0	140.0	Rst	1.29	NaN	Pr3	Yes	
Brick_Spall	Bonded	642.0	179.0	B	NaN	6.00	Pr2	Yes	
Brick_Spall	Missing	533.0	139.0	M	NaN	2.00	Pr2	Yes	
Brick_Spall	Missing	537.0	141.0	M	NaN	1.00	Pr2	Yes	
Brick_Spall	Missing	639.0	143.0	M	NaN	1.00	Pr2	Yes	
Brick_Spall	Missing	746.0	139.0	M	NaN	2.00	Pr2	Yes	
Brick_Spall	Missing	836.0	184.0	M	NaN	6.00	Pr2	Yes	
Brick_SurfLoss	Face spalled	656.0	168.0	Fce	2.38	1.00	Pr2	Yes	
Brick_SurfLoss	Face spalled	756.0	191.0	Fce	0.11	1.00	Pr2	Yes	
Brick_SurfLoss	Face spalled	847.0	190.0	Fce	0.54	1.00	Pr2	Yes	
Brick_Unsecured	Missing	553.0	149.0	M	0.85	NaN	Pr2	Yes	2
Brick_Unsecured	Missing	658.0	146.0	M	0.50	NaN	Pr2	Yes	2
Brick_Unsecured	Missing	658.0	149.0	M	0.86	NaN	Pr2	Yes	6
Concrete_Crack	Single unit	536.0	197.0	C	0.22	1.00	Pr2	Yes	

Block	Condition	X	Y	Code	Amount	Severity	Priority	Photo	Note
SheetMetal_Corrosion	Perforated	765.0	182.0	Prf	4.68	NaN	Pr2	Yes	ACTIVE LEAK
Stone_Crack	Repair failed	35.0	124.0	CRprF	3.44	1.00	Pr2	Yes	
Stone_Crack	Repair failed	35.0	122.0	CRprF	4.53	0.00	Pr2	Yes	
Stone_Crack	Repair failed	45.0	0.0	CRprF	0.82	0.00	Pr2	Yes	
Stone_Crack	Repair failed	49.0	30.0	CRprF	2.97	0.00	Pr2	Yes	
Stone_Crack	Repair failed	67.0	101.0	CRprF	0.29	2.00	Pr2	Yes	
Stone_Crack	Repair failed	67.0	108.0	CRprF	2.86	2.00	Pr2	Yes	
Stone_Crack	Repair failed	136.0	101.0	CRprF	0.88	0.00	Pr2	Yes	
Stone_Crack	Repair failed	226.0	1.0	CRprF	2.36	0.00	Pr2	Yes	
Stone_Crack	Repair failed	333.0	132.0	CRprF	1.74	3.00	Pr2	Yes	
Stone_Crack	Repair failed	334.0	28.0	CRprF	0.78	2.00	Pr2	Yes	
Stone_Crack	Repair failed	335.0	128.0	CRprF	0.94	1.00	Pr2	Yes	
Stone_Crack	Repair failed	336.0	132.0	CRprF	0.71	3.00	Pr2	Yes	
Stone_Crack	Repair failed	366.0	97.0	CRprF	2.82	3.00	Pr2	Yes	
Stone_Crack	Repair failed	368.0	32.0	CRprF	1.46	2.00	Pr2	Yes	
Stone_Crack	Repair failed	538.0	201.0	CRprF	4.64	1.00	Pr2	Yes	
Stone_Crack	Repair failed	644.0	206.0	CRprF	2.38	1.00	Pr2	Yes	
Stone_Crack	Repair sound	130.0	123.0	CRpr	0.97	1.00	Pr2	Yes	
Stone_Crack	Repair sound	130.0	74.0	CRpr	2.14	3.00	Pr2	Yes	
Stone_Crack	Repair sound	134.0	129.0	CRpr	1.84	NaN	Pr2	Yes	
Stone_Crack	Single unit	28.0	103.0	C	1.02	1.00	Pr2	Yes	
Stone_Crack	Single unit	30.0	44.0	C	1.53	0.00	Pr2	Yes	
Stone_Crack	Single unit	37.0	15.0	C	1.07	0.00	Pr2	Yes	
Stone_Crack	Single unit	41.0	83.0	C	1.06	0.00	Pr2	Yes	
Stone_Crack	Single unit	41.0	169.0	C	0.78	1.00	Pr2	Yes	
Stone_Crack	Single unit	48.0	14.0	C	2.64	0.00	Pr2	Yes	
Stone_Crack	Single unit	48.0	108.0	C	1.11	2.00	Pr2	Yes	
Stone_Crack	Single unit	48.0	101.0	C	1.51	0.00	Pr2	Yes	
Stone_Crack	Single unit	48.0	105.0	C	1.77	2.00	Pr2	Yes	
Stone_Crack	Single unit	54.0	138.0	C	1.29	0.00	Pr2	Yes	
Stone_Crack	Single unit	57.0	161.0	C	1.04	0.00	Pr2	Yes	
Stone_Crack	Single unit	59.0	128.0	C	0.39	0.00	Pr2	Yes	
Stone_Crack	Single unit	60.0	70.0	C	1.07	3.00	Pr2	Yes	

Block	Condition	X	Y	Code	Amount	Severity	Priority	Photo	Note
Stone_Crack	Single unit	66.0	77.0	C	1.93	0.00	Pr2	Yes	
Stone_Crack	Single unit	72.0	46.0	C	2.42	0.00	Pr2	Yes	
Stone_Crack	Single unit	130.0	23.0	C	1.61	0.00	Pr2	Yes	
Stone_Crack	Single unit	130.0	20.0	C	1.61	0.00	Pr2	Yes	
Stone_Crack	Single unit	134.0	105.0	C	1.21	0.00	Pr2	Yes	
Stone_Crack	Single unit	135.0	113.0	C	1.00	1.00	Pr2	Yes	
Stone_Crack	Single unit	135.0	108.0	C	2.38	0.00	Pr2	Yes	
Stone_Crack	Single unit	142.0	192.0	C	0.81	0.00	Pr2	Yes	
Stone_Crack	Single unit	142.0	173.0	C	0.76	0.00	Pr2	Yes	
Stone_Crack	Single unit	151.0	122.0	C	1.53	1.00	Pr2	No	
Stone_Crack	Single unit	155.0	100.0	C	1.36	2.00	Pr2	Yes	
Stone_Crack	Single unit	158.0	193.0	C	1.44	1.00	Pr2	Yes	
Stone_Crack	Single unit	165.0	127.0	C	1.17	1.00	Pr2	Yes	
Stone_Crack	Single unit	179.0	178.0	C	1.23	1.00	Pr2	Yes	
Stone_Crack	Single unit	185.0	114.0	C	1.14	1.00	Pr2	Yes	
Stone_Crack	Single unit	228.0	27.0	C	1.15	1.00	Pr2	Yes	
Stone_Crack	Single unit	230.0	23.0	C	2.06	0.00	Pr2	Yes	
Stone_Crack	Single unit	235.0	11.0	C	1.39	1.00	Pr2	Yes	
Stone_Crack	Single unit	235.0	28.0	C	0.45	2.00	Pr2	Yes	
Stone_Crack	Single unit	236.0	42.0	C	1.15	2.00	Pr2	Yes	
Stone_Crack	Single unit	237.0	15.0	C	1.73	0.00	Pr2	Yes	
Stone_Crack	Single unit	241.0	181.0	C	0.65	1.00	Pr2	Yes	
Stone_Crack	Single unit	253.0	105.0	C	2.02	2.00	Pr2	Yes	
Stone_Crack	Single unit	256.0	7.0	C	1.16	0.00	Pr2	Yes	
Stone_Crack	Single unit	259.0	5.0	C	1.06	1.00	Pr2	Yes	
Stone_Crack	Single unit	262.0	11.0	C	1.92	0.00	Pr2	Yes	
Stone_Crack	Single unit	271.0	147.0	C	0.72	1.00	Pr2	Yes	
Stone_Crack	Single unit	271.0	75.0	C	1.48	0.00	Pr2	Yes	
Stone_Crack	Single unit	272.0	121.0	C	0.36	1.00	Pr2	Yes	
Stone_Crack	Single unit	286.0	103.0	C	0.78	0.00	Pr2	Yes	
Stone_Crack	Single unit	330.0	23.0	C	2.02	0.00	Pr2	Yes	
Stone_Crack	Single unit	330.0	128.0	C	2.36	1.00	Pr2	Yes	stylolite
Stone_Crack	Single unit	333.0	184.0	C	1.85	1.00	Pr2	Yes	
Stone_Crack	Single unit	334.0	193.0	C	0.50	0.00	Pr2	Yes	

Block	Condition	X	Y	Code	Amount	Severity	Priority	Photo	Note
Stone_Crack	Single unit	336.0	82.0	C	0.51	1.00	Pr2	Yes	
Stone_Crack	Single unit	336.0	125.0	C	1.51	1.00	Pr2	Yes	
Stone_Crack	Single unit	343.0	117.0	C	1.00	0.00	Pr2	Yes	
Stone_Crack	Single unit	343.0	150.0	C	0.98	2.00	Pr2	Yes	
Stone_Crack	Single unit	351.0	138.0	C	1.64	1.00	Pr2	Yes	
Stone_Crack	Single unit	355.0	78.0	C	1.13	0.00	Pr2	Yes	
Stone_Crack	Single unit	355.0	135.0	C	1.83	1.00	Pr2	Yes	
Stone_Crack	Single unit	356.0	41.0	C	0.74	0.00	Pr2	Yes	
Stone_Crack	Single unit	356.0	32.0	C	0.75	0.00	Pr2	Yes	
Stone_Crack	Single unit	361.0	138.0	C	0.55	1.00	Pr2	Yes	
Stone_Crack	Single unit	537.0	195.0	C	1.55	1.00	Pr2	Yes	
Stone_Crack	Single unit	548.0	195.0	C	0.77	1.00	Pr2	Yes	
Stone_Crack	Single unit	640.0	198.0	C	0.55	1.00	Pr2	Yes	
Stone_Crack	Single unit	844.0	205.0	C	2.56	1.00	Pr2	Yes	base of neck
Stone_Crack	System joints	862.0	194.0	CJ	3.16	1.00	Pr2	Yes	
Stone_Crack	System units	137.0	113.0	CU	2.54	1.00	Pr2	Yes	
Stone_Crack	System units	244.0	7.0	CU	1.99	1.00	Pr2	Yes	
Stone_Crack	System units	256.0	41.0	CU	2.10	0.00	Pr2	Yes	
Stone_Crack	System units	273.0	11.0	CU	1.61	1.00	Pr2	Yes	
Stone_Crack	System units and joints	47.0	110.0	CUJ	12.51	3.00	Pr2	Yes	
Stone_Crack	System units and joints	53.0	103.0	CUJ	3.09	1.00	Pr2	Yes	
Stone_Crack	System units and joints	65.0	116.0	CUJ	5.39	1.00	Pr2	Yes	
Stone_Crack	System units and joints	66.0	32.0	CUJ	1.04	1.00	Pr2	Yes	
Stone_Crack	System units and joints	66.0	132.0	CUJ	7.34	1.00	Pr2	Yes	
Stone_Crack	System units and joints	129.0	70.0	CUJ	0.64	0.00	Pr2	Yes	
Stone_Crack	System units and joints	135.0	123.0	CUJ	28.49	1.00	Pr2	Yes	
Stone_Crack	System units and joints	135.0	10.0	CUJ	0.92	0.00	Pr2	Yes	
Stone_Crack	System units and joints	135.0	10.0	CUJ	2.26	1.00	Pr2	Yes	

Block	Condition	X	Y	Code	Amount	Severity	Priority	Photo	Note
Stone_Crack	System units and joints	135.0	32.0	CUJ	5.96	3.00	Pr2	Yes	
Stone_Crack	System units and joints	138.0	118.0	CUJ	4.24	1.00	Pr2	Yes	
Stone_Crack	System units and joints	146.0	108.0	CUJ	18.82	3.00	Pr2	Yes	
Stone_Crack	System units and joints	166.0	33.0	CUJ	3.08	1.00	Pr2	Yes	
Stone_Crack	System units and joints	230.0	51.0	CUJ	2.07	0.00	Pr2	Yes	
Stone_Crack	System units and joints	234.0	26.0	CUJ	1.34	0.00	Pr2	Yes	
Stone_Crack	System units and joints	235.0	33.0	CUJ	2.97	1.00	Pr2	Yes	
Stone_Crack	System units and joints	241.0	70.0	CUJ	0.39	1.00	Pr2	Yes	
Stone_Crack	System units and joints	247.0	104.0	CUJ	7.14	1.00	Pr2	Yes	
Stone_Crack	System units and joints	251.0	122.0	CUJ	1.69	1.00	Pr2	Yes	
Stone_Crack	System units and joints	255.0	111.0	CUJ	13.49	2.00	Pr2	Yes	
Stone_Crack	System units and joints	264.0	132.0	CUJ	12.18	1.00	Pr2	Yes	
Stone_Crack	System units and joints	266.0	90.0	CUJ	2.60	1.00	Pr2	Yes	
Stone_Crack	System units and joints	336.0	13.0	CUJ	2.50	1.00	Pr2	Yes	
Stone_Crack	System units and joints	339.0	14.0	CUJ	1.22	1.00	Pr2	Yes	
Stone_Crack	System units and joints	344.0	88.0	CUJ	2.08	0.00	Pr2	Yes	
Stone_Crack	System units and joints	346.0	104.0	CUJ	9.46	1.00	Pr2	Yes	
Stone_Crack	System units and joints	354.0	85.0	CUJ	0.77	1.00	Pr2	Yes	
Stone_Crack	System units and joints	355.0	108.0	CUJ	5.42	1.00	Pr2	Yes	
Stone_Crack	System units and joints	364.0	13.0	CUJ	1.31	1.00	Pr2	Yes	
Stone_Crack	System units and joints	365.0	107.0	CUJ	2.03	1.00	Pr2	Yes	

Block	Condition	X	Y	Code	Amount	Severity	Priority	Photo	Note
Stone_Crack	System units and joints	366.0	55.0	CUJ	2.78	0.00	Pr2	Yes	
Stone_Displacement	Horizontal	134.0	30.0	Hor	NaN	3.00	Pr2	Yes	
Stone_Displacement	Horizontal	633.0	196.0	Hor	1.00	1.00	Pr2	Yes	
Stone_Displacement	Horizontal	664.0	197.0	Hor	1.00	1.00	Pr2	Yes	
Stone_Displacement	Horizontal	847.0	198.0	Hor	1.00	1.00	Pr2	Yes	
Stone_Embedment	Ferrous Embedment	45.0	93.0	Fe	NaN	NaN		Yes	
Stone_Embedment	Ferrous Embedment	147.0	89.0	Fe	NaN	NaN		Yes	
Stone_Embedment	Ferrous Embedment	867.0	200.0	Fe	NaN	NaN		Yes	
Stone_Embedment	Other Embedment	152.0	76.0	Otr	NaN	NaN		Yes	
Stone_Joints	Mortar Failed	31.0	158.0	MorF	1.38	NaN	Pr2	Yes	
Stone_Joints	Mortar Failed	32.0	181.0	MorF	0.21	NaN	Pr2	Yes	
Stone_Joints	Mortar Failed	34.0	56.0	MorF	0.28	NaN	Pr2	Yes	window
Stone_Joints	Mortar Failed	35.0	191.0	MorF	0.31	NaN	Pr2	Yes	
Stone_Joints	Mortar Failed	36.0	185.0	MorF	1.94	NaN	Pr2	Yes	
Stone_Joints	Mortar Failed	37.0	184.0	MorF	0.19	NaN	Pr2	Yes	
Stone_Joints	Mortar Failed	38.0	188.0	MorF	0.70	NaN	Pr2	Yes	
Stone_Joints	Mortar Failed	38.0	181.0	MorF	0.20	NaN	Pr2	Yes	
Stone_Joints	Mortar Failed	40.0	193.0	MorF	3.03	NaN	Pr2	Yes	
Stone_Joints	Mortar Failed	41.0	185.0	MorF	1.58	NaN	Pr2	Yes	
Stone_Joints	Mortar Failed	42.0	192.0	MorF	4.16	NaN	Pr2	Yes	
Stone_Joints	Mortar Failed	42.0	192.0	MorF	0.19	NaN	Pr2	Yes	
Stone_Joints	Mortar Failed	43.0	154.0	MorF	20.26	NaN	Pr2	Yes	
Stone_Joints	Mortar Failed	45.0	185.0	MorF	1.11	NaN	Pr2	Yes	

Block	Condition	X	Y	Code	Amount	Severity	Priority	Photo	Note
Stone_Joints	Mortar Failed	55.0	1.0	MorF	107.64	NaN	Pr2	Yes	
Stone_Joints	Mortar Failed	58.0	157.0	MorF	0.46	NaN	Pr2	Yes	
Stone_Joints	Mortar Failed	89.0	178.0	MorF	1.35	NaN	Pr2	Yes	
Stone_Joints	Mortar Failed	135.0	133.0	MorF	18.27	NaN	Pr2	Yes	
Stone_Joints	Mortar Failed	141.0	188.0	MorF	0.89	NaN	Pr2	Yes	
Stone_Joints	Mortar Failed	149.0	0.0	MorF	69.60	NaN	Pr2	Yes	
Stone_Joints	Mortar Failed	160.0	137.0	MorF	2.15	NaN	Pr2	Yes	
Stone_Joints	Mortar Failed	167.0	29.0	MorF	4.17	NaN	Pr2	Yes	
Stone_Joints	Mortar Failed	196.0	138.0	MorF	6.07	NaN	Pr2	Yes	
Stone_Joints	Mortar Failed	219.0	-1.0	MorF	5.14	NaN	Pr2	Yes	
Stone_Joints	Mortar Failed	222.0	1.0	MorF	5.41	NaN	Pr2	Yes	
Stone_Joints	Mortar Failed	234.0	-0.0	MorF	3.77	NaN	Pr2	Yes	
Stone_Joints	Mortar Failed	235.0	194.0	MorF	1.57	NaN	Pr2	Yes	
Stone_Joints	Mortar Failed	242.0	10.0	MorF	1.90	NaN	Pr2	Yes	
Stone_Joints	Mortar Failed	243.0	189.0	MorF	9.52	NaN	Pr2	Yes	
Stone_Joints	Mortar Failed	243.0	151.0	MorF	8.26	NaN	Pr2	Yes	
Stone_Joints	Mortar Failed	245.0	185.0	MorF	9.53	NaN	Pr2	Yes	
Stone_Joints	Mortar Failed	245.0	184.0	MorF	2.49	NaN	Pr2	Yes	
Stone_Joints	Mortar Failed	248.0	138.0	MorF	2.09	NaN	Pr2	Yes	
Stone_Joints	Mortar Failed	250.0	1.0	MorF	6.56	NaN	Pr2	Yes	
Stone_Joints	Mortar Failed	251.0	181.0	MorF	0.72	NaN	Pr2	Yes	

Block	Condition	X	Y	Code	Amount	Severity	Priority	Photo	Note
Stone_Joints	Mortar Failed	255.0	188.0	MorF	0.76	NaN	Pr2	Yes	
Stone_Joints	Mortar Failed	255.0	28.0	MorF	0.75	NaN	Pr2	Yes	
Stone_Joints	Mortar Failed	256.0	138.0	MorF	0.73	NaN	Pr2	Yes	
Stone_Joints	Mortar Failed	256.0	72.0	MorF	2.29	NaN	Pr2	Yes	
Stone_Joints	Mortar Failed	257.0	192.0	MorF	4.74	NaN	Pr2	Yes	
Stone_Joints	Mortar Failed	257.0	183.0	MorF	3.60	NaN	Pr2	Yes	
Stone_Joints	Mortar Failed	257.0	166.0	MorF	16.25	NaN	Pr2	Yes	
Stone_Joints	Mortar Failed	258.0	89.0	MorF	7.80	NaN	Pr2	Yes	
Stone_Joints	Mortar Failed	265.0	1.0	MorF	6.91	NaN	Pr2	Yes	
Stone_Joints	Mortar Failed	305.0	156.0	MorF	24.34	NaN	Pr2	Yes	
Stone_Joints	Mortar Failed	329.0	41.0	MorF	12.63	NaN	Pr2	Yes	
Stone_Joints	Mortar Failed	334.0	192.0	MorF	8.44	NaN	Pr2	Yes	
Stone_Joints	Mortar Failed	334.0	186.0	MorF	4.24	NaN	Pr2	Yes	
Stone_Joints	Mortar Failed	335.0	136.0	MorF	6.25	NaN	Pr2	Yes	
Stone_Joints	Mortar Failed	336.0	188.0	MorF	2.06	NaN	Pr2	Yes	
Stone_Joints	Mortar Failed	336.0	174.0	MorF	3.20	NaN	Pr2	Yes	
Stone_Joints	Mortar Failed	337.0	181.0	MorF	1.21	NaN	Pr2	Yes	
Stone_Joints	Mortar Failed	338.0	184.0	MorF	10.15	NaN	Pr2	Yes	
Stone_Joints	Mortar Failed	341.0	139.0	MorF	1.36	NaN	Pr2	Yes	
Stone_Joints	Mortar Failed	342.0	16.0	MorF	0.59	NaN	Pr2	Yes	
Stone_Joints	Mortar Failed	343.0	185.0	MorF	14.48	NaN	Pr2	Yes	

Block	Condition	X	Y	Code	Amount	Severity	Priority	Photo	Note
Stone_Joints	Mortar Failed	344.0	141.0	MorF	6.40	NaN	Pr2	Yes	
Stone_Joints	Mortar Failed	345.0	181.0	MorF	0.32	NaN	Pr2	Yes	
Stone_Joints	Mortar Failed	351.0	86.0	MorF	0.26	NaN	Pr2	Yes	
Stone_Joints	Mortar Failed	355.0	1.0	MorF	39.99	NaN	Pr2	Yes	
Stone_Joints	Mortar Failed	530.0	204.0	MorF	0.24	50.00	Pr2	Yes	
Stone_Joints	Mortar Failed	531.0	191.0	MorF	1.24	100.00	Pr2	Yes	
Stone_Joints	Mortar Failed	539.0	193.0	MorF	17.96	25.00	Pr2	Yes	
Stone_Joints	Mortar Failed	639.0	194.0	MorF	1.91	100.00	Pr2	Yes	
Stone_Joints	Mortar Failed	643.0	196.0	MorF	3.26	75.00	Pr2	Yes	
Stone_Joints	Mortar Failed	755.0	193.0	MorF	0.40	100.00	Pr2	Yes	
Stone_Joints	Mortar Failed	844.0	193.0	MorF	18.33	50.00	Pr2	Yes	
Stone_Joints	Mortar Failed	848.0	194.0	MorF	0.66	10.00	Pr2	Yes	
Stone_Joints	Mortar Failed	866.0	193.0	MorF	0.63	100.00	Pr2	Yes	
Stone_Joints	Mortar Missing	136.0	200.0	MorM	1.23	NaN	Pr2	Yes	
Stone_Joints	Mortar Missing	266.0	92.0	MorM	5.69	NaN	Pr2	Yes	bee nest
Stone_Joints	Mortar Removed	132.0	181.0	MorR	1.35	NaN	Pr2	Yes	
Stone_Joints	Sealant Failed	37.0	45.0	SlntF	4.89	NaN	Pr2	Yes	
Stone_Joints	Sealant Failed	37.0	82.0	SlntF	5.16	NaN	Pr2	Yes	
Stone_Joints	Sealant Failed	37.0	90.0	SlntF	3.92	NaN	Pr2	Yes	
Stone_Joints	Sealant Failed	37.0	63.0	SlntF	4.89	NaN	Pr2	Yes	
Stone_Joints	Sealant Failed	37.0	71.0	SlntF	5.37	NaN	Pr2	Yes	

Block	Condition	X	Y	Code	Amount	Severity	Priority	Photo	Note
Stone_Joints	Sealant Failed	38.0	53.0	SlntF	5.05	NaN	Pr2	Yes	
Stone_Joints	Sealant Failed	52.0	90.0	SlntF	8.46	NaN	Pr2	Yes	
Stone_Joints	Sealant Failed	61.0	127.0	SlntF	6.00	NaN	Pr2	Yes	
Stone_Joints	Sealant Failed	61.0	121.0	SlntF	6.00	NaN	Pr2	Yes	
Stone_Joints	Sealant Failed	61.0	62.0	SlntF	6.00	NaN	Pr2	Yes	
Stone_Joints	Sealant Failed	61.0	71.0	SlntF	6.00	NaN	Pr2	Yes	
Stone_Joints	Sealant Failed	61.0	37.0	SlntF	6.00	NaN	Pr2	Yes	
Stone_Joints	Sealant Failed	61.0	101.0	SlntF	6.00	NaN	Pr2	Yes	
Stone_Joints	Sealant Failed	61.0	109.0	SlntF	6.00	NaN	Pr2	Yes	
Stone_Joints	Sealant Failed	61.0	90.0	SlntF	6.00	NaN	Pr2	Yes	
Stone_Joints	Sealant Failed	62.0	46.0	SlntF	6.00	NaN	Pr2	Yes	
Stone_Joints	Sealant Failed	62.0	81.0	SlntF	6.00	NaN	Pr2	Yes	
Stone_Joints	Sealant Failed	137.0	68.0	SlntF	4.96	NaN	Pr2	Yes	
Stone_Joints	Sealant Failed	137.0	42.0	SlntF	5.37	NaN	Pr2	Yes	
Stone_Joints	Sealant Failed	137.0	51.0	SlntF	5.66	NaN	Pr2	Yes	
Stone_Joints	Sealant Failed	138.0	106.0	SlntF	4.12	NaN	Pr2	Yes	
Stone_Joints	Sealant Failed	138.0	80.0	SlntF	6.08	NaN	Pr2	Yes	
Stone_Joints	Sealant Failed	139.0	128.0	SlntF	3.66	NaN	Pr2	Yes	
Stone_Joints	Sealant Failed	139.0	89.0	SlntF	5.51	NaN	Pr2	Yes	
Stone_Joints	Sealant Failed	139.0	121.0	SlntF	5.50	NaN	Pr2	Yes	
Stone_Joints	Sealant Failed	146.0	101.0	SlntF	1.84	NaN	Pr2	Yes	

Block	Condition	X	Y	Code	Amount	Severity	Priority	Photo	Note
Stone_Joints	Sealant Failed	150.0	41.0	SlntF	8.96	NaN	Pr2	Yes	
Stone_Joints	Sealant Failed	150.0	90.0	SlntF	9.57	NaN	Pr2	Yes	metal visible
Stone_Joints	Sealant Failed	151.0	67.0	SlntF	9.06	NaN	Pr2	Yes	
Stone_Joints	Sealant Failed	151.0	79.0	SlntF	8.38	NaN	Pr2	Yes	
Stone_Joints	Sealant Failed	154.0	101.0	SlntF	1.39	NaN	Pr2	Yes	
Stone_Joints	Sealant Failed	163.0	50.0	SlntF	6.19	NaN	Pr2	Yes	
Stone_Joints	Sealant Failed	163.0	66.0	SlntF	5.62	NaN	Pr2	Yes	
Stone_Joints	Sealant Failed	163.0	130.0	SlntF	4.50	NaN	Pr2	Yes	
Stone_Joints	Sealant Failed	163.0	109.0	SlntF	4.17	NaN	Pr2	Yes	
Stone_Joints	Sealant Failed	163.0	115.0	SlntF	5.11	NaN	Pr2	Yes	
Stone_Joints	Sealant Failed	164.0	40.0	SlntF	5.41	NaN	Pr2	Yes	
Stone_Joints	Sealant Failed	164.0	78.0	SlntF	5.11	NaN	Pr2	Yes	
Stone_Joints	Sealant Failed	164.0	90.0	SlntF	5.19	NaN	Pr2	Yes	
Stone_Joints	Sealant Failed	240.0	55.0	SlntF	6.00	NaN	Pr2	Yes	
Stone_Joints	Sealant Failed	240.0	66.0	SlntF	6.00	NaN	Pr2	Yes	
Stone_Joints	Sealant Failed	240.0	101.0	SlntF	6.00	NaN	Pr2	Yes	
Stone_Joints	Sealant Failed	240.0	112.0	SlntF	6.00	NaN	Pr2	Yes	
Stone_Joints	Sealant Failed	240.0	90.0	SlntF	6.00	NaN	Pr2	Yes	
Stone_Joints	Sealant Failed	240.0	122.0	SlntF	6.00	NaN	Pr2	Yes	
Stone_Joints	Sealant Failed	241.0	37.0	SlntF	6.00	NaN	Pr2	Yes	
Stone_Joints	Sealant Failed	241.0	46.0	SlntF	6.00	NaN	Pr2	Yes	

Block	Condition	X	Y	Code	Amount	Severity	Priority	Photo	Note
Stone_Joints	Sealant Failed	241.0	82.0	SlntF	6.00	NaN	Pr2	Yes	
Stone_Joints	Sealant Failed	241.0	130.0	SlntF	6.00	NaN	Pr2	Yes	
Stone_Joints	Sealant Failed	250.0	66.0	SlntF	8.97	NaN	Pr2	Yes	
Stone_Joints	Sealant Failed	251.0	81.0	SlntF	8.58	NaN	Pr2	Yes	
Stone_Joints	Sealant Failed	251.0	54.0	SlntF	8.04	NaN	Pr2	Yes	
Stone_Joints	Sealant Failed	262.0	121.0	SlntF	4.59	NaN	Pr2	Yes	
Stone_Joints	Sealant Failed	263.0	125.0	SlntF	4.13	NaN	Pr2	Yes	
Stone_Joints	Sealant Failed	263.0	100.0	SlntF	4.38	NaN	Pr2	Yes	
Stone_Joints	Sealant Failed	264.0	66.0	SlntF	6.54	NaN	Pr2	Yes	
Stone_Joints	Sealant Failed	264.0	82.0	SlntF	4.74	NaN	Pr2	Yes	
Stone_Joints	Sealant Failed	335.0	90.0	SlntF	6.00	NaN	Pr2	Yes	
Stone_Joints	Sealant Failed	340.0	106.0	SlntF	6.00	NaN	Pr2	Yes	
Stone_Joints	Sealant Failed	340.0	68.0	SlntF	6.00	NaN	Pr2	Yes	
Stone_Joints	Sealant Failed	340.0	80.0	SlntF	6.00	NaN	Pr2	Yes	
Stone_Joints	Sealant Failed	340.0	53.0	SlntF	6.00	NaN	Pr2	Yes	
Stone_Joints	Sealant Failed	341.0	122.0	SlntF	6.00	NaN	Pr2	Yes	
Stone_Joints	Sealant Failed	341.0	45.0	SlntF	6.00	NaN	Pr2	Yes	
Stone_Joints	Sealant Failed	355.0	68.0	SlntF	11.00	NaN	Pr2	Yes	
Stone_Joints	Sealant Failed	356.0	52.0	SlntF	11.00	NaN	Pr2	Yes	
Stone_Joints	Sealant Failed	361.0	96.0	SlntF	6.00	NaN	Pr2	Yes	
Stone_Repair	Dutchman Failed	134.0	196.0	DF	9.00	NaN	Pr2	Yes	

Block	Condition	X	Y	Code	Amount	Severity	Priority	Photo	Note
Stone_Repair	Dutchman Sound	346.0	164.0	D	16.00	NaN		Yes	
Stone_Repair	Dutchman Sound	380.0	154.0	D	48.00	NaN		Yes	
Stone_Repair	Patch Failed	31.0	1.0	PF	15.00	NaN	Pr2	Yes	
Stone_Repair	Patch Failed	135.0	107.0	PF	5.00	NaN	Pr2	Yes	
Stone_Repair	Patch Failed	138.0	17.0	PF	2.00	NaN	Pr2	Yes	
Stone_Repair	Patch Failed	167.0	202.0	PF	20.00	NaN	Pr2	Yes	
Stone_Repair	Patch Failed	240.0	70.0	PF	8.00	NaN	Pr2	Yes	
Stone_Repair	Patch Failed	243.0	1.0	PF	6.00	NaN	Pr2	Yes	
Stone_Repair	Patch Failed	262.0	120.0	PF	20.00	NaN	Pr2	Yes	
Stone_Repair	Patch Failed	335.0	134.0	PF	3.00	NaN	Pr2	Yes	
Stone_Repair	Patch Failed	342.0	182.0	PF	0.50	NaN	Pr2	Yes	
Stone_Repair	Patch Failed	342.0	183.0	PF	6.00	NaN	Pr2	Yes	
Stone_Repair	Patch Failed	343.0	32.0	PF	1.00	NaN	Pr2	Yes	
Stone_Repair	Patch Failed	345.0	148.0	PF	9.00	NaN	Pr2	Yes	
Stone_Repair	Patch Failed	351.0	181.0	PF	NaN	NaN	Pr2	Yes	
Stone_Repair	Patch Failed	354.0	71.0	PF	3.00	NaN	Pr2	Yes	
Stone_Repair	Patch Failed	355.0	172.0	PF	4.00	NaN	Pr2	Yes	
Stone_Repair	Patch Failed	360.0	131.0	PF	3.00	NaN	Pr2	Yes	
Stone_Repair	Patch Failed	545.0	193.0	PF	10.00	NaN	Pr2	Yes	
Stone_Repair	Patch Failed	637.0	193.0	PF	20.00	NaN	Pr2	Yes	
Stone_Repair	Patch Failed	868.0	203.0	PF	20.00	NaN	Pr2	Yes	
Stone_Repair	Patch Removed	60.0	139.0	PR	3.00	NaN	Pr2	Yes	
Stone_Repair	Patch Removed	162.0	15.0	PR	6.00	NaN	Pr2	Yes	
Stone_Repair	Patch Sound	34.0	172.0	P	2.00	NaN		Yes	
Stone_Repair	Patch Sound	63.0	83.0	P	4.00	NaN		Yes	
Stone_Repair	Patch Sound	64.0	70.0	P	6.00	NaN		Yes	
Stone_Repair	Patch Sound	136.0	153.0	P	NaN	NaN		Yes	
Stone_Repair	Patch Sound	235.0	101.0	P	8.00	NaN		Yes	
Stone_Repair	Patch Sound	236.0	91.0	P	8.00	NaN		Yes	
Stone_Repair	Patch Sound	239.0	91.0	P	20.00	NaN		Yes	
Stone_Repair	Patch Sound	322.0	170.0	P	4.00	NaN		Yes	

Block	Condition	X	Y	Code	Amount	Severity	Priority	Photo	Note
Stone_Repair	Patch Sound	322.0	162.0	P	2.00	NaN		Yes	
Stone_Repair	Patch Sound	342.0	181.0	P	1.00	NaN		Yes	
Stone_Repair	Patch Sound	346.0	172.0	P	NaN	NaN		Yes	
Stone_SoilStain	Biological	43.0	26.0	Bio	3.37	NaN	Pr3	Yes	
Stone_SoilStain	Biological	50.0	187.0	Bio	26.31	NaN	Pr3	Yes	
Stone_SoilStain	Biological	51.0	104.0	Bio	0.44	NaN	Pr3	Yes	
Stone_SoilStain	Biological	51.0	193.0	Bio	4.52	NaN	Pr3	Yes	
Stone_SoilStain	Biological	52.0	31.0	Bio	12.88	NaN	Pr3	Yes	
Stone_SoilStain	Biological	59.0	26.0	Bio	2.91	NaN	Pr3	Yes	
Stone_SoilStain	Biological	61.0	13.0	Bio	2.54	NaN	Pr3	Yes	
Stone_SoilStain	Biological	61.0	33.0	Bio	0.10	NaN	Pr3	Yes	
Stone_SoilStain	Biological	62.0	26.0	Bio	1.19	NaN	Pr3	Yes	
Stone_SoilStain	Biological	65.0	136.0	Bio	1.34	NaN	Pr3	Yes	
Stone_SoilStain	Biological	135.0	141.0	Bio	15.69	NaN	Pr3	Yes	
Stone_SoilStain	Biological	138.0	194.0	Bio	3.26	NaN	Pr3	Yes	
Stone_SoilStain	Biological	144.0	161.0	Bio	4.38	NaN	Pr3	Yes	
Stone_SoilStain	Biological	150.0	194.0	Bio	5.64	NaN	Pr3	Yes	
Stone_SoilStain	Biological	162.0	140.0	Bio	5.26	NaN	Pr3	Yes	
Stone_SoilStain	Biological	252.0	29.0	Bio	36.88	NaN	Pr3	Yes	
Stone_SoilStain	Biological	356.0	29.0	Bio	22.21	NaN	Pr3	Yes	moss, largely on south facing portions of ornaments
Stone_SoilStain	Biological	533.0	190.0	Bio	9.37	NaN	Pr3	Yes	
Stone_SoilStain	Biological	543.0	190.0	Bio	24.82	NaN	Pr3	Yes	
Stone_SoilStain	Biological	646.0	190.0	Bio	42.82	NaN	Pr3	Yes	
Stone_SoilStain	Biological	664.0	194.0	Bio	0.61	NaN	Pr3	Yes	
Stone_SoilStain	Biological	858.0	188.0	Bio	17.19	NaN	Pr3	Yes	
Stone_SoilStain	Black Crusts	355.0	92.0	Blck	51.40	NaN	Pr3	Yes	
Stone_SoilStain	Cementitious	339.0	21.0	Cem	1.26	NaN	Pr3	Yes	
Stone_SoilStain	Efflorescence	15.0	179.0	Eff	3.83	NaN	Pr3	Yes	
Stone_SoilStain	Efflorescence	42.0	184.0	Eff	9.40	NaN	Pr3	Yes	
Stone_SoilStain	Efflorescence	42.0	128.0	Eff	8.95	NaN	Pr3	Yes	

Block	Condition	X	Y	Code	Amount	Severity	Priority	Photo	Note
Stone_SoilStain	Guano	151.0	193.0	Gua	13.78	NaN	Pr3	Yes	
Stone_SoilStain	Guano	151.0	182.0	Gua	1.41	NaN	Pr3	Yes	
Stone_SoilStain	Guano	250.0	194.0	Gua	4.70	NaN	Pr3	Yes	
Stone_SoilStain	Leached Salts	17.0	179.0	Lch	0.40	NaN	Pr3	Yes	
Stone_SoilStain	Leached Salts	28.0	102.0	Lch	0.38	NaN	Pr3	Yes	
Stone_SoilStain	Leached Salts	30.0	136.0	Lch	0.20	NaN	Pr3	Yes	
Stone_SoilStain	Leached Salts	31.0	59.0	Lch	2.61	NaN	Pr3	Yes	
Stone_SoilStain	Leached Salts	32.0	136.0	Lch	0.39	NaN	Pr3	Yes	
Stone_SoilStain	Leached Salts	33.0	150.0	Lch	0.19	NaN	Pr3	Yes	
Stone_SoilStain	Leached Salts	33.0	148.0	Lch	0.30	NaN	Pr3	Yes	
Stone_SoilStain	Leached Salts	33.0	50.0	Lch	0.36	NaN	Pr3	Yes	
Stone_SoilStain	Leached Salts	34.0	157.0	Lch	1.67	NaN	Pr3	Yes	
Stone_SoilStain	Leached Salts	34.0	186.0	Lch	0.33	NaN	Pr3	Yes	
Stone_SoilStain	Leached Salts	36.0	179.0	Lch	0.08	NaN	Pr3	Yes	
Stone_SoilStain	Leached Salts	36.0	165.0	Lch	0.59	NaN	Pr3	Yes	
Stone_SoilStain	Leached Salts	37.0	180.0	Lch	0.12	NaN	Pr3	Yes	
Stone_SoilStain	Leached Salts	37.0	182.0	Lch	2.00	NaN	Pr3	Yes	
Stone_SoilStain	Leached Salts	43.0	175.0	Lch	4.15	NaN	Pr3	Yes	at joints
Stone_SoilStain	Leached Salts	59.0	177.0	Lch	0.16	NaN	Pr3	Yes	
Stone_SoilStain	Leached Salts	70.0	97.0	Lch	1.78	NaN	Pr3	Yes	
Stone_SoilStain	Leached Salts	80.0	162.0	Lch	20.67	NaN	Pr3	Yes	at joints
Stone_SoilStain	Leached Salts	81.0	137.0	Lch	10.81	NaN	Pr3	Yes	at joints

Block	Condition	X	Y	Code	Amount	Severity	Priority	Photo	Note
Stone_SoilStain	Leached Salts	84.0	181.0	Lch	5.65	NaN	Pr3	Yes	at joints
Stone_SoilStain	Leached Salts	85.0	179.0	Lch	8.27	NaN	Pr3	Yes	
Stone_SoilStain	Leached Salts	90.0	181.0	Lch	10.47	NaN	Pr3	Yes	at joints
Stone_SoilStain	Leached Salts	92.0	178.0	Lch	1.77	NaN	Pr3	Yes	
Stone_SoilStain	Leached Salts	95.0	138.0	Lch	8.40	NaN	Pr3	Yes	at joints
Stone_SoilStain	Leached Salts	113.0	174.0	Lch	2.88	NaN	Pr3	Yes	
Stone_SoilStain	Leached Salts	125.0	164.0	Lch	144.89	NaN	Pr3	Yes	at joints
Stone_SoilStain	Leached Salts	136.0	170.0	Lch	1.08	NaN	Pr3	Yes	
Stone_SoilStain	Leached Salts	136.0	150.0	Lch	8.79	NaN	Pr3	Yes	
Stone_SoilStain	Leached Salts	138.0	179.0	Lch	23.02	NaN	Pr3	Yes	
Stone_SoilStain	Leached Salts	140.0	178.0	Lch	8.01	NaN	Pr3	Yes	
Stone_SoilStain	Leached Salts	141.0	182.0	Lch	21.51	NaN	Pr3	Yes	at joints
Stone_SoilStain	Leached Salts	143.0	97.0	Lch	3.34	NaN	Pr3	Yes	
Stone_SoilStain	Leached Salts	167.0	158.0	Lch	0.44	NaN	Pr3	Yes	
Stone_SoilStain	Leached Salts	170.0	170.0	Lch	0.38	NaN	Pr3	Yes	
Stone_SoilStain	Leached Salts	172.0	88.0	Lch	0.07	NaN	Pr3	Yes	
Stone_SoilStain	Leached Salts	172.0	125.0	Lch	0.25	NaN	Pr3	Yes	
Stone_SoilStain	Leached Salts	173.0	68.0	Lch	0.20	NaN	Pr3	Yes	
Stone_SoilStain	Leached Salts	174.0	26.0	Lch	0.32	NaN	Pr3	Yes	
Stone_SoilStain	Leached Salts	187.0	180.0	Lch	9.04	NaN	Pr3	Yes	
Stone_SoilStain	Leached Salts	204.0	157.0	Lch	38.04	NaN	Pr3	Yes	at joints

Block	Condition	X	Y	Code	Amount	Severity	Priority	Photo	Note
Stone_SoilStain	Leached Salts	230.0	138.0	Lch	8.59	NaN	Pr3	Yes	
Stone_SoilStain	Leached Salts	234.0	183.0	Lch	1.71	NaN	Pr3	Yes	
Stone_SoilStain	Leached Salts	235.0	181.0	Lch	12.26	NaN	Pr3	Yes	at joints
Stone_SoilStain	Leached Salts	237.0	176.0	Lch	2.52	NaN	Pr3	Yes	
Stone_SoilStain	Leached Salts	237.0	170.0	Lch	0.66	NaN	Pr3	Yes	
Stone_SoilStain	Leached Salts	240.0	137.0	Lch	0.77	NaN	Pr3	Yes	
Stone_SoilStain	Leached Salts	241.0	178.0	Lch	6.60	NaN	Pr3	Yes	
Stone_SoilStain	Leached Salts	242.0	164.0	Lch	0.33	NaN	Pr3	Yes	
Stone_SoilStain	Leached Salts	243.0	142.0	Lch	0.20	NaN	Pr3	Yes	
Stone_SoilStain	Leached Salts	244.0	72.0	Lch	0.48	NaN	Pr3	Yes	
Stone_SoilStain	Leached Salts	246.0	177.0	Lch	3.16	NaN	Pr3	Yes	
Stone_SoilStain	Leached Salts	251.0	138.0	Lch	5.67	NaN	Pr3	Yes	
Stone_SoilStain	Leached Salts	255.0	177.0	Lch	1.29	NaN	Pr3	Yes	
Stone_SoilStain	Leached Salts	269.0	169.0	Lch	0.33	NaN	Pr3	Yes	
Stone_SoilStain	Leached Salts	272.0	71.0	Lch	0.51	NaN	Pr3	Yes	
Stone_SoilStain	Leached Salts	272.0	35.0	Lch	0.40	NaN	Pr3	Yes	
Stone_SoilStain	Leached Salts	272.0	156.0	Lch	1.17	NaN	Pr3	Yes	
Stone_SoilStain	Leached Salts	273.0	13.0	Lch	0.28	NaN	Pr3	No	
Stone_SoilStain	Leached Salts	329.0	32.0	Lch	2.66	NaN	Pr3	Yes	at joints
Stone_SoilStain	Leached Salts	330.0	115.0	Lch	9.45	NaN	Pr3	Yes	
Stone_SoilStain	Leached Salts	330.0	38.0	Lch	3.59	NaN	Pr3	Yes	

Block	Condition	X	Y	Code	Amount	Severity	Priority	Photo	Note
Stone_SoilStain	Leached Salts	336.0	178.0	Lch	1.63	NaN	Pr3	Yes	
Stone_SoilStain	Leached Salts	341.0	176.0	Lch	1.27	NaN	Pr3	Yes	
Stone_SoilStain	Leached Salts	342.0	175.0	Lch	0.45	NaN	Pr3	Yes	
Stone_SoilStain	Leached Salts	342.0	131.0	Lch	2.60	NaN	Pr3	Yes	
Stone_SoilStain	Leached Salts	343.0	168.0	Lch	0.56	NaN	Pr3	Yes	
Stone_SoilStain	Leached Salts	343.0	154.0	Lch	0.20	NaN	Pr3	Yes	
Stone_SoilStain	Leached Salts	344.0	52.0	Lch	9.22	NaN	Pr3	Yes	
Stone_SoilStain	Leached Salts	345.0	28.0	Lch	0.16	NaN	Pr3	Yes	
Stone_SoilStain	Leached Salts	345.0	168.0	Lch	0.56	NaN	Pr3	Yes	
Stone_SoilStain	Leached Salts	346.0	70.0	Lch	0.62	NaN	Pr3	Yes	
Stone_SoilStain	Leached Salts	346.0	176.0	Lch	2.21	NaN	Pr3	Yes	
Stone_SoilStain	Leached Salts	350.0	182.0	Lch	4.86	NaN	Pr3	Yes	
Stone_SoilStain	Leached Salts	355.0	86.0	Lch	NaN	NaN	Pr3	Yes	
Stone_SoilStain	Leached Salts	355.0	144.0	Lch	3.32	NaN	Pr3	Yes	
Stone_SoilStain	Leached Salts	355.0	176.0	Lch	1.29	NaN	Pr3	Yes	
Stone_SoilStain	Leached Salts	356.0	71.0	Lch	0.44	NaN	Pr3	Yes	
Stone_SoilStain	Leached Salts	356.0	110.0	Lch	0.36	NaN	Pr3	Yes	
Stone_SoilStain	Leached Salts	357.0	45.0	Lch	5.50	NaN	Pr3	Yes	
Stone_SoilStain	Leached Salts	357.0	152.0	Lch	1.54	NaN	Pr3	Yes	
Stone_SoilStain	Leached Salts	358.0	37.0	Lch	1.10	NaN	Pr3	Yes	
Stone_SoilStain	Leached Salts	359.0	21.0	Lch	2.60	NaN	Pr3	Yes	

Block	Condition	X	Y	Code	Amount	Severity	Priority	Photo	Note
Stone_SoilStain	Leached Salts	360.0	138.0	Lch	0.25	NaN	Pr3	Yes	
Stone_SoilStain	Leached Salts	370.0	12.0	Lch	0.91	NaN	Pr3	Yes	
Stone_SoilStain	Leached Salts	397.0	156.0	Lch	3.55	NaN	Pr3	Yes	
Stone_SoilStain	Paint	241.0	23.0	Pnt	10.29	NaN	Pr3	Yes	
Stone_Spall	Bonded	33.0	146.0	B	NaN	6.00	Pr2	Yes	
Stone_Spall	Bonded	35.0	138.0	B	NaN	2.00	Pr2	Yes	
Stone_Spall	Bonded	35.0	114.0	B	NaN	14.00	Pr2	Yes	
Stone_Spall	Bonded	36.0	154.0	B	NaN	4.00	Pr2	Yes	
Stone_Spall	Bonded	39.0	91.0	B	NaN	4.00	Pr2	Yes	
Stone_Spall	Bonded	40.0	82.0	B	NaN	5.00	Pr2	Yes	
Stone_Spall	Bonded	41.0	172.0	B	NaN	6.00	Pr2	Yes	
Stone_Spall	Bonded	42.0	152.0	B	NaN	3.00	Pr2	Yes	
Stone_Spall	Bonded	42.0	171.0	B	NaN	4.00	Pr2	Yes	
Stone_Spall	Bonded	46.0	101.0	B	NaN	11.00	Pr2	Yes	
Stone_Spall	Bonded	50.0	87.0	B	NaN	7.00	Pr2	Yes	
Stone_Spall	Bonded	55.0	85.0	B	NaN	4.00	Pr2	Yes	
Stone_Spall	Bonded	79.0	161.0	B	NaN	5.00	Pr2	Yes	
Stone_Spall	Bonded	133.0	46.0	B	NaN	3.00	Pr2	Yes	
Stone_Spall	Bonded	133.0	141.0	B	NaN	12.00	Pr2	Yes	
Stone_Spall	Bonded	137.0	15.0	B	NaN	20.00	Pr2	Yes	hollow
Stone_Spall	Bonded	138.0	16.0	B	NaN	26.00	Pr2	Yes	hollow
Stone_Spall	Bonded	142.0	194.0	B	NaN	2.00	Pr2	Yes	
Stone_Spall	Bonded	163.0	38.0	B	NaN	7.00	Pr2	Yes	
Stone_Spall	Bonded	164.0	144.0	B	NaN	2.00	Pr2	Yes	
Stone_Spall	Bonded	179.0	180.0	B	NaN	3.00	Pr2	Yes	
Stone_Spall	Bonded	194.0	171.0	B	NaN	2.00	Pr2	Yes	
Stone_Spall	Bonded	194.0	149.0	B	NaN	22.00	Pr2	Yes	
Stone_Spall	Bonded	222.0	153.0	B	NaN	10.00	Pr2	Yes	
Stone_Spall	Bonded	228.0	18.0	B	NaN	2.00	Pr2	Yes	
Stone_Spall	Bonded	234.0	80.0	B	NaN	4.00	Pr2	Yes	
Stone_Spall	Bonded	234.0	187.0	B	NaN	2.00	Pr2	Yes	
Stone_Spall	Bonded	239.0	178.0	B	NaN	30.00	Pr2	Yes	

Block	Condition	X	Y	Code	Amount	Severity	Priority	Photo	Note
Stone_Spall	Bonded	257.0	28.0	B	NaN	1.00	Pr2	Yes	
Stone_Spall	Bonded	282.0	134.0	B	NaN	4.00	Pr2	Yes	
Stone_Spall	Bonded	334.0	142.0	B	NaN	12.00	Pr2	Yes	
Stone_Spall	Bonded	335.0	184.0	B	NaN	6.00	Pr2	Yes	
Stone_Spall	Bonded	335.0	135.0	B	NaN	60.00	Pr2	Yes	
Stone_Spall	Bonded	340.0	45.0	B	NaN	50.00	Pr2	Yes	hollow sound
Stone_Spall	Bonded	373.0	15.0	B	NaN	3.00	Pr2	Yes	
Stone_Spall	Incipient	859.0	203.0	I	NaN	6.00	Pr2	Yes	
Stone_Spall	Incipient	859.0	202.0	I	NaN	10.00	Pr2	Yes	
Stone_Spall	Incipient	860.0	202.0	I	NaN	3.00	Pr2	Yes	
Stone_Spall	Missing	33.0	188.0	M	NaN	3.00	Pr2	Yes	
Stone_Spall	Missing	35.0	198.0	M	NaN	9.00	Pr2	Yes	
Stone_Spall	Missing	35.0	163.0	M	NaN	6.00	Pr2	Yes	
Stone_Spall	Missing	41.0	168.0	M	NaN	5.00	Pr2	Yes	
Stone_Spall	Missing	41.0	163.0	M	NaN	2.00	Pr2	Yes	
Stone_Spall	Missing	42.0	180.0	M	NaN	4.00	Pr2	Yes	
Stone_Spall	Missing	48.0	108.0	M	NaN	6.00	Pr2	Yes	
Stone_Spall	Missing	54.0	105.0	M	NaN	28.00	Pr2	Yes	
Stone_Spall	Missing	128.0	4.0	M	NaN	36.00	Pr2	Yes	
Stone_Spall	Missing	134.0	200.0	M	NaN	25.00	Pr2	Yes	
Stone_Spall	Missing	134.0	142.0	M	NaN	3.00	Pr2	Yes	
Stone_Spall	Missing	135.0	11.0	M	NaN	4.00	Pr2	Yes	
Stone_Spall	Missing	139.0	195.0	M	NaN	8.00	Pr2	Yes	
Stone_Spall	Missing	140.0	69.0	M	NaN	5.00	Pr2	Yes	
Stone_Spall	Missing	154.0	142.0	M	NaN	4.00	Pr2	Yes	
Stone_Spall	Missing	158.0	11.0	M	NaN	3.00	Pr2	Yes	
Stone_Spall	Missing	158.0	163.0	M	NaN	4.00	Pr2	Yes	
Stone_Spall	Missing	180.0	170.0	M	NaN	7.00	Pr2	Yes	
Stone_Spall	Missing	237.0	139.0	M	NaN	4.00	Pr2	Yes	
Stone_Spall	Missing	237.0	193.0	M	NaN	16.00	Pr2	Yes	
Stone_Spall	Missing	239.0	188.0	M	NaN	1.00	Pr2	Yes	
Stone_Spall	Missing	243.0	198.0	M	NaN	40.00	Pr2	Yes	
Stone_Spall	Missing	244.0	201.0	M	NaN	80.00	Pr2	Yes	

Block	Condition	X	Y	Code	Amount	Severity	Priority	Photo	Note
Stone_Spall	Missing	253.0	184.0	M	NaN	3.00	Pr2	Yes	
Stone_Spall	Missing	255.0	195.0	M	NaN	4.00	Pr2	Yes	
Stone_Spall	Missing	273.0	30.0	M	NaN	4.00	Pr2	Yes	
Stone_Spall	Missing	334.0	135.0	M	NaN	20.00	Pr2	Yes	
Stone_Spall	Missing	342.0	151.0	M	NaN	5.00	Pr2	Yes	
Stone_Spall	Missing	343.0	198.0	M	NaN	3.00	Pr2	Yes	
Stone_Spall	Missing	355.0	90.0	M	NaN	4.00	Pr2	Yes	
Stone_Spall	Missing	356.0	201.0	M	NaN	40.00	Pr2	Yes	
Stone_Spall	Missing	356.0	197.0	M	NaN	6.00	Pr2	Yes	
Stone_Spall	Missing	356.0	32.0	M	NaN	10.00	Pr2	Yes	
Stone_Spall	Missing	535.0	196.0	M	NaN	10.00	Pr2	Yes	
Stone_Spall	Missing	551.0	195.0	M	NaN	1.00	Pr2	Yes	
Stone_Spall	Missing + Steel	145.0	91.0	MS	NaN	5.00	Pr2	Yes	
Stone_Spall	Missing + Steel	147.0	91.0	MS	NaN	7.00	Pr2	Yes	
Stone_Spall	Missing + Steel	151.0	91.0	MS	NaN	4.00	Pr2	Yes	
Stone_Spall	Missing + Steel	154.0	91.0	MS	NaN	34.00	Pr2	Yes	
Stone_Spall	Missing + Steel	334.0	98.0	MS	NaN	12.00	Pr2	Yes	
Stone_Spall	Missing + Steel	340.0	90.0	MS	NaN	10.00	Pr2	Yes	
Stone_Spall	Missing + Steel	355.0	38.0	MS	NaN	8.00	Pr2	Yes	
Stone_Spall	Removed	23.0	146.0	R	NaN	2.00	Pr2	Yes	
Stone_Spall	Removed	35.0	160.0	R	NaN	2.00	Pr2	Yes	
Stone_Spall	Removed	50.0	88.0	R	NaN	25.00	Pr2	Yes	
Stone_Spall	Removed	129.0	149.0	R	NaN	4.00	Pr2	Yes	
Stone_Spall	Removed	132.0	161.0	R	NaN	4.00	Pr2	Yes	
Stone_Spall	Removed	134.0	102.0	R	NaN	9.00	Pr2	Yes	
Stone_Spall	Removed	137.0	17.0	R	NaN	25.00	Pr2	Yes	
Stone_Spall	Removed	137.0	182.0	R	NaN	0.50	Pr2	Yes	
Stone_Spall	Removed	161.0	59.0	R	NaN	8.00	Pr2	Yes	
Stone_Spall	Removed	161.0	46.0	R	NaN	5.00	Pr2	Yes	
Stone_Spall	Removed	164.0	142.0	R	NaN	9.00	Pr2	Yes	

Block	Condition	X	Y	Code	Amount	Severity	Priority	Photo	Note
Stone_Spall	Removed	229.0	157.0	R	NaN	3.00	Pr2	Yes	
Stone_Spall	Removed	331.0	48.0	R	NaN	7.00	Pr2	Yes	
Stone_Spall	Removed	334.0	135.0	R	NaN	5.00	Pr2	Yes	
Stone_Spall	Removed + Steel	51.0	87.0	RS	NaN	11.00	Pr2	Yes	
Stone_Spall	Removed + Steel	132.0	71.0	RS	NaN	36.00	Pr2	Yes	
Stone_Spall	Removed + Steel	141.0	69.0	RS	NaN	120.00	Pr2	Yes	
Stone_Spall	Removed + Steel	146.0	91.0	RS	NaN	7.00	Pr2	Yes	
Stone_Spall	Removed + Steel	149.0	91.0	RS	NaN	22.00	Pr2	Yes	
Stone_Spall	Removed + Steel	160.0	46.0	RS	NaN	30.00	Pr2	Yes	
Stone_Spall	Removed + Steel	160.0	66.0	RS	NaN	10.00	Pr2	Yes	
Stone_Spall	Removed + Steel	194.0	154.0	RS	NaN	9.00	Pr2	Yes	
Stone_Spall	Removed + Steel	241.0	55.0	RS	NaN	4.00	Pr2	Yes	
Stone_Spall	Removed + Steel	328.0	50.0	RS	NaN	9.00	Pr2	Yes	
Stone_SurfLoss	Chipped	29.0	119.0	Chp	0.28	3.00	Pr2	Yes	
Stone_SurfLoss	Chipped	32.0	169.0	Chp	0.07	1.00	Pr2	Yes	
Stone_SurfLoss	Chipped	32.0	157.0	Chp	0.09	0.00	Pr2	Yes	
Stone_SurfLoss	Chipped	33.0	176.0	Chp	0.04	1.00	Pr2	Yes	
Stone_SurfLoss	Chipped	33.0	80.0	Chp	0.21	1.00	Pr2	Yes	
Stone_SurfLoss	Chipped	33.0	142.0	Chp	0.47	1.00	Pr2	Yes	
Stone_SurfLoss	Chipped	33.0	180.0	Chp	0.06	0.00	Pr2	Yes	
Stone_SurfLoss	Chipped	33.0	180.0	Chp	0.10	0.00	Pr2	Yes	
Stone_SurfLoss	Chipped	33.0	180.0	Chp	0.04	0.00	Pr2	Yes	
Stone_SurfLoss	Chipped	33.0	181.0	Chp	0.11	0.00	Pr2	Yes	
Stone_SurfLoss	Chipped	34.0	156.0	Chp	0.09	1.00	Pr2	Yes	
Stone_SurfLoss	Chipped	34.0	152.0	Chp	0.57	0.00	Pr2	Yes	
Stone_SurfLoss	Chipped	35.0	164.0	Chp	0.18	0.00	Pr2	Yes	
Stone_SurfLoss	Chipped	35.0	195.0	Chp	NaN	0.00	Pr2	Yes	
Stone_SurfLoss	Chipped	35.0	184.0	Chp	0.14	1.00	Pr2	Yes	

Block	Condition	X	Y	Code	Amount	Severity	Priority	Photo	Note
Stone_SurfLoss	Chipped	36.0	162.0	Chp	0.06	1.00	Pr2	Yes	
Stone_SurfLoss	Chipped	37.0	184.0	Chp	0.04	1.00	Pr2	Yes	
Stone_SurfLoss	Chipped	40.0	183.0	Chp	0.57	1.00	Pr2	Yes	
Stone_SurfLoss	Chipped	41.0	160.0	Chp	0.50	1.00	Pr2	Yes	
Stone_SurfLoss	Chipped	41.0	190.0	Chp	1.89	1.00	Pr2	Yes	
Stone_SurfLoss	Chipped	41.0	138.0	Chp	0.60	1.00	Pr2	Yes	
Stone_SurfLoss	Chipped	42.0	169.0	Chp	0.35	2.00	Pr2	Yes	
Stone_SurfLoss	Chipped	42.0	147.0	Chp	0.96	2.00	Pr2	Yes	
Stone_SurfLoss	Chipped	45.0	191.0	Chp	0.40	1.00	Pr2	Yes	
Stone_SurfLoss	Chipped	59.0	142.0	Chp	0.22	0.00	Pr2	Yes	
Stone_SurfLoss	Chipped	80.0	129.0	Chp	2.12	1.00	Pr2	Yes	
Stone_SurfLoss	Chipped	93.0	139.0	Chp	1.40	1.00	Pr2	Yes	
Stone_SurfLoss	Chipped	131.0	162.0	Chp	0.25	2.00	Pr2	Yes	
Stone_SurfLoss	Chipped	133.0	161.0	Chp	0.72	1.00	Pr2	Yes	
Stone_SurfLoss	Chipped	133.0	179.0	Chp	0.44	1.00	Pr2	Yes	
Stone_SurfLoss	Chipped	133.0	159.0	Chp	0.20	0.00	Pr2	Yes	
Stone_SurfLoss	Chipped	133.0	139.0	Chp	0.56	1.00	Pr2	Yes	
Stone_SurfLoss	Chipped	133.0	148.0	Chp	0.44	1.00	Pr2	Yes	
Stone_SurfLoss	Chipped	134.0	187.0	Chp	0.91	0.00	Pr2	Yes	
Stone_SurfLoss	Chipped	134.0	146.0	Chp	0.37	1.00	Pr2	Yes	
Stone_SurfLoss	Chipped	136.0	185.0	Chp	1.05	1.00	Pr2	Yes	
Stone_SurfLoss	Chipped	137.0	157.0	Chp	0.32	0.00	Pr2	Yes	
Stone_SurfLoss	Chipped	141.0	185.0	Chp	0.66	2.00	Pr2	Yes	
Stone_SurfLoss	Chipped	141.0	140.0	Chp	1.96	2.00	Pr2	Yes	
Stone_SurfLoss	Chipped	150.0	140.0	Chp	1.88	1.00	Pr2	Yes	
Stone_SurfLoss	Chipped	153.0	122.0	Chp	6.21	2.00	Pr2	No	
Stone_SurfLoss	Chipped	155.0	183.0	Chp	0.22	1.00	Pr2	Yes	
Stone_SurfLoss	Chipped	156.0	188.0	Chp	1.03	1.00	Pr2	Yes	
Stone_SurfLoss	Chipped	167.0	142.0	Chp	0.46	0.00	Pr2	Yes	
Stone_SurfLoss	Chipped	172.0	158.0	Chp	0.13	0.00	Pr2	Yes	
Stone_SurfLoss	Chipped	204.0	151.0	Chp	27.24	1.00	Pr2	Yes	at joints
Stone_SurfLoss	Chipped	230.0	158.0	Chp	0.27	1.00	Pr2	Yes	
Stone_SurfLoss	Chipped	234.0	192.0	Chp	0.99	1.00	Pr2	Yes	
Stone_SurfLoss	Chipped	234.0	180.0	Chp	16.34	1.00	Pr2	Yes	at joints

Block	Condition	X	Y	Code	Amount	Severity	Priority	Photo	Note
Stone_SurfLoss	Chipped	237.0	182.0	Chp	0.49	1.00	Pr2	Yes	
Stone_SurfLoss	Chipped	241.0	164.0	Chp	0.35	0.00	Pr2	Yes	
Stone_SurfLoss	Chipped	242.0	188.0	Chp	0.28	1.00	Pr2	Yes	
Stone_SurfLoss	Chipped	243.0	190.0	Chp	0.32	1.00	Pr2	Yes	
Stone_SurfLoss	Chipped	243.0	154.0	Chp	0.56	0.00	Pr2	Yes	
Stone_SurfLoss	Chipped	244.0	163.0	Chp	0.44	2.00	Pr2	Yes	
Stone_SurfLoss	Chipped	248.0	184.0	Chp	0.18	1.00	Pr2	Yes	
Stone_SurfLoss	Chipped	257.0	189.0	Chp	0.71	1.00	Pr2	Yes	
Stone_SurfLoss	Chipped	324.0	157.0	Chp	0.08	1.00	Pr2	Yes	
Stone_SurfLoss	Chipped	328.0	14.0	Chp	3.03	1.00	Pr2	Yes	
Stone_SurfLoss	Chipped	332.0	185.0	Chp	0.99	1.00	Pr2	Yes	
Stone_SurfLoss	Chipped	334.0	182.0	Chp	1.46	1.00	Pr2	Yes	
Stone_SurfLoss	Chipped	335.0	30.0	Chp	0.36	3.00	Pr2	Yes	
Stone_SurfLoss	Chipped	335.0	105.0	Chp	0.16	1.00	Pr2	Yes	
Stone_SurfLoss	Chipped	335.0	107.0	Chp	0.09	1.00	Pr2	Yes	
Stone_SurfLoss	Chipped	341.0	150.0	Chp	0.38	1.00	Pr2	Yes	
Stone_SurfLoss	Chipped	341.0	143.0	Chp	0.09	1.00	Pr2	Yes	
Stone_SurfLoss	Chipped	341.0	181.0	Chp	7.38	0.00	Pr2	Yes	
Stone_SurfLoss	Chipped	341.0	21.0	Chp	0.24	0.00	Pr2	Yes	
Stone_SurfLoss	Chipped	341.0	141.0	Chp	0.14	1.00	Pr2	Yes	
Stone_SurfLoss	Chipped	342.0	158.0	Chp	0.37	3.00	Pr2	Yes	
Stone_SurfLoss	Chipped	344.0	186.0	Chp	0.14	0.00	Pr2	Yes	
Stone_SurfLoss	Chipped	344.0	173.0	Chp	0.39	1.00	Pr2	Yes	
Stone_SurfLoss	Chipped	345.0	171.0	Chp	0.18	0.00	Pr2	Yes	
Stone_SurfLoss	Chipped	345.0	194.0	Chp	0.20	2.00	Pr2	Yes	
Stone_SurfLoss	Chipped	346.0	78.0	Chp	0.10	0.00	Pr2	Yes	
Stone_SurfLoss	Chipped	346.0	162.0	Chp	0.17	0.00	Pr2	Yes	
Stone_SurfLoss	Chipped	346.0	160.0	Chp	0.27	0.00	Pr2	Yes	
Stone_SurfLoss	Chipped	351.0	102.0	Chp	0.29	2.00	Pr2	Yes	
Stone_SurfLoss	Chipped	351.0	122.0	Chp	0.29	1.00	Pr2	Yes	
Stone_SurfLoss	Chipped	352.0	184.0	Chp	0.07	0.00	Pr2	Yes	
Stone_SurfLoss	Chipped	353.0	119.0	Chp	0.42	1.00	Pr2	Yes	
Stone_SurfLoss	Chipped	355.0	72.0	Chp	0.43	1.00	Pr2	Yes	
Stone_SurfLoss	Chipped	355.0	181.0	Chp	0.32	1.00	Pr2	Yes	

Block	Condition	X	Y	Code	Amount	Severity	Priority	Photo	Note
Stone_SurfLoss	Chipped	356.0	37.0	Chp	0.06	1.00	Pr2	Yes	
Stone_SurfLoss	Chipped	356.0	137.0	Chp	0.50	2.00	Pr2	Yes	
Stone_SurfLoss	Chipped	356.0	185.0	Chp	0.07	1.00	Pr2	Yes	
Stone_SurfLoss	Chipped	356.0	187.0	Chp	0.03	2.00	Pr2	Yes	
Stone_SurfLoss	Chipped	356.0	174.0	Chp	0.31	1.00	Pr2	Yes	
Stone_SurfLoss	Chipped	357.0	191.0	Chp	0.29	1.00	Pr2	Yes	
Stone_SurfLoss	Chipped	374.0	12.0	Chp	1.20	1.00	Pr2	Yes	
Stone_SurfLoss	Eroded	135.0	45.0	Erd	2.08	4.00	Pr2	Yes	
Stone_SurfLoss	Friable	41.0	180.0	Fri	0.68	1.00	Pr2	Yes	
Stone_Unsecured	Missing	857.0	202.0	M	3.82	NaN	Pr2	Yes	
TerraCotta_Coating	Coating Failed	388.0	151.0	CtF	0.11	NaN	Pr2	Yes	
TerraCotta_Crack	Single unit	10.0	175.0	C	0.34	0.00	Pr2	Yes	
TerraCotta_Crack	Single unit	10.0	155.0	C	0.45	0.00	Pr2	Yes	
TerraCotta_Crack	Single unit	11.0	173.0	C	1.46	0.00	Pr2	Yes	
TerraCotta_Crack	Single unit	11.0	160.0	C	0.56	1.00	Pr2	Yes	
TerraCotta_Crack	Single unit	13.0	175.0	C	0.26	0.00	Pr2	Yes	
TerraCotta_Crack	Single unit	13.0	163.0	C	0.69	1.00	Pr2	Yes	
TerraCotta_Crack	Single unit	16.0	164.0	C	0.60	1.00	Pr2	Yes	
TerraCotta_Crack	Single unit	86.0	176.0	C	0.51	0.00	Pr2	Yes	
TerraCotta_Crack	Single unit	88.0	177.0	C	0.71	0.00	Pr2	Yes	
TerraCotta_Crack	Single unit	88.0	151.0	C	1.36	0.00	Pr2	Yes	
TerraCotta_Crack	Single unit	89.0	157.0	C	1.82	0.00	Pr2	Yes	
TerraCotta_Crack	Single unit	90.0	133.0	C	1.38	1.00	Pr2	Yes	
TerraCotta_Crack	Single unit	115.0	165.0	C	0.28	0.00	Pr2	Yes	
TerraCotta_Crack	Single unit	287.0	111.0	C	0.70	0.00	Pr2	Yes	
TerraCotta_Crack	System units and joints	10.0	173.0	CUJ	0.29	2.00	Pr2	Yes	
TerraCotta_Displacement	Horizontal	392.0	153.0	Hor	NaN	3.00	Pr2	Yes	
TerraCotta_SoilStain	Biological	383.0	171.0	Bio	0.51	NaN	Pr3	Yes	
TerraCotta_Spall	Missing	9.0	173.0	M	NaN	5.00	Pr2	Yes	
TerraCotta_Spall	Missing	10.0	154.0	M	NaN	3.00	Pr2	Yes	
TerraCotta_Spall	Missing	13.0	173.0	M	NaN	3.00	Pr2	Yes	
TerraCotta_Spall	Missing	15.0	164.0	M	NaN	2.00	Pr2	Yes	
TerraCotta_Spall	Missing	88.0	111.0	M	NaN	4.00	Pr2	Yes	

Block	Condition	X	Y	Code	Amount	Severity	Priority	Photo	Note
TerraCotta_Spall	Missing	309.0	158.0	M	NaN	4.00	Pr2	Yes	
TerraCotta_Spall	Missing	309.0	173.0	M	NaN	4.00	Pr2	Yes	
TerraCotta_Spall	Missing	385.0	159.0	M	NaN	3.00	Pr2	Yes	
TerraCotta_Spall	Missing + Steel	9.0	164.0	MS	NaN	12.00	Pr2	Yes	
TerraCotta_SurfLoss	Chipped	117.0	169.0	Chp	0.05	3.00	Pr2	Yes	
TerraCotta_SurfLoss	Glaze loss	111.0	149.0	Glz	0.28	0.50	Pr2	Yes	
TerraCotta_SurfLoss	Glaze loss	111.0	169.0	Glz	0.10	0.50	Pr2	Yes	
TerraCotta_SurfLoss	Glaze loss	113.0	161.0	Glz	0.23	0.50	Pr2	Yes	
TerraCotta_SurfLoss	Glaze loss	114.0	159.0	Glz	0.06	0.50	Pr2	Yes	
TerraCotta_SurfLoss	Glaze loss	114.0	163.0	Glz	0.23	0.50	Pr2	Yes	
TerraCotta_SurfLoss	Glaze loss	116.0	171.0	Glz	0.08	0.50	Pr2	Yes	
TerraCotta_SurfLoss	Glaze loss	116.0	158.0	Glz	2.67	1.00	Pr2	Yes	
TerraCotta_SurfLoss	Glaze loss	116.0	161.0	Glz	1.32	1.00	Pr2	Yes	
TerraCotta_SurfLoss	Glaze loss	215.0	147.0	Glz	0.11	0.50	Pr2	Yes	
TerraCotta_SurfLoss	Glaze loss	216.0	166.0	Glz	0.02	0.50	Pr2	Yes	
TerraCotta_SurfLoss	Glaze loss	216.0	163.0	Glz	0.32	0.50	Pr2	Yes	
TerraCotta_SurfLoss	Glaze loss	217.0	157.0	Glz	0.57	0.50	Pr2	Yes	
TerraCotta_SurfLoss	Glaze loss	217.0	175.0	Glz	0.10	0.50	Pr2	Yes	
TerraCotta_SurfLoss	Glaze loss	218.0	163.0	Glz	0.10	1.00	Pr2	Yes	
TerraCotta_SurfLoss	Glaze loss	218.0	161.0	Glz	0.24	0.50	Pr2	Yes	
TerraCotta_SurfLoss	Glaze loss	313.0	164.0	Glz	0.06	0.50	Pr2	Yes	
TerraCotta_SurfLoss	Glaze loss	315.0	168.0	Glz	0.07	0.50	Pr2	Yes	
TerraCotta_SurfLoss	Glaze loss	315.0	160.0	Glz	0.11	0.50	Pr2	Yes	
TerraCotta_SurfLoss	Glaze loss	315.0	158.0	Glz	0.10	0.50	Pr2	Yes	
TerraCotta_SurfLoss	Glaze loss	317.0	168.0	Glz	0.20	0.50	Pr2	Yes	

TPAS® User's Manual

Guide to TPAS Annotated Drawings

Tablet PC Annotation System (TPAS®)

Updated August 2020

Quick Start

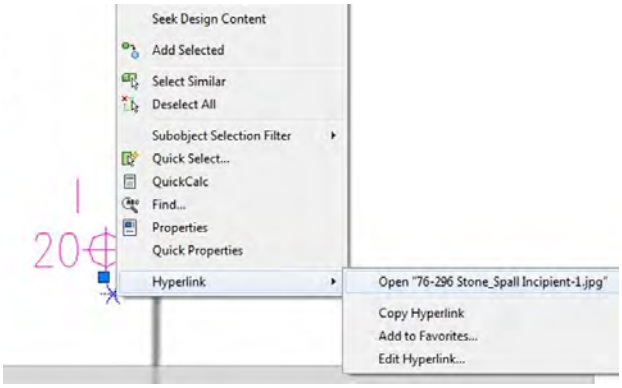
The Tablet PC Annotation System (TPAS®) allows direct input of both visual and numerical survey data into an AutoCAD drawing during investigations of buildings and other structures. The annotated drawings are delivered in three formats: paper drawings, PDF files, and AutoCAD DWG files. Survey photographs are delivered in both hard copy and digital format. **The most efficient way to view the survey photographs is to open them directly from the AutoCAD drawing**; if AutoCAD is not available, it is also possible to reference printed or digital photographs from the printed or PDF drawing. Both methods are discussed below.

Open digital photographs using the AutoCAD hyperlinks

Survey photographs can be opened and viewed from within the AutoCAD drawing using the hyperlinks, which appear as blue asterisks. Not all observations are photographed. Before using the hyperlinks for the first time (and each time the digital files are transferred to a new computer or the file folders are renamed) **you must edit the HYPERLINKBASE setting in order for AutoCAD to be able to locate the hyperlinked photographs.**

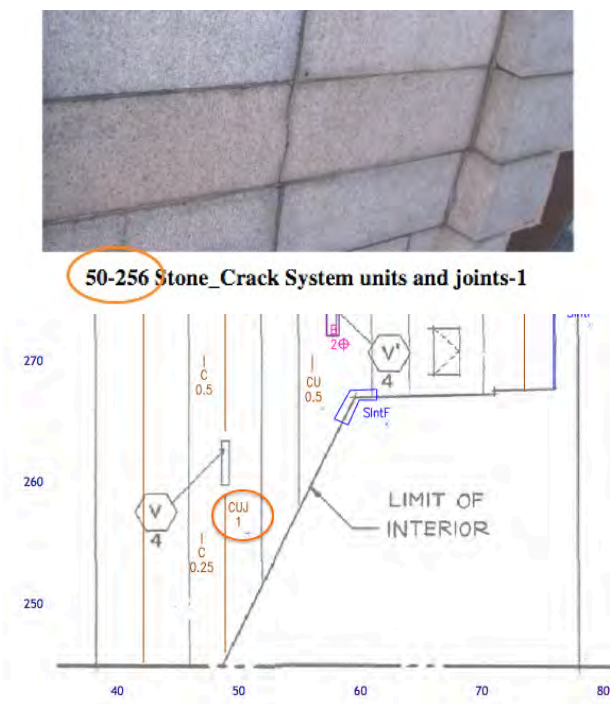
1. Make sure that all of the hyperlinked photos are in a single folder in the computer.
2. Type HYPERLINKBASE at the AutoCAD command line, and hit enter.
3. Open the folder containing the hyperlinked photos and copy the folder's file path from the Windows "Address Bar."
4. Paste the folder's file path into the command line, and hit enter.

In recent versions of AutoCAD, CTRL + click on the hyperlink to open the photograph. In older versions, select the link, then right-click anywhere in the drawing. Choose *Hyperlink* at the bottom of the drop-down menu, then choose *Open "filename.jpg."*



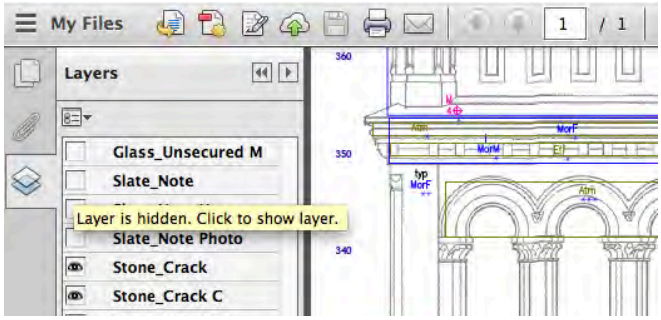
Use x-y coordinates to match photographs to condition locations

Each survey photograph is named with a unique X-Y coordinate (not necessarily the beginning of the photo name) corresponding to its location on the drawing. Photo locations are referenced by their X-Y coordinates within the report narrative. If AutoCAD is not available, use the X-Y coordinates to match annotated conditions on the drawings to the corresponding printed photographs.



Manage layers in the PDF drawing for selective viewing and printing

All of the TPAS annotations are grouped together on layers named for each material and condition, and these layers can be turned on and off for ease of viewing. Open the PDF drawing in Adobe Reader to access the layer management panel. Print additional copies of the drawing showing only the selected layers, if desired. The PDF drawings may be printed full-size (typically 24” x 36”) or reduced.



View AutoCAD drawings with raster background images

Raster images - taken from PDFs, JPEGs, or other file formats - are sometimes used as background references for TPAS drawings in AutoCAD. In order for the background to appear in the AutoCAD drawing, the referenced file must be stored in the same folder as the AutoCAD drawing. The referenced file is included on the deliverables DVD.

Open hyperlinks in the PDF drawing to view associated photographs

Survey photographs can be opened and viewed from within the PDF drawing using the hyperlinks, which appear as blue asterisks. Not all observations are photographed. Before using the hyperlinks for the first time (and each time digital files are transferred to a new computer or the file folders are renamed) you must download Adobe Acrobat Reader DC and maintain the file directory structure.

1. Download Adobe Acrobat Reader (free download) and follow the prompts to install.
2. Download the Photographs folder associated with the drawings you wish to view in its entirety.
3. Drag the drawing PDF into the Photographs folder and open the drawing PDF with Adobe Acrobat Reader DC.
4. Click on the asterisk (*) symbol below the condition you wish to view.
5. In the popup window select “Allow” then “Okay” and the photograph will open.

AutoCAD Features

This section addresses more advanced digital analysis of the TPAS survey data, for users familiar with basic AutoCAD features including model and paper space, layers, and blocks.

Print AutoCAD drawings

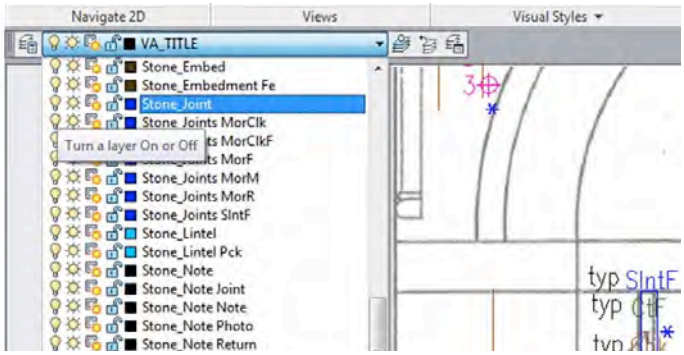
As-delivered printed drawings can be reproduced from the AutoCAD DWG file. All TPAS annotations are created in model space with a 9” text height, in order to plot at 3/32” in a 1/8” = 1’ drawing view.

TPAS drawings are plotted, or printed, from paper space layouts. Title block information and drawing keys are present directly in paper space—no external references are used. The x-y coordinates shown on the paper drawings are model space data visible through veiwports.

Manage layers in AutoCAD

All of the TPAS annotations are grouped together on layers named for each material and condition, and these layers can be turned on and off for ease of viewing. Photo hyperlinks are on the same layer as the condition with which they are associated.

Use the AutoCAD Layer Manager to turn layers on and off, and to freeze and thaw layers: use the LAYER command, choose Layer from the Format menu, or click the layer button on the Object Properties Toolbar.



In paper space, the “Current VP Freeze” option becomes available in the Layer Manager. This allows each viewport to have its own freeze/thaw layer settings, allowing the user to present multiple combinations of layers on a single print layout.

To freeze or thaw layers in a paper space viewport:

1. Select the viewport.
2. Set the viewport to Model by clicking the Model/Paper button at the bottom of the AutoCAD window (or by double clicking anywhere within the viewport boundaries).
3. Open the Layer Manager.
4. Use the “Current VP Freeze” column to freeze or thaw layers within the current viewport.

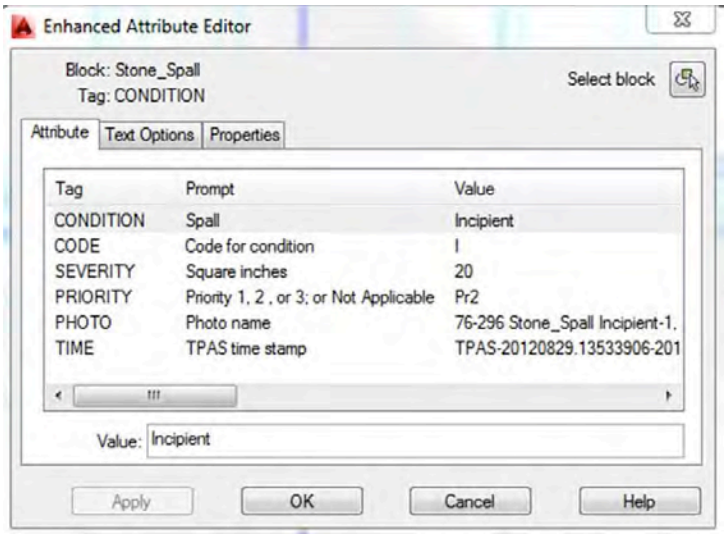
View and edit conditions data recorded in block attributes

All TPAS annotations consist of *blocks* - pre-drawn and reusable graphical symbols that represent distinct material conditions. *Block attributes* are text labels that add descriptive information to a block. During the investigation, quantitative data about survey conditions (e.g. crack widths or areas of soiling) are entered as block attributes.

Standard TPAS blocks contain seven attributes: Condition, Code, Severity, Amount, Priority, Photo, and Time. All blocks contain the Condition, Code, Photo, and Time attributes; all others are optional. In cases of observations that are not photographed, the Photo attribute will be blank.

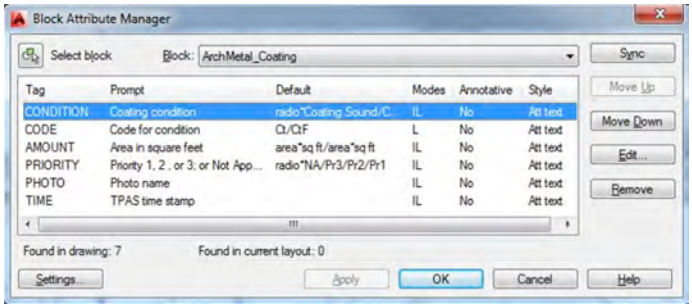
It is possible to add custom attributes to standard blocks, or to create entire custom blocks. For clarity, typically only the Code and Severity attributes are visible in the drawing; all others are set in Invisible Mode and do not print or appear in model or paper space.

To view and/or edit a block's attributes, open the Enhanced Attribute Editor command by double-clicking on a block reference containing attributes (or from the command line –EATTEDIT, from the Ribbon: Home tab>Block Panel>Edit Attributes, from the menubar: Modify>Object>Attribute> Single, or from the Modify II toolbar). The



Enhanced Attribute Editor can only access and edit an individual block reference and therefore will not affect block definitions. Attributes in Invisible Mode do appear in the editor, and are available for editing.

Global changes to blocks with attributes are made with the Block Editor, which accesses and edits block definitions. Launch the Block Editor from the command line—BEDIT, from the Ribbon: Home tab>Block panel>Block Editor, from the menubar: Tools>Block Editor or from the Modify II toolbar.



The Block Editor is not available in AutoCAD 2000/2002 or 2004. In those versions, use the Block Attribute Manager, which is launched from the command line—BATTMAN, the Modify menu: Modify>Object>Attribute>Block Attribute Manager or the Modify II toolbar.

Both methods are available in recent releases of AutoCAD. For in depth guidance, refer to the AutoCAD Help documentation.

Extract survey data from block attributes

Survey data in the form of block attributes can be exported to a spreadsheet or database application, in several file formats depending on the version of AutoCAD in which the extraction is performed.

For the purposes of survey annotations, the information extracted includes block names, X-Y insertion coordinates, and block attribute values. Use the commands ATTOUT (most efficient method,) DATAEXTRACTION or ATTEXT to extract block attribute values and other information.

The process of extracting data varies substantially among various AutoCAD releases. Refer to the AutoCAD Help documentation for specific capabilities and procedures.

Key to TPAS Codes
Tablet PC Annotation System®

Vertical Access LLC
PO Box 4135, Ithaca, NY 14852
Tel: 607 257 4049 / Fax: 607 257 2129

TPAS®, the Tablet PC Annotation System, utilizes a combination of graphical and text symbols to represent conditions. Each annotation includes a block, which is a pre-defined group of text and symbols containing data fields. The library of condition blocks for each building material includes one color-coded block for each general class of conditions. Within each class of conditions, there may be several sub-classes or specific conditions. Not all sub-classes apply to all materials. See Vertical Access' Conditions Glossary (http://www.vertical-access.com/glossary.html) for definitions of terminology and photographs illustrating each specific condition.

The classes and subclasses of conditions represented in the standard TPAS block libraries are shown in the table below.

Class of Condition	Subclass	Code	Materials
Biological Growth	Fungi	Fng	Wood
	Lower Plants	PlntLo	Wood
	Higher Plants	PlntHi	Wood
Coating	Coating Sound	Ct	Plaster, Stucco, Masonry, Membrane Roof, Metals, Wood
	Coating Failed	CtF	Plaster, Stucco, Masonry, Membrane Roof, Metals, Wood
Connection	Fastener Failed	FstF	Metals
	Flange Failed	FlF	Metals
	Weld Failed	WldF	Metals
Corrosion	Fastener Rusted	FstRst	Metals

Class of Condition	Subclass	Code	Materials
	Surface Corrosion	Srf	Metals
	Pitted Corrosion	Pit	Metals
	Perforated Corrosion	Prf	Metals
Crack/Checked	Crack	C	Metals, Glass, Plaster, Stucco, Wood
	Checked	Chk	Wood
	Crazing	Crz	Masonry
	Single Unit	C	Masonry
	System Units	CU	Masonry
	System Joints	CJ	Masonry
	System Units & Joints	CUJ	Masonry
	Repair Sound	CRpr	Plaster, Stucco, Masonry
	Repair Failed	CRprF	Plaster, Stucco, Masonry
	Repair Removed	CRprR	Plaster, Stucco, Masonry
Damaged	Bent	Bnt	Metals
	Dented	Dnt	Metals
	Punctured	Pnc	Membrane Roof, Metals
	Torn	Trn	Membrane Roof, Metals
Damage/Infestation	Insect	Ins	Wood
	Mammal	Mam	Wood
Debonded	Debonded	Dbnd	Membrane Roof
	Debonded + Water	DbndW	Membrane Roof
	Blister	Bls	Membrane Roof
Deteriorated	Abraded	Abr	Wood
	Crack	C	Membrane Roof

Class of Condition	Subclass	Code	Materials
	Crazing	Crz	Membrane Roof
	Rotten	Rot	Wood
	Weathered	Wthr	Wood
Displacement	Horizontal	Hor	Masonry
	Vertical	Ver	Masonry
	Horizontal & Vertical	HV	Masonry
	Bulge	Blg	Glass
Embedment	Ferrous	Fe	Stucco, Masonry
	Aluminum	Al	Stucco, Masonry
	Copper	Cu	Stucco, Masonry
	Wood	Wood	Stucco, Masonry
	Plastic	Pls	Stucco, Masonry
	Other	Otr	Stucco, Masonry
Lath	Lath Failed	LthF	Plaster, Stucco
Lintels Rusted	Surface Rust	Srf	Masonry
	Pack Rust	Pck	Masonry
Seams and Joints	Mortar Caulked	MorClk	Masonry
	Mortar Caulked Failed	MorClkF	Masonry
	Mortar Failed	MorF	Masonry
	Mortar Missing	MorM	Masonry
	Mortar Removed	MorR	Masonry
	Sealant Failed	SlntF	Glass, Plaster, Stucco, Masonry, Metals, Wood
	Ornament Joint Failed	OrnJtF	Plaster
	Panel Joint Failed	PnlJtF	Plaster

Class of Condition	Subclass	Code	Materials
	Putty Failed	PtyF	Glass
	Gasket Failed	GskF	Glass
	Insulated Glazing Unit Failed	IGUF	Glass
	Fastener Failed	FstF	Membrane Roof, Metals
	Folded Seam Failed	FldF	Metals
	Seam Failed	SmF	Membrane Roof
	Solder Failed	SldF	Metals
Previous Repairs	Dutchman Sound	D	Masonry, Wood
	Dutchman Failed	DF	Masonry, Wood
	Dutchman Removed	DR	Masonry, Wood
	Patch Sound	P	Plaster, Stucco, Masonry, Membrane Roof, Metals, Wood
	Patch Failed	PF	Plaster, Stucco, Masonry, Membrane Roof, Metals, Wood
	Patch Removed	PR	Plaster, Stucco, Masonry, Membrane Roof, Metals, Wood
	Replacement	Rpl	Plaster, Stucco, Masonry, Membrane Roof, Metals, Wood
	Consolidation Sound	Con	Plaster, Stucco
	Consolidation Failed	ConF	Plaster, Stucco
	Stabilization Sound	Stb	Plaster, Stucco
	Stabilization Failed	StbF	Plaster, Stucco
Soiled or Stained	Atmospheric	Atm	Plaster, Stucco, Masonry, Membrane Roof
	Biological	Bio	Plaster, Stucco, Masonry
	Bituminous	Bit	Plaster, Stucco, Masonry, Membrane Roof, Wood

Class of Condition	Subclass	Code	Materials
	Black Crusts	Blck	Masonry
	Cementitious	Cem	Stucco, Masonry, Membrane Roof, Wood
	Copper	Cpr	Plaster, Stucco, Masonry, Membrane Roof
	Efflorescence	Eff	Stucco, Masonry
	Guano	Gua	Plaster, Stucco, Masonry, Membrane Roof, Wood
	Leached Salts	Lch	Stucco, Masonry
	Paint	Pnt	Plaster, Stucco, Masonry, Membrane Roof, Wood
	Rust	Rst	Plaster, Stucco, Masonry, Membrane Roof, Wood
Spalls	Bonded	B	Masonry
	Incipient	I	Masonry
	Missing	M	Masonry
	Missing + Steel	MS	Masonry
	Removed	R	Masonry
	Removed + Steel	RS	Masonry
	Hazardous	Haz	Masonry
Surface Loss	Chipped	Chp	Masonry
	Delaminated	Dlm	Masonry
	Eroded	Erd	Masonry
	Exfoliated	Exf	Masonry
	Friable	Fri	Masonry
	Glaze Loss	Glz	Masonry
Unsecured	Fastener Failed	FstF	Wood
	Hazardous	Haz	Glass, Plaster, Stucco, Metals, Masonry, Wood

Class of Condition	Subclass	Code	Materials
	Hollow	H	Plaster, Stucco, Masonry
	Loose	L	Glass, Plaster, Stucco, Metals, Masonry, Wood
	Missing	M	Glass, Plaster, Stucco, Metals, Masonry, Wood
	Removed	R	Glass, Plaster, Stucco, Metals, Masonry, Wood
Water Damage	Water Damage	WDmg	Plaster
Water Stain	Water Stain	WStn	Plaster