

MINUTES OF THE MEETING OF THE
GOLDSBORO HISTORIC DISTRICT COMMISSION
JUNE 3, 2025

The Goldsboro Historic District Commission of the City of Goldsboro, North Carolina, met in Regular Session in the Large Conference Room, City Hall Addition, 200 North Center Street, at 5:30 p.m. on June 3, 2025

Present: Mr. Fritz Knack, Presiding
Mr. John Peacock, Vice Chair
Mr. Richard Best
Mr. Terry Cottle
Ms. Judith McMillen
Ms. Nancy Delia
Mr. David Archibald

Manning Musgrave (ALT)

Also Present: Kenny Talton, Assistant Planning Director
Paul Saylor, Planner I/Preservation Planner
Ron Lawrence, City Attorney
Holly Jones, Planning Executive Assistant

Absent: Derek Roche (ALT)

Mr. Knack began the meeting at 5:30 p.m.

Approval of Minutes

Mr. Archibald asked that Mr. Cottle's statement on page 2 be corrected to state 'not incongruous', and to add quotation marks to separate what was being asked, for better clarification. Mr. Archibald made a motion to approve the minutes of the Regular Meeting of February 4, 2025, with the requested change. The motion was seconded by Mr. Cottle and unanimously carried.

New Business

CA-08-25 – 301 S. John St./108 E. Spruce St.: The applicant is requesting a Certificate of Appropriateness for a permit required for exterior changes to the one-story, north side of the building facing E. Spruce Street (108 E. Spruce St.). 301 S. John St. is currently zoned in the Central Business District (CBD). The property is located within the City of Goldsboro's Local Historic Preservation Overlay District. The property considered for approval is located on the southwest corner of S. John and E. Spruce St. and is further identified as NCPIN# 2599-84-9658.

The item was presented by Paul Saylor, Planner I/Preservation Planner, after being properly sworn in. (See Exhibit A).

Mr. Knack opened the public hearing. The following people spoke, after being properly sworn in:

1. Darian Grantham, applicant, came forward to answer any questions.

Mr. Peacock thanked Mr. Grantham for taking care of the home and asked if the whole property would be painted. Mr. Grantham confirmed that he would.

Mr. Cottle asked if he planned to live in the home. Mr. Grantham confirmed that he likely would.

No one else spoke and the public hearing was closed.

Mr. Peacock made a motion to approve CA-08-25. The motion was seconded by Mr. Archibald and unanimously carried.

CA-09-25 – 204 E. Chestnut Street/200 S. John St.: The applicant is requesting a Certificate of Appropriateness for a permit required for the deconstruction of the existing towers of St. Paul Methodist Church and new construction in accordance with the design guidelines of downtown Goldsboro. The church is currently zoned in the Central Business District (CBD). The property is located within the City of Goldsboro's Local Historic Preservation Overlay District. The property considered for approval is located on the southeast corner of S. John and E. Chestnut St. and is further identified as NCPIN# 2599-95-3044.

The item was presented by Paul Saylor, Planner I/Preservation Planner. (See Exhibit B).

Mr. Knack opened the public hearing. The following people spoke after being properly sworn in:

1. Kent Yarborough, SKA Consulting Engineers, Inc., reviewed a PowerPoint and the Investigation Report prepared for the Church. (See Exhibit C). He discussed the original mortar and construction of the towers. He discussed SKA's assessment of the repairs needed and the options that had been considered by the church. He concluded that, due to previous damage and rebuilding, repairing the towers would require taking them down to the bottom where it was not deteriorated and completely reconstructing them.

Mr. Peacock noticed that some of the wood looked wet, and asked what would happen if they found surprises when they got into the project, as he did not see that mentioned in the report. Mr. Yarborough stated that this was not addressed because the report was based on taking the towers all the way down, which would remove or replace all of that. He also mentioned that damage to the roof was causing the walls to bow out.

2. Michael Richter, representing St. Paul Methodist Church, addressed that the last time any repair was done to the roof appears to have been in 1904. He further discussed the effect this roof damage was having, and the repairs planned on the interior of the church. He stated that these repairs were not anticipated to have any change or effect on the exterior of the church.
3. Josh Bryce, also representing St. Paul Methodist Church, stated that they have repaired the roof as much as possible. He further stated that the church is no longer able to get a roofer to go on the roof to make any repairs, due to the danger.

Mr. Best asked for clarification of the request; if the church was asking to redo the towers or to tear them down and reconstruct the exterior based on the drawings. Mr. Richter stated that the request was to remove the towers and go with the alternate elevation.

Mr. Peacock asked if they have any hard numbers. Mr. Richter stated that they had a budget, not including any other roof work; just to deconstruct the towers and reconstruct those areas of the church was at 2.5 million dollars.

Mr. Best asked if they had a number on rebuilding the towers, and how much more it was. Mr. Richter stated that they did not have a hard number, but it was hundreds of thousands more.

Ms. Delia asked if the new roof pitch would match the existing. Mr. Richter confirmed it is the same pitch.

Mr. Peacock stated that the vestibules would be smaller if the building was made flush when the towers were removed, and Ms. Delia asked why they would not leave the interesting architecture. Mr. Richter stated that the vestibules were hardly ever used, and Mr. Bryce stated they were made flush for cost reasons. Mr. Peacock asked about the stained glass. Mr. Richter stated they would try to salvage and reuse what they could.

No one else spoke and the public hearing was closed.

Mr. Saylor stated the Commission had the option to table the request, and send it up to the state to get a recommendation from the Senior Restoration Specialist at the State Historic Preservation Office (SHPO) in Raleigh; the Commission would not have to listen to the recommendation.

Mr. Peacock asked what he had seen in the past; if the state would send their own engineer. Mr. Saylor answered that the state would not send their own engineer, and he had no experience to this extent in Goldsboro.

Mr. Knack reopened the public hearing to allow the Commission to ask further questions of the speakers.

Mr. Archibald asked if there was a certain amount of time the church had to get this project done. Mr. Richter stated it was more a question of safety; the area would need to be quarantined off if there was a hurricane or hurricane force winds.

Mr. Bryce stated that the congregation was making a hard choice of rebuilding the towers, or stabilizing the rest of the building.

Mr. Peacock asked for confirmation that they would try to save the stained glass in the towers. Mr. Richter stated that they would try to save them and work them into the new building.

No one else spoke and the public hearing was closed again.

Ms. Delia asked if it could be relayed to the state about the potential safety issue to hurry them up in their recommendation. Mr. Saylor stated we could, but their budget had been cut as well, so they would do their best.

Mr. Archibald asked if the Commission was allowed to deny the request, as long as it is within our guidelines. Mr. Knack stated that the Commission has the power to delay demolition for so long, but not deny; it is a matter of what the Commission can do to preserve history along the way.

Mr. Cottle made a motion to table the item until such time that the State Preservation Board could provide a recommendation. The motion was seconded by Mr. Peacock and unanimously carried.

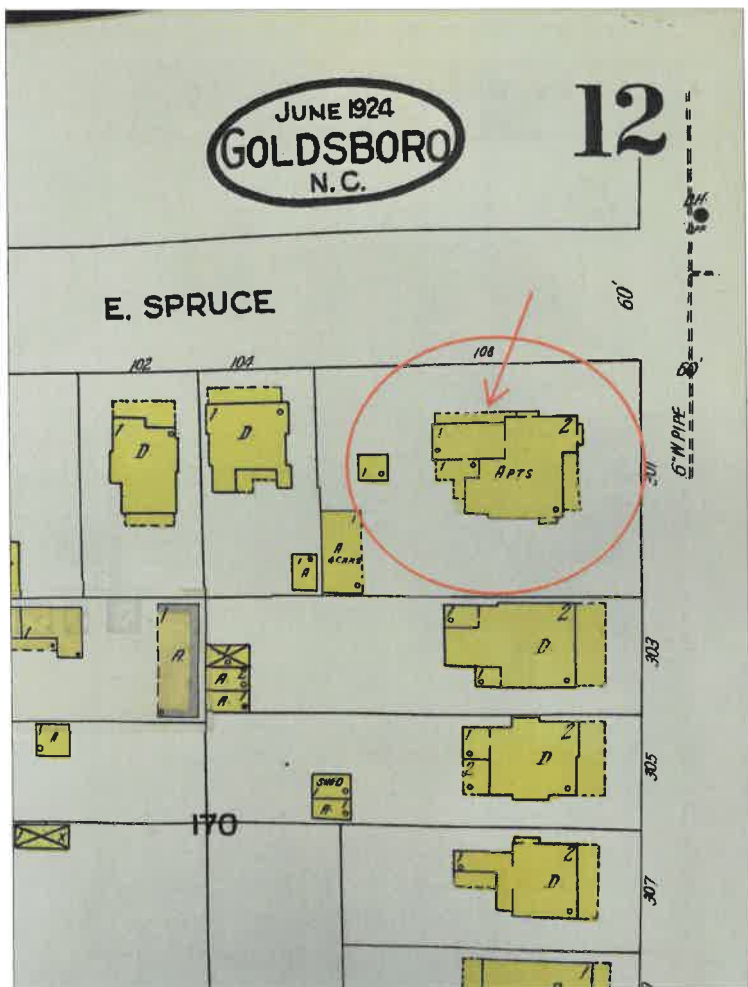
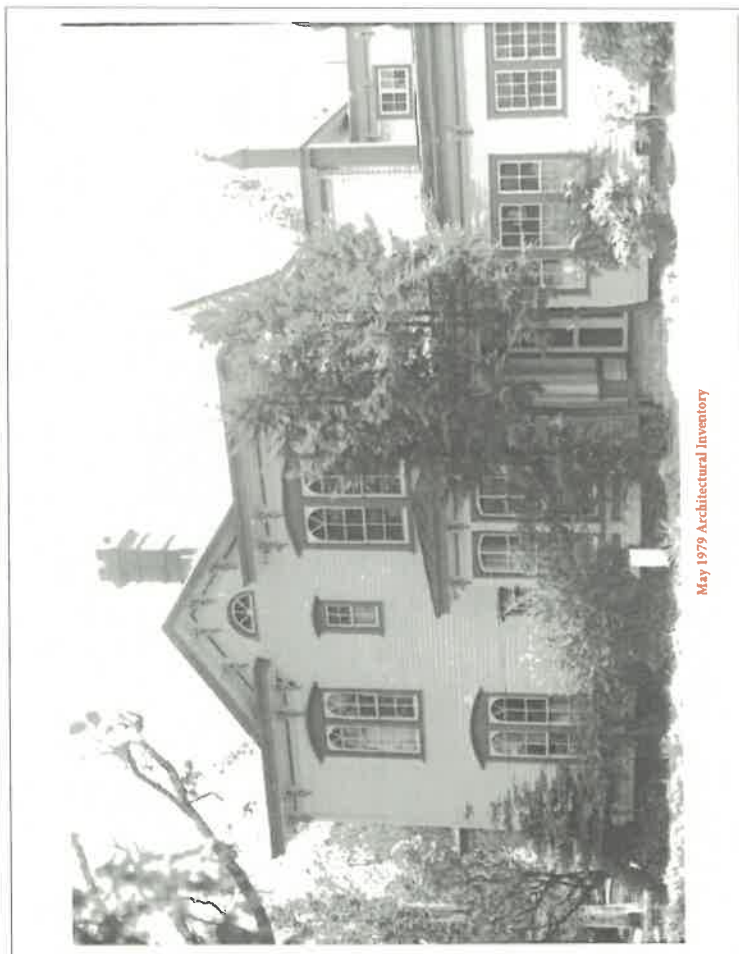
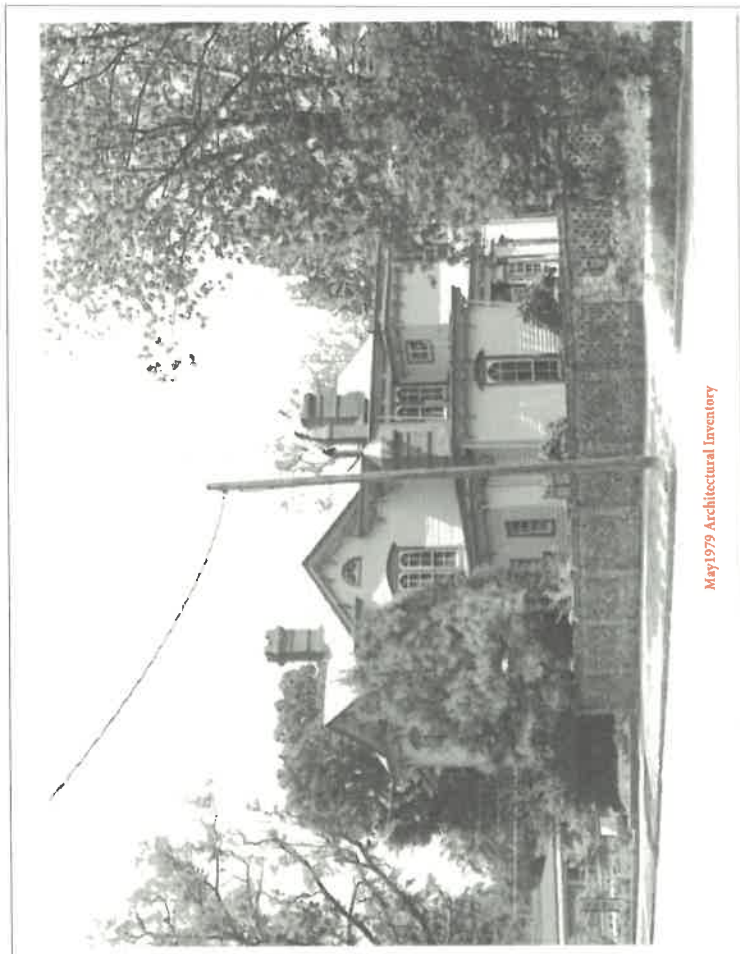
There being no further business, Mr. Knack asked for a motion to adjourn the meeting. Mr. Cottle made the motion, and it was seconded by Mr. Peacock. The motion was unanimously carried, and the meeting was adjourned at 6:30 p.m.



Fritz Knack
Chair



Holly Jones
Planning Executive Assistant



Meridian Engineering, LLC
 48 S. GARDNER STREET
 GOLDSBORO, N.C. 27530
 Tel: 1-800-457-1887
 Fax: 1-800-457-1887
 www.meridianeng.com

PROJECT FOR:
 DAVAN GRANITZMAN
 301 S. JOHN STREET
 GOLDSBORO, N.C. 27530

PROJECT NO.:
 18-001

DATE:
 08/20/2018

SCALE:
 AS SHOWN

PROJECT TITLE:
 EXTERIOR ELEVATION

EXTERIOR ELEVATION
 PROJECT NO. 18-001

Meridian Engineering, LLC
 48 S. GARDNER STREET
 GOLDSBORO, N.C. 27530
 Tel: 1-800-457-1887
 Fax: 1-800-457-1887
 www.meridianeng.com



Meridian Engineering, LLC
 48 S. GARDNER STREET
 GOLDSBORO, N.C. 27530
 Tel: 1-800-457-1887
 Fax: 1-800-457-1887
 www.meridianeng.com

PROJECT FOR:
 DAVAN GRANITZMAN
 301 S. JOHN STREET
 GOLDSBORO, N.C. 27530

PROJECT NO.:
 18-001

DATE:
 08/20/2018

SCALE:
 AS SHOWN

PROJECT TITLE:
 EXTERIOR ELEVATION

EXTERIOR ELEVATION
 PROJECT NO. 18-001

Meridian Engineering, LLC
 48 S. GARDNER STREET
 GOLDSBORO, N.C. 27530
 Tel: 1-800-457-1887
 Fax: 1-800-457-1887
 www.meridianeng.com

Meridian Engineering, LLC
 48 S. GARDNER STREET
 GOLDSBORO, N.C. 27530
 Tel: 1-800-457-1887
 Fax: 1-800-457-1887
 www.meridianeng.com

PROJECT FOR:
 DAVAN GRANITZMAN
 301 S. JOHN STREET
 GOLDSBORO, N.C. 27530

PROJECT NO.:
 18-001

DATE:
 08/20/2018

SCALE:
 AS SHOWN

PROJECT TITLE:
 EXTERIOR ELEVATION

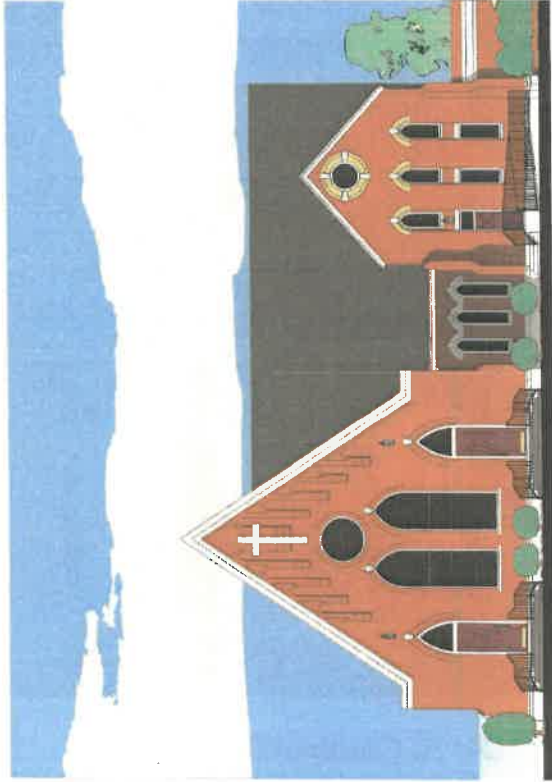
EXTERIOR ELEVATION
 PROJECT NO. 18-001

Meridian Engineering, LLC
 48 S. GARDNER STREET
 GOLDSBORO, N.C. 27530
 Tel: 1-800-457-1887
 Fax: 1-800-457-1887
 www.meridianeng.com

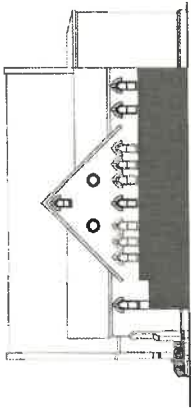


From Soho St.
Looking North

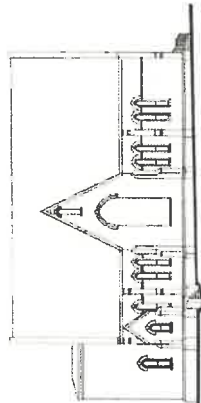
Side



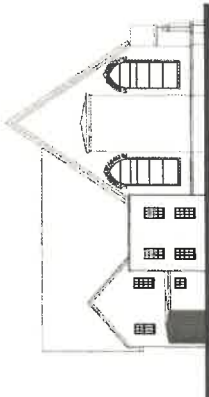
Saint Paul Methodist Church
Goldboro, North Carolina
Proposed Front Elevation



Proposed Right Elevation View
Scale: 1/8" = 1'-0"



Proposed Left Elevation View
Scale: 1/8" = 1'-0"



Proposed Rear Elevation View
Scale: 1/8" = 1'-0"



Saint Paul Methodist Church
Goldboro, North Carolina
Existing Elevation Views

St Paul Church – Proposed Exterior Materials List

The exterior materials to be used on the St Paul Sanctuary renewal project will be intended to match the existing materials in materials, colors etc. to the extent practicable.

-Exposed Masonry: If structurally sound, the intent is to reuse the bricks from the existing towers. If the existing brick cannot be used new brick will be selected to match the existing. Note, the original construction utilized different types of bricks as they do not match.

-Shingles: The existing asphalt shingles are relatively new, and any new shingles will be selected to best match the existing.

- Exterior trim – Any new exterior trim required will match existing in color and construction to the extent practicable.

-Entrances: The new entrances will be designed to replicate the style and materials of the existing entrances

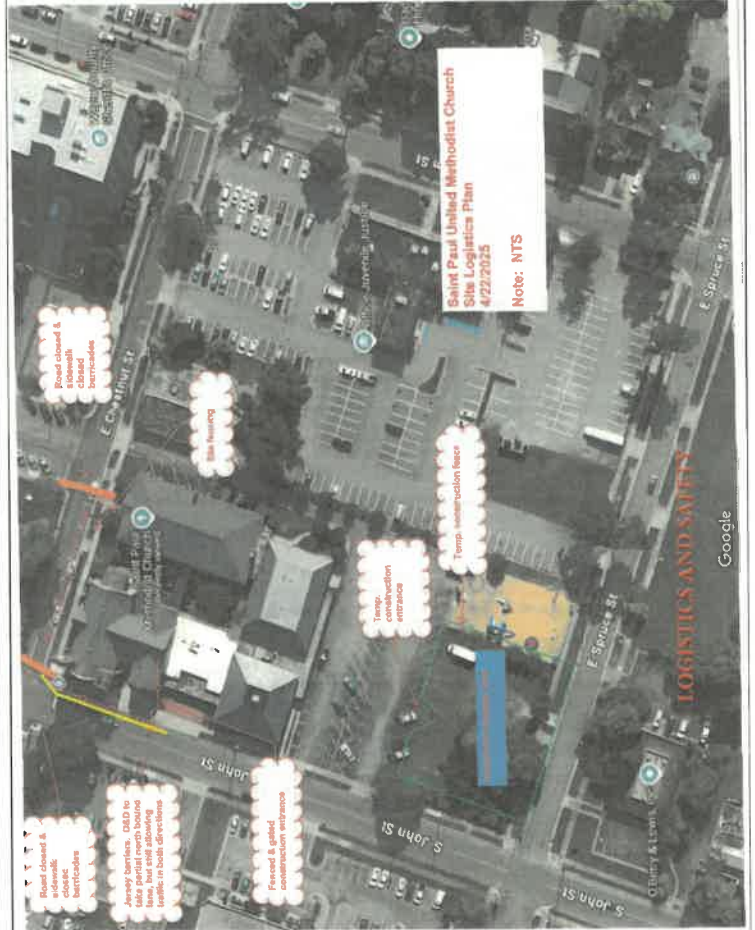
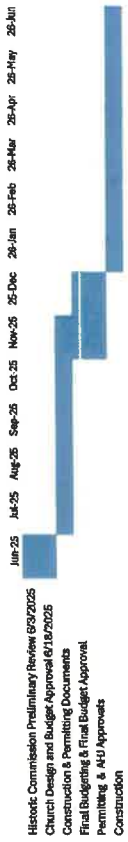
- Exterior Doors and trim will be custom wood in the same color as the existing

- Stained Glass: If possible, the existing stained glass above the existing doors will be refurbished and reused above the new doors.

- Entrance steps: If possible, the granite entrance steps will be reused for the new steps.

- Handrails: Handrails will be custom metal constructed and painted to match to match the existing handrails.

St Paul Methodist Church -Renewal Project - Timeline



Sanctuary Building Brick Masonry Investigation Report

Saint Paul Methodist Church
204 East Chestnut Street
Goldensboro, North Carolina 27530



SKA Project No. 230217.0

Prepared by:
SKA Consulting Engineers, Inc.
North Carolina License No. F-0508

December 21, 2023

Mason E. Undercoffer, E.I.



Kent S. Yarborough, P.E.

QUALITY. INTEGRITY. INNOVATION.

Structural Mechanical-Electrical-Plumbing-Fire Protection Building Solutions-Roofing-Waterproofing



Table of Contents

Report Section	Pages
Executive Summary	03 – 05
Scope of Building Envelope Condition Assessment	05 – 06
Background Information	06
General Visual Observations	07 – 18
Forensic Water Testing	
ASTM E2128 Field Water Testing	19 – 25
ASTM C1601 Water Penetration Testing of Masonry	25 – 27
Rim Tube Field Water Testing	27 – 29
Exterior Cladding Field Excavations	30 – 39
Qualifications	40



EXECUTIVE SUMMARY

At several locations along the perimeter of the structure, water is infiltrating into the interior conditioned space through the exterior multi-wythe brick masonry walls of the Sanctuary Building of Saint Paul Methodist Church. This infiltration has led to distress and damage of the plaster finish(es) applied to exterior brick masonry along the perimeter of the Sanctuary. Water intrusion through the multi-wythe brick masonry walls was confirmed by SKA Consulting Engineers, Inc. (SKA) while performing field water testing at various exterior elevations/areas of the Sanctuary. It is our understanding that construction of the Saint Paul Methodist Church Sanctuary Building was completed circa 1883.

During our condition assessment, the following regarding the existing construction of the exterior multi-wythe brick masonry walls of the Sanctuary Building was observed:

- The original brick and mortar construction of the multi-wythe masonry exhibits varying stages of deterioration around the perimeter of the Sanctuary Building.
- Deterioration was observed along the interior of the northwest tower (located at the corner of East Chestnut Street and South John Street). Along the interior wythe of the exterior brick masonry walls of the tower, mortar originally installed between the brick masonry units is no longer present at several locations. Where present, the original mortar has a sandy texture, and can be removed by scratching the mortar surface. SKA was unable to review the interior of the southwest tower (to the right of the South John Street Sanctuary entrance).
- At the locations where field water testing was completed, water penetrated the exterior brick masonry and infiltrated the interior of the exterior walls. Field water testing was performed by applying water to the exterior of the multi-wythe masonry walls utilizing a water spray rack.
- Surface mounted and sealed step flashings are installed at various roof-to-wall transitions. Due to the leakage through the full depth of the masonry walls. These flashings appear to be ineffective at collecting and redirecting water infiltration to the exterior of the brick masonry (and subsequently onto the exterior surface of the adjacent roof(s)).
- Along the top surfaces of the battlement parapets of the northwest tower and southwest (along South John Street), a cementitious parge coat was applied to prevent water infiltration. However, the parging is cracked due to differential movement between the various construction materials (e.g., clay brick masonry, cementitious parge). These breaches in the parge coat allow rainwater to penetrate the multi-wythe brick masonry wall below.
- Little to no protection is present along the sloped masonry of the existing buttresses/pilasters along the left elevation (along East Chestnut Street) of the Sanctuary. This allows water to permeate the top of the sloped buttresses and infiltrate the masonry walls.



- Portions of the exterior multi-wythe brick masonry appear to have been replaced during the lifespan of the Sanctuary Building. In addition, it is our understanding that portions of the existing towers were damaged and rebuilt after Hurricane Hazel in 1954. In some locations, newer masonry walls are supported by what appears to be the original masonry.
- Along the exterior of the building, many of the exposed exterior mortar joints of the Sanctuary Building appear to have been tuck-pointed. Tuck-pointing is removing the exterior portion of the mortar and installing new mortar along the exterior of the joints.

Based upon the results of our condition assessment, the following **Conceptual Repair Recommendations** are submitted for review:

- 1) The original mortar utilized to construct the exterior multi-wythe masonry of the Sanctuary exhibits significant deterioration at several locations throughout the structure. The condition of the original clay brick units varies from acceptable to poor, with some clay units exhibiting damage/spalling to the exterior brick faces. Areas that have been previously repaired or tuck-pointed likely did not match the lower compressive strength of the original mortar utilized during construction. Placing a higher strength mortar along the exterior edge of the brick masonry can shift or move the vertical load path of the masonry to the stronger material. Differential loading of the clay masonry unit(s) can lead to spalling of the exterior face of the masonry units.
- 2) At the Sanctuary, the exterior mortar utilized to tuck-point the original construction (and at locations exhibiting signs of deterioration) should be tuckpointed utilizing a mortar that closely matches the original compressive strength that closely strength of the mortar utilized during original construction. Repair mortar should incorporate a high lime content to allow autogenous healing (self-healing) of the mortar when cracking occurs.
- 3) Areas of brick masonry walls that were originally replaced may need to be removed and reconstructed utilizing a mortar with a compressive strength (and high lime content) that closely matches the strength of the mortar utilized during original construction.
- 4) After tuck-pointing repair and exterior wall replacement has been performed, Saint Paul Methodist Church should consider the application of a clear penetrating sealer (e.g., silane, siloxane, etc.) to the exterior face of the exposed brick walls. This helps to limit water infiltration in the future and ultimately improve the durability of the multi-wythe masonry.
- 5) At all parapets, a new flashing system should be installed to prevent water from infiltrating the top surface of the parapet. In addition, an interior rainscreen cladding can be installed (where allowed) to further prevent water from penetrating the multi-wythe masonry. This system allows breathability of the interior sides of the masonry walls while also allowing proper integration of existing and future roof installations.



After the repairs to the exterior brick masonry outlined above are performed, SKA would recommend that St. Paul Methodist Church wait approximately 12 to 16 months to perform repairs to the interior walls/plaster. This will help ensure that the existing saturated masonry walls be allowed to dry prior to performing repairs.

At the front elevation towers, the mortar was severely deteriorated. Brick and mortar had been replaced above the bottom half of the tower; however, water infiltration has led to the closure of the two (2) front elevation tower entrances. Additionally, the newer brick and mortar is resting on the deteriorated brick which could eventually lead to a structural failure. Due to the severity and location of the deterioration, it is our preliminary recommendation that the towers be removed (and replaced if requested) due to stability concerns related to the construction of the towers.

It should be noted that a structural analysis of the existing towers and a review of the existing structural framing system (e.g., roof framing members, floor framing members, etc.) was neither authorized nor performed. Prior to performing the repairs outlined above, St. Paul Methodist Church may wish to perform these evaluations to help ensure that additional issues are not present that should be addressed while repairs are being performed to the exterior cladding system.

SCOPE OF BUILDING ENVELOPE CONDITION ASSESSMENT

The following was included in the scope of engineering services to be performed at Saint Paul United Methodist Church:

1. Review of existing plans, and if available, contracts, plans, details, etc. applicable to remedial work performed on the facade after the original 1883 construction.
2. Visually examine the exterior masonry walls with binoculars, from a manlift (retained and operated by others), and from other accessible points of access. Examination will be directed toward identifying and defining potential issues and/or deficiencies in the exterior façade.
3. Examine and survey the interior of window surrounds where available on a limited basis to identify leakage and/or distress relative to the windows and to identify leakage that is associated with windows and window surrounds; review and observe interior masonry cracking.
4. Perform a minimum of one (1) water penetration test on a portion of the existing sanctuary masonry wall(s) in general accordance with ASTM C1601, "Test Method for Field Determination of Water Penetration of Masonry Wall Surfaces."
5. Perform other non-pressurized water spray testing utilizing an ASTM E-1105 spray rack at various areas of notable interior plaster damage and other wall areas where damage was observed during our visual review. This testing will be limited to three separate locations.



6. With the assistance of a third-party contractor (potentially T.A. Loving or another contractor hired directly by the Client), remove various sections of brick masonry walls and/or copings at three to five locations to identify underlying "as built" and potential flashing conditions. Locations will be selected by SKA based on areas identified that may be contributing to leakage and masonry cracking.

7. Provide a written report outlining the results of our testing and the findings of our assessment along with conclusions and recommendations for repairs.

BACKGROUND INFORMATION

Saint Paul Methodist Church located in Goldsboro, North Carolina is a multi-wythe mass masonry structure originally constructed in 1883. The original construction consisted of the sanctuary and two (2) towers at the front entryway of the building. Subsequent additions are attached to the sanctuary and have been constructed at various points in the building's history.

SKA was contacted to investigate ongoing water leakage present in the sanctuary and towers of the building. No observations were made regarding the condition of the additions. The sanctuary and towers consist of multi-wythe mass masonry with thickness that varies based on elevation.

The interior of the building in accessible areas is finished with plaster. At many locations the plaster is directly applied to brick masonry. It appears that plaster may also be applied to wood lath at some transition areas.

Signs of water intrusion and areas of interior plaster wall damage are present along the exterior walls of the Sanctuary Building of Saint Paul Methodist Church in Goldsboro, North Carolina.

(Remainder of Page Left Blank Intentionally)

GENERAL VISUAL OBSERVATIONS

Evidence of previous water infiltration was observed at areas in the sanctuary. Typically, evidence consisted of discolored paint or peeling plaster. Evidence of water infiltration was observed in five (5) main locations. These locations were later selected for further testing and inspection. Locations consist of the following:

- Discoloration and peeling plaster began near the top of the multi-story archway along the east elevation of the sanctuary. Discoloration of the plaster continued down below the arch along each side. Along the exterior, this location consists of a roof-to-wall transition with step flashing visible from the ground. Moisture readings of the plaster were performed with a scan-type moisture meter. Readings up to 55.0% were detected indicating that the paint and plaster likely retain elevated levels of moisture content.



Damaged Archway



Roof-to-Wall Transition



Elevated Moisture Reading Along Interior Side of Plaster.

(Remainder of Page Left Blank Intentionally)

- Discoloration, deteriorated plaster and peeling paint was present at the small exit door located at the northeast corner of the sanctuary. A roof-to-wall transition is present at the lower gable roof with step flashing. In this location, the buttress/plaster extends outward from the wall near the bottom of the gable. This creates an area where water can collect and infiltrate the roof-to-wall transition in wind-driven rain events. The location where the plaster jogs and an internal gutter is present is where the water damage is visible at the interior.

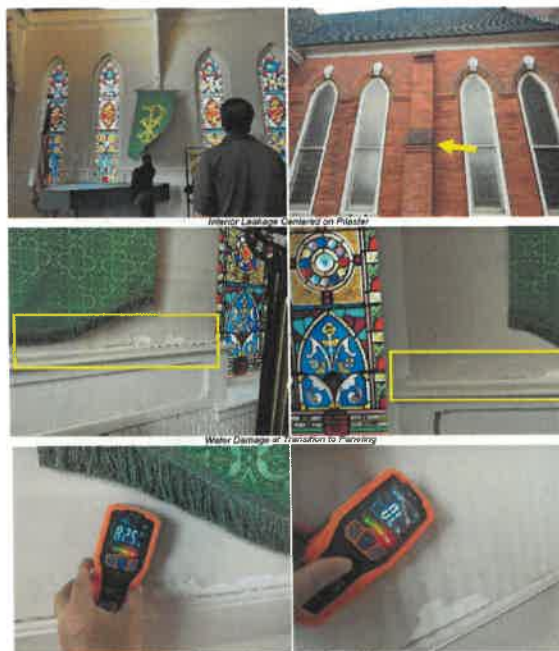


Damaged Plaster/Paint



Plaster Extends Beyond Wall Causing Water at Corner, Internal Gutter is Present

- Along the left-hand side (LHS) of the chancel (north elevation), damaged plaster and peeling paint was observed behind a banner hanging on the wall. Along the exterior of this location, a brick pilaster/butress is constructed between window units. Moisture readings of the plaster were performed with a scan-type moisture meter: readings ranged from 82.5% and more [over-limit ("OL")] were detected.



Interior Damage Caused by Plaster

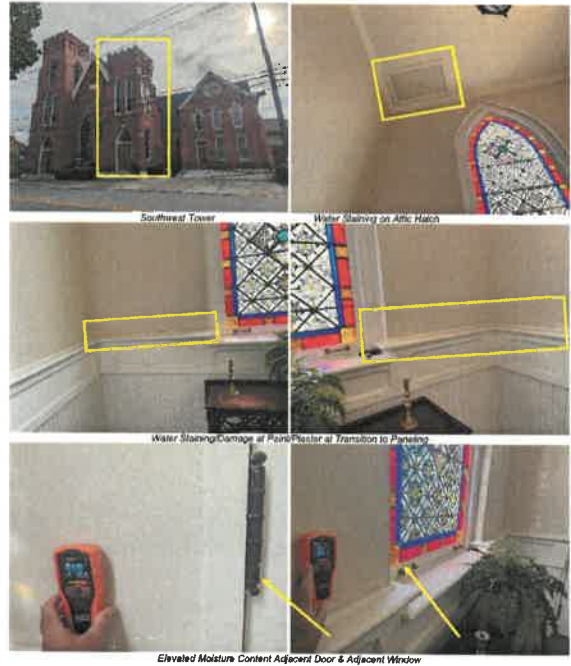
Water Damage at Transition to Parvise

Elevated moisture readings in paint and plaster

- In the tower along the northwest corner of the sanctuary, paint and plaster were significantly deteriorated along the entirety of the north, and portions of the east and west elevation at the first-floor level. Multiple moisture readings of the wall from 55.8% up to OL readings indicated that significant moisture levels are present in the paint / plaster at the northwest tower exterior walls,



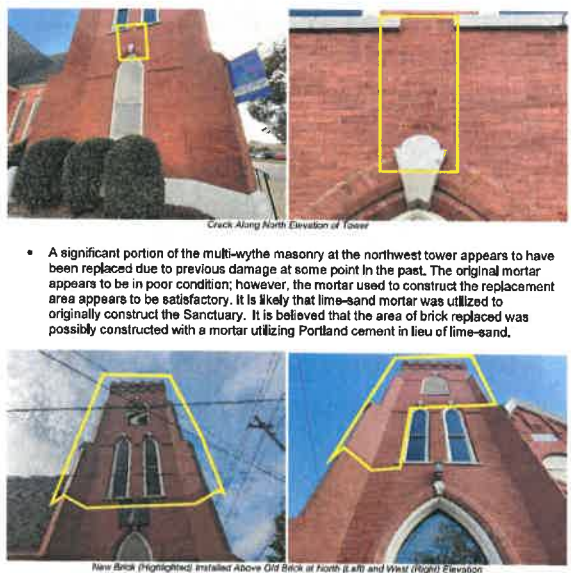
- In the shorter tower along the southwest corner of the sanctuary, minor paint and plaster damage were noted along the south and east elevation at the first floor. Moisture readings of the plaster were performed with a scan-type moisture meter; readings from 27.4% to over-limit ("OL") were detected indicating that portions of the paint and plaster retain elevated levels of moisture content.



- In the southernmost section along the west elevation of the second-floor level of the sanctuary, paint delamination at trim and plaster damage (cracks) were noted along the west elevation typically at the base of the wall under the level of the windowsills. No elevated levels of moisture were detected. Delamination and/or damage was noted at wood trim at perimeters of windows and adjacent the window heads.



- A large vertical crack is present in the mortar and brick at the top of the arched window along the north elevation of the northwest tower.



- At the interior of the northwest tower above the finished room, severe deterioration and "wash-out" of original mortar has occurred. The existing mortar has a sand-like feel, appearance and texture. In addition, the original mortar can be easily removed from the wall. This represents a potential structural and safety concern.



Significant Mortar Deterioration

(Remainder of Page Left Blank Intentionally)

- The battlement parapet of the towers does not incorporate a flashing system to protect upper horizontal surfaces of the masonry. The parge coat / mortar installed at these locations is deteriorated and likely allows water to enter the wall system.



Deteriorated Mortar on Battlement

(Remainder of Page Left Blank Intentionally)

- At the east elevation second floor mechanical room, large gaps in the brick masonry are present. The gaps in the masonry appear to be old or abandoned mechanical penetrations where the brick masonry was not subsequently restored. Two (2) mechanical units located in this area appear to be more recent installations. However, penetrations through the brick masonry do not appear to be properly sealed.



Second Floor Mechanical Room

Unsealed Penetrations



Abandoned Penetrations of Brick Masonry Wall

- At the east elevation second floor storage rooms (adjacent to the mechanical room), gaps in the brick masonry are present. This is likely from mechanical components that have been removed. In addition, plaster delamination is present adjacent to these areas.



Second Floor storage room

Delaminated Plaster



Gap in brick masonry

(Remainder of Page Left Blank Intentionally)

FORENSIC WATER TESTING

ASTM E2128 Field Water Testing

Water testing of multi-wythe masonry walls was performed in general accordance with ASTM E2128 – "Standard Guide for Evaluating Water Leakage of Building Walls" which provides means and methods for testing the water resistance of building walls. Testing was performed utilizing an ASTM E1105 spray rack capable of outputting water at a rate of 5 gallons per square foot per hour, which equates to approximately 8-inches of rainfall per hour. The spray rack applied water at a location of interest for a specified amount of time. Due to the thickness of the multi-wythe, the spray rack was intended to apply water for 1.5-hours. No interior pressure differential was applied, and the spray rack was placed above locations that exhibited leakage at the interior to allow water to cascade down the face of the wall.

Two (2) locations were selected to be tested. The first location was selected to be the taller, northwest tower. Water was applied to the western face near the north corner of the tower just below the battlement parapet. The second location was at the shorter, southwest tower. Water was applied to the south elevation just below the sill of the second floor windows.



Water Test #01 (WT#01) – Northwest Tower, West Elevation

The ASTM E1105 spray rack was positioned approximately 4-foot below the top of the battlement at the northern corner of the western elevation. This location was selected as severe water damage was visible at the plaster installed along the interior of the bottom floor of the tower. This damage extended along the entirety of the north elevation and ¼ of the east and west elevations from the ceiling (approximately 15-foot high) to the transition to paneling (approximately 4-foot high).



Initially, the testing was intended to be run for 1.5-hours, however, when SKA checked the interior for 45-minutes, water was streaming down the wall in numerous locations. Testing was concluded at this point. Water intrusion was noted to be coming from the following locations:

- Streaming down the wall in the room with the damaged plaster. The water appeared to be coming from above the ceiling, however, it is also possible that the water was intruding through the windows in addition.



(Remainder of Page Left Blank Intentionally)

- Through the severely deteriorated mortar just above the ceiling at the next "floor" of the tower, A large amount of water was noted to be running out of the mortar joints at the northwestern corner of the tower. Water was also pooling on the sills of both of the windows adjacent to this location.

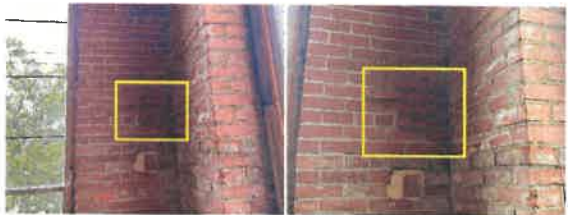


Water Leaking Through Deteriorated Mortar



Water Pooling on West Sill (Left) and North Sill (Right)

- A portion of the brick and mortar was repaired at the midpoint of the window, approximately 5-foot above the previously outlined location. This indicates that water infiltration is not limited to the original installed masonry walls.



- Significant water intrusion was noted through the beams installed approximately 5-foot below the roofline at the northwestern corner of the tower. Water was running down the wall at this previously repaired area and was noted to be soaking the beams. Additionally, the beams appear to have water damage on, and adjacent to, the wall. Noticeable section loss/rot was observed at this location.



Wet, Deteriorated Wood Beams Set in Brick Masonry Beam Pockets

- The underside of the roof deck at the area that was being sprayed appeared to be wet. The wood decking boards, and support beams appeared to be deteriorated at this location, with the board adjacent to the wall having significant section loss.



Significantly Deteriorated Wood Floor Decking Above Leakage Location

These locations suggest that numerous areas along the tower have significant water intrusion issues. It is likely that these water intrusion issues stem from the original, deteriorated, porous mortar that is allowing water to be absorbed into the multi-wythe masonry system. Once into the wall, masonry can act like a sponge, holding water and causing deterioration of the mortar at the interior. While the damage is concentrated along the north elevation, it is likely that these problems are present throughout the tower, as environmental conditions may change the impact at the interior.

It is worth noting that the leakage locations at the interior aligned closely with the corbelled brick courses installed along the wall. It is possible that these courses are capturing water that is running down the face of the wall and causing significant deterioration of the mortar at these locations. SKA noted significant deterioration at the corbelled course where the spray rack was positioned.



Spray Location, Corbelled Brick Location

Corbelled Brick Location



Corbelled Brick Location

Water Test #02 (WT#02) – South Tower, South Elevation, Below 2nd Floor Window

The ASTM E1105 spray rack was positioned just below the second floor window along the south elevation of the southwest tower. This location was selected as minor water damage was visible at the plaster installed along the interior of the bottom floor of the tower.



The test was planned to be run for 1.5-hours, however, after approximately 1-hour, water intrusion was noted at the tile floors at the interior of the tower in several locations. In one location, the water was running down the face of the paneling above. Other locations did not exhibit visible water on the wall. It appears that water is collecting and being stored in the mass masonry until it collects along the base of the wall.



Water Infiltration Noted at Two (2) Locations Below Window Area



Water Infiltration along Interior of Paneling

Water Detection Paper (Pink Color) Identifying Water Infiltration

ASTM C1601 Water Penetration Testing of Masonry Surfaces

ASTM C1601 "Standard Test Method for Field Determination of Water Penetration of Masonry Wall Surfaces" was performed on the exterior multi-wythe brick masonry surface of the Saint Paul Methodist Church sanctuary at one (1) location. Due to accessibility restraints, the test was completed along the first level. Water Test #03 was completed along the south elevation of the sanctuary.

ASTM C1601 is a field test that determines the amount of water passing through the masonry assemblage by utilizing a specific water flow rate and air pressure conditions into the closed test apparatus. This field test quantifies the water penetration at a single location. The standard procedure for ASTM C1601 is:

- Mechanically anchoring a chamber to the wall surface and sealing the perimeter to prevent leakage. A defined water spray and air pressure are applied simultaneously to the wall surface to simulate wind driven rain.



Water Test #03 - ASTM C1601

- Pre-condition the wall surface for 30 minutes prior to beginning the measurements.
- Apply water at a rate of 3.4 gal/m²/h times the area of the wall being tested (12 square feet). A positive, sustained air pressure of 10 psf (1.92 inches of water column) is created in the chamber to simulate a wind-driven rain event.



- Run the test for 4 hours and record water penetration rates at 5-minute increments.

This standard test method represents a rain event equal to approximately 5-1/2 inches of water per hour accompanied by an estimated 62.5 mph wind speed. These test conditions are severe and probably represent conditions that might normally be expected to occur during severe rain events. It is likely that this type of condition may happen no more than one or two times during the life of a building.

A rating system for resistance of masonry walls to water penetration is not defined in ASTM C1601 because of attempts by consultants to use ratings to study and compare the performance of various wall systems. Wall systems with walls that exhibit poor water penetration resistance may function acceptably provided that the flashing and weep system are

sound, functional and prevent water entry to the interior and provided that the exposure to the wall system is not acceptable to freeze-thaw deterioration.

Suggested ratings published for the laboratory test versions of the test (ASTM E514) and adoption of this laboratory test for field tests published prior to 2006 were found not realistically achievable for brick construction in a typical environment. In 2006, Whitlock, Dalrymple Poston & Associates, PC, (WDP) submitted a paper to ASTM which was published in 2008. The paper published the results of 270 field tests performed by WDP that were performed in general accordance to the field adapted version of ASTM E514 "Standard Test Method for Water Penetration and Leakage Through Masonry" and ASTM C1601. Based on the results of these tests, the following performance rating criteria was performed by WDP that the results of their field test suggested would be reasonable and expected for field construction utilizing multi-wythe masonry.

Good < 2.64 gal/hour
 Expected 2.64 to 3.96 gal/hour
 Excessive > 3.96 gal/hour

The paper submitted by WDP suggests that these leakage rates would be more realistic for today's construction environment. They significantly exceed the rates proposed in earlier ASTM publications and the laboratory version of this test.

Based on our experiences with the results of these tests on other projects, it is our opinion that the rating systems proposed by WDP for today's construction environment are reasonable and expected. The results of the water penetration test performed by SKA are as follows:

Water Test #03 - ASTM C1601 - Level 1 Building - Sanctuary - South Elevation = 3,486 gal/hr

The test results indicate that the water resistance rating of the "as-constructed" brick masonry falls within the "Expected" performance rating system for Water Test #03 as suggested by WDP.

It is worth noting that the area tested, which was selected due to accessibility, appeared to have formerly been a doorway that was infilled with newer brick at some point in the past. This brick appeared to be in better condition than the original brick and may not be representative of performance at original brick locations.

RILEM Tube Field Water Testing

Rilem or Mat tube tests are a field test that measures the quantity of water absorbed by a masonry surface over a specific period of time. These tests are not a standard ASTM test but can be useful in evaluating whether or not water will leak through a masonry wall and the rate of leakage. This test is made by attaching a glass or plastic tube with a 90° bend that contains a flat circumference on the end of the band to the face of the wall. The flat circumference is adhered/sealed to the exterior face of a masonry wall. The tubes utilized hold up to 4.5 or 5 milliliters (ml) of water and are graduated in 0.1 ml increments from 0.0 to 4.5 or 5.0 ml. The tubes are filled with water. As the water is absorbed by the masonry system being tested, the level of water in the tube is lowered. By monitoring the falling water levels in the tubes (and

refilling as needed), the amount of water absorbed into a brick masonry system over a specific period of time can be determined.

Rilem tube tests were performed on the brick masonry veneer at a total of nine (9) locations. Three (3) tests were performed on the Southeast Elevation (back elevation), two (2) on the Northeast Elevation (left elevation), and three (3) on the northwest elevation (front elevation). The tests were performed on head joints, bed joints and T-joints.

The leakage rate at three (3) locations was approximately 5.0-ml absorbed in less than one (1) minute. The leakage rate at two (2) locations was 4.5ml absorbed in one (1) to fifteen (15) minutes. SKA did note during testing that mortar with a very small void(s) resulted in larger leakage rates. The results of these tests suggest that the mortar bond has separated from the brick veneer unit and/or the mortar joints may be only partially filled with mortar.

Published research on the value of this type of test has resulted in several interesting findings. These are:

- The bottom of head joints usually allows the highest water penetration rates followed by the middle of the head joint, bed joints and top of head joints.
- Joints that absorb 5 ml of water in 5 minutes or less are most likely to leak water through a wall. Joints requiring 15 minutes or more to absorb 5 ml of water show no signs of leakage as wetting patterns on the back of the wall. Five (5) tests resulted in leakage requiring less than 15-minutes to absorb approximately 5 ml of water with three (3) of these tests exhibiting leakage in less than five (5) minutes.



Rilem Test Tube - Head Joint



Rilem Test Tube - Bed Joint: Wetting / Absorption of Mortar during Testing



Rilem Test Tube - T-Joint



Rilem Test Tube - Bed Joint: Wetting / Absorption of Mortar during Testing



Rilem Test Tube - T-Joint Test #5



Rilem Test Tube - Test #5 - 4.5ml Absorbed in Less than 1-Minute with Small Void in Mortar Visible.

EXTERIOR CLADDING FIELD EXCAVATIONS

On Monday, September 18, 2023, SKA met with T.A. Loving and church staff to determine locations to perform invasive test cuts of the exterior wall system. The approximate locations for the invasive test cuts of the exterior brick were determined based on areas of reported and visible water infiltration, and accessibility by manlift. Prior to SKA's return to the site on Tuesday, September 28, 2023, invasive test cuts were performed at five (5) locations around the sanctuary and towers of the Saint Paul Methodist Church. SKA observed these locations with assistance from T.A. Loving and observed the following:

A total of five (5) field excavations through the multi-wythe brick masonry were performed.

Cladding	Field Excavation #	Location	Approximate Size of Field Excavation
Brick	TC-1	Top of Intersecting Cable along Rear/East Elevation	49 1/2-inch wide x 13 1/2-inch high x 12 1/2-inch deep
Brick	TC-2	End of Roof Rake that Slopes Towards Rear Elevation	24-inch wide x 16-inch high x 13 1/2-inch deep
Brick	TC-3	Along Angled Top Surface of First Floor Pilaster Buttress Along the Left/North Elevation	10 1/2-inch wide x 22-inch high
Brick	TC-4	Above First Floor Window Along North Elevation of Northwest Tower	24-inch wide x 16-inch high x 13 1/2-inch deep
Brick	TC-3	Along Angled Top Surface of First Floor Pilaster Buttress Along the Left/North Elevation	24-inch wide x 16-inch high x 13 1/2-inch deep

The following was noted during the review of the field excavations:

Field Excavation TC-1

Size = ~49-1/2" W x 12-1/2" D x 13-1/2" H (5 brick courses high)

Cladding = Brick Masonry Units ~ 7-3/4" L x 3-5/8" D x 2-1/4" H

Cladding Attachment = Brick mortar (Possible Sand and Lime or Type 'O')

Cladding Thickness = 3 Width Multi-Wythe Wall

Brick Joint Width (Bed) = ~1/4" to 1/2"

Brick Joint Width (Head) = ~1/4" to 1/2"

First Cavity Width = ~ 5/8" to 7/8"



Second Cavity Width = ~ 1/4"
 Third Cavity Width = N/A
 Substrate = Brick
 Mortar Condition = **Fair to Poor**: Can be broken by hand and scraped with steel awl
 Substrate Thickness = 12" to 12-1/2"
 Other Information = Roof Angle ~ 23°-25°: Approximately 5/12 Slope or Pitch.
 Brick units appear to be newer.
 Copper Step - and Counter – Flashing Weight: ~ 16 oz./ft²
 Copper Step Flashing: ~8" L x 8" W
 [4" V Leg (outside of brick x 4" H Leg (under shingle tab))
 Wooden Post visible in Attic at peak of Gable / Top of Ridge
 Exterior Stretcher/Header (S/H) Course at top of upper Copper Counterflashing
 Spacing to next S/H Course = 8 Horizontal Brick Courses
 Interior S/H Course installed below upper Exterior S/H Course
 Counterflashing extends ~ 10" above roof ridge / peak.
 ~ 8" from top of Counterflashing to bottom of excavation opening.
 Visible cracking above adjacent roof.



Field Excavation TC-2

Size = ~24" W x 13" to 13-1/2" D x 16" H (6 brick courses high)
 Cladding = Brick Masonry Units ~ 7-3/4" L x 3-5/8" D x 2-1/4" H
 Cladding Attachment = Brick mortar (Possible Sand and Lime or Type 'O')
 Cladding Thickness = 3 Width Multi-Wythe Wall
 Brick Joint Width (Bed) = ~1/4" to 3/8"
 Brick Joint Width (Head) = ~1/4" to 3/8"
 First Cavity Width = ~ 1" to 1-1/4"
 Second Cavity Width = ~ 1/8" to 3/8"
 Third Cavity Width = N/A
 Substrate = Brick
 Mortar Condition = **Fair to Poor**: Can be broken by hand and scraped with steel awl
 Substrate Thickness = 13" to 13-1/2"
 Other Information = Roof Angle ~ 23°-25°: Approximately 5/12 Slope or Pitch.
 Brick units appear to be newer.
 Copper Step - and Counter – Flashing Weight: ~ 16 oz./ft²
 Copper Step Flashing: ~8" L x 8" W
 [4" V Leg (outside of brick x 4" H Leg (under shingle tab))
 Wooden slats (~5" to 5-1/2" from back of brick to back of wood)
 Insulation (white, fluffy) visible in Attic: Possibly Fiberglass
 Exterior S/H Course second course below opening.
 Exterior S/H Course just above opening.
 Spacing to next S/H Course = 8 Horizontal Brick Courses
 Interior S/H Course installed just below upper Exterior S/H Course
 Opening begins 23" above end of roof rake,



Field Excavation TC-3

Size = ~20-1/4" W x 22" H (6 brick courses high)
 Cladding = Brick Masonry Units ~ 7-3/4" L x 2-1/4" D x 2-1/4" H
 Cladding Attachment = Brick mortar (Possible Sand and Lime or Type 'O')
 Cladding Thickness N/A
 Brick Joint Width (Bed) = N/A
 Brick Joint Width (Head) = N/A
 First Cavity Width = N/A
 Second Cavity Width = N/A
 Third Cavity Width = N/A
 Substrate = Brick

Mortar Condition = **Poor**: Can be broken by hand and scraped with steel awl
 Substrate Thickness = 13-1/2" at buttress
 Other Information = Cap Angle ~ 43° - 45°; Approximately 17-1/2" x 13-1/2"
 Brick units appear to be original.
 Visible gap (~ 5" to 6" deep) along bottom of angle masonry top
 (filled with mortar)



Field Excavation TC-04

Size = ~20-1/2" to 21-1/4" W x 13-1/2" D x 25-1/2" H (10 brick courses high)
 Cladding = Brick Masonry Units ~ 8-3/8" L x 4-1/8" D x 2-1/8" H
 Cladding Attachment = Brick mortar (Possible Sand and Lime or Type 'O')
 Cladding Thickness = **Estimated to be** 4 Width Multi-Wythe Wall
 Brick Joint Width (Bed) = ~3/16" to 1/4"
 Brick Joint Width (Head) = ~3/16" to 1/4"
 First Cavity Width = ~1/4" to 1/2"
 Second Cavity Width = ~1/4"
 Third Cavity Width = ~1/4"
 Substrate = Brick

Mortar Condition = **Poor**: Can be broken by hand and scraped with steel awl
 Substrate Thickness = **Estimated to be** ~18" to 19"

Other Information = Brick units appear to be original
 ~8" (2 courses) from window keystone (at head) to bottom of opening.
 Possible exterior S/H Course first course above keystone
 Additional S/H Courses not visible along exterior brick masonry
 Spacing to interior S/H Course = 8 Horizontal Brick Courses
 Opening begins 23" above end of roof rake.



Field Excavation TC-05

Size = ~32" W x 13" to 13-1/2" D x 13-1/2" H (5 brick courses high)
 Cladding = Brick Masonry Units ~ 7-5/8" L x 3-5/8" D x 2-1/4" H

Cladding Attachment = Brick mortar (Possible Sand and Lime or Type 'O')
 Cladding Thickness = 3 Width Multi-Wythe Wall
 Brick Joint Width (Bed) = ~1/4" to 3/8"
 Brick Joint Width (Head) = ~1/4" to 5/8"
 First Cavity Width = ~ 1/2" to 1"
 Second Cavity Width = ~ 1/2" to 5/8"
 Third Cavity Width = N/A
 Substrate = Brick

Mortar Condition = **Fair to Poor**: Can be broken by hand and scraped with steel awl
 Substrate Thickness = 12-3/4" to 13"

Other Information = Brick units appear to be newer
 Wood stud/column
 Exterior S/H Course second course below opening.
 Exterior S/H Course 3 courses above opening
 Spacing to next S/H Course = 8 Horizontal Brick Courses
 Interior S/H Course difficult to identify.
 Opening begins 2-1/2' to 3' above keystone.





Qualifications

The findings and evaluations of the multi-wythe masonry of Saint Paul Methodist Church, located in Goldsboro, North Carolina are based upon SKA Consulting Engineers, Inc.'s visual examination of the exposed, accessible areas of the existing brick exterior walls. It is our opinion that the conditions observed at these areas are representative of the "as-built" conditions at similar locations; however, other conditions could exist which may alter the conclusions and conceptual repair recommendations stated herein. In addition, a structural review and/or analysis of Saint Paul Methodist Church was neither authorized nor performed.

Reports and opinions described in this investigation are not meant to be used as design documents or contract documents. SKA specifically disclaims all responsibility for losses incurred if the product of this report is used as a contract document for construction at this facility.

SKA Consulting Engineers, Inc. (SKA) appreciates the opportunity to provide this condition assessment to T.A. Loving. Should you have any questions or require additional information regarding this assessment, please contact our office.

March 28, 2025

Saint Paul United Methodist Church
204 East Chestnut Street
Goldsboro, North Carolina 27530

Attention: Mr. Mike Richter | via email: mrichter1@tmail.com

Reference: Supplemental Interior Tower Excavation Notes
204 East Chestnut Street
Goldsboro, North Carolina 27530
SKA Project No. 230217.2

Dear Mr. Richter,

As a supplement to our original investigation, SKA Consulting Engineers, Inc. (SKA) reviewed three (3) interior test excavations that were performed at the interior of the towers at Saint Paul UMC on August 21, 2024.

The information obtained during this supplemental investigation was utilized to help determine the extent of repair and potential design for the repair/replacement of the existing towers. Therefore, a formal summary of the results was not provided to the Church at the time of the investigation.

As requested, this letter details the results of the interior test excavations of the brick mass masonry walls of the towers.

BRICK MASONRY FIELD EXCAVATIONS

On Wednesday August 21, 2024, SKA met with Church representative Mr. Mike Richter. The Church had hired a masonry contractor to assist SKA with removing portions of the mass masonry wall system along the interior of the multi-wythe brick masonry towers. The approximate locations for the invasive test cuts of the interior wythes of brick were determined based on areas of visible masonry distress, and accessibility within the towers.

A total of three (3) field excavations through multi-wythe brick masonry were performed, with one (1) area of removal performed at the south tower and two (2) performed at the north tower.

Cladding	Field Excavation #	Location	Approximate Size of Field Excavation
Brick	TC-1	South Tower, Second Floor, West Elevation at Window Sill-to-Jamb	12-inch wide x 15-inch high x 9-inch deep
Brick	TC-2	North Tower, Second Floor, West Elevation, Field of Wall	12-inch wide x 13 ½-inch high x 13-inch deep
Brick	TC-3	North Tower, Second Floor, North Elevation, Below Window	16-inch wide x 14-inch high x 12-inch deep



Excavation #01 - Approximate Location at Interior Excavation of South Tower



Excavation #02 - Approximate Location of Interior of Excavations North Tower – Excavation #03

The following was noted during the review of the field excavations:

Field Excavation TC-1 – South Tower, Second Floor, West Elevation at Window Jamb-to-Sill

- Approximate Size: 12" W x 9" D x 15" H (5 brick courses high)
- Exterior Wall: Multi-Wythe Brick Masonry Units ~ 7-5/8" L x 3-5/8" D x 2-1/4" H (Modular Brick)
- Multi-Wythe Wall Thickness: Three (3) Brick Courses [Two (2) Interior wythes removed at excavation area]
- Brick Mortar: Possible Sand and Lime or Type 'O' Mortar present
- Mortar Condition: **Poor/Faded** – Sandy, easily removed by hand
- Additional Information
 - Interior clay brick masonry units appear original.
 - Brick units at interior two (2) wythes appear to be modular brick size, while exterior wythe is pressed brick, which is standard size or larger.
 - Neither header nor skewed header courses were observed at: the five (5) courses of brick removed or the single courses above and below excavation, seven (7) courses with no visible attachment to exterior pressed brick.
 - A 1-1/4 inch gap or space is present between middle modular wythe and exterior pressed brick wythe. It appears that skewed header courses were only installed where the brick masonry wythes align (which is not often). Gap appears to be area where the exterior wythe is separating from the middle wythe.



No Skewed Header or Visible Attachment Between Brick Units



Mortar Crumbling, Easily Removed by Hand



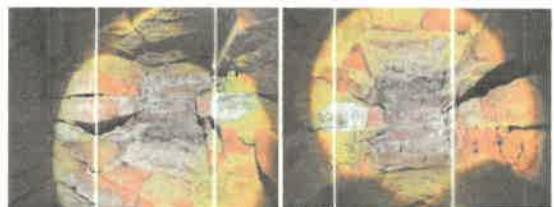
Large Gap or Separation Present Between Interior Brick Wythe and Exterior Brick Wythe

Field Excavation TC-2 – North Tower, Second Floor, West Elevation, Field of Wall

- Approximate Size: 12" W x 13" D x 13 1/2" H (5 brick courses high)
- Exterior Wall: Multi-Wythe Brick Masonry Units ~ 7-5/8" L x 3-5/8" D x 2-1/4" H (Modular Brick)
- Multi-Wythe Wall Thickness: Four (4) Width Multi-Wythe Wall [Three (3) Interior wythes removed at excavation area]
- Brick Mortar: Possible Sand and Lime or Type 'O' Mortar present
- Mortar Condition: **Poor/Faded** – Washed out, granular, sandy, most of mortar is missing or has been washed away along the interior wythes of the brick masonry
- Additional Information:
 - Existing interior brick masonry units appear original. Pressed brick masonry units along the exterior appear to have been replaced, likely after Hurricane Hazel.
 - Brick units at interior three (3) wythes appear to be modular, while exterior wythe is pressed brick, which is larger.
 - Neither header nor skewed header discovered at: the five (5) courses of brick removed or the single courses above and below excavation, seven (7) courses with no visible attachment to exterior pressed brick.
 - A 1 inch gap or space is present between interior wythes and exterior brick wythe. It appears that skewed header courses were only installed where the brick wythes align height wise, which is not often. Gap appears to be where the exterior brick wythe is separating from the middle wythe.
 - Mortar was damp inside the excavation, despite a lack of recent rain.
 - Cracked masonry units were observed in the exterior wythe.
 - Mortar between the interior brick masonry wythes were noted to be missing, likely due to water infiltration.
 - Exterior wythe head joints were not filled solid. Mortar missing throughout. Daylight is visible at several mortar joints at multiple locations.



Newer Exterior Pressed Brick Location



No Skewed Headers Present

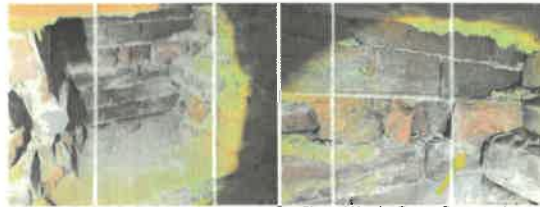


Daylight Visible Through Exterior Mortar

Missing Head Joint Mortar, Cracked Brick

Field Excavation TC-3 - North Tower: Second Floor, North Elevation, Below Window

- Approximate Size: 16" W x 12" D x 14" H (5 brick courses high)
- Exterior Wall: Multi-Wythe Brick Masonry Units ~7-5/8" L x 3-5/8" D x 2-1/4" H (Modular Brick)
- Multi-Wythe Wall Thickness: Four (4) Width Multi-Wythe Wall (Three (3) Interior wythes removed at excavation area)
- Brick Mortar: Possible Sand and Lime or Type 'C' present
- Mortar Condition: **Poor/Fair** - Washed out, sandy, easily removed, missing at interior wythe
- Additional Information:
 - All existing brick units appear original at this location.
 - Skewed header course discovered six (6) courses above intermediate floor level within the tower (five (5) courses of brick masonry above the bottom of the excavation).
 - A 1/2 inch gap or space is present between interior wythe and exterior pressed brick wythe. Separation appears smaller, likely due to skewed headers at this location remaining intact.
 - A majority of the mortar at the interior wythe was noted to be missing, likely due to water infiltration.
 - Exterior wythe head joints were not filled solid. Daylight was visible through these joints at multiple locations.



If you have any questions, please feel free to contact our office.

Sincerely,

Mason E. Undercoffer, E.I.



St. Paul Methodist Church
Goldsboro, North Carolina



SKA BACKGROUND INFORMATION

- Authorized to Perform Condition Assessment of Existing Sanctuary Building Brick Masonry in 2023
- September 2023: Assessment performed by SKA with Assistance Provided by TA Loving Company of Goldsboro
- December 2023: "Sanctuary Building Brick Masonry Investigation Report" Finalized by SKA and Submitted to St. Paul Methodist Church for Review

St. Paul Methodist Church
Goldsboro, North Carolina



SKA



CONCEPTUAL REPAIR RECOMMENDATIONS

- Removal of Higher Strength Mortar used to Tuck-Point the Exterior Wythe of the Sanctuary Masonry and Replacing it with a Mortar of Similar Strength to Original Mortar
- Installation of Retrofit Masonry Anchors to Re-Connect Masonry Wythes Together
- Replacement of Masonry Areas that were Reconstructed with a Higher Strength Mortar
- Consider Application of a Clear Penetrating Sealer after Reconstruction and Repair of Masonry

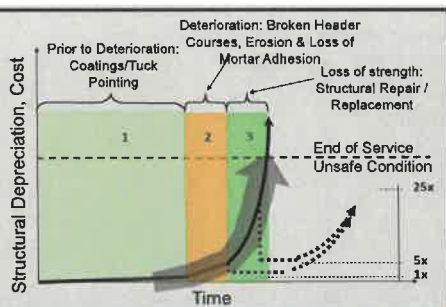
St. Paul Methodist Church
Goldsboro, North Carolina



FRONT ELEVATION TOWERS

At the front elevation towers, the mortar was severely deteriorated. Brick and mortar had been replaced above the bottom half of the tower; however, water infiltration has led to the closure of the two (2) front elevation tower entrances. Additionally, the newer brick and mortar is resting on the deteriorated brick which could eventually lead to a structural failure. Due to the severity and location of the deterioration, it is our preliminary recommendation that the towers be removed (and replaced if requested) due to stability concerns related to the construction of the towers.

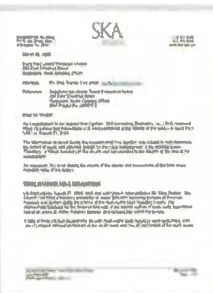
St. Paul Methodist Church
Goldsboro, North Carolina



St. Paul United Methodist Church
Goldsboro, North Carolina



SKA



SUPPLEMENTAL INTERIOR TOWER EXCAVATIONS

- August 2024: Performed Interior Test Cuts at Front Elevation Towers with Assistance Provided by Masonry Contractor Hired Directly by St. Paul
- March 2025: "Supplemental Interior Tower Excavation Notes" Letter Prepared by SKA at the Request of St. Paul Methodist Church
- Excavations Confirmed: Erosion and Reversion of Existing Mortar, Water Damages to Multi-Wythe Brick, Separation between Brick Masonry Wythes, and Broken Skewed Headers Utilized to Connect Wythes of Brick Together

St. Paul Methodist Church
Goldsboro, North Carolina



NORTHWEST TOWER (CORNER OF E. CHESTNUT & S. JOHN)



St. Paul Methodist Church
Goldsboro, North Carolina



NORTHWEST TOWER (CORNER OF E. CHESTNUT & S. JOHN)



St. Paul Methodist Church
Goldsboro, North Carolina



NORTHWEST TOWER (CORNER OF E. CHESTNUT & S. JOHN)



St. Paul Methodist Church
Goldsboro, North Carolina



NORTHWEST TOWER (CORNER OF E. CHESTNUT & S. JOHN)



St. Paul Methodist Church
Goldsboro, North Carolina



NORTHWEST TOWER (CORNER OF E. CHESTNUT & S. JOHN)



St. Paul Methodist Church
Goldsboro, North Carolina



NORTHWEST TOWER (CORNER OF E. CHESTNUT & S. JOHN)



St. Paul Methodist Church
Goldsboro, North Carolina



NORTHWEST TOWER (CORNER OF E. CHESTNUT & S. JOHN)



St. Paul Methodist Church
Goldsboro, North Carolina



NORTHWEST TOWER (CORNER OF E. CHESTNUT & S. JOHN)



St. Paul Methodist Church
Goldsboro, North Carolina



SOUTHWEST TOWER (S. JOHN STREET)



St. Paul Methodist Church
Goldsboro, North Carolina



SOUTHWEST TOWER (S. JOHN STREET)



St. Paul Methodist Church
Goldsboro, North Carolina



SOUTHWEST TOWER (S. JOHN STREET)



St. Paul Methodist Church
Goldsboro, North Carolina



SOUTHWEST TOWER (S. JOHN STREET)



St. Paul Methodist Church
Goldsboro, North Carolina



SOUTHWEST TOWER (S. JOHN STREET)



St. Paul Methodist Church
Goldsboro, North Carolina



SOUTHWEST TOWER (S. JOHN STREET)



St. Paul Methodist Church
Goldsboro, North Carolina



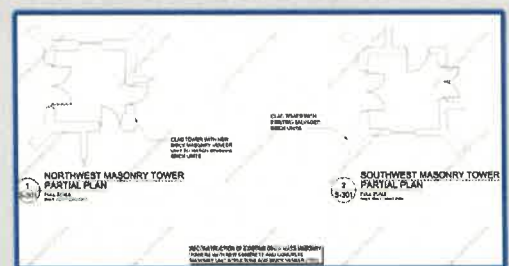
SEPTEMBER 24, 2024: SKA SCHEMATIC DESIGN DOCUMENTS



St. Paul Methodist Church
Goldsboro, North Carolina



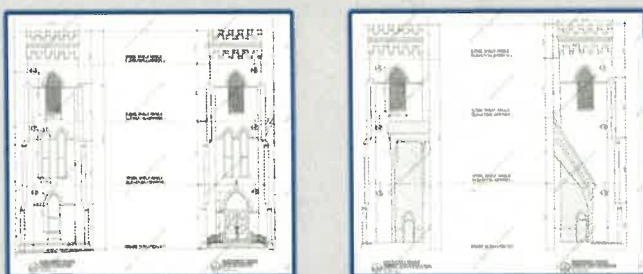
SEPTEMBER 24, 2024: SKA SCHEMATIC DESIGN DOCUMENTS



St. Paul Methodist Church
Goldsboro, North Carolina



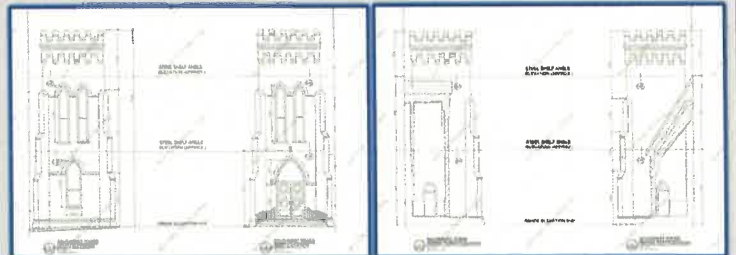
SEPTEMBER 24, 2024: SKA SCHEMATIC DESIGN DOCUMENTS



St. Paul Methodist Church
Goldsboro, North Carolina

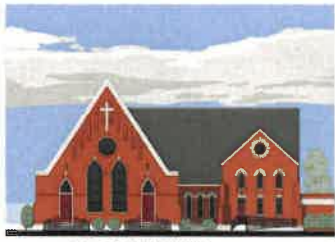


SEPTEMBER 24, 2024: SKA SCHEMATIC DESIGN DOCUMENTS



St. Paul Methodist Church
Goldsboro, North Carolina

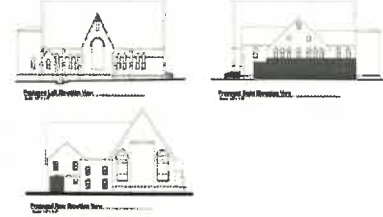




Saint Paul Methodist Church
Goldsboro, North Carolina
Proposed Front Elevation



St. Paul Methodist Church
Goldsboro, North Carolina



Proposed Side Elevation View

Proposed Side Elevation View

Proposed Side Elevation View

Saint Paul Methodist Church
Goldsboro, North Carolina

Existing Elevation Views



St. Paul Methodist Church
Goldsboro, North Carolina

