STAFF REPORT 03-16-2022 SPECIAL MEETING **PREPARED BY**: A. PHILLIPS
APPLICATION NUMBER: 22-7701
ADDRESS: 6125 14TH STREET (AKA KING SOLOMON BAPTIST CHURCH)
HISTORIC DISTRICT: KING SOLOMON BAPTIST CHURCH
OWNER: REV. CHARLES E. WILLIAMS, SR., KING SOLOMON MISSIONARY BAPTIST CHURCH
APPLICANT/ARCHITECT: SAUNDRA LITTLE, QUINN EVANS ARCHITECTS
DATE OF PROVISIONALLY COMPLETE APPLICATION: 02-04-2022
DATE OF STAFF SITE VISIT: 03-08-2022

SCOPE: ALTER AND REPAIR PORTIONS OF ROOF; STABILIZE MASONRY

EXISTING CONDITIONS
Per the Detroit Historic Designation Advisory Board:

The church's unique, Arts and Crafts-inspired Tudor Revival detail set it apart from the many Neo-Gothic and Renaissance churches which were being built in Detroit at that time. The building, faced with buff-colored brick, features a prominent gable front and an off-center, projecting rectangular tower. On the building's primary façade (east elevation), a pair of concrete steps leads to each of the building's two main entrances. The steps have been altered to accommodate a poured concrete wheelchair ramp resting on a concrete block foundation, running parallel to the building façade between the two sets of steps. Each entrance consists of a pair of double wooden doors, ornamented with trefoils, situated within a Gothic arched stone surround. A thick, beveled stone belt course extends across the façade at the height of the building's entrances. A gable roof overhangs each entrance, bearing wide vergeboards whose ends flare outwards to accommodate trefoil decorations in relief on the lower ends. The gables are supported by large wooden brackets. The space within each gable is finished with decorative half timbering and stucco. The southernmost entrance, located at the base of a projecting, rectangular tower, sits closer to the street than the northernmost entrance.

Between the two entrances, and extending upwards, is a large wood and leaded glass window with Gothic tracery, sitting within a Gothic arched, tabbed stone surround. The window is surmounted by a small, louvered, lancet-shaped opening near the peak of the gable roof. A wide vergeboard, supported by projecting wooden brackets, bears a quatrefoil decoration in relief on its northern end.

Brick wall buttresses highlight the corners of the building's rectangular tower. On the tower, a Gothic arched, tabbed-stone surround features a smaller stained glass window, resembling the one centered on the façade, but with stone mullions and tracery. The tower is topped with a louvered belfry capped by a low-pitched, flared, pyramidal roof.

The building's first addition was constructed in 1937 and extends to the north. It is two and a half stories on a high, fenestrated basement. The structure is flat-roofed and four bays wide, its brick color matching that of the original church. From south to north, its first bay projects slightly from the plane of the original church's façade and features a double steel door with wooden transom. A painted sign above the door, added in 1951 at the earliest, reads "King Solomon OFFICES EDUCATION RECREATION." Above the entrance, the first bay features a tall window with wood muntins and mullions. Continuing north, the remaining three bays project forward to meet the public sidewalk. Each of these bays features triple, wood, six over six sash windows on the upper floors, with smaller wood windows on the basement level. Each bay is separated by a brick pier which extends slightly above the roofline, while each floor is separated by a soldier belt course. The north elevation of the 1937 addition is four bays wide, featuring the same fenestration pattern as the east elevation.

The building's second and final addition was constructed in 1940 and extends to the south. It is three stories tall and three bays wide, and for the most part, resembles the earlier addition in appearance.

Instead of sash windows, it features multilight steel windows. This fenestration pattern is continued on the south elevation, with some of the window openings having been bricked in. A southeast cutaway corner provides space for a single unglazed steel door.

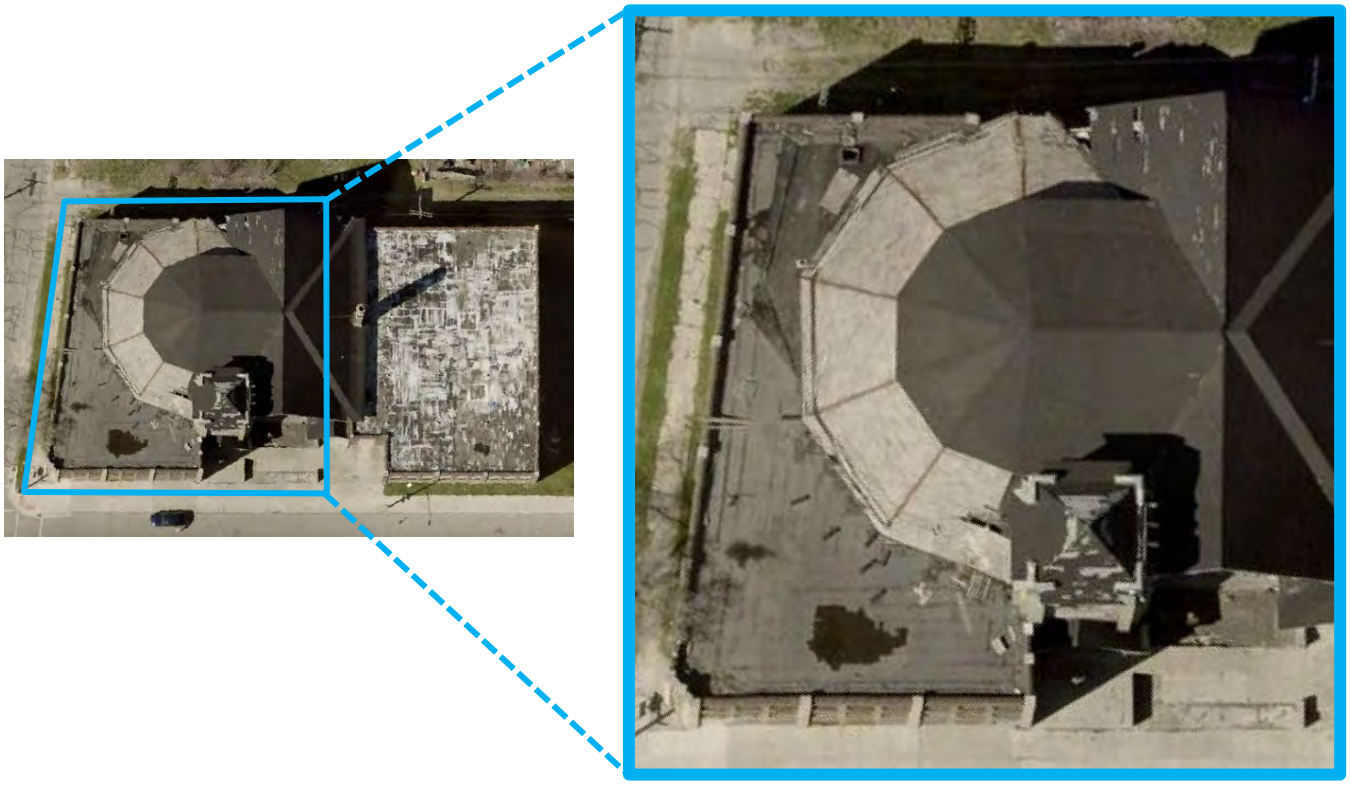
The 1940 addition concealed the church's south transept. This portion of the structure occupied a multifaceted footprint, each of the transept's six sides bearing a large, Gothic-arched stained glass window resting on a continuous sill course. The transept was capped by a six-faceted, semi-pyramidal roof with projecting eaves, interrupted by a course of clerestory windows.

The west (rear) elevation resembles the front elevation, with similar wide vergeboards and Gothic arched stained glass window.

View of existing conditions at front elevation of 6125 14th, view from 14th St. looking southwest. Staff photo, March 8, 2022.

View of existing conditions at rear elevation of 6125 14th, view from Marquette St. looking northeast. Staff photo, March 8, 2022.

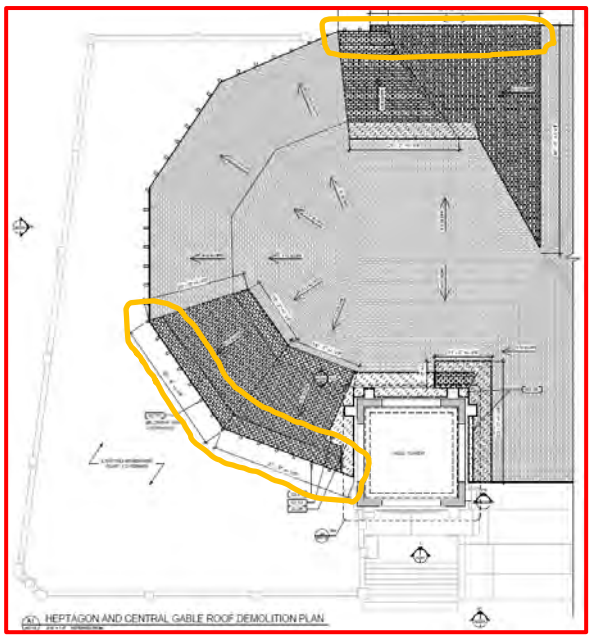
Parcel view of vicinity, 6125 14th Street is outlined in yellow.



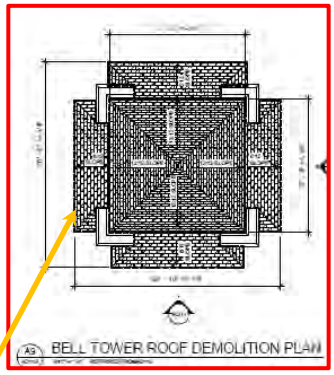
PROJECT DESCRIPTION
This application is for the first phase of a larger rehabilitation project and includes a partial roof repair, replacement, and alteration at various locations in addition to masonry stabilization at the bell tower.

The long-term intention for the building as written in the application materials (King Solomon Roof Inspection Report 11.19.2021_Printing Copy.pdf, pg. 7):

> *In 2026, the church will be celebrating its centennial. The congregation's vision is to eventually have the sanctuary and additions fully rehabilitated and operational with the hopes of following the course of the city as it rises again and finds renewed use. As an important center to the surrounding black community, the church and community members have envisioned countless expansion ideas for King Solomon's programs and services, providing neighborhood support spaces as a place to empower the black community. In order to work toward that vision, it is paramount that this project use these initial grant funds on targeted structural repairs and roofing work that best protects the historic resource until future preservation, restoration, or rehabilitation work can be completed. The primary objective is creating a weather-tight enclosure from above, and protecting the spaces below from further deterioration.*

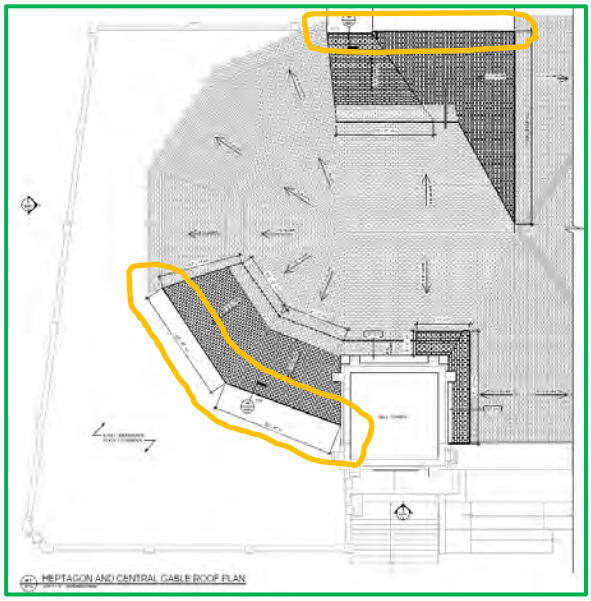


Proposed Roof Demo Plan - from applicant's materials

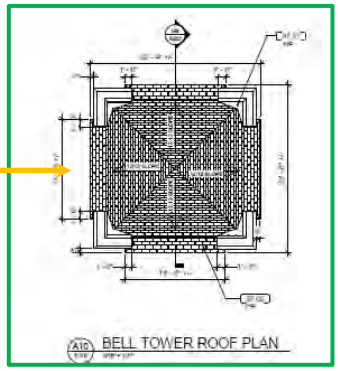


Bell Tower Roof Demo Plan

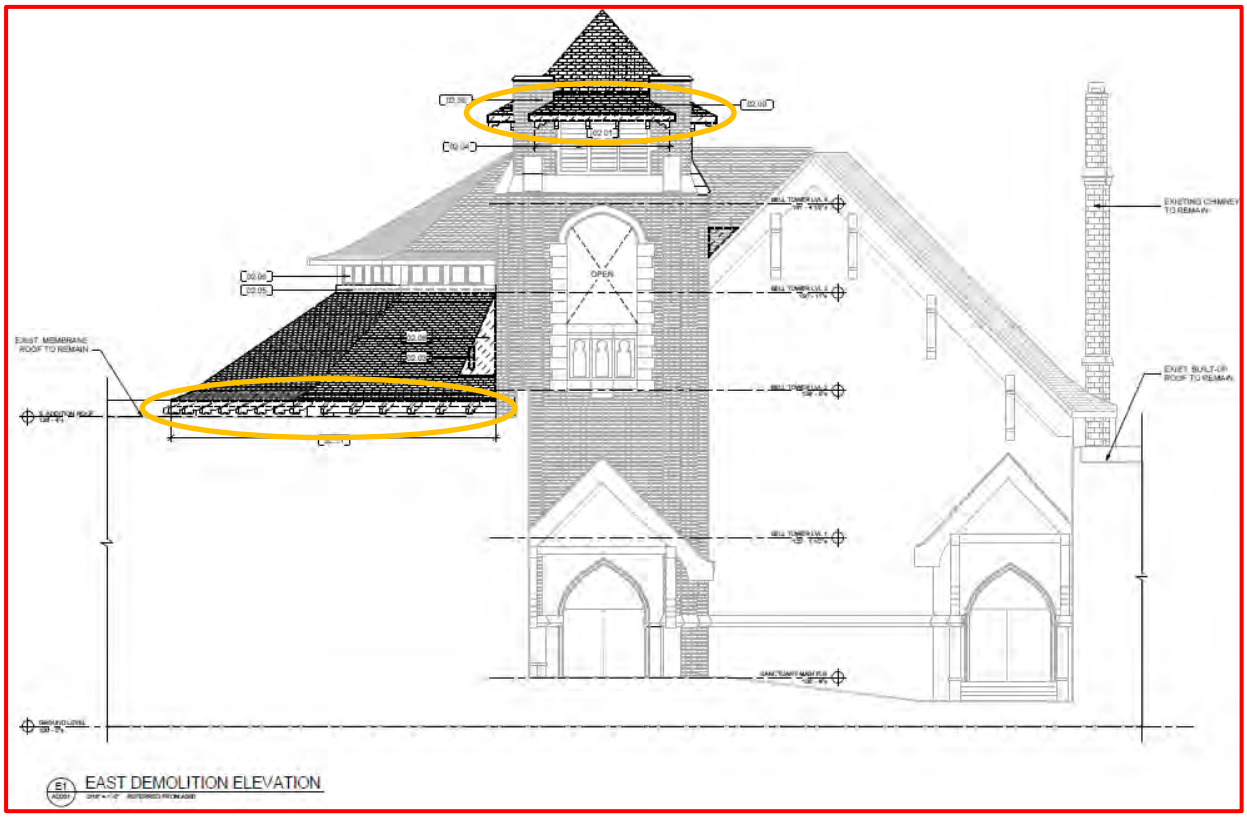
Note difference in depth of roof eaves between existing (demo) and proposed.



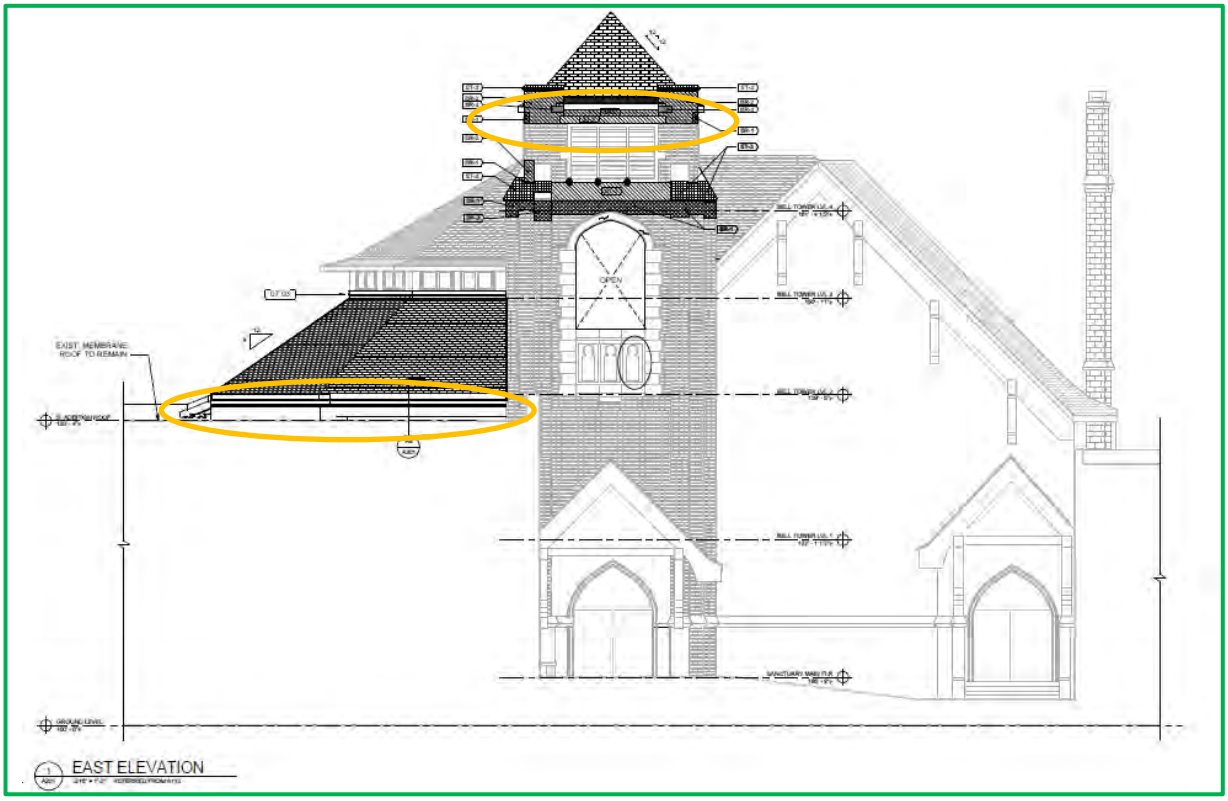
Proposed Roof Plan - from applicant's materials



Proposed Bell Tower Roof Plan



Proposed East (Front) Demo Elevation - from applicant's materials



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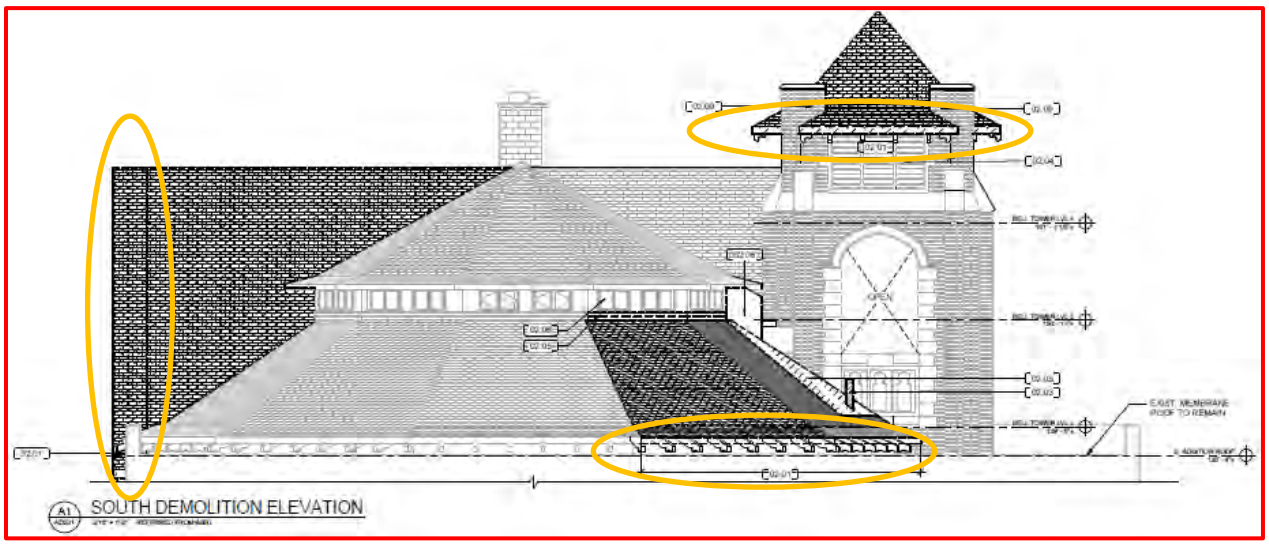
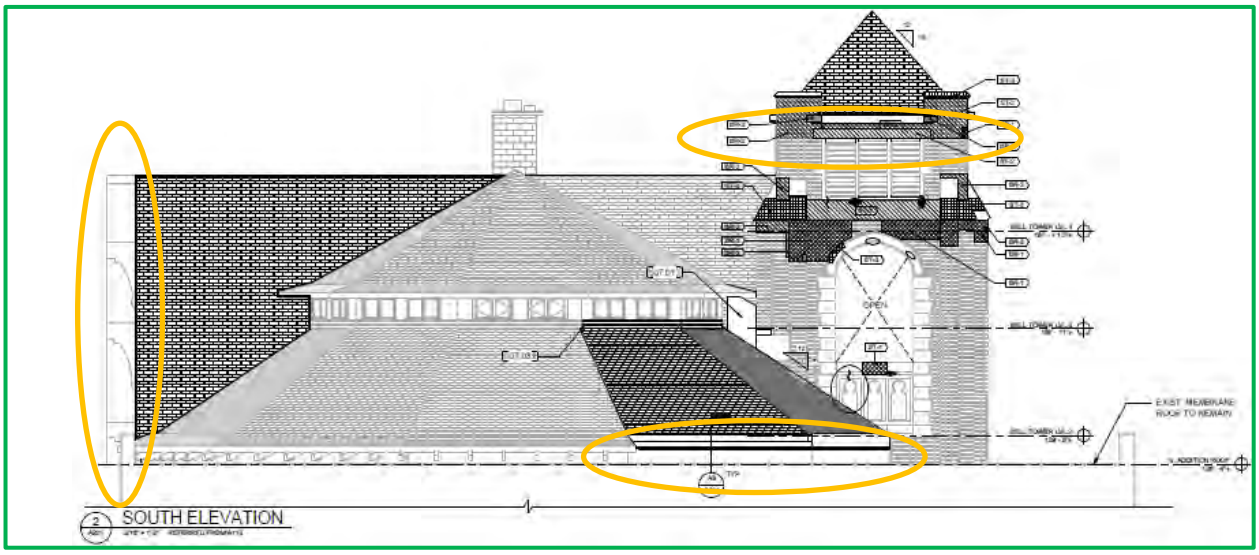
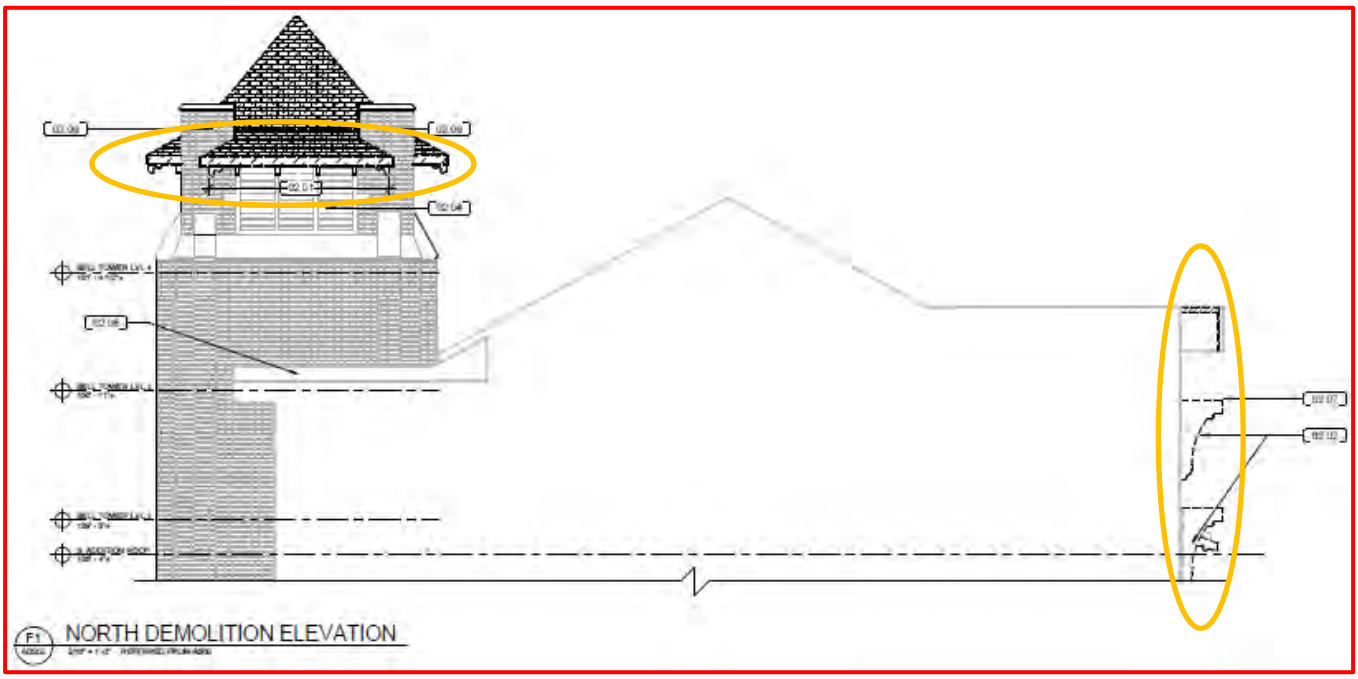


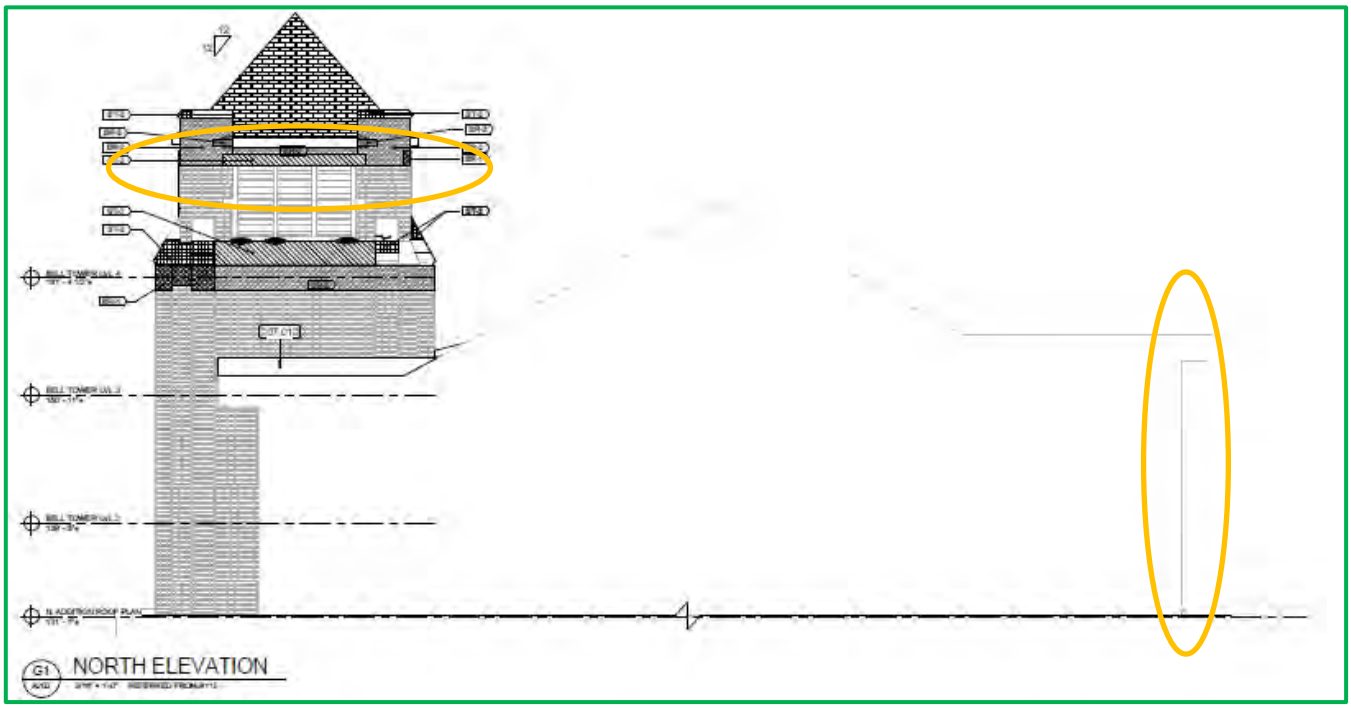
Proposed South Demo Elevation - from applicant's materials



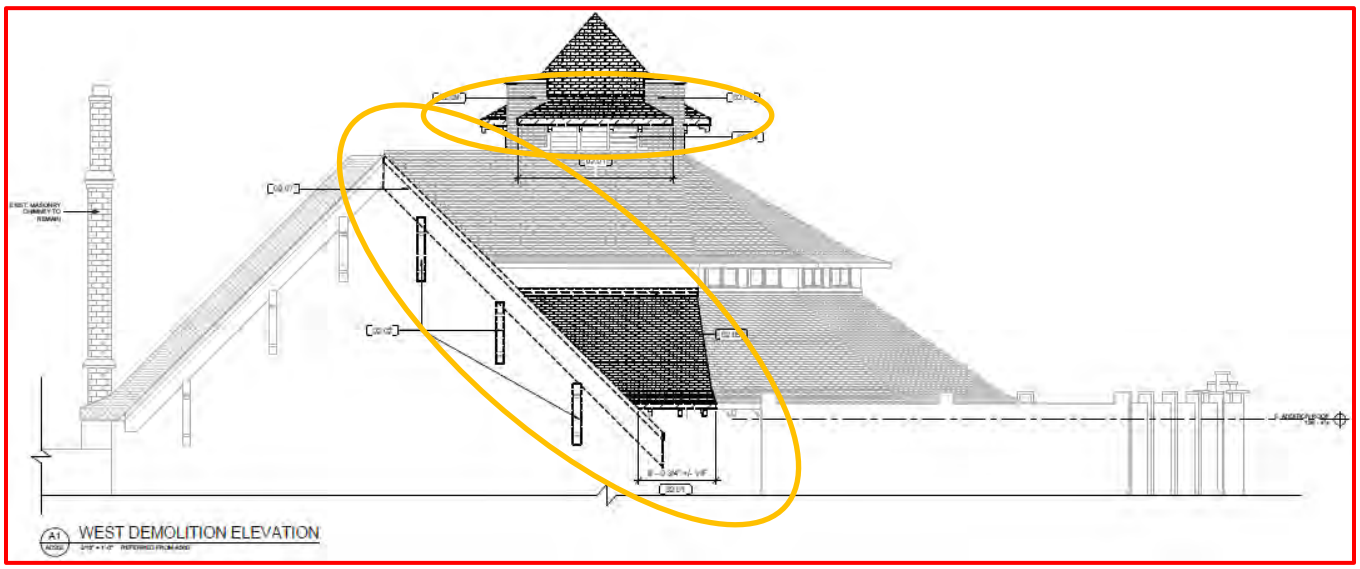
Proposed South Elevation - from applicant's materials



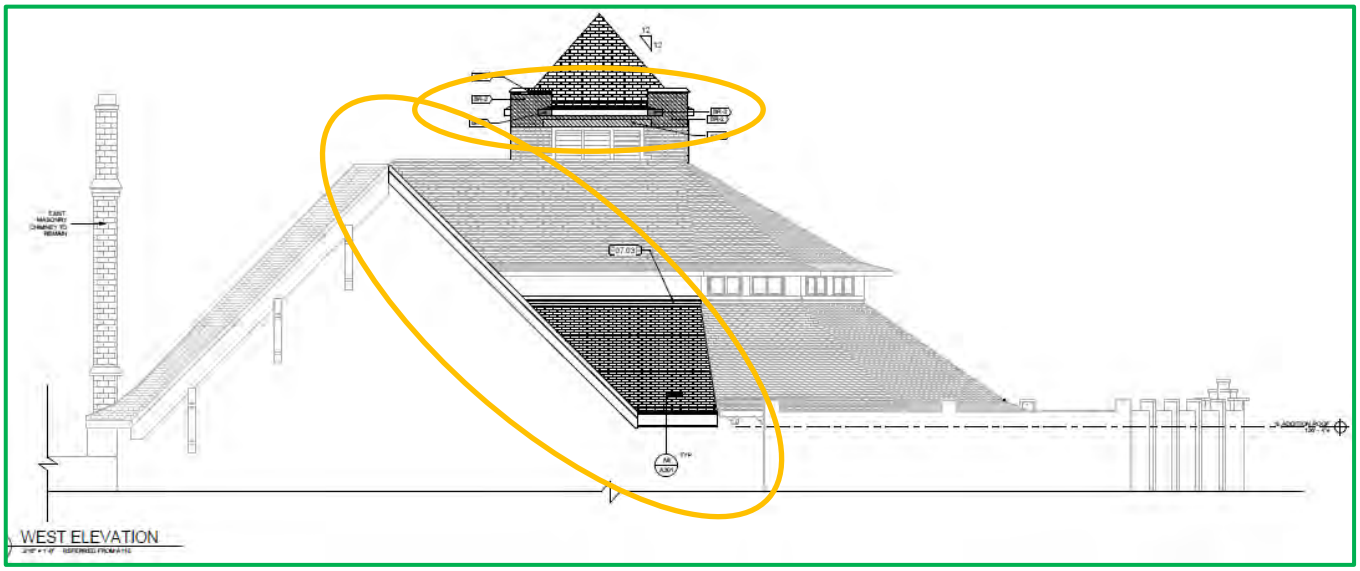
Proposed North Demo Elevation - from applicant's materials



Proposed North Elevation - from applicant's materials



Proposed West (Rear) Demo Elevation - from applicant's materials



Proposed West (Rear) Elevation - from applicant's materials

STAFF OBSERVATIONS AND RESEARCH

- The King Solomon Baptist Church Historic District was established in 2011 and consists of two contributing buildings, one of which is the building located at 6125 14th Street to which this application pertains. See historic image of King Solomon Baptist Church from the Designation Report below.

Old Auditorium, Temple Baptist Church, which has now been converted into a modern Sunday School building.

Temple Baptist Church, circa 1938-1939. [Source: Carpenter, Joel. *Inside History of First Baptist Church, Fort Worth, and Temple Baptist Church, Detroit*]

- Both the Designation Report and the Elements of Design for the King Solomon Baptist Church Historic District call out the wood decorative flared vergeboards, large wood roof brackets, rafter tails, and projecting eaves of the various roofs as notable details of the "Arts and Crafts-inspired Tudor Revival" style of architecture.
- The removal, replacement, and brick infilling of windows were not approved by the Commission. HDC staff notified the property owner of the violation in November 2021, however, the work remains in violation.

ISSUES

- All decorative wood details proposed for demolition, including all rafter tails, flared vergeboards, and roof brackets are distinctive character-defining features of the property. The current application proposes to remove these character-defining details without replacing them at this time due to budget constraints (see affected areas circled in yellow on previous pages).

  As shown in the application documents, the cost to complete the full roof project as outlined is a little over $2,000,000 (King Solomon Roof Inspection Report 11.19.2021_Printing Copy.pdf, pg. 66) compared to a cost of $222,400 (KingSolomonRoof_Scope of Work and Budget.pdf) for the targeted scope of work included in the current application.

As stated in 36 CFR 67.7 (b), the Secretary of the Interior's Standards for Rehabilitation "are to be applied to specific rehabilitation projects in a reasonable manner, taking into consideration economic and technical feasibility." Considering the economic feasibility of this rehabilitation project, it is staff's opinion that the proposed work is a reasonable stabilization approach that limits further damage, protects the building from additional deterioration, and preserves enough of the historic fabric for future rehabilitation or restoration of the character-defining features. Although staff finds the proposed work to be reasonable and appropriate, staff does not have the authority to approve the work as proposed.

- Staff finds no issue with the proposal to replace or repair the structural roof framing as necessary nor the proposed asphalt shingles.
- Staff finds no issue with the stabilization of the masonry at the bell tower.

RECOMMENDATION

Section 21-2-78, Determinations of Historic District Commission

Staff finds the proposed work to be a reasonable and appropriate stabilization approach as it limits further damage, protects the building from additional deterioration, and preserves enough of the historic fabric for future rehabilitation or restoration of the character-defining features.

Staff therefore recommends that the Commission issue a Certificate of Appropriateness for the work, as proposed, as it meets the Secretary of the Interior's Standards for Rehabilitation and the defined elements of design for the historic district, with the conditions that:

- The removed ornament is to remain and be preserved on-site for future reproduction.
- Once additional funding is in place, a new application is to be submitted to the Commission to complete an historically appropriate rehabilitation of the building.

GRAND BLVD W.

PROVIDENCE HOSPITAL, R. C.

CENTURY THEATRE

CHILDRENS WARDS

LAUNDRY

FERRY PARK AV.

WABASH AV.

14TH ST.

15TH ST.

HUGHES TER.

TEMPLE BAPTIST CHURCH

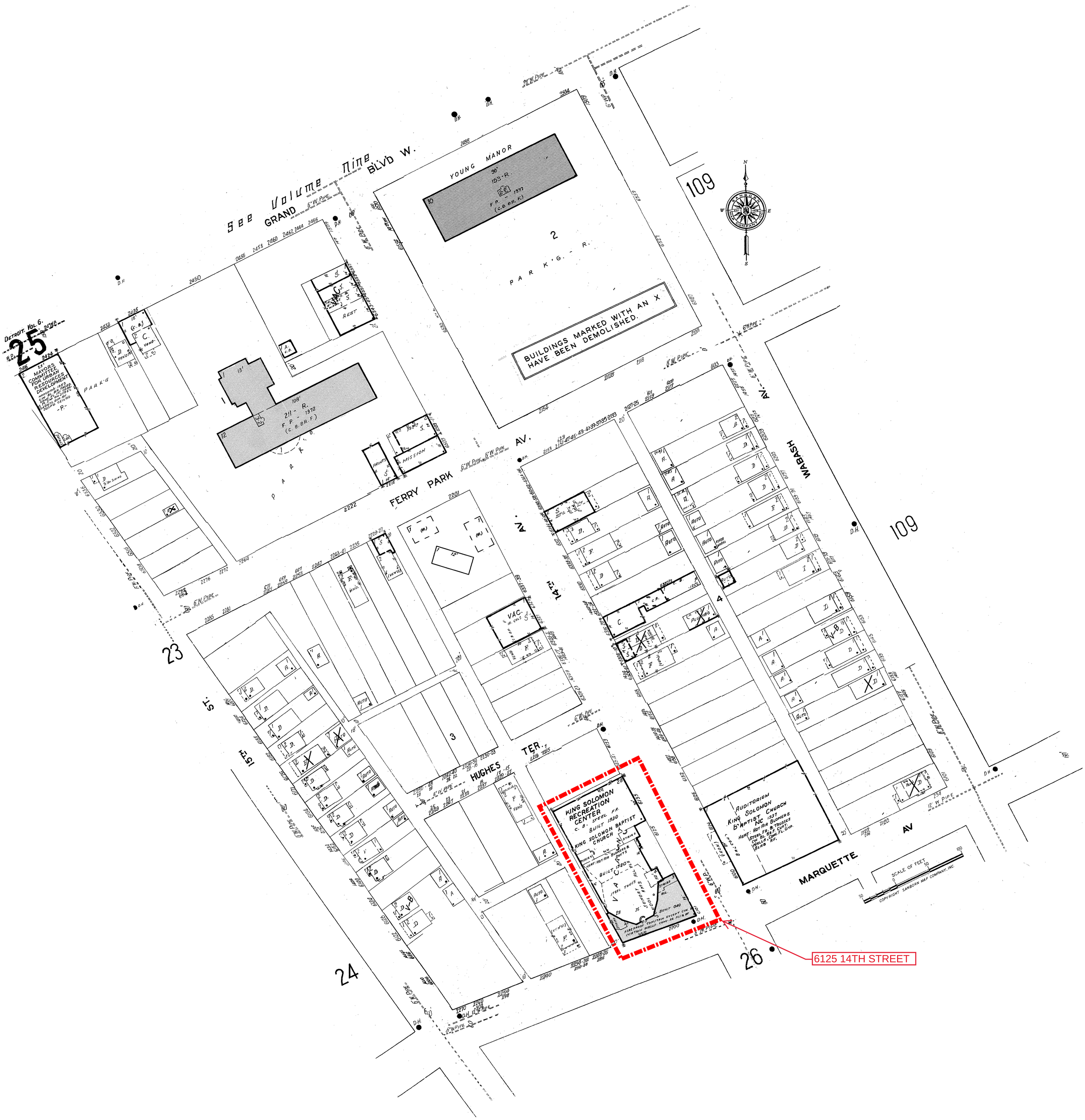
NEW AUDITORIUM TEMPLE BAPTIST CHURCH

MARQUETTE AV

6125 14TH STREET

Scale of Feet.

1915 - 1951 SANBORN MAP



POST-1951 SANBORN MAP

STAFF SITE VISIT 3/8/2022


AHEAD
STAFF SITE VISIT 3/8/2022

STAFF SITE VISIT 3/8/2022

STAFF SITE VISIT 3/8/2022

STAFF SITE VISIT 3/8/2022

THIS IS A 3-PAGE FORM - ALL INFORMATION IS REQUIRED FOR PROJECT REVIEW

HISTORIC DISTRICT COMMISSION
PROJECT REVIEW REQUEST

City of Detroit - Planning & Development Department
2 Woodward Avenue, Suite 808
Detroit, Michigan 48226

DATE: 1-31-22

PROPERTY INFORMATION

ADDRESS(ES): 6125 14th Street AKA: King Solomon Baptist Church

PARCEL ID: 10005106 HISTORIC DISTRICT: King Solomon Baptist Church HD

SCOPE OF WORK: (Check ALL that apply)
- ☐ Windows/ Doors
- ☐ Walls/ Siding
- ☐ Painting
- ☑ Roof/Gutters/ Chimney
- ☐ Porch/Deck/ Balcony
- ☐ Addition
- ☐ Demolition
- ☐ Signage
- ☐ New Building
- ☐ Major Alteration *(3+ scope items)*
- ☐ Site Improvements *(landscape, trees, fences, patios, etc.)*

BRIEF PROJECT DESCRIPTION: Partial in-kind roof replacement (asphalt shingles). Select roof framin
Partial in-kind roof replacement (asphalt shingles). Select roof framing and masonry repairs.

APPLICANT IDENTIFICATION

- ☐ Property Owner/ Homeowner
- ☐ Contractor
- ☐ Tenant or Business Occupant
- ☑ Architect/Engineer/ Consultant

NAME: Saundra Little COMPANY NAME: Quinn Evans

ADDRESS: 4219 Woodward Ave-Suite30 CITY: Detroit STATE: MI ZIP: 48201

PHONE: 313.462.2550 MOBILE: 313-518-1432 EMAIL: slittle@quinnevans.com

PROJECT REVIEW REQUEST CHECKLIST

Please attach the following documentation to your request:

PLEASE KEEP FILE SIZE OF ENTIRE SUBMISSION UNDER 30MB

☑ **Completed Building Permit Application** (highlighted portions only)

☐ **ePLANS Permit Number** (only applicable if you've already applied for permits through ePLANS)

NOTE:
Based on the scope of work, additional documentation may be required.
See www.detroitmi.gov/hdc for scope-specific requirements.

☑ **Current Photographs:** Including the front of the building & detailed photographs of the area(s) affected by the proposed work. All photographs must be labeled or captioned, e.g. "west wall", "second floor window," etc.

☑ **Description of existing conditions** (including materials and design)

☑ **Description of project** (if replacing any existing material(s), include an explanation as to why replacement--rather than repair--of existing and/or construction of new is required)

☑ **Detailed scope of work** (formatted as bulleted list)

☑ **Brochure/cut sheets** for proposed replacement material(s) and/or product(s), as applicable

Upon receipt of this documentation, staff will review and inform you of the next steps toward obtaining your building permit from the Buildings, Safety Engineering and Environmental Department (BSEtED) to perform the work.

SUBMIT COMPLETED REQUESTS TO: HDC@DETROITMI.GOV

P2 - BUILDING PERMIT APPLICATION

Date: 1-31-22

PROPERTY INFORMATION

Address: 6125 14th Street Floor: Roof Suite#: ___ Stories: 3

AKA: King Solomon Baptist Church Lot(s): ___ Subdivision: L26

Parcel ID#(s): 10005106 Total Acres: 0.526 Lot Width: 216 Lot Depth: 106

Current Legal Use of Property: Religious (unoccupied) Proposed Use: Religious (unoccupied)

Are there any existing buildings or structures on this parcel? ☒ Yes ☐ No

PROJECT INFORMATION

Permit Type: ☐ New ☒ Alteration ☐ Addition ☐ Demolition ☐ Correct Violations

☐ Foundation Only ☐ Change of Use ☐ Temporary Use ☒ Other: Repair

☐ Revision to Original Permit #: ___ (Original permit has been issued and is active)

Description of Work (Describe in detail proposed work and use of property, attach work list)

Partial in-kind roof replacement with asphalt shingles, over new sheathing and underlayment. Select wood roof framing repairs or replacement in-kind.

New wood edge trim and metal flashings at roof areas impacted. Select masonry repairs in upper area of Bell Tower.

☐ MBC use change ☒ No MBC use change

Included Improvements (Check all applicable; these trade areas require separate permit applications)

☐ HVAC/Mechanical ☐ Electrical ☐ Plumbing ☐ Fire Sprinkler System ☐ Fire Alarm

Structure Type

☐ New Building ☒ Existing Structure ☐ Tenant Space ☐ Garage/Accessory Building

☐ Other: ___ Size of Structure to be Demolished (LxWxH) ___ cubic ft.

Construction involves changes to the floor plan? ☐ Yes ☒ No

(e.g. interior demolition or construction to new walls)

Use Group: A-3 Type of Construction (per current MI Bldg Code Table 601) III-A

Estimated Cost of Construction $ ___ (By Contractor) $ ___ (By Department)

Structure Use

☐ Residential-Number of Units: ___ ☐ Office-Gross Floor Area ___ ☐ Industrial-Gross Floor Area ___

☒ Commercial-Gross Floor Area: 35,909 ☐ Institutional-Gross Floor Area ___ ☐ Other-Gross Floor Area ___

Proposed No. of Employees: ___ List materials to be stored in the building: ___

PLOT PLAN SHALL BE submitted on separate sheets and shall show all easements and measurements (must be correct and in detail). SHOW ALL streets abutting lot, indicate front of lot, show all buildings, existing and proposed distances to lot lines. (Building Permit Application Continues on Next Page)

For Building Department Use Only

Intake By: ___ Date: ___ Fees Due: ___ DngBld? ☐ No

Permit Description:

Permit #:

Current Legal Land Use: ___ Proposed Use: ___

Permit#: ___ Date Permit Issued: ___ Permit Cost: $ ___

Zoning District: ___ Zoning Grant(s): ___

Lots Combined? ☐ Yes ☐ No (attach zoning clearance)

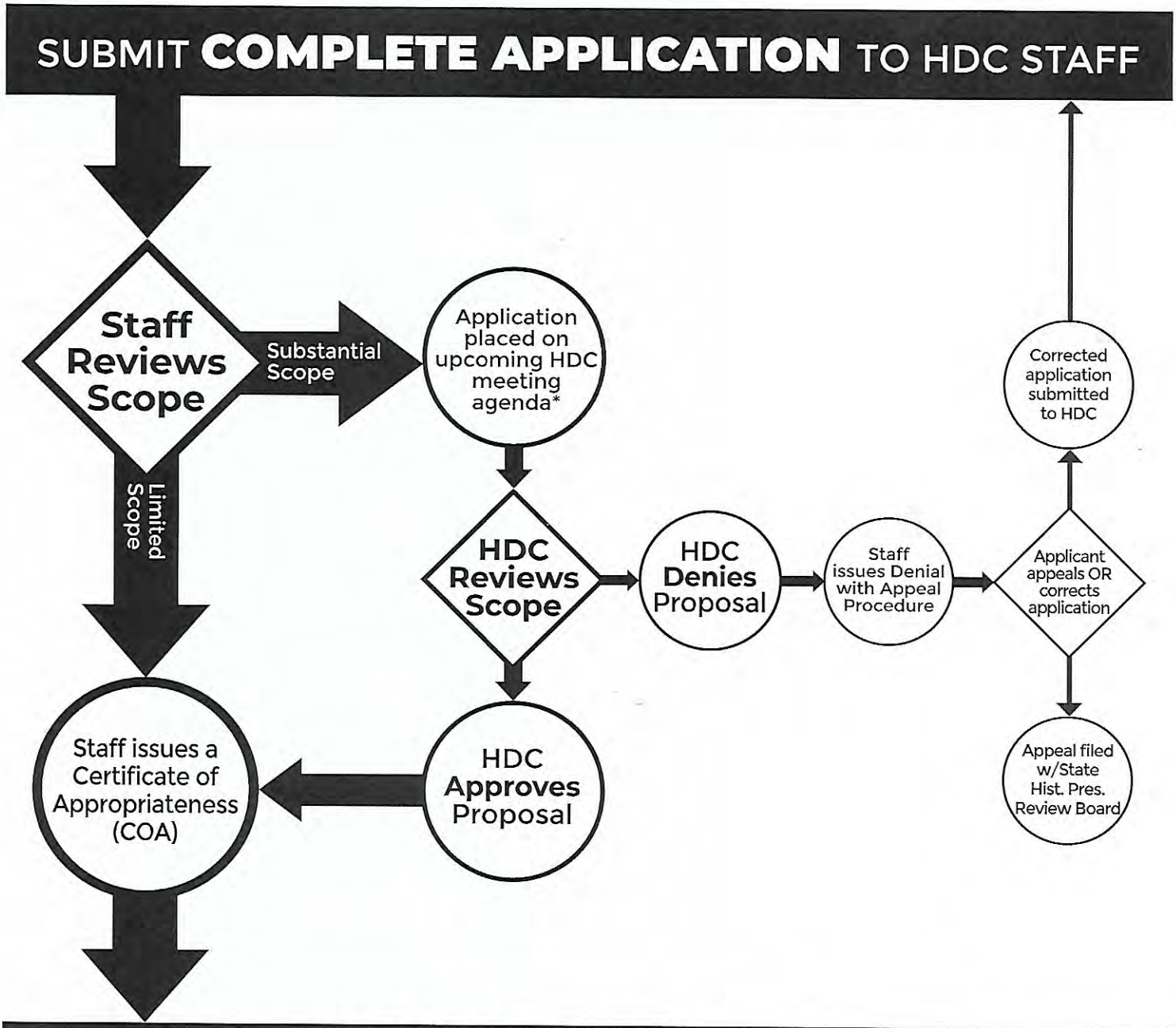
Revised Cost (revised permit applications only) Old $ ___ New $ ___

Structural: ___ Date: ___ Notes: ___

Zoning: ___ Date: ___ Notes: ___

Other: ___ Date: ___ Notes: ___

HISTORIC DISTRICT COMMISSION
REVIEW & PERMIT PROCESS



* THE **COMMISSION MEETS REGULARY AT LEAST ONCE PER MONTH,** TYPICALLY ON THE SECOND WEDNESDAY OF THE MONTH.
(SEE WEBSITE FOR MEETING SCHEDULE/AGENDAS)

FIND OUT MORE AT: www.detroitmi.gov/hdc

Proposed Scope of Work - Direct Construction Cost Breakdown:

	Zone 1: Flat Roof (South / North)	
	No work	$0
	Zone 2: Heptagon Roof	
1,231 SF	Replace sections of roof with open holes present: Remove remaining asphalt shingles, underlayment and sheathing/overhang; Remove membrane valley flashings at base of Bell Tower; Replace or reinforce deteriorated wood rafters; Provide new exterior grade plywood sheathing; Provide new asphalt shingles and underlayment, and prefin. aluminum drip edge over new wood fascia; Provide new prefin. aluminum valley and wall flashings around base of Bell Tower	$55,600
	Zone 3: Bell Tower Roof	
800 SF	Complete base scope / full repair and replacement as Remove existing shingles, underlayment, sheathing and roof framing; remove flashings & detached masonry Extend new wood trusses, exterior grade sheathing, underlayment, and architectural grade shingles beyond wall to create 6-12" deep overhang; Repair, replace, reset select masonry in upper area of Tower	$103,400
	Zone 4: Central Gable Roof	
738 SF	Replace sections of roof with open holes present: Remove remaining asphalt shingles, underlayment and sheathing/overhang; Remove membrane valley flashings at base of Bell Tower Replace or reinforce deteriorated wood rafters; Provide new exterior grade plywood sheathing; Provide new asphalt shingles and underlayment, and prefin. aluminum drip edge over new wood fascia; Provide new prefin. aluminum valley and wall flashings around base of Bell Tower	$63,400
	Direct Construction Cost TOTAL:	**$222,400**

SCOPE OF WORK SUMMARY:

Project is capturing funds from a National Park Service (NPS) African American Civil Rights Grant, being administered by the State Historic Preservation Office (MI-SHPO) for partial roof replacement. The project is utilizing the limited funds to address the most deteriorated sections of the roofs (those with open holes to the interior), and to stabilize masonry at the Bell Tower as required to support that new roof / eliminate life safety hazards directly below.
Each limited area of work will include full replacement of roofing, underlayments, flashings, and sheathing, as well as repair/replacement to the structural framing directly supporting the localized area. Due to the nature of partial replacement, materials will primarily match existing for this project, and require tie-in to the adjacent existing materials to remain.

**Additional funding will be required for future projects to address remaining areas of deterioration.*

FIGURE EAST ELEVATION

FIGURE SOUTH ELEVATION

FIGURE WEST ELEVATION

FIGURE NORTH ELEVATION

ZONE 2: HEPTAGONAL ROOF - ARCHITECTURAL ASSESSMENT

Zone 2 constitutes a 5,250 square feet, wood framed, two tiered, seven-sided polygon asphalt roof that is part of the original Temple construction. Bot tiers have a flared eave, extended over decorative wood brackets and outriggres. The lower tier terminates over the Zone 1 flat roof with minimal clearance. This roof shows significant deterioration at the lower tier, as evidence by systemic failure along the eave and open holes throughout the roof surface. Exposure to the outdoor elements and increased water infiltration has caused the roof structure to rot and weaken further. Listed below are the *architectural observations and findings*:

- Asphalt shingles worn, well beyond the end of their useful life
- Large, visible holes in the roof, exposing deteriorating wood structural framing; deteriorated plywood patching *(see figure A2.1 and A2.7)*
- Pronounced waviness to the roof surface which may indicate damage to the roof decking and structural framing below *(see figure A2.2)*
- Extensive deterioration of the decorative wooden eave brackets, particularly along the lower tier where the decking has mostly deteriorated completely away at the overhang *(see figure A2.8)*
- Flashing failure along the supporting masonry wall under the eaves *(see figure A2.7)*
- Patched valley flashing with improper terminations along bell tower masonry wall and of asphalt roofing. Excessive mastic on masonry wall. *(see figure A2.13)*
- Severely rusting metal head flashing where the lower tier roof terminates at the vertical clerestory wall between roof tiers; moderately rusting metal drip flashing along upper tier roof edge
- Clerestory glazed windows set between metal trim between two roof tiers appear to be in fair to good condition, with metal trim exhibiting surface rust and worn paint *(see figure A2.11)*

FIGURE A2.1 OVERVIEW OF THE TWO TIERED HEPTAGON ROOF; ROOF DECAY AND WATER INFILTRATION, WORN AND MISSING ASPHALT TILES, WEATHERED AND ROTTED DECORATIVE EAVE OUTRIGGERS/RAFTER TAILS.

FIGURE A2.2 SURFACE DEPRESSIONS ALONG THE ROOF; CURLED, DISCOLORED AND FRAYED ASPHALT SHINGLES; RUSTED METAL FLASHING UNDER THE UPPER WINDOWS

FIGURE A2.7 COMPLETE DETERIORATION AND DECAY OF THE DECORATIVE WOOD EAVES AND DECORATIVE RAFTER TAILS; THE LEVEL OF DETERIORATION MAY REQUIRE LOCALIZED REPAIRS TO ADJACENT ELEMENTS SUCH AS THE BRICK WALL BELOW

FIGURE A2.8 SIGNIFICANT DETERIORATION AT THE PERIMETER (TERMINATION OF DECORATIVE EAVES); EXTENSIVE WOOD ROT OF THE DECORATIVE EAVE OUTRIGGERS/RAFTER TAILS; PONDING WATER BELOW

FIGURE A2.10 UPPER TIER OF HEPTAGON ROOF; WORN, MISSING CURLED, DISCOLORED, AND FRAYED ASPHALT SHINGLES

FIGURE A2.12 OVERVIEW OF THE HEPTAGON ROOF ABOVE, SHOWS THE EXTENT OF THE ROOF DETERIORATION WITH VARIOUS HOLES ALONG THE SURFACE

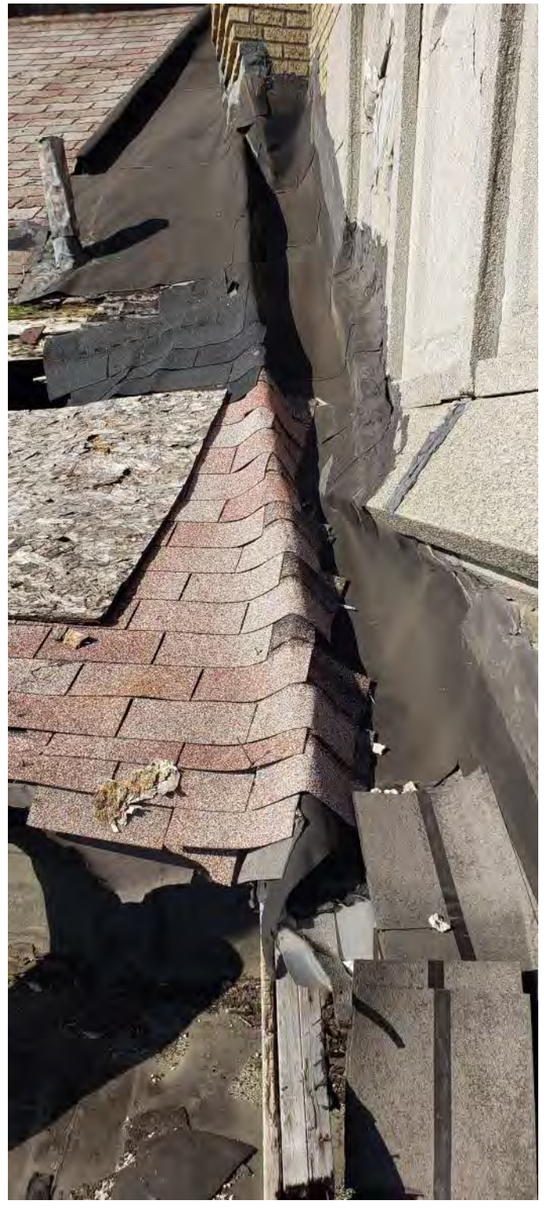


FIGURE A2.13 IMPROPER FLASHING AND PATCHING AT THE VALLEY JUNCTION BETWEEN THE POLYGONAL ROOF AND BELL TOWER; THE ASPHALT SHINGLES ARE NOT PROPERLY TERMINATED; EXCESSIVE USE OF ROOFING MASTIC ALONG THE BELL TOWER WALL; DETERIORATED ROOF VENT NEAR THE LARGE HOLE IN THE ROOF.

FIGURE A2.6 FAILURE OF THE FLASHING AT THE INTERSECTION WHERE THE POLYGONAL ROOF INTERSECTS WITH THE BELL TOWER; STAINING OF THE DECORATIVE STONE BY FLASHING SEALANT

FIGURE A2.14 DETERIORATING INTERIOR PLASTER BELOW THE HEPTAGONAL ROOF STRUCTURE; SUN LIGHT IS VISIBLE THROUGH THE HOLE IN THE ROOF ABOVE

FIGURE A2.11 THE UPPER TIER OF THE POLYGONAL ROOF; VISIBLE RUST ON THE METAL WINDOW FRAMING AND ROOF HIPS; METAL FLASHING IS CORRODING AND DETACHING FROM THE FASCIA BOARD AND HEAD OF LOWER ROOF

FIGURE A2.13 DECORATIVE WOOD EAVE SHOW SIGNS OF DECAY AND ROT; SIGNIFICANT DETERIORATION OF THE ROOF PERIMETER EDGE; WITH POOLS OF WATER GATHERING UNDER THE EAVES

ZONE 2: HEPTAGONAL - STRUCTURAL ASSESSMENT

Zone 2's structural roof is constructed of tongue and groove wood plank sheathing, spanning to sloped rafters or brackets at approximately 4'-0" on center. The sloped rafters span to the exterior beams and is constructed of an elaborate system of trusses, posts and transfer beams. The roof has an intermediate level of windows located at the upper tier. The roof flares out and extends beyond and overhangs the exterior support walls at the low end as well above the intermediate level of windows. Listed below are the *structural observations and findings:*

- The lower overhang extending over the flat roof is in poor condition with missing and deteriorated sheathing. The structural rafters inside the decorative side panels are in very poor condition. The wood is rotten beyond serviceability. Water shedding off the roof flows over exposed wood sides and edges, accelerating the deterioration of the support structure. *(see figure S2.1)*

- The lower roof area up to the intermediate windows conditions varies. There is a large hole with severely deteriorated and damaged sheathing and support framing on the east side and in the valley behind the bell tower. The condition of the roof framing appears to improve towards the south side will only localized signs of damaged, deteriorated sheathing. The condition of the roof further deteriorates toward the northwest corner where the sheathing is visibly sagging between the support rafters. *(see figure S2.2)*

- The condition of the vertical walls, framing and windows at the intermediate window level appear in to be structurally functional. *(see figure S2.3)*

- The roof overhang above the intermediate windows appears intact for all segments except at the northwest corner where the overhang had been removed with only the exposed outrigger brackets remaining. It can be assumed that the exposed wooden brackets are rotten and are beyond serviceable condition. *(see figure S2.4)*

- Upper tier roof area appears in better condition than the lower roof. Localized deterioration of sheathing and rafters can be anticipated above the area with exposed overhang brackets. *(see figure S2.5)*

FIGURE S2.1

FIGURE S2.2

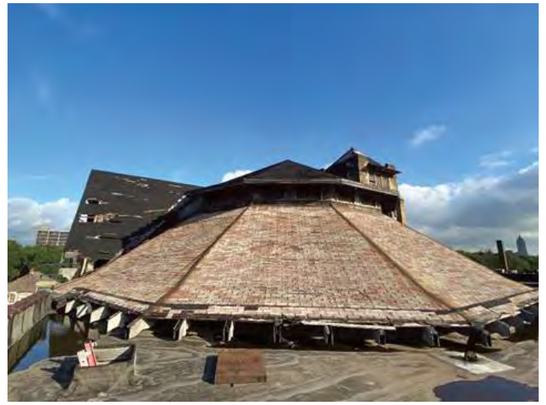


FIGURE S2.3

FIGURE S2.4

FIGURE S2.5

KING SOLOMON BAPTIST CHURCH ROOF INSPECTION REPORT

ZONE 3: BELL TOWER - ARCHITECTURAL ASSESSMENT

Zone 3 constitutes a 800 square feet pyramid hip roof on a wood framed structure with asphalt shingles. The decking flares into deep overhangs at each side and returns around four masonry corner piers of the tower. Decorative wood rafter tails support the extended overhang on all four sides. The extended wood eave overhangs and rafter tails, show significant deterioration on all four sides with extensive wood decay and rot. Several sections of the overhangs and select rafter tails have fallen off the building to the roofs or street below . Listed below are the *architectural observations and findings*:

- Asphalt shingles are work, well beyond the end of their useful life, with a significant quantity missing and exposing the sheathing below
- Weathered, rotted, or missing roof decking and painted soffit trim *(see figure A 3.7 and S3.0)*
- Extensive roof damage at extended eave overhangs
- Decorative wood rafter tails are rotted or missing; wood frieze board and trim is detaching from the masonry wall where still existing, weathered with worn paint. *(see figure A3.4 and A3.6)*
- Some displacement or movement is visible in the upper section of the four corner masonry piers *(see figure S3.3)*
- Several piece of stone caps over the masonry bell tower piers and buttress, as well as within the window and louver surrounds are cracked, detached, or already fallen to the roof or site below, exposing openings in the masonry wall assemblies *(see figure S3.2)*
- Missing or detaching, deteriorated copper step flashing at the overhang returns and brick piers; original copper gutters are missing and remnants of some disconnected copper downs[pouts remain *(see figure A3.10)*
- Large arched windows in the bell tower are missing glass and framing, leaving the underside of the roof and bell tower interior exposed to the elements and increased deterioration. Wood louvers above the windows are weathered with worn pain, in poor to fair condition, with some sections missing. *(see figure A3.1 and A3.2)*

FIGURE A3.2 THE EAVE OVERHANG SHOWS EXTENSIVE WOOD DECAY AND DETERIORATION

FIGURE A3.4 DECORATIVE WOOD OVERHANGS COLLAPSING AND OPEN AT ENDS TO INTERIOR; BRICK MASONRY SHOWS SIGNS OF DIFFERENTIAL MOVEMENT; REMAINING STEPPED COPPER FLASHING (EAST ELEVATION)

FIGURE A3.6 DIFFERENTIAL BRICK MOVEMENT UNDER EAVES; REMNANTS OF THE ORIGINAL STEPPED COPPER FLASHING; (NORTH ELEVATION)

FIGURE A3.7 HIP ROOF IS IN VERY POOR CONDITION; WEATHERED AND DECAYED WOOD DECKING, MISSING/FALLEN SHINGLES AND EXPOSED DECKING AND ORIGINAL STEPPED COPPER FLASHING (EAST ELEVATION)

FIGURE A3.8 ROTTED DECORATIVE WOOD RAFTER TAIL AND DETACHING FRIEZE BOARD TRIM

FIGURE A3.9 UNDERSIDE OF THE PAINTED DECORATIVE OVERHANGS; WEATHERED DETERIORATED WOOD DECKING (EAST ELEVATION)

FIGURE A3.10 OVERVIEW OF THE BELL TOWER'S ROOF AND DECKING; THE DECKING ON TOP OF THE DECORATIVE EAVE HAS COMPLETELY DECAYED AND DETACHED FROM THE ROOF ASSEMBLY (NORTH ELEVATION)

FIGURE A3.11 DETACHED COPPER DOWNSPOUT AND MISSING ASSOCIATED COPPER GUTTER

FIGURE A3.12 SOUTH WEST ELEVATION OF BELL TOWER; CRUMBLING STONE AT THE COLUMN CAP; BRICK MOVEMENT DIRECTLY UNDER THE ROOF

ZONE 3: BELL TOWER - STRUCTURAL ASSESSMENT

Zone 3's bell tower has a pyramid roof constructed of sloped rafters above the bell loft. The roof flares out between masonry corner piers that extend above the trusses. The flared roof, originally wrapped partially around the sides of the masonry corner piers. Listed below are the *structural observations and findings*:

- The entire roof structure is in very poor condition and beyond serviceable condition. Large portions of the roof overhang area and support brackets are missing. The plank sheathing on the pyramid roof is exposed and is in poor condition. The nearby areas are badly deteriorated or missing. *(see figure S3.1)*
- The masonry piers and masonry below the roof support zone has limited cracking, moderate mortar joint deterioration and visible spalling. There is a significant risk of damage to people and property from falling debris due to the condition of the masonry. *(see figure S3.2)*
- There are large openings in the bell tower where the original windows and louvers have been removed or are damaged. These openings should be closed off as part of the roofing solution. *(see figure S3.3)*

FIGURE S3.1

FIGURE S3.2

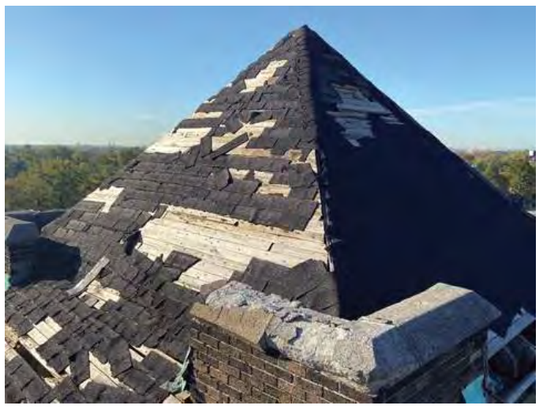


FIGURE S3.0

FIGURE S3.3

KING SOLOMON BAPTIST CHURCH ROOF INSPECTION REPORT

ZONE 4: CENTRAL GABLE ROOF - ARCHITECTURAL ASSESSMENT

Zone 4 constitutes a 5,650 square feet cross gable wood roof structure with asphalt shingles that is situated over the main sanctuary. This roof shows significant deterioration at various locations along is surface, particularly on its southwest slope. Openings in the roof exposure to the outdoor elements has allowed water to infiltrate into the building and damage the structure and interior space below. Listed below are the *architectural observations and findings*:

- Asphalt shingles are beyond their useful life; numerous shingles have lifted, are cracked, or missing with curled edges
- Open holes through the roofing and sheathing on the southwest slope, each corner of the overhangs, and the in the valley connections adjacent to the bell tower, allowing exposure from the elements to deteriorate the structural framing and interior spaces below
- Some wave or sag between structural support members can be seen in the north slope.
- Decorative wood rafter tails are rotted and failed on the west rake but generally in fair condition along the north overhang. The large decorative support brackets below structural wood outriggers, supporting the deep west and east rake overhangs are in fair to poor condition. End caps surrounding the outriggers are mostly open and the structural wood members rotted away. The decorative brackets below the outriggers are in fair condition with worn paint and weathered wood.
- Extensive deterioration and now measurable missing decking and trim at the deep overhang and fascia along the west rake edge. The full depth of the exterior wall assembly is exposed from above in the southwest corner where the sheathing is missing.
- Tongue-and-groove trim at the underside of the east and west rake overhangs, as well as adjacent fascia trim is in poor to fair condition with worn paint and weathered or missing wood elements. The wood fascia behind the gutters at the north eave has detached from the decorative rafter tails but is otherwise in fair condition, weathered with worn paint.
- At the north eave, the metal gutter and downspouts are significantly rusted, with some section of the downspout missing. Any previous gutter along the southwest eave is not missing, and a single disconnected copper downspout remains extending to grade.
- A block wall stair enclosure for access to the north flat roof (not in project) sits under a portion of the north eave overhang. The block walls are in poor condition with displaced units and broken blocks. The door and frame has completely failed leaving an opening into the stair from the exterior. The membrane roofing on the north flat roof is detached at its base and vegetation is present. Despite the connection, it appears that repairs can be made to the Zone 4 gable roof independent of any removal or repairs to the stair enclosure.

FIGURE A4.00 OVERVIEW OF NORTHERN SIDE OF THE CROSS GABLE ROOF

FIGURE 4.1 DETERIORATED WOOD DECKING, MISSING/FALLEN SHINGLES AT THE EAVE (WEST ELEVATION)

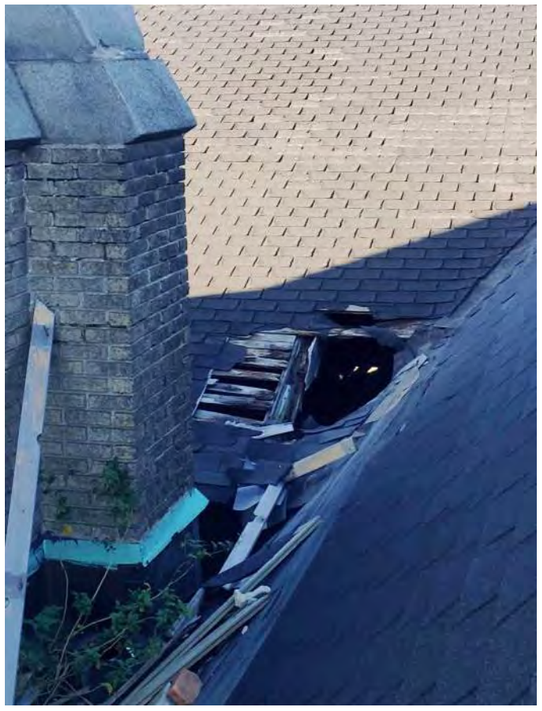


FIGURE A4.17 LARGE HOLE IN THE ROOF; DETERIORATED SHINGLES, WOOD DECKING AT THE ROOF VALLEY ; FALLEN WOOD DECKING FROM THE BELL TOWER ROOF ABOVE

FIGURE A4.23 EXTENSIVE EXTERIOR MASONRY DETERIORATION AT ROOFTOP STAIR ENTRY/EXIT; MISSING AND DETERIORATED MORTAR JOINTS; DETACHED ROOFTOP STAIR ENTRY DOOR; DAMAGED DOOR FRAMING. DETACHED FLASHING AT THE UPTURN OF THE NORTH MEMBRANE ROOFING

FIGURE A4.2 DECORATIVE WOOD EAVE, SIDE ELEVATION APPROX. LENGTH 3'-4"; IN FAIR CONDITION

FIGURE A4.3 DECORATIVE WOOD EAVE IN FAIR CONDITION; (NORTH ELEVATION)

FIGURE A4.4 WEATHERED FASCIA BOARD WITH ATTACHED METAL GUTTER

FIGURE A4.5 RUSTED GUTTER, CURLED AND FRAYED ASPHALT SHINGLES

FIGURE A4.6 OVERVIEW OF NORTHERN ROOF; CURLED, DISCOLORED, AND FRAYED ASPHALT SHINGLES; SHOW SIGNS OF DEPRESSIONS AND UNEVEN SURFACES ALONG THE ROOF

FIGURE A4.9 WEATHERED FASCIA BOARD; DECAYED WOOD DECKING; CURLED, FRAYED AND MISSING ASPHALT SHINGLES ABOVE ROOFTOP STAIR ENTRY.

FIGURE A4.14 MISSING WOOD FASCIA BOARDS AT EAST ELEVATION

FIGURE A4.12 WEATHERED, FADED EAVES; RUSTED GUTTER (EAST ELEVATION)

FIGURE A4.24 WEATHER AND FADED FASCIA BOARDS; DECAYED HOLLOWED WOODEN SUPPORT BRACKET

FIGURE 4.13 DECORATIVE FASCIA BOARDS ARE WEATHERED AND FADED; THEY ARE DETACHING FROM THE SUBSTRUCTURE. WOOD DECKING AT VALLEY TERMINATION IS EXPOSED, DECAYED WITH MISSING SHINGLES

FIGURE A4.15 UNDERSIDE OF THE EAVES; PAINTED WOODEN BRACKET EAVE SUPPORT; (EACH BRACKET SHOULD BE INDIVIDUALLY EVALUATED)

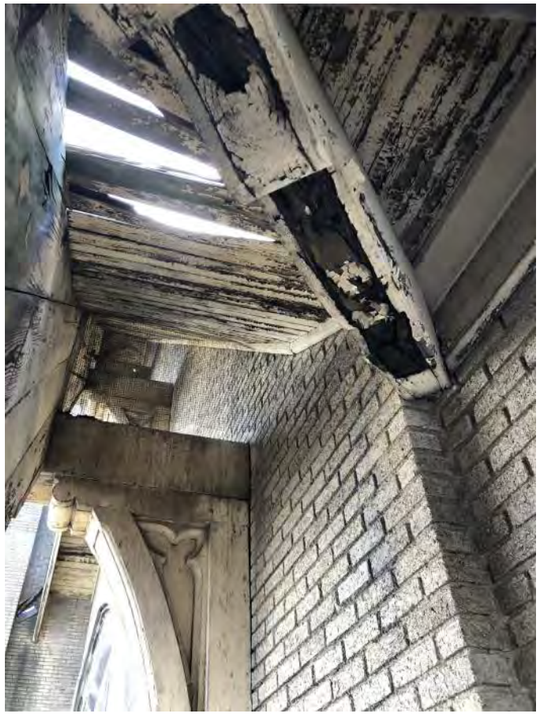


FIGURE A4.16 UNDERSIDE OF EAVES ON THE EAST ELEVATION AT THE MAIN ENTRANCE; WOOD DECKING IS DETERIORATION AT THE EAVE; MISSING WOOD DECKING; WEATHERED AND DECAYING SUPPORT BRACKETS

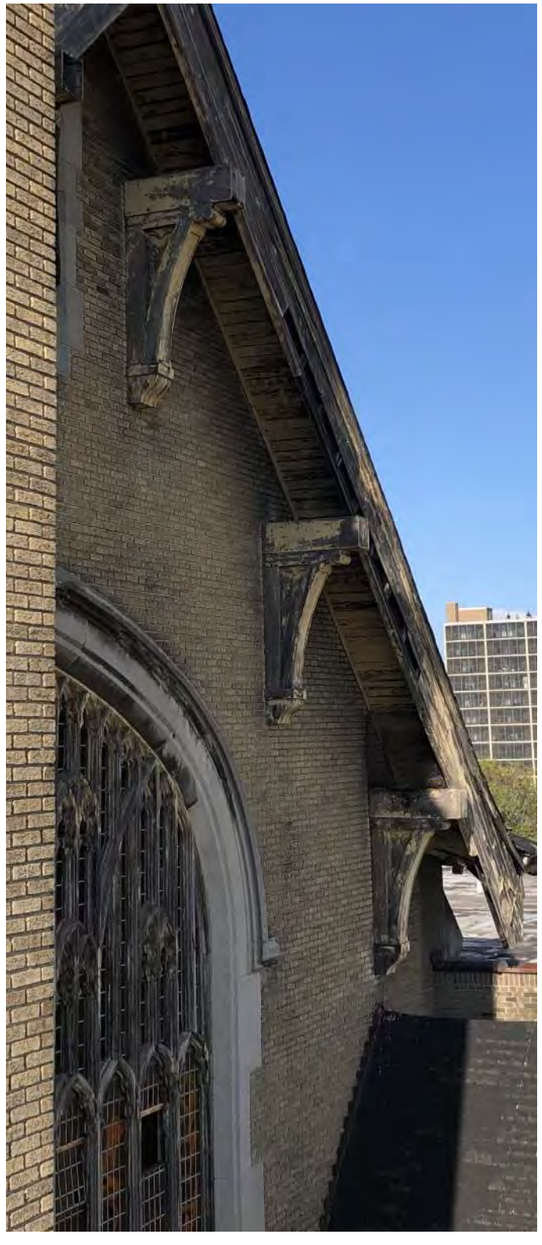


FIGURE 4.22 WEATHER AND FADED FASCIA BOARDS, FADED WOOD DECKING AT THE UNDERSIDE OF THE EAVES ON THE EAST ELEVATION AT THE MAIN ENTRANCE

ZONE 4: CENTRAL GABLE ROOF - STRUCTURAL ASSESSMENT

Zone 4 is a staggered ridge sloped roof with gabled overhangs on the east and west ends. The roof extends over the gable end walls. Decorative wood brackets support sloping edge beam/ fascia. The edge beam and fascia support the roof sheathing planks.

- The condition of the east overhang varies. The sheathing and a sloping beam that appears to be in moderate condition. The top members and inside structural members within the decorative brackets are in poor condition due to water leaking into the top of the brackets. *(see figure S4.1)*
- The main roof structure beyond the east overhang appears in moderate condition at the north and southeast slopes. The area at valley between the sloped roof and the bell tower is damaged, the structural members below the roofing may show some level of deterioration. *(see figure S4.2)*
- The southwest slope of the main roof area is in poor condition with many holes and areas of deteriorated sheathing and rafters. *(see figure S4.3)*
- The west overhang is in poor condition. The decorative support varies in condition. *(see figure S4.4)*

FIGURE S4.1

FIGURE S4.2

FIGURE S4.1

FIGURE S4.3

ROOF INSPECTION REPORT

KING SOLOMON BAPTIST CHURCH

NOVEMBER 19, 2021

PREPARED FOR:
MICHIGAN STRATEGIC FUND
KING SOLOMON BAPTIST CHURCH

QUINN EVANS

TEMPLE BAPTIST CHURCH 1916

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01

INTRODUCTION

INTRODUCTION

SNAPSHOT OF KING SOLOMON BAPTIST CHURCH FRONT ENTRY BELL TOWER AND SIGNAGE LOCATED ON THE STRUCTURE ACROSS THE STREET

HISTORY AND SIGNIFICANCE

King Solomon Baptist Church consists of two histroic buildings located at the intersection of Fourteenth Street and Marquette Avenue. The original sanctuary, Educational and Recreation Building (6125 Fourteenth Street) on the intersection's northwest corner, and its Main Auditorium (6102 Fourteenth Street) on the northeast corner. The buildings are presently owned and occupied by King Solomon Missionary Baptist Church of Detroit. Both buildings occupy their entire respective parcels, featuring only a minimal setback from the street. The buildings are in a residential neighborhood of detached, single-family, and multi-family homes. Most of these homes date from the 1910s and 1920s, and many have been demolished in recent years.

Constructed in 1917, the original Temple Baptist Church was designed by architect J. Will Wilson, principal of the firm Wilson & Catto. Wilson was noted as one of the leading architects in Detroit during that time and the original church is one of the only structures remaining of Wilson's work in the city. The original Temple building included a sanctuary with large arched stained glass windows and a bell tower. The building was designed in the Gothic Arts and Crafts style with light buff brick with gray sandstone trimming and a green clay roof tiles.

In 1920, to accommodate a blossoming congregation and expansion of the the school's growth, the original church was converted into an a Sunday School building which was later known as the Educational and Recreation Building and would also serve as a community center for the neighborhood. The sanctuary was split into two floors of classrooms, where a new a three story wing was added to the north side of the original building. In 1941, another three-story wing was added to the south side, almost completely covering the curved wall of stained glass windows. Each addition were designed with a similar light buff brick to match the original structure.

In 1937, the Main Auditorium, an Art Deco-styled auditorium was completed and would hosts regular services. In part to its 5,000-seat auditorium, King Solomon Baptist went on to play a prominent role in the Civil Rights Movement in Detroit and nationwide, as speakers could address large audiences. King Solomon Baptist Church has long served as a focal point of Detroit's Northwest Goldberg community. It was an early member of the Progressive National Baptist Convention (an association of African American churches that emphasizes civil rights and social justice) and the site of that body's second annual conference. In that conference and others, it hosted numerous guests including the Rev. Dr. Martin Luther King, Jr., the Rev. Ralph D. Abernathy, and the Rev. Benjamin Mays. The church grew to national prominence under the leadership of its longtime pastor, the Rev. Theodore Sylvester Boone, and is significant as the location of Malcolm X's 1963 "Message to the Grass Roots" address, one of the minister's most influential speeches and a key turning point in his career. Prior to the King Solomon era, the building was the home of Temple Baptist Church which, by contrast, did not allow African Americans to become members or attend services.

Through the research and documentation of the State Historic

Preservation Office (SHPO) “2016 Project”, the King Solomon Baptist Church in Detroit was identified as a significant Civil Right site and listed on the National Register for its contributions as a site of multiple historic events related to the African American Civil Rights Movement and Black Arts Movement.

SCOPE AND PURPOSE

With the decline of the neighborhood and local population, the congregation had shrunk significantly and limited funding has left the sanctuary and addition in disrepair and unoccupied for several years. Due to the site’s importance, the Michigan State Historic Preservation Office (SHPO) received a National Park Service (NPS) African American Civil Rights Grant to 1) survey and inspect, 2) create construction drawings and specifications for replacement of the sanctuary and addition roofs. The scope is limited the replacement of the most deteriorated roofs, which include the steep slope roof of the original church core, the bell tower roof, and the low slope roof of the Southerly addition. This report focuses on those (4) roof zones. The roofs are in poor condition and have collapsed in areas causing intrusions of the elements and increasingly severe deterioration to the interior of the structure.

In 2026, the church will be celebrating its centennial. The congregation's vision is to eventually have the sanctuary and additions fully rehabilitated and operational with the hopes of following the course of the city as it rises again and finds renewed use. As an important center to the surrounding black community, the church and community members have envisioned countless expansion ideas for King Solomon’s programs and services, providing neighborhood support spaces as a place to empower the black community. In order to work toward that vision, it is paramount that this project use these initial grant funds on targeted structural repairs and roofing work that best protects the historic resource until future preservation, restoration, or rehabilitation work can be completed. The primary objective is creating a weather-tight enclosure from above, and protecting the spaces below from further deterioration. This report fulfills the first step of that process in reporting findings from the survey and inspections, providing resulting recommendations toward objective of roof replacement, in conjunction with a conceptual estimate of costs for implementing the recommendations. The information can then be used for value-driven decision-making in determining what scope makes best use of the funds available, for further development into construction documents.

PROJECT TEAM

The project team for the roof inspection and resulting recommendations consisted of the following professionals:

PRIME - QUINN EVANS – PRESERVATION ARCHITECT

Saundra Little FAIA, LEED AP Principal in Charge
Ann K. Dilcher AIA, LEED AP Preservation Architect
Alexis Cecil Project Manager, Senior Architect
Shanita Rutland, Architectural Designer

SUBCONSULTANT - RESURGET ENGINEERING - STRUCTURAL ENGINEER

Marc Steinhobel PE \\ Structural Engineer

SUBCONSULTANT - MIDWESTERN CONSULTING - SURVEYOR

Chris Somers \\ Drone and Laser Scan Survey

SUBCONSULTANT - DCM CONSULTING - COST ESTIMATOR

Chris Toma \\ Cost Estimator

ASSESSMENT METHODOLOGY

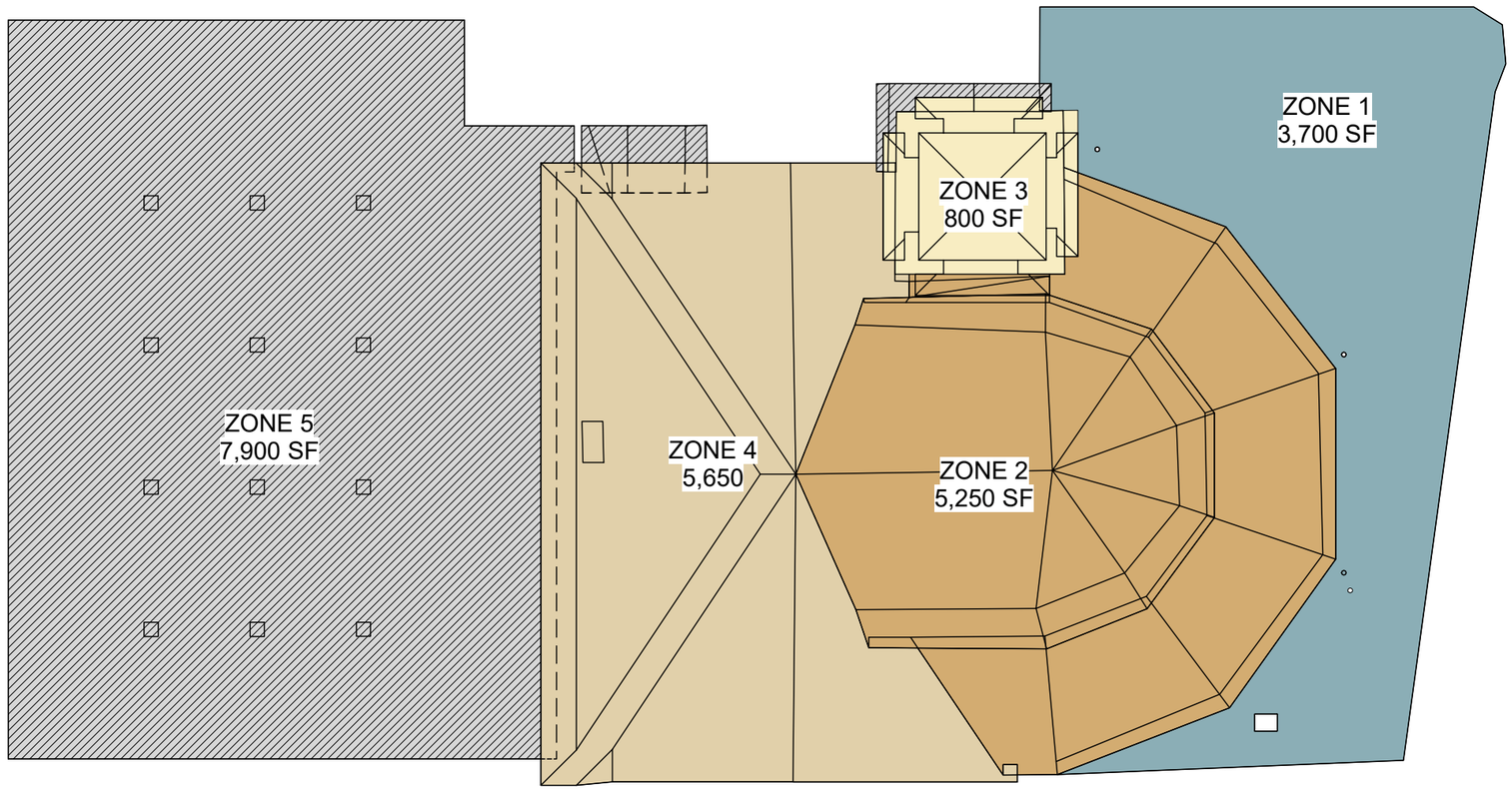
Our approach focused on providing a thorough assessment of the existing conditions and structural evaluation of the conditions. Our team then brainstormed, discussed, evaluated, and prepared what we feel are the necessary and most appropriate best options for the replacement work to be considered by the Church and SHPO.

Our survey started by reviewing take-offs of areas and slopes provided by the eagle view report and used the documentation to develop initial survey plans. The onsite survey was combined with a visual survey from the ground and connecting low slope roofs with the survey from a lift of the bell tower roof. A laser scan of the exterior and (where possible) interior of the roof structure, allowed us to best understand the existing structure of the 1917 building. With the information on the existing building gathered, our team met to develop a narrative of recommendations, including several options or alternates. Our estimator has provided concept budget numbers for these recommendations that will help our team, the Church, and SHPO to evaluate the recommended scope.

KING SOLOMON BAPTIST CHURCH

02

EXISTING CONDITIONS OBSERVATIONS & ASSESSMENTS



PLAN NORTH

40' 20' 10' 0' 20' 40'

1" = 20' - 0" SCALE OF FEET

ROOF ZONE LEGEND

- ZONE 1: Flat Roof South
- ZONE 2: Heptagon Roof (Upper and Lower)
- ZONE 3: Bell Tower Roof
- ZONE 4: Central Gable Roof
- ZONE 5: Flat Roof North (Not In Scope)

QUINN EVANS

KING SOLOMON BAPTIST CHURCH

ROOF ZONE PLAN

ROOF INSPECTION REPORT
NOVEMBER 19, 2021

EXISTING CONDITIONS OBSERVATIONS & ASSESSMENT

ZONE 1: FLAT ROOF (SOUTH) - ARCHITECTURAL ASSESSMENT

Zone 1 constitutes a 3,700 square feet, single ply membrane roof, over a reinforced concrete structural roof deck, surrounded and supported by brick masonry parapet walls and clay tile caps. This portion of the building is one of the additions to the original Temple constructed in 1941. Listed below are the *architectural observations and findings*:

- Membrane roofing and subsequent patching at the end of its useful life, with seams beginning to fail
- Worn or no indication of tapered roof insulation
- Minimal slope-to-drain at the three existing rooftop drain locations
- Three existing roof drains approx. 2" in diameter. They have no visible signs of surface clogs, but are undersized for the rooftop's square footage; no secondary overflow drainage is present *(see figure A1.6)*
- Present on the roof - three inches or more standing water at various areas along the flat roof *(see figure A1.1, A1.2 and A1.15)*
- Present debris and building materials
- Missing, detached or cracked clay tile parapet caps leaving membrane roofing termination and top of masonry wall exposed along approx. 25% the length; 50% clay tile caps are in fair to good condition *(see figure A1.9 and A1.10)*
- Water Infiltration along the masonry wall between the flat roof and bell tower
- Rusted or missing metal termination flashing at the upturn along the parapet wall and pier columns *(see figure A1.11 and A1.12)*
- Displaced masonry parapet wall with detached masonry units along third floor ceiling/roof junction *(see figure S1.4)*
- Visible step cracking along the masonry brick wall along the parapet and buckling of the top of the piers*(see figure S1.4)*
- Cracked and detached masonry column surround at west elevation
- Detached and metal roof hatch door; weathered wood hatch curb *(see figure A1.5)*

FIGURE A1.1 OVERVIEW LOOKING WEST AT VARIOUS POOLS OF STANDING WATER; FRAYED WARPED ROOFING MEMBRANE SEAMS; NO INDICATION OF ROOF INSULATION OR TAPERING

FIGURE A1.2 OVERVIEW LOOKING NORTH AT THE FLAT ROOF WITH STANDING WATER; FRAYED RUBBER ROOF SEAMS; PARAPET FLASHING

FIGURE A1.3 EAGLE VIEW OF THE SOUTH FLAT ROOF; VARIOUS AREAS OF STANDING WATER

FIGURE A1.5 EXISTING ROOF HATCH WITH DETACHED ROOF HATCH CAP

FIGURE A1.6 EXISTING ROOF DRAIN CAP BODY

FIGURE A1.8 MISSING AND DAMAGED PARAPET CLAY TILES (SOUTHEAST CORNER)

FIGURE A1.9 CRACKED AND DETACHED CLAY TILES AT THE PARAPET

FIGURE A1.10 CRACKED CLAY TILES ALONG EAST ELEVATION

FIGURE A1.11 FLASHING MISSING UNDER COLUMN CAP

FIGURE A1.15 DETERIORATING CORNER COLUMN, UNFLASHSED MASONRY AT PIER COLUMN; 3" OR MORE PONDING WATER AT SOUTHWEST CORNER

FIGURE A1.12 RUSTED FLASHING; WEATHERED SEALANTS, FLASHING MISSING AT THE UNDERSIDE OF THE COLUMN CAP

FIGURE A1.16 "ROLLING" BRICK DISPLACEMENT AT THE EXTERIOR PARAPET PIER COLUMN

FIGURE A1.21 CORRODED AND EXPANDING STEEL LINTEL ABOVE THE WINDOWS ON THE THIRD FLOOR

FIGURE A1.22 "ROLLING" BRICK DISPLACEMENT AT THE EXTERIOR PARAPET; BUCKLING AT PIER COLUMN

FIGURE A1.23 CORRODED AND EXPANDING LINTELS; "ROLLING" BRICK DISPLACEMENT AT THE EXTERIOR PARAPET

ZONE 1: FLAT ROOF (SOUTH) - STRUCTURAL ASSESSMENT

Zone 1's structural roof construction is a thin concrete slab supported by I-shaped precast joists that spans to the exterior steel lintels. The joist are embed in the masonry walls and the interior steel beams are encased in concrete. The exterior steel lintels and interior steel beams are supported by steel columns encased in concrete. Listed below are the structural observations and findings:

- Moderate to severe damage and deterioration of the thin concrete slab, observed in areas near the three roof drain locations. The full extent of the concrete deterioration can only be determined after the existing roofing is removed and the top surface is exposed for inspection.*(see figure S1.1)*
- Moderate to severe damage observed in many of the precast beams. This has resulted in the spalling of the concrete cover below the bottom tension reinforcing steel. There is moderate to severe deterioration of the web concrete and on a few joist the shear reinforcement is exposed. *(see figure S1.2)*
- Observed at two beam locations, spalling concrete and corrosion of the exposed reinforcing bars. It appears the structural frame is steel that is encased in concrete. In these locations the cracked and spalling concrete should be removed to ensure no loose concrete fall in occupied space. Additional repair work will be required if the beam is reinforced concrete or if the embedded steel beam is severely corroded. *(see figure S1.3)*
- Precast joists frame into the exterior masonry wall and are supported by steel lintels that are embedded in the masonry walls. The steel lintels support the masonry above the window openings. The embedded steel lintel beams are severely corroded with a thick rust pack. The thick rust pack, results in an excessive expansion of the corroded steel. This has caused severe movement, damage and deterioration of exterior masonry and rollover of the parapet walls *(see figure S1.4)*
- Damage to the exterior wall does not have a direct impact on the roof. However, it does impact the structural integrity of the roof structure and any resulting movement of the parapet walls and piers could result in damage to the new roofing system or interior leaks through the masonry wall that are not associated with roofing system.

FIGURE S1.0

FIGURE S1.1

FIGURE S1.2

FIGURE S1.3

FIGURE S1.4

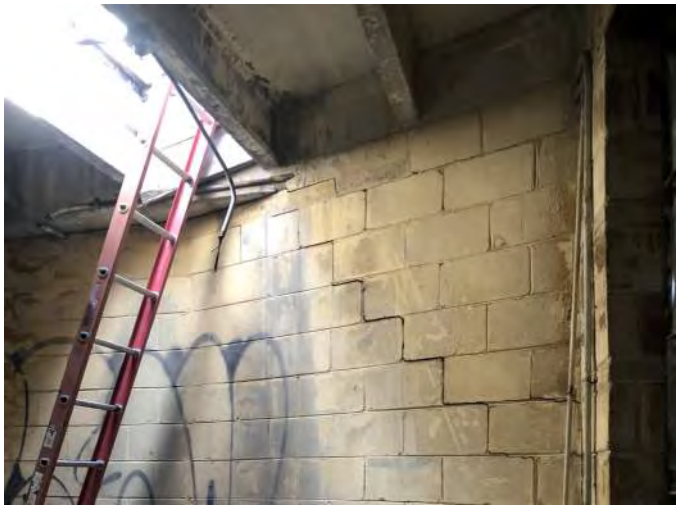
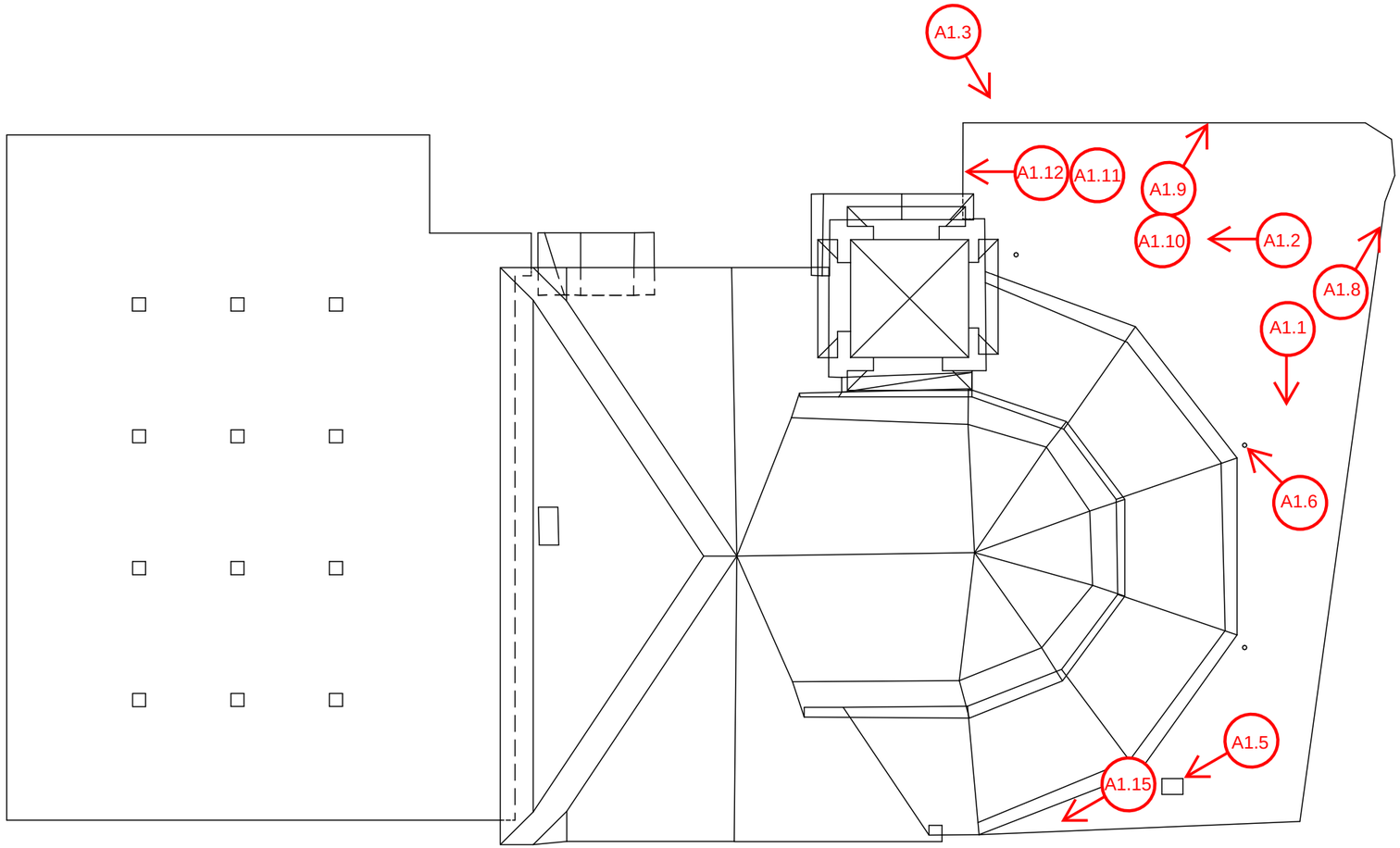
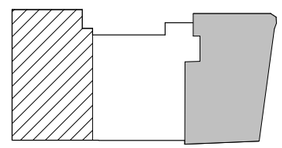


FIGURE S1.5 STAIR STEP CRACKING ALONG THE WEST WALL BEHIND THE ROOF HATCH ACCESS

FIGURE S1.6 INTERNAL WATER DAMAGE FROM THE ROOF ABOVE; THE WATER INFILTRATION IS STARTING TO SHOW SIGNS OF FREEZE/THAW DAMAGE INCLUDE SPALLING AND SCALING OF THE CONCRETE SURFACE, SURFACE PARALLEL CRACKING, OR EXPOSED AGGREGATE.





KEY PLAN

03 EXISTING CONDITIONS - ARCHITECTURAL EXTERIOR PHOTO KEY

QUINN EVANS

KING SOLOMON BAPTIST CHURCH

ZONE 1 | ROOF INSPECTION REPORT
NOVEMBER 19, 2021

ZONE 2: HEPTAGONAL ROOF - ARCHITECTURAL ASSESSMENT

Zone 2 constitutes a 5,250 square feet, wood framed, two tiered, seven-sided polygon asphalt roof that is part of the original Temple construction. Bot tiers have a flared eave, extended over decorative wood brackets and outriggres. The lower tier terminates over the Zone 1 flat roof with minimal clearance. This roof shows significant deterioration at the lower tier, as evidence by systemic failure along the eave and open holes throughout the roof surface. Exposure to the outdoor elements and increased water infiltration has caused the roof structure to rot and weaken further. Listed below are the *architectural observations and findings*:

- Asphalt shingles worn, well beyond the end of their useful life
- Large, visible holes in the roof, exposing deteriorating wood structural framing; deteriorated plywood patching *(see figure A2.1 and A2.7)*
- Pronounced waviness to the roof surface which may indicate damage to the roof decking and structural framing below *(see figure A2.2)*
- Extensive deterioration of the decorative wooden eave brackets, particularly along the lower tier where the decking has mostly deteriorated completely away at the overhang *(see figure A2.8)*
- Flashing failure along the supporting masonry wall under the eaves *(see figure A2.7)*
- Patched valley flashing with improper terminations along bell tower masonry wall and of asphalt roofing. Excessive mastic on masonry wall. *(see figure A2.13)*
- Severely rusting metal head flashing where the lower tier roof terminates at the vertical clerestory wall between roof tiers; moderately rusting metal drip flashing along upper tier roof edge
- Clerestory glazed windows set between metal trim between two roof tiers appear to be in fair to good condition, with metal trim exhibiting surface rust and worn paint *(see figure A2.11)*

FIGURE A2.1 OVERVIEW OF THE TWO TIERED HEPTAGON ROOF; ROOF DECAY AND WATER INFILTRATION, WORN AND MISSING ASPHALT TILES, WEATHERED AND ROTTED DECORATIVE EAVE OUTRIGGERS/RAFTER TAILS.

FIGURE A2.2 SURFACE DEPRESSIONS ALONG THE ROOF; CURLED, DISCOLORED AND FRAYED ASPHALT SHINGLES; RUSTED METAL FLASHING UNDER THE UPPER WINDOWS

FIGURE A2.7 COMPLETE DETERIORATION AND DECAY OF THE DECORATIVE WOOD EAVES AND DECORATIVE RAFTER TAILS; THE LEVEL OF DETERIORATION MAY REQUIRE LOCALIZED REPAIRS TO ADJACENT ELEMENTS SUCH AS THE BRICK WALL BELOW

FIGURE A2.8 SIGNIFICANT DETERIORATION AT THE PERIMETER (TERMINATION OF DECORATIVE EAVES); EXTENSIVE WOOD ROT OF THE DECORATIVE EAVE OUTRIGGERS/RAFTER TAILS; PONDING WATER BELOW

FIGURE A2.10 UPPER TIER OF HEPTAGON ROOF; WORN, MISSING CURLED, DISCOLORED, AND FRAYED ASPHALT SHINGLES

FIGURE A2.12 OVERVIEW OF THE HEPTAGON ROOF ABOVE, SHOWS THE EXTENT OF THE ROOF DETERIORATION WITH VARIOUS HOLES ALONG THE SURFACE

FIGURE A2.13 IMPROPER FLASHING AND PATCHING AT THE VALLEY JUNCTION BETWEEN THE POLYGONAL ROOF AND BELL TOWER; THE ASPHALT SHINGLES ARE NOT PROPERLY TERMINATED; EXCESSIVE USE OF ROOFING MASTIC ALONG THE BELL TOWER WALL; DETERIORATED ROOF VENT NEAR THE LARGE HOLE IN THE ROOF.

FIGURE A2.6 FAILURE OF THE FLASHING AT THE INTERSECTION WHERE THE POLYGONAL ROOF INTERSECTS WITH THE BELL TOWER; STAINING OF THE DECORATIVE STONE BY FLASHING SEALANT

FIGURE A2.11 THE UPPER TIER OF THE POLYGONAL ROOF; VISIBLE RUST ON THE METAL WINDOW FRAMING AND ROOF HIPS; METAL FLASHING IS CORRODING AND DETACHING FROM THE FASCIA BOARD AND HEAD OF LOWER ROOF

FIGURE A2.13 DECORATIVE WOOD EAVE SHOW SIGNS OF DECAY AND ROT; SIGNIFICANT DETERIORATION OF THE ROOF PERIMETER EDGE; WITH POOLS OF WATER GATHERING UNDER THE EAVES

FIGURE A2.14 DETERIORATING INTERIOR PLASTER BELOW THE HEPTAGONAL ROOF STRUCTURE; SUN LIGHT IS VISIBLE THROUGH THE HOLE IN THE ROOF ABOVE

ZONE 2: HEPTAGONAL - STRUCTURAL ASSESSMENT

Zone 2's structural roof is constructed of tongue and groove wood plank sheathing, spanning to sloped rafters or brackets at approximately 4'-0" on center. The sloped rafters span to the exterior beams and is constructed of an elaborate system of trusses, posts and transfer beams. The roof has an intermediate level of windows located at the upper tier. The roof flares out and extends beyond and overhangs the exterior support walls at the low end as well above the intermediate level of windows. Listed below are the *structural observations and findings:*

- The lower overhang extending over the flat roof is in poor condition with missing and deteriorated sheathing. The structural rafters inside the decorative side panels are in very poor condition. The wood is rotten beyond serviceability. Water shedding off the roof flows over exposed wood sides and edges, accelerating the deterioration of the support structure. *(see figure S2.1)*

- The lower roof area up to the intermediate windows conditions varies. There is a large hole with severely deteriorated and damaged sheathing and support framing on the east side and in the valley behind the bell tower. The condition of the roof framing appears to improve towards the south side will only localized signs of damaged, deteriorated sheathing. The condition of the roof further deteriorates toward the northwest corner where the sheathing is visibly sagging between the support rafters. *(see figure S2.2)*

- The condition of the vertical walls, framing and windows at the intermediate window level appear in to be structurally functional. *(see figure S2.3)*

- The roof overhang above the intermediate windows appears intact for all segments except at the northwest corner where the overhang had been removed with only the exposed outrigger brackets remaining. It can be assumed that the exposed wooden brackets are rotten and are beyond serviceable condition. *(see figure S2.4)*

- Upper tier roof area appears in better condition than the lower roof. Localized deterioration of sheathing and rafters can be anticipated above the area with exposed overhang brackets. *(see figure S2.5)*

FIGURE S2.1

FIGURE S2.2

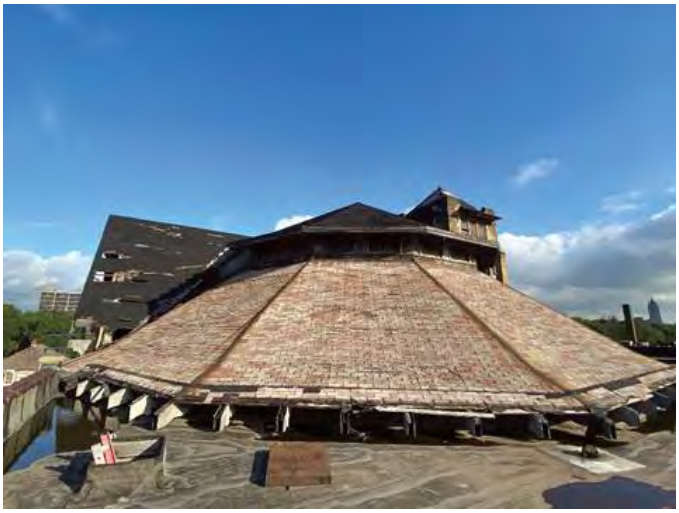
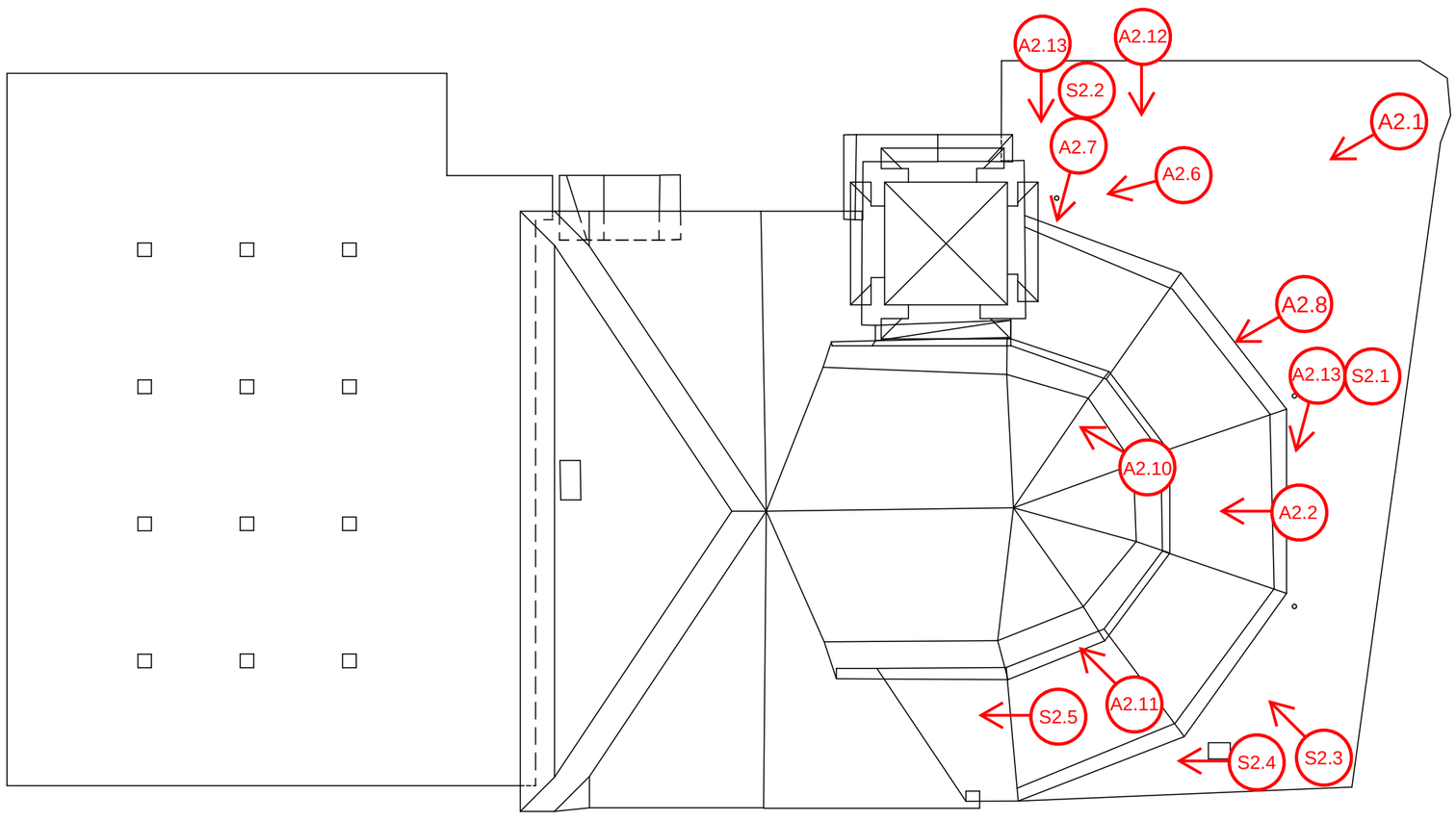
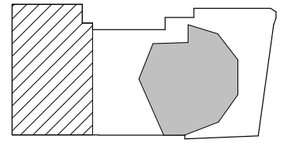


FIGURE S2.3

FIGURE S2.4

FIGURE S2.5





KEY PLAN

03 EXISTING CONDITIONS - ARCHITECTURAL EXTERIOR PHOTO KEY

QUINN EVANS

KING SOLOMON BAPTIST CHURCH

ZONE 2 | ROOF INSPECTION REPORT
NOVEMBER 19, 2021

ZONE 3: BELL TOWER - ARCHITECTURAL ASSESSMENT

Zone 3 constitutes a 800 square feet pyramid hip roof on a wood framed structure with asphalt shingles. The decking flares into deep overhangs at each side and returns around four masonry corner piers of the tower. Decorative wood rafter tails support the extended overhang on all four sides. The extended wood eave overhangs and rafter tails, show significant deterioration on all four sides with extensive wood decay and rot. Several sections of the overhangs and select rafter tails have fallen off the building to the roofs or street below . Listed below are the *architectural observations and findings*:

- Asphalt shingles are work, well beyond the end of their useful life, with a significant quantity missing and exposing the sheathing below
- Weathered, rotted, or missing roof decking and painted soffit trim *(see figure A 3.7 and S3.0)*
- Extensive roof damage at extended eave overhangs
- Decorative wood rafter tails are rotted or missing; wood frieze board and trim is detaching from the masonry wall where still existing, weathered with worn paint. *(see figure A3.4 and A3.6)*
- Some displacement or movement is visible in the upper section of the four corner masonry piers *(see figure S3.3)*
- Several piece of stone caps over the masonry bell tower piers and buttress, as well as within the window and louver surrounds are cracked, detached, or already fallen to the roof or site below, exposing openings in the masonry wall assemblies *(see figure S3.2)*
- Missing or detaching, deteriorated copper step flashing at the overhang returns and brick piers; original copper gutters are missing and remnants of some disconnected copper downs[pouts remain *(see figure A3.10)*
- Large arched windows in the bell tower are missing glass and framing, leaving the underside of the roof and bell tower interior exposed to the elements and increased deterioration. Wood louvers above the windows are weathered with worn pain, in poor to fair condition, with some sections missing. *(see figure A3.1 and A3.2)*

FIGURE A3.2 THE EAVE OVERHANG SHOWS EXTENSIVE WOOD DECAY AND DETERIORATION

FIGURE A3.4 DECORATIVE WOOD OVERHANGS COLLAPSING AND OPEN AT ENDS TO INTERIOR; BRICK MASONRY SHOWS SIGNS OF DIFFERENTIAL MOVEMENT; REMAINING STEPPED COPPER FLASHING (EAST ELEVATION)

FIGURE A3.6 DIFFERENTIAL BRICK MOVEMENT UNDER EAVES; REMNANTS OF THE ORIGINAL STEPPED COPPER FLASHING; (NORTH ELEVATION)

FIGURE A3.7 HIP ROOF IS IN VERY POOR CONDITION; WEATHERED AND DECAYED WOOD DECKING, MISSING/FALLEN SHINGLES AND EXPOSED DECKING AND ORIGINAL STEPPED COPPER FLASHING (EAST ELEVATION)

FIGURE A3.8 ROTTED DECORATIVE WOOD RAFTER TAIL AND DETACHING FRIEZE BOARD TRIM

FIGURE A3.9 UNDERSIDE OF THE PAINTED DECORATIVE OVERHANGS; WEATHERED DETERIORATED WOOD DECKING (EAST ELEVATION)

FIGURE A3.10 OVERVIEW OF THE BELL TOWER'S ROOF AND DECKING; THE DECKING ON TOP OF THE DECORATIVE EAVE HAS COMPLETELY DECAYED AND DETACHED FROM THE ROOF ASSEMBLY (NORTH ELEVATION)

FIGURE A3.11 DETACHED COPPER DOWNSPOUT AND MISSING ASSOCIATED COPPER GUTTER

FIGURE A3.12 SOUTH WEST ELEVATION OF BELL TOWER; CRUMBLING STONE AT THE COLUMN CAP; BRICK MOVEMENT DIRECTLY UNDER THE ROOF

ZONE 3: BELL TOWER - STRUCTURAL ASSESSMENT

Zone 3's bell tower has a pyramid roof constructed of sloped rafters above the bell loft. The roof flares out between masonry corner piers that extend above the trusses. The flared roof, originally wrapped partially around the sides of the masonry corner piers. Listed below are the *structural observations and findings*:

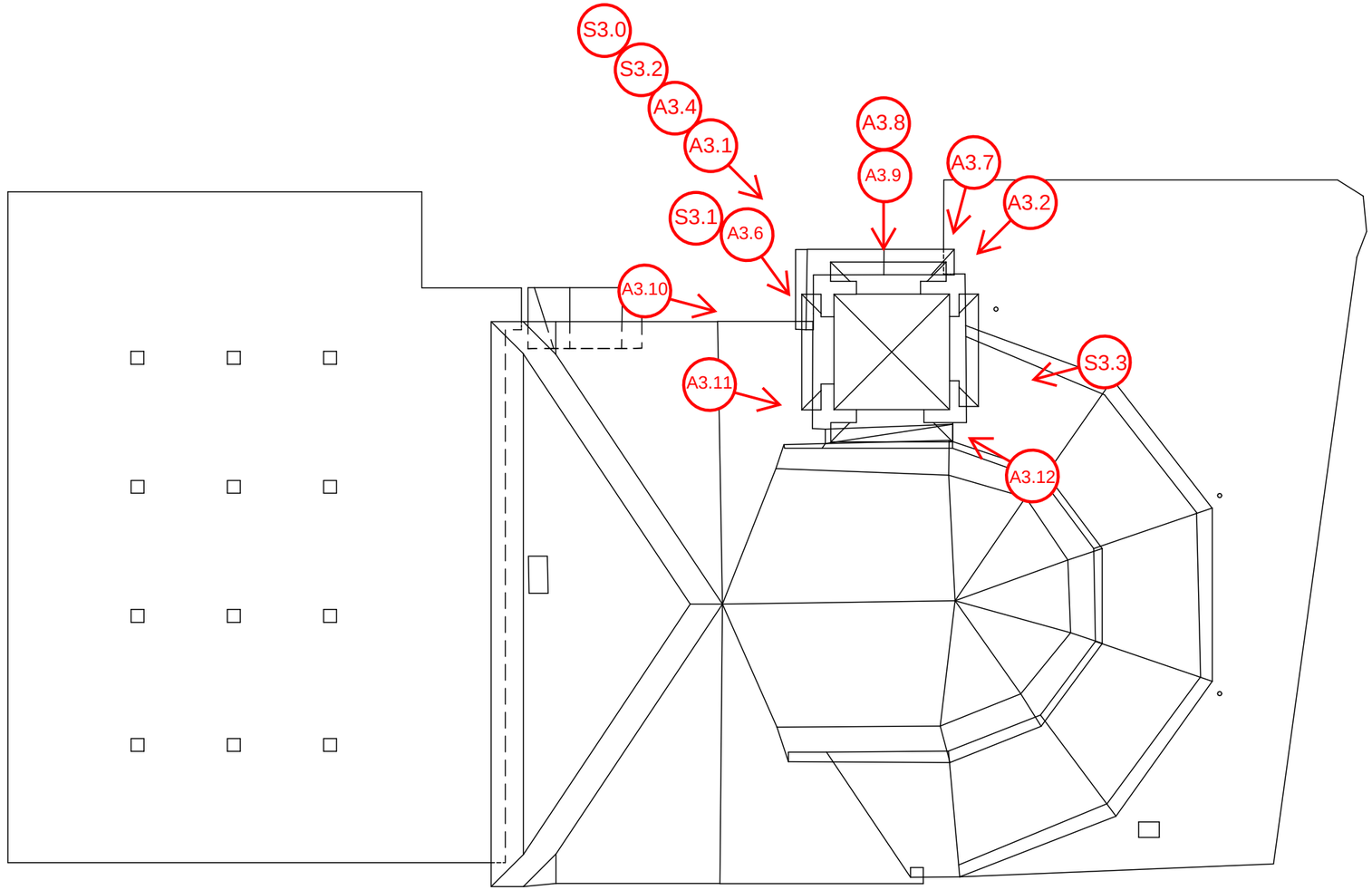
- The entire roof structure is in very poor condition and beyond serviceable condition. Large portions of the roof overhang area and support brackets are missing. The plank sheathing on the pyramid roof is exposed and is in poor condition. The nearby areas are badly deteriorated or missing. *(see figure S3.1)*
- The masonry piers and masonry below the roof support zone has limited cracking, moderate mortar joint deterioration and visible spalling. There is a significant risk of damage to people and property from falling debris due to the condition of the masonry. *(see figure S3.2)*
- There are large openings in the bell tower where the original windows and louvers have been removed or are damaged. These openings should be closed off as part of the roofing solution. *(see figure S3.3)*

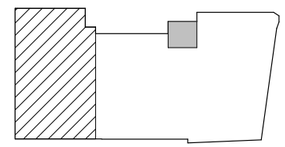
FIGURE S3.1

FIGURE S3.2

FIGURE S3.0

FIGURE S3.3





KEY PLAN

03 SCOPE OF EXISTING CONDITIONS - ARCHITECTURAL EXTERIOR PHOTO KEY

QUINN EVANS

KING SOLOMON BAPTIST CHURCH

ZONE 3 | ROOF INSPECTION REPORT
NOVEMBER 19, 2021

ZONE 4: CENTRAL GABLE ROOF - ARCHITECTURAL ASSESSMENT

Zone 4 constitutes a 5,650 square feet cross gable wood roof structure with asphalt shingles that is situated over the main sanctuary. This roof shows significant deterioration at various locations along is surface, particularly on its southwest slope. Openings in the roof exposure to the outdoor elements has allowed water to infiltrate into the building and damage the structure and interior space below. Listed below are the *architectural observations and findings*:

- Asphalt shingles are beyond their useful life; numerous shingles have lifted, are cracked, or missing with curled edges
- Open holes through the roofing and sheathing on the southwest slope, each corner of the overhangs, and the in the valley connections adjacent to the bell tower, allowing exposure from the elements to deteriorate the structural framing and interior spaces below
- Some wave or sag between structural support members can be seen in the north slope.
- Decorative wood rafter tails are rotted and failed on the west rake but generally in fair condition along the north overhang. The large decorative support brackets below structural wood outriggers, supporting the deep west and east rake overhangs are in fair to poor condition. End caps surrounding the outriggers are mostly open and the structural wood members rotted away. The decorative brackets below the outriggers are in fair condition with worn paint and weathered wood.
- Extensive deterioration and now measurable missing decking and trim at the deep overhang and fascia along the west rake edge. The full depth of the exterior wall assembly is exposed from above in the southwest corner where the sheathing is missing.
- Tongue-and-groove trim at the underside of the east and west rake overhangs, as well as adjacent fascia trim is in poor to fair condition with worn paint and weathered or missing wood elements. The wood fascia behind the gutters at the north eave has detached from the decorative rafter tails but is otherwise in fair condition, weathered with worn paint.
- At the north eave, the metal gutter and downspouts are significantly rusted, with some section of the downspout missing. Any previous gutter along the southwest eave is not missing, and a single disconnected copper downspout remains extending to grade.
- A block wall stair enclosure for access to the north flat roof (not in project) sits under a portion of the north eave overhang. The block walls are in poor condition with displaced units and broken blocks. The door and frame has completely failed leaving an opening into the stair from the exterior. The membrane roofing on the north flat roof is detached at its base and vegetation is present. Despite the connection, it appears that repairs can be made to the Zone 4 gable roof independent of any removal or repairs to the stair enclosure.

FIGURE A4.00 OVERVIEW OF NORTHERN SIDE OF THE CROSS GABLE ROOF

FIGURE 4.1 DETERIORATED WOOD DECKING, MISSING/FALLEN SHINGLES AT THE EAVE (WEST ELEVATION)

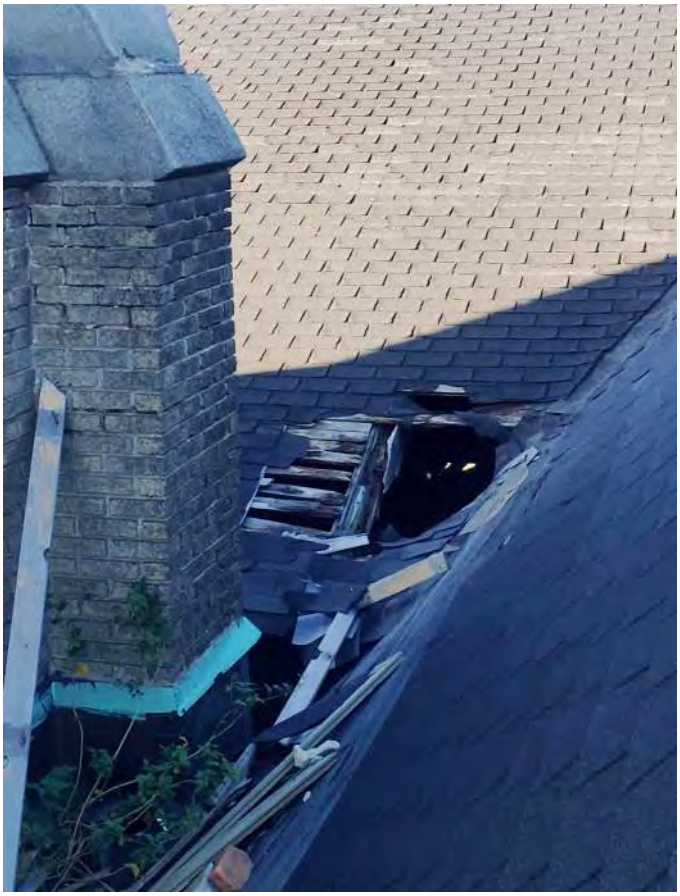


FIGURE A4.17 LARGE HOLE IN THE ROOF; DETERIORATED SHINGLES, WOOD DECKING AT THE ROOF VALLEY ; FALLEN WOOD DECKING FROM THE BELL TOWER ROOF ABOVE

FIGURE A4.23 EXTENSIVE EXTERIOR MASONRY DETERIORATION AT ROOFTOP STAIR ENTRY/EXIT; MISSING AND DETERIORATED MORTAR JOINTS; DETACHED ROOFTOP STAIR ENTRY DOOR; DAMAGED DOOR FRAMING. DETACHED FLASHING AT THE UPTURN OF THE NORTH MEMBRANE ROOFING

FIGURE 4.2 DECORATIVE WOOD EAVE, SIDE ELEVATION APPROX. LENGTH 3'-4"; IN FAIR CONDITION

FIGURE A4.3 DECORATIVE WOOD EAVE IN FAIR CONDITION; (NORTH ELEVATION)

FIGURE A4.4 WEATHERED FASCIA BOARD WITH ATTACHED METAL GUTTER

FIGURE A4.5 RUSTED GUTTER, CURLED AND FRAYED ASPHALT SHINGLES

FIGURE A4.6 OVERVIEW OF NORTHERN ROOF; CURLED, DISCOLORED, AND FRAYED ASPHALT SHINGLES; SHOW SIGNS OF DEPRESSIONS AND UNEVEN SURFACES ALONG THE ROOF

FIGURE A4.9 WEATHERED FASCIA BOARD; DECAYED WOOD DECKING; CURLED, FRAYED AND MISSING ASPHALT SHINGLES ABOVE ROOFTOP STAIR ENTRY.

FIGURE A4.14 MISSING WOOD FASCIA BOARDS AT EAST ELEVATION

FIGURE A4.12 WEATHERED, FADED EAVES; RUSTED GUTTER (EAST ELEVATION)

FIGURE A4.24 WEATHER AND FADED FASCIA BOARDS; DECAYED HOLLOWED WOODEN SUPPORT BRACKET

FIGURE 4.13 DECORATIVE FASCIA BOARDS ARE WEATHERED AND FADED; THEY ARE DETACHING FROM THE SUBSTRUCTURE. WOOD DECKING AT VALLEY TERMINATION IS EXPOSED, DECAYED WITH MISSING SHINGLES

FIGURE A4.15 UNDERSIDE OF THE EAVES; PAINTED WOODEN BRACKET EAVE SUPPORT; (EACH BRACKET SHOULD BE INDIVIDUALLY EVALUATED)

FIGURE A4.16 UNDERSIDE OF EAVES ON THE EAST ELEVATION AT THE MAIN ENTRANCE; WOOD DECKING IS DETERIORATION AT THE EAVE; MISSING WOOD DECKING; WEATHERED AND DECAYING SUPPORT BRACKETS

FIGURE 4.22 WEATHER AND FADED FASCIA BOARDS, FADED WOOD DECKING AT THE UNDERSIDE OF THE EAVES ON THE EAST ELEVATION AT THE MAIN ENTRANCE

ZONE 4: CENTRAL GABLE ROOF - STRUCTURAL ASSESSMENT

Zone 4 is a staggered ridge sloped roof with gabled overhangs on the east and west ends. The roof extends over the gable end walls. Decorative wood brackets support sloping edge beam/ fascia. The edge beam and fascia support the roof sheathing planks.

- The condition of the east overhang varies. The sheathing and a sloping beam that appears to be in moderate condition. The top members and inside structural members within the decorative brackets are in poor condition due to water leaking into the top of the brackets. *(see figure S4.1)*
- The main roof structure beyond the east overhang appears in moderate condition at the north and southeast slopes. The area at valley between the sloped roof and the bell tower is damaged, the structural members below the roofing may show some level of deterioration. *(see figure S4.2)*
- The southwest slope of the main roof area is in poor condition with many holes and areas of deteriorated sheathing and rafters. *(see figure S4.3)*
- The west overhang is in poor condition. The decorative support varies in condition. *(see figure S4.4)*

FIGURE S4.1

FIGURE S4.2

FIGURE S4.1

FIGURE S4.3

ADDITIONAL STRUCTURAL CONDITIONS OBSERVED

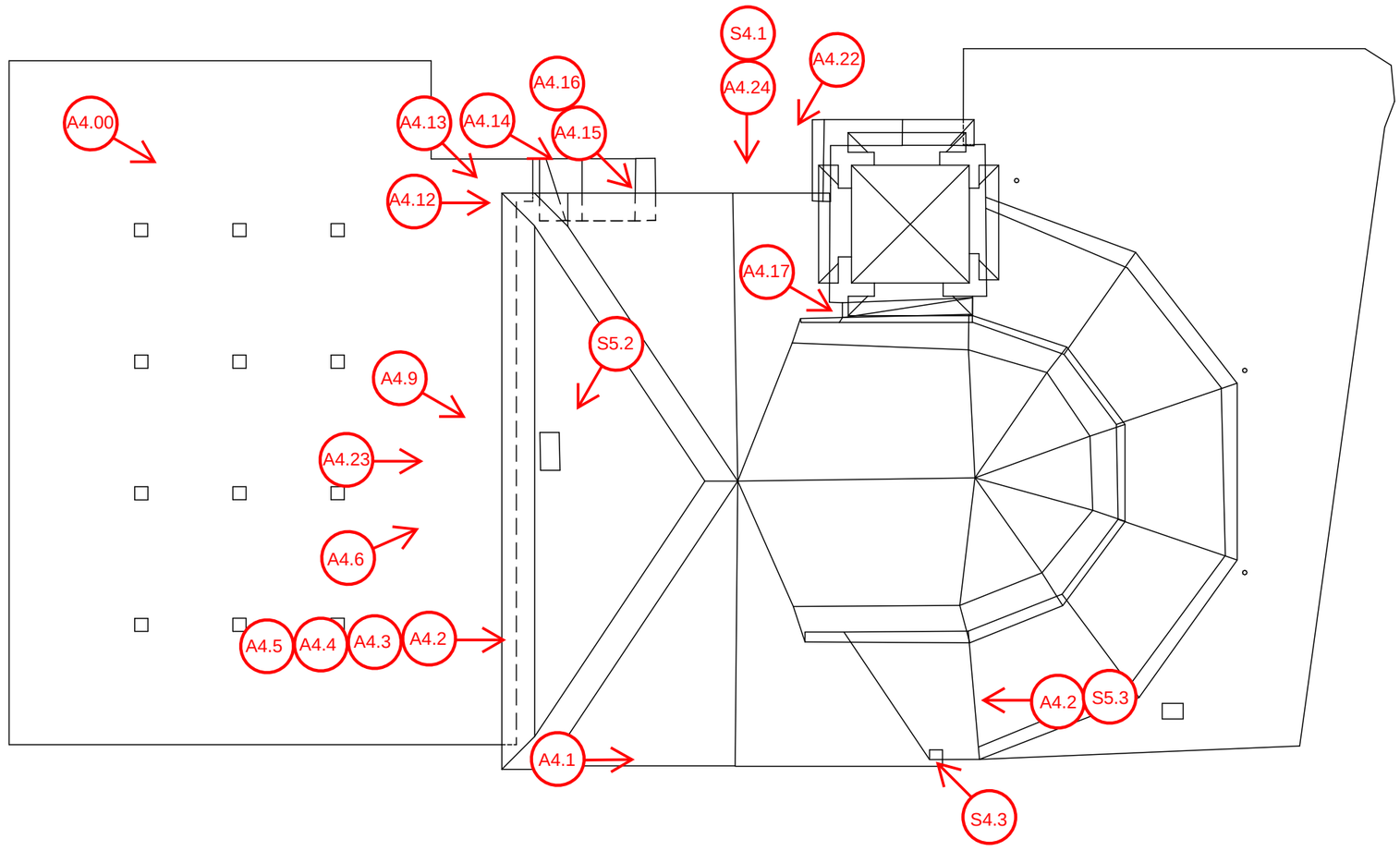
The following are additional items beyond the scope of the project were observed that should be considered and addressed to restore structural integrity.

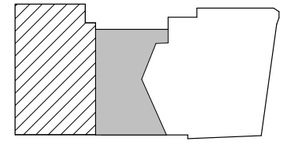
- The lower roof above the southeast entrance has displaced significantly and should be shored, removed or stabilized to prevent it from falling. *(see figure S5.1)*
- Small area of stone embed in chimney is spalling and should be removed to prevent falling debris hazard. *(see figure S5.2)*
- Additional structural stabilization may be required during demolition and removal of roofing and damaged sheathing and support structure. For example, it appears there are severely deteriorated wood rafter embed between brick/masonry wythes at the gable end overhangs. Additional masonry removal or stabilization may be required at these locations. *(see figure S5.3)*
- Extreme caution is required when working on the exiting roof supported by wood roofing. These areas should be considered un-safe areas with no direct access to or working on without adequate personal protective equipment secured to OSHA complaint connection point.

FIGURE S5.1

FIGURE S5.2

FIGURE S5.3





KEY PLAN

03 EXISTING CONDITIONS - ARCHITECTURAL EXTEIOR PHOTO KEY

QUINN EVANS

KING SOLOMON BAPTIST CHURCH

ZONE 4 | ROOF INSPECTION REPORT
NOVEMBER 19, 2021

03

SCOPE OF WORK RECOMMENDATIONS

SCOPE OF WORK RECOMMENDATIONS

The (4) roof zones have had extended exposure to the elements resulting in significant aging over time. The holistic replacement of the roof, gutters and associated components should be a priority. Moisture infiltration, corrodes these assemblies as well as the structural members and finishes. The continued structural integrity of any building depends on its roof and drainage system. The current condition of the roof structures are in poor conditions and will further deteriorate without intervention.

In consideration of the existing conditions and what has been visually observed on-site, the design team offers the following recommendations toward the principal objective to replace the roofs in the areas identified to be part of this initial project. The scope of work identified would create weathertight, code-compliant, and warrantable assemblies that would provide overhead protection of the interior spaces of the church below, as well as provide safe and serviceable roof areas.

ZONE 1: FLAT ROOF (SOUTH) RECOMMENDATIONS

Demolition and Removal

- Remove all debris
- Remove and dispose of all cracked, crazed, or broken parapet tiles; salvage all sound tiles for reuse *(see figure A1.8 and A1.10)*
- Remove all existing membrane roofing and flashings, insulation, and underlayment (including metal flashings and mastic at brick piers
- Remove (3) existing roof drain bodies and PVC rain conductors *(see figure A1.6)*
- Remove existing roof hatch and wood curb *(see figure A1.13)*

Roofing, Trim, and Drainage

- Provide 60 mil EDPM (20-year minimum warranty) roofing and flashings over 6-inch-thick average (R-30) polyisocyanurate rigid insulation, over the existing roof deck to remain
  - Insulation to taper and slope to drains
  - Roofing membrane to extend up and over the masonry parapet walls, terminating at the top of wall / under the reset parapet wall caps
- Provide prefinished aluminum termination bar, reglet counterflashing, and sealant at membrane terminations around brick piers *(see figure A1.11)*
- Replace roof hatch in same location as existing on new treated wood curb (36”x30”)
- Provide (3) new roof drains in same location as existing; core larger 3-inch diameter (min.) openings in roof deck to properly accommodate stormwater capacity at drain locations; Provide new, larger 3-inch diameter (min.) PVC rain conductors down through building; Extending across underside of roof slab and vertically 3 stories down and ties into existing storm lines
- Create (2) scuppers openings for secondary overflow drainage through masonry parapet walls, properly flashed
- Clean mortar and mastic from salvaged clay parapet tiles, cap and reset (grouted) over new membrane roofing termination; Provide new tiles to match existing to replace broken pieces.

Structure and Support (refer to structural matrix)

- Due to the poor condition of the parapet wall and the amount of "rolling" and displacement. The recommendation is to rebuild the brick masonry parapet entire length, including removal and resetting of displaced brick masonry belt course along the exterior wall and piers just below the parapet. This work may be beyond the scope of the current project, but is recommended for the durability and warranty of the roofing system is this work is not completed, the serviceable life of any new roofing system will be shortened.

- Rebuild the the deteriorated brick masonry column pier at the northwest corner of the south addition, this includes the entire length from ground to parapet (one location). *(see zone 1 exterior elevations)*

- The damage and deterioration of the parapet walls and piers are a result of deterioration of the steel lintels above 3rd floor windows (inclusive of brick masonry removal, salvage, mortar removal, and resetting to allow lintel replacement). Replacement of the lintels recommended and required to provide a stable structure for any new work or roofing system. The lintels above the 1st and 2nd floor windows are also in poor condition but beyond the scope of this project.

- Repair the damaged and deteriorated roof slab in limited areas, concentrated around the existing roof drains. Inspect roof deck following tear-off of existing roofing. Assume select spall and crack repairs to surface of concrete roof deck (approx. 25% of surface). *(see figure A1.26)*

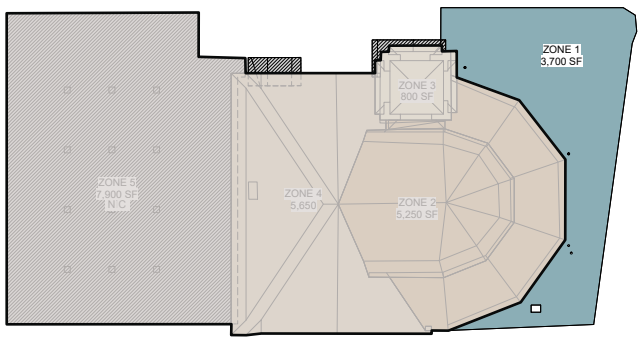
- The roof slab is supported by pre-cast roof joists. Approximately 440lf of repairs are required at the roof slab support joists. *(see figure A1.25)*

    - **ALTERNATE:** Provide temporary shoring down through all floors, that will remain in place until the joist are repaired. Shoring will be required at all areas with deteriorated roof slab or damaged precast joists.

- Two existing joists beams are damaged and deteriorating.

    - **ALTERNATE:** Provide temporary shoring down through all floors, that will remain in place until a the joists are repaired. Shoring will be required along the damaged beam lines (in two locations).

    - **ALTERNATE (All Zones):** Provide copper flashings in lieu of prefinished aluminum



ZONE 1 FLAT ROOF (SOUTH)

SCOPE OF WORK RECOMMENDATIONS - ZONE 1 - EXTERIOR ELEVATION

Figure A1.27 South Elevation

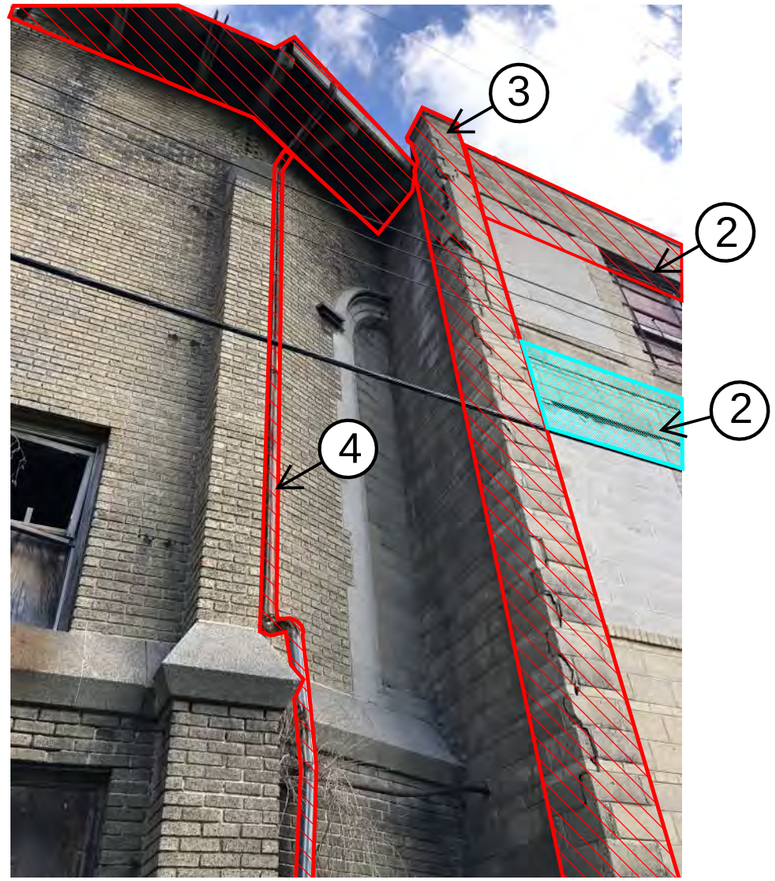
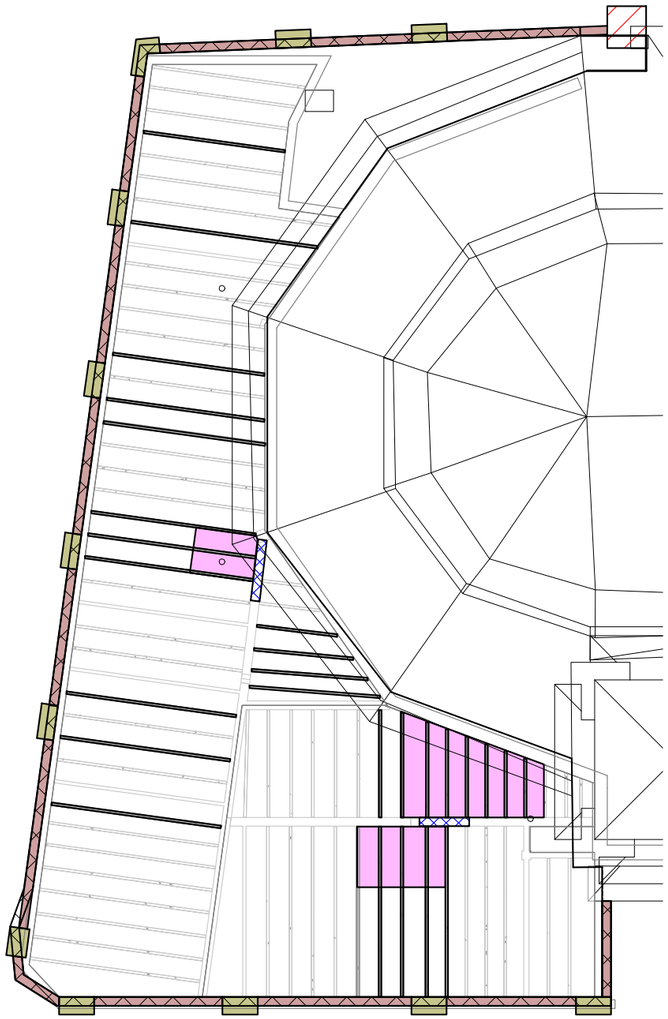


Figure A1.28 West Elevation

1. Rebuild brick masonry parapet, lintels and associated brickwork
2. Rebuild lintels and associated brickwork (typical at the openings on the 1st and 2nd floor)
3. Rebuild brick masonry column pier (west elevation)
4. Rebuild eave and reconnect gutter to divert rainwater off of the flat roof

Requires immediate intervention

To be completed in a future phase



STRUCTURAL ITEMS REQUIRED FOR ROOFING INTEGRITY AND SAFETY

HATCH AREA	DESCRIPTION	UNITS	COMMENT
	DETERIORATED AND DAMAGED 2" TO 3" THICK CONCRETE ROOF SLAB. AFTER REMOVING ROOF, HAMMER SOUND CONCRETE. CHIP AWAY DETERIORATED CONCRETE ADD 6X6W2XW2 WWF. APPLY CEMENTITIOUS BONDING AGENT. OVERLAY WITH CONCRETE PATCH.	280SF	REPAIR REQUIRED TO PROVIDE STRUCTURALLY SOUND SUPPORT FOR ROOFING.
	DAMAGED AND DETERIORATED PRECAST ROOF SUPPORT JOISTS. HAMMER SOUND CONCRETE. CHIP AND REMOVE DAMAGED AND DETERIORATED CONCRETE. CLEAN CORRODED STEEL. ADD (2)#5 HORIZONTAL BARS IF BOTTOM BARS ARE CORRODED MORE THAN 10%. DOWEL SHEAR BARS AS REQUIRED. APPLY TROWEL APPLIED CONCRETE PATCH OR SHOTCRETE TO PROVIDE MIN 1" COVER TO EXISTING AND NEW REBAR.	440LF	STRUCTURAL INTEGRITY OF JOISTS HAVE BEEN COMPROMISED. CURRENT STRUCTURAL LOAD CAPACITY OF JOIST CANNOT BE DETERMINED IN CURRENT CONDITION. REQUIRED TO SAFELY HAVE CONSTRUCTION ACTIVITY ON ROOF.
	DAMAGED AND DETERIORATED CONCRETE BEAM. REMOVE ANY LOOSE CONCRETE AND CONFIRM CONDITION OF ENCASED STEEL BEAM.	440LF	CONFIRM STRUCTURAL STEEL FRAMING. IF STEEL FRAMING IS PRESENT NO ADDITIONAL WORK IS REQUIRED OTHER THAN REMOVING FALL HAZARDS.

STRUCTURAL ITEMS REQUIRED FOR ROOFING DURABILITY

HATCH AREA	DESCRIPTION	UNITS	COMMENT
	EXISTING STEEL LINTELS OVER 3RD FLOOR WINDOW OPENINGS ARE SEVERELY CORRODED AND BEYOND REPAIR, RESULTING IN SEVERE ROLLING AND DAMAGE TO PARAPET WALLS. SHORE EXISTING ROOF STRUCTURE. REMOVE AND REPLACE STEEL LINTELS AND PARAPET WALL. INSTALL NEW GALVANIZED STEEL LINTELS AND RE-CONSTRUCT PARAPET WALLS.	180LF 30 WINDOW OPENINGS	ROOFING WILL NOT BE DURABLE IF PARAPET WALL CONTINUES TO DETERIORATE AND MOVE. HIGH RISK OF FALLING DEBRIS TO PEDESTRIANS AND PROPERTY IN STREET.
	CORRODED STEEL LINTELS HAVE RESULTED IN SEVERE DAMAGE TO MASONRY PIERS COVERING STEEL BUILDING COLUMNS. REMOVE DAMAGED MASONRY, REPAIR EMBEDDED STEEL COLUMNS AND CONNECTION. RE-CONSTRUCT MASONRY PIERS	13	HIGH RISK OF FALLING DEBRIS. AT MINIMUM LOOSE AND UNSTABLE MASONRY TO BE REMOVED FROM PIERS TO REDUCE RISK.
	RECONSTRUCT MASONRY PIER FULL HEIGHT	1	

DAMAGED AND DETERIORATED CONCRETE BEAM

DAMAGED AND DETERIORATED PRECAST JOIST AND CONCRETE SLAB

SPALLING BRICK AND ROLLED PARAPET WALL DUE TO CORRODED STEEL LINTEL.

DAMAGED AND DETERIORATED PARAPET WALL AND MASONRY PIER DUE TO EMBEDDED CORRODING STEEL.

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ROOF PLAN - ZONE 1

ROOF INSPECTION REPORT
NOVEMBER 19, 2021

ZONE 2: HEPTAGON ASPHALT ROOF (UPPER AND LOWER) RECOMMENDATIONS

Demolition and Removal

- Remove all existing asphalt shingles and underlayment (protect upper tier windows and vertical metal paneling to remain) *(see figure A2.11)*
- Remove membrane valley flashings and all mastics from base of Bell Tower masonry *(see figure A2.6)*
- Inspect wood roof deck after tear-off of existing roofing and remove all deteriorated decking, as well as remove all decking extending beyond perimeter building wall, creating overhangs at eave of both tiers
- Remove wood fascia and frieze board trim around eaves of both tiers *(see figure A2.7)*
- Remove wood outriggers and rafter tails around eave overhang of both tiers *(see A2.13)*
- Remove plaster ceilings below this roof area to provide access for structural repairs to framing *(see figure A2.14)*

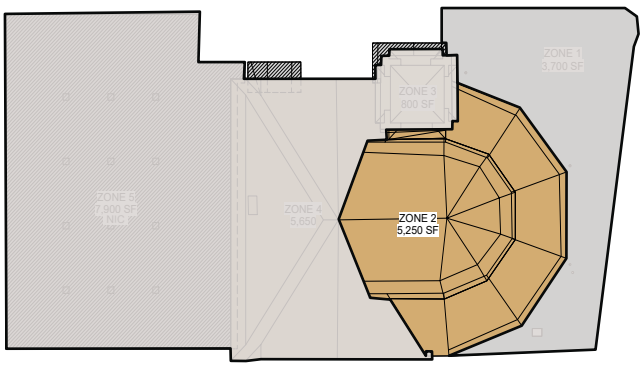
Roofing, Trim, and Drainage

- Infill roof deck where removed, with exterior grade plywood, thickness to match existing sound decking to remain (verify in field)
  - Replace roof decking only to edge of masonry building wall (restoration and reinstallation of eave outriggers and decorative rafter tails to occur in future project)
  - Wood deck replacement
- Provide architectural grade asphalt shingles over underlayment, over repaired wood roof deck and sheathing
- Provide all new wood fascia, soffit, and frieze board and trim, primed and painted along eave of both tiers
- Provide prefinished aluminum valley and wall termination flashings around base of Bell Tower
- Provide prefinished aluminum drip edge along the eaves of both tiers, and head flashings where the upper tier meets the vertical walls supporting the upper tier roof
- Provide gutter and downspout at junction of Zone 1, 2, 4 roofs to outlet onto Zone 1 flat roof

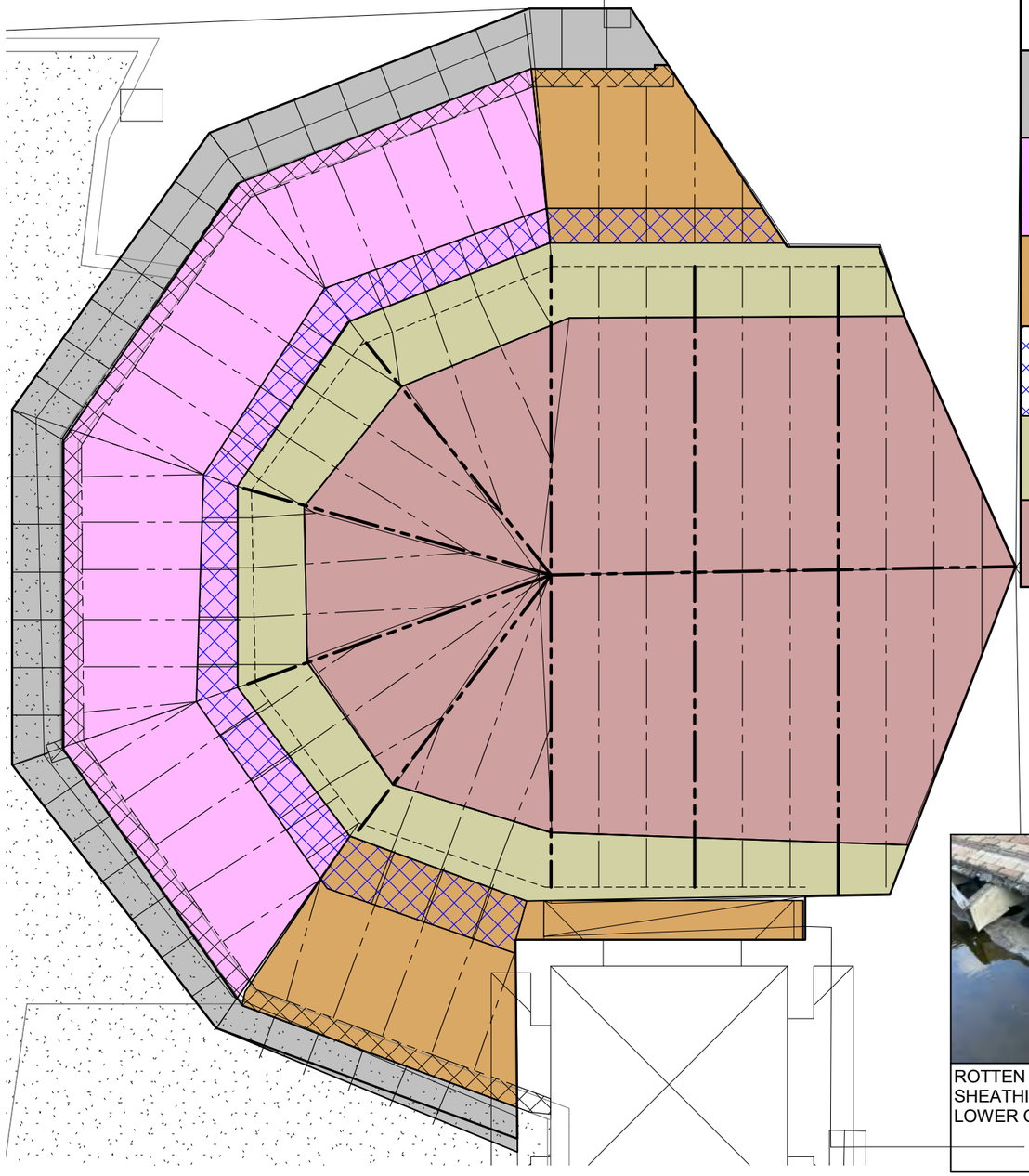
Structure and Support (refer to structural matrix)

- Provide allowance to reset any displaced masonry and repoint open joints within the brick wall directly under the eaves of the lower tier
- Remove lower overhang and brackets *(see figure A2.13)*
- Two area of the lower roof beyond the overhang are damaged beyond repair and will need to be replaced. Refer to structural details for sheathing, purlin and rafter sizes and details. *(see figure A2.4 and A2.7)*
- After the removal of the roofing on the remaining lower roof area, there will be areas of sheathing that need to be replaced as well as the support rafters that have deteriorated or maybe damaged.
- Remove damaged deteriorated brackets and sheathing on the upper flared overhang.
- Replace deteriorated sheathing and repair damaged rafters on the upper roof area

***ALTERNATE (All Zones):** Provide copper flashings in lieu of prefinished aluminum



ZONE 2 HEPTAGONAL ROOF



STRUCTURAL ITEMS REQUIRED FOR ROOFING INTEGRITY AND SAFETY

HATCH AREA	DESCRIPTION	UNITS	COMMENT
	EXISTING ROOF FLARED OVERHANG WITH DECORATIVE WOOD BRACKETS CANTILEVERING OUT FROM BEARING WALL. REMOVE ROOF SHEATHING AND BRACKETS. MEASURE AND PRESERVE BRACKET GEOMETRY AND DETAIL FOR FUTURE REPLICATION.	550SF	OVERHANG NOT REQUIRED FOR ROOF ENCLOSURE.
	SLOPING LOWER ROOF AREA APPEARS IN MODERATE TO POOR CONDITION. ASSUME 30% OF SHEATHING AND 15% OF SUPPORT RAFTERS NEED TO BE REPLACED OR REINFORCED.	SHEATHING: 350SF RAFTERS: 65LF	EXTREME CARE NEEDED DURING CONSTRUCTION. REMOVAL OF ROOFING NEEDS TO BE CARRIED OUT FROM SAFE PLATFORM OR LIFT.
	SLOPING LOWER ROOF AREA IN VERY POOR CONDITION. ASSUME REPLACEMENT OF 100% OF SHEATHING AND 30% REPLACEMENT OR REINFORCING OF SUPPORT RAFTERS.	SHEATHING: 600SF RAFTERS: 50LF	EXTREME CARE NEEDED DURING CONSTRUCTION. REMOVAL OF ROOFING NEEDS TO BE CARRIED OUT FROM SAFE PLATFORM OR LIFT.
	UPPER ROOF FLARED OVERHANG APPEARS IN MODERATE CONDITION. ASSUME REMOVAL OF 15% OF TOTAL AREA ON WEST SIDE.	REMOVE: 50SF	EXTREME CARE NEEDED DURING CONSTRUCTION. REMOVAL OF ROOFING NEEDS TO BE CARRIED OUT FROM SAFE PLATFORM OR LIFT.
	UPPER ROOF FLARED ROOF AREA APPEARS IN MODERATE CONDITION. ASSUME 20% OF SHEATHING AND 10% OF SUPPORT RAFTERS NEED TO BE REPLACED OR REINFORCED.	SHEATHING: 130SF RAFTERS: 30LF	EXTREME CARE NEEDED DURING CONSTRUCTION. REMOVAL OF ROOFING NEEDS TO BE CARRIED OUT FROM SAFE PLATFORM OR LIFT.
	UPPER ROOF AREA APPEARS IN MODERATE CONDITION. ASSUME 15% OF SHEATHING AND 10% OF SUPPORT RAFTERS NEED TO BE REPLACED OR REINFORCED.	SHEATHING: 300SF RAFTERS: 80LF	EXTREME CARE NEEDED DURING CONSTRUCTION. REMOVAL OF ROOFING NEEDS TO BE CARRIED OUT FROM SAFE PLATFORM OR LIFT.

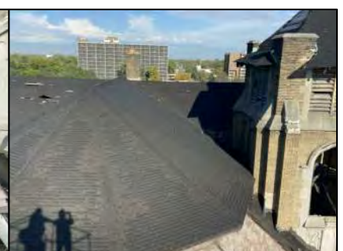
NOTES:

1. REPLACE EXISTING TONGUE AND GROOVE ROOF SHEATHING WITH 3/4" EXTERIOR RATED PLYWOOD SPANNING TO 2X6@16" OC. 2X6 SPANNING TO RAFTERS AT APPROXIMATELY 4'-0" OC.
2. REPLACE BADLY DAMAGED RAFTERS SPANNING UP TO 16 FT WITH (3)2X12.
3. REINFORCED MODERATELY DAMAGED RAFTERS WITH (2)2X12.

ROTTEN AND DAMAGED SHEATHING AT BRACKETS AT LOWER OVERHANG

ROTTEN AND DAMAGED SHEATHING AND BRACKETS AT LOWER AND UPPER OVERHANGS

LOWER SLOPING ROOF AREA IN POOR CONDITION WITH DAMAGED SHEATHING AND SUPPORT RAFTERS



UPPER SLOPING ROOF AND OVERHANG IN MODERATE CONDITION

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ROOF PLAN - ZONE 2

ROOF INSPECTION REPORT
NOVEMBER 19, 2021

ZONE 3: BELL TOWER ROOF

Demolition and Removal

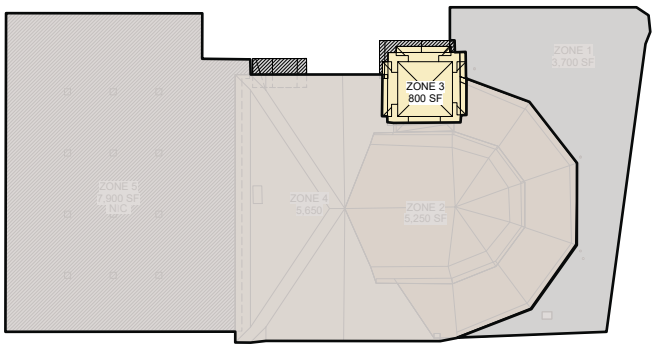
- Remove existing asphalt roofing, metal flashings, wood roof decking, and wood-framed structure *(see figure A3.7)*
- Remove wood outriggers and decorative rafter tails along eave overhangs *(see figure A3.4, A3.6, A3.9)*
- Remove copper downspouts
- Provide allowance to remove all loose or detached brick masonry and stone caps in upper section of tower walls and piers *(see figure A3.11)*

Roofing, Trim, and Drainage

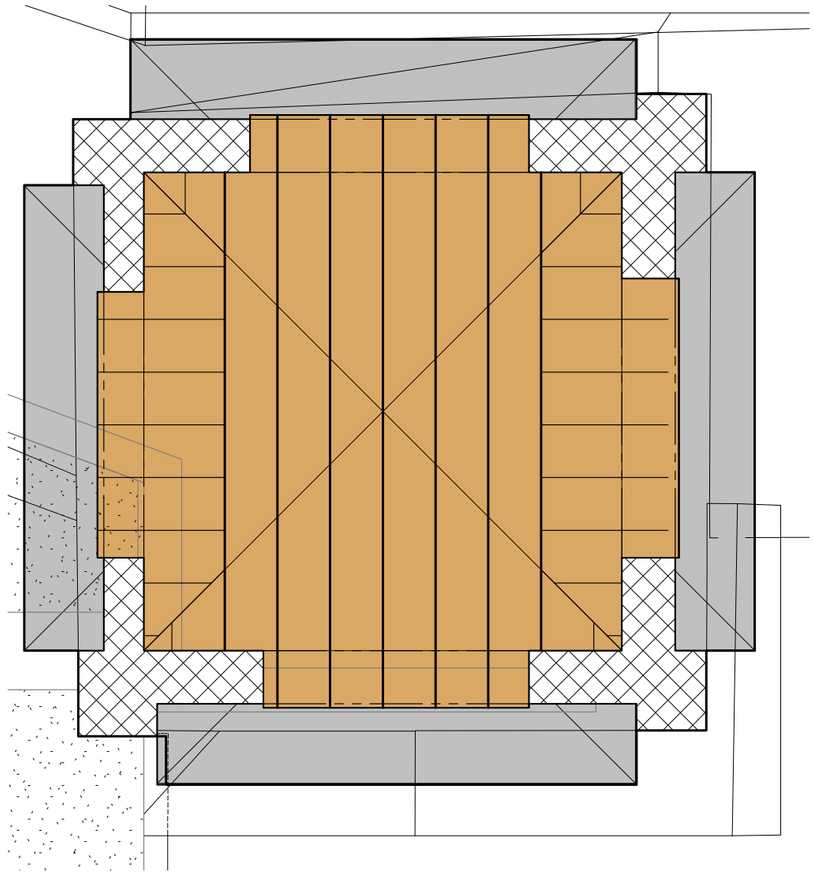
- Provide architectural grade asphalt shingles over underlayment over new exterior grade plywood sheathing roof, over new wood truss framing as noted below.
- Provide roof decking only to edge of masonry building walls (restoration and reinstallation of eave outriggers and decorative rafter tails to occur in future project) – refer to structural for quantity
  - **ALTERNATE:** Extend new roof decking to recreate extended overhang to match existing, provide new outriggers as part of roof trusses and cover with replicated wood decorative rafter tail brackets along eaves
- Provide wood framed and flashed crickets behind four corner piers
- Provide all new wood fascia, soffit, and frieze board and trim, primed and painted along eaves
- Provide prefinished aluminum metal flashing and trim, including drip edge
- Provide new prefinished aluminum gutters and downspouts

Structure and Support (refer to structural matrix)

- Rebuild the pyramid hip roof with new prefabricated trusses supporting plywood sheathing and anchored into the masonry tower walls. All wood bearing on masonry to be preservative treated.
- Provide allowance for resetting displaced brick masonry or stone caps, and repointing open joints in upper section of tower walls and piers
- Provide simple precast stone caps at top of brick masonry piers exposed with removal of loose or deteriorated caps
  - **ALTERNATE (All Zones):** Provide copper flashings in lieu of prefinished aluminum



ZONE 3 BELL TOWER ROOF

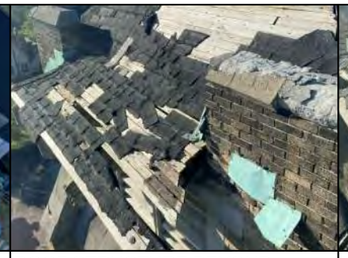


STRUCTURAL ITEMS REQUIRED FOR ROOFING INTEGRITY AND SAFETY

HATCH AREA	DESCRIPTION	UNITS	COMMENT
	FUTURE DECORATIVE BRACKETS AND ROOF OVERHANG. NOT IN CURRENT SCOPE.	240SF	
	REMOVE EXISTING ROOF FRAMING. REPLACE WITH RE-ENGINEERED WOOD TRUSSES AT 2'-0" OC WITH 3/4" SHEATHING. REFER TO ARCHITECTURAL FOR ROOFING DETAILS AND INFORMATION.	500SF	
	MASONRY AND STONE REQUIRES STABILIZATION TO REMOVE POTENTIAL FALLING DEBRIS (4 CORNERS)		ASSUME 3 DAYS OF WORK FOR MASONRY RESTORATION CONTRACTOR TO REMOVE LOOSE MATERIALS

ROTTEN AND DAMAGED SHEATHING, BRACKETS AND RAFTERS

DETERIORATING MASONRY COPING. REMOVE LOOSE AND DAMAGED MATERIAL. FALLING DEBRIS HAZARD.



ROOF STRUCTURE BEYOND REPAIR.

MASONRY JOINTS REQUIRED RE-POINTING AND REPAIRS TO RESTORE FACADE. (FUTURE WORK)

ZONE 4: CENTRAL GABLE ROOF

Demolition and Removal

- Remove all existing asphalt shingles and underlayment *(see figure A4.00)*
- Remove all metal flashings around base of the chimney
- Inspect the wood roof deck after tear-off of the existing roofing and remove all deteriorated decking
- Remove the metal gutter along the eaves, existing wood fascia board, frieze board and trim, and decorative wood rafter tails to remain *(see figure A4.5)*
- Remove existing metal downspouts
- At east rake edge (front façade): Remove and salvage for reinstallation (4) 4' x 8' decorative wood support bracket enclosures around deteriorated wood structural outriggers along rake edge (see structural scope below). Existing wood fascia and soffit boards/trim to remain in place along 4-foot deep rake edge overhang – provide temporary shoring/support during replacement of outriggers. *(see figure A4.22)*
- At west rake edge (back façade): Remove all roof decking extending beyond perimeter building wall, creating existing deep rake edge overhang. Remove, salvage, pack for storage existing structural outriggers and (6) 4' x 8' decorative support brackets for future project reuse.
- Remove membrane valley flashings, prefinished flashings, and all mastics from base of Bell Tower masonry
- Provide allowance for removal of sections of plaster ceilings below this roof area to provide access for structural repairs to framing, identified below

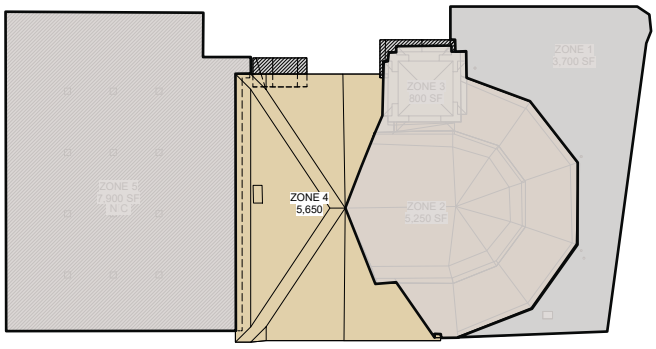
Roofing, Trim, and Drainage

- Provide architectural grade asphalt shingles over underlayment, over wood roof deck and sheathing
- Infill roof deck where removed, with exterior grade plywood, thickness to match existing sound decking to remain (verify in field)
- Resecure wood fascia board along (north and south) eaves; clean, prep, prime and repaint fascia, underside of soffit, frieze boards and trim
- Provide new prefinished aluminum gutters along (north and south) eaves. Provide downspouts to outlet to roof surfaces below
- At east rake edge (front façade): Reinstall (4) 4' x 8' decorative wood support bracket enclosures around new structural outriggers (see structural below); consolidate, prep, prime, and repaint all sides of wood fascia, underside of soffit along rake edges, and brackets; replace select deteriorated or missing pieces to match existing; prep, prime and repaint all wood components
- At west rake edge (back façade): Extend new sheathing to create shorter rake edge with new wood fascia board, primed and painted
    - **ALTERNATE:** In lieu of demo of decorative wood brackets and cutting back deep rake edge overhang, salvage for reuse (6) 4' x 8' decorative support brackets around replaced structural outriggers, and repair, prep and prime existing wood fascia and soffit trim to remain (similar to east façade rake edge)

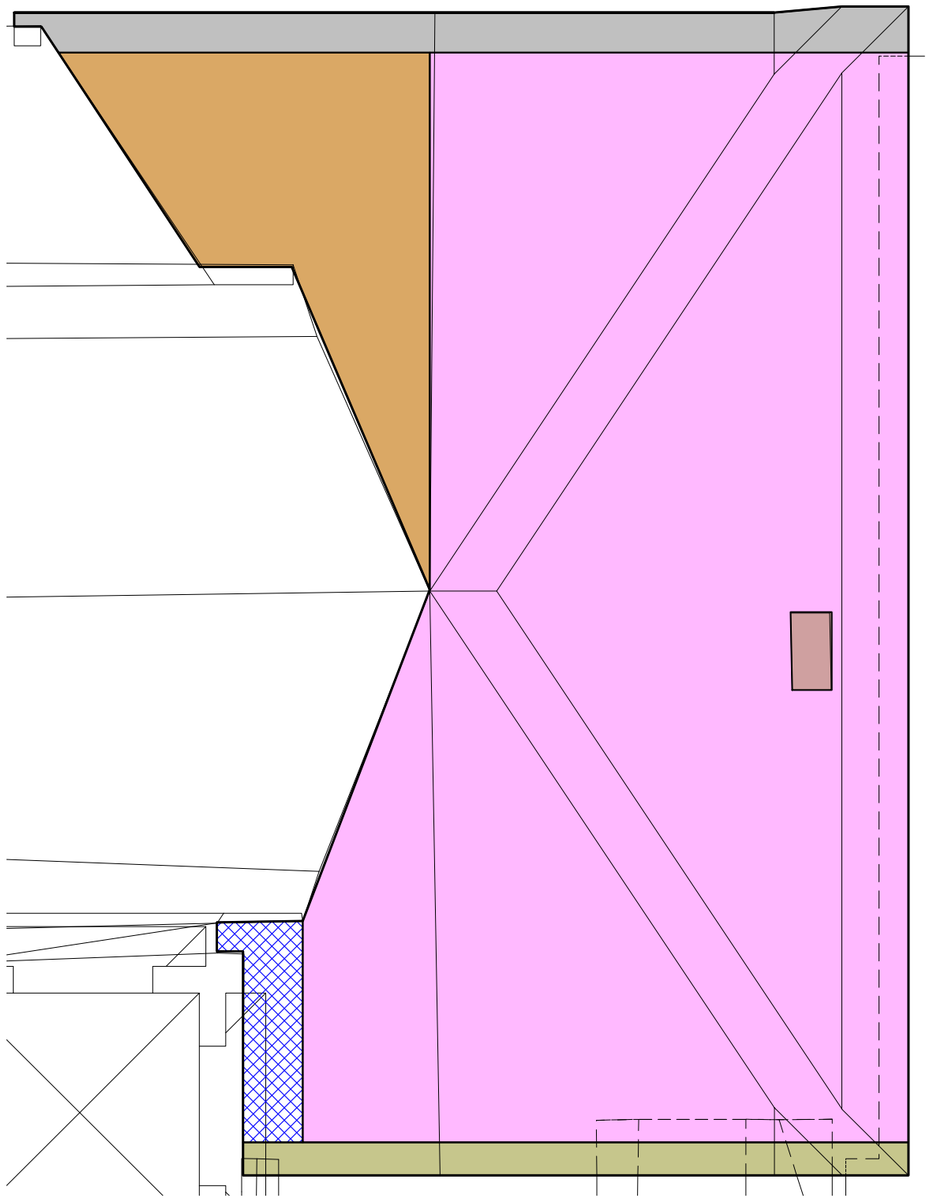
Structure and Support (refer to structural matrix)

- Replace (4) wood outriggers on east façade supporting overhang along rake edge. Replace deteriorated sheathing, bracket framing fascia assembly and trim. Provide temporary shoring as required to continue to support existing rake overhangs to remain. *(see figure A4.22)*
    - **ALTERNATE:** Replace (6) additional outriggers supporting west rake edge
- Large zone of damaged roof sheathing and potentially damaged rafters in southwest roof area. Replace all sheathing and replace or sister damaged rafters
- Remove and replace saddle framing between sloping roof area and bell tower
- After removal or remain roofing, inspect sheathing over entire roof and replace damaged and deteriorated areas
- Removed spalled and damaged masonry from chimney

    - **ALTERNATE (All Zones):** Provide copper flashings in lieu of prefinished aluminum



ZONE 4 CENTRAL GABLE ROOF



STRUCTURAL ITEMS REQUIRED FOR ROOFING INTEGRITY AND SAFETY

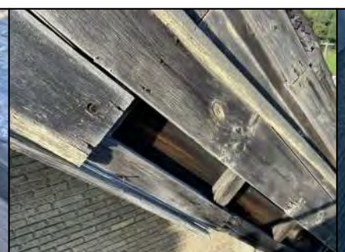
HATCH AREA	DESCRIPTION	UNITS	COMMENT
	EXISTING ROOF OVERHANG WITH DECORATIVE WOOD BRACKETS CANTILEVERING OUT FROM WALL. REMOVE ROOF SHEATHING AND BRACKETS. MEASURE AND PRESERVE BRACKET GEOMETRY AND DETAIL FOR FUTURE REPLICATION.	REMOVE: 280SF	OVERHANG NOT REQUIRED FOR ROOF ENCLOSURE.
	SLOPING LOWER ROOF AREA APPEARS IN MODERATE TO POOR CONDITION. ASSUME 15% OF SHEATHING AND 10% OF SUPPORT RAFTERS NEED TO BE REPLACED OR REINFORCED.	SHEATHING: 600SF RAFTERS: 80LF	EXTREME CARE NEEDED DURING CONSTRUCTION. REMOVAL OF ROOFING NEEDS TO BE CARRIED OUT FROM SAFE PLATFORM OR LIFT.
	SLOPING LOWER ROOF AREA IN VERY POOR CONDITION. ASSUME REPLACEMENT OF 100% OF SHEATHING AND 30% REPLACEMENT OR REINFORCING OF SUPPORT RAFTERS.	SHEATHING: 600SF RAFTERS: 50LF	EXTREME CARE NEEDED DURING CONSTRUCTION. REMOVAL OF ROOFING NEEDS TO BE CARRIED OUT FROM SAFE PLATFORM OR LIFT.
	ROOF SHEATHING IN VALLEY IN VERY POOR CONDITION REPLACE 100% OF SHEATHING AND 50% OF SUPPORT RAFTERS.	SHEATHING: 100SF RAFTERS: 20LF	EXTREME CARE NEEDED DURING CONSTRUCTION. REMOVAL OF ROOFING NEEDS TO BE CARRIED OUT FROM SAFE PLATFORM OR LIFT.
	EXISTING ROOF OVERHANG WITH DECORATIVE WOOD BRACKETS CANTILEVERING OUT FROM WALL. REPAIR IN PLACE. MEASURE AND PRESERVE BRACKET GEOMETRY AND DETAIL FOR FUTURE REPLICATION.	REPAIR : 250SF	EXTREME CARE NEEDED DURING CONSTRUCTION. REMOVAL OF ROOFING NEEDS TO BE CARRIED OUT FROM SAFE PLATFORM OR LIFT.
	REMOVE LOOSE AND SPALLING MASONRY FROM CHIMNEY		ALLOW ONE DAY OF MASONRY CONTRACTOR WORKING FROM LIFT

NOTES:

1. REPLACE EXISTING TONGUE AND GROOVE ROOF SHEATHING WITH 3/4" EXTERIOR RATED PLYWOOD SPANNING TO 2X6@16" OC. 2X6 SPANNING TO RAFTERS AT APPROXIMATELY 4'-0" OC.
2. REPLACE BADLY DAMAGED RAFTERS SPANNING UP TO 16 FT WITH (3)2X12.
3. REINFORCED MODERATELY DAMAGED RAFTERS WITH (2)2X12.

ROTTEN AND DAMAGED SHEATHING, BRACKETS AND RAFTERS

NORTH EAST SIDE OF MAIN ROOF APPEARS IN MODERATE CONDITION



ROOF OVERHANG FRAMING IN POOR TO VERY POOR CONDITION. BRACKET SUPPORT MEMBERS ROTTEN

HOLE IN ROOF AT INTERSECTION OF ROOFS

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ROOF PLAN - ZONE 4

ROOF INSPECTION REPORT
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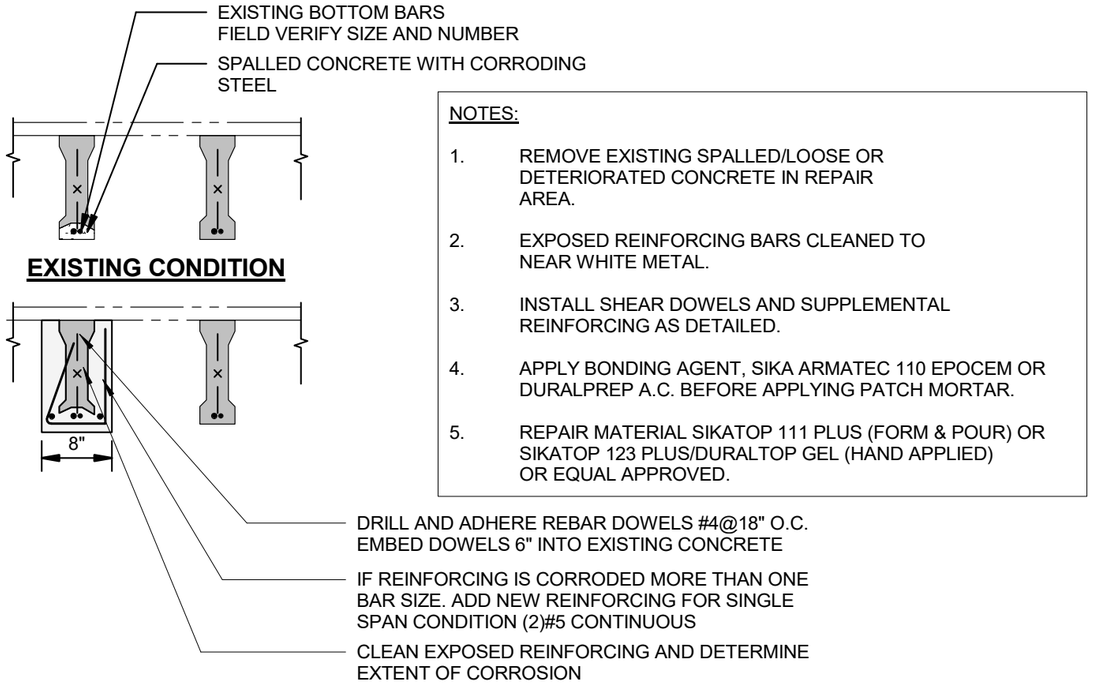
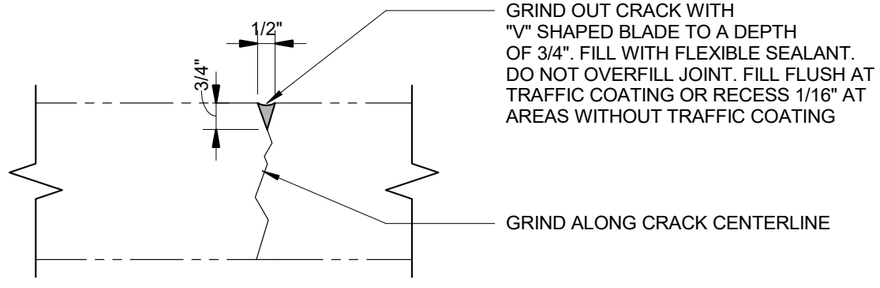


NOTES:

1. REMOVE EXISTING SPALLED/LOOSE OR DETERIORATED CONCRETE IN REPAIR AREA.
2. EXPOSED REINFORCING BARS CLEANED TO NEAR WHITE METAL.
3. INSTALL SHEAR DOWELS AND SUPPLEMENTAL REINFORCING AS DETAILED.
4. APPLY BONDING AGENT, SIKA ARMATEC 110 EPOCEM OR DURALPREP A.C. BEFORE APPLYING PATCH MORTAR.
5. REPAIR MATERIAL SIKATOP 111 PLUS (FORM & POUR) OR SIKATOP 123 PLUS/DURALTOP GEL (HAND APPLIED) OR EQUAL APPROVED.

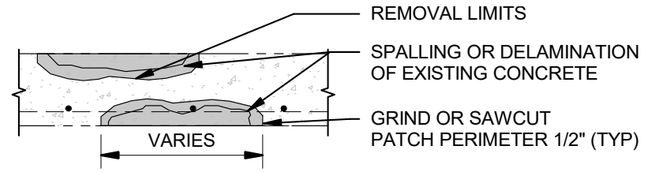
4 CONCRETE JOIST REPAIR DETAIL

SCALE: 3/4" = 1'-0"



3 SLAB CRACK >1/32" REPAIR

SCALE: 3" = 1'-0"

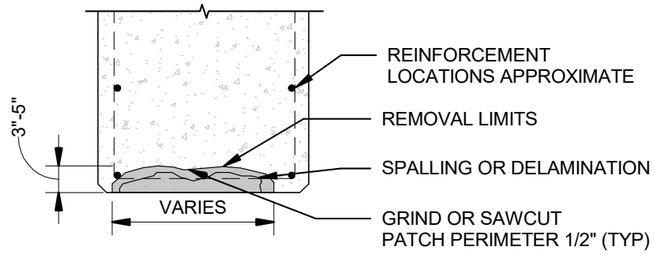


NOTES:

1. Sawcut or grind 1/2" reveal around perimeter of repair area.
2. Chip and remove all damaged, spalling and delaminated concrete.
3. Expose and clean all corroding reinforcing.
4. Apply bonding agent to steel and concrete before placing mortar patch.
5. Bonding Agents. Comply with the following minimum parameters:
   - A. Flexural Strength at 28days: 1,400psi
   - B. Splitting Tensile Strength at 28days: 500psi
   - C. Slant Shear Strength at 28days: 600psi
   - D. Pull-Out Resistance, adhesion to mechanically prepared concrete: 350psi
   - E. Products:
     - SikaArmatec 1C
     - SikaArmatec 110 EpoCem
6. Trowel apply mortar patch to match elevation of original concrete.
7. Trowel Applied Mortar. Comply with the following minimum parameters:
   - A. Compressive Strength (ASTM C109) at 7 days: 4,000psi
   - B. Flexural Strength at 28days >1,400psi
   - C. Tensile Bond Strength at 28days: 290psi
   - D. Slant Shear Strength at 28days: 1,500psi
   - E. Volume change less than -0.15%
   - F. Products:
     - Plantop XS
     - SikaTop 122 Plus
     - SikaDuratop Gel
8. If loss of steel section exceeds 10% add and lap new rebar matching the diameter of damaged bar

2 CONCRETE SLAB REPAIR

SCALE: 3/4" = 1'-0"



NOTES:

1. CLEAN AND APPLY CORROSION INHIBITING PRIMER/BONDING AGENT TO ALL EXPOSED REINFORCEMENT.
2. PROVIDE 3/4" CLEARANCE AROUND ALL EXPOSED REINFORCEMENT.
3. NUMBER AND LOCATION OF REINFORCEMENT SHOWN MAY DIFFER FROM ACTUAL FIELD CONDITIONS.

1 CONCRETE BEAM REPAIR

SCALE: 3/4" = 1'-0"

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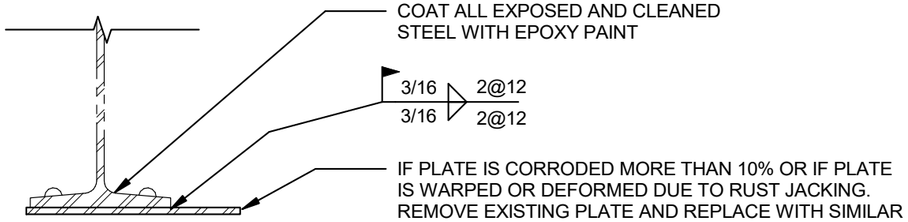
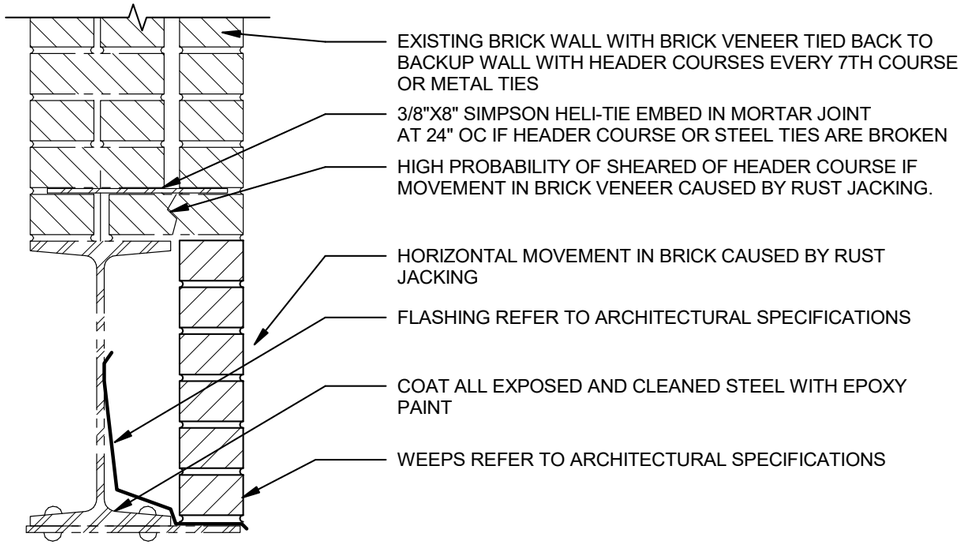
SECTIONS AND DETAILS | ROOF INSPECTION REPORT
NOVEMBER 19, 2021



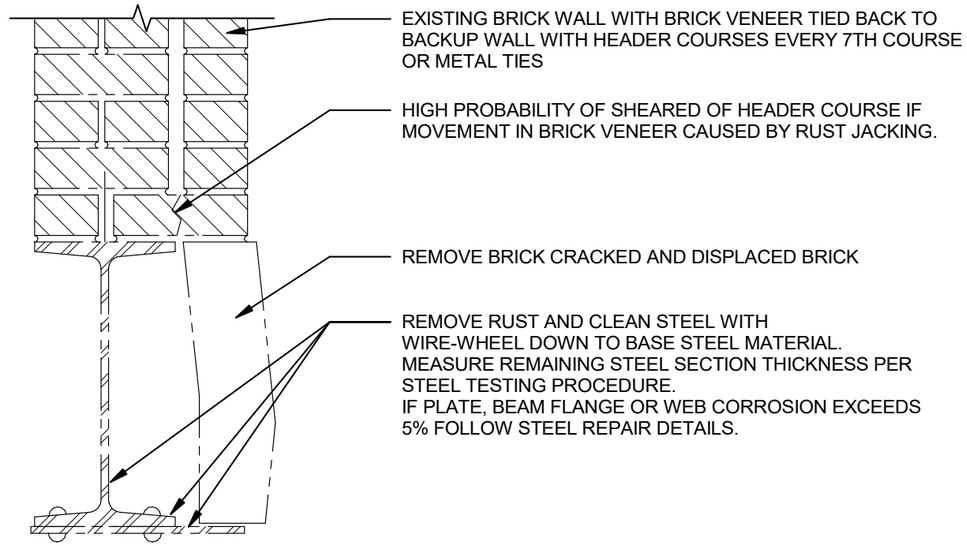
4 STEEL LINTEL PLATE REPLACEMENT

SCALE: 1 1/2" = 1'-0"



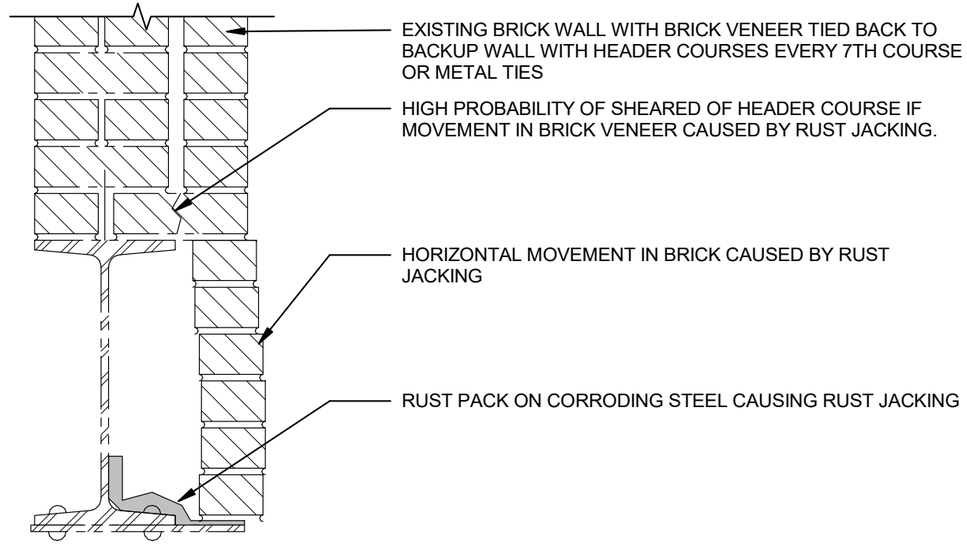
3 STEEL LINTEL REPAIR (STEP 2)

SCALE: 1 1/2" = 1'-0"



2 STEEL LINTEL REPAIR (STEP 1)

SCALE: 1 1/2" = 1'-0"



1 CORROSION AT EXISTING STEEL LINTEL

SCALE: 1 1/2" = 1'-0"

QUINN EVANS

RESURGET ENGINEERING
4219 WOODWARD AVE SUITE 306
DETROIT, MI 48201
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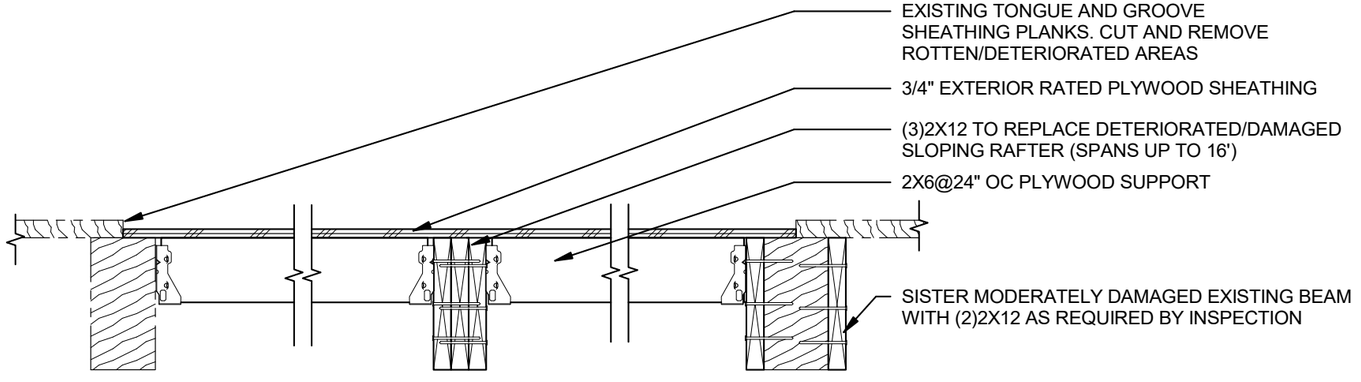
KING SOLOMON BAPTIST CHRUCH

SECTIONS AND DETAILS

ROOF INSPECTION REPORT
NOVEMBER 19, 2021



1

WOOD REPAIR DETAIL

SCALE: 1" = 1'-0"

ASSOCIATED WORK RECOMMENDATIONS - ADD ALTERNATIVES

The following scope recommendations are not required to provide a permanent, safe, and compliant roof in the four zones requested be a part of the inspection, but are items that will either impact the the longevity of the new roofs, or would be efficient to address at the same time as the base scope. The following items have been included in the Cost Estimate as add alternates:

- Televise, scope, and clear existing storm drain lines serving Zone 1 Flat Roof ((3) x 3 stories in length)
- Board up open windows to curb weather infiltration and continued deterioration of the interior (approx. 450 SF)
- Provide bird screening behind wood louvers in Bell Tower (approx. 425 SF)
- Remove collapsing gabled roof over main sanctuary entry vestibule at the base of the Bell Tower; provide temporary shed roof over vestibule with wood joists, plywood sheathing, underlayment, asphalt shingles, treated wood edge and prefinished aluminum drip edge flashing. Approx. 25' wide x 12' deep x 25' tall
- Close up open end of valley/cricket flashing at north end of north entry vestibule roof into main sanctuary (east façade) with secured treated wood framing and prefinished metal flashing (assume 4 SF)
- Prep and repaint vertical metal paneling and window trim between upper and lower tiers of Zone 2 Heptagon Roof (150 SF)
- Demo (including vegetative growth) existing masonry block rooftop stair enclosure, and wood frame and door. Rebuild new enclosure out of CMU, including a new hollow metal door and frame - approx. 160 SF of walls. Cut back existing membrane roofing and reflash with new membrane roofing and termination bar/ sealant at base of replaced enclosure.

ASSUMPTIONS AND ADDITIONAL INVESTIGATIONS

The following assumptions regarding the limits of scope and construction informed, and are reflected by, the Cost Estimate provided:

- Construction period of 6-months (August 2022 – January 2023)
- Testing for hazardous materials will occur prior to any work being performed. Any hazardous materials found to be present related and disturbed by the scope of work will be abated prior to commencement of work.
- Debris and FFE will be removed by Owner from interior spaces in any locations where contractors need to access or perform work.
- Due to the deteriorated condition of sloped roof decks, access to perform removal and some new work will require use of lifts and scaffolding from the ground. Access is further limited along the west façade and roof edges due to proximity of power lines.
- Electrical service is on and available for contractor use. Gas service is turned off and no water service is available for contractor use.
- Contractor will provide temporary weathertight enclosures where exterior masonry wall cavities or roofs are opened up during work.
- Insulation will be added to the interior attic space below the sloped roof decks in the future and is not part of this project.
- Additional attic ventilation may be required in the future related to both the Zone 2 Heptagonal Roof and Zone 4 Central Gable Roof once interior ceiling finishes are restored (re-enclosing attic cavities). Ventilation calculations will need to be performed to determine how much additional ventilation will be required beyond the existing gable end louvers for the Zone 4 Central Gable Roof. Construction period of 6-months (August 2022 – January 2023)

04

COST ESTIMATE

COST ESTIMATE SUMMARY

The following conceptual estimate is organized by roof zone, providing a Total Direct Cost of Construction for each zone, in representation of the Scope of Work Recommendations provided within this report.

Contingencies, escalation, indirect and other project costs are applied to the (collective) Total Project Direct Cost of all zones, in result of a Total Project Cost. Such mark-ups, defined as percentages of the Total Direct Cost, will scale down as scope of work is pared down to align with the project budget, defined by this phase of grant funding.

November 19, 2021

Revised

Opinion of Probable Cost Budget Estimate
to
Quinn Evans

Project:

King Solomon Baptist Church
Roof Conditions Assessment

Phone: 248.933.6304
E-Mail: chris.toma@dcmest.com
Website: www.dcmest.com

DCM Consulting
400 S. Old Woodward Ave., Suite 100
Birmingham, MI 48009

King Solomon Baptist Church
Roof Conditions Assessment
Opinion of Probable Cost Budget Estimate

Estimate Clarifications

1 DMC Consulting has evaluated the documents and prepared an estimate based on the reasonable intent of these documents.

2 The estimate is not formatted or intended to predict low bids by category.

3 The Building Gross Square Foot (GSF) Listed in this deliverable is based on the American Institute of Architects (AIA) Document D101.

4 The estimate is based on the project design documents prepared by Quinn Evans dated 11/8/21.

5 Performance and payment bonds are included for all subcontractor work.

6 The estimate excludes the State of Michigan sales tax.

7 This estimate assumes that the final bid documents will name three or more manufacturers whose product are acceptable. Estimate excludes sole sourcing unless noted otherwise.

8 This estimate is based on local labor wage rates.

9 The estimate includes standard material and labor escalation. Escalation in the estimate is included at an annual rate of 5.0% per year from the date of the estimate to the midpoint of the construction schedule.

10 The estimate is based on the following construction milestone dates:
Construction Start Date = 8/01/22
Construction Substantial Completion Date = 2/1/23

11 The estimate is based on all work being performed on standard shift time.

12 Estimate is based on the Owner providing parking for all trade contractors.

13 The estimate excludes hazardous material survey and abatement.

14 The estimate excludes material and soils testing.

15 The estimate excludes furniture, furnishings and equipment (FF&E).

16 The estimate excludes the General Building Permit.

17 The estimate excludes utility consumption charges used for construction purposes.

King Solomon Baptist Church

Estimate Date: 11/19/2021

Roof Conditions Assessment

Detroit, Michigan

Construction Start: 08/01/2022

Opinion of Probable Cost Budget Estimate

Construction Finish: 02/01/2023

	Description	Building Gross Area		Cost / GSF	Total Cost	% Of Total
	PROJECT DIRECT COST					
	Zone 1: Flat Roof (South)	1	LPSM	$487,000	**$487,000**	24.15%
	Zone 2: Heptagon Roof (Upper and Lower)	1	LPSM	$270,000	**$270,000**	13.39%
	Zone 3: Bell Tower Roof	1	LPSM	$103,000	**$103,000**	5.11%
	Zone 4: Central Gable Roof	1	LPSM	$292,500	**$292,500**	14.51%
	TOTAL PROJECT DIRECT COST	1	LPSM	$1,152,500	**$1,152,500**	57.15%
	CONTINGENCIES & ESCALATION					
	Design Contingency	15.00%	OF	$1,152,500	**$173,000**	8.58%
GC	Construction Contingency	0.00%	OF	$1,152,500	**$0**	0.00%
	Material & Labor Escalation	4.75%	OF	$1,152,500	**$55,000**	2.73%
	TOTAL CONTINGENCIES & ESCALATION	1	LPSM	$228,000	**$228,000**	11.31%
	GENERAL CONTRACTOR INDIRECT COST					
GC	General Conditions	6	MONTH	$15,000	**$90,000**	4.46%
GC	Staff Labor Cost	6	MONTH	$22,500	**$135,000**	6.69%
GC	General Liability Insurance	0.65%	OF	$1,715,500	**$11,000**	0.55%
	Builder's Risk Insurance	0.00%	OF	$1,715,500	**$0**	0.00%
GC	Performance & Payment Bond	0.70%	OF	$1,715,500	**$12,000**	0.60%
GC	Construction Phase Services Fee	8.00%	OF	$1,380,500	**$110,000**	5.45%
	TOTAL GENERAL CONTRACTOR INDIRECT COST	1	LPSM	$358,000	**$358,000**	17.75%
	TOTAL CONSTRUCTION COST	1	LPSM	$1,738,500	**$1,738,500**	86.21%
	OWNER PROJECT COST					
	A/E Professional Construction Administration Fees	8.00%	OF	$1,738,500	**$139,000**	6.89%
	FF&E	1	LPSM	$0.00	**$0**	0.00%
	Project / Legal Expenses	1	LPSM	$0.00	**$0**	0.00%
	Land Acquisition	1	LPSM	$0.00	**$0**	0.00%
	IT / Technology Expenses	1	LPSM	$0.00	**$0**	0.00%
	Owner Contingency	8.00%	OF	$1,738,500	**$139,000**	6.89%
	TOTAL OWNER PROJECT COST	1	LPSM	$278,000.00	**$278,000**	13.79%
	TOTAL COST	**1**	**LPSM**	**$2,016,500**	**$2,016,500**	**100.00%**

GENERAL ALTERNATES - INCLUDES CONTINGENCIES AND INDIRECTS COSTS

1.	Board up open windows to curb weather infiltration and continued deterioration of the interior	1	LPSM	$24,000	**$24,000**	ADD
2.	Remove collapsing gabled roof over main sanctuary entry vestibule at the base of the Bell Tower; provide temporary shed roof over vestibule with wood joists, plywood sheathing, underlayment, asphalt shingles, treated wood edge and prefinished aluminum drip edge flashing	1	LPSM	$52,000	**$52,000**	ADD
3	Close up open end of valley/cricket flashing at north end of north entry vestibule roof into main sanctuary (east façade) with secured treated wood framing and prefinished metal flashing	1	LPSM	$11,000	**$11,000**	ADD
4.	Provide Copper Flashings/Trim,Gutters,downspouts in lieu of prefinished aluminum (All Zones)	1	LPSM	$158,000	**$158,000**	ADD

King Solomon Baptist Church **Estimate Date: 11/19/2021**
Roof Conditions Assessment
Opinion of Probable Cost Budget Estimate

	Description	Quantity	Unit	Unit Price	Total Cost
7	**Zone 1: Flat Roof (South)**				
8	**Demolition and Removal**				
9	Remove all debris	3,700	sqft	0.50	1,850
10	Remove and dispose of all cracked, crazed, or broken parapet tiles	60	lnft	10.00	600
11	Salvage all sound tiles for reuse	170	lnft	25.00	4,250
12	Remove all existing membrane roofing and flashings, insulation, and underlayment (including metal flashings and mastic at brick piers)	3,700	sqft	5.00	18,500
13	Remove (3) existing roof drain bodies and PVC rain conductors	3	each	500.00	1,500
14	Remove existing roof hatch and wood curb	1	each	200.00	200
15	**Roofing, Trim, and Drainage**				
16	Provide 60 mil EDPM (20-year minimum warranty) roofing and flashings over 6-inch-thick average (R-30) polyisocyanurate rigid insulation, over the existing roof deck to remain	3,700	sqft	30.00	111,000
17	Provide prefinished aluminum termination bar, reglet counterflashing, and sealant at membrane terminations around brick piers	40	lnft	35.00	1,400
18	Replace roof hatch in same location as existing on new treated wood curb	1	each	7,500.00	7,500
19	Provide (3) new roof drains in same location as existing; core larger 3-inch diameter (min.) openings in roof deck to properly accommodate stormwater capacity at drain locations; provide new, larger 3-inch diameter (min.) PVC rain conductors down through building	3	each	10,000.00	30,000
20	Create (2) scuppers openings for secondary overflow drainage through masonry parapet walls, properly flashed	2	each	8,000.00	16,000
21	Clean mortar and mastic from salvaged clay tile parapet caps and reset (grouted) over new membrane roofing termination	170	lnft	30.00	5,100
22	Provide new tiles to match existing to replace broken pieces	60	lnft	150.00	9,000
23	**Structure and Support**				
24	Deteriorated And Damaged 2" To 3" Thick Concrete Roof Slab. After Removing Roof, Hammer Sound Concrete. Chip Away Deteriorated Concrete Add 6X6W2Xw2 Wwf. Apply Cementitious Bonding Agent. Overlay With Concrete Patch.	280	sqft	120.00	33,600
25	Assume select spall and crack repairs to surface of concrete roof deck (approx. 25% of surface).	925	sqft	10.00	9,250
26	Damaged And Deteriorated Precast Roof Support Joists. Hammer Sound Concrete. Chip And Remove Damaged And Deteriorated Concrete. Clean Corroded Steel. Add (2)#5 Horizontal Bars If Bottom Bars Are Corroded More Than 10%. Dowel Shear Bars As Required. Apply Trowel Applied Concrete Patch Or Shotcrete To Provide Min 1" Cover To Existing And New Rebar.	440	lnft	120.00	52,800
27	Damaged And Deteriorated Concrete Beam. Remove Any Loose Concrete And Confirm Condition Of Encased Steel Beam.	440	lnft	50.00	22,000
28	Existing Steel Lintels Over Window Openings Are Severely Corroded And Beyond Repair, Resulting In Severe Rolling And Damage To Parapet Walls. Shore Existing Roof Structure. Remove And Replace Steel Lintels And Parapet Wall. Install New Galvanized Steel Lintels And Re- **Construct Parapet Walls.**	180	lnft	200.00	36,000

King Solomon Baptist Church **Estimate Date: 11/19/2021**
Roof Conditions Assessment
Opinion of Probable Cost Budget Estimate

	Description	Quantity	Unit	Unit Price	Total Cost	
29	Existing Steel Lintels Over Window Openings Are Severely Corroded And Beyond Repair, Resulting In Severe Rolling And Damage To Parapet Walls. Shore Existing Roof Structure. Remove And Replace Steel Lintels And Parapet Wall. Install New Galvanized Steel Lintels And Re- **Replace Lintels.**	30	each	3,000.00	90,000	
30	Corroded Steel Lintels Have Resulted In Severe Damage To Masonry Piers Covering Steel Building Columns. Remove Damaged Masonry, Repair Embedded Steel Columns And Connection. **Re-Construct One (1) Masonry Piers**	360	sqft	100.00	36,000	
31			**Subtotal Zone 1: Flat Roof (South)**		**$487,000**	
32						
33			**Total Zone 1: Flat Roof (South)**		**$487,000**	
34						
35	**ALTERNATES - INCLUDES CONTINGENCIES AND INDIRECTS COSTS**					
36	Provide temp. shoring down through all floors, that will remain in place until a future project repairs joists in Lieu of	1	lpsm	(33,000.00)	(33,000.00)	DEDUCT
37	Televise, scope, and clear existing storm drain lines serving Zone 1 Flat Roof	1	lpsm	11,000.00	11,000	ADD

	Description	Quantity	Unit	Unit Price	Total Cost	
7	**Zone 2: Heptagon Roof (Upper and Lower)**					
8	**Demolition and Removal**					
9	Remove all existing asphalt shingles and underlayment (protect upper tier windows and vertical metal paneling to remain	5,250	sqft	3.00	15,750	
10	Remove membrane valley flashings and all mastics from base of Bell Tower masonry	50	sqft	20.00	1,000	
11	Remove wood fascia and frieze board trim around eaves of both tiers	350	lnft	15.00	5,250	
12	Remove wood outriggers and rafter tails around eave overhang of both tiers	80	each	100.00	8,000	
13	Remove (and do not replace) plaster ceilings below this roof area to provide access for structural repairs to framing, identified below. Allowance	2,155	sqft	7.00	15,085	
14	**Roofing, Trim, and Drainage**					
15	Provide architectural grade asphalt shingles over underlayment, over repaired wood roof deck and sheathing as Noted in Structural Section below	5,250	sqft	7.50	39,375	
16	Provide all new wood fascia, soffit, and frieze board and trim, primed and painted along eave of both tiers	350	lnft	60.00	21,000	
17	Provide prefinished aluminum valley and wall termination flashings around base of Bell Tower	50	sqft	40.00	2,000	
18	Provide prefinished aluminum drip edge along the eaves of both tiers, and head flashings where the upper tier meets the vertical walls supporting the upper tier roof	475	lnft	20.00	9,500	
19	Provide Gutters and Downspouts	105	lnft	40.00	4,200	
20	**Structure and Support**					
21	Provide allowance to reset any displaced masonry and repoint open joints in brick wall directly under the eaves of the lower tier	63	sqft	125.00	7,813	
22	Existing Roof Flared Overhang With Decorative Wood Brackets Cantilevering Out From Bearing Wall. Remove Roof Sheathing And Brackets. Measure And Preserve Bracket Geometry And Detail For Future Replication.	550	sqft	35.00	19,250	
23	Sloping Lower Roof Area In Moderate To Poor Condition. Assume 30% Of Sheathing And 15% Of Support Rafters Need To Be Replaced Or Reinforced.	415	sqft	75.00	31,125	
24	Sloping Lower Roof Area In Very Poor Condition. Assume Replacement Of 100% Of Sheathing And 30% Replacement Or Reinforcing Of Support Rafters.	650	sqft	75.00	48,750	
25	Upper Roof Flared Overhang Appears In Moderate Condition. Assume Removal Of 15% Of Total Area On West Side.	50	sqft	35.00	1,750	
26	Upper Roof Flared Roof Area Appears In Moderate Condition. Assume 20% Of Sheathing And 10% Of Support Rafters Need To Be Replaced Or Reinforced.	160	sqft	75.00	12,000	
27	Upper Roof Area Appears In Moderate Condition. Assume 15% Of Sheathing And 10% Of Support Rafters Need To Be Replaced Or Reinforced.	380	sqft	75.00	28,500	
28			**Subtotal Zone 2: Heptagon Roof (Upper and Lower)**		**$270,000**	
29						
30			**Total Zone 2: Heptagon Roof (Upper and Lower)**		**$270,000**	
31						
32	**ALTERNATES - INCLUDES CONTINGENCIES AND INDIRECTS COSTS**					
33	Prep and repaint vertical metal paneling and window trim between upper and lower tiers of Zone 2 Heptagon Roof	1	LPSM	6,000.00	6,000	ADD

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Opinion of Probable Cost Budget Estimate

	Description	Quantity	Unit	Unit Price	Total Cost	
7	**Zone 3: Bell Tower Roof**					
8	**Demolition and Removal**					
9	Remove existing asphalt roofing, metal flashings, wood roof decking, and wood-framed structure	800	sqft	7.00	5,600	
10	Remove wood outriggers and decorative rafter tails along eave overhangs	15	each	250.00	3,750	
11	Remove copper downspouts	2	each	300.00	600	
12	Provide allowance to remove all loose or detached brick masonry and stone caps in upper section of tower walls and piers	300	sqft	25.00	7,500	
13	**Roofing, Trim, and Drainage**					
14	Provide architectural grade asphalt shingles over underlayment over new sheathing and wood truss framing as noted below (no overhang provided).	500	sqft	10.00	5,000	
15	Provide all new wood fascia, soffit, and frieze board and trim, primed and painted along eaves	80	lnft	60.00	4,800	
16	Provide prefinished aluminum metal flashing and trim, including drip edge	80	lnft	20.00	1,600	
17	Provide new prefinished aluminum gutters and downspouts	160	lnft	40.00	6,400	
18	**Structure and Support**					
19	Provide simple precast stone caps at top of brick masonry piers exposed with removal of loose or deteriorated caps	100	sqft	150.00	15,000	
20	Provide allowance for resetting displaced brick masonry or stone caps, and repointing open joints in upper section of tower walls and piers where required for structural stability, weather-tightness and life safety.	150	sqft	100.00	15,000	
21	Future Decorative Brackets And Roof Overhang. Not In Current Scope.		excluded		0	
22	Remove Existing Roof Framing. Replace With Re- Engineered Wood Trusses At 2'-0" Oc With 3/4" Sheathing. Refer To Architectural For Roofing Details And Information.	500	sqft	75.00	37,500	
23				**Subtotal Zone 3: Bell Tower Roof**	**$103,000**	
24						
25				**Total Zone 3: Bell Tower Roof**	**$103,000**	
26						
27	**ALTERNATES - INCLUDES CONTINGENCIES AND INDIRECTS COSTS**					
28	Extend new roof decking to recreate extended overhang to match existing, provide new outriggers as part of roof trusses and cover with replicated wood decorative rafter tail brackets along eaves (qty. 24 x 84 SF each)	1	LPSM	137,000.00	137,000	ADD
29	Provide bird screening behind wood louvers in Bell Tower	1	LPSM	16,000.00	16,000	ADD

King Solomon Baptist Church **Estimate Date: 11/19/2021**
Roof Conditions Assessment
Opinion of Probable Cost Budget Estimate

	Description	Quantity	Unit	Unit Price	Total Cost
7	**Zone 4: Central Gable Roof**				
8	**Demolition and Removal**				
9	Remove all existing asphalt shingles and underlayment	5,650	sqft	7.00	39,550
10	Remove all metal flashings around base of chimney	25	lnft	20.00	500
11	Remove metal gutter along eaves; existing wood fascia board, frieze board and trim, and decorative wood rafter tails to remain	100	lnft	25.00	2,500
12	Remove existing metal downspouts	2	each	100.00	200
13	At east rake edge (front façade): Remove and salvage for reinstallation (4) 4' x 8' decorative wood support bracket enclosures around deteriorated wood structural outriggers along rake edge (see structural scope below). Existing wood fascia and soffit boards/trim to remain in place along 4-foot deep rake edge overhang – provide temporary shoring/support during replacement of outriggers.	4	each	5,000.00	20,000
14	At west rake edge (back façade): Remove all roof decking extending beyond perimeter building wall, creating existing deep rake edge overhang. Remove, salvage, pack for storage (6) 4' x 8' decorative support brackets for future project reuse.	6	each	2,000.00	12,000
15	Remove membrane valley flashings, prefinished flashings, and all mastics from base of Bell Tower masonry	50	sqft	30.00	1,500
16	Remove (and do not replace) plaster ceilings below this roof area to provide access for structural repairs to framing, identified below. Allowance	1,730	sqft	7.00	12,110
17	**Roofing, Trim, and Drainage**				
18	Provide architectural grade asphalt shingles over underlayment, over wood roof deck and sheathing as noted in structural section below.	5,650	sqft	7.50	42,375
19	Resecure wood fascia board along (north and south) eaves; clean, prep, prime and repaint fascia, underside of soffit, frieze boards and trim	100	lnft	50.00	5,000
20	Provide new prefinished aluminum gutters along (north and south) eaves (90 LF). Provide downspouts (qty.4 x 8 ft. length) to outlet to roof surfaces below (including 18-inch extensions and splash blocks at flat roofs)	212	lnft	40.00	8,480
21	At east rake edge (front façade): Reinstall (4) 4' x 8' decorative wood support bracket enclosures around new structural outriggers (see structural below); consolidate, prep, prime, and repaint all sides of wood fascia (26-inch tall x 5-inch thickness x 50-foot length), underside of soffit along rake edges (48-foot deep x 50-foot length), and brackets; replace select deteriorated or missing pieces to match existing; prep, prime and repaint all wood components	4	each	4,000.00	16,000
22	At west rake edge (back façade): Extend new sheathing to create shorter 6-inch tall and 6-inch deep rake edge with new wood fascia board, primed and painted	included below			
23	**Structure and Support**				
24	Sloping Lower Roof Area Appears In Moderate To Poor Condition. Assume 15% Of Sheathing And 10% Of Support Rafters Need To Be Replaced Or Reinforced.	680	sqft	75.00	51,000
25	Sloping Lower Roof Area In Very Poor Condition. Assume Replacement Of 100% Of Sheathing And 30% Replacement Or Reinforcing Of Support Rafters.	650	sqft	75.00	48,750
26	Roof Sheathing In Valley In Very Poor Condition Replace 100% Of Sheathing And 50% Of Support Rafters.	120	sqft	75.00	9,000

King Solomon Baptist Church **Estimate Date: 11/19/2021**
Roof Conditions Assessment
Opinion of Probable Cost Budget Estimate

	Description	Quantity	Unit	Unit Price	Total Cost	
27	Replace 4 wood outriggers on east façade supporting overhang along rake edge	4	each	5,000.00	20,000	
28	Remove Loose And Spalling Masonry From Chimney	1	lsum	3,500.00	3,500	
29			**Subtotal Zone 4: Central Gable Roof**		**$292,500**	
30						
31			**Total Zone 4: Central Gable Roof**		**$292,000**	
32						
33	**ALTERNATES - INCLUDES CONTINGENCIES AND INDIRECTS COSTS**					
34	In lieu of demo of decorative wood brackets and cutting back deep rake edge overhang along west rake edge, salvage for reuse (6) 4' x 8' decorative support brackets around replaced structural outriggers and shore, repair, prep and prime existing wood fascia and soffit trim to remain (similar to east façade rake edge)	1	LPSM	36,000.00	36,000	ADD
35	Demo (including vegetative growth) existing masonry block rooftop stair enclosure, and wood frame and door. Rebuild new enclosure out of CMU, including a new hollow metal door and frame. Cut back existing membrane roofing and reflash with new membrane roofing and termination bar/sealant at base of replaced enclosure.	1	LPSM	60,000.00	60,000	ADD

05

FUTURE RECOMMENDATIONS AND PHASING

FUTURE RECOMMENDATIONS AND PHASING

In recognition that roof replacement is the first step in a longer process that will need to involve additional scope of work implemented on the exterior and interior of the building, toward the long term goal of a full rehabilitation and re-occupancy of the church, we offer the following outline of future efforts for consideration. Following completion of roof replacement efforts, it is strongly recommended that prioritization first remain with items related to creating a complete weather-tight envelope and safe conditions for public walking alongside the building. Once the envelope is deemed safe and weather-tight, efforts can re-focus to the interior rehabilitation, prioritizing structural stability and safety, functionality of systems, and eventually repair and fit-out of a finished, programmable interior. Scope items within each section below are listed in order of recommend priority.

EXTERIOR

- Remove and repair or replace any remaining structures or elements in danger of falling and harming persons below (masonry, glazing, framing, or debris), or creating additional openings in the envelope.
- Ensure all storm drain lines are free-flowing and connections to the municipal system are sound.
- Provide temporary closures at all openings where windows, glazing, doors, or screening is missing.
- Maintain security at all access points to prevent unwanted access and further vandalism.
- Remove dry and unmanaged vegetation surrounding the building that could contribute to fire risk, most notably along the west elevation and alley.
- Perform conditions assessment of exterior envelope beyond initial roof areas.
- Replace the North Flat Roof not included in this project, including structure and support, and proper functioning drainage, as needed to provide for a safe, weather-tight, functional and warrantable system.
- Complete masonry repairs around the entire perimeter of the structure.
- Provide permanent windows, louvers, and door assemblies to replace temporary closures.
- Repair and/or reconstruct building entry enclosures.
- Rebuild and restore site access elements (walks, steps, ramps, railings) inclusive of accessible means and egress lighting.
- Extend roof overhangs and restore original roof edge profiles and detailing, valued-engineered from initial roof work.
- Perform remaining or additional cosmetic work: masonry cleaning, painting, lighting, or other restoration or replacement of materials, elements, or finishes.

INTERIOR

- Extend roof overhangs and restore original roof edge profiles and detailing, valued-engineered from initial
- Complete testing and removal of any hazardous materials (lead, asbestos, mercury).
- Remove all debris and furnishings throughout.
- Perform conditions assessment of interior architecture and structure, executed by design professionals.
- Provide structural repairs and reinforcements as needed for safe work areas and future occupancy
- Restore utility services and install new mechanical, plumbing, and electrical systems, including fire suppression and life safety systems.
- Repair, restore, and provide interior finishes and updated layout for programmed occupancy and use.

FIGURE EAST ELEVATION

FIGURE SOUTH ELEVATION

FIGURE WEST ELEVATION

FIGURE NORTH ELEVATION

FIGURE INT 1.1 FALLEN OR MISSING WINDOWS; DETERIORATED MASONRY WALLS AND DEBRIS

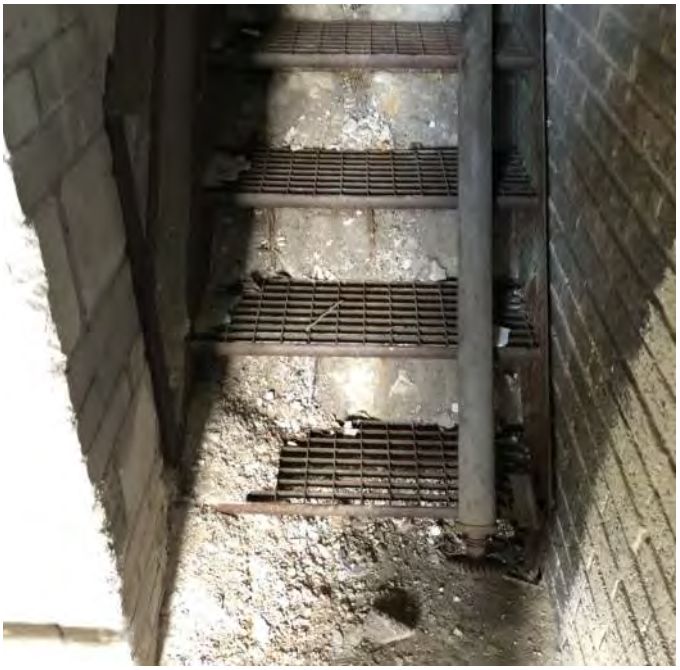


FIGURE INT 1.3 INTERIOR PLASTER HAS CRUMBLED FROM THE WALLS, CEILING AND STRINGER BEHIND THE STAIR (LEADS TO THE ROOTOP EXIT)

FIGURE INT 1.2 WATER STAINED A,D LOOSE WOOD DECKING; OXIDIZED STRUCTURAL BEAM AND COLUMNS; VARIOUS DEBRIS; AT 1917 ADDITION INTERIORS

FIGURE INT 1.4 WATER DAMAGED PAINT AND PLASTER FINISHES AND FURNISHINGS. DAMAGED STAINED GLASS WINDOWS WITH MISSING GLASS AND FAILED JOINTS

FIGURE INT 1.5 MAIN SANCTUARY ALTAR

FIGURE INT 1.6 FAILED FINISHES AND DEBRIS IN CLASSROOMS OVER SANCTUARY; OPENINGS THRU ROOFS TO DAYLIGHT ABOVE

FIGURE INT.7 FAILED FINISHES AND DEBRIS IN LOWER LEVEL SPACES

FIGURE INT 1.8 FAILED FINISHES AND DEBRIS IN ENTRYWAY AND CORRIDORS

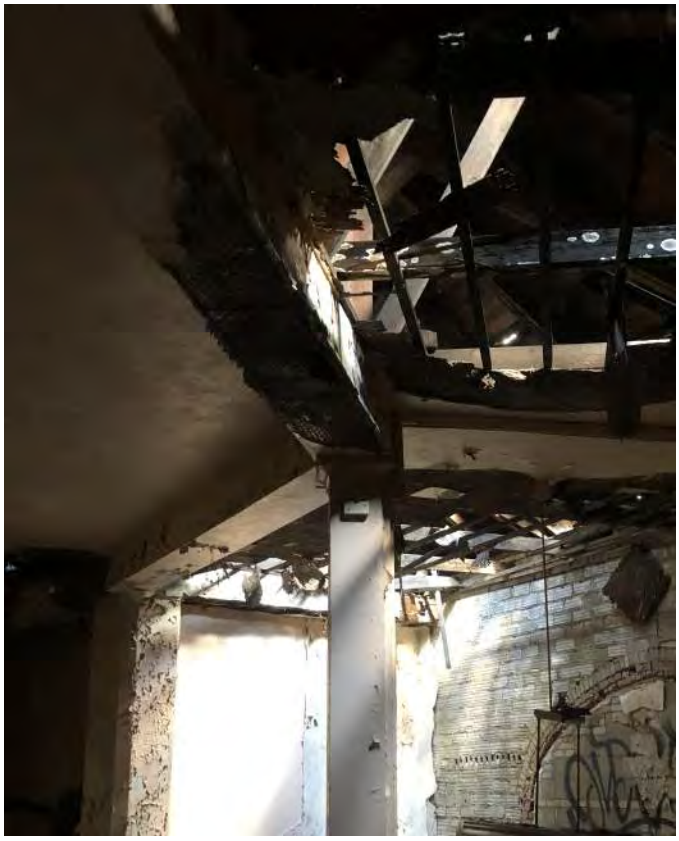


FIGURE INT 1.9 FAILED FINISHES AND DEBRIS IN CLASSROOMS OVER SANCTUARY; OPENINGS THRU ROOFS EXPOSING INTEIROR TO ELEMENTS

FIGURE INT 1. 10 BUCKLING AND CRACKED MASONRY EXTERIOR WALLS

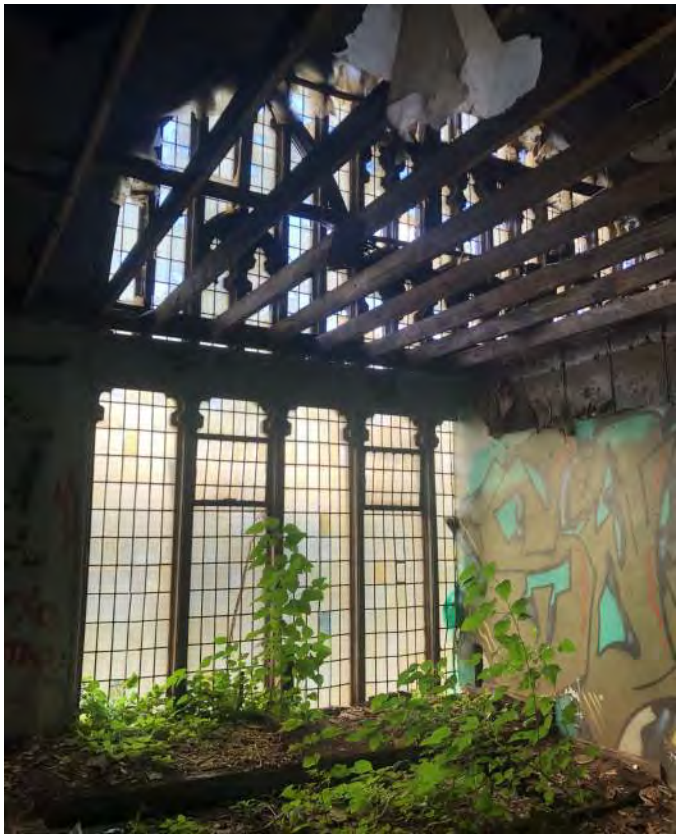


FIGURE INT 1.8 FAILED FINISHES AND VEGETATION IN SANCTUARY MEZZANINE OPEN TO THE ELEMENTS ABOVE

FIGURE INT 1.11 BOARDED UP FORMER WINDOW OPENINGS

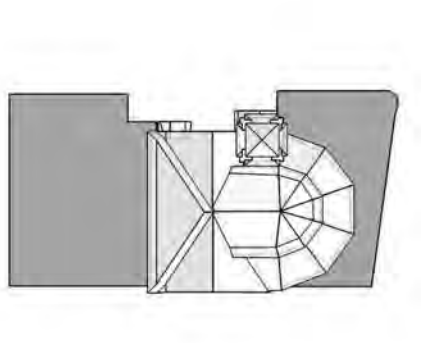
06

APPENDIX

Premium Report

9/19/2021

6125 14th St, Detroit, MI 48208-1307 Report: 42294749



In this 3D model, facets appear as semi-transparent to reveal overhangs.

PREPARED FOR

Contact:	Ann Dilcher
Company:	Quinn Evans Architects
Address:	219 1/2 N Main St Ann Arbor, MI 48104
Phone:	734-926-0415

TABLE OF CONTENTS

MEASUREMENTS

Total Roof Area =23,787 sq ft
Total Roof Facets =57
Predominant Pitch =0/12
Number of Stories >1
Total Ridges/Hips =653 ft
Total Valleys =242 ft
Total Rakes =218 ft
Total Eaves =497 ft
Total Penetrations =13
Total Penetrations Perimeter = 200 ft
Total Penetrations Area = 212 sq ft

Measurements provided by www.eagleview.com

Certified Accurate

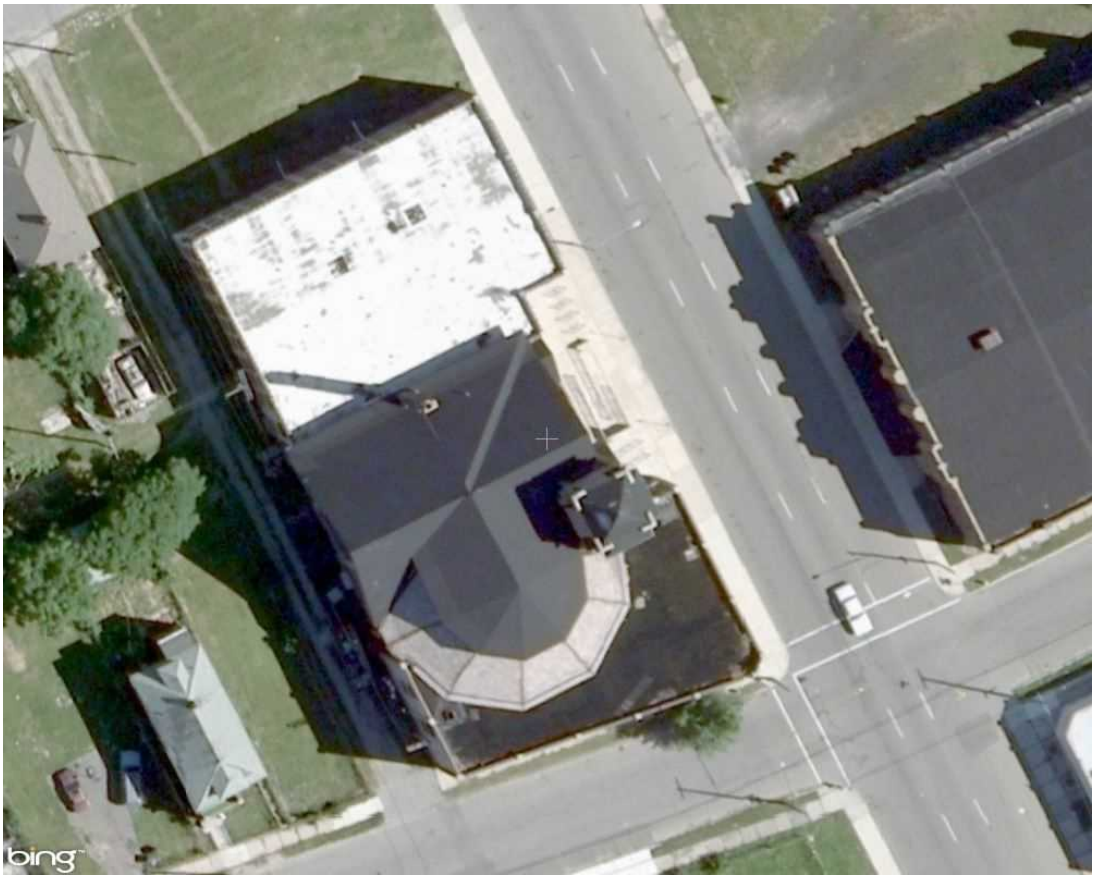
www.eagleview.com/Guarantee.aspx

6125 14th St, Detroit, MI 48208-1307 Report: 42294749

IMAGES

The following aerial images show different angles of this structure for your reference.

Top View



IMAGES

North Side

South Side

IMAGES

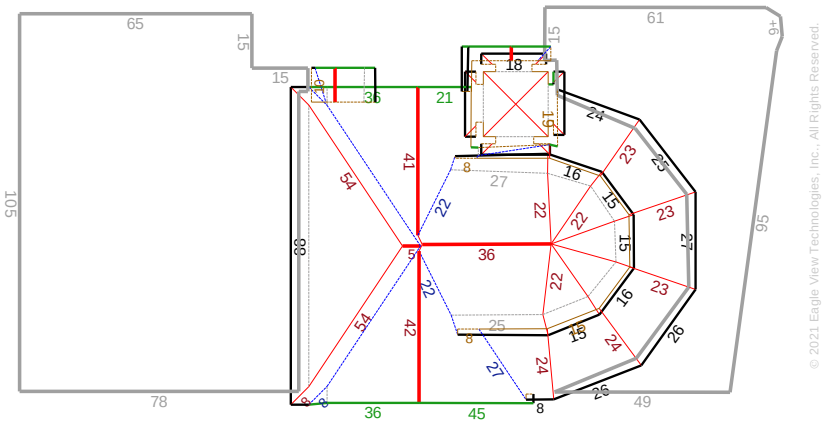
East Side

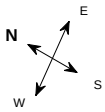
West Side

6125 14th St, Detroit, MI 48208-1307 Report: 42294749

LENGTH DIAGRAM

Total Line Lengths:
Ridges = 138 ft
Hips = 515 ft
Valleys = 242 ft
Rakes = 218 ft
Eaves = 497 ft
Flashing = 187 ft
Step flashing = 161 ft
Parapets = 739 ft



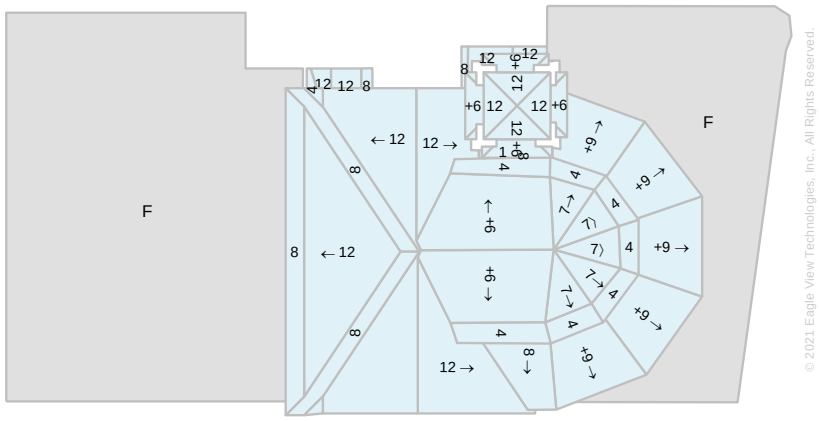


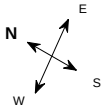
Note: This diagram contains segment lengths (rounded to the nearest whole number) over 5.0 Feet. In some cases, segment labels have been removed for readability. Plus signs preface some numbers to avoid confusion when rotated (e.g. +6 and +9).

6125 14th St, Detroit, MI 48208-1307 Report: 42294749

PITCH DIAGRAM

Pitch values are shown in inches per foot, and arrows indicate slope direction. The predominant pitch on this roof is 0/12



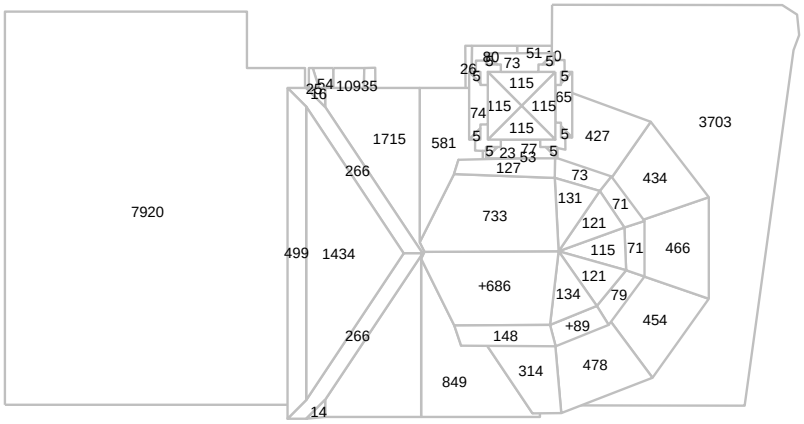


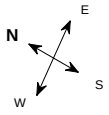
Note: This diagram contains labeled pitches for facet areas larger than 20.0 square feet. In some cases, pitch labels have been removed for readability. Blue shading indicates a pitch of 3/12 and greater. Gray shading indicates flat, 1/12 or 2/12 pitches. If present, a value of "F" indicates a flat facet (no pitch).

6125 14th St, Detroit, MI 48208-1307 Report: 42294749

AREA DIAGRAM

Total Area = 23,787 sq ft, with 57 facets.



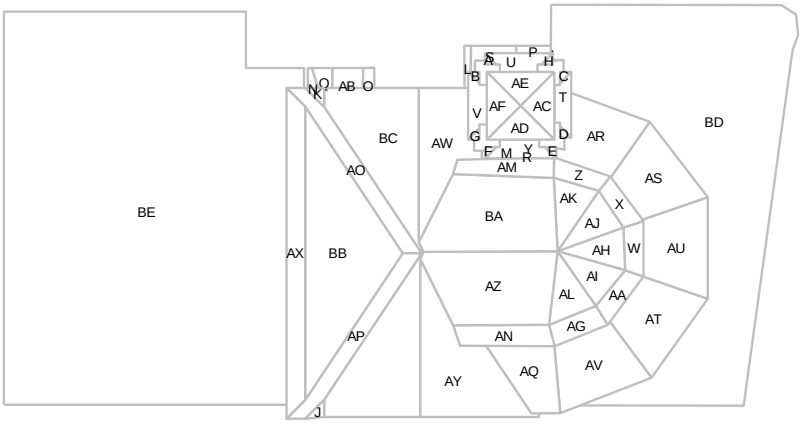


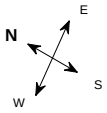
Note: This diagram shows the square feet of each roof facet (rounded to the nearest Foot). The total area in square feet, at the top of this page, is based on the non-rounded values of each roof facet (rounded to the nearest square foot after being totaled).

6125 14th St, Detroit, MI 48208-1307 Report: 42294749

NOTES DIAGRAM

Roof facets are labeled from smallest to largest (A to Z) for easy reference.



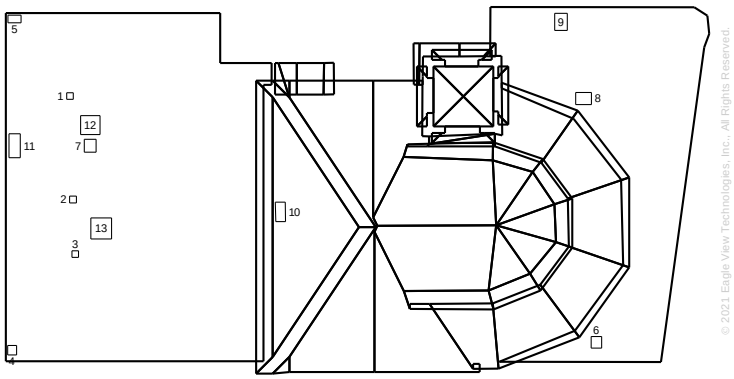


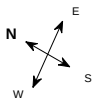
6125 14th St, Detroit, MI 48208-1307 Report: 42294749

PENETRATIONS NOTES DIAGRAM

Penetrations are labeled from smallest to largest for easy reference.

Total Penetrations = 13
Total Penetrations Perimeter = 200 ft
Total Penetrations Area = 212 sq ft
Total Roof Area Less Penetrations = 23,575 sq ft





REPORT SUMMARY

All Structures

Areas per Pitch									
Roof Pitches	0/12	1/12	4/12	6/12	7/12	8/12	9/12	11/12	12/12
Area (sq ft)	11622.7	22.7	682.7	1748.3	621.7	1488.0	2258.4	9.6	5332.0
% of Roof	48.9%	0.1%	2.9%	7.3%	2.6%	6.3%	9.5%	0%	22.4%

The table above lists each pitch on this roof and the total area and percent (both rounded) of the roof with that pitch.

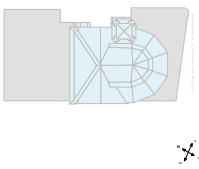
Waste Calculation Table							
Waste %	0%	10%	12%	15%	17%	20%	22%
Area (sq ft)	23,787	26,166	26,641	27,355	27,831	28,544	29,020
Squares	237.9	261.7	266.4	273.6	278.3	285.4	290.2

This table shows the total roof area and squares (rounded up to the nearest decimal) based upon different waste percentages. The waste factor is subject to the complexity of the roof, individual roofing techniques and your experience. Please consider this when calculating appropriate waste percentages. Note that only roof area is included in these waste calculations. Additional materials needed for ridge, hip, valley, and starter lengths are not included.

Penetrations	1-3	4	5	6	7	8	9	10	11	12
Area (sq ft)	4	7.7	9.2	11.2	13.5	17.4	19.4	24.2	24	33.5
Perimeter (ft)	8	11.2	12.6	13.4	14.8	16.8	17.8	20	21	23.2
	13									
Area (sq ft)	39									
Perimeter (ft)	24.8									

Any measured penetration smaller than 3.0x3.0 Feet may need field verification. Accuracy is not guaranteed. The total penetration area is not subtracted from the total roof area.

All Structures Totals



Total Roof Facets = 57
Total Penetrations =13

Lengths, Areas and Pitches

Ridges = 138 ft (6 Ridges)
Hips = 515 ft (36 Hips).
Valleys = 242 ft (13 Valleys)
Rakes† = 218 ft (16 Rakes)
Eaves/Starter‡ = 497 ft (34 Eaves)
Drip Edge (Eaves + Rakes) = 715 ft (50 Lengths)
Parapet Walls = 739 (22 Lengths).
Flashing = 187 ft (29 Lengths)
Step flashing = 161 ft (29 Lengths)
Total Penetrations Area = 212 sq ft
Total Roof Area Less Penetrations = 23,575 sq ft
Total Penetrations Perimeter = 200 ft
Predominant Pitch = 0/12
Total Area (All Pitches) = 23,787 sq ft

Property Location

Longitude = -83.0929683
Latitude = 42.3596259

Notes

This was ordered as a commercial property. There were no changes to the structure in the past four years.

† Rakes are defined as roof edges that are sloped (not level).
‡ Eaves are defined as roof edges that are not sloped and level.

Parapet Wall Area Table							
Wall Height (ft)	1	2	3	4	5	6	7
Vertical Wall Area	739	1478	2217	2956	3695	4434	5173

This table provides common parapet wall heights to aid you in calculating the total vertical area of these walls. Note that these values assume a 90 degree angle at the base of the wall. Allow for extra materials to cover cant strips and tapered edges.

Online Maps

Online map of property
http://maps.google.com/maps?f=g&source=s_q&hl=en&geocode=&q=6125+14th+St,Detroit,MI,48208-1307
Directions from Quinn Evans Architects to this property
http://maps.google.com/maps?f=d&source=s_d&saddr=219+1/2+N+Main+St,Ann+Arbor,MI,48104&daddr=6125+14th+St,Detroit,MI,48208-1307


QUINN
EVANS

KING SOLOMON BAPTIST CHURCH

ROOF REPLACEMENT - 50% CD SET
6125 FOURTEENTH STREET DETROIT, MI

DRAWING INDEX

		SUBMISSIONS		
NUMBER	SHEET NAME	50% CD	100%CD	BID SET
G001	COVER SHEET	▪		
G002	LEGENDS, SYMBOLS, ABBREVIATIONS	▪		
G003	COMPOSITE ROOF ZONE KEY PLAN	▪		
S-001	GENERAL STRUCUTRAL NOTES	▪		
S-100	FRAMING PLANS	▪		
S-300	SECTION AND DETAILS	▪		
AD110	DEMOLITION ROOF PLANS	▪		
AD201	DEMOLITION ELEVATIONS	▪		
AD202	DEMOLITION ELEVATIONS	▪		
A110	ROOF PLANS	▪		
A201	ELEVATIONS	▪		
A202	ELEVATIONS & SECTIONS	▪		
A301	DETAILS	▪		

Grand total: 13

PROJECT TEAM

QUINN EVANS

ARCHITECT
4219 WOODWARD AVE
SUITE 301
DETROIT, MI 48201
v 313.3462.2550

RESURGET ENGINEERING

STRUCTURAL
28 W ADAMS AVE SUITE 1710
SUITE 1710
DETROIT, MI 48226
V 313.315.3290

VICINITY MAPS

PLAN NORTH

QUINN EVANS

4219 WOODWARD AVE
SUITE 301
DETROIT, MI 48201

v 313.462.2550

QUINNEVANS.COM

NOT FOR CONSTRUCTION

KING SOLOMON BAPTIST CHURCH

ROOF REPLACEMENT - 50% CD SET

6125 FOURTEENTH STREET DETROIT, MI

No.	Date	Description

PROJECT MANAGER: A. CECIL
DRAWN BY: S. RUTLAND

QEA No.42134130

50% CD SET
1/24/2022

COVER SHEET

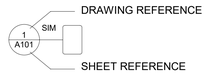
G001

ABBREVIATIONS

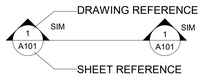
TRZ	T
A/C	AIR CONDITIONING
A/E	ARCHITECT / ENGINEER
ABV	ABOVE
ACCESS	ACCESSIBLE
ACP	ACOUSTICAL CEILING PANEL
ACST	ACOUSTIC
AD	AREA DRAIN
ADA	AMERICANS WITH DISABILITIES ACT
ADD'L	ADDITIONAL
ADJ	ADJACENT/ADJUST
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AGG	AGGREGATE
ALT	ALTERNATE
ALUM	ALUMINIUM
APPROX	APPROXIMATE(LY)
ARCH	ARCHITECT(URAL, URE)
ASPH	ASPHALT(IC)
ASSOC	ASSOCIATED
AUTO	AUTOMATIC
AVG	AVERAGE
AWP	ACOUSTICAL WALL PANEL
BBT	BIO-BASED TILE
BC	BRICK COURSE
BD	BOARD
BIT	BITUMINOUS, BITUMEN
BLDG	BUILDING
BLKG	BLOCKING
BLKHD	BULKHEAD
BLW	BELOW
BM	BEAM
BOS	BOTTOM OF STEEL
BOT	BOTTOM
BR	BRASS OR BRONZE
BRG	BEARING
BTWN	BETWEEN
BUR	BUILT-UP ROOF
C-C	CENTER TO CENTER
CAB	CABINET
CEM	CEMENT
CFS	COLD FORMED STEEL
CIP	CAST-IN-PLACE
CJ	CONTROL JOINT
CL	CENTER LINE
CLG	CEILING
CLO	CLOSET
CLR	CLEAR(ANCE)
CMU	CONCRETE MASONRY UNIT
COL	COLUMN
COM	COMMUNICATIONS
CONC	CONCRETE
COND	CONDITION
CONFIG(S)	CONFIGURATION(S)
CONST	CONSTRUCTION
CONT	CONTINUOUS
COORD	COORDINATE
CORR	CORRIDOR
CPT	CARPET(ED)
CT	CERAMIC TILE
CTR	CENTER
D	DEEP/DEPTH
DBL	DOUBLE
DEG	DEGREE
DEMO	DEMOLISH, DEMOLITION
DETER	DETERIORATING, DETERIORATED
DF	DRINKING FOUNTAIN
DIA	DIAMETER
DIAG	DIAGONAL
DIM(S)	DIMENSION(S)
DIV	DIVIDE
DN	DOWN
DR	DOOR, DRAIN
DS	DOWNSPOUT
DTL	DETAIL
DWG(S)	DRAWING(S)
DWR	DRAWER
E	EAST
E-P	EPOXY PAINT
EA	EACH
EJ	EXPANSION JOINT
EL	ELEVATION (TOPO)
ELEC	ELECTRICAL
ELEV	ELEVATION (ARCH), ELEVATOR
EMER	EMERGENCY
ENCL	ENCLOS(E,URE)
ENGR	ENGINEER
ENTR	ENTRANCE
EOS	EDGE OF SLAB
EPDM	ETHYLENE PROPYLENE DIENE MONOMER
EPS	EXPANDED POLYSTYRENE BOARD
EQ	EQUAL
EQUIP	EQUIPMENT
EST	ESTIMATE(D)
EW	EACH WAY
EWC	ELECTRIC WATER COOLER
EXH	EXHAUST
EXHB	EXHIBIT
EXIST	EXISTING
EXP	EXPOSED, EXPANSION
EXT	EXTERIOR
FA	FIRE ALARM
FAS	FASTEN(ER)
FD	FLOOR DRAIN
FDC	FIRE DEPARTMENT CONNECTION
FDTN	FOUNDATION
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FF	FINISH(ED) FACE
FF&E	FURNITURE, FIXTURES & EQUIPMENT
FH	FIRE HOSE, FIRE HYDRANT
FHC	FIRE HOSE CABINET
FIN(S)	FINISH(ES)
FIXT	FIXTURE
FL	FLOOR(ING)
FLAM	FLAMMABLE
FLUOR	FLUORESCENT
FO	FINISHED OPENING
FOS	FACE OF STUDS
FP	FIRE PROTECTION
FR	FRAME(D,ING), FIRE RATING, FIRE RESISTANT
FT	FEET
FTG	FOOTING
FUR	FURR(ED,ING)
FWC	FABRIC WALL COVERING
G	NATURAL GAS
GA	GAUGE
GALV	GALVANIZED
GB	GRAB BAR
GC	GENERAL CONTRACT(OR)
GEN	GENERATOR
GF	GLASS FILM
GFRC	GLASS-FIBER-REINFORCED CONCRETE
GFRG	GLASS-FIBER-REINFORCED GYPSUM
GFRP	GLASS-FIBER-REINFORCED POLYESTER, GLASS-FIBER-REINFORCED PLASTIC
GL	GLASS, GLAZING
GLU LAM	GLUE LAMINATED WOOD
GOVT	GOVERNMENT
GT	GROUT
GWB	GYPSUM WALLBOARD
H	HIGH
HAZ MAT	HAZARDOUS MATERIAL
HB	HOSE BIBB
HC	HOLLOW CORE, HOSE CABINET
HCWD	HOLLOW CORE WOOD DOOR
HD	HEAVY DUTY
HDR	HEADER
HDWD	HARDWOOD
HDWR	HARDWARE
HID	HIGH INTENSITY DISCHARGE
HM	HOLLOW METAL
HORIZ	HORIZONTAL(LY)
HP	HIGH POINT
HSS	HOLLOW STRUCTURAL SECTION
HT	HEIGHT(S)
HT	HEIGHT
HVAC	HEATING, VENTILATION & AIR CONDITIONING
HW	HOT WATER
ID	INSIDE DIAMETER
ILO	IN LIEU OF
IN	INCH(ES)
INCAN	INCANDESCENT
INCL	INCLUDE(S,D,ING)
INFO	INFORMATION
INSUL	INSULATION, INSULATED
INT	INTERIOR
INV	INVERT
IRMA	INVERTED ROOF MEMBRANE ASSEMBLY
J-BOX	JUNCTION BOX
JAN	JANITOR
JT(S)	JOINT(S)
KIT	KITCHEN
KO	KNOCK OUT
L	ANGLE
LAM	LAMINATE(D)
LAV	LAVATORY
LBL	LABEL
LH	LEFT HAND
LHR	LEFTHAND REVERSE
LL	LIVE LOAD
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LP	LOW POINT
LT GA	LIGHT GAUGE
LTG	LIGHTING
LV	LOW VOLTAGE
LVT	LUXURY VINYL TILE
LW	LIGHT WEIGHT
MAS	MASONRY
MATL	MATERIAL(S)
MAX	MAXIMUM
MDO	MEDIUM DENSITY OVERLAY
MECH	MECHANICAL
MED	MEDIUM
MEMB	MEMBRANE
MFR	MANUFACTURE(R)
MIN	MINIMUM
MISC	MISCELLANEOUS
MO	MASONRY OPENING
MOD BIT	MODIFIED BITUMEN
MR	MLISTURE RESISTANT
MTD	MOUNTED
MTG	MOUNTING
MTL	METAL
N	NORTH
NA	NOT APPLICABLE
NAT	NATURAL
NC	NOISE CRITERIA, NORMALLY CLOSED
NIC	NOT IN CONTRACT, NOISE ISOLATION CLASS
NO('S)	NUMBER(S), NORMALLY OPEN
NOM	NOMINAL
NRC	NOISE REDUCTION COEFFICIENT
NTS	NOT TO SCALE
O-O	OUT TO OUT
OC	ON CENTER
OD	OUTSIDE DIAMETER
OF/CI	OWNER FURNISHED / CONTRACTOR INSTALLED
OFC	OFFICE
OH	OPPOSITE HAND, OVERHEAD
OPNG	OPENING(S)
ORIG	ORIGINAL
PA	PUBLIC ADDRESS
PAR	PARALLEL
PART	PARTITION(S), PARTIAL
PC	PRECAST
PERF	PERFORATE(D)
PL	PLATE, PROPERTY LINE
PLAM	PLASTIC LAMINATE
PLAS	PLASTER
PLWD	PLYWOOD
PNL	PANEL(ED)
POL	POLISHED
POLY	POLYETHYLENE
PR	PAIR
PREP	PREPARE (SURFACE)
PROV	PROVIDE(D)
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	PAINT, POST-TENSIONED, PRESSURE TREATED
PTD	PAINTED
PVC	POLYVINYL CHLORIDE
PVMT	PAVEMENT
PWR	POWER
QT	QUARRY TILE
QTY	QUANTITY
QUAD	QUADRANT
QZ	QUARTZ
QZT	QUARTZ TILE
R	RADIUS, RISER, THERMAL RESISTANCE
RB	RUBBER BASE
RBR	RUBBER
RCP	REFLECTED CEILING PLAN
RD	ROOF DRAIN
REBAR	REINFORCING BAR
REF	REFERENCE
REG	REGISTER, REGULATION
REINF	REINFORCED
REPL	REPLACE
REQ	REQUIRED
RES	RESILIENT
RET	RETAINING, RETURN
REV	REVISION(S) / REVISE(D)
RFG	ROOFING
RFG	ROOFING
RH	RIGHT HAND, RELATIVE HUMIDITY
RHR	RIGHT HAND REVERSE
RL	RAIN LEADER
RM	ROOM
RO	ROUGH OPENING
RS	RESILIENT SHEET
RTF	RUBBER TILE FLOOR
RTU	ROOF TOP UNIT
RV	ROOF VENTILATOR
S	SOUTH, SEAL
SAB	SOUND ATTENUATION BATT
SALV	SALVAGE
SAN	SANITARY
SB	SPLASH BLOCK
SC	SOLID CORE
SCHED	SCHEDULE
SCT	STRUCTURAL CLAY TILE
SCWD	SOLID CORE WOOD DOOR
SDT	STANDARD DISSIPATIVE TILE
SEC	SECURE, SECURITY
SECT	SECTION
SF	SQUARE FEET
SHT	SHEET
SIM	SIMILAR
SLD	SEALED
SLL	SOUND / LIGHT LOCK
SPEC	SPECIFICATION
SQ	SQUARE
SS	STAINLESS STEEL
SSM	SOLID SURFACE MATERIAL
ST	STONE
STD	STANDARD
STL	STEEL
STN	STAIN
STO	STORAGE
STRUC	STRUCTURAL
SUB	SUBSTITUTION
SUSP	SUSPENDED
SYS	SYSTEM
T	THICK, TREAD, TOILET
T&G	TONGUE AND GROOVE
T.O.	TOP OF
TBB	TILE BACKER BOARD
TECH	TECHNOLOGY
TEL	TELEPHONE
TEMP	TEMPORARY, TEMPERED
THRS	THRESHOLD
THRU	THROUGH
TOC	TOP OF CONCRETE
TOF	TOP OF FOOTING
TOJ	TOP OF JOIST
TOM	TOP OF MASONRY
TOP	TOP OF PARAPET
TOS	TOP OF STEEL
TOW	TOP OF WALL
TRANS	TRANSPARENT
TV	TELEVISION
TYP	TYPICAL
UC	UNDERCUT
UH	UNIT HEATER
UIO	UNLESS INDICATED OTHERWISE
UL	UNDERWRITER'S LABORATORY
UNFIN	UNFINISHED
UR	URINAL
VAR	VARIES
VAT	VINYL ASBESTOS TILE
VB	VINYL BASE
VCT	VINYL COMPOSITION TILE
VERT	VERTICAL
VEST	VESTIBULE
VIF	VERIFY IN FIELD
VTR	VENT THROUHG ROOF
VU	VENTILATION UNIT
VWC	VINYL WALLCOVERING
W	WEST, WIDE, WIDE FLANGE
W-W	WALL TO WALL
W/	WITH
W/O	WITHOUT
WC	WATER CLOSET
WD	WOOD
WDW	WINDOW
WH	WALL HEATER
WP	WATERPROOFING, WORK POINT
WT	WEIGHT
WWF	WELDED WIRE FABRIC
WWM	WELDED WIRE MESH
X BRACE	CROSS BRACING
XFER	TRANSFER
YD	YARD, YARD DRAIN
#	NUMBER, POUND
&	AND
@	AT
±	PLUS / MINUS

GRAPHIC SYMBOLS

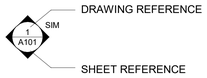
DETAIL / PLAN



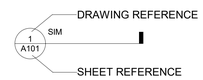
BLDG SECTION CUT



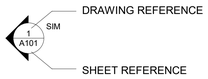
INTERIOR ELEVATION



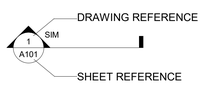
DETAIL CUT



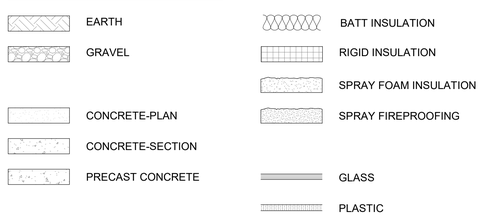
EXTERIOR ELEVATION



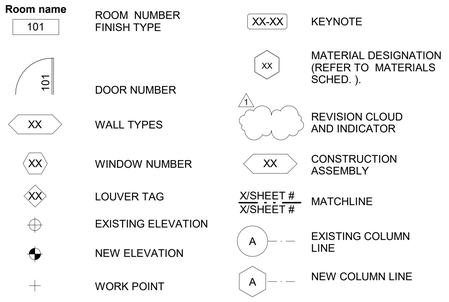
WALL SECTION CUT



MATERIAL SYMBOLS



SYMBOLS



GENERAL PROJECT NOTES	
G 1	PERFORM WORK IN ACCORDANCE WITH APPLICABLE LAWS, ORDINANCES, CODES AND REQUIREMENTS. GENERAL CONTRACTOR SHALL OBTAIN ALL PERMITS AND APPROVALS AS REQUIRED FOR THE COMPLETION OF THE WORK BY THE AUTHORITY HAVING JURISDICTION.
G 2	EXISTING GROUND ELEVATION IDENTIFIED AS 100'-0" IN DRAWINGS. CONTRACTOR TO VERIFY FLOOR TO FLOOR HEIGHTS.
G 3	BUILDING IS UNOCCUPIED AND WILL REMAIN AS SUCH DURING CONSTRUCTION. CONTRACTOR TO COORDINATE ACCESS AND SECURING OF BUILDING AND WORK AREA WITH OWNER.
G 4	ALTHOUGH INTENDED TO CONVEY APPROPRIATE INFORMATION, THESE DRAWINGS HAVE BEEN PREPARED FROM LIMITED FIELD MEASUREMENTS. AS SUCH, DRAWINGS MAY CONTAIN DISCREPANCIES DUE TO CONCEALED CONDITIONS, ABSENCE OF EXISTING DRAWINGS, INACCESSIBLE LOCATIONS, UNRECORDED BUILDING ALTERATIONS, AND MISSING OR DETERIORATED ELEMENTS. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS AND MEASUREMENTS. NOTIFY ARCHITECT REGARDING DISCREPANCIES BETWEEN EXISTING CONDITIONS AND THE CONTRACT DOCUMENTS PRIOR TO COMMENCING WORK.
G 5	BUILDING INTERIOR CONTAINS DEBRIS FROM STRUCTURE DETERIORATION AND EXPOSURE TO THE ELEMENTS. CONTRACTOR TO COORDINATE CLEAR PATHS FOR ACCESS TO AND EGRESS FROM AREAS OF WORK WITH OWNER.
G 6	FLOOR AREAS AND STRUCTURE DIRECTLY BELOW AND ADJACENT TO AREAS OPEN TO THE ELEMENTS ARE TO BE CONSIDERED UNSAFE FOR OCCUPANCY, CIRCULATION OR STORAGE.
G 7	OCCUPANCY IS NOT TO OCCUR ON, AND WORK IS NOT TO BE PERFORMED FROM, WOOD FRAMED ROOF AREAS WHERE ROOFING IS NOT BEING REMOVED AND CONDITION OF DECKING AND FRAMING IS NOT VISIBLE AND STRUCTURAL INTEGRITY IS NOT ABLE TO BE CONFIRMED. CONTRACTOR TO PROVIDE ALTERNATE MEANS OF STAGING AND ACCESS TO PERFORM SCOPE IN AREAS OF WORK.

QUINN EVANS
4219 WOODWARD AVE
SUITE 301
DETROIT, MI 48201
v 313.462.2550
QUINNEVANS.COM

NOT FOR CONSTRUCTION

KING SOLOMON BAPTIST CHURCH

ROOF REPLACEMENT - 50% CD SET

6125 FOURTEENTH STREET DETROIT, MI

No.	Date	Description

PROJECT MANAGER: A. CECIL
DRAWN BY: S. RUTLAND

QEA No.42134130

50% CD SET
1/24/2022

LEGENDS, SYMBOLS, ABBREVIATIONS

G002

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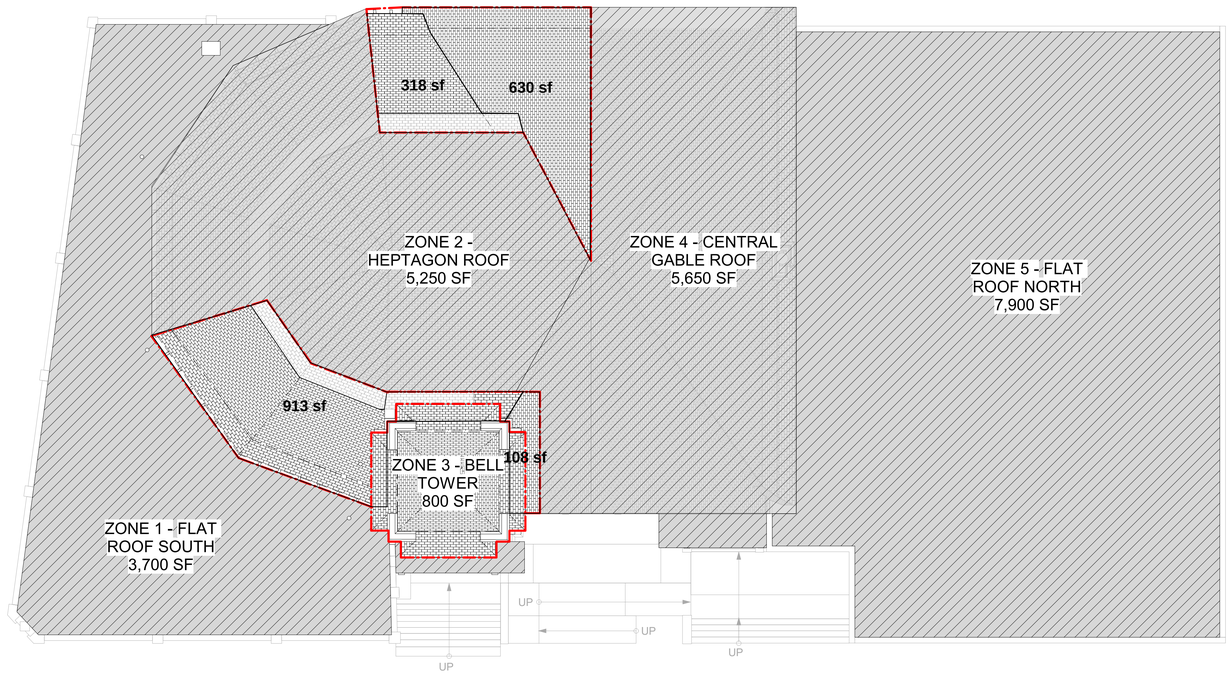


A5 / G003 COMPOSITE ROOF ZONE KEY PLAN

3/32" = 1'-0" REFERRED FROM:

SITE INFORMATION	
ADDRESS	6125 14TH ST DETROIT, MI
LEGAL DESCRIPTION)	W 14TH 34 THRU 38 PETER HUGHES 2ND SUB L26 P75 PLATS, W C R 10/57 39 AMENDED PLAT OF PETER HUGHES 2ND SUB L26 P85PLATS, W C R 10/56 216.12 IRREG
PARCEL ID #	10005106.
SCOPE OF WORK	EXISTING BUILDING ROOF REPAIRS
PROPERTY CLASS	201 - COMMERCIAL
PROPERTY USE	22650 - RELIGIOUS STRUCTURE/USE
ZONING	B4
# OF BUILDINGS/ STRUCTURES	4
TOTAL AREA (SF)	35909
TOTAL ACREAGE	.526 AC
DEPTH X FRONTAGE (FT)	106 X 216

SOURCE CITY OF DETROIT PARCEL VIEWER

ROOF ZONE LEGEND

NIC - Not In Contract

Area of Work

QUINN EVANS

4219 WOODWARD AVE
SUITE 301
DETROIT, MI 48201

v 313.462.2550

QUINNEVANS.COM

NOT FOR CONSTRUCTION

KING SOLOMON BAPTIST CHURCH

ROOF REPLACEMENT - 50% CD SET

6125 FOURTEENTH STREET DETROIT, MI

No.	Date	Description

PROJECT MANAGER: A. CECIL

DRAWN BY: S. RUTLAND

QEA No.42134130

50% CD SET
1/24/2022

COMPOSITE ROOF ZONE KEY PLAN

G003

PATH & FILENAME: BIM 360://King Solomon Baptist Church Roof Replacement/42134130_King Solomon Church (joint cloud).rvt
PLOTTING DATE & TIME: 1/24/2022 3:17:25 PM

STATEMENT OF SPECIAL INSPECTIONS - WOOD CONSTRUCTION

TASK	INSPECTION FREQUENCY		REFERENCED STANDARD	MBC REFERENCE	RESPONSIBLE AGENT
	CONTINUOUS	PERIODIC			
1. PRE-FABRICATED WOOD					
A. INSPECTION OF FABRICATION PROCESS OF PRE-FABRICATED WOOD STRUCTURAL ELEMENTS.	-	X	MANUFACTURER'S FABRICATION AND QUALITY CONTROL PROCEDURES	1704.2.5, 1705.5	SI

SPECIAL INSPECTION NOTES

1. PERFORM SPECIAL INSPECTIONS IN ACCORDANCE WITH THE 2015 MICHIGAN (INTERNATIONAL) BUILDING CODE CHAPTER 17 AND AS MODIFIED IN THE MATERIAL SPECIFIC STATEMENTS OF SPECIAL INSPECTION.
2. DESIGNATION OF RESPONSIBLE AGENT AND THEIR QUALIFICATIONS

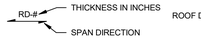
   SI SPECIAL INSPECTOR QUALIFIED WITH DEMONSTRATED COMPETENCE DOCUMENTED BY CERTIFICATIONS FROM RECOGNIZED AGENCIES SUCH AS AWS, ACI, MASONRY INSTITUTE OF MICHIGAN (MIM), ETC., AS SUBMITTED AND APPROVED BY THE BUILDING OFFICIAL. SPECIAL INSPECTOR MAY BE A FIRM WITH MULTIPLE SPECIALISTS AND A PROJECT MANAGER PROVIDING REPORTS.

   TA TESTING AGENCY QUALIFIED TO TEST AND INSPECT MATERIALS AND ASSEMBLIES. TESTING AGENCY SHALL BE UNDER THE SUPERVISION OF THE SPECIAL INSPECTOR.

   GE GEOTECHNICAL ENGINEER WHO PROVIDED THE ORIGINAL PROJECT GEOTECHNICAL SOILS INVESTIGATION REPORT.

   SE SPECIALTY ENGINEER RESPONSIBLE FOR DESIGNING ASSEMBLIES SUCH AS PRECAST CONCRETE, STEEL JOISTS, COLD FORMED FRAMING ASSEMBLIES, ETC. SPECIALTY ENGINEER SHALL PROVIDE OBSERVATION OF FABRICATED AND INSTALLED ITEMS OF THEIR DESIGN IN ADDITION TO THE SPECIAL INSPECTION.
3. TA, GE AND SE SHALL SUBMIT RECORDS OF THE INSPECTION RESULTS TO THE SI. THE SI SHALL COMPILE AND SUBMIT INSPECTION RECORDS TO THE ARCHITECT/ENGINEER AND BUILDING OFFICIAL. RECORDS SHALL INCLUDE STATEMENTS OF TESTS, WHETHER INSTALLED/FABRICATED ITEM COMPLIES WITH CONTRACT DOCUMENTS, REMEDIAL WORK PERFORMED, RETESTS.
4. SI SHALL PROVIDE A DAILY REPORT OF ANY DISCREPANCIES FROM THE CONTRACT DOCUMENTS FOUND ON THE SAME DAY OF THE INSPECTION TO THE ENGINEER OF RECORD. FORMAL REPORTS OF COMPLIANCE CAN FOLLOW BY A MAXIMUM OF 2 WEEKS. SI SHALL PROVIDE AND SIGN FINAL REPORT WITH A SUMMARY OF ALL TESTS PERFORMED AND RESULTS TO THE ENGINEER OF RECORD AND BUILDING OFFICIAL, IN ACCORDANCE WITH SECTION 1704.2.4.
5. SI, TA & GE SHALL BE PAID BY THE OWNER IN COMPLIANCE WITH THE MICHIGAN (INTERNATIONAL) BUILDING CODE.
6. WHERE FABRICATION OF STRUCTURAL, LOAD-BEARING OR LATERAL LOAD-RESISTING MEMBERS OR ASSEMBLIES IS BEING CONDUCTED ON THE PREMISES OF A FABRICATOR'S SHOP, SPECIAL INSPECTIONS OF THE FABRICATED ITEMS SHALL BE PERFORMED DURING FABRICATION. SPECIAL INSPECTIONS DURING FABRICATION ARE NOT REQUIRED WHERE THE FABRICATOR MAINTAINS APPROVED DETAILED FABRICATION AND QUALITY CONTROL PROCEDURES THAT PROVIDE A BASIS FOR CONTROL OF THE WORKMANSHIP AND THE FABRICATOR'S ABILITY TO CONFORM TO APPROVED CONSTRUCTION DOCUMENTS AND THE GOVERNING BUILDING CODE. APPROVAL SHALL BE BASED UPON REVIEW OF FABRICATION AND QUALITY CONTROL PROCEDURES AND PERIODIC INSPECTION OF FABRICATION PRACTICES BY THE BUILDING OFFICIAL. SPECIAL INSPECTIONS ARE NOT REQUIRED WHERE THE FABRICATOR IS REGISTERED AND APPROVED IN ACCORDANCE WITH SECTION 1704.2.5.1.
7. REFER TO MATERIAL SPECIFIC STATEMENTS OF SPECIAL INSPECTION AND GENERAL STRUCTURAL NOTES FOR ADDITIONAL QUALITY CONTROL TESTING AND INSPECTIONS.

DECK AND SLAB SYMBOLS



ROOF DECK MARK

SPECIAL CHARACTERS

ø	Diameter, Small
Ø	Diameter, Large
°	Degree
•	Bullet Point, Rd, Small
●	Bullet Point, Rd, Large
▪	Bullet Point, Sq, Small
■	Bullet Point, Sq, Large
±	Plus or minus

ABBREVIATIONS

ADD	ADDITIONAL
APPROX	APPROXIMATE
ARCH	ARCHITECTURAL
BF	BRACED FRAME
BOF	BOTTOM OF FOOTING
BOS	BOTTOM OF STEEL
BP	BEARING PLATE
BRG	BEARING
CANT	CANTILEVERED
CFMF	COLD FORMED METAL FRAMING
CIP	CAST IN PLACE
CJ	CONTROL OR CONSTRUCTION JOINT
CMU	CONCRETE MASONRY UNIT
COL	COLUMN
CONC	CONCRETE
CONN	CONNECTION
CONT	CONTINUOUS OR CONTINUATION
CONTR	CONTRACTOR
COORD	COORDINATE
DIA	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSIONS
DWG	DRAWING
EF	EACH FACE
EL	ELEVATION
EQ	EQUAL
EW	EACH WAY
EX	EXISTING
EXP	EXPANSION
EXT	EXTERIOR
FF	FINISH FLOOR
FOUND	FOUNDATION
FTG	FOOTING
GALV	GALVANIZED
GB	GRADE BEAM
HORIZ	HORIZONTAL
INT	INTERIOR
JT	JOINT
LLBB	LONG LEGS BACK TO BACK
LSH	LONG SIDE HORIZONTAL
LSV	LONG SIDE VERTICAL
MAX	MAXIMUM
MECH	MECHANICAL
MIN	MINIMUM
MP	MASONRY PIER
NIC	NOT IN CONTRACT
OC	ON CENTER
OD	OVERFLOW ROOF DRAIN
OH	OPPOSITE HAND
OPNG	OPENING
PC	PRECAST
PERIM	PERIMETER
PL	PLATE
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
RD	ROOF DECK
REF	REFERENCE
REINF	REINFORCING
REQD	REQUIRED
RTU	ROOF TOP UNIT
SIM	SIMILAR
SLBB	SHORT LEG BACK TO BACK
SOG	SLAB ON GRADE
SP	SPACING
TOC	TOP OF CONCRETE
TOF	TOP OF FOOTING
TOSLAB	TOP OF SLAB
TOS	TOP OF STEEL
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
VERT	VERTICAL
VIF	VERIFY IN FIELD
W/O	WITHOUT
WWF	WELDED WIRE FABRIC

WOOD

1. Framing Lumber: Spruce Pine Fur No. 2 or better or as noted otherwise.
2. Laminated Veneer Lumber (LVL): All LVL members shall have the following minimum properties: Fb = 2600 psi, Fv = 285 psi, E = 1900 ksi.
3. TimberStrand (LSL): All LSL members shall have the following minimum properties: Fb = 1700 psi, Fc* = 635 psi, E = 1300 ksi.
4. Parallam (PSL): All PSL posts shall have the following minimum properties: Fb = 2400 psi, Fc parallel to grain = 2500 psi, E = 1800 ksi
5. Wolmanized Parallam (WPSL): All exterior exposed posts shall be WPSL posts shall have the following minimum properties: Fb = 1728 psi, Fc parallel to grain = 1450 psi, E = 1566 ksi.
6. Wood Structural Panel Sheathing: All panels shall be and rated by the American Plywood Association (APA).
7. Nails: Standard Common with the following minimum penetrations into support member:
   - 6d (diameter 0.113") with 1.25" penetration
   - 8d (diameter 0.131") with 1.50" penetration
   - 10d (diameter 0.148") with 1.63" penetration
   - 16d (diameter 0.162") with 1.75" penetration
8. Bolts for connections: ASTM A307 with ASTM A563 heavy hex nuts and hardened washers, Grade A, unless noted otherwise.
9. Special Treatments (American Wood Preservers Institute Standards): All wood in contact with concrete, masonry or soil: Pressure treated with Wolman CCA preservative or equal.
10. Minimum Nailing Requirements (See drawings for areas with greater requirements):
    A. Roof: Nail all sheathing panels with 8d common nails at 6" o.c. at all supported edges and at 12" o.c. at all intermediate supports. Use two plyclips between each support for spans of 48" o.c. and one plyclip between each support for lesser spans at all unsupported panel edges.
    B. Floor: Nail all sheathing panels with 8d common nails at 6" o.c. at all supported edges and 8d at 10" o.c. at all intermediate supports.
    C. Walls: Nail all sheathing panels with 8d common nails at 6" o.c. at all edges and at 12" o.c. at all intermediate supports (3/8" or 7/16" panels on studs spaced at 24" o.c. requires 6" spacing at all intermediate supports). Solid block all panel edges.
11. General Framing and Carpentry: Connect all items as per NDS "Fastening Schedule", unless noted otherwise.
12. Framing Connections
    A. All Framing connections not shown or otherwise indicated on the drawings shall be connected in a manner similar to the connections shown in the drawings or with approved Simpson Strong-Tie Connectors or Equal. The following notations refer to Simpson Strong-Tie Connectors:
       - Joist and Rafters: "U" or "F" hangers as required.
       - Beams: "EG" Hangers and "HGLB" Beam Seats.
       - Hinge connectors: "HCCT."
       - Columns: "CC" Caps and "CB" Column Bases.
       - Hold Down Anchors: "HDU" and "HTT."
13. Blocking, Bridging, and Bracing: Provide solid shaped blocking at least 2" (nominal) thick and full depth of joist at ends and at each support of joist. Provide approved bridging at 8'-0" o.c. maximum between joist end supports. Solid blocking between joists shall be nailed to the wood plate at the top of the wall with one Simpson "A35" framing anchor per each piece of blocking. Fill all holes in the framing anchors with 8-d short nails.
14. Laminated built-up beams of 2X member 12 in. or less in depth shall be spiked together with not less than 16-d spikes at twelve-inch (12 in.) centers, staggered. Unless so spiked, or if the depth of beam is more than twelve inches (12 in.), the laminations shall be connected together with 1/2" diameter bolts at 24 in. o.c. staggered. Bolts shall be placed 1/4 the depth of the member from the top and bottom of the member.
15. Pre-fabricated Steel Plate Wood Trusses:
    A. Design Loading: The truss manufacturer is responsible for design and fabrication of the trusses. They shall be designed to support the concentrated and other distributed loads as shown on the framing plans in addition to the following uniform loads:
       - Roof Trusses:
         - Dead Load (Top Chord) = 10 psf
         - Dead Load (Bottom Chord) = 15 psf
         - Live Load (Top Chord) = 20 psf
         - Wind loading per load maps
         - Total load deflection limit = span/240
         - Live load deflection limit = span/360
    B. Correlate the design with all mechanical equipment, fire sprinkling systems and hanging walls supported by the trusses. Provide extra trusses where required.
    C. Submittals: Complete calculations and shop drawings indicating all member forces, stresses, lumber grades, dimensions, steel truss plate sizes and locations shall be submitted and reviewed by the engineer before fabrication. Each connector shall be dimensioned on the shop drawings as to its exact location at the joint. Shop drawings and calculations shall bear the seal of a professional engineer licensed in the State of the Project. After truss installation, the fabricator shall certify in writing that the trusses have been installed according to his specifications.
    D. Steel Connector Plates: Use only galvanized steel connector plates that comply with the Truss Plate Institute publication, TPI 1-1995. All steel connector plates must be approved by the International Conference of Building Officials Evaluation Services. Submit a copy of the ICBO Report for the connector plate used. Values established by this committee must be indicated on the shop drawings.
       - The minimum size for any connector shall be 15 square inches.
       - All steel gusset plates shall be located on the joint as the stresses require and shall provide a minimum bite of 2.5" length on all tension members.
       - Plates shall be pressed or rolled into member to obtain full penetration without crushing the outer surfaces of wood.
       - Steel plates at compression web members shall be designed to resist 100% of the compression force without considering wood to wood bearing.
       - All steel plate dimensions shall be increased by 10% above that required by analysis. Stress increases for steel connector plate values for duration of load are not allowed.
    E. Wood Members: All wood members of the truss shall be constructed of kiln dried lumber. The trusses shall be handled and stored in a manner to prevent moisture from being absorbed by the wood. Grade stamps shall be visible on framing members. Splices in chords shall occur at 1/4 of the panel span from a joint.
    F. The trusses shall be designed by the truss supplier according to the following criteria:
       - Bending moments in the top and bottom chords shall be based on the following moment coefficients:
         - 1/8 for one and two continuous span conditions.
         - 1/10 for three or more continuous span conditions.
       - Web members shall be designed using an effective length factor: K = 1.0
    G. Lateral Bracing: Lateral bracing and bridging may be required by the design of the pre-fabricated wood roof truss to reduce the buckling length of individual truss members and provide stability during erection. This bracing or bridging may be in the form of 2 x 4 horizontal bracing or bridging with 2 x 4 cross-bracing spaced at 24'-0" o.c. maximum and at each end of the bracing or bridging. The 2 x 4 cross bridging shall be connected to the truss top chord and the horizontal bridging with Simpson A35 each end. Locations of the lateral bracing and truss bridging is to be supplied and installed at the location specified on the pre-fabricated wood roof truss design drawings by the General Contractor.
    H. Other requirements for truss stability and erection shall comply with the Truss Plate Institute publications entitled "Commentary and Recommendations for Bracing Wood Trusses" and "Commentary and Recommendations for Handling and Erecting Wood Trusses." The contractor shall have copies of these publications on site and shall be familiar with their contents.
    I. Prior to the fabrication of the pre-fabricated wood trusses, the contractor shall submit, in writing, proof of compliance of in-plant inspection by an ICBO approved independent inspection agency. The in-plant inspections shall comply with section 1704.2 of the International Building Code.
    J. The truss manufacturer's identification stamp shall be clearly visible.

POST-INSTALLED ANCHORS IN CONCRETE

1. Expansion anchors
   A. Expansion Anchors shall be per CODE requirements
   B. Expansion Anchors shall be: Kwik-Bolt TZ (ESR-1917) by Hilti, Power-Stud+ SD2 (ESR-2502) by Power Fasteners, Strong Bolt (ESR-1771) by Simpson, TruBolt+ (ESR-2427) by ITW Red Head or approved equal.
   C. For interior condition use carbon steel anchors and for exterior condition use stainless steel anchors
   D. Tension test 50% of all expansion anchors to test load provided by manufacturer
2. Adhesive anchors
   A. Comply with CODE requirements.
   B. Adhesive anchors shall be: HIT-HY 200 (ESR-3187) by Hilti, HIT-RE 500 SD (ESR-2732) by Hilti, Set-XP (ESR-2508) by Simpson, or approved equal.
   C. For interior condition use carbon steel anchors and for exterior condition use stainless steel anchors
   D. Tension test 50% of all expansion anchors to test load provided by manufacturer.

SPECIAL INSPECTIONS

1. Special inspections shall be provided by the Owner's Testing Lab in according to the code and the project specifications. The special inspector shall observe the work for conformance with the construction documents. The special inspector shall send reports to the inspector of record, architect, engineer, contractor and Owner. All discrepancies shall be brought to the attention of the contractor for correction. When work is done to the satisfaction of the inspector, then the special inspector shall submit a final signed report stating that, to the best of their knowledge, the work was competed in conformance with the plans, specifications, and the applicable workmanship provisions of the CODE.
2. Refer to Special Inspection tables and notes for specific requirements.

EXISTING CONSTRUCTION

1. Before submitting a proposal for work, and/or preparing shop drawings for this work each Bidder, Contractor and Sub-Contractor shall visit the site and become fully acquainted with the existing conditions, temporary construction required, type of equipment required to perform the work.
2. Field verify all existing dimensions, conditions, members sizes and elevations with the information provided on the drawings. Information provided on drawings is based on limited field observations and available existing drawings which may not reflect actual conditions. Discrepancies to be noted and immediately brought to the attention of the Structural Engineer.
3. Provide temporary shoring and bracing as required before, during and after construction as required until all materials have reached the required strength and stability.
4. Existing construction not undergoing alteration is to remain undisturbed. Where such construction is disturbed as a result of the operations of this contract, Contractor shall repair or replace as required and to the satisfaction of the Architect/Structural Engineer and Owner's Representative.
5. Verify the existence, location and elevation of existing utilities, sewers, drains, etc. in demolition areas and adjacent to new work before proceeding with the work. All discrepancies shall be documented and reported, do not proceed with work until discrepancies have been resolved.
6. Provide fire safety precautions during field cutting and welding operations, meeting the requirements of the CODE.
7. Provide temporary protection of existing equipment during execution of work, satisfying the Owner's requirements.
8. Provide temporary protection to prevent damage from the weather and vandalism.
9. Coordinate work with the Owner's personnel to avoid any interference in their operations.
10. Refer to "SHORING AND BRACING" notes for additional requirements.

SHORING AND BRACING

1. Contractor shall provide temporary shoring and bracing of existing construction, new construction and underground utilities as follows:
   A. Where shown or noted on the Drawings.
   B. Where existing construction is to be altered or disturbed until permanent support is in place.
   C. Where existing construction is not undergoing alteration and is to remain undisturbed but is disturbed as a result of the work of this contract.
   D. As required for safe erection, installation of new construction, equipment, etc.
   E. When needed for Contractor's "means and methods" of construction, and other safety related issues.
2. Shoring and bracing shown on the Drawings is conceptual. Contractor shall be responsible for verifying existing conditions, shoring and bracing calculations, methods of installation, transfer of loads through to final load support, and work sequence phasing with new construction.
3. Shoring and bracing shall be performed by a Contractor with minimum 5 years demonstrated experience in similar size and scope of shoring and bracing projects.
4. Shoring and bracing shall be designed by a Professional Engineer registered in the State of the Project with minimum 5 years demonstrated experience in similar size and scope of shoring and bracing projects. Design loads and methods shall conform to applicable codes. Soil and material strengths shall be verified by tests, unless conservative estimates that do not affect deflections and deformations are approved by the Architect/Structural Engineer.
5. Contractor shall submit drawings and calculations sealed and signed by the Contractor's Professional Engineer showing complete design including temporary conditions, final conditions and sequence of work.
6. Before starting work, Contractor shall perform condition survey of the existing building structure, exterior façade and interior finishes, including photographic documentation and submit survey to the Owner for record.
7. During the shoring and bracing operations, Contractor shall:
   A. Keep the existing and new construction in a safe condition.
   B. Monitor existing and new construction to detect any signs of distress or deformation.
   C. Take immediate steps to prevent distress, deformation or damage.
8. Contractor shall continuously monitor the shoring and bracing system. Contractor shall review and ascertain that all field connections are completed according to the Contractor's design and issue approval for inspection of the work by the Testing Agency.
9. After completion of shoring and bracing and completion of work requiring shoring and bracing, Contractor shall repair any damage to the existing and new construction, without any cost to the Owner, and to the satisfaction of the Owner and Architect/Structural Engineer.

GENERAL NOTES

1. Governing Design Code: 2015 Michigan Building Code with local jurisdiction amendments (hereafter referred to as "CODE")
2. All construction shall be in accordance with the following:
   A. CODE
   B. Drawings and Specifications
3. The structural drawing notes are intended to work together and be complementary with the project specifications. Consult the specifications for additional requirements in each section. Information provided on structural drawings shall take precedence over the specifications. Information shown on specific details shall take precedence over typical details and structural notes.
4. Typical details and general notes shall apply, UNO.
5. The structural drawings shall be used in conjunction with the architectural drawings. See architectural drawings for information not shown, including but not limited to the following:
   A. Setting out dimensions and angles of all grid lines
   B. Setting out dimensions of concrete walls and wall openings that are not shown on the structural drawings.
   C. Dimensions not shown on the structural drawings
   D. Waterproofing system and details
6. Contractor is responsible for the coordinating all equipment pad sizes and locations with the actual layout provided in the shop drawings.
7. Drawing scales noted on structural drawings are for reference only. Do NOT scale drawings. The contractor shall verify dimensions not provided with the architect prior to proceeding with work.

STRUCTURAL OBSERVATIONS

1. Resurget Engineering shall provide Structural Observation of the structural systems for general conformance to the drawings and specifications at significant stages of construction and at completion of the primary structural system as defined in Code.
2. Structural Observation does not include or waive any of the responsibilities of the Special Inspector as required per the Section "Special Inspections".
3. At the conclusion of work included in permit, the structural observer will submit to the building official a written statement that the structural observations have been completed and that to the best of their knowledge the work is in conformation with the construction documents.
4. Structural Observation on this project shall be conducted on the following structural elements:
   A. Stick Built Wood Construction

SHOP DRAWINGS:

1. Verify all existing dimension before submitting shop drawings for review.
2. Review all shop drawings for accuracy and compliance with shop drawing before submitting for review. Review of shop drawings does not relieve the Contractor of any responsibility or errors and omissions.
3. Use of 2D Drawing or 3D REVIT model does not relieve the Contractor of any responsibility specified in the contract documents.
4. Allow a minimum of 10 working days for review by Structural Engineer of each set of submitted contract drawing. Submit shop drawings in reasonable quantities with at least 10 working days between submittals. Review time stated is for Structural Engineer only, add additional time to schedule as required for review by other disciplines.
5. Contractor shall coordinate work between multiple trades before submitting shop drawings. Dimensions and elevations specific to equipment installation shall be provided and coordinated prior to submittal for review. Failure to provide these dimensions shall result in return of shop drawings without review.
6. Structural Engineer is not responsible for coordination of work marked as "by others" on shop drawings.

DESIGN CRITERIA		
Design is in accordance with CODE		CODE REFERENCE
Risk Category	III	IBC Table 1604.5 ASCE Table 1.5-1
FLOOR LIVE LOADS		CODE REFERENCE
ROOF	20 PSF	ASCE Table 4-1
SNOW LOADS		CODE REFERENCE
Ground Snow Load	Pg = 25 PSF	ASCE Figure 7-1
Flat Roof Snow Load	Pf = 22 PSF (minimum)	ASCE Section 7.3
Exposure Factor	Ce = 1.0	ASCE Table 7-2
Importance Factor	I = 1.1	ASCE Table 1.5-2
Thermal Factor	Ct = 1.0	ASCE Table 7-3
Snow loads adjacent to vertical projections, on lower roofs adjacent to high roofs, or sloped roofs are increased for the effects of drifting.		
WIND LOADS		CODE REFERENCE
Ultimate Design Wind...	V(ULTIMATE)= 120 MPH	ASCE Figure 26.5-1A
Nominal Design Wind Speed	V(SERVICE) = 89 MPH	IBC Section 1609.3.1
Exposure Category	B	ASCE Section 26.7.3
Internal Pressure...	± 0.18 (Enclosed)	ASCE Section 26.11-1

COMPONENTS AND CLADDING ROOF				
	Zone 1	Zone 2	Zone 3	CODE REFERENCE
Support Beams (A > 100 SF)	-25 PSF	-29 PSF	-29 PSF	ASCE Table 30.7-2
Roof Sheathing (A = 50 SF)	-26 PSF	-34 PSF	-41 PSF	ASCE Table 30.7-2
Deck Fasteners (A < 10 SF)	-27 PSF	-45 PSF	-68 PSF	ASCE Table 30.7-2

COMPONENTS AND CLADDING WALLS				
	Zone 4	Zone 5		CODE REFERENCE
A = 100 SF	21/-23 PSF	20/-26 PSF		ASCE Table 30.7-2
A = 50 SF	22/-24 PSF	22/-28 PSF		ASCE Table 30.7-2
A = 10 SF	25/-27 PSF	25/-33 PSF		ASCE Table 30.7-2
Building design displacements	Wind drift at 10 year Design Wind Speed = h/400			

SEISMIC LOADS		
Seismic Importance Factor	Ie = 1.25	ASCE Table 1.5-2
Short Period Spectral Response Acceleration	SS = 0.1022 g	ASCE Section 11.4.1
1.0 sec. Period Spectral Response Acceleration	S1 = 0.0457 g	ASCE Section 11.4.1
Site Class	D	ASCE Section 11.4.2
Design Short Spectral Response Acceleration	SDS = 0.11 g	ASCE Section 11.4.4
Design Short Period Spectral Response Acceleration	SD1 = 0.073 g	ASCE Section 11.4.4
Seismic Design Category	B	ASCE Section 11.6
Seismic Force Resisting System	Ordinary Plain Masonry Shear Walls	ASCE Table 12.2-1
Seismic Response Coefficient	CS = 0.098	ASCE Section 12.8.1.1
Response Modification Factor	R = 1.5	ASCE Table 12.2-1
Analysis Procedure	Equivalent Lateral Force	ASCE Section 12.8
Building design displacements	Seismic Inelastic Story Drift (Delta m) = 2.0%	

SUPERIMPOSED DEAD LOAD	
Typical Roof	5 PSF (MEP)

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KING SOLOMON BAPTIST CHURCH

ROOF REPLACEMENT

6125 FOURTEENTH STREET

NOT FOR CONSTRUCTION

No.	Date	Description

PROJECT MANAGER: MS | DESIGNED BY: SM

50% CD SET
1/24/2022

GENERAL STRUCTURAL NOTES

S-001

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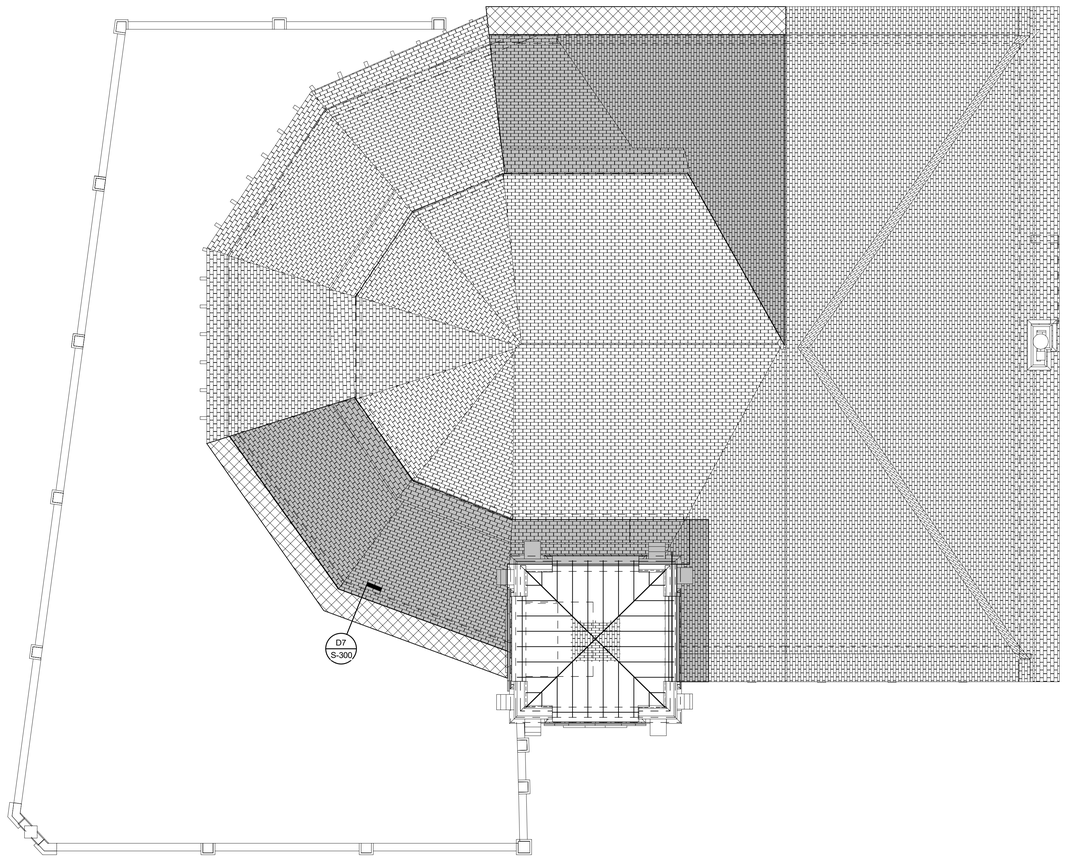


STRUCTURAL ITEMS REQUIRED FOR ROOFING INTEGRITY AND SAFETY			
HATCH AREA	**DESCRIPTION**	**UNITS**	**COMMENT**
	EXISTING ROOF FLARED OVERHANG WITH DECORATIVE WOOD BRACKETS CANTILEVERING OUT FROM BEARING WALL. REMOVE ROOF SHEATHING AND BRACKETS. MEASURE AND PRESERVE BRACKET GEOMETRY AND DETAIL FOR FUTURE REPLICATION.	300SF	OVERHANG NOT REQUIRED FOR ROOF ENCLOSURE.
	SLOPING LOWER ROOF AREA IN VERY POOR CONDITION. ASSUME REPLACEMENT OF 100% OF SHEATHING AND 60% REPLACEMENT OR REINFORCING OF SUPPORT RAFTERS.	SHEATHING: 1600SF RAFTERS: 300LF	EXTREME CARE NEEDED DURING CONSTRUCTION. REMOVAL OF ROOFING NEEDS TO BE CARRIED OUT FROM SAFE PLATFORM OR LIFT.

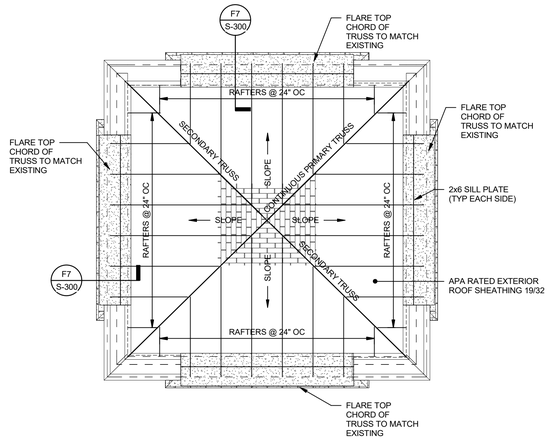
NOTES:

1. REPLACE EXISTING TONGUE AND GROOVE ROOF SHEATHING WITH 3/4" EXTERIOR RATED PLYWOOD SPANNING TO 2X6@16" OC. 2X6 SPANNING TO RAFTERS AT APPROXIMATELY 4'-0" OC.
2. REPLACE BADLY DAMAGED RAFTERS SPANNING UP TO 16 FT WITH (3)2X12.
3. REINFORCED MODERATELY DAMAGED RAFTERS WITH (2)2X12.

HEPTAGONAL AND CENTRAL GABLE ROOF FRAMING PLAN

SCALE: 1/8" = 1'-0"

NORTH



BELL TOWER ROOF FRAMING PLAN

SCALE: 1/4" = 1'-0"

NORTH

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www.resurget.engineering

CONSTRUCTION

NOT FOR

KING SOLOMON BAPTIST CHURCH

ROOF REPLACEMENT

6125 FOURTEENTH STREET

No.	Date	Description

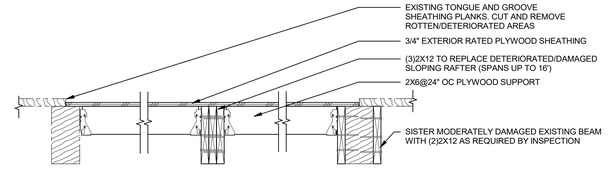
PROJECT MANAGER: MDS

DRAWN BY: SM

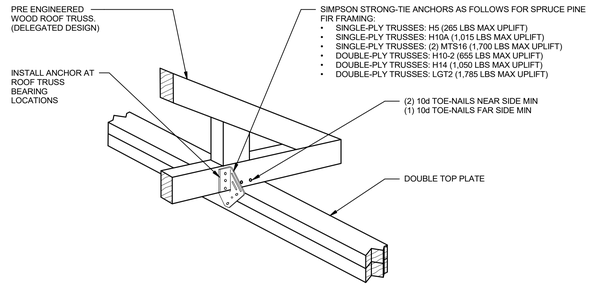
50% CD SET
1/24/2022

FRAMING PLANS

S-100

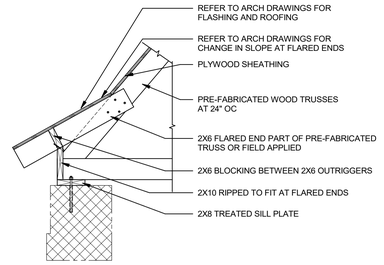


L10 WOOD REPAIR DETAIL
SCALE: 1" = 1'-0"

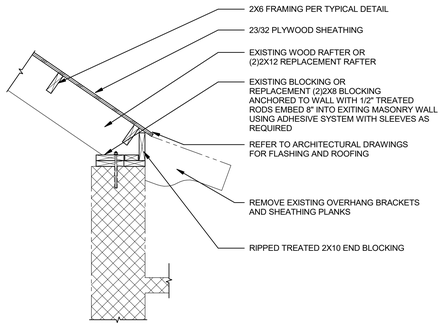


NOTES:
1. MAXIMUM WALL STUD SPACING 16" OC
2. SELECT TRUSS ANCHOR BASED ON APPROVED TRUSS SHOP DRAWINGS WITH TRUSS REACTIONS.
3. TRUSS MANUFACTURER OR CONTRACTOR SHALL REQUEST FOR ADDITIONAL HOLDOWN ANCHORS AT TRUSS GIRDERS, MULTI-PLY TRUSSES, JACK TRUSSES AND HIP/VALLEY TRUSSES.
4. MULTIPLE ANCHORS MAY BE USED (PER SIMPSON STRONG-TIE RECOMMENDED DETAILS) TO ANCHOR HIGHER UPLIFT VALUES.
5. DETAIL APPLIES TO INTERIOR AND EXTERIOR BEARING WALLS.

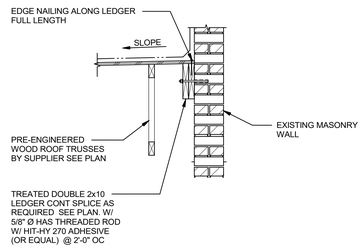
F10 TYPICAL ROOF TRUSS CONNECTION
SCALE: 3" = 1'-0"



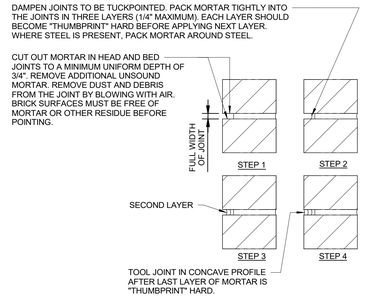
F7 S-100 FLARED TRUSS SUPPORT
SCALE: 3/4" = 1'-0"



D7 S-100 EAVE OVERHANG DETAIL
SCALE: 3/4" = 1'-0"



D10 ROOF TRUSSES PARALLEL TO MASONRY WALL
SCALE: 3/4" = 1'-0"



A10 MASONRY TUCK POINTING DETAIL
SCALE: 3/4" = 1'-0"

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NOT FOR CONSTRUCTION

KING SOLOMON BAPTIST CHURCH

ROOF REPLACEMENT

6125 FOU[redacted]ENTH STREET

No.	Date	Description

PROJECT MANAGER: MS
DESIGNED BY: SM

50% CD SET
1/24/2022

SECTIONS AND DETAILS

S-300

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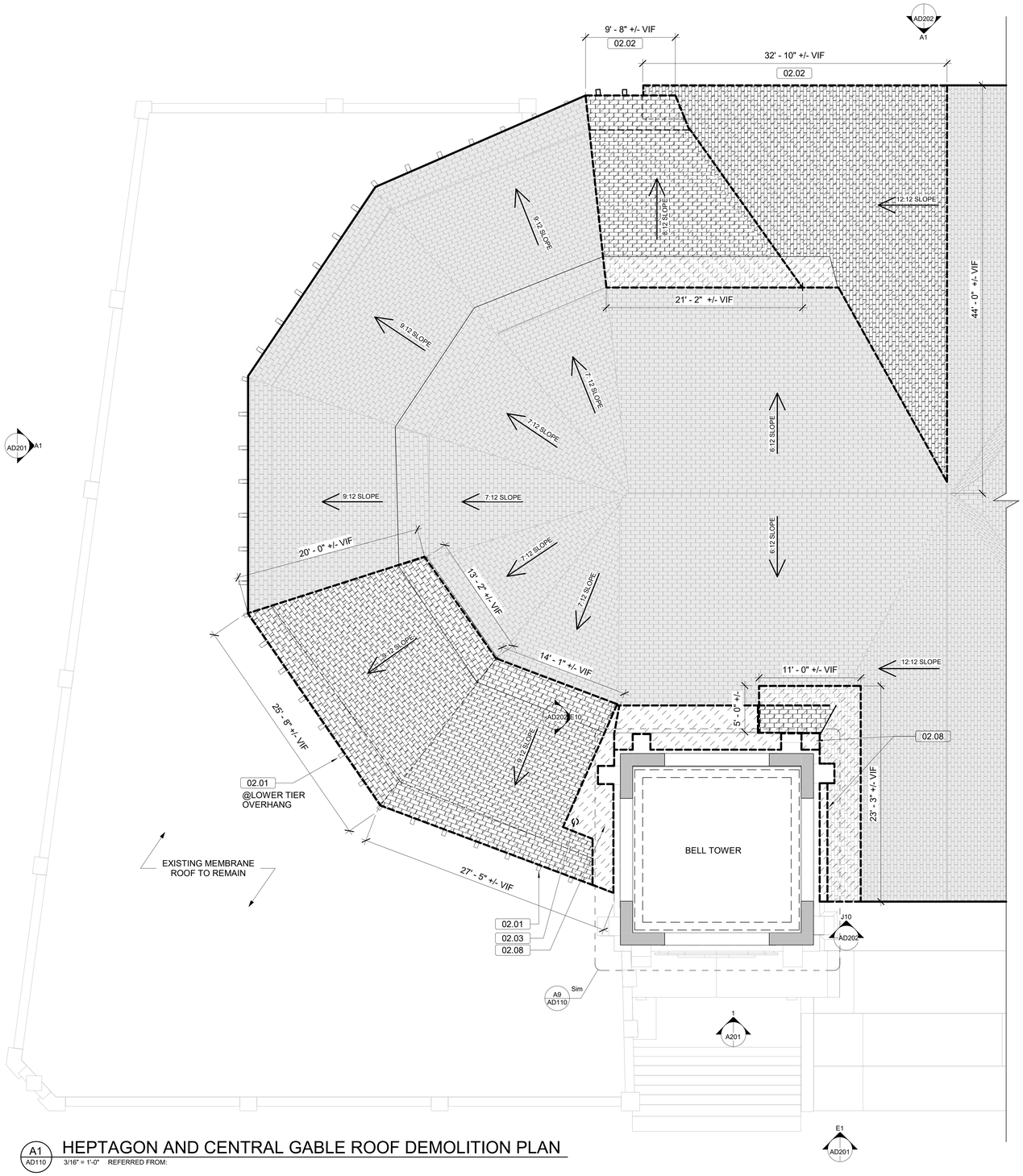
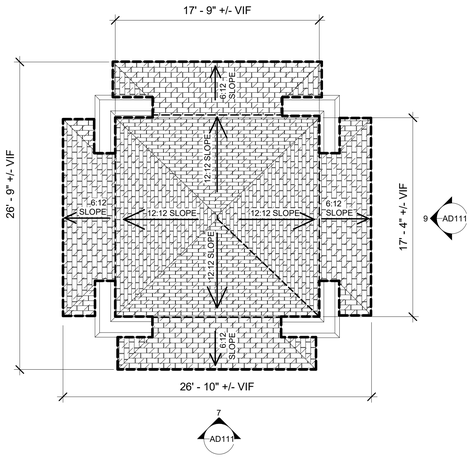


A1 AD110 HEPTAGON AND CENTRAL GABLE ROOF DEMOLITION PLAN

3/16" = 1'-0" REFERRED FROM:



A9 AD110 BELL TOWER ROOF DEMOLITION PLAN

3/16" = 1'-0" REFERRED FROMAD110

GENERAL DEMO NOTES	
D 1	PROTECT FROM WEATHER ANY OPENINGS TO THE INTERIOR IN THE WORK AREA, EITHER EXISTING OR CREATED DURING DEMOLITION
D 2	THE CONTRACTOR SHALL PROVIDE SHORING, BRACING, OR OTHER TEMPORARY SUPPORT TO MAINTAIN THE STRUCTURAL INTEGRITY OF CONSTRUCTION TO REMAIN SUPPORTED BY WALLS, COLUMNS, BEAMS OR OTHER ITEMS TO BE REMOVED.
D 3	CONTRACTOR TO PERFORM SURVEY AND ANALYSIS OF EXISTING BUILDING PRIOR TO COMMENCING WITH DEMOLITION OPERATIONS. DO NOT REMOVE CONSTRUCTION IF THE STRUCTURAL INTEGRITY OF THE BUILDING MAY BE COMPROMISED UNTIL APPROPRIATE TEMPORARY SUPPORTS ARE IN PLACE. DESIGN OF SHORING IS THE RESPONSIBILITY OF THE CONTRACTOR.
D 4	CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSION PRIOR TO BEGINNING WORK AND NOTIFY THE ARCHITECT OF ANY DISCREPANCIES PRIOR TO BEGINNING WORK.
D 5	ALL DIMENSIONS ARE BASED ON LIMITED FIELD VERIFICATION. CONTRACTOR TO VERIFY EXISTING CONDITIONS AND SCOPE OF DEMOLITION WORK WITH REQUIREMENTS FOR NEW CONSTRUCTION
D 6	PROTECT EXISTING CONSTRUCTION TO REMAIN.
D 7	PRESENCE OF HAZARDOUS MATERIALS IS UNKNOWN. CONTRACTOR IS RESPONSIBLE FOR PROPER REMOVAL AND DISPOSAL OF ALL REMOVED MATERIALS
D 8	SALVAGE 12' MIN. OR ENTIRE PIECE OF EACH DISTINCT PROFILED TRIM PIECE BEING REMOVED - FOR OWNER RECORD

KEYNOTES	
KEY VALUE	TEXT
02.01	REMOVE DECORATIVE WOOD RAFTER TAILS FROM OVERHANGS OF ROOF AREA IDENTIFIED FOR REMOVAL - REFER TO STRUCTURAL FOR FRAMING SCOPE
02.02	REMOVE DECORATIVE WOOD BRACKETS UNDER OVERHANG OF ROOF AREA IDENTIFIED FOR REMOVAL - REFER TO STRUCTURAL FOR FRAMING SCOPE
02.03	REMOVE VENT STACK AND FLASHING
02.08	REMOVE MEMBRANE OVER-ROOFING AND FLASHING (AROUND BASE OF BELL TOWER, ALL THREE SIDES). REMOVE MEMBRANE BURIED LAYERS OF ROOFING, DECKING, AND FLASHINGS COMPLETE - REFER TO STRUCTURAL RE: FRAMING

DEMOLITION LEGEND

- EXISTING CONSTRUCTION TO REMAIN
- ITEM/ CONSTRUCTION TO BE REMOVED, SALVAGED OR REINSTALLED - AS NOTED
- EXISTING ASPHALT SHINGLE ROOF TO REMAIN
- EXTENT OF ROOF REMOVAL: REMOVE ASPHALT SHINGLES, UNDERLAYMENT, SHEATHING OVERHANG, DECKING, EDGING/TRIM, AND FLASHINGS COMPLETE - REFER TO STRUCTURAL RE: FRAMING

PLAN NORTH

4' 2' 0' 4' 8'
3/16" = 1'- 0" SCALE OF FEET

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NOT FOR CONSTRUCTION

KING SOLOMON BAPTIST CHURCH

ROOF REPLACEMENT - 50% CD SET

6125 FOURTEENTH STREET DETROIT, MI

No.	Date	Description

PROJECT MANAGER: A. CECIL
DRAWN BY: S. RUTLAND

QEA No.42134130

50% CD SET
1/24/2022

DEMOLITION ROOF PLANS

AD110

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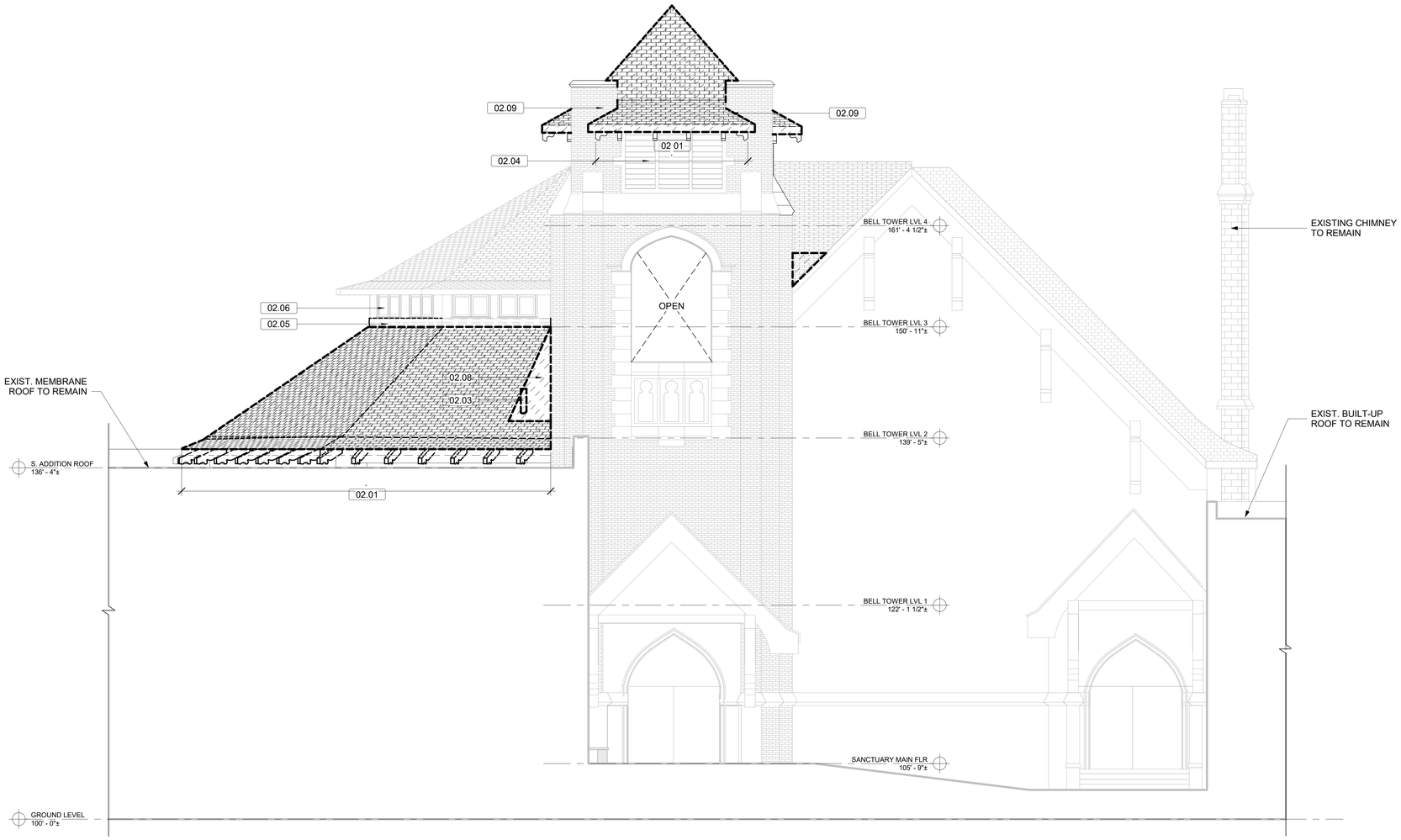
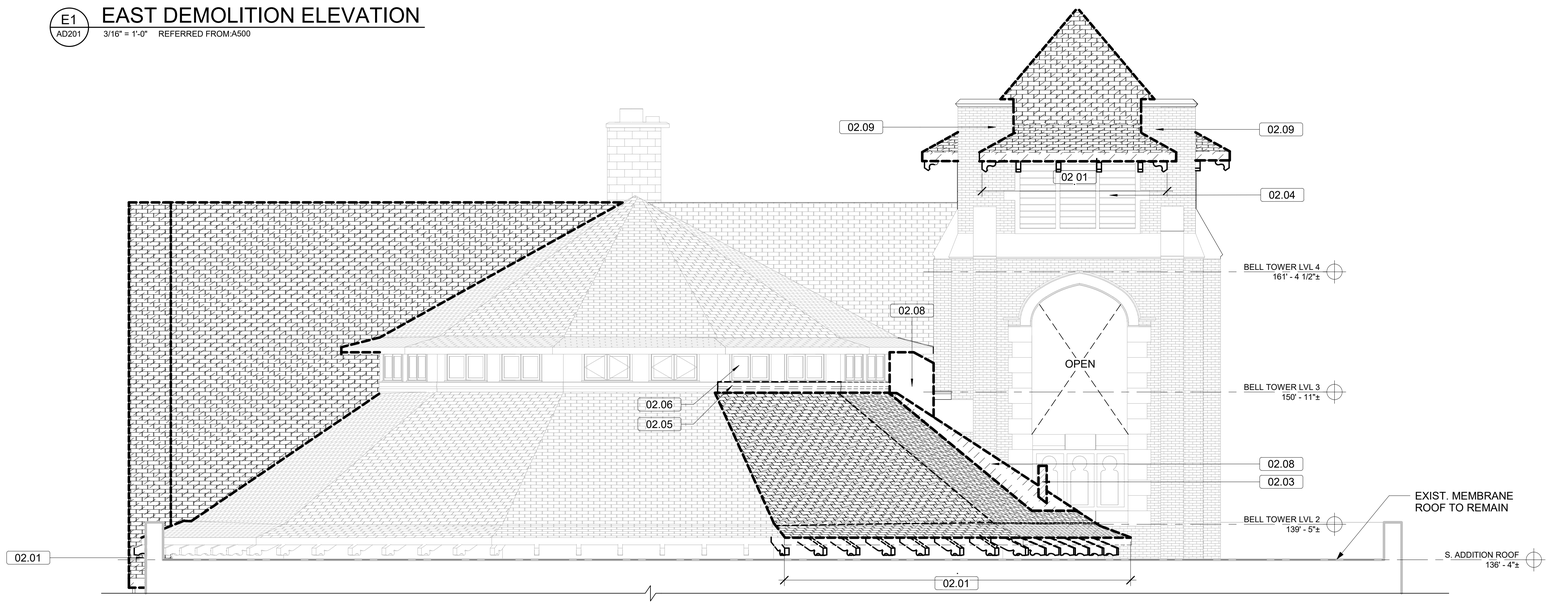


E1 AD201 EAST DEMOLITION ELEVATION

3/16" = 1'-0" REFERRED FROM:A500



A1 AD201 SOUTH DEMOLITION ELEVATION

3/16" = 1'-0" REFERRED FROM:A500

GENERAL DEMO NOTES	
D 1	PROTECT FROM WEATHER ANY OPENINGS TO THE INTERIOR IN THE WORK AREA, EITHER EXISTING OR CREATED DURING DEMOLITION
D 2	THE CONTRACTOR SHALL PROVIDE SHORING, BRACING, OR OTHER TEMPORARY SUPPORT TO MAINTAIN THE STRUCTURAL INTEGRITY OF CONSTRUCTION TO REMAIN SUPPORTED BY WALLS, COLUMNS, BEAMS OR OTHER ITEMS TO BE REMOVED.
D 3	CONTRACTOR TO PERFORM SURVEY AND ANALYSIS OF EXISTING BUILDING PRIOR TO COMMENCING WITH DEMOLITION OPERATIONS. DO NOT REMOVE CONSTRUCTION IF THE STRUCTURAL INTEGRITY OF THE BUILDING MAY BE COMPROMISED UNTIL APPROPRIATE TEMPORARY SUPPORTS ARE IN PLACE. DESIGN OF SHORING IS THE RESPONSIBILITY OF THE CONTRACTOR.
D 4	CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSION PRIOR TO BEGINNING WORK AND NOTIFY THE ARCHITECT OF ANY DISCREPANCIES PRIOR TO BEGINNING WORK.
D 5	ALL DIMENSIONS ARE BASED ON LIMITED FIELD VERIFICATION. CONTRACTOR TO VERIFY EXISTING CONDITIONS AND SCOPE OF DEMOLITION WORK WITH REQUIREMENTS FOR NEW CONSTRUCTION
D 6	PROTECT EXISTING CONSTRUCTION TO REMAIN.
D 7	PRESENCE OF HAZARDOUS MATERIALS IS UNKNOWN. CONTRACTOR IS RESPONSIBLE FOR PROPER REMOVAL AND DISPOSAL OF ALL REMOVED MATERIALS
D 8	SALVAGE 12" MIN. OR ENTIRE PIECE OF EACH DISTINCT PROFILED TRIM PIECE BEING REMOVED - FOR OWNER RECORD

KEYNOTES	
KEY VALUE	TEXT
02.01	REMOVE DECORATIVE WOOD RAFTER TAILS FROM OVERHANGS OF ROOF AREA IDENTIFIED FOR REMOVAL - REFER TO STRUCTURAL FOR FRAMING SCOPE
02.03	REMOVE VENT STACK AND FLASHING
02.04	EXISTING WOOD LOUVERS TO REMAIN
02.05	REMOVE METAL HEAD COUNTERFLASHING
02.06	COVER AND PROTECT GLASS IN EXISTING WINDOWS TO REMAIN IN WORK AREA
02.08	REMOVE MEMBRANE OVER-ROOFING AND FLASHING (AROUND BASE OF BELL TOWER, ALL THREE SIDES). REMOVE MEMBRANE BURIED LAYERS OF ROOFING, DECKING, AND FLASHINGS COMPLETE - REFER TO STRUCTURAL RE: FRAMING
02.09	REMOVE COPPER FLASHING AND ANY ASSOCIATED MASTIC OR SEALANTS. PREP AND REPOINT ABANDONED REGLET JOINTS N MASONRY WITH MORTAR TO MATCH EXISTING

DEMOLITION LEGEND

- EXISTING CONSTRUCTION TO REMAIN
- ITEM/ CONSTRUCTION TO BE REMOVED, SALVAGED OR REINSTALLED - AS NOTED
- EXISTING ASPHALT SHINGLE ROOF TO REMAIN
- EXTENT OF ROOF REMOVAL: REMOVE ASPHALT SHINGLES, UNDERLAYMENT, SHEATHING OVERHANG, DECKING, EDGING/TRIM, AND FLASHINGS COMPLETE - REFER TO STRUCTURAL RE: FRAMING

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NOT FOR CONSTRUCTION

KING SOLOMON BAPTIST CHURCH

ROOF REPLACEMENT - 50% CD SET

6125 FOURTEENTH STREET DETROIT, MI

No. Date Description

PROJECT MANAGER: A. CECIL
DRAWN BY: S. RUTLAND

QEA No.42134130

50% CD SET
1/24/2022

DEMOLITION ELEVATIONS

AD201

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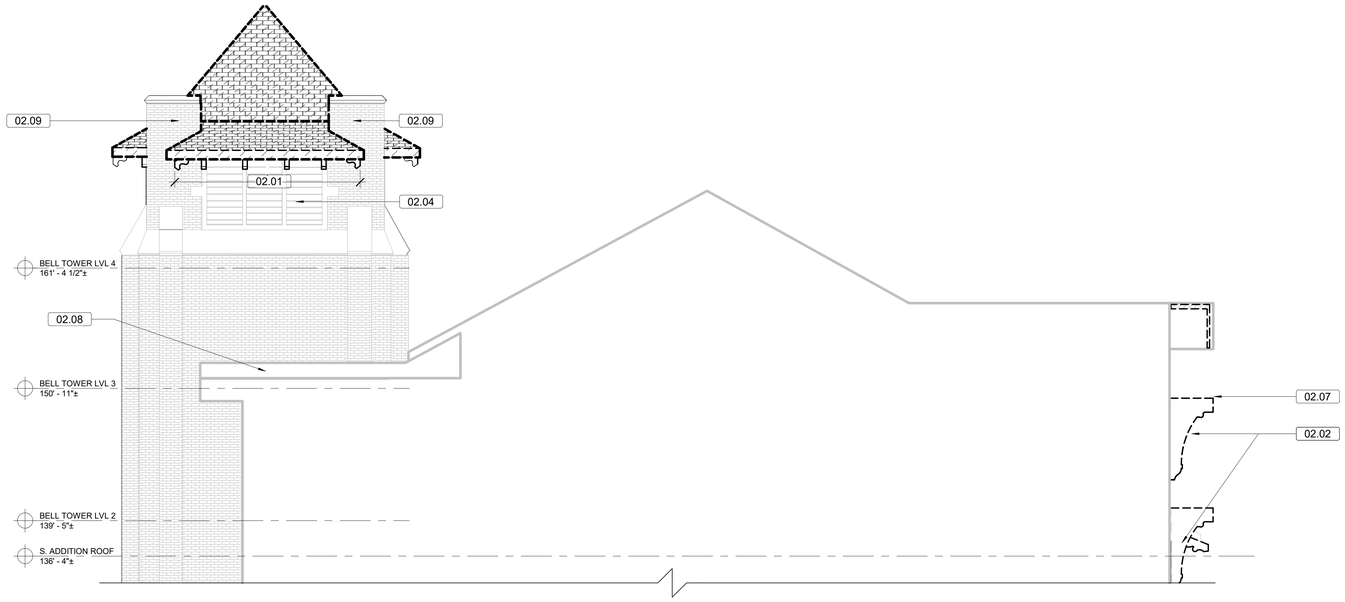

F1 AD202 NORTH DEMOLITION ELEVATION

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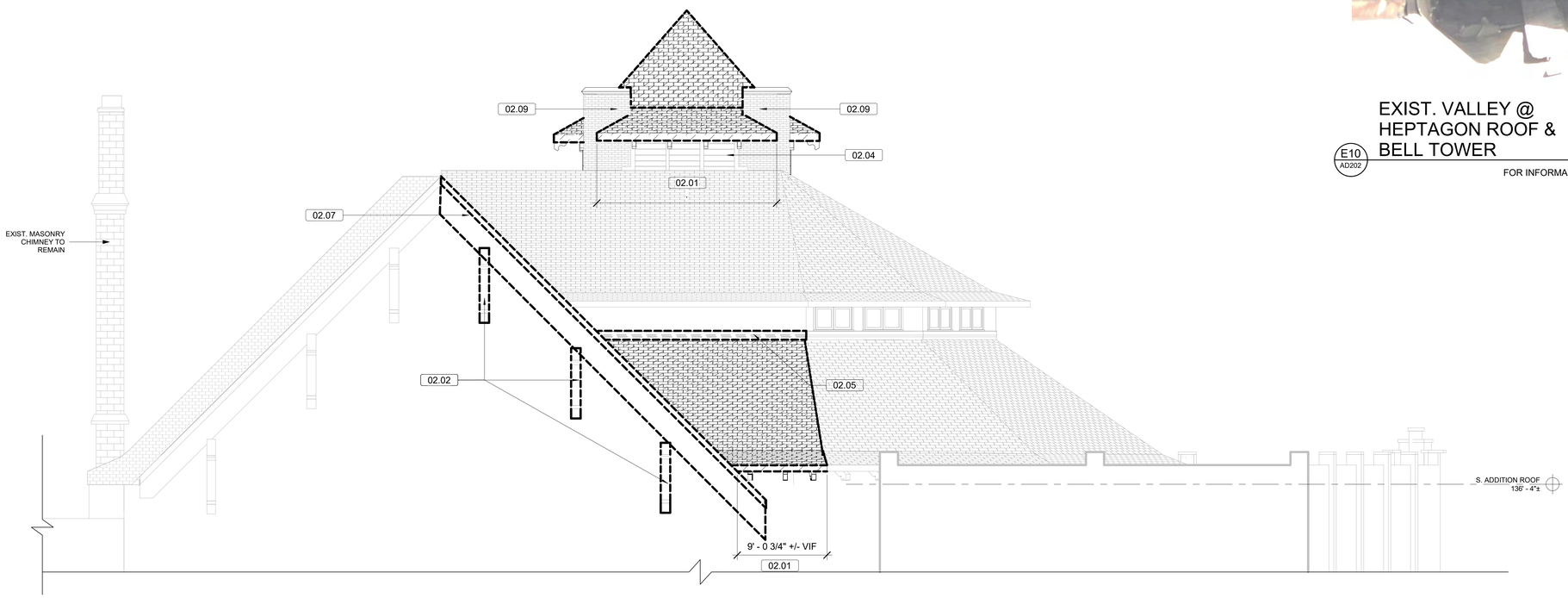
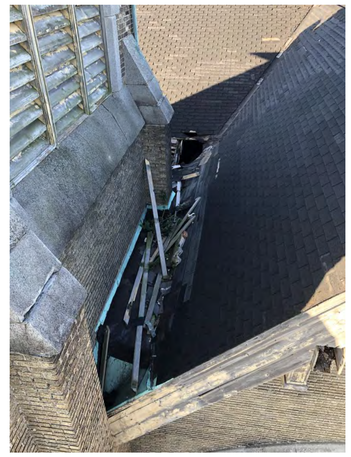


A1 AD202 WEST DEMOLITION ELEVATION

3/16" = 1'-0" REFERRED FROM:A500



J10 AD202 EXIST. VALLEY @ GABLE ROOF & BELL TOWER

FOR INFORMATION ONLY

E10 AD202 EXIST. VALLEY @ HEPTAGON ROOF & BELL TOWER

FOR INFORMATION ONLY

GENERAL DEMO NOTES	
D 1	PROTECT FROM WEATHER ANY OPENINGS TO THE INTERIOR IN THE WORK AREA, EITHER EXISTING OR CREATED DURING DEMOLITION
D 2	THE CONTRACTOR SHALL PROVIDE SHORING, BRACING, OR OTHER TEMPORARY SUPPORT TO MAINTAIN THE STRUCTURAL INTEGRITY OF CONSTRUCTION TO REMAIN SUPPORTED BY WALLS, COLUMNS, BEAMS OR OTHER ITEMS TO BE REMOVED.
D 3	CONTRACTOR TO PERFORM SURVEY AND ANALYSIS OF EXISTING BUILDING PRIOR TO COMMENCING WITH DEMOLITION OPERATIONS. DO NOT REMOVE CONSTRUCTION IF THE STRUCTURAL INTEGRITY OF THE BUILDING MAY BE COMPROMISED UNTIL APPROPRIATE TEMPORARY SUPPORTS ARE IN PLACE. DESIGN OF SHORING IS THE RESPONSIBILITY OF THE CONTRACTOR.
D 4	CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSION PRIOR TO BEGINNING WORK AND NOTIFY THE ARCHITECT OF ANY DISCREPANCIES PRIOR TO BEGINNING WORK.
D 5	ALL DIMENSIONS ARE BASED ON LIMITED FIELD VERIFICATION. CONTRACTOR TO VERIFY EXISTING CONDITIONS AND SCOPE OF DEMOLITION WORK WITH REQUIREMENTS FOR NEW CONSTRUCTION
D 6	PROTECT EXISTING CONSTRUCTION TO REMAIN.
D 7	PRESENCE OF HAZARDOUS MATERIALS IS UNKNOWN. CONTRACTOR IS RESPONSIBLE FOR PROPER REMOVAL AND DISPOSAL OF ALL REMOVED MATERIALS
D 8	SALVAGE 12' MIN. OR ENTIRE PIECE OF EACH DISTINCT PROFILED TRIM PIECE BEING REMOVED - FOR OWNER RECORD

KEYNOTES	
KEY VALUE	TEXT
02.01	REMOVE DECORATIVE WOOD RAFTER TAILS FROM OVERHANGS OF ROOF AREA IDENTIFIED FOR REMOVAL - REFER TO STRUCTURAL FOR FRAMING SCOPE
02.02	REMOVE DECORATIVE WOOD BRACKETS UNDER OVERHANG OF ROOF AREA IDENTIFIED FOR REMOVAL - REFER TO STRUCTURAL FOR FRAMING SCOPE
02.04	EXISTING WOOD LOUVERS TO REMAIN
02.05	REMOVE METAL HEAD COUNTERFLASHING
02.07	REMOVE WOOD FASCIA & TRIM ASSEMBLY ALONG EDGE OF ROOF AREA DESIGNATED FOR REMOVAL
02.08	REMOVE MEMBRANE OVER-ROOFING AND FLASHING (AROUND BASE OF BELL TOWER, ALL THREE SIDES). REMOVE MEMBRANE BURIED LAYERS OF ROOFING, DECKING, AND FLASHINGS COMPLETE - REFER TO STRUCTURAL RE: FRAMING
02.09	REMOVE COPPER FLASHING AND ANY ASSOCIATED MASTIC OR SEALANTS. PREP AND REPOINT ABANDONED REGLET JOINTS N MASONRY WITH MORTAR TO MATCH EXISTING

DEMOLITION LEGEND

- EXISTING CONSTRUCTION TO REMAIN
- ITEM/ CONSTRUCTION TO BE REMOVED, SALVAGED OR REINSTALLED - AS NOTED
- EXISTING ASPHALT SHINGLE ROOF TO REMAIN
- EXTENT OF ROOF REMOVAL: REMOVE ASPHALT SHINGLES, UNDERLAYMENT, SHEATHING OVERHANG, DECKING, EDGING/TRIM, AND FLASHINGS COMPLETE - REFER TO STRUCTURAL RE: FRAMING

QUINN EVANS
4219 WOODWARD AVE
SUITE 301
DETROIT, MI 48201
v 313.462.2550
QUINNEVANS.COM

NOT FOR CONSTRUCTION

KING SOLOMON BAPTIST CHURCH

ROOF REPLACEMENT - 50% CD SET

6125 FOURTEENTH STREET DETROIT, MI

No.	Date	Description

PROJECT MANAGER: A. CECIL
DRAWN BY: S. RUTLAND

QEA No.42134130

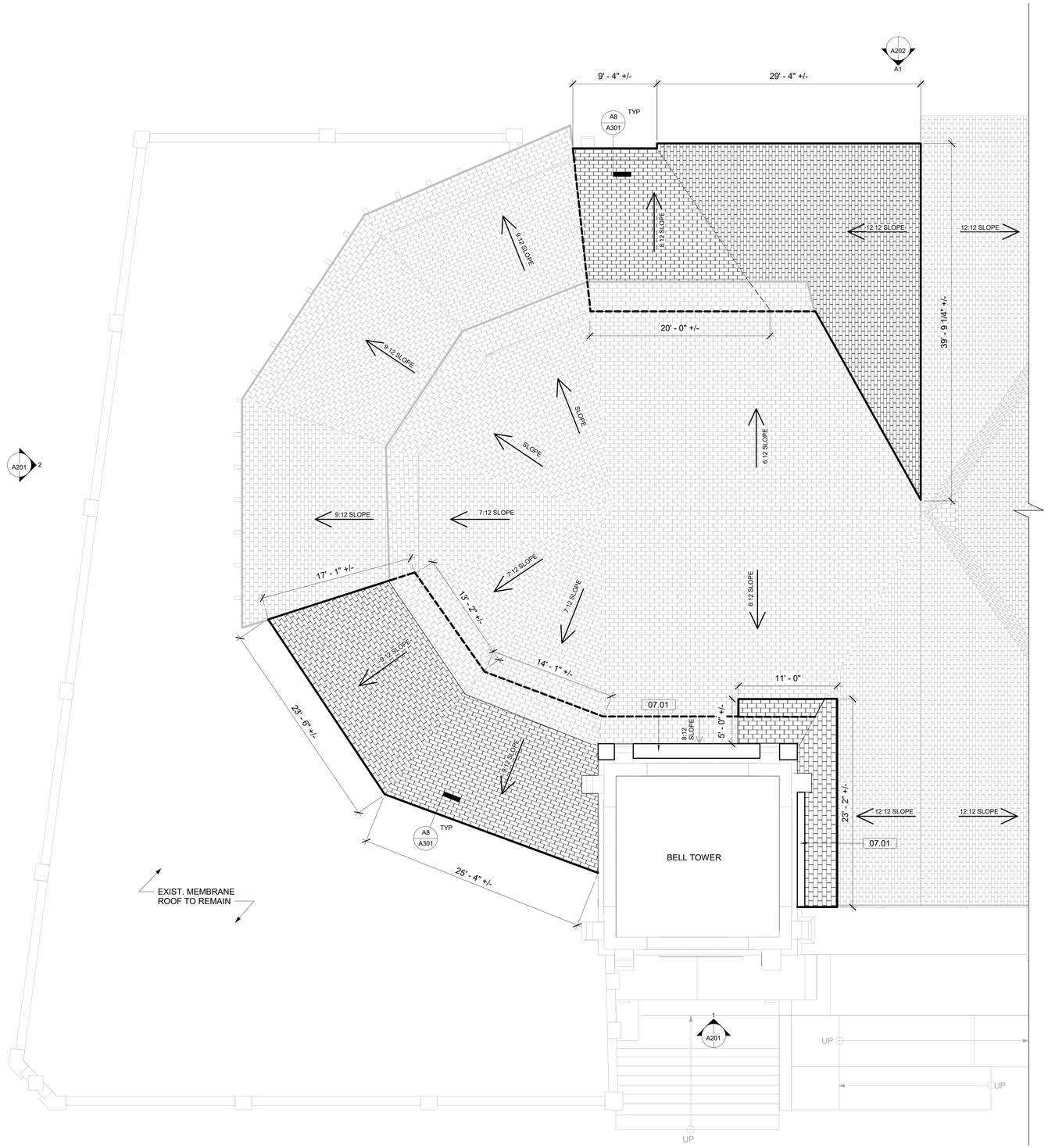
50% CD SET
1/24/2022

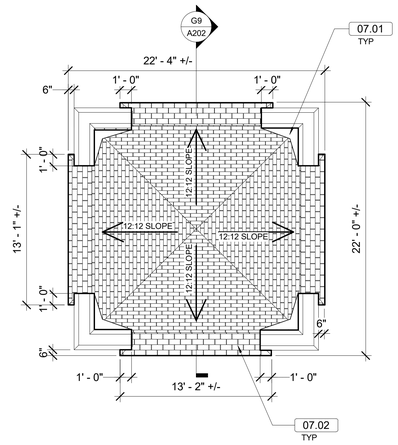
DEMOLITION ELEVATIONS

AD202

PATH & FILENAME: BIM 360://King Solomon Baptist Church Roof Replacement/42134130_King Solomon Church (point cloud).rvt
PLOTTING DATE & TIME: 1/24/2022 5:17:23 PM

GENERAL ROOF NOTES	
R 1	SLOPE OF NEW ROOFING TO MATCH EXISTING IN AREA OF REPLACEMENT, U.O.N.
R 2	NEW FLASHING TO BE PREFINISHED ALUM., U.O.N.
R 3	INTERWEAVE AND LAP NEW SHINGLES WITH EXISTING TO REMAIN SHINGLES AT INTERSECTION OF AREA OF WORK WITH AREAS NOT IN CONTRACT. RESECURE EXITING SHINGLES IMPACTED BY EFFORTS.





KEYNOTES	
KEY VALUE	TEXT
07.01	CONTINUOUS PREFINISHED ALUMINUM VALLEY AND CRICKET FLASHING OVER NEW PLYWOOD SHEATHING AND SUPPORT FRAMING, AS NEEDED
07.02	SLOPE OF SKIRT TO MATCH EXISTING, EA. SIDE

ROOF LEGEND

EXISTING ASPHALT SHINGLE ROOF TO REMAIN

EXTENT OF NEW ROOF: PROVIDE ARCHITECTURAL GRADE ASPHALT SHINGLES OVER WATERPROOFING UNDERLAYMENT, OVER NEW SHEATHING - REFER TO STRUCTURAL

A1 / A110 HEPTAGON AND CENTRAL GABLE ROOF PLAN
3/16" = 1'-0" REFERRED FROM:

A10 / A110 BELL TOWER ROOF PLAN
3/16" = 1'-0"

PLAN NORTH

8' 0' 8' 16'
1/8" = 1' - 0" SCALE OF FEET

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KING SOLOMON BAPTIST CHURCH

ROOF REPLACEMENT - 50% CD SET

6125 FOURTEENTH STREET DETROIT, MI

No.	Date	Description

PROJECT MANAGER: A. CECIL
DRAWN BY: S. RUTLAND

QEA No.42134130

50% CD SET
1/24/2022

ROOF PLANS

A110

PATH & FILENAME: BIM 360://King Solomon Baptist Church Roof Replacement/42134130_King Solomon Church (point cloud).rvt
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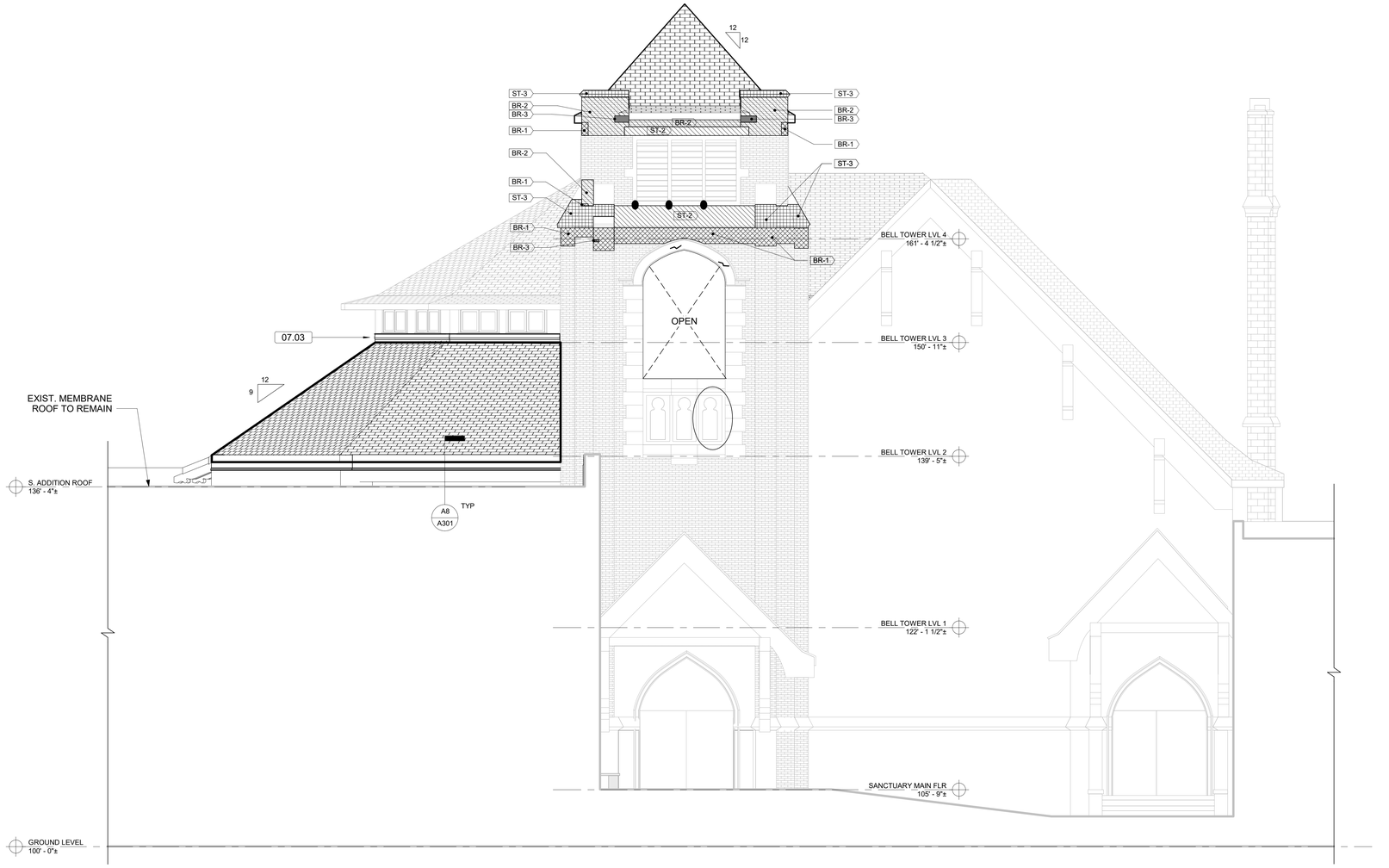
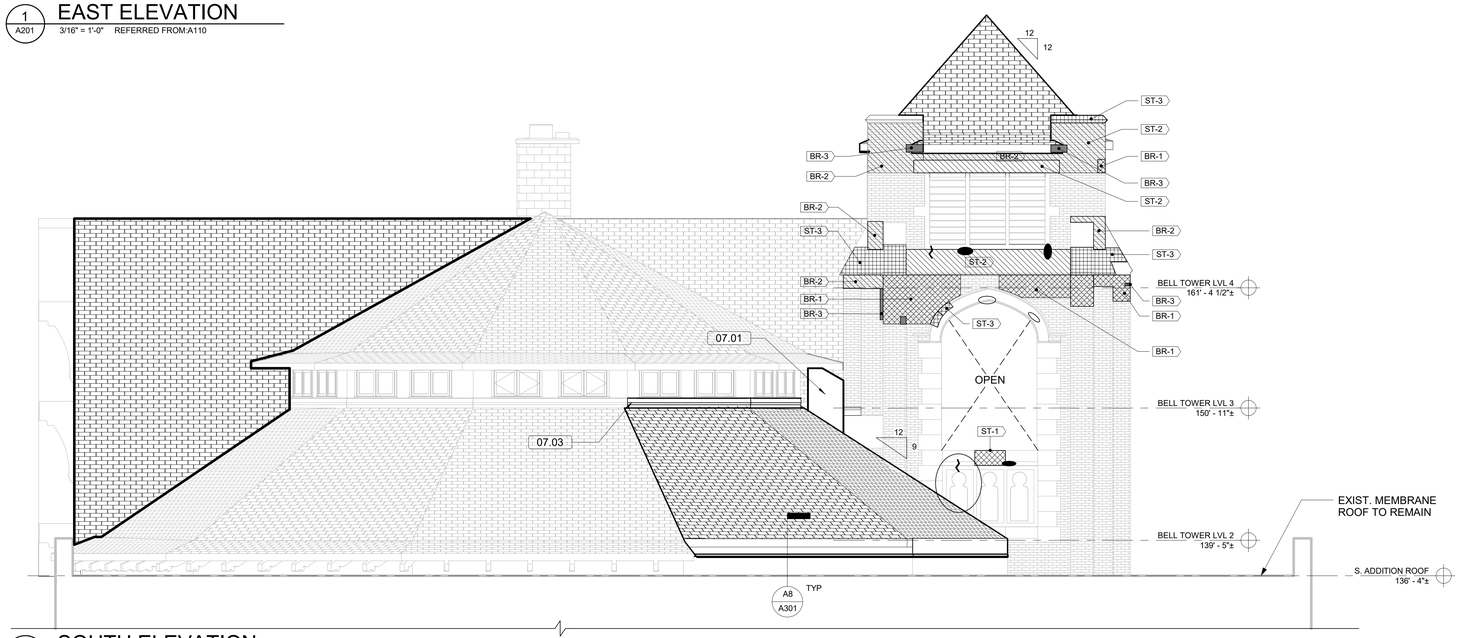


1 A201 **EAST ELEVATION**

3/16" = 1'-0" REFERRED FROM:A110



2 A201 **SOUTH ELEVATION**

3/16" = 1'-0" REFERRED FROM:A110

GENERAL ROOF NOTES	
R 1	SLOPE OF NEW ROOFING TO MATCH EXISTING IN AREA OF REPLACEMENT, U.O.N.
R 2	NEW FLASHING TO BE PREFINISHED ALUM., U.O.N.
R 3	INTERWEAVE AND LAP NEW SHINGLES WITH EXISTING TO REMAIN SHINGLES AT INTERSECTION OF AREA OF WORK WITH AREAS NOT IN CONTRACT. RESECURE EXITING SHINGLES IMPACTED BY EFFORTS.

KEYNOTES	
KEY VALUE	TEXT
07.01	CONTINUOUS PREFINISHED ALUMINUM VALLEY AND CRICKET FLASHING OVER NEW PLYWOOD SHEATHING AND SUPPORT FRAMING, AS NEEDED
07.03	PROVIDE CONTINUOUS PREFINISHED ALUMINUM COUNTERFLASHING - PROFILE TO MATCH EXIST.

MASONRY REPAIR LEGEND

STONE

- ST-1 RESET: REMOVE & SALVAGE SOUND BUT DISPLACED UNITS; RESET IN MORTAR WITH NEW GALV. ANCHORS OR DOWELS
- ST-2 REPOINT: REMOVE LOOSE MORTAR & PREP JOINTS, REPOINT OPEN JOINTS WITH MORTAR TO MATCH EXISTING
- ST-3 REPLACE: REMOVE DETERIORATED UNITS; REPLACE WITH CAST STONE TO MATCH/ RECREATE ORIGINAL IN PROFILE, COLOR, & TEXTURE
- ST-4 CRACK REPAIR: ROUTE CRACK & PREP JOINT; EPOXY CRACK REPAIR JOINT IN-SITU
- ST-5 SPALL: REMOVE REMAINING LOOSE MATERIAL FROM SURFACE; PREP SURFACE & PATCH REPAIR SPALL WITH FILL MATERIAL FLUSH WITH FACE OF EXISTING STONE TO REMAIN
- ST-6 SPALL: REMOVE DETACHED OR LOOSE STONE MATERIAL FROM SURFACE ONLY

BRICK

- BR-1 RECONSTRUCT: DISMANTLE DISPLACE OR DETERIORATED MASONRY; SALVAGE SOUND UNITS FOR REINSTALLATION & REPLACE BROKEN UNITS; RESET SALVAGED AND NEW UNITS IN MORTAR (WITH NEW TIES) TO REBUILD
- BR-2 REPOINT: REMOVE DETACHED OR LOOSE MORTAR & PREP JOINTS, REPOINT OPEN JOINTS WITH MORTAR MATCH EXISTING
- BR-3 REPLACE: REMOVE BROKEN OR MISSING UNITS & ASSOC. MORTAR; REPLACE WITH BRICKS TO MATCH EXISTING (SIZE, COLOR, TEXTURE) IN NEW MORTAR BED & JOINTS TO MATCH EXISTING

ROOF LEGEND

EXISTING ASPHALT SHINGLE ROOF TO REMAIN

EXTENT OF NEW ROOF: PROVIDE ARCHITECTURAL GRADE ASPHALT SHINGLES OVER WATERPROOFING UNDERLAYMENT, OVER NEW SHEATHING - REFER TO STRUCTURAL

4' 2' 0' 4' 8'

3/16" = 1' - 0" SCALE OF FEET

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v 313.462.2550

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NOT FOR CONSTRUCTION

KING SOLOMON BAPTIST CHURCH

ROOF REPLACEMENT - 50% CD SET

6125 FOURTEENTH STREET DETROIT, MI

No.	Date	Description

PROJECT MANAGER: A. CECIL
DRAWN BY: S. RUTLAND

QEA No.42134130

50% CD SET
1/24/2022

ELEVATIONS

A201

PATH & FILENAME: BIM 360:\King Solomon Baptist Church Roof Replacement\42134130_King Solomon Church (point cloud).rvt
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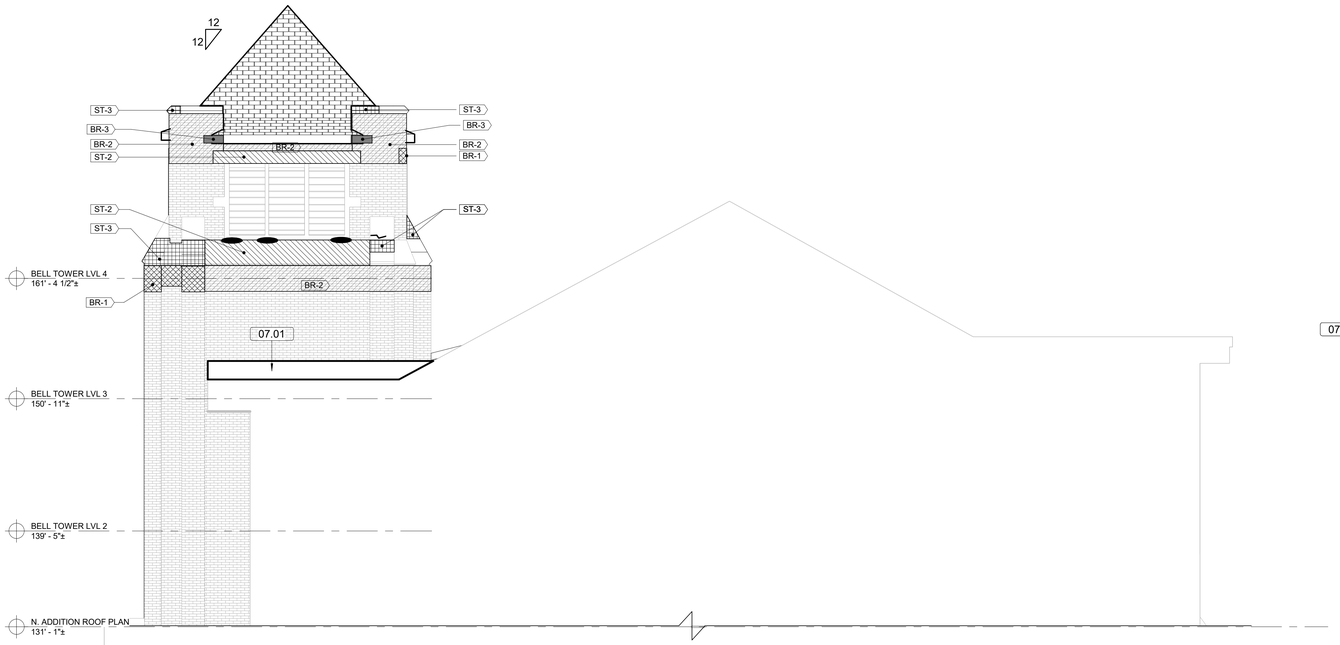
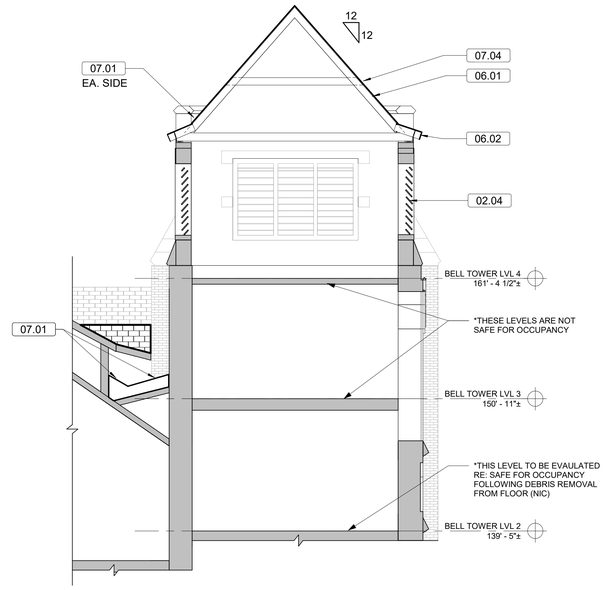


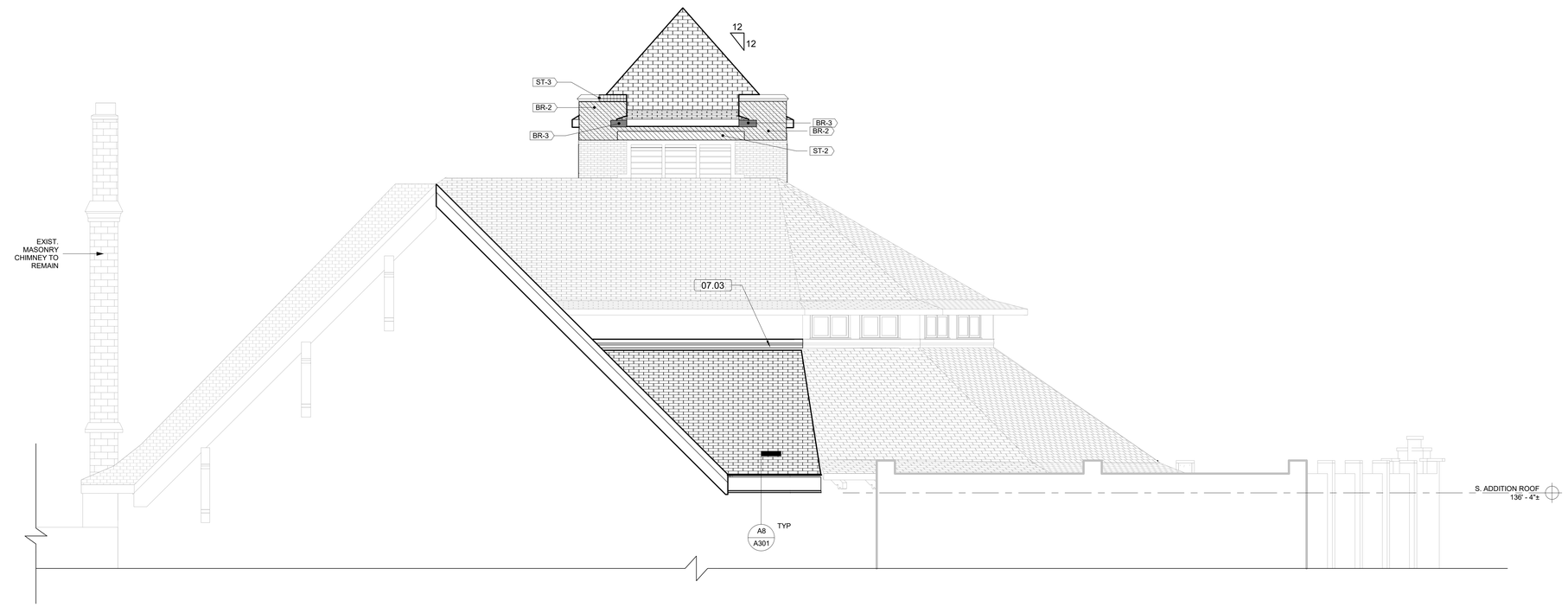
G1 / A202 NORTH ELEVATION
3/16" = 1'-0" REFERRED FROM:A110



G9 / A202 BELL TOWER BUILDING SECTION
3/16" = 1'-0" REFERRED FROM:A110

GENERAL ROOF NOTES	
R 1	SLOPE OF NEW ROOFING TO MATCH EXISTING IN AREA OF REPLACEMENT, U.O.N.
R 2	NEW FLASHING TO BE PREFINISHED ALUM., U.O.N.
R 3	INTERWEAVE AND LAP NEW SHINGLES WITH EXISTING TO REMAIN SHINGLES AT INTERSECTION OF AREA OF WORK WITH AREAS NOT IN CONTRACT. RESECURE EXITING SHINGLES IMPACTED BY EFFORTS.

KEYNOTES	
KEY VALUE	TEXT
02.04	EXISTING WOOD LOUVERS TO REMAIN
06.01	PLYWOOD SHEATHING OVER NEW WOOD TRUSSES - REFER TO STRUCTURAL
06.02	1X PRESSURE TREATED WOOD TIM, PTD. OVER 2X SILL PLATES AND BLOCKING REFER TO STRUCTURAL
07.01	CONTINUOUS PREFINISHED ALUMINUM VALLEY AND CRICKET FLASHING OVER NEW PLYWOOD SHEATHING AND SUPPORT FRAMING, AS NEEDED
07.03	PROVIDE CONTINUOUS PREFINISHED ALUMINUM COUNTERFLASHING - PROFILE TO MATCH EXIST.
07.04	ARCHITECTURAL GRADE ASPHALT SHINGLE ROOFING OVER WATERPROOFING UNDERLAYMENT



A1 / A202 WEST ELEVATION
3/16" = 1'-0" REFERRED FROM:A110

MASONRY REPAIR LEGEND

STONE

- ST-1 RESET: REMOVE & SALVAGE SOUND BUT DISPLACED UNITS; RESET IN MORTAR WITH NEW GALV. ANCHORS OR DOWELS
- ST-2 REPOINT: REMOVE LOOSE MORTAR & PREP JOINTS, REPOINT OPEN JOINTS WITH MORTAR TO MATCH EXISTING
- ST-3 REPLACE: REMOVE DETERIORATED UNITS, REPLACE WITH CAST STONE TO MATCH/ RECREATE ORIGINAL IN PROFILE, COLOR, & TEXTURE
- ST-4 CRACK REPAIR: ROUTE CRACK & PREP JOINT; EPOXY CRACK REPAIR JOINT IN-SITU
- ST-5 SPALL: REMOVE REMAINING LOOSE MATERIAL FROM SURFACE: PREP SURFACE & PATCH REPAIR SPALL WITH FILL MATERIAL FLUSH WITH FACE OF EXISTING STONE TO REMAIN
- ST-6 SPALL: REMOVE DETACHED OR LOOSE STONE MATERIAL FROM SURFACE ONLY

BRICK

- BR-1 RECONSTRUCT: DISMANTLE DISPLACE OR DETERIORATED MASONRY; SALVAGE SOUND UNITS FOR REINSTALLATION & REPLACE BROKEN UNITS; RESET SALVAGED AND NEW UNITS IN MORTAR (WITH NEW TIES) TO REBUILD
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ROOF LEGEND

EXISTING ASPHALT SHINGLE ROOF TO REMAIN

EXTENT OF NEW ROOF: PROVIDE ARCHITECTURAL GRADE ASPHALT SHINGLES OVER WATERPROOFING UNDERLAYMENT, OVER NEW SHEATHING - REFER TO STRUCTURAL

4' 2' 0' 4' 8'
3/16" = 1' - 0" SCALE OF FEET

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KING SOLOMON BAPTIST CHURCH

ROOF REPLACEMENT - 50% CD SET

6125 FOURTEENTH STREET DETROIT, MI

NOT FOR CONSTRUCTION

No.	Date	Description

PROJECT MANAGER: A. CECIL
DRAWN BY: S. RUTLAND

QEA No.42134130

50% CD SET
1/24/2022

ELEVATIONS & SECTIONS

A202

PATH & FILENAME: BIM 360:\Kings Solomon Baptist Church Roof Replacement\42134130_King Solomon Church (point cloud).rvt
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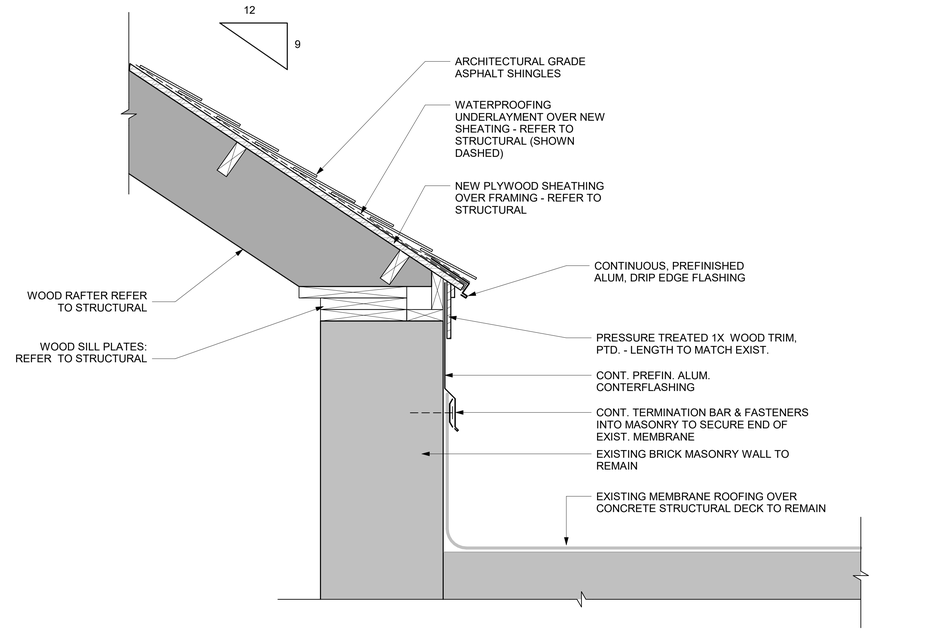

A8 / A301 SHORTENED EAVE OVERHANG AT HEPTAGON TIER TYP.

1 1/2" = 1'-0" REFERRED FROM:A110

12" 6" 0" 1'

1 1/2" = 1' - 0" SCALE OF FEET

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KING SOLOMON BAPTIST CHURCH

ROOF REPLACEMENT - 50% CD SET

6125 FOURTEENTH STREET DETROIT, MI

No.	Date	Description

PROJECT MANAGER: A. CECIL

DRAWN BY: S. RUTLAND

QEA No.42134130

50% CD SET
1/24/2022

DETAILS

A301

PATH & FILENAME: BIM 360://King Solomon Baptist Church Roof Replacement/42134130_King Solomon Church (point cloud).rvt
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GAF Timberline HDZ®
High Definition® Lifetime† Shingles

America's #1-selling shingle just got better — again

Now with GAF Time-Release Algae-Fighting Technology and LayerLock™ Technology, Timberline HDZ® offers everything you can expect from an architectural shingle roof, and more.

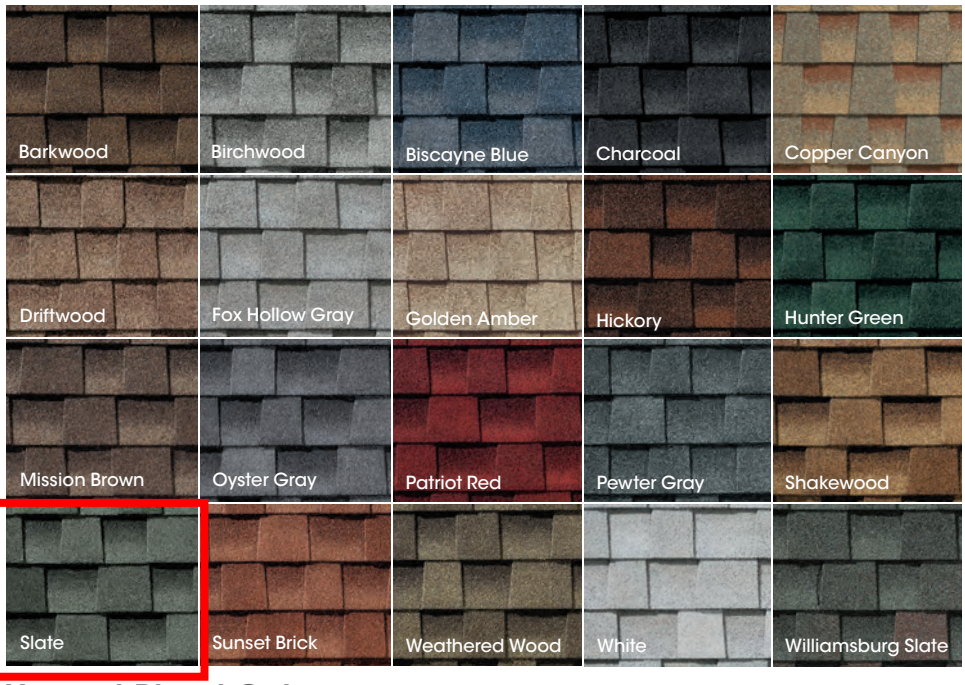
For new Bell Tower shingles

Timberline HDZ® Shingles

Benefits:

- **LayerLock™ Technology** — mechanically fuses the common bond between overlapping shingle layers
- **Up to 99.9% nailing accuracy** — the StrikeZone™ nailing area is so easy to hit that a roofer placed 999 out of 1,000 nails correctly in our test[1]
- **WindProven™ Limited Wind Warranty** — when installed with the required combination of GAF Accessories, Timberline HDZ® Shingles are eligible for a wind warranty with no maximum wind speed limitation[3]
- **Dura Grip™** sealant pairs with the microgranule surface of the StrikeZone™ nailing area. Then, an asphalt to-asphalt monolithic bond cures for durability, strength, and exceptional wind uplift performance.
- **25-year StainGuard Plus™ Algae Protection Limited Warranty** against blue-green algae discoloration.[2] Proprietary GAF Time-Release Algae-Fighting Technology helps protect your shingles from unsightly stains.
- **For the best look** — use TimberTex® Premium Ridge Cap Shingles or TimberCrest® Premium SBS-Modified Ridge Cap Shingles

Colors:



Harvest Blend Colors[5]

Product details:

Product/System Specifics

- Fiberglass asphalt construction
- **Dimensions (approx.)**: 13 ¼" x 39 ⅜" (337 x 1,000 mm)
- **Exposure**: 5 ⅝" (143 mm)
- **Bundles/Square**: 3
- **Pieces/Square**: 64
- **StainGuard Plus™ Algae Protection**[2] Limited Warranty
- **Hip/Ridge**: TimberTex®; TimberCrest®; Seal-A-Ridge®; Z®Ridge; Ridglass®[5]
- **Starter**: Pro-Start®; QuickStart®; WeatherBlocker™

Applicable Standards & Protocols:

- UL Listed to ANSI/UL 790 Class A
- State of Florida approved
- Classified by UL in accordance with ICC-ES AC438
- Meets ASTM D7158, Class H
- Meets ASTM D3161, Class F
- Meets ASTM D3018, Type 1
- Meets ASTM D3462[4]
- Miami-Dade County Product Control approved
- ICC-ES Evaluation Reports ESR-1475 and ESR-3267
- Meets Texas Department of Insurance Requirements
- Rated by the CRRC; Can be used to comply with Title 24 Cool Roof requirements (some colors)

† Lifetime refers to the length of warranty coverage provided and means as long as the original individual owner(s) of a single-family detached residence [or eligible second owner(s)] owns the property where the qualifying GAF products are installed. For other owners/structures, Lifetime coverage is not applicable. Lifetime coverage on shingles requires the use of GAF Lifetime Shingles only. See the *GAF Shingle & Accessory Limited Warranty* for complete coverage and restrictions. Visit gaf.com/LRS for qualifying GAF products. Lifetime coverage on shingles and accessories requires the use of any GAF Lifetime Shingle and at least 3 qualifying GAF Accessories. See the *GAF Roofing System Limited Warranty* for complete coverage and restrictions. For installations not eligible for the *GAF Roofing System Limited Warranty*, see the *GAF Shingle & Accessory Limited Warranty*. Visit gaf.com/LRS for qualifying GAF products.

[1] Results based on study conducted by Home Innovation Research Labs, an independent research lab, comparing installation of Timberline HD® Shingles to Timberline HDZ® Shingles on a 16-square roof deck using standard 4-nail nailing pattern under controlled laboratory conditions. Actual results may vary.

[2] 25-year StainGuard Plus™ Algae Protection Limited Warranty against blue-green algae discoloration is available only on products sold in packages bearing the StainGuard Plus™ logo. See *GAF Shingle & Accessory Limited Warranty* for complete coverage and restrictions and qualifying products.

[3] 15-year WindProven™ limited wind warranty on GAF Shingles with LayerLock™ Technology requires the use of GAF Starter Strips, Roof Deck Protection, Ridge Cap Shingles, and Leak Barrier or Attic Ventilation. See *GAF Roofing System Limited Warranty* for complete coverage and restrictions. Visit gaf.com/LRS for qualifying GAF products. For installations not eligible for the *GAF Roofing System Limited Warranty*, see the *GAF Shingle & Accessory Limited Warranty*.

[4] Periodically tested by independent and internal labs to ensure compliance with ASTM D3462 at time of manufacture.

[5] Harvest Blend colors are only available on TimberTex® Ridge Cap Shingles, Seal-A-Ridge® Ridge Cap Shingles, and TimberCrest® Premium SBS-Modified Ridge Cap Shingles.

Note: It is difficult to reproduce the color clarity and actual color blends of these products. Before selecting your color, please ask to see several full-size shingles.

We protect what matters most™

Marquis Weathermax®
Sell Sheet
(RESRS122)

Updated: 7/15

For Heptagon and Gable Roof partial replacement and tie-in to existing

GAF®

Quality You Can Trust…From
North America's Largest Roofing Manufacturer!™

GAF®

Quality You Can Trust…From North America's Largest Roofing Manufacturer!™

MARQUIS WeatherMax® SHINGLES

"Outstanding, All-Weather Performance!"

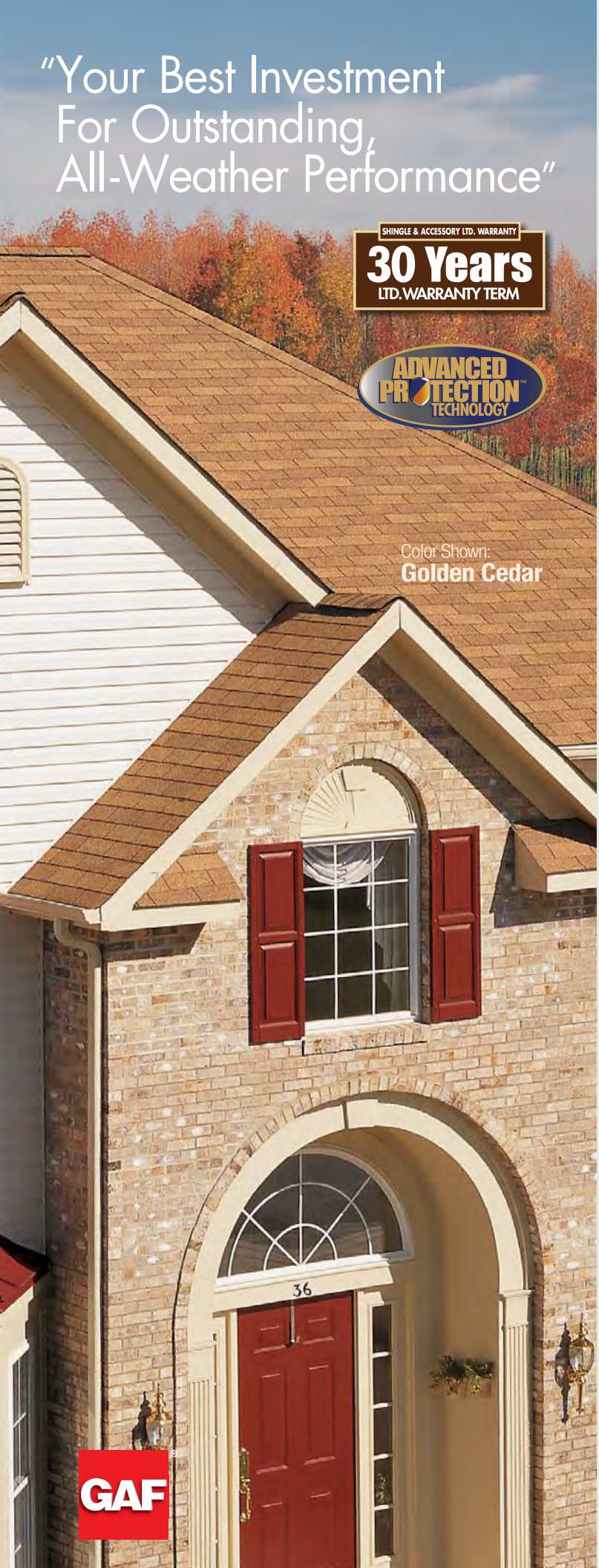
gaf.com
gaf.ca

Heptagon Roof areas

Gable Roof areas

Autumn Brown | Charcoal | Golden Cedar | Weathered Gray

"Your Best Investment For Outstanding, All-Weather Performance"



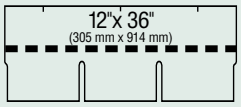
The top of the line in traditional "3-tab" shingles, Marquis WeatherMax® Shingles are designed for the discriminating homeowner who demands outstanding performance, classic detailing, and a traditional appeal.

for HOMEOWNERS

- ***Your Best Investment...*** For just pennies-a-day more than standard 3-tab shingles, Marquis WeatherMax® Shingles provide outstanding, all-weather performance
- ***Stays In Place...*** Passes the industry's two toughest wind tests: ASTM's 110 mph and 150 mph (177 & 241 km/h) wind tests (under controlled laboratory conditions)
- ***Advanced Protection® Shingle Technology...*** Reduces the use of precious natural resources while providing excellent protection for your home (visit gaf.com/aps to learn more)
- ***Highest Fire Rating...*** Class A fire rating from Underwriters Laboratories
- ***Looks Great...*** Color Lock™ Ceramic Firing (granules) helps maintain the true shingle color
- ***Great For Resale...*** Long-lasting beauty may increase your home's resale value
- ***Peace Of Mind...*** 30-year ltd. transferable warranty with Smart Choice® Protection (non-prorated material and installation labor coverage) for the first five years[1]

for PROFESSIONALS

- ***Versatile...*** Twice as sturdy as standard shingles, so they lie flatter and look better – excellent for reroofing or complete tear-offs
- ***Dependable Performance..*** Special Dura Grip™ Adhesive seals faster and easier than standard shingles – and at lower temperatures



Marquis WeatherMax® Shingles have earned the prestigious Good Housekeeping Seal, which means that Good Housekeeping stands behind this product. (Refer to Good Housekeeping Magazine for its consumer protection policy. Applicable in U.S. only.)

SPECIFICATIONS

Fiberglass Asphalt Construction
30-Year Ltd. Transferable Warranty[1]
80 mph Ltd. Wind Warranty[1]
Class A Fire Rated – UL 790
ASTM D3018 Type 1
ASTM D3462[2]
ASTM D3161, Class F
ASTM D7158, Class H
CSA A123.5
Approx. 79 Pieces/Square
Approx. 3 Bundles/Square
Approx. 316 Nails/Square
5" (127 mm) Exposure

[1] See *GAF Shingle & Accessory Ltd. Warranty* for complete coverage and restrictions.
[2] Periodically tested by independent and internal labs to ensure compliance with ASTM D3462 at time of manufacture.

Note: It is difficult to reproduce the color clarity and actual color blends of these products. Before selecting your color, please ask to see several full-size shingles.

gaf.com
gaf.ca

 1 Campus Drive, Parsippany NJ 07054 RESRS122