

Facility Assessment

Sacred Heart Church,
New Haven, Connecticut
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I. Report Executive Summary

Herbert S. Newman and Partners (HSNP) was asked to do a cursory survey and report of the existing conditions at Sacred Heart Church. A limited building survey was conducted and the subsequent report was issued. A more exhaustive and complete study should be conducted with evaluations from structural, civil and MEP engineers to evaluate existing conditions and make specific recommendations with drawings and specifications. The information below is conceptual in nature and will help the parish to determine the order of magnitude for budgeting in the near future.

For this report we have separated our findings into two categories of work.

1. Recommended Repairs
These repairs are considered a high priority. In most cases the work should happen within the next year. These items have been compiled into a priority list with allowances and budgets attached.
2. Discretionary Upgrades
The discretionary upgrades are considered a low priority. These recommendations should be evaluated with the program and future fund raising capabilities in mind. In most cases the work could be conducted with a phased schedule over multiple years.

For this report, we are preparing budgets and cost allowance for recommended repairs. Below, the recommended repairs are listed in order of priority.

Recommended Repairs / Budgets and Allowances

Repair Balcony Flooring (Estimate)	\$3,000
Re-Flash Roof and Gutters and Replace Downspouts (Allowance)	\$90,000
Transept Pier Repair (Estimate)	\$5,000
Patch, Repair and Paint Damaged Plaster (Allowance)	\$25,000
Re-Point, Transept, Rear Exterior Walls (Allowance)	\$75,000
New Tile Flooring Altar (Estimate)	\$17,000
Patch, Repair, and Paint Exterior Wood Trim (Estimate)	<u>\$16,000</u>
Total Conceptual Estimated Cost	\$231,000

End of Section

II. Introduction

The building code requirement currently allows for existing buildings to remain and function as they were originally intended. The local building and fire official determine any upgrade requirements.

However, should the parish choose to do a major program renovation of the church, it could be required to come into compliance with the current life safety and handicapped building codes.

The survey team was asked to review the building and determine what conditions threaten the life safety and welfare of the parishioners; what issues need to be resolved now and what items are at the discretion of the parish?

Each building component was evaluated in terms of existing conditions and recommended repairs.

End of Section

III. Description of Existing Conditions and Summary of Recommended Repairs

A. Interior Architectural Elements

1. Description of Existing Conditions

a. Floors

The floors of the church are wood construction bearing on masonry walls and piers. The altar floor is wood joists with plywood sheeting and carpet finish. The nave and transept are structural wood joist with plank flooring, carpeting in the aisles and exposed wood finish under the pews. The choir loft is wood joist with wood planking. The floor has several worn areas that have patched with plywood.



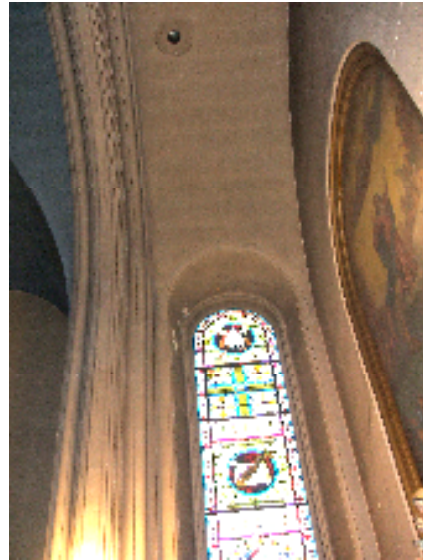
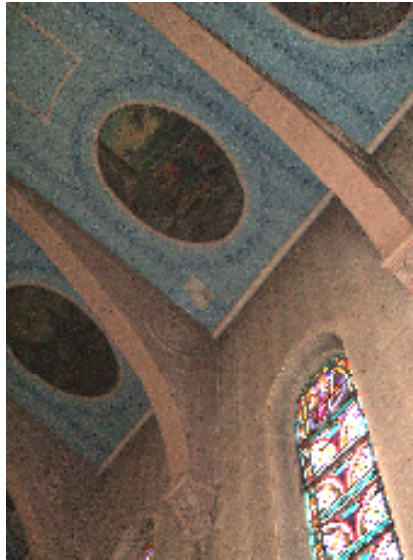
b. Walls

Most walls throughout the building are painted stucco walls. In a few areas there is visible cracking and spalling from what appears to be water infiltration. Throughout the building there is surface cracking that is characteristic of a building of this age. The paint surface has faded and discolored over time.



c. Ceilings

Most ceilings throughout the building are painted stucco. In some areas there is visible cracking and spalling from what appears to be water infiltration. Throughout the building there is surface cracking that is characteristic of a building of this age. The paint surface has faded and discolored over time.



d. Exit Doors

The current arrangement of doors at the front and rear sides of the church provides a balanced egress pattern. Parishioners can exit from behind the altar, at each transept and at three locations in the narthex. The hardware is currently exiting crash bars. The doors are not handicapped accessible.





e. Millwork and Pews

Most of the woodwork at the pews, altar and balcony show signs of age and wear. Most of the surface damage is due do exposure to sunlight and physical contact. The railing at the balcony does not meet current railing height requirements.



f. Bathroom

Currently the bathroom stairs and toilet rooms have ceiling heights that do not conform to current codes.

g. Handicapped Accessibility

Currently the building is not handicapped accessible. There is no wheel chair access to the nave, altar, balcony or bathrooms.

h. Life Safety

The building does not have a fire alarm or fire suppression system.

2. Suggested Interior Repairs and Remediation

a. Floors

The flooring at the choir loft should be repaired. The floor patching should be secure at all areas. The wood plank floor should be patch and repaired. The carpet at the altar is worn and separating from the sub floor. The altar carpet could be replaced with thin set tile or wood flooring. The remainder of the floors may continue to function as they have in the past. Most improvements would be cosmetic in nature. The floor creaking could be solved by furring and anchoring the floor.

b. Walls

The interior wall should be patched, painted and repaired upon completion of the flashing, drain pipe and gutter improvements (see roofing description in next section Exterior Architectural Elements).

c. Ceilings

The interior ceilings should be patched painted a repaired upon completion of the flashing, drain pipe and gutter improvements (see roofing description in next section Exterior Architectural Elements).

d. Exit Doors

At this time the local fire marshal has reviewed the egress plan and there are no requirements to add egress doors or change the exit hardware. The panic hardware could be updated to meet the current code at the discretion of the parish.

e. Millwork and Pews

Any improvements would be cosmetic in nature. Any of these improvements and upgrades would be at the discretion of the parish.

f. Bathrooms

The current bathrooms could be relocated to improve access and improve the ceiling height issues at the stair and the bathrooms. They should meet

current handicapped requirements. Any of these improvements would be at the discretion of the parish.

g. Handicapped Accessibility

Handicapped accessibility would need to be upgraded in the future if extensive program renovations are planned.

h. Life Safety

A fire alarm and sprinkler system would need to be installed if extensive program renovations are planned.

3. Summary of Recommended Repairs and Discretionary Upgrades

The recommendation at this time is to repair three interior areas as described above.

a. Recommended Repairs

Patch and Repair Choir Loft Flooring
Patch, Repair and Paint Damaged Plaster
Replace the Carpet at the Altar

b. Discretionary Upgrades

Fur and Anchor Floors
Install New Hardware at Exit Doors
Relocate Bathrooms to Main Floor
Improve Handicapped Accessibility
Add Fire Alarm and Fire Suppression Systems

End of Section

B. Exterior Architectural Elements

1. Description of Existing Conditions

The exterior wall appears to be solid, load bearing brownstone. The windows, doors, and trim are wood. The roof is slate with metal flashing at the edge. The gutters are integrated into the roof and drainage is through exterior roof drains.



a. Exterior Wall

The exterior wall is a bearing wall of solid masonry construction. The stone is rough cut brownstone with concrete mortar at the joints. The condition of the stone is excellent. It appears the building was re-pointed from the transept joint to the front façade. The transept and the back altar wall have visible gaps and cracks at the mortar joints



b. Roofing

The roofing is slate with steel and copper flashing. The gutters are integrated into the roof and the downspouts are mounted to the exterior. There are visible signs of water infiltration at the gutters and down spouts. This appears to be within the gutter lining at the transition joints at the transept. There is also water infiltration at the flashing on the chimney transition at the back altar wall.



c. Wood Trim and Windows

The exterior windows have wood sills, jambs and heads. The paint is peeling and cracking and the wood is exposed. The wood trim at the cupola and

fascias is also peeling and cracking and the wood is exposed in some areas. The exterior window could be replaced with double glazed low-e glass to improve heat loss.



2. Suggested Exterior Repairs and Remediation

a. Exterior Walls

The exterior walls should be re-pointed at the transept and altar walls. The nave and narthex have been re-pointed and do not need this work at this time.

b. Roofing

The roofing should be surveyed more extensively to determine the extent of the leakage. It appears that most of the leaks are at the gutter transitions and at the flashing joints. We recommend re-flashing all of the integrated gutters, and re-flashing at the existing transitions. A survey should be done of the copper roof and flashing at the cupola.

c. Wood Trim and Windows

All of the exterior wood should be scraped, patch, repaired and painted.

3. Summary of Recommended Repairs and Discretionary Upgrades

a. Recommended Repairs

Re-Point, Transept, Rear Exterior Walls
Re-Flash Roof and Gutters and Replace Downspouts
Patch, Repair and Paint Exterior Wood Trim

b. Discretionary Upgrades

Replace Exterior Windows

End of Section

C. Site

1. Description of Existing Condition

a. Site Handicapped Accessibility

The current building does not have an accessible route for the existing site grading to the building.

2. Suggested Site Repairs and Remediation

a. Description of Site Improvements

If the parish undertakes a campaign to make the building accessible a handicapped ramp would need to be constructed to accommodate access for site grading.

3. Summary of Recommended Repairs and Discretionary Upgrades

a. Recommended Repairs

No Recommended Repairs

b. Discretionary Upgrades

Handicapped Accessible Ramp at Entrance

End of Section

D. Structural Systems

1. Description of Existing Systems

The existing building masonry bearing wall is brown stone construction with timber joist framing at the floors. The floor joists bear on a series of brick masonry piers in the basement. The transept is supported by a series of piers that bear on beams that transition to the floor joist and wood planking and/ or plywood. The roof is wood rafter construction with wood sheathing and slate roofing.

a. Masonry Walls

Our limited visual observation, determined no visible signs of structural stress, cracks, or deflection in the masonry walls

b. Masonry Brick Piers

The brick piers should be examined more closely. From the visual inspection it appeared that one of the piers had an exposed footing at the connection of the transept.



c. Wood Rafters

A further investigation should be done of the wood rafters and roof sheathing. From visual observation from the ground, the water infiltration is only at selected areas and the full extent of the water damage will be

determined during the repair work.

d. Wood Joist Floor Construction

The wood joists and floors are plumb and the bridging ties are secure. From our limited observation there was no water infiltration and the wood was dry and insect free. The church was recently inspected by an exterminator.



2. Suggested Structural Repairs

a. Masonry Brick Piers

The brick pier at the transept should be further investigated by a structural engineer. It appears that a new concrete footing will need to be poured.

b. Wood Rafters

The water damage infiltration should be further investigated by a structural engineer. The full extent of the water damage will be determined during the repair.

3. Summary of Recommended Repairs and Discretionary Upgrades

a. Recommended Repairs

New Footing At Transept Pier
Review Rafters During Flashing and Gutter Repair

b. Discretionary Upgrades

No Recommended Upgrades

End of Section

E. Mechanical

1. Description Mechanical Systems

a. General

The current building does not have air conditioning. The heating system currently provides steam to cast iron radiation units at the altar, and narthex and to piping that runs along the floor in the narthex.

b. Boiler

The building is heated with an oil fired furnace. The boiler was replaced approximately ten years ago.



c. Cast Iron Radiation

The cast iron radiation system is supplied by steam from a central boiler.

2. Summary

At this time the mechanical systems will not need any major upgrades.

End of Section

F. Electrical

1. Description of Existing Electrical

a. Electrical

The electrical system is (2) 200 amp circuit breakers which are close to the end of their life cycle.

b. Electrical Utilities

The electrical utilities run to the back of the church though overhead service. The utility connection should be upgraded with the proper shielding.



2. Summary

It is recommended that an electrical engineer review the service, and utility connection and make a final recommendation.

End of Section