REPORT OF CURRENT CONDITIONS

Analysis & Documentation

Cathedral of the Immaculate Conception

By
Edward "Buzzy" Ribbeck
Lake Charles, Louisiana
01/05/2013

Book 1 of 4

Diocese of Lake Charles – Cathedral of the Immaculate Conception

The Most Reverend Bishop Glen John Provost, D.D., M.A. Bishop
Reverend Monsignor Daniel Torres, V.G.
Deacon George Stearns, Chancellor
Very Reverend Derek Covert. J.C.L., Judicial Vicar; Secretary Adjutant to Bishop Provost

411 Iris Street
Lake Charles, Louisiana 70601

Reverend Monsignor Jace F. Eskind, Rector, Immaculate Conception Cathedral

935 Bilbo Street
Lake Charles, Louisiana 70601

Table of Contents

Table of Contents

Introduction

2013 marks the 100th anniversary of Immaculate Conception Cathedral. The author of this report was requested to perform a site survey and follow with a report listing any conditions of concern. In other words, a "wellness report" . This report addresses the issues discovered from visual inspections only without performing selective destructive investigation techniques. Laboratory test results were made on small samples of paint chips, acoustical panel and vinyl tile obtained throughout various areas of the building as well.

Though digital photographs were taken and some of the many photos that were taken and studied, only a few were printed and included in this report. The author highly recommends viewing the digital photos as the report is read. These photos can be found on a computer disk bound in the back of this report.

This report represents the beginning of the process to identify problematic issues. The steps that follow will go into much more detail of each problem, documenting the specific problem, researching varies means and methods for correction to arrive at the most desired means, planning and coordinating the process, documenting the process and finally assembling the collected data in an organized means, formatting the data for archival for historical preservation for future generations use and creating a maintenance plan to prevent future deterioration.

There are a total of four (4) spiral bound "notebooks" that make up this report. The are as follows:

Book 1 of 4 - Titled "Analysis and Documentation" – A CD is included in the binder with digital photographs
Book 2 of 4 - Titled "History of Architectural/Engineering Plans"- A CD of the plans in PDF format is in back of binder.
Book 3 of 4 - Titled "Technical Preservation Briefs" (from the National Park Service)
Book 4 of 4 - Titled "Presbytery - Rectory " – A CD is included in the binder with digital photographs.

The architectural plans were fortunately found at various locations and should be protected from loss as they will be utilized far into the future and are of historical significance and are of substantial value. A full size set of each set of plans are provided for archives and placed in a 8" plan tube container for permanent records.

Purpose of Report

The purpose of this report is to perform a preliminary non destructive visual analysis of the current condition of the interior, exterior & surrounding grounds to observe present and potential problems to lead the corrective means whether for Preserving or Restoring of this historic structure & grounds as well as to provide guidance to perform work to prolong the life of the facility and continue it's historical significance into the future for generations to come.

The exact means of repair or maintenance is intentionally not addressed in this report and is left for a report to follow, that perhaps would be all inclusive of issues addressed herein or in conjunction with planned future preservation work. We have included preservation briefs from our library studied and utilized in previous historical design/build projects by our firm herein. These briefs were originally obtained from the Technical Preservation Services of the National Park Services of the United States of America and should be incorporated and utilized in further review and planning of the preservation and restoration of the facility. These briefs are an invaluable resource from years of work on historical properties.

Once all deficiencies are studied and means of repairs are finalized for the entire facility, a schedule of how the work should progress starting with the exterior work should be created and tied to the budget.

The commencement of this reports findings began with locating all the architectural and engineering documents from previous construction both original construction and later additions & renovations, followed by a study of the history of the construction, various additions & renovations. Field site visits were made to inspect and photograph to document findings. The plans provided substantial information that will continue to assist with the management and care of this property for generations to come. These plans should be carefully protected for future use. All of these documents and this report will eventually be prepared for protection from light and moisture and stored in the Diocesan archives for historical record keeping and future use.

Brief History of Parish & Church

The first Catholic church in Lake Charles, a mission chapel dedicated to St. Francis de Sales, was built in 1858. When the first resident priest arrived in 1869, St. Francis de Sales became an officially recognized Roman Catholic Parish. The church was damaged by a hurricane on August 22, 1879. A new church was erected for the parish in 1881 and renamed the Church of the Immaculate Conception. This church burnt on April 23,1910, to be replaced with the current structure.

This two-story church with its five-story bell tower, a rectory and a breezeway, was designed by Favrot and Livaudais of New Orleans, LA. in 1912 and constructed by Reinhart and Donovan Contractors and completed and dedicated on 12/18/1913. Purely Romanesque in design, the windows and doorways are arched in brick and decorated with brick crosses and original stained glass, including a series of Viennese stained glass windows depicting the story of Mary's life installed in 1939. The interior walls are lined with simulated acoustical stone blocks. The floor plan, under a vaulted half-dome ceiling, resembles the shape of a Greek cross.

The Cathedral of the Immaculate Conception is a Catholic cathedral located at 935 Bilbo Street, Lake Charles, Louisiana. It is the seat of the Diocese of Lake Charles, and it is listed on the National Register of Historic Places. On January 29, 1980 Blessed John Paul II established the Diocese of Lake Charles and Immaculate Conception became the cathedral for the new diocese, The Cathedral of the Immaculate Conception.

In 2000 the Parish was named a Proto-Parish.

.

Historical Significance & Registration

National Historic Significance

The Cathedral of the Immaculate Conception Catholic Church is a historical structure added to the National Register of Historic Places in 1994 -- # 94001201. The listing is recorded as:

Historic Significance:	Architecture/Engineering
Architect/Engineer:	Reinhart and Donovan, Favrot & Livaudais
Architectural Style:	Romanesque
Area of Significance:	Architecture
Period of Significance:	1900-1924
Owner:	Private
Historic Function:	Religion
Historic Sub-Function:	Religious Structure
Current Function:	Religion
Current Sub-Function:	Religious Structure

U.S. Department of Interior Standards

The U.S. Department of the Interior, National Park Service sets the Standards for Preservation & Guidelines for Preserving, Rehabilitating, Restoring & Reconstructing Historic Buildings. These guidelines along with the assistance of experienced restorers/rehabilitation/reconstruction professionals make for a successful project and to maintain the facilities historic presence and certification.

The Preservation Guidelines include various types of treatments for properties by category.

Rehabilitation:

Rehabilitation is defined as the act or process of making possible a compatible use for a property through repair; alterations, and additions while preserving those portions or features which convey its historical, cultural, or architectural values.

Preservation:

Preservation is defined as the act or process of applying measures necessary to sustain the existing form, integrity, and materials of an historic property. Work, including preliminary measures to protect and stabilize the property, generally focuses upon the ongoing maintenance and repair of historic materials and features rather than extensive replacement and new construction. New exterior additions are not within the scope of this treatment; however; the limited and sensitive upgrading of mechanical, electrical, and plumbing systems and other code-required work to make properties functional is appropriate within a preservation project.

U.S. Department of Interior Standards

Restoring (Restoration):

Restoration is defined as the act or process of accurately depicting the form, features, and character of a property as it appeared at a particular period of time by means of the removal of features from other periods in its history and reconstruction of missing features from the restoration period. The limited and sensitive upgrading of mechanical, electrical, and plumbing systems and other code-required work to make properties functional is appropriate within a restoration project.

Reconstruction:

Reconstruction is defined as the act or process of depicting, by means of new construction, the form, features, and detailing of a non-surviving site, landscape, building, structure, or object for the purpose of replicating its appearance at a specific period of time and in its historic location.

History of Construction, Renovations & Additions

The following schedule of architectural and engineering drawings on the following page provides a history of the architectural/engineering plans located thus far providing a chronological graph of construction, renovations and additions to the property. Plans were not found, if exist, for some of the work listed on the following pages. Where plans were not located, the data was extracted from historical writings such as the Lake Charles American Press and other documents obtained from prior research by Ann Romero.

1913 - The original church and Presbytery as it presently stands was designed in 1912 and constructed in 1913. Its 100 year anniversary is the year 2013.

1916/10/1 – Electro-Pneumatic Action Organ installed by Mohler Company.

1923 Three (3) Gothic Altars were obtained from the Salt Lake City Cathedral, procured by the Paul Zimmermann's and were installed by Solari Tile Company.

1936, Various alterations and additions were performed such as confessional, vestment case and terra cotta trimmed windows.

1936/4/19 – Purchased and installed the church tower bell, named “Mary”.

1939 – Stained leaded glass furnished and installed by Emile Frei, Inc., St. Louis, Mo., glass was produced in Vienna. New iron windows were measured for and ordered based upon designs chosen by Parish. The glass is known as Antique with the color burned into them.

1939 - Painted and re-stenciled chancel walls.

1939 - Heating system installed. (no plans were located thus far for this work, data from American Press, 1/12/1939).

History of Construction, Renovations & Additions

1944, the original wood joist and floor system in the Nave was removed and replaced with an engineered concrete pier foundation supporting a structural concrete slab to support a new terrazzo floor. The original wood joist and subfloor system still remains at the Sacristy. The Sanctuary and Main Center Vestibule floor is the original elevated structural concrete slab covered with marble.

1955 -1956 – Marble wainscot installed on side aisles and the Chancel, acoustical tile attached to Nave above the marble wainscot. Columns were covered with Tennessee marble and Solari Marble (Solari Tile Company) built a marble pulpit.

1957 – Wicks organ installed in loft.

1963 – New marble Altar (Alabama marble) made by Solari Marble, 5 engraved crosses on the top. Relics of two Saints: St. Prosper and St. Clarus. Consecrated and dedicated 11/17/1966.

1972, The Meeting Room Addition (Parish Life Center) was designed and constructed in 1973 on the north side of the church, connecting the church with a covered walkway. Included Cloister, Patio & Statue of Our Lady of Beauraing.

1980, Reroofing of the church was performed. According to the plans, the lower roofs were replaced with new tile and one layer of 43# felt, salvaging the old tile. On the higher roof areas, the tile was removed, salvaged; applying two new layers of 30# asbestos fiber felt underlayment then reinstalling the salvaged tile.

1982 – Masonry sign designed and constructed.

History of Construction, Renovations & Additions

1980 – Parish Life Center became “day Chapel”. The old fire station across Bilbo Street, turned into the City Court Building was purchased by the Parish and turned into the Parish Life Center and Church offices, including parking lot.

1987 – Electrical lighting and work performed.

1993/March – Organ rebuilt by Wicks Organ Company now consisting of 1,042 pipes with 21 ranks.

1993 – Plexiglass covering of stained glass windows installed.

1994-5-18 An Architectural and Art History was published which contains historical and educational information on the floor plan, windows, ceiling paintings etc. This book should be kept with other pertinent data and archived for historical reference for future generations.

2003 – Demolished “Old” Parish Life Center building and constructed new Ave Maria Life Center and Parish offices in it’s place.

History of Construction – Architectural & Engineering Plans

Item #	*Plan Date*	*Architect/Engineer*	*Architects Home Office Location*	*Job #*	*Sheets*	*Project Description*
1	May 2, 1912	Favrot & Livaudais Ltd	New Orleans, Louisiana	694	23	Original Construction Drawings - Cathedral
2	May 20, 1912	Favrot & Livaudais Ltd	New Orleans, Louisiana	694	5	Original Construction Drawings - Presbytery
3	January 3, 1936	Andry & Feitel, Architects	New Orleans, Louisiana	273	1	Various Alterations & Additions (confessional, Vestment Case,
4	April 1, 1939	Dunn & Quinn Architects & Engineers	Lake Charles, Louisiana	273	2	Electrical Plan with Circuit Numbers
5	No Date on Plan	Dunn & Quinn Architects & Engineers	Lake Charles, Louisiana	273	3	Terra Cotta Trimmed Windows, Confessionals & Transepts
6	May, 1944	Dunn & Quinn Architects & Engineers	Lake Charles, Louisiana	273-A	2	Concrete & Terrazzo Floor System - HVAC?
7	April 6, 1948	Dunn & Quinn Architects & Engineers	Lake Charles, Louisiana	273-48	2	Additions to Rectory
8	May, 1972	Dunn & Quinn Architects & Engineers	Lake Charles, Louisiana	273 R-72	1	Rectory Toilet Addition
9	August, 1972	Dunn & Quinn Architects & Engineers	Lake Charles, Louisiana	273-72	8	Meeting Room Addition
10	March, 1975	Dunn & Quinn Architects & Engineers	Lake Charles, Louisiana	273-75	1	Renovations to Rectory
11	October, 1975	Dunn & Quinn Architects & Engineers	Lake Charles, Louisiana	273-75	2	Air Conditioning of Rectory
12	December 31, 1980	Whitaker & Webb	Lake Charles, Louisiana	273	1	Survey of Gray Estate, Lots 58,59,60
13	January, 1980	Dunn Quinn Gallaugher & Quinn	Lake Charles, Louisiana	273-80	3	Re-Roofing of Church & Rectory 2 sheets of same drawing with inspection hand notes
14	August, 1981	D.W. Jessen & Associates	Lake Charles, Louisiana	273	1	City of Lake Charles Paving & Drainage of Bilbo Street
15	October, 1981	Dunn Quinn Gallaugher & Quinn	Lake Charles, Louisiana	273-81	1	Parking Lot & Driveway Addition, Kirby & Bilbo St.
16	No Date on Plan	Dunn Quinn Gallaugher & Quinn	Lake Charles, Louisiana	273 A/C	1	Chilled Water Hot Water System - A/C Units
17	March, 1982	Dunn Quinn Gallaugher & Quinn	Lake Charles, Louisiana	273-82	1	Masonry Sign
18	April, 1986	Dunn Quinn Gallaugher & Quinn	Lake Charles, Louisiana	273-86PL	1	Parking Lot Paving @ Office Parking Lot
19	October, 1987	Dunn Quinn Gallaugher & Quinn	Lake Charles, Louisiana	273-87	3	Lighting & Electrical Plan, New Electrical Service

Moisture

Moisture is one of the most prevalent causes of decay in historic buildings. Excessive moisture from rain, ground water and condensation can inflict damage ranging from dampened wall products and plaster to severe deterioration of structural components. In extreme cases, moisture can jeopardize brick walls and can threaten building stability.

Moisture can rise through the wall from below the foundation; outside moisture and humidity can penetrate absorptive wall surfaces; vapor can move in and out of building materials; moisture can travel into materials either with exterior driving rain or interior humidity or condensation.

The building's exterior – foundation walls, exterior walls, openings and roof are constantly exposed to the elements. Moisture, ultraviolet rays, wind and hail all accelerate deterioration. One of the challenges of preservation is to keep a building weather-tight while still allowing the materials to expand and contract naturally. As building materials expand and contract, openings for moisture penetration will undoubtedly occur. Only routine inspections and cyclical maintenance can slow down this natural process of deterioration.

There is evidence as documented of excessive moisture entering the envelope of the structure. Moisture and ponding water was found in the crawl space under the ground level floor, walls and ceilings. The interior side of the exterior wall surfaces were covered with an acoustic material some years later after the original construction. The acoustical panels are latent with excessive moisture. Moisture is entering the envelope of the structure and being absorbed by the acoustical panels. This retained moisture being held by these acoustical panels (which were tested for Asbestos and were found to contain 3% to 10% of Chrysoltile asbestos) have affected the original plaster walls in which they were attached to. The results of the preliminary survey report by Booth Environmental Services, LLC is made a part of this report.

Moisture

Moisture measurements will be taken on the envelope of the structure and provided by addendum to this report. Measurements will be obtained by infrared thermography (IRT) and moisture meter readings of materials will be logged to establish the prevalent areas of moisture sources and migration.

Lake Charles, Louisiana is considered a Hot Humid Climate Zone based on Herbertson's Thermal Regions. Humidity (the amount of water vapor in the air) is substantial in this zone. Careful examination, research and planning must be carried out to provide the correct products, application techniques, design and maintenance of facilities. Rain is inherent in this region and designs to deal with 60+ inches of rainfall a year must be carefully considered whether a project is being planned for maintenance, restoration, preservation, rehabilitation or reconstruction.

Identification of Problem Areas – Site & Grounds

Site:

The site is bound by masonry fences set on concrete foundations. Both paved and grass/landscaped areas exist within these bounds. Drainage of rain water is inhibited and needs to be addressed to allow rapid run off and disposal of rain water to prevent ponding and saturation of the soil that can lead to foundation problems and failure.

Currently, water is found ponding under the structure and poses problems that can exacerbate foundation settlement, attraction of termites and rot. This water and drainage must be addressed. Mature large plants surround most of the building at its foundation base obstructing the proper ventilation of the underside of the raised floor areas. These plants should be removed and a new landscape plan should be encompassed and coordinated with any new work performed on the exterior.

Vertical elevations of the site must be surveyed and recorded to start the process of design for a healthy site to deal with rain water run off and to move the water away from the foundation lines and the crawl space.

Rainwater is controlled by gutters and downspout, as well as grade sloping away from the building, Ground water is controlled by a drain pipe at the footing carried away to municipal storm drains.

Identification of Problem Areas – Site and Grounds

Masonry perimeter fencing and drainage obstacles.

Identification of Problem Areas – Site and Grounds

Masonry perimeter fencing and drainage obstacles.

Perimeter plants that can affect Foundation, drainage & Circulation of outside air between the floor and Ground.

Identification of Problem Areas – Crawl Space

The original wood floor joist in the Nave were removed in 1944 and replaced with a concrete and terrazzo floor system. The architectural/engineering drawings obtained do not reflect the HVAC ductwork presently installed, but the photographs taken during this inspection lead the writer to believe that the ductwork was installed during this time frame. Some newer duct work has been added over time as indicated in the photographs.

The crawl space under the floor contains electrical, communication lines/wiring and HVAC ductwork. The vestibule has a concrete floor poured over the wood subfloor with marble as the finished material.. HVAC systems were added. The duct work system was installed under the floor in the crawl space area.

Standing water was found at the south eastern part of the structure. This water intrusion must be identified and stopped to prevent foundation failure, mold, fungus, rot and or mildew and termites. Other means of moisture are created by capillary action, humidity, rising damp and condensation.

Capillary suction is controlled by a break on top of the foundation wall.

Ventilation through open vents in the crawl space walls removes moisture from the crawl space interior. The current vents for the most part are damaged and are in need of repair or replacement.

Air movement into the space is controlled by pressurizing the above grade conditioned space, limiting or sealing all penetrations between the crawl space and the conditioned space and placing an impervious product over the soil.

Identification of Problem Areas – Crawl Space

Vapor diffusion from the soil should be controlled by an impervious product placed over the soil after leveling large random deposits of earth excavated during the newer foundation installed in 1944.

Abandoned mechanical piping, electrical wiring and conduit, abandoned sheet metal ductwork and construction debris are found through out the entire crawl space and should be removed.

Open electrical junction boxes and connections are exposed and dangerous. Electrical conduit is rusted, corroded and rotted and is in need of replacement. Electrical wiring should be replaced simultaneously and new upgraded circuit panels should be installed.

The rising ground moisture due to lack of an existing, properly placed impervious vapor barrier is causing concrete reinforcing to rust and deteriorate which will eventually cause structural failure and undesired deflection in the floor.

Soil should be leveled out where mounded to provide an even ground surface to install an impervious vapor barrier.

Concrete spalling is present and should be addressed.

Evidence of termite damage is present and is in need of inspection to determine if this is old or current damage. Additional treatment may be needed.

Insulation around existing ductwork is deteriorated and is in need of replacement.

Identification of Problem Areas – Foundation

Foundations appear to be sound. Evidence of settlement such as typically observed in the masonry walls was not found in excess of what would be expected in a building of this type and age. Elevations were obtained in the Nave and alter to obtain vertical variances. We have included our findings in this report which follow this pages. The largest variance from the highest elevation obtained to the lowest elevation obtained in the Nave was .08 feet or 15/16". This would not be deemed excessive. The variation does not necessarily indicate settlement and could be attributed to the way it was constructed. Further study of the elevations indicate on south exterior wall line, the foundation only varies by 1/2". The north wall of the Nave varies in elevation only by 13/16". These are well within what would be expected and why the masonry wall does not indicate settlement. The original nave wood joist and wood subfloor was supported in part the by exterior foundation walls that also support the masonry walls. The original wood floor system was removed around 1944 (design by Dunn & Quinn Architects & Engineers) and replaced with a concrete pier and beam foundation and overlaid with a terrazzo floor system. The weight of the new floor system is partially supported by the perimeter foundation walls that also support the exterior masonry walls.

The Altar did not indicate any variation in elevation. It is supported on top of a solid reinforced concrete foundation spread footings and walls as indicated in the photographs and original construction drawings by Favrot & Livaudais Ltd dated 1912.

Removal of water intrusion, current standing water and drainage systems to move rain water away from the foundation exterior will promote for a healthy foundation environment in many years to come.

Identification of Problem Areas – Crawl Space

Damaged crawl space grills and masonry lintel corroded

Identification of Problem Areas – Crawl Space

Corroded sewer, water, HVAC & electrical piping in need of replacement or removal & disposal if Abandoned. Water Ponding.

Identification of Problem Areas – Crawl Space

Corroded sewer, water, HVAC & electrical piping in need of replacement or removal if abandoned

Identification of Problem Areas – Crawl Space

Concrete spalling, refrigerant piping insulation in need of repair. Hole in floor system

Identification of Problem Areas – Crawl Space

Open electrical junction box, corroded electrical box, exposed wiring

Identification of Problem Areas – Crawl Space

Exposed electrical wiring. Construction debris remnants. HVAC duct insulation displaced from metal ductwork. Soil needs to be spread out and impervious vapor barrier installed to prevent moisture from rising through the soil and affecting the construction materials as well as penetrating into the conditioned interior spaces affecting the design sizing, wear, tear and use of the HVAC systems.

Identification of Problem Areas – Crawl Space

Dangerous and improper exposed electrical wiring connections.

Identification of Problem Areas – Crawl Space

HVAC freon & suction line insulation jacket pulled apart and requires attention.

Identification of Problem Areas – Crawl Space

Corroded fastenings & hangers in need of replacement and support system. Exposed romex wiring that should be in electrical conduit.

Identification of Problem Areas – Crawl Space

Loose wiring, spalling concrete at underside of floor system. Wet and damaged ductwork. Damaged crawl space vent in background

Identification of Problem Areas – Crawl Space

Evidence of termite and or ant Insect dirt piles. Construction Debris in need of removal for Placement of moisture barriers directly on ground.

Identification of Problem Areas – Crawl Space

Spalling concrete at the underside of the floor exposing the concrete reinforcing. The reinforcing is exposed to the moisture from the ground causing corrosion and eventual structural concrete failure.

Identification of Problem Areas – Crawl Space

Water intrusion at basement through foundation walls. waterproofing required

Identification of Problem Areas – Crawl Space

Damaged insulation, rusted and corroded piping and support system.

Identification of Problem Areas – Crawl Space

Evidence of termites and termite damage.

Identification of Problem Areas – Crawl Space

Foil facing on ductwork insulation damaged. Wet earth. Damaged and broken duct support system.

Identification of Problem Areas – Crawl Space

Loose exposed wiring. Wet earth. Damaged crawl space vent grill. Construction debris.

Identification of Problem Areas – Crawl Space

Ductwork insulation damaged and need of replacement. Wet earth. Damaged crawl space vent. Construction debris remnants. Loose exposed wiring.

Evidence of termites. Note line of termite travel.

Identification of Problem Areas – Crawl Space

Evidence of termite damage

Identification of Problem Areas – Crawl Space

Damaged HVAC insulation, loose exposed wiring

Identification of Problem Areas – Crawl Space

Identification of Problem Areas – Crawl Space

Construction debris requires removal and disposal. Rusted and abandoned piping requires removal & replacement.

Identification of Problem Areas – Crawl Space

Wiring requires conduit and suspension from bottom of floor system. HVAC piping missing insulation as well as piping is corroded.

Identification of Problem Areas – Crawl Space

Loose wiring requiring conduit.

Identification of Problem Areas – Crawl Space

Wet earth, loose exposed wiring, damaged wet HVAC duct insulation. Rusted HVAC piping. Wood joist with evidence of termites.

Identification of Problem Areas – Crawl Space

Electrical wiring exposed. Rusted and deteriorated conduit and electrical boxes

Identification of Problem Areas – Crawl Space

Strewn debris, rusted and corroded piping, un-insulated HVAC ductwork. Exposed wiring, wet earth creating moisture problems.

Identification of Problem Areas – Crawl Space

Damaged and corroded crawl space ventilation grill. Steel lintel above supporting brick wall opening is corroded and in need of replacement. This is typical of most vents at perimeter. Note the rising damp from the soil in the masonry.

Identification of Problem Areas – Crawl Space

HVAC ductwork missing insulation. Animals have entered crawl space through perimeter wall crawl space vents that have corroded or been damaged and destroyed insulation.

Identification of Problem Areas – Crawl Space

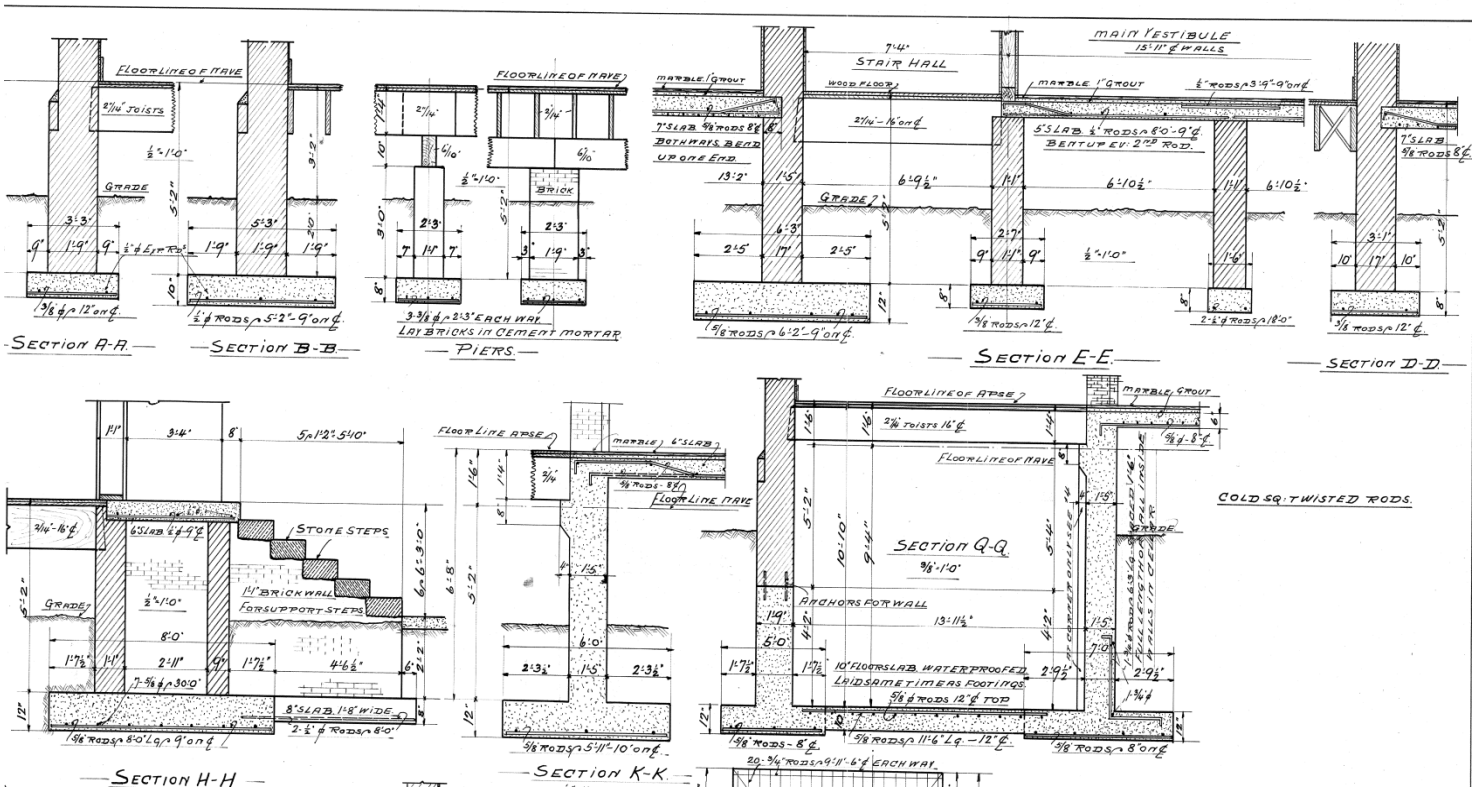
Mounded wet/damp soil that should be knocked down to allow coverage and access through to other areas of crawl Space. Termite damaged wood beam at underside of elevated concrete floor slab system. Loose wiring should be in conduit.

Identification of Problem Areas – Crawl Space

Spalling concrete, exposed concrete reinforcing steel at underside of floor system. Rusted and deteriorated conduit. Crawl space ventilation grills broken and in disrepair. Electrical wiring left exposed. Mechanical supports rusted and corroded. Wet and damp earth in need of coverage.

Identification of Problem Areas – Crawl Space & Foundation

Sections of foundation piers, pads and floor construction from original drawings.



Identification of Problem Areas – Bell Tower

The bell tower is part of the original construction. Evidence of moisture migration is through the walls is present at the 1st floor level.

Interior stucco is spalling and dead. Discoloration is present indicating moisture problems.

The steel windows are in need of restoring. Windows are leaking & deteriorated.

Exterior masonry needs cleaning, repointing and an analysis on sealants to prevent moisture penetration/migration and spalling of brick during freeze/dry cycles.

The old bell works should be removed. The new bell supports have damaged the masonry.

Roofing and wall to roof flashing is in need of work. Flashing at walls is pulled away from the masonry walls at the upper level.

The masonry has been strained from movement during high winds at the upper floor bell tower. The structural steel supports for the bell are in need of rust removal and repainting. Bricks are damaged and are in need of replacement.

Columns are damaged and are in need of repair.

Water stains are prevalent from the underside of the bell tower top floor level.

Identification of Problem Areas – Bell Tower

Plaster at bell tower windows spalling due to moisture penetration.

Identification of Problem Areas – Bell Tower

Plaster stress crack at bell tower. Spalled plaster at windows.

Identification of Problem Areas – Bell Tower

Plaster at bell tower windows & walls spalling due to moisture penetration.

Identification of Problem Areas – Bell Tower

Plaster at bell tower windows & walls spalling due to moisture penetration.

Identification of Problem Areas – Bell Tower

Plaster at bell tower windows & walls spalling due to moisture penetration.

Identification of Problem Areas – Bell Tower

Various types of glass have been utilized over the years to replace broken/damaged glass. Broken glass currently exist.

Identification of Problem Areas – Bell Tower

Various types of glass have been utilized over the years to replace broken/damaged glass. Broken glass currently exist. Broken arms on operable windows are damaged and in need of being restored to original operation.

Identification of Problem Areas – Bell Tower

Old bell works are in need of removal as well as cleaning of flammable petroleum products from wood flooring.

Identification of Problem Areas – Bell Tower

Closer inspection/view of windows in bell tower indicate the need for window glass and window parts restoration/replacement.

Identification of Problem Areas – Bell Tower

Bell tower bell works structural steel supports in need of cleaning and coating. Electrical gear/disconnects are in need of replacement, wiring and connections should be inspected and repaired/replaced where necessary to protect from environment and to prolong life.

Identification of Problem Areas – Bell Tower

Bell tower bell structural steel supports in need of cleaning and coating. Masonry in need of restoration/repair where damaged. These steel beams were not part or the original construction and were added to support the bell.

Identification of Problem Areas – Bell Tower

Bell tower floor in need of waterproof membrane replacement and related floor to wall copper flashing. Old supports need attention and a study of whether the bell should be supported by floor or masonry walls.

Identification of Problem Areas – Bell Tower

Bell tower top floor in need of new waterproof membrane , flashing and electrical rework.

Identification of Problem Areas – Bell Tower

Bell tower top floor. Floor membrane needs replacement, new wall to floor flashing, rework of electrical. Masonry damaged from installation of steel beams to support bell.

Identification of Problem Areas – Bell Tower

Bell tower masonry damaged. Repairs of poor quality workmanship. Electrical wiring requires attention.

Identification of Problem Areas – Bell Tower

Structural steel bell support which was not part of the original construction was installed in the masonry wall. Damage has resulted from possibly high winds during past storms.

Identification of Problem Areas – Bell Tower

Columns at bell tower damaged in need of repair.

Identification of Problem Areas – Bell Tower

Bell tower floor needs the floor removed and replaced with along with new floor to wall copper flashing. Masonry needs repointing and waterproofing.

Identification of Problem Areas – Bell Tower

Floor to wall flashing needs replacing at bell tower top level.

Identification of Problem Areas – Roof

The roof is a clay tile roof with felt underlayment and copper flashings at valleys, parapets, wall/roof intersections and the like. Some of the roof has been replaced over the years.

In 1980, Reroofing of the church was performed. The lower roofs (3/12 pitch) around the Cross were replaced with new tile and one layer of 43# felt & 2 layers of hot mopped 15 lbs. felt. The old tile was called on the plans to be salvaged. On the higher roof areas (7/12 pitch), the tile was removed, salvaged; applying two new layers of 30# asbestos fiber felt underlayment then reinstalling the salvaged tile.

This information was extracted from the architectural/engineering plans. The roof has not been inspected in detail, but appears sound. The clay tile appear to be in very good shape. The copper flashings and valleys etc., should be further inspected to assure no hidden damage is apparent.

The underlayment “felt” is the critical element along with the copper flashings. The underlayment layering was an excellent design, as the expense in this roof system clearly is the clay tile. The underlayment is relatively inexpensive compared to the cost of removing and replacing the clay tile. Due to the layering of the underlayment, it could be safely assumed that the roof “system” is in excellent shape for another 50 to 100 years. However, the copper flashings should be more closely examined, photographed and documented by an experienced contractor. The flashings were not called to be replaced at the time of the reroofing in 1980.

The copper gutters were called to be removed , while a layer of “nervastral” rubberized flashing was installed under the gutter and rolled up under the leading tile on the roof. The gutters were called to be reinstalled after the installation of the rubberized secondary flashing material. Should the gutters deteriorate and a water leak occur, the rubberized flashing should divert the water to the exterior of the envelope.

Identification of Problem Areas – Roof

Gutters & downspouts will require reworking of the joints. Evidence is apparent at seams where water stains are evidence of leaks.

Some decking that was damaged or rotted was removed and replaced during the re-roofing project in 1980. From an inspection in the attic, it appears the roof structural wood decking is in very good shape. There is some evidence of what appears to be old water stains.

The workmanship of the roof structure is impressive, especially considering that the rough lumber was cut by hand saw. The joinery is superb and leads to a well constructed sound structure.

The original clay tiles that were removed during the 1980 re-roofing were salvaged and placed in the cellar Of the church. These clay tiles should be maintained and kept for potential future use.

Identification of Problem Areas – Roof

The roof appears to be in good shape. Further inspection of copper flashings, valleys, gutter and downspouts will be necessary. Parapet masonry work and chimney caps need closer inspection and documentation to insure there are no hidden defects.

Identification of Problem Areas – Roof

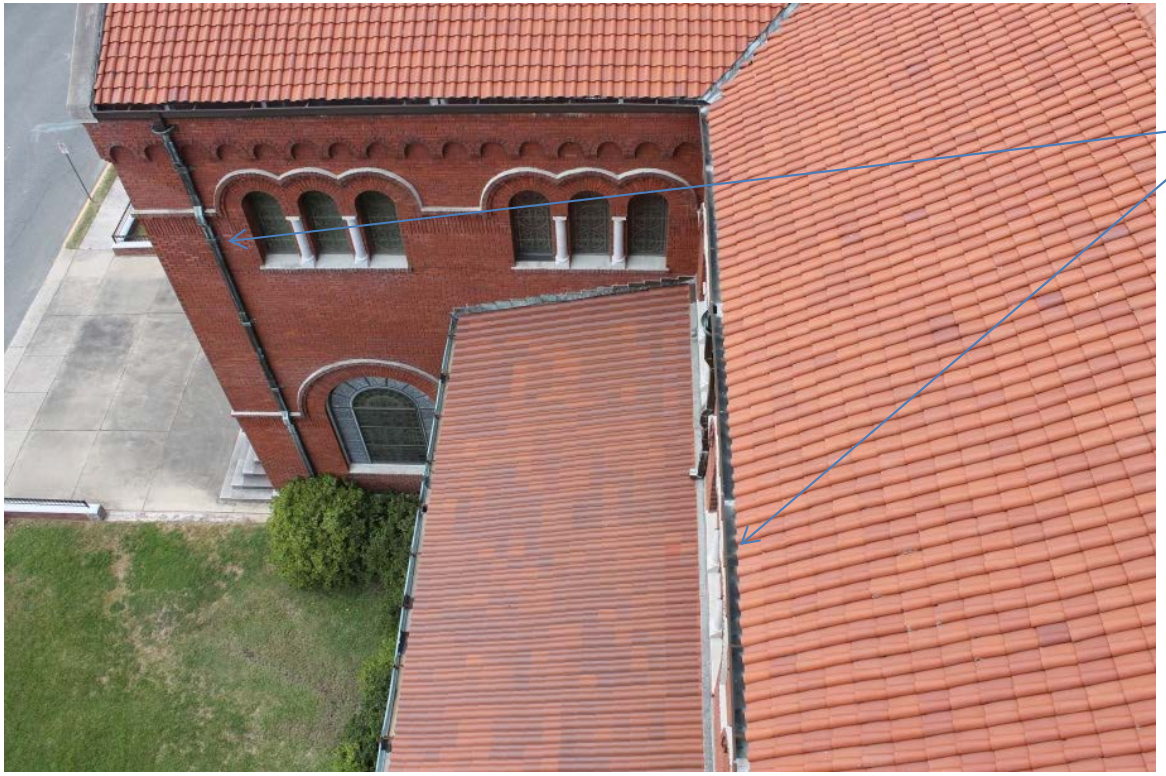
Masonry calcification or sealer/waterproofing.

Identification of Problem Areas – Roof

Masonry calcification or sealer/waterproofing. Dirt/debris should be removed from clay tile. Built up roof system needs close inspection along with all flashings on the meeting room addition.

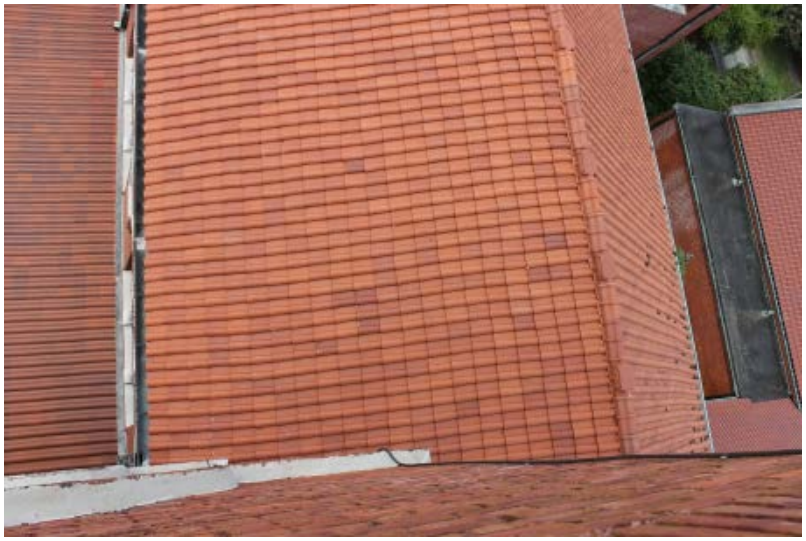
Identification of Problem Areas – Roof

Identification of Problem Areas – Roof



Evidence of efflorescence or remnant of sealer previously installed. Gutters and flashings will require a detailed inspection from the roof.

Identification of Problem Areas – Roof



Identification of Problem Areas – Roof

Step roof to wall flashings need close inspections to insure continuity and are without damage.

White coloring is either remnants of prior sealant coating installed in early 1970's or calcification.

Identification of Problem Areas – Roof

The attic/roof framing appears to be in very good condition. The workmanship is superior. The following photographs of the attic over the Narthex, Nave, North Transept, South Transept, Crossing and Altar.

The architectural plans by Dunn, Quinn, Gallaugher & Quinn found under tab 13 of Book 2 of 4 provide details of the reroofing project performed in 1980. The plans provide information on damaged wood decking that was replaced during the reroofing process.

There were no signs of damaged wood decking on the underside of the roof deck. There are signs of what appear to be old water stains on some of the lumber, however, the source of water penetration was apparently repaired prior to structural damage to the wood occurred.

Identification of Problem Areas – Roof

South entry to roof structure from bell tower. Old stain marks from earlier years of rain water leakage.

Identification of Problem Areas – Roof

Main roof over
south side of Nave.
No issues found.

Identification of Problem Areas – Roof

Main roof over Nave.
No issues.

Identification of Problem Areas – Roof

North side of east end of Nave. Old roof leak stains on wood framing members. No issues found.

Identification of Problem Areas – Roof

Old water stains. Wood is not structurally damaged and is still sound.

Identification of Problem Areas – Roof

Old water stain. All framing and joinery are in good shape. No signs of damage or insect infestation.

Identification of Problem Areas – Roof

Identification of Problem Areas – Roof

Original roof truss over Apse. All fastenings are steadfast and in good condition. Joints are tight and proper. No signs of decay or insect damage. Electrical was added later.

Identification of Problem Areas – Roof

All framing is in very good condition. No problems found. Wiring connections are improper and need to be installed inside an electrical box.

Identification of Problem Areas – Roof

All framing appears to be in good shape. All joinery is tight. No signs of insects or damage.

Identification of Problem Areas – Roof

All framing appears to be in good shape. All joinery is tight. No signs of insects or damage.

Identification of Problem Areas – Roof

All framing appears to be in good shape. All joinery is tight. No signs of insects or damage.

Identification of Problem Areas – Roof

All framing appears to be in good shape. All joinery is tight. No signs of insects or damage.

Identification of Problem Areas – Roof

All framing appears to be in good shape.
All joinery is tight.
No signs of insects or damage.

Old water stain.

Identification of Problem Areas – Roof

All framing appears to be in good shape. All joinery is tight. No signs of insects or damage.

Identification of Problem Areas – Roof

All framing appears to be in good shape. All joinery is tight. No signs of insects or damage.

Identification of Problem Areas – Roof

All framing appears to be in good shape. All joinery is tight. No signs of insects or damage.

Construction debris requires removal and should not be left in attic.

Identification of Problem Areas – Roof

Old water stains from leaks prior to re-roofing performed in 1980.

Identification of Problem Areas – Masonry & Terra-Cotta

The walls are of solid masonry construction varying in depth from 1'-0" to as wide as 3'-3". The brick are common size red brick. The original source is unknown. The exterior walls are indicative that some sort of coating was installed apparently some time around early 1970. It would be advisable to locate the records concerning this previous treatment to obtain information on date of work, company providing the services, methods and specific materials utilized. Harmony between various products used must be heeded to prevent later complications. The U.S. Department of the Interior National Park Service, Heritage Preservation Services advises against use of coatings and or sealers.

Inappropriate cleaning and coating treatments are a major cause of damage to historic masonry buildings. While either or both treatments may be appropriate in some cases, they can be very destructive to historic masonry if they are not selected carefully. Historic masonry, as considered here, includes stone, brick, architectural terra cotta, cast stone, concrete and concrete block. It is frequently cleaned because cleaning is equated with improvement. Cleaning may sometimes be followed by the application of a water-repellent coating. However, unless these procedures are carried out under the guidance and supervision of an experienced professional, they may result in irrevocable damage to the historic resource.

Water-Repellent Coatings and Waterproof Coatings
To begin with, it is important to understand that waterproof coatings and water-repellent coatings are not the same. Although these terms are frequently interchanged and commonly confused with one another, they are completely different materials. **Water-repellent coatings**--often referred to incorrectly as "sealers", but which do not or should not "seal"--are intended to keep liquid water from penetrating the surface but to allow water vapor to enter and leave, or pass through, the surface of the masonry. Water-repellent coatings are generally transparent, or clear, although once applied some may darken or discolor certain types of masonry while others may give it a glossy or shiny appearance. **Waterproof coatings** seal the surface from liquid water and from water vapor. They are usually opaque, or pigmented, and include bituminous coatings and some elastomeric paints and coatings.

Identification of Problem Areas – Masonry & Terra-Cotta

For further education on this issue, please refer to the NPS Preservation Brief 1 made part of this report. It can be found in Book 3 of 4 under Tab 1.

Mortar & mortar Joints: The masonry mortar joints are in need of cleaning and spot repointing. Repointing is the process of removing deteriorated or distressed mortar from joints and installing new mortar in the joints. It is apparent that some repointing was performed in the past, perhaps during the 1970's when the masonry walls were last worked on. The overall condition of the mortar joints are good.

Random areas have some missing mortar that can be addressed by cleaning any loose mortar and replacing with new mortar mixed to match the existing mortar after the cleaning of the masonry.

Caulking compounds have been utilized in place of mortar. The work is poor and obtrusive and does not meet with Historical Restoration Guidelines. This material should be removed and replaced with proper mortar mix as indicated in the guidelines noted herein.

ASTM E2260-03 (2012) Standard Guide for Repointing (Tuck-pointing) Historic Masonry should be followed. Also the NPS Preservation Brief 7 the Preservation of Historic Glazed Architectural Terra-Cotta should be used as a guide for cleaning and restoration.

Additional digital photographs can be found on the CD in the back of this report that can be enlarged to view more detail of the issues concerning the masonry on this project.

Identification of Problem Areas – Masonry & Terracotta

Masonry is in need of cleaning and repointing is areas. Signs of efflorescence and or masonry sealer previously installed is indicative in some areas.

Identification of Problem Areas – Masonry & Terracotta

Wood hip rafters at four corners show signs of rot on ends where they are exposed to direct sun and rain. All overhangs are in need of cleaning and recoating.

Identification of Problem Areas – Masonry

Identification of Problem Areas – Masonry

Prior improper masonry repointing requires attention. Signs of gutter leakage at joints are prevalent. Masonry and gutters require proper cleaning. Windows need a thorough detailed investigation and report for rework.

Identification of Problem Areas – Masonry

Masonry requiring cleaning. Landscaping needs to be cut back to allow cross ventilation under building.

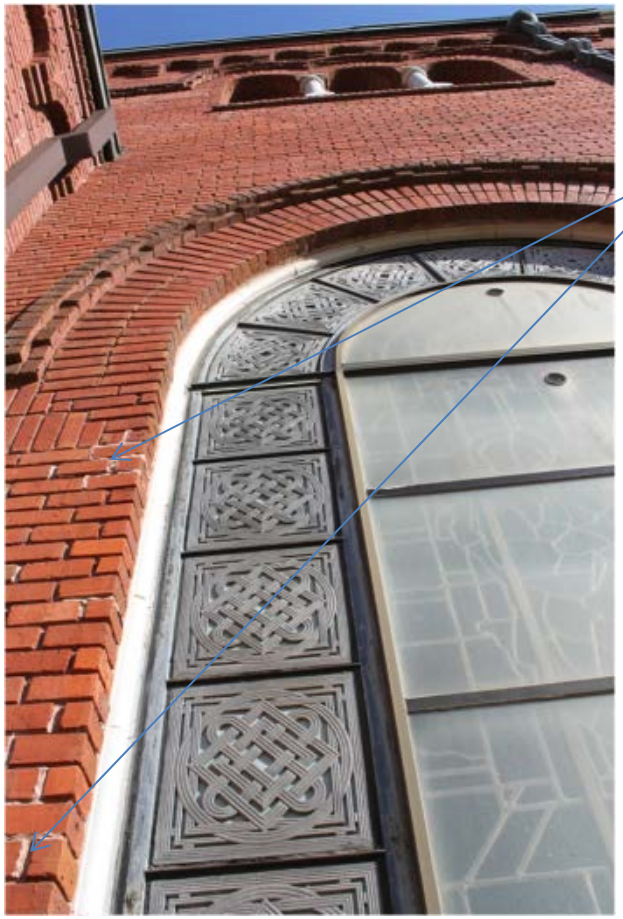
Identification of Problem Areas – Masonry & Terracotta

Brick masonry and terra cotta in need of proper cleaning and repointing.

Identification of Problem Areas – Masonry & Terracotta

Vegetation growth requires removal. Flashing needs close, thorough inspection including associated sealant. Gutters and downspouts and waterproofing under gutters require thorough inspection for leaks and fastening. Masonry requires cleaning & repointing.

Identification of Problem Areas – Masonry & Terracotta



Caulking has been used to replace missing masonry mortar in various locations. This caulking should be removed and replaced with proper mixed masonry mortar and blended to match the existing mortar make up and color. Iron window frames are rusting/corroding and are in need of restoration. A detailed report on each window is required.

Identification of Problem Areas – Exterior Wood

Areas that have wood exposed to the elements are minimal and are in basically good condition but are in need of cleaning and preserving. Wood can be found at the following areas:

Bell Tower – Ceiling & Roof overhang
Main Cathedral Building – Exterior Doors
Meeting Room Addition – Ceilings @ covered entry and walkways
Rectory Windows, Window Screens & Doors

The bell tower roof overhang shows evidence of beginning stages of rot at the four (4) hip rafter tails. These rafter tails are exposed to the elements & can only be reached by means of a crane, so maintenance is not easily performed. After further inspection, it may be found that the rafter tails may need to be repaired. Due to the difficulty (expensive) cost to coat this wood often due to it's exposure, extensive consideration and research should be performed to arrive at a means of protection that would both prevent maintenance often and keep within the guidelines of historical preservation.

The exterior doors and Meeting Room covered entry ceilings are in need of cleaning and recoating.

The rectory windows & associated parts will require cleaning, paint removal, re-glazing, rework to insure operability and treatment.

The NPS Preservation Brief on Exterior Paint Problems on Historic Woodwork made part of this report should be used as a guide.

Identification of Problem Areas – Wood

Wood hip rafters at four corners show signs of rot on ends where they are exposed to direct sun and rain. All overhangs are in need of cleaning and recoating.

Identification of Problem Areas – Wood

Exterior main doors at Narthex are in need of cleaning and proper coating, including all perimeter edges.

Identification of Problem Areas – Wood

Day chapel ceiling of covered walkway requires cleaning and determination of surface substance.

Masonry shows sign of efflorescence.

Identification of Problem Areas – Wood

Exterior entry doors at south Transept are in need of cleaning and proper coating, including all perimeter edges.

Identification of Problem Areas – Steel Windows

The steel window frames are in disrepair. The metal is rusted and corroded. Rain water is penetrating at the frames and glass. The leaded glass is in need of attention and reworking. An analysis of each window will be required with a historical steel window preservationist to determine the scope of work required on each window, options available and a rehabilitation work plan. Upgrades to energy efficiency should be examined simultaneously while maintaining historical preservation. The windows were originally designed by the Emile Frei, Inc. of St. Louis, Missouri. The company is still in existence and is run by the Steven Frei, the third generation grandson of the founder. The company is being contacted to discuss preliminary review of the windows and potential scope of work.

Windows are among the most vulnerable features of historic buildings undergoing restoration/preservation/rehabilitation. This is especially the case with rolled steel windows, which are often mistakenly not deemed worthy of preservation in the conversion of old buildings to new uses. The ease with which they can be replaced and the mistaken assumption that they cannot be made energy efficient except at great expense are factors that typically lead to the decision to remove them.

In many cases, however, repair and retrofit of the historic windows are more economical than wholesale replacement, and all too often, replacement units are unlike the originals in design and appearance. If the windows are important in establishing the historic character of the building, insensitively designed replacement windows may diminish--or destroy--the building's historic character.

The stained and leaded glass will also require work. The glass will require a preservationist to inspect and document each window and a plan to coordinate the steel window frame work with the glass work. Refer to Preservation Brief 33: Preservation and Repair of Historic Stained and Leaded Glass and No. 13 The Repair and Thermal Upgrading of Historic Steel Windows contained herein.

Identification of Problem Areas – Steel Windows

Original iron windows. Some windows pieces are beyond repair and parts will require exact replacement. A detailed written report and scope will be required of each and every window.

Identification of Problem Areas – Steel Windows

Iron window frame rusted and corroded in need of repair and refinishing.

Identification of Problem Areas – Steel Windows

Iron window frame rusting and corroding. In need of restoration and preservation measures.

An investigation and research should be performed further on the protective covers installed to determine how much damage if any has been caused and determine if they should be removed, replaced with a different product etc. Some covers contain vents to allow moisture to exit the space, but some do not.

Identification of Problem Areas – Steel Windows

Rust and corrosion is prevalent on most all windows. A detailed inspection and report on each window is required with a corrective scope of work defined.

Identification of Problem Areas – Steel Windows

Rust and corrosion

Identification of Problem Areas – Steel Windows

Small vents installed in protective covers.

Identification of Problem Areas – Exterior Stucco

There is minimal exterior stucco on the buildings and appears to be in good shape as it is somewhat protected by placement with a partial roof and wall covering.

Identification of Problem Areas – Exterior Stucco

Plaster installed in wall recess at east wall of Day Chapel – originally the Meeting Room Addition constructed in 1972.

Identification of Problem Areas – Interior Plaster

The interior plaster has some problems that appear to be mostly from moisture. Close inspections indicate prior roof leaks that wetted the plaster ceilings and caused stains and damage to the plaster and or finish on the plaster. Evidence found in the attic above these ceiling areas indicate that the leaks were older leaks and have apparently been repaired. Windows however are allowing some water penetration and is effecting the plaster finish. The acoustical tiles on the walls collect and hold this moisture against the plaster creating another problem.

Plaster was also found missing from around windows. Moisture penetrating the envelope has caused the plaster to loosen and break away from the masonry substrate.

The acoustical tiles placed on the original plaster walls show indication of moisture absorption which is most likely emanating from the exterior through the masonry. This is not uncommon on Historic masonry structures. Further analysis by means of removal of the acoustical material in various locations to test moisture content of the plaster and inspection of the plaster must be performed. Infrared photometrics for determining moisture measurements is currently scheduled to be performed in mid January 2013 and may not be completed in time to include in this report, if not, then it will be sent as an amendment to this report.

Addition of air-conditioning to a historical building that was not designed for air-conditioning requires careful planning and engineering.

Identification of Problem Areas – Interior Plaster

Plaster over masonry walls are vulnerable to water damage if the wall is constantly wet from moisture. The exterior of the entire envelope requires water/moisture proofing prior to addressing the repairs to the interior plaster.

There are a substantial amount of photos of the interior included in the rear of this report that should be reviewed as there was no need to include prints of all the photos. A review of the digital photos will provide the reader with a more comprehensive view of the amount of water and moisture damage to the plaster throughout the church.

Identification of Problem Areas – Interior Plaster

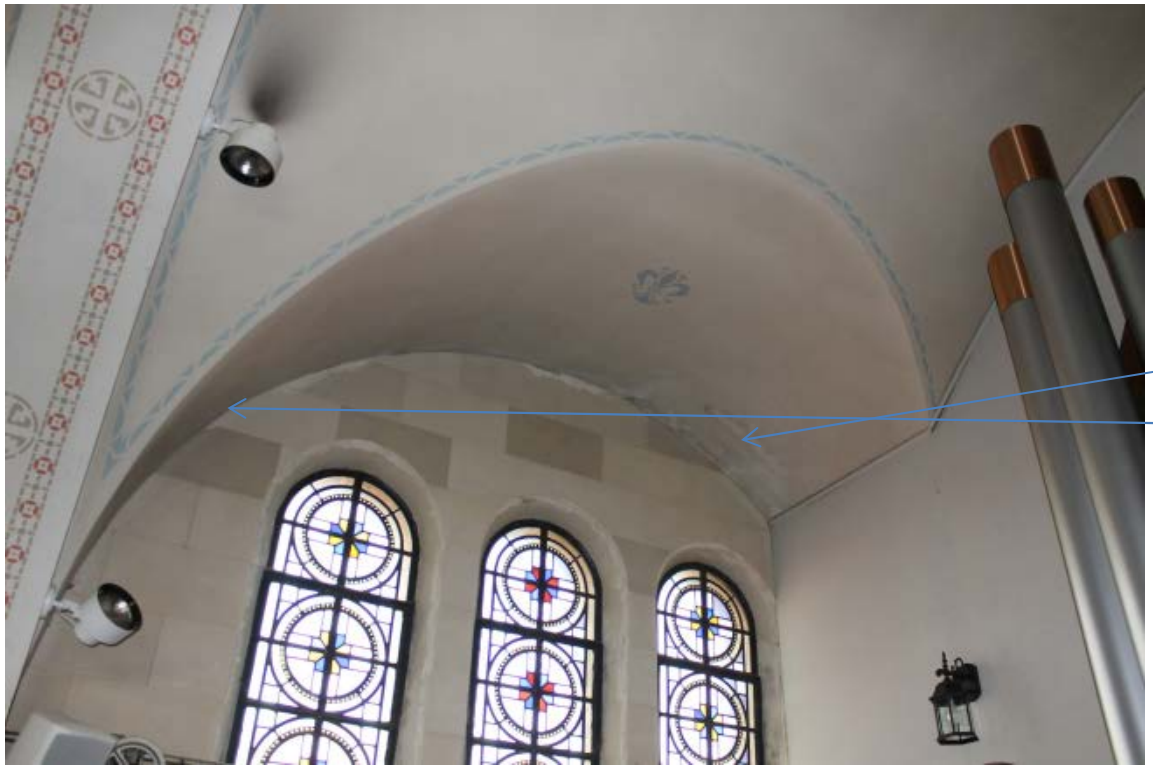
Identification of Problem Areas – Interior Plaster

Plaster damaged from is believed to be old roof leaks that were previously repaired.

Identification of Problem Areas – Interior Plaster

Damaged plaster from water leakage. Plaster will need to be analyzed and a final determination of a detailed scope of work should be established. This is very prevalent at all of the arches. This photo is in the choir loft.

Identification of Problem Areas – Interior Plaster



Damaged plaster from water leakage. Plaster will need to be analyzed and a final determination of a detailed scope of work should be established. This is very prevalent at all of the arches. This photo is in the choir loft.

Identification of Problem Areas – Interior Plaster

Identification of Problem Areas – Interior Plaster

What appears to be insect trails. Further inspection is required. Acoustical sound panels installed over plaster walls after initial construction.

Identification of Problem Areas – Interior Plaster

Plaster that has become wet and stained. Scaffolding will need to be set and sampling made to determine assessment.

Identification of Problem Areas – Interior Plaster

Interior plaster rotted and missing from water intrusion. This is prevalent throughout building and especially in bell tower.

Identification of Problem Areas – Interior Plaster

Stress cracks in plaster at bell tower at 2nd floor.

Identification of Problem Areas – Interior Plaster

Plaster in bell tower from moisture migration through walls and roof/wall intersection leaks.

Identification of Problem Areas – Interior Plaster

Plaster in bell tower from moisture migration through walls and roof/wall intersection leaks.

Identification of Problem Areas – Interior Plaster

Water leaks are substantial at Apse at both roof and windows. The reader should review the digital photos provided in the back of this report to enlarge and obtain a clearer picture of the issues and problems with moisture penetration throughout the church.

Identification of Problem Areas – Interior Plaster

Water and moisture penetration at upper Apse.

Identification of Problem Areas – Interior Plaster

Original wall painting bleed through.

Identification of Problem Areas – Interior Plaster

Stress crack in plaster molding. Repair required. Does not appear to emanate from the exterior masonry. Once acoustical panels are removed further investigation can be performed to determine exact cause and solution for repair.

Heating/Ventilation/Air Conditioning (HVAC)

The original church was not designed with an HVAC system in mind in 1912. The duct work that is currently installed under the current pier and beam reinforced concrete system with terrazzo finished floor system was added in that was installed sometime between 1939 and 1944. From the inspection, it appears that the ductwork was Installed at the same time as the reinforced concrete floor system was installed.

The original church was designed to have single column radiator heaters only. The plan is on drawing sheet 21 under Tab 1. These radiators were located along the interior of the exterior walls under the windows.

Architectural or engineering plans for the duct work that is currently installed have not been located. The digital photographs in the back of this report show this ductwork in detail. The duct work appears to have been coated at the time of installation. Insulation encapsulates some of the ductwork and is in need of replacement. The damp, moist ground continues to deteriorate the insulation and its cover. The steel rod hangars supporting the ductwork have rusted out and some have since broken. The damper handles for veins in the ductwork are frozen in position due to rust and corrosion from continued contact with moisture.

The insulation and piping to each of the units in the Nave and Transepts require new insulation and supports. Some of piping is corroded and may require replacement in lieu of repair.

The current exterior units have either reached the end of their economic life or are very close. Testing of the existing units and a report should be issued. A potential new location away from the church should be reviewed as well, possibly within a mechanical yard.

Most of the ductwork can be viewed on the digital photographs contained in the back of this report and should be reviewed by the reader.

Heating/Ventilation/Air Conditioning (HVAC)

Heating/Ventilation/Air Conditioning (HVAC)

Heating/Ventilation/Air Conditioning (HVAC)

Heating/Ventilation/Air Conditioning (HVAC)

Spalled concrete & exposed reinforcing.

HVAC piping on ground, insulation deteriorated.

Electrical wiring loose and uncontained- unprotected in conduit.

Electrical

Naturally, since the original structure was designed in 1911/1912, electrical work was designed and installed at a minimum. The reader can elude to the original electrical drawings under tab 1 of the report book 2 of 4, drawing Sheet pages 19 and 20. Basically only ceiling lighting was installed with a few outlets.

In 1939, Dunn and Quinn Architects and Engineers provided drawings labeling the electrical circuitry. This plan can be found in report book 2 of 4, tab 4.

In 1987 Dunn, Quinn, Gallaugher & Quinn provided designs for installation of the current electrical service and added lights and electrical receptacles. These drawings are found in book 2 of 4 under tab 19.

Some of the conduit is in need of either repair or replacement in the crawl space under the floor. There are loose wire connections that are in need of an electrical box. Some wire is loose and should be installed in electrical conduit. Review of the many digital photographs contained on the computer disk found in the back of this report will display the electrical disarray commented on herein.

A survey of the entire electrical system will be needed and documented to work up a final scope of requirements.

Lead Paint & Asbestos

Lead paint and asbestos was suspected, hence a preliminary limited investigation was performed and test made on peeling paint chips, vinyl floor tiles and acoustical tiles from various locations from within the property. As expected both asbestos was found in some of the floor samples and in the acoustical tiles on the walls inside the church. Lead paint was found in the presbytery/rectory exterior wood windows.

The preliminary report is found in the appendix of this book.

A full report has been ordered on the entire facility to be incorporated later and made a part of this initial report. The full report will provide a plan of all locations and provide the owner with a full survey, management plan and program to deal with the contaminants during restoration phases of the various areas around the church when performed.

Conclusion

In general, from first glance of the untrained eye, the structure appears to be in very good condition considering it's age. However, upon closer inspection and analysis, it was found the it does suffer from a range of issues, some minor to severe. A review of this entire report, including the digital photos included in the report will provide the reader with a sense of how much work is needed to bring this facility to the condition it deserves.

Destructive examination was not performed in this study of current conditions. There are areas that will require removal of "sample areas" to further conclude this study. Those areas such as interior wall surfaces under finishes or exterior wall flashings will require a more thorough inspection requiring removal of materials and replacement of same.

Due to the National Historic significance and that this facility is the Cathedral for the Roman Catholic Church, Diocese of Lake Charles, it would be prudent and highly recommended to assemble a team that allowed only trained, experienced professional preservationist, conservators, restorers, contractors, specialist, architects, engineers and historical experts to formulate a plan to restore, preserve or reconstruct to insure appropriate means, methods and measures are taken using the most sensitive means possible. No significant work has been performed based upon the construction records located thus far and compiled within this report since being placed on the National Register of Historic Places in 1994. Experienced professionals that perform work on historic structures in each of the areas addressed in this report should be consulted to build upon a proper final solution to each of the issues. A final plan addressing all of the issues would be scripted to unite harmoniously. A schedule would then be compiled to perform the work in a methodical organized manner to allow the work to be performed in an efficient manner and to allow continued use of the church.

Historical work is NOT typical design or construction work and SHOULD NOT be treated as such.

Conclusion

This report is the beginning of a “Historic Structure Report”. We have provided some history on the property, however, an exhaustive research of data has not been completed. This report provides a broad statement of each of the areas that were inspected.

The next step in this process is to form a team which will be lead by an experienced individual with historical preservation, rehabilitation, restoration, reconstruction experience and knowledge. The team will work under the guidance of the team leader in each of their respective disciplines/areas of expertise such as:

Historical data collection (history of the property, including construction)
Moisture and Control of unwanted moisture and its effects on structures.
Concrete spall repair
Steel Windows and leaded glass
Stained & Leaded Glass
Historical Masonry repair/restoration
Roofing (Clay tile, built up, flashing & underlayment's)
Expert on air-conditioning & heating Historical Buildings
Historical Plaster & Stucco
Painting of Historical structures
Historical lighting & related electrical
Landscaping
Drainage
Code issues
Archivist
Documenter (Existing, Restoration Process & Completion) for Historical Recordation
Grant Writer

Conclusion

The Cathedral is a magnificent structure and landmark. Lake Charles is blessed to have such a structure. We have been provided with a gift that we are responsible for it's caretaking throughout our life here on earth and to pass on to our heirs and fellow mankind a well maintained facility that they can equally be proud of.