EXTERIOR WALL INSPECTION REPORT
OUR LADY OF THE ASSUMPTION CATHOLIC CHURCH

35 OLD EAGLE SCHOOL ROAD
STRAFFORD , PA 19087

SUBMITTED TO:
OUR LADY OF THE ASSUMPTION CHURCH
C/O NICOLE GIACCHE , PARISH MANAGER
CC: ARCHDIOCESE OF PHILADELPHIA

JULY 31, 2017

SUBMITTED BY:
OFS ASSOCIATES

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EXECUTIVE SUMMARY

O&S Associates, Inc. (O&S) performed an inspection of the exterior walls of the Our Lady of the Assumption Catholic Church in accordance with our proposal to the Archdiocese of Philadelphia dated September 6, 2016. Though the Church lies outside the extents of the City of Philadelphia, O&S understands the Archdiocese intends to follow similar standards for exterior wall inspection and reporting for suburban parishes.

We understand it is the intent of the Archdiocese and the Parish (Owner) to maintain the exteriors of their buildings in good condition, to address deficient conditions, and to perform maintenance repairs as needed. Our reporting herein describes our findings of the conditions of the exterior walls, windows, and roofing, and our recommended repairs in accordance with the described Owner goals, as well as probable costs for said repairs.

Our inspection of the Church and ancillary buildings indicated that the exterior walls and roofing are generally in ***good*** condition. O&S met with Nicole Giacche, Business Manager, and John Catalanotto, maintenance personnel, to discuss the maintenance and repair history of the parish buildings. The Parish has been proactive at maintaining their building components in a serviceable condition, and the following reporting of observations and repair recommendations supplements the work that is ongoing.

The observed conditions and recommended repairs have been categorized into four main prioritization levels as follows:

Immediate:	Complete the repairs immediately to avoid failure of building components or damage to interior finishes.
High:	Complete repairs within 1 year. High priority repairs are necessary to avoid continued damage to building components and interiors.
Moderate:	Complete repairs within 2-4 years. Moderate priority repairs are required to continue proper maintenance of the building façade components.
Low:	Complete repairs within 5-10 years. Low priority repairs are recommended to continue proper maintenance and aesthetics of the building components.

During the inspection, O&S did not observe any conditions that require immediate repair, however, conditions categorized as high priority include:

- Repair damaged metal flashing at Rectory
- Patch spalling and cracked concrete lintels at Rectory
- Remove and reset granite masonry units at School
- Rout and seal concrete soffit at school and parish center
- Replace spalled concrete veneer units at parish hall
- Repair cracked and spalling stucco between church and rectory
- Cut and replace perimeter window sealants at rectory
- Remove and rebuild deteriorating brick masonry at convent chimney.

O&S recommends these high priority exterior wall deficiencies be addressed within the next year to ensure they do not develop into unsafe conditions. O&S estimates a project budget of ***$40,500*** for high priority repairs. Preventative maintenance will provide continued serviceability of the building for years to come. The observed conditions and recommendations are outlined in the following report sections, and are quantified in the attached Table of Prioritized Recommended Repairs.

INTRODUCTION

PURPOSE

This report is an engineering study that provides a physical condition assessment of the building's exterior walls. The purpose is to identify deterioration and potential problems to classify the walls based on their current condition, and to recommend repairs where required. The scope of work was to inspect the exterior walls and roofing from ground level and roofs.

GENERAL PROPERTY DESCRIPTION

The Our Lady of the Assumption church building is a grey granite stone masonry structure built in a Gothic style in 1922 by James Rosato, a parishioner, and then subsequently renovated in 1948 under the direction of Sam Piombino, also a parishioner. The property is located at 35 Old Eagle School Road in Strafford, Pennsylvania and includes five (5) other buildings, for which a cursory review of the exterior walls was completed.

The exterior walls of the Church building consist primarily of granite block masonry. Stained glass windows with storm panels occur throughout within wood frames and atop cast stone sill stones. The roofing consists of asphalt shingles with metal downspouts and gutters. There exists a bell tower located at the West/front elevation. Concrete pedestrian ramps are located on the South elevation.

The present Rectory building is a three-story granite masonry structure constructed in 1922. It is attached to the Church on the North elevation. This connecting structure consists of stucco façade on the West elevation. Concrete coping stones exist on the West and East elevations. Vinyl windows occur throughout with concrete lintels and sills. Wrought iron window boxes exist only on the South elevation. Three windows in wood frames exist on the East end of the South elevation. Two garage doors exist on the East elevation within wood frames. The roofing consists of asphalt shingles with a granite masonry chimney located near the South elevation. Metal gutters and downspouts are present at the east and west elevation of the building.

A one-story, granite masonry School building was constructed in 1955. It contains eight (8) classrooms and an office. Metal storefront windows occur throughout atop limestone sill stones. A tall granite stone pillar exists by the main entrance on the South elevation and extends higher than the height of the structure. The roofing consists of 60 mil low-slope EPDM roofing membrane.

A two-story, multi-purpose addition was added to the School in 1972 to be used as a parish hall and library. The Parish Hall structure consists of concrete split face veneer façade and contains vinyl windows throughout with steel lintels. The roofing consists of modified bitumen with through wall scuppers and roof drains.

A twelve (12) room Convent was constructed to the East of the school in 1960. The two-story structure primarily consists of yellow brick masonry. Vinyl windows occur throughout with steel lintels. A screened-in porch is located on the West elevation. A yellow brick chimney exists at the Northeast corner of the building. The roofing consists of asphalt shingles with metal gutters and downspouts.

The Forrest Lane House property was acquired to be used as the office of the vicar for Chester County. The two-story structure consists of stucco façade with vinyl windows within wood frames. The roofing consists of asphalt shingles with metal gutters and downspouts.

INSPECTION FINDINGS

PROCESS

O&S visited the site on May 24, 2017 to make visual observations of the exterior wall conditions. We performed the inspection from the ground using optical zoom cameras and binoculars to view higher wall areas on the buildings. Prior to the visit, O&S relied on digital map imagery to gain familiarity with the site.

OBSERVATIONS AND RECOMMENDATIONS

O&S made the following observations of the exterior wall and roofing components of the main church building. Observations of surrounding buildings are also included as indicated.

Masonry and Concrete

Observation: The granite masonry exterior walls of the Church were found to be in generally good condition, however localized areas of deteriorated mortar joints were observed throughout. The stucco façade at the pedestrian ramp at the South elevation were observed to be in fair condition, with cracking and spalls observed throughout.

Recommendation: Deteriorated mortar joints should be cut and repointed within the next 2-4 years to prevent accelerated masonry deterioration. The stucco façade at the pedestrian stairs should be removed and repaired within the next year to prevent development to an unsafe condition.

Photos: See next page.

Cracked mortar joints in granite masonry at East elevation.

Typical deterioration of mortar joints in masonry.

Spalling stucco at pedestrian ramp, South elevation.

Cracked and spalling stucco at pedestrian ramp, South elevation.

Windows

Observation: The stained glass windows throughout the Church were found to be in good condition, however failing perimeter sealant was observed at many of the windows. Wood window frames were observed throughout to be in good condition, however areas of rotted or damaged wood framing was noted at isolated locations. The paint system was found to be in good condition with a few areas of peeling or failing paint noted.

Recommendation: Window sealant should be removed and re-sealed within the next 2-4 years to maintain the water tightness of the building. O&S recommends that the parish perform a wood window painting program in the next 5-10 years to extent the service life of the wood frames.

Photos:

Typical failing sealant around windows.

Typical peeling paint on wood window frame.

Typical peeling paint on wood window frame between stained glass windows.

Roofing

Observation: The asphalt shingle roofing was observed to be in good condition. The metal gutters and downspouts were found to be in good condition. No visual damage to the roofing was observed during the time of our visit.

Recommendations: O&S recommends the parish perform an annual roofing review to repair damage and to extend the service life of the roofing assembly.

Photos:

General view of the asphalt shingle roofing.

Typical view of the metal gutters and downspouts.

Ancillary Buildings

Observations: O&S made a cursory review of the ancillary buildings on the site. Our observations and recommended repairs are described below:

Rectory*:* The granite masonry exterior walls of the Rectory were found to be in good condition, however many instances of cracked mortar joints and a few instances of cracked granite masonry were observed throughout. The stucco exterior walls at the structure connecting the Rectory and Church buildings were noted to have moderate cracks throughout. Loose metal base flashing was observed at two locations on the roof. The wood frame around one of the garage doors located at the East elevation was observed to be rotting. Wood window frames were observed to be rotted and damaged throughout. The window perimeter sealant joints were noted to be missing or failing at several locations. Concrete window lintels and sill located above and below windows throughout were found to have cracks and incipient spall at several areas. One window was observed to have a broken screen.

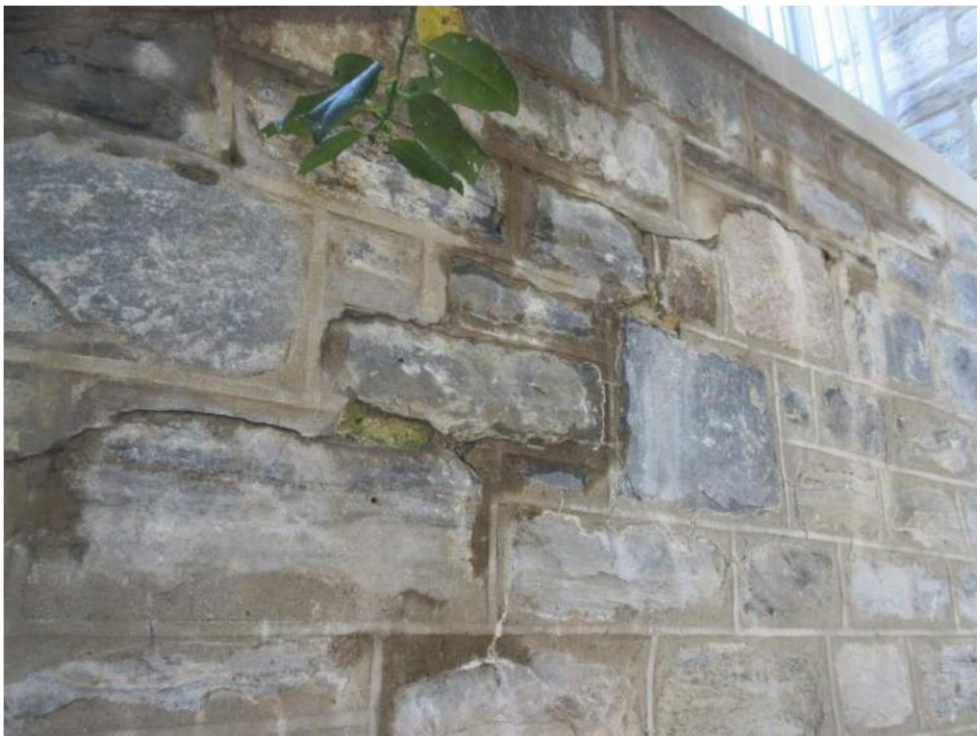
Recommendations: Deteriorated mortar joints should be cut and repointed within the next 2-4 years. Cracked granite masonry should be repaired by crack injection within the next 2-4 years. Cracked stucco should be removed and repaired within the next year to limit the potential for moisture infiltration into the wall assembly. Loose metal flashing

should be repair within the next year to prevent moisture infiltration into the interior of the building. All rotted and damaged wood elements should be replaced within the next year. O&S recommends the parish complete a wood painting program at the rectory within the next 2-4 year to prolong the useful life of the wood trim elements. The window perimeter sealant joints should be replaced within the next year to prevent moisture infiltration into the wall assembly. Cracked and incipient spalls in the concrete lintels and sills should be repaired within the next year to prevent the possibility of overhead spalling. The damaged window screen should be removed and replaced in kind within the next 5-10 years.

Photos:

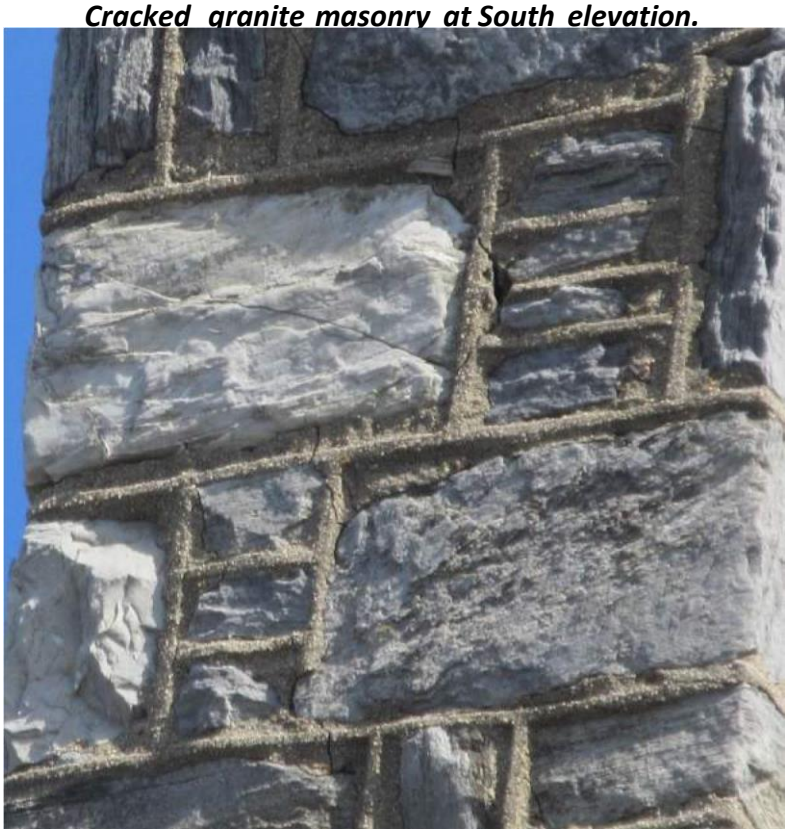
Typical cracked mortar joints in granite masonry.

Cracked mortar joints in granite masonry between windows at East elevation.



Deteriorated masonry joints at stair wall, West elevation.

Cracked granite masonry at South elevation.



Cracked granite masonry and mortar joints at chimney.

Cracked stucco above window at West elevation of connecting structure between Church and Rectory buildings.

Loose metal flashing at roof, near South-west building corner.

Loose metal flashing at roof, middle of West side.

Deteriorated wood frame around garage door at East elevation.

Typical deteriorated wood around third-story windows. Note cracked concrete sill, East elevation.

Typical cracked wood window frame around stained-glass window.

Cracked concrete lintel at window, West elevation.

Cracked and incipient spall in concrete lintel at third-story, East elevation.

Damaged screen at second-story middle window, West elevation.

Missing and open window perimeter joints at vinyl windows.

School: The granite masonry exterior walls of the School building were found to be in generally good condition, however isolated cases of deteriorated stone joints were observed throughout. One instance of cracked granite was observed at the pillar located at the South elevation. Several instances of cracking of the concrete soffit along the South elevation were observed. Perimeter window sealant was noted to be failing throughout. A metal door on the North elevation was observed to have corrosion. The EPDM roofing was found to be in good condition, however ponding of water was observed throughout the roof.

Recommendation: Deteriorated joints in granite masonry should be cut and repointed within the next 2-4 years. The cracked granite should be repaired within the next year to prevent accelerated masonry deterioration. All cracks in the soffit should be routed and sealed within the next 2-4 years. All window sealant should be removed and replaced within the next 2-4 years to maintain the water tightness of the building. The metal door at the North elevation should be replaced within the next 2-4 years. O&S recommends the parish have an annual roofing inspection to maintain the serviceability of the roofing membrane.

Photos:

Weather masonry joints in granite masonry at South elevation.

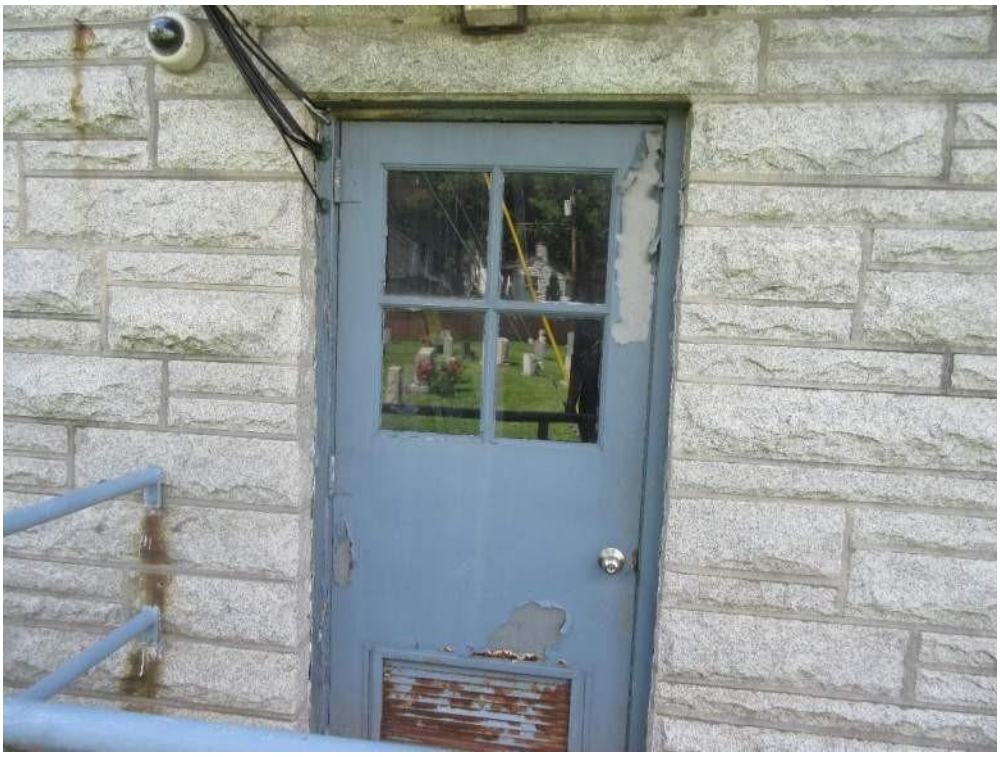
Cracked masonry joints, typical, on granite masonry pillar at South elevation.

Cracked masonry joints, typical, on granite pillar at South elevation.

Cracked granite masonry on pillar at South elevation.

Cracked soffit, South elevation.

Typical failing and crazed window perimeter sealant.



Peeling paint and corroding metal door at North elevation.

Ponding water on EPDM roofing.

Parish Hall: The concrete split face veneer exterior walls of the Parish Hall building were found to be in good condition, however one instance of spalling was observed by a window on the West elevation. Cracked mortar joints were also observed at the West elevation, near the Northwest building corner. Steel lintels atop windows and a door on the West elevation were observed to be corroded. The paint system on the metal awning at the west elevation was noted to be peeling and failing. Perimeter window sealants was noted to be beginning to fail throughout.

Recommendation: Spalling concrete veneer should be removed and replaced within the next year. Cracked mortar joints should be sealed within the next 2-4 years to prevent accelerated masonry deterioration. Corroded steel lintels should be scraped, primed, and painted within the next 2-4 years to extend the service life and prevent masonry deterioration. The metal awning at the West elevation should be scraped, primed, and painted within the next 5-10 years to prevent further deterioration. All failing window sealant should be removed and replaced within the next 2-4 years to maintain the water tightness of the building.

Photos: See next page

Spalling concrete veneer adjacent to window at West elevation.

Cracked mortar joints in concrete veneer at West elevation.

Corroded steel lintel at door, West elevation.

Typical corroded steel lintel at window, West elevation.

Peeling paint and minor corrosion at metal awning at West elevation.

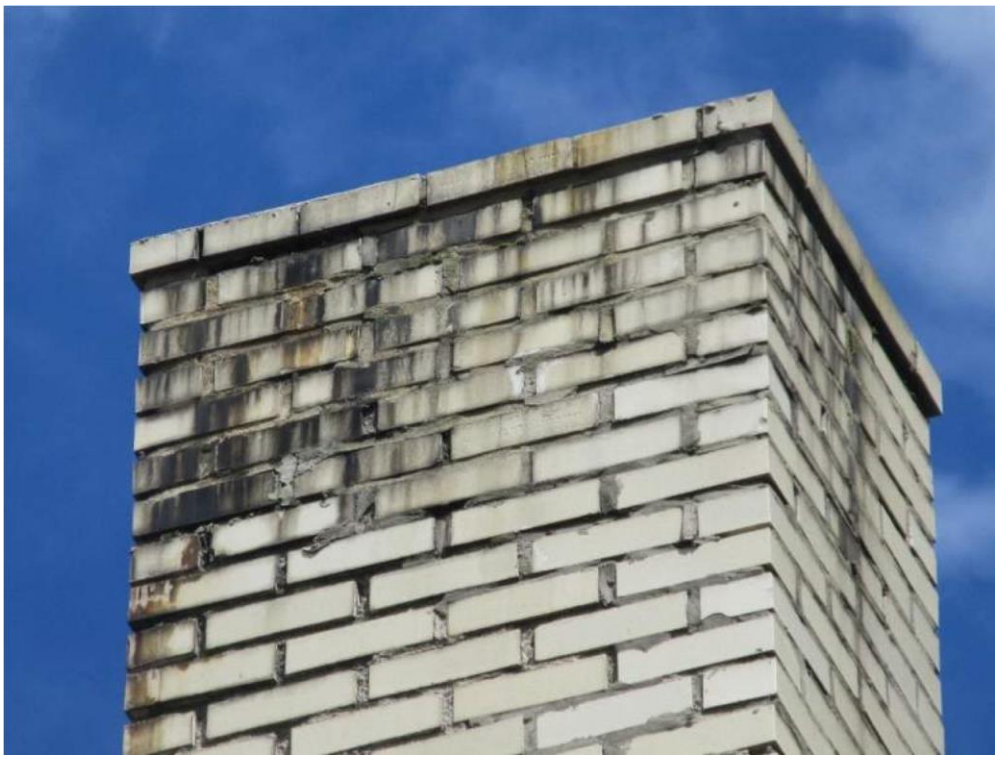
Window sealant beginning to fail, typical throughout.

Convent: The yellow brick exterior walls of the Convent building were found to be in generally good condition, however localized areas of mortar joint deterioration were observed throughout, including the chimney located at the Northeast building corner. The chimney was also observed to be slightly leaning outwards. Steel lintels above windows throughout the building were observed to corroded. Window sealant was observed to be failing around windows throughout the building.

Recommendation: Deteriorated mortar joints should be cut and repointed within the next 2-4 years. The brick masonry at the chimney should be removed, reset, and pointed within the next year. All corroded steel lintels should be scraped, primed, and painted within the next 2-4 years to prevent accelerated deterioration of surrounding brick masonry. Failing window sealant should be removed and replaced within 2-4 years to maintain the water tightness of the building.

Photos: See next page.

Deteriorated mortar joints at East elevation.



Deteriorated mortar joints on chimney at Northeast building corner.

Leaning chimney at Northeast building corner.

Typical corroded steel lintel atop window.

Typical failing window sealant.

Vicar House: The stucco exterior walls, vinyl windows, and asphalt shingle roofing of the Vicar House building were found to be in good to excellent condition. No deficient conditions were observed during the time of the visit.

Recommendations: O&S recommends the parish have an annual roofing review and perform preventative maintenance to maintain the service life of the building.

Photos: See next page.

Overall of West and South elevations.

CONCLUSIONS

The exterior walls of Our Lady of the Assumption Church and ancillary buildings are generally in good condition and appeared to be well maintained. There are localized areas of concern at each building that are recommended to be addressed per the attached table of Prioritized Recommended Repairs. O&S also recommends the Parish continue to perform the preventative maintenance and repair projects discussed during the site visit.

The following materials are recommended as part of any repair or maintenance program:

- *Masonry Mortar Repointing Materials:* Mortar joint re-pointing is necessary wherever and whenever cracking and/or deterioration of the masonry joints is observed. O&S recommends re-pointing using the following mortars:
    - Granite Masonry: Use Type N Mortar (1 part cement, 1 part lime, 6 parts sand),

- *Masonry Pointing Joint Configuration*: New mortar joints installed should match the original intent in color, texture, and profile. The joint should be tooled well to provide a tight mortar joint with compacted mortar. The mortar joints, when re-pointed, should be cut to a minimum of 3/4" and pointed with well-tooled pointing mortar.

- *Granite Masonry Crack Repair Materials:* Crack injection repairs should be performed at all granite stone crack locations observed. O&S recommends using the following repair materials:

    - Crack Repair Mortar: Jahn M30 #32 Micro Injection Grout

- *Masonry Patch Repair Materials:* Patching repair mortar should be performed at spalling or eroding natural stone. O&S recommends the use of the following patch repair materials: ○ Jahn M70 – for use on Limestone *Stucco Repair Materials:* ○ Portland Cement ○ Mason sand ○ Hydrated lime ○ Acrylic bonding agent

- *Sealant Joints:* O&S recommends the use of silicone sealants when replacing sealant joints throughout the building envelope. Silicone joints will last longer than other joint materials and will bond well to all types of masonry present in the building. We also recommend the use of a primer on all surfaces prior to sealant application. We recommend the use of Pecora 895NST, or equal.

  Where paintable sealant is required, O&S recommends a general purpose polyurethane sealant, such as Pecora Dynatrol I-XL or equal.

- *Wood Repair:* Where wood is rotted, and needs to be patched prior to painted, O&S recommends the use of a two-part epoxy-resin, knife grade, wood patching compound, such as Abatron, Inc. LiquidWood with WoodEpox or equal. Compound shall be for filling voids in damaged wood materials that have deteriorated due to weathering and decay.

- *Painting:* We recommend the use of high quality exterior grade paints and primers. We recommend Benjamin Moore Aura Exterior Paint or similar.

We encourage the Parish to thoroughly review this report and the recommended table of repairs and contact us with any questions or comments. O&S would be happy to provide additional assistance to the Parish in the implementation of any of the recommended repairs.

Attachments: Table of Prioritized Recommended Repairs

DEFINITIONS

The following are the definitions of the professional terms that may be used in the report. These words are occasionally troublesome as their technical meaning may be at odds with the understanding of similar language used to define leaseholder or ownership obligations under a lease or other contract. As such, these definitions may need to be interpreted with additional legal judgment.

Excellent: Item is in "as new" condition requiring no rehabilitation and should perform in full accordance with its useful expected life.

Good: Item is sound and performing its function, although it may show signs of normal wear and tear. Some incidental rehabilitation work may be recommended.

Fair: Item is performing adequately at this time; but exhibits deferred maintenance, evidence of previous repairs, substandard workmanship, is obsolete, and is approaching the end of its typical useful expected life. Repair, replacement, or maintenance is necessary to prevent further deterioration, or to prolong its useful life.

Poor: Item either has failed or cannot be relied upon to continue performing its original function. Present condition could contribute or cause the deterioration of other adjoining elements or systems. Repair or replacement is required.

Service Life The service life of a system or component is the actual length of time that a system or component performs is intended function. The service life is estimated based on the historical performance of similar systems or components.

Maintenance Maintenance is when corrective work or repairs are done selectively to a portion of a system or a component exclusive of replacing, reconstructing, or upgrading. Conceptually, repairs or maintenance to a system or component does not increase the expected useful service life.

Repairs Generally synonymous with maintenance except that it usually excludes those maintenance items considered to be "Routine Maintenance"

Routine Maint. Prescribed periodic maintenance performed at pre-established intervals that do not require the assistance or direction of professionals.
Routine maintenance is often accomplished by in-house labor.

Improve An improvement would be maintenance, repairs, or upgrades that

reverses the effects of normal wear and tear, or that provides durability, function, service life, or use beyond that which a structure, element, or system was originally constructed with.

LIMITATIONS

This report contains the professional opinions of the Engineer based on conditions observed as of the dates of inspection. This report is believed to be accurate with the limitations of the stated methods for obtaining information. Nothing in this report shall be interpreted as any kind of guarantee or warrantee. This report is not intended to be a discourse on safety nor shall it be used as a specification.

We developed this report to assist in the planning of repairs and maintenance to the exterior walls. Critical statements made in this report on the condition of the building may not be used to justify criticism of previous design professionals, contractors, or anyone responsible for the building.

This inspection does not include the examination of building areas for hazardous materials, or for building code, fire or safety violations. The evaluation required that certain assumptions be made regarding existing conditions, and some of these assumptions cannot be verified without expending additional sums of money or destroying otherwise adequate or serviceable portions of the building. The extent of our evaluation was limited to visual observations and the scope of work indicated in this report. We cannot guarantee that the appraisal discovered or disclosed all possible latent conditions.

The project repair costs are based on available information and from our experience with similar projects. The repair life expectancy is based on our experience with repairs of similar types of structures. Effective maintenance can significantly reduce long-term repair costs. Periodic monitoring can assist in scheduling of further maintenance.

The report is not for the benefit of or use by others without the written permission of O&S ASSOCIATES. We summarized the evaluation and recommendations in this report for use with additional fiscal and technical judgment. Use of this report without our permission and guidance may lead to erroneous action for which the user shall bear full responsibility.

PRIORITIZED RECOMMENDED REPAIRS
OUR LADY OF THE ASSUMPTION
Strafford, PA
Exterior Wall Inspection

Description	Recommendation	Cost Estimate
High Priority Repairs (within 1 year)		
Metal Flashing at Rectory	Repair loose metal base flashing at the west end of the rectory roof.	$ 2,000
Concrete Lintels Repairs at Rectory	Repair cracks and incipient spalls in concrete lintels and sills at rectory.	$ 4,500
Granite Masonry Repair at School	Remove and reset granite masonry units at exterior pillar at school.	$ 4,000
Concrete Soffit Repair at School/Parish Hall	Route and seal cracks in concrete soffit. Patch spalled soffit at parish hall.	$ 1,500
Split Face Concrete Veneer Repairs at Parish Hall	Remove and replace spalled concrete veneer units at parish hall.	$ 1,500
Stucco Repairs at Church/Rectory	Remove damaged stucco and install new 3 coat stucco system to match existing. Coat all stucco to match.	$ 8,000
Wood Repair at Rectory	Replace rotted and damaged wood elements at the rectory.	$ 5,000
Window Perimeter Sealant Replacement Program at Rectory	Cut and replace perimeter window sealants.	$ 8,000
Brick Masonry Repair at Convent Chimney	Remove, reset, and point deteriorated brick masonry at convent chimney.	$ 6,000
	Subtotal High Priority Roofing Repairs	**$ 40,500**
Moderate Priority Repairs (2-4 years)		
Window Perimeter Sealant Replacement Program at Church/Convent/School/ Parish Center	Cut and replace perimeter window sealants.	$ 30,000
Wood Painting Program at Rectory	Strip existing paint and paint wood elements at rectory building.	$ 11,000
Granite Masonry Repairs at Church, Rectory, and School	Cut and repoint deteriorated granite masonry mortar joints. Repair cracked granite with crack injection.	$ 30,000
Steel Lintels at Parish Hall/Convent	Scrape/Prime/Paint exposed steel lintels at the Parish Hall.	$ 4,000
Door Replacement at School	Replace metal entry door at the north elevation of the school building.	$ 1,000
	Subtotal Moderate Priority Repairs	**$ 76,000**
Low Priority Repairs (5-10 years)		
Roofing Maintenance at all Building	Perform annual roofing review of all buildings to maintain serviceable condition.	$ 16,000
Wood Painting Program at Church	Strip existing paint and paint wood windows at Church.	$ 8,000
Damaged Window Screen at Rectory	Remove damaged window screen and replace in-kind.	$ 200
Metal Awning at Parish Hall	Scrape/Prime/Paint metal awning at Parish Hall	$ 3,000
	Subtotal Low Priority Repairs	**$ 27,200**