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Reviewed for Code Compliance
Inspections Division
Approved with Conditions

Date: 07/19/13

VERIZON WIRELESS TELCOM ROOM
202 WOODFORD STREET
PORTLAND, MAINE

Prepared For:

Dewberry
280 Summer Street 10th Floor
Boston, MA 02210

July 18, 2013

Project #: B60964

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INTRODUCTION

Dewberry, Inc. has retained Rolf Jensen & Associates, Inc. (RJA) to provic protection and life safety code consulting services for the proposed new telecommunications room within the basement level of the 200 Woodford S in Portland, Maine.

This report serves as the fire protection and life safety Chapter 34, Existing Building Report for the project. This report documents the existing fire protection and life safety features of the building and review of applicable documentation, including architectural drawings. This report will outline the application of Chapter 34 of the 8th Edition of the Maine Uniform Building and Energy Code, which is an amended version of the 2009 International Existing Building Code and the City of Portland Fire Prevention and Protection Code which adopts and amends the 2009 edition of NFPA 101, Life Safety Code (LSC) and 2009 edition of NFPA 1, Fire Code (FC) to the existing building in the context of the proposed renovation projects under consideration.

The information in this report is based on the following:

- Review of existing/proposed drawings of the building;
- Walkthrough visual inspection of the building, conducted on July 2 & 9, 2013, by James McLaughlin (RJA);
- Various project-related discussions with Dewberry, Inc.

It should be noted that the information and observations contained in this report are based on a walk-through visual survey of the building only. Functional, destructive, or intrusive visual inspections and/or fire protection system testing were not conducted.

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APPLICABLE CODES AND REQUIREMENTS

The following codes are applicable to this project:

- **Building** — Maine Uniform Building and Energy Code (MUBEC), based on the 2009 Edition of the International Building Code (IBC), with Maine State Amendments.
- **Electrical** — NFPA 70, National Electrical Code, 2008 Edition, with Maine State Amendments.
- **Fire Prevention** — City of Portland Fire Prevention and Protection Code, which is an amended version of the 2009 NFPA 101, Life Safety Code (LSC) and 2009 NFPA 1, Fire Code (FC).
- **Elevators** — Maine Elevator Code, based on the Safety Code for Elevators and Escalators (ASME A17.1), 2007 Edition with Appendices, with Maine State Amendments.
- **Accessibility** — American Disabilities Act Accessibility Guidelines (ADAAG), 2010 Edition as adopted by the State of Maine.
- **Other** — National Fire Protection Association (NFPA) Standards, as referenced by the MUBEC and the City of Portland Fire Prevention and Protection Code.

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EXISTING BUILDING DESCRIPTION

The 202 Woodford Street complex consists of several buildings constructe connected together over time and is owned and operated by the 202 Wooc Congregational Parish. The complex consists of the following main section House, Cloister, Chapel, and Sanctuary. Based on a site survey, review of the existing building drawings, and discussions with the Parish facility team, the construction history of the complex is as follows:

- The Parish House was constructed in the early 1900s as a standalone building. The building is four (4) stories in height and currently contains a gymnasium, a hall with a stage, a large kitchen, church offices, lounge areas, and classrooms for a music school.

- The Sanctuary building was constructed in the mid 1950's as a standalone building. The building is one (1) story in height with a basement level and balcony level. The Basement Level contains a music room, Sunday school classrooms, a nursery and meeting rooms. The First Floor consists of the Church with a balcony seating area.

- The Chapel and Cloister were constructed in the mid 1950's after the construction of the Sanctuary building. These structures were constructed as a connection between the Parish House and Sanctuary buildings. The Chapel and Cloister are a single story in height with a Basement level. A meeting room and storage rooms are located on the Basement Level and a Chapel is located on the First Floor.

Upon survey of the buildings, there appears to be an existing 2-hour fire resistance rated separation including 90-minute fire resistance rated doors between the Parish House, Chapel, and Cloister and the Sanctuary building. As such, it is assumed that the Sanctuary Building is classified as a separate stand-alone building and the Parish House, Cloister, and Chapel consist of a single building.

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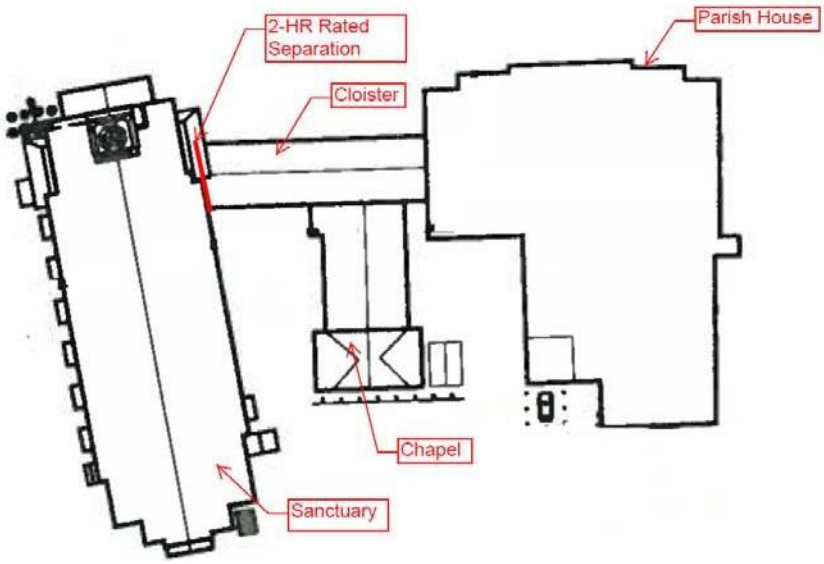
A layout of the buildings is indicated in Figure 1 below.

Figure 1 – 202 Woodford Street Complex



PROJECT DESCRIPTION

The proposed project includes retrofitting an existing storage room located in the Basement Level of the Sanctuary Building to house telecommunications equipment for Verizon Wireless. The existing storage room is approximately 210 square feet and the size or configuration of the room will not be changing as a result of this project. Since the occupancy classification of the room will remain as Moderate Hazard Storage, Use Group S-1, no change in use is planned. Due to the new function proposed for the room, new fire alarm notification and smoke detection devices will be provided. Additionally, a new FM-200 suppression system will be designed for the room. The new fire alarm devices will be tied into the existing fire alarm system for the complex which is located on the First Floor of the Parish House. The scope of work will also include the installation of a new antenna to be located within the steeple of the Sanctuary.

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COMPLIANCE REQUIREMENTS FOR EXISTING BUILDING

EXISTING UNRENOVATED AREAS

Under the MUBEC, an existing building is presumed to meet the provisions of the applicable laws, codes, rules or regulations, bylaws, or ordinances in effect at the time such building was constructed or altered. In general, an existing building is allowed to continue to be occupied pursuant to its use and occupancy, provided that the building is maintained. However, this does not permit the continuation of existing building features which were installed in conflict with any codes or laws in effect at the time of construction or installation.

In addition to the MUBEC, existing buildings are also required to comply with the requirements of the City of Portland Fire Prevention and Protection Code. This code requires all existing areas of a building to comply with the 2009 edition of NFPA 1, Fire Code, and the existing occupancy requirements contained in the 2009 Edition of NFPA 101, Life Safety Code (LSC). Compliance with the LSC is required throughout all existing portions of the building, regardless of any work conducted. However, the enforcement of these provisions is at the discretion of the local fire official.

RENOVATED AREAS / NEW CONSTRUCTION

In general, all new work associated with a renovation or addition project should conform to the specific “new construction” requirements of the MUBEC, which is an amended version of the 2009 Edition of the International Building Code (IBC) and also references the 2009 Edition of the International Existing Building Code (IEBC). The IEBC is permitted to be used in lieu of Chapter 34 of the IBC.

Renovated and newly constructed areas are also subject to compliance with NFPA 1 and the new occupancy chapters of the LSC per the City of Portland Fire Prevention and Protection Code.

The IEBC, with Maine amendments (ME IEBC) was selected to evaluate the renovated and/or altered portions of the building for this project.

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EXISTING CONDITIONS

As stated above, existing unrenovated areas of the building are required to the existing building chapters of the LSC and NFPA 1. The following sectio analysis of the existing buildings compliance with the aforementioned code

USE AND OCCUPANCY

Table 1 below outlines the applicable occupancy classifications of the complex based on the use of space.

Table 1 – Occupancy Classification

Building	Function of Space	LSC Occupancy Classification(s)
Parish House	Gymnasium, Hall with stage, kitchen, church offices, classrooms for music school	LSC Chapter 39 (Existing Business Occupancy) LSC Chapter 13 (Existing Assembly Occupancy)
Chapel and Cloister	Meeting rooms and Chapel	LSC Chapter 13 (Existing Assembly Occupancy)
Sanctuary	Church, music room, Sunday school classrooms, nursery, and meeting rooms	LSC Chapter 39 (Existing Business Occupancy) LSC Chapter 13 (Existing Assembly Occupancy)

As the classrooms in the complex will be used for music lessons and a Sunday school, the requirements of LSC Chapter 15 for an existing Educational Occupancy do not apply (LSC 15.1.4.3). Further, the nursery located in the Sanctuary building is only used during religious services. Places of religious worship are not required to meet the provisions of a Day-Care Occupancy where providing day-care while services are being held in the building (LSC 17.1.1.5). Based on discussions with the Parish, day-care services are only offered during religious services and as such the requirements of LSC Chapter 17 for an existing Day-Care Occupancy do not apply.

LSC Section 13.1.1.2 permits an existing building housing an Assembly Occupancy to be approved for continued use if it conforms to, or is made to conform to the provisions of the LSC to the extent that, in the opinion of the Authority Having Jurisdiction (AHJ), reasonable life safety against the hazards of fire, explosion, and panic is provided and maintained. **As such, the AHJ has the authority to permit any of the below mentioned deficiencies to remain as-is.**

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CONSTRUCTION CLASSIFICATION – HEIGHT AND AREA

The Parish House, Chapel and Cloister building contain brick masonry ext and a combination of unprotected steel and wood interior structural elemer the construction type of the building most closely resembles Type III (200) construction. LSC Table 13.1.6 permits buildings with assembly occupancies to be a maximum of two (stories) for a fully sprinklered building of Type III (200) construction. **The Parish House, Chapel and Cloister building is four (4) stories in height, including an above grade Basement Level, and thus exceeds the height limitations for a Type III (200) building.**

The construction type of the Sanctuary building also most closely resembles Type III (200) construction. **As the Sanctuary building is a single story in height, it meets the height limitations for a Type III (200) building.**

VERTICAL OPENINGS

All existing interior vertical openings should comply with the requirements of LSC 8.6 (LSC 13.3.1 & 39.3.1.1). Existing vertical openings are permitted to be 30-minute fire resistance rated (LSC 8.6.5(3)). Existing exit enclosures in fully sprinklered buildings should be protected with 1-hour fire resistance rated construction (LSC 7.1.3.2.1(2)((b)).

The Parish House has a stair enclosure containing two (2) staircases which connects all four levels of the building. The stair enclosure is not marked or signed as a means of egress and thus is assumed to serve as a convenience stair. Further, the stair appears to have been retroactively enclosed with 90-minute fire resistance rated doors. LSC Section 8.6 requires existing shafts in existing buildings to be enclosed in 30-minute fire resistance rated construction (LSC 8.6.5((3)). It should be confirmed that the walls of the shaft enclosure meet the 30 minute fire resistance rating requirements. If the shaft is proposed to be utilized as an egress stair as detailed in the Fire Escapes Section of this report, it should be confirmed that the stair is enclosed in 1-hour fire resistance rated construction as required by LSC Section 7.1.3.2.1(2)(a).

The Sanctuary contains three (3) stair enclosures which appear to be protected with 2-hour fire resistance rated construction including 90-minute fire resistance rated doors. As such, the stairs meet the protection requirements of LSC Section 7.1.3.2.1(2)(b)).

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MEANS OF EGRESS

The means of egress for the existing building should meet the existing occ chapters of the LSC. The major egress requirements for the existing faciliti summarized in this section of the report. It should be recognized that where multiple occupancies share the same portions of a means of egress system, those egress components should meet the more stringent requirements of all of the occupancies served. It should be recognized that this summary does not detail all applicable requirements of the LSC and FC; however it provides the major fire protection and life safety requirements.

OCCUPANT LOAD

The occupant load for the building should be determined using the greater of the following (LSC 7.3.1.2):

- Occupant load calculations using factors prescribed by the LSC Table 7.3.1.2, summarized in Table 2.
- The actual number of occupants who will use each space or floor.

Table 2 – Occupant Load Factors

Occupancy	Occupant Load Factor (sq ft/occ.)
Offices (Business)	100 Gross
Gymnasium and Memorial Hall (Including Stage and Balcony)[1]	15 Net
Kitchen	100 Gross
Meeting, Lounges and Conference Rooms	15 Net
Classrooms, Sunday School & Music Room	20 Net
Nursery	35 Net
Bench Seating	1 person/18 linear in.
Storage/MEP Rooms	500 Gross

[1] The occupant load for this space is conservatively taken at 15 Net ft^2/occupant given that the space is occasionally rented out for large functions.

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The following table outlines the calculated occupant load of the Parish Hou and Cloister. **As scaled drawings of the existing buildings are not avai areas below are estimated based on the updated construction docum project.**

Table 3 - Occupant Loads (OL) for Parish House, Chapel and Cloister

Level	Room	Area (sq ft)	Load Factor (sq ft / occ)	Occupant Load (OL)	Total OL
B	Gymnasium & Memorial Hall	~4,700	15	313.3	314
	Kitchen	~655	100	6.5	7
	Office	~859	100	8.6	9
	Seeley Hall	~1,135	15	75.6	76
	Storage	~1,040	500	2.08	3
				Total For Floor	**409**
1	Memorial Hall Balcony	650	15	43.3	44
	Office	2,423	100	24.2	25
	Chapel Bench Seating	(22), 102" rows	1 person/18 linear in.	124.7	125
	Chapel Stage	275	15	18.3	19
	Lounge	355	15	23.6	24
				Total For Floor	**237**
2	Parents Corner	~740	15	49.3	50
	Resource Room	~440	15	29.3	30
	Lounge	~395	15	26.3	27
	Office Space	~2,320	100	23.2	24
	Storage	~575	500	1.1	2
				Total For Floor	**133**
3	Classrooms	~3,250	20	162.5	163
				Total For Floor	**163**

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The following table outlines the calculated occupant load of the Sanctuary. **drawings of the existing buildings are not available, the areas below a estimated based on the updated construction documents for this pro**

Table 4 - Occupant Loads (OL) for Sanctuary

Level	Room	Area (sq ft)	Load Factor (sq ft / occ)	Occupant Load (OL)	Total OL
B	Music Room	~1,000	20	50	50
	Sunday School	~2230	20	111.5	112
	Meeting Room	~700	15	46.6	47
	Storage	~948	500	1.8	2
				Total For Floor	**211**
1	Church Bench Seating	(52), 221" rows	1 person/18 linear in.	638.4	639
	Church Stage	~490	15	32.7	33
	Storage	~130	500	.2	1
	Balcony	(16), 170" rows	1 person/18 linear in.	151.1	152
				Total For Floor	**825**
Balcony	Balcony	(16), 170" rows	1 person/18 linear in.	151.1	152
				Total For Floor	**152**

EGRESS CAPACITY AND NUMBER OF EXITS

Each floor of the building is required to minimally have a number of exits specified in LSC Section 7.4.1, based on the calculated occupant load of each floor. The following table outlines the minimum number of exits required for every floor or space:

Table 5 - Minimum Number of Exits

Occupant Load (persons)	Minimum Number of Exits (per story)
1-500	2
501-1,000	3
More than 1,000	4

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The following tables outlines the minimum required and provided number c
buildings:

Table 6 – Number of Exits for Parish House, Chapel and Cloister

Floor	Occupant Load	Required Number of Exits	Number of E
B	409	2	6
1	237	2	5
2	133	2	2
3	163	2	2

Table 7 - Number of Exits for Sanctuary

Floor	Occupant Load	Required Number of Exits	Number of Exits Provided
B	211	2	3
1	825	3	4
Balcony	152	2	2

The egress capacity is calculated using 0.3 inches per occupant for stairs and 0.2 inches per occupant for other egress components (LSC 7.3.3.1). The egress capacity for the fire escapes stairs is based on ½ inches per person (LSC Table 7.2.8.4.1(a)).

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The following table outlines the provided egress capacity from the building

Table 8 – Egress Capacity for Parish House, Chapel and Cloister

Floor	Exit	Component	Width (inches)	Factor	Capacity (Occupants)	E
B	Gym Exit 1	Door	34	0.2	170	170
		Stair	-	0.3	-	
	Gym Exit 2	Door	34	0.2	170	170
		Stair	-	0.3	-	
	Gym Exit 3	Doors	34	0.2	170	146
		Stair	44	0.3	146	
	Parish Front Entry	Doors	56	0.2	280	156
		Stair	47	0.3	156	
	Seeley Hall Exit	Door	48	0.2	240	160
		Stair	48-	0.3	160	
	Sanctuary Shared Stair[2] 1	Doors	39	0.2	195	73
		Stair	44	0.3	146	
						Total Provided = 875 Total Required = 409
1	Parish Rear Stair	Door	37	0.2	185	146
		Stair	44	0.3	146	
	Parish Front Entry	Doors	56	0.2	280	156
		Stair	47	0.3	156	
	Cloister Exit 1	Doors	59	0.2	295	293
		Stair	88	0.3	293	
	Cloister Exit 2	Doors	59	0.2	295	293
		Stair	88	0.3	293	
	Chapel Exit	Door	34	0.2	170	120
		Stair	36	0.3	120	
						Total Provided = 1,008 Total Required = 237
2	Fire Escape 1	Door	30	-	150	100
		Stair	30	-	100	
	Fire Escape 2	Door	30	-	150	100
		Stair	30	-	100	
						Total Provided = 200 Total Required = 133
3	Fire Escape 1	Door	30	1/2” per person		40.75
		Stair	30			
	Fire Escape 2	Door	34	1/2” per person		40.75
		Stair	30			
						Total Provided = 81.5 Total Required = 163

As shown in the table above, the Parish House is not provided with sufficient egress capacity on the Second and Third Floors due to the limiting capacity of the fire escape stairs. Refer to the Fire Escape section of this report for further discussion.

[2] Conservatively, the capacity of the shared exit stair located in the Sanctuary building will be divided evenly between the two buildings.

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Table 9 - Egress Capacity for Sanctuary

Floor	Exit	Component	Width (inches)	Factor	Capacity (Occupants)	E
B	Sanctuary Shared Stair[2] 1	Doors	39	0.2	195	
		Stair	44	0.3	146	
	Sanctuary Stair 2	Door	39	0.2	195	146
		Stair	44	0.3	146	
	Sanctuary Stair 3	Doors	39	0.2	195	146
		Stair	44	0.3	146	
						Total Provided = 365 Total Required = 211
1	Main Entry	Doors	158	0.2	790	790
		Stair	-	0.3	-	
	Sanctuary Stair 2 Exit	Door	56	0.2	280	280
		Stair	-	0.3	-	
	Rear Exit 1	Door	40	0.2	200	200
		Stair	86	0.3	286	
	Rear Exit 2	Door	39	0.2	195	195
		Stair	86	0.3	286	
						Total Provided = 1,465 Total Required = 825
Balcony	Sanctuary Stair 1	Doors	39	0.2	195	146
		Stair	44	0.3	146	
	Sanctuary Stair 2	Door	39	0.2	195	146
		Stair	44	0.3	146	
						Total Provided = 292 Total Required = 152

As shown in the table above, the Sanctuary building is provided with sufficient egress capacity.

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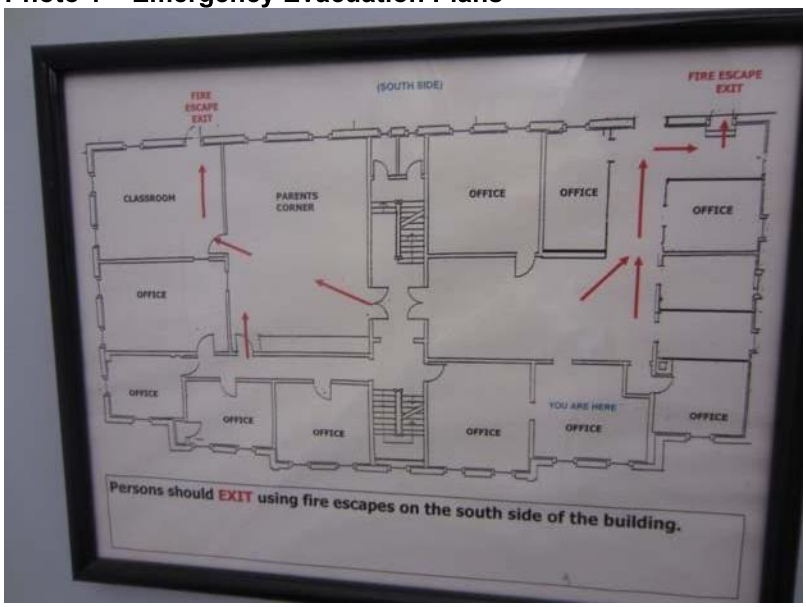
FIRE ESCAPES

Fire escape stairs should comply with LSC Section 7.2.8 unless they are a existing fire escape stairs. LSC Section 7.2.8 outlines the following major r for fire escape stairs:

- Fire escape stairs are permitted on existing Assembly and Business Occupancy buildings, but should not constitute more than 50 percent of the required means of egress (LSC 7.2.8.1.2).

  The fire escape stair currently constitutes 100% of the required means of egress for the Second and Third Floors of the Parish House and thus does not meet the above requirement (See Photo 1 Below). If the above condition is not approved by the AHJ, it is recommended that the single stair enclosure in the Parish House be signed and labeled as an Exit from the Second and Third Floors. The stair should also be verified as being protected with 1-hour fire resistance rated construction for an existing exit enclosure.

  Photo 1 – Emergency Evacuation Plans



- Fire escape stairs should be exposed to the smallest possible number of window and door openings, and each opening should be protected with approved fire door or fire window assemblies where the opening or any portion of the opening is located as described in LSC Section 7.2.8.2. This requirement is permitted to be modified by the AHJ where automatic sprinkler protection is provided, where the occupancy is limited to low hazard contents, or where other special conditions exist (LSC 7.2.8.2.2).

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- Required dimensional criteria for fire escape stairs is outlined in LS(7.2.8.4.1(a). Fire escape stairs serving more than 10 occupants shc minimum width of 22 inches clear between rails with a maximum ris inches and a minimum tread depth of 9 inches. **The fire escape sta to meet the dimensional criteria of LSC Table 7.2.8.4.1(a) with t of the tread depths which were typically measured between 7½ and 8 inches. The tread depth condition should be rectified if not approved by the AHJ.**

- The egress capacity for fire escape stairs should calculated at ½ inch per person if accessed by a door (LSC Table 7.2.8.4.1(a)). As shown in the egress capacity tables above, the fire escape stairs do not have adequate capacity to accommodate the occupant loads on the Second and Third Floors of the Parish House. **If the above condition is not approved by the AHJ, it is recommended that the single stair enclosure in the Parish House be signed and labeled as an Exit from the Second and Third Floors. The stair should also be verified as being protected with 1-hour fire resistance rated construction for an existing exit enclosure.**

- The fire escape stairs should provide occupants safe access to a public way (See Figure 2 Below) (LSC 7.7.1.1). **The East fire escape stair and the exterior stair leading from the Chapel discharge to an area of heavy, overgrown vegetation on the path to a public way. It is recommended that the vegetation be removed in order to provide occupants safe exit discharge conditions.**

Figure 2 – Fire Escape Discharge

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MEANS OF EGRESS LIGHTING

The following sections detail the LSC requirements for artificial lighting.

General Means of Egress Lighting

In normal non-emergency conditions, means of egress should be equipped with artificial lighting facilities to provide one (1) foot-candle intensity floor lighting continuously during the time that conditions of occupancy of the building require that the exits be available (LSC 7.8.1.3(2)). RJA did not verify the adequacy of existing means of egress illumination levels.

Emergency Means of Egress Lighting

Means of egress should be provided with artificial lighting throughout the building in accordance with the requirements of the LSC. In the event of power supply failure, an emergency electrical system should automatically illuminate the following areas (LSC 7.9.1):

- Exit access corridors, passageways and aisles in rooms and spaces which require two or more means of egress.
- The portion of the exterior exit discharge immediately adjacent to exit discharge doorways in buildings required to have two or more exits.

In emergency conditions, emergency power should be provided for a minimum of 90-minutes (LSC 7.9.2.1). Emergency lighting facilities should provide an average initial illumination of one (1) foot-candle and a minimum at any point of 0.1 foot-candle measured any point along the path of egress at floor level. Illumination levels are permitted to decline to not less than 0.06 foot-candle at the end of 90-minutes. A maximum to minimum illumination uniformity ratio of 40:1 should not be exceeded (LSC 7.9.2.1).

The emergency lighting and exit signage in the building is provided with battery backup. RJA did not perform functional testing of these devices.

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FIRE PROTECTION SYSTEMS

The Parish House, Chapel and Cloister are protected throughout with an a sprinkler system.

The Sanctuary building is completely unsprinklered which is permitted by the LSC and FC for an existing assembly occupancy based on the specific uses of the building.

FIRE ALARM SYSTEMS

Assembly occupancies with occupant loads of more than 300 should be provided with an approved fire alarm system (LSC 13.3.4.1.1). **The complex is protected throughout with a fire alarm system consisting of manual pull stations, smoke detection, and visible and audible notification appliances throughout.**

FIRE EXTINGUISHERS

Fire extinguishers should be provided throughout the building in accordance with NFPA 10 (2007 Edition), *Standard for the Installation of Portable Fire Extinguishers* (FC Table 13.6.2). **Fire extinguishers were observed throughout the Complex.**

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ME IEBC SCOPING REQUIREMENTS

COMPLIANCE METHODS

ME IEBC Section 101.5 presents the various options available to evaluate the code requirements applicable to repair, alteration, change of occupancy, addition, or relocation projects for existing buildings. Users elect one of the available compliance methods to evaluate the existing building based on the proposed scope of work of the project. The three compliance options available are as follows:

Prescriptive Compliance Method:

Users electing to use this compliance method should follow the requirements outlined in ME IEBC Chapter 3 to perform the existing building evaluation.

Work Area Compliance Method:

Users electing to use this compliance method should follow the requirements of Chapters 4 through 12 of the ME IEBC to perform the existing building evaluation.

Performance Compliance Method:

Users electing to use this compliance method should follow the requirements of ME IEBC Chapter 13 to perform the existing building evaluation. This method generally requires more upgrades than the work area method would require and thus has not been chosen.

The prescriptive compliance method has been selected for use on this project.

GENERAL

In order to perform work within an existing building, a MUBEC Chapter 34 evaluation of the existing building is required to determine the necessary fire protection, life safety, accessibility, structural, and energy improvements when any alteration or renovation work is undertaken. As previously noted, Chapter 34 of the MUBEC is based on the requirements of the 2009 Existing Building Code of Maine (ME IEBC).

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CHAPTER 3 – PRESCRIPTIVE COMPLIANCE METHOD

GENERAL

301.2 Building Materials

Materials that are currently in use in a building that are in compliance with requirements or approvals in effect of the time of their erection or installation are permitted to remain in use unless determined by the code official to be dangerous to life, health, or safety (ME IEBC 301.2.1).

Materials permitted by the applicable code for new construction should be used in the renovation. Like materials are permitted for alterations provided that no hazard to life, health or property is created. Hazardous materials should not be used where the MUBEC would not permit their use in buildings of similar occupancy, purpose, or location (ME IEBC 301.2.2).

It is RJA's assumption that all existing building materials were compliant with the code in effect at the time of original construction. New building materials should comply with new construction requirements.

ALTERATIONS

303.1 General

Alterations to any building or structure should comply with the requirements for new work in the MUBEC. Alterations should not be performed such that, after completion, the building is less conforming to the provisions of the MUBEC than the building was prior to renovation.

303.2 Flood Hazard Areas

For areas in flood hazard areas established in MUBEC 1612.3, any alteration that constitutes a substantial improvement of the existing structure should comply with the floor design requirements for new construction and all aspects of the existing structure should be brought into compliance with the MUBEC requirements for flood design.

It is not anticipated that this project will constitute a substantial improvement of the existing structure.

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303.3 Existing Structural Elements Carrying Gravity Load

Existing gravity load-carrying structural elements for which an alteration ca increase in design gravity load of more than 5 percent should be strengthe supplemented, replaced, or otherwise altered as needed to carry the incre load required by the MUBEC. The cumulative effect of the load increase since the original construction should be considered. Existing gravity load-carrying structural elements for which an alteration causes a decrease in design gravity load-carrying capacity should be shown to have the required capacity to resist the applicable design gravity loads as required by the MUBEC.

It is not anticipated that existing gravity load-carrying elements will have an increase in design gravity load of more than 5% as a result of this project; however, compliance with this requirement should be verified by the design team's structural engineer.

303.4 Existing Structural Elements Carrying Lateral Load

Except as permitted in ME IEBC 303.5, where an alteration increases design lateral loads in accordance with MUBEC Section 1609 or 1613, or where an alteration decreases the capacity of any existing lateral load-carrying structural element, the structure of the altered building or structure should be shown to meet the requirements of MUBEC Section 1609 and 1613.

It is not anticipated that the alteration will increase the design lateral loads of the structure; however, compliance with this requirement should be verified by the design team's structural engineer.

303.5 Voluntary Seismic Improvements

This section contains requirements for structural upgrades not otherwise required by the ME IEBC.

It is RJA's understanding that no voluntary seismic improvements are planned as part of this alteration.

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310 Accessibility for Existing Buildings

The following accessibility requirements are applicable to alterations to exi buildings. Accessibility requirements for alterations should comply with An Disabilities Act Accessibility Guidelines (ADAAG), 2010 Edition unless tecl infeasible. In general, all public use spaces that are altered should be designed to be accessible. **As the equipment room is not a public space it should not be required to comply with the abovementioned requirements.**

NEW CONSTRUCTION

All new work within the renovation work area should comply with the new construction requirements of the MUBEC and LSC. The following items summarize the major code requirements that should be considered within the new work area:

1. Although the space is not independently required to be provided with an automatic fire alarm system in accordance with the MUBEC, it is understood that one is to be voluntarily provided within the room. The fire alarm system will be designed in accordance with the 2010 Edition of NFPA 72: the *National Fire Alarm and Signaling Code.*

2. Although the space is not required to be provided with an automatic sprinkler system in accordance with the MUBEC, the space will be provided with automatic clean agent fire suppression system in accordance with NFPA 2001: *Standard of Clean Agent Fire Extinguishing Systems*.

3. The interior finish of walls and ceilings in the work area should be Class A, B, or C (MUBEC Table 803.9 & LSC Section 42.3.3.2).

4. The creation of the telecommunications room will not result in a change of occupancy classification. Since the renovation includes neither a change in use nor an addition to the existing building, a height and area analysis is not required to be performed.

5. Exit signage is not required to be provided since a single means of egress is permitted from the room (MUBEC 1011.1 Exception 2).

6. Means of egress lighting should be provided throughout the renovation work area in compliance with MUBEC Section 1006. Notably, the means of egress illumination level should not be less than 1-foot-candle at the walking surface (MUBEC 1006.2 & LSC 7.8.1.3(2)).

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Please do not hesitate to contact us with questions regarding the content c

Sincerely,

ROLF JENSEN & ASSOCIATES, INC.

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