

MUSÉE DE SAINT-BONIFACE MUSEUM

CONDITON ANALYSIS OF DOORS, WINDOWS, ROOF, AND SIDING – Fall 2022

1.0 DOOR CONDITION:

A. GROUND FLOOR DOORS

Note: Door Identification numbers are matched to those used for the 1993 Architectural Restoration Drawings produced by Prairie Partnership. See PDF attached.

D 1-01 West Entry Porch Door:

The antique latch hardware in the museum's collection of salvaged hardware items looks like it will work on the west vestibule door. A similar set exists on the north vestibule door (IMG_5813). This would replace the modern looking doorknob set which is not appropriate for this heritage building. To install antique latch, insert and epoxy a wood plug to the existing hole for the newer doorknob set. Use black slot head crown screws to secure latch and keeper into place.

The exterior antique escutcheon plate and interior escutcheon plate for the dead bolt is in good condition. The Schlage deadbolt may remain part of the antique plate, or alternatively, purchase a new dead bolt with new hardware that fits into the hole in the period escutcheon plate currently on the door. General oiling is recommended.

Photo References: 7569, 7570, 7571

West Main Door Screen Door

Hardware needs repairs to allow the door to close properly (i.e., firing out of the keeper plate on the door jamb, oiling hardware). Weather stripping is keeping the door partly opened on the lock stile at the sill. It may require a spring-loaded door keeper to keep it closed when shut. Treat unfinished wood which has lost its wood graining finish, with wood preservative (linseed oil) and add new weather stripping. Longer lasting weather stripping consists of a butyl weather strip set into a groove cut in wood.

Photo References: 7572, 7573, 7574, 7576

West Main Door

Main door is in good service. The doorknob set appears to be old. A latch mechanism will not work as there is a mortise lock system for the door. General oiling of hardware is recommended. The bronze door keeper needs to be removed and the existing rough chiseled countersinks for former keeper filled with wood dutchmen, and the bronze keeper plate being reinstalled. Although still serviceable, replacing the existing copper weather stripping with new spring bronze weather stripping may be considered.

Photo References: 7575, 7577, 7588, 7579, 7580

D 1-06 North Entry Porch Door

This door is askew and jammed shut. New interior casings which match the profiles of the interior window casings, and robust weather stripping is recommended to seal off the large existing gap in the door head area. Install a new weather strip threshold piece.

Photo References: 5813, 7581, 7582,

Interior West Door

This appears to be an old door for the building; it may not be an original feature of the building. It was originally hung on the interior side of the door and swung into the room. For fire exit/building code reasons, it was shifted to the exterior side of the door frame. It is hung backwards – the original exterior face of the door is now the interior face. There is a cracked windowpane which needs to be replaced. There are gaps between the door and the frame allowing frigid air to get into the building. New robust weather stripping is recommended.

D 1-16 East Wall at South East Corner

Door opening has been closed off with plywood.

Wood rot exists at the bottom of the brick moulds and exterior casings.

D 1-20 South Door

Each of the two door panels is comprised of 2 wood pieces. There is a gap existing between these wood pieces in both panels which need filling with linseed oil putty before painting. Repair the bottom edge of the door. Install new robust weather stripping. On the exterior side, replace the epoxy repaired sill with a wood dutchmen. Fill existing gaps in the stile to rail connections of the door. There are protruding wood pegs at the bottom rail to east stile connection. This door needs robust weather stripping.

B. SECOND STOREY DOORS

D 2-01 West Front Door

The storm door does not fit snugly to the door stops/frame. The bottom rail rubs against the door sill and does not completely close. The door's bottom rail and stiles should be planed to ensure a snug fit to the door frame.

There is an interior screen door with is in good service. It is completely non-original but does offer fresh air ventilation when needed. It is recommended that a new screen door be installed in this area that matches the design of the screen door of D 1-01.

The interior door is in good service. There is a securing draw bolt that should be repositioned on the door or door casing to permit ease of use. Currently, it is very hard to close the bolt once opened. The door appears to be old, however, the window sash was a later addition to the door itself.

D 2-04 North Door of East Wall

Before painting, seal existing cracks in the bottom and intermediate rails.

Temporarily remove lexan sheet on the door's interior window sash and paint.

Replace existing weather stripping with more robust weather stripping.

D 2-10 South Door of East Wall

Re-putty the door's window sash where needed.

Fill opening crack between the hinge stile and the top rail of the door before painting.
Replace existing weather stripping with more robust weather stripping.
Gaps between the exterior casings and wall boards need to be filled.
Wood drip cap above door has weathered and needs restoring with linseed oil.

2.0 WINDOW CONDITION

Note: Window Identification numbers are matched to those used for the 1993 Architectural Restoration Drawings produced by Prairie Partnership. See PDF attached.

A. SHUTTER CONSTRUCTION

Overall dimensions: 22 7/8" x 58 7/8" typical for ground floor, and 20 5/8" x 50 1/4" for the second storey. Shutter dimensions may vary slightly from window to window.

- Each shutter consists of four (4) 7/8" thick boards – 2 inner boards tend to be full sized between 5 7/8" and 6 13/16" (shutter W 1-15). Original boards were rough sawn. Many boards have been replaced with past restoration work. Those replacement boards tend to have a smoother finish. Many original boards have been replaced, usually the end boards which measure approximately 4 1/2" – 4 5/8" in widths. Plenty of gaps between the boards, likely due to weathering and shrinkage. Board joints vary in places; there are butt, shiplap and tongue and grooved joints used in the shutter construction.

Cleat dimensions: 7/8" x 5" flush to the outside edges of the shutter boards. No edge beading utilized. Shutter boards were originally secured to the cleats with 2 1/4"-2 1/2" long cut nails, nailed from both sides and clinched (i.e. the exposed nail tip was bent over) Cleats are secured to hinges with 1 5/8" rounded slot head screws, likely not original. 5/32" diameter shank, 5/16" head

Shutters fixed in place with a hook and eye, likely not original.

- **Condition:**
Boards are sagging due to weathering and no cross-bracing Z cleat board. Wood is well weathered, and many cleats have rotted and are in need of replacement. Bird nests exist on the east side of the building.
- Strong consideration should be given to the total replacement of all window shutters. New Z cleats should be included for any new shutters to ensure longevity in service.

1.0 BASEMENT WINDOWS

General Notes:

There are 4 basement windows located along the museum's west wall. They are partially obscured by the front hedge. All but one window has been altered to accommodate current and closed off fresh air vent intakes and exhausts vents. All but one window has their original (or early) wood sash in place. Glass panes have been removed to accommodate the fresh air intake flues and exhaust vents. There is a wood screened sash attached to the outside of each window frame.

Each original wood sash is operable by swinging in and up and each sash has two (2) metal hinges, bottom rail handle and sash stops.

Each wood window frame rests on a stone foundation that is below ground level and set within a limestone window well. The limestone is mortared to the building's limestone foundation; but some have separated over time. Each window's wood frames exhibit rot in their jambs and sills. This is due to their proximity to ground level within each window well, and snow and moisture build up over time.

The north most window sash (B3) has been changed at some point in the past.

B1 South Most Window

The original wood sash remains in place. The upper north glass pane has been removed for a vinyl pipe which houses the point of entry for the electrical lines for phone/IT services. The upper south glass pane has been removed for an insulated fresh air intake flue which connects to HVAC components (Apirilaire Series 600 Humidifier). The glass opening is closed in with metal. The bottom two panes of glass remain in place. The limestone of the window well appears to be snug to the building's foundation.

B-2

The original wood sash remains in place. The upper north glass pane has been removed to accommodate an insulated air intake which has been closed off on the exterior side. The glass pane area is infilled with galvanized sheet metal. All glass remains in the other three (3) pane openings. There are five (5) diagonal bars set into the window frame's head and sill, and between the wood sash and the screen sash.

The original wood sash appears in sound condition; however, wood decay in the frame is suspected to the underside of the sill and at the sill to jamb connections. The two sashes have holes in them. There are two (2) strap hinges attached to the stiles of this sash for a former window well cover. Some wood decay is evident along the bottom of this sash. There is an unplugged hole in the south window jamb. A water line copper pipe intake is drilled through the south window jamb. The mortar bond between the window well and the foundation has a sheer crack.

B3

The original sash remains in place. All glass panes remain in place. The limestone window well has separated from the building's foundation stones. The joint relies solely on mortar bonding. The wood sashes appear in sound condition; however, wood decay in the frame is suspected to the underside of the sill and at the sill to jamb connections. There is wood decay also evident in the sill log immediately above this window opening.

B4

The window opening is narrower in height to the other three sash openings. There is a non-original wood elements making up the casings. There is plate glass used in the outer side of the frame. This glass is held in place by wood stops. All wood appears to be in good service.

2.0 GROUND FLOOR WINDOWS

W 1-01

- Storm sash does not fit snugly to the window stops.
- Storm sash's hook and eyes fastened into wood stops and not into sill.
- Storm sash's vertical venting flap is painted shut.
- Storm sash is slightly warped outward at approximately the mid height.
- Storm sash's bottom rail decayed at its south end. Repair dutchmen wood strip added to the underside of the storm sash's bottom rail.
- Decayed wood to both sill to jamb joints.
- Gap existing between the stool and frame.
- Drag mark gouge into the stool from the lower window bolt. No metal keeper at stool.

W 1-02

- Storm sash does not fit snugly to the window stops.
- Storm sash needs re-puttying.
- Storm sash's vent flap is painted shut.
- Wood sash pegs on storm sash's bottom rail are loose.
- Storm sash's vent sash's upper north wood stop is loose, needs pinning and gluing.
- The upper north vent sash has loose and protruding wood pegs.
- A top wood piece has been added to the top rail of the south casement sash.
- North casement hinges are loose – upper north hinge is broken.
- Lichen growth on sill. Well-worn and weather wood sill. There is a missing half knot in the sill's top surface which can collect moisture.

W 1-03

- Drag marks on interior window stool.
- Wood splice piece has been added to the top rail of the south casement sash.
- Interior casement sashes are out of alignment and jammed shut.
- Window sill appears sound.
- Storm sash needs re-puttying.

W 1-04

- Storm sash has a snug fit to wood stops.
- Partially cracked glass pane.
- Storm sash's vent sash is painted shut.
- Wood strip added to underside of bottom rail and stiles.
- Gap exists between the stool and window frame.
- Checks, cracks and lichen growth evident on window sill.
- Drag marks on window stool by lower bolt.

W 1-05 West Entry Porch Windows – South Wall's Windows

- Sashes are in good condition. Repainting work is all that is required.

W 1-06 West Entry Porch Windows – South Most Window

- Sashes are in good condition. Repainting work is all that is required.

W 1-07 No Window 1-07 is indicated on the Architectural Drawings

W 1-08 West Entry Porch Windows – North Most Window

- Sashes are in good condition. Repainting work is all that is required.

W 1-09 West Entry Porch Windows – North Wall's Windows

- Sashes are in good condition.
- Re-putty work to the lower areas of the lower sash is required.

W 1-10 No Window 1-10 indicated on the Architectural Drawings

W 1-11

- Lichen growth on window sill. Weathering has raised the grain on the window sill.
- Storm sash has a snug fit to wood stops.
- Sashes are in good condition.
- Minor re-putty work to the lower areas of the storm sash.

W 1-12

- No bottom metal keeper for the lower bolt.
- Checking exists in the storm sashes.
- Storm sash has a snug fit to wood stops.
- Storm sash needs re-puttying.
- ¼" gap exists between the underside of the window head and the top of the north casement sash and 3/8" gap between the underside of the window head and the top of the south casement sash.
- Wood sill is sound.
- Storm sash's bottom rail is narrow in height and needs strengthening.

W 1-13

- South casement sash has a loose-fitting stile-to-bottom rail joint. Its bottom rail is cracked.
- No wood decay on storm sashes.
- Storm sash has a snug fit to wood stops.
- Storm sash needs re-puttying.
- Storm sash's venting flaps are painted shut.
- Lichen growth exists on window sill.
- Crack exists in the underside of the window sill.

W 1-14

Top sash bolt jams the interior casement sashes shut.

Window sill is sound but is suspected to be punky beneath the bottom rail of the storm sash.

Storm sash needs re-puttying.

Storm sash has a snug fit to wood stops.

W 1-15

- Storm sash has a snug fit to wood stops.
- Lichen growth evident on window sill.
- No paint on sills, need wood conservation treatment.
- Storm sash needs re-puttying.

W 1-16 North Entry Porch – West Window

- Checking exists in window sill wood.
- Putty is in good condition.

W 1-17 North Entry Porch – North Wall – West Window

- Checking exists in window sill wood.
- Putty is in good condition; however, the bottom rail does need re-puttying.

W 1-18 North Entry Porch – North Wall – East Window

- Checking exists in window sill wood.
- Putty is in good condition.

W 1-19 North Entry Porch – East Window

- Checking exists in window sill wood.
- Sash needs re-puttying.

W 1-20

- Checking exists in window sill wood.
- Chipped east reveal located at window head.
- Split/gouge exists in west casing at stool.
- Bolts jam casement sashes shut.
- Storm sash's connecting pegs are loose and protruding from the exterior face of the rails and stiles.

W 1-21

- Wood pieces have been added to the top and bottom rails of the north casement sash.
- Thin wood strip added to the top rail of the south casement sash.
- No metal keeper for the lower sash bolt.
- Sashes are jammed shut.
- Cracks exist in window sill wood.
- Gaps exist in the north exterior casing.
- Dutchmen repair to both exterior casings.
- Possible carpenter ant infestation to the exterior window wood and surrounding wall.

W 1-22

- Gap exist between the stool and window sill.
- No metal keeper for the lower sash bolt.
- Storm sash needs re-puttying.
- Storm sash is not fitting snugly to the wood stops.
- Checks and cracks exist in the window sill wood. Large crack at the north casing.
- Storm sash's vent flap is painted shut.
- Wing nut seals storm sash's vent sash shut.
- North casement has a separate board added to its meeting stile.
- Protruding wood pegs at stile to rail connections of storm sash.
- Dutchmen repair to both exterior casings.
- Gap above window's top casing wood drip and underside of wall boards.
- Possible carpenter ant infestation to the exterior window's wood components.

W 1-23 (Washroom Window)

- Carpenter ant infestation exists on the exterior side of this window.
- Storm sash's vent flap is paint shut.
- Storm sash's venting sash is jammed and not weather tight. Its bottom stop is split with a section missing.
- Non-original bottom rail indicates repairs to the storm sash at some point.
- Window sill is damp between casement and storm sashes.
- Weather stripping is in good service.
- South casement sash wood drip is damaged, including an existing knot hole.
- Storm sash's bottom rail connection to the south stile is loose.
- Dirt accumulation buildup exists on the window sill wood between the casement sashes and the storm sash.

Dual Pane Plate Glass Windows to the North Entry Addition.

Note: No window designation numbers were applied to these windows on the architectural drawings.

North Window

- Carpenter ant infestation exists at the lower part of this window's wood frame, mostly at the window sill level.
- Checks exist in the window sill wood.
- The window frame and base metal flashing need repainting.

East Window

- The window frame and base metal flashing need repainting.

W 1-25 Chapel Window

- This window was a former second storey door onto a balcony which was removed in the past.
- It has been altered to a window opening with connects to a former ground floor opening.

- Surrounding wall boards have shrunk – some out of their tongue and groove joints and have also cupped. Gaps exist between the wall boards above the window arch and the arch flashing. Both conditions have allowed moisture to penetrate the building envelope.
- There is a rotted wall board beneath the east end of the window sill.
- Interior storm sash in the building has had extra pieces added to each stile to allow for the sash to fit the window opening.
- All interior sash wood is in good condition.
- Interior sash hinge screws have been pulled out of their holes and no longer support the sash.
- Storm sash need re-puttying.

W 1-27 Chapel Window

- Wood decay at storm sash's stile to bottom rail connections and possibly at the exterior window casings at the sill level.
- South west casing needs repairs.
- At the base of the window, fill all existing gaps.

W 1-28 Chapel Window

- The casing is rotted at the north west end of the window sill.
- Gaps existing between the window casings and the wall boards.

W 1-29

- Crack in the window pane on the lower sash.
- Gaps existing between the window casings, window sill, and the wall boards.
- Gaps exist between the storm sash's south east stile and bottom rail.
- Wood pegs are loose and protruding from some stile to rail connections.

W 1-30

- Gaps existing between the window casings, window sill, and the wall boards.
- Gaps exist between the storm sash's south east stile and bottom rail.
- Wood pegs are loose and protruding from some stile to rail connections.
- End rot decay in window sill at its south west end.

W 1-31

- Cracks exist in stile to rail connections.
- Gaps exist in the exterior casings
- Cracks exist in the bottom window sill. All 3 window sills have weathered.
- There is a loose shim in the bottom sash.

W 1-32 There is no actual Window 1-32 noted on the architectural drawings.

W 1-33

Window's casement and storm sashes were built to fit into this acutely out of square window opening. Storm sash does not fit snugly to the wood stops.

Storm sash needs re-puttying.

Cracks and exposed knot exist in the window sill wood near the north casing.

North window casing needs wood repairs.

W 1-34

Storm sash fits snugly to the wood stops.

Storm sash needs re-puttying.

Weathering in the storm sash's bottom rail.

Cracks existing in window sill wood, and it has a worn edge.

Existing gap between the storm sash's bottom rail and the north stile.

W 1-35

Epoxy repairs have been done to the window's north jamb and storm sash's north stile.

Window sill wood appears sound and in good service.

Storm sash needs re-puttying.

Putty intermediate stile to bottom rail joint; but some decay is suspected at or around the storm sash's south stile.

The bottom of the storm sash's south stile needs a dutchmen repair.

W 1-36

Window sill wood is crushed/compressed and decayed at its west end – needs a wood dutchman.

Cracks and an exposed knot exist in window sill wood.

Protruding wood pegs in storm sash's intermediate stile and east stile connections to bottom rails.

Split repair in lower third of the storm sash's west stile and upper third area of the east stile.

Storm sash appears to be fitted snugly to the wood stops.

Storm sash's bottom rail appears to have been repaired at some point.

W 1-37

Storm sash does not fit snugly to the wood stops.

Protruding wood pegs in storm sash's west stile to bottom rail connection.

Window sill wood appears sound.

3.0 SECOND FLOOR WINDOWS

General Notes:

General Work includes:

- Re-putty Storm Sashes.
- Plane storm sashes to ensure a snug fit to the existing wood stops.
- Install weather stripping where deteriorated, work or not existing.
- Replace cracked window panes.
- Make all interior casement sashes operable as some are jammed shut.
- Wood repairs to exterior wood components: sills, casings, storm sashes.
- Weather strip all storm sashes vent sashes.
- Install insect screens in all existing vent flaps.
- Painting both interior and exterior of window's wood components.

- Repair hinges where required: bolt keepers to be installed, make up new hinges.
- Build new shutters for ground and second floor windows.

W 2-01

- Storm sash is sound.
- Window sill is sound. Cracks in window sill wood need filling. Gaps exist between the sill and the casings which need to be filled.
- Casement meeting stiles need weather stripping
- No venting holes or weather stripping on storm sash.
- Paint worn/weathered off the sill.
- Storm sash is not fit snugly to the window stops.
- No weather stripping at storm sash's stops.
- Storm sash needs putty.
- The small venting sash in the storm sash needs weather stripping, and a shim at the thumb turn latch to keep it tight.

W 2-02

- Storm sash's small vent sash needs putty.
- Storm sash does not fit snugly to the window stops. The lower hook and eye fasteners do not meet.
- Paint weathered off sill.
- No weather stripping at storm sash's stops.
- Missing lower sash stop on the storm sash's venting sash.
- The lower bolt keeper is broken.
- Storm sash's vent flap is painted shut.
- Window sill is sound. Cracks in window sill wood need filling. Gaps exist between the sill and the casings which need to be filled.

W 2-03

- Sill is weathered.
- The interior sash's weather stripping is sound.
- Storm sash does not fit snugly to the window stops.
- Storm sash needs putty.
- One (1) cracked glass pane in storm sash.
- No metal keeper slot for lower sash bolt connection into the interior stool.
- Window sill is sound. Cracks and exposed knot in window sill wood need filling and sealing before painting. Gaps exist between the sill and the casings which need to be filled.
- Window sill is sound. Cracks in window sill wood need filling. Gaps exist between the sill and the casings which need to be filled.

W 2-04

- Weather stripping is sound.
- Storm sash does not fit snugly to the window stops.

- Storm sash wood is sound.
- Storm sash needs putty.
- Storm sash vent is painted shut.
- No metal keeper slot for lower sash bolt connection into the interior stool.
- Window sill is sound. Cracks in window sill wood need filling. Gaps exist between the sill and the casings which need to be filled.
- New wood piece may be required to storm sash's north stile at window sill level.

W 2-05

- Storm sash is fitted snugly to the window stops.
- All wood is sound.
- Weatherstripping is sound.
- Minor putty work to the storm sash is needed.
- Window sill wood is sound.
- Exterior casings are sound.

W 2-06

- Storm sash does not fit snugly to the window stops.
- Storm sashes require new putty.
- Existing wood and weather stripping is sound.
- Window sill wood is sound.
- Exterior casings are sound.

W 2-07

- Storm sash's two (2) cover flaps do not totally cover vent holes.
- Storm sash is loose and does not fit snugly to the window stops. Upper hook and eye fasteners are not keeping the storm sash snugly in place.
- Storm sash needs weather stripping.
- Storm sash's upper north vent sash is loose at the stile to bottom rail connection. It is sticky and will not completely open.
- Existing checks and cracks exist in the window sill.
- Cracks exist in window sill.

W 2-08

- The storm sash is loose and does not fit snugly to the window stops.
- Storm sash needs re-puttying.
- Cracks existing in the window sill at both casings.
- No metal keeper for lower security bolt.
- Window sill is sound. Cracks in window sill wood need filling. Gaps exist between the sill and the casings which need to be filled

W 2-09

- Existing weather is stripping sound.
- Storm sash is loose fitting and needs re-puttying.
- Crack in sill at north exterior casing.
- North interior casement sash needs repairs – hinge stile, existing crack in wood approximately 16" in length is located on the exterior sash side.
- Repair crack existing at former lower bolt location behind the existing bolt.
- One (1) cracked pane on north casement sash.
- Cracks in window sill.
- Storm sash's bottom north stile and upper south stile needs dutchmen wood repairs.
- Storm sash needs re-puttying.

W 2-10

- Crack pane of glass on north casement sash.
- Interior casement sashes are skewed and jammed shut. Sashes may need planning to make them operable.
- Upper north casement hinge is bent.
- South interior casement sash may be cracked at the meeting stile.
- Bottom edge of north casement sashes meeting stile is damaged.
- North storm sash stop rotted at or near the window sill.
- Coroplast sheet has degraded due to UV exposure. Replace with U/V treated 3/16" thick lexan.
- Loose wood pegs in storm sash's vent sash.
- Gaps exist between storm sash's stiles, bottom rail and bottom wood piece.
- Window sill is sound. Cracks in window sill wood need filling. Gaps exist between the sill and the casings which need to be filled.
- New wood piece may be required to storm sash's north stile at window sill level.

W 2-11

- Storm sash does not fit snugly to the window stops.
- Storm sash wood is sound.
- Window sill shows deterioration at east exterior casing.
- Storm sash putty appears sound.
- East storm sash stop is punky at sill level.
- No weather stripping exists at the casement sashes' meeting stiles.
- Wood decay exists at underside of west casing.
- Window sill is sound. Cracks in window sill wood need filling. Gaps exist between the sill and the casings which need to be filled.
- New wood piece may be required to storm sash's north stile at window sill level.
- Storm sash needs re-puttying.

W 2-23 (middle sash of north wall)

- Storm sash is in very poor condition. The bottom rail has rotted. Repairs will be required to this sash.

- Storm sash needs re-puttying.
- Storm sash does not fit snugly to the window stops.
- Window sill rotted immediately below the storm sash's bottom rail.
- Gaps between the underside of the exterior casings and the window sill.
- Wood drip on the top of the window needs repairs.
- Deteriorated wall boards on either side of the window.

W 2-12

- North casement sash's weather stripping has deformed
- Window sill rot is suspected below storm sash's bottom rail.
- Storm sash needs re-puttying.
- Storm sash vent is new.
- Storm sash does not fit snugly to the window stops.
- Storm sash's intermediate stile is rotted at the bottom rail.
- Rot exists at east casing, needs a dutchmen wood repair.
- Cracks in window sill wood need filling. Gaps exist between the sill and the casings which need to be filled.

W 2-13

- Holes drilled to vent the storm sash have rotted.
- Storm sash needs re-puttying.
- Storm sash does not fit snugly to the window stops.
- Loose wood pegs in the storm sash exterior side.
- Bird nest exists in the south wood shutter.

W 2-14

- Cracks forming around knot locations in the window sill.
- Storm sash needs re-puttying.
- Storm sash does not fit snugly to the window stops.
- Minor cracking exists in the north jamb near the window sill.
- Storm sash's vent sash is inoperable.
- Bird's nest exists in the north shutter.

W 2-15 – There is no exterior W 2-15 noted on the architectural drawings

W 2-16

- Casement sashes are inoperable, badly skewed and jammed. These likely need planning at the north casement sash's bottom rail and meeting stile.
- Cracks are forming around knot locations on the window sill.
- Some wood rot is suspected at the window sill to the window jambs.
- Storm sash does not fit snugly to its wood stops.

W 2-17

- Gaps exist between the reveals and window frames on the interior side.
- Window sill exhibits checking, notably along the wood grain at the north end.
- Storm sash needs re-puttying.
- Storm sash does not fit snugly to the window stops.
- Loose hook and eye fasteners securing the storm sash in place.
- Bird's nest exists in the north shutter.
- Cracks exist in the wood drip above the window casing.
- Cracks exist in the window sill wood.

W 2-18

- The casement sashes are jammed and inoperable.
- Crack exists in the north casement hinge stile.
- Cracking exists in the window sill.
- Wood deterioration on the wood drip cap at the top of the window.
- Gap exists between the wall siding boards and the top of the drip cap.
- Sill wood appears sound.

W 2-19

- Crack exists in window sill.
- The east shutter is closed.
- Gap exists between the west side casings.
- The hinge stop on the storm sash's vent sash needs a repair to some split wood.
- Storm sash needs re-puttying.

W 2-20 – There is no exterior W 2-20 noted on the architectural drawings

W 2-21

- Storm sash has a snug fit.
- Crack existing in sill at the west interior casing.
- Window sash wood is sound.
- Interior window stool wood could be white spruce.
- Lower east part of the storm sash has been sealed with plywood screwed to the interior side.

W 2-22

This window is concealed by a cabinet set against the wall. Assume general repairs are required for this window opening including:

- Ensuring the storm sash has a snug fit with the wood stops,
- Re-putty the storm sash and make the vent sash in the storm sash operable. Add weather stripping to this vent sash.
- Repairs all cracks and fill gaps in the window's wood components.
- Paint the windows components.

4.0 THIRD FLOOR DORMER WINDOWS

General Notes:

1. Casement window sashes and associated hardware for all ten (10) dormers were manufactured by Kolbe and Kolbe Windows – www.kolbewindows.com
Local Winnipeg Supplier/Contact:
GNT Premium Windows and Doors
940 John Bruce Rd E, Winnipeg, MB R3X 1Y5
Phone: 204-795-0815
2. All units were functioning. A small screw has been installed in the arm of the crank hardware to limit the opening arc.
3. Window designation numbers are taken from Prairie Partnership's architectural drawings of 1993.

W 3-01

- Exterior casing wood is cupped creating gaps between wood pieces.
- Needs sanding
- Sash wood is sound and functioning.
- Gaps in exterior wood components need filling, notably the mitred corner of the crown mouldings.
- Moss accumulating along the base course of dormer wall shingles and adjacent roof shingles.

W 3-02

- Inner sill is rotted at sill butt joint, notably at the north end of the window opening.
- The wood cover piece for the window hardware is cracked and loose.
- Gaps in fascia board at the window head.
- Bottom window casing has rotted approximately 6".
- The exterior sill member is in good condition.
- Small wood rot exists at edge of south inner casing.

W 3-03

- The butt joint in two (2) piece sill. Edge rot in the inner sill and the south end of the inner sill.
- The bottom stile of the sash is punky.
- South crown mould is broken. Gap in the north mitre joint.
- Bottom 8" of north casings have rotted and are punky.
- The bottom edges of the south exterior casings are rotted approximately 4".
- Insect screen is a tight fit.
- Large amount of moss growing on the north side of the dormer.

W 3-04

- The insect screen has worn and needs replacing.
- Mildew on the inner sill surface.
- North crown moulding between it and the fascia board.

- Edge rot on casings – south side
- North side outer casing cracked along north edge
- Moss growth on north wall
- Sash's bottom rail is weathered, including the upper glazing slopes.

W 3-05

- Wood sill butt joint rotted on interior sill member, notably at the south end.
- The outer wood sill is sound.
- Bottom 6" of the north casing show wood rot and are badly cupped along the north side.
- Large gaps exist between the south casings.
- Gaps in the triangular wood trim pieces, crown mouldings' mitre joints.
- Sash wood is sound.
- The wood cover for sash hardware is cracked and has been glued back together.

W 3-06

- Gaps in mitre joints of north crown moulding.
- Mildew exists on the inner sill.
- Lower 1" x 6" casing is punky.
- Bottom of sill is punky.
- Sash's bottom rail and muntin angles are punky.
- The interior sill is cracked.
- Shingles used as casings at the sill level are exposed at the top.
- Gaps between the two west casings.
- Moss growth on shingles.

W 3-07

- The bottom sash rail needs repairs.
- Sill is sound
- Gaps between the two exterior casings
- Dutchmen repair required at the north casings – up to 4" of rot exists.
- Sash's crank hardware needs cleaning and oiling.
- Gaps in east crown moulding.

W 3-08

- New insect screen required - dimension 30 $\frac{3}{4}$ " x 31 $\frac{3}{4}$ "
- Rot exists in inner sill along its outer edge.
- Gaps exist in the butt joint between the two (2) sill members.
- The large north casing is punky. Remaining casings members appear sound.
- Sash's bottom rail is weathered as well as the upper slopes of the glass pane's wood stops.
- Roof edge board on the north side is rotted at the roof peak.

W 3-09 (Third Floor Emergency Exit)

- Inner sill has rotted.

- Checks in outer sill wood.
- Gaps in exterior casing boards. Lower boards areas need dutchmen repairs.
- Gaps in the crown mouldings.
- Sash's bottom rail is rotted near the north stile/rail connection.
- Moss growth on the exterior's north side.

W 3-10

- Major moss growth on the surrounding shingles.
- Gaps exist in the crown mouldings.
- Wood sills, exterior casings, and sash wood is sound.
- Base corner shingles in dormer are loose.

C. SIDING BOARDS

1. General Description

The siding boards consist of vertically orientated tongue and grooved boards, 7\8" to 1 1/4" in thickness. There are two courses aligning with each storey of vertical wall boarding nailed to hidden wood strapping (furring) which in turn are nailed to the wall logs.

A. Ground Floor Wall Boards of Museum and Chapel Sections:

The bottom boards nailed to wood strapping on the ground floor level, are not original boards, but likely added during the mid-90's restoration. They show vertical saw marks to create a rough sawn, antiquated finish. Wood species is not determined. Architectural specifications from the 1990's call for either white spruce or Douglas Fir and the former is suspected as being used. They are nailed to the wall strapping using cut nails.

There are three (3) types of base flashing details used at the bottom edge of these boards:

- There are 2"x 8" drip edge boards applied to the bottom of the museum's north and south wall boards, and to the north and east walls of the north stucco addition. Weathered paint exists in most areas. There is decayed wood on the north stucco addition's north wall at a butt joint, and at the south wall east of the south door D 1-20.
- The museum's west wall has a wood drip board and covering metal flashing applied. The east walls have a similar detail as well.
- The chapels wall boards have a metal drip at the base of the walls with no wood drip board.

Areas of concern:

Overtime, the boards have shrunk. Most boards have not yet shrunk completely out of their tongue and grooved joints. This drying out of the boards has led to cracks forming in the wood in areas around nail locations, particularly at the bottom of each board. Other areas include around knots, in wood grain raising, and in areas where the grain meets the board edge.

It appears there has been one coat, or 2 very thin coats of white paint applied during the 1990's restoration work to these wall boards, likely through spray painting methods. This has weathered

away in areas where snow accumulates, in shaded areas (i.e., south wall), at wood knots, and along the slope drip boards at the bottom of the walls. Existing paint applied to the majority of the wall's surface area, remains well bonded to the wood.

It is suspected that the wood siding was not back primed, the end grain was not sealed, and the knots in the wood were not sealed with shellac before painting. This is exhibited in many areas where wood rot is present in the bottom edge of many wood boards.

Of major concern, there appears to be an infestation of carpenter ants in the north area of the museum's east wall and to the north stucco addition near the west plate glass window. All affected boards should be removed (including affected window casings) and treated with Borocol wood preservative. All wood substrates should be similarly treated before re-installing wood components.

Design Options:

1. Do Dutchmen repairs to those boards which have rotted. Work to include knot sealing with shellac, light sanding to prepare the wood surface. Roll on application for painting in situ. See detail. The advantage of this work is that it is specific to those areas only and recreates the existing condition. The disadvantage is that it doesn't treat wood edges that do not show rot and decay; but likely will in the future.
2. Create a new wood drip edge at the base of the walls. This is more expensive initially but will allow for sealing the edge grain of the wood resulting in a longer performance. The visual finish will not be overwhelming; but heritage might object to its use. The detail closely follows tradition siding details used and is not visually prominent on the wall elevations.
3. General Painting Preparation work to include:
 - Knot sealing with coats of shellac.
 - Light sanding for paint preparation. This work must not remove the existing saw marks.
 - Filling cracks with linseed oil putty.
 - Using paintable caulking, caulk seal at lower wall area near drip edges where snow can accumulate.

B. Second Storey Wall Boards to the Museum and Chapel

General Description:

These boards are quite old and the likely wood species of locally available wood species such as white spruce, basswood, aspen or poplar. They may predate the arrival of the railway. They vary in widths (4 ½ " - 7 ½ "), 1 ¼" in thickness, have tongue and grooved joinery and secured with square nails. These boards run up behind the frieze board at the top of the wall. There is a wooden drip board covered by a galvanized flashing at the bottom of the boards. There are wooden drips installed above the doors and windows.

The saw marks are not easily discerned due to weathering and the buildup in paint layers. The boards have cupped in many locations. Replacement boards have been spliced into the walls in a number of places, and these are secured with common nails. Their finish matches the ground floor wall boards.

General Condition:

- Many of the boards have shrunk out of their tongue and grooved joints. This wood shrinkage is causing moisture leaks to develop in the north stucco addition's roof where it abuts the north wall boards of the chapel, and the museums' west wall area surrounding D 2-01 allowing moisture to leak into the west entry porch's ceiling.
- The paint is peeling and crazing in many areas.
- Knots are unsealed, and paint is missing in these areas.
- Some areas show raised grain and splits.

D. PAINT COLOURCHRONOLOGY

Used Benjamin-Moore Colour Fan Deck (B-M)

Used Pratt & Lambert Colour Fan Deck (P&L)

STORM SASHES

EXTERIOR

WHITE

WHITE

WHITE

GREY P&L GRAVEL Gravier 2229 B2 (associated with P&L Light Olive found on exterior casings)

POSSIBLE INDISTINCT LAYERS

GREEN P&L THISTLE Chardon 1480 (3) B3

WOOD

SHUTTERS

GREEN B-M CUSHING GREEN Campanule 3B HC-125

WHITE can't colour match

GREY B-M Bluegrass CC-640 (somewhat lighter than what is on the shutters)

WOOD

EXTERIOR CASING

WHITE B-M Snowfall White OC-118

WHITE B-M Cloud White OC-130

OLIVE GREEN P&L Light Olive Olive Clair 1491 B2

POSSIBLE OLIVE GREEN

WHITE B-M Dune White CC-70

WOOD

INTERIOR SASH (WEST STILE) W 1-15

WHITE B-M Dune White blanc dune CC-70

BLUISH GREY Indistinct - can't match to a colour chip

LIGHT GREY (warmer tint/hue) P&L Sesame 2129 B1

LIGHT GREY	Indistinct (possibly white) can't match to a colour chip
GREY	Indistinct (warmer tint/hue to adjacent layers) can't match to a colour chip
BLUISH GREY	B-M Meadow Mist OC-134
LIGHT BLUISH WHITE	P&L Diamond 1297G DW
BLUISH GREY	Indistinct - can't match to a colour chip
DARK BLUISH GREY	Gull Wing Grey B-M 2134-50
WHITE	Indistinct - can't match to a colour chip

E. ROOF

1. Shingles

Description:

The roof is shingled using Western Red Cedar Shingles, 100" edge grain both on the main slopes and ridges. A layer of insulation was added above the roof boards and underneath the shingles, likely during the 1990's restoration work.

Condition:

The majority of wood shingles are in good service; however, primarily on the north side of each dormer, the shingles to both the main roof slope and the dormer side walls have decayed and need replacing. All ridge shingles have shrunk and curled open over time, and should be replaced with cedar ridge boards which are longer lasting. An exception to this is the bay roofs of the chapel which should have a galvanized metal ridge cap placed in those locations.

The south roof slope of the museum has existing roof leaks. As the adjacent building shades this roof slope, moisture is slow to dry out with rain/snow melt. As a result, there is moss growing on this slope. This area should be re-shingled entirely.

2. Roof Structure

The glulam roof rafters after 30 years of service, have developed some issues which required attention. These include:

- Stress/bending cracks forming in many of the glulam rafters' bottom chords.
- Delamination of some glulam beam's wood components.
- Movement in the glulam beams which may be putting stress on fire suppression pipes.

Engineering consultation should be undertaken to design and specify repairs needed and to monitor the ongoing humidity levels in the third floor of the building. A term of reference for engineering services has been written to assist in this regard.

3. Chimneys and Bell Tower

According to museum staff, there are leaks around the edges of the two brick chimneys which need to be patched.

There is an existing leak in the bell tower base. Consideration should be given to replace the crown mouldings and corner shingles of the tower base to seal the leak(s).