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Conservation Plan
Ira D. Ramer House
33 Roseview Avenue, Town of Richmond Hill

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1.0 conservation approach

1.1 Standards

According to Parks Canada's "Standards and Guidelines for the Conservation of Historic Places", the broad term "Conservation" can be subdivided into three separate and unique actions:

Preservation, Rehabilitation, & Restoration.

Each of the activities of Preservation, Rehabilitation, and Restoration involve different levels and complexities of approach to perform properly. The work proposed for any interventions will not necessarily require all these activities. To determine which action should be applied to a given component of the roof can be achieved by defining a hierarchy of increasingly disruptive activities to the original fabric, in the order of least invasive to most invasive. A series of questions then may be posed to determine if the least amount of intervention is required, or if the next step in complexity is necessary. The path towards a proper scope of work to perform the conservation can therefore be as shown below:

If the need to analyze further is encountered, then replacement of original heritage fabric components would most likely involve a significant amount of material change, and thus lost heritage fabric. A narrative of approach on a case-by-case basis should be considered, especially if future investigative openings of certain components reveal serious evidence of heavy deterioration and failure. Parks Canada has a statement regarding substitute materials in their Guidelines, essentially stating that substitutions can only be considered:

- if the historic material or the craftsmanship is no longer available,
- when existing conditions are of a



- poor quality or are damaging adjacent historic materials and fabric,
- if current Authorities Having Jurisdiction do not allow the use of the originally found material.

In sum, the options are:

- Do nothing.
- Repair and conserve existing components.
- Replace components.

For now, broadly speaking, the conservation effort at Ramer House will centre on the action of "Rehabilitation".

1.2 Conservation Strategy

The most severe impacts from conservation activities deemed necessary on the Ramer house, identified are as follows:

- Re-building the north sunroom structure in its entirety;
- Replacing of roof and water-shedding elements;
- Provide replacement windows, but repair any existing storm windows determined to be original heritage fabric;
- Upgrade the exterior walls with improved resistance to heat loss and moisture flow;
- Perform preservation work on elements of the south verandah.

To re-build the north sunroom, careful recording of the existing structural elements, finish detailing and measurements should be taken in order to accurately replicate the shape, scale, and aesthetic of the original. Also, when more information becomes available as to the exact construction of the walking deck on top of the sunroom that is surmised to have existed, the re-build of the sunroom should anticipate a future alteration to include for historically accurate guard design. In the meantime, a durable decking system and legible glazed guardrail can suffice.

The second floor exterior doorway leading to the proposed rooftop terrace over the sunroom will require replacement, and should also act as some form of durable and weatherproof barrier against the elements.

The replacement of the existing asphalt shingle roofing surfaces throughout the Ramer house leads to questioning the replacement material. It is not entirely known what the original material would have been. Different kit-home manufacturers would have specified different materials depending on availability and access to new technology. Wood shingles would have been the most common material to specify, and is found on a great number of

existing "Foursquare" homes in the immediate vicinity. Sears Roebuck advertised an "Oriental Slate Surfaced" shingle that promised the look of slate with the technology of asphalt mixed with crushed slate to create a water-proof tile not unlike today's asphalt shingles. In the case of this house, longevity of the surface wear and proper detailing is the over-arching concern. Asphalt shingles do not provide for 50+ years of wear due to granule loss. Wood shingles will require a batten sub-system to allow the wood shingle to dry out and not rot, thus giving the material an opportunity to last 50+ years.

The windows in the home comprise of two separate elements: the thermal barrier and the weather barrier. The sashed windows (not including the stained glass) that are remaining were installed without the benefit of them matching the profiles of the original storms that remain. Therefore, the sashed thermal windows are inappropriate from an aesthetic point of view, even though they can be considered "heritage fabric". As such, they can be removed and a modern, tight window can be installed. That said, the existing vinyl windows that were installed are not appropriate either as they don't match well with the storms either. This would be the over-arching performance requirement in selecting a window system. The storm windows on the house can be refinished and reinstalled without being concerned with seals or hardware, and will last longer as they are not subject to extremes in thermal performance.

It is expected the renovation efforts will include for the interior environment to be improved by upgrading the thermal and moisture resistance of the exterior wall. It is assumed there is no insulation in the walls, and there may be a tar paper on the exterior sheathing that acts as an air barrier. If the tar paper is present, no inspection will be possible as to it's contiguous nature: it will be in between the sheathing and the brick. Therefore, the only possibility for reinstatement of an air barrier is to install a vapour barrier, and completely seal that layer. Carefully detailed lap joints at floor headers and wall-to-roof junctions will be required. Insulation added in the framing behind the vapour barrier is acceptable, so long as it is inert from vermin and removable for repairs.

2.0 statement of heritage intent

2.1 Conservation Intention

The common reason for removing components is to provide a “Restorative” effort to the heritage building, in that the proper heritage elements will be revealed and presented in the context it was originally intended (App.B, Parks Canada). Further, the removal of these elements will respect the heritage building’s original fabric, and its history (App.B, #4, 5). The conservation activities that fall under this category include:

- Conserve the second floor doorway location for the re-instatement of a doorway onto a new sunroom terrace.

The elements to remain will receive overall conservation treatments that will “Preserve” as well as “Rehabilitate” the original fabric (App.B, Parks Canada). The original fabric of building elements will be protected and maintained, while providing for the necessary alterations for the re-purposed building (App.B, #3, 4). The conservation activities that fall under this category include:

- Repairing the south verandah in its entirety;
- Repairing the exterior walls of damage;
- Repair any existing storm windows determined to be original heritage fabric;
- Repair necessary items related to re-using the existing stained glass windows.

New elements introduced to the existing heritage structure are typically a “Restorative” exercise. The goal is to recover the lost state of missing elements to accurately depict the heritage resource at its proper state in past history (App.B, Parks Canada). In other cases, the new elements are necessary in order to satisfy current standards, laws and building codes. The conservation activities that fall under this category include:

- Re-building the north sunroom structure in its entirety;
- Upgrade the exterior walls with improved resistance to heat loss and moisture flow;
- New sashed windows;
- Replacing of roof and water-shedding elements.

Monitoring of the Ramer house prior to, during, and after excavation and backfilling are completed on the proposed detached dwelling will be necessary in order to judge if settlement issues occur on the Ramer house at the east end. Further, the foundation load-bearing wall midway in plan in the basement with the observable crack should have a crack monitor attached for the duration of the construction activity with movements weekly noted.

Any further methodology related to construction practices and principles to be performed on heritage resources will require the benefit of continued schematic design activities to occur that will lead to a design development stage that fully informs the proper construction practices necessary. Early engagement with pre-qualified conservators and contractors will complete the conversation.

3.0 conservation treatment

3.1 Organization Structure

The conservation methodology follows the CSI/CSC UniFormat method classification system. This method organizes and defines basic elements and systems which, when integrated, encompass the requirements to construct a project. The UniFormat alpha-numeric codes refer to the fixed reference designations for each item, are therefore not sequential, and reference designations not required for this project have been deleted.

The Uniformat system divides the building into eight broad categories:

- A Substructure
- B Shell
- C Interiors
- D Services
- E Equipment and Furnishings
- F Other Building Construction
- G Building Sitework
- Z General Requirements

The following discussion will focus on the components to be conserved, and the basic construction methodologies involved in the various conservation activities proposed.

3.2 A - Substructure

A10 FOUNDATIONS

A1010 Standard Foundations

The exterior of the exposed foundation wall above grade appears to have an appliqué on the surface of a faux random rubble stone panels. It has been adhered to the existing foundation wall all around the perimeter. The proud edge condition at the top of the panels has been feathered to the brick using a hard cement mortar. Corner conditions are beginning to separate out with sizable gaps observed. This finish product was a common method of hiding exposed foundation walls that rose out of grade quite high from the 1970's onwards. It is certainly not original to the home, and moreover, will be damaging to the concrete foundation wall by allowing water to be trapped behind the panel.

However, removal may damage the surface matrix of the foundation wall, making it more susceptible to water infiltration. Therefore, it shall re-

main. The only area where the appliqué can be removed without reinstatement, is the north sunroom slated for demolition and rebuild.

A20 BASEMENT CONSTRUCTION

A2020 Basement Walls

There is a poured concrete wall 100mm thick running north-south, centred in plan. It is a loadbearing wall that carries the end-joists (bearing approximately 50mm) of the floor framing running to the east foundation wall, and the west foundation wall.

The wall is structurally sound from visual inspection, with one issue. There is a crack approximately 1-2mm in width located centrally along the wall, and runs from the top of the wall to the floor, gradually becoming a hairline thickness towards the floor. The crack was observed on the east side of the wall, but not visible on the west side. No noticeable compromises in the support floor framing above were observed, however it is clear there has been movement of the overall house impacting on the wall.

Crack gauges shall be installed on both sides of the wall to monitor the crack width during construction. The crack will be repaired using an epoxy filler: a high-strength epoxy resin injectable filler that will cure in place without expanding the crack. SikaDur crack fillers provide for durable and reliable crack protection.

3.3 B - Shell

B20 EXTERIOR CLOSURE

B2010 Exterior Walls

The exterior wall construction consists of brick masonry veneer, 50 x 100mm wood framing and an interior sheathing that would originally consist of wood lath and plaster finish. Evidence of the original interior finish is found at the interior stairwell leading to the basement. It is believed some lath and plaster may still exist around the perimeter exterior wall interior face. The wood framed exterior walls appear to have been balloon-framed. There is no immediate evidence as to the make-up of individual layers within the exterior wall, however traditionally an exterior plank sheathing would have been applied horizontally to the wood stud, directly over the diagonal bracing that would have been "let" into the wood studs. A tar-felt overlay would have been applied to the plank sheathing to act as an air barrier. Insulation within the studs is possible, but unknown: the associated R-values would not be high regardless. This all requires confirmation.

The brick veneer is an orange-red tone, of size 101mm x 73mm x 215mm. This size is a standard Ontario brick size common to construction of its time. As it acts as a veneer, it is not subject to extremes in heat or cold, and therefore most of the brick masonry is in very good condition. The mortar

used appears to be a common lime-hydrated mortar similarly used on loadbearing walls. The mortar colour appears to be yellow-brown. The joints were struck concave, but have receded to make the appearance as that of a squared joint. Some open mortar joints exist, mostly in the chimney stack at the roof and third floor, and in spot areas on the west exterior wall at window head locations. All window locations use Roman arch soldier coursing.

Replacement brick for deteriorated units must be of the same size, and Ontario brick is still manufactured today. An exact colour match is to be avoided in order to provide legibility of the repairs: the rehabilitated areas must be able to be identified from the original. Possible replacement brick can be from "Vintage Brick": colour, "Alderley Orange". An alternate can be "Forterra brick": colour "Williamsburg MKII".

Mortar replacement will require an analysis of the existing mortar to determine the makeup, and the sand colour to match. The mortar type should be confirmed as to its makeup and softness. Too hard a mortar will not allow the masonry to bond well to it, and cracks may eventually appear. Cementitious mortars are not to be used. Softer mortars are recommended to allow movement of the brick, and to not stress the brick matrix. A simple binder-to-sand ratio 1:3 will most likely be appropriate, using lime-based materials for the binder. Raking back the joints by 38mm will allow a 19mm backpoint application, and a 19mm frontpoint final. The joint can be struck concave to match existing.

There is some efflorescence stains underneath window sills. The wash could be from the sill material itself (Roman stone), or could be the transfer of vapour through the wall, carrying soluble salts with it from the mortar joints. The efflorescence staining requires removal by light water washing and hand scrubbing using clean water.

There is a pair of vertical atmospheric stain streaks running down the side of the east elevation, from 3rd floor to ground floor. It is indeterminate what caused the stains. These should be cleaned using a water wash, surfactant detergent cleaner, and hand scrubbing using soft bristle brushes. Abrasive blasting or water jet cleaning should be avoided to minimize surface matrix loss.

With respect to the north sunroom, it is in a grave state of disrepair. Structurally, it is compromised by unsupported corners due to missing wood at the base, water and fire damage to the shed roof framing of the sunroom, and settlement towards the north east of the sunroom, causing the entire structure to fall away from the home. A gap of 25mm was observed between the sunroom and the house. It is structurally unsafe for habitation. It must be demolished, it's structure recorded and rebuilt in the same form factor using the same wood member sizing. A new concrete foundation is required to carry the sunroom, and should be a separate structure from the existing house, although joined to the existing exterior walls using movable materials and slip joints.

The finishes on the rebuilt sunroom are to be cement board siding to match the size and thickness of the original wood siding. All wood fascia, corner treatments, and the cement board siding should be painted white with a cream undertone to accent the brick and mortar colours. The current colour on the sunroom windows can be used as a guide for colour matching, as can the original wood siding underneath the added metal cladding. Using the "Farrow & Ball" colour chart, an equivalent colour could be the "Wimborne White". High gloss is recommended for durability and wash capability.

Oil-base is preferred for long-lasting finish.

B2020 Exterior Windows

The exterior windows are a current mix of recently installed vinyl windows, interior units replaced and original sashes remaining, or completely replaced windows dated to 1940-50's. A summary of replacements is given below. Unless otherwise noted, all windows kept are wood frame (refer to drawings for locations):

A) North Elevation

- 1) 3rd floor:
 - i) All windows to be replaced. No heritage value.
- 2) 2nd floor:
 - Ni) Sash window to be replaced. 6-over-6 storm to be kept.
 - Nii) Sash window to be replaced. Storm to be replaced.
- 3) Ground floor:
 - Niii) Stained glass window to be kept. Storm to be kept.
- 4) Sunroom:
 - Niv) All windows to be kept.

B) South Elevation:

- i) All windows to be replaced.

C) East Elevation

- 1) 2nd floor:
 - Ei) Sash window to be replaced. Storm to be kept.
- 2) Ground floor:
 - Eii) Stained glass window to be kept. Storm to be kept.
 - Eiii) Sash window to be replaced. Metal storm to be removed, replaced with wood storm.
- 3) Basement
 - Eiv) All windows to be kept.

D) West Elevation:

- 1) 2nd floor:

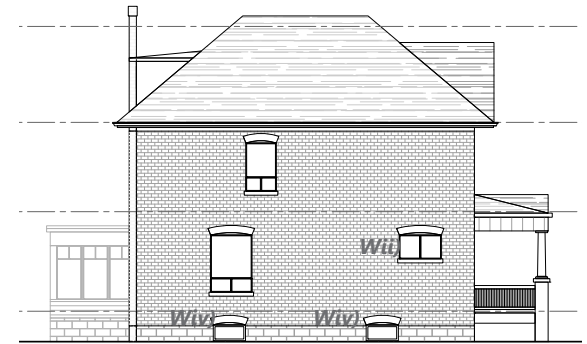


IMAGE 1. File: Existing House 7.pdf - West Elev.



IMAGE 2. File: Existing House 8.pdf - North Elev.



IMAGE 3. File: Existing House 9.pdf - East Elev.

- i) All windows to be replaced.
- 2) Ground floor:
 - Wii) Stained glass window to be kept. Storm to be kept.
 - iii) Window to be replaced.
- 3) Basement
 - Wiv) All windows to be kept.

Most of the wood windows are in a serious state of surface dis-repair, although the glass is in very good condition. The wood windows are exhibiting paint delamination, shrinkage, and cracking. The putty seals at glass interfaces have all failed. The wood windows to be kept must be removed and preserved in the shop: paint removal, wood repairs using compatible wood putty, wood dutchman as necessary to replace rotted portions will form the basis of repair work.

The three stained glass windows (north, west and south elevations) are in very good shape, with glazing and lead comes intact. There is confirmation and verification that repairs had taken place in 1992 on the windows to reset the glazing due to bowing out.

B2030 Exterior Doors

The main entrance exterior door at the south elevation acts as a storm door to a newer wood slab door. The wood storm door is original to the house. The half-height lite, three panel door is in good condition, with replaced glazing in the opening. The storm door requires a refinishing of the surface with a clear-coat polyurethane. There is no evidence it ever carried a paint finish.

The side-hall entrance door at the east elevation is a weather-barrier door with no storm door added on. The half-height lite, three panel door is in fair condition, with replaced glazing in the opening. There are surface imperfections in the lower wood panel surface, paint delamination and pits in the wood surface, as well as the exterior wood surrounds. Paint and putty repair is required. An exterior-grade oil-based paint to match the colour of the rebuilt sunroom is appropriate.

The exterior door leading from the kitchen to the exterior sunroom is a weather-barrier door with an aluminum storm door added on. The half-height lite, three panel door is in fair condition, with replaced glazing in the opening. There are surface imperfections in the lower wood panel surface, paint delamination and pits in the wood surface, as well as the exterior wood surrounds. The wood threshold is beyond its serviceable life, and the exterior wood jambs are exhibiting rot at the base to approximately 300mm in height. Replacements via dutchman are required. Paint and putty repair is required. An exterior-grade oil-based paint to match the colour of the rebuilt sunroom is appropriate.

There is an exterior door at the second floor at the north elevation that provides access to what might have been a walkout onto the sunroom

roof. No proof of roof construction or guard design exists at this time. The door is beyond repair and unsuitable for security purposes, as the base has been pierced with a window box air conditioner unit. The door threshold has rot and is transferring moisture to the wood floor surface inside the room. Finally, it is of the opinion of this author that the exterior is not original to the home, in that the construction is of a cheaper sort than the other representative exterior doors in the home. A replacement door can be made to replicate the panel pattern of this door, but glazing is not necessary. The replacement door should be a solid wood-core door, painted to match the proposed colour of the rebuilt sunroom. Modern weatherseals around the door jamb should be employed, and full lockset with deadbolt is recommended for basic safety and security. Brass finishes for this hardware will tailor to other hardware throughout the house.

B30 ROOFING

B3010 Roof Coverings

All roof elements have existing asphalt shingles on them. The asphalt shingles are certainly not original to the house, either in the flat laid application, or in the vertical wall application. The shingles are beyond their serviceable life, with severe wear-away of the granules on the surface, and curling up of the shingles. All roof surfaces will need replacing. A three-tab traditional asphalt shingle is recommended, in a colour scheme that is complimentary to the brick colour. Once such example is the IKO Marathon Ultra 30 in either "Vintage Green" or "Harvest Slate".

The flat roof over the sunroom at one time was covered in tar and felt roof with infinity-edge flashing detailing. It will require a replacement and a re-roofing using a hot-torch single-ply membrane. On top of this will be a light-duty, light-weight paver on polymer pedestals to carry a new terrace on the sunroof.

Sheet flashings at abutments, roof eaves, eavestroughs and edge conditions all require replacement, to be hemmed to the surface substrate, or let into the mortar joints with proper fasteners. Sealants are only to be used for reglet sealing. The material can be pre-painted aluminum to match the proposed paint colour for exterior wood components. Coppers, leads and other bare materials will leach it's oxidizing acids onto the brick.

An overhead canopy at the east entrance is wood framed with 65mm x 65mm wood material, with an asphalt shingle finish on the plank wood surface. The canopy overall is in very good condition, although the shingles and abutment flashings are beyond their serviceable life. The shingles will require replacement to follow the roof replacement. New flashings are required at the abutment to the roof, to be installed into the brick joint as a reglet, and sealed with a polyurethane sealant.

There is a full-length, wood framed and roofed verandah at the south elevation at the main entrance. The roof is supported by three wood columns in the shape of a stylized "Tuscan" order, resting on Roman stone base material, atop brick pedestals. The pedestals form the supports for the original wood guard that wraps around to the west and east elevation and engages the exterior brick of the house. There are no wood railings at the wood

stair: the railing at the stair is a metal rail and spindle not original to the home. It is unclear if the wood stair is original.

Pre-painted aluminum soffit panels and pre-painted aluminum ceiling slats and coverings are wrapped around the wood framing around the roof canopy, and makes up the ceiling finish of the verandah roof. The coverings do not allow for visual inspection of the wood condition. No sagging, discolouration or settlement issues were observed.

The shingles and abutment flashings are beyond their serviceable life, besides not being original to the home. The shingles will require replacement to follow the roof replacement. New flashings are required at the abutment to the roof, to be installed into the brick joint as a reglet, and sealed with a polyurethane sealant.

The "Tuscan" columns are painted wood, with severe paint delamination and cracking observed. The east column has a hole at the top of the column, revealing a hollow interior. The columns can be stripped of its paint and refinished to the same colour proposed for the north sunroom. The wood base of the columns will require replacement with a Douglas Fir solid wood replica. The reinstallation of the columns should be atop metal cap flashing placed over the Roman stone base to act as a separator to prevent moisture transfer to the wood.

The Roman stone bases are in very good condition, and the brick pedestals are in good condition. However, the first 600mm from grade of brickwork is exhibiting bricks with worn and spalled surfaces, raked-back mortar joints that are lime-based and open mortar joints. The proximity to grade with no protection from splashing or moisture most likely has caused the degradation. Brick replacement as necessary, mortar repairs and base flashing let into the brick joints with reglet and sealant is required for the pedestals.

The wood railing substrate is in good condition, although the painted finish may hide rot or vermin issues. The species of wood used is unclear. The paint finish is beyond its serviceable life as it is cracking and delaminating. The paint can be stripped, and then repainted using the same colour proposed for the north sunroom. If some wood is proven to be soft or rotted, then replacements in-kind can be done using a Douglas Fir wood species.

A new railing is proposed for the south verandah, which should accompany a new wood stair to access the verandah deck. It is not known whether a railing existed for the stair to access the verandah, however one can be introduced in the same detailing as the existing guard on the verandah, using the same size wood newel posts and picket size and spacing. Species should be Douglas Fir.

The metal soffits at the underside of the verandah and the underside of the roof eaves are not sympathetic to the overall scale and proportion of the house. Replacement is necessary to accommodate additional flashing workaround the roof and abutments throughout, and tie-in to the soffits necessitates replacement. A metal soffit for all underside conditions that is 75mm (3") in width to colour match the proposed exterior paint of the sunroom and other wood detailing is called for. Finally, the orientation of the soffit direction should be perpendicular to the exterior walls.

3.4 G - Building Siteworks

G20 SITE IMPROVEMENTS

G2050 Landscaping

A 915mm high chain link fence runs along the west, south and east property lines. It is unclear if fencing of any kind was ever initiated along the property lines at the Ramer residence. A short 760-860mm (30-34") wood picket fence using wood posts similar to the south verandah, and a flat rail with wood pickets would be deemed sympathetic. The size of the pickets can also be similar, however the spacing of the pickets should not mimic the south verandah, as it will block the view of the house from the corner. A 100mm (4") spacing is appropriate.

