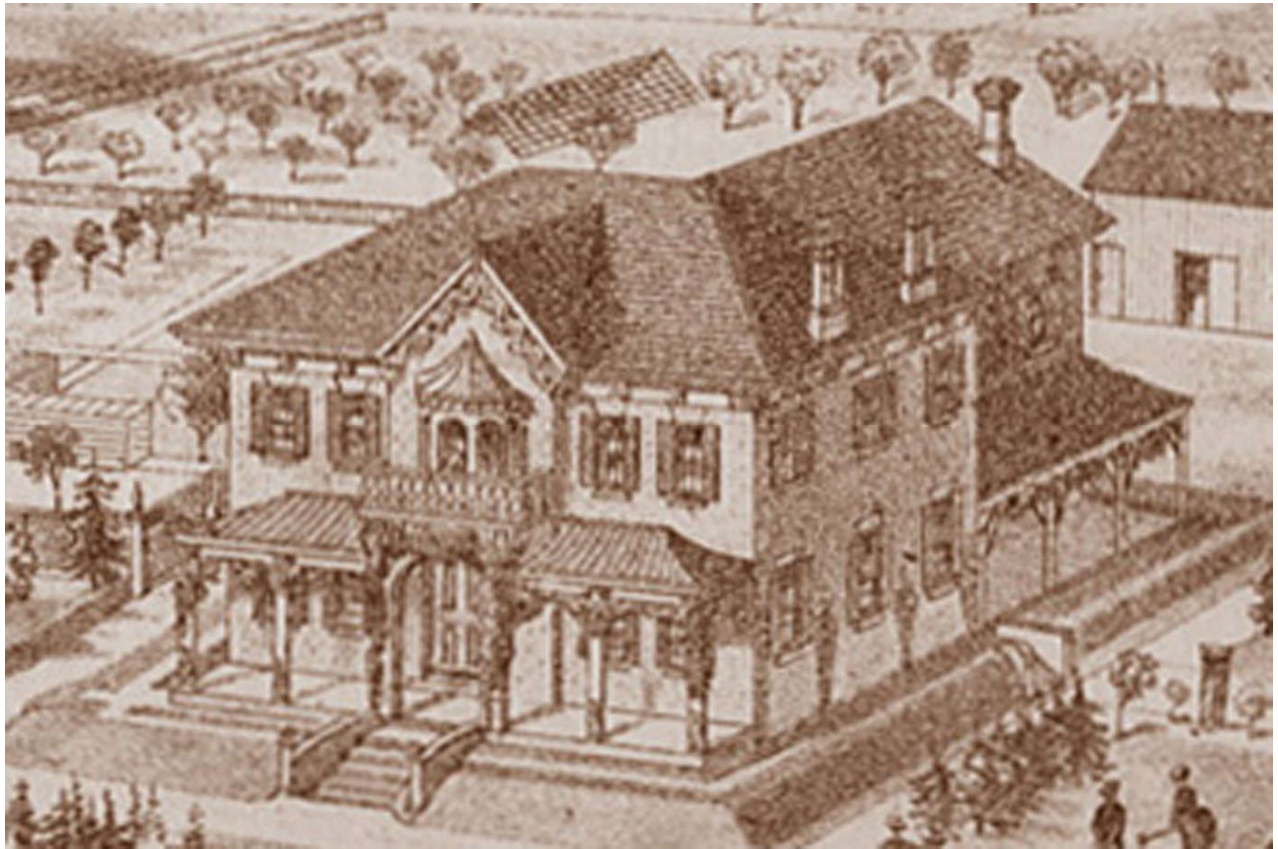


Heritage Conservation Management Plan
William Barber House
5155 Mississauga Road, Mississauga



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A residential development is proposed for the William Barber House property at 5155 Mississauga Road in Mississauga that includes the removal of later additions to the building and restoration of the exterior. Prepared by Owen R. Scott, CAHP of CHC Limited and John Beresford, OAA of Flanagan, Beresford, Patteson Architects Inc., with technical input from Tacoma Engineers Inc., this Heritage Conservation Management Plan is for the property which is designated¹ under Part IV of the *Ontario Heritage Act* and is located in the Mississauga Scenic Road Cultural Landscape².

A Heritage Impact Assessment (HIA)³ was prepared for the property, following the *City of Mississauga Heritage Impact Assessment Terms of Reference* February 2016⁴ and the *Cultural Landscape Heritage Impact Assessment Terms of Reference* 2016⁵. The HIA recommended “A Conservation Plan should be prepared to guide the demolition of the additions and the exterior restoration of the original house”⁶. Requirements of the Heritage Conservation Management Plan terms of reference⁷ related to the description and significance of the property are found in the aforementioned HIA.

This Conservation Plan sets out a plan to manage, restore, protect, and preserve the heritage attributes and integrity of the cultural heritage resource.

1. Introduction

Executive summary of the scope of the project

The development proposal for this property is a residential development on the subject property that incorporates and showcases the original c. 1862 William Barber House. Single detached homes book-end the William Barber House, retaining its prominence on Mississauga Road; townhomes flank an internal street and Barbertown Road, beside and behind the Barber House in the proposal. New development is clad in a red brick, the colour of the Barber House brick under its white paint, complementing and contrasting at the same time the white-painted brick of the Barber House.

The proposal is to remove the c. 1960, 1984 and 2003 additions of the Barber House to restore its exterior to its former size and grandeur. The William Barber House is set in a garden and remains a dominant feature on the street.

Background information to document the historical and development history of the site

The May 2016 HIA (updated October 20, 2017) provides full documentation of the historical and development history of the site.

¹ City of Mississauga bylaw # 368-82

² Mississauga Road Scenic Route F-TC-4, *Cultural Landscape Inventory*, City of Mississauga, The Landplan Collaborative Ltd., January, 2005

³ *Heritage Impact Assessment, William Barber House, 5155 Mississauga Road, (Part of Lot 1, Concession 4, West of Hurontario Street)*, Mississauga, CHC Limited May 16, 2016, updated 23 March 2017 & 20 October 2017

⁴ Culture Division, Community Services Department, City of Mississauga

⁵ *Ibid*

⁶ *Heritage Impact Assessment, William Barber House*, CHC Limited May 16, 2016

⁷ *City of Mississauga, Heritage Management Conservation Plan Terms of Reference*, March 2013

Identification of the property owner and stakeholders, current and proposed use

The former property owner was The Old Barber House Restaurant Limited. The proposed development is by City Park (Streetsville) Inc. Current use is vacant. The property was a restaurant and banquet facility with most of the site not occupied by the building, a parking lot. The proposed use of the Barber House is a 4-unit residence. Single-family homes and townhomes are to occupy the former parking lot.

2. Project Description

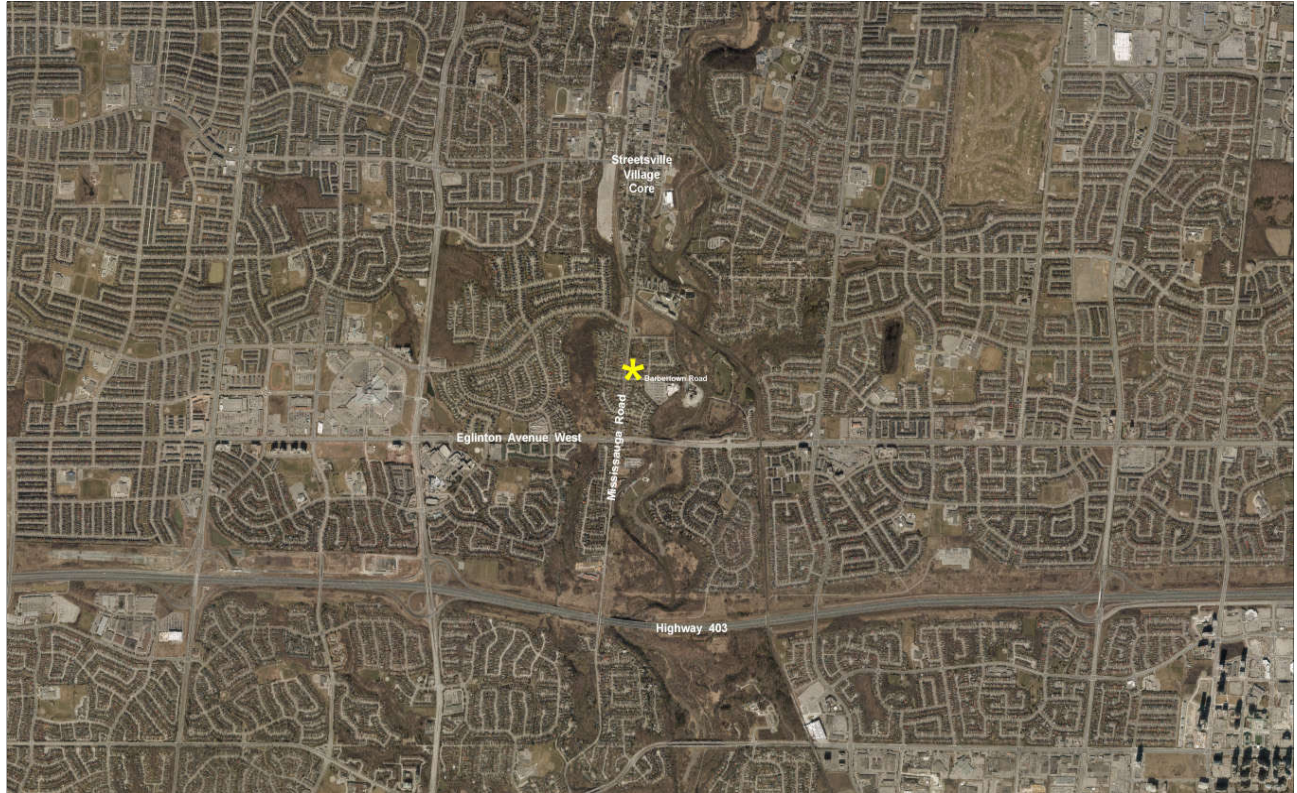


Figure 1 - Location Map

A) Property Description

Municipal address - 5155 Mississauga Road

Documentation of the existing conditions

An extensive photographic record of the subject property is included in the HIA. The development application submission includes an arborist's report, landscape plan, servicing plan, planning report, *etc.* The HIA includes a summary of the history of the property outlining its development over time within a time frame context and documentation of land ownership from the original Crown Grant and subsequent records from the Land Registry Office. A time line, from 1828 to the present is shown in Figure 2.

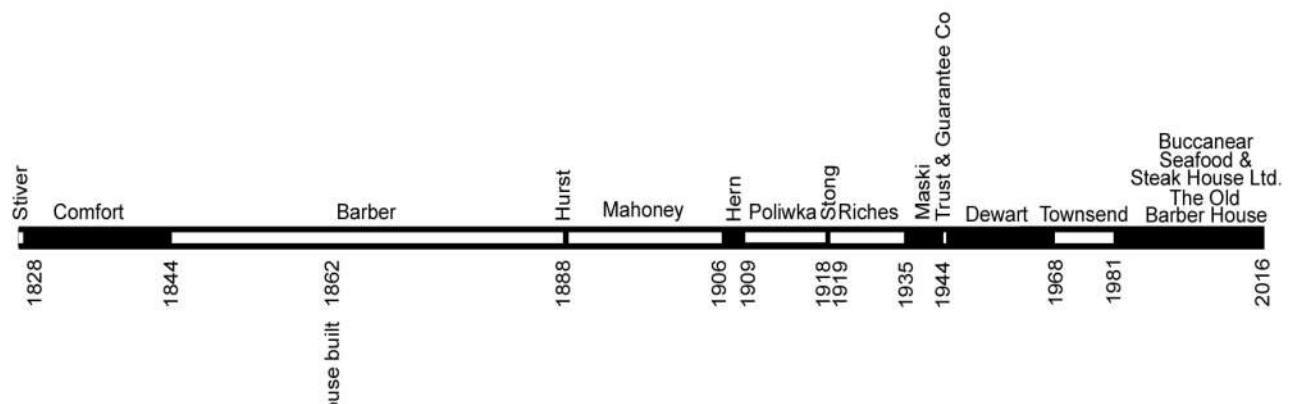
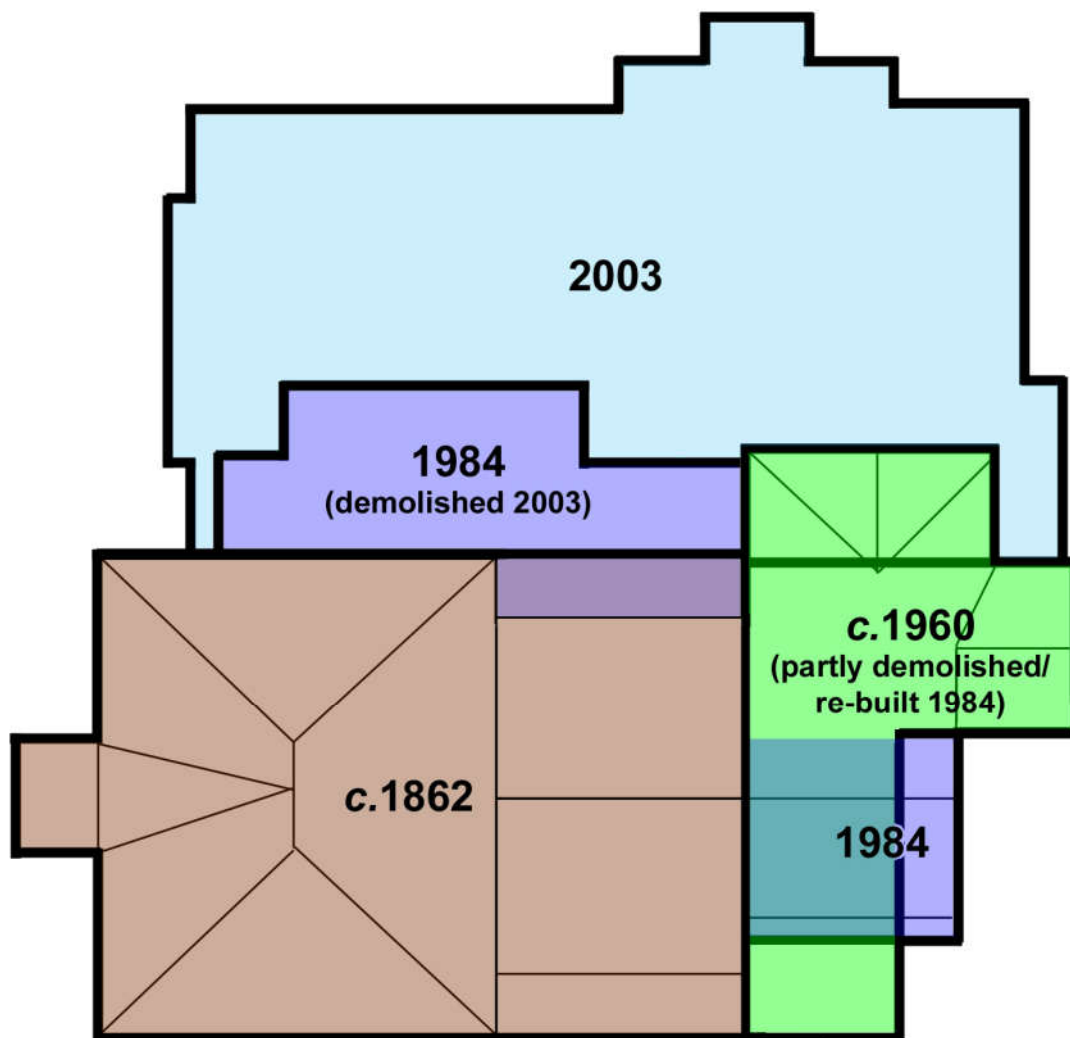


Figure 2 Time Line 1828 - 2016

The original main house, now a component of the former restaurant and banquet facility, is a clay brick, two-storey, hipped-roof building with a gabled-roof extension to the rear. The original red-orange brick has been painted white for at least 5 decades.

Numerous additions and alterations have been constructed over the years, the most recent and largest in scale being for the restaurant conversion in 1984 and an enlarged facility in 2003⁸. A greenhouse, built *c.* 1960 once occupied the rear of the building. Additions have been demolished and/or re-built in 1984 and 2003. Renovations and restorative works to the original house interior have been generally well done, and to the untrained eye, appear to be mainly original with few exceptions, such as glazing, *etc.* Figure 3 illustrates the additions and demolitions that have occurred since *c.* 1862.

Figure 3 William Barber House construction dates - building outline from:
Proposed Site Plan, Old Barber House Ltd., Michael Spaziani Architect Inc., August 28, 2003



⁸City of Mississauga webpage <http://www.mississauga.ca/portal/services/property> 'Property Building Permits'

As-built drawings are included in appendix A to this Plan

B) Significance

The Part IV amended designation by-law provides a statement of cultural heritage value or interest and identifies the cultural heritage attributes and values of the property structures and landscape features. The description is included in the HIA.

C) Planning and Policy Status

The subject property has a total site area of 0.698 hectares (1.725 acres). It currently contains the William Barber House, a two-storey historic dwelling designated under Part IV of the *Ontario Heritage Act*, with an attached banquet facility that currently operated as a restaurant. The House is surrounded by a surface parking area.

The City of Mississauga *Official Plan* designates the subject property as “Mixed Use” and within the Central Erin Mills Neighbourhood Character Area. The subject lands are currently zoned “C3-12” in Zoning By-law 0225-2007 which permits only a restaurant and an outdoor garden accessory to a retail store.

3. Project Objectives

To be achieved by this project

To afford a development opportunity and restoration of the *circa* 1862 William Barber House, the removal of 2003 and earlier additions to the William Barber House, in concert with the restoration of the facades is proposed, achieving a sensitive infill project that is complementary to the historic property.

Goals and objectives

The objective is to restore and re-purpose the former restaurant and banquet facility as a residence, its original use, and to redevelop the restaurant’s surrounding asphalt parking lot for single family and town homes.

Proposed solutions for conservation of the property’s heritage attributes

The property’s heritage attributes are listed in the 2017 amended designation by-law and in the HIA. They are:

Design/Physical Value:

- the scale and massing of the two-storey main building, including east wing;
- the running bond load bearing brick walls;
- the stone foundations;
- the raised ground floor;
- the hipped roof of the villa, and gabled roof of the east wing, both clad in shingles;
- the paired internally bracketed chimneys;
- the symmetrical division of the south and west elevations into 3 and 5 bays, respectively;
- the central projecting-portico on the west elevation;
- the elliptical arch openings at the central portico;
- the original masonry window and door openings and their flat brick arches;
- the interior and exterior front doors, transom and sidelights;
- the upstairs door to umbrage and balcony;
- the six-over-six configuration of the windows: the remaining original wood frames, brick moulds and wood lugsills;
- the eaves, cornice and fascia, with paired brackets and dentils;

- the gable end on the west elevation, with cornice, profiled finial and dropped post, and triangular scalloped-edge brick inset;
- the verandas with tented roofs resting on thin paired posts, between which span elliptical arches with drop pendants and fretwork;
- the secondary outbuilding to the north of the villa, including:
the pointed arch windows in the gable ends, and
the running bond brick walls;

Contextual Value:

- the villa's prominent set-back from Mississauga and Barbertown Roads;
- views of the building from Mississauga Road and from the corner of the lot at Mississauga Road and Barbertown Road, from the public realm (the sidewalk and road)

These heritage attributes, for the most part, are intact and in relatively good condition. The exception is the brick which has been painted for many years and is showing signs of spalling in some places. Where this has occurred, the brick will be carefully cleaned of flaking paint and re-painted, or replaced and painted. It is unlikely that the paint could be removed from the entire house without damaging the soft orange-red brick underneath (see Appendix 3). The original house exterior is to be restored, retaining all its character-defining elements, replacing later non-heritage elements such as the faux shutters with replications of the originals which are no longer extant, restoring the open porches, replacing the *circa* 1984 replacement windows with replica windows, and restoring windows to the now blank 2nd storey rear wall.

Conservation policies to be used in this project

The conservation principles to be employed in this project are found in: Parks Canada – *Standards and Guidelines for the Conservation of Historic Places in Canada*; and Ontario Ministry of Tourism, Culture and Sport's *Eight Guiding Principles in the Conservation of Built Heritage Properties* and in the City of Mississauga's *Official Plan*.

*Parks Canada – Standards and Guidelines for the Conservation of Historic Places in Canada:*⁹

General Standards (all projects)

- 1 *Conserve the heritage value of a historic place. Do not remove, replace, or substantially alter its intact or repairable character-defining elements. Do not move a part of a historic place if its current location is a character-defining element.*

None of the structure's character-defining elements (heritage attributes) is to be removed, replaced or altered with the exception of the conversion of 2 window openings to doors to meet OBC requirements. The original house is to be restored, retaining all its character-defining elements, replacing later non-heritage elements. The later additions, built to convert the house to a restaurant, are to be removed, restoring the house to its original configuration.

- 2 *Conserve changes to a historic place which, over time, have become character-defining elements in their own right.*

Later additions have not become character-defining elements and detract from the heritage attributes of the original house. They are to be removed.

- 3 *Conserve heritage value by adopting an approach calling for minimal intervention.*

Intervention to be employed on the original part of the house is limited to restoring original character-defining elements.

⁹Parks Canada website www.parkscanada.gc.ca

- 4 *Recognize each historic place as a physical record of its time, place and use. Do not create a false sense of historical development by adding elements from other historic places or other properties or by combining features of the same property that never coexisted.*

Not applicable

- 5 *Find a use for a historic place that requires minimal or no change to its character-defining elements.*

Minimal change to the character-defining elements is proposed. The house is to be restored to its original use as a residence.

- 6 *Protect and, if necessary, stabilize a historic place until any subsequent intervention is under-taken. Protect and preserve archaeological resources in place. Where there is potential for disturbance of archaeological resources, take mitigation measures to limit damage and loss of information.*

Not applicable, the building is being well-maintained.

- 7 *Evaluate the existing condition of character-defining elements to determine the appropriate intervention needed. Use the gentlest means possible for any intervention. Respect heritage value when undertaking an intervention.*

No extant character-defining elements are to be affected. Two window openings which contain 1984 replacement windows will be changed to doors to meet OBC requirements. Original materials on the house will be retained and restored where necessary.

- 8 *Maintain character-defining elements on an ongoing basis. Repair character-defining elements by reinforcing their materials using recognized conservation methods. Replace in kind any extensively deteriorated or missing parts of character-defining elements, where there are surviving prototypes.*

Missing shutters and windows will be replaced to match the originals based on patterns taken from other elements on the house.

- 9 *Make any intervention needed to preserve character-defining elements physically and visually compatible with the historic place, and identifiable upon close inspection. Document any intervention for future reference.*

See point 7 above.

Eight Guiding Principles in the Conservation of Built Heritage Properties¹⁰

1. RESPECT FOR DOCUMENTARY EVIDENCE:

Do not base restoration on conjecture. Conservation work should be based on historic documentation such as historic photographs, drawings and physical evidence.

Conjecture is not needed. Evidence is clear.

2. RESPECT FOR THE ORIGINAL LOCATION:

Do not move buildings unless there is no other means to save them. Site is an integral component of a building or structure. Change in site diminishes cultural heritage value considerably.

¹⁰Ontario Ministry of Culture website

http://www.culture.gov.on.ca/english/heritage/info_sheets/info_sheet_8principles.htm

Building remains on its original site in its original orientation.

3. *RESPECT FOR HISTORIC MATERIAL:*

*Repair/conserv*e - rather than replace building materials and finishes, except where absolutely necessary. Minimal intervention maintains the heritage content of the built resource.

Replacements are not necessary except for missing elements.

4. *RESPECT FOR ORIGINAL FABRIC:*

Repair with like materials. Repair to return the resource to its prior condition, without altering its integrity.

Not applicable

5. *RESPECT FOR THE BUILDING'S HISTORY:*

Do not restore to one period at the expense of another period. Do not destroy later additions to a building or structure solely to restore to a single time period.

Later c. 1960s, 1984 and 2003 additions to a c. 1862 building do not complement the original building. Restoration to a single time period is not the intention.

6. *REVERSIBILITY:*

Alterations should be able to be returned to original conditions. This conserves earlier building design and technique. e.g. When a new door opening is put into a stone wall, the original stones are numbered, removed and stored, allowing for future restoration.

Not applicable

7. *LEGIBILITY:*

New work should be distinguishable from old. Buildings or structures should be recognized as products of their own time, and new additions should not blur the distinction between old and new

Not applicable

8. *MAINTENANCE:*

With continuous care, future restoration will not be necessary. With regular upkeep, major conservation projects and their high costs can be avoided.

Pertinent cultural heritage policies of the City of Mississauga's *Official Plan* (October 14, 2015), 7-Complete Communities section include:

7.4.1.2 *Mississauga will discourage the demolition, destruction or inappropriate alteration or reuse of cultural heritage resources.*

"Demolition" in this case, is the removal of later additions that are not part of the designation, not character-defining elements, and detract from the heritage attributes of the original house; this is considered appropriate.

7.4.1. *Mississauga will require development to maintain locations and settings for cultural heritage resources that are compatible with and enhance the character of the cultural heritage resource.*

The residential proposal setting for the Barber House is compatible with its character.

7.4.1.10 Applications for development involving cultural heritage resources will be required to include a Heritage Impact Assessment prepared to the satisfaction of the City and other appropriate authorities having jurisdiction.

An HIA has been prepared.

7.4.1.1 Cultural heritage resources designated under the Ontario Heritage Act, will be required to preserve the heritage attributes and not detract or destroy any of the heritage attributes in keeping with the Ontario Heritage Tool Kit, the Ontario Ministry of Culture, and the Standards and Guidelines for the Conservation of Historic Places in Canada, Parks Canada.

The heritage attributes of the William Barber House are to be conserved and protected in keeping with the standards and guidelines.

7.4.1.13 Cultural heritage resources must be maintained in situ and in a manner that prevents deterioration and protects the heritage qualities of the resource.

The building is being maintained on its original lot in its original orientation.

7.4.1.14 Cultural heritage resources will be integrated with development proposals.

The resource is well-integrated with the development proposal.

7.4.2.2 Prior to the demolition or alteration of a cultural heritage resource, documentation will be required of the property to the satisfaction of the City, and any appropriate advisory committee. This documentation may be in the form of a Heritage Impact Assessment.

An HIA has been prepared.

7.4.2.3 Development adjacent to a cultural heritage property will be encouraged to be compatible with the cultural heritage property.

The adjacent, proposed, residential development is compatible in land use, scale, massing and character.

4. Statement of Heritage Intent

The intent of this project from a heritage perspective, is to restore the exterior of the William Barber House to its *circa* 1862 exterior appearance as much as is possible and to restore its use to a residence. Conservation treatments that retain original fabric will be employed except where original features are no longer extant. Where original features such as windows and shutters are missing, these will be replicated from on-site and photographic evidence.

Why one period of restoration over another was selected

The later additions, built to convert the house to a restaurant in 1984 and 2003, and to replace additions built *circa* 1960 (see Figure 3), are to be removed, restoring the house to its original *circa* 1862 configuration. These later additions, which are the only major alterations made to the exterior in its 150 year history, have not become character-defining elements and detract from the heritage attributes of the original house.

Rationale for new interventions

The only new interventions planned are for the non-designated interior which is to be converted to 4 luxury residential condominium units. In 1984, while the building was vacant, it was vandalized, and a fire was set in the interior. The 8 original fireplaces mantles were stolen. The main staircase was vandalized and much of the original woodwork was burned¹¹. In the City's 1981 Heritage Structure Report, the original marble fireplaces were extant. The current owner replaced the fire damaged woodwork, fireplaces and staircase with new in 1984. Wainscoting in the parlours is a recent addition. Most of the windows have been replaced. Some plaster mouldings remain, as do the large pocket doors between the north parlours.

5. Condition Assessment of the Cultural Heritage Resource(s)

The Tacoma Engineers Structural Report, September 21, 2106 (Appendix 3) identifies the Barber House to be generally sound with the need for minor remedial work to the floor system. The Structural Report makes recommendations regarding the restoration of the existing coated brick which includes potential removal of the coatings and rehabilitation of the underlying brick including re-pointing, masonry repair, masonry replacement and probably re-coating with a modern paint. The Report also acknowledges that it is possible that removal of the existing coatings may be so detrimental to the underlying masonry that it may not be feasible. In this case, the alternative for restoration would be scraping of loose material, repair to damaged brick, re-pointing and replacements where necessary, and application of a new exterior coating.

The structural report recommends that the course of action that results in the lowest likelihood of imparting further damage to the brick is to re-coat the brick. While this may not restore the brick to its original condition, it will serve to extend the life of the masonry, albeit with a higher degree of active maintenance in the coming years.

The building has been assessed as basically structurally sound. The restoration of the exterior (more fully described under Section 7 Work Plan) with the removal of 2003 and earlier additions in concert with the restoration of the elevations will conserve the heritage attributes of the building.

The proposed change of use back to residential as a POTL (parcel of tied land) of a common element condominium will ensure long term sustainability of the designated building.

6. Building System and Legal Considerations

The proposed building and site use from a practical perspective has been addressed in previous sections of this Report. The logistical and legal aspect of re-purposing the Barber House and converting it from a restaurant to four dwellings within the footprint of the original house is explained as follows:

The four new dwellings (Appendix B) will be part of a Common Element Condominium. With these four dwellings the Condominium will include townhouses, single family homes and the common elements being the road, parking spaces and open space as shown on Figure 4. The tenure for each of the units in the Condominium is freehold. From a legal description they will be 4 Parcels of Tied Land (POTLs) into the Common element Condominium. Individually each POTL will be described as Part of Block 4 of Plan 43M XXXX. (XXXX to be determined). From a Zoning perspective they will be described under a site specific zoning bylaw which allows them to fall under the RM6 (CEC) zone as Back to Back Townhouses. They will be subject to their own definition and these four POTLs will have separate zoning standards in the bylaw. The "Development" consists of two distinct construction projects. The first is the restoration of the facade of the house which includes the removal of all pre 2003 additions. The second construction

¹¹pers. com. Victor Petrovski, March 23, 2016

project is the renovation and conversion of the interior of the building to four back to back townhouses.

The restoration of the facade is the subject of Section 7 Work Plan. The renovation of the interior of the building will be accomplished through normal renovation practices. All interior wall and ceiling finishes including all trim will be removed. All existing plumbing, electrical HVAC equipment, restaurant related equipment and air handling equipment in the roof space will be removed in its entirety. Remedial work will be done to existing floor joists showing signs of dry rot. The interior ground and second floor will be divided with new fire rated walls into four dwelling units and vertical connections within each unit will be installed. New interior partitions within each unit will delineate rooms (Appendix B). Exterior walls and second floor ceilings will be insulated to current OBC requirements after testing the brick for porosity and employing the wall assembly most commonly used as recommended in the Tacoma Engineering Report. New individual electrical, water, waste and gas connections will be installed for each of the units. Each unit will be fitted with individual HVAC equipment and fitted with a sprinkler system for fire safety. Each unit will be registered with TARION. Finally the exterior space associated with each unit will be landscaped per the approved landscape plan for the Condominium.

The secondary building will be moved on-site and intact by a qualified building moving contractor and set on a new concrete pad in the location shown on the Site Plan (Figure 4). The masonry, woodwork, door and windows will be treated with the same techniques, materials and methods as the main house.

The building will be re-purposed as a bicycle storage structure.



Figure 4 – Site Plan, Flanagan Beresford Patteson

7. Work Plan

The first task of the Work Plan for the restoration of the exterior facade of the Barber House will be to determine the best alternative for masonry restoration. Under the guidance of Tacoma Engineering and FBP Architects testing of the brick for porosity will be performed in order to recommend the final material (paint) to be used for re coating.

Once the method of masonry restoration has been agreed upon, all of the pre-2003 additions to the Barber House are to be demolished and removed from the site under the periodic review of Tacoma Engineering and FBP Architects. All exposed openings resulting from demolition are to be temporarily weather protected and temporary support is to be provided as needed, particularly on the east facade of the tail of the building. 24 hour security monitoring will be provided during demolition and until all openings in the building can be secured.

All existing landscaping, ponds, flower beds and other landscaping surrounding the building are to be removed to allow for the installation of scaffolding as necessary during brick restoration (Appendix B).

Prior to the restoration of the brick all existing openings in the east wall of the tail of the original 1862 house are to be filled in with brick and mortar to match the existing brick. Existing covered-up window openings are to be re-established on the north elevation and on the east elevation of the tail of the 1862 building. The existing recent closed-in porch addition on the south elevation of the tail is to be removed.

Prior to restoration of the brick all existing windows and shutters on all elevations are to be removed. Exposed openings are to be made temporarily weather tight. All existing wood surfaces (wood sills, trim, soffit, dentils etc.) are to be protected.

The agreed-upon method of brick restoration is to be implemented under the periodic review of Tacoma Engineering and FBP Architects.

Once the Brick restoration has been completed the windows in the main building and tail of the 1862 house are to be replaced. Replacement windows for the main building are to have a painted wood frame, be double glazed with simulated divided lights with interior and exterior surface mounted muntins. They are to be double-hung, divided 6 over 6 and sized to fit the existing openings. Replacement and new windows for the tail of the 1862 house are also to have a painted wood frame, be double-glazed with simulated divided lights with exterior and interior surface mounted muntins. They are to be double hung, divided 4 over 4 and sized to fit the former openings. (See north, south, east and west elevation drawings Appendix B for location of replacement and new windows.)

Existing wood sills are to be repaired or replaced where necessary. New wood sills will be provided for new windows in the tail of the building. New wood shutters for the 24 windows on the main building of the original 1862 house are to be provided and installed. New shutters are to be proportioned to appear that they could cover the windows if they were operable. A new ground floor porch floor and roof on the north and south facade of the tail of the 1862 building will be constructed. Porch columns, pickets decorative arches and detail are to match the existing front porch. All of these ornamental details will be duplicated by a skilled finish carpenter. Replication input and review is to be performed by FBP Architects.

All existing exterior porch, soffit and wood detail is to be repaired or replaced as necessary. All replacement pieces are to match existing.

Existing aluminum gutters and downspouts are to be removed and replaced with 5" copper gutters and downspouts.

Long term repair and maintenance of the exterior of the restored building will be the responsibility of the future owners of the building.

8. Qualifications

This Heritage Conservation Management Plan has been prepared by an accredited, qualified multidiscipline team of professionals with demonstrated experience in the field of heritage conservation.

Owen R. Scott BSA, MLA, OALA, FCSLA, CAHP commenced his professional career as a landscape architect with Project Planning Associates Ltd. where he enjoyed the privilege of being involved with master plans for Wasaga Beach Provincial Park, the Canadian National Exhibition, the University of Guelph, a national parkway for the Kingdom of Kuwait, Expo '67 in Montreal, and many other projects. In 1969 he was appointed Assistant Professor in the School of Landscape Architecture at the University of Guelph where he taught for thirteen years, being promoted to Associate Professor. President of The Landplan Collaborative Ltd. from 1977 to 2015, he is an experienced landscape architect specializing in heritage conservation. He oversaw his firm's preparation of the *Downtown Guelph Improvement Manual* and produced both a plan for the public and private realms and a streetscape manual for downtown Guelph. He directed the preparation of the heritage and urban design policies and regulations for Guelph's *Official Plan* and *Comprehensive Zoning By-law* in 1995. He authored the *Grand River Corridor Conservation Plan*, developed the *Wanuskewin Heritage Park Master Plan* in Saskatoon, designed the Sussex Drive portion of Ottawa's Confederation Boulevard, designed landscapes for Langdon Hall in Cambridge and Woodside National Historic Site in Kitchener, and completed master plans for Rockway Gardens in Kitchener and the Elam Martin Farmstead in Waterloo. He was responsible for the master planning of Doon Heritage Crossroads and much of the landscape and site planning. He prepared a master plan for Black Creek Pioneer Village in Toronto. With CHC Limited, a firm he and his late father founded in 1965, Owen Scott has prepared more than seventy Cultural Heritage Impact Assessments, Reports and Conservation Plans for historic bridges, golf courses, parks, cemeteries, hospitals, homes, railway stations, commercial properties, university buildings, heritage districts and cultural landscapes in Ontario and Saskatchewan.

John Beresford, B. Arch., OAA, MRAIC is a Principal and founder of Flanagan Beresford Patteson Architects of Woodbridge, ON. He is a 1972 graduate of the University of Waterloo's Environmental Studies program with a 1974 Bachelor of Architecture degree from the same institution. He was awarded the Architectural Guild Medal for Architectural Design by the Ontario Association of Architects, has served as a member of the OAA Council, as a member of the Discipline Committee and as Chair of the Complaints Committee. Flanagan Beresford Patteson was established in 1979 and currently consists of 14 professional and technical staff. They specialize in providing architectural design services for custom residential projects including new residences, additions, renovations, and adaptive re-uses. John Beresford has 40 years of experience in Canada, Britain and the Caribbean. His innovative solutions resolving complex urban infill issues include numerous projects within Heritage Conservation Districts and Cultural Heritage Landscapes.

Jerry Zegerius, BA.Sc., P.Eng., CAHP is a Structural Engineer and Associate with Tacoma Engineers of Guelph, ON. He is a long-term member of the Tacoma Engineers heritage and investigation team, and he has been involved in the assessment, analysis, and restoration of dozens of prominent heritage structures, including a number of National Historic Sites and other designated structures.

9. Additional Information

- Documentation resources:

City of Mississauga, Heritage Management Conservation Plan Terms of Reference, March 2013

City of Mississauga bylaw # 368-82, William Barber House

City of Mississauga heritage files - <http://www.mississauga.ca/portal/services/property>

City of Mississauga maps - <http://www.mississauga.ca/portal/services/maps>

City of Mississauga Heritage Mississauga website - <http://www.heritagemississauga.com/history.htm>

Flanagan, Beresford & Patteson Architects, building plans

Tacoma Engineers, Structural Report – Barber House

Heritage Mississauga web page <http://heritagemississauga.com/page/Barberton>

Landplan Collaborative Ltd. (The) *Cultural Landscape Inventory, City of Mississauga*, January, 2005

Memorandum, *Heritage Structure Report, William Barber House*. to Local Architectural Conservation Advisory Committee; from L. F. Love, Commissioner, Recreation and Parks Dept. City of Mississauga, August 31st, 1981

Michael Spaziani Architect Inc., *Proposed Site Plan, Old Barber House Ltd.*, August 28, 2003

Ontario Ministry of Tourism, Culture and Sport website

http://www.mtc.gov.on.ca/en/publications/InfoSheet_8%20Guiding_Principles.pdf

Mississauga Library System Historic Images Gallery

<http://www.mississauga.ca/portal/residents/cooksvillegallery>

Parks Canada website www.parkscanada.gc.ca

Province of Ontario *Ontario Heritage Act, R.S.O. 1990, c. O.18*

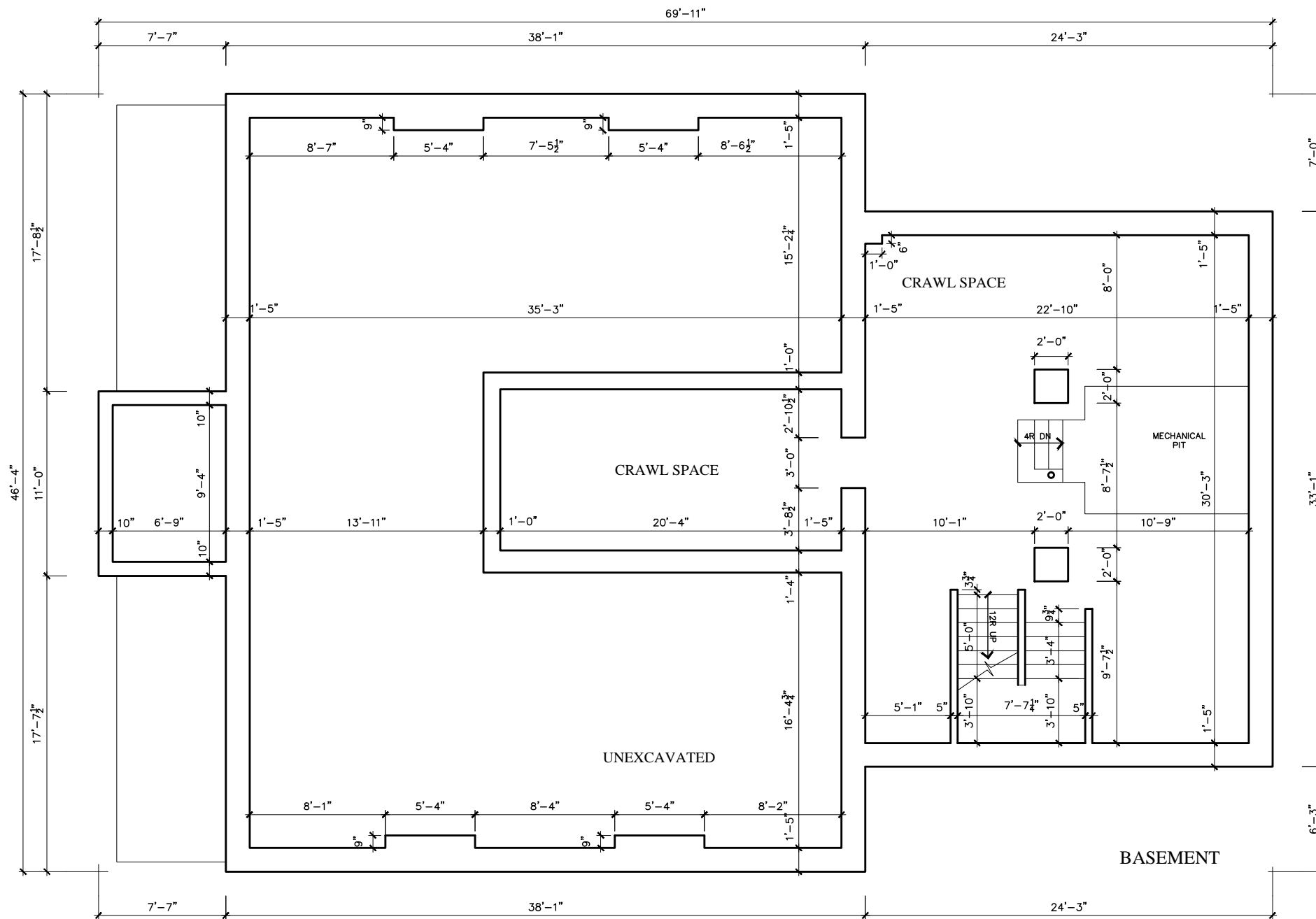
Province of Ontario *Provincial Policy Statement (PPS, 2014)* Cultural Heritage and Archaeology Policies 2.6

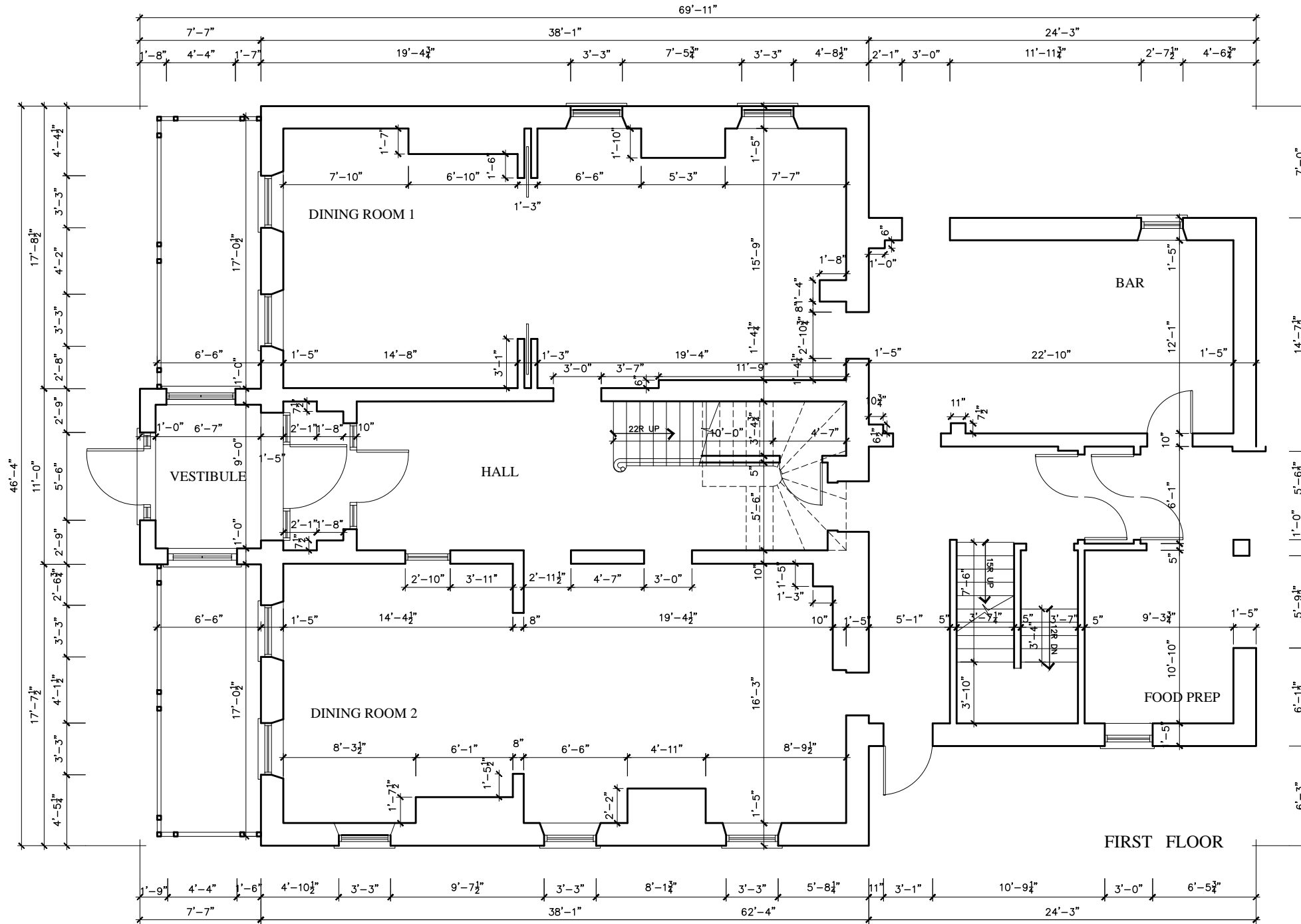
Province of Ontario *InfoSheet #5, Heritage Impact Assessments and Conservation Plans*, Winter 2006

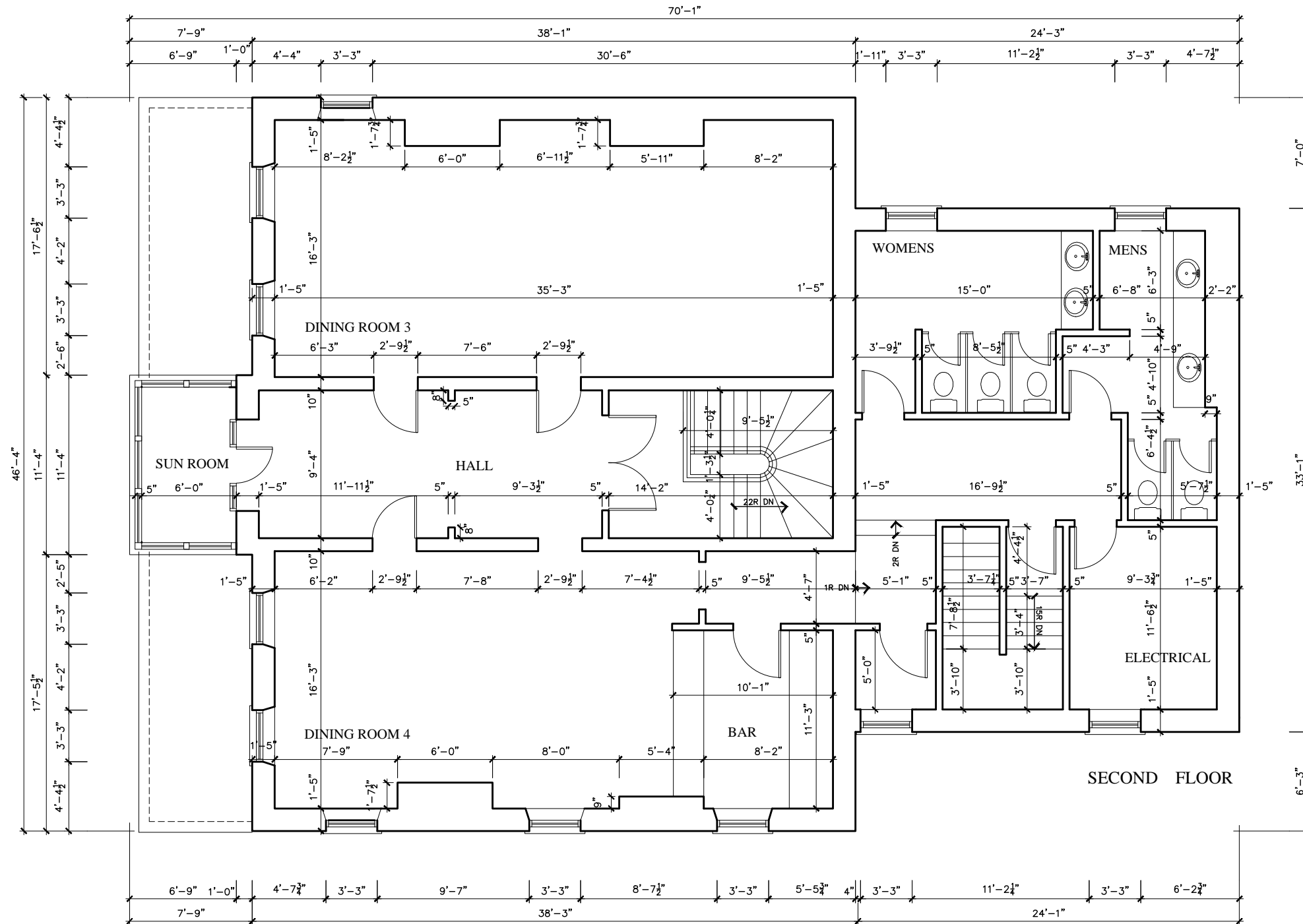
- List of consultants and other professionals related to the project
 - Diane Harman (title consultant)
 - Aird & Berlis (legal)
 - Parente, Borean (legal)
 - John Zipay (planning)
 - Glen Schnarr & Associates Inc. (planning)
 - Archeoworks Inc. (archaeology)
 - MSLA Landscape Architects
 - Bruce A. Brown Associates Limited (environmental and applied earth sciences)
 - Skira & Associates Ltd., (site engineering)
 - HGC Engineering Limited (acoustical engineering)
 - Cole Engineering (transportation planning)
 - Rady-Pentek & Edward Surveying Ltd.

APPENDIX A – As-built drawings

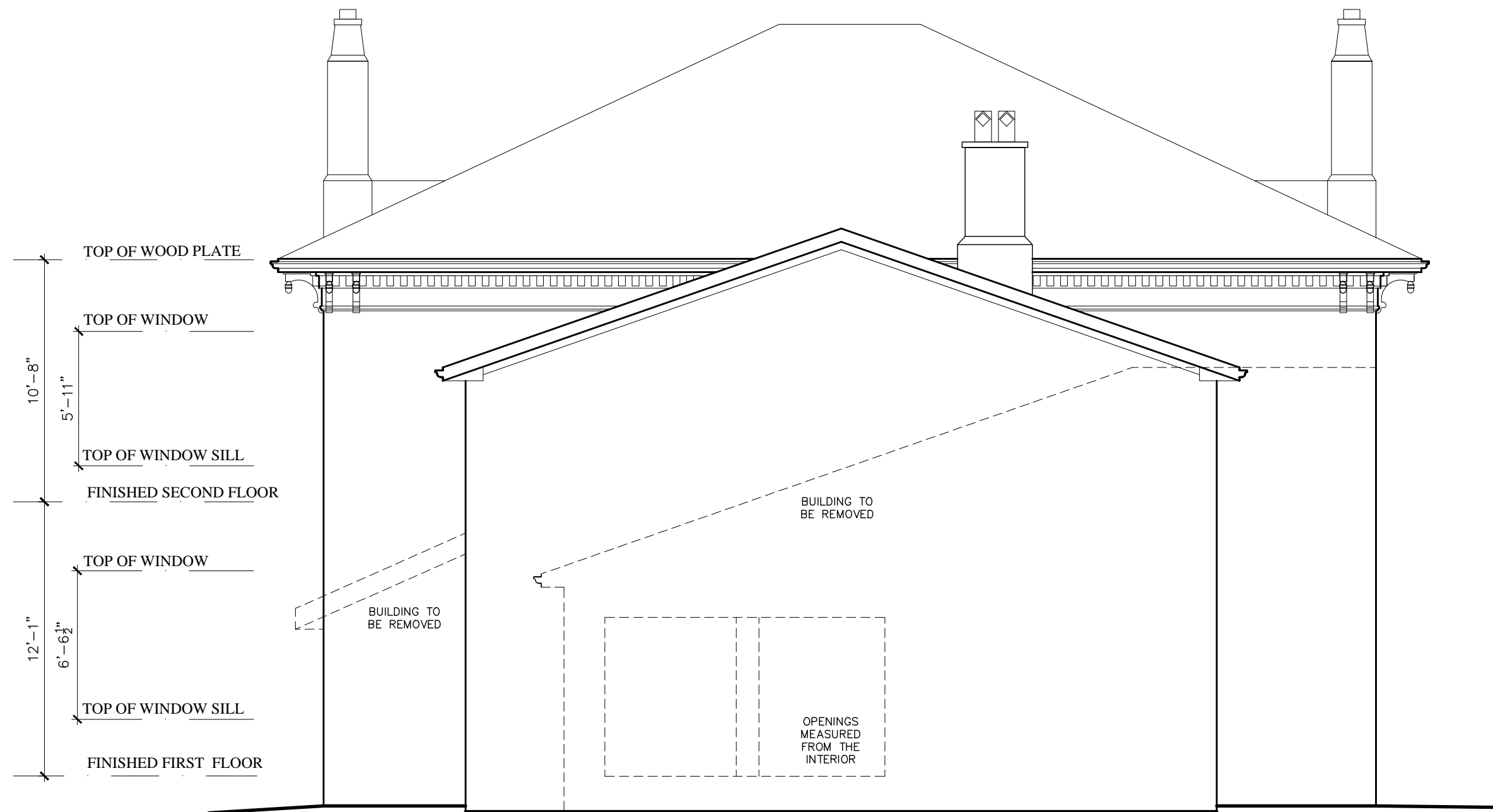
Existing conditions July 8, 2016



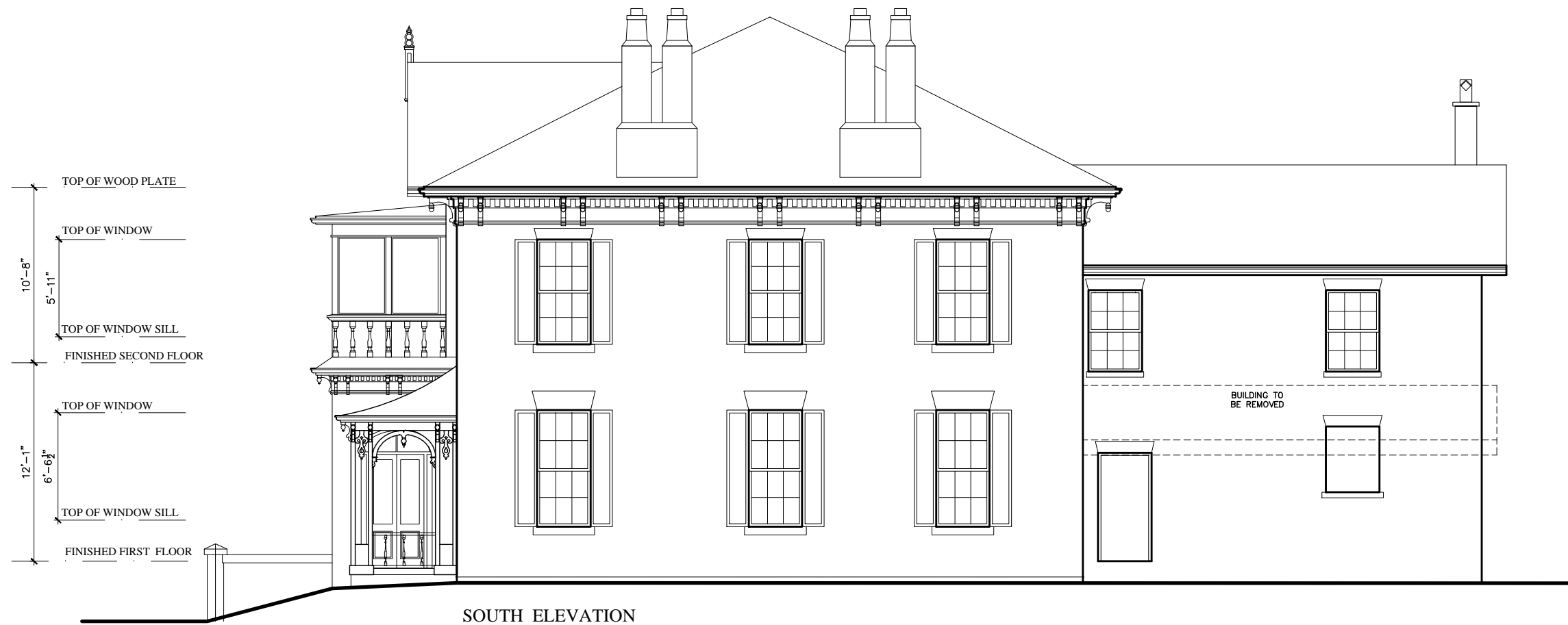


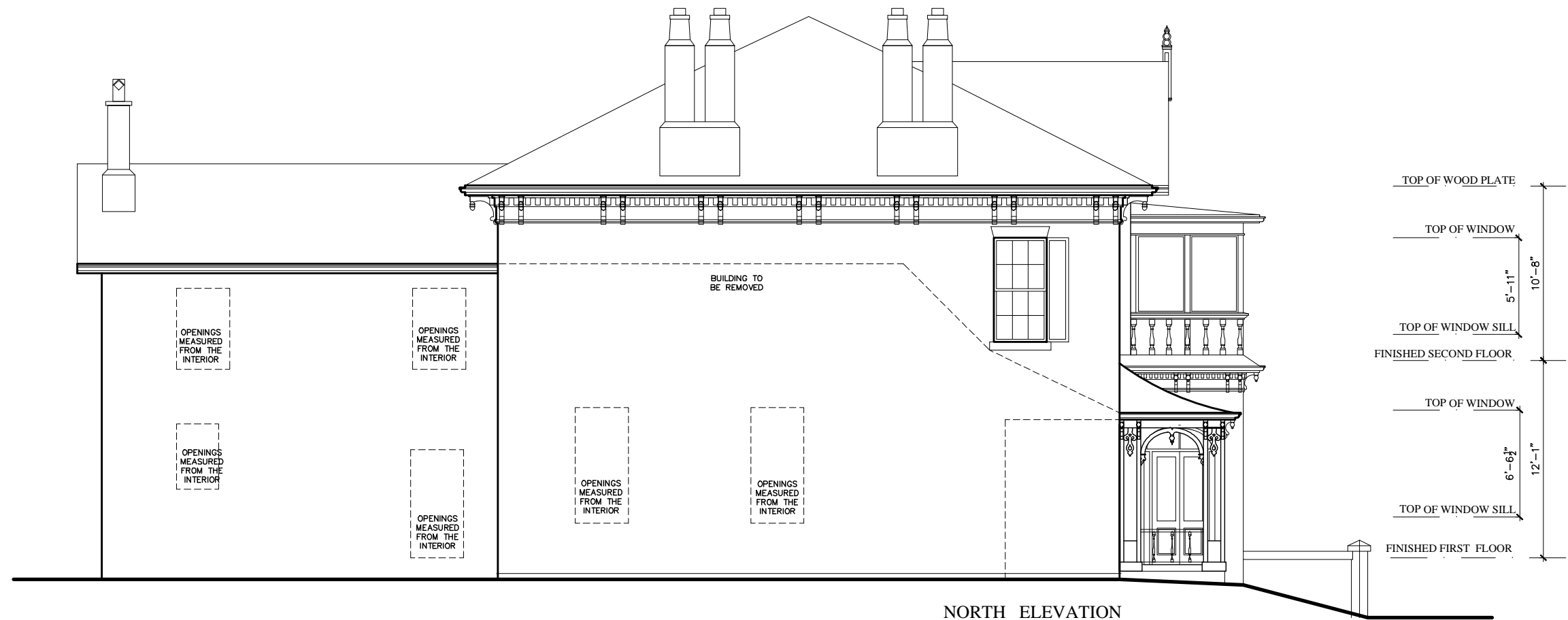




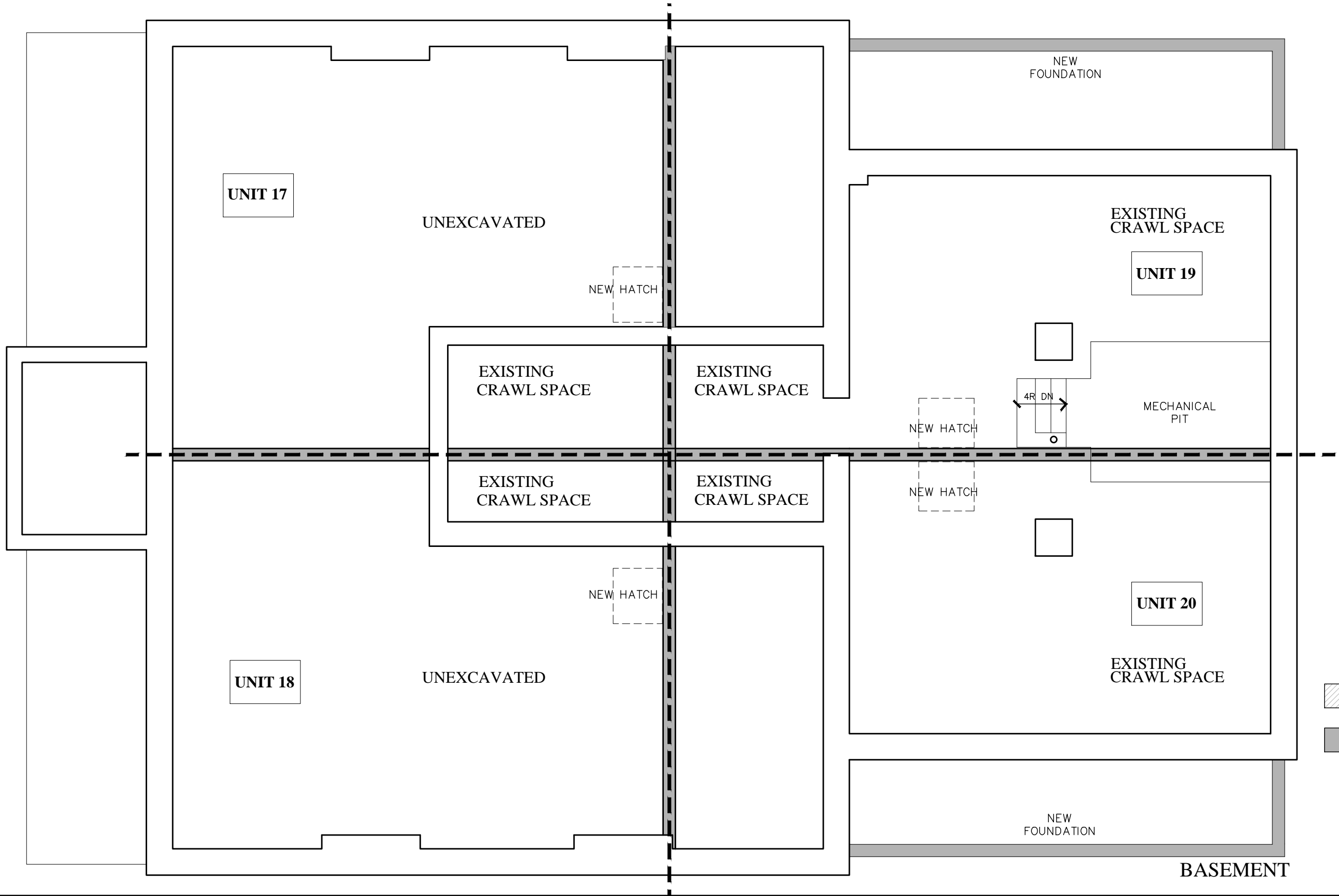


EAST ELEVATION

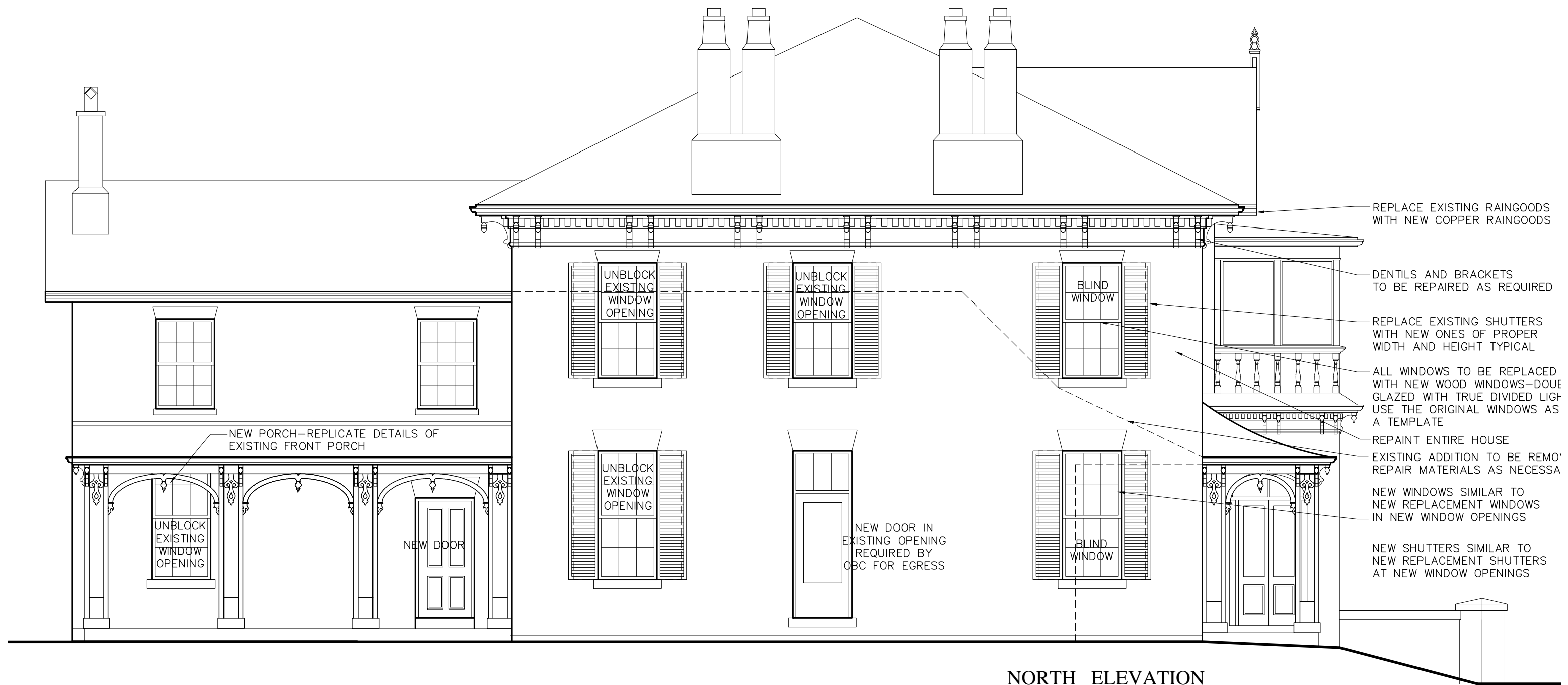




Appendix B – Proposed residential units



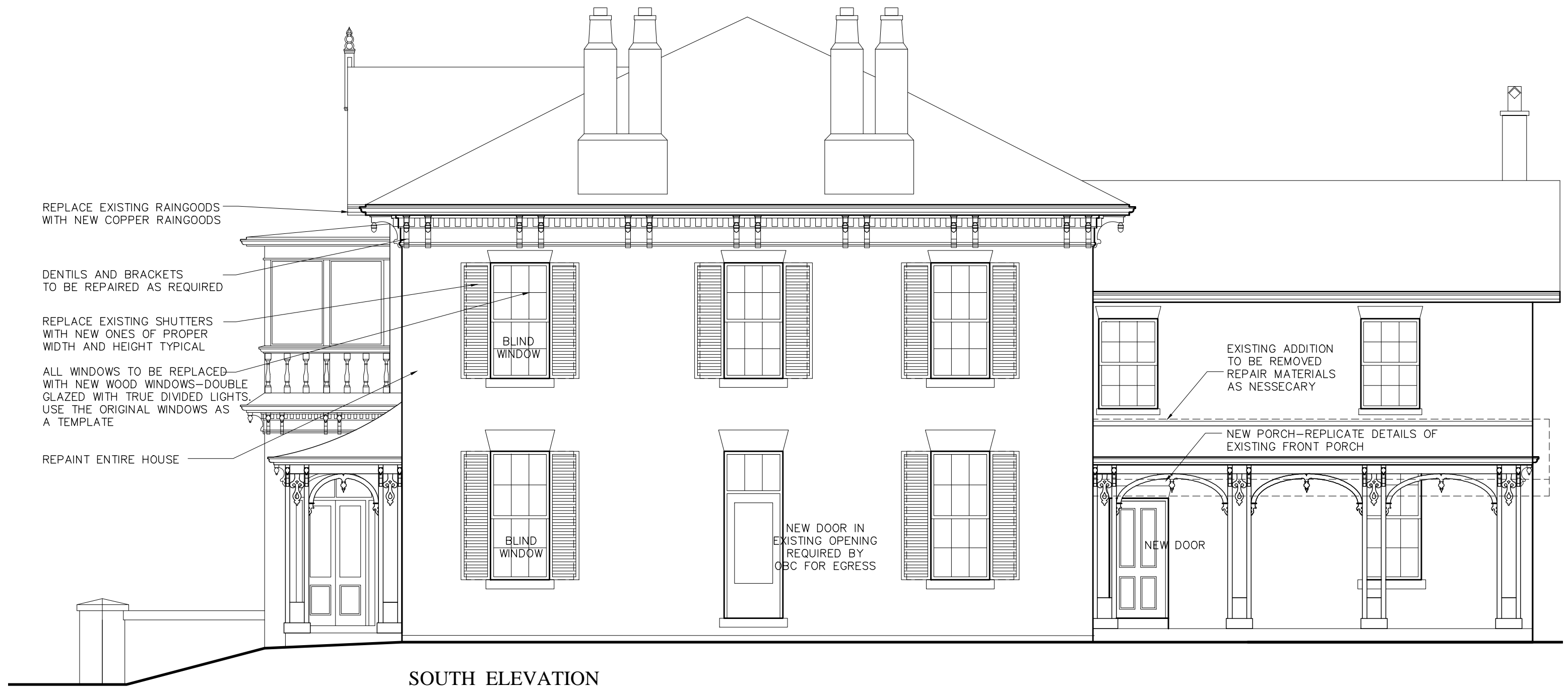






EAST ELEVATION





Appendix C – Structural Report

Date:	March 21, 2016	No. of Pages:	9 + Encl.
Project:	Barber House	Project No.:	TE-28594-16
Address:	5155 Mississauga Road, Mississauga	Permit No.:	n/a
Client:	City Park (Streetsville) Inc.		
Dist.:	Owen Scott John Beresford	CHC Limited Flanagan Beresford & Patteson	oscott87@rogers.com johnb@fbparch.com

Background

Tacoma Engineers has been retained by City Park (Streetsville) Inc. to carry out a review of the existing conditions at the Barber House located at 5155 Mississauga Road in Mississauga, Ontario.

The scope of this report includes:

- a general assessment of the existing conditions;
- a specific review of the existing brick and associated coatings; and
- general recommendations regarding the restoration of the existing brick, as well as recommendations for potential methods of insulation.

A site review was completed on the morning of September 19th, 2016, accompanied by Owen Scott and John Beresford.

Note that no destructive investigations were completed as part of this review. The findings of this report are based on a visual review only; many parts of the structure were not visible for review due to the installation of finishes that were not removed. Structural items that appear to be performing adequately are assumed to have been designed and constructed in conformance with the building codes and best building practices in place at the time of construction. No building code analysis was completed as part of this review.

Building Conditions

The interior and exterior of the building were available for review, including the crawl-space basement and a limited attic access port.

Primary structure

A review of the interior found very few signs of deterioration or deflection that would normally be indicators of structural deficiencies. Isolated areas of the main and second floors appear to be out of level, but not to the degree that would lead one to suspect significant structural problems. A crack between drywall sheets was noted on the ceiling of the northern second floor dining room; however, this is not considered a sign of a major structural problem.

Limited areas of the main floor framing appear to have sustained some deterioration, likely due to moisture exposure.



Figure 1: Deteriorated floor framing

The floor joist shown in Figure 1 can be found below the central hallway. It is estimated that between 5 and 10 of these joists will require some form of remedial work. The majority of the basement ceiling has been fire-rated and as such the framing was not visible at the time of the review. A more comprehensive review of the floor framing should be carried out during any proposed renovation design work.

Exterior masonry

Based on a visual review of the exterior of the building, it is reasonable to assume that the exterior masonry walls are constructed as multi-wythe masonry. Lock coursing was visible in several locations on the rear (east) and side elevations. The front (west) elevation did not show evidence of regular lock coursing; however, it is possible that this coursing was hidden on the front elevation for aesthetic reasons. The vintage and construction style of the building lead one to assume that the interior structure is constructed with wood framing supported on multi-wythe brick walls.

The brick has been coated with at least two (2) different coatings. Remnants of a third coating were visible, and it is possible that this lowest layer is a composite of a repeated lime wash, known to have been applied to other buildings of a similar vintage and construction.



Figure 2: Exterior coatings

The outermost coating is very thick and has flaked off in many locations, most notably at interior corners or other locations more prone to moisture accumulation. The coatings exposed below are in varying states of decay, and have deteriorated to a form of powder, possible lime, in some locations. Where exposed below the coatings, the brick was found to be extremely soft.



Figure 3: Soft brick exposed below coatings

It was possible to scrape a depression of up to $\frac{3}{4}$ " deep into the brick with a screwdriver and moderate pressure.

Coatings at or near grade are showing signs of more advanced deterioration, particularly where the wall is sheltered by gardens.



Figure 4: Deteriorated coatings near grade

Advanced deterioration of the coatings and the underlying brick was noted on the south side of the entry canopy.

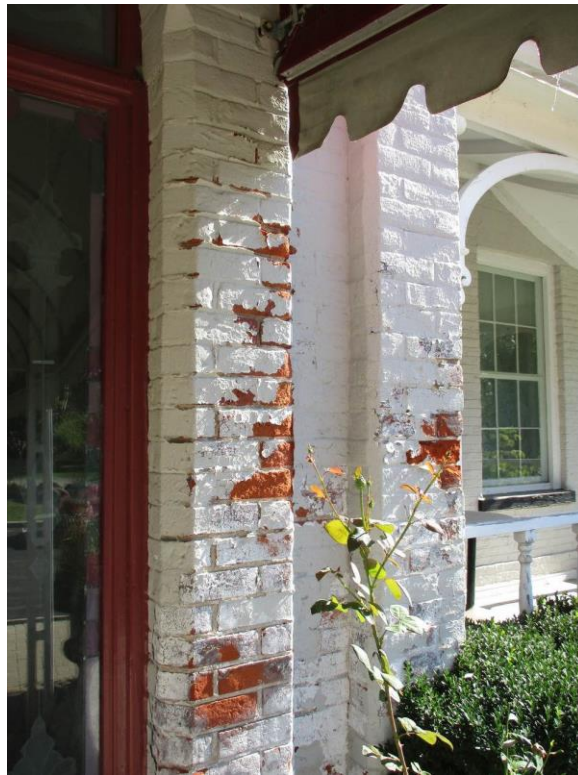


Figure 5: Deterioration on south side of entry canopy

It appears that the concentration of run-off from the canopy has resulted in saturation of the brick at this location, and the loss of coatings has lead to advanced deterioration of the brick.



Figure 6a, 6b: Damage to masonry at south side of entry canopy

A step crack was noted on the front elevation below the second storey north window. The presence of the coatings precludes comment on the extent or width of the crack.



Figure 7: Step cracking below second storey window

Masonry Restoration

The coatings currently in place on the exterior of the building have compromised the ability of the brick to dry to the exterior, and are likely to increase the risk of freeze-thaw damage. There are several options available to clean and restore the masonry.

Chemical Removals

There are several products available that have a proven capacity to remove paint from masonry surfaces. A solvent is applied to the outside of the brick, and a laminated paper laid over top of the solvent in order to limit evaporation. After a relatively short period of time the paper is peeled off, removing the coating.

Note that these products do not work with the same level of effectiveness on all coatings or substrates, and varying levels of success should be expected. Trial areas should be selected as test sections and the removals process modified as required.

Mechanical Removals

In the event that the chemical removals are not effective, it is recommended that mechanical removals be investigated. Again, limited trial areas should be selected to determine whether the removals process is effective.

The following mechanical removals can be used, in order of increasing abrasion:

- water blasting or flushing;
- ice or dry-ice blasting;
- soda blasting;

- media (glass or plastic beads, organics) blasting;
- sand blasting.

The mildest forms of mechanical removals must be attempted before advancing to the next stage. The use of a more aggressive form of abrasive removals increases the risk of damage to the brick and mortar, and any damage to the substrate will negatively impact the overall lifespan of the material.

Rehabilitation of Brick

Once exposed, the condition of the brick and mortar can be assessed. It is reasonable to assume that the original coatings were applied as a reaction to some deterioration of the brick or mortar. In addition to this, the application of these coatings has likely compromised the brick in areas more likely to accumulate moisture. Furthermore, the removal of the coatings may exacerbate conditions in some locations. As a result, it is anticipated that some masonry repair, other than that noted around the entry and other areas of obvious deterioration, will be required once the coatings are removed. It should be anticipated that repair will include:

- repointing of mortar joints;
- repair of masonry units; and
- replacement of masonry units.

Compatible materials should be used in all locations where repair work is required. Replica brick should be sourced and should be of a comparable hardness and porosity. Mortar used for repointing should match the existing mortar in hardness and colour wherever possible. It is likely that the mortar used in the original construction was composed largely of lime, with limited, if any, amounts of Portland cement. It was not possible at the time of the review to determine if the building had been previously repointed prior to the application of the exterior coatings.

Recoating

Due to the combination of previous coatings and the relatively soft original brick, it is possible that the best course of action includes the application of another exterior coating. The technology of exterior coatings has advanced considerably over the last 30 years, and the careful selection and application of a new coating could serve to extend the life of the masonry.

When selecting a new coating, it is recommended that the following factors are considered in detail:

- reduction of moisture ingress from the exterior (rain, snow, etc.);
- adequate permeability from the inside (“breathability”); and
- ultraviolet light resistance.

Note that it is possible that the removal of the existing coatings may not be feasible, even when using the more aggressive forms of abrasive blasting. It may be found that, when advancing to sand blasting, the damage caused to the substrate is not acceptable, and that removing the

coatings will cause more damage than leaving it in place. Until the mock-up areas are completed it is not possible to say with any certainty that the coatings can be removed.

In the event that the coatings cannot be removed for the reasons listed above, it is recommended that:

- all loose areas be scraped clean;
- all damaged brick is repaired, as required;
- any deteriorated masonry joints are repointed, as required; and
- a new exterior coating is applied to unify the building in appearance and performance.

The course of action that results in the lowest likelihood of imparting further damage to the brick in this instance is to re-coat the brick. While this may not restore the brick to its original condition, it will serve to extend the life of the masonry, albeit with a higher degree of active maintenance in the coming years. Care must be taken when selecting this new coating, and surface preparation should be carried out as listed above and in conjunction with the manufacturer recommendations.

Insulation

The insulation of previously uninsulated buildings, particularly buildings of masonry construction, has resulted in some unforeseen failures in the past. This is largely a result of the installation of wall assemblies that did not adequately appreciate the impact of the reduced temperature of the brick, coupled with the varying susceptibility of the brick to freeze-thaw deterioration.

In general, it is recommended that the brick be tested prior to undertaking a new method of insulation. Brick can be tested for its porosity (the amount of water it is likely to take on during regular exposure to the elements) and for its ability to withstand the cycles of freeze-thaw that are common during southern Ontario winters. These findings serve to inform the requirements for a more direct water protection strategy (site drainage, overhangs, flashings, coatings, etc.).

The wall assembly most commonly used to insulate existing masonry buildings includes, from the outside in:

- masonry (varying thickness);
- bond break (typically an air barrier such as Tyvek or Typar);
- closed cell spray foam insulation;
- steel stud framing; and
- drywall.

This particular assembly serves to minimize the vapour transmission from the inside to the outside using the spray foam insulation, reducing the risk of condensation forming on the inside face of the now colder brick assembly. The use of the bond break is intended to provide some measure of reversibility of the spray foam.

When carrying out alterations to heritage buildings, whether they are structural alterations or otherwise, it is important to ensure that the changes can be reversed in future if the alterations

prove to be detrimental to the building, or if more effective means of achieving the goals of the alterations are found in future. For example, if in the future a new, much more effective method of insulation is discovered, and during future renovations of this building the decision is made to install this new method, the bond break will allow for the easy removal of the spray foam, with no damage being done to the brick in the process.

Note that the specification of the final insulation assembly should be coupled with a more comprehensive investigation of the vulnerability of the brick, and should also consider the specific properties of the new coating that will be applied as part of the final restoration strategy. It is recommended that a more detailed investigation of the brick and the anticipated effects of any proposed insulation assembly is carried out prior to specifying the final design of the building.

Per

Gerry Zegerius, P.Eng., CAHP
Structural Engineer, Associate
Tacoma Engineers



Encl.

none