



160 Gerrard Street East, Toronto, Ontario

Allan Gardens Palm House (AGPH) Restoration & Functional Upgrade

TORONTO PRESERVATION BOARD MEETING | JUNE 16TH, 2021



Architects Rasch Eckler Associates Ltd.
15 Lola Road, Toronto, ON M5P 1E5
p: 416.696.1969 // f: 416.696.1966 // m: mail@areaarchitects.ca



PROPERTY DESCRIPTION

LOCATION:

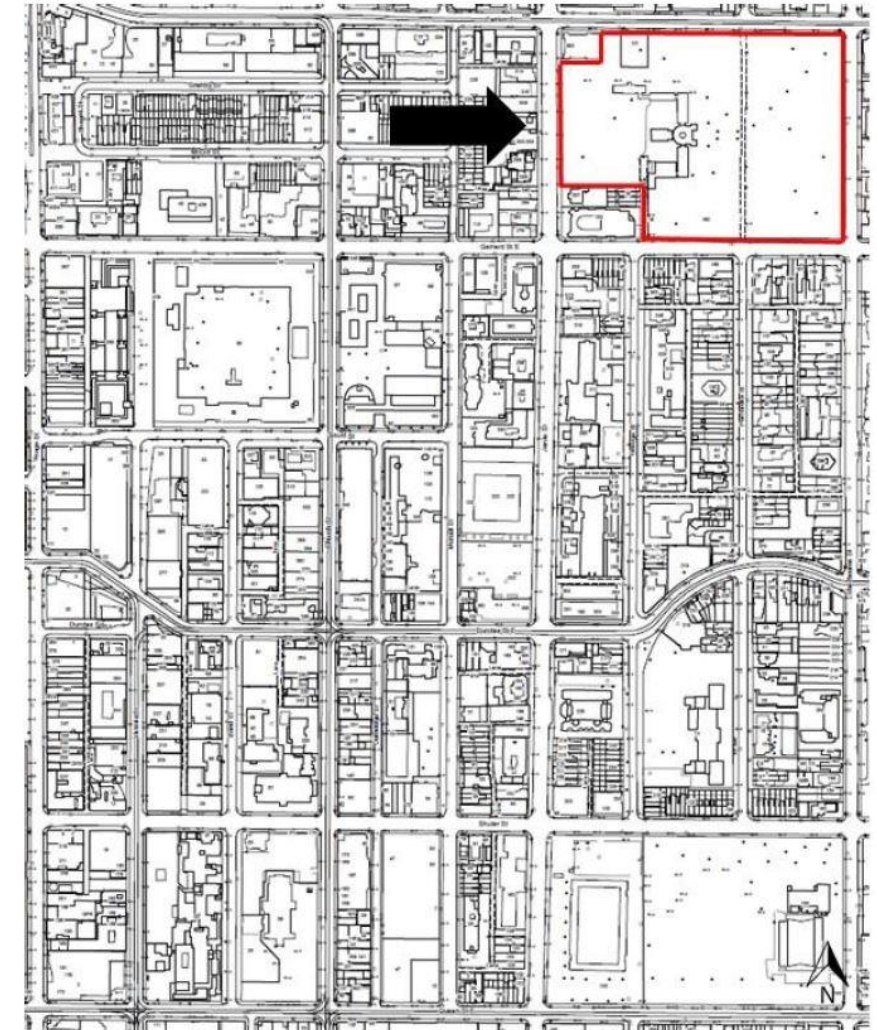
The conservatory complex which is contained within Allan Gardens is a 13-acre City park bounded by Carlton (north), Sherbourne (east), Gerrard (south) and Jarvis (west) Streets within Toronto's downtown core.

CONTEXT:

Its location and size make Allan Gardens one of the largest green spaces in the downtown. As a public park, its historical origin and continuous purpose as Botanical Gardens dates to 1858, and in 1864 came under City ownership. The park is identified with two addresses:

- 19 Horticultural Lane, being used for postal delivery and the visitor entrance, which is the Administration Building accommodating the offices and deliveries receiving for the property; and
- 160 Gerrard Street East being the legal address used for its Heritage Designation and other such municipal map identification.

The Palm House, also identified as Greenhouse No. 3 (GH #3) is the original and oldest of the Allan Gardens Conservatory Complex of seven greenhouses and it was constructed in 1910 based on design drawings prepared by City Architect, Robert McCallum, dated 1909.



Location map, showing the property at Allan Gardens (160 Gerrard St. E.) indicated by the arrow.

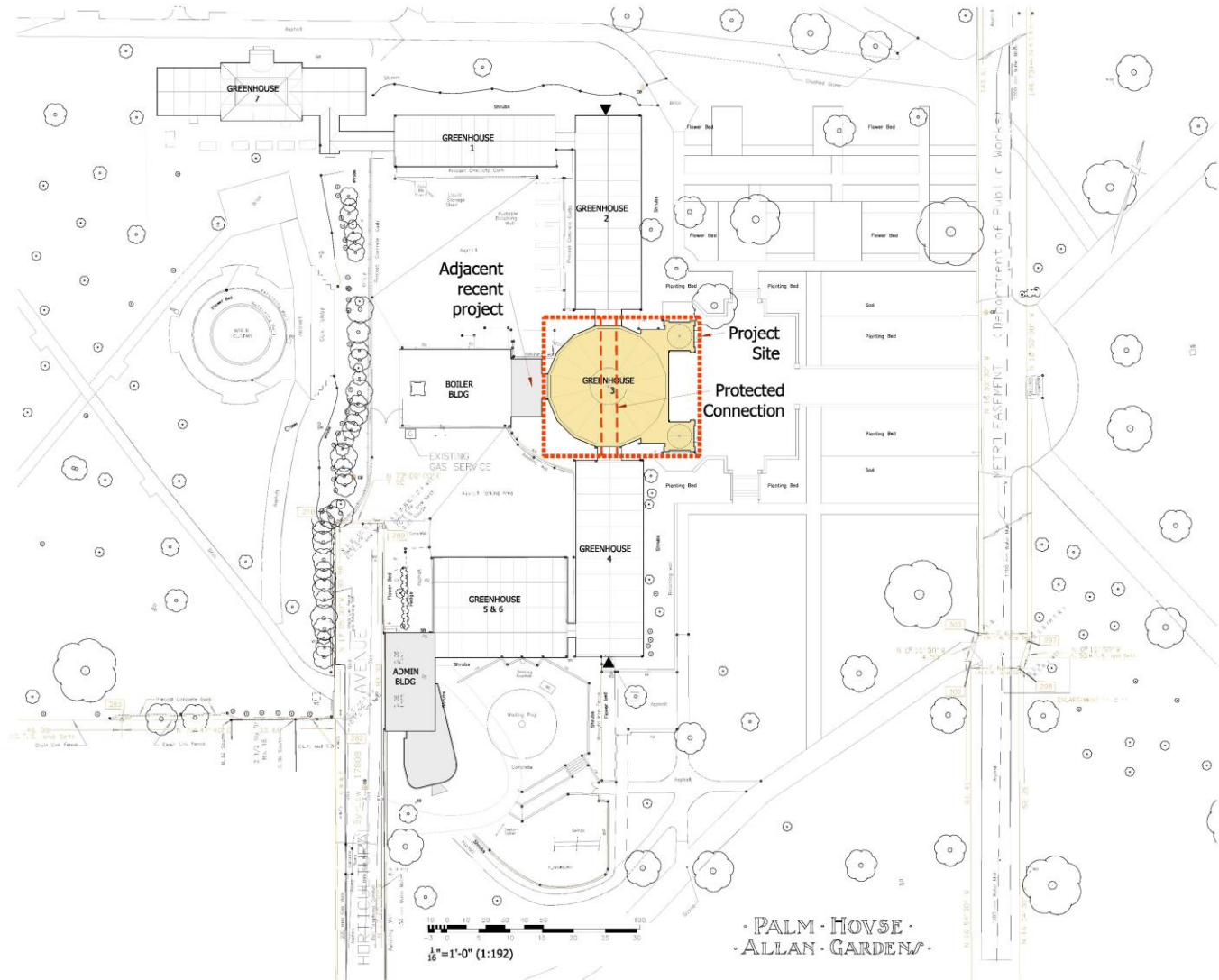
PROJECT DESCRIPTION

The proposed development alters the subject site through the restoration of the Palm House Building for the City client, Parks, Forestry & Recreation (PF&R) Division. As part of the PF&R Capital Plan, City Council approved the alterations proposed for the Allan Gardens Palm House (AGPH), in accordance with Section 33 of the Ontario Heritage Act for the continued use of the greenhouses. The project team is led by Zeidler Architecture Inc. (Zeidler) with *AREA, Architects Rasch Eckler Associates Ltd. (AREA)* as the heritage consultant, who prepared the Heritage Impact Assessment (HIA), May 4th, 2021.

The restoration proposal includes the following two primary critical heritage interventions:

1. Reinstating the central East Portico entrance &
2. Reproduction in fiberglass or aluminium framing of the vertical windows in the walls and clerestory bands.

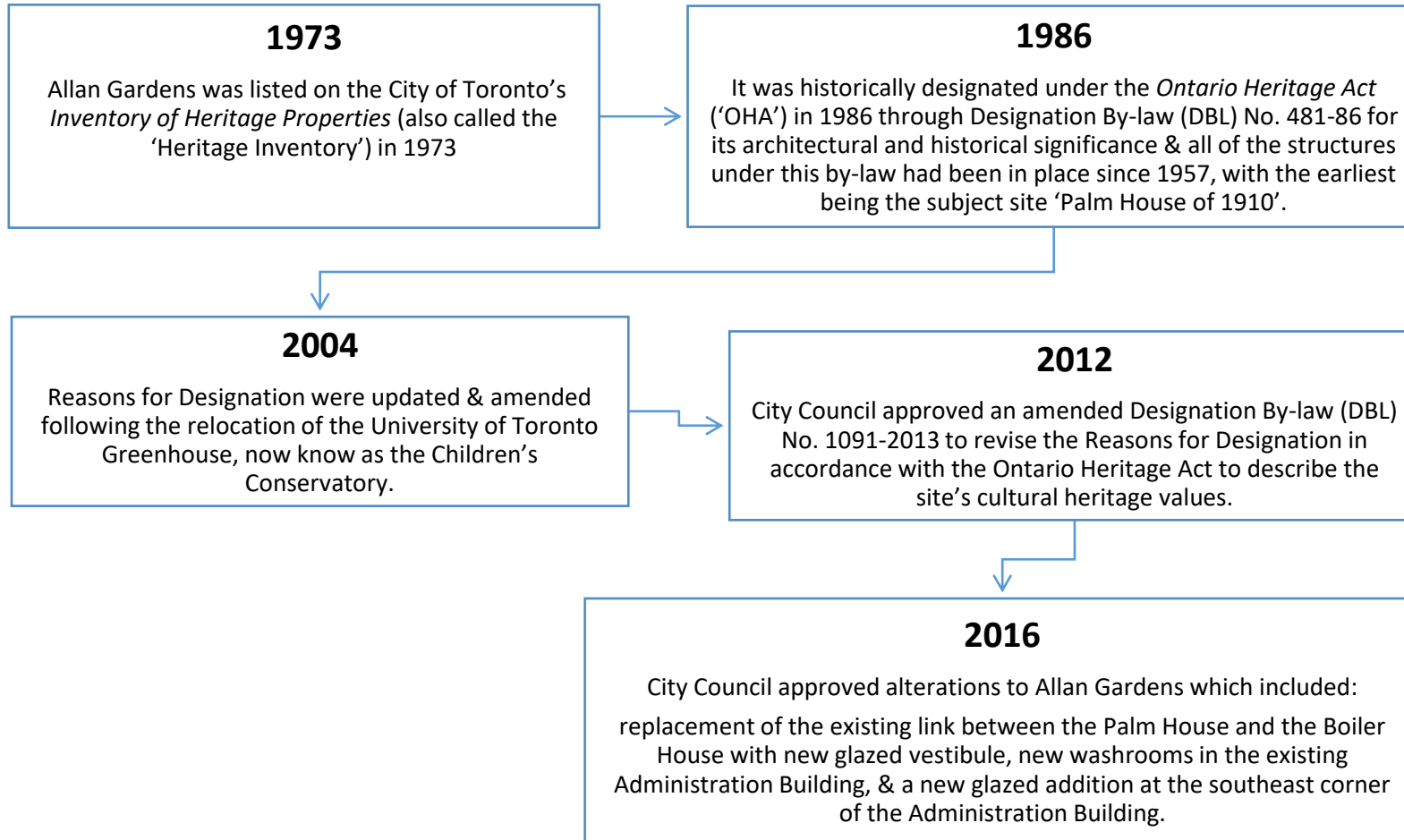
Other upgrades of minor alterations will be undertaken in this project which have either low or no impact on the heritage attributes of the AGPH.



Site Plan. Source: Zeidler

PROJECT BACKGROUND

HERITAGE STATUS



Palm House in late 1910 or early 1911.
Source: Toronto Reference Library

PROJECT BACKGROUND

HERITAGE VALUE & ATTRIBUTES

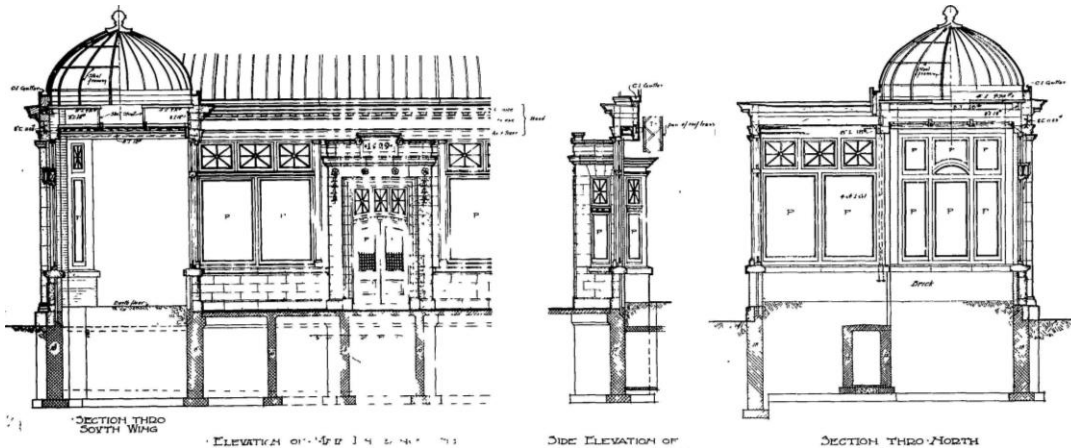
1903-1909

The Palm House was designed in the period of 1903-1909 and constructed between 1909-1910.



1924 & 1956

The 'addition' of Greenhouse Nos. 4 & 2 to the Palm House occurred in 1924 and 1956 respectively.



The original Palm House drawings (1909) with side pavilions, in section and elevation, showing only exterior windows & the central entrance portico providing double doors.

Under the *Ontario Heritage Tool Kit*, 2006, in accordance with its guidelines for “Heritage Property Evaluation” and “Designating Heritage Properties”, this formalized description of heritage significance involves identifying the key attributes of a building which, as applied to the subject greenhouses, have been included in the 2004 and 2012 BBL descriptions, excerpted as follows:

The heritage attributes of the Palm House, North and South Conservatories, Arid House and Tropical Houses, Boiler House, Administration Building, and the University of Toronto Greenhouses are found on the exterior walls and roofs of the structures...

The Palm House displays a circular brick-clad base with sandstone detailing where wood-framed windows with sidelights and transoms are surmounted by a wood frieze with sections of dentils...

A pair of square pavilions marks the east entrance to the Palm House facing Sherbourne Street...

On each pavilion, the three-part windows with transoms have been converted to entrances. The entrance colonnade with doors that was located between the pavilions has been turned into windows.

PROPOSED ALTERATIONS

CENTRAL ENTRANCE – EAST(FRONT) ELEVATION

1910

The original constructed Palm House had its front (east) entrance in the middle of the glazed façade between the two side pavilions and behind a free-standing colonnade.



Front view of the Palm House, 1913.

1957 – EXISTING

The original central east front entrance was removed and replaced with entrances in the north and south pavilions.

This change subverted the original heritage character of the park's axial composition.

Most of the wood framing contained rotted and deteriorated portions and needed replacement.



Front view of the GH#3 Palm House.

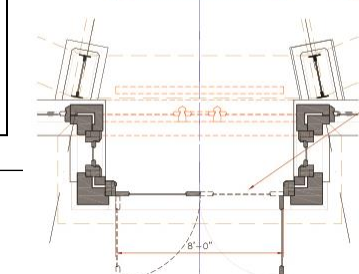
PROPOSED ALTERATION

A new projecting entry bay with double doors is proposed to be inserted in the centre of the AGPH east façade emulating and reinstating its original east portico design from 1910.

The new reinstated portico will achieve several PF&R objectives:

- barrier-free accessibility entry;
- accommodate heavy machinery for construction & maintenance;
- formal receptions & events;
- interconnection between interior & the front plaza.

The stone façade, masonry knee wall and sills will be coordinated with the new inserted portico arch.



The GH #3 Palm House east central entry portico doorway, Palm House 2021.

PROPOSED ALTERATION IMPACT

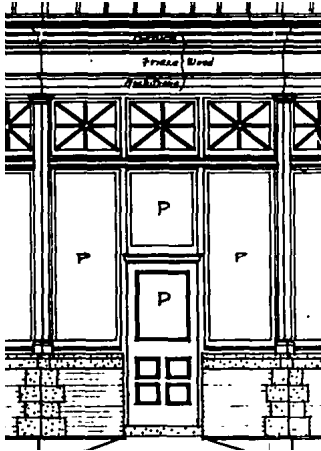
- The re-introduction of the central east entrance will help restore and conserve the original intent of the 1909 design.
- It will provide better interconnection between the front plaza and the conservatory interior for large future events.
- The processional entry along the east-west axis of the site is reinstated by the restoration of the original entrance.
- The main entrance will incorporate barrier-free access with a single door having an automatic door operator (ADO).
- Heavy machinery can be accommodated for construction and maintenance allowing for the removal of the interior gantry in the dome.

PROPOSED ALTERATIONS NORTH AND ELEVATIONS – INTERIOR DOORWAYS

1910

The original north and south elevations of the then-exterior walls of the 1909 Palm House comprised single doors at the centre of their respective facades.

Original North/South Elevation of the then-exterior walls of the 1909 Palm House.



1924, 1957 –
EXISTING

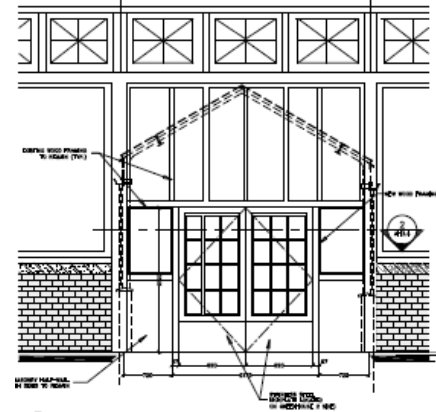
The original doors with their transoms and side lights were altered on both elevations due to the addition of Greenhouses Nos. 2 and 4 in 1956 and 1924, respectively.

Later altered in 2013 to provide barrier-free accessibility.

Both the doors exhibit signs of damage and deterioration from water leakage and condensation.



Existing North Doorway.



PROPOSED
ALTERATION

The proposed design of the door leafs will incorporate some of the characteristics of the original 1909 design and the 1910 construction.

The door height will be increased which will help in moving machinery and equipment to GH Nos. 2 & 4.

Specialty hardware for large opening with hold-open devices and automatic door operator (ADOs) will be part of the alteration work.



NORTH DOORS
(From Exterior)

(From Interior)



Proposed GH #3 Palm House north entry doorway.

PROPOSED ALTERATION IMPACT

- The new replacement doorways design takes cues from the original 1909 design to create a consistent design language for the doors and windows.
- The new doorways are proposed to be AODA compliant for present day use.
- These doors will also accommodate heavy machinery for the purposes of maintenance, exhibits, construction, etc..

PROPOSED ALTERATIONS OVERHEAD GLAZING IN DOME & CUPOLAS



Exterior and interior view of the existing overhead plate glass.

PROPOSED ALTERATION IMPACT

- The 16-sided dome with curved trusses supporting the glazing are listed among the heritage attributes in the DBL Reasons for Designation 2012.
- The replacement of the overhead glazing and the retrofit of its framing will conserve the historic appearance.
- Fritted glass will help reduce glare, summer heat and the danger to birds. The pattern will be virtually transparent and would thus mitigate any visual impact on the Palm House appearance.

PROPOSED ALTERATION

The existing overhead plate glazing will be removed and replaced with laminated glass panels.

Glazing will be engineered to be suitable as a walking surface for maintenance.

Ceramic frit patterns are proposed to be applied to the glass surface to reduce summer solar transmission.

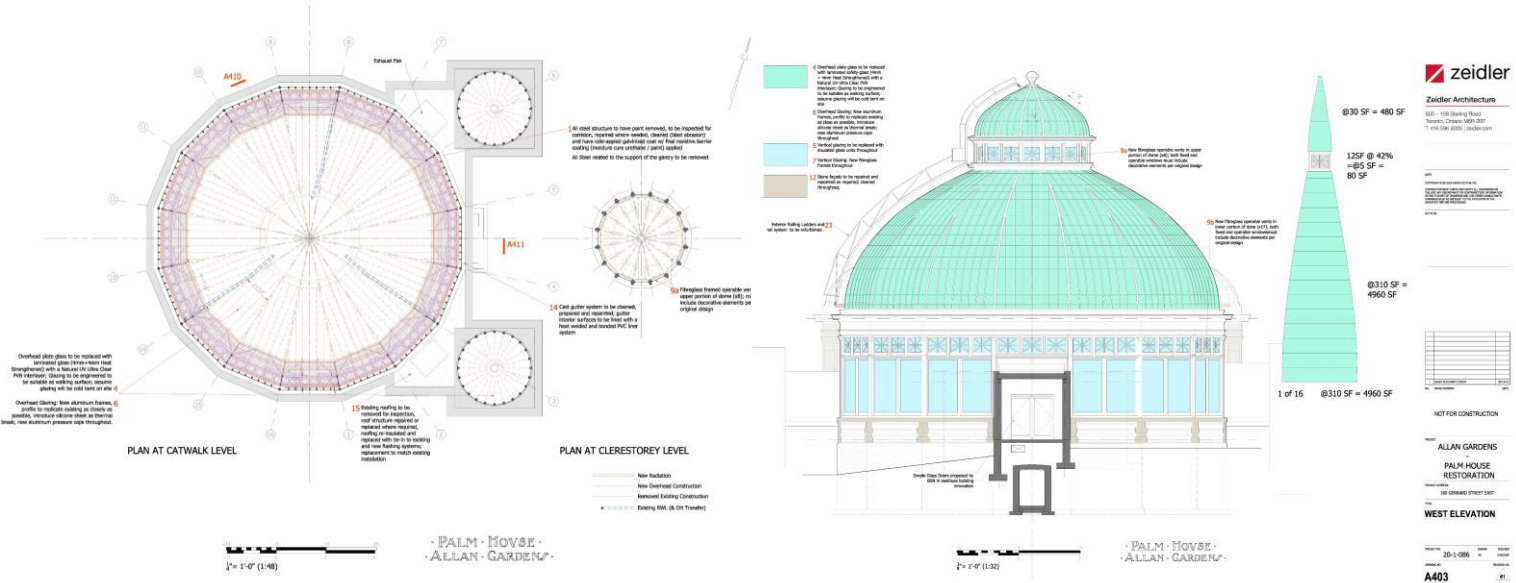
New framing will either be aluminum or fiberglass depending on budget constraints.

Replacement profiles will emulate the original historic profiles as closely as possible.

EXISTING

The existing aluminum frames (dating back to 1976) are a replacement of the original wood components.

The existing plate glass panes have at times fallen to the floor below which creates the risk of injury thereby posing safety concerns.



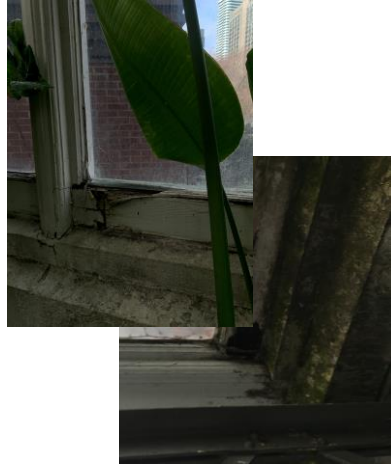
Upper Level Plans & West Elevation. Source: Zeidler

PROPOSED ALTERATIONS

WALL WINDOWS & CLERESTORY BANDS



Exterior Elevation of an as-existing window bay.



Existing wood windows show deterioration due to humidity, condensation, vegetation & rodents.

PROPOSED ALTERATION IMPACT

- The vertical windows in the walls and clerestory bands are listed among the heritage attributes in the DBL Reasons for Designation 2012.
- Replacement of the clerestory windows with reproduction framing will conserve the historic appearance.
- Insulated glass units will help maintain the temperature indoors thereby reducing the deterioration of components from excess humidity and condensation.

EXISTING

The upper and lower portions of the dome presently incorporate clerestory bands of windows that are manually operated with rod and arm hardware. These windows incorporate the Union Jack muntin pattern. Presently they are fixed closed due to warping and paint.

The wall windows comprise tall windows extending from the masonry knee wall surmounted by clerestory windows.

These existing wood windows exhibit considerable deterioration from rot, cracking, splitting, warping, etc., due to humidity, condensation, contiguous vegetation and rodents.

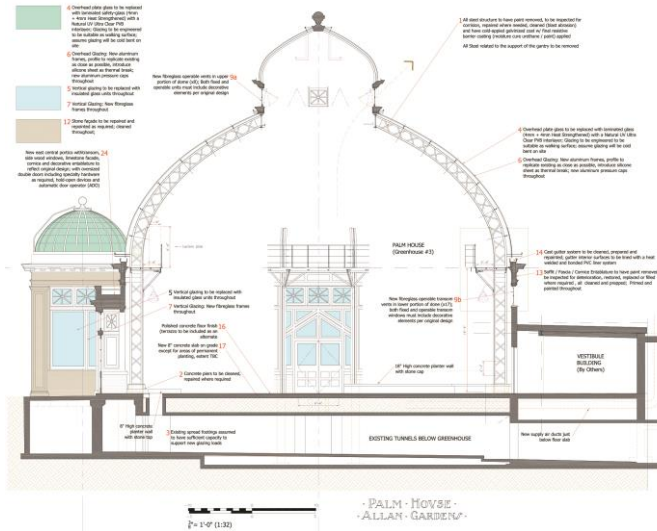
PROPOSED ALTERATION

The proposed vertical windows in the walls and clerestory bands will incorporate insulated glass units with aluminium or fiberglass as framing material.

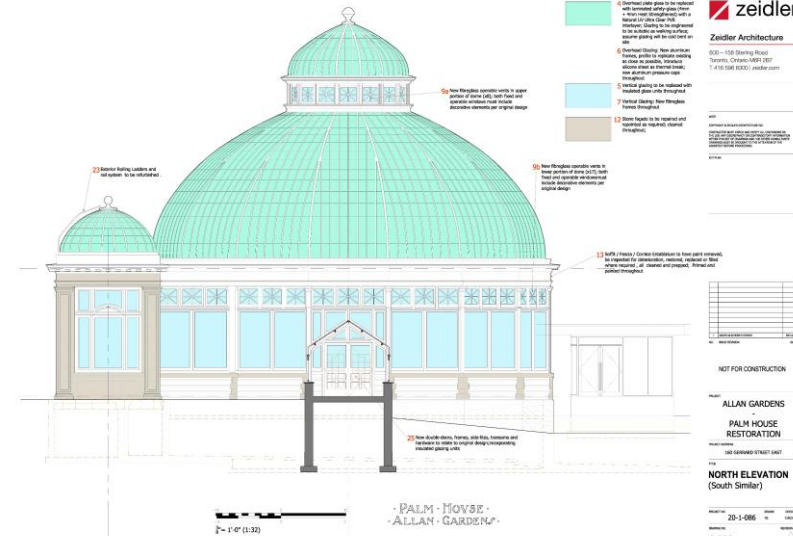
Window framing (aluminium or fiberglass) and glazing (insulated glass units) will replace to emulate the original historic appearance while ensuring functional upgrades to the building envelope.

New framing will either be aluminum or fiberglass depending on budget constraints.

Replacement mullions and muntins will emulate the original historic profiles as closely as possible.



Section of the Palm House dome showing the proposed overhead laminated glass panels. Source: Zeidler



North Elevation. Source: Zeidler

CONSERVATION STRATEGY

CONSERVATION APPROACH

This project proposes rehabilitation and restoration as primary conservation approaches for the Palm House building. The conservation objective is to maintain the long-standing use of the Palm House building as the centrepiece conservatory of the greenhouses complex and a venue for future events.

RECOMMENDED CONSERVATION STRATEGY

- i. The redevelopment proposal will conserve the Palm House building elevations while restoring portions of the east façade by reinstating the centre entrance portico. As identified in the condition assessment, the wood framing is in a deteriorated state and the overhead glazing poses safety risks.
- ii. As part of the scope of work for all elevations, the brick masonry wall, stone façade, soffit, fascia and cornice will also be rehabilitated.
- iii. Archival photographs and other documentation, where existing, will also be used to inform the conservation approach. A similar approach will be used to inform replacement of the existing window units in the building with historically accurate aluminum or fiberglass reproductions (discussed in HIA section 8.0).
- iv. The proposed conservation of 160 Gerrard Street East includes a comprehensive repair scope (See Scope Tracker, in HIA Appendix D) which addresses the items identified in the condition assessment to ensure long-term conservation of the designated building.
- v. Prior to and during construction, the elevations will be protected and regularly monitored. Where new material is required (e.g. reproduction windows, restoration of the east façade, the reconstruction of the north and south doorways), it will be compatible in dimension, proportions, profiles, detailing and colour with the retained heritage fabric.

CONCLUSION

The Palm House building is an important venue that links a new generation with an older one, acting as a tangible connection to the City of Toronto's past. This Heritage Impact Assessment finds that the proposed restoration of the Palm House building at 160 Gerrard Street East preserves and protects the architectural heritage fabric and conserves the cultural heritage value and the identified heritage attributes of the designated subject property.

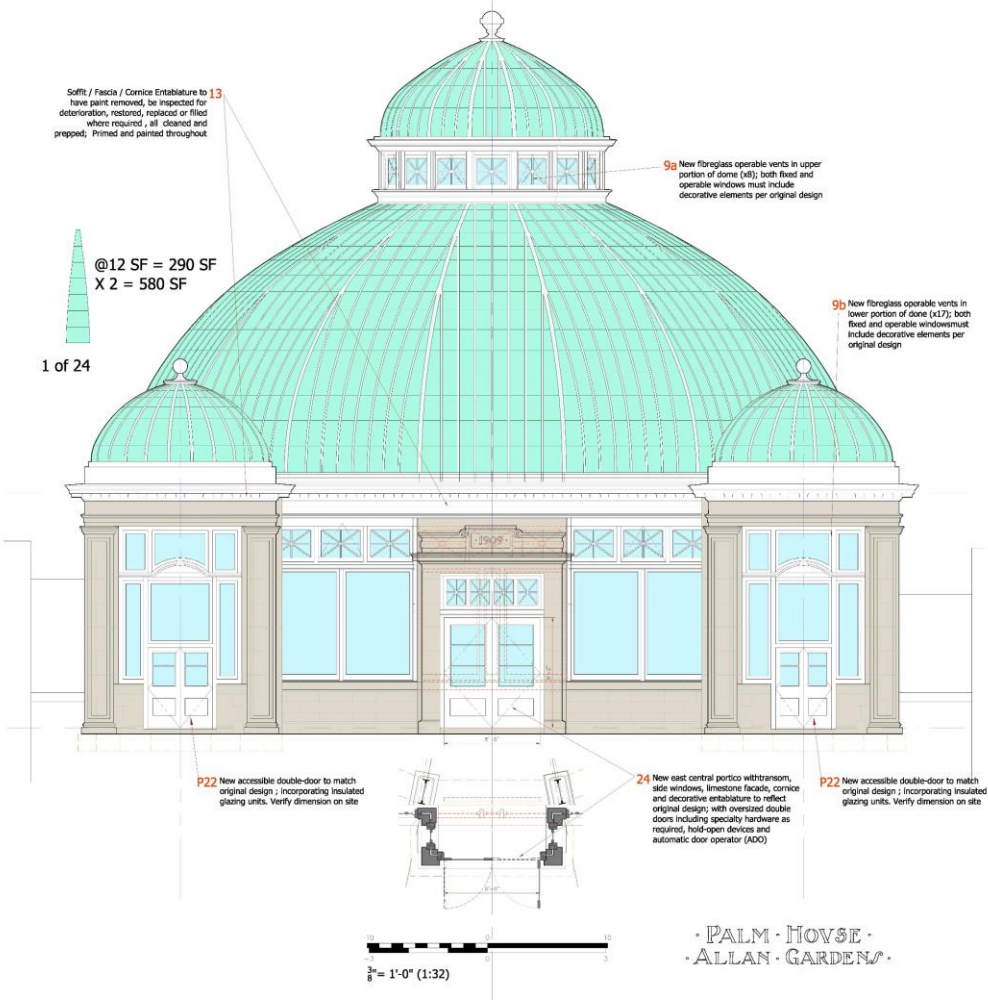
To summarize, the proposed restoration and rehabilitation will be a vital component of urban revitalization of Allan Gardens within the Garden District Heritage Conservation District (HCD) that incorporates the following set of initiatives and heritage benefits:

1. Conserving and enhancing the East Elevation:
2. Doors and Windows Replacement
3. Interior Face of Brick Knee Wall (stripped of paint, repaired and repointed)
4. Clutter-free interiors, like the removal of existing electrical panels, gantry, etc.

Heritage Planning staff has reviewed the proposed alterations and is satisfied the proposal meets the intent of the heritage policies of the Provincial Policy Statement and the City of Toronto's Official Plan (OP) along with the Standards and Guidelines for the Conservation of Historic Places in Canada. Staff also support that the proposed conservation strategy meets the intent of OP Policy 3.1.5.27 for conserving the cultural heritage value of the property.

Further details on the construction-related protection and restoration of the heritage building will be provided in Heritage Conservation Plan Drawings as part of the Design Development phase.

QUESTIONS



160 Gerrard Street East, Toronto, Ontario

Allan Gardens Palm House (AGPH) Restoration & Functional Upgrade