

HALIFAX

P.O. Box 1749
Halifax, Nova Scotia
B3J 3A5 Canada

Item No. 8.1.2
Design Review Committee
July 7, 2016

TO: Chair and Members of the Design Review Committee

Original signed by

SUBMITTED BY:

Bob Bjerke, Chief Planner and Director of Planning and Development

DATE: June 20, 2016

SUBJECT: Case 20553: Substantive Site Plan Approval, 1221 Lower Water Street,
Halifax (Discovery Centre at Emera Head Office)

ORIGIN

Application by Barrie Langille Architects Ltd.

LEGISLATIVE AUTHORITY

Halifax Regional Municipality Charter (HRM Charter), Part VIII, Planning & Development

RECOMMENDATION

It is recommended that the Design Review Committee approve the qualitative elements of the substantive site plan approval application for the façade alterations at 1221 Lower Water Street, Halifax, as shown on Attachment A.

BACKGROUND

An application has been received from Barrie and Langille Architects Ltd. for certain façade alterations to the building at 1221 Lower Water Street, Halifax (Map 1). To allow the renovations, the Design Review Committee must consider the proposal relative to the Design Manual within the Downtown Halifax Land Use By-law (LUB). This report addresses relevant guidelines of the Design Manual in order to assist the Committee in their decision.

Existing Context

The building located at 1221 Lower Water Street, known as Block “D”, is the former turbine hall for the power generating station (Map 1) within the transformed industrial complex owned by Emera on the Halifax Waterfront. It is adjacent the new corporate headquarters for Emera and the area surrounding the building includes:

- a parking lot to the north;
- the waterfront boardwalk to the east;
- the Halifax Port Authority Seaport district that includes the Halifax Farmers’ Market to the southeast;
- the Westin Hotel, located to the southwest across Terminal Road; and
- parking lots, including a parking lot that is owned and used by Emera to the west.

Project Description

When Emera’s headquarters was transformed from a power plant to an office building, the building’s exterior cladding changed from being primarily concrete to aluminium and glass. with the Discovery Centre’s relocation to the site, the applicant wishes to re-clad the existing building at 1221 Lower Water Street using a similar design approach with steel cladding and large windows without any vertical or horizontal expansions or rooftop features. The second aspect of the application is a horizontal “lunar screen” across the top of the west wall that is mounted to stand off from the cladding and windows.

Information about the approach to the design of the project has been provided by applicant (Attachment B).

Regulatory Context

Given that the building in question exists today, and the proposal involves a re-cladding of the existing development, a limited number of policies with the planning strategy, land use by-law and design manual apply. This notwithstanding, with regard to the Downtown Halifax Secondary Municipal Planning Strategy (DHSMPS) and the Downtown Halifax LUB, the following are relevant to note from a regulatory context:

- the site is within the DH-1 (Downtown Halifax) Zone and Schedule W (Waterfront Development Overlay);
- the site is within Precinct 1: Southern Waterfront; and
- the site is identified as a Potential Civic/Cultural Site.

In addition to the above regulations, the Design Manual of the Downtown Halifax LUB contains guidance regarding the appropriate appearance and design of buildings.

Role of the Development Officer

In accordance with the Substantive Site Plan Approval process, as set out in the Downtown Halifax LUB, the Development Officer is responsible for determining if a proposal meets the land use and built form requirements of the Downtown Halifax LUB. The Development Officer has reviewed the application and determined it to be in conformance with these requirements.

Role of the Design Review Committee

The role of the Design Review Committee (DRC) in this case is to determine if the proposal is in keeping with the design guidelines in the Design Manual.

Scope of Proposed Changes

The existing building at 1221 Lower Water Street does not meet many of the built-form requirements of the Downtown Halifax LUB and Design Manual. For example, under the built-form requirements and guidelines, the streetwalls for 1221 Lower Water Street should be closer to Lower Water Street and Terminal Road than their current location. With this said, given that the subject application deals with an existing building, existing non-conforming elements may continue and are outside the scope of the DRC review. The changes under consideration would not increase the extent of the existing non-conformity. The intent of the Downtown Halifax LUB and Design Manual is to ensure that wherever possible new development provides for an improved condition consistent with the vision established by the Downtown MPS. Section 6(5) of the Downtown Halifax LUB specifically allows for the extension, enlargement, and alteration of non-conforming buildings.

DISCUSSION

Design Manual Guidelines

The Design Manual contains a variety of building and site design criteria and design responses that are to be considered in development of new buildings and in modification of existing buildings. Section 2.1 of the Design Manual contains design criteria and responses that are to be considered specifically for properties in Precinct 1.

Staff's review of the proposal against the Design Manual guidelines has been provided to assist the DRC's consideration of this application (Attachment C). The table indicates staff's advice as to whether the project complies with a particular guideline. In addition, it identifies circumstances where there are different possible interpretations of how the project relates to a guideline or where additional explanation is warranted. These matters, identified as "Discussion" items are addressed as follows:

Building Materials (3.3.2e, 3.3.2f,)

The Design Manual emphasizes the use of quality materials true to their nature chosen for their functional and aesthetic quality. High quality facades should carry around all sides of the building for a unified building image. The proposal is for grey coloured steel siding that respects the tonal qualities of the existing building but does not try to mimic the material of the office block. While these are not materials specifically referenced within the Design Manual, they appropriately reflect the existing industrial character of the original building. The featured lunar screen affixed to the upper portion of the subject building is a sculptural element applied over the steel siding and windows but will be complementary to the existing colour scheme.

Roofline and Roofscapes (3.3.4c, 3.3.4d, 3.3.4e, 3.3.4f)

The Design Manual states that all rooftop mechanical equipment should be screened from view by integrating it into the architectural design of the building and the expression of the building top. Sculptural and architectural elements are encouraged to add visual interest. The AHU (Air Handling Unit) for the HVAC (heating, ventilation and air conditioning) system may be visible from Lower Water Street and the walkway to the new access doors. In order to screen it from public view, the screening would need to be mounted on a building not part of the subject application. The Manual also requires landscaping treatment of all flat rooftops especially where pre-eminently visible and encourages living "green roofs" as a landscape treatment. Staff advise that any landscape treatment, other than vegetation, would not be visible from the public realm and would not be discernable from nearby tall buildings.

Conclusion

Staff advise that the external cladding changes respecting 1221 Lower Water Street are consistent with the criteria within the Design Manual and therefore, recommend that the substantive site plan approval application be approved by the Design Review Committee.

FINANCIAL IMPLICATIONS

There are no financial implications. The HRM costs associated with processing this planning application can be accommodated within the approved operating budget for C310 Urban & Rural Planning Applications.

RISK CONSIDERATION

This application may be considered under existing MPS policies. The Design Review Committee has the discretion to make decisions that are consistent with the MPS and Design Manual, and such decisions may be appealed to Halifax Regional Council. Information concerning risks and other implications of adopting the proposed site plan approval application are contained within the Discussion section of this report.

COMMUNITY ENGAGEMENT

The community engagement process is consistent with the intent of the HRM Community Engagement Strategy and the requirements of the Downtown Halifax LUB regarding substantive site plan approvals. The level of engagement was information sharing, achieved through the HRM website, the developer's website, public kiosks at HRM Customer Service Centres, and a public open house.

ENVIRONMENTAL IMPLICATIONS

No implications have been identified.

ALTERNATIVES

1. The Design Review Committee may choose to approve the application with conditions. This may necessitate further submissions by the applicant, as well as a supplementary report from staff.
2. The Design Review Committee may choose to deny the application. The Committee must provide reasons for this refusal based on the specific guidelines of the Design Manual. An appeal of the Design Review Committee's decision can be made to Regional Council.

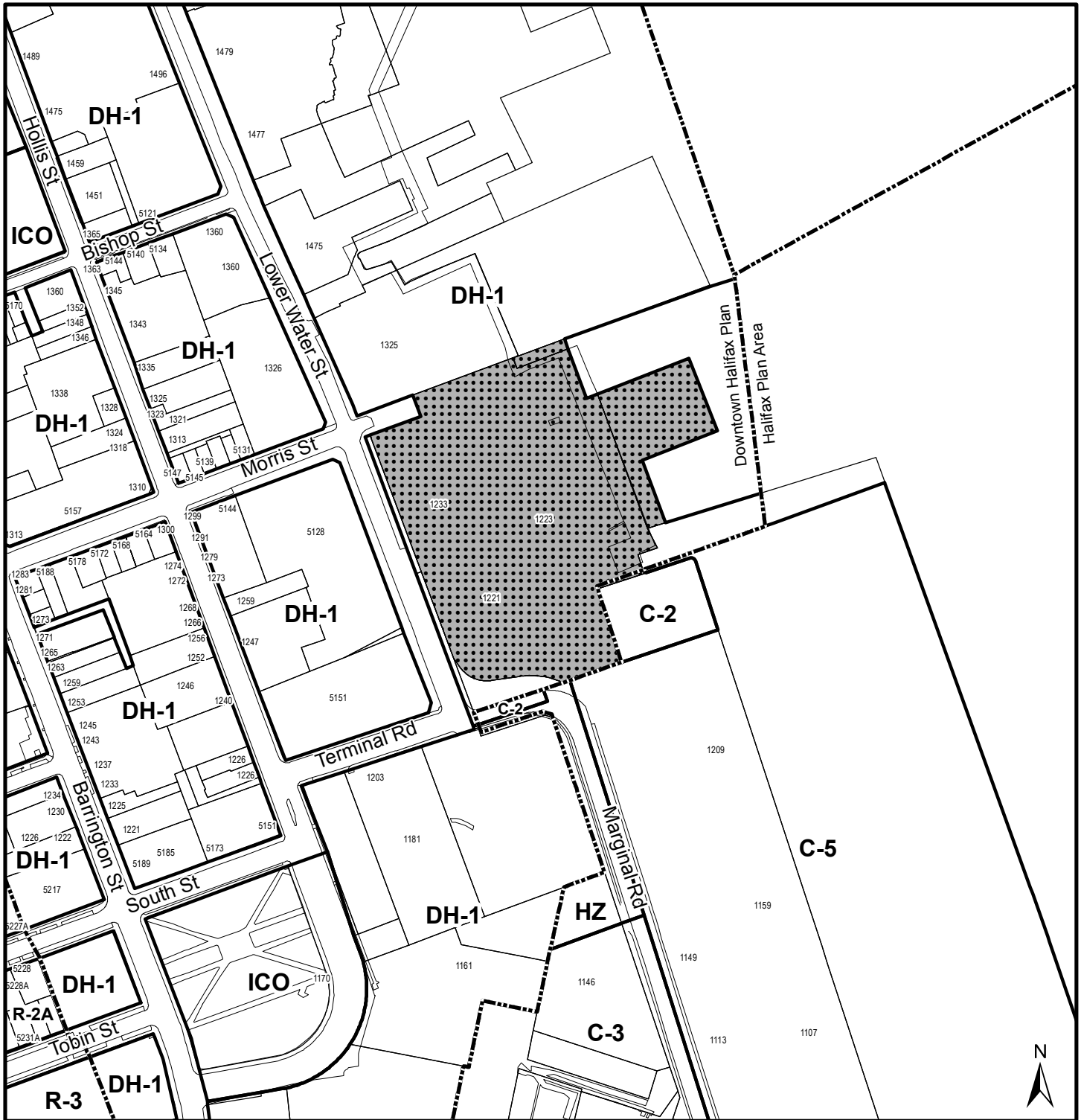
ATTACHMENTS

Map 1	Location and Zoning
Attachment A	Site Plan Approval Plans
Attachment B	Design Rationale
Attachment C	Design Manual Review

A copy of this report can be obtained online at: <http://www.halifax.ca/boardscom/drc/Agendas.php> then choose the appropriate meeting date, or by contacting the Office of the Municipal Clerk at 902.490.4210 or fax 902.490.4208.

Report Prepared by: Darrell Joudrey, Planner II, Current Planning, 902.490.4181

Report Approved by: Original sigend by
Kelly Denty, Manager, Current Planning, 902.490.4800



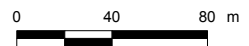
Map 1 - Location and Zoning

1221 Lower Water Street,
Halifax

HALIFAX

 Subject Site

Downtown Halifax		Zone	
DH-1	Downtown Halifax	DH-1	Downtown Halifax
ICO	Institutional, Cultural and Open Space	ICO	Institutional, Cultural and Open Space
R-2A	General Residential Conversion	R-2A	General Residential Conversion
R-3	Multiple Dwelling	R-3	Multiple Dwelling
C-2	General Business	C-2	General Business
C-3	Industrial	C-3	Industrial
C-5	Harbour-Related Industrial	C-5	Harbour-Related Industrial
HZ	Hotel Zone	HZ	Hotel Zone



This map is an unofficial reproduction of a portion of the Zoning Map for the plan area indicated.

The accuracy of any representation on this plan is not guaranteed.

Downtown Halifax Plan Area

Attachment A - Site Plan Approval Plan

 <p>BARRIE AND LAVALLE ARCHITECTS LTD 1000 SHEPPARD AVENUE EAST, SUITE 101 SCARBOROUGH, ONTARIO M1S 1W2 TEL: (416) 291-1111 FAX: (416) 291-1112 WWW: WWW.BARRIEANDLAVALLE.COM</p>	<p>PROJECT NO: 2018-001 SHEET NO: A-021</p>	<p>DISCOVERY CENTRE Lower Water St Halifax, Nova Scotia</p>	<table border="1"> <tr> <th>NO.</th> <th>REVISION</th> <th>DATE</th> </tr> <tr> <td>1</td> <td>ISSUE FOR CONSTRUCTION</td> <td>2018 11 28</td> </tr> <tr> <td>2</td> <td>REVISED TO REFLECT COMMENTS</td> <td>2019 01 15</td> </tr> <tr> <td>3</td> <td>REVISED TO REFLECT COMMENTS</td> <td>2019 01 15</td> </tr> <tr> <td>4</td> <td>REVISED TO REFLECT COMMENTS</td> <td>2019 01 15</td> </tr> <tr> <td>5</td> <td>REVISED TO REFLECT COMMENTS</td> <td>2019 01 15</td> </tr> <tr> <td>6</td> <td>REVISED TO REFLECT COMMENTS</td> <td>2019 01 15</td> </tr> <tr> <td>7</td> <td>REVISED TO REFLECT COMMENTS</td> <td>2019 01 15</td> </tr> <tr> <td>8</td> <td>REVISED TO REFLECT COMMENTS</td> <td>2019 01 15</td> </tr> <tr> <td>9</td> <td>REVISED TO REFLECT COMMENTS</td> <td>2019 01 15</td> </tr> <tr> <td>10</td> <td>REVISED TO REFLECT COMMENTS</td> <td>2019 01 15</td> </tr> </table> <p>DATE: FEBRUARY 07, 2019</p>	NO.	REVISION	DATE	1	ISSUE FOR CONSTRUCTION	2018 11 28	2	REVISED TO REFLECT COMMENTS	2019 01 15	3	REVISED TO REFLECT COMMENTS	2019 01 15	4	REVISED TO REFLECT COMMENTS	2019 01 15	5	REVISED TO REFLECT COMMENTS	2019 01 15	6	REVISED TO REFLECT COMMENTS	2019 01 15	7	REVISED TO REFLECT COMMENTS	2019 01 15	8	REVISED TO REFLECT COMMENTS	2019 01 15	9	REVISED TO REFLECT COMMENTS	2019 01 15	10	REVISED TO REFLECT COMMENTS	2019 01 15	 <p>Do not scale drawings. The contractor shall check with the engineer for any changes to the drawings. The engineer shall be responsible for any errors or omissions in the drawings and shall be liable for any damages resulting therefrom.</p> <p>DATE: FEBRUARY 07, 2019</p>	<p>SITE PLAN A-021</p>
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DISCOVERY CENTRE
 Lower Water St
 Halifax, Nova Scotia

4	ISSUED FOR CONSTRUCTION	2015	11	27
3	ISSUED FOR CONTRACT TENDER	2015	09	09
2	ISSUED FOR PERMITS APPROVAL	2015	08	19
1	PRELIMINARY / ARCH REVIEW	2015	08	19
1	ISSUED FOR REVIEW	2015	08	19

SCALE: _____ DATE: FEBRUARY 27, 2015

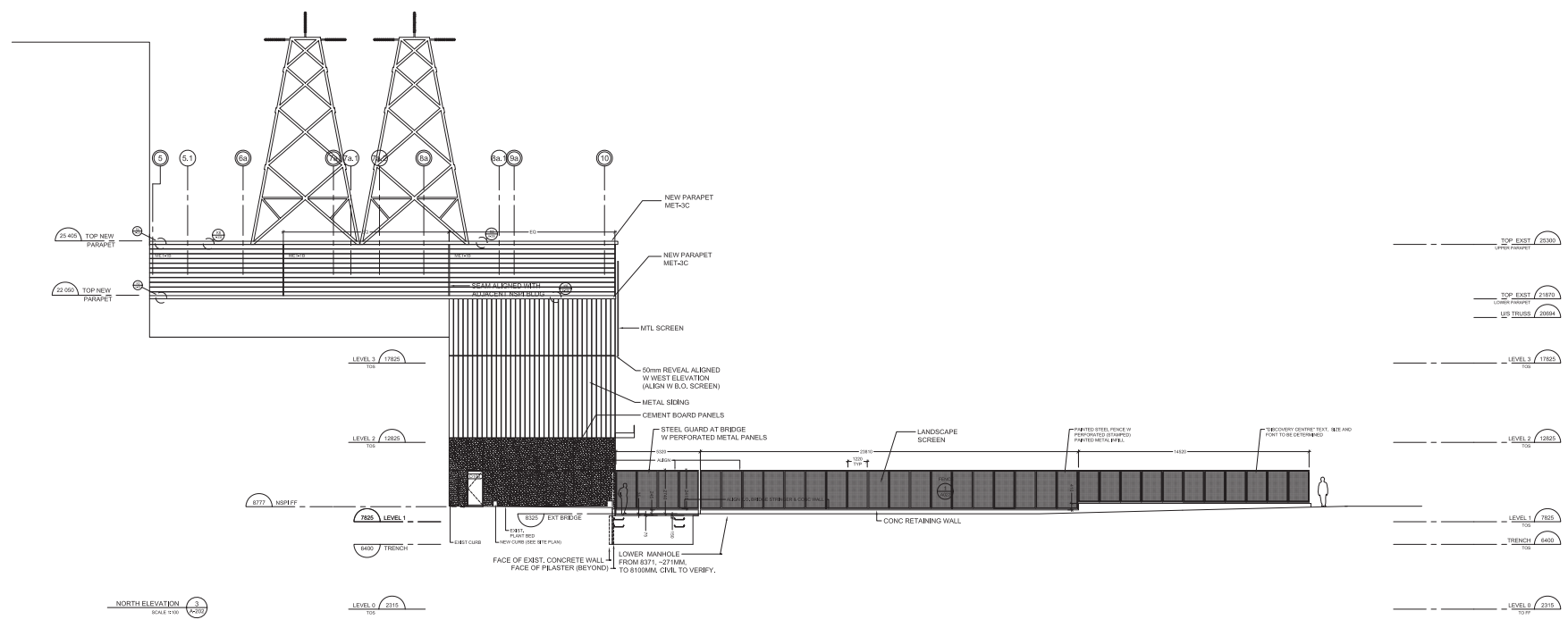
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Do not scale drawings. The contractor shall check and verify all dimensions and report any errors or omissions to the architect before commencing or proceeding with any work. All drawings remain the property of the architect.
 Copyright © 2014

DRAWING TITLE: PROPOSED NORTH ELEVATION

NUMBER: A-202a



CONSULTANT

PROJECT

DISCOVERY CENTRE
 Lower Water St
 Halifax, Nova Scotia

4	ISSUED FOR CONSTRUCTION	2015	11	27
3	ISSUED FOR COUNCIL TENDER	2015	09	09
2	ISSUED FOR PERMITS APPROVAL	2015	09	09
1	PRELIMINARY / ARCH REVIEW	2015	09	09
1	ISSUED FOR REVIEW	2015	09	09

DATE: FEBRUARY 27, 2015

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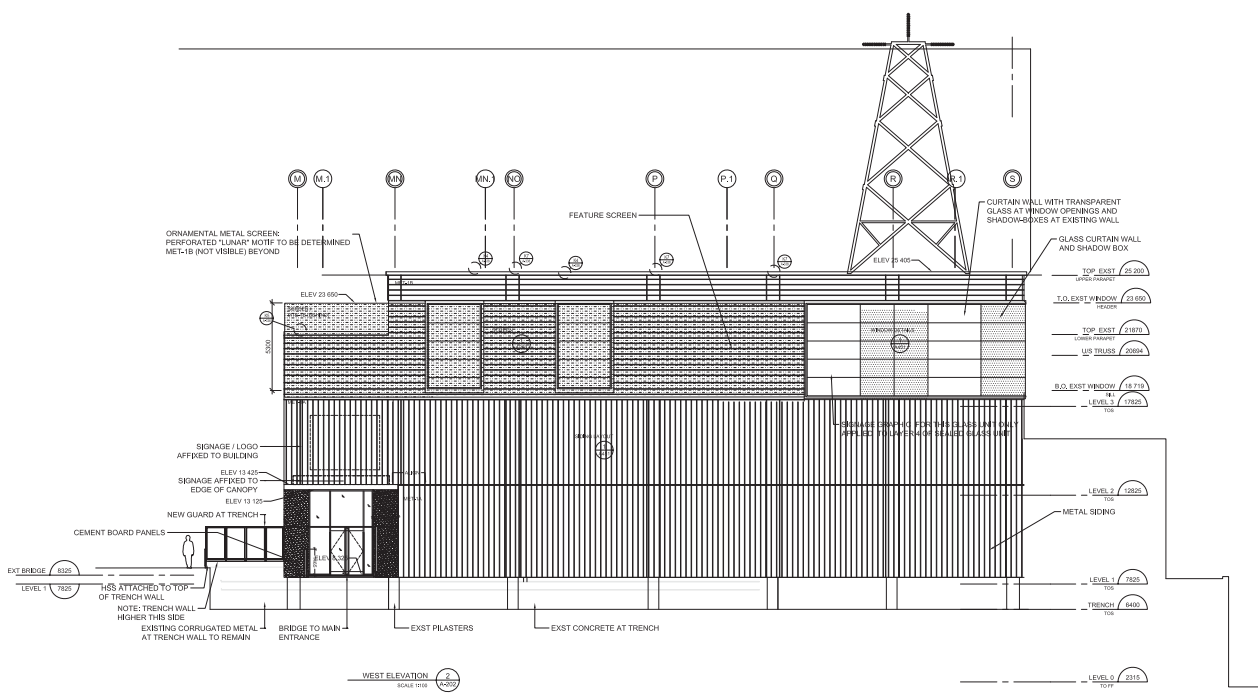


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PROPOSED WEST ELEVATION

DRWING TITLE:
 A-202b



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NORMA & TESSMA
architects + designers
117 Quaker Street Toronto, Ontario Canada M5G 1M4 416 593 4844
100 Murray Street Suite 114-3 Ottawa Ontario Canada K1N 1S6 613 922 2303

CONSULTANT

PROJECT
DISCOVERY CENTRE
Lower Water St
Halifax, Nova Scotia

	DATE
4	ISSUED FOR CONSTRUCTION 2015 11 30
3	ISSUED FOR CONTRACT TENDER 2015 09 09
2	ISSUED FOR PERMIT APPROVAL 2015 09 18
1	PRELIMINARY DESIGN REVIEW 2015 07 14
1	ISSUED FOR REVIEW 2015 07 14

SCALE YEAR: MD 24

SCALE DATE FEBRUARY 27, 2015

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SCALE:



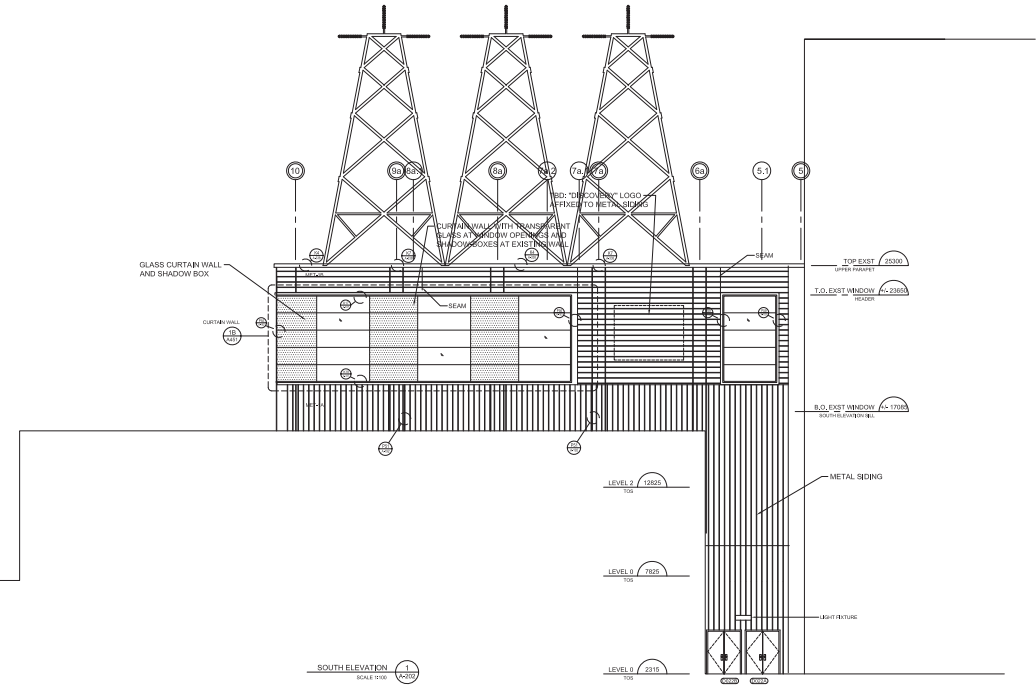
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DRAWING TITLE:

PROPOSED SOUTH ELEVATION

DRAWING NO.: A-202c



the new DISCOVERY CENTRE

1221 Lower Water Street



HRM Substantive Site Plan Approval Application:
Discovery Centre Project Information Sheet

Revised May 11, 2016

1. Proposed Use

Existing Block "D", the former Turbine Hall for a power generating station that NSP/Emera has transformed into its new corporate headquarters on the Halifax waterfront, will be converted to use as the new home of Discovery Centre - Nova Scotia's only hands-on science centre. NSP has made the unfinished Block "D" structure available on a long term lease to Discovery Centre for interior infill and exterior renovations that will create a four storey 40,000 square foot cultural attraction hosting the latest interactive exhibits in themed galleries and labs that showcase the world of science and technology, and immerse children and adults alike in the wonders and delights of the universe.

2. Design Rationale

Building Interior:

The cavernous interior volume of Block "D", with a 12,000 square foot footprint extending 70' into the air, will accommodate four levels of gallery and exhibit space. As well, it will house associated administrative and ancillary facilities, all oriented to a continuous Atrium space along the west wall that captures sunshine and daylight from mass windows retrofitted into existing openings that once held large louvres delivering ventilation air for the turbines. The full height Atrium exposes and connects visitors to activity on all floors. A glass-faced elevator ascends the vertical column of space and a playful central stair climbs the exterior wall, connected by bridges to each successive floor at the intermediate landings. The imagery and material vocabulary of the Centre will celebrate the industrial heritage of the building, exposing mass concrete walls, massive roof trusses, steel columns and beams, punched metal plate and wire grid screening, and other "raw" building elements.

Building Exterior:

The existing footprint, volume, and height of Block "D" will remain unchanged, with no vertical or horizontal expansion and no enlargement of the existing envelope. Large windows at the upper reaches of the interior Atrium space will be retrofitted into original ventilation openings. Given that the exterior concrete walls must be retrofitted with thermal insulation and membrane barriers for weather integrity and environmental control, Block "D" will be clad primarily in metal siding (with concealed fasteners) in a way that references an industrial heritage even as it reflects a prevailing material from the vocabulary of the latest waterfront developments on neighbouring properties to the south (Halifax Farmers' Market, NSCAD, Pier 21, etc.) as well as on immediately abutting NSP structures (such as the Annex, the substation, etc.) The subtly profiled metal cladding product will serve as a quiet and uniform backdrop that allows the interpretive features outlined below to dominate the building appearance aesthetic. The steel cladding will be a charcoal gray colour, to complement the lighter silver and grey tones of the NSP envelope, and to contrast with the lunar screen and curtain wall installations that are superimposed.

Exterior Features:

Highlights of the new exterior façade will include a horizontal screen feature across the top of the west wall that meets a composition of curtain wall and shadow box glazing (using clear, untinted glass) at the southwest corner. The screen, made of perforated aluminum panels with a matte silver finish, stands off from the cladding and windows behind. The pattern of surface perforations, computer generated to create a pixelated motif that evokes lunar cycles and imagery, creates a semi-transparent veil that subtly transforms in accordance with daylight, sunlight, and artificial illumination. Grade-level lighting of both the "lunar screen" (as well the "tidal screen" adjacent to the main entrance walkway) is calculated to wash the installations with uniform illumination that is cut-off to minimize spill lighting and to eliminate night sky light pollution, so that these features hover against a dark "inky" background in nighttime conditions. The lunar screen, with motifs drawn from the phases of the moon and rare photos of the dark side of the moon only recently made available) extends from the corner curtain wall/shadow box composition (near the south end of the west façade) to align with and visually emphasize the main entrance location (to the north end of the west façade). In doing so it also obscures the lower roof of the building bay that houses the AHU unit for the HVAC system.

Main Entrance:

The building entrance is defined and differentiated by a contrasting cement panel cladding that flanks an extended height portal of glass, capped by a projecting canopy. Articulation of the cement panels framing the glazed entrance screen adds definition, interest, and significance to the front doors, in conjunction with a steel bridge that spans the intervening "service moat". Locations designated for building-mounted signage and branding are preserved at the leading edge of the projecting canopy that shelters the main entrance doors, to announce the front doors, as well as at the east end of the south façade, in order to engage visitors approaching from the significant supply of public parking facilities in the Seaport district to the south.

Site Development:

The project site development agenda is modest, with only minimal and localized disturbance to existing conditions. The existing main sidewalk that leads from Lower Water Street to the NSP entrance will be expanded in width to accommodate grade level pedestrian access to the New Discovery Centre, defined by the decorative landscape screen along the south edge that both screens and secures the abutting NSP service yard for the adjacent substation and that incorporates interpretive graphics that create a full-scale 12 month tidal calendar. The "tidal screen" at the pedestrian level, and the "lunar screen" at the building roof line, invoke the local theme of the tug of moon and tides and are executed using the same perforated aluminum panel material. The parallel concrete walkways for NSP and Discovery centre split around a planter feature that separates traffic on approach to the entrances, while facilitating localized grading transitions. Site furniture includes open air bicycle racks, benches, and refuse containers along the entrance walk, organized along a low planter that features vegetation and boulders native to the topography of Nova Scotia. A small structure to provide bicycle parking to HRM Class A standards is nested in a sheltered location at the building. Upon arrival at the main entrance, visitors access Discovery Centre across a structural steel bridge that spans an NSP service "moat" housing major horizontal runs of power cable.

There are no traffic or transportation changes to the site associated with the conversion of existing Block "D" and no work is intended within the abutting road right-of-ways. No on-site parking provision is added, no vehicle drop-off facilities or lay-bys are proposed, and no new service and delivery facilities are required. Likewise there are no new utilities or municipal services extended. As a tenant, Discovery Centre will share use of the facilities, services, and systems that currently support operations on site. The traffic impact of the new Discovery Centre operation has been assessed and determined to be compatible with the circumstances and capacity of the local infrastructure.

3. Proposed Public Benefit Contribution

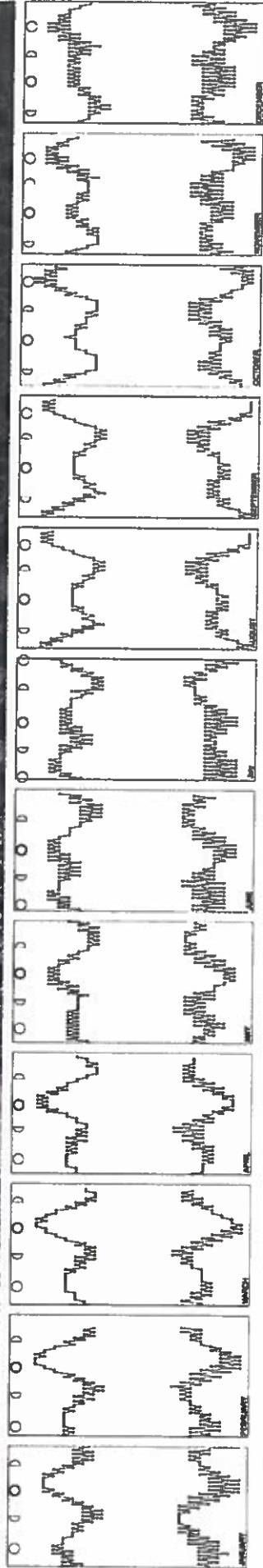
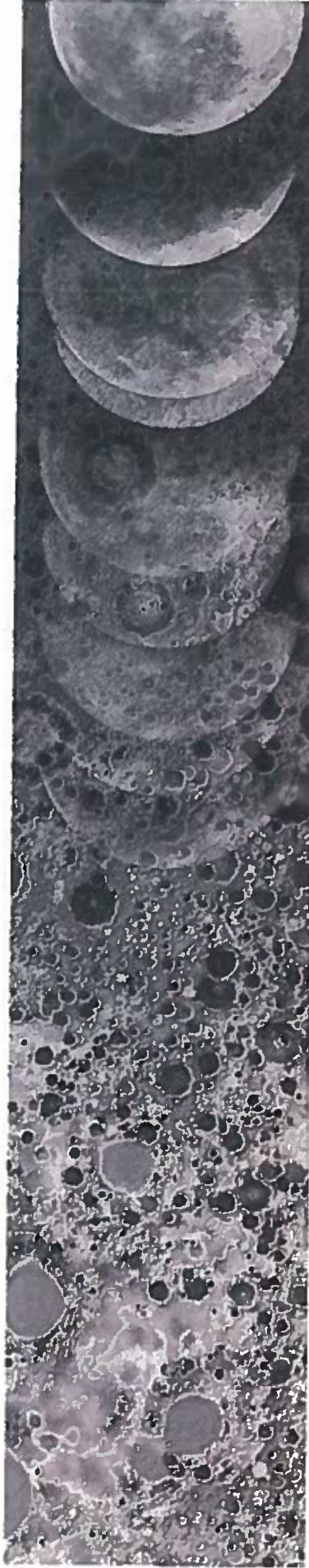
The informal benefits of the Discovery Centre relocation, in terms of contributing to the ongoing animation and vitality of the streetscape and the larger Seaport District, are self-evident. However no formal or official Public Benefit Contribution is proposed.

4. Variance Requests

Conscientious efforts have been made to comply with the standards, and practices promoted in the HRM Schedule S-1 Design Manual, to the extent that they apply to the circumstance of the Discovery Centre project. No variances are requested in this regard.

End of Project information Sheet

DISCOVERY CENTRE - HALIFAX



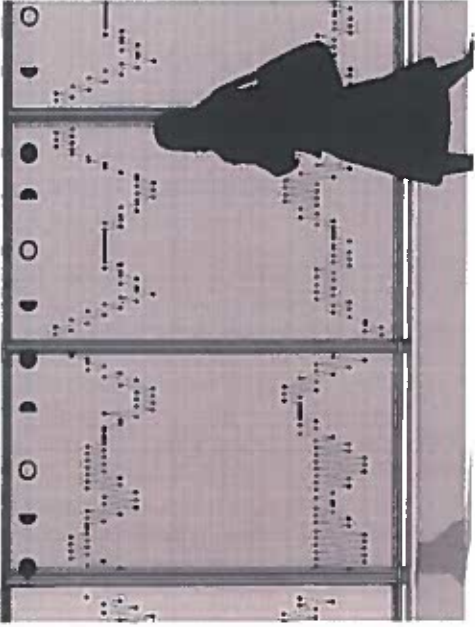
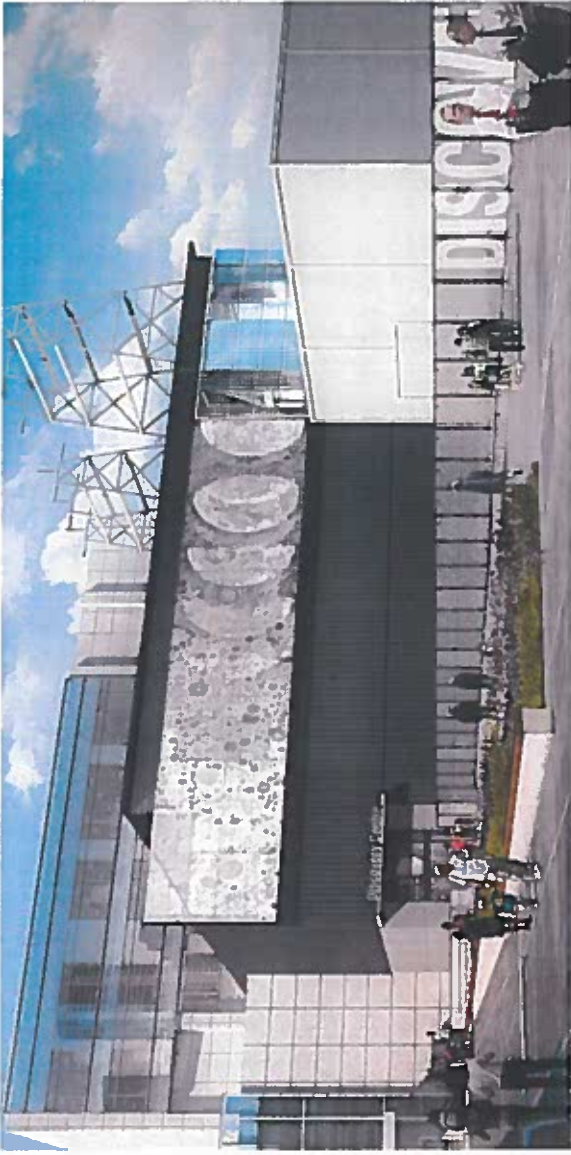
CONCEPTS FOR SCREEN & FENCE / PRESENTATION

JUNE 30th - 2015

Concepts for Screen & Fence: INTRODUCTION

PURPOSE OF PRESENTATION:

1. Review the final two elements of the Building Façade Design:
 - Screen
 - Fence
2. Review the landscaping design



Concepts for Screen & Fence: **SCREEN**

SCREEN:

Dimensions: ~5.5m high x 29m long

Material: custom image transferred by digital software process to create custom perforated 3mm aluminum panels using laser cutting

The Screen illustrates the ephemeral qualities of the Moon. Both the familiar face that we see every night and its opposite dark side are depicted to show just how familiar we are with the moon and yet also how much there still is to be discovered about our closest celestial neighbour. The omni-presence of the Moon is often understated given that it has a very complex and intricate relationship with our planet. Our understanding of how it influences the daily lives of Nova Scotians specifically with relation to the tides in Halifax is one example of this.



DISCOVERY CENTRE - HALIFAX

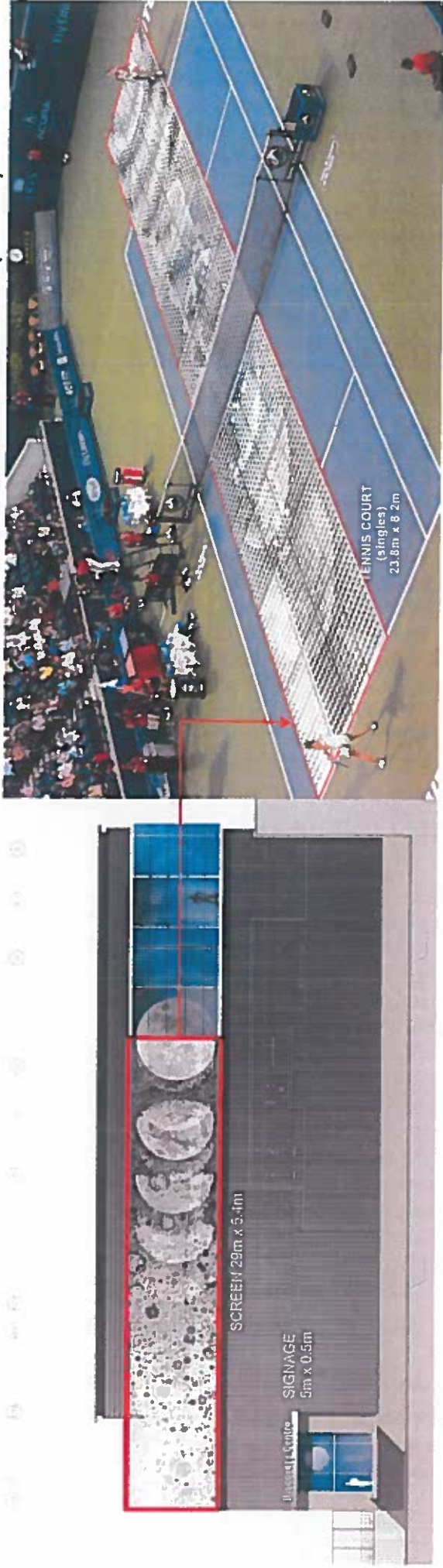
Concepts for Screen & Fence | June 30th -- 2015

MORIYAMA & TESHIMA ARCHITECTS | BARRIE & LANGILLE ARCHITECTS

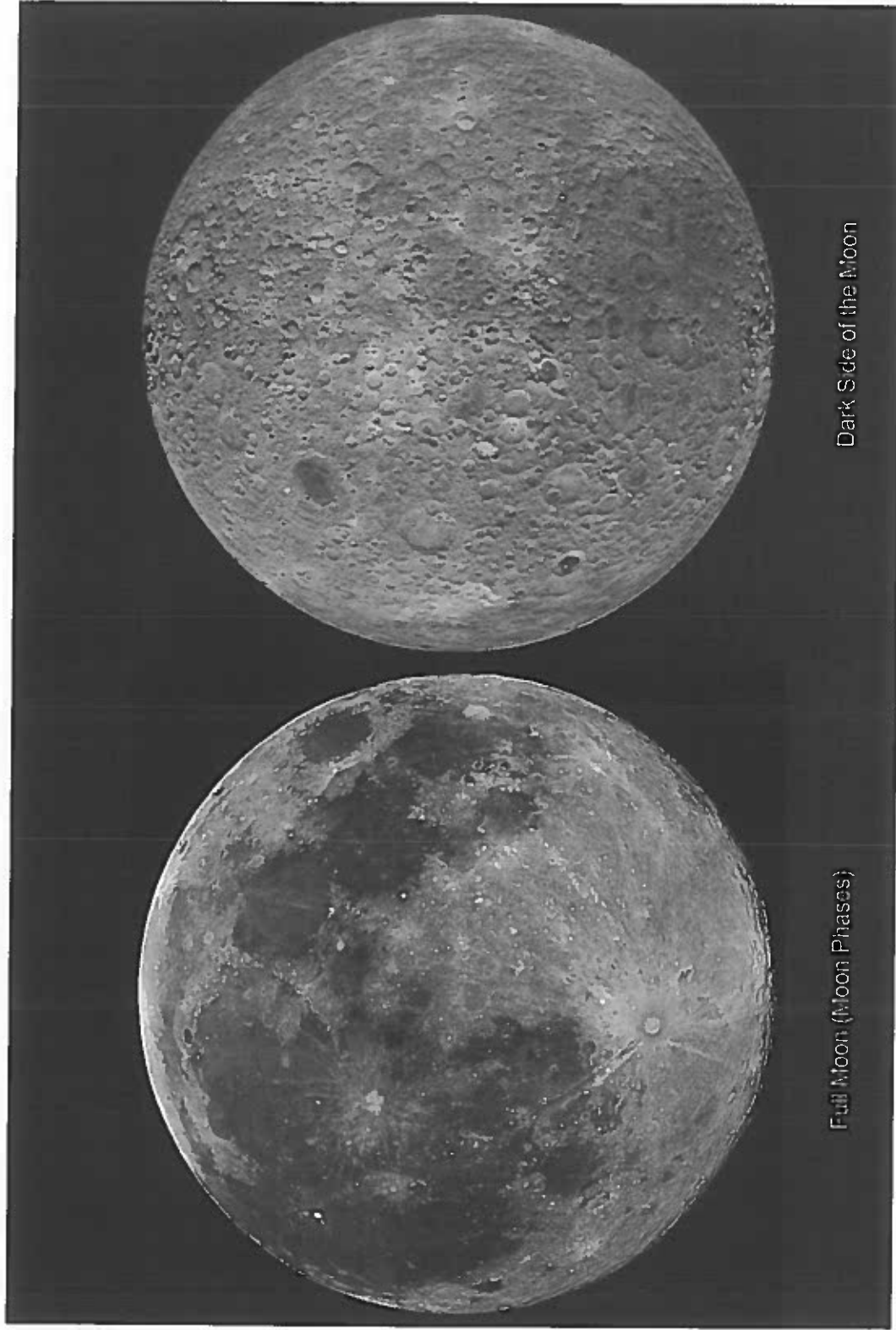
Concepts for Screen & Fence: SCREEN

SCALE is a critical factor in this assignment as it has been incredibly tricky for everyone to really get a handle on the fact that the screen measures a whopping **29m x 5.4m = 156.6m²**. The attention to detail and selection of the base image will be critical if we are to get the most out of the process.

By comparison a (singles) Tennis court is **23.8m x 8.2m (78' x 27')**



Concepts for Screen & Fence: SCREEN



Full Moon (Moon Phases)

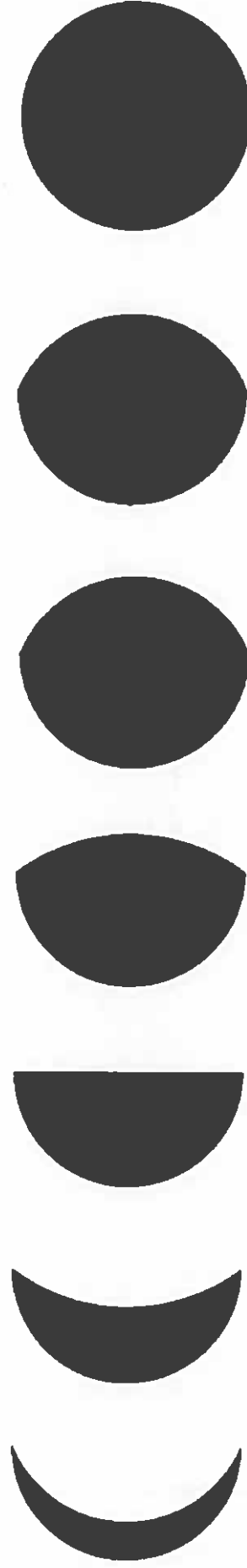
Dark Side of the Moon

DISCOVERY CENTRE - HALIFAX
Concepts for Screen & Fence | June 30th – 2015

MORIYAMA & TESHIMA ARCHITECTS | BARRIE & LANGILLE ARCHITECTS

Concepts for Screen & Fence: **SCREEN**

FULL MOON (MOON PHASES)



Concepts for Screen & Fence: SCREEN

DARK SIDE OF THE MOON

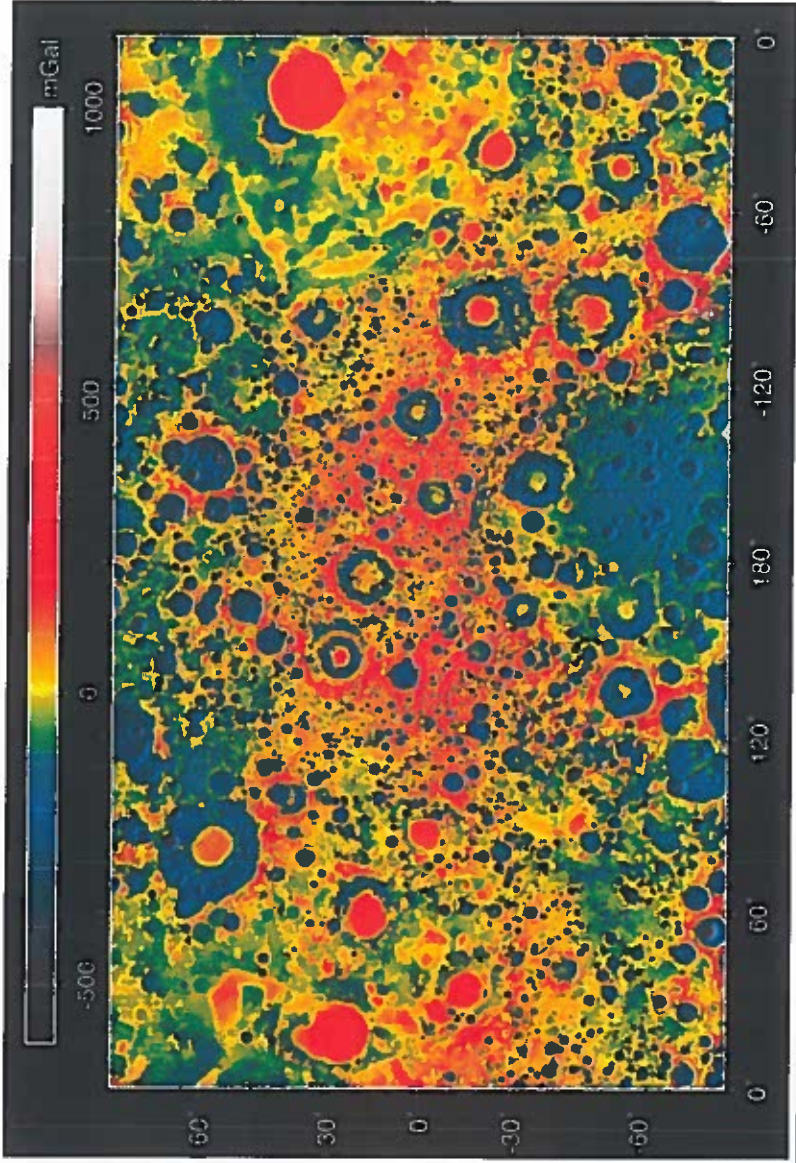
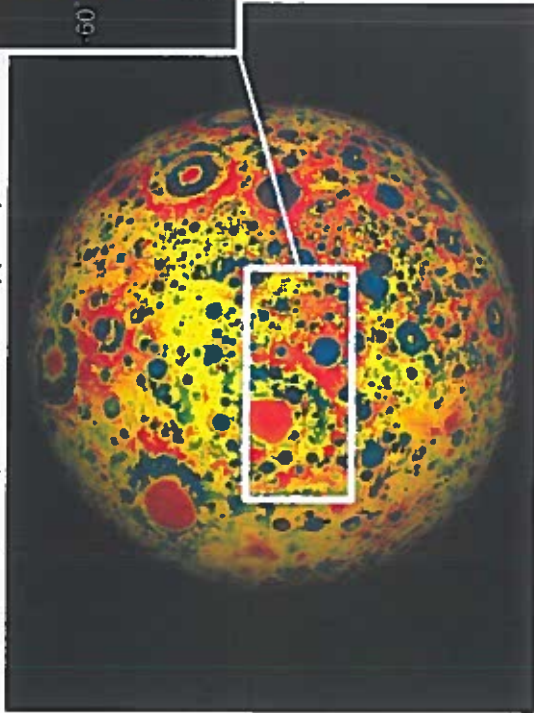
SCIENTISTS CONTINUE TO RESEARCH AND EXPLORE THE MOON TODAY. THE IMAGES CAPTURED FROM GRAIL* ARE LESS THAN 2 YEARS OLD.

THE PATTERN OF PERFORATION ON THE SCREEN IS DERIVED FROM A 2012 NASA IMAGE. - http://www.nasa.gov/mission_pages/grail/multimedia/pla16587.html

FROM NASA'S WEBSITE:

THIS MAP SHOWS THE GRAVITY FIELD OF THE MOON AS MEASURED BY NASA'S GRAIL MISSION. THE VIEWING PERSPECTIVE, KNOWN AS A MERCATOR PROJECTION, SHOWS THE FAR SIDE OF THE MOON IN THE CENTER AND THE NEAR SIDE (AS VIEWED FROM EARTH) AT EITHER SIDE.*

* NASA's Gravity Recovery and Interior Laboratory (GRAIL)



THIS IMAGE SHOWS A LUNAR SURFACE WE NEVER SEE FROM EARTH.

DISCOVERY CENTRE - HALIFAX

Concepts for Screen & Fence | June 30th - 2015

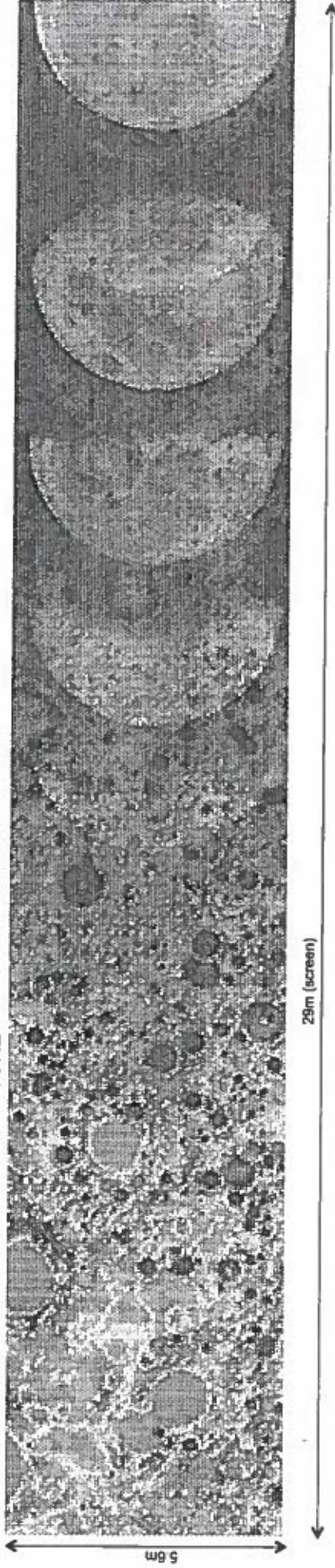
MORIYAMA & TESHIMA ARCHITECTS | BARRIE & LANGILLE ARCHITECTS

Concepts for Screen & Fence: SCREEN

VARIOUS FACES OF THE MOON



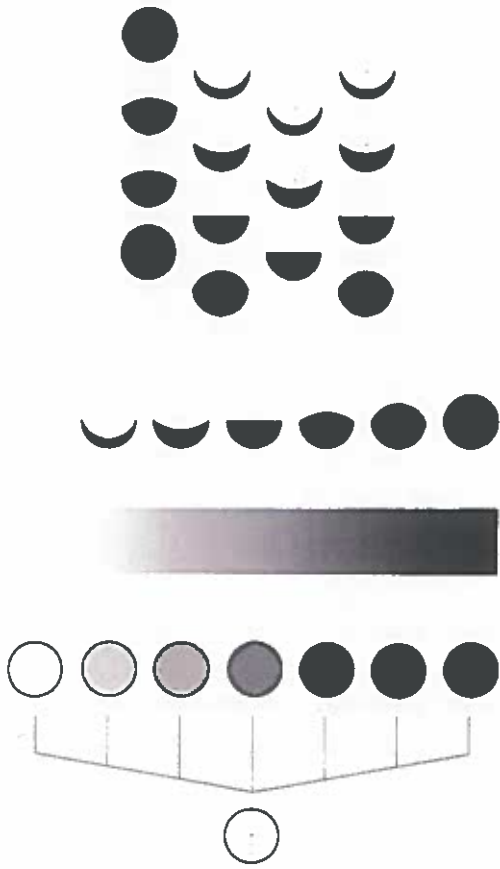
COMPOSITE OF MOON PHASES AND TEXTURE



DISCOVERY CENTRE - HALIFAX
Concepts for Screen & Fence | June 30th - 2015

MORIYAMA & TESHIMA ARCHITECTS | BARRIE & LANGILLE ARCHITECTS

Concepts for Screen & Fence: DETAIL OF SCREEN

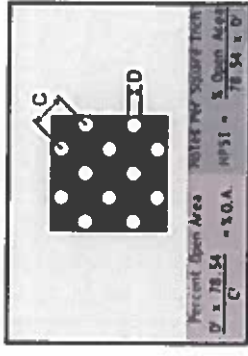


SHAPE OF PIXELS DEPICTS A FULL LUNAR CYCLE / PHASES OF THE MOON



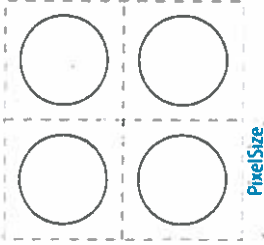
CUSTOM IMAGE CONSISTING OF VARIOUS IMAGE OVERLAYS (to be confirmed) IMAGE TRANSFERRED TO PERFORATED ALUMINIUM SCREEN

45° STAGGERED CENTERS



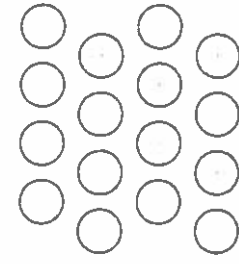
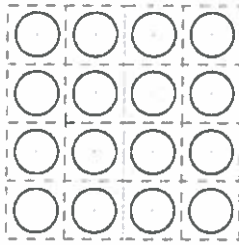
$D = R1 + T + R2$
 $D = (PixelSize) \cdot 2^{1/2}$
 $R1 + T + R2 = (PixelSize) \cdot 2^{1/2}$
 $R2 = (PixelSize/2) \cdot 2^{1/2} - R1 - T$

$PixelSize = 50$
 $R1 = 50$
 $R2 = \text{Varies}$
 $T = \text{Varies}$



Pixel size/2

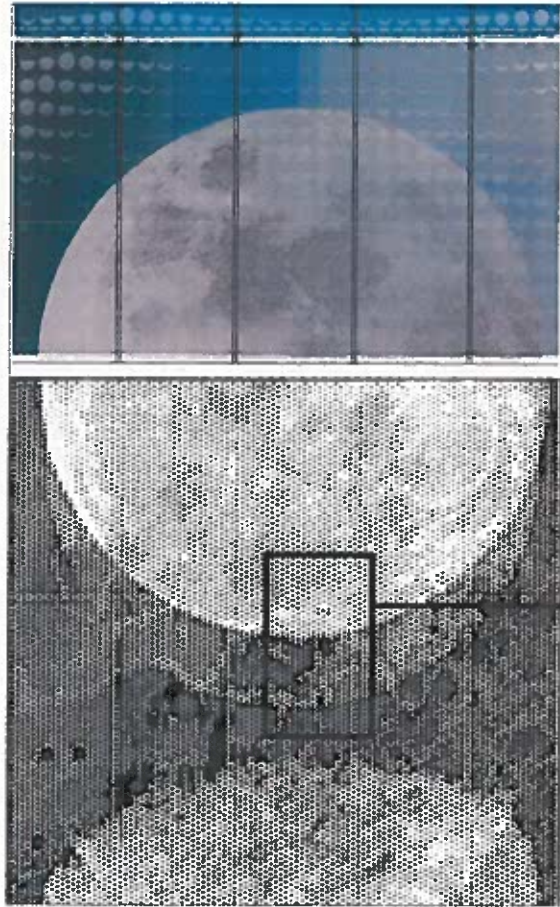
Shift every other row



MATCHING FRIT GRAPHIC PATTERN APPLIED TO GLASS / WINDOWS

SCULPTURE OF MOON HANGING IN ATRIUM

Concepts for Screen & Fence: DETAIL OF SCREEN



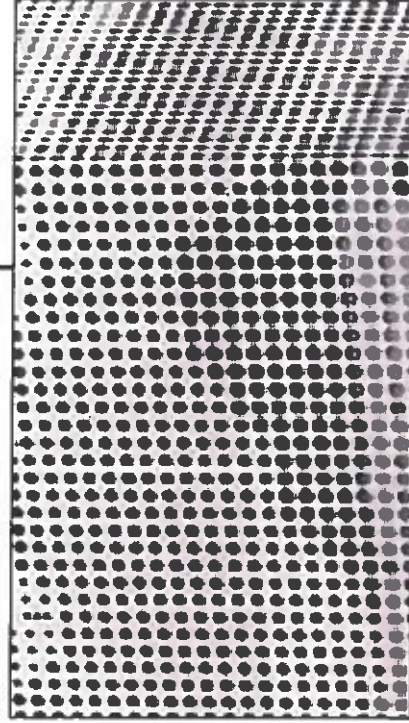
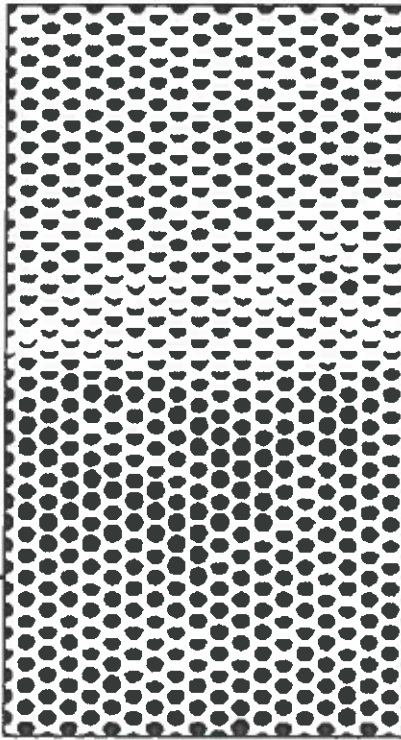
CUSTOM IMAGE TRANSFERRED TO PERFORATED ALUMINUM SCREEN

SCULPTURE OF MOON HANGING IN ATRIUM

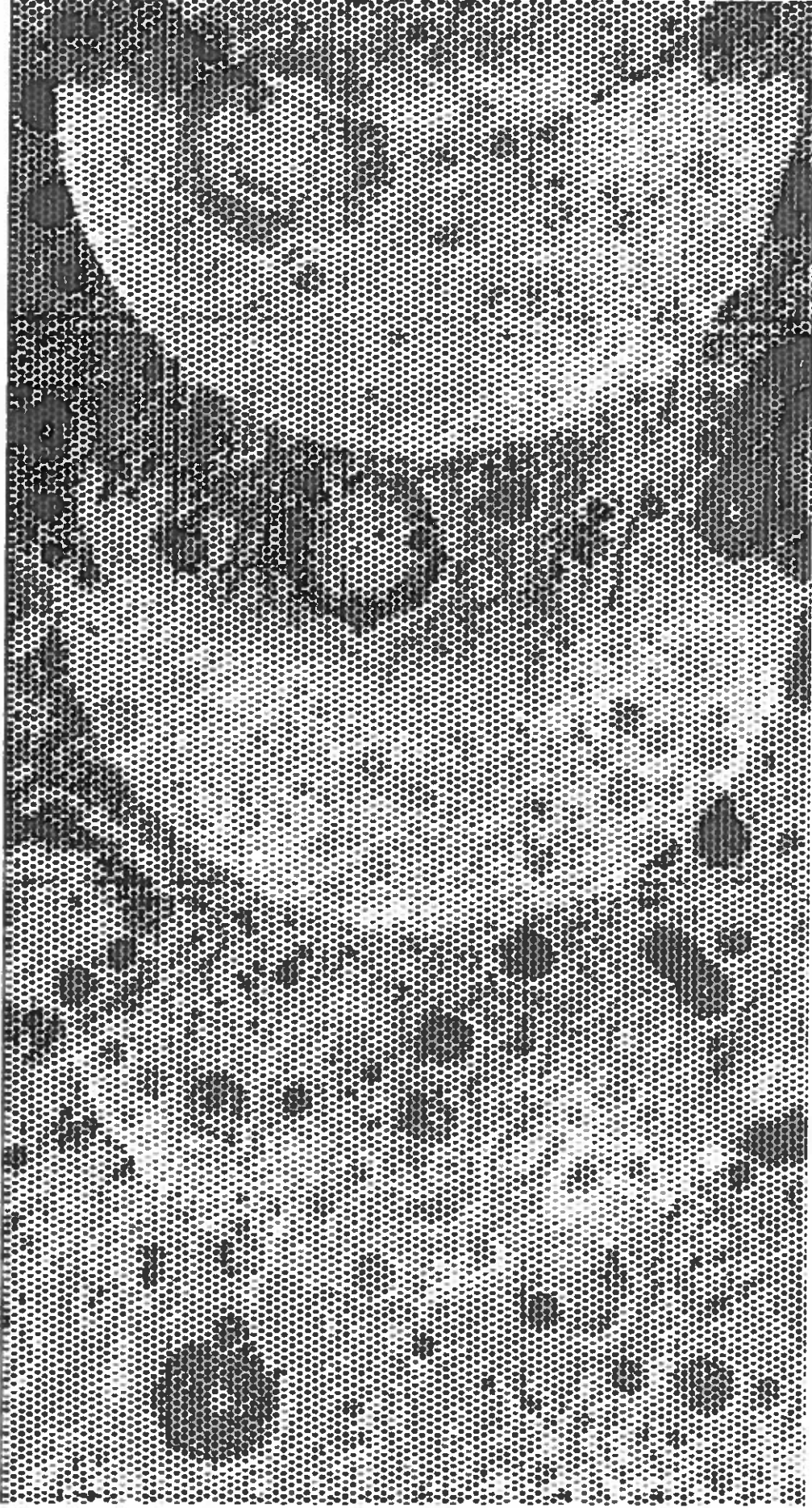
MATCHING GRAPHIC FRIT ON WINDOWS



EXAMPLE OF EXISTING PERFORATED CLADDING



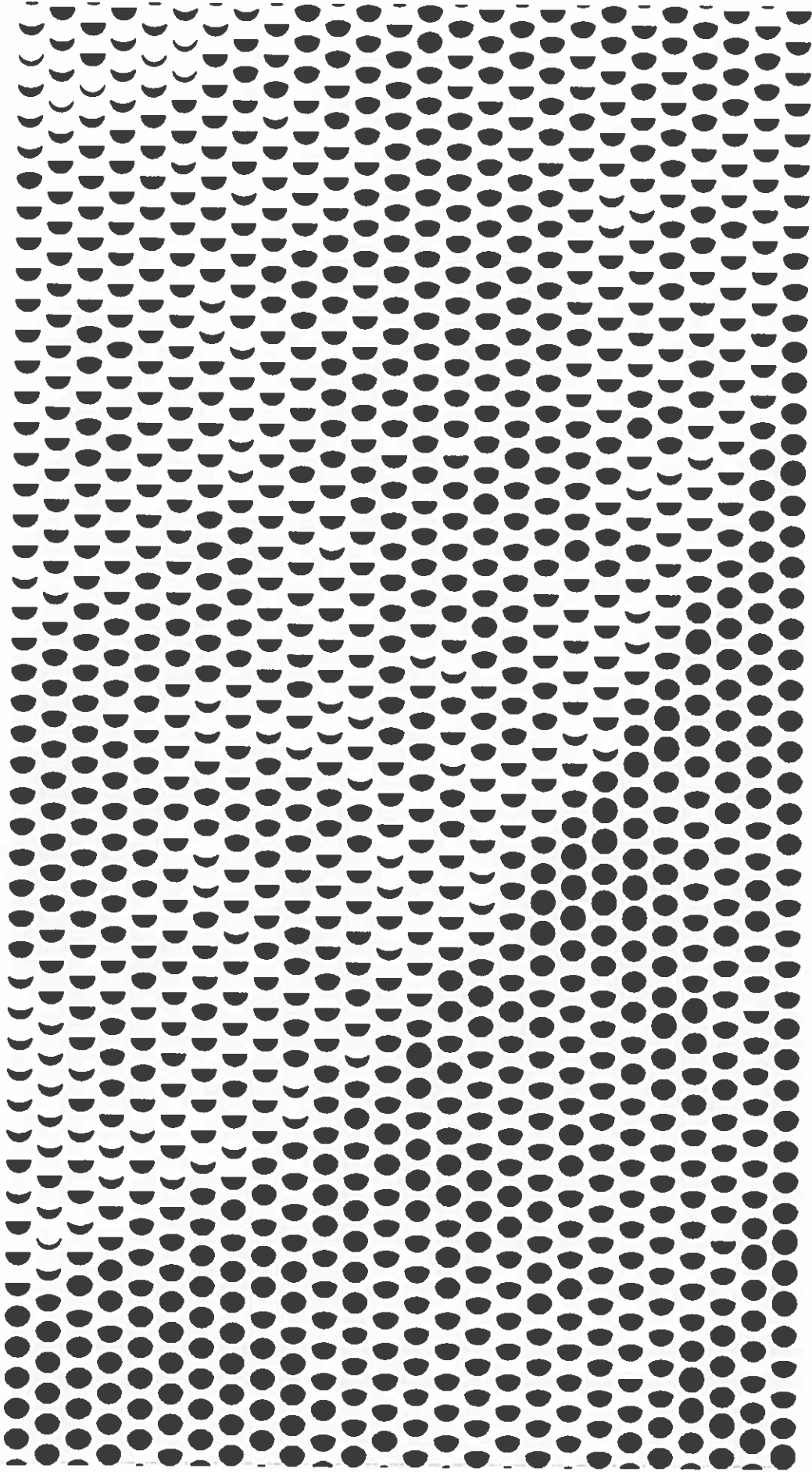
Concepts for Screen & Fence: DETAIL OF SCREEN



DISCOVERY CENTRE - HALIFAX
Concepts for Screen & Fence | June 30th - 2015

MORIYAMA & TESHIMA ARCHITECTS | BARRIE & LANGILLE ARCHITECTS

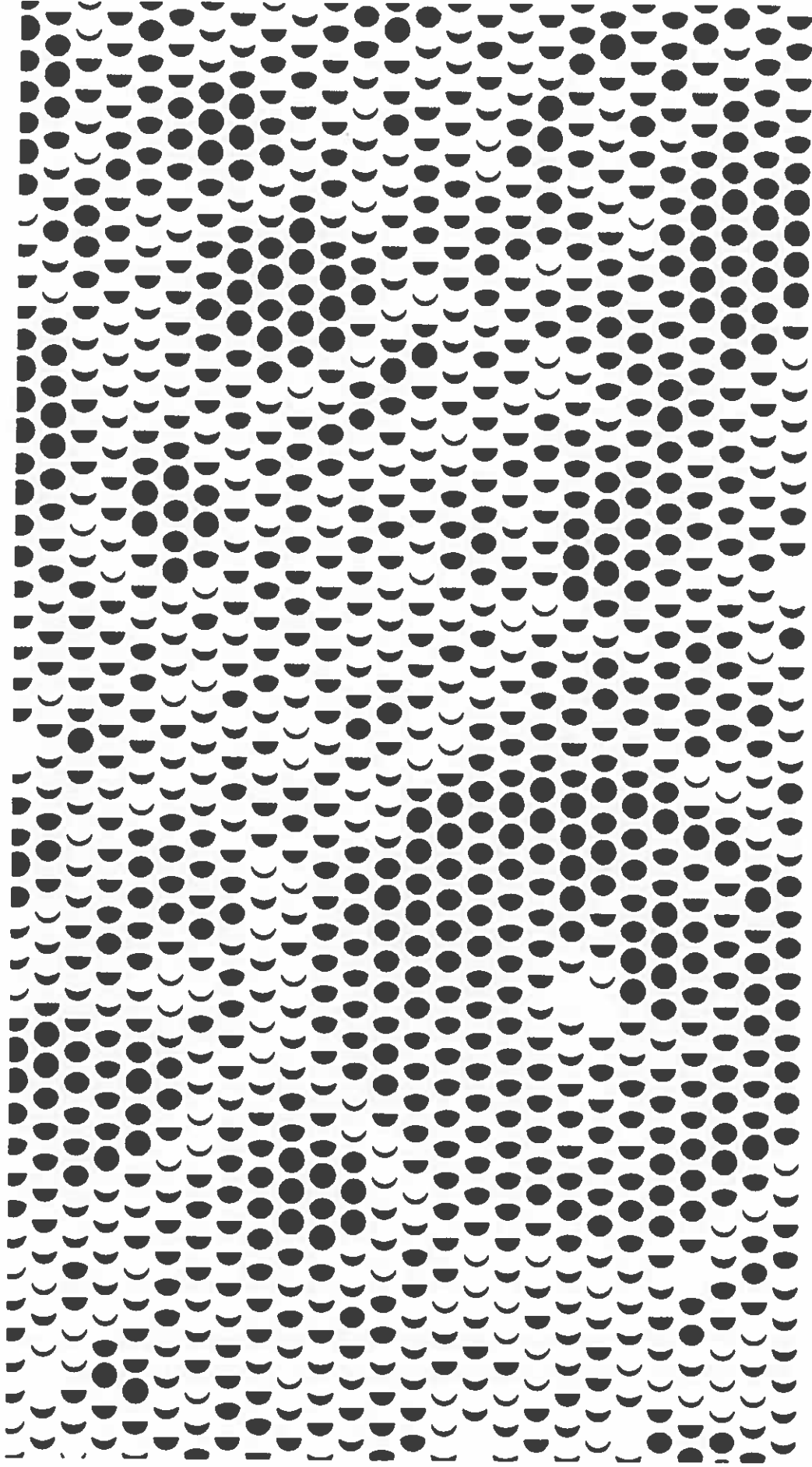
Concepts for Screen & Fence: **DETAIL OF SCREEN**



DISCOVERY CENTRE - HALIFAX
Concepts for Screen & Fence | June 30th - 2015

MORIYAMA & TESHIMA ARCHITECTS | BARRIE & LANGILLE ARCHITECTS

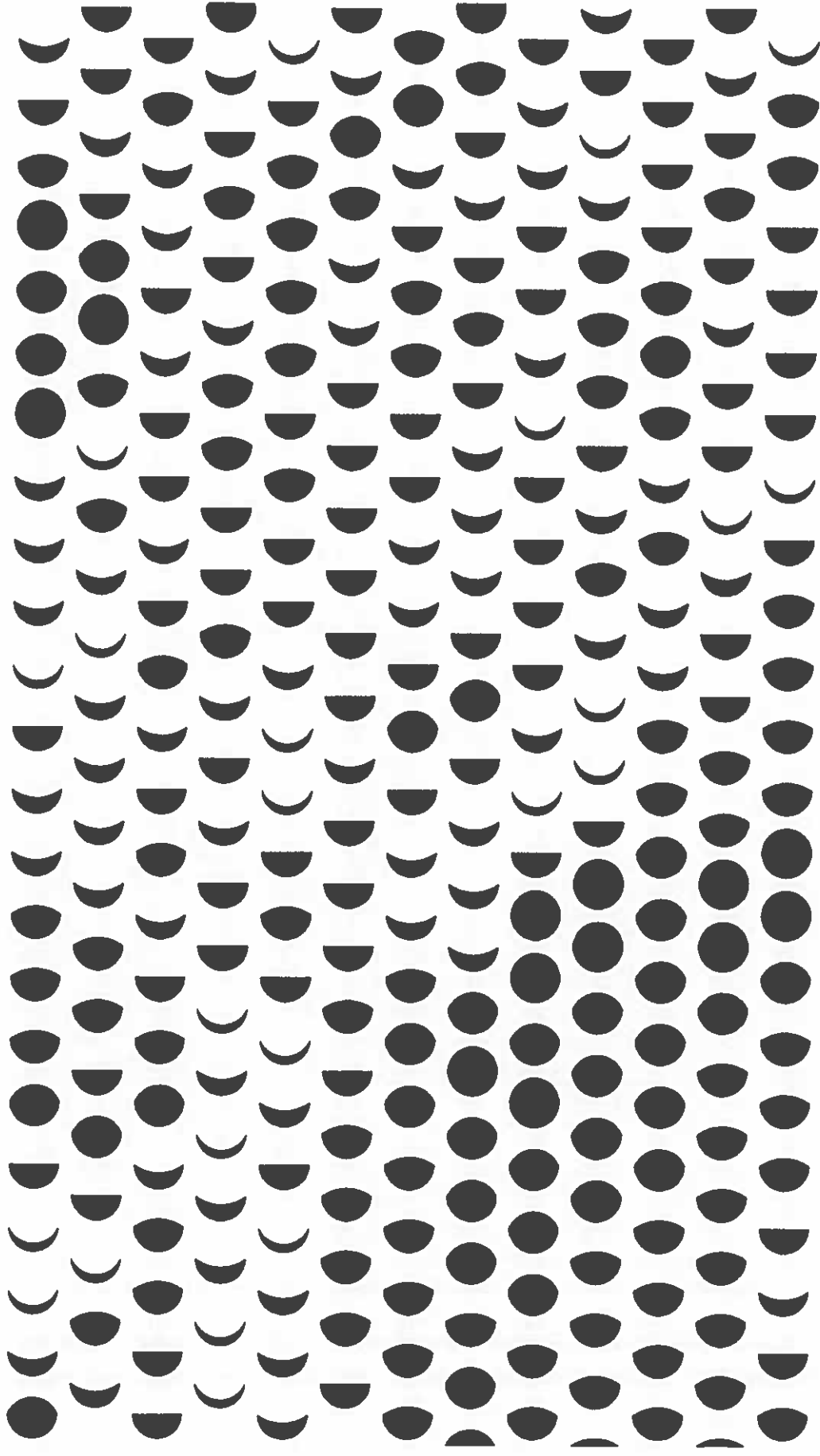
Concepts for Screen & Fence: **DETAIL OF SCREEN**



DISCOVERY CENTRE - HALIFAX
Concepts for Screen & Fence | June 30th - 2015

MORIYAMA & TESHIMA ARCHITECTS | BARRIE & LANGILLE ARCHITECTS

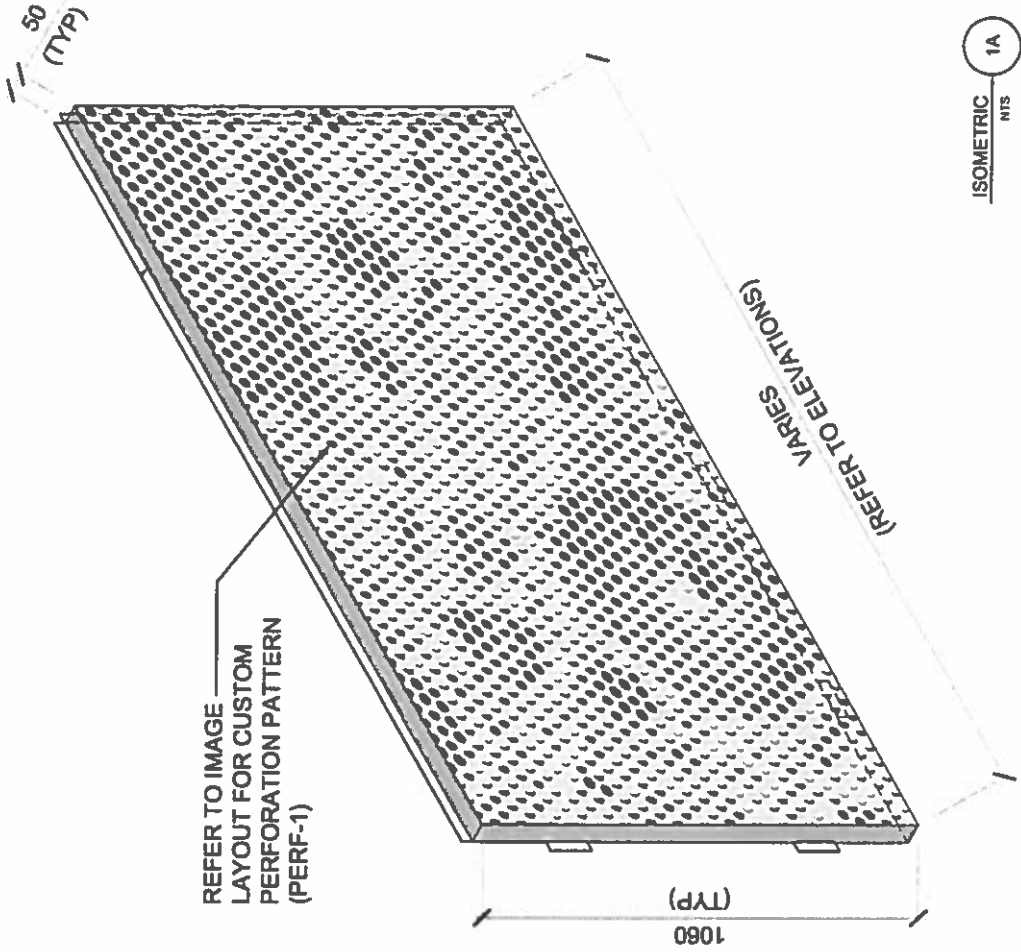
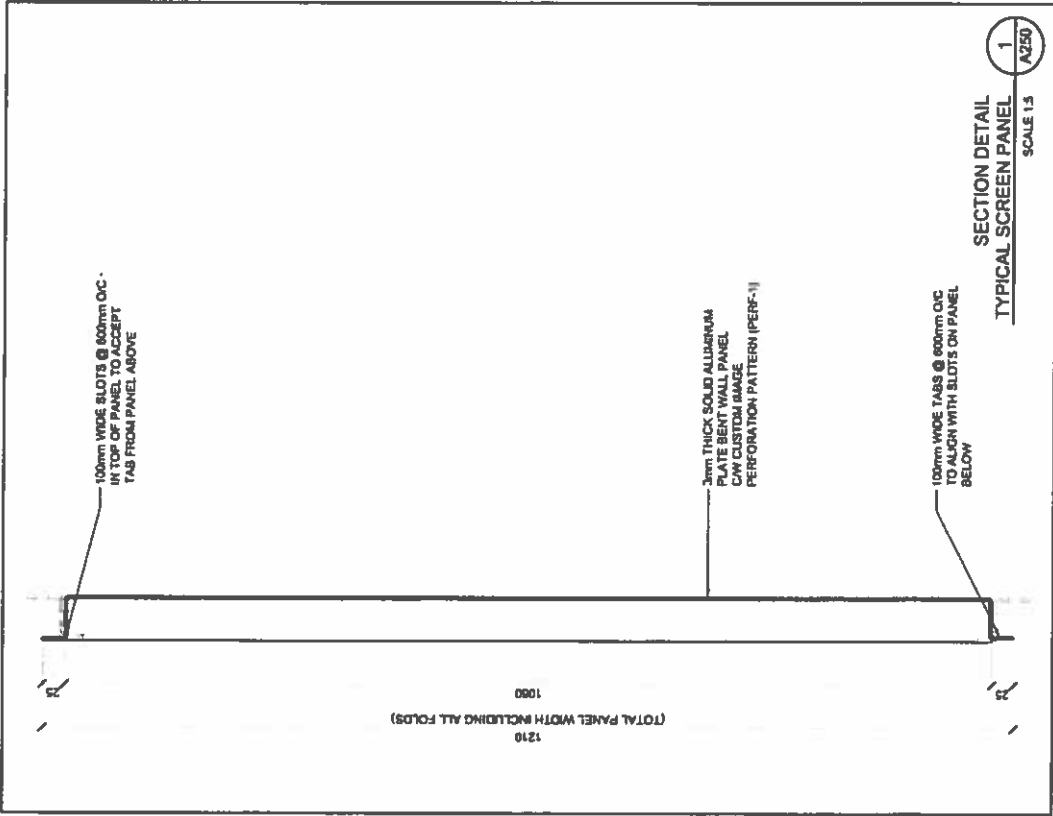
Concepts for Screen & Fence: DETAIL OF SCREEN



DISCOVERY CENTRE - HALIFAX
Concepts for Screen & Fence | June 30th - 2015

MORIYAMA & TESHIMA ARCHITECTS | BARRIE & LANGILLE ARCHITECTS

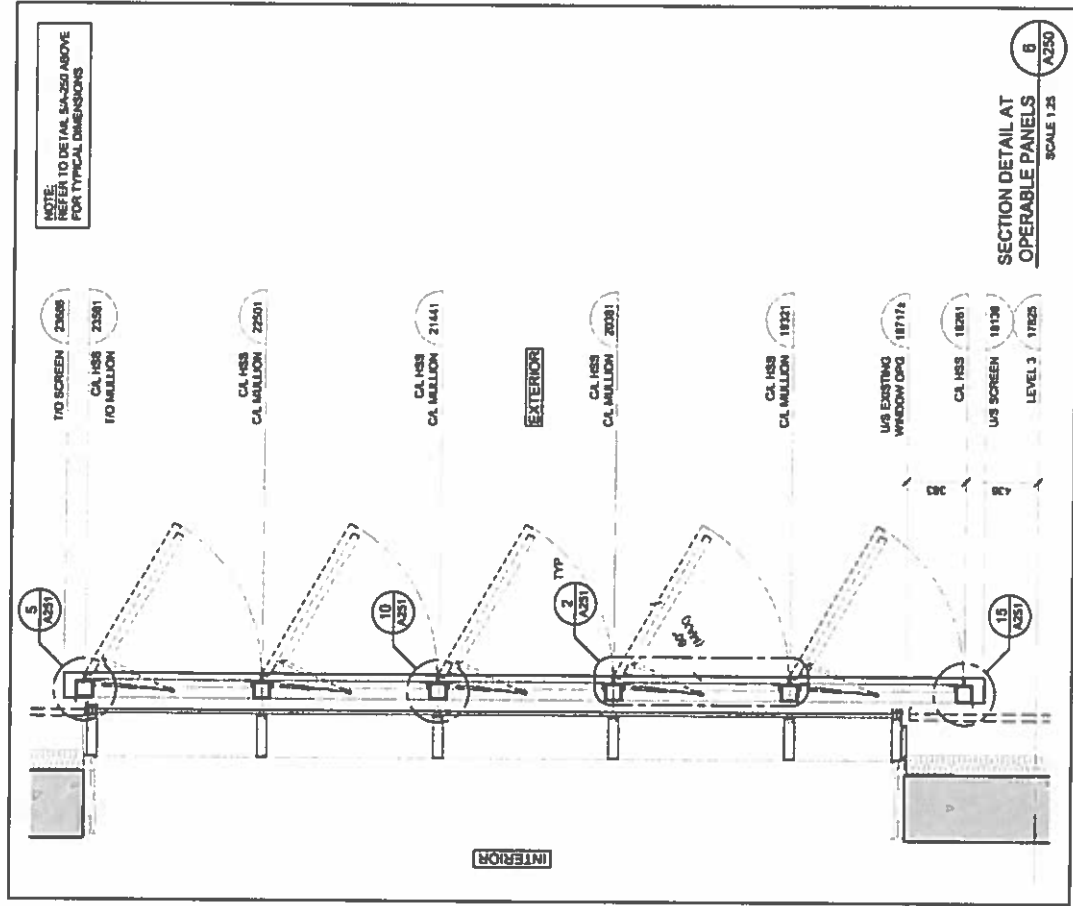
Concepts for Screen & Fence: DETAIL OF SCREEN



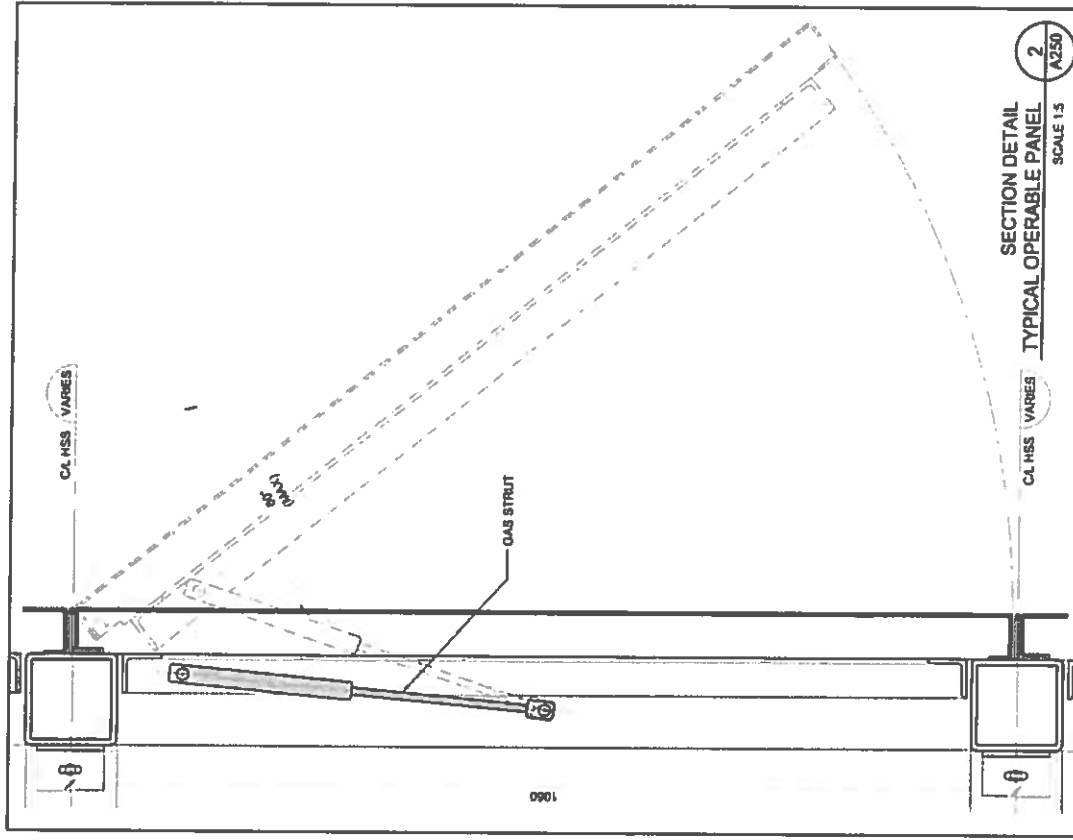
DISCOVERY CENTRE - HALIFAX
 Concepts for Screen & Fence | June 30th - 2015

MORIYAMA & TESHIMA ARCHITECTS | BARRIE & LANGILLE ARCHITECTS

Concepts for Screen & Fence: DETAIL OF SCREEN

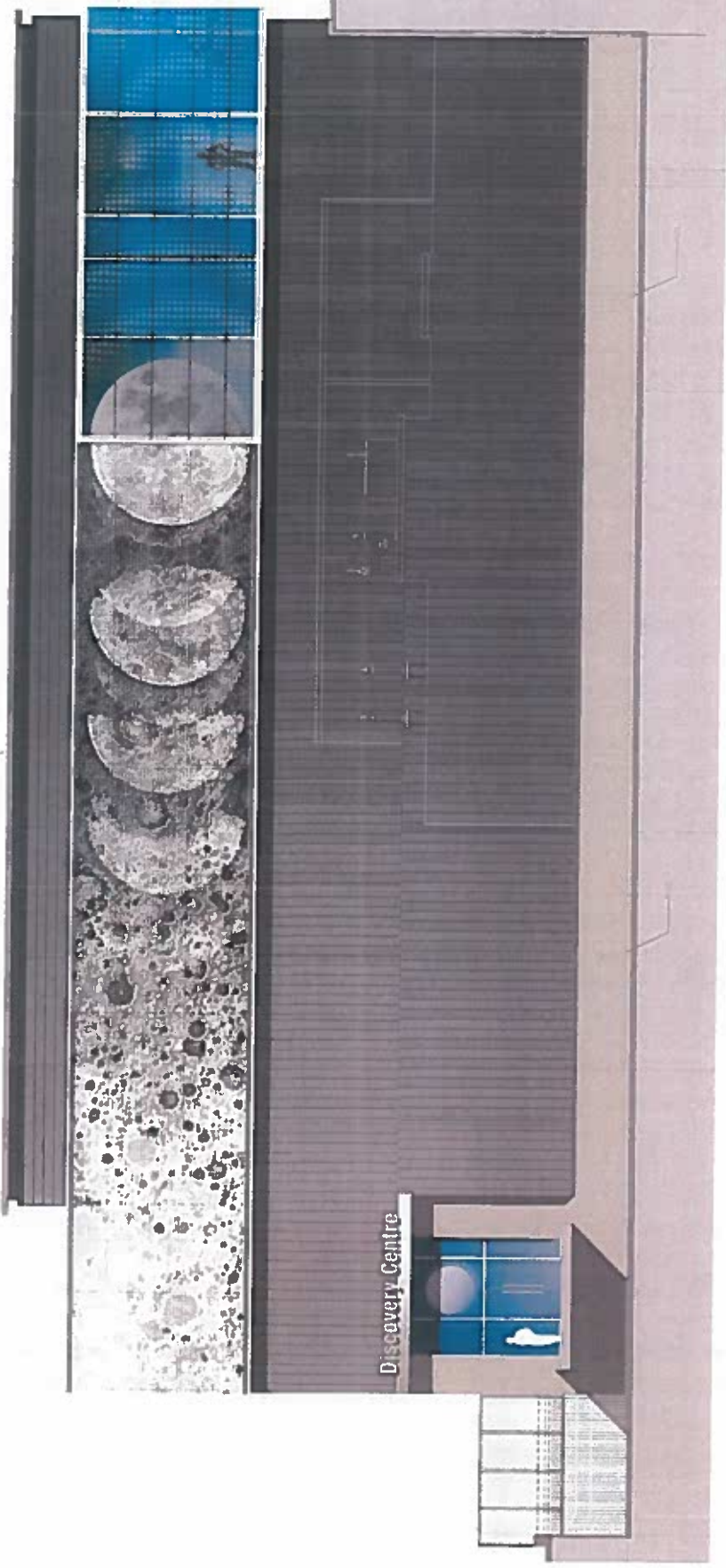


DISCOVERY CENTRE - HALIFAX
Concepts for Screen & Fence | June 30th - 2015



MORIYAMA & TESHIMA ARCHITECTS | BARRIE & LANGILLE ARCHITECTS

Concepts for Screen & Fence: WEST ELEVATION



DISCOVERY CENTRE - HALIFAX
 Concepts for Screen & Fence | June 30th -- 2015

MORIYAMA & TESHIMA ARCHITECTS | BARRIE & LANGILLE ARCHITECTS

Concepts for Screen & Fence: WEST ELEVATION



West Facade – PROPOSED

DISCOVERY CENTRE - HALIFAX
Concepts for Screen & Fence | June 30th - 2015

MORIYAMA & TESHIMA ARCHITECTS | BARRIE & LANGILLE ARCHITECTS

Concepts for Screen & Fence: WEST ELEVATION

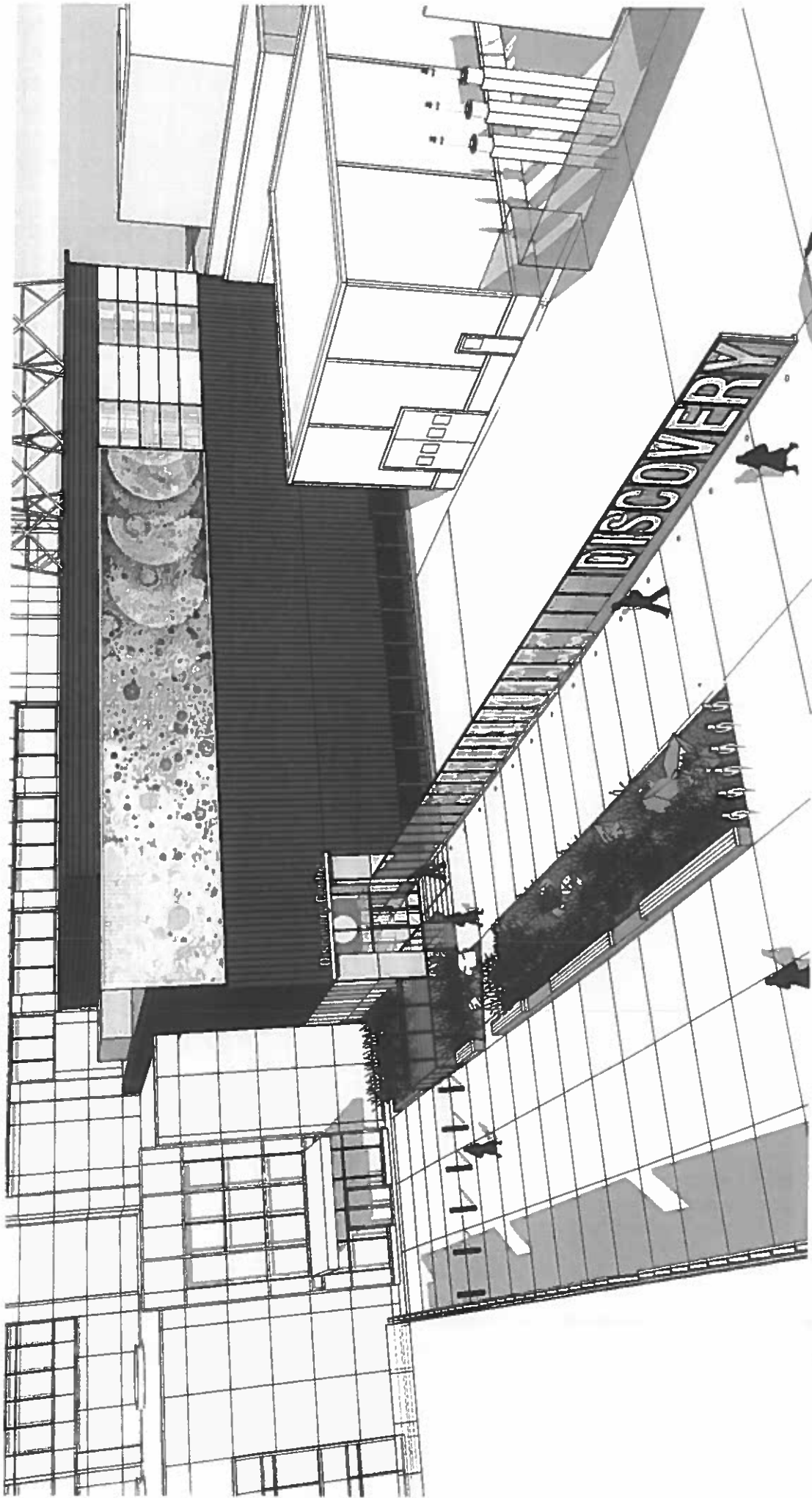


West Facade – EXISTING

DISCOVERY CENTRE - HALIFAX
Concepts for Screen & Fence | June 30th – 2015

MORIYAMA & TESHIMA ARCHITECTS | BARRIE & LANGILLE ARCHITECTS

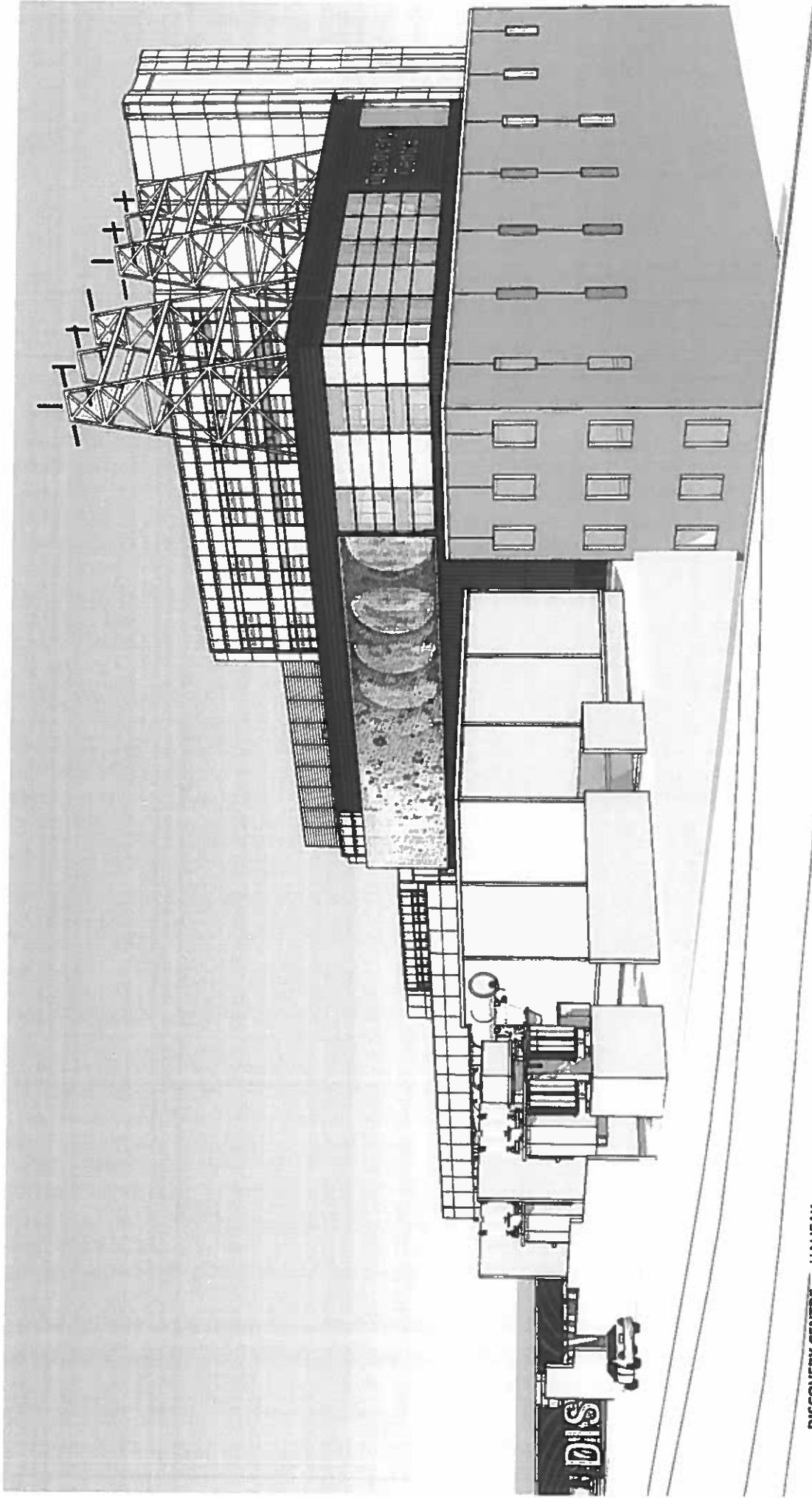
Concepts for Screen & Fence: ELEMENTS



DISCOVERY CENTRE - HALIFAX
Concepts for Screen & Fence | June 30th - 2015

MORIYAMA & TESHIMA ARCHITECTS | BARRIE & LANGILLE ARCHITECTS

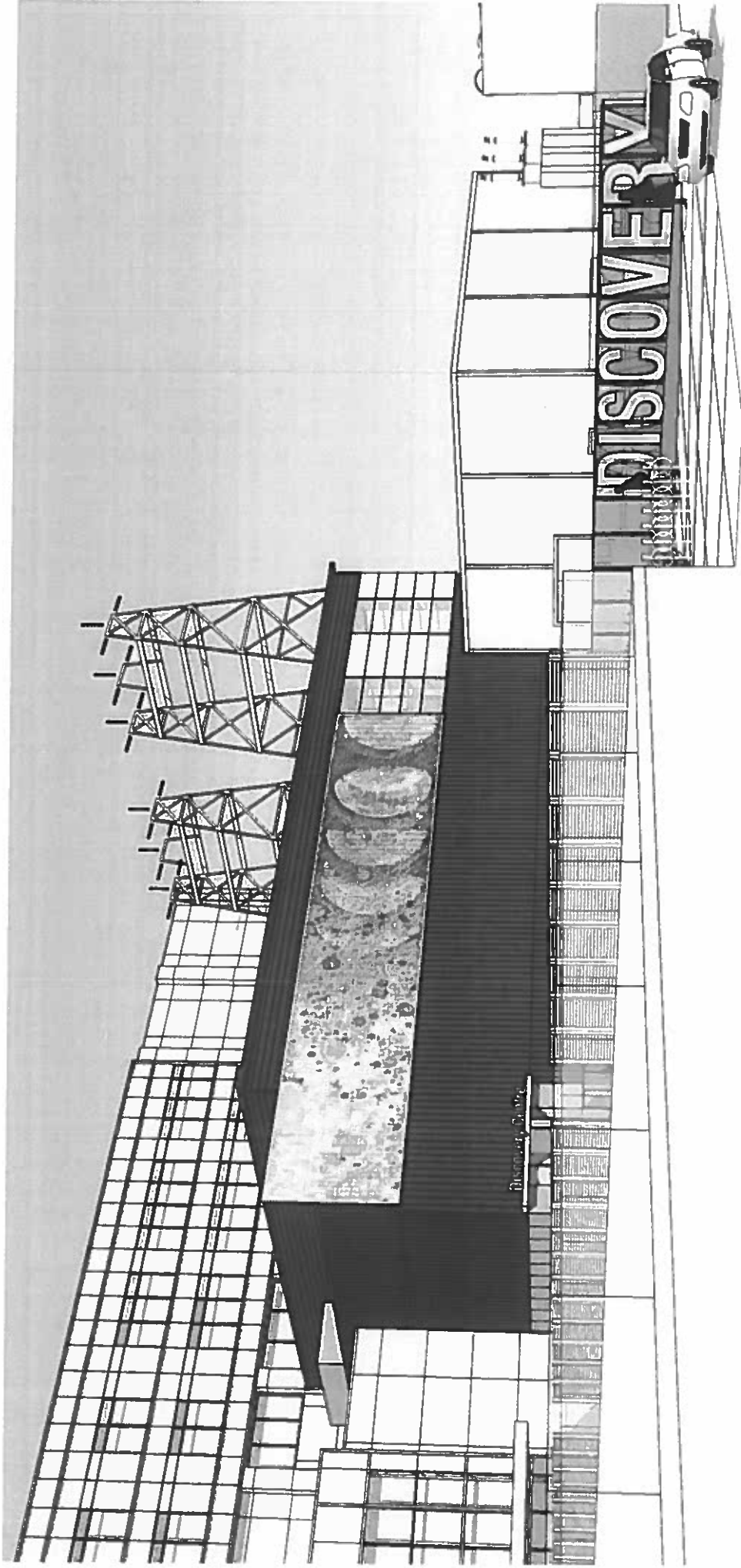
Concepts for Screen & Fence: VIEWS OF EXTERIOR



DISCOVERY CENTRE - HALIFAX
Concepts for Screen & Fence | June 30th - 2015

MORIYAMA & TESHIMA ARCHITECTS | BARRIE & LANGILLE ARCHITECTS

Concepts for Screen & Fence: **VIEWS OF EXTERIOR**



DISCOVERY CENTRE - HALIFAX
Concepts for Screen & Fence | June 30th - 2015

MORIYAMA & TESHIMA ARCHITECTS | BARRIE & LANGILLE ARCHITECTS

Concepts for Screen & Fence: VIEWS OF EXTERIOR



DISCOVERY CENTRE - HALIFAX
Concepts for Screen & Fence | June 30th - 2015

MORIYAMA & TESHIMA ARCHITECTS | BARRIE & LANGILLE ARCHITECTS

Concepts for Screen & Fence: VIEWS OF EXTERIOR



DISCOVERY CENTRE • HALIFAX
Concepts for Screen & Fence | June 30th – 2015

MORIYAMA & TESHIMA ARCHITECTS | BARRIE & LANGILLE ARCHITECTS

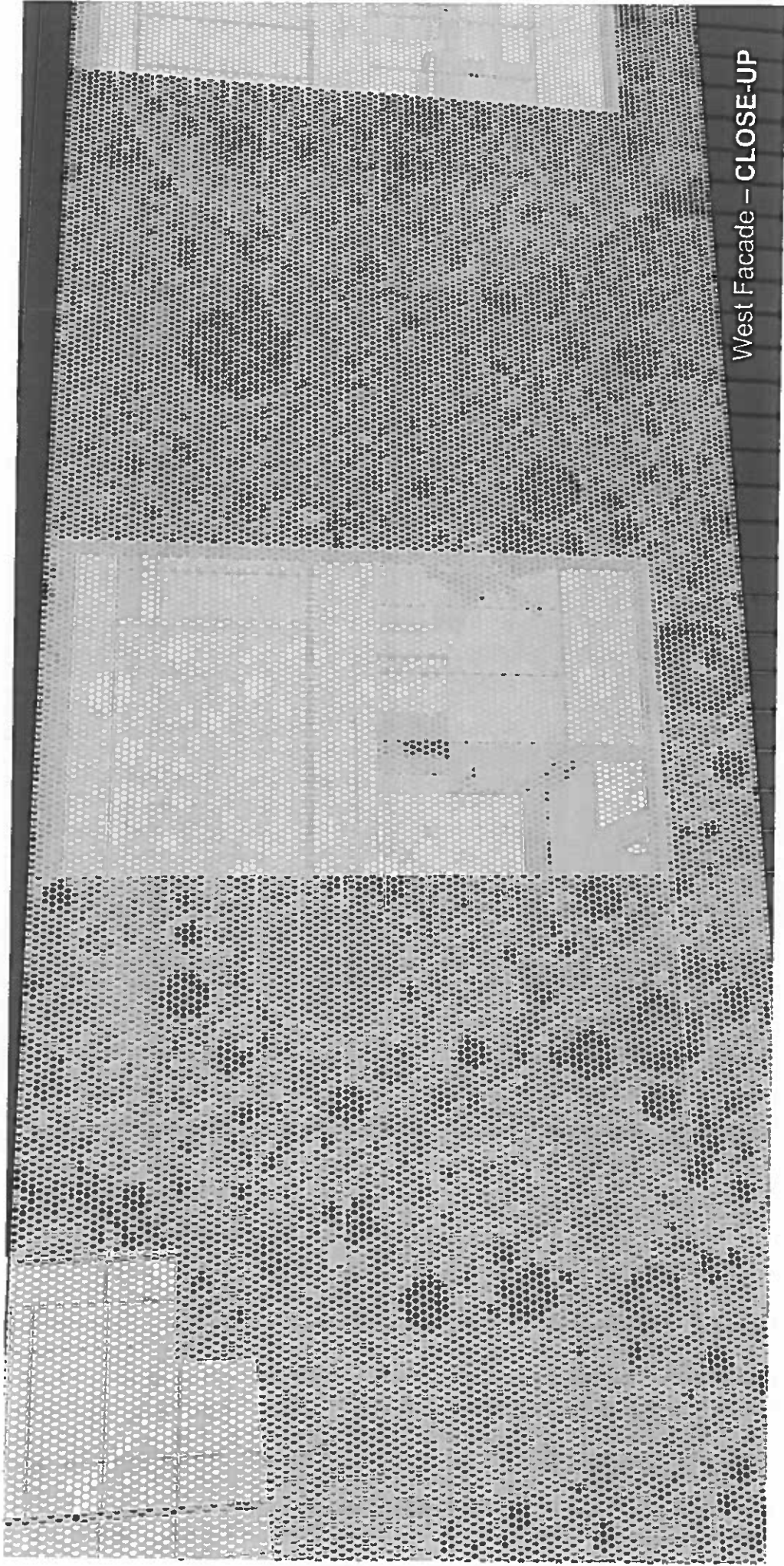
Concepts for Screen & Fence: DETAIL OF SCREEN



DISCOVERY CENTRE - HALIFAX
Concepts for Screen & Fence | June 30th - 2015

MORIYAMA & TESHIMA ARCHITECTS | BARRIE & LANGILLE ARCHITECTS

Concepts for Screen & Fence: DETAIL OF SCREEN



West Facade – CLOSE-UP

DISCOVERY CENTRE - HALIFAX
Concepts for Screen & Fence | June 30th – 2015

MORIYAMA & TESHIMA ARCHITECTS | BARRIE & LANGILLE ARCHITECTS

Concepts for Screen & Fence: **DETAIL OF SCREEN**



Interior view from Level 3

DISCOVERY CENTRE - HALIFAX
Concepts for Screen & Fence | June 30th - 2015

MORIYAMA & TESHIMA ARCHITECTS | BARRIE & LANGILLE ARCHITECTS

Concepts for Screen & Fence: **DETAIL OF SCREEN**



Interior view from Level 3

DISCOVERY CENTRE - HALIFAX
Concepts for Screen & Fence | June 30th - 2015

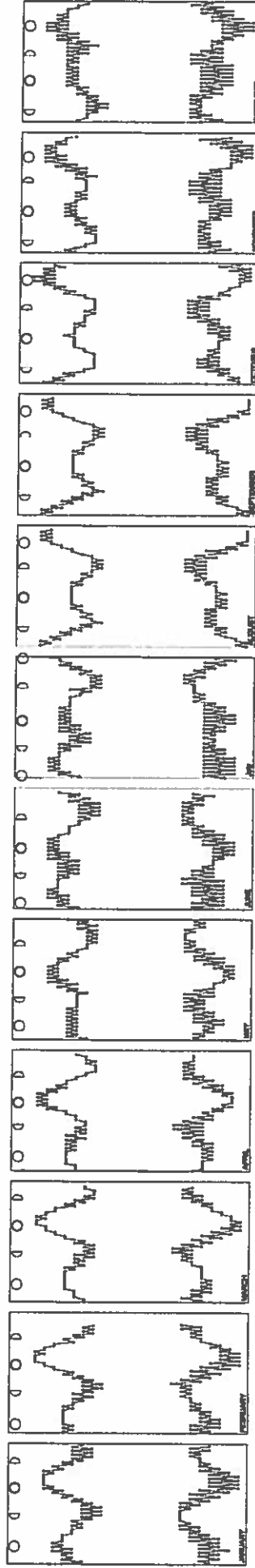
MORIYAMA & TESHIMA ARCHITECTS | BARRIE & LANGILLE ARCHITECTS

Concepts for Screen & Fence: **FENCE**

FENCE:

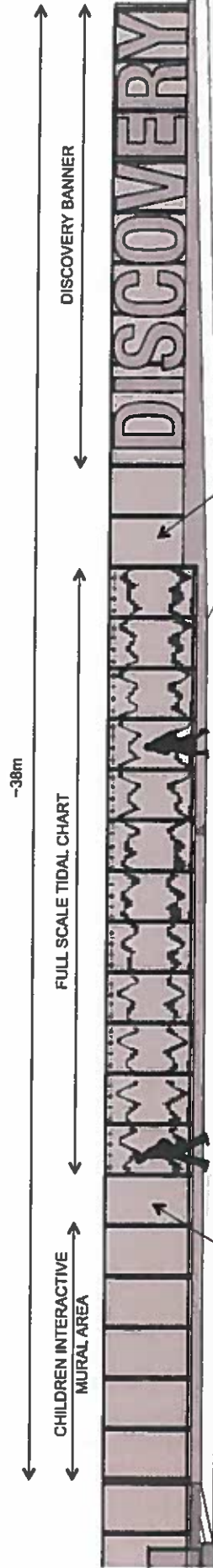
Dimensions: ~2.3m high x 38m long
Material: standard perforated aluminum with standard galvanized steel frame

The Fence has been designed to be a playful, yet informative element that visitors experience when they enter Discovery Centre. It is used as a graph paper to map out the tides at full scale. A full year of tidal predictions is plotted on what is likely the first Full Scale Tidal Calendar (FSTC). Seaside communities are directly connected to the cycle of tides and every such place on earth as its very own unique "signature" when it comes to the ebb and flow of the tides. This is depicted at real scale for visitors to quantify.



Concepts for Screen & Fence: FENCE

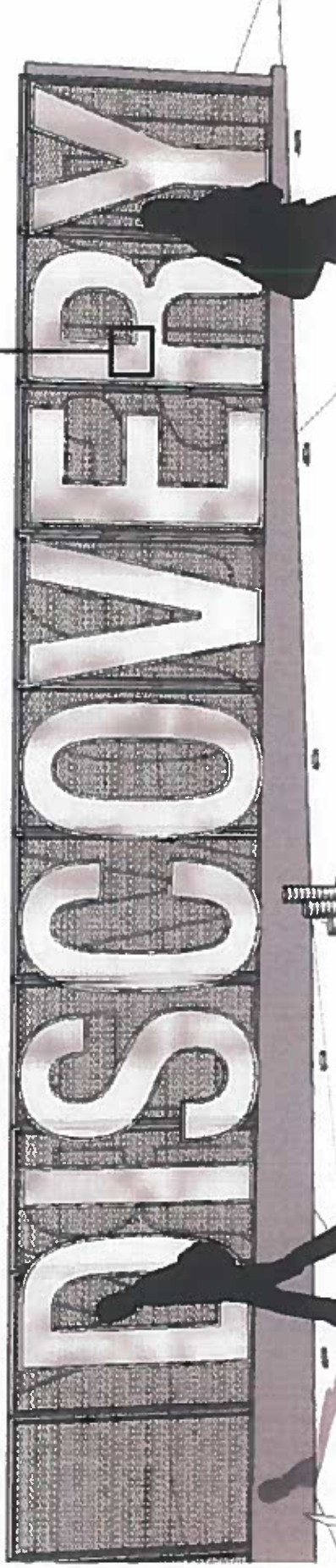
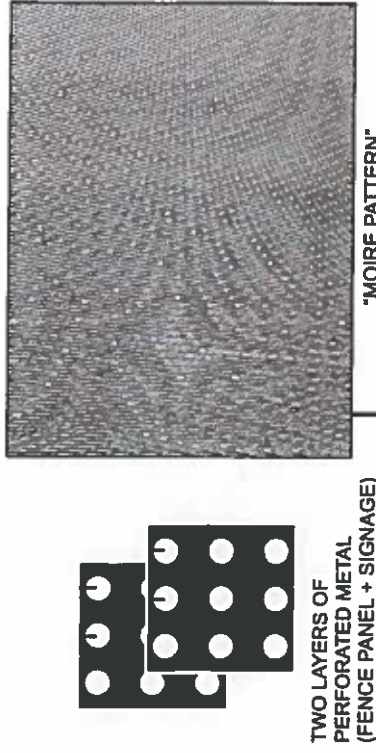
CONCEPT FOR FENCE



Concepts for Screen & Fence: FENCE

CONCEPT FOR FENCE

The fence panels are a standard perforated aluminum with galvanized frame (Open Area ~35%). The lettering is also to be perforated aluminum (Open Area ~35%) and cut from a 1200 x 2400 sheet of aluminum and edged with a 25mm bent aluminum angle. Letters would be fit in front of the fence panels resting on the concrete curb and pinned at the top and where they meet a vertical support. Having a perforated letter in front of a perforated fence panel will create the phenomenon of a "moire pattern" which is an interesting optical illusion which will add intrigue to the Discovery Centre's street banner.



MTA / BLA Recommendations:

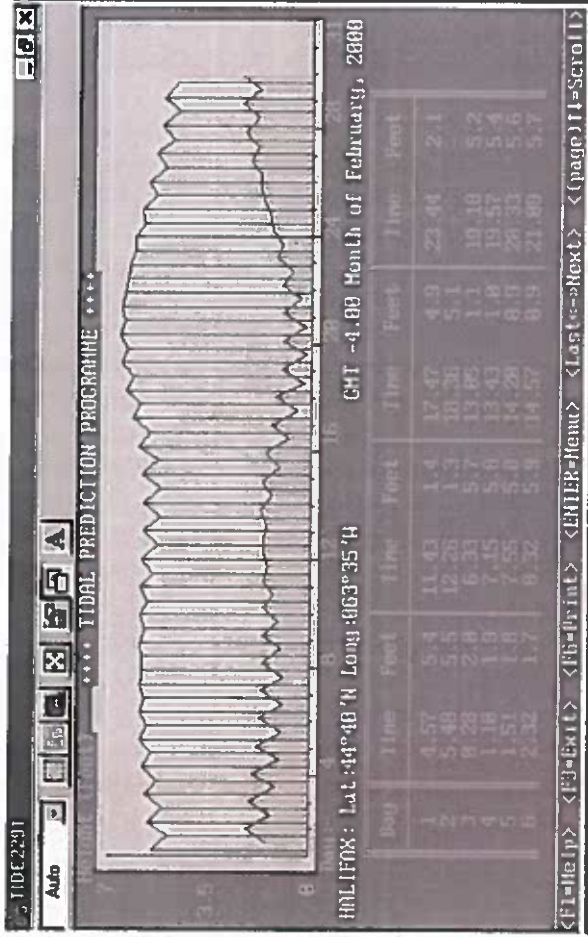
With regards to the double sided effect, it was confirmed that NSPI will not be installing a fence or gate to prevent DCH visitors from entering their adjacent maintenance parking area. As such it was thought that there was an opportunity to also have the word "DISCOVERY" on both sides of fence however we would recommend having only on the DCH walkway side for the following reasons:

1. Reduces confusion as to which is the walkway to DCH since having it on both sides of fence might lead to visitors entering NSPI parking area
2. Perforations at fence will be opaque enough so that the lettering cannot be read backwards
3. Visitors will still be guided to DCH entry by the fence itself and the Screen with Moon imagery
4. Cost savings by not duplicating the lettering

Concepts for Screen & Fence: FENCE

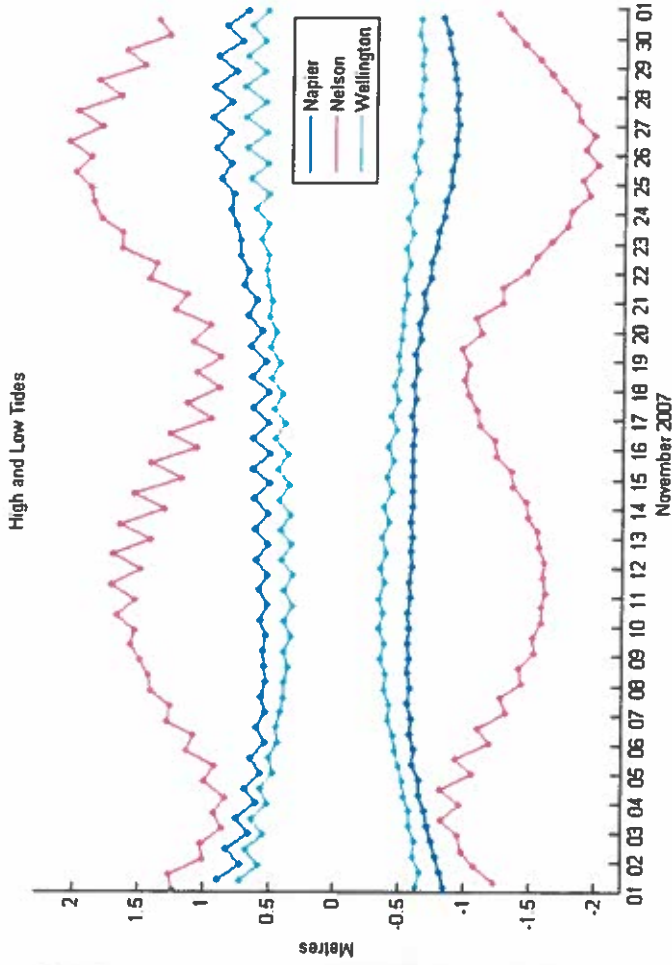
TIDE CHARTS

TIDE TABLES AND SOLUNAR TABLES ARE WIDELY AVAILABLE FOR BOTH COMMERCIAL AND FOR SPORT FISHERS IN HALIFAX. THE CHART IS AN IMPORTANT TOOL WHICH ESSENTIALLY ALLOWS FISHERMAN TO FORECAST HIGH TIDES AND LOW TIDES BEFORE SETTING OUT TO FISH, AND OTHER FISHING-RELATED DATA SUCH AS THE LUNAR PHASE, TIDAL COEFFICIENT, SUN AND MOON RISING AND SETTING TIMES, HOURS OF MAXIMUM FISH ACTIVITY, WEATHER CONDITIONS IN HALIFAX...



THIS IS A MAPPING OF HIGH TIDES AND LOW TIDES OVER THE MONTH OF FEBRUARY 2000 FOR HALIFAX. THERE IS INTERESTING RELATIONSHIP BETWEEN THE TIDAL HEIGHTS.

DISCOVERY CENTRE - HALIFAX
 Concepts for Screen & Fence | June 30th - 2015



HALIFAX WOULD HAVE ITS OWN UNIQUE SIGNATURE AS A FUNCTION OF ITS COASTAL ORIENTATION, CONTINENTAL SHELF MARGIN, WATER BODY DIMENSIONS, LONGITUDE AND LATITUDE.

MORIYAMA & TESHIMA ARCHITECTS | BARRIE & LANGILLE ARCHITECTS

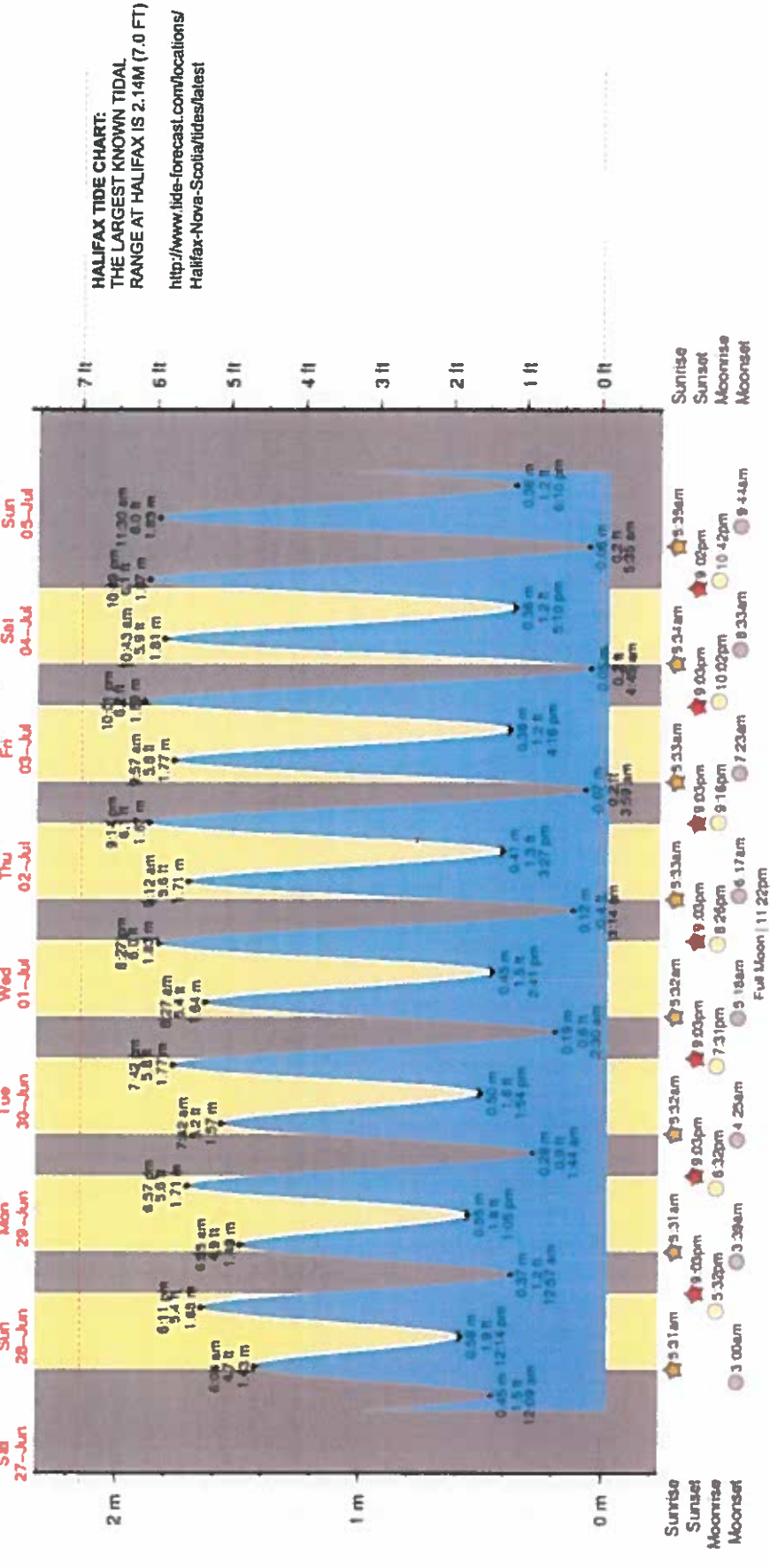
Concepts for Screen & Fence: FENCE

TIDE CHARTS

Tides in Halifax occur twice daily

Halifax, Nova Scotia (max. tidal range 2.14m 7.0ft)

Times are ADT (UTC -3.0hrs). Last Spring Tide on Tue 16 Jun (hr 1.86m 6.1ft). Next Spring Tide on Fri 03 Jul (hr 1.80m 6.2ft)



DISCOVERY CENTRE - HALIFAX
Concepts for Screen & Fence | June 30th - 2015

Concepts for Screen & Fence: FENCE

HOW THE MOON INFLUENCES TIDES

SPRING TIDES

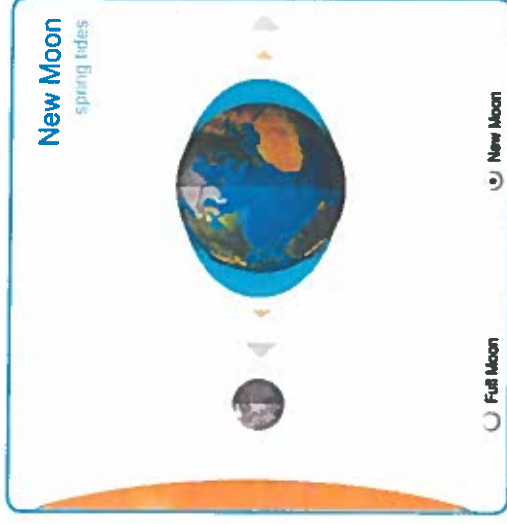
DURING THE FULL MOON & NEW MOON PHASES, THE MOON AND THE SUN ARE ALIGNED AND THEIR EFFECTS COMBINED, PRODUCING THE SPRING TIDES. ON THE TIDE TABLES WE CAN SEE THE HIGH TIDAL COEFFICIENT OF THE TIDES WHEN BOTH CELESTIAL BODIES ARE ALIGNED.

THERE IS A PROVEN INCREASE IN THE ACTIVITY OF FISH DURING SPRING TIDES, ABOVE ALL IF THESE COINCIDE WITH SUNRISE OR SUNSET, AND THESE ARE THE MOST PROPITIOUS DAYS FOR FISHING.

NEAP TIDES

DURING WAXING AND WANING MOONS, ON THE CONTRARY, THE EFFECTS ARE DETRACTED, THEREBY OBTAINING TIDES OF LESS AMPLITUDE (LOWER TIDAL COEFFICIENT), CALLED NEAP TIDES.

THE MOVEMENT ON THE SEABED TENDS TO BE LESS AND THIS NORMALLY RESULTS IN DAYS THAT ARE LESS PROPITIOUS FOR FISHING THAN DAYS WITH SPRING TIDES.



DISCOVERY CENTRE - HALIFAX

Concepts for Screen & Fence | June 30th - 2015

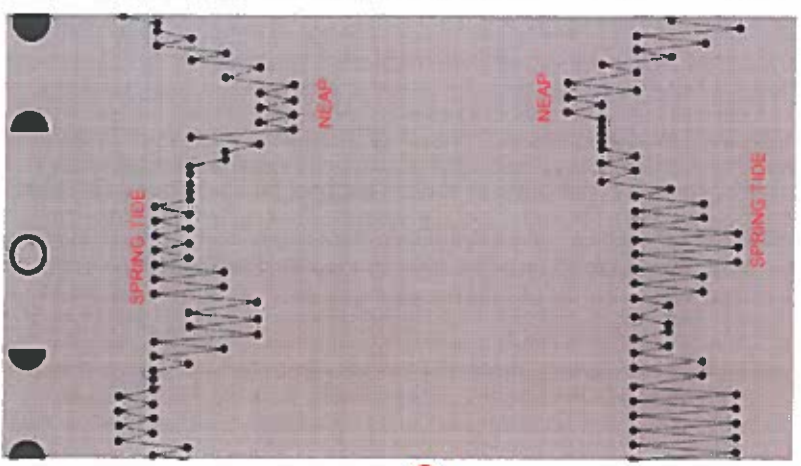
Concepts for Screen & Fence: FENCE

TIDE CHARTS

Tides predicted for Halifax for month of July 2015

Mapping by MTA using computational software

JULY 2015		Day	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	Moon	
7.1		Wed 1		02:19:00	08:23:00	02:19:00	02:19:00	02:19:00	08:23:00	15:00:00	14:27:00	14:27:00	08:23:00	15:00:00	20:25:00	20:25:00	20:25:00	20:25:00	20:25:00	20:25:00	1.8	Full Moon
7.2		Thu 2		03:05:00	09:08:00	03:05:00	03:05:00	03:05:00	09:08:00	1.7	15:15:00	15:15:00	09:08:00	15:15:00	21:10:00	21:10:00	21:10:00	21:10:00	21:10:00	21:10:00	1.9	
7.3		Fri 3		03:50:00	09:54:00	03:50:00	03:50:00	03:50:00	09:54:00	1.8	16:04:00	16:04:00	09:54:00	16:04:00	21:56:00	21:56:00	21:56:00	21:56:00	21:56:00	21:56:00	1.9	
7.4		Sat 4		04:37:00	10:40:00	04:37:00	04:37:00	04:37:00	10:40:00	1.8	16:57:00	16:57:00	10:40:00	16:57:00	22:44:00	22:44:00	22:44:00	22:44:00	22:44:00	22:44:00	1.9	
7.5		Sun 5		05:28:00	11:27:00	05:28:00	05:28:00	05:28:00	11:27:00	1.8	17:55:00	17:55:00	11:27:00	17:55:00	23:32:00	23:32:00	23:32:00	23:32:00	23:32:00	23:32:00	1.9	
7.6		Mon 6		06:22:00	12:14:00	06:22:00	06:22:00	06:22:00	12:14:00	1.8	18:58:00	18:58:00	12:14:00	18:58:00							1.9	
7.7		Tue 7	00:21:00	07:20:00	13:04:00	07:20:00	07:20:00	13:04:00	13:04:00	1.8	20:02:00	20:02:00	13:04:00	20:02:00							1.9	
7.8		Wed 8	01:14:00	08:18:00	13:56:00	08:18:00	08:18:00	13:56:00	13:56:00	1.8	21:04:00	21:04:00	13:56:00	21:04:00							1.9	
7.9		Thu 9	02:12:00	09:16:00	14:53:00	09:16:00	09:16:00	14:53:00	14:53:00	1.8	22:04:00	22:04:00	14:53:00	22:04:00							1.9	
7.10		Fri 10	03:20:00	10:15:00	15:00:00	10:15:00	10:15:00	15:00:00	15:00:00	1.7	23:04:00	23:04:00	15:00:00	23:04:00							1.9	
7.11		Sat 11	04:35:00	11:15:00	17:08:00	11:15:00	11:15:00	17:08:00	17:08:00	1.7			17:08:00								1.7	
7.12		Sun 12		05:04:00	05:46:00	05:04:00	05:04:00	05:46:00	05:46:00	1.5	12:15:00	12:15:00	05:46:00	12:15:00	18:06:00	18:06:00	18:06:00	18:06:00	18:06:00	18:06:00	1.8	
7.13		Mon 13		01:01:00	06:46:00	06:46:00	06:46:00	06:46:00	06:46:00	1.6	13:14:00	13:14:00	06:46:00	13:14:00	19:00:00	19:00:00	19:00:00	19:00:00	19:00:00	19:00:00	1.8	
7.14		Tue 14		01:54:00	07:39:00	07:39:00	07:39:00	07:39:00	07:39:00	1.6	14:07:00	14:07:00	07:39:00	14:07:00	19:48:00	19:48:00	19:48:00	19:48:00	19:48:00	19:48:00	1.8	
7.15		Wed 15		02:41:00	08:26:00	08:26:00	08:26:00	08:26:00	08:26:00	1.7	14:55:00	14:55:00	08:26:00	14:55:00	20:34:00	20:34:00	20:34:00	20:34:00	20:34:00	20:34:00	1.8	
7.16		Thu 16		03:25:00	09:10:00	09:10:00	09:10:00	09:10:00	09:10:00	1.7	15:38:00	15:38:00	09:10:00	15:38:00	21:18:00	21:18:00	21:18:00	21:18:00	21:18:00	21:18:00	1.8	
7.17		Fri 17		04:04:00	09:53:00	09:53:00	09:53:00	09:53:00	09:53:00	1.7	16:18:00	16:18:00	09:53:00	16:18:00	22:01:00	22:01:00	22:01:00	22:01:00	22:01:00	22:01:00	1.8	
7.18		Sat 18		04:42:00	10:34:00	10:34:00	10:34:00	10:34:00	10:34:00	1.7	16:57:00	16:57:00	10:34:00	16:57:00	22:43:00	22:43:00	22:43:00	22:43:00	22:43:00	22:43:00	1.8	
7.19		Sun 19		05:19:00	11:14:00	11:14:00	11:14:00	11:14:00	11:14:00	1.7	17:36:00	17:36:00	11:14:00	17:36:00	23:24:00	23:24:00	23:24:00	23:24:00	23:24:00	23:24:00	1.7	
7.20		Mon 20		05:54:00	11:52:00	11:52:00	11:52:00	11:52:00	11:52:00	1.7	18:16:00	18:16:00	11:52:00	18:16:00							1.7	
7.21		Tue 21	00:05:00	06:30:00	12:30:00	06:30:00	06:30:00	12:30:00	12:30:00	1.7	19:00:00	19:00:00	12:30:00	19:00:00							1.7	
7.22		Wed 22	00:45:00	07:09:00	13:07:00	07:09:00	07:09:00	13:07:00	13:07:00	1.6	19:46:00	19:46:00	13:07:00	19:46:00							1.5	
7.23		Thu 23	01:26:00	07:51:00	13:46:00	07:51:00	07:51:00	13:46:00	13:46:00	1.7	20:34:00	20:34:00	13:46:00	20:34:00							1.5	
7.24		Fri 24	02:11:00	08:37:00	14:30:00	08:37:00	08:37:00	14:30:00	14:30:00	1.5	21:25:00	21:25:00	14:30:00	21:25:00							1.5	
7.25		Sat 25	03:04:00	09:26:00	15:22:00	09:26:00	09:26:00	15:22:00	15:22:00	1.5	22:17:00	22:17:00	15:22:00	22:17:00							1.5	
7.26		Sun 26	04:08:00	10:20:00	16:24:00	10:20:00	10:20:00	16:24:00	16:24:00	1.5	23:12:00	23:12:00	16:24:00	23:12:00							1.5	
7.27		Mon 27	05:15:00	11:17:00	17:26:00	11:17:00	11:17:00	17:26:00	17:26:00	1.6			17:26:00								1.7	
7.28		Tue 28		00:08:00	06:15:00	06:15:00	06:15:00	06:15:00	06:15:00	1.6	12:16:00	12:16:00	06:15:00	12:16:00	18:21:00	18:21:00	18:21:00	18:21:00	18:21:00	18:21:00	1.7	
7.29		Wed 29		01:02:00	07:06:00	07:06:00	07:06:00	07:06:00	07:06:00	1.6	13:14:00	13:14:00	07:06:00	13:14:00	19:12:00	19:12:00	19:12:00	19:12:00	19:12:00	19:12:00	1.8	
7.30		Thu 30		01:54:00	07:55:00	07:55:00	07:55:00	07:55:00	07:55:00	1.7	14:07:00	14:07:00	07:55:00	14:07:00	20:01:00	20:01:00	20:01:00	20:01:00	20:01:00	20:01:00	1.8	
7.31		Fri 31		02:42:00	08:43:00	08:43:00	08:43:00	08:43:00	08:43:00	1.8			14:59:00		20:50:00	20:50:00	20:50:00	20:50:00	20:50:00	20:50:00	1.9	



Concepts for Screen & Fence: FENCE

FENCE - 1:1 FULL SCALE TIDAL CHART

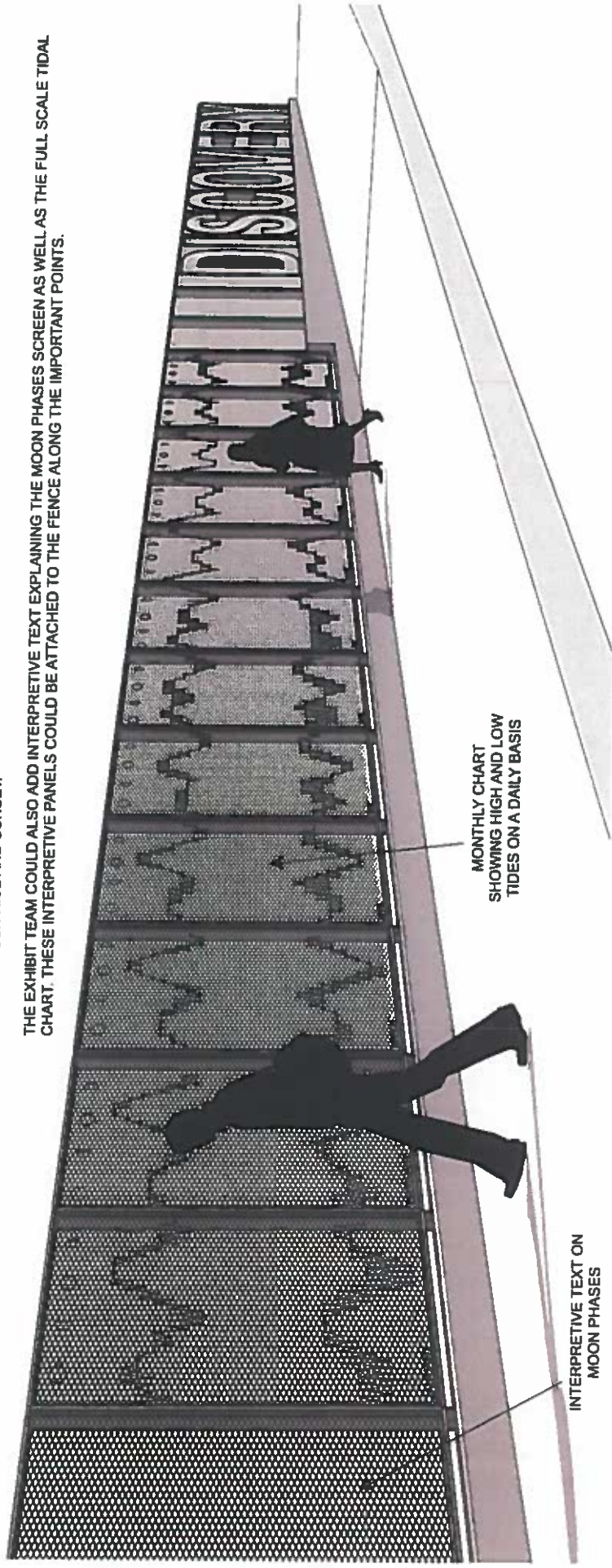
THE IDEA IS TO TURN A BASIC FENCE INTO A TEACHING TOOL TO COMPLETE THE CONNECTION BETWEEN THE MOON AND THE TIDES. TO DO THIS THE FENCE BECOMES A FULL SCALE TIDAL CHART.

THE PERFORATED METAL OF THE FENCE IS TURNED INTO FULL SCALE 1:1 GRAPH PAPER FOR MAPPING OUT THE HIGH AND LOW TIDES USING REAL LIFE 1:1 DATUMS

HIGH TIDE AND LOW TIDE LINES ARE MAPPED OUT AS WELL AS ADDED INFO CORRESPONDING TO SUNSET/SUNRISE AND PHASES OF THE MOON DEMONSTRATE THEIR INFLUENCE ON THE AMPLITUDE OF TIDES.

- FENCE BECOMES A GRAPH PAPER
 - EACH FENCE PANEL IS A MONTH
 - EACH FOUR PERFORATION IS A DAY (ie. 6HR STEPS).
- ALONG THE LENGTH OF THE FENCE THERE WOULD BE ADDED METAL LETTERING PLUGGED INTO THE PERF TO EXPLAIN THE GRAPH'S HORIZONTAL AND VERTICAL AXIS (IE. MONTHS, DIURNAL TIDE, HIGH TIDE ETC...) AS WELL AS SYMBOLS FOR FULL MOON HALF-MOON, NEW MOON AND SUN RISE AND SUNSET.

THE EXHIBIT TEAM COULD ALSO ADD INTERPRETIVE TEXT EXPLAINING THE MOON PHASES SCREEN AS WELL AS THE FULL SCALE TIDAL CHART. THESE INTERPRETIVE PANELS COULD BE ATTACHED TO THE FENCE ALONG THE IMPORTANT POINTS.



MONTHLY CHART
SHOWING HIGH AND LOW
TIDES ON A DAILY BASIS

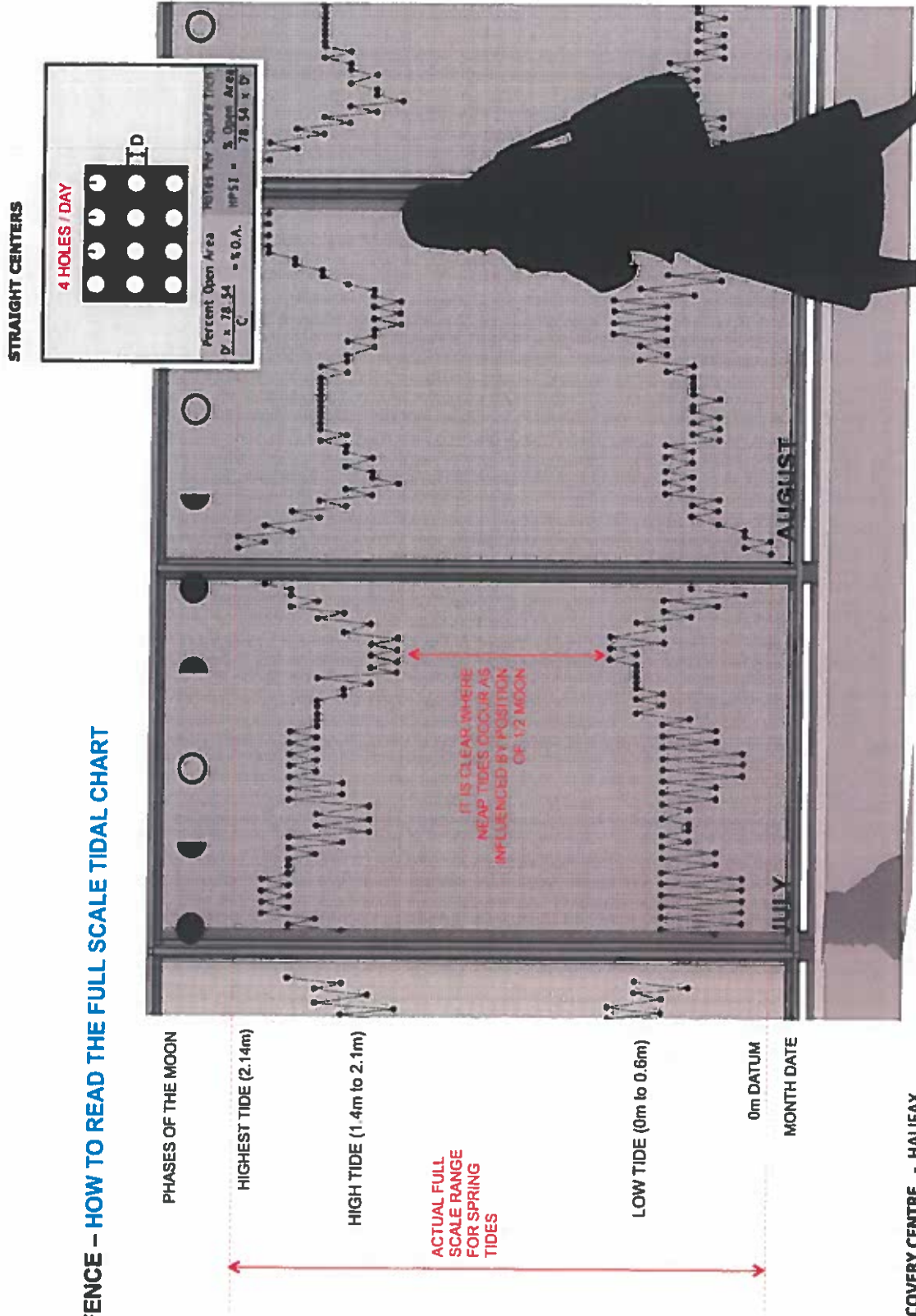
INTERPRETIVE TEXT ON
MOON PHASES

DISCOVERY CENTRE - HALIFAX
Concepts for Screen & Fence | June 30th - 2015

MORIYAMA & TESHIMA ARCHITECTS | BARRIE & LANGILLE ARCHITECTS

Concepts for Screen & Fence: FENCE

FENCE – HOW TO READ THE FULL SCALE TIDAL CHART

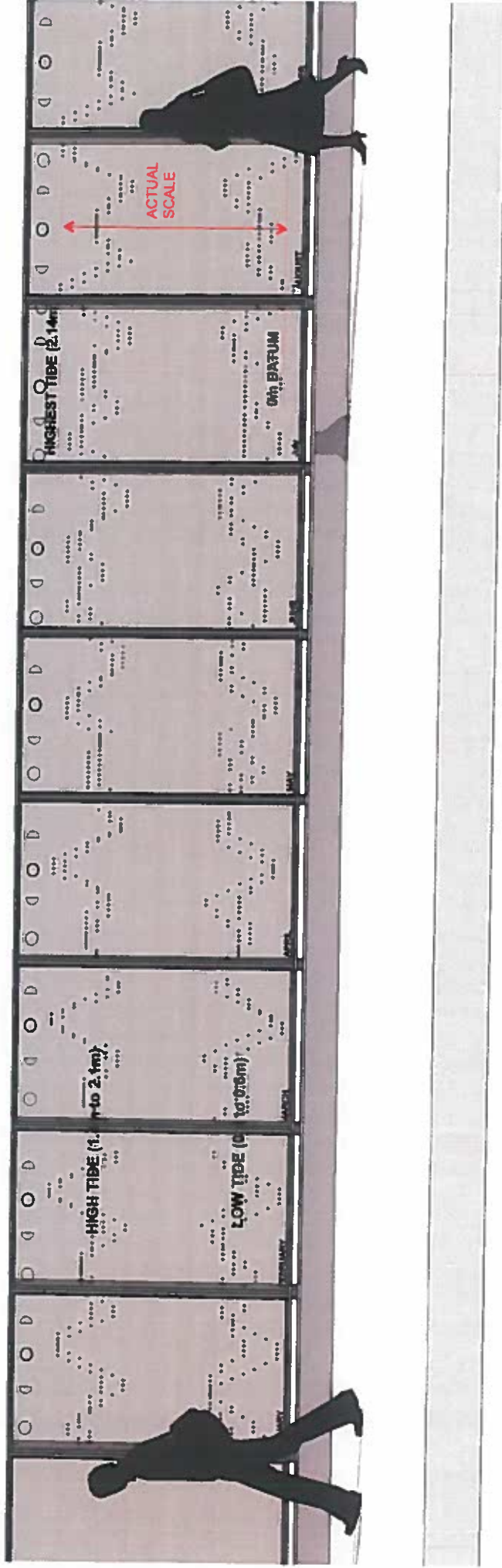


DISCOVERY CENTRE - HALIFAX
 Concepts for Screen & Fence | June 30th – 2015

MORIYAMA & TESHIMA ARCHITECTS | BARRIE & LANGILLE ARCHITECTS

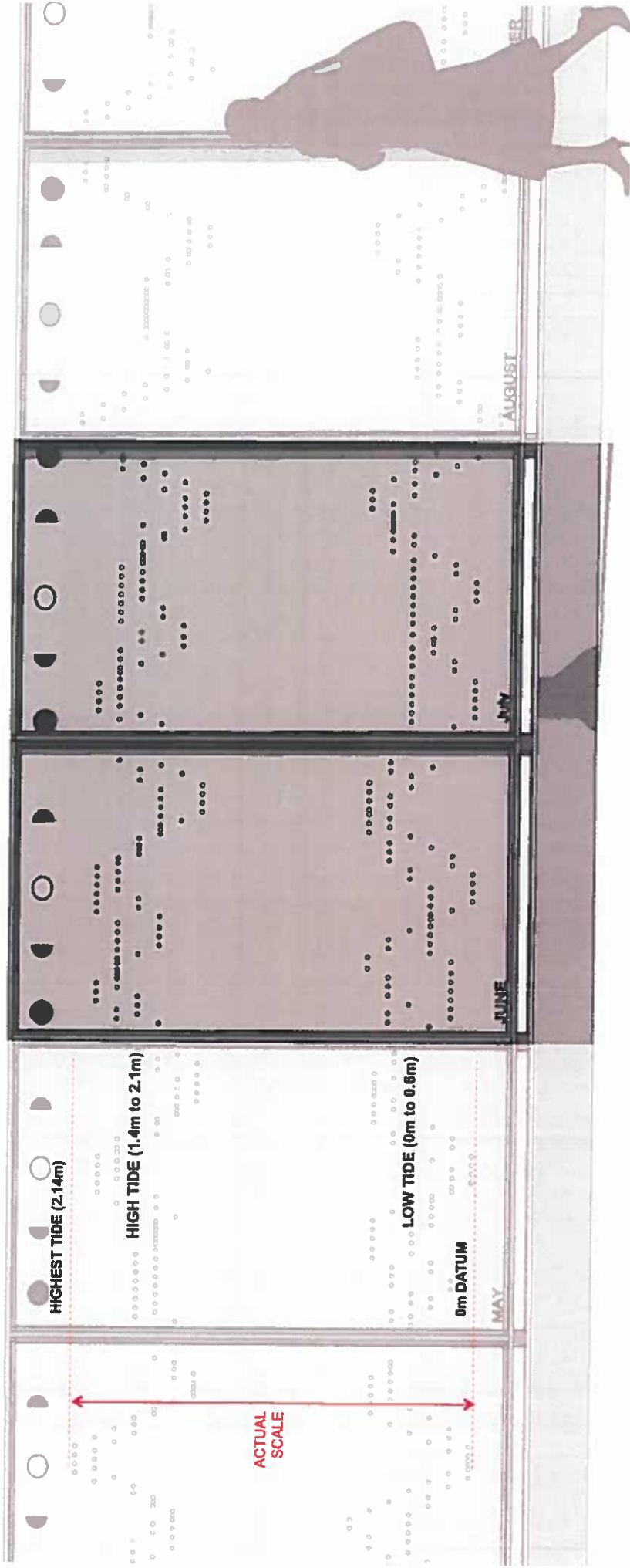
Concepts for Screen & Fence: FENCE

FENCE – HOW TO READ THE FULL SCALE TIDAL CHART



Concepts for Screen & Fence: FENCE

FENCE – OPTION 1

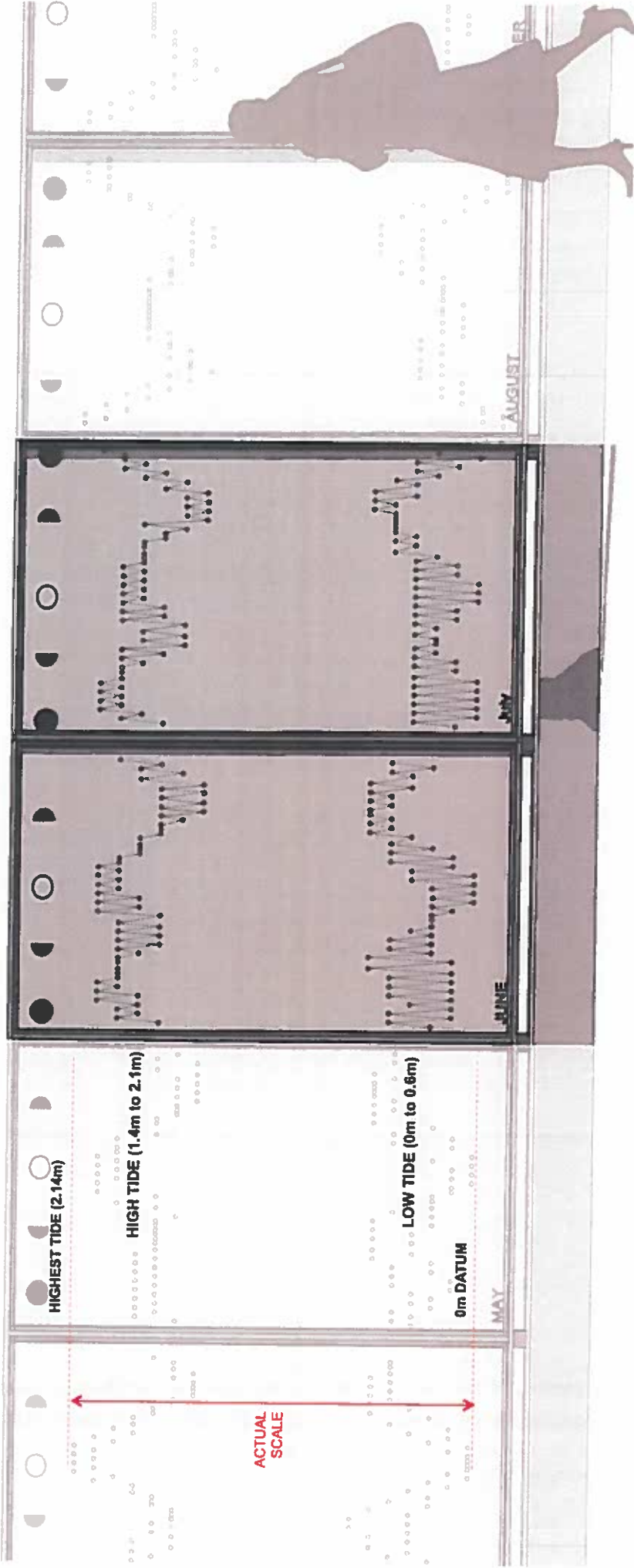


DISCOVERY CENTRE - HALIFAX
Concepts for Screen & Fence | June 30th - 2015

MORIYAMA & TESHIMA ARCHITECTS | BARRIE & LANGILLE ARCHITECTS

Concepts for Screen & Fence: FENCE

FENCE - OPTION 2

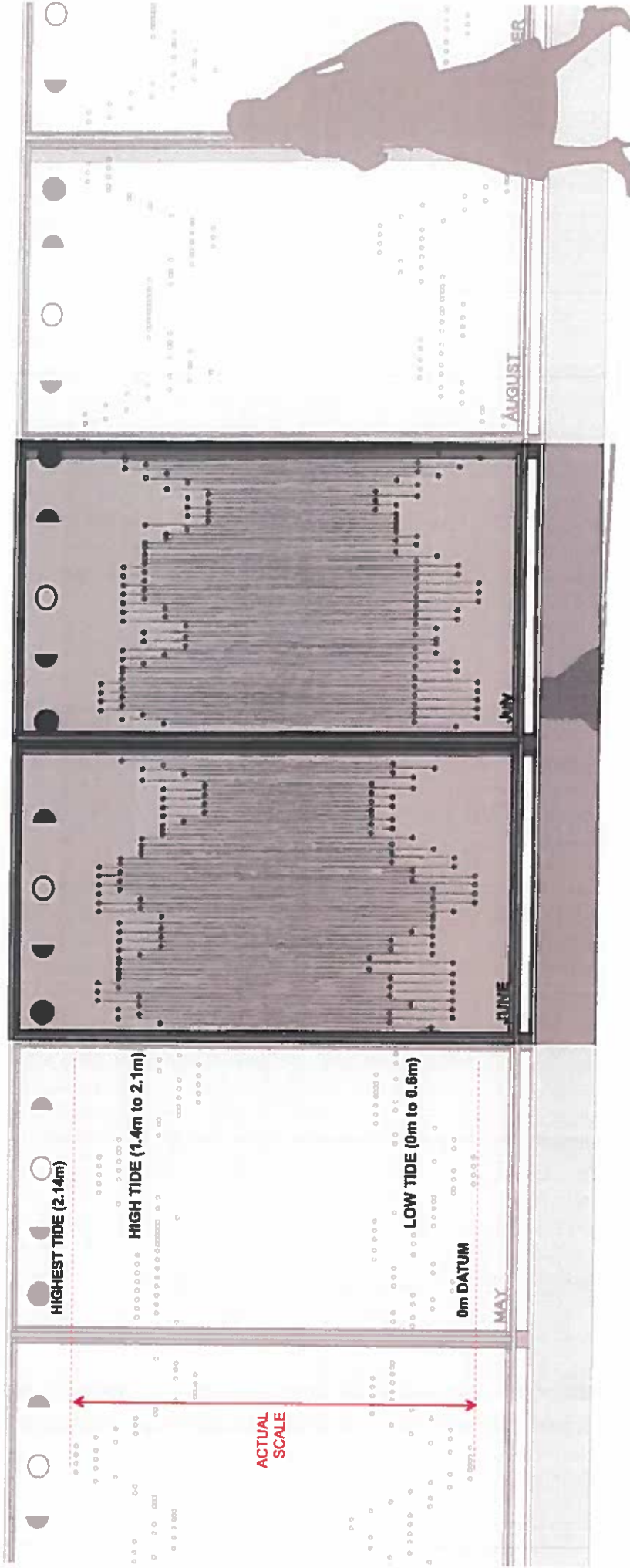


DISCOVERY CENTRE - HALIFAX
Concepts for Screen & Fence | June 30th - 2015

MORIYAMA & TESHIMA ARCHITECTS | BARRIE & LANGILLE ARCHITECTS

Concepts for Screen & Fence: FENCE

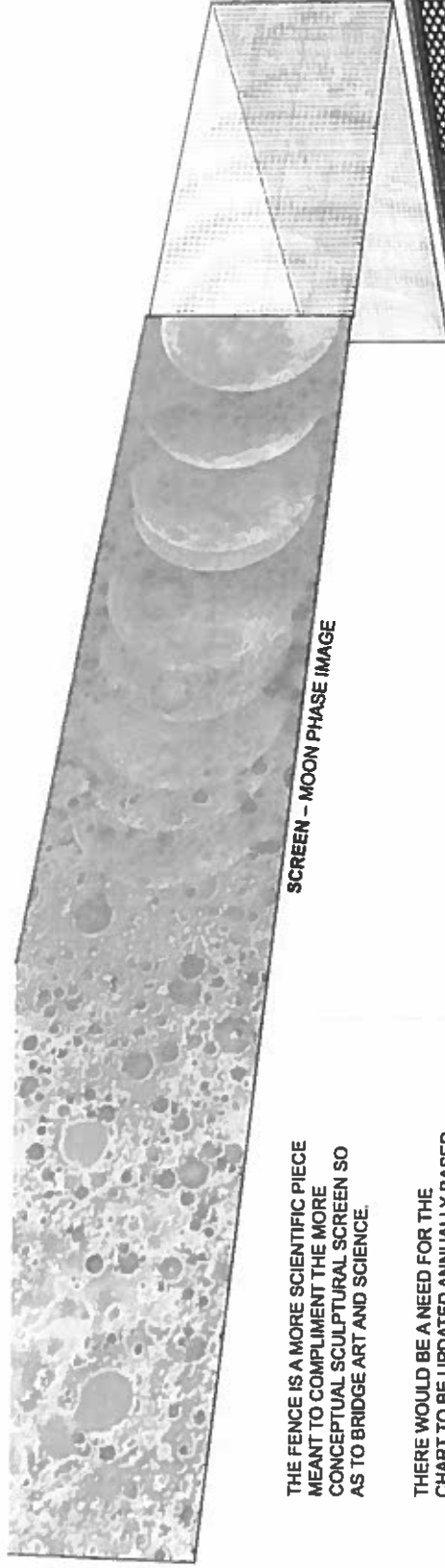
FENCE – OPTION 3



DISCOVERY CENTRE - HALIFAX
Concepts for Screen & Fence | June 30th – 2015

MORIYAMA & TESHIMA ARCHITECTS | BARRIE & LANGILLE ARCHITECTS

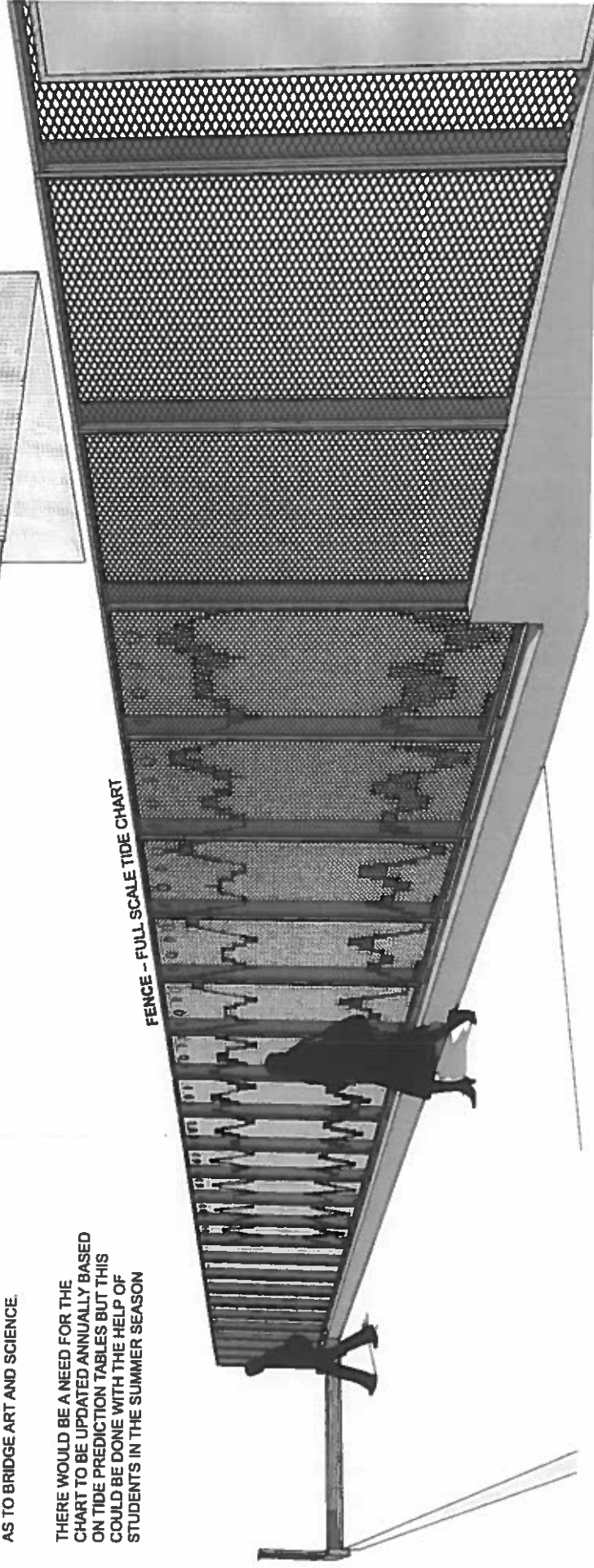
Concepts for Screen & Fence: FENCE



SCREEN - MOON PHASE IMAGE

THE FENCE IS A MORE SCIENTIFIC PIECE MEANT TO COMPLEMENT THE MORE CONCEPTUAL SCULPTURAL SCREEN SO AS TO BRIDGE ART AND SCIENCE.

THERE WOULD BE A NEED FOR THE CHART TO BE UPDATED ANNUALLY BASED ON TIDE PREDICTION TABLES BUT THIS COULD BE DONE WITH THE HELP OF STUDENTS IN THE SUMMER SEASON



FENCE - FULL SCALE TIDE CHART

DISCOVERY CENTRE - HALIFAX
Concepts for Screen & Fence | June 30th - 2015

MORIYAMA & TESHIMA ARCHITECTS | BARRIE & LANGILLE ARCHITECTS

Concepts for Screen & Fence: **FENCE**



DISCOVERY CENTRE - HALIFAX
Concepts for Screen & Fence | June 30th - 2015

MORIYAMA & TESHIMA ARCHITECTS | BARRIE & LANGILLE ARCHITECTS

Exterior Façade Studies: LANDSCAPING

CLARIFICATION: LANDSCAPING

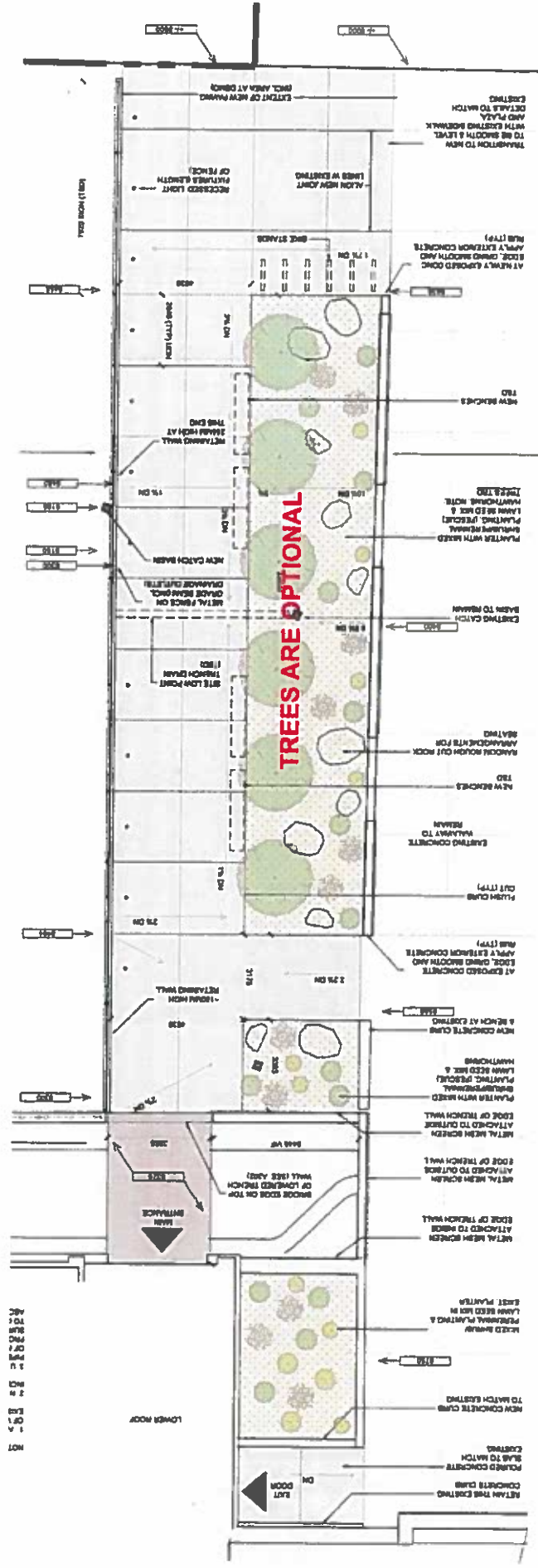
DISCOVERY CENTRE - HALIFAX
Concepts for Screen & Fence | June 30th – 2015

Exterior Façade Studies: LANDSCAPING

COMMENTS FROM DCH via May 19th email (continued)

7) DCH: Can we incorporate local NS plant life and possibly rock/geology within the landscaping feature?

MTA/BLA: Local Nova Scotia vegetation will be used as noted below. Also the stones can be selected to highlight the various stone/geology of the region. They can even come with name plates and/or small interpretive display maps for educational purposes. Refer to next slide for recommended plant species. Also note that the trees shown (ie. Washington Hawthorns) are optional as it was thought that some shade / colour would be a nice feature in the foreground to the Discovery Center however DCH may find that they block direct views to the main entry & signage.



Exterior Façade Studies: LANDSCAPING

COMMENTS FROM DCH via May 19th email (continued)



TREES ARE OPTIONAL
(to be confirmed)

DISCOVERY CENTRE - HALIFAX
Concepts for Screen & Fence | June 30th - 2015

Exterior Façade Studies: LANDSCAPING



DISCOVERY CENTRE - HALIFAX
Concepts for Screen & Fence | June 30th - 2015

MORIYAMA & TESHIMA ARCHITECTS | BARRIE & LANGILLE ARCHITECTS

Exterior Façade Studies: **LANDSCAPING**

COMMENTS FROM DCH via May 19th email (*continued*)



CRATAEGUS PHAENOPYRUM (IE. WASHINGTON HAWTHORN) – TREES ARE OPTIONAL



CORNUS SEVCEA (IE. CREEK DOGWOOD)



MYRICA PENNSYLVANICA



SALIX ALBA 'FLAME'



BETWEEN THE ROUGH CUT ROCKS, THERE WOULD BE FESCUE LAWN. IT GROWS LONG AND DOES NOT NEED TO BE MOWED.

DISCOVERY CENTRE - HALIFAX
Concepts for Screen & Fence | June 30th - 2015

MORIYAMA & TESHIMA ARCHITECTS | BARRIE & LANGILLE ARCHITECTS

Attachment C – Design Manual Checklist – Case 20553

Section	Guideline	Complies	Discussion
2	Downtown Precinct Guidelines (refer to Map 2 for Precinct Boundaries)		
2.1	Precinct 1 – Southern Waterfront (criteria for other precincts has not been included)		
2.1a	Fill existing gaps created by vacant properties and parking lots with new development.	N/A	
2.1b	Create a system of open space that includes: <ul style="list-style-type: none"> • extensions of east-west streets between Lower Water Street and the Harbour as key components of an open space network; • the boardwalk; • sidewalks along Lower Water Street, and; plazas and small parks where the extensions of the east-west streets intersect the boardwalk. 	Yes	
2.1c	Tall and slender towers provided that their placement and design are consistent with the objectives identified for this precinct and with the design guidelines.	N/A	
2.1d	Ensure that development along Lower Water Street has streetwall and landscaping conditions that emphasize its meandering qualities and emergence as an important street. Encourage measures such as sound-proofing requirements for new development to reduce the conflict created by truck traffic traveling along Lower Water Street.	Yes	
2.1e	Permit surface parking lots only when they are an accessory use and are in compliance with the Land Use By-Law and design guidelines.	N/A	
2.1f	New waterfront development shall adhere to section 2.10 of the Design Manual.	N/A	
3	General Design Guidelines		
3.1	The Streetwall		
3.1.1	Pedestrian-Oriented Commercial On certain downtown streets pedestrian-oriented commercial uses are required to ensure a critical mass of activities that engage and animate the sidewalk These streets will be defined by streetwalls with continuous retail uses and are shown on Map 3 of the Land Use By-law. All retail frontages should be encouraged to reinforce the 'main street' qualities associated with the historic downtown, including:		
3.1.1a	The articulation of narrow shop fronts, characterized by close placement to the sidewalk.	N/A	
3.1.1b	High levels of transparency (non-reflective and non-tinted glazing on a minimum of 75% of the first floor elevation).	N/A	
3.1.1c	Frequent entries.	N/A	

Attachment C – Design Manual Checklist – Case 20553

Section	Guideline	Complies	Discussion
3.1.1d	Protection of pedestrians from the elements with awnings and canopies is required along the pedestrian-oriented commercial frontages shown on Map 3, and is encouraged elsewhere throughout the downtown.	N/A	
3.1.1e	Patios and other spill-out activity is permitted and encouraged where adequate width for pedestrian passage is maintained.	Yes	
3.1.1f	Where non-commercial uses are proposed at grade in those areas where permitted, they should be designed such that future conversion to retail or commercial uses is possible.	N/A	
3.1.2	Streetwall Setback (refer to Map 6)		
3.1.2a	Minimal to no Setback (0-1.5m): Corresponds to the traditional retail streets and business core of the downtown. Except at corners or where an entire block length is being redeveloped, new buildings should be consistent with the setback of the adjacent existing buildings.	N/A	
3.1.2b	Setbacks vary (0-4m): Corresponds to streets where setbacks are not consistent and often associated with non-commercial and residential uses or house-form building types. New buildings should provide a setback that is no greater or lesser than the adjacent existing buildings.	N/A	
3.1.2c	Institutional and Parkfront Setbacks (4m+): Corresponds to the generous landscaped setbacks generally associated with civic landmarks and institutional uses. Similar setbacks designed as landscaped or hardscaped public amenity areas may be considered where new public uses or cultural attractions are proposed along any downtown street. Also corresponds to building frontages on key urban parks and squares where an opportunity exists to provide a broader sidewalk to enable special streetscape treatments and spill out activity such as sidewalk patios.	Yes	
3.1.3	Streetwall Height (refer to Map 7) To ensure a comfortable human-scaled street enclosure, streetwall height should generally be no less than 11 metres and generally no greater than a height proportional (1:1) to the width of the street as measured from building face to building face. Accordingly, maximum streetwall heights are defined and correspond to the varying widths of downtown streets: generally 15.5m, 17m or 18.5m. Consistent with the principle of creating strong edges to major public open spaces, a streetwall height of 21.5m is permitted around the perimeter of Cornwallis Park. Maximum Streetwall Heights are shown on Map 7 of the Land Use By-law.		
3.2	Pedestrian Streetscapes		
3.2.1	Design of the Streetwall		
3.2.1a	The streetwall should contribute to the fine grained	N/A	

Attachment C – Design Manual Checklist – Case 20553

Section	Guideline	Complies	Discussion
	character of the streetscape by articulating the façade in a vertical rhythm that is consistent with the prevailing character of narrow buildings and storefronts.		
3.2.1b	The streetwall should generally be built to occupy 100% of a property's frontage along streets. [note: the DHLUM permits a reduction of 80% on non-central blocks]	N/A	
3.2.1c	Generally, streetwall heights should be proportional to the width of the right of way, a 1:1 ratio between streetwall height and right of way width. Above the maximum streetwall height, further building heights are subject to upper storey stepbacks.	N/A	
3.2.1d	In areas of contiguous heritage resources, streetwall height should be consistent with heritage buildings.	N/A	
3.2.1e	Streetwalls should be designed to have the highest possible material quality and detail.	N/A	
3.2.1f	Streetwalls should have many windows and doors to provide eyes on the street and a sense of animation and engagement.	N/A	
3.2.1g	Along pedestrian frontages at grade level, blank walls shall not be permitted, nor shall any mechanical or utility functions (vents, trash vestibules, propane vestibules, etc.) be permitted.	N/A	
3.2.2	Building Orientation and Placement		
3.2.2a	All buildings should orient to, and be placed at, the street edge with clearly defined primary entry points that directly access the sidewalk.	N/A	
3.2.2b	Alternatively, buildings may be sited to define the edge of an on-site public open space, for example, plazas, promenades, or eroded building corners resulting in the creation of public space (see diagram at right). Such treatments are also appropriate for Prominent Visual Terminus sites identified on Map 9 of the Land Use By-law.	N/A	
3.2.2c	Side yard setbacks are not permitted in the Central Blocks defined on Map 8 of the Land Use Bylaw, except where required for through-block pedestrian connections or vehicular access.	N/A	
3.2.3	Retail Uses		
3.2.3a	All mandatory retail frontages (Map 3 of Land Use By-law) should have retail uses at-grade with a minimum 75% glazing to achieve maximum visual transparency and animation.	N/A	

Attachment C – Design Manual Checklist – Case 20553

Section	Guideline	Complies	Discussion
3.2.3b	Weather protection for pedestrians through the use of well-designed awnings and canopies is required along mandatory retail frontages (Map 3) and is strongly encouraged in all other areas.	N/A	
3.2.3c	Where retail uses are not currently viable, the grade-level condition should be designed to easily accommodate conversion to retail at a later date.	N/A	
3.2.3d	Minimize the transition zone between retail and the public realm. Locate retail immediately adjacent to, and accessible from, the sidewalk.	N/A	
3.2.3e	Avoid deep columns or large building projections that hide retail display and signage from view.	N/A	
3.2.3f	Ensure retail entrances are located at or near grade. Avoid split level, raised or sunken retail entrances. Where a changing grade along a building frontage may result in exceedingly raised or sunken entries it may be necessary to step the elevation of the main floor slab to meet the grade changes.	N/A	
3.2.3g	Commercial signage should be well designed and of high material quality to add diversity and interest to retail streets, while not being overwhelming.	N/A	
3.2.4	Residential Uses		
3.2.4a	Individually accessed residential units (i.e. town homes) should have front doors on the street, with appropriate front yard privacy measures such as setbacks and landscaping. Front entrances and first floor slabs should be raised above grade level for privacy, and should be accessed through means such as steps, stoops and porches.	N/A	
3.2.4b	Residential units accessed by a common entrance and lobby may have the entrance and lobby elevated or located at grade-level, and the entrance should be clearly recognizable from the exterior through appropriate architectural treatment.	N/A	
3.2.4c	Projects that feature a combination of individually accessed units in the building base with common entrance or lobby-accessed units in the upper building, are encouraged.	N/A	
3.2.4d	Units with multiple bedrooms (2 and 3 bedroom units) should be provided that have immediately accessible outdoor amenity space. The amenity space may be at-grade or on the landscaped roof of a podium.	N/A	
3.2.4e	Units provided to meet housing affordability requirements	N/A	

Attachment C – Design Manual Checklist – Case 20553

Section	Guideline	Complies	Discussion
	shall be uniformly distributed throughout the development and shall be visually indistinguishable from market-rate units through the use of identical levels of design and material quality.		
3.2.4f	Residential uses introduced adjacent to pre-existing or concurrently developed eating and drinking establishments should incorporate acoustic dampening building materials to mitigate unwanted sound transmission.	N/A	
3.2.5	Sloping Conditions		
3.2.5a	Maintain active uses at-grade, related to the sidewalk, stepping with the slope. Avoid levels that are distant from grade.	N/A	
3.2.5b	Provide a high quality architectural expression along facades. Consider additional detailing, ornamentation or public art to enhance the experience.	N/A	
3.2.5c	Provide windows, doors and other design articulation along facades; blank walls are not permitted.	N/A	
3.2.5d	Articulate the façade to express internal floor or ceiling lines; blank walls are not permitted.	N/A	
3.2.5e	Wrap retail display windows a minimum of 4.5 metres around the corner along sloping streets, where retail is present on the sloping street.	N/A	
3.2.5f	Wherever possible, provide pedestrian entrances on sloping streets. If buildings are fully accessible at other entrances, consider small flights of steps or ramps up or down internally to facilitate entrances on the slope.	N/A	
3.2.5g	Flexibility in streetwall heights is required in order to transition from facades at lower elevations to facades at higher elevations on the intersecting streets. Vertical corner elements (corner towers) can facilitate such transitions, as can offset or broken cornice lines at the top of streetwalls on sloping streets.	N/A	
3.2.6	Elevated Pedestrian Walkways (<i>criteria not included – no pedway is proposed</i>)		
3.2.7	Other Uses		
3.2.7a	Non-commercial uses at-grade should animate the street with frequent entries and windows.	N/A	
3.3	Building Design		
3.3.1	Building Articulation		
3.3.1a	To encourage continuity in the streetscape and to ensure	N/A	

Attachment C – Design Manual Checklist – Case 20553

Section	Guideline	Complies	Discussion
	vertical breaks in the façade, buildings shall be designed to reinforce the following key elements through the use of setbacks, extrusions, textures, materials, detailing, etc.: <ul style="list-style-type: none"> • Base: Within the first four storeys, a base should be clearly defined and positively contribute to the quality of the pedestrian environment through animation, transparency, articulation and material quality. • Middle: The body of the building above the base should contribute to the physical and visual quality of the overall streetscape. • Top: The roof condition should be distinguished from the rest of the building and designed to contribute to the visual quality of the skyline. 		
3.3.1b	Buildings should seek to contribute to a mix and variety of high quality architecture while remaining respectful of downtown’s context and tradition.	Yes	
3.3.1c	To provide architectural variety and visual interest, other opportunities to articulate the massing should be encouraged, including vertical and horizontal recesses or projections, datum lines, and changes in material, texture or colour.	Yes	
3.3.1d	Street facing facades should have the highest design quality, however, all publicly viewed facades at the side and rear should have a consistent design expression.	Yes	
3.3.2	Materials		
3.3.2a	Building materials should be chosen for their functional and aesthetic quality, and exterior finishes should exhibit quality of workmanship, sustainability and ease of maintenance.	Yes	
3.3.2b	Too varied a range of building materials is discouraged in favour of achieving a unified building image.	Yes	
3.3.2c	Materials used for the front façade should be carried around the building where any facades are exposed to public view at the side or rear.	Yes	
3.3.2d	Changes in material should generally not occur at building corners.	Yes	
3.3.2e	Building materials recommended for new construction include brick, stone, wood, glass, in-situ concrete and pre-cast concrete.	No	The Design Manual emphasizes quality of materials and that they are true to their nature. The proposal is for grey coloured steel siding that respects the tonal qualities of the existing building but does not try

Attachment C – Design Manual Checklist – Case 20553

Section	Guideline	Complies	Discussion
			to mimic the materials of the office block. These materials are not specifically referenced in the Design Manual but it is felt they appropriately reflect the existing industrial character of the original building.
3.3.2f	In general, the appearance of building materials should be true to their nature and should not mimic other materials.	No	The Design Manual emphasizes quality of materials and that they are true to their nature. The proposal is for grey coloured steel siding that respects the tonal qualities of the existing building but does not try to mimic the materials of the office block. These materials are not specifically referenced in the Design Manual but it is felt they appropriately reflect the existing industrial character of the original building.
3.3.2g	Stucco and stucco-like finishes shall not be used as a principle exterior wall material.	Yes	
3.3.2h	Vinyl siding, plastic, plywood, concrete block, EIFS (exterior insulation and finish systems where stucco is applied to rigid insulation), and metal siding utilizing exposed fasteners are prohibited.	Yes	
3.3.2i	Darkly tinted or mirrored glass is prohibited. Clear glass is preferable to light tints. Glare reduction coatings are preferred.	Yes	
3.3.2j	Unpainted or unstained wood, including pressure treated wood, is prohibited as a building material for permanent decks, balconies, patios, verandas, porches, railings and other similar architectural embellishments, except that this guidelines shall not apply to seasonal sidewalk cafes.	Yes	
3.3.3	Entrances		
3.3.3a	Emphasize entrances with such architectural expressions as height, massing, projection, shadow, punctuation, change in roof line, change in materials, etc.	Yes	

Attachment C – Design Manual Checklist – Case 20553

Section	Guideline	Complies	Discussion
3.3.3b	Ensure main building entrances are covered with a canopy, awning, recess or similar device to provide pedestrian weather protection.	Yes	
3.3.3c	Modest exceptions to setback and stepback requirements are possible to achieve these goals.	N/A	
3.3.4	Roof Line and Roofscapes		
3.3.4a	Buildings above six storeys (mid and high-rise) contribute more to the skyline of individual precincts and the entire downtown, so their roof massing and profile must include sculpting, towers, night lighting or other unique features.	Yes	
3.3.4b	The expression of the building top (see previous) and roof, while clearly distinguished from the building middle, should incorporate elements of the middle and base such as pilasters, materials, massing forms or datum lines.	Yes	
3.3.4c	Landscaping treatment of all flat rooftops is required. Special attention shall be given to landscaping rooftops in precincts 3, 5, 6 and 9, which abut Citadel Hill and are therefore pre-eminently visible. The incorporation of living “green roofs” is strongly encouraged.	No	The applicant is not proposing any landscape treatment of the flat rooftops. Any landscape treatment, other than vegetation, such as a hardscape would not be visible from ground level and not discernable in views from nearby buildings.
3.3.4d	Ensure all rooftop mechanical equipment is screened from view by integrating it into the architectural design of the building and the expression of the building top. Mechanical rooms and elevator and stairway head-houses should be incorporated into a single well-designed roof top structure. Sculptural and architectural elements are encouraged to add visual interest.	No	The proposal shows a rooftop mechanical unit (Air Handling Unit) at the rear of the north elevation. Effective screening would need be mounted on a building other than the subject building.
3.3.4e	Low-rise flat roofed buildings should provide screened mechanical equipment. Screening materials should be consistent with the main building design. Sculptural and architectural elements are encouraged for visual interest as the roofs of such structures have very high visibility.	No	The proposal shows a rooftop mechanical unit (Air Handling Unit) at the rear of the north elevation. Effective screening would need to be mounted on a building other than the subject building.
3.3.4f	The street-side design treatment of a parapet should be carried over to the back-side of the parapet for a complete,	Partially	The proposal shows a rooftop mechanical unit

Attachment C – Design Manual Checklist – Case 20553

Section	Guideline	Complies	Discussion
	finished look where they will be visible from other buildings and other high vantage points.		(Air Handling Unit) at the rear of the north elevation. Effective screening would need be mounted on a building other than the subject building.
3.4	Civic Character		
3.4.1	Prominent Frontages and View Termini		
3.4.1a	Prominent Visual Terminus Sites: These sites identify existing or potential buildings and sites that terminate important view corridors and that can strengthen visual connectivity across downtown. On these sites distinctive architectural treatments such as spires, turrets, belvederes, porticos, arcades, or archways should be provided. Design elements (vertical elements, porticos, entries, etc.) should be aligned to the view axis. Prominent Visual Terminus Sites are shown on Map 9 in the Land Use By-law.	N/A	
3.4.1b	Prominent Civic Frontage: These frontages identify highly visible building sites that front onto important public open spaces such as the Citadel and Cornwallis Park, as well as important symbolic or ceremonial visual and physical connections such as the waterfront boardwalks, the proposed Grand Promenade linking the waterfront to the Town Clock, and other east-west streets that connect the downtown to the waterfront. Prominent Civic Frontages are shown on Map 1 in Appendix A of the Design Manual.	Yes	
3.4.2	Corner Sites		
3.4.2a	Provision of a change in the building massing at the corner, in relation to the streetwall.	N/A	
3.4.2b	Provision of distinctive architectural treatments such as spires, turrets, belvederes, porticos, arcades, or archways.	N/A	
3.4.2c	Developments on all corner sites must provide a frontal design to both street frontages.	N/A	
3.4.2d	Alternatively, buildings may be sited to define the edge of an on-site public open space, for example, plazas, promenades, or eroded building corners resulting in the creation of public space.	N/A	
3.4.3	Civic Buildings		
3.4.3e	Civic buildings entail a greater public use and function, and therefore should be prominent and recognizable, and be designed to reflect the importance of their civic role.	N/A	

Attachment C – Design Manual Checklist – Case 20553

Section	Guideline	Complies	Discussion
3.4.3f	Provide distinctive architectural treatments such as spires, turrets, belvederes, porticos, arcades, or archways.	N/A	
3.4.3g	Ensure entrances are large and clearly visible. Provide a building name and other directional and wayfinding signage.	N/A	
3.4.3h	Very important public buildings should have unique landmark design. Such buildings include transit terminals, museums, libraries, court houses, performing arts venues, etc.	N/A	
3.5	Parking Services and Utilities		
3.5.1	Vehicular Access, Circulation, Loading and Utilities		
3.5.1a	Locate parking underground or internal to the building (preferred), or to the rear of buildings.	N/A	
3.5.1b	Ensure vehicular and service access has a minimal impact on the streetscape, by minimizing the width of the frontage it occupies, and by designing integrated access portals and garages.	N/A	
3.5.1c	Locate loading, storage, utilities, areas for delivery and trash pick-up out of view from public streets and spaces, and residential uses.	Yes	
3.5.1d	Where access and service areas must be visible from or shared with public space, provide high quality materials and features that can include continuous paving treatments, landscaping and well designed doors and entries.	N/A	
3.5.1e	Coordinate and integrate utilities, mechanical equipment and meters with the design of the building, for example, using consolidated rooftop structures or internal utility rooms.	Yes	
3.5.1f	Locate heating, venting and air conditioning vents away from public streets. Locate utility hook-ups and equipment (i.e. gas meters) away from public streets and to the sides and rear of buildings, or in underground vaults.	Yes	
3.5.2	Parking Structures <i>(criteria not included - refers to stand-alone parking structures)</i>		
3.5.3	Surface Parking <i>(criteria not included – no surface parking is proposed)</i>		
3.5.4	Lighting		
3.5.4a	Attractive landscape and architectural features can be highlighted with spot-lighting or general lighting placement.	Yes	
3.5.4b	Consider a variety of lighting opportunities inclusive of street lighting, pedestrian lighting, building up- or	Yes	

Attachment C – Design Manual Checklist – Case 20553

Section	Guideline	Complies	Discussion
	down-lighting, internal building lighting, internal and external signage illumination (including street addressing), and decorative or display lighting.		
3.5.4c	Illuminate landmark buildings and elements, such as towers or distinctive roof profiles.	Yes	
3.5.4d	Encourage subtle night-lighting of retail display windows.	N/A	
3.5.4e	Ensure there is no light trespass onto adjacent residential areas by the use of shielded “full cut-off” fixtures.	Yes	
3.5.4f	Lighting shall not create glare for pedestrians or motorists by presenting unshielded lighting elements in view.	Yes	
3.5.5	Signs (<i>no plans have been provided about specific signage – signs will be subject of separate future permit applications</i>)		
3.6	Site Plan Variances		
3.6.3	Streetwall Height Variance		
3.6.3a	The streetwall height is consistent with the objectives and guidelines of the Design Manual; and	N/A	
3.6.3b	The modification is for a corner element that is used to join streetwalls of differing heights; or	N/A	
3.6.3c	The streetwall height of abutting buildings is such that the streetwall height would be inconsistent with the character of the street; or	N/A	
3.6.3d	Where a landmark building element is called for pursuant to the Design Manual	N/A	
3.6.5	Upper Storey Streetwall Stepback Variance		
3.6.5a	The upper storey streetwall stepback is consistent with the objectives and guidelines of the Design Manual; and	N/A	
3.6.5b	The modification results in a positive benefit such as improved heritage preservation or the remediation of an existing blank building wall.	N/A	
3.6.8	Maximum Height Variance		
3.6.8a	The maximum height is consistent with the objectives and guidelines of the Design Manual; and	N/A	
3.6.8b	The additional building height is for rooftop architectural features and the additional height does not result in an increase in gross floor area;	N/A	
3.6.8c	The maximum building height is less than 1.5 metres below the View Plane or Rampart height requirements;	N/A	

Attachment C – Design Manual Checklist – Case 20553

Section	Guideline	Complies	Discussion
3.6.8d	Where a landmark building element is provided pursuant to the Design Manual; or	N/A	
3.6.8e	Where the additional height is shown to enable the adaptive re-use of heritage buildings.	N/A	
4	Heritage Design Guidelines		
4.1	New Development in Heritage Context		
4.1.1	Replicas and Reconstructed Buildings		
	The replication of a historic building should proceed in a similar manner to the restoration of an existing but altered or deteriorated structure. Design of the building should be based on documentary evidence including photographs, maps, surveys and historic design and construction drawings. The interior space and basic structure of a replica building is not required to, but may, also use historic materials or details as long as the exterior presentation replicates the original structure.	N/A	
4.1.2	New Buildings in Heritage Contexts		
	Entirely new buildings may be proposed where no previous buildings existed, where original buildings are missing, or where severely deteriorated or non-historic buildings are removed. The intention in designing such new buildings should not be to create a false or ersatz historic building, instead the objective must be to create a sensitive well designed new structure of its time that fits and is compatible with the character of the district or its immediate context. The design of new buildings should carefully consider requirements elsewhere in these guidelines for density, scale, height, setbacks, stepbacks, coverage, landscaped open space, view corridors, and shadowing. Design considerations include: contemporary design, material palette, proportions of parts, solidity vs. transparency and detailing.	N/A	
4.1.3	Contemporary Design		
	New work in heritage contexts should not be aggressively idiosyncratic but rather it should be neighbourly and respectful of its heritage context, while at the same time representing current design philosophy. Quoting the past can be appropriate; however, it should avoid blurring the line between real historic buildings, bridges and other structures. Contemporary as a design statement does not simply mean current. Current designs with borrowed detailing inappropriately, inconsistently, or incorrectly used, such as pseudo-Victorian detailing, should be avoided.	N/A	

Attachment C – Design Manual Checklist – Case 20553

Section	Guideline	Complies	Discussion
4.1.4	Material Palette		
	<p>As there is a very broad range of materials in today's design palette, materials proposed for new buildings in a heritage context should include those historically in use. The use and placement of these materials in a contemporary composition and their incorporation with other modern materials is critical to the success of the fit of the proposed building in its context. The proportional use of materials, drawing lines out of the surrounding context, careful consideration of colour and texture all add to success of a composition.</p>	N/A	
4.1.5	Proportion of Parts		
	<p>Architectural composition has always had at its root the study of proportion. In the design of new buildings in a heritage context, work should take into account the proportions of buildings in the immediate context and consider a design solution with proportional relationships that make a good fit. An example of this might be windows. Nineteenth century buildings tended to use a vertical proportion system in the design and layout of windows including both overall windows singly or in built up groups and the layout of individual panes.</p>	N/A	
4.1.6	Solidity versus Transparency		
	<p>Similar to proportion, it is a characteristic of historic buildings of the 19th century to have more solid walls with punched window openings. This relationship of solid to void makes these buildings less transparent. It was a characteristic that was based upon technology, societal standards for privacy, and architectural tradition. In contrast buildings of many 20th century styles use large areas of glass and transparency as part of the design philosophy. The relationship of solidity to transparency is a characteristic of new buildings that should be carefully considered. It is an element of fit. The level of transparency in the new work should be set at a level that provides a good fit on street frontages with existing buildings that define the character of the street in a positive way.</p>	N/A	
4.1.7	Detailing		
	<p>For new buildings, detailing should refer to the heritage attributes of the immediate context. Detailing can be more contemporary yet with a deference to scale, repetition, lines and levels, beam and column, solid and transparent that relates to the immediate context. In past styles, structure was often unseen, hidden behind a veneer of other surfaces, and detailing was largely provided by the use of coloured, shaped, patterned or carved masonry or added</p>	N/A	

Attachment C – Design Manual Checklist – Case 20553

Section	Guideline	Complies	Discussion
	traditional ornament, moldings, finials, cresting and so on. In contemporary buildings every element of a building can potentially add to the artistic composition of architectural, structural, mechanical and even electrical systems.		
4.4	Guidelines for Integrated Developments and Additions		
4.4.1	Building Setback		
4.4.1a	<p>New buildings proposed to abut heritage buildings on the same site (integrated development) should generally transition to heritage buildings by introducing a building setback from the building line. This setback can be accomplished in several alternate ways, including:</p> <ul style="list-style-type: none"> • new construction is entirely setback from the heritage building, resulting in a free-standing heritage structure . This is suitable where multiple façades have heritage value (see diagram for <i>Option 1</i> at left). • new construction is setback from the street frontage of the heritage building, but only to a depth required to give the heritage structure visual prominence (see diagram for <i>Option 2</i> at left). • new construction is setback along its entire façade from the street line established by the heritage structure (see diagram for <i>Option 3</i> at left). 	N/A	
4.4.1b	Consideration should only be given to the construction of new buildings abutting, or as an addition to, a heritage resource, when the parts of the heritage building that will be enclosed or hidden from view by the new construction do not contain significant heritage attributes.	N/A	
4.4.2	Cornice Line & Upper Level Stepbacks		
4.4.2a	Maintain the same or similar cornice height for the podium building (building base) to create a consistent streetwall height, reinforcing the 'frame' for public streets and spaces.	N/A	
4.4.2b	Stepback building elements that are taller than the podium or streetwall height. Stepbacks should generally be a minimum of 3 metres for flat-roofed streetwall buildings and increase significantly (up to 10 metres) for landmark buildings, and buildings with unique architectural features such as peaked roofs or towers.	N/A	
4.4.2c	Greater flexibility in the contemporary interpretation of historic materials and design elements is permitted.	N/A	
4.4.3	Facade Articulation and Materials		

Attachment C – Design Manual Checklist – Case 20553

Section	Guideline	Complies	Discussion
4.4.3a	<i>Similarity:</i> Maintain the same architectural order and rhythm of both horizontal and vertical divisions in the facade.	N/A	
4.4.3b	Provide similar materials to existing heritage buildings.	N/A	
4.4.3c	Typical materials are masonry, usually brick or stone, in small modular units (bricks, cut stones).	N/A	
4.4.3d	Where materials differ, for example concrete, provide fine scale articulation of the surface through score lines or modular units.	N/A	
4.4.3e	Provide similar colour palettes, typically neutrals and earth tones.	N/A	
4.4.3f	<i>Contrast:</i> Consider existing architectural order and rhythm of both horizontal and vertical divisions in the façade in the articulation of the new building.	N/A	
4.4.3g	Provide contrasting materials and surface treatments that complement the heritage building. Use of glass can be effective both for its transparency and reflectivity.	N/A	
4.4.3h	Ensure materials and detailing are of the highest quality. In a downtown-wide context, use of contrast should result in the most exemplary buildings in the downtown.	N/A	
4.5	Guidelines for Façade Alteration on Registered Heritage Buildings and Buildings in Heritage Conservation Districts		
4.5.1	Rhythm of Bays and Shop Fronts		
4.5.1a	The traditional architectural elements of historic building facades such as columns, pilasters, entries and shop fronts which establish a pedestrian scale and rhythm, should be retained.	N/A	
4.5.1b	Consolidating two (or more) shop fronts into one is discouraged, since it reduces pedestrian interest. If such consolidation is proposed, the retention of original historic building features should not be compromised, even if this means retaining a redundant entry configuration.	N/A	
4.5.2	Lower Facade (Storefront)		
4.5.2a	Existing traditional shop fronts should be retained.	N/A	
4.5.2b	Historic photos and drawings should be used to support the restoration or replication of decorative elements of historic significance in the shop front.	N/A	
4.5.2c	The following features should be incorporated in the design of rehabilitated or restored shop fronts, as applicable:	N/A	

Attachment C – Design Manual Checklist – Case 20553

Section	Guideline	Complies	Discussion
	<ul style="list-style-type: none"> • Restoration of cast iron or masonry elements; or • A high percentage of glazing, in the display window area, transom windows and in the entry door(s); or • A recessed entry with a rectangular or trapezoidal plan; or • Transom window above the entry and display windows, often stretching the full width of the shop front; or • Base panels rich in detail and of durable materials; or • A shop front cornice and sign band which is generally a reduced version of the main cornice atop the building; or • Access to upper floors should be in the original configuration. 		
4.5.3	Contemporary Expression Within the Historic Shop front Frame		
	<p>The objective is to allow and encourage contemporary shop front design in historic commercial buildings to support and stimulate revitalization, through the following approaches:</p> <ul style="list-style-type: none"> • Traditional Approach • Infolding Windows and Doors 	N/A	
4.5.4	Upper Façade		
4.5.4a	To maintain this upper floor pattern and texture, new window openings are encouraged to be repetitive, and organized in relationship to the vertical elements which frame and divide the facade.	N/A	
4.5.4b	Vertical elements such as pilasters, columns, cornices, and projecting bays should be retained.	N/A	
4.5.4c	Historic photos and drawings should be used to support the restoration or replication of decorative elements of historic significance on the upper facade.	N/A	
4.5.4d	Existing projecting bays or other architectural elements, such as cornices that project over the public right of way, should be retained provided that Building By law, life safety and other pertinent concerns have been satisfactorily addressed.	N/A	
4.5.4e	Existing fenestration patterns should be retained. Where new openings are proposed, they should be compatible with the existing architectural features of the building.	Yes	
4.5.5	Windows		
4.5.5a	Where there are existing windows within historic window	Yes	

Attachment C – Design Manual Checklist – Case 20553

Section	Guideline	Complies	Discussion
	openings which are either original or more recent replacements in the historical form and material, every effort should be made to retain and repair them.		
4.5.5b	Repair of existing wood windows should use wood sash and frames.	N/A	
4.5.5c	Where existing appropriate windows are too deteriorated to repair, replacement windows should replicate either original windows, as documented by historical photographs or drawings or the existing windows.	N/A	
4.5.5d	Replacement of wooden windows should be in wood, and should match the shape, proportion, type of operation, detail, colour and clarity of glass of the wood original when painted.	N/A	
4.5.5e	Where they exist, lintels, sills, and other historic window surround elements should be retained.	N/A	
4.5.5f	The original fenestration pattern should be retained. Where new openings are proposed, they should be compatible with the original composition in terms of alignment, proportion, surrounds, and ornamentation.	Yes	
4.5.5g	<p>In the event that the original windows have been replaced and the existing windows are inappropriate to the building, then new windows should be designed to replicate the original window's size, configuration and appearance as based on archival information. If such information is not available, the following criteria should be referenced:</p> <ul style="list-style-type: none"> • The dimensions of frames, sashes, muntins, etc., should be similar to traditional wood windows. • The window should be divided into a minimum of two sash or panes; more divisions are also possible. • Operable windows are encouraged and the method of opening should replicate that of traditional window types. • Horizontally sliding windows are discouraged as they are not traditional. • Glass should be clear; tints, colours or mirrored surfaces are not acceptable • Frames and sashes should preferably be of painted or stained wood but aluminum clad windows are also acceptable. • Vinyl windows are not permitted • The sash should be recessed within the window frame at least 4 inches from the exterior surface of the building facade. 	N/A	
4.5.6	Materials – The objective is to retain the character of historic building facades by using traditional		

Attachment C – Design Manual Checklist – Case 20553

Section	Guideline	Complies	Discussion
	materials for both rehabilitation and new construction.		
4.5.6a	Brick in a range of buff/beige through red colours, traditional dimension.	N/A	
4.5.6b	Building stone, particularly granite and sandstone.	N/A	
4.5.6c	Terracotta, tile and glazed brick materials and decorative elements.	N/A	
4.5.6d	Cast iron and pressed metal decorative elements, particularly cornices.	N/A	
4.5.6e	Wood elements for shop front base panels, windows, bay window framing.	N/A	
4.5.6f	Parged or cement rendered surfaces.	N/A	
4.5.6g	Specially treated concrete finishes for rear or for some secondary surfaces.	N/A	
4.5.6h	Wooden clapboards or shingles.	N/A	
	For existing buildings, where new materials are required for repair, they should match the old materials they are replacing. If this is not feasible for cost, technical or availability reasons, then new substitute materials should be largely indistinguishable from original materials. The treatment of existing materials is primarily that of good conservation techniques. Detailed recommendations for conservation of materials can be found in the <i>Standards and Guidelines for Conservation of Historic Places in Canada, 2nd Edition</i> .	N/A	
4.5.6i	Vinyl siding, plastic, plywood, concrete block, and EIFS (exterior insulation and finish systems where stucco is applied to rigid insulation), and metal siding utilizing exposed fasteners are prohibited for use on historic buildings in the downtown.	N/A	
4.5.6j	Darkly tinted or mirrored glass is also prohibited.	N/A	
	Generally, roofs on historic commercial buildings in the downtown are flat and covered with bituminous membrane, tar and gravel finish, etc. These materials are acceptable for both replacement roofs on existing buildings and new roofs on building additions. Some historic buildings have slate or wood shingle roofs. Where possible, these should be repaired or replaced with like materials. Where this is not feasible, then asphalt shingle roofs in black or dark grey tones are acceptable.	N/A	
4.5.7	Cornice and Parapets		

Attachment C – Design Manual Checklist – Case 20553

Section	Guideline	Complies	Discussion
4.5.7a	The retention of original cornices and parapets is required.	N/A	
4.5.7b	Repairs should be undertaken with matching materials and anchoring systems should be reinforced to ensure safety.	N/A	
4.5.7c	If cost or structural considerations make conservation of existing cornices difficult, substitute materials can be considered.	N/A	
4.5.7d	Where original cornices have disappeared, their replacement can be considered based on archival evidence.	N/A	
4.5.8	Penthouse & Minor Rooftop Structures		
4.5.8a	Where feasible, existing mechanical penthouses should be retained.	N/A	
4.5.8b	New rooftop elements or equipment on top of heritage buildings, such as satellite dishes and skylights should be set back far enough from the front or other facades to be inconspicuous from the sidewalk on the opposite side of the street.	N/A	
4.5.8c	The cladding material for new rooftop elements should be compatible with and distinguishable from those of the main building.	Yes	
4.5.9	Awnings and Canopies		
4.5.9a	Retractable fabric awnings are encouraged for use on all buildings. The fabric (usually heavy canvas, not shiny or translucent vinyl) can be a solid colour, preferably a traditional dark colour, or striped and usually the ends of the frame are left open.	N/A	
4.5.9b	Plain valences, often with a sign band are acceptable.	N/A	
4.5.9c	In some instances, metal and glass fixed canopies are appropriate, particularly if there is archival evidence of their precedent on the building or on similar historic buildings.	N/A	
4.5.9d	Stretch skin plastic or vinyl awnings are prohibited.	N/A	
4.5.9e	Curved stretch skin plastic and idiosyncratically shaped fixed awnings are prohibited.	N/A	
4.5.9f	Internal illumination of awnings or canopies is prohibited.	N/A	