

NARRATIVE IN ARCHITECTURE

How The Built Environment Tells Our Stories

FINAL THESIS SUBMISSION

December 15, 2017



We seek two things in our buildings.
We want them to shelter us. And we
want them to speak to us – to speak
to us of whatever we find important
and need to be reminded of.

- John Ruskin

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THESIS OUTLINE

We are story tellers. We share our knowledge and our experience through a collective narrative that forms the basis of our culture. This uniquely human trait defines us as a species and establishes the foundation for all other human activity. Stories passed from one generation to the next free us from the confined experience of a single lifespan and allow us to establish our world view based on past understanding and perspectives.

Over time we have used all the tools at our disposal to capture and convey our meaning. It is only in recent times however that we have learned to use written language to preserve our stories. The majority of our collective experience was encoded in other forms of expression - myth, song, poem, dance, art, ritual, sculpture and architecture.

By intent or happenstance our stories are woven into the fabric of our built environment. Architecture tells our stories at all scales, from the concentric rings of a city wall to the recycled window in a tree house. This process continues today with new materials, technology and construction techniques that expand our capacity to tell ever larger stories.

My intention through this thesis project has been to explore the concept of narrative as a design generator and to identify key elements of a design process that capitalizes on this influence.

The narrative strength of architecture is perhaps most clearly experienced in those structures that are commissioned to hold our cultural identity; museums. Tales of triumph and despair, childhood and history, art and science, the unique and the mundane. The buildings that contain them are not impartial, empty vessels. They are form makers that establish a narrative in which the artifacts can speak for themselves.

For this reason I have focused my explorations through the specific lens of museum design, as a way to access the broader question:

How can we use the inherent narrative in architecture to inform and enrich our design process?



*Fictional Library of Babel
- 1941 Jorge Luis Borges*

NARRATIVE IN ARCHITECTURE

Initial Presentation

April 8, 2017

EXPLORATION OF NARRATIVE

ORIGINS OF NARRATIVE

“We tell ourselves stories in order to live”

- Joan Didion

We are finite beings, living in a universe of infinite complexity



To function, we have evolved to seek patterns in the information that we receive



To understand and share our experience we invest the patterns with meaning. A narrative



*Before the development of written language we shared our narratives through an oral history.
The cultural inheritance of a community passed from one generation to the next through the words of the story teller.*



To enhance and help remember the stories we shared in their telling using all the tools at our disposal including art, poetry, song, ritual, dance, sculpture...



Lascaux Cave Painting 17,000 B.C. - Montignac, France



Poulnabrone Dolmen 4,000 B.C. - County Clare, Ireland

ARCHITECTURAL NARRATIVES

“While narratives in other media are based on representations of space and time, architectural narratives are organized *in* space and time”

- Sophia Psarra

PERSONAL VISION



NATIONAL IDENTITY



CULTURAL SCRIPT



WRIT LARGE



ASPIRATIONAL



FUNCTIONAL



EVEN IN THE ABSENCE OF ORGANIZATION, A STORY IS EMERGENT



SOMETIMES THE STORY WE THINK WE'RE TELLING



DOES'T ALIGN WITH WHATS ACTUAL SAID



BUT SOMETIMES IT DOES



QUESTION

How can we use the narrative in architecture to inform and enrich our design process

ELEMENTS OF NARRATIVE IN ARCHITECTURE

PARTI | THEME | FORM | STRUCTURE | ELEMENT | MOMENT | PATH

PART I

THE BIG IDEA

The essence of the project. The single all encompassing idea or concept that informs every architectural move and is visible at all scales from the overall composition to the finest detail

LOVE



*Taj Mahal - Agra, India
- 1653 Ustad Ahmad Lahauri*

DIVISION



*Berlin Wall - Berlin, Germany
- 1961 - 1989 German Democratic Republic*

NEED



Dharavi Slum - Mumbai, India

CORPORATION



*John Hancock Building - Boston, Massachusetts
- 1976 I. M. Pei & Partners*



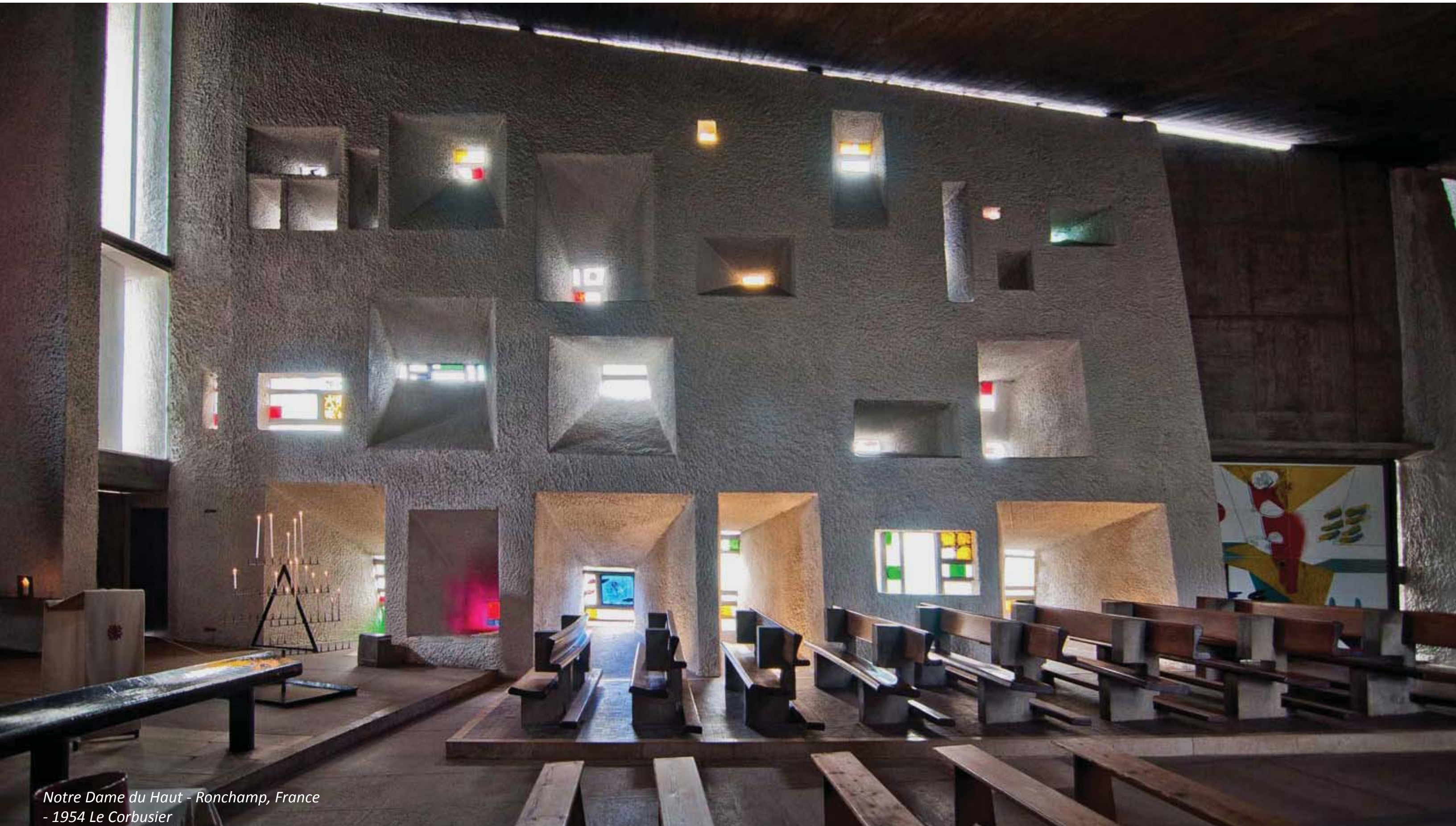
*Tea House - Vancouver, Canada
- 2017 Kengo Kuma*

THEME

REPEATED IDEA OR ELEMENT

One or more secondary concepts that run throughout the design and whose influence is visible through recurring gestures, conditions, details, materials etc. May be abstract and emotive or concrete and actionable.

LIGHT



*Notre Dame du Haut - Ronchamp, France
- 1954 Le Corbusier*

WATER



*Salk Institute - La Jolle, California
- 1953 Louis Kahn*

SUSTAINABILITY



*Roof, Vancouver Convention Centre - Vancouver, BC
- 2009 LMN Architects*

PRESERVATION



*castelvecchio Mueum - Verona, Italy
- 1974 Carlo Scarpa*

FORM

CONCEPTUAL / PERCEPTUAL

The basic massing and large scale arrangement of elements that define how the structure can be understood

CONCEPTUAL

Form is understood all at once



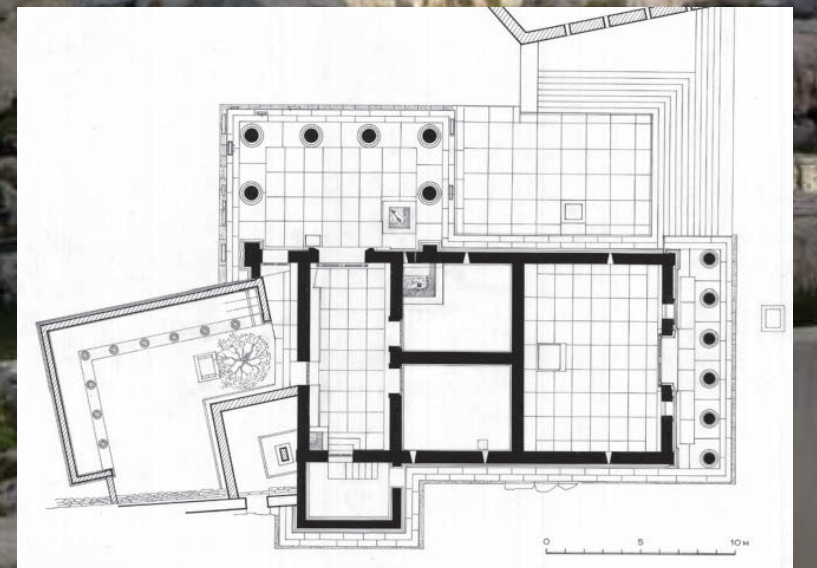
Parthenon - Athens, Greece
- 438 BCE

PERCEPTUAL

Form is understood only through movement



Erechtheion - Athens, Greece
- 406 BCE



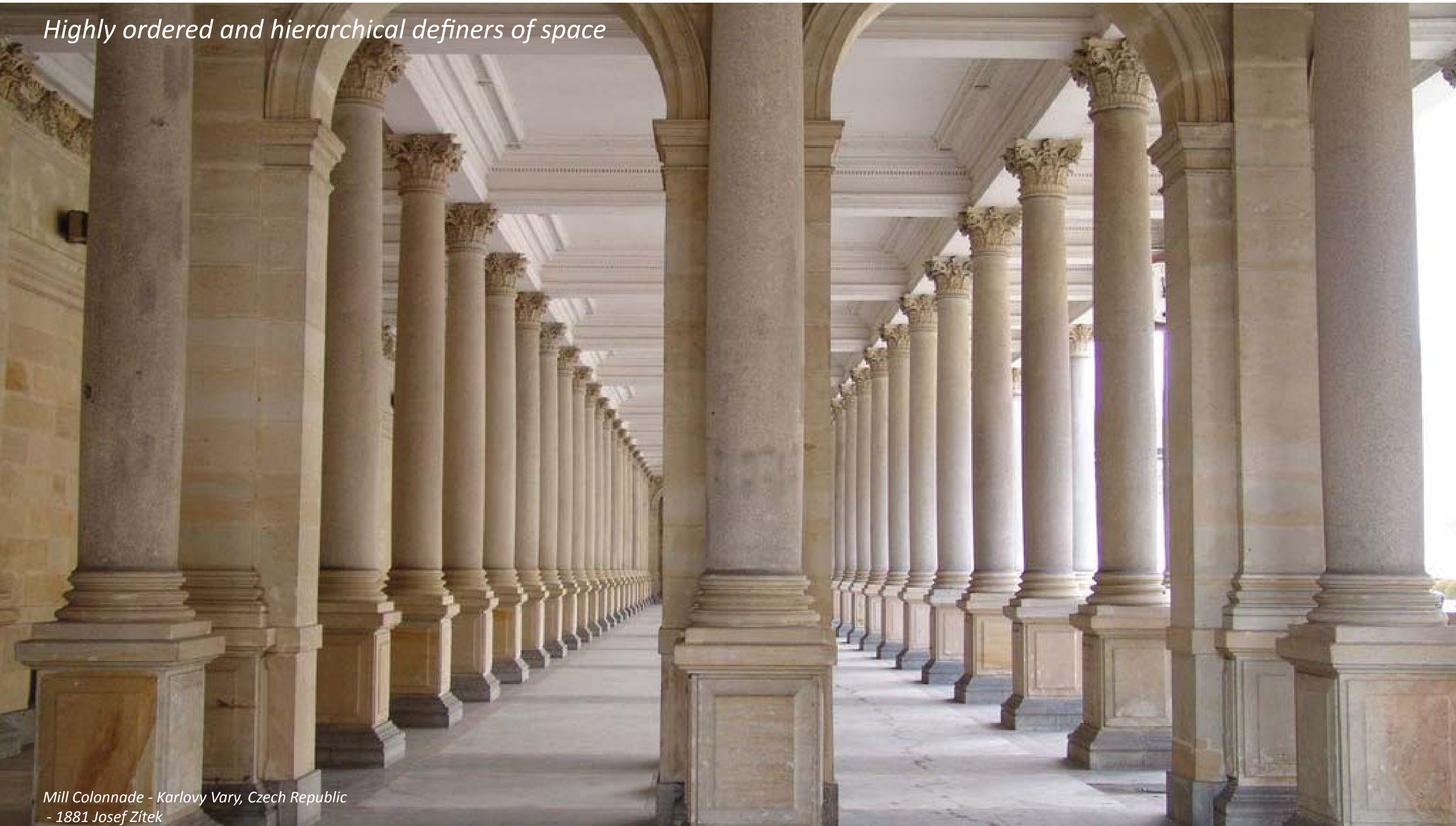
STRUCTURE

STRUCTURE

The type, arrangement and visibility of elements that collect and guide forces within a building from the roof down to the ground

STATIC

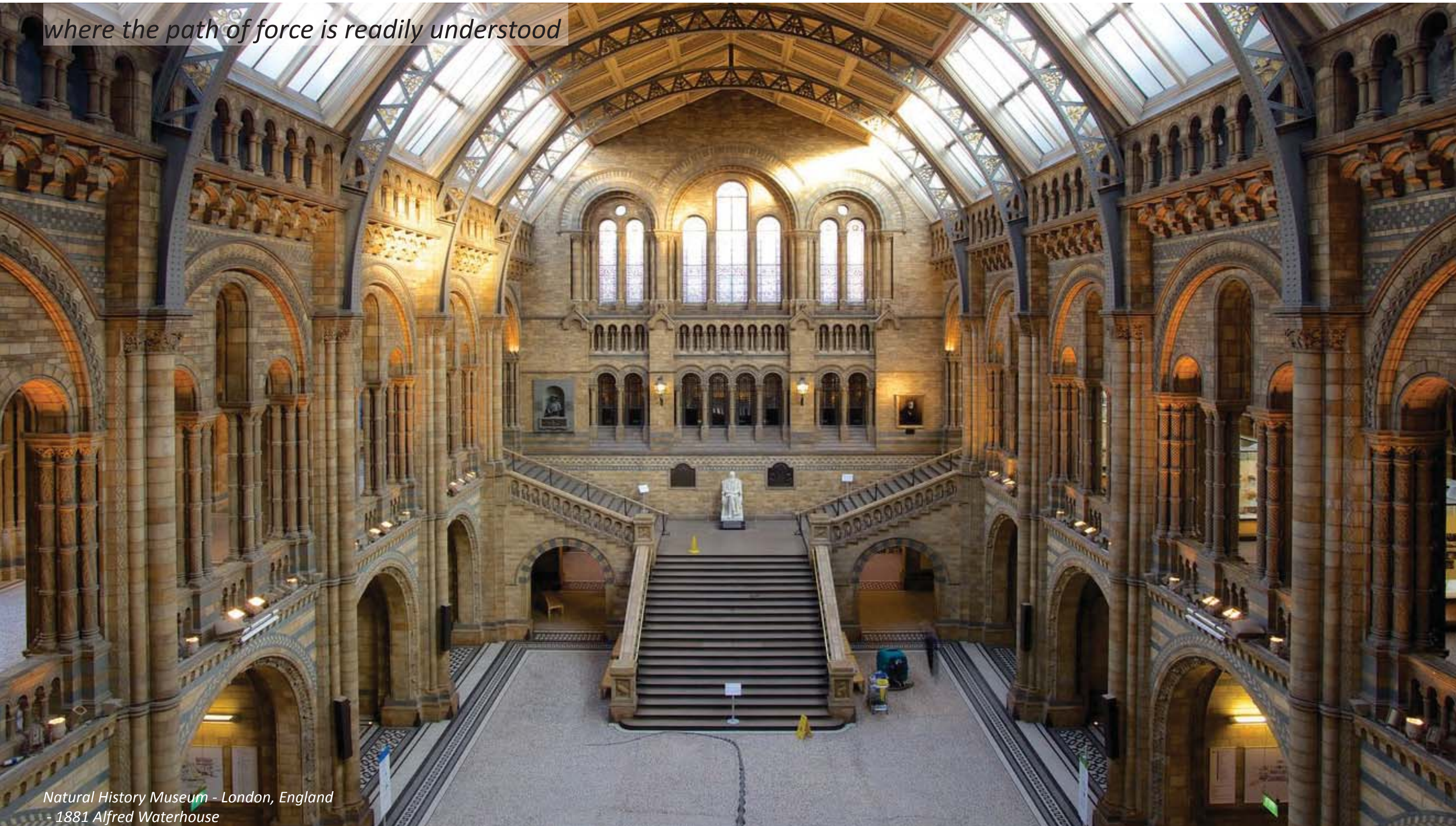
Highly ordered and hierarchical definers of space



*Mill Colonnade - Karlovy Vary, Czech Republic
- 1881 Josef Zitek*

STATIC

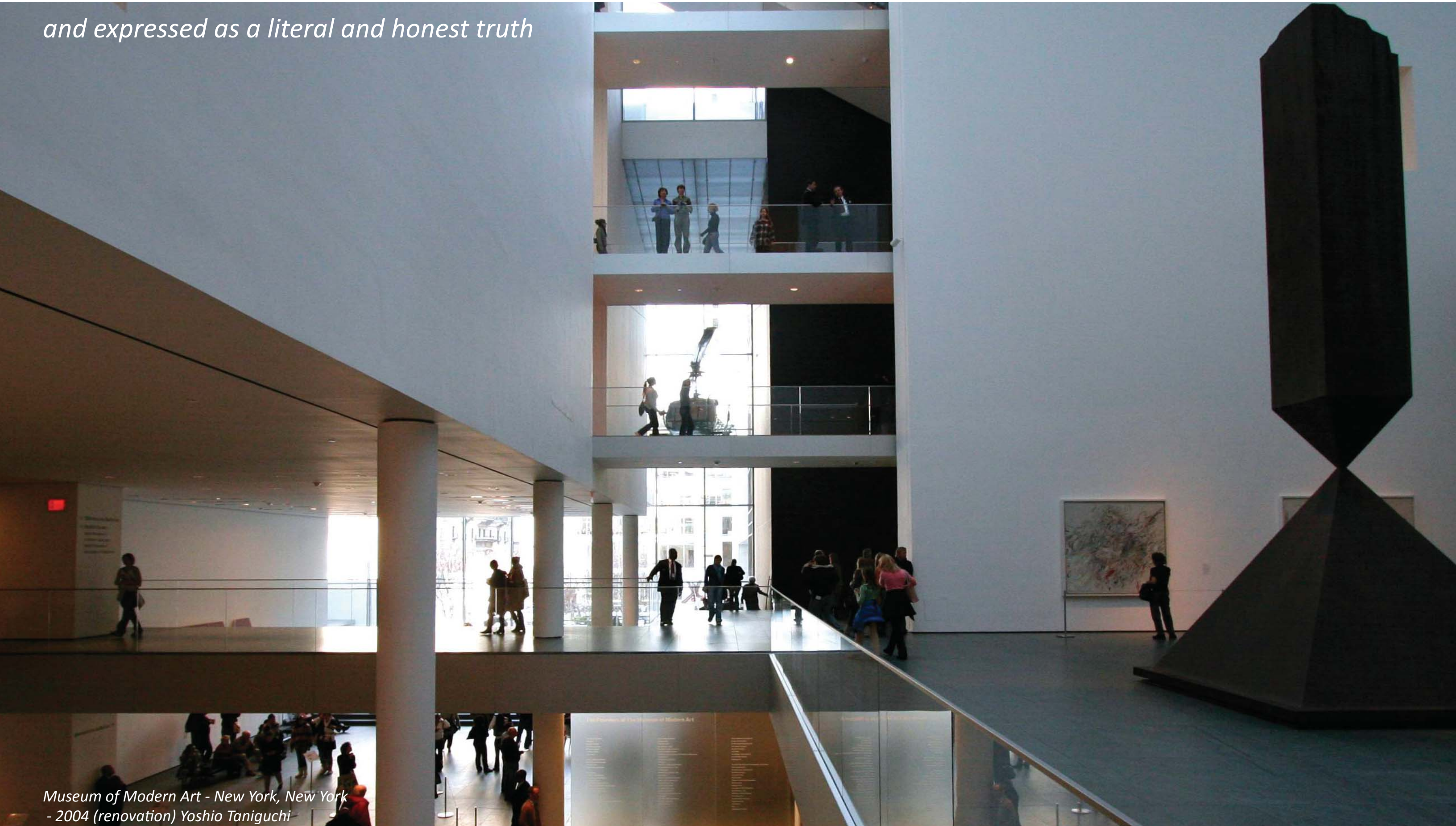
where the path of force is readily understood



Natural History Museum - London, England
- 1881 Alfred Waterhouse

STATIC

and expressed as a literal and honest truth



*Museum of Modern Art - New York, New York
- 2004 (renovation) Yoshio Taniguchi*

DYNAMIC

Complex and fluid animators of space



*Naive Columns, Sagrada Família - Barcelona, Spain
- 1882 - present, Antoni Gaudí*

DYNAMIC

where the path of force is ambiguous



*Entry Canopy - Lou Ruvo Center for Brain Health - Las Vegas, Nevada
- 2010, Frank Gehry*

DYNAMIC

and things are not always what they seem



*Gallery - Canadian War Museum - Ottawa, Ontario
- 2005, Moriyama & Teshima Architects*

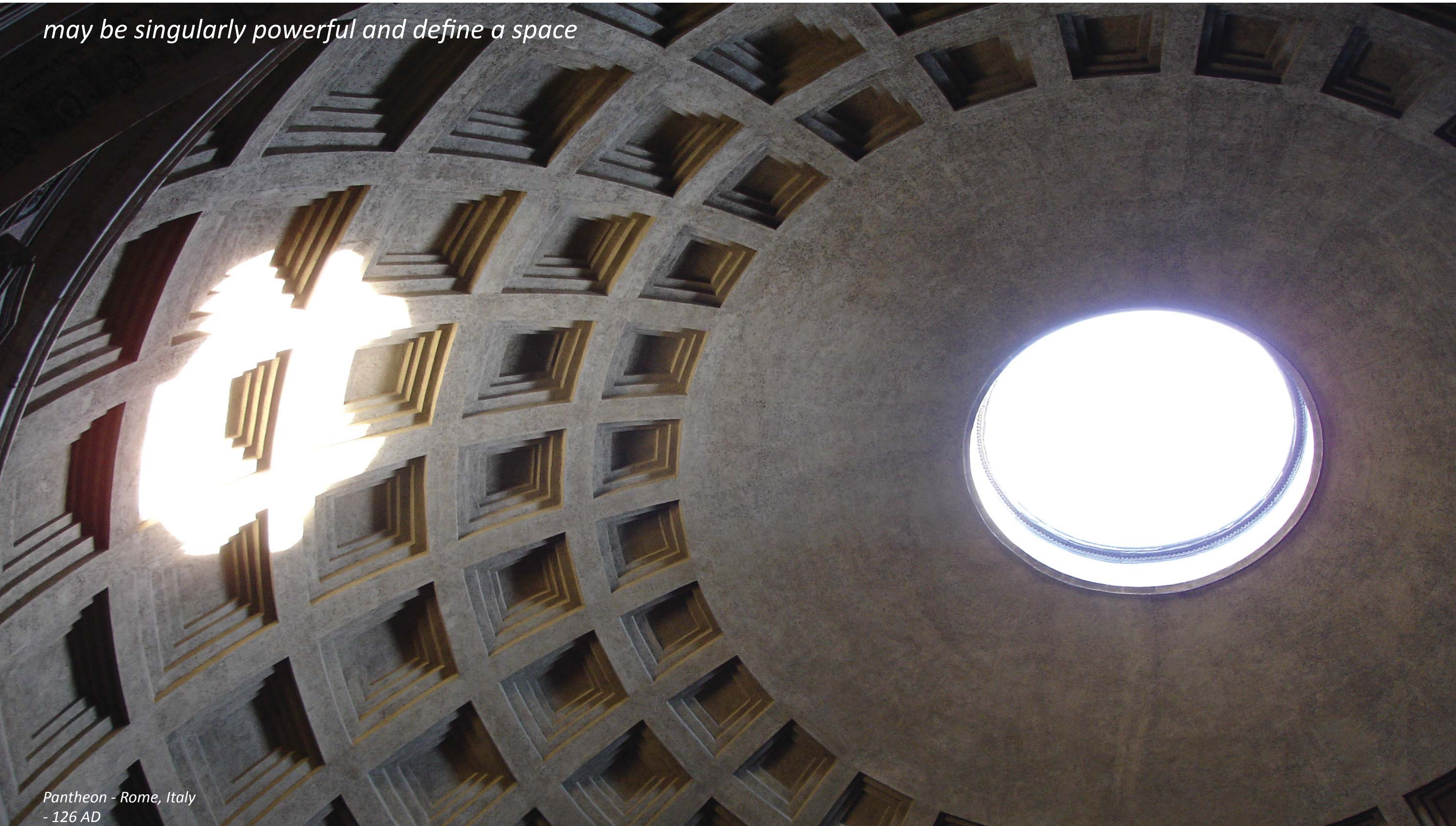
ELEMENT

CHARACTERS

The discrete components of an architectural program or design whose interactions create spaces and environments that we may inhabit

ELEMENT

may be singularly powerful and define a space



*Pantheon - Rome, Italy
- 126 AD*

ELEMENT

or quietly define a feeling



*Farmhouse - Gatenou, Quebec
- Early 19th century*

ELEMENT

establish a centre of gravity



*Hearth, Hollyhock House - Hollywood, California
- 1921 Frank Lloyd Wright*

ELEMENT

or remember a sense of whimsy



*Lullaby Factory, Great Ormond Hospital - London, England
- 2014 Studio Weave*

MOMENT

CIRCUMSTANCE OR NODE. A SCENE

A unique physical circumstance in which a number of architectural elements are brought together within a setting and their interaction provides new information or perspective to the design narrative

MOMENT

may be monumental and inspiring



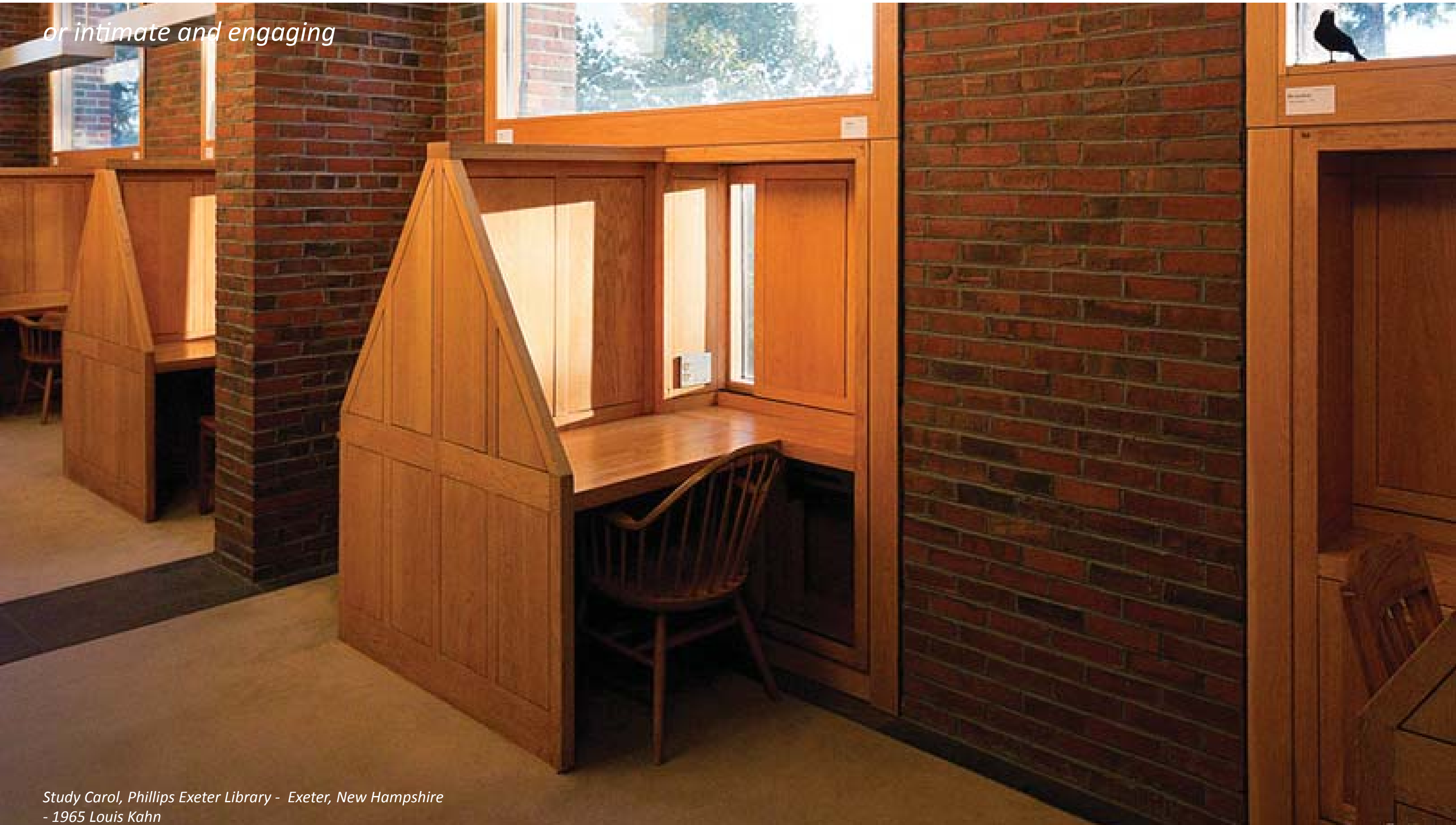
Great Court - British Museum - London, England
- 2000, Foster and Partners

Justin Gammon BC08 1006

and let thy feet
millenniums hence
be set in midst of knowledge

MOMENT

or intimate and engaging



*Study Carol, Phillips Exeter Library - Exeter, New Hampshire
- 1965 Louis Kahn*

MOMENT

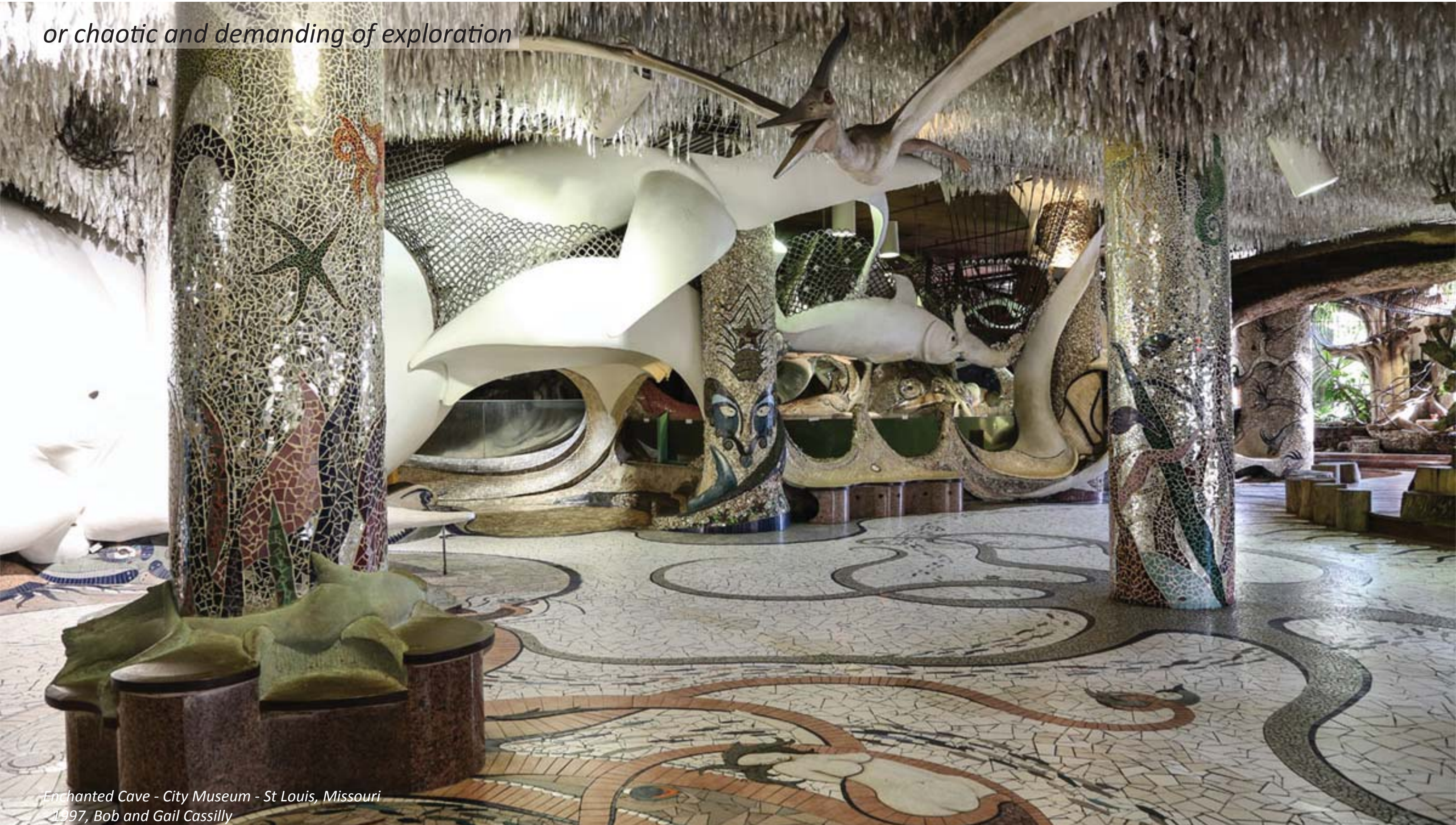
highly ordered and composed



*Entry, Gamble House - Pasadena, California
1909 Greene and Greene*

MOMENT

or chaotic and demanding of exploration



*Enchanted Cave - City Museum - St Louis, Missouri
1997, Bob and Gail Cassilly*

MOMENT

grandly formal public expression



*Grand Stair, Paris Opera House - Paris, France
- 1875 Charles Garnier*

MOMENT

or genuine personal statement



*Interior, Yurt - Great Steppe, Mongolia
- Contemporary*

PATH

SEQUENCE OF SPACES AND MOMENTS

The organizing principle or thread of the narrative presented as a sequence of events or moments that drive the story forward

PATH

“There are two types of paths. The one you follow physically, and the one your eyes take.”

- Sophia Psarra

*Castelvecchio Museum - Verona, Italy
- 1973 Carlo Scarpa*

LINEAR PATH

Often defined by a highly prescriptive program



*Vancouver International Airport - Vancouver, BC
- Stantec*

LINEAR PATH

*the story unfolds in a regular
and predictable fashion*



Gallery - Natural History Museum - London, England
- 1881 Alfred Waterhouse

LINEAR PATH

*with a focused narrative
that can be inviting*



*Entry Glass Museum - Tacoma, Washington
- 2002 Arthur Erickson*

LINEAR PATH

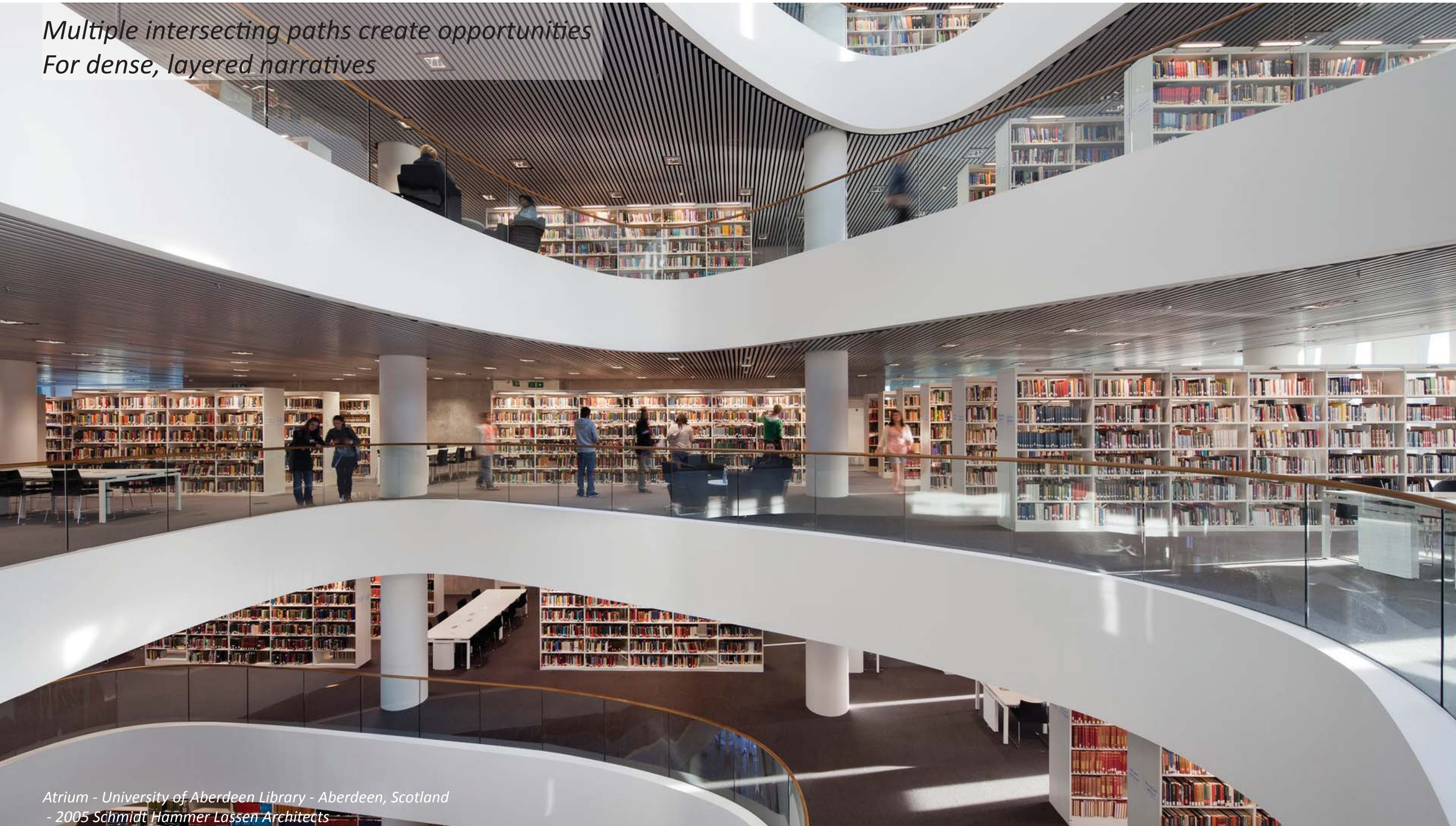
or almost overwhelming



*Jewish Museum - Berlin, Germany
- 2001 Daniel Libeskind*

COMPLEX PATH

*Multiple intersecting paths create opportunities
For dense, layered narratives*



*Atrium - University of Aberdeen Library - Aberdeen, Scotland
- 2005 Schmidt Hammer Lassen Architects*

COMPLEX PATH

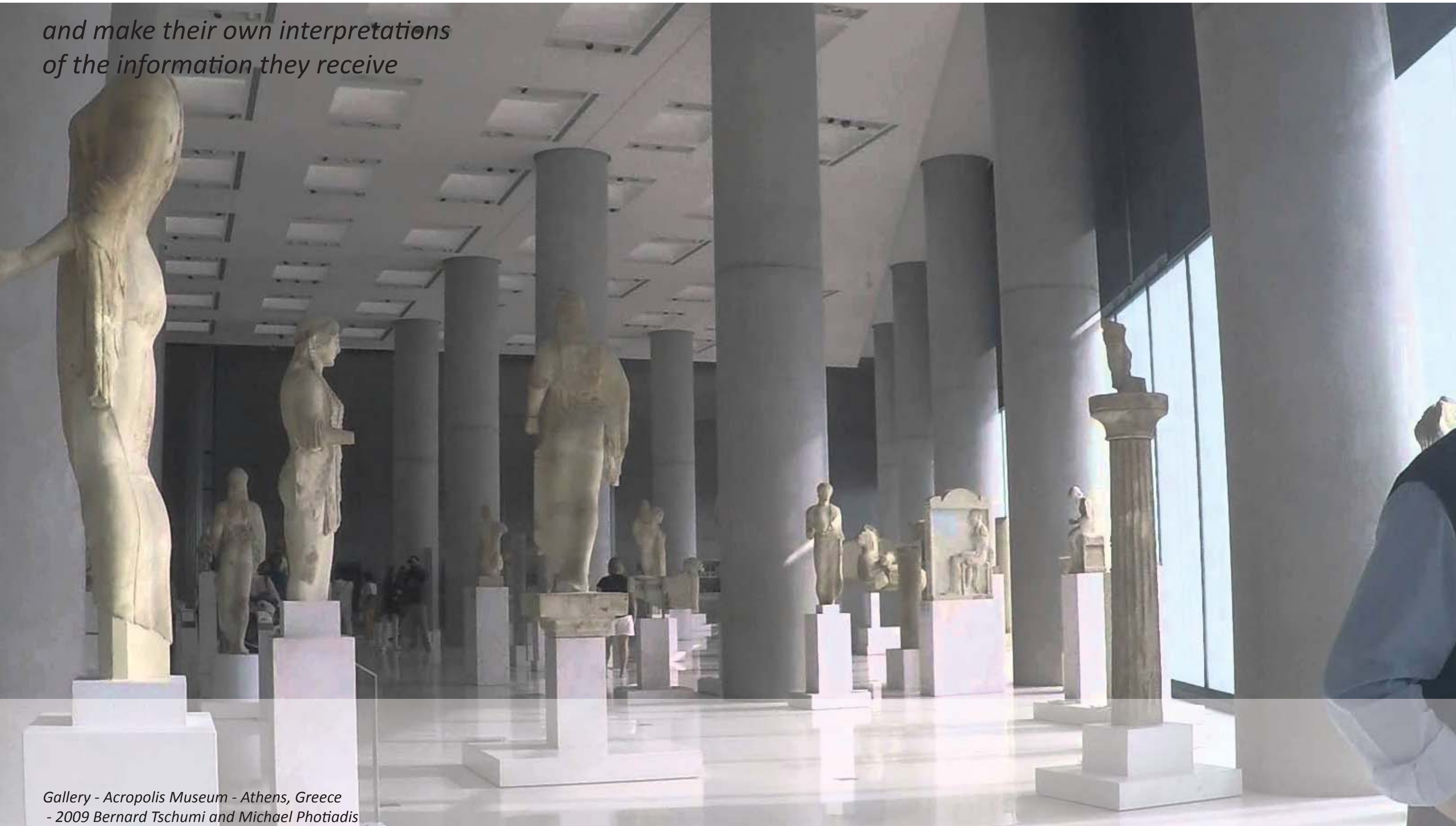
*where people are free to select
their own trajectories and destinations*



*Main Concourse - Grand Central Station - New York, New York
- 1913 Reed & Stem and Warren & Wetmore.*

COMPLEX PATH

*and make their own interpretations
of the information they receive*

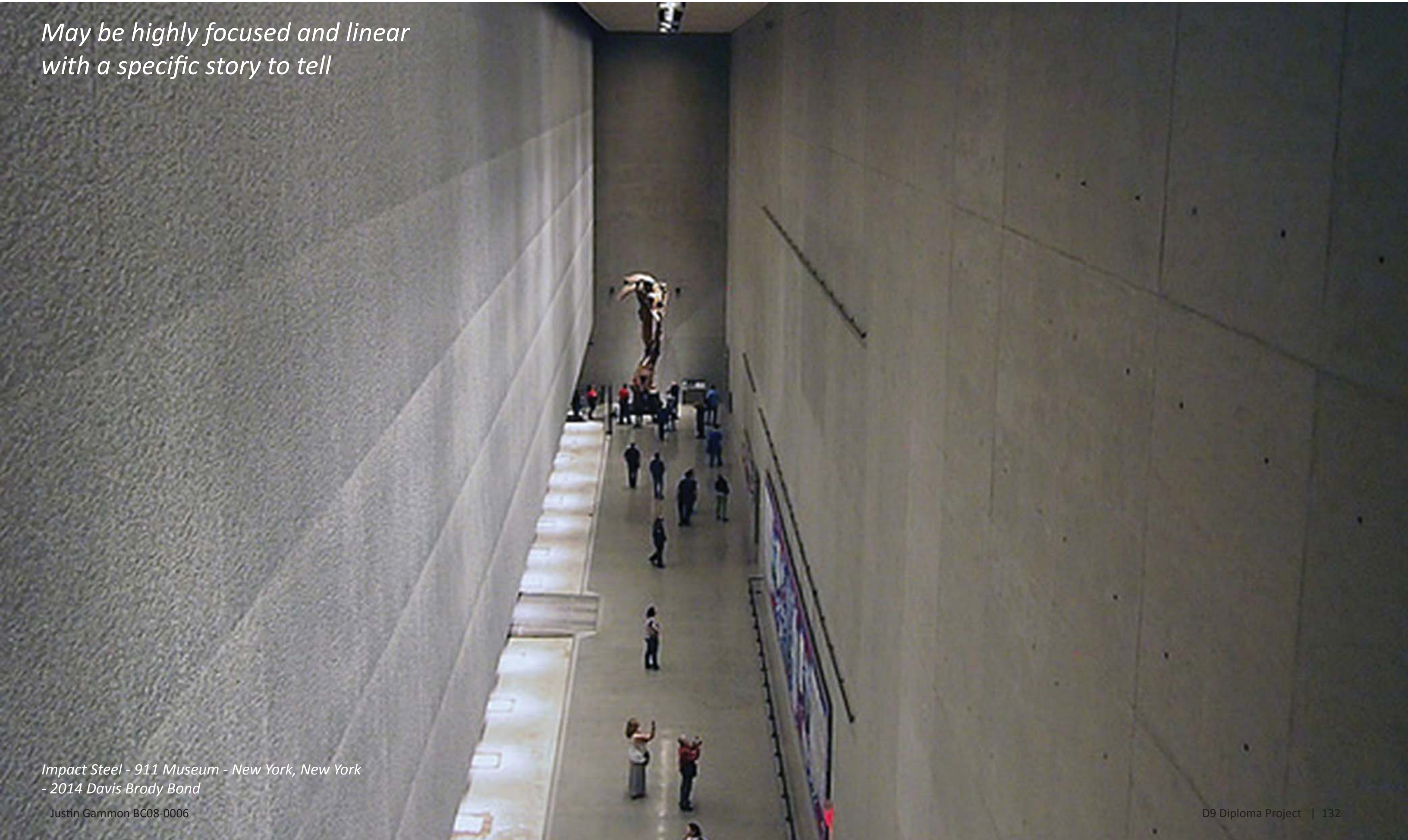


Gallery - Acropolis Museum - Athens, Greece
- 2009 Bernard Tschumi and Michael Photiadis

VISUAL PATH

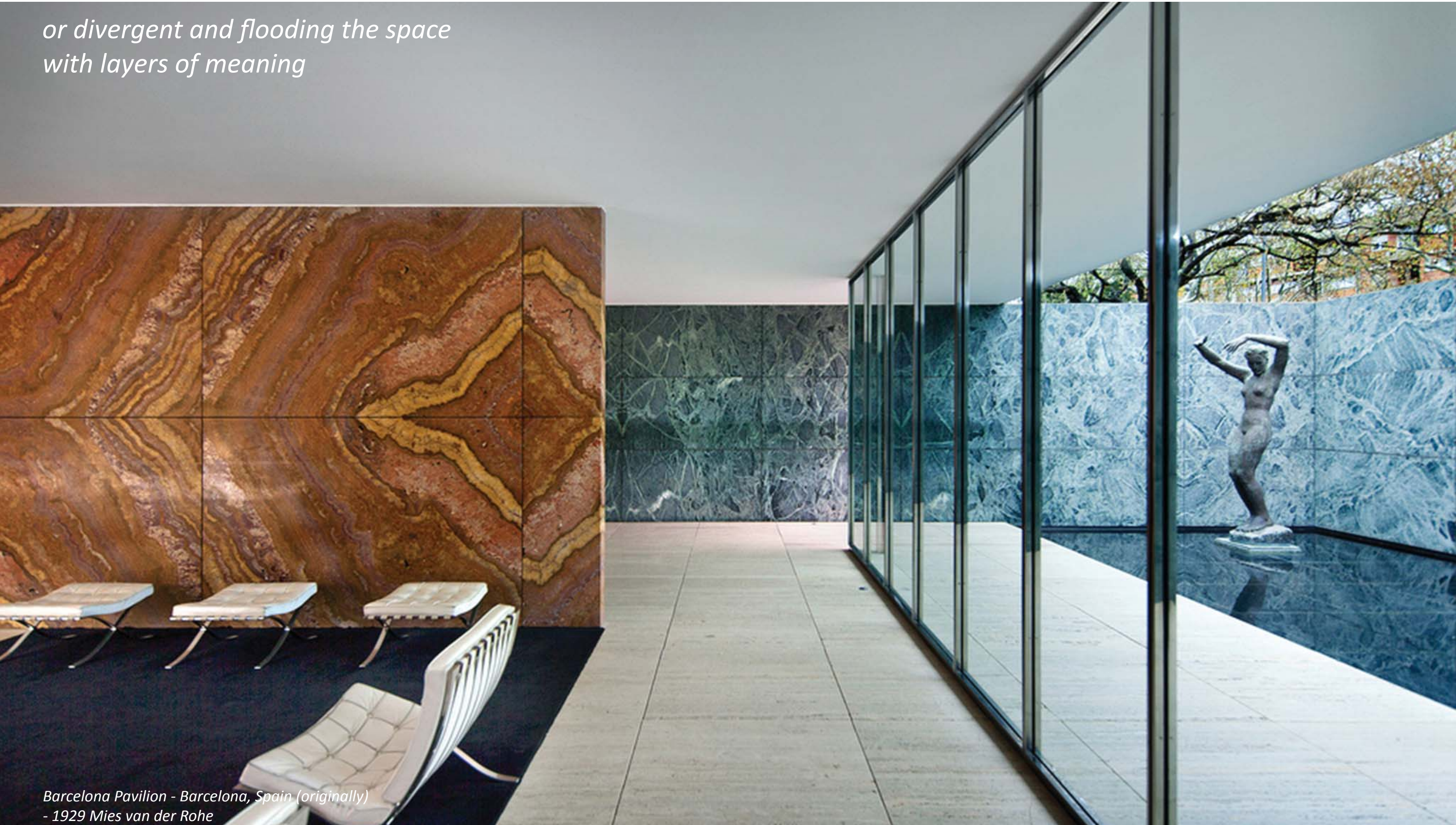
*May be highly focused and linear
with a specific story to tell*

*Impact Steel - 911 Museum - New York, New York
- 2014 Davis Brody Bond*



VISUAL PATH

*or divergent and flooding the space
with layers of meaning*



*Barcelona Pavilion - Barcelona, Spain (originally)
- 1929 Mies van der Rohe*

VISUAL PATH

it may foreclose a view



*Portals - Brion Cemetery - Treviso, Italy
- 1978 Carlo Scarpa*

VISUAL PATH

or define it



*Overlook - Mount St. Helens Visitor Center - Silver lake, Washington
- 1986 Spencer Associates*

PRECEDENT STUDIES

NATURAL HISTORY MUSEUM

Location:	London, England
Opening Date:	1881
Architect:	Alfred Waterhouse
Parti:	Scientific Truth
Themes:	Natural Order, Hierarchy
Experience:	Conceptual
Path:	Strictly Linear
Structure:	Static and Visible
Materials:	Natural



NATURAL HISTORY MUSEUM

The natural history museum can be seen as a physical embodiment of the 19th century rationalist movement that powered the industrial revolution. It is a church to the new religion of science which holds that reason is the source and test of all knowledge.

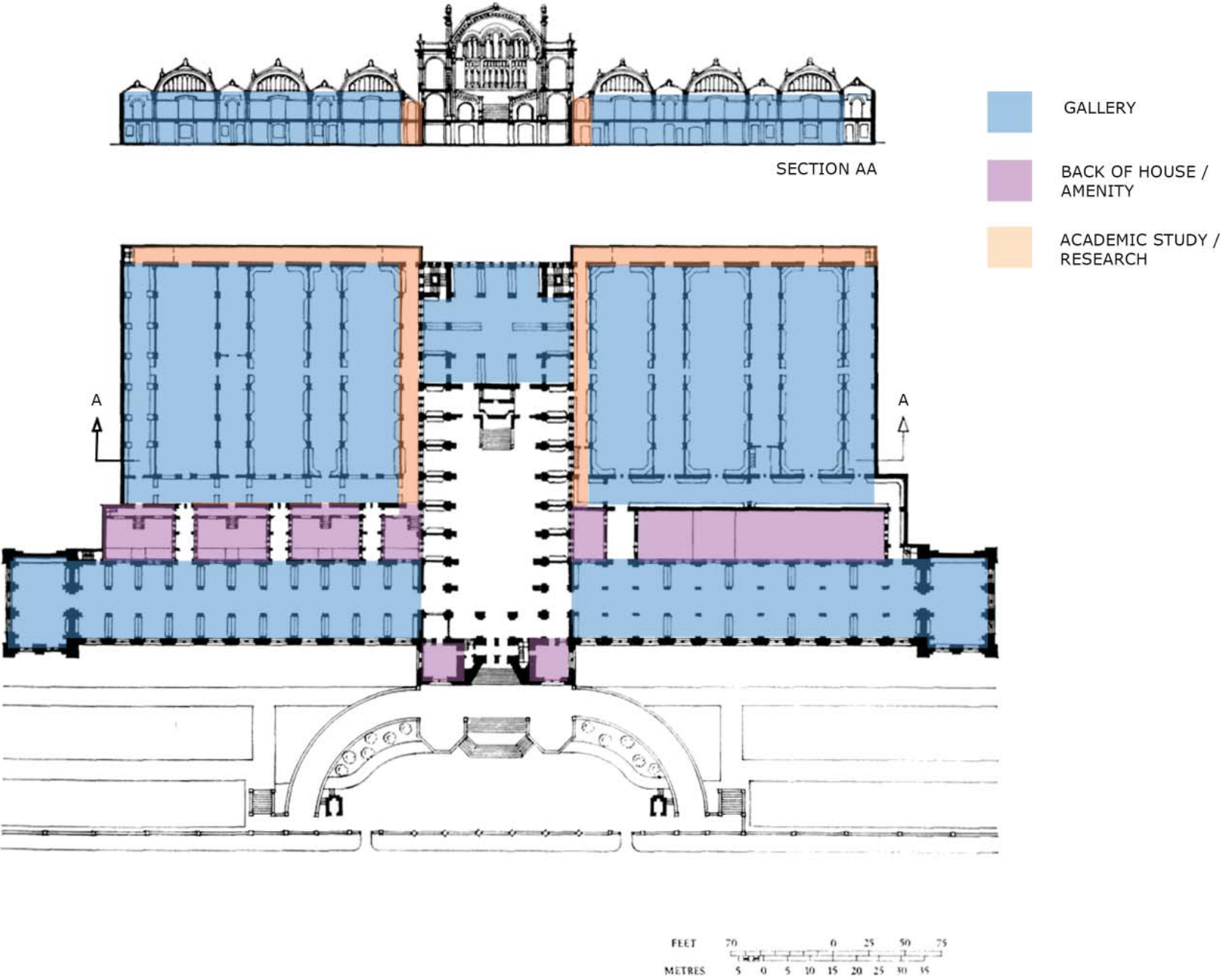
The physical narrative told by the architecture is perfectly aligned with the intellectual story presented through the exhibits. Everything has its correct and rightful place within a greater, hierarchical order.

The narrative is clear and reinforced throughout the building - there is a single truth and it is knowable through the rational application of scientific study.



NATURAL HISTORY MUSEUM

PROGRAM



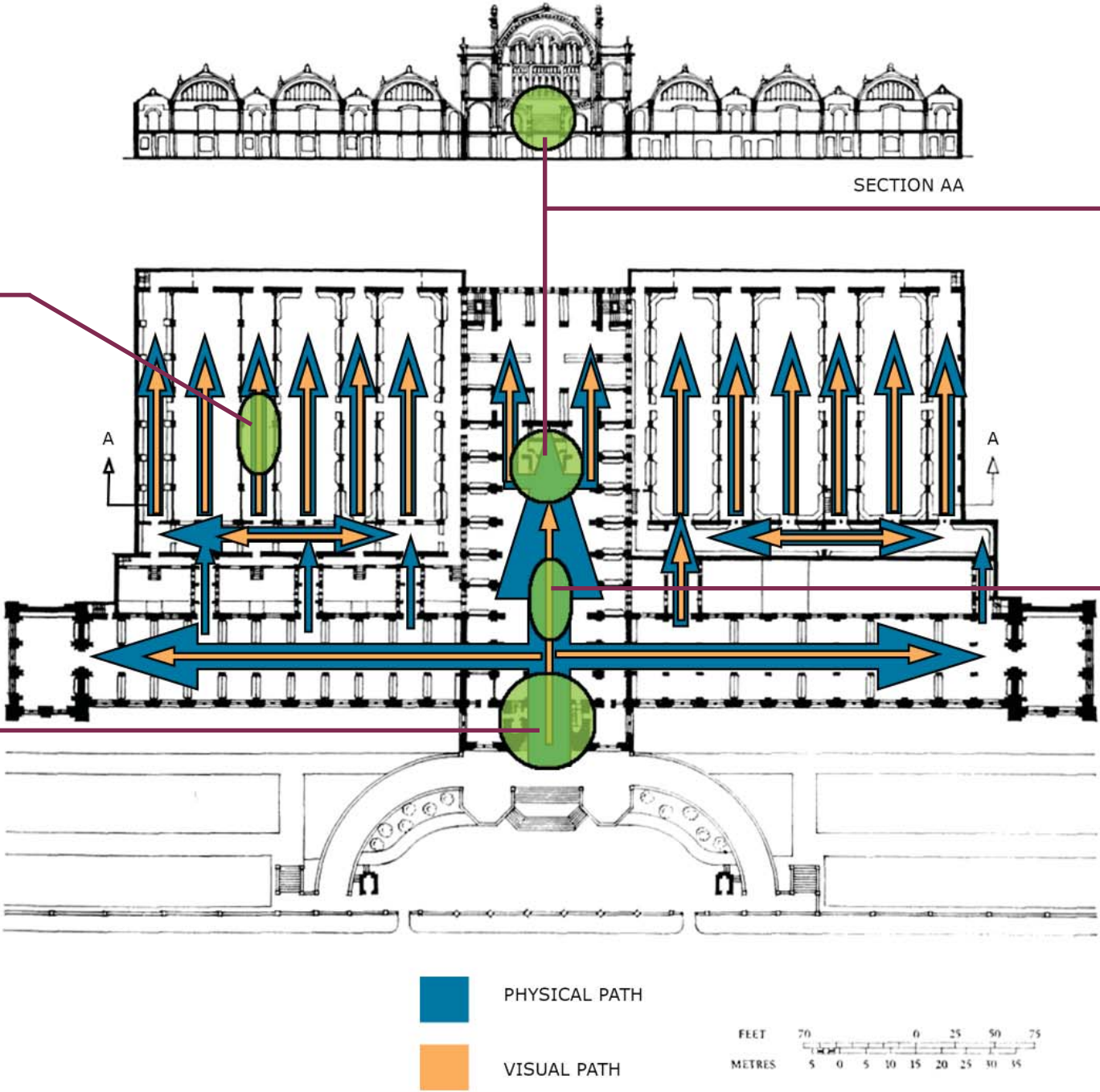
NATURAL HISTORY MUSEUM



GALLERY



ENTRANCE PORTAL



GRAND STAIR



"DIPPY"

MUSEUM OF ANTHROPOLOGY

Location: Vancouver, BC
Opening Date: 1976
Architect: Arthur Erickson

Parti: Cultural Recognition
Themes: First Nations History,
Transparency

Experience: Perceptual
Path: Complex
Structure: Static and Visible
Materials: Concrete and Glass



MUSEUM OF ANTHROPOLOGY

The MOA, built almost a hundred years after the Natural History Museum represents a seminal change in the understanding of what museums are, and how they convey their meaning.

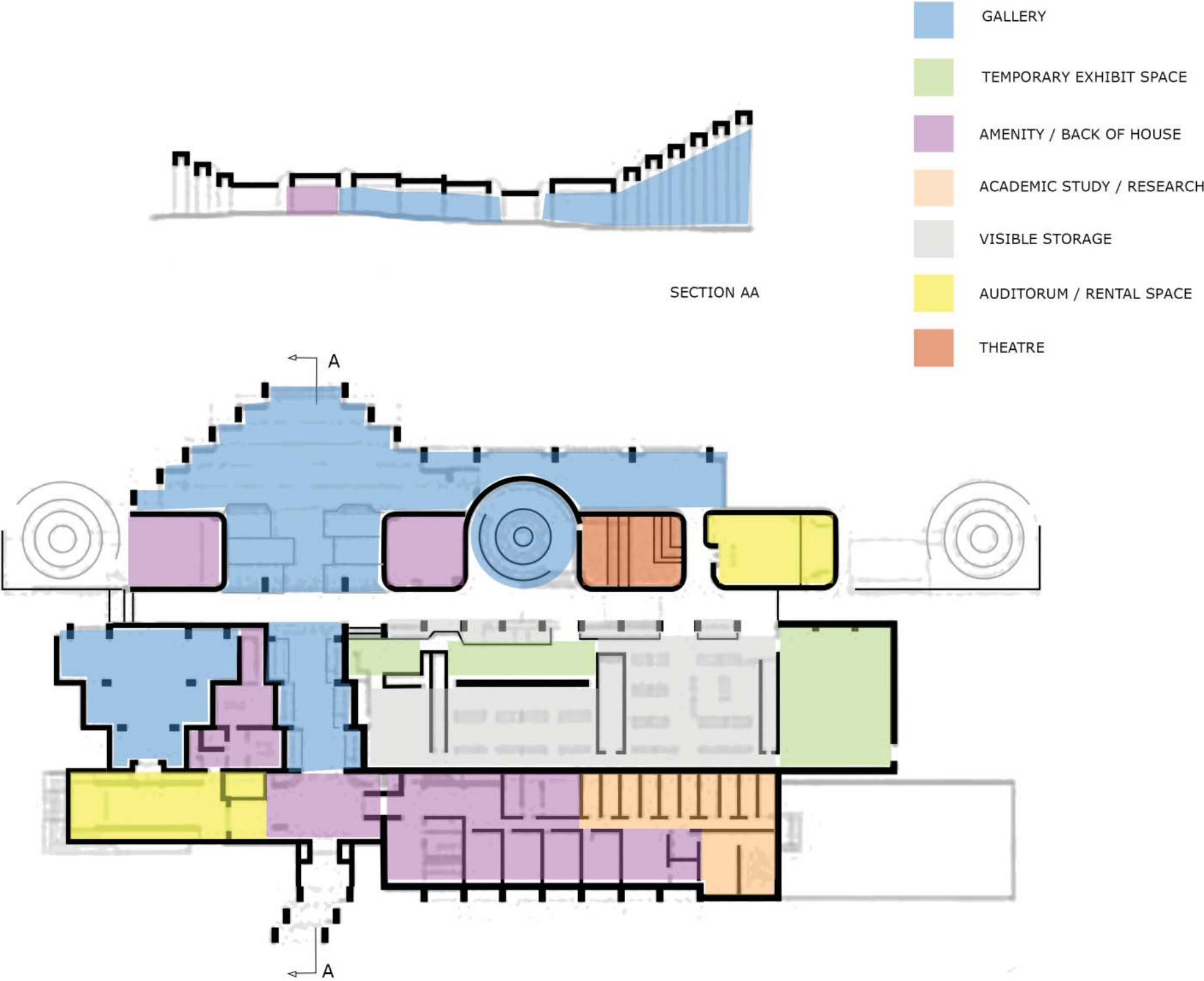
The powerful first nations narrative that the building embodies is generated from the many unique voices that it contains.

Their multilayered story is not presented as a static history or plodding sequence of artifacts and events. Instead the complex relationship between spaces, between the artifacts and their surroundings, and between the interior and exterior environments, forces the visitor to follow their own path and form their own interpretation of what they experience.



MUSEUM OF ANTHROPOLOGY

PROGRAM



MUSEUM OF ANTHROPOLOGY



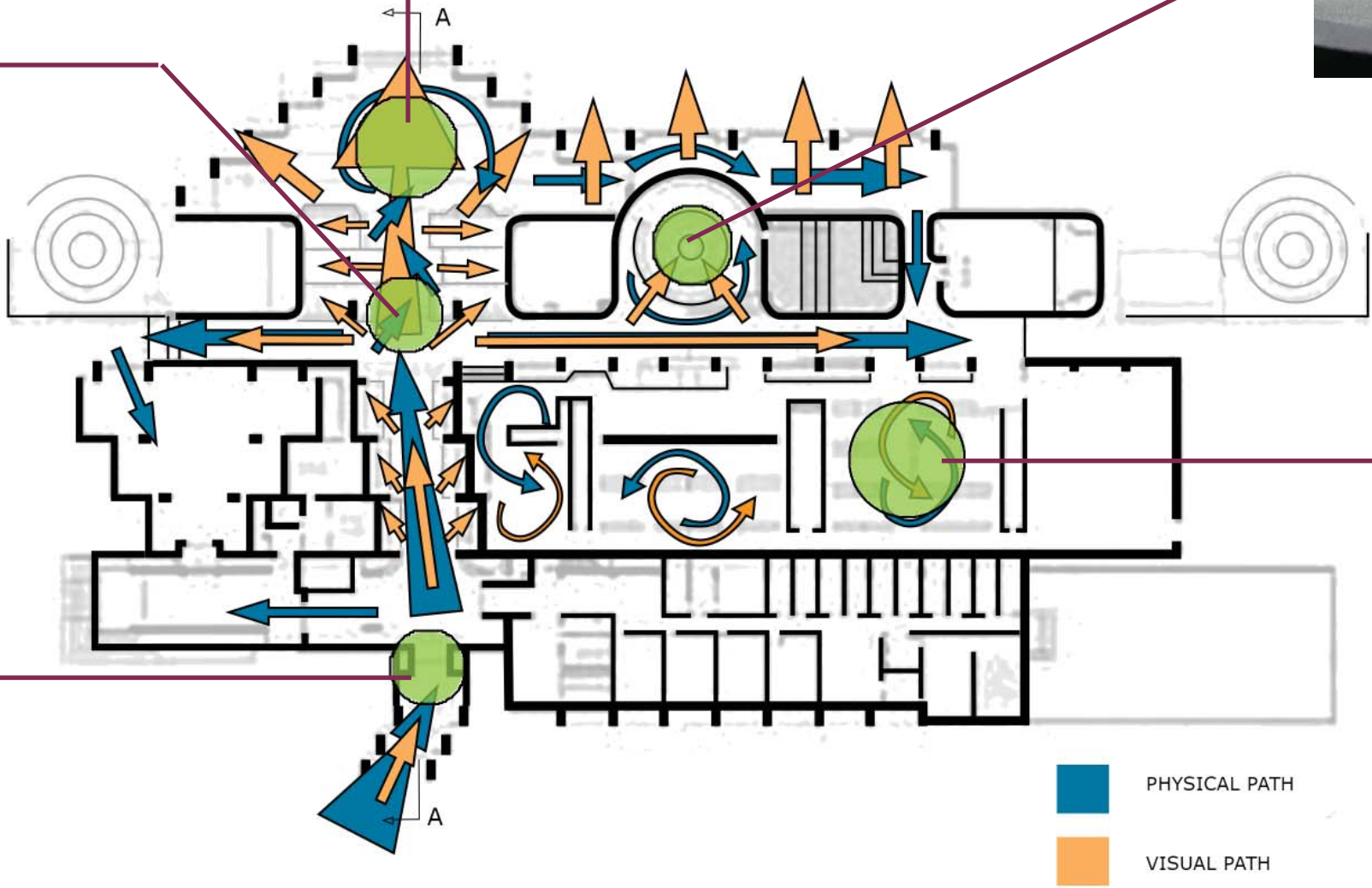
GALLERY ONE



MAIN GALLERY



RAVEN ROTUNDA



ENTRANCE PORTAL



VISIBLE STORAGE

911 MEMORIAL AND MUSEUM

Location: New York, New York
Opening Date: 2014
Architect: Davis Brody Bond

Parti: Loss
Themes: Deformation,
Resilience,
Transformation

Experience: Perceptual
Path: Mixed
Structure: Dynamic and hidden
Materials: Exposed concrete,
steel and aluminum



911 MEMORIAL AND MUSEUM

The concept of loss is present in every aspect of the museum's design and execution. Its architecture is defined by the remaining elements of the story that it was created to tell. It exists in the spaces left behind, like an inverted figure ground diagram in which the negative space becomes occupied.

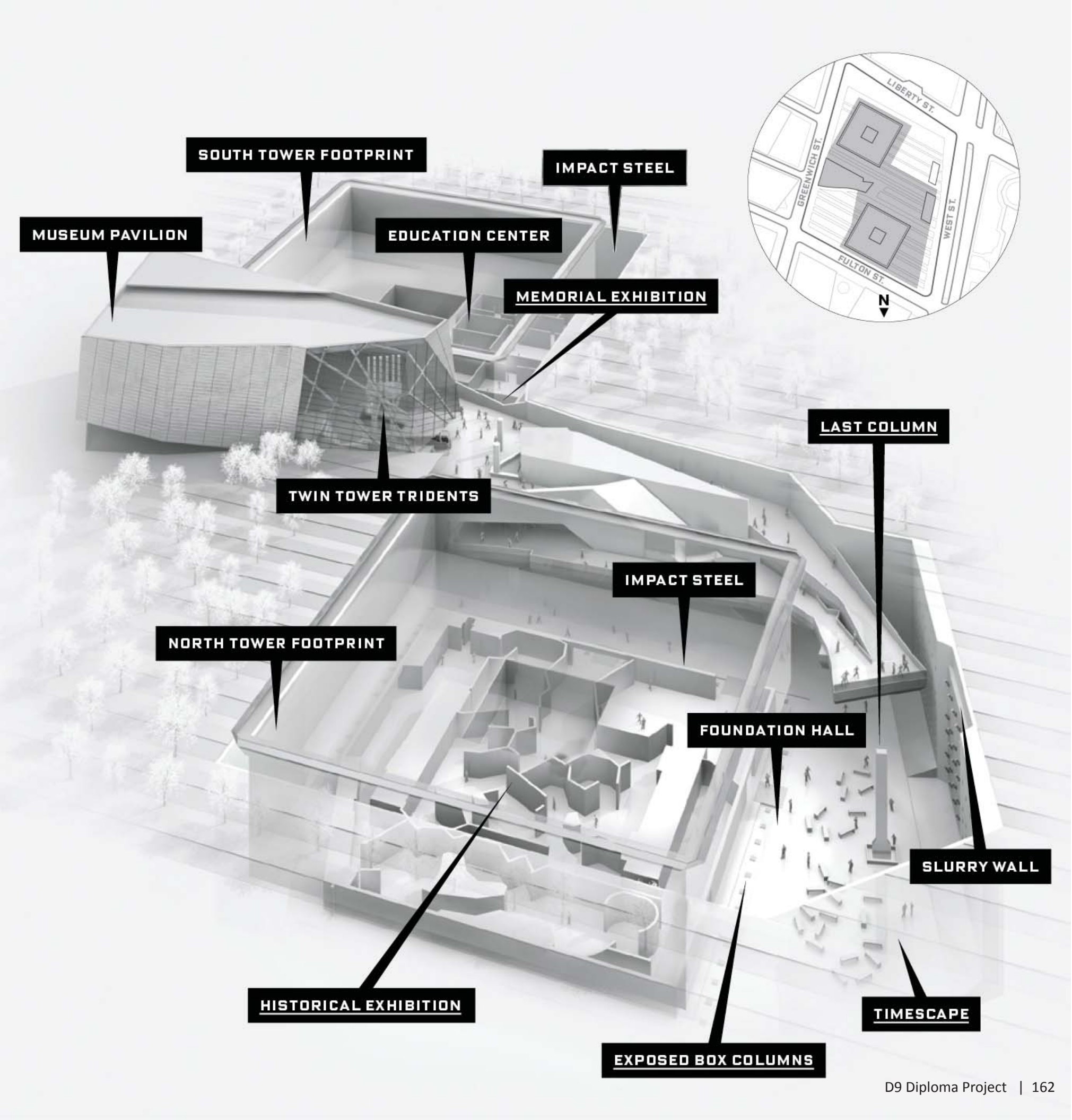
From the recessed forms of the tower footprints to the excavations at the foundation and retaining walls the building is composed of voids.

The story it tells is a difficult one. It's delivered in two distinct stages with an initial, linear, narrative providing visitors with the contextual information they need to process the complex and demanding later exhibits.



911 MEMORIAL AND MUSEUM

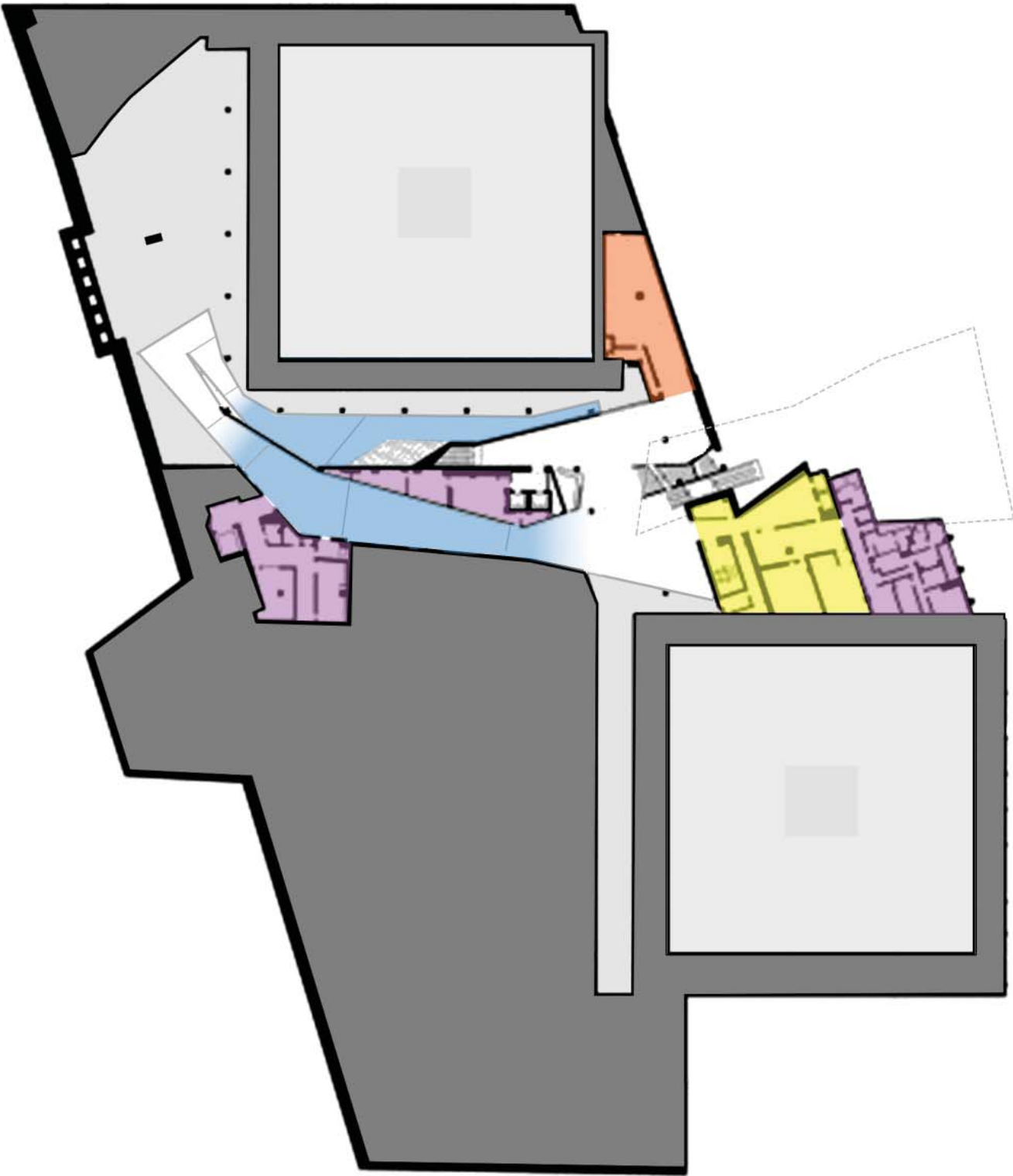
SECTIONAL OVERVIEW



911 MEMORIAL AND MUSEUM

CONCOURSE LEVEL - PROGRAM

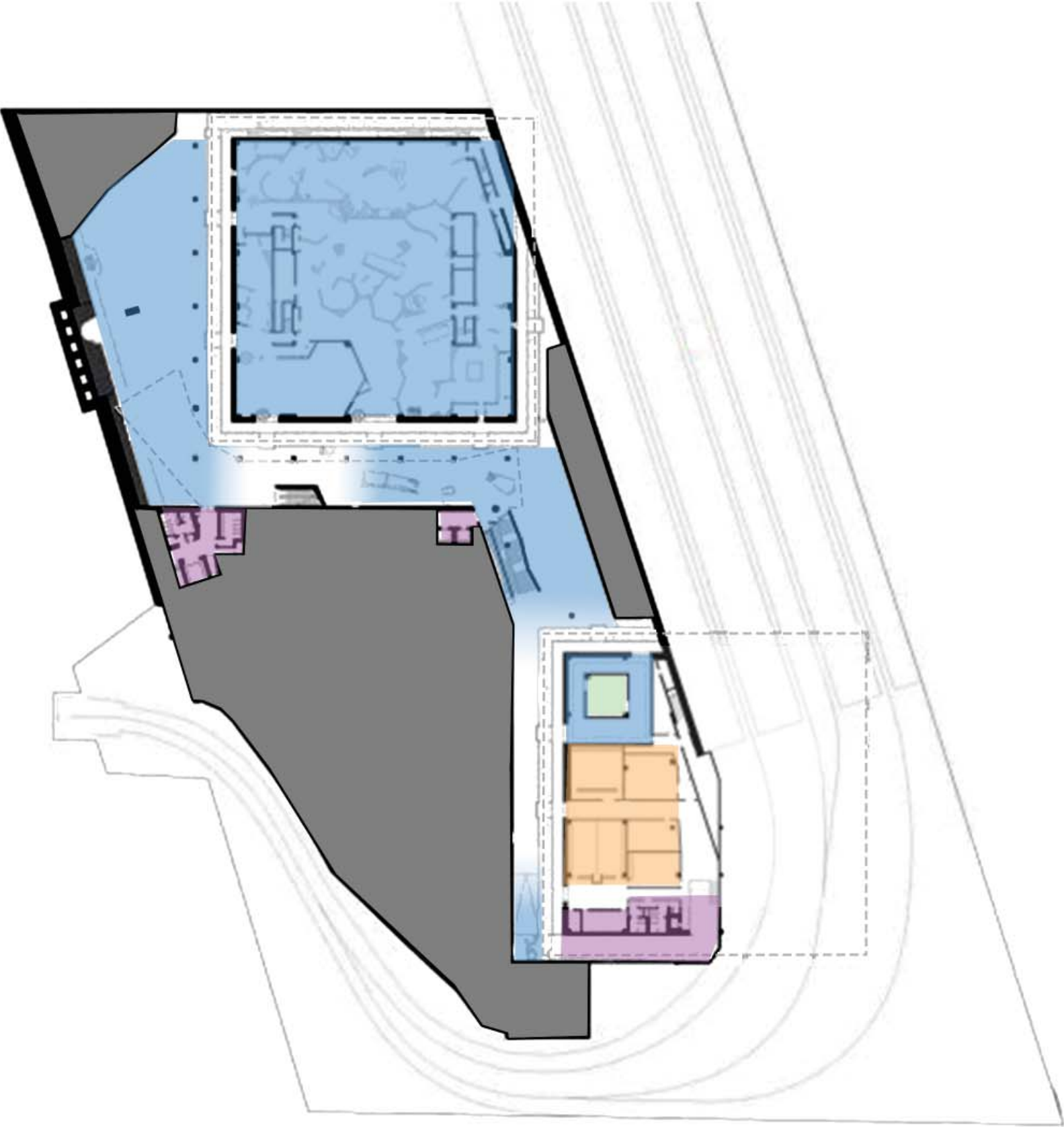
- GALLERY
- AMENITY / BACK OF HOUSE
- MEETING / SEMINAR SPACE
- RETAIL



911 MEMORIAL AND MUSEUM

FOUNDATION LEVEL - PROGRAM

- GALLERY
- AMENITY / BACK OF HOUSE
- MEMORIAL / CONTEMPLATIVE
- EDUCATION CENTRE



911 MEMORIAL AND MUSEUM

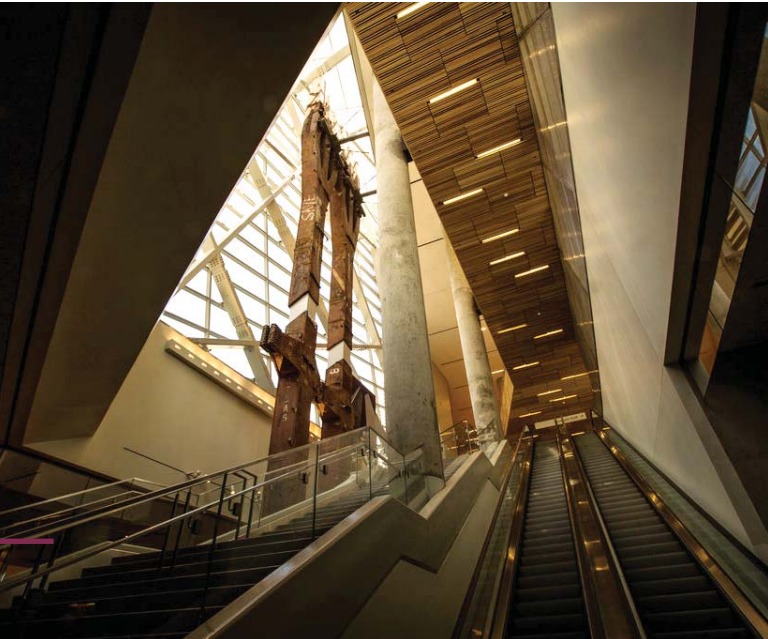
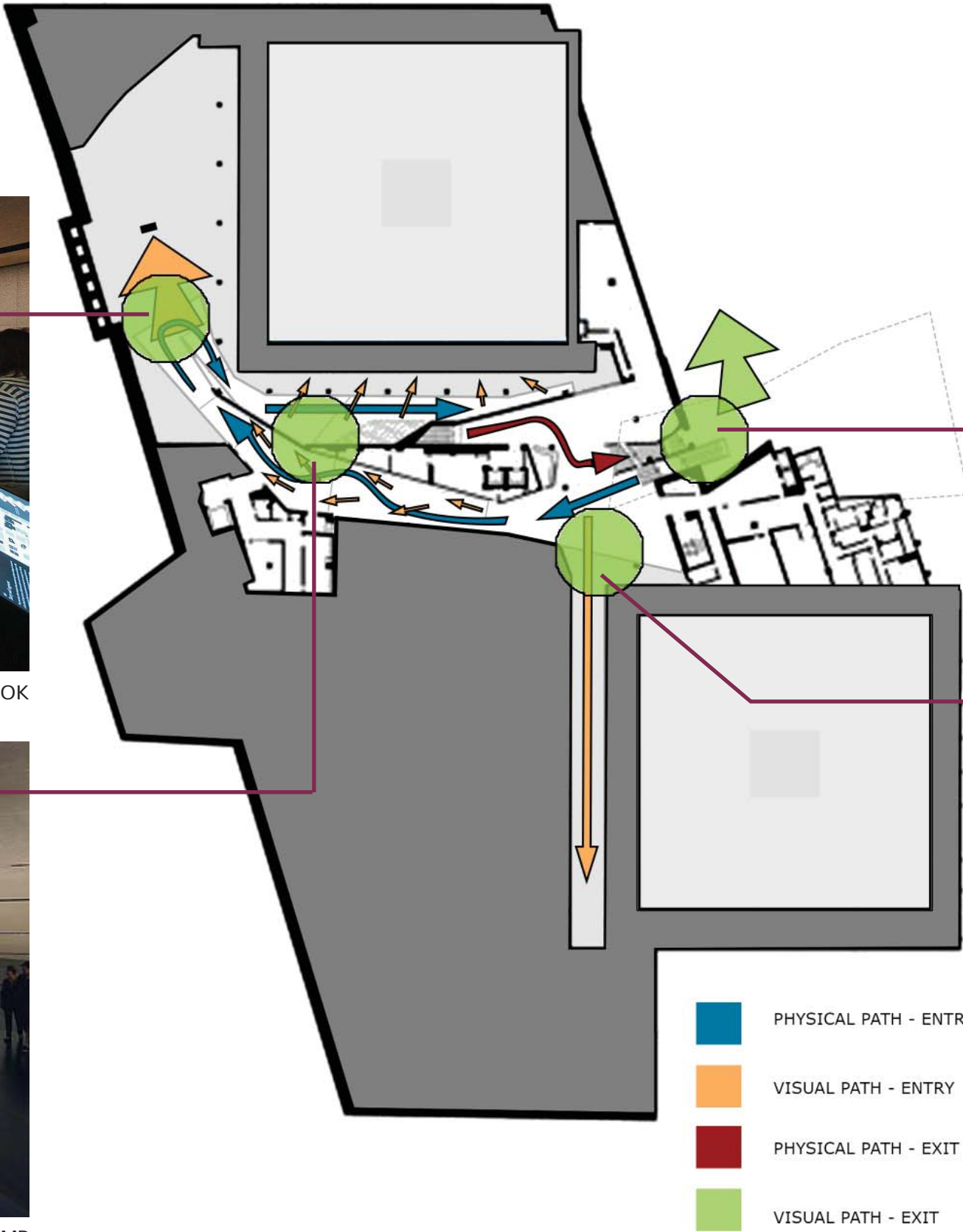
CONCOURSE LEVEL



FOUNDATION HALL OVERLOOK



"THE RIBBON" RAMP



ENTRY / EXIT



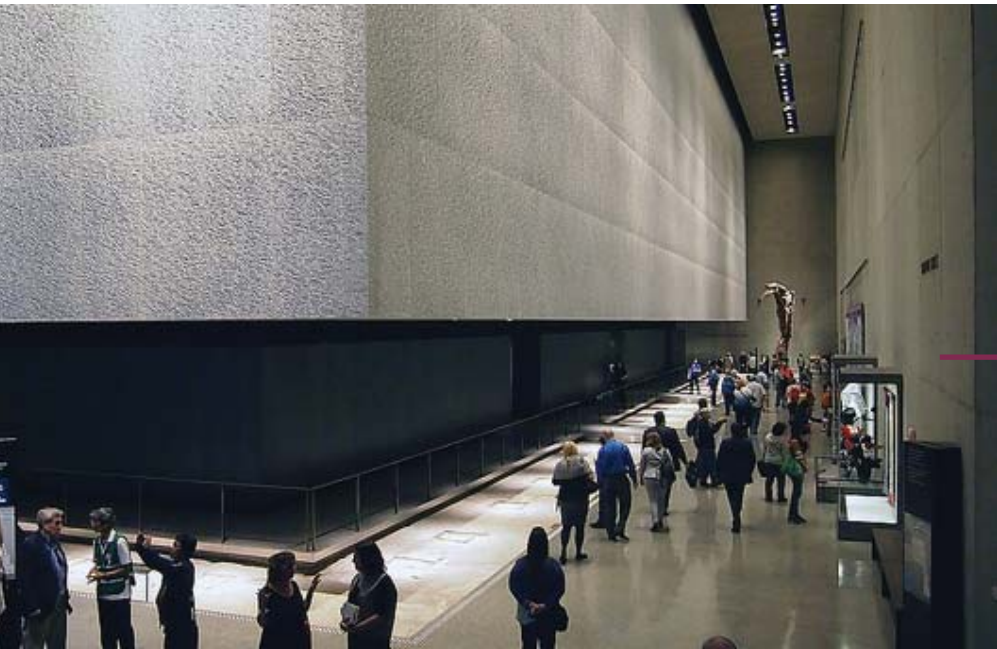
CANYON VIEW TO "IMPACT STEEL"

911 MEMORIAL AND MUSEUM

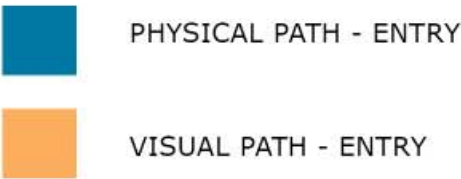
FOUNDATION LEVEL



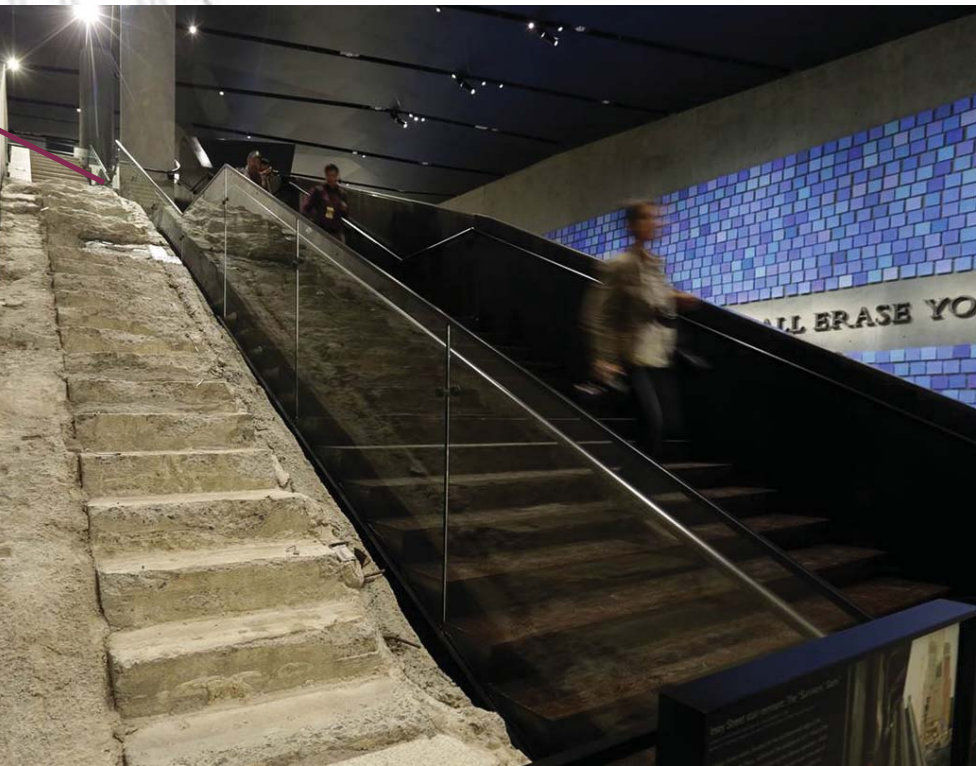
FOUNDATION HALL



CUT COLONNADE / IMPACT STEEL



MEMORY WALL



VASEY STREET STAIR

NARRATIVE DESIGN CONCEPT



BUSINESS WORLD

Ex-CIA head warned Russia r
to meddle in U.S. election, B4

Editor: Darron Kloster > Telephone: 250-380-5235 > Email: dkloster@timescolonist.com timescolonist.com/business

■ MARKETS, B2

ON THE STREET

Victoria architect named Fellow

Victoria's Catherine Nickerson, principal of Nickerson Consulting Services, has been named a Fellow of the Royal Architectural Institute of Canada. Nickerson, whose company focuses on government-funded capital construction and renewal projects, is one of 37 new Fellows named in 2017. Others include a designer of the Vancouver SkyTrain, a Toronto living wall pioneer, a Montreal expert on heritage materials conservation and two Winnipeg architects reimagining that prairie city. The College of Fellows of the RAIC, bestows Fellowship in recognition of outstanding achievement based on design excellence, exceptional scholarly contribution, or distinguished service to the profession or the community.

Mill Bay woman wins HR honour

Mill Bay's Ilka Bene, assistant vice president of human resources at First West Credit Union, has been named HR Professional of the Year by the Chartered Professionals in Human Resources of B.C. and Yukon.

The award is given annually to a human resources practitioner who demonstrates leadership, achieves business results and improves their organization's bottom line. "I've dedicated more than 30 years to HR — the last 15 with Island Savings, a division of First West. Through this time I've seen the impact of thoughtful, strategic HR practices and believe it makes all the

Billionaire sea dog announces plans to build new maritime museum

Local legend and ancient mariner Archibald Swaghorn announced yesterday that he has secured the rights to the large waterfront lot below Bastion Square and will be investing 100 million of his own funds to develop a new maritime museum. Swaghorn, who made his fortune in latex after retiring from the sea... Cont pg B3



Archibald Swaghorn makes his announcement yesterday at the inner harbour beside his boat the Salty Breeze

Mortgage rate increases causing worry: poll

LINDA NGUYEN
The Canadian Press

TORONTO — Nearly three quarters of Canadian homeowners say they would have difficulty paying their mortgage if their payments were to increase by more than 10 per cent, said a new survey by Manulife Bank.

Thirty-eight per cent of those polled said their mortgage bills could rise between one to five per cent before they would have financial difficulty; 20 per cent say they could sustain an increase in payments between six to 10 per cent before having trouble; and 14 per cent say any hike would be a problem.

Twenty-two per cent said they could handle a payment increase of between 11 to 30 per cent, while the remaining seven per cent didn't know or were unsure.

"What these people don't realize is that we're at record low interest rates today," said Rick

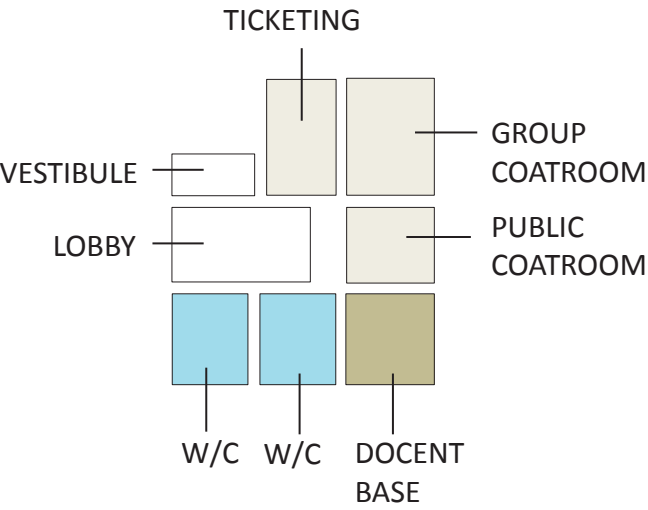
SITE



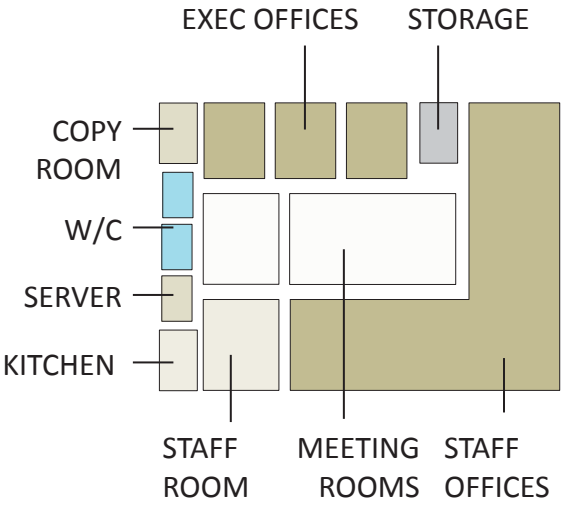
FUNCTIONAL PROGRAM

Scale: 1 to 500

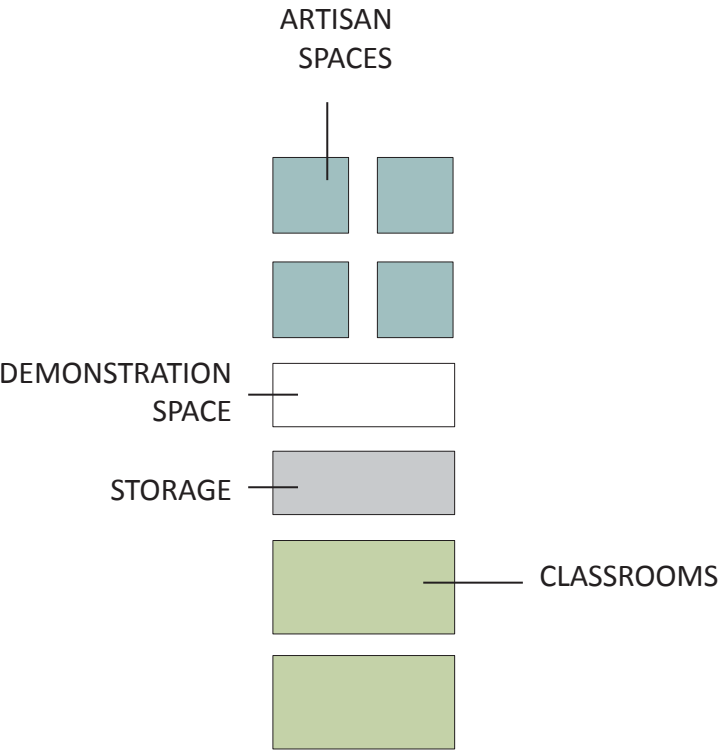
Entry



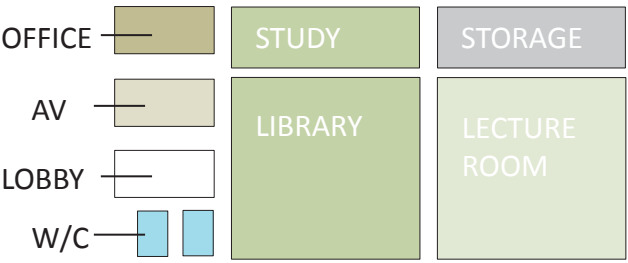
Administration



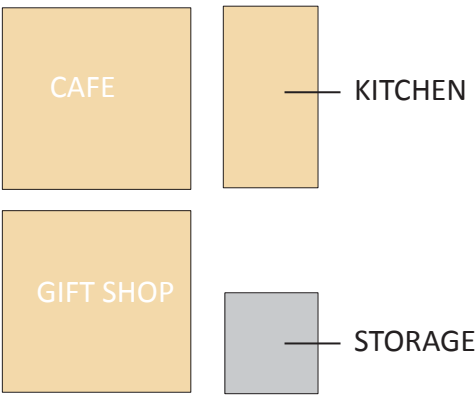
Learning Centre



Academic / Research



Food & Retail



Service Spaces

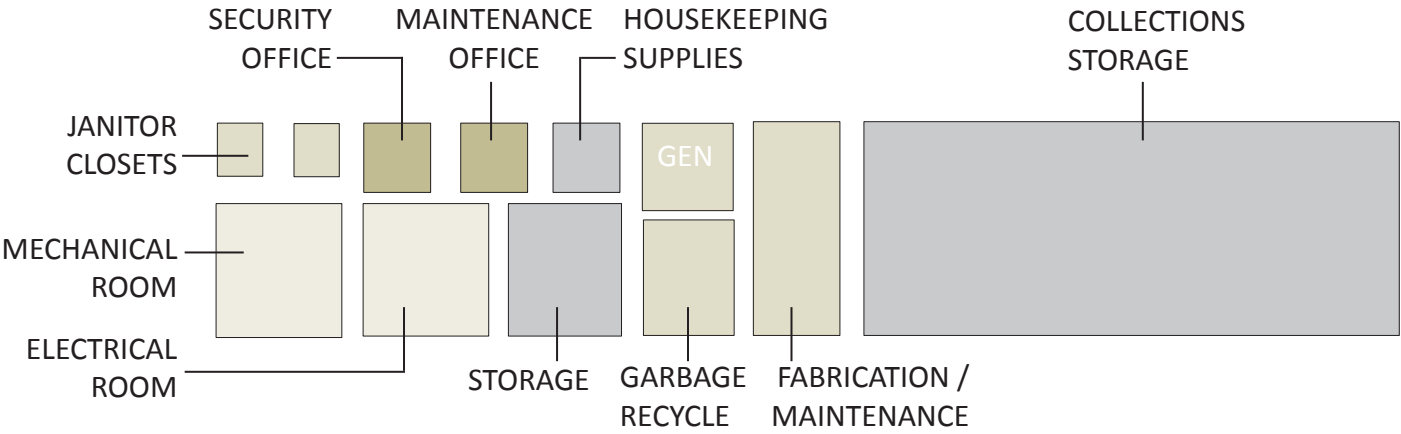
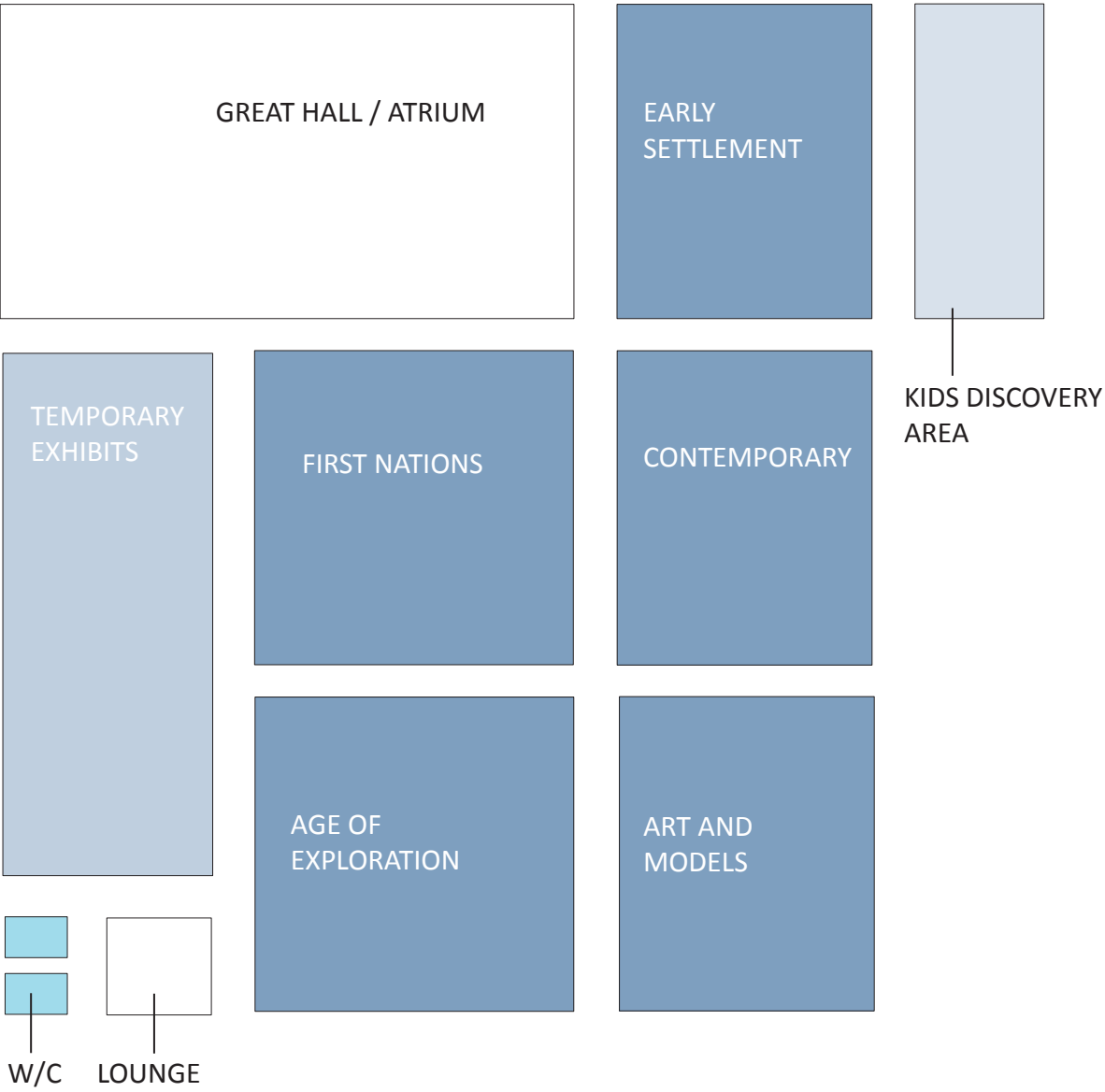


Exhibit Spaces





CHARRETTE - IMAGINING THE EXPERIENCE



THE DIRECTOR'S STORY



THE EDGE

Maritime Museum, Victoria BC



Victoria's new Maritime Museum will celebrate our long connection with the ocean through a shared expression of the unique stories, cultures and experiences that have defined our historic position, at the edge of the world

LUCY MERIWETHER
Executive Director

THIS PLACE IS SPECIAL



IT IS A PLACE OF CONSTANT CHANGE



BOTH GEOLOGIC



AND MANMADE



PEOPLE FIRST ARRIVED HERE 10,000 YEARS AGO



THEY NAVIGATED THE SEA



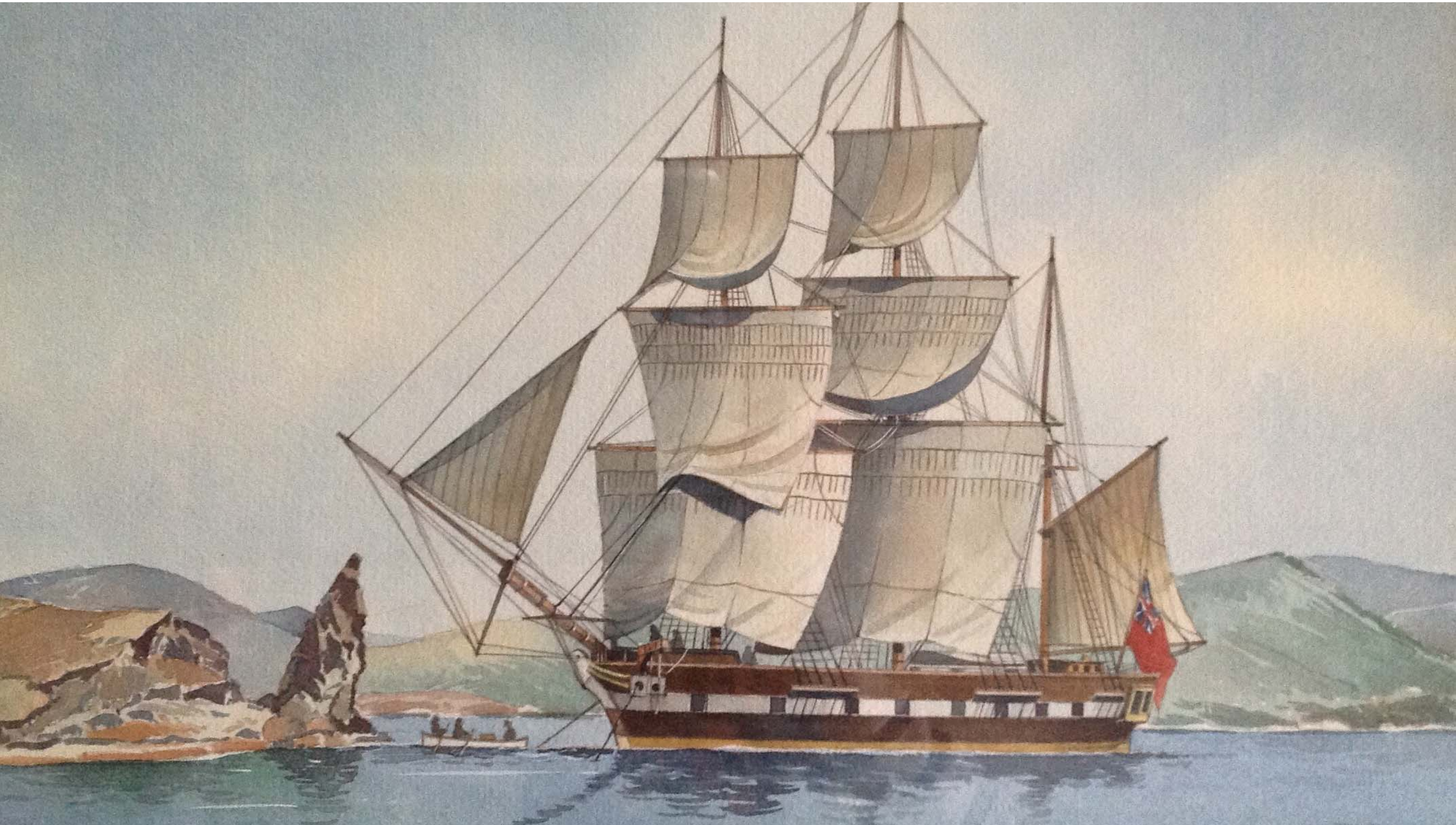
AND HARVESTED ITS RESOURCES



THEY CELEBRATED WITH ART AND CEREMONY



ONE DAY NEW PEOPLE ARRIVED



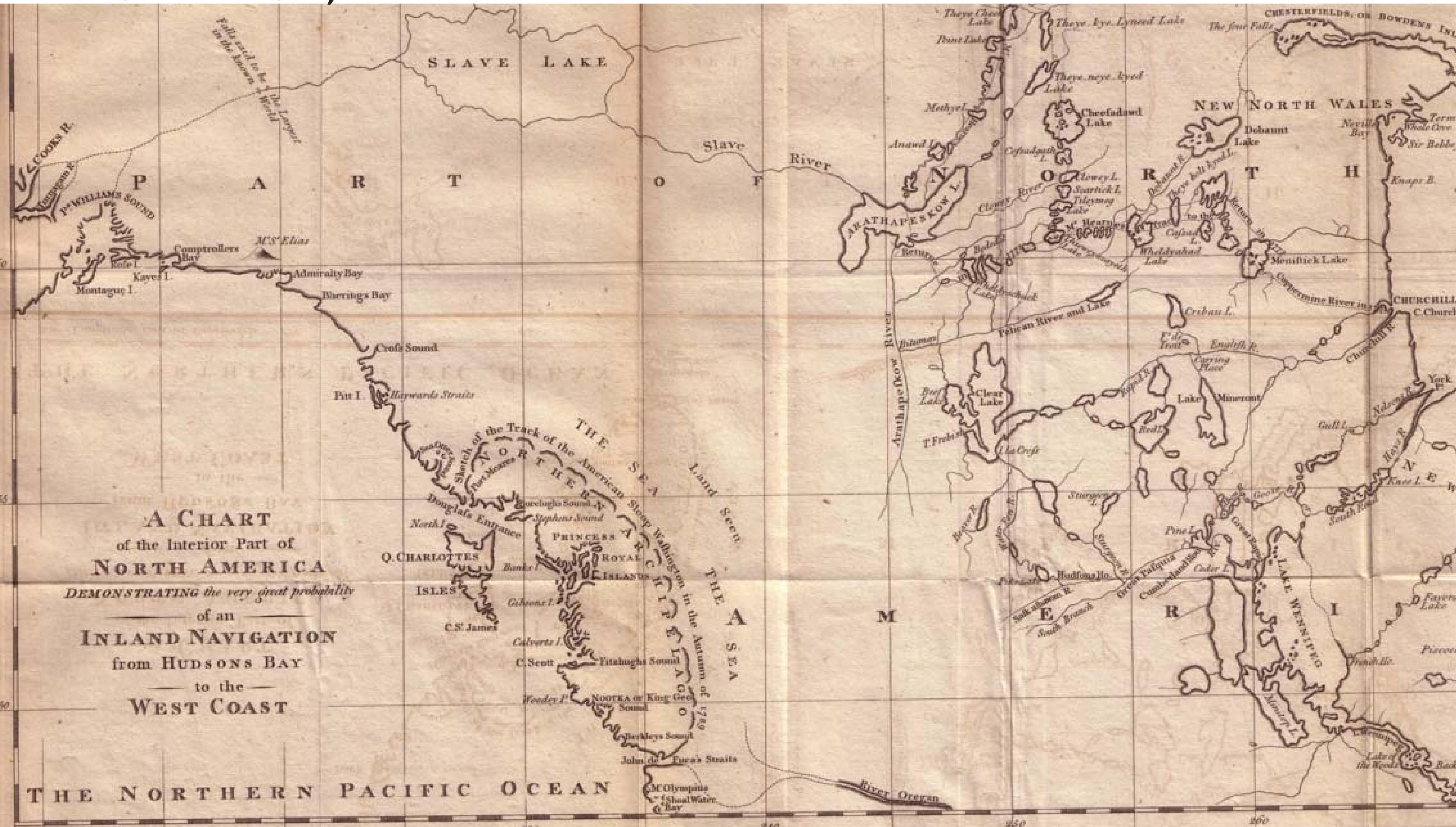
THEY BROUGHT NEW IDEAS AND TECHNOLOGY



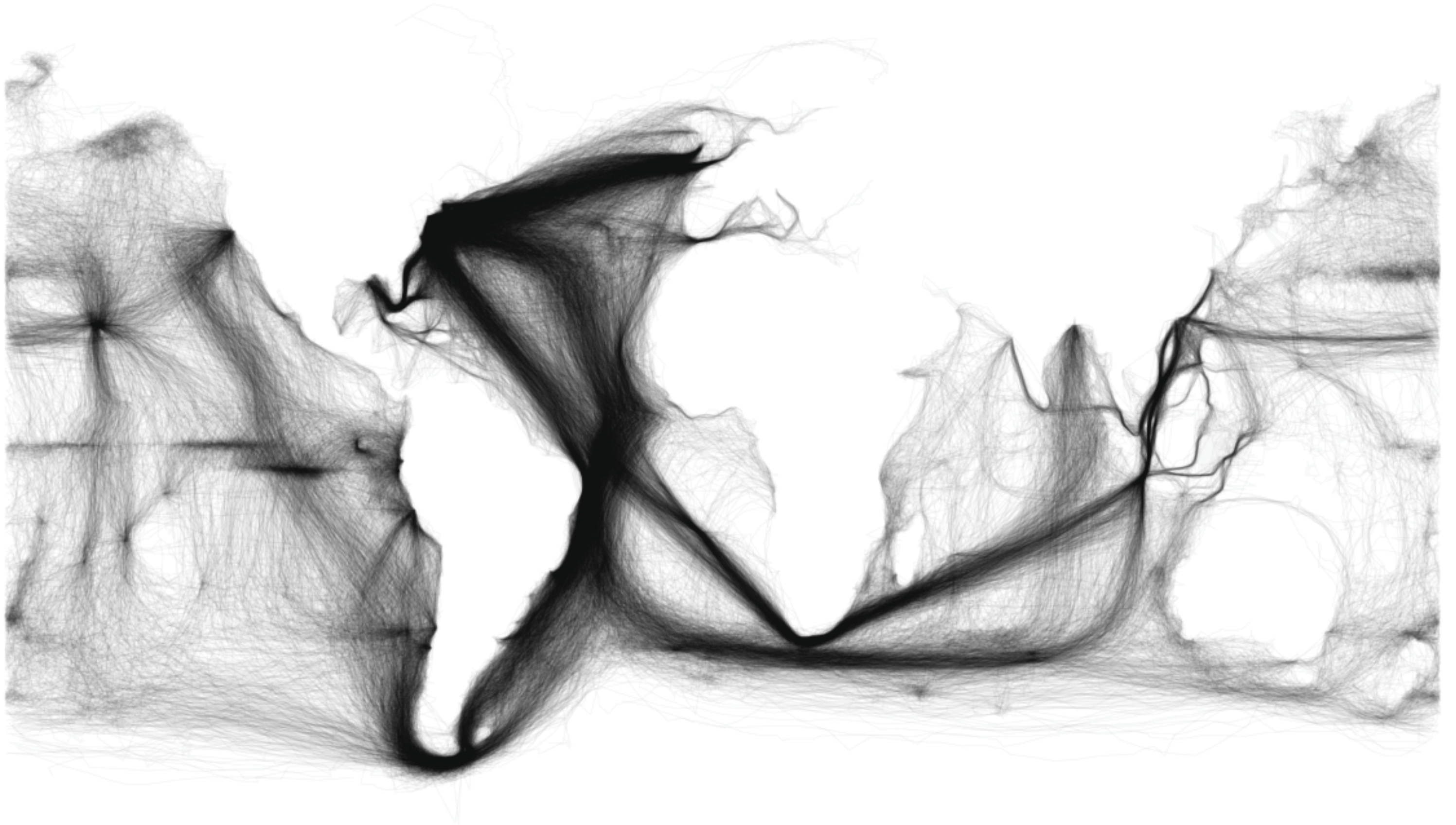
THEY FORTIFIED THE LAND,



EXPLORED THE SEA,



AND CONNECTED WITH GLOBAL SHIPPING ROUTES



THE HABOUR BECAME A BUSY PLACE



NEW TECHNOLOGIES ARRIVED



BRINGING WITH THEM NEW INDUSTRIES



AND A CITY GREW UP ON THE WATER



THE FIRST PEOPLE MAINTAINED THEIR CONNECTION WITH THE SEA



AND ITS CONTRIBUTION TO DAILY LIFE



**TODAY, OUR COMMUNITY
STILL RELIES ON THE SEA**



**AND WE RECOGNIZE IT AS A FRAGILE
AND PRECIOUS RESOURCE**



THE SITE'S STORY



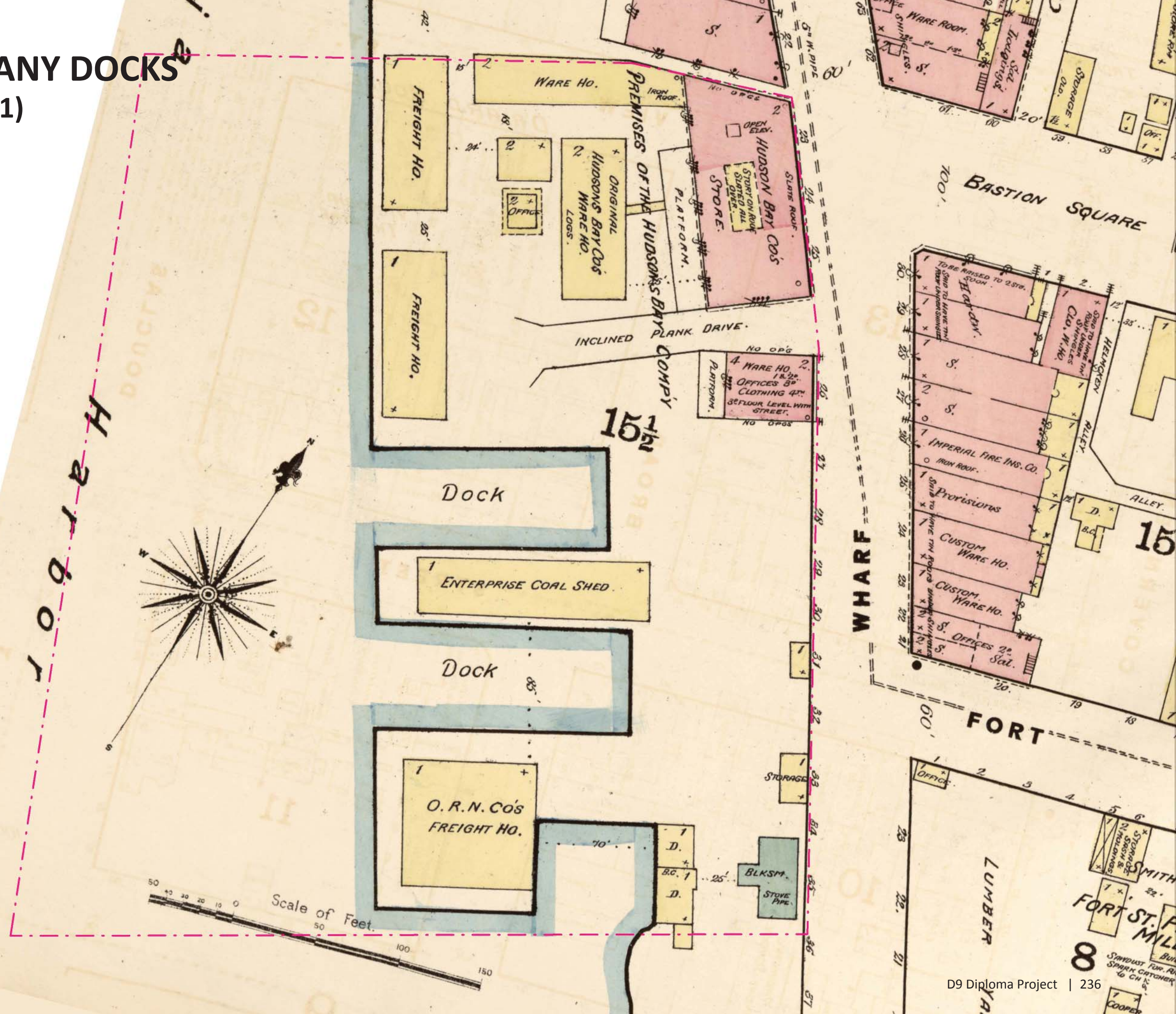
CURRENT CONDITION



19TH CENTURY SHORELINE

HUDSONS BAY COMPANY DOCKS

(FIRE INSURANCE MAP 1891)



ILLUSTRATED MAP - 1889



VIEW TO SITE FROM SONGHEES - 1864



HUDSONS BAY WHARF STREET WAREHOUSE - 1890'S



HUDSONS BAY WAREHOUSE AND STORE - 1920'S



BC Archives Photo # D-01797 - Supplied for Research Only. No Duplication. Fees May Apply for Other Use

EASTERN WALL OF HUDSONS BAY WAREHOUSE



BRICKED PORTAL TO UNDERGROUND STOREROOMS



GLACIATED ROCK OUTCROP



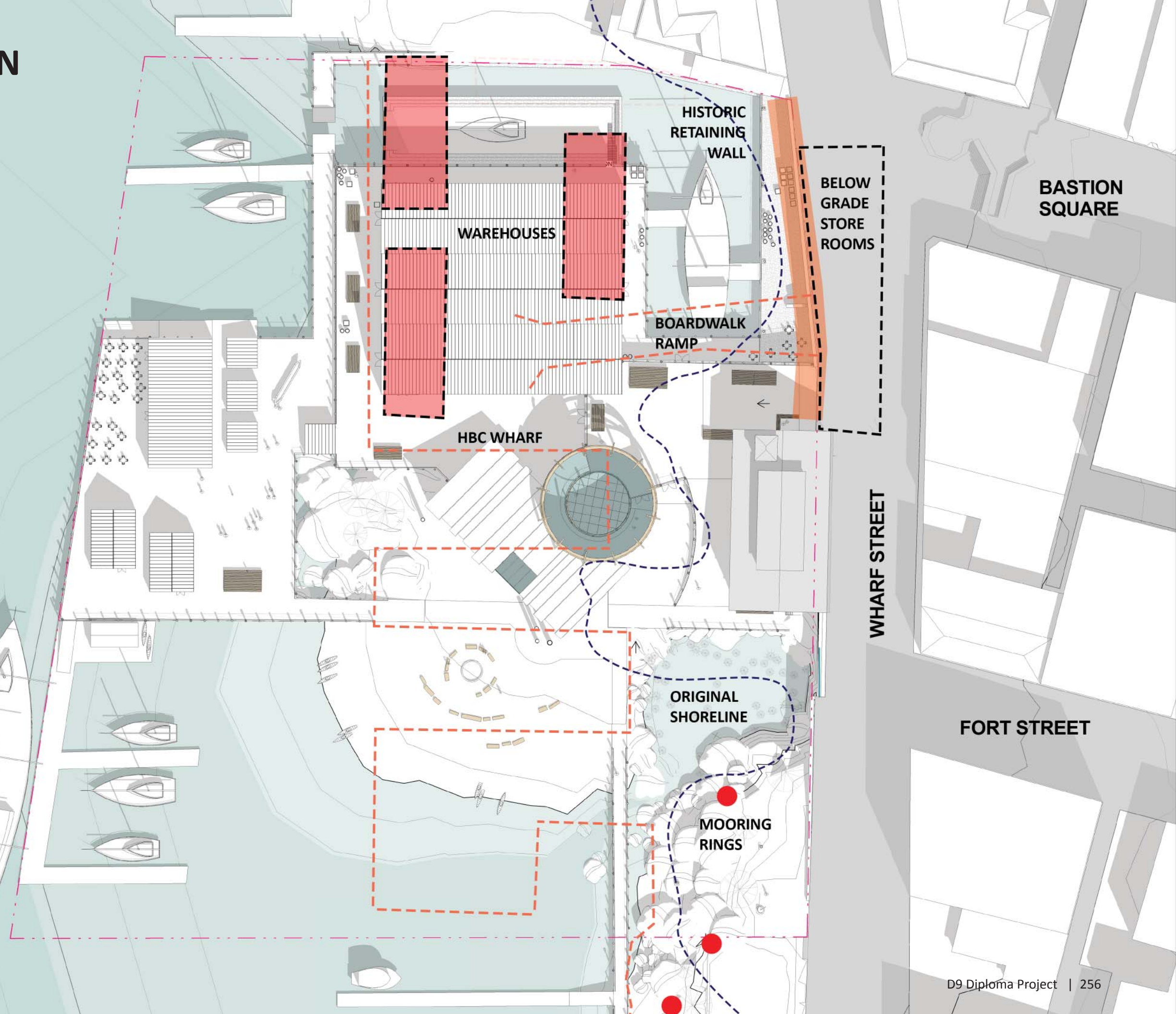
19TH CENTURY IRON MOORING RINGS

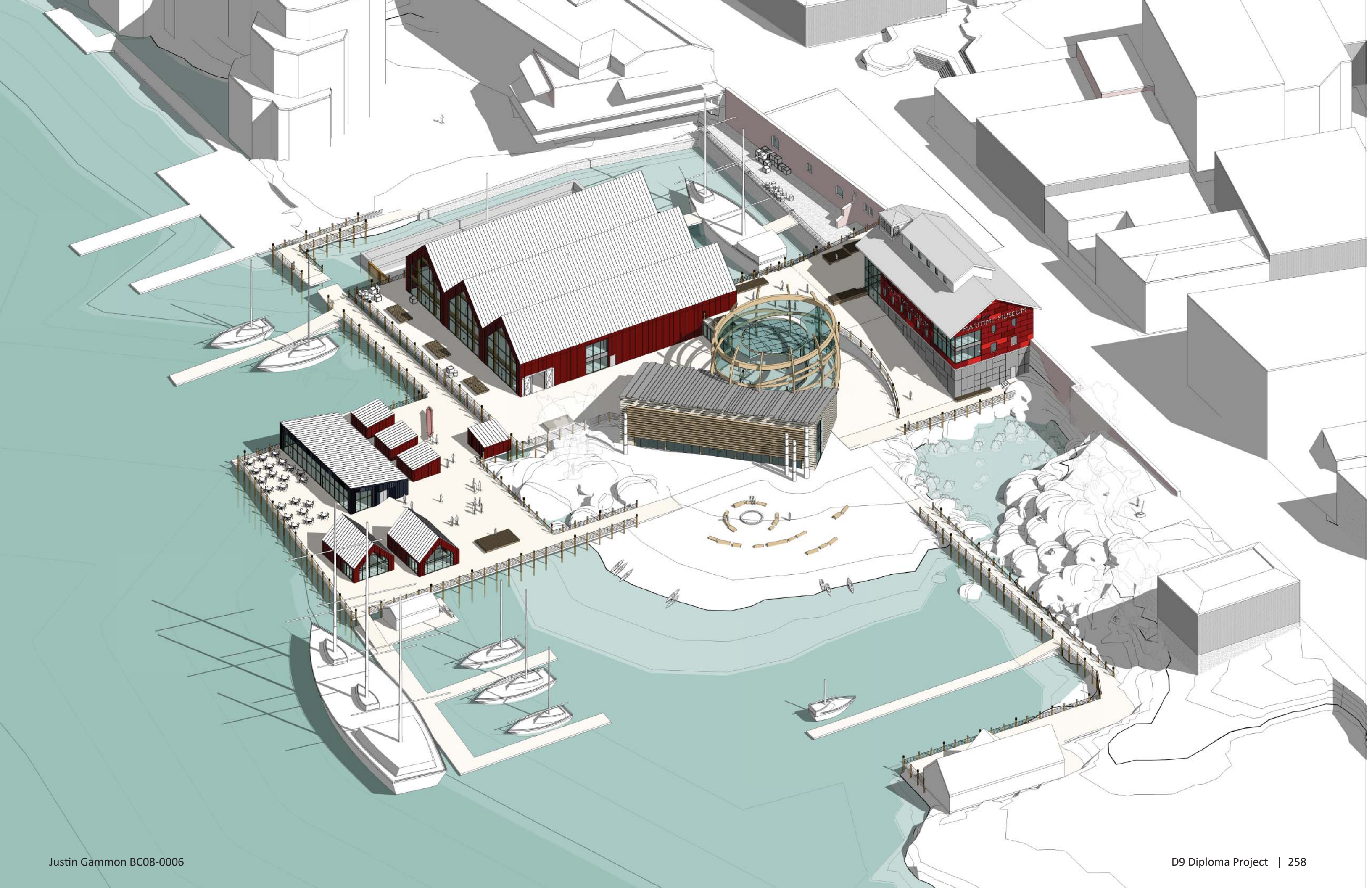


A LAYERED HISTORY

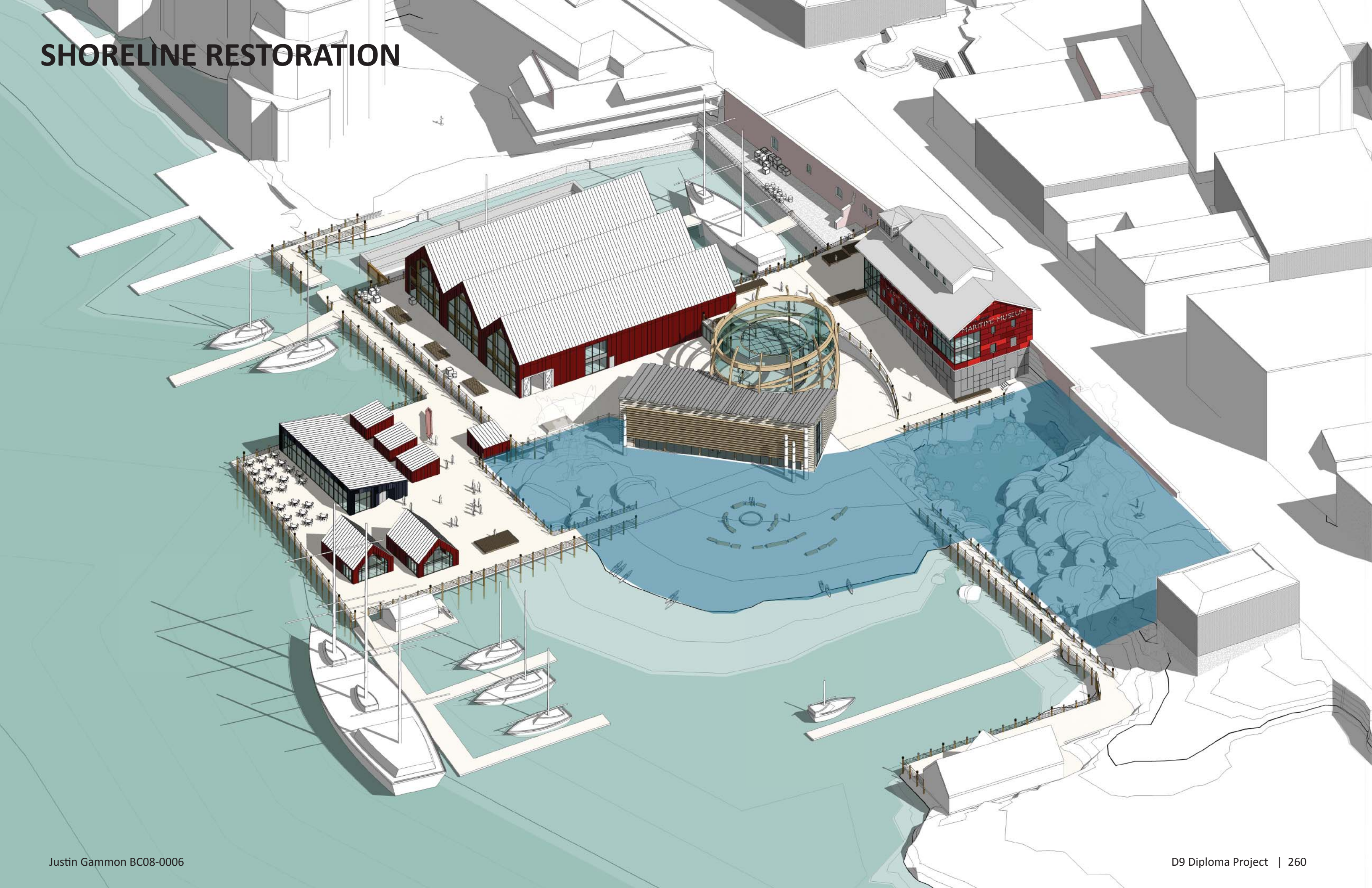


INFORMS A NEW PLAN

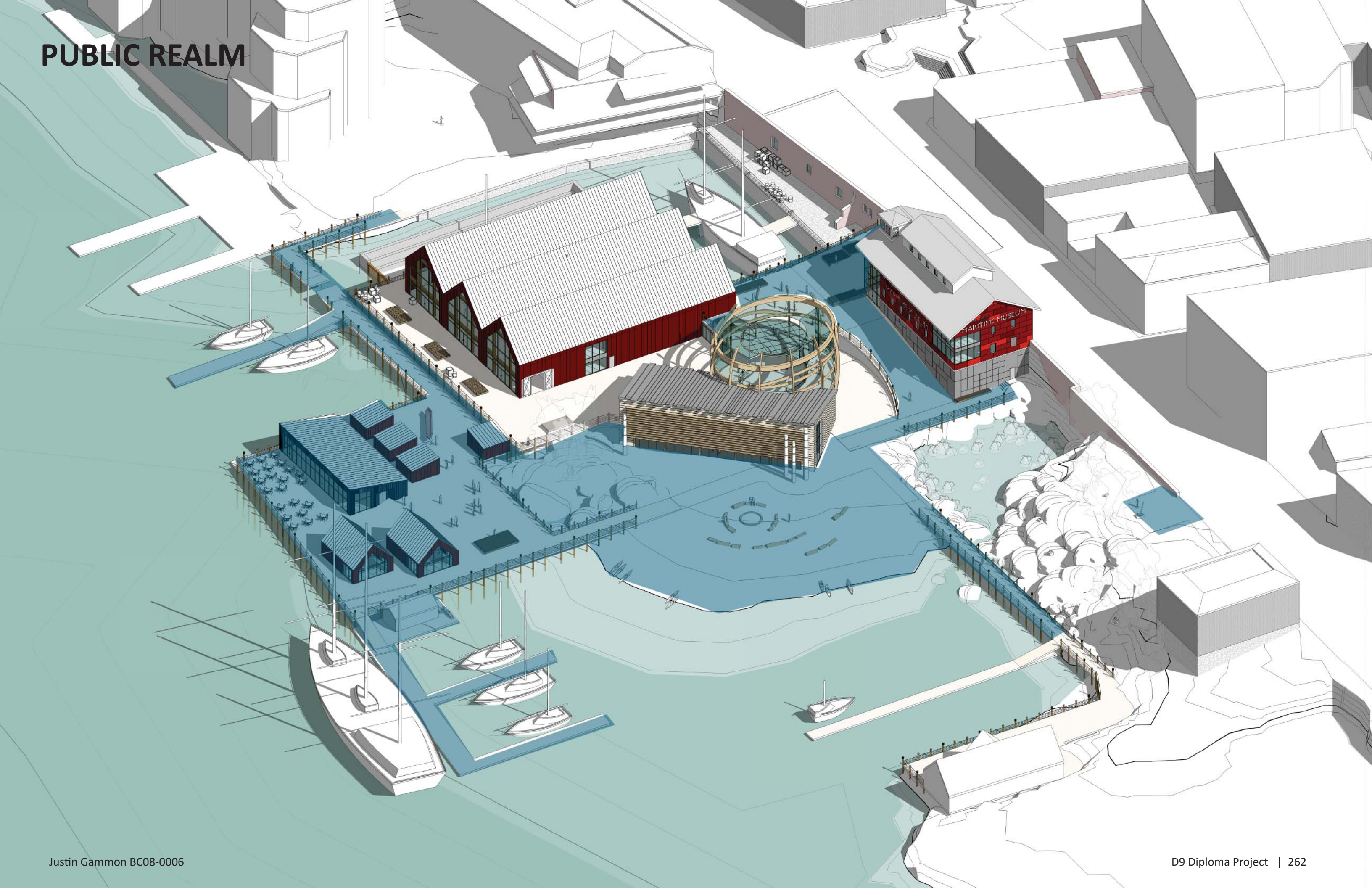




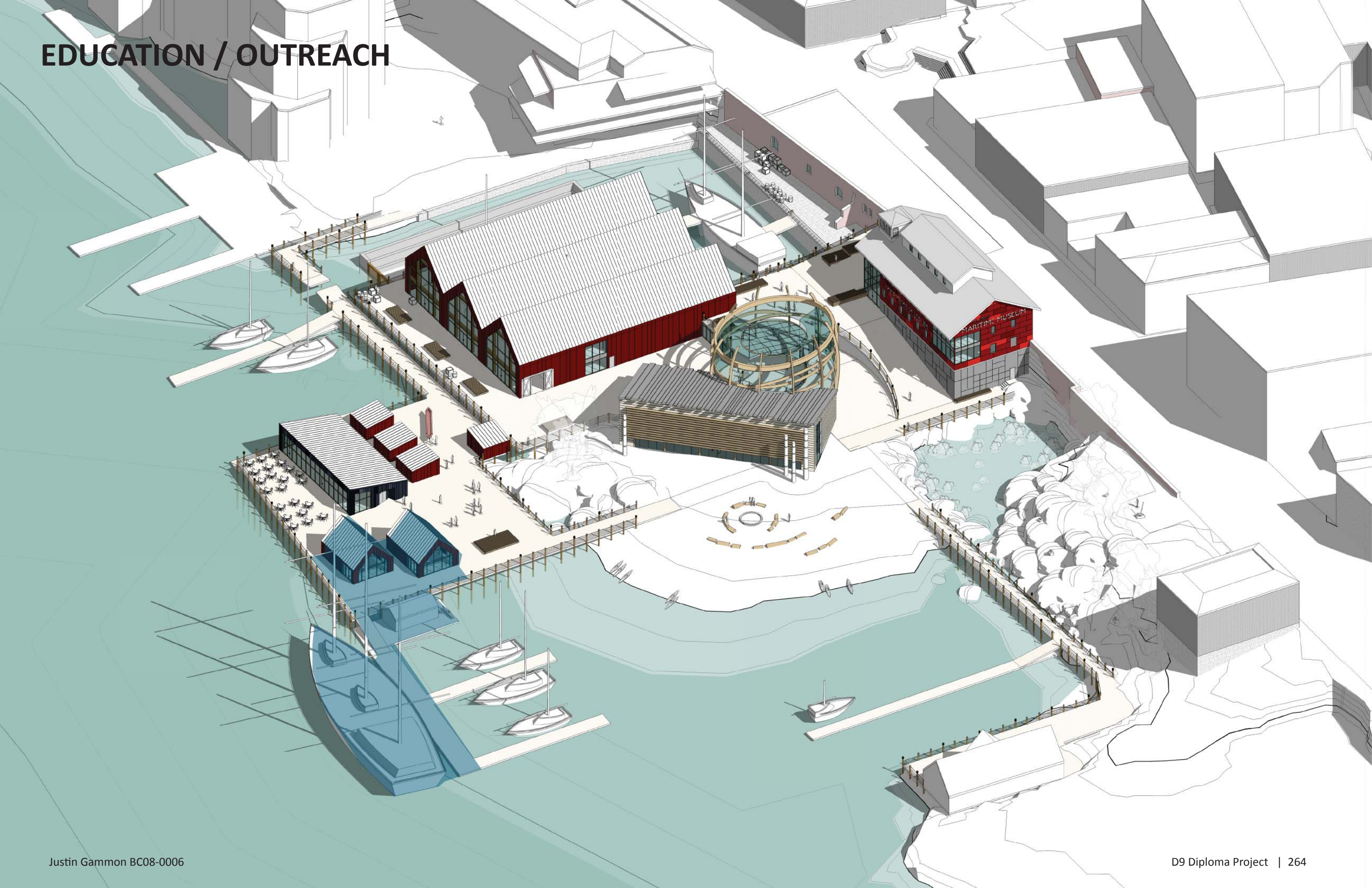
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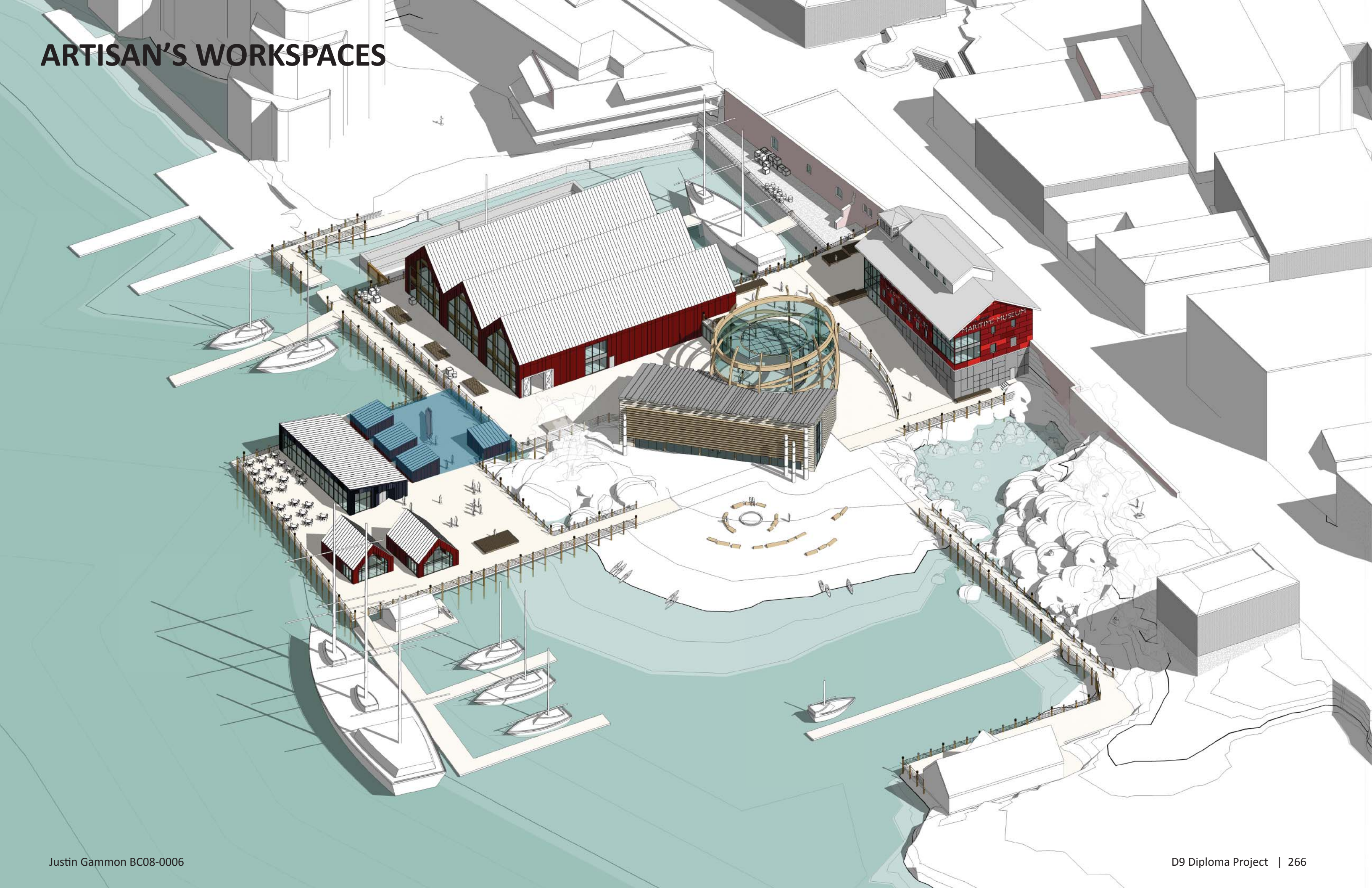
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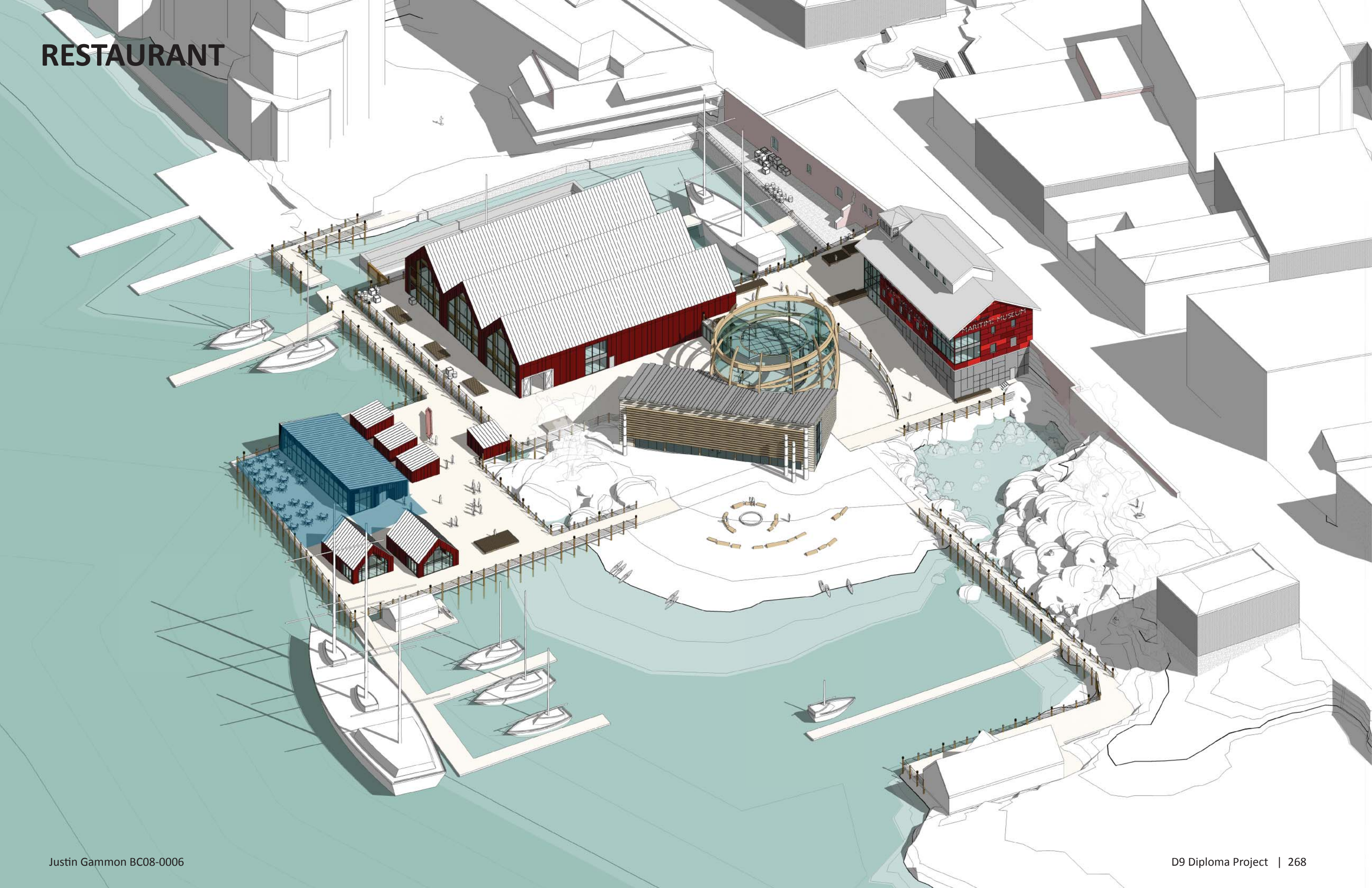
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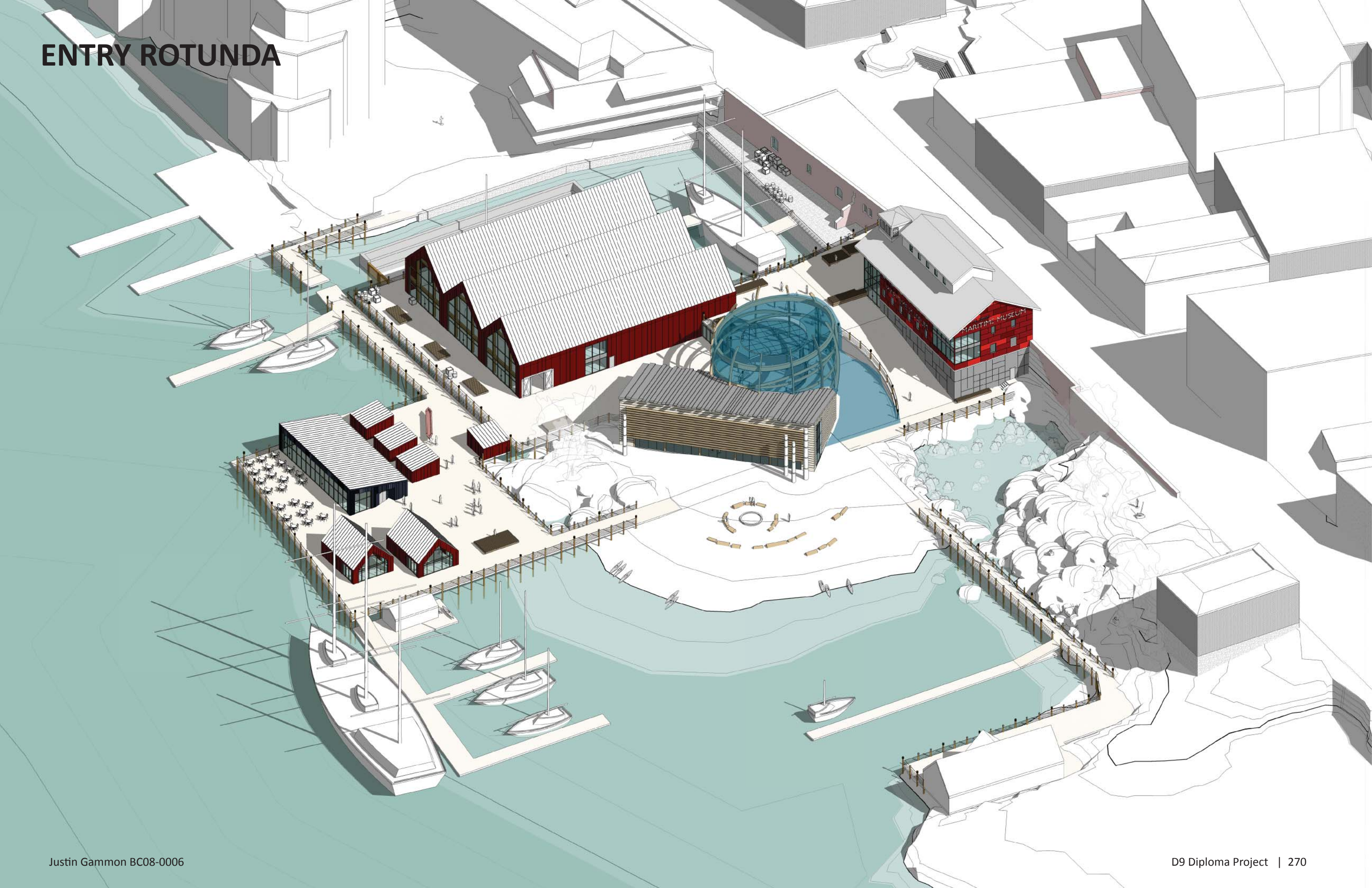
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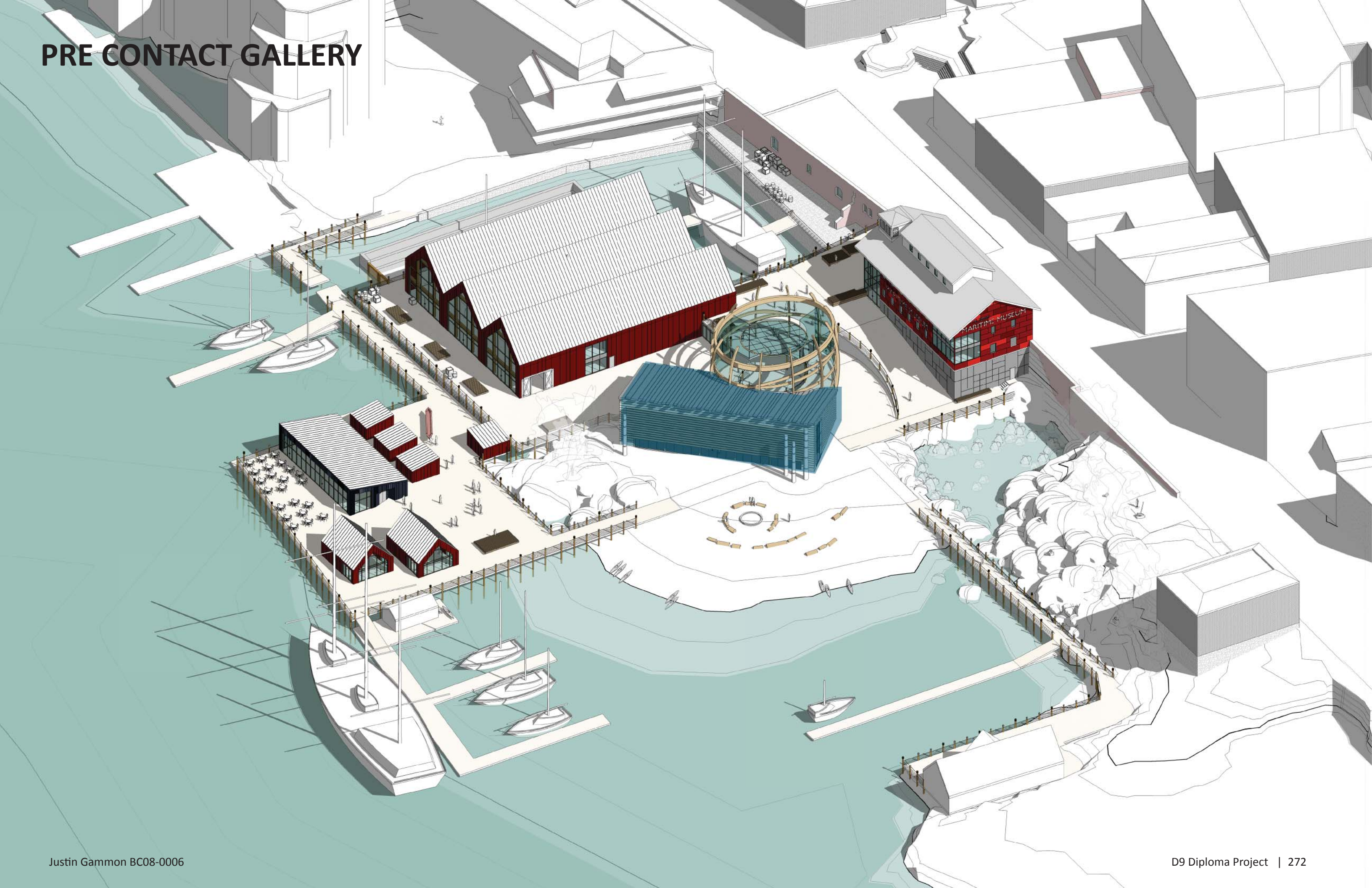
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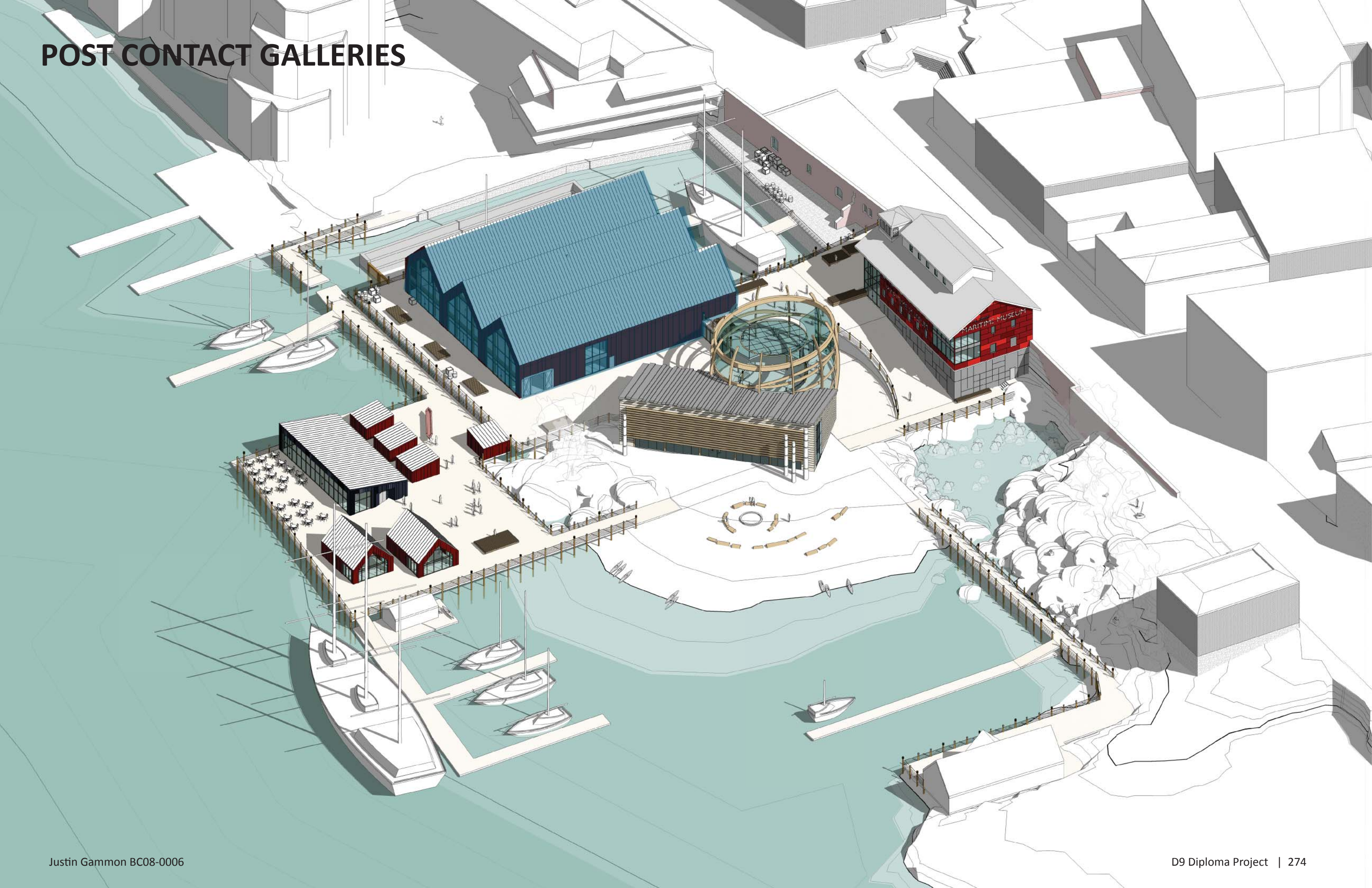
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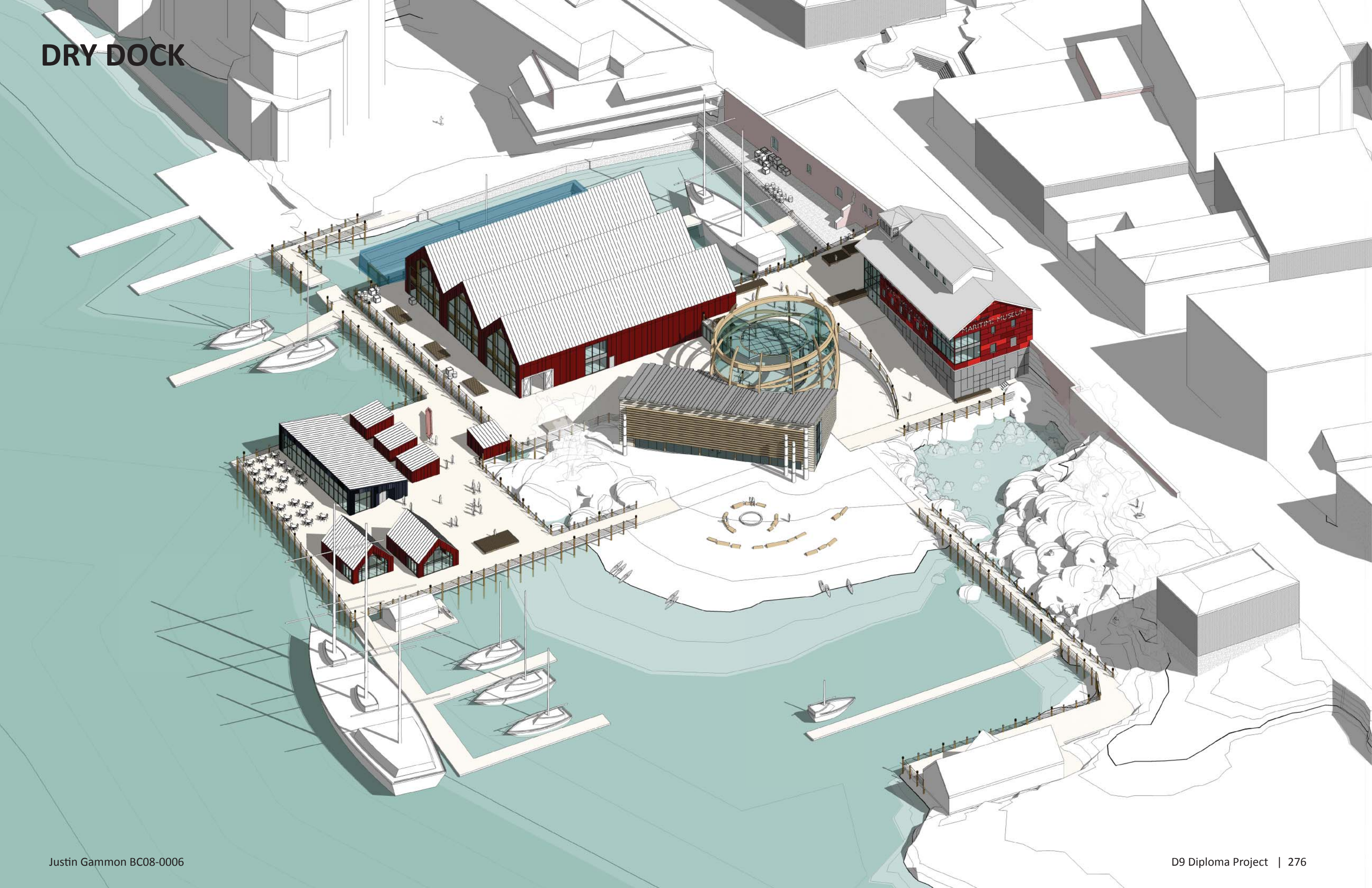
PRE CONTACT GALLERY



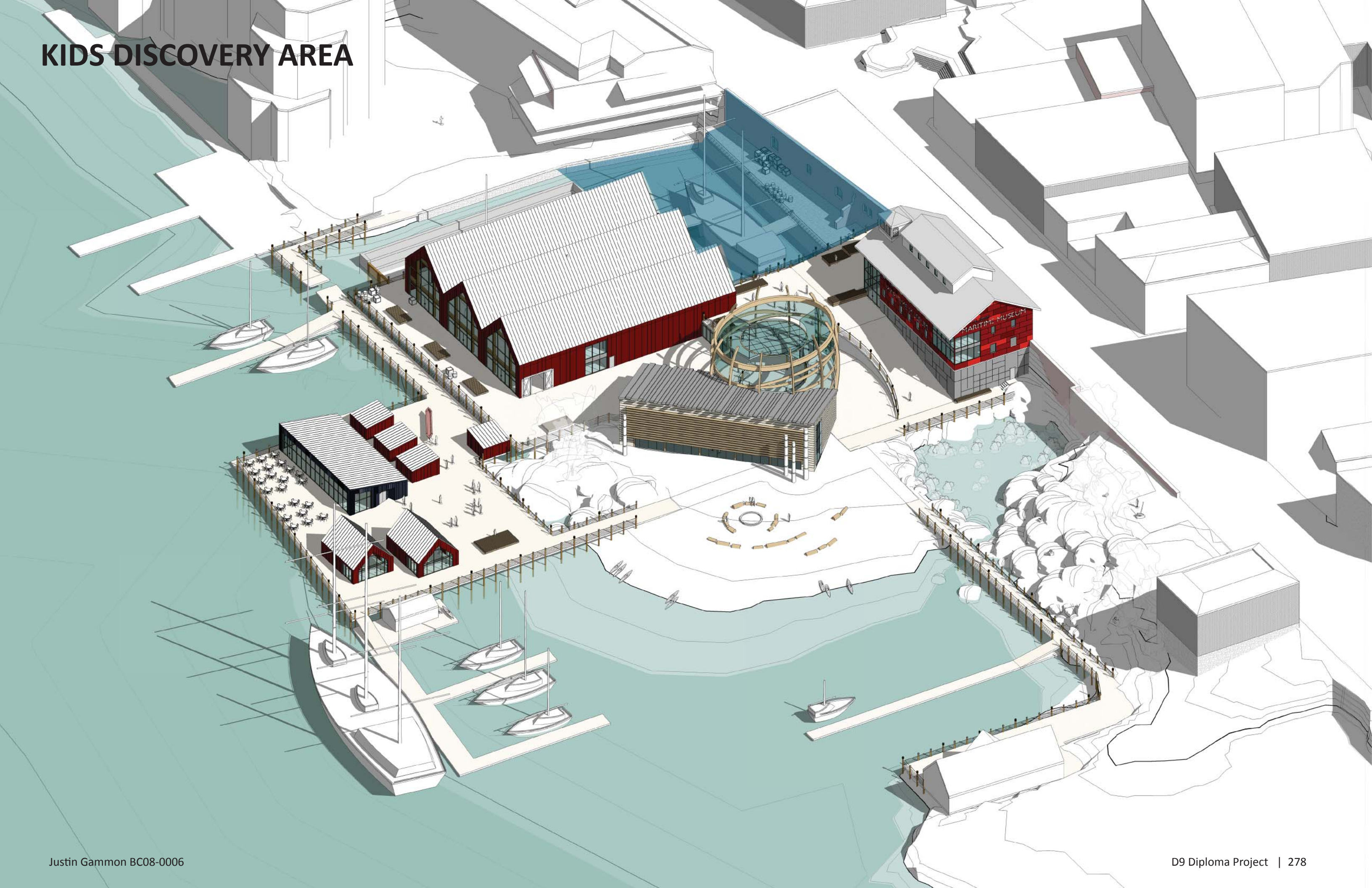
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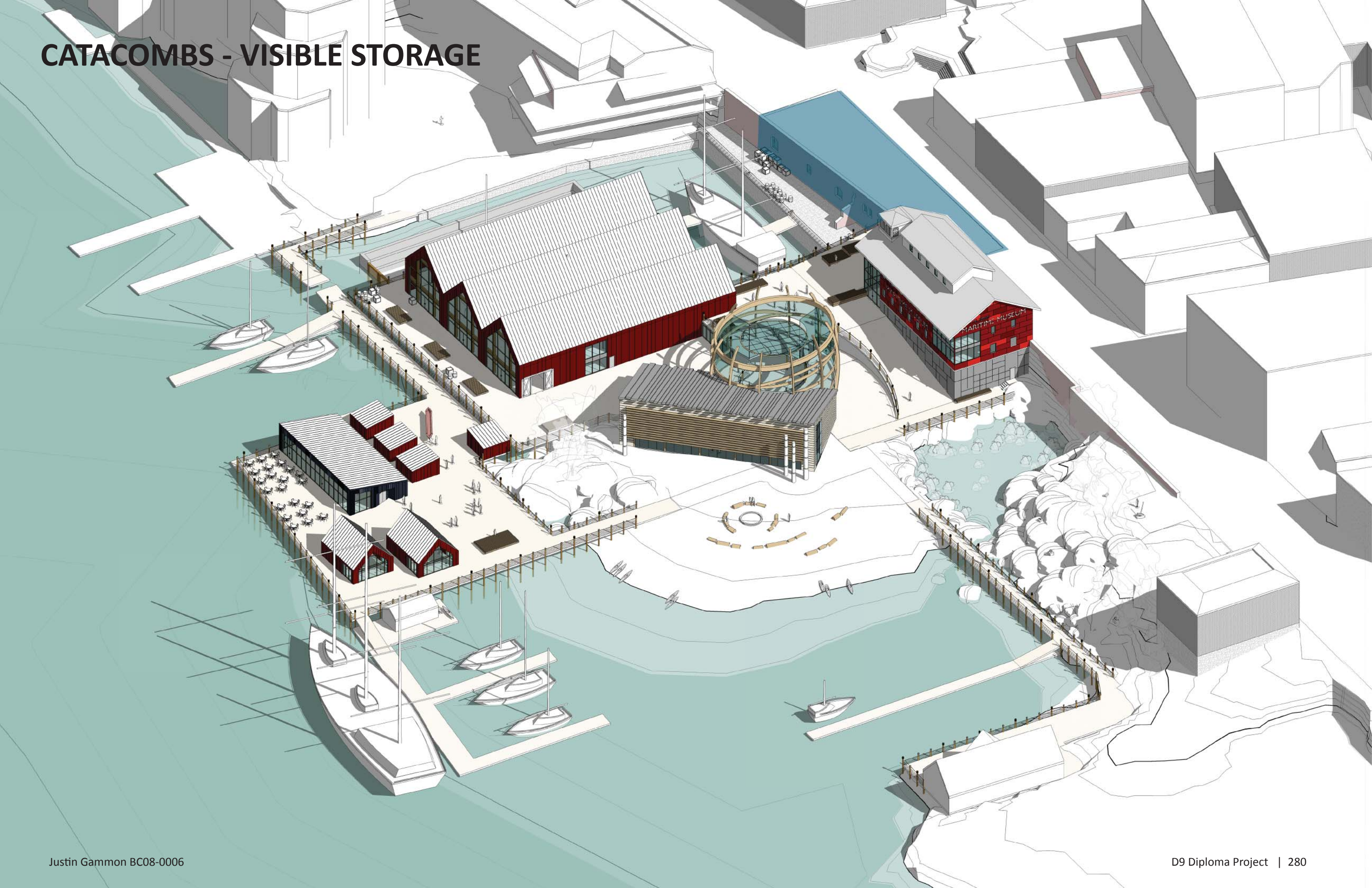
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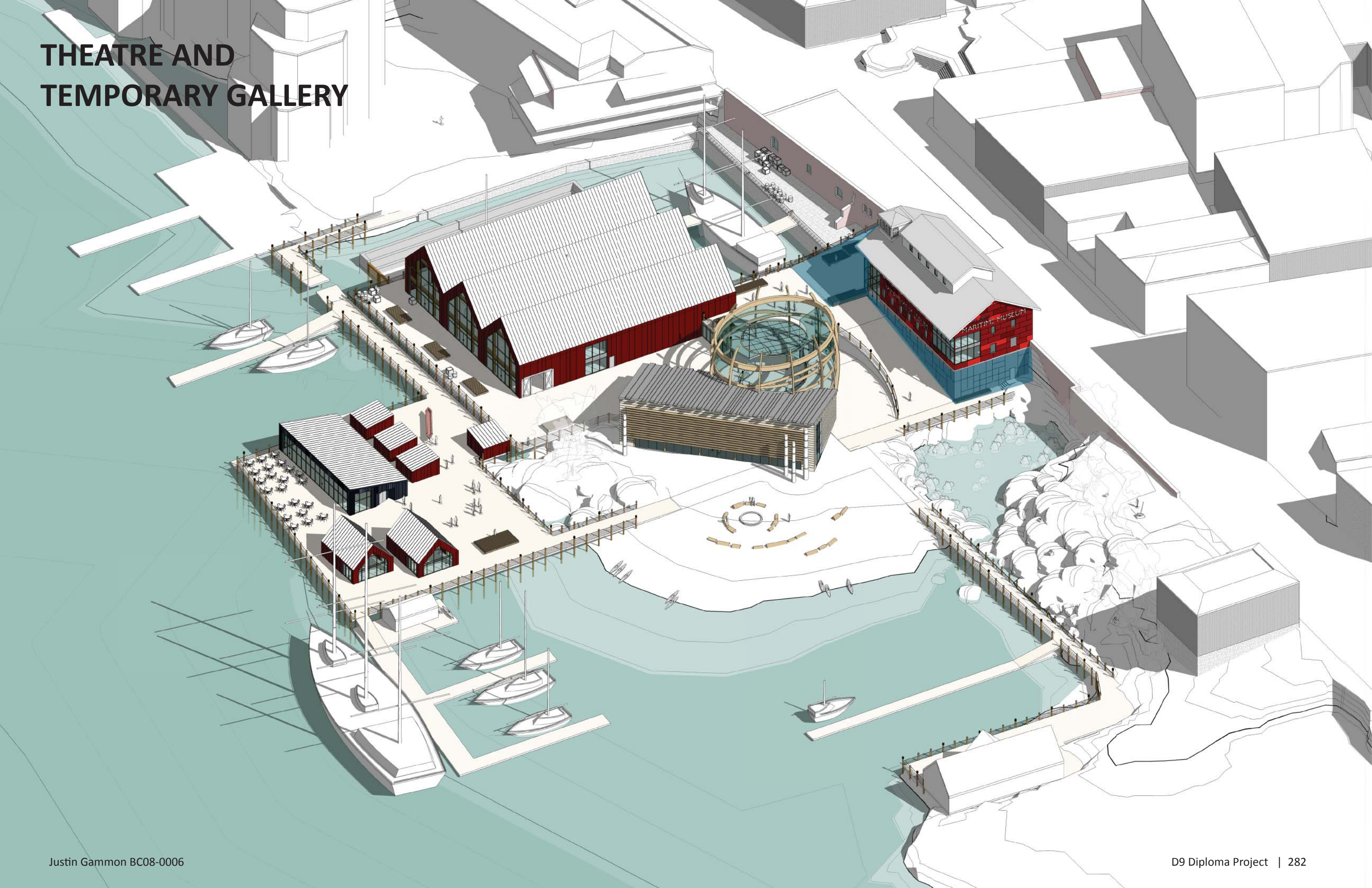
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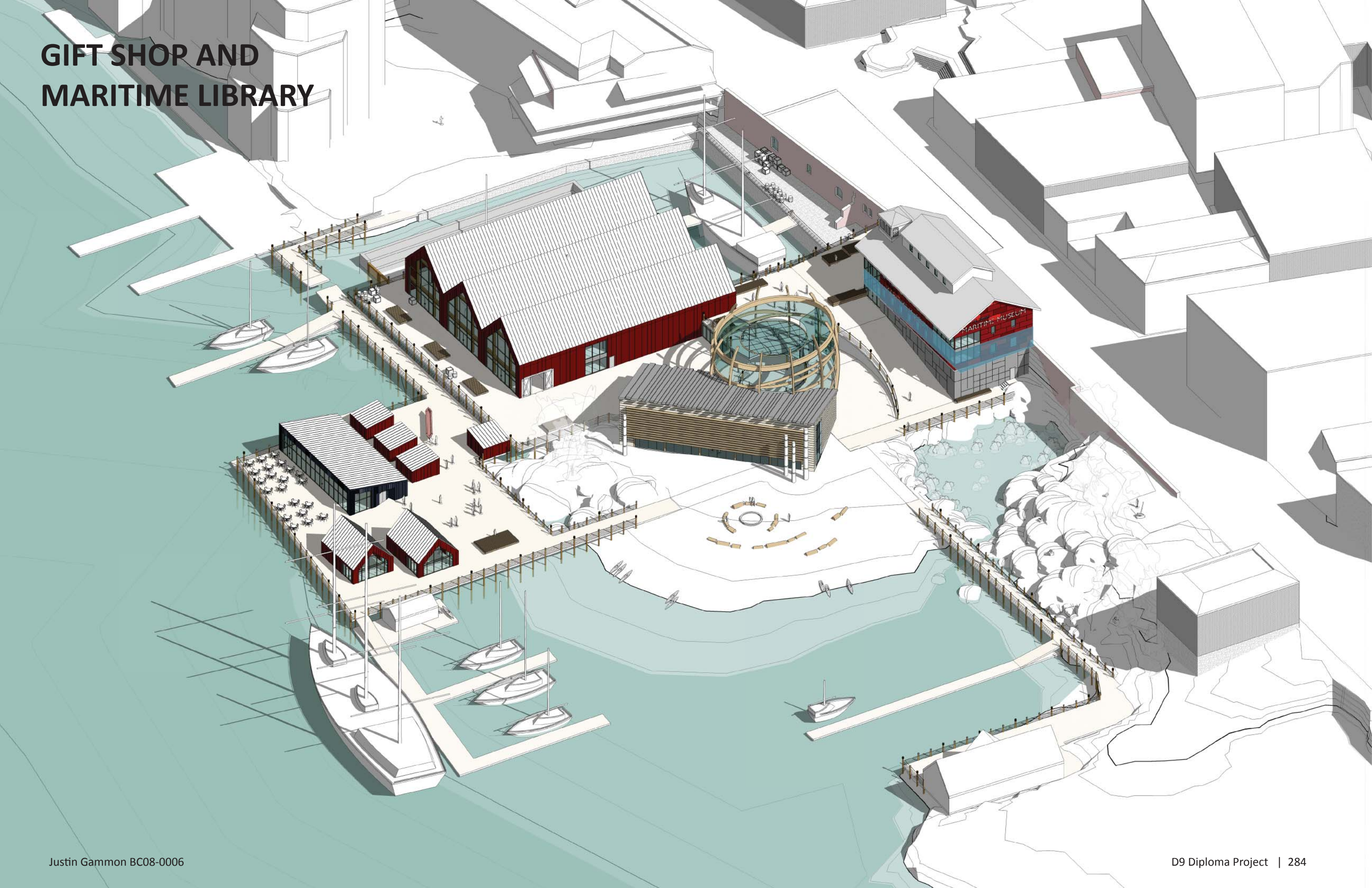
CATACOMBS - VISIBLE STORAGE



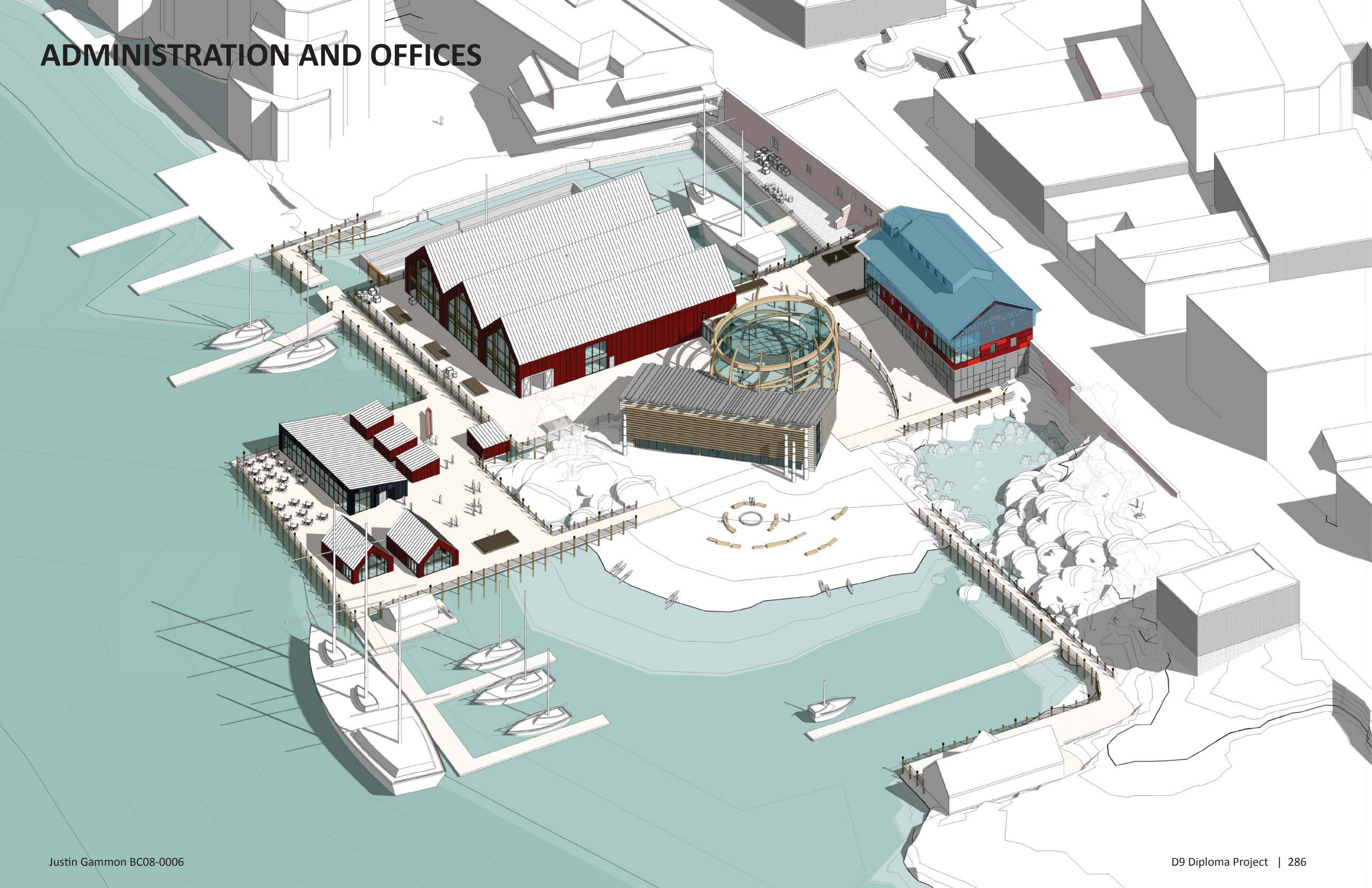
THEATRE AND
TEMPORARY GALLERY



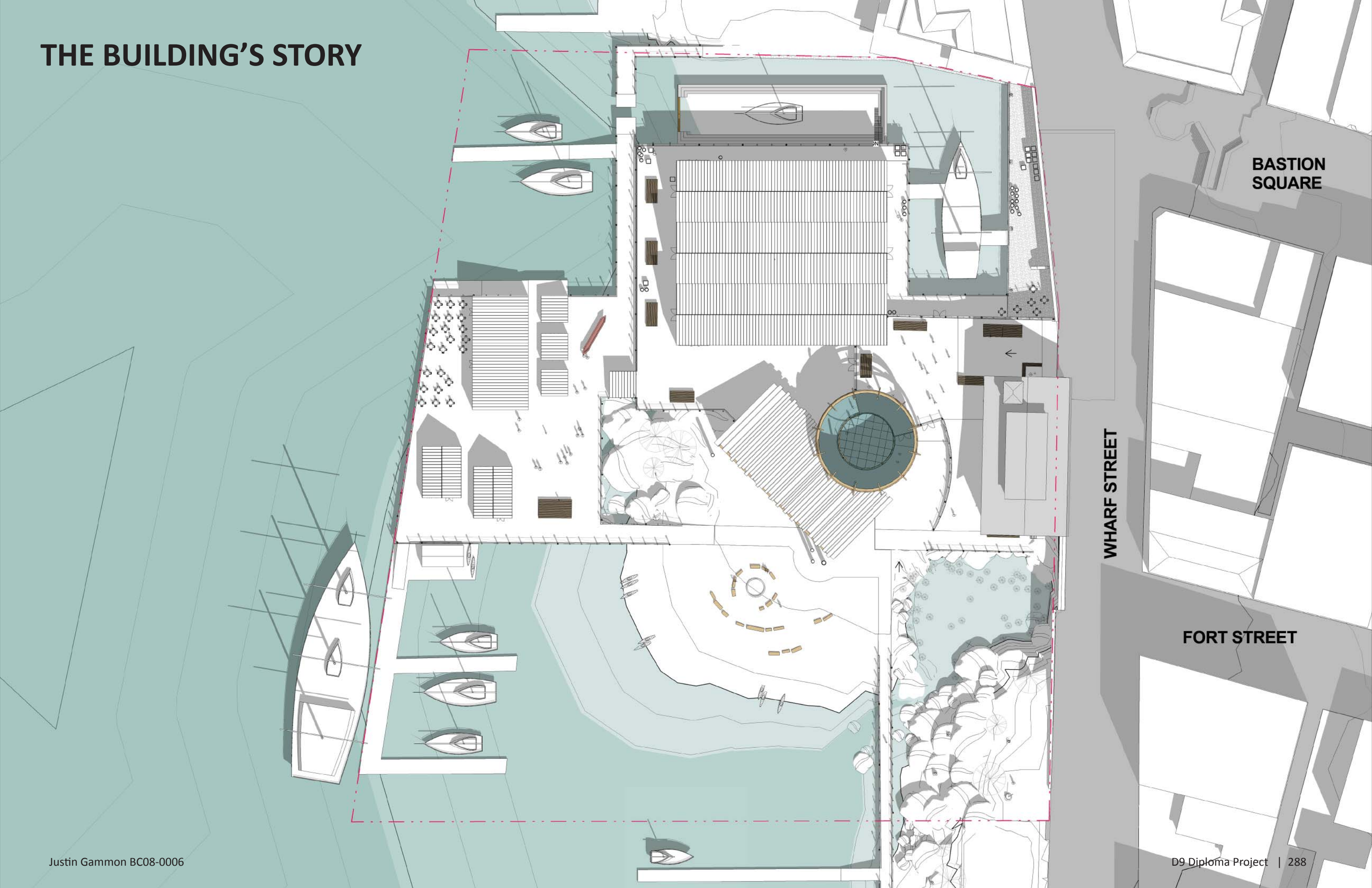
GIFT SHOP AND
MARITIME LIBRARY



ADMINISTRATION AND OFFICES



THE BUILDING'S STORY

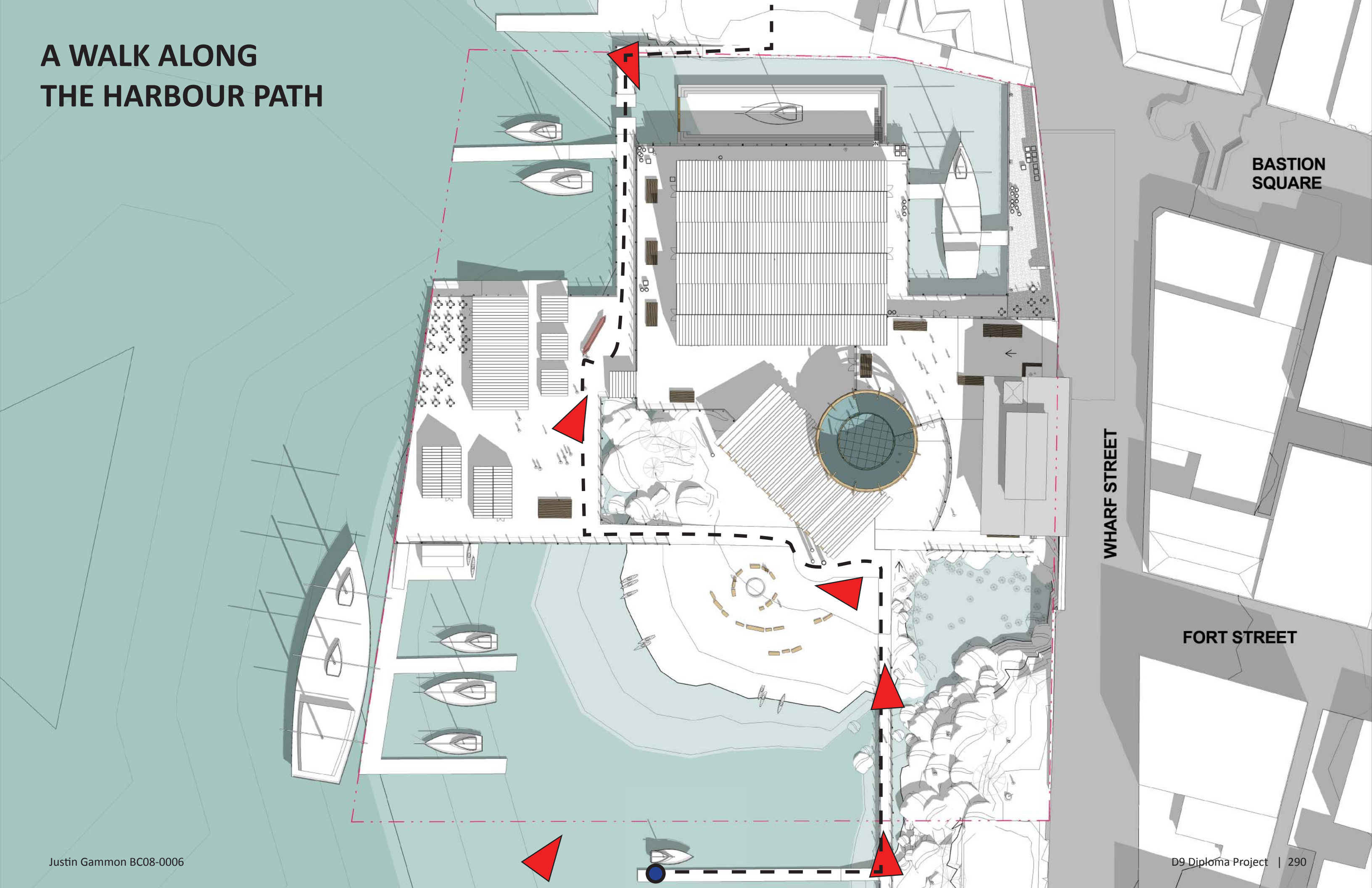


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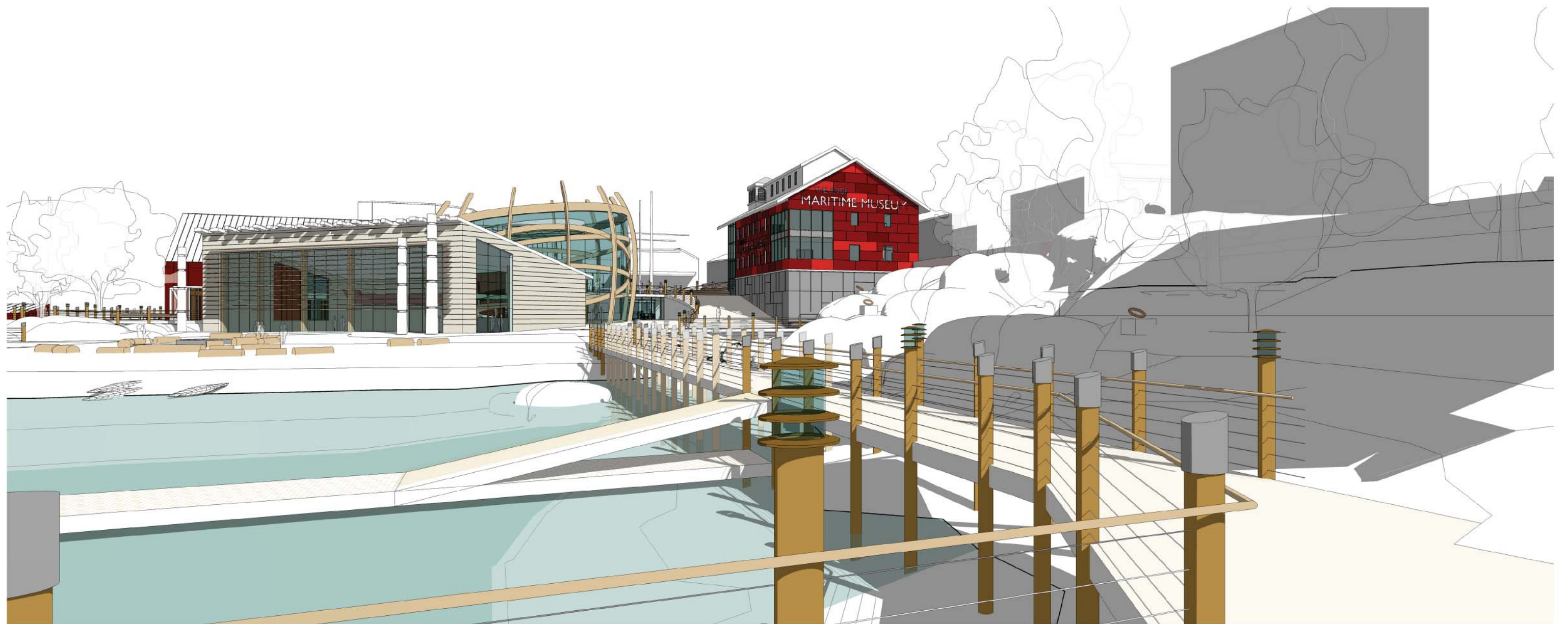
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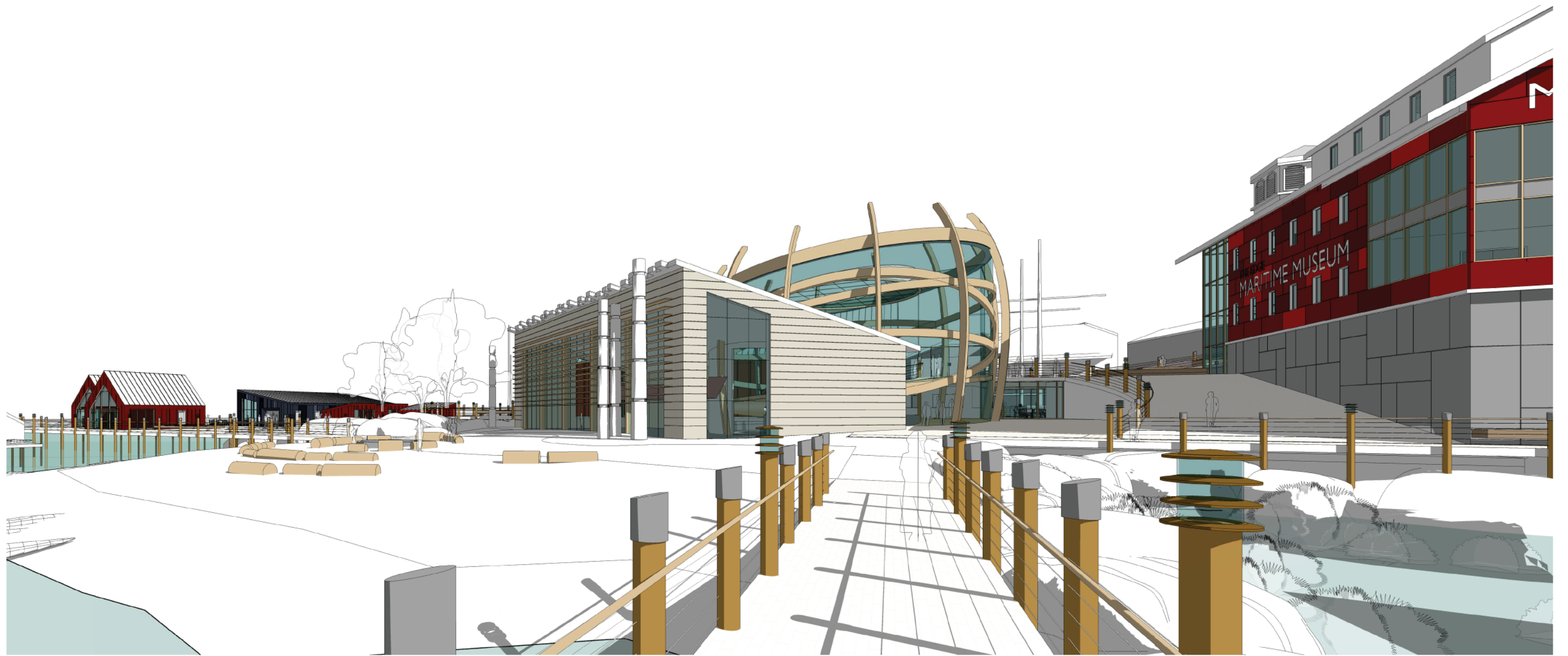
FORT STREET

A WALK ALONG THE HARBOUR PATH



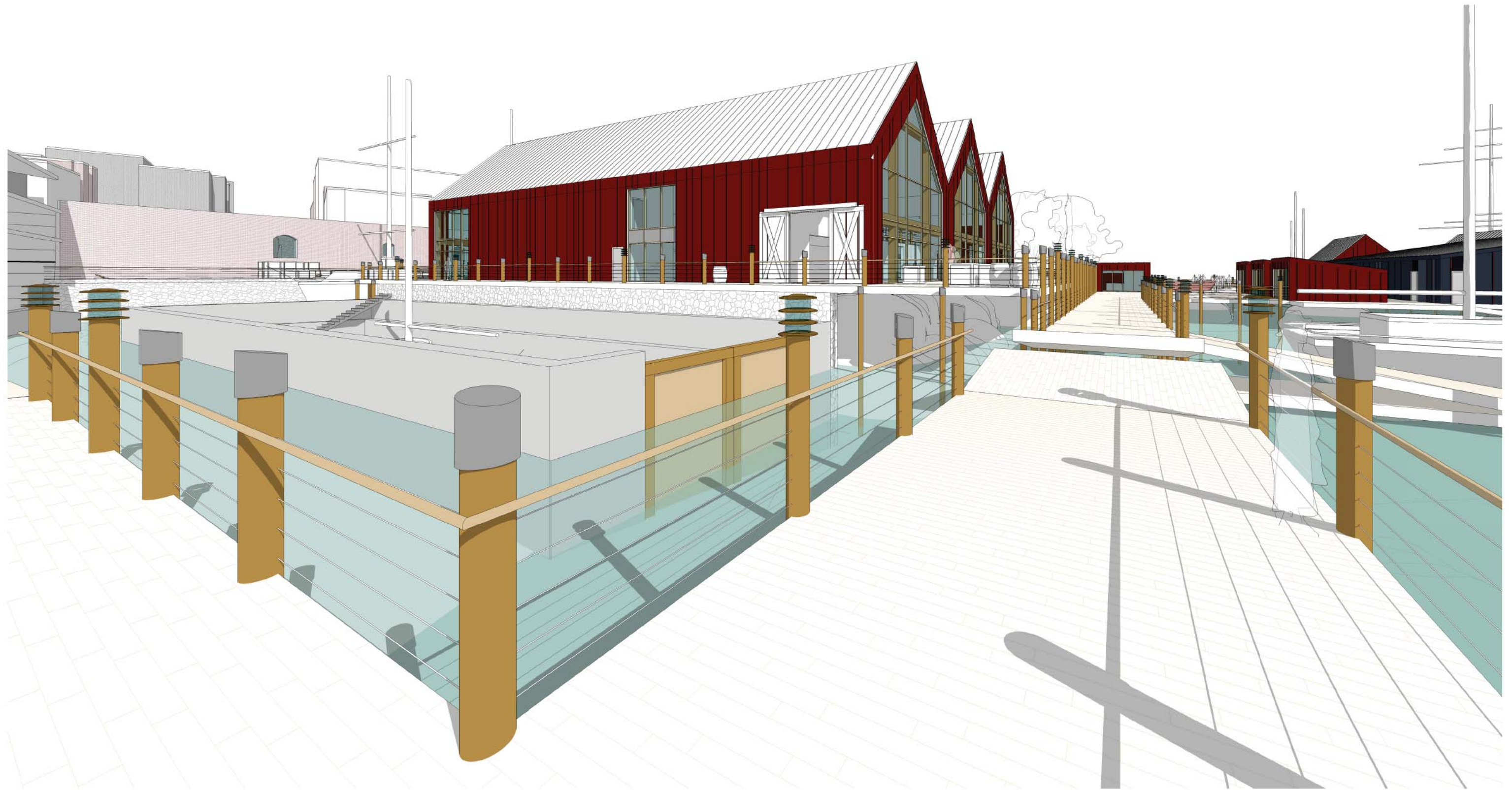




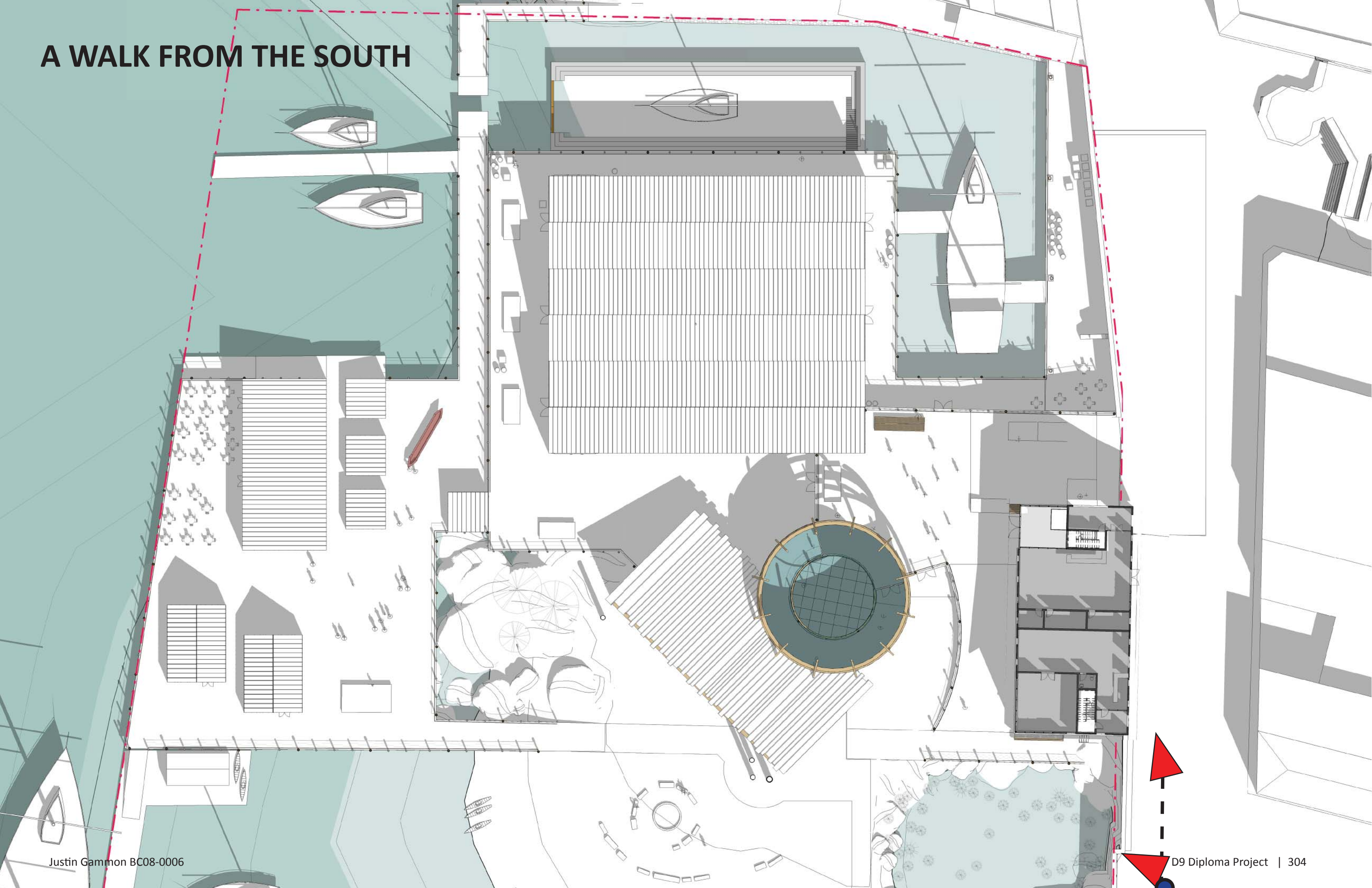


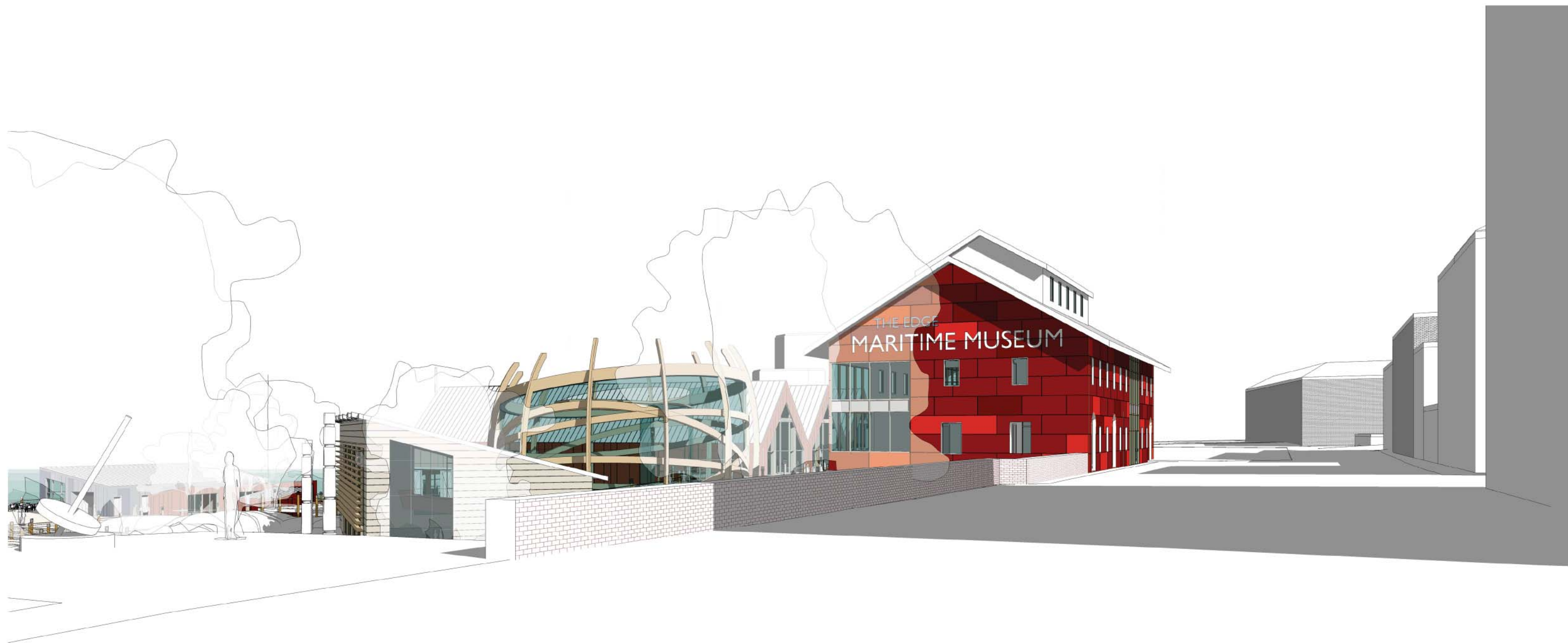


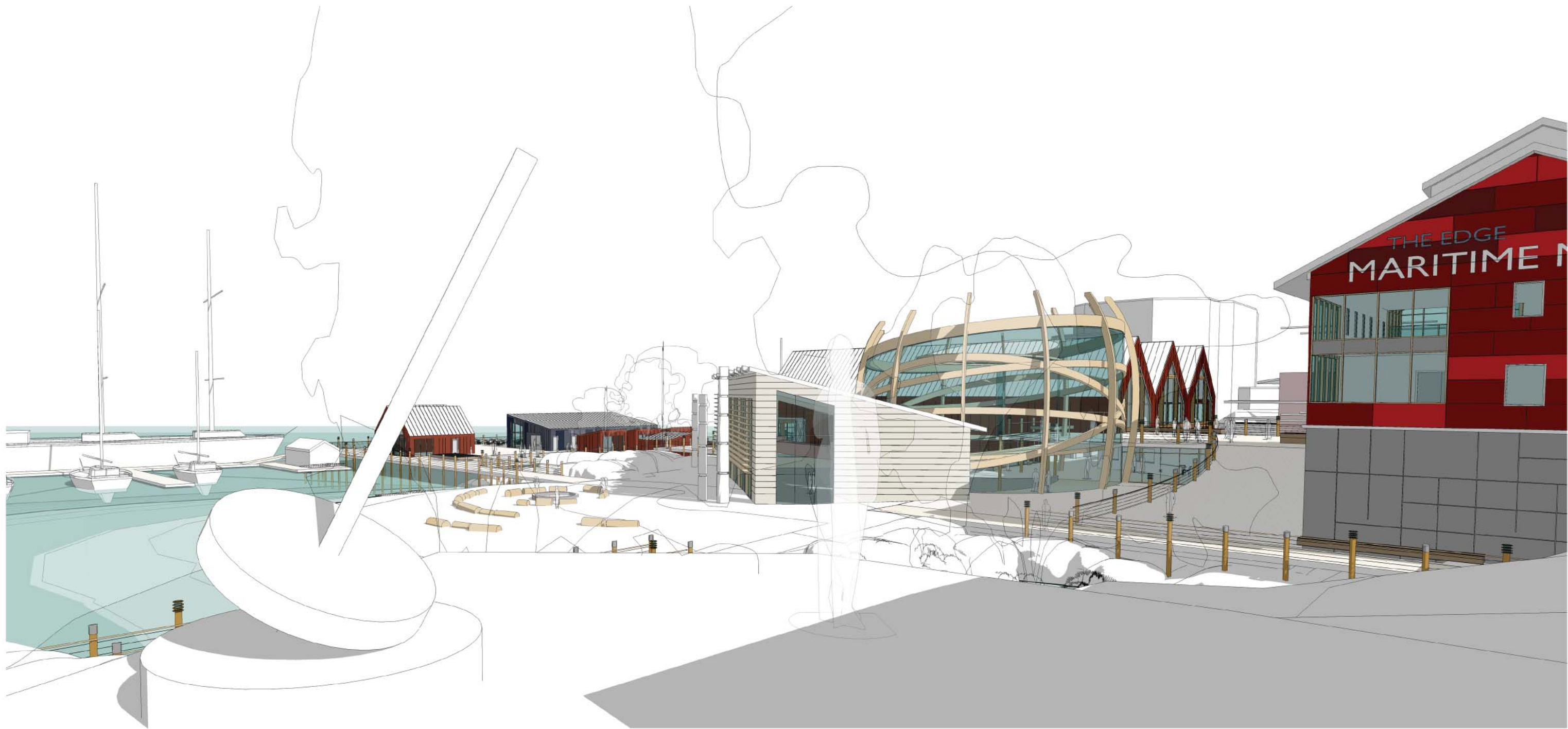




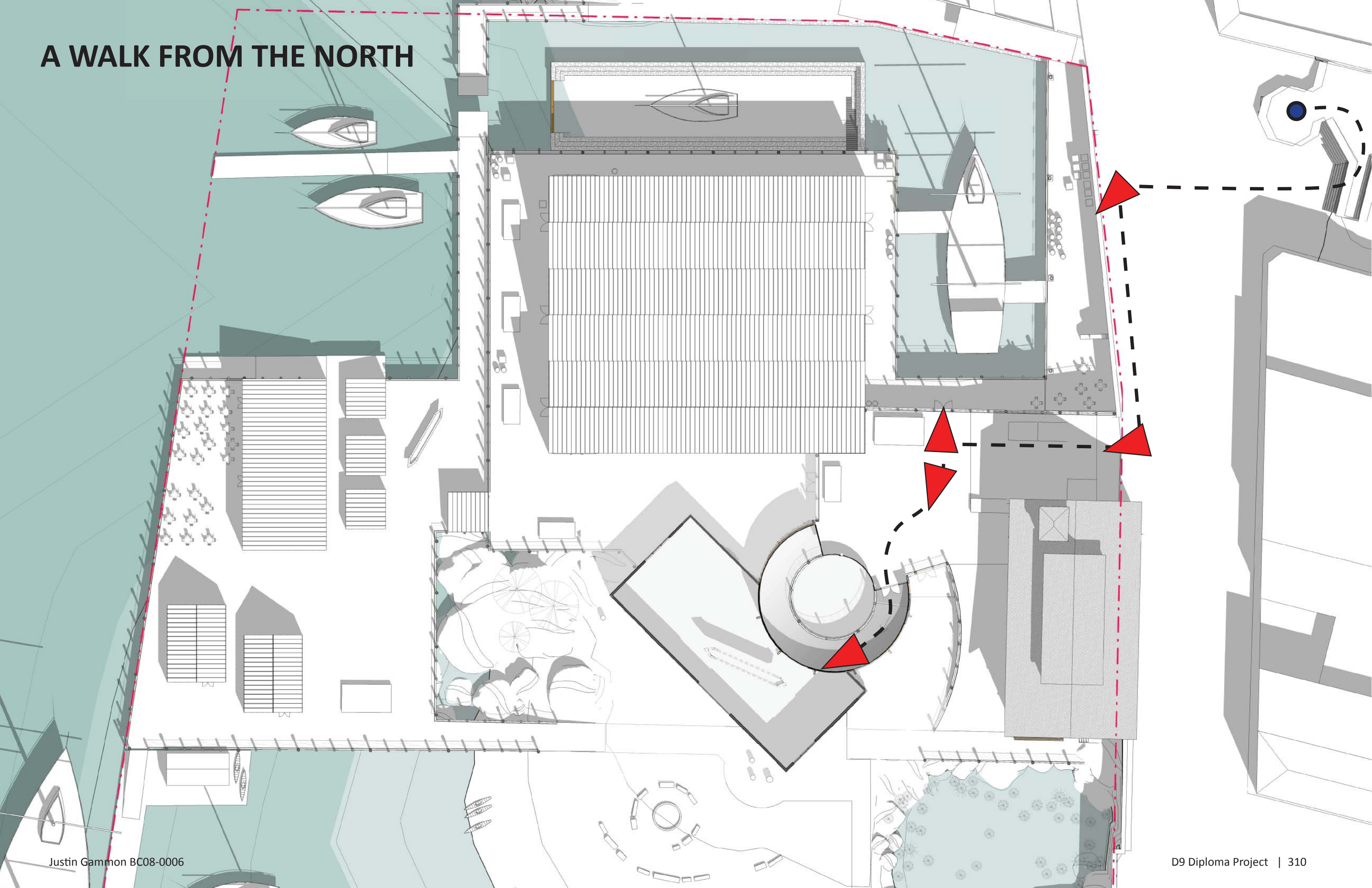
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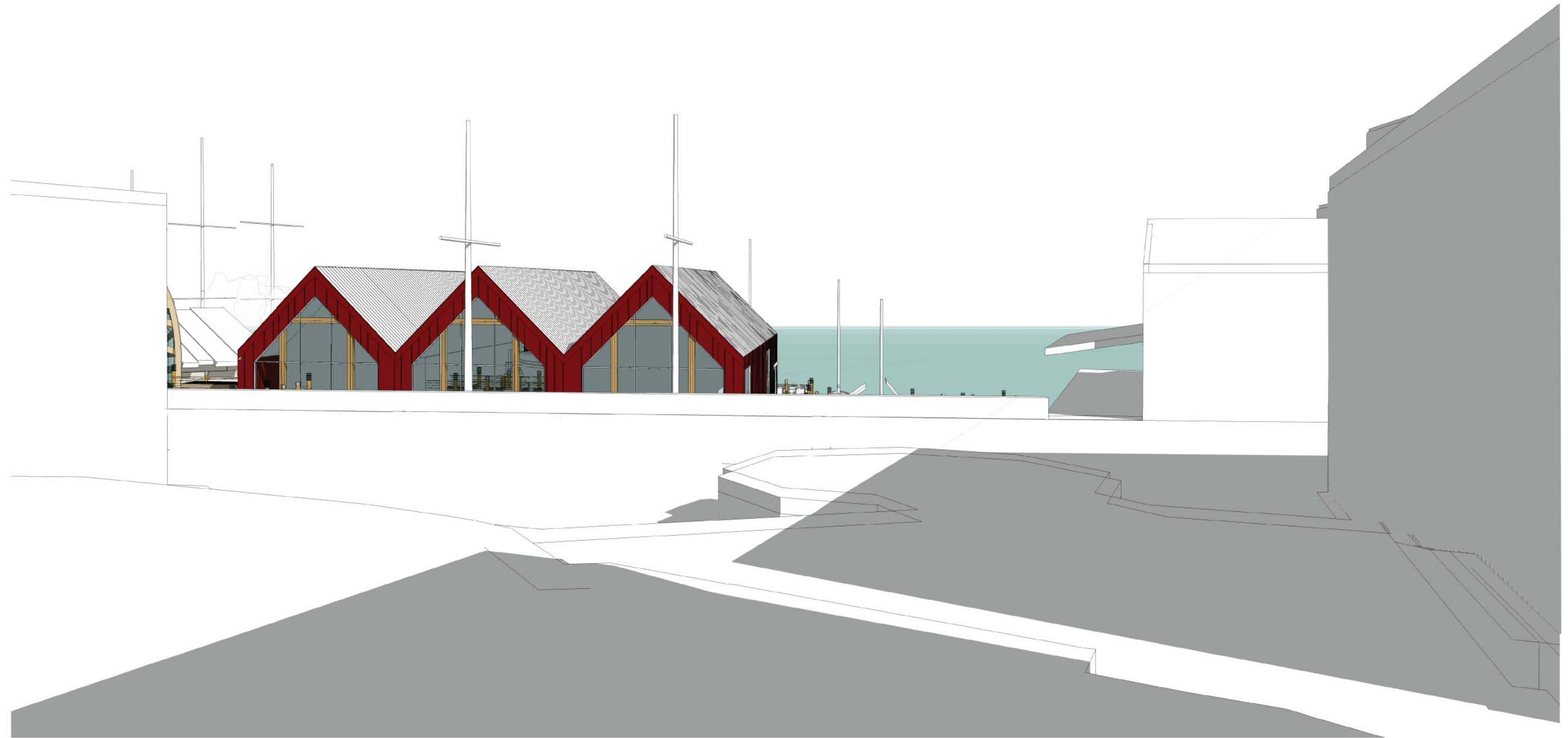


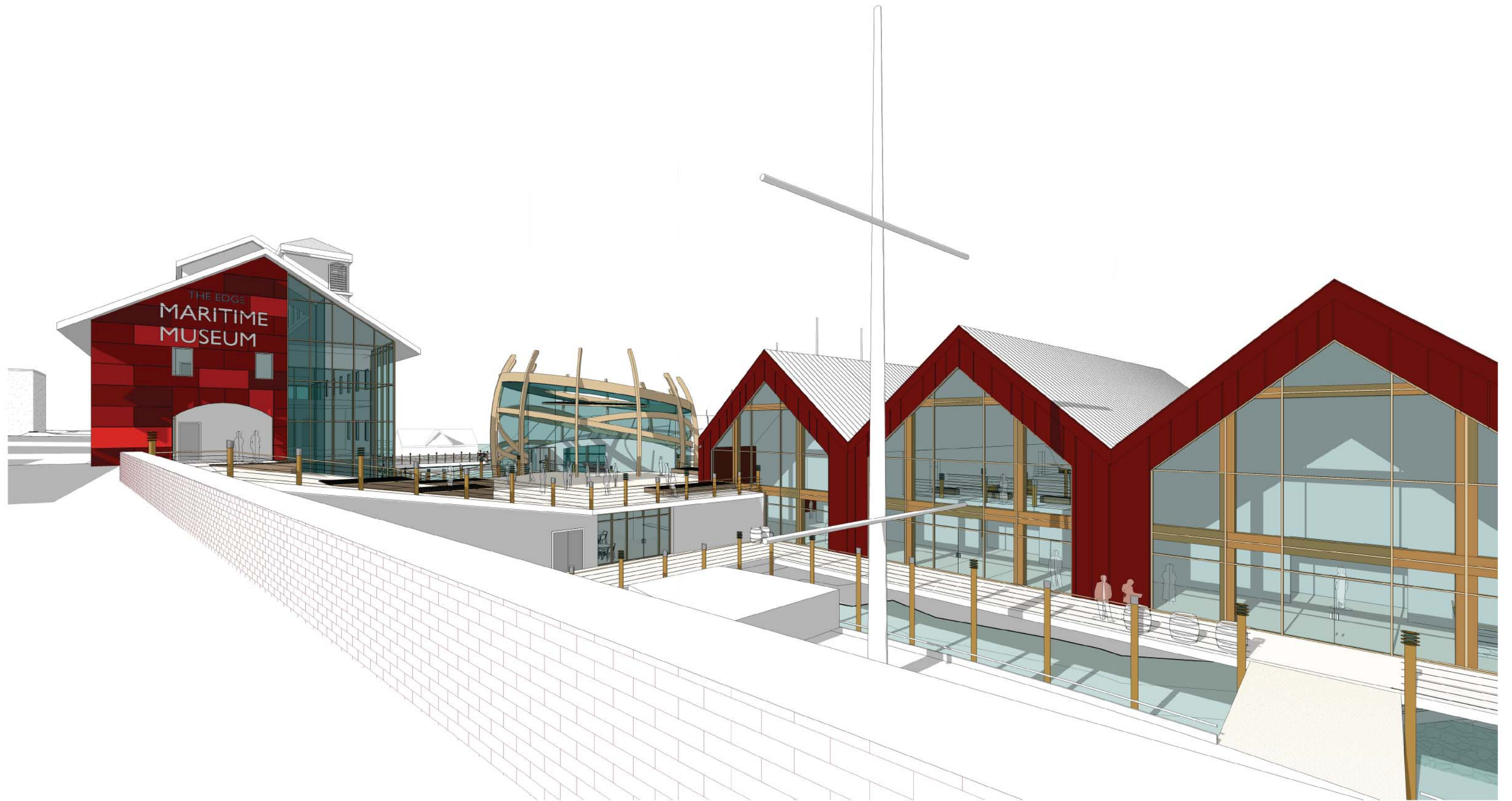


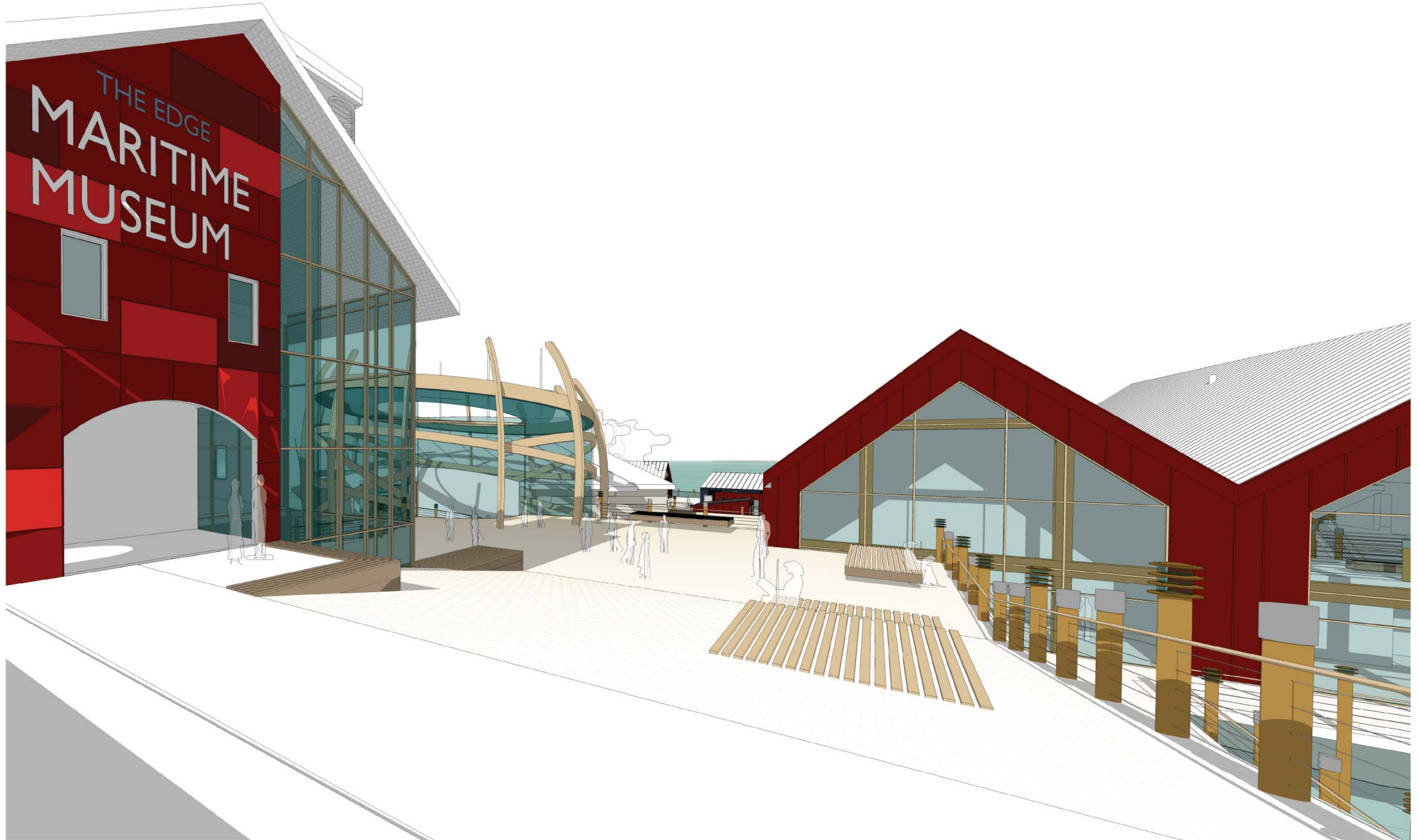


A WALK FROM THE NORTH

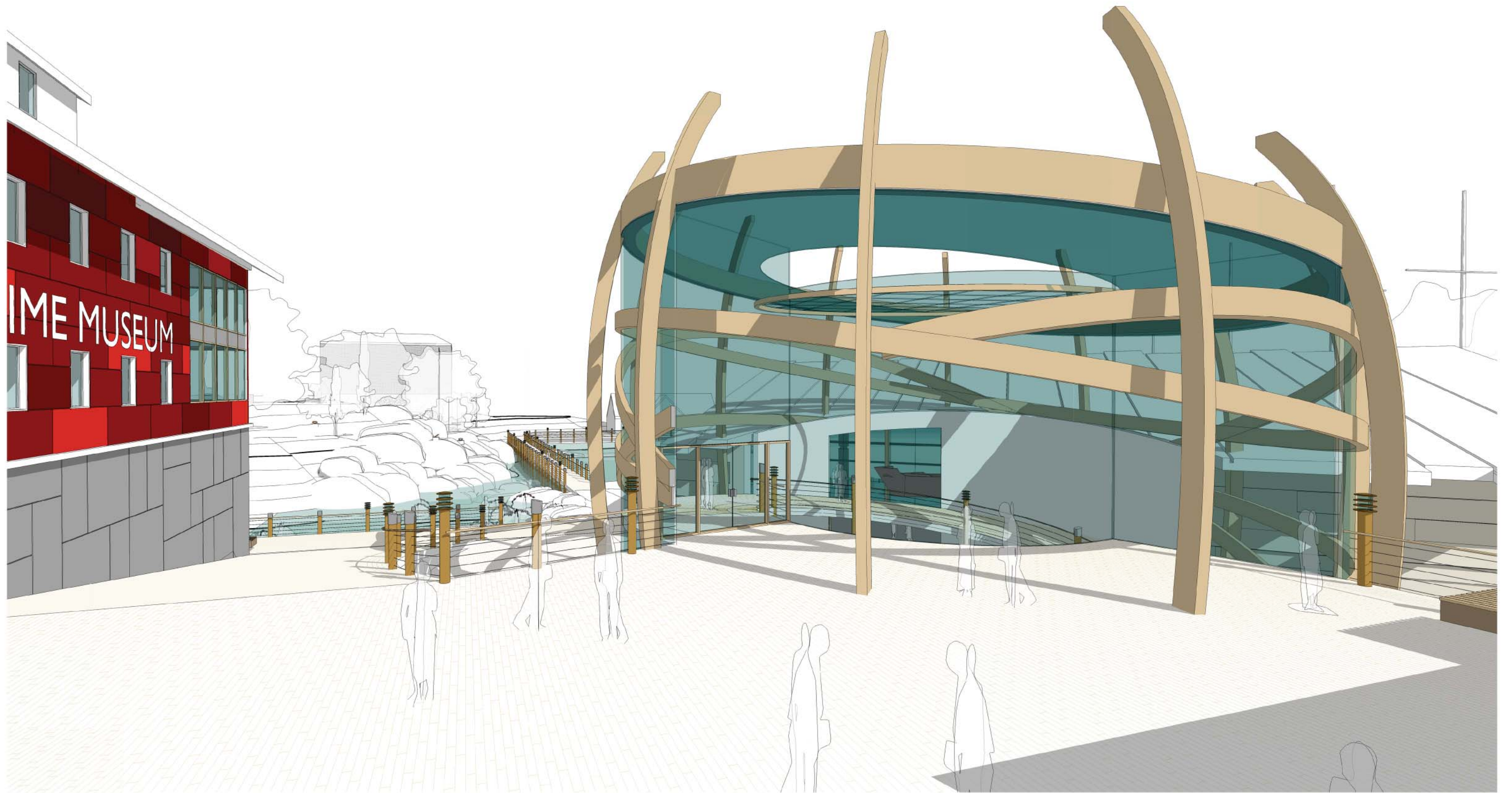


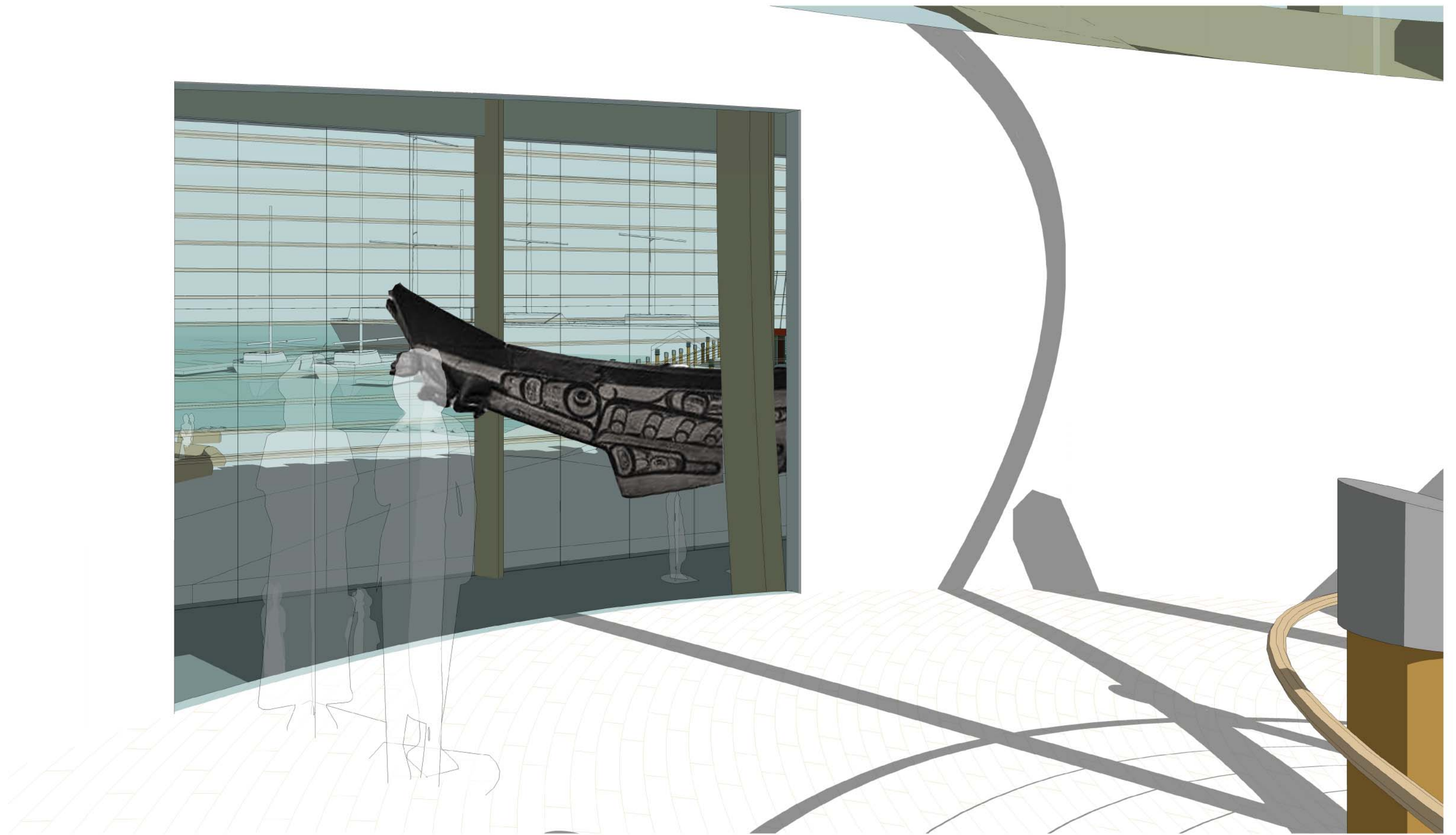




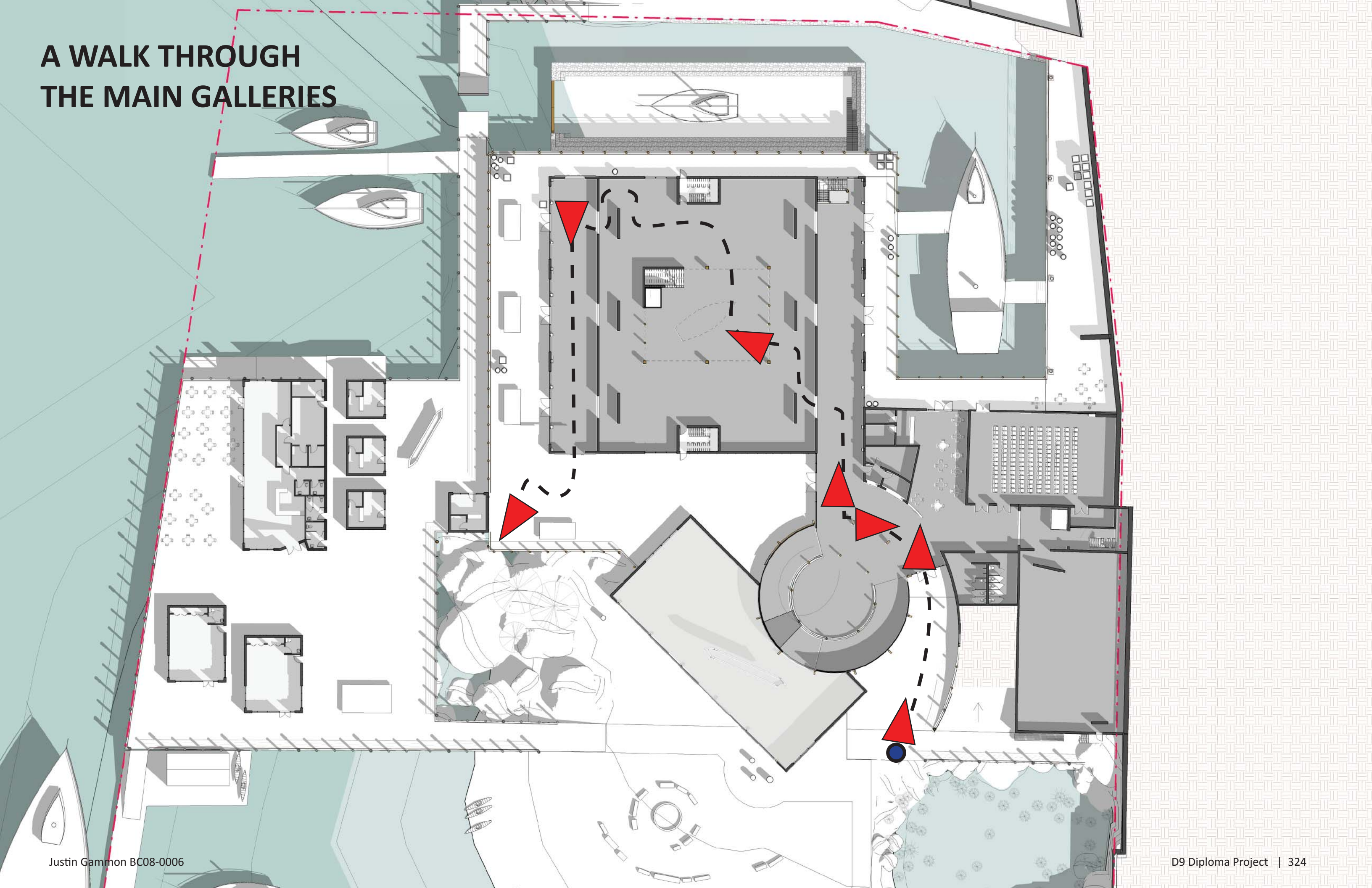




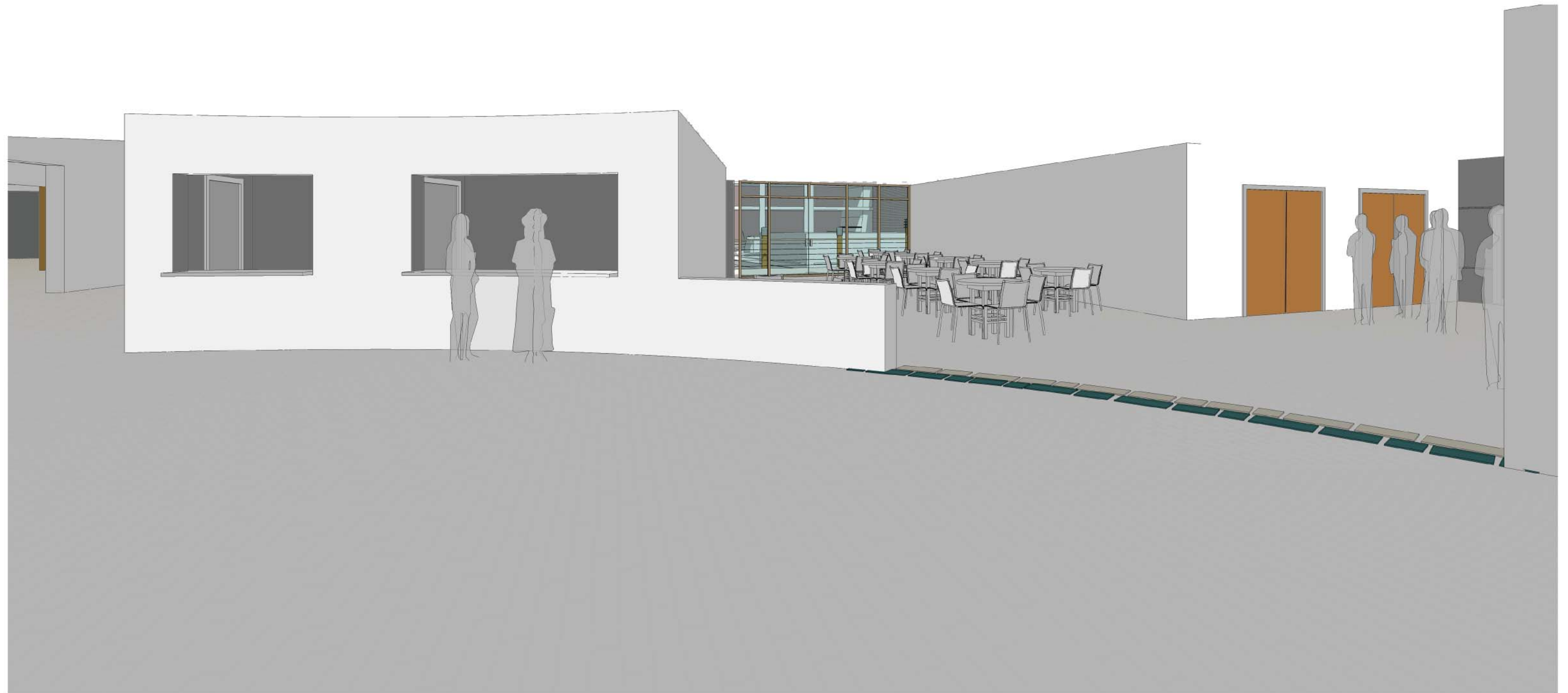


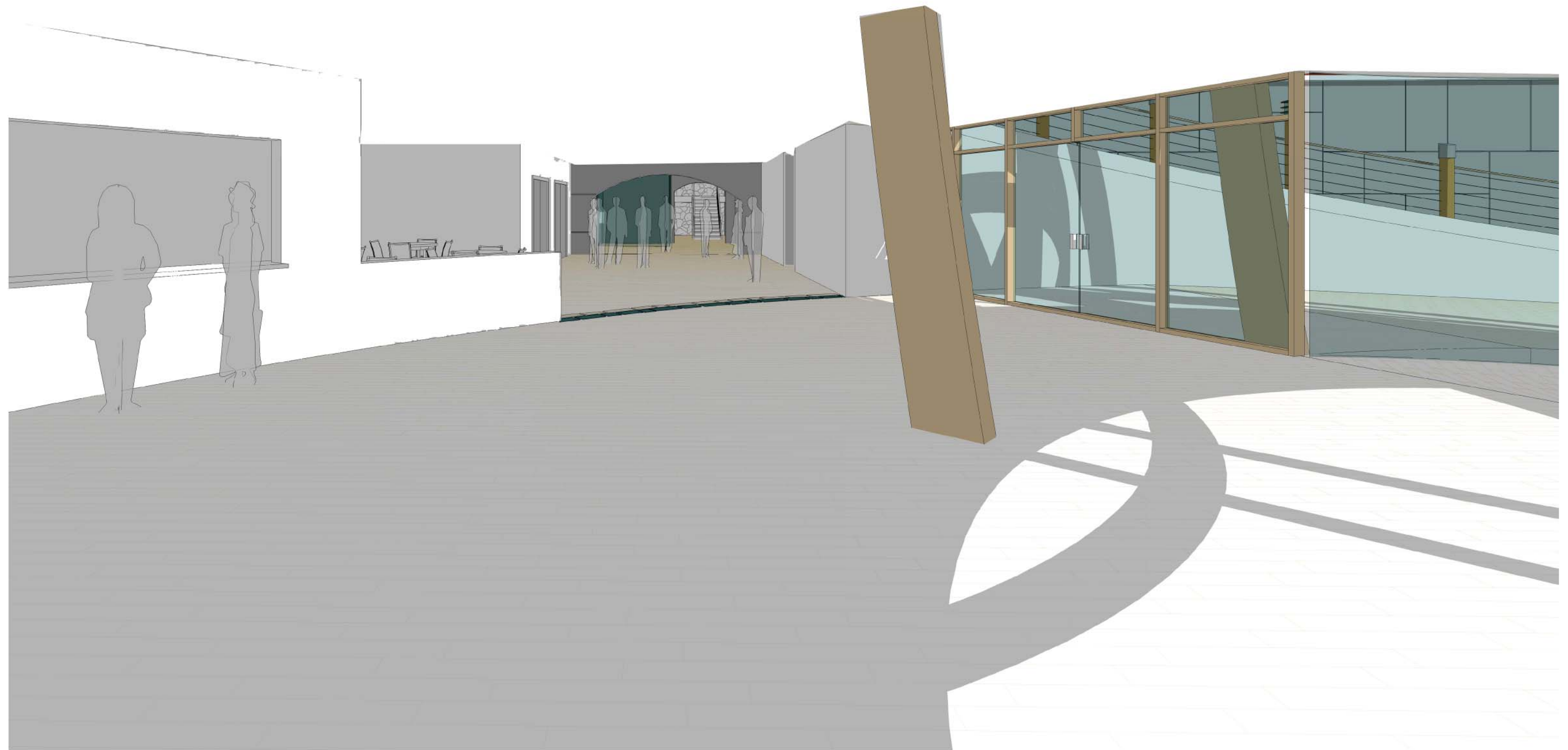


A WALK THROUGH THE MAIN GALLERIES

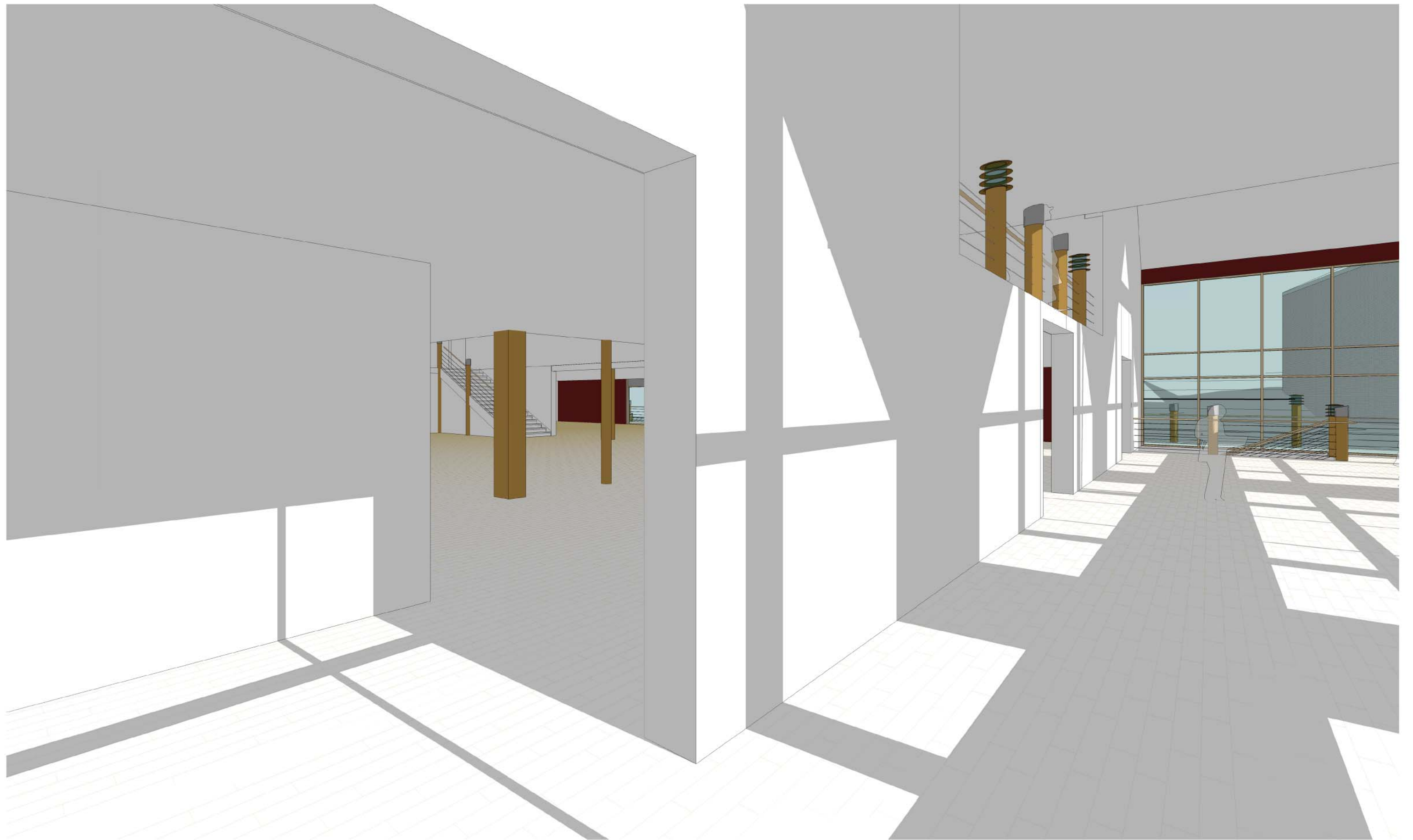






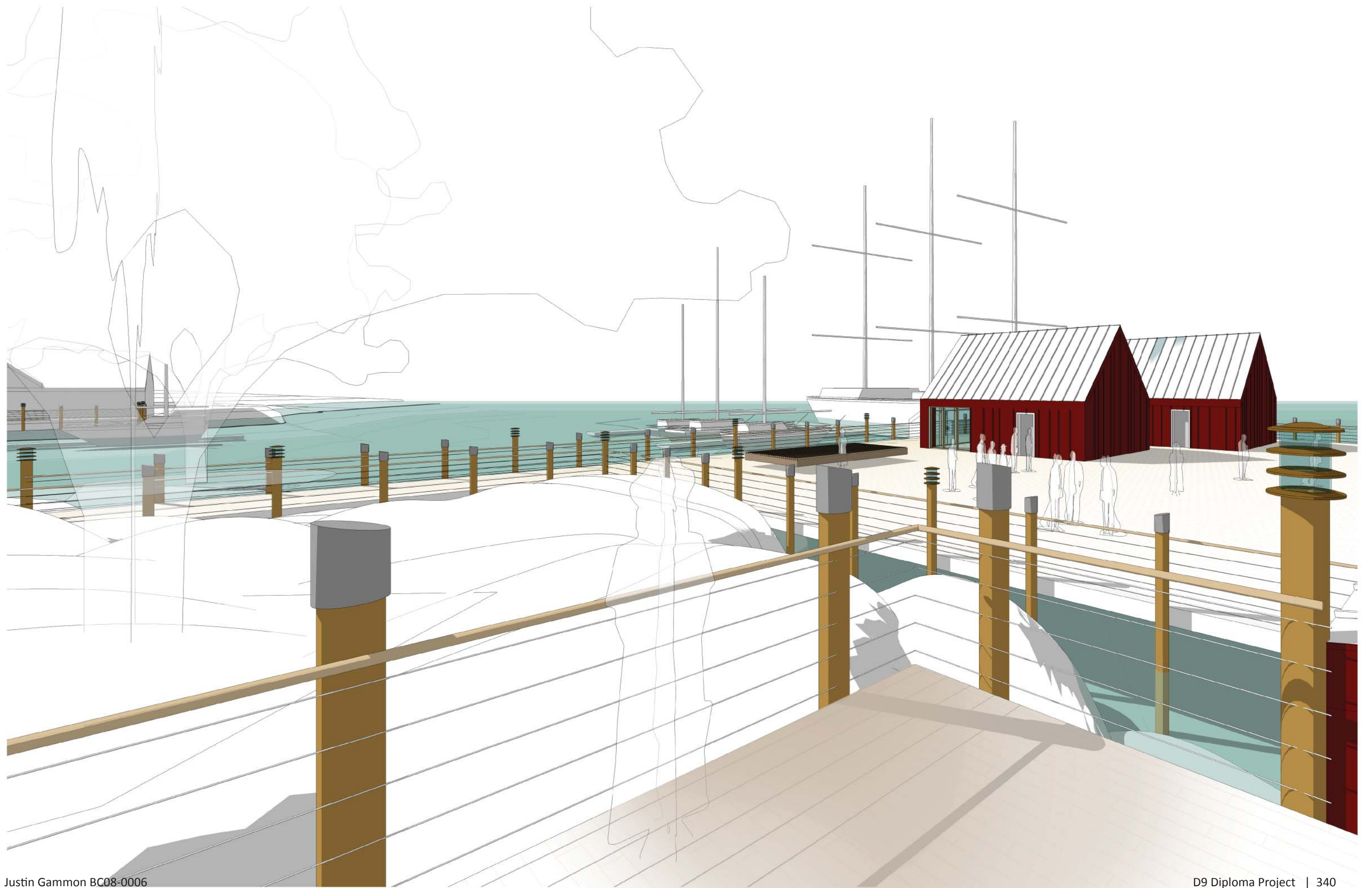




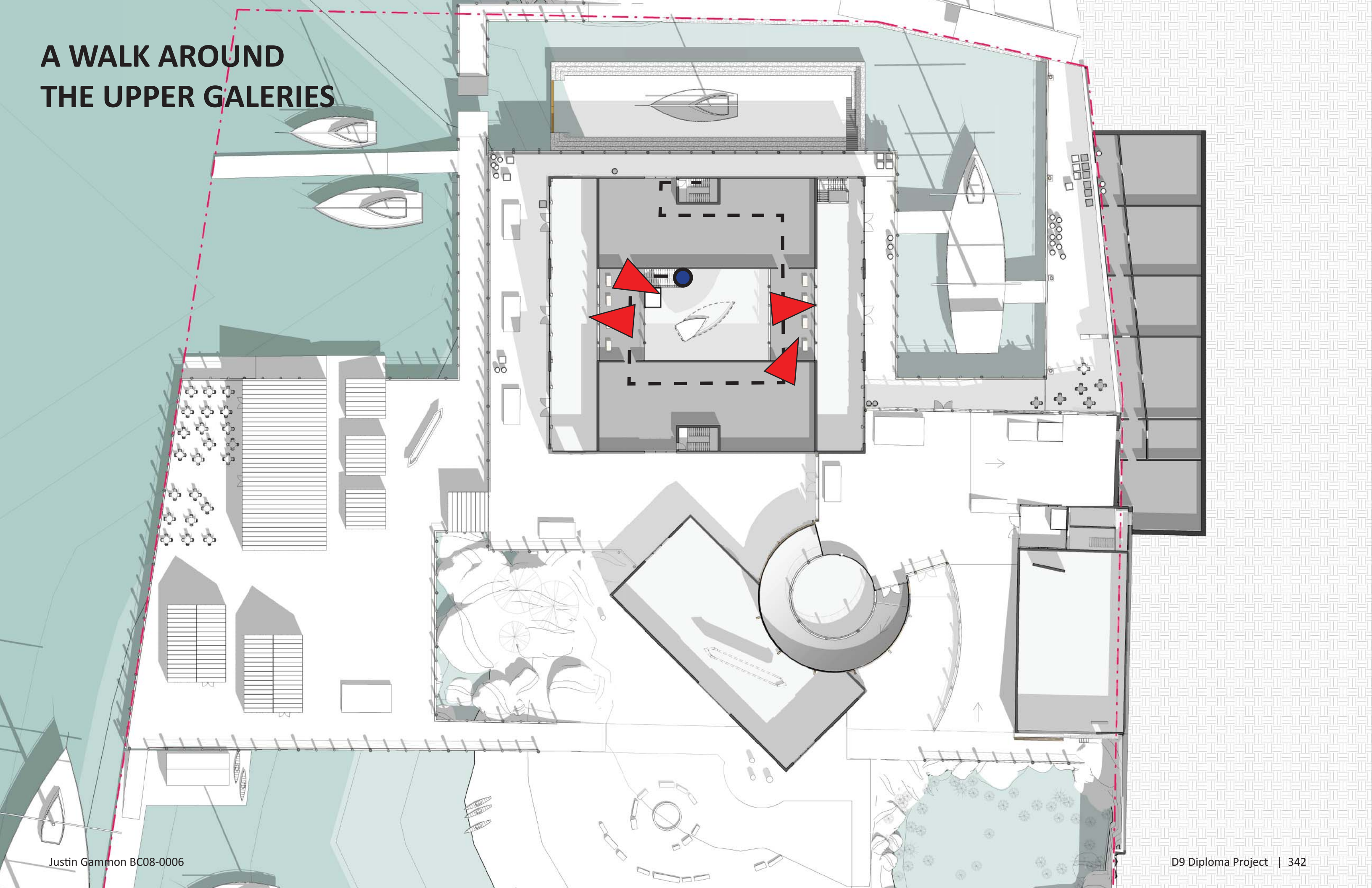




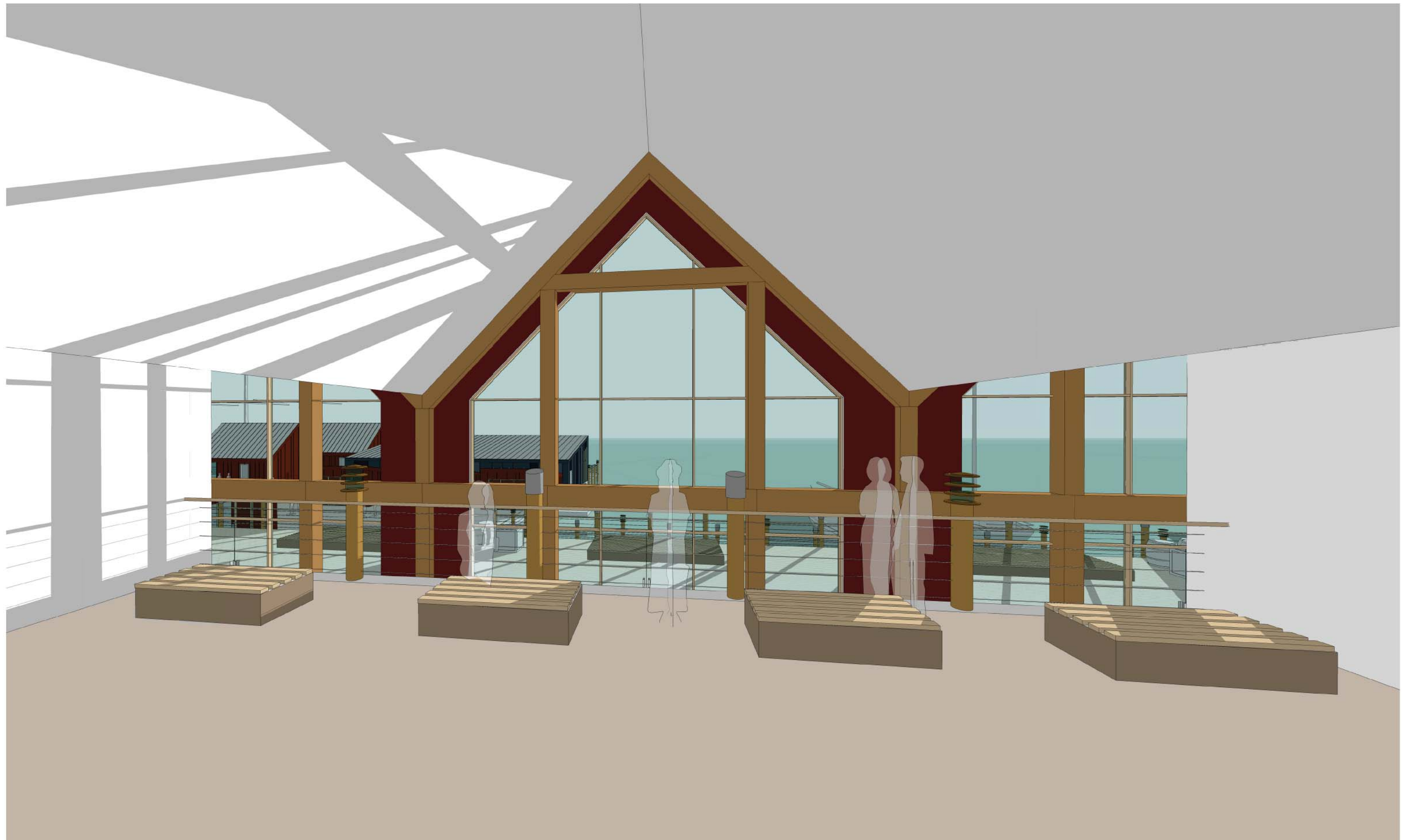


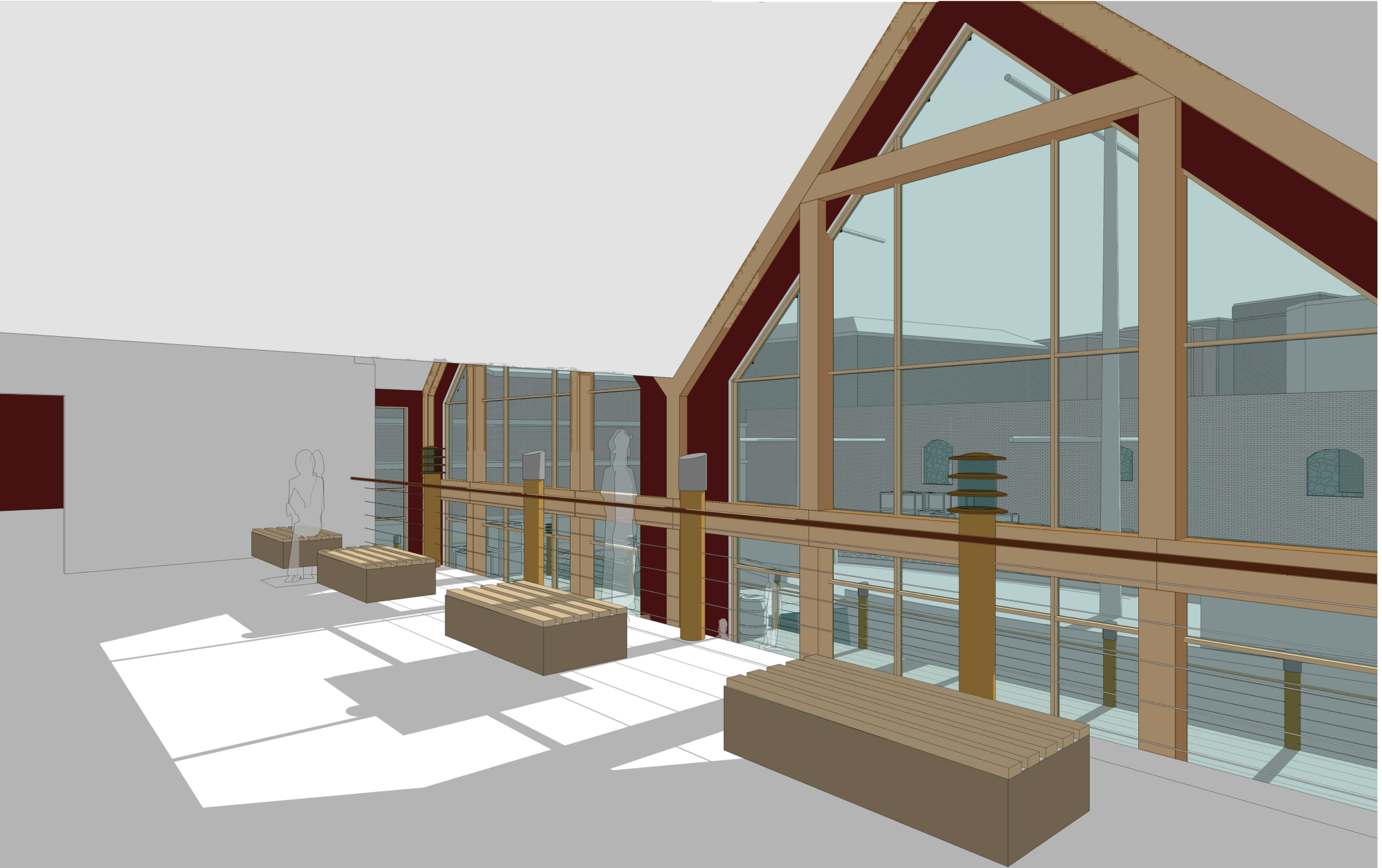


A WALK AROUND
THE UPPER GALERIES



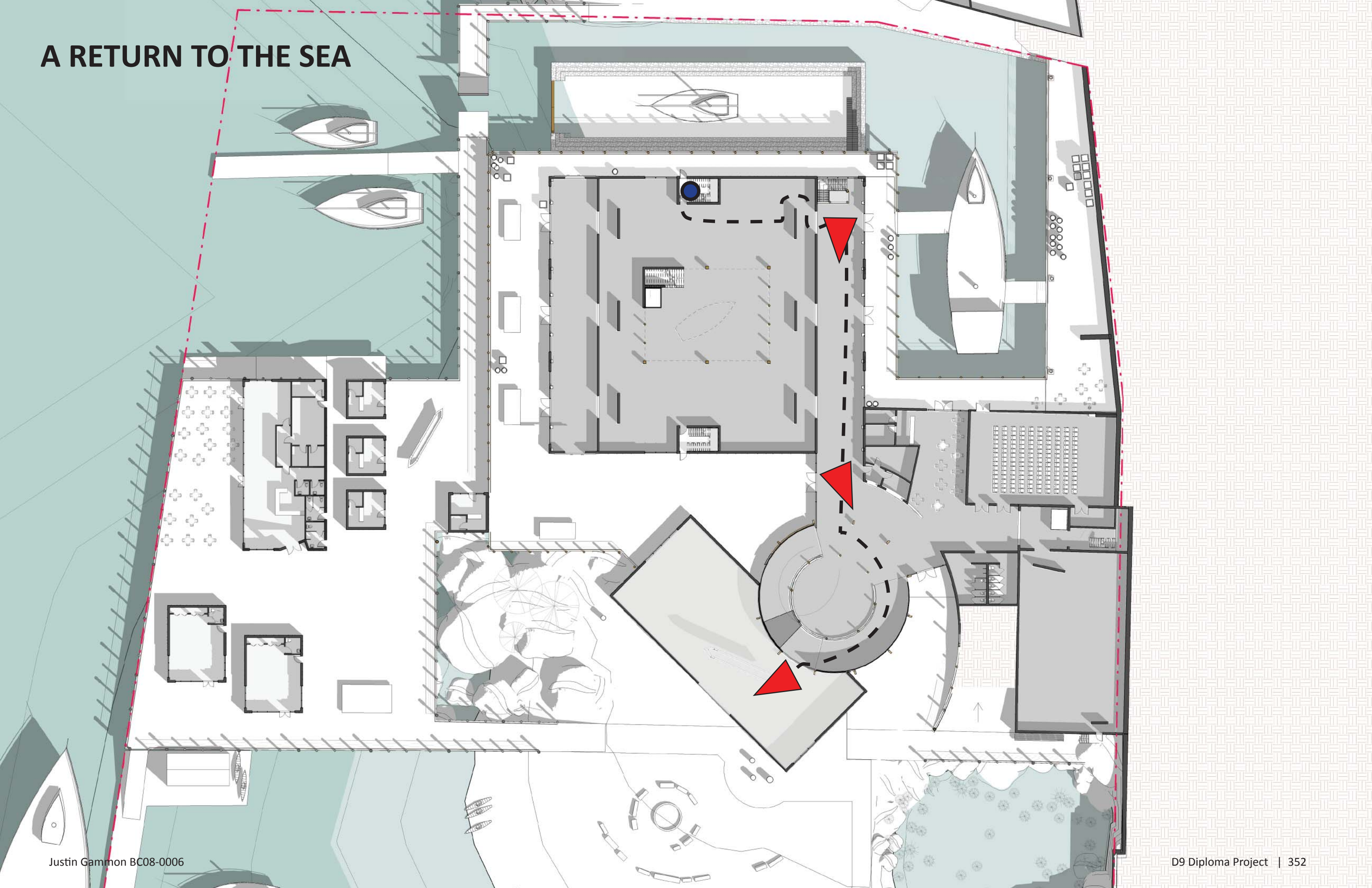


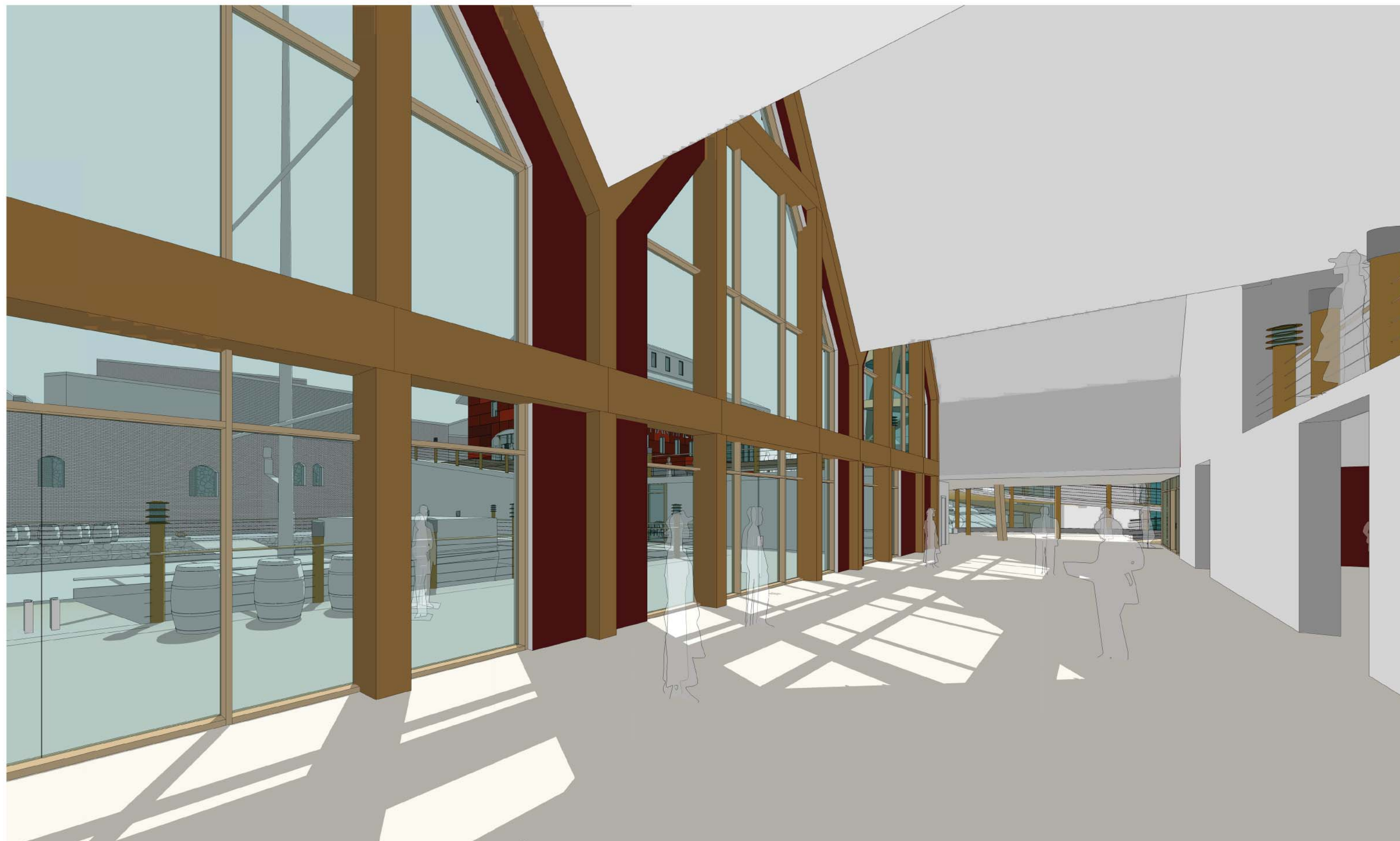


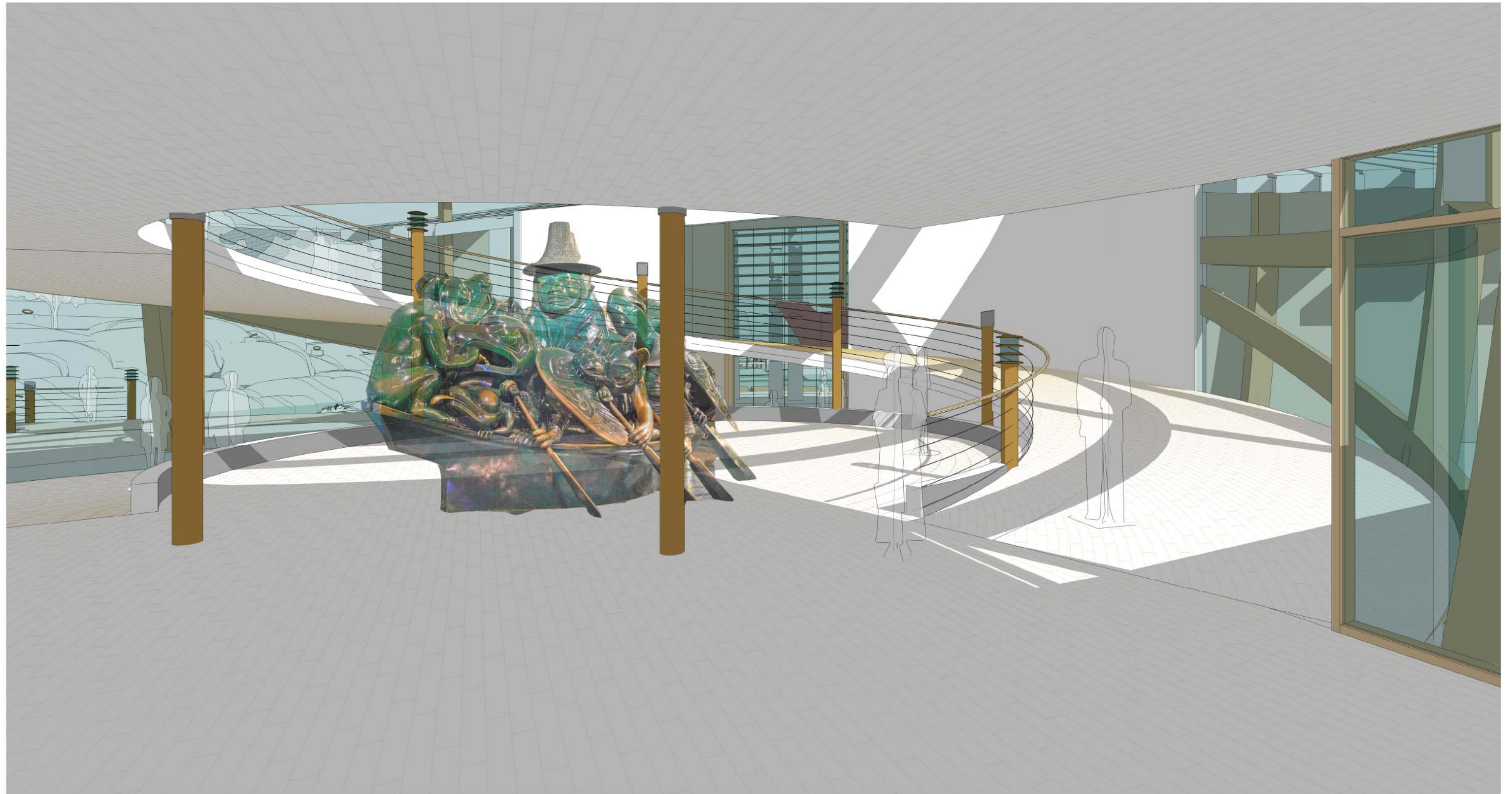


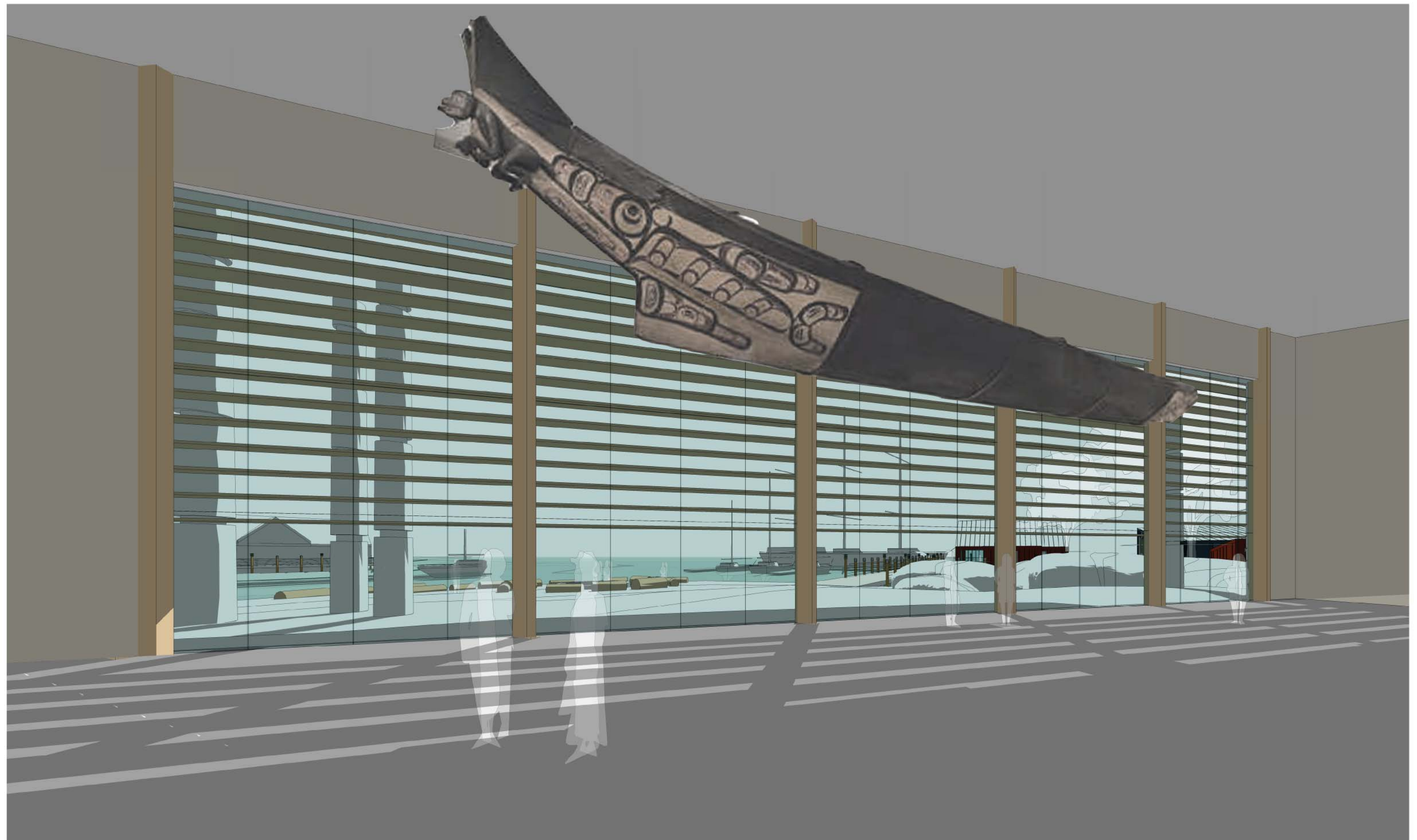


A RETURN TO THE SEA







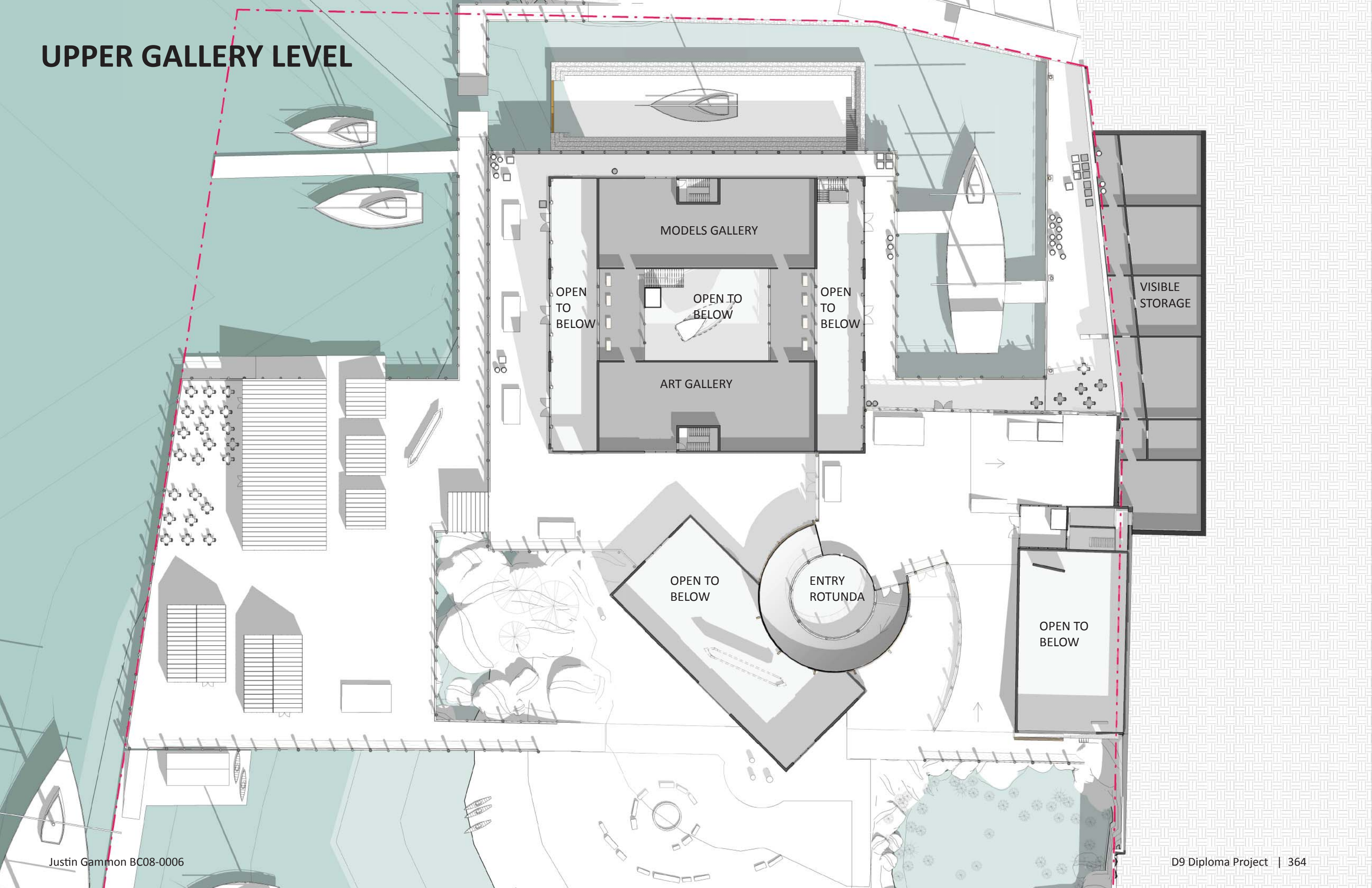


PLANS | SECTIONS | DETAILS

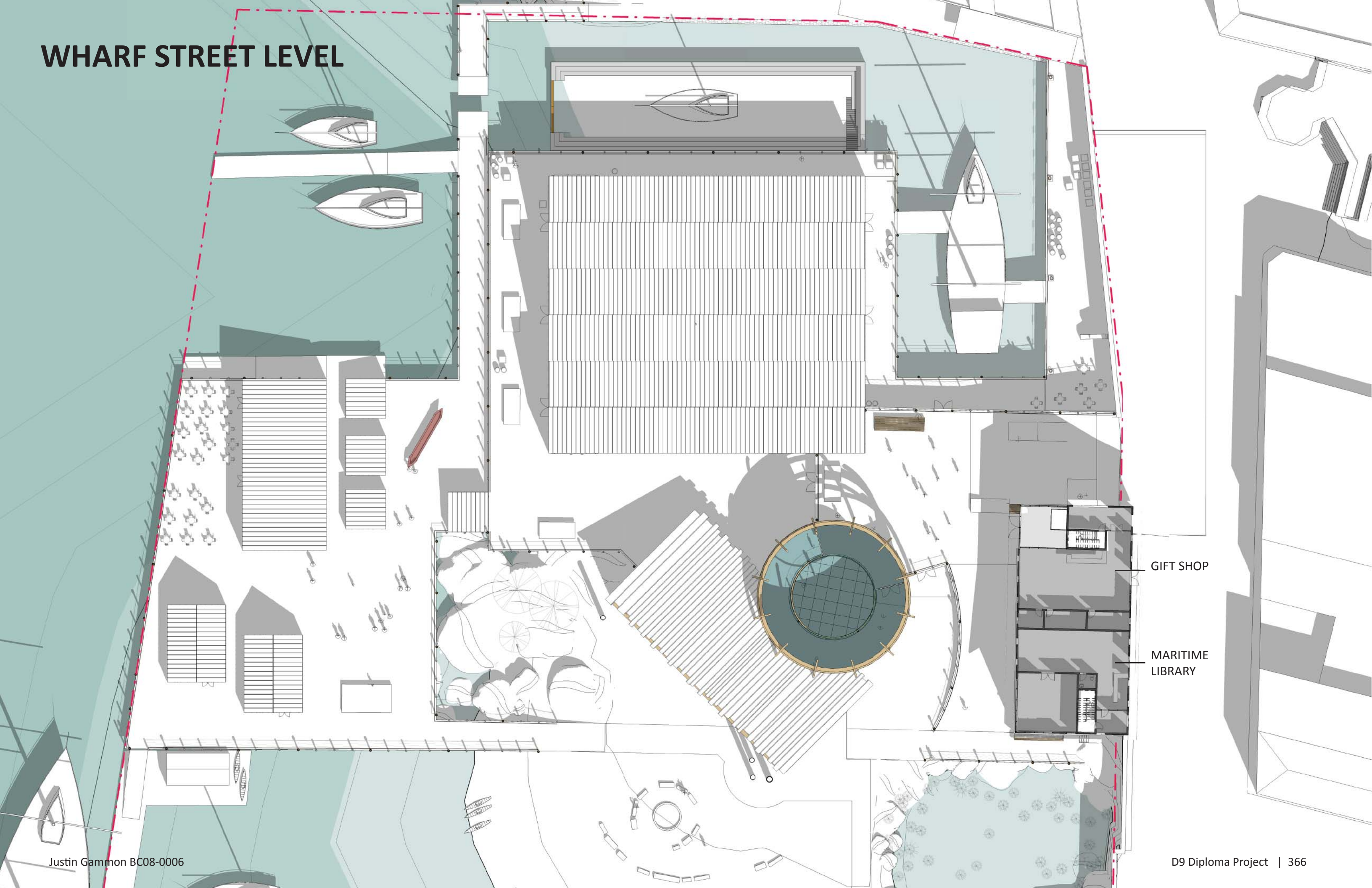
MAIN GALLERY LEVEL



UPPER GALLERY LEVEL



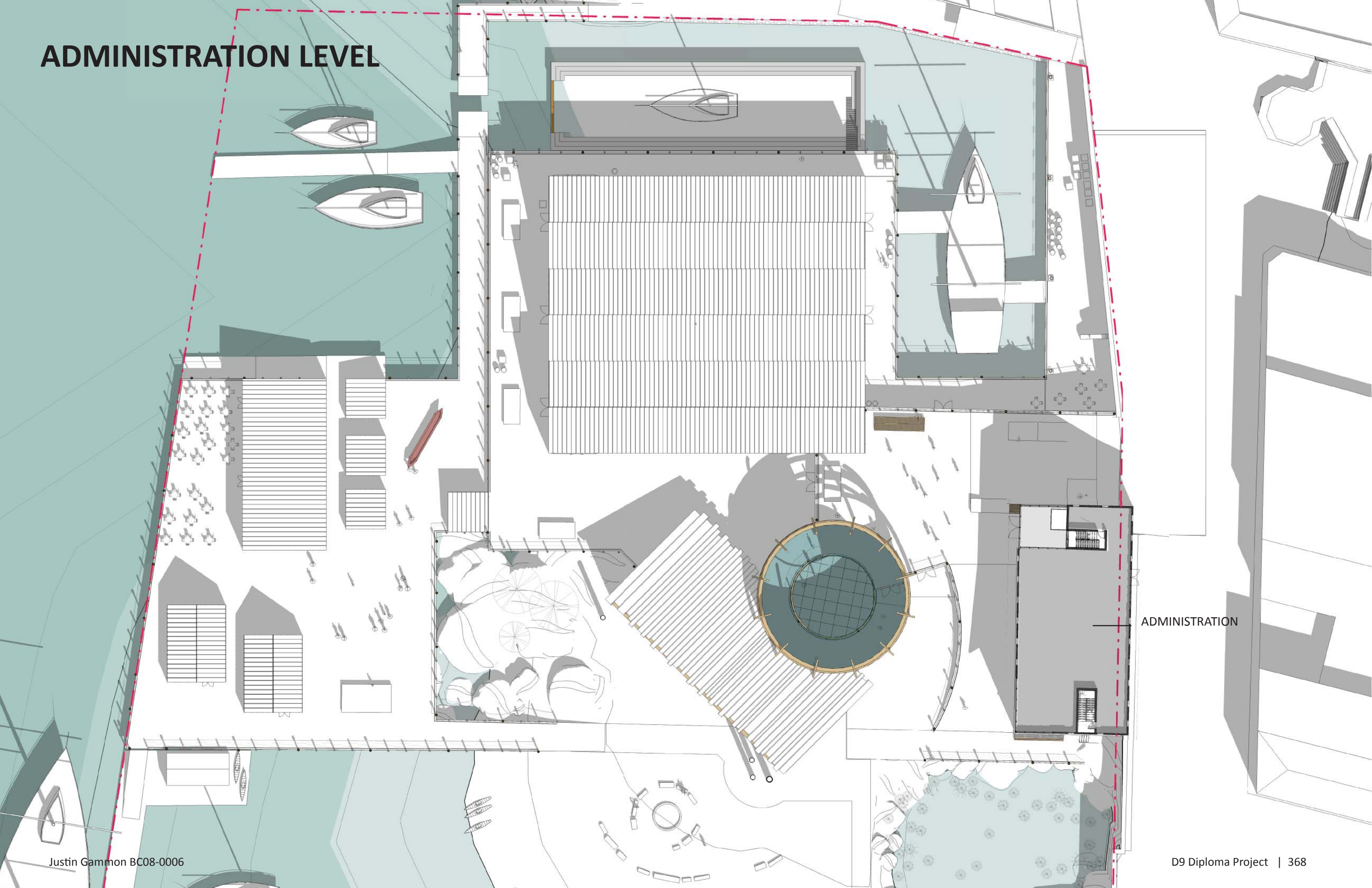
WHARF STREET LEVEL



GIFT SHOP

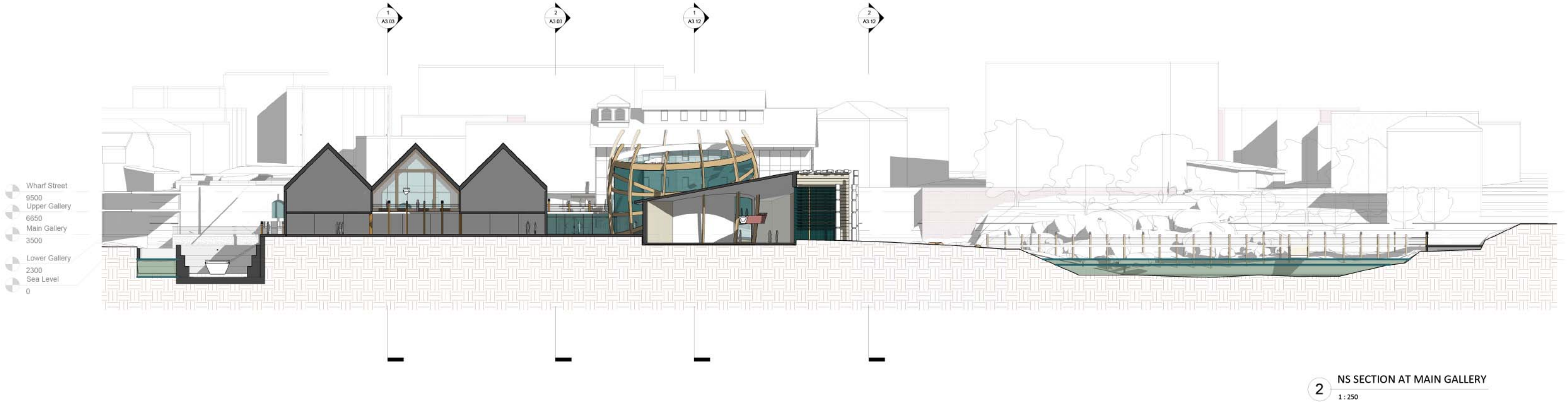
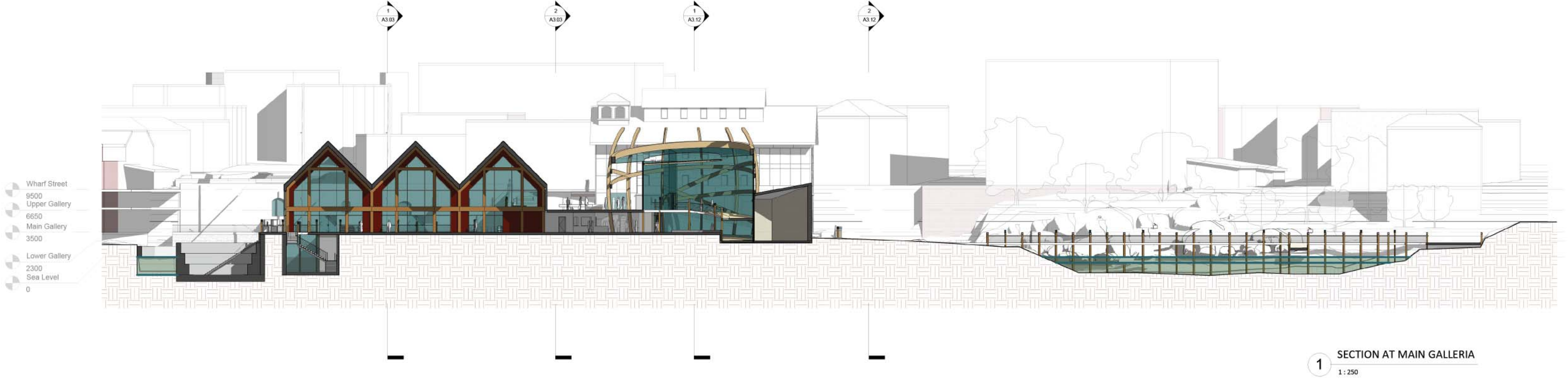
MARITIME LIBRARY

ADMINISTRATION LEVEL

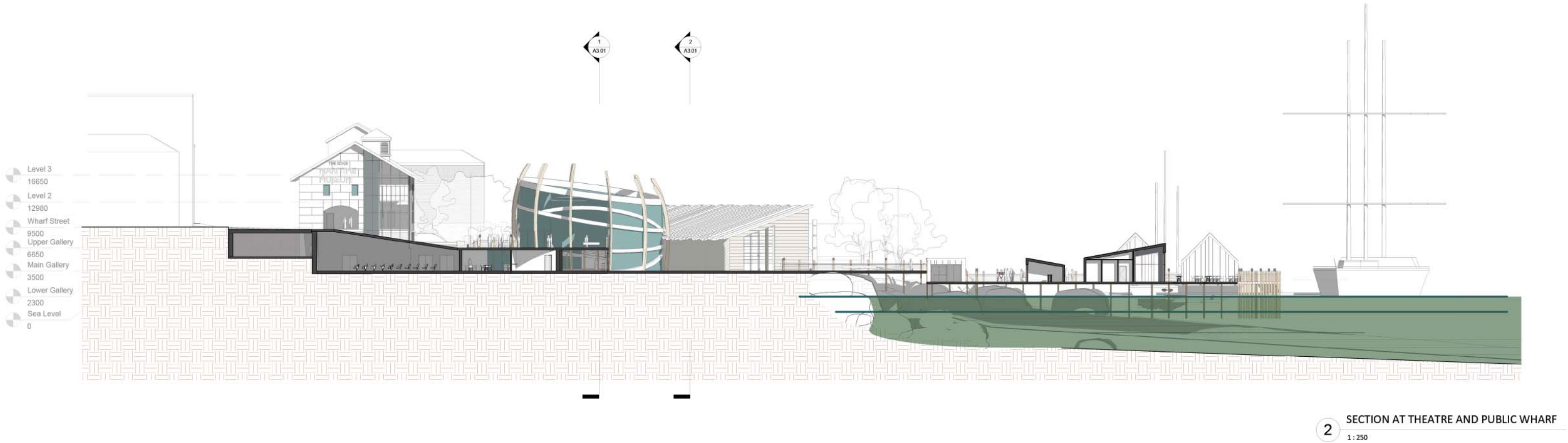
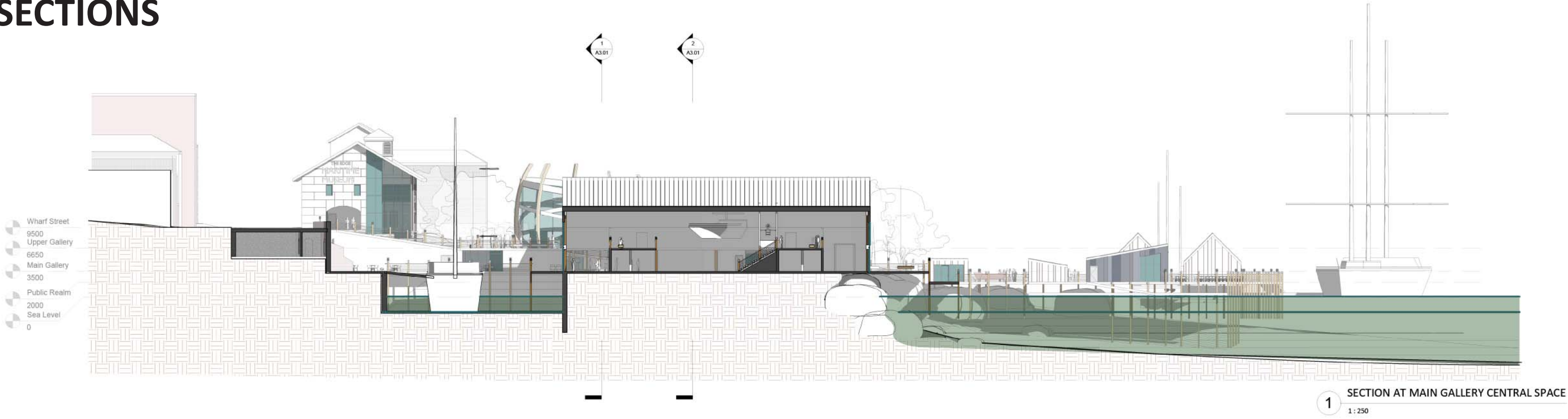


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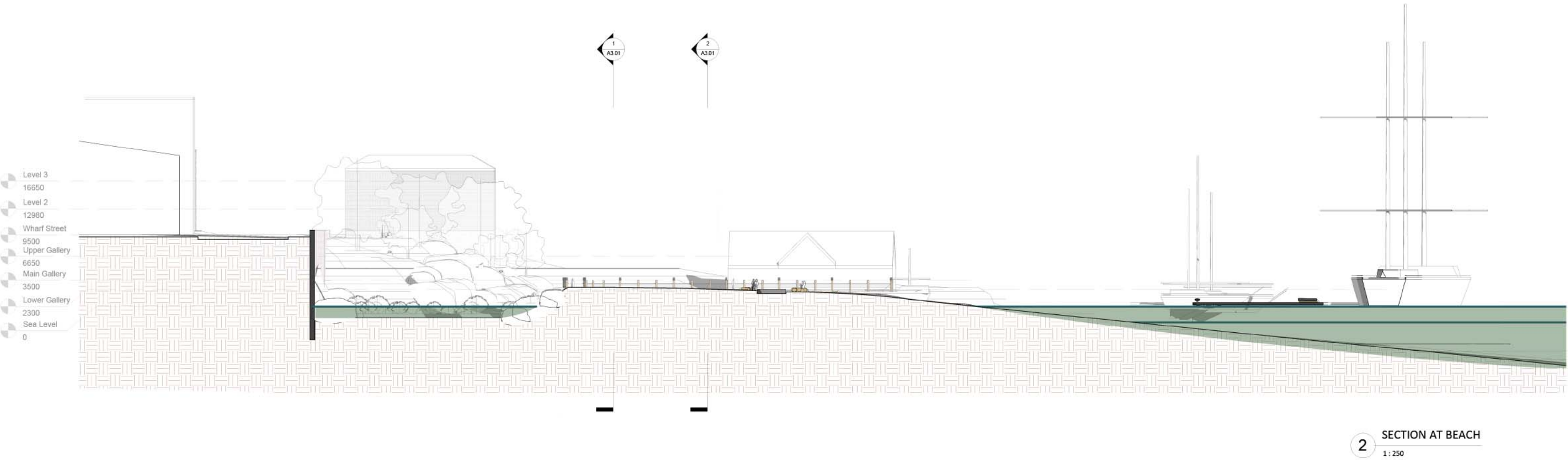
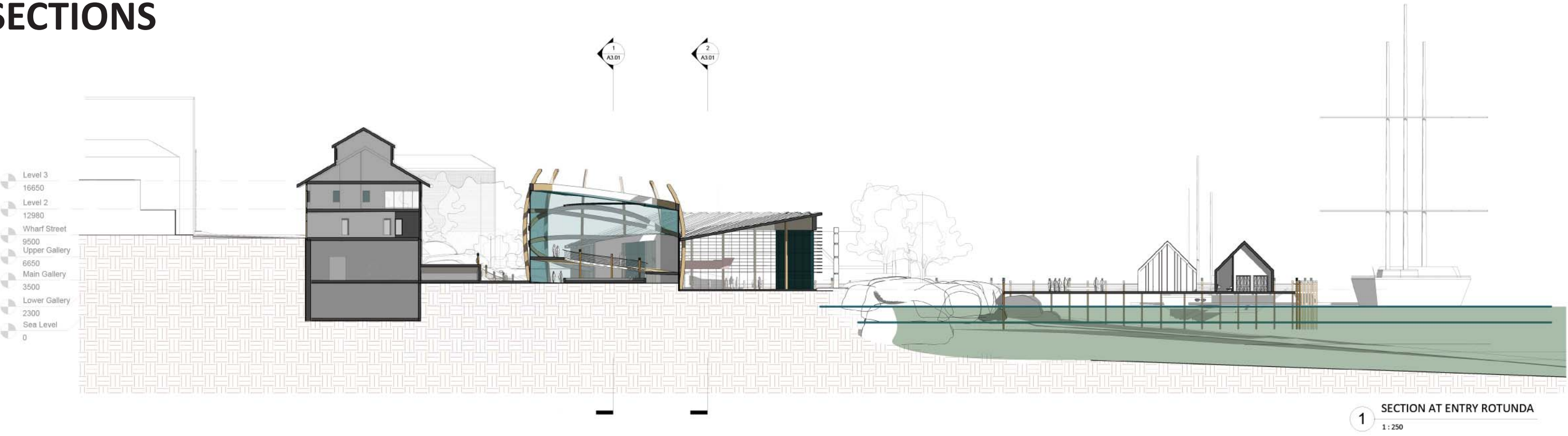
SECTIONS



SECTIONS



SECTIONS



ELEVATIONS

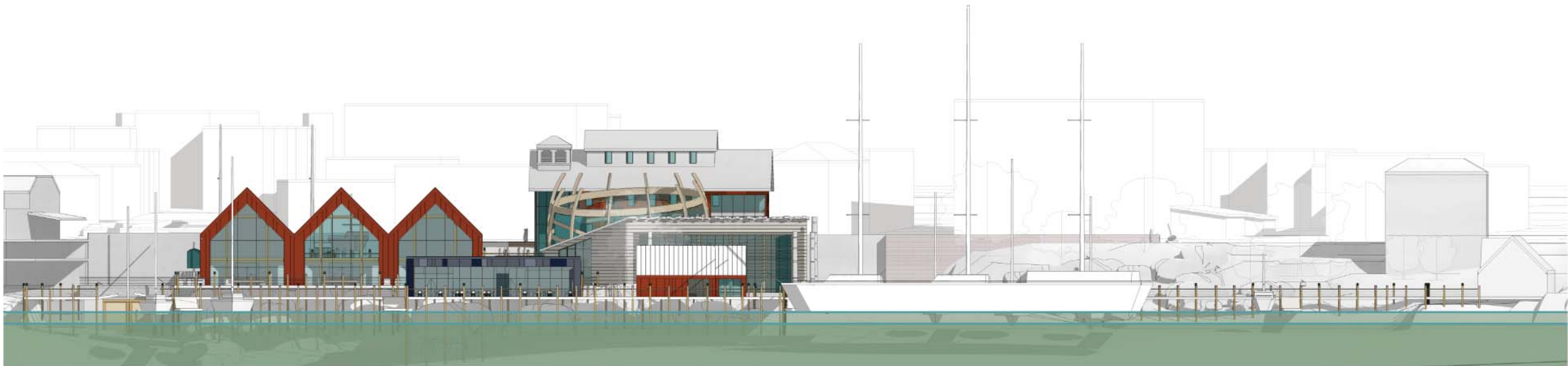


1 East Elevation
1 : 250

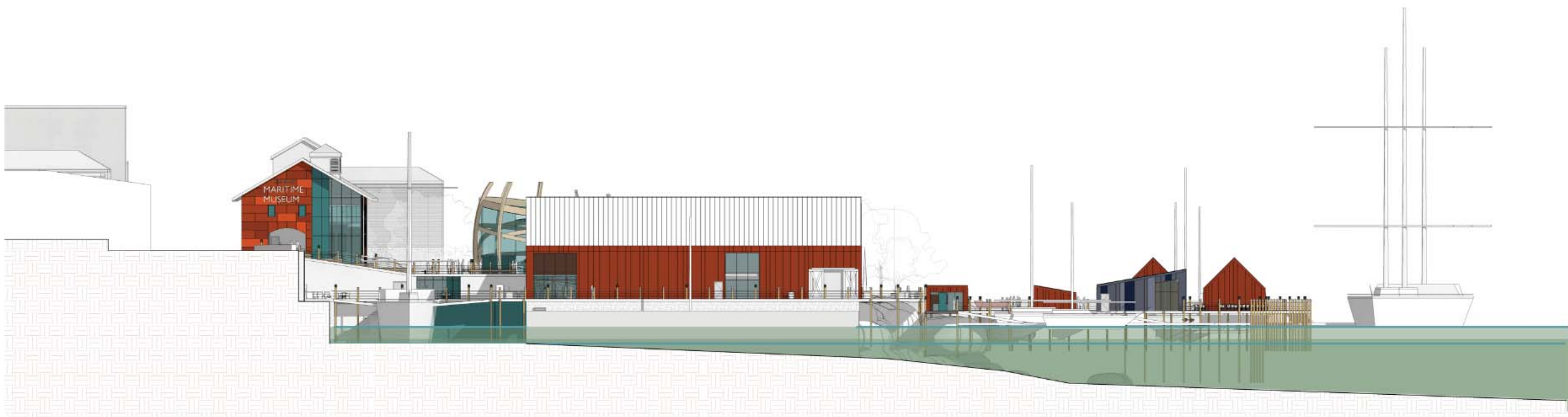


2 South Elevation
1 : 250

ELEVATIONS

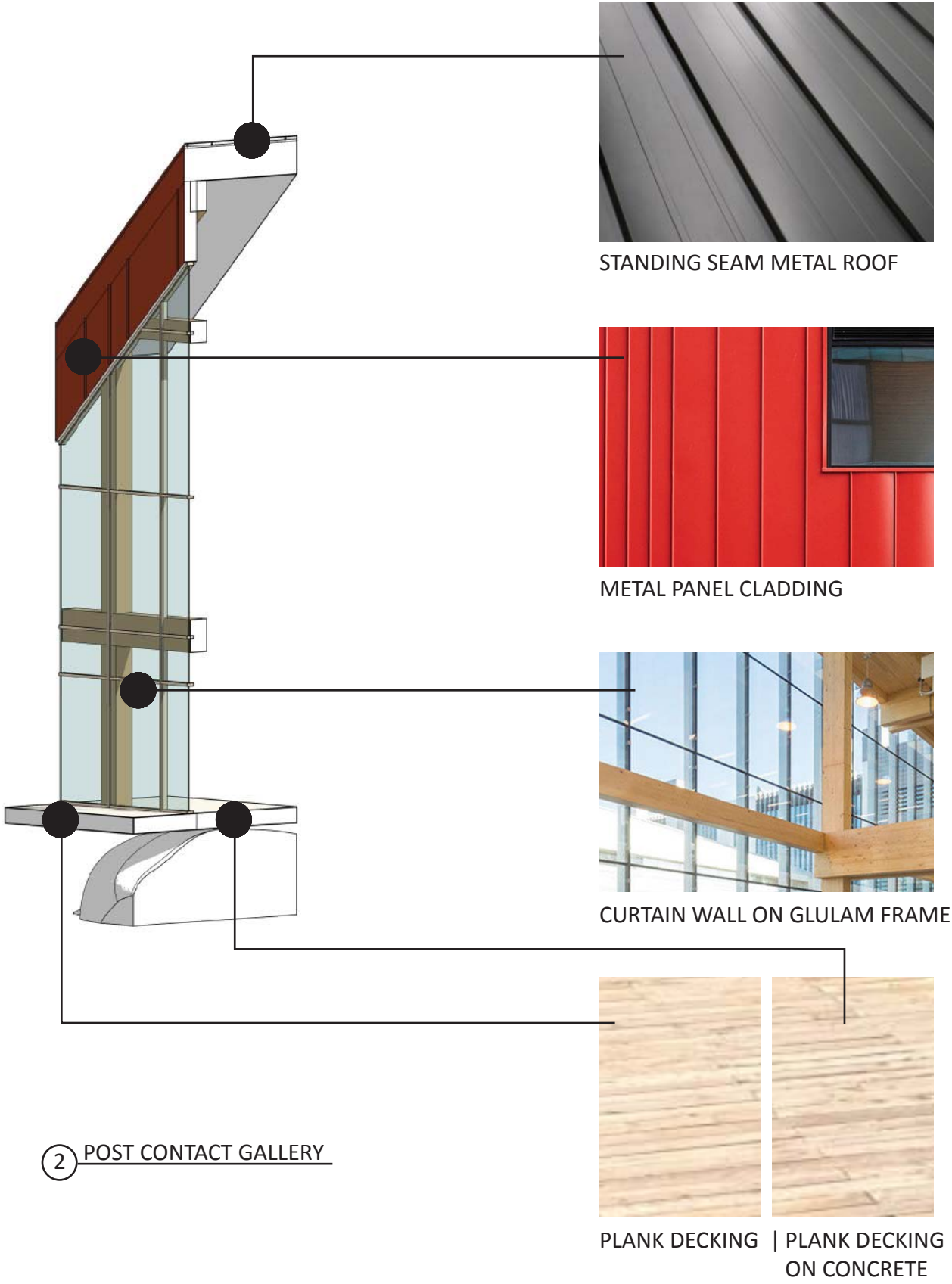
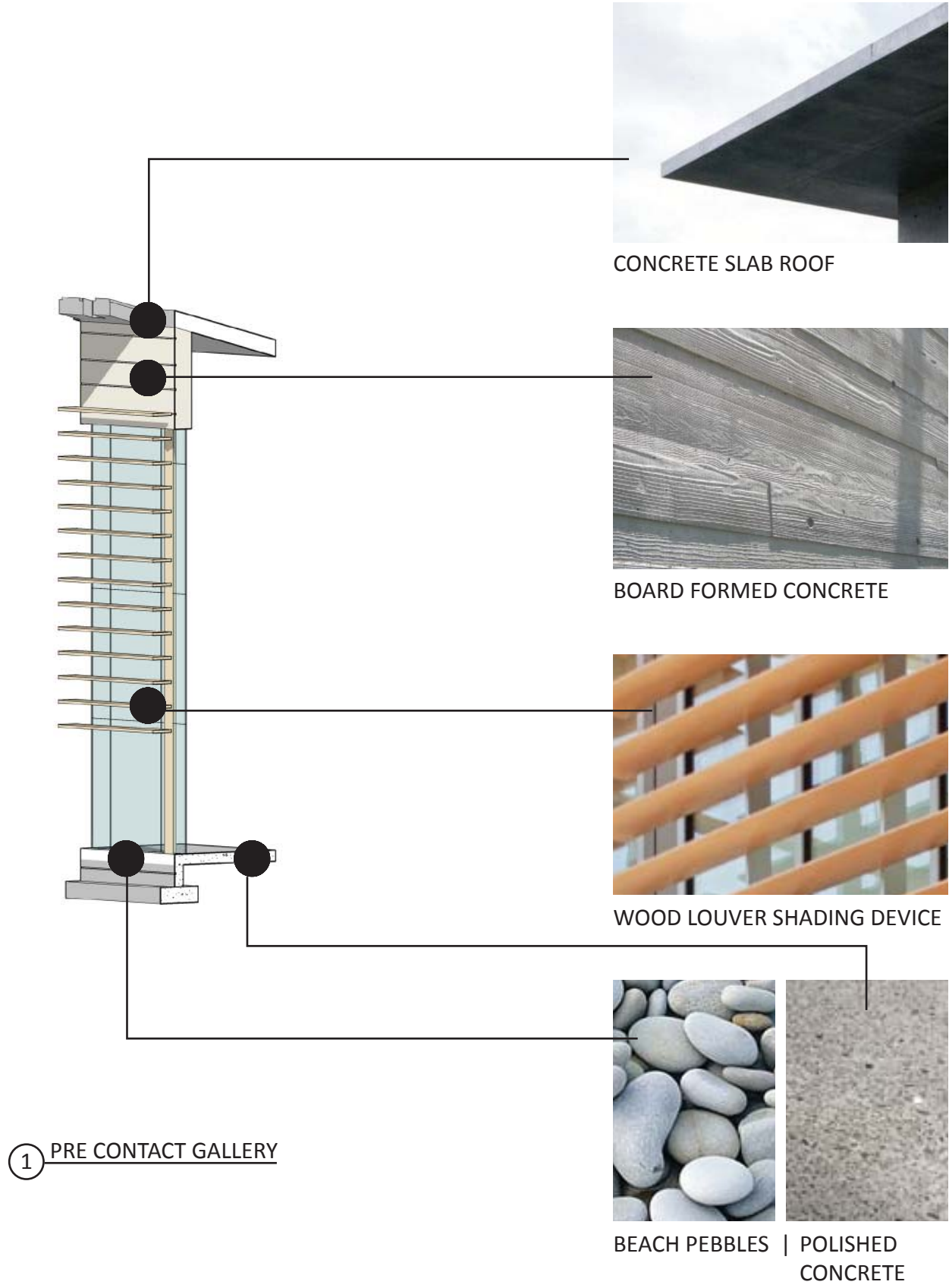


1 West Elevation
1:250

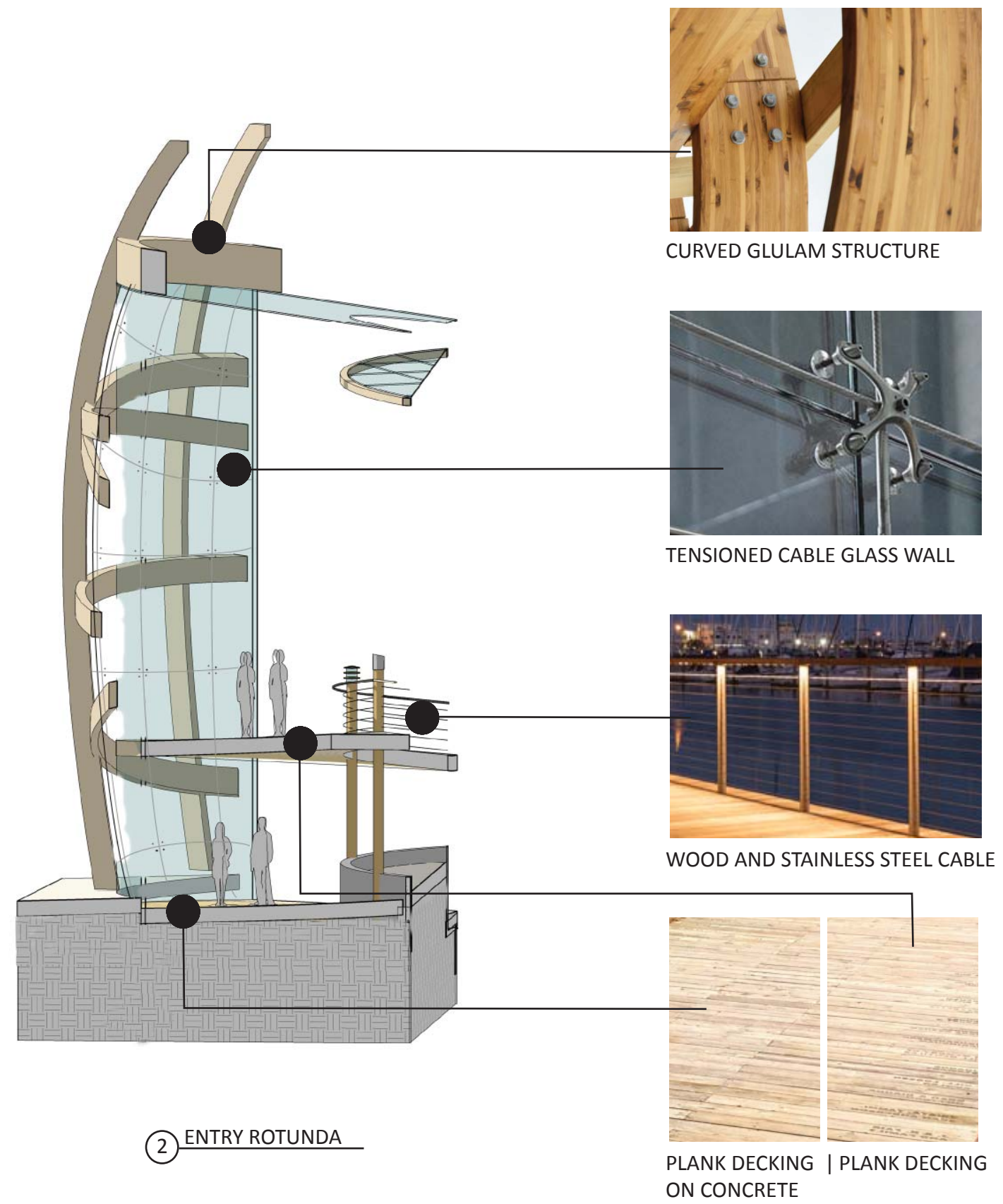
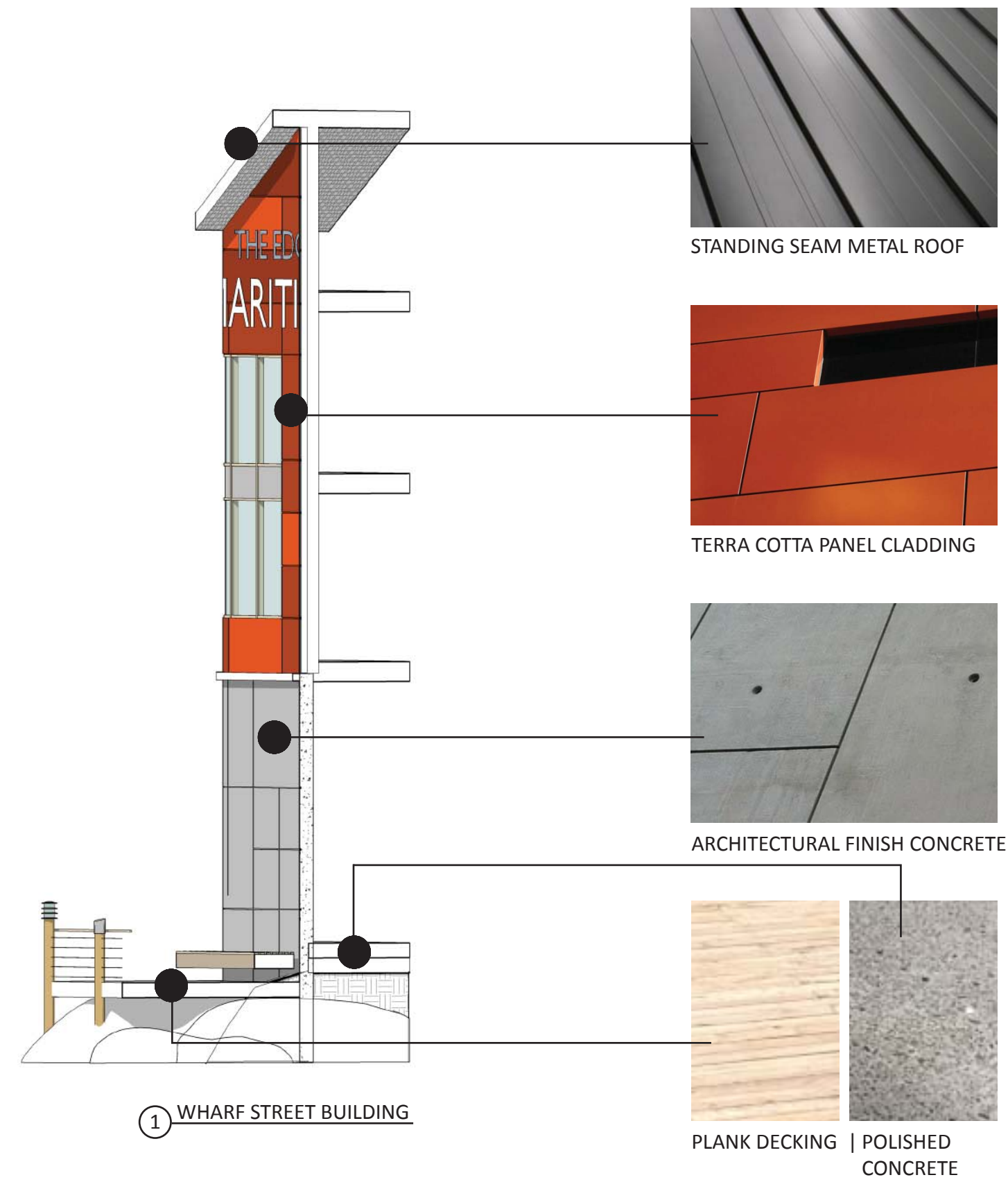


2 North Elevation
1:250

MATERIALS



MATERIALS



BUILDING SYSTEMS

VENTILATION

Principle public spaces within the museum are naturally ventilated using the **STACK EFFECT** within the entry rotunda.

The tall glazed volume creates a reservoir of warm air that rises to the roof where it exits through mechanical louvers.

The rising air column draws cool fresh air into the building through controlled louvers at the lower levels.

HEATING / COOLING

Buildings within the museum campus are conditioned using radiant floor slabs and a **HYDROTHERMAL LOOP** laid on the harbour floor.

Highly efficient heat pumps draw heat from the ocean and radiate it into the museums spaces during the winter.

The process is reversed in the summer months with the ocean used as a heat sink.

STORM WATER

Storm water runoff from the site is sequestered in a **TIDAL WETLAND** where it is naturally filtered by native plants and helps reestablish a critical ecosystem that has been absent from the harbour for many years.

The wetland is sized to hold and filter runoff from the municipal watershed immediately above the site and reduces the burden on the city's aging infrastructure.

APPENDIX A

Literary Research

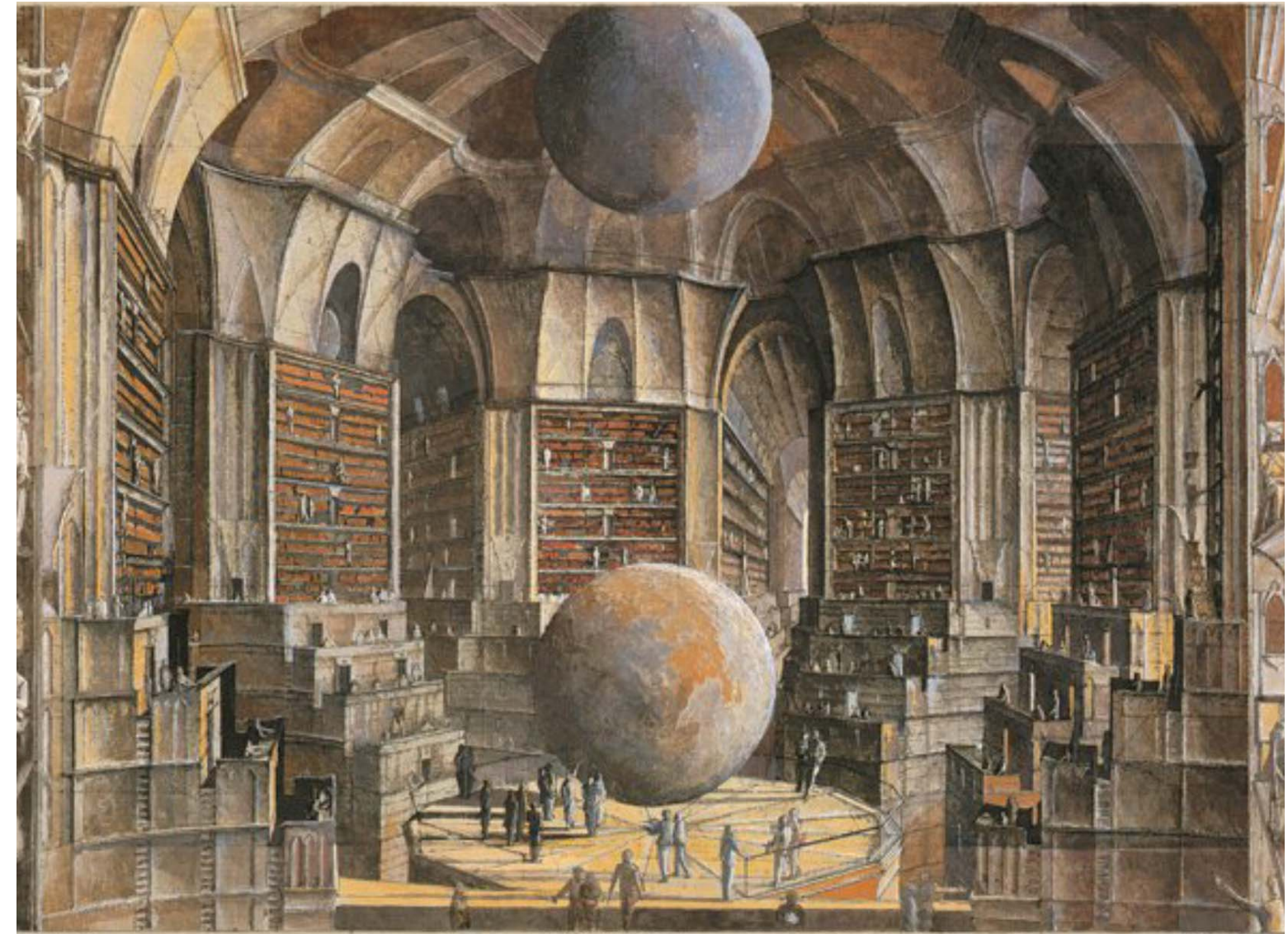
TIME AND SPACE

As narrative creatures we are constantly interpreting our experience of the world around us and translating it into stories that help us understand and contextualize our environment. Conversely, we interpret and internalize the stories that have gone before us. We do this through a wide variety of media including books, films, plays, songs and poems but perhaps most profoundly through our capacity to embed our stories in our architecture. We invest meaning into the multitude of building typologies and spaces that form our built environment and retain the relevance of this meaning through a process of constant renewal and reinterpretation.

Architecture is a unique carrier of narrative. Unlike other media which use representations of time and space to convey meaning, an architectural narrative resides in the reality of a physical space. (psarra 4) This creates rich opportunities for expression but also challenges the traditional story telling approach in which the narrative is moved forward sequential in time by a coherent plot.

Nigel Coates notes that “in architecture the linearity of the narrative function dissolves as the spatial dimension interferes with time” (Coates 15). Or, more simply, architectural spaces are limited in their capacity to tell a story in an orderly and sequential manner by the presence of physical structures such as walls, floors and ceilings. We tend not to build linear sequential spaces, because the lives that they will contain are rarely linear or sequential in nature. Any narrative that we wish to invest in a structure must therefore be embedded at some higher level of interpretation. The building must carry the story in all its composite parts but, crucially, must also tie back to a coherent overarching idea that provides meaning and context for the whole.

While restricted in a temporal realm, the physical nature of an architectural space opens up entire new avenues for story telling in ways that connect with all the senses. “Having both substance and void, content and relationship, space is a medium ready to soak up associative meaning” (coates 32)



Fictional Library of Babel
- 1941 *Jorge Luis Borges*

THE DESIGNER AND THE EXPLORER

The Architect conceives and sees the spaces they design all at once from a position outside of time and physical constraint and are able to establish a narrative with a simultaneous understanding of all the parts and elements that make the whole. By contrast, the visitor experiences the space sequentially in time. Slowly developing their understanding as each scene or circumstance is revealed through movement and their changing vantage point. (psarra 93)

By crossing a physical or visual threshold along the approach to a building the visitor voluntarily enters a controlled environment, similar to opening a book or taking a seat at a theatre. They put themselves into the hands of the designer and accept the evolving restrictions on movement and view that come naturally from approaching and occupying a physical space. Consciously or otherwise the visitor anticipates the emergence of a narrative. A way of understanding their new environment so they can successfully navigate within it and assimilate its meaning into their experience.

The dynamic nature of the built environment however means that this is a two way dialog. Coates notes that “architecture exists in the way people interact with their environment, and in the process of responding to it and yielding to it, map their own experiences onto it.” (coates 11) Two equal partners - the medium and the interpreter.



Labyrinth - Meditative Path

NARRATIVE PATHS

Narrative may be defined in a number of different ways depending on the circumstance of the story and the nature of its carrying media. Suzanne Macleod suggests that “when reduced to its base elements a narrative can be considered a coherent sequence of concepts and / or emotions” (macleod 183)

An Architectural narrative, constructed of physical forms, follows this same paradigm and is told through the spatial and visual connections that are established within a building and its composite environments. The different spaces, nodes and scenes that the Architect develops within the building create and foster a variety of emotional responses that build the story at an emotional level.

Sophia Psarra describes two distinct path types that allow the visitor to access and understand the narrative of an architectural space. “The path you follow physically, and the one your eyes take.” (psarra 125)

The two paths maybe closely aligned or widely divergent and may generate multiple ways of perceiving a space through the creation of a network of physical and visual relationships that activate different experiences and generate different interpretations.

Paths maybe highly constrained and linear in nature - driving toward a singular and well defined meaning. Or densely woven and rich with the potential for individual exploration. The more ambiguous the structural framework of a space the more the narrative relies on the decision making of the individual explorer and their personal interpretation of its meaning. The opportunity for embedding layered and nuanced meanings in the space is therefore similarly increased.

Coates observes that a non sequential space without a prescribed ordering of narrative events may create a “framework of associative meanings held in wait to ‘drench’ the unsuspecting visitor in meaning” (coates 15).

Nice.



Castelvecchio Museum - Verona, Italy
- 1973 Carlo Scarpa

THE PHYSICAL PATH

The physical path through an architectural space is defined by its geometry - the locations of its walls, portals and structural elements. It goes beyond the simple concept of “circulation” however and include all the suggested and implied routes that may connect one architectural space to another.

Paths may be simple, obvious and linear. Or complex, ambiguous and multivariate.

When a linear path is defined or prescribed through a space it emphasizes one interpretation out of the infinite number that may have been possible. The selection of a singular or highly restricted route specifies a particular way that the designer wants the explorer to experience the building. (psarra 87) By channeling the explorer through a particular sequence of events and experiences, defined by the organizing framework of the building’s geometry, it is possible to deliver a very clear and well defined meaning within the building narrative.

Expanding a single route into many, using digression and multiplicity adds complexity to the space and opens the door for personal interpretation of an embedded meaning. Psarra observes that “meaning is often found in separation, juxtaposition and reintegration of paths.” (psarra 130) As the complexity of a path increases the number of decisions required from the explorer increases also. Each intersection or branching point becomes a scene with its own unique circumstances, inputs and outcomes.

As the path, and narrative, becomes more complex it becomes increasingly important for the building to provide strong orientation and overall context so that the explorer does not become lost or overwhelmed and they are able place their personal experience in a larger framework.



Jewish Museum - Berlin, Germany
- 2001 *Daniel Libeskind*

THE VISUAL PATH

The visual path through an Architectural space is also defined by the physical geometry of the space but may be far broader and varied than the physical path that is defined by the same constructions.

By controlling what is visible and when the designer invests fixed space with a sense of movement. “Vistas maybe shortened or lengthened and routes twisted or layered to achieve spatial drama and heighten suspense” (psarra 67)

The narrative of a space can be driven forwards by developing a visual tension between the seen and unseen. A story is told when a view to an important element is provided from a distance, then hidden as the viewer moves forward before being revealed again, from a new perspective. Each new view reveals new information and propels the narrative forwards.

Significant meaning is also transfered to a space or element when the visual and physical paths are aligned as, for example, where a linear path terminate on an element. The consistent view of a particular destination or object through a series of axial portals and thresholds builds anticipation and reinforce that part of the narrative. The visualization of the terminating experience colours the atmosphere and experience of spaces that the explorer passes through on the journey towards it.

Paths may also terminate obliquely on an element or destination space, through staggered portals and thresholds. This arrangement is intrinsically dynamic in nature, revealing more information about the element through movement, and creates an emergent understanding of the embedded narrative. (psarra 125)



Barcelona Pavilion - Barcelona, Spain (originally)
- 1929 Mies van der Rohe

NARRATIVE ELEMENTS

Lee Skolnick notes that “fragments of stories are carried in details, features of buildings reveal function, building elements have metaphoric qualities: portals loaded with the significance of arrival, windows as the eyes through which a controlled view of the world is afforded. Only when an architect has a larger vision do these individual, sometimes unavoidably metaphorical details attain a higher level of organization that we might call a story” (macleod 87)

As inhabitants and explorers of our environment we are constantly absorbing and assimilating the details of our surrounding. Psarra observes that “We take as much pleasure in the parts as in understanding the whole, as much satisfaction in lingering with our senses at work, as in grasping patterns with our intellect at full power.” (Psarra 124)

The individual elements that comprise a building are powerful containers and transmitters of narrative and form the basis for our understanding of a space. We process the details through the lens of our past experience and transform the separate aspects of materials and artifacts and elements into a complex and emergent whole.

The characteristics of a material used in a space, whether its fine or course, hard or soft, dull or reflective, inexpensive or costly, warm or cold has a powerful impact on our perception of the space and establishes a mood or atmosphere that colours our larger experience.

Elements of transition such as doors, windows, ramps, stairs, passages and arches create defining moments within an Architectural composition. They possess their own gravity that draws people toward them and mark critical points of inflection and decision within each explorer’s experience of the narrative of a space.



Doors - Sagrada Familia - Barcelona, Spain
- 1882 - present, Antoni Gaudí

CONCEPTUAL AND PERCEPTUAL FORMS

People are wired to build a mental model of the world around them and use memory and anticipation to fill in gaps in their sensory experience. Architecture provides unique opportunities to tap into this process. The desire to extrapolate from what we see and experience and push beyond that into a new state of “the unknown” is a powerful drive in all of us. It’s the force that advances the plot in any media and has direct application in an architectural setting.

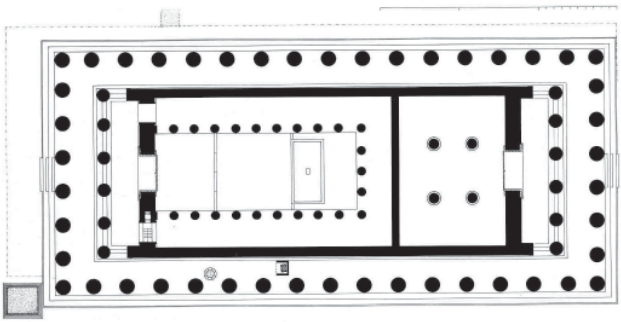
Psarra observes that “buildings are experienced gradually through movement” (psarra 5) It is in the physical act of motion, as an observer moves towards, around, and through an architectural space that the space becomes activated and is invested with meaning.

Psarra drives further into this experience of discovery and describes two distinct ways in which an observer may receive and understand information about their surroundings based on the conceptual and perceptual characteristics of the space.

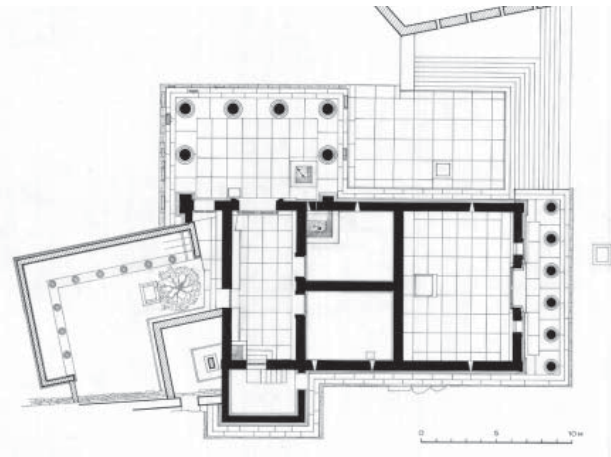
Structures with a conceptual characteristic are those that project patterns that we are able to hold in our minds all at once. We “get it” at first sight or experience. These are typically simple and well ordered compositions displaying symmetry, rhythm, alignment, congruence and repetition that allow us to anticipate portions of the building that we do not immediately see. (psarra 7) The Parthenon exemplifies this typology with its symmetrical and highly ordered form set obliquely to the line of approach so it can be immediately understood.

Structures with a perceptual characteristic are grasped more gradually through the experience of movement. Their irregular forms limit opportunities to anticipate unseen elements and their meaning is emergent - requiring an exploration of visual axes, fields of view, spatial connections, adjacencies, paths and nodes to understand them. (psarra 7) The Erechtheion, standing immediately adjacent to the Parthenon on the Acropolis, is a highly perceptual form that changes its nature with each incremental change in vantage point. Its meaning, while no more or less significant than that of the Parthenon, is revealed far more slowly and requires a viewer to completely circle the structure to grasp it.

Two very different ways of telling a story. Each reinforcing the other.



Parthenon - Athens, Greece
- 438 BCE



Erechtheion - Athens, Greece
- 406 BCE

CONTEXT

Macleod observes that novels and museums developed simultaneously in the explosion of new ideas and ways of interacting with the world immediately following the industrial revolution. (macleod 7) Both offered a fully contained world in miniature that could be occupied and explored by a visitor. Each environment was highly controlled by the author or designer with the express purpose of delivering a carefully crafted narrative.

Museums in particular were driven by the rising power of science and empire to explain, control and exploit the natural and political world. The resultant institutions were rigid and hierarchical and expressed the Victorian belief that the world was founded on a singular and ultimately knowable truth.

Many early museums grew out of the unique explorations of a single individual. The archetypal gentleman scholar whose work and collections were inextricably bound together. The opening of these works to the public offered a window into their operating environment. Psarra observes however that over time the scientific function of the museum became increasingly separated from the educational function “creating a split between the museum as a place for specialists and as a front of house for the public.” (psarra 181)

The concept of a museum as a place to safeguard and share our collective stories by providing a “spatial framework for formal and informal remembering.” (macleod 145) did not emerge until after the second world war. As macleod notes, museums hold power over time “objects are carriers of memories and are vehicles that can carry us back to earlier days and release us from the terrible forward flow of time” (macleod 7)

In order for museums to connect and share their stories with a broad and fluid audience they need to speak a common language that communicates across cultures and ages. A narrative approach to architecture facilitates this sharing through the development of “highly communicative buildings” (macleod xix) that support and sustain the narrative without competition or distraction.



frontispiece - Musei Wormiani Historia
- 1665 Isaac Elzevier

STORYTELLING

Macleod suggests, eloquently, that:

“Life does not tell stories. Life is chaotic, fluid, random; it leaves myriads of ends untied, untidily. Writers can extract a story from life only by strict, close selection, and this must mean falsification. Telling stories is really telling lies.

In finding a coherent story to tell, contested narratives and dissonant voices are quieted, and the heterogeneous and ultimately unknowable truth is left behind. The ‘objective facts’ — traditionally so important within the realm of the museum — are only partially revealed through a series of explanatory fictions” (macleod xxii)

Museums have traditionally presented a “top down” view of history. Using a very restrictive concept of narrative as a way of framing a story to support a specific, dominant, view. This approach to storytelling, which suppresses minority views and experiences, was frequently codified in the rigid and linear architecture of the museum buildings that supported it.

The current approach to museum design recognizes that the success of an institution depends on the credibility of the story it tells. As such the narrative explored in a contemporary museum is more likely to be nuanced, multi-layered and open to challenge. “Visitors are encouraged to become co-curators of the museum narrative as their experience is impacted by their choices” (macleod 2)

This expansion of the narrative thread may come at the expense of clarity and focus however. As museums work to support the presence of multiple voices with divergent viewpoints they increasingly struggle with the competing need to preserve and express a meaningful “truth”. Macleod suggests that “a sensitive architecture that supports and reinforces the narrative at a higher level may provide a sense of cohesion and unification.” (macleod xxii)



Canadian Museum of Human Rights - Winnipeg, Manitoba
- 2008 Antoine Predock

NARRATIVE APPROACH

The design for a museum should emerge organically from the roots of its surroundings and the story that it was established to tell, its own creation story as it were, rather than clinically from a defined building typology. Nic Coetzer states that “it is the particular of the story not the generic of “museum” that drives the design” (macleod 63)

The traditional museum parti calls for long, black box galleries in which collections of related artifacts are frozen in rigid order. This top down approach ensures that each visitor follows the same path and experience the same spaces and artifacts in a particular, curated, order. While this has the advantage of enforcing a dominate and predetermined narrative over the visitor’s experience it may not reach them at an emotional level where meaningful interpretation, and learning, occurs.

Contemporary museums by contrast frequently pursue a bottom up approach where “the relationships between spaces are complex and layered and the narrative, or narratives, emerge from the experience of exploring found spaces, artifacts and moments.” (macleod 105) In this environment the visitor is engaged as an equal partner in the curation and sequencing of their own experience.

Psarra refers to the first of these two approaches as a “neutral warehouse” of the past. She notes that their form is frequently linear and symmetrical in plan with little variation in section, except at the entry or an interior atrium space.

She refers to the second approach as an “active container” where dynamic treatment of both plan and section respond to the particulars of the setting and the story that the institution is mandated to tell. These buildings may offer “dramatic views of an excavated basement, a central hall or the landscape. They contrast the linear extension of axes with gaps, stairs, voids, and objects calling attention to the visual mechanisms governing the spaces. They provide sensory stimulus rather than emphasizing the rational existence of the display and the architecture.” (psarra 181)



Acropolis Museum - Athens, Greece
- 2009 Bernard Tschumi and Michael Photiadis

NARRATIVE APPROACH

Within each of these approaches the physical elements of the building's architecture and the intellectual elements of its exhibitry must work together to generate a narrative energy that draws visitors through the various spaces and galleries of the museum.

The three part progression of rising action, climax and resolution that powers classical literature draws on the deep human drive to know "what happens next" and has equal relevance in an architectural setting. The elements of an architectural space can be arranged to create a richly narrative environment. One that develops tension through a discernible progression of experiences, punctuated by the introduction of unfamiliar surroundings or information that creates a desire for resolution. (macleod 108)

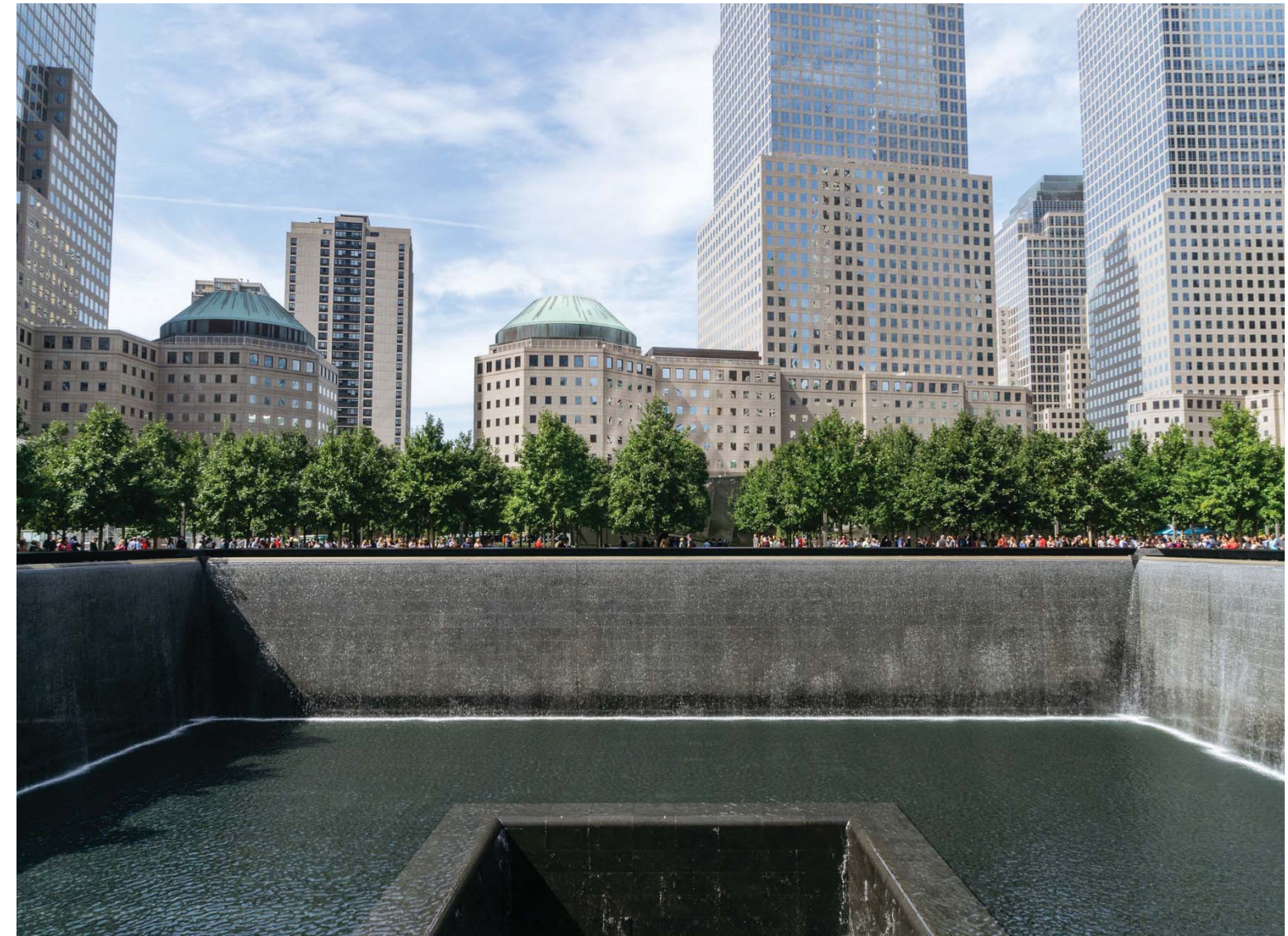
It is these moments of disorientation and questioning, followed by reestablishment of meaning and context, that drives the plot, and the visitors journey, forwards.

Tricia Austin suggests that there are two distinct types of narrative that are conducted through the medium of a museum - the physical and the intellectual. "The physical space is designed to tell the story through a variety of sensory means: spatial dimensions and sightlines, volumes and rhythms, forms, colour, light, materials, sound etc.. while the content is communicated more directly through written and spoken words, and still and moving images" (macleod 108)

The two are not however mutually exclusive. The physical aspects of the building - the materials that it is composed of, the paths that it opens, the views that it frames, the way that it sounds - creates an atmosphere that supports the intellectual narrative at an intuitive, body level.

Sheila Watson, referring to the oddly arranged and pungent spaces of a museum built inside an old herring factory, builds on this idea and suggests that "The immersive experience of the body moving through an unfamiliar space engages the visitor at one level with sensations unmediated by the artifacts or interpretation within it. The place is sensed rather than understood intellectually." (macleod 162)

The strength of a narrative architecture occurs at this crossroads. Within the circumstance where the physical expression of the architecture sufficiently engages the visitor at a physical, sensory, level that they are lifted from a purely intellectual understanding of their surroundings and become immersed in an experience. "As narrative dissolves, epiphany emerges" (macleod 93)



911 Memorial - New York, New York
- 2011 Michael Arad and Peter Walker

APPENDIX B

Bibliography

Bite, S. (2014). **Museum Without Artifacts. - Narrative Architecture In the Bytown Museum** Carleton University. Retrieved from https://curve.carleton.ca/system/files/etd/2de9dbb9-09fe-4049-a9a5-ff9158b3fc7b/etd_pdf/89c441b32708c9f821d0a8dce50a7543/bite-museumwithoutartifactsnarrativearchitecture.pdf

Borson, B. (2016). **Narrative as Design Process**. Retrieved 28 December 2016, from <http://www.lifeofanarchitect.com/narrative-as-design-process/>

Building Stories – the architectural design process as narrative – Conference paper. (2016). Cristina-ampatzidou.com. Retrieved 11 December 2016, from <http://www.cristina-ampatzidou.com/building-stories-the-architectural-design-process-as-narrative-conference-paper/>

Can an Exhibition Be a story? (2016). Fiona Romeo. Retrieved 28 December 2016, from <http://www.foeromeo.org/conferences-etc/can-an-exhibition-be-a-story>

Coates, N. (2012). **Narrative Architecture** (1st ed.). Chichester, West Sussex: Wiley.

Gautrand, M. (2014). **Museum Architecture and Interior Design** (1st ed.). Design Media Publishing Ltd.

Hadley, B. & Clarke, A. (2016). **Spatial Experience, Narrative and Architecture** NSW Architects Registration Board. Retrieved from http://www.architects.nsw.gov.au/download/BHTS/Clarke_A_Spatial_Experience_Narrative__BHTS2012.pdf

Lord, G. & Lord, B. (2001). **The Manual Of Museum Planning** (3rd ed.). Walnut Creek, CA: AltaMira Press.

Macleod, S., Hourston Hanks, L., & Hale, J. (2012). **Museum Making** (1st ed.). London: Routledge.

Psarra, S. (2009). **Architecture and Narrative** (1st ed.). London: Routledge.

Storytelling in Architecture. (2016). Planetizen: Retrieved 11 December 2016, from <http://www.planetizen.com/node/46878>