December 18, 2024

Securing Historical Objects in the Britannia Shipyard Building

Project Purpose: To ensure the safety of the historical objects contained within the Britannia Shipyards building at Britannia Shipyards National Historic Site during the upcoming envelop renewal project.

Background

Site Description

Britannia Shipyards is a 3.2 hectare historic cannery and shipyard site and public park located on the south side of Lulu Island on the South Arm of the Fraser River in the community of Steveston in Richmond BC. The site is part of three-kilometre stretch of shoreline known collectively as Cannery Channel, which was once the most prolific salmon canning centre in British Columbia.

The park and many of the historic buildings are open to the public year round, offering heritage programming such as costumed interpreters, guided tours, school programs, self-guided activities, and special event programming.

The site consists of a collection of historic wooden buildings related to early canning, fishing, and boatbuilding operations arranged along a wooden boardwalk, dike and bulkhead. The buildings reflect both the original Britannia Shipyard operation and others relocated to the site for interpretive purposes.

One of these buildings, the Britannia Shipyard, is a highlight of the site and features installed exhibits throughout. Originally a cannery, the building was repurposed to serve as a boat repair facility with the south wall opened to the River and a set of marine ways added. A 360° video provides views of the building's exhibition spaces.

Envelop Repair Work

Starting in approximately March of 2025, the City of Richmond is undertaking an extensive envelop renewal of the Britannia Shipyards building. This project will include repair or replacement of missing or deteriorated:

- Wood siding, fascia, and exterior trim boards;
- Gutters and down spouts;
- Exterior doors and windows; and
- Roof system (plywood sheeting to be retained).

Additional structural work will include:

- installing roof anchors;
- replacing rotten structural members such as piles and cross bracing for the sub-structure; and
- renewing deteriorated structural members of the building frames.

This work is anticipated to take a minimum of one year until complete.

Project Description

Due to the extensive nature of the envelop work, most of the historical objects including props, artifacts original to the site (OTS) and interpretive elements displayed within the building must be stored away or secured in place for the duration of the work. This RFQ is seeking quotations for a firm to implement the detailed historical object move plan, in *Appendix A*, to secure in place, or safely remove and store the building's historical contents.

Scope of Work (to be completed in accordance with *Appendix A Move Plan*)

1. Planning	On site kick-off meeting
	Ordering specified materials and equipment
	Booking movers and equipment rentals
2. Preparation	Site meeting for staff and contractors
	Post safety and schedule information
	Mark out on-site storage zones
	Move interpretive interactives to Net Loft
	Receive and manage materials and equipment ordered
	Post project plan with OTS object locations and storage zones
	Photo documentation and record of exhibits
3. Project Start	Set up mobile workstations, supply cart
	Condition report, protect, tag OTS items that can't be moved
	Guide construction of on-site storage zones: see Floor Plan, p.14 of

	Appendix A Move Plan
	Documentation: photo documentation, light cleaning, condition report and update Individual Object Plan Sheets
4. Packing Stage	Wrap and tote artifacts
	Wrap and tote props
	Palletize and crate artefacts to move
	Palletize and crate props to move
	Construct crates for objects in place
	Cover and label OTS and objects in place with poly sheeting
5. Moving Stage	Move objects to onsite storage zones
	Site clean up
6. Post-move	Transfer project documents to City staff

What the City will provide:

- A detailed historical object move plan for the building (see *Appendix A Move Plan*);
- Staff support throughout the project as described in the move plan;
- Removal of the *MV Burnaby* vessel;
- A staging area on site;
- A shared desk space (if required);
- Parking on site; and
- Access to building between 8am and 5pm, Monday to Friday.

Deliverables

1. Planning tasks as described in *Appendix A Move Plan*
2. Preparation tasks described in *Appendix A Move Plan*
3. Project Start tasks described in *Appendix A Move Plan*
4. Packing tasks described in *Appendix A Move Plan*
5. Moving tasks described in *Appendix A Move Plan*
6. Final transfer of project documents

Estimated Project Timeline

Deliverable 1	January 31
Deliverable 2	February 7
Deliverable 3	February 28
Deliverable 4	March 28
Deliverable 5	April 4
Deliverable 6	April 11

** Exact timeline to be confirmed in January in alignment with construction start times.*

Bidders must provide:

1. An estimate of costs to complete each of the identified deliverables;
2. Biographies/resumes of the principle people involved; and

3. Examples of similar projects you have worked on.

Project contact:

Camille Owens, Curator of Collections at cowens@richmond.ca
For more information, please call Camille at 604-314-2593.

Deadline to provide quotation:

January 12, 2025

Appendix A

Move Plan for Securing Historical Objects Prior to Construction

Britannia Shipyards National Historic Site
Building Envelope Renewal Project
Shipyard Building

Contents

1.0 PROJECT AND PLAN

Starting in Spring 2025, the City of Richmond is undertaking an extensive envelop renewal of the Britannia Shipyards building. This project will include repair or replacement of missing or deteriorated:

- Wood siding, fascia, and exterior trim boards;
- Gutters and down spouts;
- Exterior doors and windows; and
- Roof system (plywood sheeting to be retained).

Additional structural work will include:

- installing roof anchors;
- replacing rotten structural members such as piles and cross bracing for the sub-structure; and
- renewing deteriorated structural members of the building frames.

This work is anticipated to take a minimum of one year until complete.

1.1 OBJECTIVES

Due to the extensive nature of the envelop work, most of the historic objects displayed within the building will be removed to storage or secured in place for the duration of the work. This plan is will guide, and provide resources to assist in, the successful, smooth and safe packing and securing of the objects in the Shipyard Building.

1.2 PLAN OVERVIEW

This report provides lists, processes, scheduling and suggestions for the upcoming Britannia Shipyards Building historic object securing and move. Section 1 provides Project Background, Objectives and Deliverables. Section 2 outlines the Stages of the Move, based upon a ten week schedule and planning for on-site storage. The move is divided into five main stages: Planning, Pre-project start, Project start, Packing, and Moving. The stages are presented in a table and Gantt chart and further broken down into details and team members required for each stage. Section 3 outlines the tasks of each role as well as the skills and abilities required. The main body of this report ends with a summary of the reinstallation process.

The Appendices provide in-depth details to support the plan. There is a basic floor plan with suggested areas for on-site storage, as well as larger Original-To-Site objects that are within future work zones. There is also a template for Individual Object Plan Sheets (IOPS), to be used as a key method of tracking the packing and movement of objects. This is followed by a catalogue of securing and packing methods as a guide. This offers consistency and best practice to customized approaches for each object. Appendix D, Moving Plan Components, provides detailed lists, costs and suppliers of materials and supplies, equipment, and potential transport companies. Appendix E provides assessments of the larger, more challenging pieces to be protected in place or moved. These assessments

provide an idea of the storage space, number of pallets required and which objects need to be protected in place, including methods.

*All measurements, costs and estimates will need to be verified.

2.0 STAGES OF THE MOVE

The move is broken into five stages for the purpose of this plan.

1. Planning
2. Preparation
3. Project Start
4. Packing
5. Moving

2.1 STAGES OF THE MOVE – TABLE

1. Planning	Ordering of specified crates, pallets, materials and equipment
	Booking of movers and equipment rentals
	Remove items that are not artifacts, props, OTS, interpretive
2. Preparation	Site meeting for staff and contractors
	Post safety and schedule information
	Mark out on-site storage zones
	Protect flooring
	Move interpretive interactives to Net Loft
	Receive and manage materials and equipment ordered
	Post project plan with OTS object locations and storage zones
	Photo documentation and record of exhibits
3. Project Start	Condition report, protect, tag OTS items that can't be moved
	Construct onsite storage zones: Westway, Hallway, Under Stair, Machine shop
4. Packing Stage	Set up mobile workstations, supply cart
	Documentation: photo documentation, light cleaning, condition report and update Individual Object Plan Sheets
	Wrap and tote artifacts
	Wrap and tote props
	Palletize and crate artefacts to move
	Palletize and crate props to move
	Construct crates for objects in place
	Cover and label OTS and objects in place with poly sheeting
5. Moving Stage	Move objects to onsite storage zones

2.2 STAGES OF THE MOVE – DETAILS

1. PLANNING

Order specified crates, pallets, materials and equipment (See Appendix D 1-4)

Ordering should be completed 4 – 6 weeks in advance of the move.
A location for these deliveries should be allocated with a checklist binder that is filled out and updated as deliveries are made.
Any delays or missing items should be tracked by the Move Coordinator and mitigation put in place: expedited delivery, alternate suppliers or materials.

Checklist should include:

a) Item description
b) Order date
c) Supplier
d) Delivery date
e) Delivery Company (if known)
f) Number of items
g) Name of person who signed for items
h) Notes (condition concerns)

Required: 1 person – Move Coordinator or Staff

Booking of movers and equipment rentals (See Appendix D-3 and D-4.4)

Bookings should be made 4-6 weeks in advance.
Movers may be able to provide the rental equipment (pallet jack and gantry if needed)
Wheeled equipment should be specified with pneumatic tires.
Dates of bookings to be refined once start-date of access to site is confirmed.
Required: 1 person – Move Coordinator or Staff

Remove items that are not artifacts, props, OTS, or interpretive

This list can be generated and confirmed by Municipal staff and the move to be done by Municipal staff at any stage before the project begins.
Required: 2 people – Staff

2. PREPARATION

Site meeting for staff and contractors

Review the process and stages of the move (See Section 2), locations and supplies, procedures for safety, reporting and documenting, packing. Address concerns.
***Required: Move Coordinator, team members from Municipality and site, Building contractors*.**

Post safety and schedule information

Apply any changes to schedule and process and post on site.
Safety procedures and first-aid kit clearly posted.
Required: Move Coordinator or Staff

Mark out on-site storage zones

Lay out and mark zones for on-site storage (See Appendix A). These will be the outlines for Poly-cage construction.

Required: Move Coordinator

Protect flooring

Lay trackway of protective flooring. This should be plywood and not screwed into existing heritage flooring. Tuck tape can be used at the seams on the plywood only – not on the flooring. This protective flooring should cover areas where the building contractors may damage flooring through their work and also where heavier objects may be moved across the flooring for the move.

Consult with building contractors re: floor weight load for areas for on-site storage.

Required: Movers or Building Contractors

Move interactives to Net Loft or cover in place

Prepare Net Loft space.

Poly-wrap, label and move portable interactives

Required: Staff

Delivery of materials and equipment

See details in "PLANNING 1. Ordering of specified amounts of crates, pallets, materials and equipment" and Appendix D 1-4)

Required: Staff to receive

Post plan with OTS object locations marked and storage zones

Post plan from Appendix A.

Required: Move Coordinator or Staff

Photo documentation and record of displays for re-installation purposes

Each display and item that has an IOPS should be photographed in its original display location with a label stating location and date. Display photos will be kept according to location.

Required: 1 staff

3. PROJECT START

Protect and tag OTS that can't be moved (See E-3)

These items include:

a) Sliding doors (interior and exterior)
b) Locker banks
c) Painted Japanese sun
d) Built-in benches and tables
e) Steambox
f) Conduits

g) Circuit breakers
h) Light switches
i) Doorknobs
j) Interior doors
k) Machine shaft systems and screens
l) Chimneys

Crate in place or poly-cover over and label to protect items marked as OTS that can't be packed and moved. Brief the construction crew on not be altering or moving these items.

Required: Two people (Move coordinator plus one staff?) plus Carpentry

Construct onsite storage zones: Westway, Hallway, stairs, Machine shop

Marked off zones (See Appendix A) will have 2 x 4 cages built with poly on all sides.

Required: Carpentry

4. PACKING STAGE

Set up mobile workstations, supply cart

Set up supply cart and two worktables: Documentation and Cleaning Table and Packing Table, all with locking casters.

Documenting and Cleaning Table

Photo area on one end with white padded surface for placing objects
Tripod
Adjustable Anglepoise light screwed or clamped in place to avoid tipping
Photo documentation scale
Object identification template
Cleaning area on the other end
Hepa adjustable speed vacuum with screen for nozzle
Clean flat hake brushes – small, medium, large
B-72 and micro pigment pen for accession numbering if needed
Laptop
Conservation notes sheets

Packing Table

Polyethylene foam padded toppers
Cutting mat
Knife
Scissors
Bone folder
Seamstress' measuring tape

Supply Cart

Tags and labels
Polyethylene sheeting

Polyethylene foam
Ethafoam 1” and 2”
Tyvek
Tuck Tape and tapegun
Coroplast
Acid-free tissue
Sealing tape printed with “Packed” and tapegun
Twill tape 1” and ½”
Masks and gloves,
Zip lock bags with writing area for loose parts or surface fragments
Pencils and sharpies
Stretch wrap
Stapler with staples
Staple gun with staples.
Required: Move Coordinator or staff

Documentation: Light Cleaning, condition report and IOPS database updates

This takes place before packing on the Documentation and Cleaning table if small enough. Otherwise in situ.
Ensure that each object has individual photo taken with a photo documentation scale and accession number, on a white background if possible. Artifact and recorded object photos will be attached to the digital IOPS sheet (see Appendix B).
Brush and vacuum (screened nozzle) and check and consolidate accession number if present. Any fragments or loose elements bag and record to be packed with object.
Make condition notes on IOPS.
Flag any conservation concerns and record these on Conservation sheet. Inform Municipal staff and Move coordinator immediately if conservation is needed. A decision will be made on an individual object basis if conservation intervention is needed immediately or noted as a recommendation before re-installation.
Make updates into IOPS database.
Required: Registrar and 2 staff

Wrap and tote artifacts

For artifacts: consult Move Coordinator or Municipal staff
See Appendix C - Catalogue of Securing/ Packing and Moving Methods
Required: Registrar, Move Coordinator and 2 Staff

Wrap and tote props

See Appendix C - Catalogue of Securing/ Packing and Moving Methods
Same procedure as with Artifacts, though perhaps less padding, wrapping and labelling.
Required: Registrar, Move Coordinator and 2 Staff

Palletize and crate to move artifacts

For artifacts: consult Move Coordinator or Municipal staff

See Appendix C - Catalogue of Securing/ Packing and Moving Methods

Required: Registrar, Move Coordinator and 2 Staff, possibly movers

Palletize and crate to move props

Plan a set time for these moves as extra team members and equipment will need to be on site. Team members should wear steel-toed footwear and other PPE and be briefed of the process beforehand.

See Appendix C - Catalogue of Securing/ Packing and Moving Methods

Same procedure as with Artifacts, though padding, wrapping and labelling can be less thorough.

Required: Registrar, Move Coordinator and 2 Staff, possibly movers

Construct crates in place objects

For artifacts: consult Move Coordinator or Municipal staff

See Appendix C - Catalogue of Securing/ Packing and Moving Methods

Required: Move Coordinator, Carpentry

Poly off and label OTS and objects in place

See Appendix C - Catalogue of Securing/ Packing and Moving Methods

Required: Move Coordinator and 2 Staff

5. MOVING STAGE

On-site storage objects moved to onsite zones

Smaller totes and palletized or crated objects can be moved into their storage zones individually once packed, labelled and recorded.

Plan a set time for moving larger items as extra team members and equipment will need to be on site. Team members should wear steel-toed footwear and other PPE and be briefed of the process beforehand. Movers will be needed for certain objects.

A pallet jack will be needed for larger crates and pallets. Otherwise, four-wheeled dollies and a hand truck will suffice. Once the storage zone is full, seal it off with Tuck Tape. Post No Unauthorized Access signage.

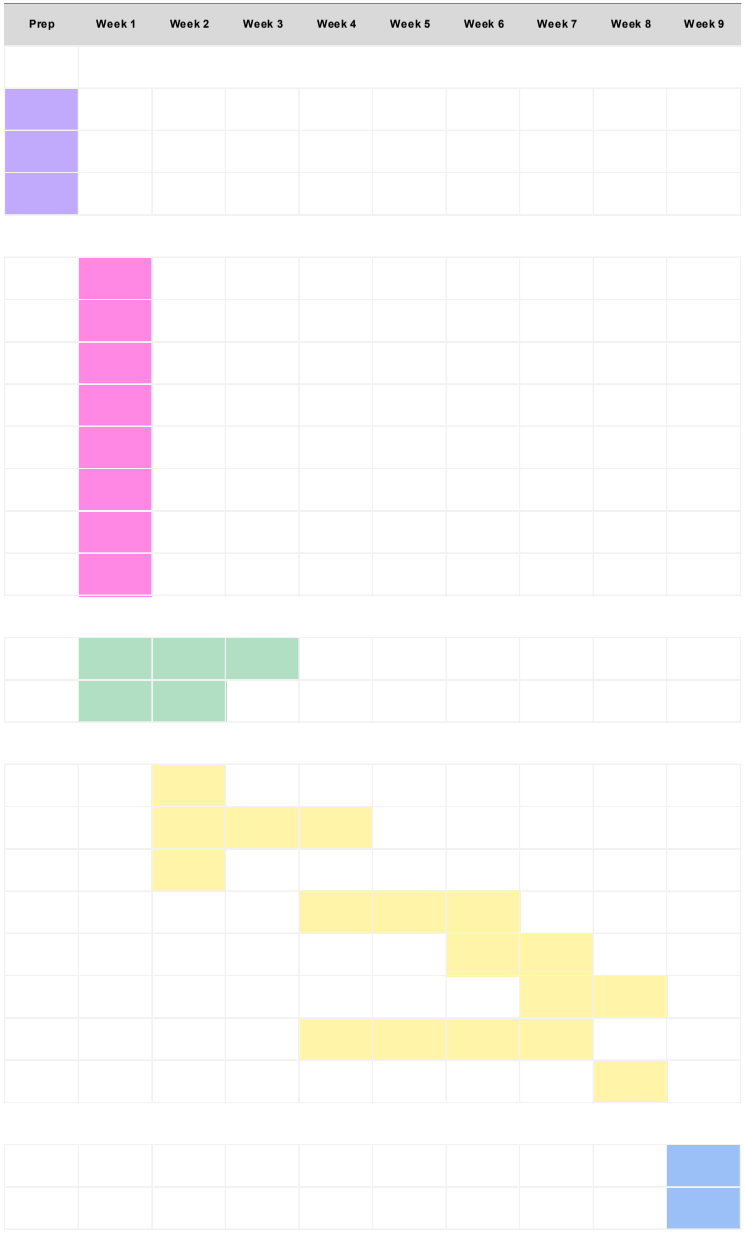
This stage will include post-project clean up of the work sites.

Required: Move Coordinator, Registrar, Movers, staff

2.3 TIMELINE

This chart estimates the time and overlapping of tasks with a Full Project Team, including a Move Coordinator and an on-call Carpenter, and at least two Prep, Pack and Move staff. This timeline makes the most use of efficiencies through a dedicated work crew, focused planning, team coordination and specialized skills. This scenario is estimated to take 10 weeks.

TASK	ASSIGNED TO
1. Ordering of specified crates, pallets, materials and equipment	Move Coordinator
2. Booking of movers and equipment rentals	Move Coordinator
3. Remove items that are not artifacts, props, OTS interpretive	Staff
Pre-Project Start	
4. Site meeting for staff and contractors	Team - Move Coordinator, Staff, Registrar
5. Post safety and schedule information	Move Coordinator
6. Mark out on-site storage zones	Move Coordinator
7. Protect flooring	Movers
8. Move interactives to Net Loft	Staff
9. Delivery of materials and equipment begins	Move Coordinator
10. Post plan with OTS object locations and storage zones	Move Coordinator
11. Photo documentation and record of displays	Staff
Project Start	
12. Condition report, protect, tag OTS that can't be moved	Team: Move Coordinator, Staff, Carpentry
13. Construct on-site storage zones: Plan A	Carpentry
Packing Stage	
14. Set up mobile work stations, supply cart	Move Coordinator
15. Photo documentation, cleaning, condition reports, IOPS database updates	Team - Move Coordinator, Staff, Registrar
16. Wrap and tote artifacts	Team - Move Coordinator, Staff, Registrar
17. Wrap and tote props	Team - Move Coordinator, Staff, Registrar
18. Palletize and crate to move artifacts	Team - Move Coordinator, Staff, Registrar
19. Palletize and crate to move props	Team - Move Coordinator, Staff, Registrar
20. Construct crates for objects in place	Carpentry
21. Poly off and label OTS and objects in place	Team: Move Coordinator, Staff, Carpentry
Moving Stage	
22. Storage objects moved to onsite zones	Team: Move Coordinator, Staff, Registrar, Movers
23. Off-site storage objects move out	Team: Move Coordinator, Staff, Registrar, Movers



2.4 TEAM MEMBERS

Role	Task Descriptions	When
Move Coordinator	Source and order supplies, equipment, storage Book rental equipment Engage movers Report to, and work with, municipality staff Prepare signage and templates Maintain a safe, organized and well-supplied work site Track deliveries Supervise and advise on documentation and packing methods Call upon conservator as needed Communicate and coordinate with building contractors Coordinate and participate in: • documentation and packing with team members • photo documentation of displays crate in place and poly cage construction • palletization and crating • moving and securing of objects on and off site • storage of off-site objects • return of objects after restoration project is complete • re-installation of displays	Throughout Move Stages
Registrar	Maintain and update IOPS, documentation and tracking Light cleaning and condition reporting Match objects to database and update records Numbering of objects as required	On contract for the move
Conservator	When condition suggests further conservation needed before move or before re-installation	As needed
Prep, Pack & Move team members	To assist with documentation and packing Possibly existing staff or volunteers	As needed
Movers	To assist with palletizing, crating and removing from site specified objects	As scheduled
Carpentry	To assist with building poly cages and crate in place and pallet adaptations/supports.	Project Start, Stage 11

2.5 REQUIRED EXPERTISE FOR ROLES

Move Coordinator:

- High level of organizational ability
- Familiarity and expertise in heritage and museology best practices such as care and handling, collections and data management, condition reporting, basic artifact conservation principles

- Experience/ familiarity with packing, moving and tracking artifacts
- Experience directing and training team members of various skill levels
- Experience with truck loads and working with moving teams
- Project management experience including scheduling, resource allocation, booking and ordering
- Ability to oversee and participate in hands on prep, pack and move of artifact and prop objects
- Flexibility with work schedule and location

Registrar:

- Familiarity with heritage and museology best practices such as care and handling, collections and data management, condition reporting, basic artifact conservation principles
- Experience in a museum or heritage site or equivalent educational experience in documenting and tracking collection objects and their movement.
- Experience/ familiarity with packing and moving and tracking artifacts

Conservator

- Experienced in object assessment, preventative conservation and treatment as needed
- Preferred specialization in object conservation, particularly with industrial collections
- Available on an on-call basis

  Possible conservation concerns are:
  - infestation
  - friable surfaces at risk of loss
  - loose or damaged parts at risk of loss
  - hazardous materials
  - active corrosion beyond reason within an industrial site

Prep, Pack and Move Team Members

- Organized and good attention to detail
- Experience with artifact care and handling
- Documentation and packing with team members
- Comfort with documenting, packing, and moving objects of all sizes Movers
- Experience in working with care and attention to detail under the direction of a coordinator
- Experience working in a heritage environment
- Flexibility with dates and schedule

Carpentry

- Ability to work on site and with a team, without dimensional diagrams
- Familiarity with heritage site requirements
- Preferred experience with artifact care and handling but care, attention to detail and the ability to follow direction form the Move Coordinator would be equivalent.

3.0 RE-INSTALLATION NOTES

The re-installation of the objects into the Shipyard building is not part of this plan, but these notes are provided to help with organization of storage areas in the de-installation process.

Re-installation can be done in phases once the construction work is complete.

Upon the removal of construction debris and equipment, leaving the flooring protection in place, there will be two stages of cleaning. The first requires that all surfaces, including those of crates, protections in place and totes will need to be vacuumed. The second, would take place on each surface again before placing the artifacts and props back in place.

Using the photo documentation that was done in the Pre-project stage of the move, pieces can be put back into place. Each move of each piece should be recorded and any changes in condition noted in the IOPS.

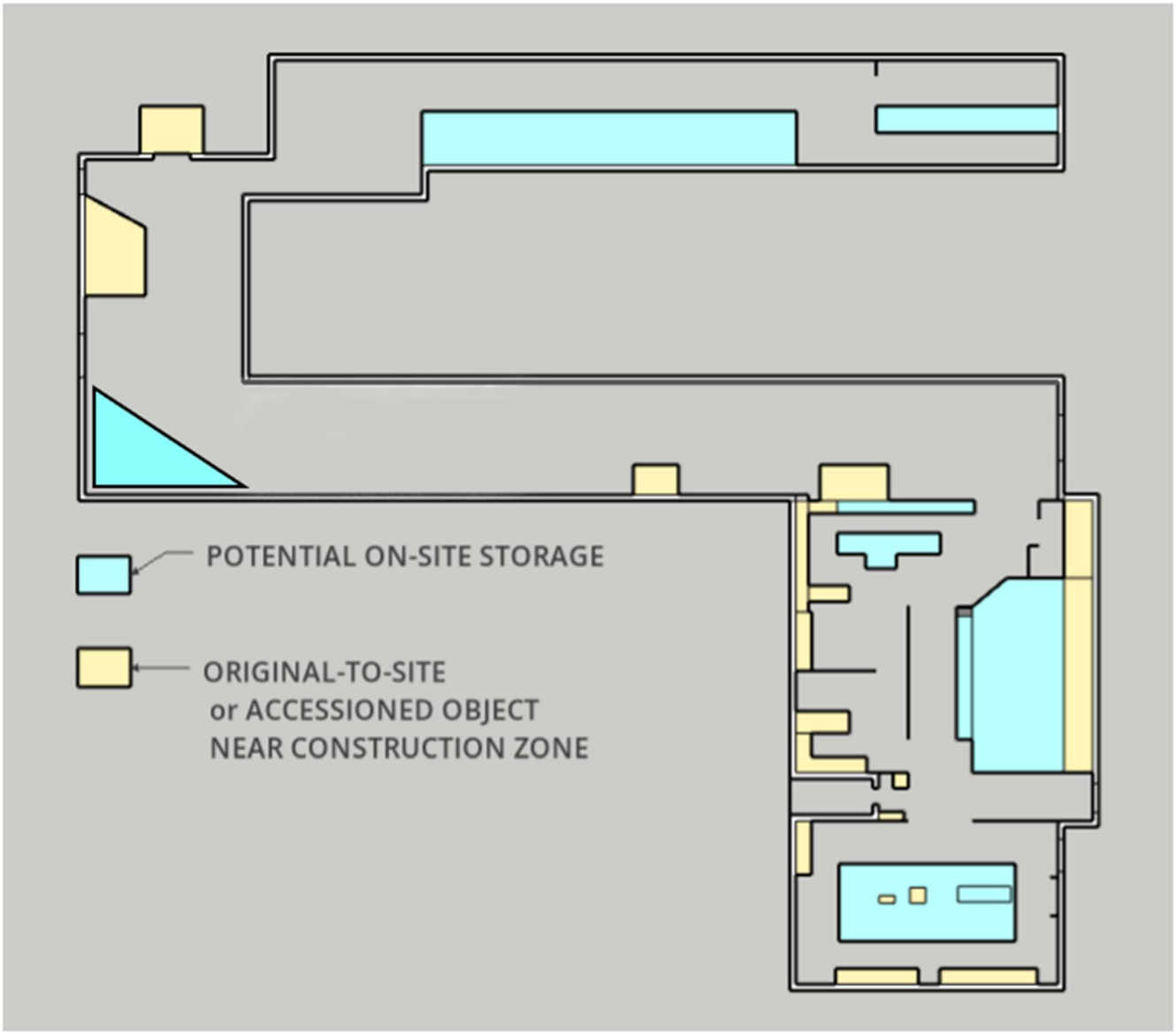
The larger pieces should return to place first, followed by those on pallets and then totes. The protection of the Original-To-Site objects should stay in place until any use of pallet jacks or larger equipment is complete. Then the OTS objects can be revealed as well. They will likely require a dusting.

The larger and then smaller artifacts should go in place last, with any required dusting being completed at that time. Some artifacts and props will need security attachments redone.

This re-installation phase is also the opportunity to re-assess the objects that may or may not be original to site and number any objects that are deemed significant artifacts. Props that are deemed non-essential can be disposed of or redistributed.

APPENDIX A FLOOR PLAN

FLOOR PLAN WITH ONSITE STORAGE ZONES



*Dimensions extrapolated for illustrative purposes only.

APPENDIX B SAMPLE IOPS Sheet

Pallet/ Tote Number:	
Exhibit Location:	
Storage Location:	
Date Packed:	
Packed By:	
Object Number(s):	
Object Name(s):	
Object Description(s) Type of object: Materials: Dimensions: Details:	
Related objects: (parts, companion piece)	
Condition Notes:	
Conservation Notes/ Recommendations	

APPENDIX C METHODS

Below are the four main recommended methods of packing, and the process and materials involved.

PALLETIZE - TO MOVE

For: Larger, heavy objects with robust structure and surfaces
Massing loose larger objects for ease of move

Description: The object(s) placed on a pallet and strapped down, using cam straps (ratchets on very heavy objects) with polyethylene padding on contact points, covered with polyethylene sheeting sealed by tuck tape. Wooden cage and/or supports if required.

Materials:

Pallets rated to weight
Cam straps
Ratchet straps
Polethylene sheeting
Polyethylene foam
Tuck tape
Wood 2" x 4"
Plywood corners
Tie-down d-rings
Screws

Equipment:

Mitre saw
Screw gun
Olfa knife
Tape dispenser
Lifting straps
Pallet jack
Gantry crane
Web sling

Process:

1. Structural and surface condition of the object assessed
2. If structure and surface deemed robust, weight distribution assessed and pallet supports/ cage built and padded as required
3. Gantry and sling moved into place and modified pallet positioned
4. With spotters and gantry operator, object slowly raised and pallet slid into position
5. Object strapped with padding at contact points
6. Object wrapped in poly sheeting and sheeting sealed with tuck tape
7. Object plan sheet, and move phase and location identifier label attached
8. Stage of packing entered into database

CRATE - TO MOVE

For: Larger objects that are less robust in structure or surfaces
Larger objects with multiple other pieces that need to be kept in association.

Description: Plywood-construction crate with interior ethafoam padding and wooden structural supports and padded strapping as needed.

Materials:

Plywood crate (custom size if needed) with pallet feet
Ethafoam 1", 2" and sheeting
Tyvek
Polyester webbing
Twill tape 1"

Equipment:

Screw gun
Olfa knife
Lifting straps
Pallet jack
Gantry crane
Web sling

Process:

1. Structural and surface condition of the object assessed
2. If structure and surface deemed unsound, or multiple parts are in association, take measurements and assess weight distribution to order/ custom build a crate
3. Line crate with ethafoam at contact points and build supports where needed
4. If possible, hand-bomb into position with spotters and lifters. Use gantry as weight assistance if needed
5. Position padding at contact points and under strapping and screw strapping to stabilize object and parts
6. Object plan sheet, and move phase and location identifier label attached
7. Stage of packing entered into database with crate number noted

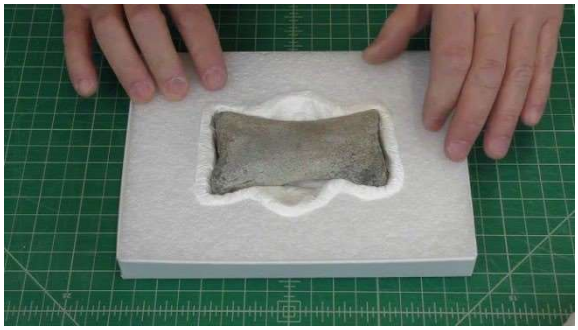
TOTE - TO MOVE

For: Mid to smaller sized robust objects, artifacts and props

Description: Off the shelf stackable totes and custom coroplast boxes. Lined with ethafoam and layered between polyethylene foam wrap and coroplast "shelves". Each object wrapped and labelled in polyethylene foam wrap and/or acid-free tissue. Tyvek-lined cavity storage mount in ethafoam if object needs extra support.

Materials:

Off the shelf stackable totes
Coroplast
Ethafoam 1"
Polyethylene foam roll
Twill tape 1" and ½"
Acid-free tissue
Sealing Tape printed with "Packed"
Archival Grade Tyvek



Equipment:

Olfa knife
Scissors
Bone folder
Cutting matt

Process:

1. Group like-objects
2. Structural and surface condition of the objects assessed.
3. Line off-the-shelf stackable totes with ethafoam or create and line a custom coroplast box as needed
4. Wrap each object in polyethylene foam wrap and secure with twill tape. Attach identifier label to twill tape.
5. If surface is friable, wrap in acid-free tissue first.
6. If structure is delicate, carve a custom cavity in 2" ethafoam and line with Tyvek. Place a twill tape tab under object or allow for finger gaps for ease of removal.
7. Add blocks of ethafoam on corners and centre to create shelf supports and layer coroplast. Make a tab cut-out in each layer of coroplast for ease of removal. Repeat layers, ensuring that the weight is not causing a crushing concern.
8. If more than one object, enclose IOPS in box and attach list of objects to outside. Fill out tote label with items in tote, display area, tote number and zone.
9. Update IOPS of items with tote number and storage location.

COVER IN PLACE

For: Larger objects too heavy or delicate to move.
Objects that are built in, particularly those original to Site (OTS).

Description: Ethafoam padding on vulnerable points, poly sheeting sealed with tuck tape Custom five-sided crate cover, plywood topper or area barrier.
Wooden cage with poly walls for larger groupings. Poly sheeting for flat objects.
For OTS pipes and conduits, foam pipe insulation can be attached and marked.

Materials:

Polyethylene sheeting
Polyethylene foam
Tyvek
Tuck tape
Plywood crate cover (custom size if needed)

Equipment:

Olfa knife

Process:

1. Structural and surface condition of the object assessed to ascertain if deemed too heavy or dangerous to move, or the object's integrity would be threatened by a move
2. Object padded at contact points, with Tyvek first if surface is delicate
3. Object wrapped in poly sheeting and sheeting sealed with tuck tape and, if extra protection is needed, covered with a custom five-sided crate, plywood top or protected with an area barrier
4. Object plan sheet, and move phase and location identifier label attached
5. Stage of packing entered into database

APPENDIX D KEY COMPONENTS

This section outlines key components that need to be considered for the move. Lists, detailed quantities, sources and costs are included.

This Moving Components Section provides:

D-1 Materials and Supplies List
Based on estimated amounts needed and with three suppliers and costs

D-2 Carpentry and Construction Materials
Outlines the elements that are wooden construction related. These could be undertaken by Scott Construction.

D-3 Equipment List
Based on equipment needed and three suppliers and costs

D-4 Potential Suppliers
Offered as a resource, these are included in the equipment and materials lists.

D-5 Storage Spaces
Selected from those in the area with availability and suitable specifications, including Seacans, warehouses spaces and storage spaces.

D-6 Transport Companies
Selected from those in the area with the necessary skills and availability

D-7 Storage Specifications
Objects listed according to method of securing/packing, including objects too big for pallets, objects to palletize and objects to protect in place.

D-1 MATERIALS AND SUPPLIES LIST

***First check with staff as to availability.
***Wood and hardware in Appendix D-2

Materials and Supplies	Quantity
PPE – masks 3M N95	1 box - 20
PPE - gloves	2 boxes -100
Flagging tape - multicolours	5 rolls
Full sheet adhesive label paper	1 pk
Tags	1 pk
Polyethylene sheeting	4 rolls
Polyethylene foam .080”	550 ft
Tyvek 1422A	1 roll
Acid-free tissue	2 100 ream packs
Tuck tape	10 rolls
Sealing tape	6 rolls
Sealing tape printed with “Packed”	2 rolls 2” x 55yrds
Off the shelf stackable totes 102 litre	25
Coroplast 4 x 8 sheets	4
Ethafoam	6
Sharpie extra and fine	1 doz
Photo documentation scale	2
Hake Dusting brushes	2
Ziplock bags large	1 pk
Paraloid B-72	1 bottle
“Do not stack” cones	20
Stretch wrapping – 14”1500’ roll and 5” x 1000’	2 rolls of each
Cam straps 1”	25
Ratchet straps	20
Tie-down d-rings	40
Polyester webbing 1”	100 ft
Foam Pipe Wrap	200 ft
Coated Steel Plumbers Strap	10ft
Twill tape ½” and 1”	72 yard roll

D-2 CARPENTRY AND CONSTRUCTION MATERIALS

- Possibly supplied by Envelope Project contractor.
- Quantities will depend upon the amount of approved square footage for onsite storage.
- Flooring and protective covers should not be screwed into the flooring, heritage wall surfaces or built-ins. Where necessary, Tuck tape, brackets and padded plumbers strapping can be used to secure plywood-to-plywood edges or attach around heritage rafters and beams.
- These materials are available at any building centre.

Estimated Material Required

- 2" x 4" x 92 5/8" SPF Stud Grade lumber
- ¾" x 4' x 8' Plywood spruce standard sheet
- 7/16" x 4' x 8' OSB (Strandboard) Panel
- 38" x 100' Ram Board

Additional hardware needed:

- Screws, washers and framing nails – as needed
- ½" x 25' nylon coated strap for areas where securing to beams or posts is necessary
- Braces and mending plates for connecting to new non-heritage wood only – as needed

To be constructed:

Plywood corners - For structural integrity and protection of open frame poly crates.

Plywood crate covers (custom size if needed) for cover-in-place objects (See Appendix C - Catalogue of Securing/ Packing and Moving Methods – Cover in Place).

Plywood crates (custom size if needed) with pallet feet for larger objects to be moved (too big for tote or pallet, needing extra protection) (See Appendix C - Catalogue of Securing/ Packing and Moving Methods – Crate- to Move)

OSB Panel for flooring protection where heavy traffic or equipment will be, with attention paid to location of joists underneath when placing. Ram board elsewhere.

Pallets

www.mapleleafpallets.com
https://geopalletltd.com/geoproducts
www.deltapallet.com

D-3 EQUIPMENT LIST

***First check with staff as to availability.

- Laptop and printer
- Staple gun (plus staples)
- Cordless Drill set Bosch
- Olfa knife
- Tape dispenser gun
- Web sling
- Scissors
- Bone folder
- Cutting matt
- Moving blankets 80” x
- 72”
- Four-wheel dollies
- Hand truck
- Hepa backpack vacuum
- First Aid kit
- Worktable with locking
- casters
- Utility Cart

Possible Equipment Rentals: (unless supplied by movers and construction crew)
Mitre Saw, Pallet Jack, Gantry Crane

D-4 POTENTIAL SUPPLIERS

This list provides a sampling of suppliers who can provide the materials and equipment provided. These are for suggestion only.

https://www.staples.ca/
www.uline.ca
https://www.globalindustrial.ca/
https://www.canadiantire.ca
www.homedepot.ca
www.allworldpack
https://wolfpack.ca/aging.com
https://canada.michaels.com/
https://www.grainger.ca/
www.carrmclean.ca
www.universityproducts.com/
www.benchmarkcatalog.com
www.amazon.ca
www.walmart.ca
www.princessauto.com
www.eddies.com
www.talasonline.com
https://opusartsupplies.com/
www.brodart.ca
www.gaylord.com
www.fabriclandonline.com
www.bestbuy.ca www.homehardware.ca

D-5 TRANSPORT

Below are potential moving companies. Salmons Transfer are the only ones with previous museum and heritage site experience and are familiar with the site and therefore are the ones recommended:

- Salmon's Transfer https://www.salmonstransfer.com/
- Metropolitan Movers www.metropolitanmovers.ca
- Fergusons Moving and Storage https://fergusonmoving.com/

APPENDIX E

STORAGE SPECIFICATIONS

Artifacts and props that are small enough will be packed into Totes. The following tables are for the objects that are too large for a tote, including those too large for a pallet (E-1), those that will fit onto numbered pallets (E-2), and those that need to be protected in place, with poly cover or plywood structure identified (E-3).

***** Dimensions are in inches and need to be verified.**

*****Object numbers are included where known.**

E-1 LARGER OBJECTS (TOO BIG FOR PALLET)

Object #	Object Name	Object Dimensions LXWXH	Display Location
S-009	Template, woodworking	106 x 1 x 42	Westway
749	Girth plank	213 x 20 x 21	Westway?
Prop	Miyakazi Cart	78 x 40 x 31	Westway
Prop	Wheel barrow with rope ladder	64 x 32 x 28	Westway
Prop	Wheelbarrow with net balls	60 x 24 x 24	Westway
Prop	Stack of boat patterns	80 x 24 x 42	Westway
Prop	Stack of wood	328 x 20 x 49	Westway
Prop	Stack of wood # 2	50 x 29 x 45	Westway
Prop	Shaped wooden boat part	240 x 35 x 5	Westway
Prop	T. Karia cart with floats & nets	75 x 40 x 28	Westway
Prop	Silver cart with life preservers	62 x 33 x 35	Westway
Prop	Tippy cart Tom Crow	120 x 30 x 38	Westway
Prop	Silver/ white cart near fire sign	67 x 28 x 42	Westway
019.10.246	Rowboat and paddle	87 x 37 x 20	Westway
019.10.245	Fraser River skiff ***potential artifact***	336 x 78 x 56	Westway
019.10.223	Rope-making machine	60 x 30 x 40	Westway
019.10.224	Rope-making machine	60 x 30 x 40	Westway
	Shaper, wooden	60x 22 x 56	Westway?
No #	Four propellers on shafts	23 round, 176 shaft	Hallway
019.10.217	Ruler	84 x 2 x 2	Machine Shop
486 / MEN.90-89	Trough	52 x 18 x 12	Machine Shop

E-2 LARGER OBJECTS TO PALLETIZE (18 PALLETS TOTAL)

Pallet #	Object #	Object Name	Object Dimensions L x W x H	Display Location
1	019.10.222	Grind stone	31 x 22 x 41	Westway
1	Prop	Ship's knee (possibly two in westway?)	33 x 5 x 55 each	Westway
1	Prop	Wedge clamp	40 x 20 x 26	Westway
2	Prop	Boat floats	36 x 36 x 36	Westway
2	Prop	Two Lantern floats	10 x 20 x 22	Westway
3	S-006 a-e	Rope, pulley (Maybe Large wooden block pulley?) OTS	9 x 10 x 31	South end Westway?
3	Prop	Net cushion large	36 x 9 x 9	Westway
3	Prop	Net cushion small	22 x 6 x 4	Westway
3	Prop	Anchor	45 x 38 x 24	Westway
4	Prop	Grey hand truck	25 x 22 x 50	Westway
4	Prop	Wheeled wood box -possible artifact*	26 x 27 x 29	Westway
5	019.10.215	Work table	42 x 36 x 34	Carpentry
6	S-016	Two carpentry shop boxes OTS	26 x 30 x 30 each	Carpentry
7	417	Pump	3 x 19 x 36	Carpentry
7	MEN.90-72	Box	23 x 15 x 9	Carpentry?
7	S-019	Motor, electric OTS	20 x 20 x 17	
7	Prop	Rag box	18 x 15 x 34	Carpentry
7	Prop	Tool chest (Tools to be packed)	14 x 38 x 12	Carpentry
8	Deaccessioned	British Seagull Engine		Engine Room
8	Deaccessioned	Eaton's Viking		Engine Room
9	019.10.177	Evinrude Elto Pal Sport		Engine Room
9	Deaccessioned	Muncie Gear Works		Engine Room
10	019.10.178	Evinrude Aquasonic "Whispering Power"	17 x 10 x 36	Engine Room
10	019.10.178	Evinrude Aquasonic Fleetwind		Engine Room
11	019.10.179	Sears Waterwitch		Engine Room
11	019.10.180	Johnson Seahorse		Engine Room
12	Deaccessioned	Eisemann Flywheel Magneto		Engine Room
12	019.10.181	Evinrude Sportsman		Engine Room
13	019.10.196	Forge, blacksmith	36 x 42 x 48	Machine Shop
14	019.10.197	Power hacksaw	47 x 16 x 43	Machine Shop
14	019.10.198	Grinder	47 x 16 x 43	Machine Shop

15	S-028	Desk top, slanted OTS	33 x 25x 13 high at back, 8.5 at front.	Machine Shop
15	019.10.216 a-b	Turning supports	13 x 46	Machine Shop
16	Prop	Grinder and buffer	32 x 16 x 45	Machine Shop
17	416, A_?	Vice	20 x 14 x 12	Machine Shop
17	S-028	Desk base - OTS move back	38 x 38 x 36	Machine Shop
18	Prop	Stack of ballast	46 x 39 x 14	Machine Shop

E-3 OBJECTS TO PROTECT IN PLACE

(See Appendix C - Catalogue of Securing/ Packing and Moving Methods – Cover in Place).

Poly cover or wrap – Tuck tape or strapping to hold in place – attached to poly itself or adjacent non -heritage materials. Use Polyethylene foam sheet or padding where needed (corners, delicate or protruding elements, friable surfaces.

Plywood structural protection – either five sided sleeve, surface cover or area barrier– gravity held in place or strapped – no screws, tape or nails on or into heritage materials. If area barrier is used, poly the remaining surface.

Object #	Object Name	Object Dimensions in inches	Display location
No #	Fire sign	30 x 4 x 20 (plus hose)	Westway
019.10.203	Planer	65 x 60 x 48	Westway
No #	Horseshoe on wall***possible artifact*** OTS?	6 x 7	Westway
No #	Two signs on wall - OTS	32 x 16 and 15 x 11	Westway
No #	Red painted door - OTS (not original glass)	126 x 91	Westway
No #	Silver sliding door by boat - OTS?	96 x 91	Westway
No #	Fire sign - Repro?	12 x 18	Westway
019.10.219 (door)	Steambox – Repro?		Carpentry
S-018	Pump	42 x 38 x 27	Carpentry
No #	Bench along east wall - OTS	300 x 30 x 45 & 45 x 30 x33	Carpentry
No #	Everyman sign	14 x 11	Carpentry
019.10.194 a-c	Boiler and chimney	17 x 17 x 141	Carpentry
No #	Drill press on post	13 x 15 x 45	Carpentry
019.10.198	Engine, diesel	83 x 43 x 70	Engine room?
019.10.199	Engine, gas	44 x 19 x 40	Engine room?
019.10.200	Engine	52 x 22 x 43	Engine room?
019.10.201	Engine	53 x 24 x 50	Engine room?
019.10.198	Engine, diesel	83 x 43 x 70	Engine room?
019.10.199	Engine, gas	44 x 19 x 40	Engine room?
No #	Japanese Sun painting - OTS	31 dia	Engine room
No #	West bench	159 x 38 x 33	Engine room
No #	North bench	125 x 35 x 33	Engine room
No #	Sliding door by propellers - OTS	84 x 88	Hallway
No #	Engine shop sliding door - OTS	75 x 88	Hallway
No #	Lockers	16 x 59 x 78	Hallway
S-033	Green door – OTS ?	32 x 80	Hallway
No #	Machine shop sliding door - OTS	75 x 88	Hallway

No #	Battery Shop & Paint Shop Doors - OTS	28 x 76 each	Hallway
No #	Chimney - to the top	17 x 17 x ?	Machine Shop
S-029	Screens, belts and rollers in rafters - OTS		Machine Shop
No #	Built-in benches on West side	91 x 37 x 36	Machine Shop
No #	Big Table	120 x 39 x 35	Machine Shop