

**DECONSTRUCTION & REUSE
WALLACE-EMERSON COMMUNITY CENTRE**

**WILLOWBANK CENTRE
SUMMER 2021**

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2021



**DECONSTRUCTION & REUSE
WALLACE-EMERSON
COMMUNITY CENTRE**

A summer studio led by Alison Creba in collaboration with
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SUMMER STUDIO
WILLOWBANK CENTRE
FOR CULTURAL LANDSCAPES

2021



Speaking the language of arches. Wallace Emerson Community Centre, Spring 2021

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A view from the street, 2021

The Site

From the road, the site occupied by the Wallace Emerson Community Centre appears aloof. Between a McDonald's parking lot and a row of houses along a busy road, mature trees hint at the park beyond. Amidst all this, a long view catches the eye and draws us in - under a row of tall steel arches that form a breezeway connecting the building's asymmetrical halves.

Though distinct, both structures speak the same language of arches; a cloud-shaped roofline casts curved shadows and concave alcoves of glass-block let speckled light into the building. Part sculpture, part structure, part park, the breezeway channels visitors through the site, offering a view down into a vaulted swimming pool or access to the low-slung multi-purpose centre.

Perhaps it is because it is so unassuming from the street, the Wallace Emerson Community Centre feels like a special discovery. Built into a rolling landscape, little nodes of activity erupt everywhere: kids play on a jungle gym, elders gather at picnic benches. In the summer, the skating rink becomes a skateboard park complete with homemade ramps.

This is the spirit of the Wallace Emerson Community Centre - a place which reflects the actions of its neighbourhood. Built in 1981, construction of the centre formalized the organic creation of community space carved from a former industrial site through a combination of kid-play and community advocacy. Designed by Matsui Baer Vanstone Freeman Architects, the structure won the Governor General's award for Architecture the year after it opened. It has remained a well-used and loved space - inside and out - ever since.



Wallace Emerson Community Centre circa 1981. Image via City of Toronto Archives

The Context

This special spot, bustling with activity, is also imbued with a hint of sadness. Large placards posted to the building's exterior inform us that the building will soon be demolished to make way for one of the three multi-story residential structures within a larger redevelopment plan. And although a new community centre will be built to serve the neighbourhood (and its estimated 2,846 new occupants), demolition of the current community centre is still a distinct loss.

Nevermind its prestigious architectural distinction or community significance, the imminent disposal of this building - just forty-years young - is a waste of valuable materials. Yet another example of the city's cannibalistic development culture and a critique of local conservation frameworks, the demolition of this site is, as one colleague put it, rude. But we are not the only ones to think so; similar laments have been published in the Toronto star, and informal odes widely distributed on social media (Micallef, 2021).

Despite these emotional appeals, we also understand that demolition has multiple meanings in multiple contexts. In the heritage community, demolition represents both material and cultural loss, and has been a key catalyzing force against which this community rallies. For some historians, it represents a 'culture of clearance' and has defined a modernist movement in architecture and urbanism (Ammon, 2016). In urban development, demolition is a process which increases property value by tearing down structures to replace them with larger ones.

Connecting the demolition of buildings to the production of waste, deconstruction has been identified within the fields of structural design, construction management and industrial ecology as an alternative to demolition which mitigates waste (Thomsen et al., 2011). Within this thinking, deconstruction is considered as a form of conservation that preserves local architectural vernacular through the re-circulation of local building components and mitigates destructive resource extraction for virgin materials (Ergun, and Gorgolewski, 2015, p. 184). In this context, deconstruction is seen as a strategy for material conservation where whole buildings cannot be retained, but also a broader mode of cultural conservation, ensuring continuity across generations.

Good-news story: How citizens fought to build their own park

By E. KAYE FULTON
Star staff writer

They scrapped and they fought for three years to get a bit of green grass for their children, and last Saturday they had reason to celebrate.

The struggle was up and the grass sprouted seven acres from Emerson Ave. to Dufferin St. — the Wallace-Emerson neighbourhood has its park.

It's not a big park, mind you. There's

still a lot of work to be done but first again, it's a lot better than the wasteland of asphalt on the site a few years ago.

And last August Mike Ferguson, the husband and wife team that spearheaded the drive to get what they claim is the only park for a community of 10,000 people, say they will make sure the one location won't stop just because they now have a "space" for play.

Add kids like Diego Barbera of Emerson Ave., who played table tennis and pool for 24 hours to raise money for field hockey equipment, and Carlo Bertinelli, 14, who has his soccer and record collection as entertainment, say they will make sure the park is well used.

"It was an ugly site before this park opened the park. It was laid fourth 'open' that day but this one was special because he had a hand in persuading the city to buy the land in 1972. He also pro-

vided over the meetings at which the city at first changed its mind and started talking about getting a school there instead. But then the city changed its mind again and even let the community keep the remaining building as a "neighbourhood improvement program."

In addition, there's a grassy area in the "neighbourhood improvement program" to set up permanent fixtures that serve even as a park. Three local residents groups, a "senior citizens' representative" and a

youth delegate will decide what goes where.

"This park is not only a testimony, it shows that if a community wants something badly enough and perseveres and works together, it can get it," he told the 100 or so enthusiastic-looking citizens shortly after to attend another function, but the people's celebrations included with films, a garage sale, food, music and dancing.

'Share the blame' Let's all resign let others try zoo officer says

By MARILYN ANDERSON
Star staff writer

The Metro Zoological Society could avoid its second "palace revolt" in two years if all six members of the executive stepped down, according to John Bates, who has already submitted his own resignation.

However, zoo board chairman Pamela Goh, who intends to resist any attempt to oust her, said in an interview yesterday that what the zoo board now needs most is continuity.

Bates, a trade magazine editor, said if there is any blame to be assessed for the executive's handling of the zoo's financial crisis, "it has to be shared blame."

"We should not let any one person be the target," Bates told the Star yesterday. "That's insanity."

ALL THIS BANCORP

Bates said it is not necessary for the six on the executive — including — to resign. He said he would like to see the board of the 31-member board. But he would like to see the board of the 31-member board. But he would like to see the board of the 31-member board.

deal as a Metro takeover at the same time," said Toronto Alderman A. A. Johnson, chairman of the city health board, which oversees family planning.

"It was sort of cute, but the whole subject of birth control is not the kind of thing that I don't want to see in a family planning service," he suggested the artist should show it to other women at City Hall to see what they thought, and "the reaction was 99 per cent 'Yeah,' she said.

Emmie said his concern was that a graphic artist in his department, Earl Woodley, had drawn it.

"Rather than depicting family planning, it carried the idea of the elimination of families," Mrs. Johnston said.

"It's a bit strange for a newspaper," she said, "but I don't think it was quite what we wanted, so I asked Earl to get the opinion of other staff."

The knickerbocker stock has been allowed to die a natural death.

Stork poster has City Hall fit to be tied

BLOOD DONORS NEEDED

The Toronto Blood Bank has just over half its daily requirement of 1,500 units.

The shortage means that surgery will have to be postponed if there is not an increase in blood collection by the middle of this week, said David Duffin, director of the Red Cross transfusion service for Area A of the Canadian Red Cross Society.

Type O positive and A negative are in particular short supply, she said.

Locations at which donations are published daily by the Star on its Metro Page, 33 Bloor St. W., which is open from 10 a.m. to 7:30 p.m. Mondays through Fridays.

City Hall rally held for Jews

About 5,000 Metro residents said a rally outside City Hall last night to show their solidarity with Jews in the Soviet Union.

The rally marked the end of Simchat Torah, a one-day festival to mark the re-reading of the Torah for another year.

"The Torah is the scroll containing the five books of Moses. It is re-read once each year after all the people have been read to in the synagogue and with God's help it will strengthen the Jewish people," Rabbi Jordan Peacock of Temple Shalom said during the gathering. "Let us affirm our blessed freedom as Jews in Canada."

He described the treatment of Soviet Jews as "outraged" "horrifying" and "praised their refusal to be intimidated by the K.G.B. Slides were shown on a giant screen that showed Jews who have been refused permission to immigrate to Israel.

Calling all Metro Brodies

Pinus Brodie, chief of the Chan Brodie, is expected in Toronto today. He'll stay until Wednesday before returning to the Brodie estates in Scotland. Any Brodie interested in the program arranged for the chief may call Craig H. Brodie, 41-090 this evening.

Calling the active retired

The challenge of retirement will be discussed tomorrow at the St. Lawrence Centre on Front St. E. beginning at 1:30 p.m. Edward Oliver, radio and television personality, will be moderator of a panel of retired persons. Admission free and everyone is welcome.

Calling Scarborough golf nuts

Continued registration and rates down is expected registrations this week for indoor golf classes.

The Toronto Star Metro News/Editorials

SECTION C—PAGES C1 TO C24 MONDAY, OCTOBER 15, 1976 REACH FOR A STAR, MOST PEOPLE DO



IT WAS ALMOST A FLASHBACK when 200 protesters marched one last time in Nathan Phillips Square Saturday to protest against nuclear arms. But many of them agreed this one lacked passion. Let's face it, the protesters were tired. Nuclear arms proliferation, love and peace were trendy 10 years ago. Now, everyone else is protesting things like wage and price controls, rent hikes and pay cuts. Even lettuce and grapes are scarce. But City Council endorsed demonstration.

What's this? A ban-the-bomb march?

By E. KAYE FULTON
Star staff writer

For a moment on Saturday it could have been the Statue as a procession from the Bomb demonstration wound its way down Queen St. to Nathan Phillips Square.

But while the 200 or so marchers brought back glimpses of past protests with familiar tactics and placards, many of the participants agreed that this one lacked the passion and energy of the nuclear arms proliferation, love and peace were trendy 10 years ago. Now everyone is protesting things like wage and price controls, rent hikes and pay cuts. Even lettuce and grapes are scarce.

But the demonstration, endorsed by the Toronto City Council and all the necessary ingredients, had a message — "The nuclear arms race with its catastrophic implications must be stopped." The lines that were supposed to be peaceful and serene were not. They were angry. They were angry. They were angry.

The knickerbocker stock has been allowed to die a natural death.

A spectacular view for a real rubbernecker

MICHAEL HANLON

Starting on Wednesday the best view of the skyline of downtown Toronto may well be from below ground level.

To see it you have to be beneath the stunning, neo-ventured (actually it's real gold) Royal Bank Plaza.

Its Mercantile Mall of retail stores opens this week and if you walk through, entering perhaps from Union subway station, you'll pass by a small front of steel imported from Florida, down a ramp to a lower level and along to the surface, in the corner of Bay and Wellington St.

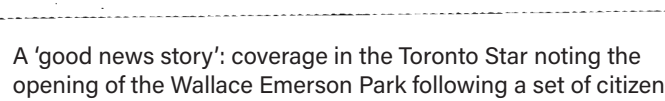
You'll then be in Chef's Gallery, a collection of fast-food corners, topped by a sky-high slab of steel, clear-glazed, Tiffany lampshade.

Now sit down on one of the oak benches, and see if you can find someone to rub your neck. It may hurt like hell for a while but the view is well worth it.

The effect is like looking at the heart of downtown commerce through a fish-eye lens.

Back in the centre of Mercantile Mall you get another chance for a crack at the neck, but worthwhile again.

The trees from Florida are Norfolk pine and fig, about 25 feet high. A fountain plays among them, and sends water spraying down. They won't let you see the second floor, but they will let you see the second floor.



RABBI ABRAHAM FEINBERG AND TORONTO MAYOR DAVID CROMBIE were at a peaceful but the bomb rally in Nathan Phillips Square.

which they're housed looks like the bridge of a nuclear submarine.

But look up. Past the trees, in to the building hall. A huge sculpture of 10,000 dancing aluminum rods hangs from the ceiling, 10 feet above your head.

It was designed by Jesus Raphael Soto, a Venezuelan.

Around the perimeter of the ceiling you'll see black tracks like railway lines. And if you're lucky on the day you're looking up, you may see the caps come out carrying the man who rides around changing the light bulbs and cleaning the windows.

At floor level (that's still below ground), you'll find about 60 shops to browse in — men's and women's clothing stores, a drug store, bookshop, jewellers, a ticket agency and a travel agency.

And a multi-bank with no tellers. It's connected to the main branch upstairs and you can get your money from the teller up there communicate by television. You won't get far if you're standing on your head, wave a pistol and prevent a riot. But the bank says it's just as efficient as dealing face to face.

And look down where the restaurants and bars. Just as you come in from the Front Street, you'll see the underground city play in.

The Studio

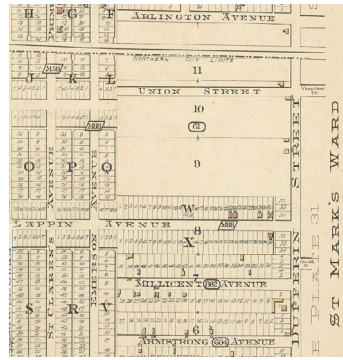
At the end of each studio, participants were asked to share one word that summarized their thoughts and impressions.

Amidst this context, we - a group of seven individuals - assembled through Willowbank Centre for Cultural Landscapes spent eight weeks conceptualizing an alternate trajectory for the structure and its component parts using a deconstruction and reuse methodology. Working within the context of urban development, the objectives of the studio were to create an alternate proposal - to deconstruct and reuse the building - in a way that would address not only the issues of waste, but also the cultural pain of losing a beloved place.

Meeting weekly, studio sessions included guest speakers, readings and reflections as well as site visits and case studies. Drawing from our diverse backgrounds, participants also shared personal experiences, expertise and insights. With few local precedents or legislative frameworks on which to structure our proposal, the studio instead became an exercise in fictional realism - a creative exploration of a site, structure and materials - in which questions were the currency.

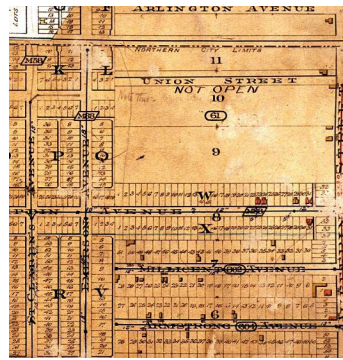
Ambitious in its goal, the outcomes of the summer studio were unexpected and intersectional. While a formal proposal was not generated, this document represents critical 'starting tentacles' of thought necessary for future steps in this larger project of change. Presented in chronological order, the following summaries illustrate the trajectory of our collective efforts over eight weeks. Supplemented with photos, diagrams, renderings and timelines, these outputs are sketches - modes of imagining an alternative trajectory for not only this special site, but also for deconstruction and reuse within the development sector in Toronto.

1899>



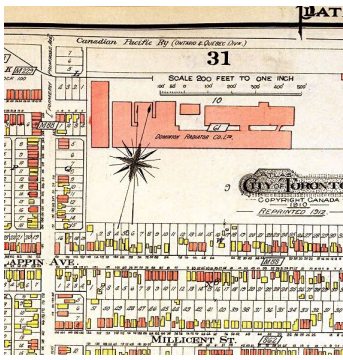
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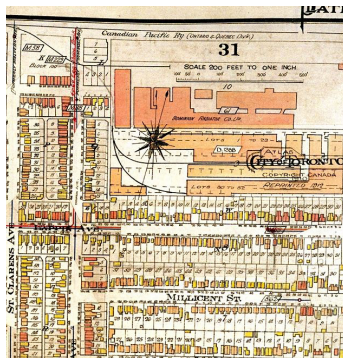
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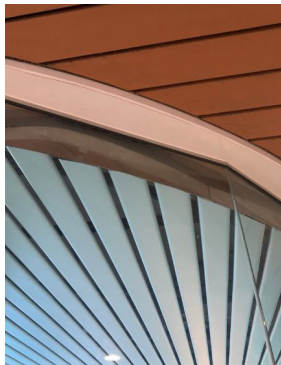
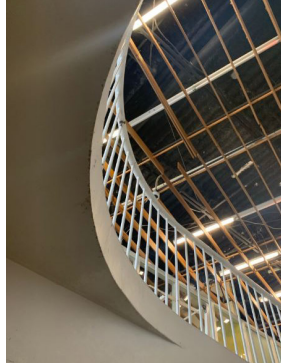
Studio One

Care; Care; More-than-human; More-than-human; Anxiety of replacement; Demolition is rude

Assembling remotely, the first studio began with the project of situating ourselves in the site. Reading through the development proposals and Heritage Impact Assessments, we were also joined by Loren March, a PhD candidate with the University of Toronto's Geography Department. March's research explores the more-than-human affect of development projects and focuses specifically on the broader Wallace Emerson site. Having attended many of the community consultations, March shared their insights into historical and current forces shaping the current development.

Through this presentation, we came to understand the site's geological and cultural heritage - [an accumulation of sedimentary rock and slate], as the traditional territory of the [Mississaugas, Wendat, Haudenosaunee, Anishinaabe peoples], its industrial use [as a site of metal fabrication, most prominently radiators]. The park itself was created after neighbours lobbied the municipality to make the empty lot where their kids played, safe. On the narrow bit of parkland created through these efforts, the formalized their commitment to providing community spaces with the construction of the Wallace Emerson Community Centre - a facility complete with swimming, skating, an indoor gymnasium and multiple amenity rooms.

< [previous page] While a long history of indigenous use predates these records, aerial photographs and excerpts from Goads Fire Insurance maps illustrate the evolution of the site from 1899-1992. Images accessed through Toronto Archives.



Images from a site visit, July 14, 2021

Studio Two

Aesthetics of material recovery; Spongey; Assemblage; Material; identities; Layers; Section; Movement

With miniscule copies of the original drawings in our hands, on our first site visit we wandered around the interior of the Wallace Emerson Community Centre - noticing, wondering, absorbing the state of things. While there, we speculated on the order of accumulation: what layers of ceiling, flooring and conduit preceded others? Spilling out to the building's exterior, we assembled on the hillside to talk about themes and patterns we'd observed. Long lines, material changes, echoing arches and the ability to see multiple planes in a single glance were among the site and structure's notable assets.

We also discussed how it felt to tour the building at this unique moment. Aware of its imminent demise, we discussed our sadness, anger and affection for the building we were only just coming to know. We wondered:

- To what degree can deconstruction and reuse of the materials represent this unique assemblage?
- How, through these individual components, can we communicate the experience of the site, while also telling a story of its reconfiguration?

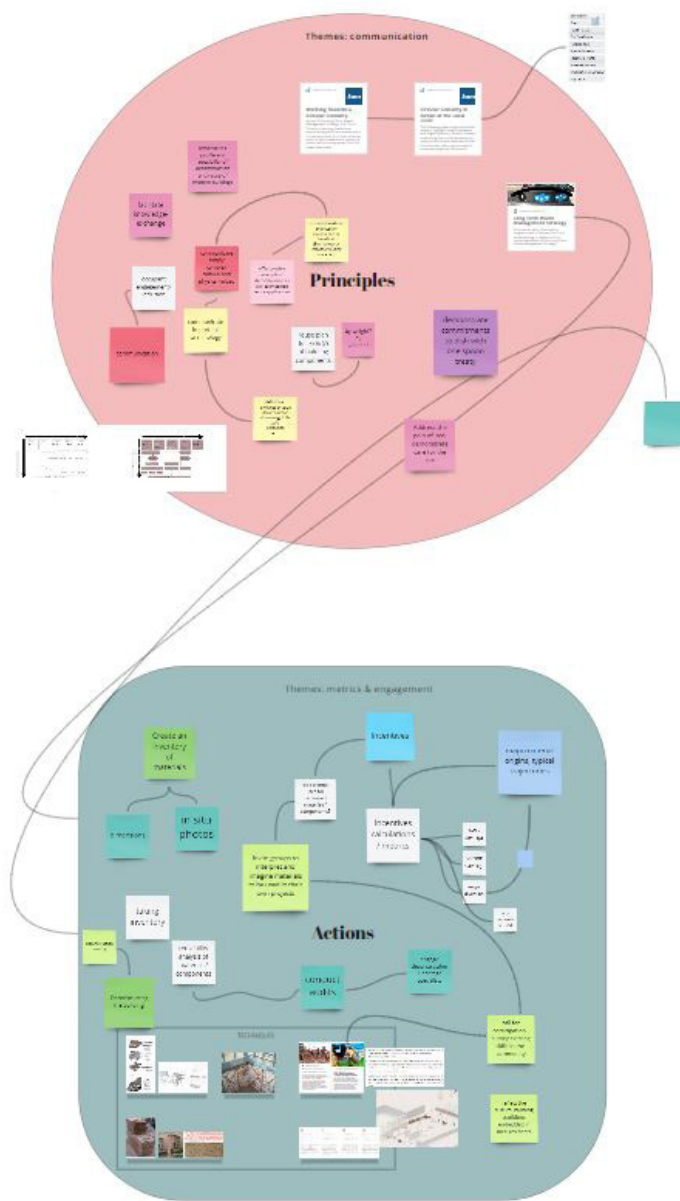
Studio Three

Visibility; Systems; Language; Extended producer responsibility; Twentieth century building materials

Joined by guest Susan Ross, an architect and associate professor of sustainable heritage conservation at Carleton University in Ottawa, we worked to stitch together our initial impressions with the broader goal. An important scholar of waste and heritage studies, Ross shared her insights and supported our trajectory by assembling ideas and questions. Untangling notions of value - heritage, environmental, social, and monetary, she challenged the group to review our perceptions of modern materials and ask what challenges or opportunities they pose in reuse.

Conducting a visual survey of the building, we discussed the possibilities of concrete, linoleum, tile, glazing and metal sheathing. We also discussed the multiple processes (cleaning, sorting, testing and staging) required on deconstruction sites in order to transform materials. Understanding both the logistical and technical role of these processes, we asked: how might the site be used to facilitate multiple phases of deconstruction and promote reuse?

Looking at the building's original specs, we considered how categories such as storage, execution, examination, preparation, and quality assessment may also be re-employed in deconstruction specifications. Thinking about other templates, Susan suggested National Master Specification (NMS) and the CSA Standard for Deconstruction of Buildings and their related parts (accessible only through purchase) as a resource for creating deconstruction specifications for this project.



A mind-map created collaboratively on an online blackboard software illustrating the Principles and Actions which guided the project.

Studio Four

*Opportunity; Value different types; "Once you name something, it kills it";
Foster care; Embodied*

Exploring the constraints and opportunities of deconstruction and reuse in Toronto, collaborators shared their research into policies and frameworks which have facilitated the adoption of these activities elsewhere. We discussed ordinances in Milwaukee and Vancouver (they exist in multiple cities including Portland, Seattle and Vancouver and Victoria). See also San Antonio's Deconstruction and Salvage initiative.

Reflecting on the correlation between heritage and sustainability, we also discussed the challenges inherent in these models. Noting that many deconstruction ordinances apply only to pre-modern structures, we recognized missed potential in considering both the heritage and ecological value of buildings built within the last 70 years. Further, supply chain shortages in the wake of the pandemic have only intensified the need and potential of second-use markets.

Identifying a need for nuanced definitions of value within heritage and sustainability practices which recognize value in modern and postmodern structures and materials, we explored various metrics with which to measure them. In a short tutorial led by Juliette Cook, we were introduced to the concepts and calculations required to determine Embodied Energy and Carbon. While labour intensive, such metrics provide a contrast from the qualitative values offered from the heritage discourse. For Bill Addis, author of *Building with Reclaimed Components and Materials*, it is unlikely that an environmental analysis will be cost effective, and much more likely that decisions will be based on the costs and values of material components.

Studio Five

Modesty; Reuse traditions; Material engagement strategies; Entangled

Keen to put these ideas in motion, we worked to focus our proposal. We articulated project principles which communicated both the qualitative and quantitative benefits of deconstruction and reuse and meet local municipal waste diversion goals. We identified actions that aimed at taking stock and engaging community to connect future projects, current values and local skills (and potential cultural building traditions or reuse). Referencing documents from BMRA (Building Material Reuse Association, now Build Reuse), Champlain Bridge Deconstruction Competition (led by the Government of Canada) and projects from the Belgian-based deconstruction and design firm Rotor, we brainstormed possible outputs, imagining a book of specs, a call for proposals, a historical timeline or an exhibition or diagram of the process.

Among these products, the team drafted templates for material profiles. Sketching a selection of character-defining materials which distinguish the site, we imagined these profiles as technical briefs which would list the properties, history, significance and recommended applications for their deconstruction and reuse. Developing these profiles offered an opportunity to conduct research into material histories, discover linkages between past and current production, as well as opportunities to enter the circular economy. The following pages contain these draft material profiles. Like many aspects of the studio, these briefs represent early draft templates on which to build a more robust language and culture of reuse.

STEEL ARCHES

General information: Material quantity: 4 sections containing 4 full arches (self-supported), 10 partial (3/4) arches (span ground to building roof), and 6 half arches (span building to building). Components include: large steel I-beams for main arches, smaller supporting I-beams between arches, trellis mesh, wiring running length of archway.

General condition: Good with some weathering but need to conduct structural testing/analysis to confirm.

Current use: *Where in the building does the material occur? How does this tie to identity of the building/feeling of the place?*

Outdoor arches that frame walkway from one side of the building to the other (east-west). These arches are a significant feature of the Centre's identity and image, a part of the building's character.

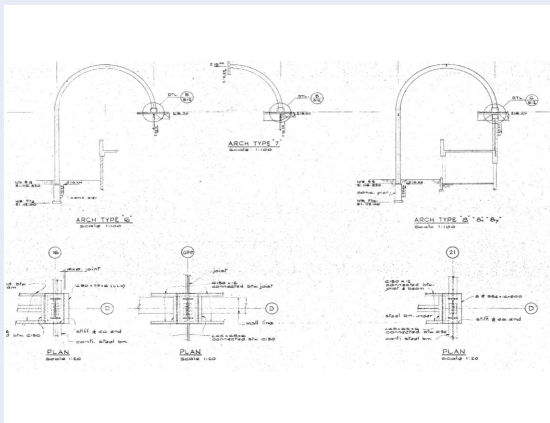
Origin: *What is the material history? Known? unknown?*

Steel is manufactured by two main production processes: blast furnace or electric arc furnace. Blast furnaces use iron ore, coke, and limestone to produce pig iron; electric arc furnaces use scrap steel or reduced iron with electricity to produce molten steel. On average, structural steel produced in the US contains 93% recycled steel scrap.

Traditional Uses

How is the material typically/historically used?

Steel I-beams are typically used in structural applications, often in the main framework of a building or as support trusses. While self-supported, the Wallace Emerson steel arches mainly serve an aesthetic purpose. The I-beam (also sometimes known as the H-beam) was developed in 1849 by engineering student Alphonse Halbou. Later on, engineer Henry Grey perfected the production method, allowing the beams to support much more weight and be made larger. The world's first steel building, the Rand McNally building, was completed in 1889.



Technical specifications

Material: Algoma steel

Dimensions for wide-flange I-beams:

Beams for arches (W410 x 54): 7" x 16" x 3/8"

Supporting beams b/w arches (W150 x 30): 5.25" x 8.5" x 3/8"

Arch height: refer to specs.

Disassembly instructions:

1. Arches connected to the building only should be disassembled first; before building facade, etc. can be taken apart
2. Curved steel beams are mechanically fastened and thus bolts can be loosened and beams taken down.
3. Cranes can be used to lift parts so they do not fall and to place/stack them elsewhere onsite for inventory.
4. If removing self-supported arches, concrete footing would need to be dug out by machine and arches lifted out.

Note: There are 8 different arch assemblies, as per original dwgs.

Reuse specifications:

A structural assessment must be performed to confirm components' potential future uses.

On-site reuse:

Self-supported arches are structurally separate from the building and thus could remain in-situ. "Partial" (3/4) arches could also remain in-situ if extended into "full" arches.

Off-site reuse:

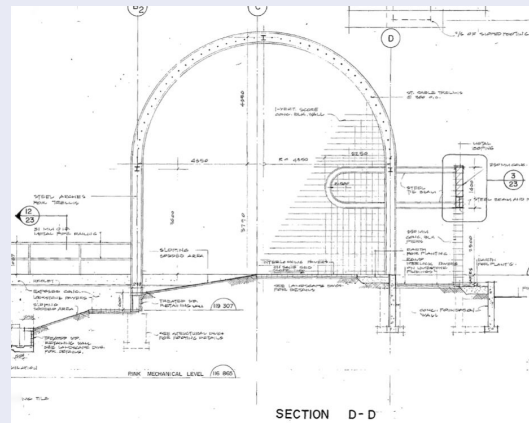
This is of course up to the user and the condition of the material as there are many reuse applications for steel beams. Consider this juxtaposition of the beam's original use, being purely aesthetic whereas steel's typical use is in structural applications. The material's future use could potentially reflect this.

Impact of reuse:

As one of Wallace Emerson Community Centre's key defining features, reusing the arches on site or off would contribute to a sense of cultural and architectural conservation and recognize the special qualities of the site.

As a material with high embodied carbon and energy (1.37 CO₂/kg and 20.1 MJ/kg respectively), reuse of this steel would also constitute significant carbon savings and potentially earn the owner/developer environmental credits.

Finally, recognizing their especially rare arched form, the reuse of these elements represents a significant opportunity for designers interested in circular practices.



Material profile prepared by Stephanie Tzanis

METAL SIDING

General information: Material quantity; number of units; area x height for wall/floor area in m²; area (m²) * thickness (m) to get volume (for floor materials for eg.)

General condition: Currently in good condition, however, its quality may decrease upon deconstruction depending on what method is used to remove rivets.

Current use:

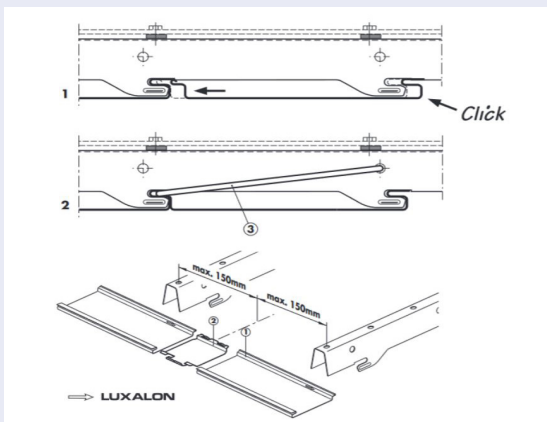
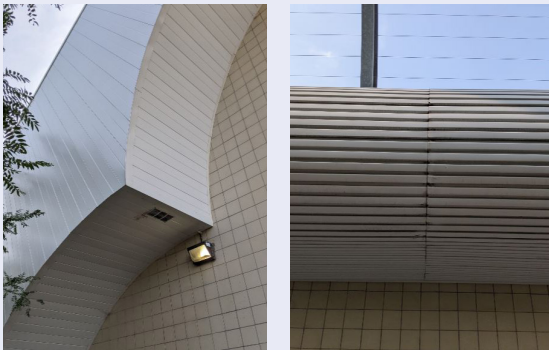
Metal siding is used on the exterior of the building, specifically the southern building containing the swimming pool and the rounded rectangular roof of the northern community centre. The application of metal siding on such distinct geometric features gives it a prominent role in the overall form of the community centre by adding to the building's design language of simple geometric shapes. The white colour of the metal siding, not only diminishes urban heat island effect, but also adds to the overall aesthetic of the building, allowing the roof to stand out on clear days, or blend into the sky on cloudy days.

Origin:

Referencing Hunter Douglas' current webpage for the Luxalon 150F Facade System, this seems to be an international product, as the manufacturer's product selection in North America is limited to window coverings.

Traditional Uses

The current Luxalon 150F Facade System is a highly versatile product, as it was developed as a facade system, however current information about the product advertises its use as an exterior ceiling system.



Technical specifications

Material: Aluminum and Aluminum Alloy Plate and Sheet
 Type: Luxalon Type 150F by Hunter Douglas
 Wall Panels: 150 mm wide by 0.635 mm thick; aluminum panels 4877 mm long maximum
 Sub Girts: Baked enamel aluminum 1.016 mm thick, formed to accept snap-in wall panels
 Panel Connectors: To match wall panels with allowance for thermal movement
 Girts: Steel girts
 Flashing: 0.813 mm aluminum with matching colour coating.

Disassembly instructions:

The main challenge of uninstalling the metal siding would be removing the rivets, which can be found along the edges. Rivets can be removed by "drilling them out". The friction from the drill cuts away the inner wall of the rivet, separating the head from its shaft. This will cause some damage to the metal siding as this process destroys the rivet.

The metal siding is attached using sub-girts that allow the panels to be snapped in place and attached to each other with panel connectors. Disassembly should be fairly straightforward due to the non-permanent connections—the panels can simply snap out of place and apart from each other.

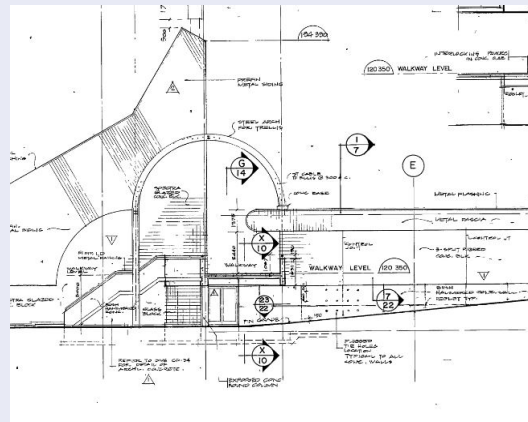
Reuse specifications:

Looking at the example of the Oslo Urban Mountain by SHL Architects in The Reuse Atlas (2017), the author mentions in the design team's C2C strategies that the aluminum panels can be directly reused or recycled into mullions for new facades, noting that recycled aluminum has only 5% of the carbon footprint of a new product (p.88).

Reuse of the metal siding will likely be off-site on another building. However, an example of on-site reuse might be a small scale architectural project, such as a tiny home, that can be built on the Wallace-Emerson grounds.

Impact of reuse:

Since metal siding in general can be directly reused, reuse of the material will maximize its service life. Reuse of the material will divert it away from landfills, which will result in cost savings, and reduce the embodied energy of the new building in which it could be installed in.



Material profile prepared by Juliette Cook

WINDOWS

General information: Material quantity unknown. Refer to window schedule in original specs.

General condition: Good.

Current use: The building has both interior and exterior windows - the former bringing in natural light and connecting the interior/ exterior amenities, and the latter providing viewing areas, as well as further penetration of natural light. Internal windows and/or glazing are found in the building's offices, weight room, and swimming pool areas, among others. Skylights trace the building's corridors. The windows consist of varying grades of glass - mostly ordinary by regulatory standards - and metal frames/detailing (see below).

Origin: Sourcing unknown. Glass manufacturing historically underdeveloped in Canada - at time of WECC construction, only 2 companies operating in Canada: PPG and Pennvernon, both using float glass production method (Pacey 1981: 44).

Traditional Uses: Sealing windows, natural light.

Technical specifications

GLASS

- Sheet Glass (CGSB 12-GP-2, B Quality)
- Polished Plate/Float Glass (CGSB 12-GP-3, Glazing Quality)
- Clear Wired Glass (Polished Georgian Wired Plate, CGSB 12-GP-11, Type 1, Style 3, 12.7mm square mesh)
- Insulating Glass (CGSB 12-GP-8, 12.7mm air space) [Exterior Glazing, not swinging doors]
- Heat Treated Glass (CGSB 12-GP-1, Type 2, Class B Transparent)
- Skylights: "based on" Sentinel Aluminum Products 5500 series

FRAMES, LATCHES, ETC.

- Stainless Steel fasteners for exterior/exposed, aluminum for non-exposed
- Anchors: Aluminium or stainless steel
- Hardware: Bronze w/ satin finish
- Sills: Aluminum, welded end drip deflectors
- Aluminum framing: Exposed AA1100-H14 or AA5005-H14 (Anodized)
- Pool Windows: Coloured anodized, Class 1 AA M12C22A42, .001" thick
- Other Windows: Duracron Thermosetting enamel
- Paint: Zinc, CGSB 1-GP-181
- Steel framing: CSA Standard G40.21, Grade 44W

Disassembly instructions:

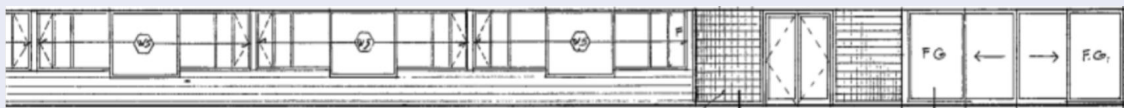
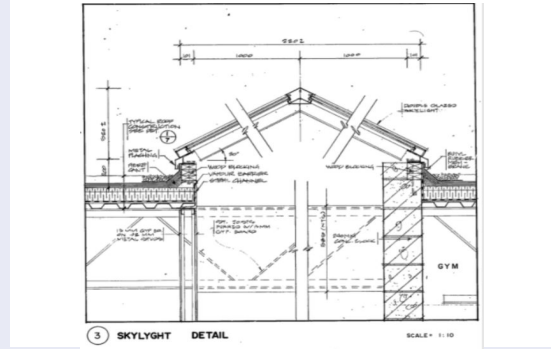
Conventionally, aluminum frames can be pried out of the opening however this often damages them. To disassemble, work from the outside of the frame and work inwards. There are often set-screws which are removed on the top, sides and bottom of the frame. All panes, hardware, etc. should be labeled and stored together.

Reuse specifications:

Review and test windows for compliance with Ontario Building energy efficiency standards. Possibilities for off site reuse includes interior space dividers/doors, added panes for storm protection or framing may be made available for AR projects (steel/aluminum windows are high cost area).

Impact of reuse:

Technical studies reviewing the environmental impact of reusing windows abound. Recent shifts away from a focus on operational towards embodied energy draw into question the large-scale replacement of windows. Increasingly, past window treatments such as storm windows are being reintroduced as a viable way to reduce heat transfer while reusing existing materials.



Material profile prepared by Charlie Caldwell

ENTRANCES & SCREENS

General information:

Material quantity: unknown.
General condition: fine.

Current use: The Entrances and Screens category describes sliding doors and balanced doors (doors which pivot midpoint in order to minimize swing radius and allow for maximum opening), as well as window screens. Sliding doors are significant to the identity of the building, along the southern facade at the walkway level which suggests these rooms are continuous with the walkway and activity could spill out onto it. While different from the interior sliding panels at the gym corridor, they reinforce the language of "open-up-able" spaces. The Balance Doors have a sharp look that is almost rotating-door, perhaps suggesting an institutional and public entrance. While the spec indicates Balance Doors, it isn't clear which entrance has them (if any).

Origin: The specification mentions Sentinel and Kawneer doors, and these are (still) manufactured in Charlotte, North Carolina (Sentinel), and throughout North America including Alberta, California, and Pennsylvania (Kawneer).

Traditional Uses

These doors and screens contain several primary materials (aluminum, glass, galvanized steel, and steel), weatherstripping, and various types of hardware (bearing assemblies, door pivots, panic device, thresholds, push-pulls, locks, etc).

Technical specifications

Screens
Dimensions: 18x16
Material: black aluminum mesh in heavy duty aluminum frame.

Disassembly instructions:

Develop a labelling schedule which enables labourers to keep track of doors, frames and hardware. Remove door from the frame by removing pins from hinges. Be sure to label and keep together. Inspect frame and disassemble from the building envelope. There will likely be screws fastening the frame to envelope. Take good care removing screws as they may have seized. Gently tap the end of a screwdriver with a hammer as your twist to remove any problematic fasteners. Label and keep together.

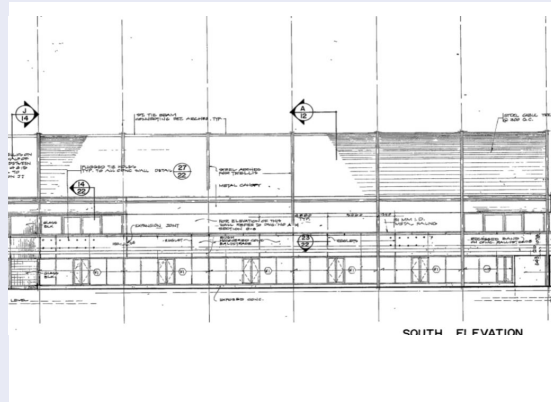
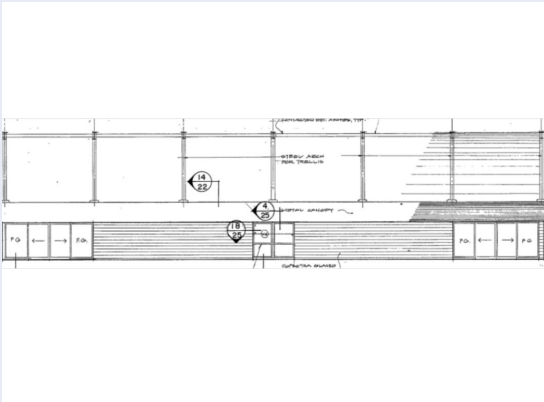
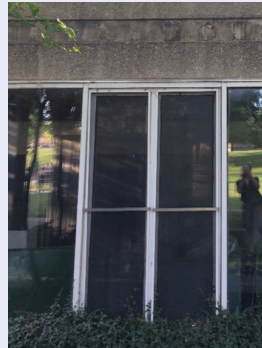
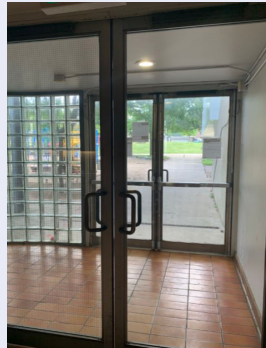
Reuse specifications:

Sturdy door assemblies can be repurposed in a similar manner. Their design would be desired/acceptable in a contemporary construction.

Impact of reuse:

As with the windows, attitudes around the reuse of entrances and screens are shifting to embrace existing material in new or renovated structures. While glass has a relatively low embodied carbon and energy (0.85 CO₂/kg and 15MJ/kg) the aluminum framing is has a large environmental impact (84 CO₂/kg and 155MJ/kg).

In addition, with such a pivotal role in defining the use of the structure, reuse of these elements would play a role in carrying the spirit of the building forward.



Material profile prepared by Jane Mah Hutton

GLASS BLOCK

General information: Material quantity; number of units; area x height for wall/floor area in m2; area (m2) * thickness (m) to get volume (for floor materials for eg.): tbd.

General condition: Good, in situ. Reuse will depend on ability to dismantle while minimizing damage.

Current use:

The center features glass block in various locations of the building. In some cases, the blocks are part of the exterior envelope, making up glazed facades that allow light in while slightly obscuring views. In other cases, the blocks constitute interior partitions, allowing for blurred views into other interior spaces. The use of glass block highlights the obscuring of what is public vs private, themes central to a programme like a community center.

Origin: Origin of the materials used in WECC are not specified within the specs, however there remain several local suppliers. Today, manufacturing does take place in Canada, largely in the western provinces of BC and Alberta. Local production takes place in Thunderbay, Ontario.

Traditional Uses

The early glass block applications were in ocean-going ships. "Deck prisms" were added to allow natural light to areas below deck. Similarly, "vault lights" were pieces of glass block, embedded in sidewalks to allow natural light to access subterranean storage spaces. In 1907, German Light Prism Company patented a process to strengthen the material into glass block. The resulting hollow center created a partial vacuum with insulating qualities that allow for sound, energy and fire proofing. Often used in industrial applications for this reason, glass block became popular as a modern material for its low cost and sleek aesthetic.

Technical specifications

Material: Material: glass, assembled with joining strips and mortar. Typical dimensions of glass block are approx. 8" x 8" x 3"

Disassembly instructions:

Tools: safety glasses, gloves, hammer & chisel OR Hilti combihammer TE 60 (\$50 rental at Home Depot for eg) Start at top row and work sideways, ideally starting with a block that is only bound on 2 sides.

When planning for disassembly, there are two choices:

1. Carefully chip away the mortar with a pointed tuck pointing mason's chisel. This is much more time intensive.
2. Use a hammer drill with a 1/4-inch bit to drill 50% of the mortar. This is a faster alternative, but may lead to more damage.

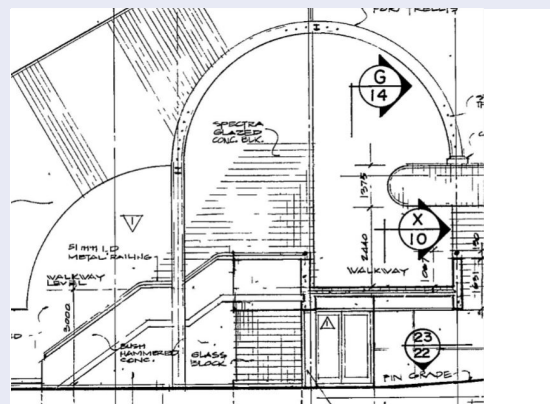
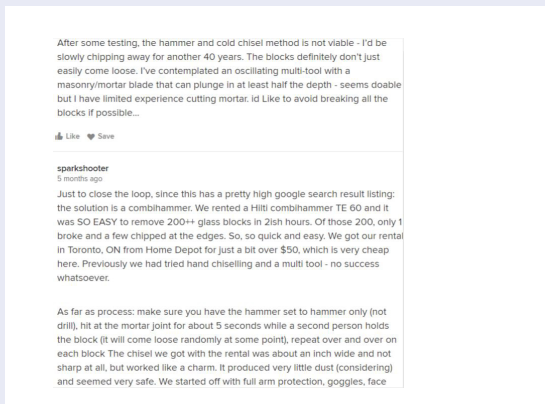
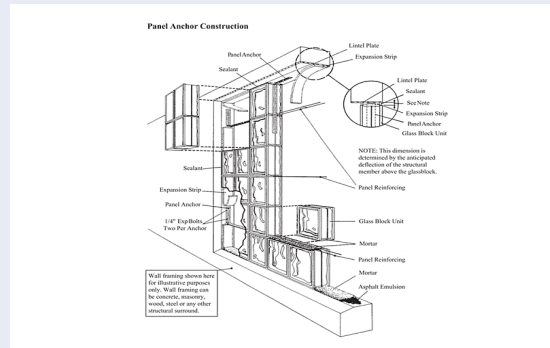
The metal siding is attached using sub-girts that allow the panels to be snapped in place and attached to each other with panel connectors. Disassembly should be fairly straightforward due to the non-permanent connections—the panels can simply snap out of place and apart from each other.

Reuse specifications:

Glass blocks that are salvaged with no damage can be reused in similar applications as their initial use.

Impact of reuse:

Celebrated for its significance as a timeless modern building material, glass block is an important material in helping to achieve modern sustainability accreditation. Using LEED, glass block can help to achieve the daylight criteria, energy performance, life-cycle impact reduction, among others.



Material profile prepared by Juliette Cook



Studio six session on site. Mapping timelines, observing patterns, imagining spatial sequences. August 11, 2021

Studio Six

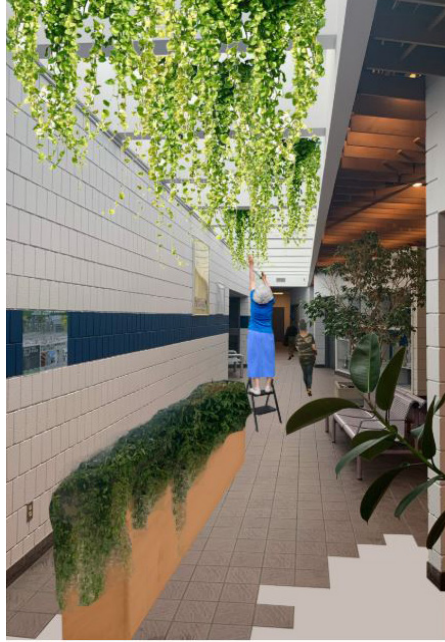
Slow; Space; Site

Returning to the site, we met on a grassy berm at the edge of the skate park. From there, we reviewed our respective material research, sharing new insights, approaches and lingering questions. Considering the tectonics of the stuff, the space and the services, we entered the building to take measurements and look again more closely. Developing inventories of our chosen materials we counted doors, measured railings, noted variations in glass blocks and the assembly of wooden ceiling units. We took our time and touched the materials gleaning what information we could from the objects themselves.

Looking at the materials in real time, we considered how phasing of the deconstruction project might occur. Looking at the iconic steel arches, we contemplated how they were assembled, and in what order they might come down. We wondered how we might disentangle the vines growing, and how they might be conserved, commemorated or carried into another project.

Reconvening, we laid out a large pad of paper on the concrete and began to chart a potential timeline. Starting with the materials we'd each profiled, we grouped them into Stewart Brand's layers: Stuff, Space, Services, Skin, Structure and Site. We drew a timeline starting from now, with the construction of the new community center at the half-way point (2023). Understanding that the current development timeline hinges on on-going use of the community centre until the new one is complete, we invented activities which might engage the community as the building transitions:

- [In the well-lit hallway] Hosting a seed bank for trees on the site & propagation station for the clippings of the vines of the trellis.
- [In classrooms] Hosting classes on how to dismantle and refurbish things: lighting, wood panels, doors and other fixtures (prepping them for resale)
- [In the gymnasium] Hosting a materials exhibition of some of the above fixtures.
- [All this while] be sourcing homes for the stuff - the chairs, tables, exercise equipment, etc.
- [In the skate park] Hosting a BBQ and Skateboarding party where folk build ramps and rails from some of the old railings extracted from the exterior/interior.
- [In the park] potentially engaging artists to harness the solar panels to demonstrate their potential.
- [Prepare a call] or competition for designers to use the skin and structure - the metal sheeting
- [In the shell of a building] invite artists to interpret select spaces* with the caveat that they do not damage materials.
- [Site] We imagined a scene where the building had been stripped away, and the arches remained.



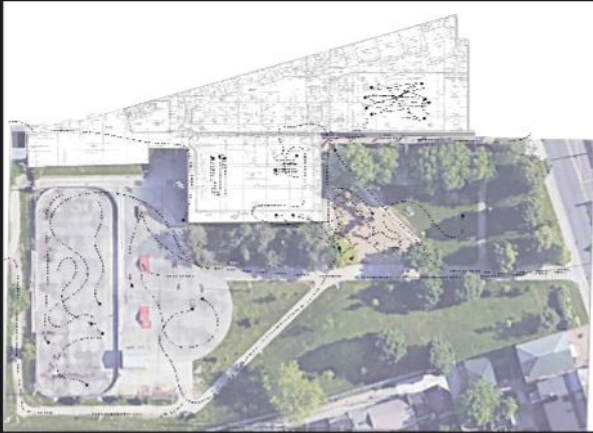
Renderings created by Juliette Cook depict three scenes of engagement with the site and materials at different stages of the deconstruction process.

Studio Seven

Human; Logistics; Outputs; Community; Working through it

Representing these scenes visually, during our independent studies, group members developed several of these outputs further. Preparing for our final session together, the group provided feedback on individual projects:

- Using the vernacular language of development renderings to illustrate some of these processes, Juliette Cook, illustrated some of the scenes described above: a community engagement event to explore material uses and meanings, community members propagating clippings from trees and other plant matter on site and the site in its final stages, when all but the iconic steel arches have been removed.
- With the support of Jane Mah Hutton, Valerie Vincente prepared initial thoughts and renderings for “a spatialized timeline indicating deconstruction phasing”. Drawing inspiration from creative and graphic arts this project sought to represent how, when and where materials might flow around the site during deconstruction.
- Translating the graphic timeline we’d dreamt up on site, Charlie Caldwell created a gantt diagram which would supplement the current development plan with our proposed deconstruction phasing into a gantt diagram.
- As a mode of engagement, Stepanie J Tzanis prepared a mock call for proposals which would invite a community of professional and neighbours alike to submit projects proposals that met the criteria:
 - Reusability analysis of materials
 - Relationship with the site
 - Vernacular of cultural building techniques
 - Endurance of materials life through reuse
 - Connection between existing and and future uses
 - Proximity to the site.



[Beginning of the farewell events to the WECC; activities will soon transition to Deconstruction programming - Late 2021]

With the opening of the new community centre approaching in the next year, the farewell ceremonies for the Wallace-Emerson Community Centre has begun, starting with the transition out of the community centre's typical programming and into Deconstruction.



SITE PLAN



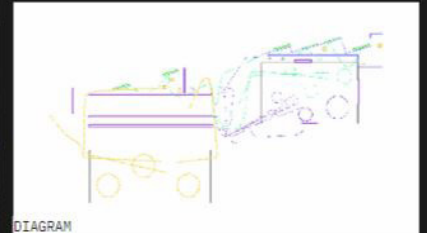
DIAGRAM



Disassembly: Workshops on dismantling and refurbishing items (lighting, wood panels, doors, etc. and prepping them for resale. Q12022



PHOTO



DIAGRAM



[In the skate park - Spring/Early Summer 2024]
 Hosting a BBQ and Skateboarding party where folk build ramps and rails from some of the old railings extracted from the exterior/interior.

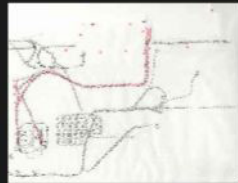
As the furnishings move out of the WECC and into their new homes, the spaces are disassembled and their materials are put to new uses. The railings find their new purpose just outside of the community centre as skateboard rails.



PHOTO



SITE PLAN



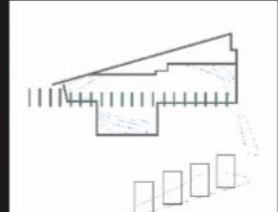
DIAGRAM



Post-Deconstruction / Late Stages: the majority of the building has been deconstructed, only the foundation and ground-to-ground arches remain (and fragments of other arches).



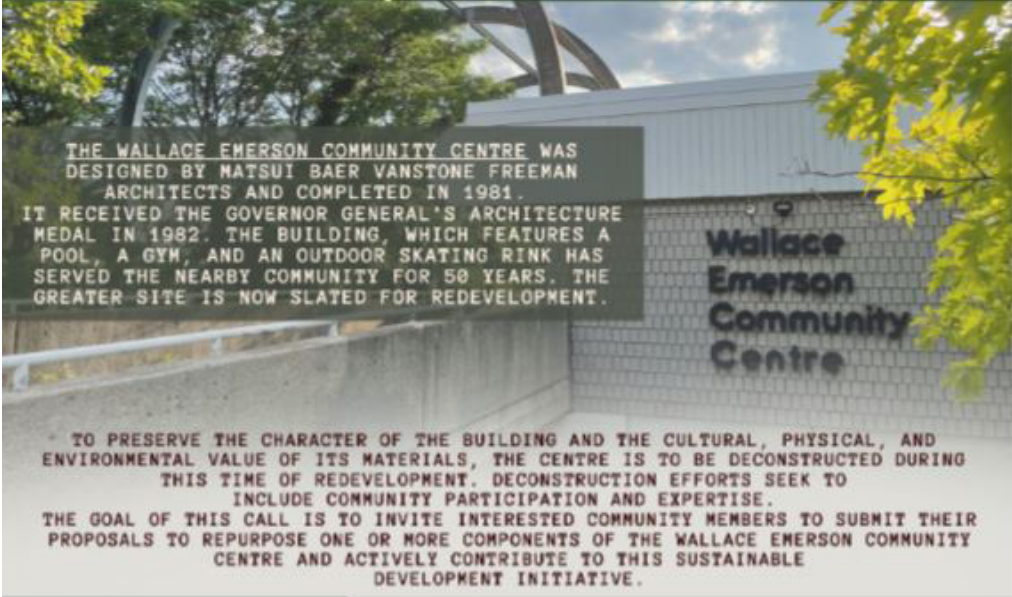
PHOTO



DIAGRAM

Illustrating the spatial choreography of the materials on site, these illustrations imagine how and where items will travel on site through different stages of the deconstruction. Created by Valerie Vincente with support from Jane Hutton

CALL FOR PROPOSALS | A COMMUNITY DECONSTRUCTION INITIATIVE



THE WALLACE EMERSON COMMUNITY CENTRE WAS DESIGNED BY MATSUI BAER VANSTONE FREEMAN ARCHITECTS AND COMPLETED IN 1981. IT RECEIVED THE GOVERNOR GENERAL'S ARCHITECTURE MEDAL IN 1982. THE BUILDING, WHICH FEATURES A POOL, A GYM, AND AN OUTDOOR SKATING RINK HAS SERVED THE NEARBY COMMUNITY FOR 50 YEARS. THE GREATER SITE IS NOW SLATED FOR REDEVELOPMENT.







TO PRESERVE THE CHARACTER OF THE BUILDING AND THE CULTURAL, PHYSICAL, AND ENVIRONMENTAL VALUE OF ITS MATERIALS, THE CENTRE IS TO BE DECONSTRUCTED DURING THIS TIME OF REDEVELOPMENT. DECONSTRUCTION EFFORTS SEEK TO INCLUDE COMMUNITY PARTICIPATION AND EXPERTISE. THE GOAL OF THIS CALL IS TO INVITE INTERESTED COMMUNITY MEMBERS TO SUBMIT THEIR PROPOSALS TO REPURPOSE ONE OR MORE COMPONENTS OF THE WALLACE EMERSON COMMUNITY CENTRE AND ACTIVELY CONTRIBUTE TO THIS SUSTAINABLE DEVELOPMENT INITIATIVE.

WHAT ARE WE LOOKING FOR?

WE ARE LOOKING FOR PROJECTS FOCUSED AROUND ONE OR MORE OF THE FOLLOWING:

- REUSABILITY ANALYSIS OF MATERIALS
- RELATIONSHIP WITH THE SITE
- VERNACULAR OR CULTURAL BUILDING TECHNIQUES
- ENDURANCE OF MATERIAL LIFE THROUGH REUSE
- CONNECTION BETWEEN EXISTING AND FUTURE USE(S)
- PROXIMITY TO SITE

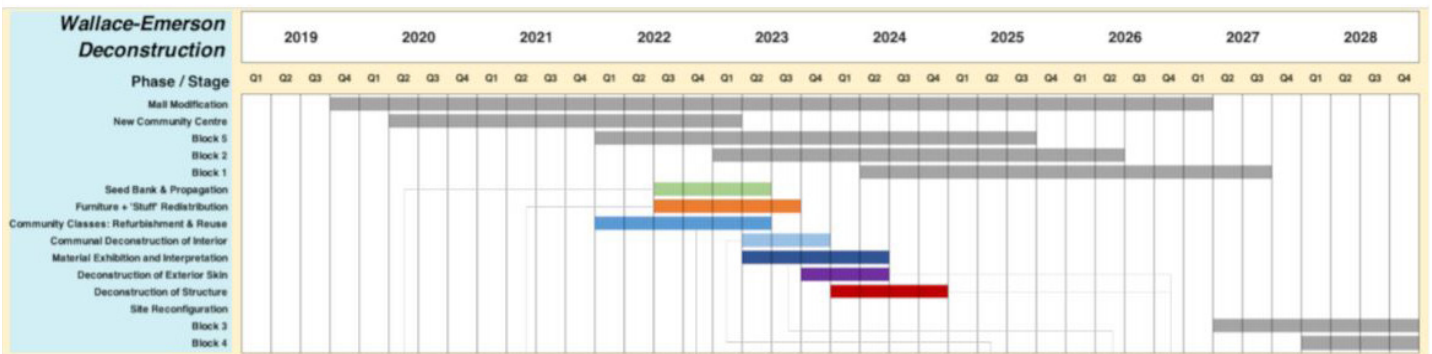
AVAILABLE COMPONENTS & MATERIALS

MORE INFORMATION ON THE LARGER DECONSTRUCTION CAN BE FOUND AT WECC-DECON.CA

GLASS BLOCKS | WOOD CEILING | CONCRETE BLOCKS
WINDOWS AND DOORS | INTERIOR FLOOR TILES
STEEL ARCHES | METAL SIDING | SOLAR PANELS
RAILINGS

In order to solicit input and direct materials, a mock-call for proposals was drafted to broaden the scope and impact of the project. Poster design by Stephanie Tzanis.



Gather seeds & vines from on-site plants and trees.



Inventory furniture/items, resell through Q3 2023.



Free upcycling courses from Q1 2022-Q1 2023.



Interior deconstruction begins Q2 2022.



Community interpretation of interior fixtures. Artistic reuse, materials exhibition, BBQ, rails for skating, etc. Q2 2024.



Deconstruct cladding (Q3 2023-Q2 2024) & structure (Q1-Q4 2024.)

Using the existing development timeline as a framework, we imagined inserting an alternative sequence of activities which would facilitate the deconstruction and reuse of the structure while engaging in local community. Gantt chart by Charlie Caldwell.

Studio Eight

Topophiliasolastalgia; choreography; Currency; Inventory; Value; Transitions; Care; Aspirational ethic; Starting tentacles; Journey; Reciprocity; Narrative; Ruin (s); Subversive

In order to both summarize and propel the work which had taken place throughout the course, in this final studio seven guests from across multiple fields were invited to listen, reflect and share their perspectives on the project. After providing a brief introduction to the structure and intent of the studio, course participants offered a brief synopsis for each output, described above.

Guest reviewers were asked to respond with one or two critical questions from their field or experience that they feel would be important to consider in this project. The results were thoughtful and provoking:

- Sam Carter Shamai (The Bentway): How can we anticipate ruins in future and current building projects?
- Ben Watt-Meyer (Public Work): What tools did you look at when considering the choreography of unbuilding? Hand or Machine?
- Mark Gorgolewski (Ryerson University; author of Resource Salvation): How do you plan to avoid obsolescence in the first place? How do you build a culture which values the existing and moves to repair and conserve it?
- Daniel Rotzstain (ERA Architects): How do we engage in the lifeways of the materials which also conserves and considers how and by whom they are used?
- Megan Torza (DTAH Architects): How much was the deconstruction timeline shaped by the existing development scheme? How would the proposal change if these constraints were not there?
- JP King (Discard Studies): How do we locate value once the material is decontextualized from the building?
- Stephanie Mah (Giamo): How do you communicate and implement these actions? What policy frameworks (or other) can be leveraged in the context of redevelopment.
- Anna Beznogova (Perkins and Will): How can we quantify the social and psychological impacts of deconstruction? How to re-channel embodied energy?

Following a lively discussion, both guests and course participants were asked to respond to the same questions:

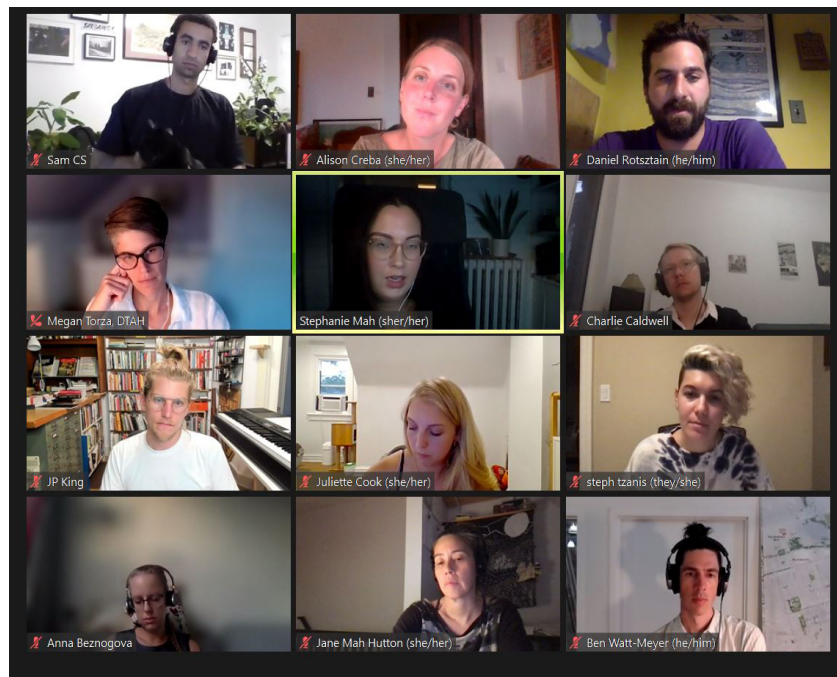
- What stands out to you as an effective way to make change?
- Who should be addressed?
- What might be some concrete next steps?

The responses shared were wide ranging:

- Daniel considered the conservation movement of the 1970s and identified the potency of today's climate crisis as a galvanizing force.

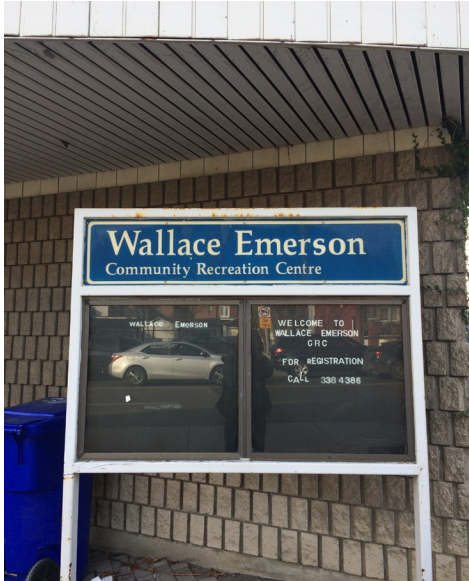
- Stephanie raised a newly passed report identifying cultural heritage as a force which could trigger a Heritage Impact Assessment (HIA), then conservation plan and a broader discussion within the heritage realm with the City of Toronto.
- Sam returned to an earlier idea of wheat-pasting hundreds of drawings of WECC's components to the hoarding surrounding the development site. He referenced Chicago's Stoney Island Art Bank as an example of using building components as literal bonds in its reformation.
- Megan emphasized the importance of training - of youth in urbanist curriculum, of deconstruction processes and training, and in processes of upcycling.
- JP offered the concepts of Solistalgia and Topophilia to suggest a collective mourning ritual.
- Anna considered how to document materials in a way that effectively told their stories and compelled their reuse (think of Rotor's online shop)
- Ben considered the possibility of using the site (temporarily or permanently) as a hub for reuse.

Generative and energizing, input from studio eight guests cast new light onto the work generated by course participants. The questions and insights offered new framing and directions with which to frame the project. Affirming the foundational work created over the preceding weeks, the final studio also emphasized the need for intersectional perspectives for this ambitious project.



Studio 8 participants and guests engaged in thoughtful discussion.





As a concluding exercise, all attendees participated in a playful exercise. Much like the game of Boggle, participants reused the individual letters from the Wallace Emerson Community Centre's sign. A metaphor for the resulting words.



Some Lessons

Over the past few years, awareness and interest in building deconstruction and material reuse has been growing in Toronto's architecture, heritage and planning realms. However, without legislative and economic incentives, there remain many barriers to implementing these practices at a local level. While initial aspirations for the studio - to prepare an alternate proposal for the demolition of the Wallace Emerson Community Centre - anticipated using technical, research and policy skills, the resulting process was much more imaginative. Challenging conventional approaches to development (where the clearance and densification of land increases its value) and heritage conservation (which promotes the retention of materials in-situ) the studio explored building deconstruction and material reuse as a process that facilitates urban change while conserving the cultural and environmental values embedded in the site, structure and materials.

Thinking through the choreography of unbuilding, the studio brought into focus specific questions and yielded new insights. Among many things, through the studio we asked:

- How can individual components communicate the experience of the site, while also telling a story of its reconfiguration?
What role does the building itself play in facilitating reuse?
- How can specific assemblies (rooms, spaces, etc.) be used to stage materials which will be made available through deconstruction?
- Can we think of forms of community and industry engagement that would invite various actors to begin imagining components reused elsewhere?
- How can these forms of engagement also work to weave together various actors in the development project?
- How can the process of deconstruction also be a demonstration of best practices/ambitions? What precedents can we set?
- Are there opportunities for local developers or agencies to support these actions?
- Thinking about lessons from Honest Ed's and the loss of other iconic structures, how can we integrate ritualized forms of goodbye into deconstruction plans?

Considered outputs in their own right, these questions are valid tangents which strengthen the overall project. Reflecting on both the process and products of the studio course, the lessons were both specific and broad:

- Looking at the Wallace Emerson Community Centre - a modern building built just forty years ago, the studio established a need for an expanded dialogue on the impact and potential of modern materials and built heritage.
Engaging directly with the materials themselves prompted consideration of what the task of deconstruction and a culture of reuse might actually look like
- Built in concrete and steel - two carbon-intensive and seemingly immovable materials - its deconstruction is contingent on available skill sets, time, logistics, and short and long-term storage spaces.

- Conjuring a future where materials are reused with greater fluidity, we were confronted with a reality where materials are worn and things might not always be shiny and new. Ripe with story-telling potential, deconstruction and reuse were conceptualized as narrative-giving processes. Within this thinking, the course also reiterated the role of design for deconstruction/disassembly (DfD), within larger deconstruction projects.
- Dismantling personal expectations and preconceptions about how socially and ecologically sustainable building practices like deconstruction can be realized, this project highlighted how culturally entrenched problems of 'waste' are. We understood that transformation is needed across multiple industries that touch on design, development, and construction in order to realize projects like this. While demolition uses very large machinery, deconstruction requires more human labour and machine-assisted hand tools. This change in pace and scale is the product of more careful processes and has the potential to facilitate many experiences of the building's transformation at different stages. This process not only preserves the integrity of the material and ensures its reuse but also elongates the building's life by opening it up to new opportunities for the community to engage with it. In this way, deconstruction has the potential to also be a site of demonstration and training.
- Demolition is Rude. This statement from our first meeting continues to resonate as a key lesson on the broader impact of erasure within development projects. Recognizing the value of the Wallace Emerson Community Centre within the broader community, the developer has tailored the construction phasing to ensure that the current structure is not closed until it's replacement is complete, allowing community services and programming on site to be uninterrupted. However the physical rupture is not given any considerations. Language within the development scheme conceals the structure's eventual demise. Our investigations into the deconstruction and reuse of the WECC and its materials reveal that this transition contains the possibility for a careful un-building process and celebrating its significance in the community.

Engaging emotionally, creatively and critically with the site, the questions, concepts and outputs generated over this 8-week studio are a reflection of the productivity of engaging in processes of deconstruction and reuse. Indeed, they are an indication of what doing so at the early stages of any project can generate.

While adjacent activity on the development site is already underway at the Wallace Emerson site, it is not too late to continue to take action. Indeed, the material generated in this course are valuable seeds capable of spawning further reflection and activity.

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