

# Beyond Art & Asphalt: Re-envisioning Outdoor Space at MASS MoCA



*Photo courtesy of Andy Schlatter*

Environmental Planning Report (ENVI 402)  
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*The team with our client during a meeting in November. Left to right: Brian Lavinio, Dover Sikes, Andy Schlatter, Kitt Urdang, and Tiffany Wu.*

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## **Abstract**

This environmental planning report is the final product of a semester-long undergraduate capstone project for ENVI 402: Environmental Planning Workshop at Williams College.

Advised by Professor Sarah Gardner and for the consideration of Andy Schlatter, Director of Campus Planning and Facilities at the Massachusetts Museum of Contemporary Art (MASS MoCA), our report synthesizes an environmental history of the museum's site to produce recommendations for how to redesign or reorient areas of the campus to better suit the outdoor space and make the site more welcoming for visitors. As an anchor institution for North Adams, Massachusetts, the development of the museum has resulted in millions of dollars for the local economy and created hundreds of jobs since it opened on Memorial Day Weekend, 1999. The museum is also an anchor point of the Northern Berkshire Cultural Corridor, which includes peer institutions such as the Clark Art Institute and the Williams College Museum of Art. While the recommendations in this report are contained to the MASS MoCA campus, their implications are far-reaching across the entire Northern Berkshire region.

Throughout developing our recommendations, we implemented a placemaking-based approach and emphasized the concept of "Lighter, Quicker, Cheaper" (LQC). Many of our recommendations do not require significant financial or operational lift and can be completed in a relatively short amount of time. They also emphasize sustainability, risk management, and benefits to a diverse set of user groups. All recommendations were vetted through an evaluation matrix, and those with the highest scores were presented to MASS MoCA staff on December 13, 2023. This report expands on our recommendations, while also detailing the environmental history of the site, summarizing relevant case studies that advised this process, and highlighting

other regional concerns that will influence environmental planning at MASS MoCA in years to come.

### **Acknowledgments**

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*The team discovered this sign when conducting interviews in the staff offices on-site.*

## **1. Introduction and Project Goals**

The “Beyond Art and Asphalt: Re-envisioning Outdoor Space at MASS MoCA” project researches the complexities of MASS MoCA’s site contamination, a legacy left by the site’s industrial history. Located at 87 Marshall Street in North Adams, the site was home to Arnold Print Works from the 1860s to the early 1900s and Sprague Electric from 1942 until 1987. These operations left behind significant contamination in the soil and the groundwater — both of which are still monitored by the state to ensure MASS MoCA staff and visitors can safely use the site. In order to keep the pollutants away from people, the contaminated areas were paved over with asphalt in the 1990s, leaving the outdoor parts of the campus with an industrial and unwelcoming atmosphere. Therefore, our goal is to explain site use restrictions in a clear, accessible way and to provide targeted recommendations for how MASS MoCA can engage visitors and staff in the outdoor space. Our client is Andy Schlatter, the Director of Facilities and Campus Planning at MASS MoCA. Schlatter has repeatedly emphasized the importance of sharing the site’s historical context in a straightforward, coherent way. This research project is occurring as MASS

MoCA begins work on a sustainability-centered strategic plan that seeks to define the possibilities and parameters for future site uses and actions. Therefore, this report will play a role in future developments at MASS MoCA. The overarching goal of this project is to use our research on the site's contaminants, remediation history, legal constraints, and current use to inform a series of recommendations for MASS MoCA. Ultimately, our recommendations envision more innovative and engaging usage of outdoor spaces at MASS MoCA. We do this by examining the current uses and potential improvements in eight key areas of campus—Courtyard A, the Former Building 3 area, Courtyard C, Courtyard D, the Hoosic, Joe's Field, Marshall Street parking lot, and Holden Street parking lot. Our project seeks to help the museum better understand the site's limitations as well as potential uses while providing innovative ways to think about remediation. This will assist the museum in its upcoming strategic plan as well as support funding proposals from trustees, donors, foundations, and grants.

## **2. North Adams and MASS MoCA's role within it**

North Adams is a city of 12,000 in Berkshire County, Massachusetts. Located along the Hoosic River, it was a long-standing industrial powerhouse in the world of textile production. By the 1930s, textile manufacturing declined and electronics took its place (Britannica 2013). Sprague Electric, which operated on the Marshall Street property, employed 4,000 people and was once the world's leading producer of capacitors (Seider 2021). As American industry transitioned away from manufacturing and Sprague closed its North Adams plant, the city suffered greatly, and its population dropped. By 1986, North Adams's unemployment rate was the highest in the state. However, the past 20 years have shown signs of revitalization and growth after a low period in the 1980s and 90s. The city is 85 percent white, 25 percent college-

educated, and the mean household income is \$48,575 (U.S. Census 2022). It is also home to the Massachusetts College of Liberal Arts, which enrolls about 2,000 students.

In a small and rural place like North Adams, anchor institutions are essential to economic and cultural prosperity. The closure of Arnold Print Works and the eventual departure of Sprague Electric left a vacuum in North Adams—by 1987, the city needed a mass employer. While anchor institutions are most commonly universities and hospitals, some scholars argue that the concept should expand to include organizations like cultural institutions and sports team franchises (Initiative for a Competitive Inner City, n.d.). In fact, it was precisely this logic that then-Mayor John Barrett used to advocate for MASS MoCA—he supported it not because of a particular affinity for modern art, but because he saw the potential for economic development that a world-renowned museum could bring (Trainer 2019). There was already a robust art-based economy in the Berkshires due to institutions like The Clark Art Institute, Tanglewood Music Center, Jacob’s Pillow, and the Williamstown Theater Festival. However, these were all located outside of North Adams (Thompson 2023). Founding Director of MASS MoCA Joe Thompson believes the museum met two needs: the first was a need in the art world for a space that allowed for large-scale, site-specific installations that may clash with the culture of “traditional” galleries and museums. The second was the need to improve the socioeconomic status of North Adams (Thompson 2023).

In 2006, Williams College economists found that MASS MoCA generated \$9.2 million in local economic growth in 2002 across multiple sectors and created 230 new jobs. Furthermore, total property value in the area has grown by almost \$14 million due to MASS MoCA, with little evidence of gentrification due to relatively low rates of neighborhood turnover in the areas surrounding the museum. In 2014, the North Adams Regional Hospital (NARH), which

employed 530 employees, abruptly shut its doors, exacerbating the need for MASS MoCA to serve as a mass employer and to revitalize the North Adams economy (Seider 2021).

Given the importance of MASS MoCA's role within the local community, it's crucial to consider the museum's physical space and the ways people interact with it. Placemaking is a concept in environmental and urban planning that calls on people to embrace public spaces and the connection between residents and the built environment (Project for Public Spaces, n.d.). Placemaking puts local needs and community-building at the forefront of planning priorities—pushing back on classical planning methodologies that relied on top-down directives and prioritized businesses over the public. Since MASS MoCA is an anchor institution in North Adams, its outdoor spaces should be designed in the placemaking tradition to promote public use and community-building. Given this belief, our recommendations section relies heavily on the idea and theories of placemaking.

### **3. 87 Marshall Street Site History**

#### **a) Overview**

The 87 Marshall Street property has served a variety of purposes over the past two centuries. Situated at the confluence of the North and South branches of the Hoosic River, the buildings were originally constructed by Arnold Print Works in 1863 to manufacture and finish textiles at the site. In 1942, Sprague Electric Company purchased the property to produce electrical components, including capacitors. Sprague Electric discontinued operations at the site in 1987. Both textile and capacitor manufacturing have historically involved the use of many chemicals for bleaching and dyeing textiles as well as for lubricating and insulating electrical devices. The main contaminants left by Arnold and Sprague are chlorinated VOCs, metals

(including antimony), PAHs, and PCBs. The PCBs mainly come from a significant oil spill that spread them in the southwest section of the property. In the aftermath of the spill, 30 water monitoring wells had to be installed and were checked on regularly. Now, the wells are checked between every six months to a year (Eastman 2023). As Sprague declined, Penn Central Railroad purchased the company and the buildings to acquire the company's proprietary patents (Thompson 2023).

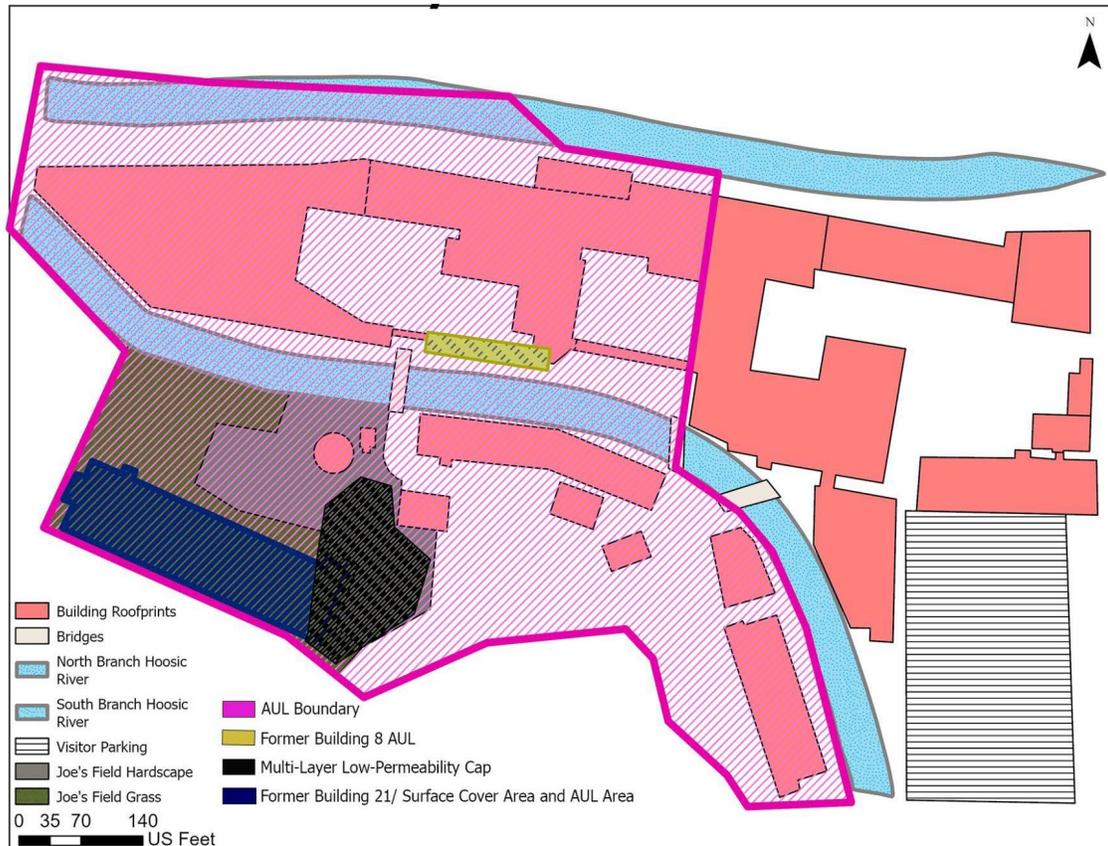
Soon after, MASS MoCA wanted to develop the property, but there was enormous uncertainty about the site's environmental liability. In the state of Massachusetts, contaminated sites must have a licensed site professional (LSP) in charge of ensuring regulatory compliance, creating documentation, and making periodic inspections to keep risks to humans as low as possible. Jeffrey Holden, a senior engineer at GEI Consultants, is the Licensed Site Professional (LSP) for the Marshall and Brown Street properties and has been working on the former Sprague site since 1995. He explained the current state of site contamination in areas under the Activity and Use Limitation: While new construction and digging are not illegal, they would be financially intensive to ensure current remediation efforts are not damaged. Any efforts to dig in areas with the asphalt cap would require new remediation efforts and state approval (Holden 2023).

To make the sale, Penn Central took on the liability through an insurance company, Great American Financial Resources, Inc. (GAFRI), for any contamination or pollution that occurred from the ground down, while MASS MoCA would take on everything above ground (Holden 2023). To minimize economic damages if the museum did not succeed, the property was leased to MASS MoCA from the City of North Adams for a period of one hundred years instead of being outright purchased. Numerous remediation efforts have been undertaken and funded by

GAFRI to ensure the site poses no significant risk to visitors and workers. Public knowledge of the site contamination seems limited—long-time North Adams residents including Paulette Wein, the Assistant to the Director at MASS MoCA, and Gregg Eastman, Buildings and Grounds Engineer at the museum, said they were unaware of the pollution before they began working at the site (Wein 2023; Eastman 2023).

Various parts of the property were involved in different stages of manufacturing and were therefore left with different quantities and types of contamination. As a result, remediation methods — which include soil excavation, capping, and natural attenuation — vary by section and have been employed at different times from the late 1980s to the present. Asbestos and lead paint also needed to be removed from large sections of the site’s interior, and MASS MoCA handled these remediation efforts (Thompson 2023). Most of the MASS MoCA site is under an Activity and Use Limitation (AUL) — meaning that the contaminants have been capped and the area is safe to visit, but some activities are risky and therefore prohibited. These activities include building for occupied use, agricultural use, and routine excavation. The AUL does not extend to the visitor parking lot, Buildings 1, 2, 3, 10, 11, 12, 13, 26, and 34, or the part of MASS MoCA closest to Marshall Street. The site of Building 21, now known as Joe’s Field, was the location of particularly severe contamination and is subject to its own AUL. However, the entire 87 Marshall Street site has been able to gain a Class C Temporary Solution RAO, with established use limitations protective of health under current and reasonably foreseeable conditions. The site adjacent to MASS MoCA on Brown Street was also part of Sprague Headquarters. It is currently owned by National Grid and holds similar contaminants (Holden 2023). However, the adjacent site is still used for industrial purposes so hasn’t been treated in the same way (Schlatter 2023). What follows is an attempt to organize previous remediation

attempts recorded across many legal and planning documents—some of which were provided to us directly by Schlatter and others we sourced from the Massachusetts Department of Energy and Environmental Affairs web portal. We aimed to construct the remediation and legal classification information we found into a single coherent chronology, more comprehensive than any available on a singular document.



*Map of 87 Marshall St property showing the location of the AULs. Map Credit: Brian Lavinio.*

b) General Timeline (see Section d, Glossary):

**1863:** Arnold Print Works begins manufacturing and finishing textiles at 87 Marshall St (Arcadis 2011, “Draft Soil Management Plan”).

**1942:** Arnold Print Works closes; Sprague Electric takes over the site to produce electrical components and capacitors (Arcadis 2011, “Draft Soil Management Plan”).

**1987:** Sprague Electric closes (Arcadis 2011, “Draft Soil Management Plan”).

**1987:** GAFRI, the insurance company that took on subsoil environmental liability of the property as a successor to Penn Central, conducts various response actions at the site under the direction of MassDEP.

- The purpose of the response actions has been to characterize the presence and extent of MCP-defined oil and/or hazardous material (OHM), and to provide remedial response measures where appropriate. GAFRI's response actions have resulted in partial closure of the site, including Permanent Solutions in the former Building 21 and Surface Cover areas (Areas 2 and 3 on Figure 1), and in Building 8 (Area 1 on Figure 1) (Arcadis 2011, "Draft Soil Management Plan").

**1993:** PCB Remediation is funded by GAFRI, involving the excavation and disposal of soil containing PCBs at concentrations greater than 200 milligrams per kilogram ("mg/kg") in shallow soil, and capping remaining soil containing PCBs at concentrations greater than 10 mg/kg with a multilayer low-permeability surface cover. Capping involved covering contaminated material with a "cap"—asphalt, clay, etc.—which isolates and keeps contaminants in place to avoid spread. This capping did not destroy or remove pollution (Holden 2013 "Activity and Use Limitation Opinion for 87 Marshall St North Adams, MA.").

**1995:** American Annuity Group, Inc., an insurance company that was connected to the Penn Central Company and briefly served as the owner of the property after Sprague, transferred a portion of the 87 Marshall Street property to MASS MoCA (Holden and Moore 2019, "Post-Temporary Solution Status and Remedial Monitoring Report #11").

**2006:** An AUL was placed on the surface cover area and the adjacent former Building 21 area (the primary concern in the former Building 21 area was VOCs in soil). MCP Class A (Permanent Solution) Response Action Outcomes ("RAOs") for the two areas were also achieved for both areas (Holde 2013, "Activity and Use Limitation Opinion for 87 Marshall St North Adams, MA.").

**2007:** 265 tons of shallow soil (up to 4 ft below ground surface) were excavated from an area adjacent to the north wall of Building 5 due to the presence of certain metals. The excavated soils were disposed of at an offsite permitted facility; however, some metals remain in soil in this area (Holden 2013, "Activity and Use Limitation Opinion for 87 Marshall St North Adams, MA.").

**2007, 2008:** A RAM was conducted near groundwater monitoring well where, historically, the highest concentrations of VOCs have been detected. Specifically, a lactose-based mixture was

added to certain wells to facilitate enhanced reductive dechlorination of VOCs in groundwater in this area. VOC concentrations were substantially reduced following lactose injections and remain well below pre-injection concentrations as of the date of the most recent sampling (Holden and Moore 2019, “Post-Temporary Solution Status and Remedial Monitoring Report #11”).

**2008:** PAH and some VOCs and some metals the impacted soil were excavated and disposed off site (Holden 2013, “Activity and Use Limitation Opinion for 87 Marshall St North Adams, MA.”).

**2009:** An AUL2 was placed on the Building 8 area and an MCP Class A (Permanent Solution). RAO was achieved for Building 8. We are reaching out to Holden to obtain copies of the AULs in the Building 8 and 21 areas. (Holden 2013, “Activity and Use Limitation Opinion for 87 Marshall St North Adams, MA.”).

**2013:** Class C (Temporary Solution) RAO Statement established by Holden which outlines that a Permanent Solution is not currently feasible because contamination can’t be readily cleaned up. This may include sites where the contamination poses a risk but it isn’t accessible, and the property has gained the status of “no significant hazard” (Holden 2013, “Activity and Use Limitation Opinion for 87 Marshall St North Adams, MA.”).

**2014:** MCP Class C-1 Partial Response Action Outcome, Activity and Use Limitation, and Phase V Completion Statement (RAO document) for the site was submitted to the Massachusetts Department of Environmental Protection (MassDEP) on behalf of Great American Financial Resources, Inc. (GAFRI) in June (Holden and Moore 2014, “Post-Temporary Solution Status and Remedial Monitoring Report #17.”).

- Concluded that it was infeasible to achieve a condition of No Significant Risk and Permanent Solution status and provided for IMM activities to support the Temporary Solution.
- Monitored natural attenuation remediation (Reed and Ziegler 2020 “Notice of Audit Findings: Audit Inspection.”).

c) Remediation Timeline

**Late 1980s:** approximately 600 tons of soil were removed from the basements of Building 6 and the west end of Building 5, stabilized, and disposed off-site under the direction of the Nuclear Regulatory Commission. This remediation focused on the removal of low-level radioactive

materials and also resulted in the incidental removal of soil containing MC-Pregulated OHM (Holden and Moore 2019, “Post-Temporary Solution Status and Remedial Monitoring Report #11”).

**1993:** PCB Remediation, by excavating and disposing of soil containing PCBs at concentrations greater than 200 milligrams per kilogram (“mg/kg”) in shallow soil, and capping remaining soil containing PCBs at concentrations greater than 10 mg/kg with a multilayer low-permeability surface cover—primarily around former Building 21 (Holden 2013, “Activity and Use Limitation Opinion for 87 Marshall St North Adams, MA.”).

**2007:** Release Abatement Measure conducted - 265 tons of shallow soil (up to 4 ft below ground surface) were excavated from an area adjacent to the north wall of Building 5 due to the presence of certain metals. The excavated soils were disposed of at an offsite permitted facility; however, some metals remain in the soil in this area (Holden 2013, “Activity and Use Limitation Opinion for 87 Marshall St North Adams, MA.”).

**2007, 2008:** A RAM was conducted near groundwater monitoring well where, historically, the highest concentrations of VOCs have been detected. Specifically, a lactose-based mixture was added to certain wells to facilitate enhanced reductive dechlorination of VOCs in groundwater in this area. VOC concentrations were substantially reduced following lactose injections and remain well below pre-injection concentrations as of the date of the most recent sampling (Holden and Moore 2019, “Post-Temporary Solution Status and Remedial Monitoring Report #11”).

**2008:** PAH and some VOCs and some metals in soil were excavated and disposed of offsite—Building 8 (Holden 2013, “Activity and Use Limitation Opinion for 87 Marshall St North Adams, MA.”).

**2014 and current:** Monitored natural attenuation remediation of VOC-affected groundwater (Reed and Ziegler 220, “Notice of Audit Findings: Audit Inspection.”).

- This means natural processes decrease or “attenuate” concentrations of contaminants in soil and groundwater, with scientists periodically monitoring these conditions to make sure natural attenuation is working.

Other current remedies include maintaining an engineered barrier over soils containing PCBs and monitoring of antimony in groundwater.

d) Glossary of terms used in relevant legal documents and maps

- AUL – Activity and Use Limitation – legal document that considers contamination and sealing to explain permissible uses and construction on sites
- CY – Cubic Yards
- HASP – Health and Safety Plan
- LSP – Licensed Site Professional – hired to oversee assessment and remediation
- MCP – Massachusetts Contingency Plan – 400-page document outlining the ways to measure and address contamination in Massachusetts
- OHM – Oil and/or Hazardous Materials
- OSHA – Occupational Safety and Health Administration
- PAHs – Polycyclic Aromatic Hydrocarbons – chemicals from coal, crude oil, gasoline
- PCBs – Polychlorinated Biphenyls – carcinogenic manmade chemicals that come from electrical work
- RAM – Release Abatement Measure - a voluntary remedial measure taken to clean up small problems, or reduce the magnitude of larger problems
- SMP – Site Management Plan
- TCE – Trichloroethene - carcinogenic halocarbon, commonly used as an industrial degreasing solvent
- TCLP – Toxicity Characteristic Leaching Procedure - chemical analysis to determine the presence and mobility of hazards
- VOCs – Volatile Organic Compounds – industrial contaminants often found in groundwater
- RAO – Response Action Outcome - written determination by a licensed site remediation professional that the site was remediated in accordance with all applicable statutes, rules and guidance, and based upon an evaluation of the historical use of the site, or of any area
- BGS – (feet) below ground surface
- GAFRI – Great American Financial Resources Inc (bought by MassMutual); owned Brown Street Property and is in charge of some remediation
- MassDEP – Mass Department of Environmental Protection

- Multilayer low permeability cap – top layer over contamination, may be composed of natural, admixed, or amended soils, a flexible membrane, or any combination of the above (ex: clay)
- Well screened in unconsolidated deposits – screen that keeps sand and gravel out of wells
- Approximate location and designation of well screened in bedrock – wells surrounded by bedrock do not usually need screens
- Metals-related RAM excavation to 2 feet BGS (2007) – voluntary remediation to remove metals by digging 2 feet

#### 4. Case Studies

To better inform our project and our recommendations to MASS MoCA, we consulted two broad types of case studies: 1) public spaces and cultural institutions built on former industrial sites that make innovative use of their outdoor spaces (since MASS MoCA is concerned with “greening” their campus, these studies provide ideas for creative programs and innovative facilities that work within the limits of site-use constraints), and 2) successful site remediation and reuse projects, especially cases in Massachusetts under similar constraints as MASS MoCA. These studies help identify the feasibility, necessity, and scope of more complete site remediation at MASS MoCA. More importantly, we learned how other post-industrial sites articulate their guiding principles in contending with industrial histories and legacies of contamination. The case studies detailed below include: Landschaftspark Duisburg-Nord (Germany), Gas Works Park (Seattle, WA), the Naismith Memorial Basketball Hall of Fame (Springfield, MA), the First Americans Museum (Oklahoma City, OK), and European city squares. Other case studies we examined include: Tate Modern (London, UK) and Freshkills Park (Staten Island, NY).

##### a) Landschaftspark Duisburg-Nord, Germany

Spanning an area of 570 acres, Landschaftspark is a public park located in Duisburg-Meiderich, Germany. The area of Duisburg was a significant industrial site in the 1900s, not unlike North Adams. In 1901, August Thyssen constructed an ironwork factory where Landschaftspark is now located (Sui 2013, 41). Blast furnaces were built to produce pig iron. In April 1985, Thyssen was closed due to economic crises, leaving the site significantly polluted by contaminants such as heavy metals, arsenic, cyanide, phenol, benzene, and hydrogen sulfide (48). The local government took over the significantly polluted land and hosted a competition to redesign the site, won by German landscape architect Peter Latz in 1991 (Hemmings and Kagel 2010, 244). Remediation costs were handled by the City of Duisburg government, which still manages the site today (Sui 2013, 47). The site was remediated in a series of complex processes involving river intervention, clearance of toxic residue, and phytoremediation, which allowed living plants to clean up hazardous materials through organic processes (Boroş and Micle 2015, 472; Lubow 2004). In 1994, the park opened to the public.

In his redesign, Latz centered the concept of memory. He thought that it was most important to remember and re-interpret the industrial landscape rather than erasing the site's industrial history. Thus, he ended up retaining the industrial ironworks structures. Visitors are able to go on an "industrial history circular trail," where informational columns and signs reveal the site's history. A guided group tour teaches about the site's industrial history, allowing visitors to learn about the production process of pig iron as well as gain insight into an average ironworker's life. A former blast furnace plant, Blast Furnace 5, is now a viewing platform, where visitors can enjoy the view of the ironworks, bunkers, casthouses, and other structures incorporated together with the park's gardens, meadows, and water courses (Landschaftspark Duisburg-Nord 2023).

Latz also emphasized leisure, recreation, and sports. For example, an old gasometer was transformed into a 13-meter deep diving center (Landschaftspark Duisburg-Nord 2023). Bike trails are available on the grounds as well as bike rental. A high ropes course is available for group activity and is supervised by professional staff. In collaboration with the German Alpine Association, a climbing garden was constructed from an old bunker, where the steepness of the tower walls make excellent climbing walls. The German Alpine Association offers courses and events at the park (Landschaftspark Duisburg-Nord 2023). Play areas include giant tube slides constructed through the buildings as well as a farm.

In 1996, British artist Jonathan Park was commissioned to create a light installation for the park, which is switched on in the evenings (Landschaftspark Duisburg-Nord 2023). In the illumination, red, green, and blue lights are projected onto the ironworks. The colors all have symbolic meanings connected to the building's original functions—red symbolizes fire, blue for water, and green for gas. This installation demonstrates how art in post-industrial sites can be not only aesthetically engaging but educational.

For our project, this case study demonstrates the importance of engaging with and re-interpreting an industrial past instead of trying to erase or deny it. This principle aligns with MASS MoCA's goal to preserve its site's industrial aesthetics. Moreover, the myriad ways that Landschaftspark makes its industrial history accessible to and engaging for the public—through tours and art installations—is worth learning from. Finally, Landschaftspark alerts us to the various possibilities for collaborating with local businesses and sports groups, something that we recommend that MASS MoCA consider.

b) Gas Works Park, Seattle

Gas Works Park, which includes 20 acres of land located on the north shore of Lake Union in Seattle, was built on the former oil and coal gasification plant of the Seattle Gas Company (Sawyer 2020). After the company closed in 1956, the transformation of the site was led by landscape architect Richard Haag, who incorporated bioremediation methods. Haag's master plan was radical for his time — he wanted to preserve and reuse the site's industrial elements, rather than fully demolish them. In the 1960s-70s, there was concern about how the soil pollutants would affect plant life. This is where Haag brought in bioremediation, a technique that activates the soil's microbiome by adding oxygen and organic matter. The microbes are able to degrade contaminants by using them as an energy source (Chant 2013).

From 1973-1977, remediation of the site also included cleanup and stabilization of the shoreline; removing 5,000 cubic yards of the worst contaminated material; burying onsite concrete purifiers, concrete slabs, and contaminated soil; constructing pathways, parking, and other facilities; converting the boiler house into a picnic shelter; and constructing drainage systems, play areas, and more (Sawyer 2020). Since the 1980s, the park has undergone many environmental assessments and phases of cleanup, specifically in relation to groundwater contamination (Sawyer 2020).

Some key features of the park include the Great Mound, now popularly known as Kite Hill, the open-air Play Barn transformed from a former exhauster-compressor building, and outdoor playground equipment for children. The Great Mound opened in 1973 and initially served as an observation station where visitors could witness the construction of the park, an innovative way to invite local communities into the construction process (Sawyer 2020). It is 45 feet high and consists of a huge pile of toxic materials capped with 18 inches of hard-packed clay

(Golden 2019). The park is very accessible to the public, with reservable picnic areas and green space available to book for outdoor ceremonies (*Seattle Parks and Recreation* 2023).

For our project, Gas Works Park is highly relevant because it represents a site that has innovatively reused instead of erased its industrial past— a guiding principle echoed in MASS MoCA’s design. The bioremediation techniques used by Haag might be of interest if we were to decide that MASS MoCA should continue remediation initiatives. The Great Mound prompts us to consider how redevelopment processes, not just results, could provide educational or leisure value to local residents. The park’s playground equipment wonderfully demonstrates how children could engage with and play in post-industrial settings. Because of its long history, there is also extensive information and articles on Gas Works Park. This was useful in showing us examples of how a remediation history could be written for MASS MoCA.

c) The Naismith Memorial Basketball Hall of Fame

This iconic feature of the Springfield, MA, skyline was once a manufactured gas plant (MGP) operated by the Bay State Gas Company. After years of decline, the plant was shuttered and the Massachusetts Highway Department built Interstate 91 through part of the site, while leaving riverfront property available for commercial and industrial operations. In 1985, The Naismith Memorial Basketball Hall of Fame was born (MassDEP 2006).

Contamination was a major issue with the Bay State Gas site. Approximately 5,200 tons of coal tar-contaminated soil, along with cyanide, gasoline, lead, and arsenic-impacted soils, were removed and treated at an off-site facility (MassDEP 2006). The remediation process was managed by stakeholders with the City of Springfield, MassDEP, and the private consulting firm O’Reilly, Talbot, & Olkun. Cleanup costs were primarily covered by Bay State Gas since they

were the responsible party, but block grants from the Department of Housing and Urban Development also supported the project. Today, the museum attracts hundreds of thousands of visitors, along with generating over \$100 million in investment to the remediated riverfront property (MassDEP 2006).

This case study offers a local perspective on remediation possibilities for MASS MoCA. While it does not address concerns about the use of green space, it does provide the proper channels for various grants that the museum could use. It also exemplifies riverfront development, which MASS MoCA is pursuing with their unique location of the convergence of two branches of the Hoosic River. Socioeconomic issues within the City of Springfield mirror many of North Adam's challenges, and The Naismith Memorial Basketball Hall of Fame offers continued evidence that museums can be a major economic driver for cities. Overall, this case study offers an interesting local example on a remediated site similar to that of MASS MoCA.

d) First Americans Museum, Oklahoma

The First Americans Museum is a museum dedicated to Native American cultures and histories. The site was originally designated Oklahoma City Oil Field Number One; in the 1920s, it was a major site for crude oil extraction (Fain 2022). The area became a brownfield and was declared a Superfund site by the EPA. Multiple EPA assessments since the 1990s have found abandoned oil/gas wells, illegal tire dumps, brine pits, sludge pits, high levels of arsenic, barium, and other contaminants (Dillner 2022). Fifty-seven oil wells were capped (Jojola 2022). The Oklahoma Corporation Commission issued a Certificate of No Further Action Necessary in 2015. In 1994, The Native American Cultural and Educational Authority was formed to begin designing a museum (Dillner 2022). Construction started in 2005, but there were periods of

pauses due to many funding challenges. After years of collaboration between Oklahoma City, AICCM Land Development LLC (owned by the Chickasaw Nation), and 39 tribal nations residing in Oklahoma, the museum finally opened in 2021 (Jojola 2022). Designed by Johnson Fain Architects, the museum seeks to tell the story of Oklahoma's native tribes, and does so through employing Indigenous traditions and beliefs in its landscape design (Journal Record Staff 2022). 45,000 truckloads of clean soil were moved to the site, part of which was used to build the museum's Mound, a 1,000-foot-diameter earthworks that pays tribute to Indigenous ancestral mounds. A tunnel cutting through the mound also serves as a cosmological clock in accordance with Indigenous practices (Jojola, 2022). In 2022, the project was awarded the Phoenix National Award by the EPA for outstanding brownfield remediation (Jojola 2022).

This case study is a stunning example of how land remediation and indigeneity can go hand in hand, as well as how a former industrial space can be redeveloped innovatively and meaningfully to tell a story of the land that honors multiple histories. For our project, the First Americans Museum sheds light on ways that MASS MoCA's landscape could be reimaged through deeper considerations of its ties with local histories, traditions, the museum's mission and values, as well as what the site means to residents of North Adams, past and present.

e) European City Squares

Schlatter and Thompson encouraged us to look towards European hardscapes as case studies on how MoCA can better use their courtyards. Thompson expressed that, although the prevalence of pavement and impervious surface on the campus ultimately came from site remediation, inspiration was drawn from European hardscapes when developing courtyards. European city centers often contain squares as a hub for commercial and recreational activities.

One will find a blend of tourists, young children, and adults using squares for socializing, procuring goods, and enjoying a meal at a busy cafe. What European city squares do well is draw people into their space and keep them engaged — visitors have places to sit, stand, and shop (Khandelwal 2023). There is general disengagement with MoCA courtyards in their current state, especially during non-summer months.

All European city squares mix old buildings with new shops and recreational spaces, but Siena, Italy, does this particularly well. The entire historic city center is subject to the Italian Law for protection of cultural heritage, “Decreto Legislativo 42/2004, Codice dei beni culturali e del paesaggio,” (UNESCO 2023). This allows the city to keep the authenticity of its Gothic architecture and its original street plan, while adding modern necessities and pleasures to the city center. Planners have enhanced city parks by redeveloping their ancient connection with city walls and the lush rolling hills and valleys that surround them. They have also instituted traffic regulations to increase ease of movement for pedestrian and bike traffic, while discouraging vehicle traffic inside the city walls (UNESCO 2023). Despite millions of tourists visiting the city every year, the center has remained culturally authentic and a proving ground for education about historic Italian architecture.

MASS MoCA and the city center of Siena share many similarities. The museum is under similar regulations since the campus is listed on the U.S. National register of Historic Places. Courtyard A, which is the main entryway of the campus, already exhibits many key aspects of a European city square: it hosts a diversity of artisans, businesses, and eateries; people are naturally funneled into the space through multiple entrances; and the courtyard is situated on a bed of impervious surface. It is also framed by historic buildings of the campus, with the 19th century clock tower looming overhead. This case study provides MoCA planners with a

successful example of intertwining impervious surface and historic buildings while producing possibilities for improved seating, recreation, and historical site education. The museum can even look to the green Berkshire Hills for inspiration to enhance green space within Courtyard A.

## **5. Key Findings from Interviews**

To support our archival research and case studies, we conducted 10 interviews with Andy Schlatter, Joe Thompson, Jeffrey Holden, Jennifer Trainer, Paulette Wein, Gregg Eastman, Judy Grinnell, Paul Marino, Keith Kurman, and Lisa Dent. These interviews have provided us with intimate accounts of the site history, the museum's founding, and ongoing remediation efforts. By speaking with stakeholders at the museum and in North Adams, we improved our understanding of the complex history of 87 Marshall Street and the role MASS MoCA plays in the community. Each interview was conducted as a formal conversation and each interviewee has given their permission to be included. Their insights have been incorporated into the content of this report and are cited accordingly.

## **6. Other Concerns**

In conducting research for this project, we encountered three key processes likely to affect outdoor space at MASS MoCA for years to come. However, they are in early planning phases, so we weren't able to fully anticipate the outcomes or how MASS MoCA can best respond to them. The three outside processes are the study of the Route 2 overpass, the construction of a bike path, and the study of the Hoosic River flood chutes. In this report, we seek to document their current states and how future decisions might impact MASS MoCA.

a) Route 2 Overpass



The Veterans Memorial Bridge in North Adams, frequently referred to as the “Route 2 overpass,” was constructed 60 years ago and crosses above the southern end of the MASS MoCA campus. While there have been concerns about the overpass for years, the federal Department of Transportation’s Reconnecting Communities Pilot program recently provided a \$750,000 grant to study its integrity and ways that the traffic flow could be re-routed (Jochem 2023). However, the bridge was declared “structurally deficient” at the beginning of December 2023, which is likely to add a level of urgency to the project (Daniels 2023). Given MASS MoCA’s proximity to the overpass, any construction or re-routing would likely impact its campus and operations.

b) Bike Path

There is considerable support for the construction of a bike path in North Adams, likely passing through the MoCA campus in some capacity. Schlatter and others at MoCA are in conversation with landscape architects about what this might look like. However, no conclusions

have been drawn. The trail could connect with the Mohican Trail in Williamstown and the Ashuwillticook Rail Trail in Adams to create a regional bike path network.

c) U.S. Army Corps of Engineers (USACE) Study of the Hoosic River Flood Chutes



After devastating floods in North Adams during the first half of the twentieth century, the USACE constructed flood chutes to control the Hoosic River in the 1950s. These flood chutes are now 70 years old and are deteriorating around the city. On the MASS MoCA campus, the North and South branches of the river are channeled through the flood chutes and meet at the edge of campus. According to Hoosic River Revival President Judy Grinnell, years of organizing efforts by the Hoosic River Revival pushed federal, state, and local governments to invest in studying other options for the Hoosic (Grinnell 2023). The USACE recently received \$3 million to return to North Adams to study the flood chutes over the next three years. The USACE expects to have recommendations for future action available for public comment by Fall 2024 (USACE Public Meeting 2023).

## 7. Goals for Recommendations

The main task of our project is to use the research and interviews we have completed to develop site-use recommendations for MASS MoCA. In consultation with our client Andy Schlatter, we established three overarching goals for these recommendations. Our recommendations should allow MASS MoCA to: 1) better activate and engage its outdoor spaces, turning them into areas conducive to community-building instead of corridors visitors use simply to get from one gallery to another; 2) tell the story of MASS MoCA, especially its industrial history; and 3) connect the campus to larger sustainability efforts, particularly through increasing and improving pollinator-friendly green spaces at MASS MoCA. Green spaces at MASS MoCA would be a valuable asset for downtown North Adams and would benefit stormwater management on campus.

In our interview with Thompson, he emphasized the hidden beauty of MASS MoCA's industrial structures, sights that remind visitors of the 120 years of labor that has happened here. Thus, it was an intentional artistic choice to preserve the "factory-ness" of the campus grounds (Thompson 2023). Our case study of Landschaftspark also revealed the value in preserving, instead of erasing, the post-industrial look of a site. We take this into consideration in our recommendations, most of which leave the industrial appearance of the campus intact.

With these goals in mind, we borrow a guiding principle often used in place-making projects, "Lighter, Quicker, Cheaper" or LQC (Project for Public Spaces, n.d.). Our recommendations prioritize solutions that are simple, low-cost, and flexible. The following section lays out the history and current use of outdoor spaces at MASS MoCA and provides accompanying recommendations for each site.

## 8. Use Evaluations by Area and Possible Recommendations

### a) Courtyard A



#### *History and Current Use:*

Courtyard A is the main entrance to the MASS MoCA complex. For many years, Courtyard A's main feature was "Tree Logic," an art piece featuring upside down trees. As of Fall 2023, the piece has been removed. Aside from the art installation, Courtyard A features a tree, a tent with picnic table seating, and some planter boxes amidst the concrete hardscape. The raised garden beds were designed by landscaper and museum attendant Keith Kurman, who said he takes into account aesthetic and practical considerations including size, color, and drought resistance (Kurman 2023). Kurman also mentioned that there is no easily-accessible water source in Courtyard A, so greenery would need to be watered by a 150-foot hose, which can be difficult with increased plant quantity and water needs (Kurman 2023).

The large area designated “No Parking” creates a feeling that the space is designed more for vehicles than people. While visitors and staff use the outdoor picnic tables to eat and meet during warmer months, the space has few uses in colder weather, and, without “Tree Logic,” lacks aesthetic appeal. As one of the first spaces MASS MoCA visitors see when entering the museum, it has the potential to set the aesthetic tone of the museum and to generate enthusiasm and excitement for the rest of the property.

Courtyard lies outside of the Activity and Use Limitation, meaning that there are no legal restrictions on digging and land use in the area.

*Possible courses of action:*

1. No change

Courtyard A, at no cost to MASS MoCA, could remain a large asphalt area outside the museum’s entrance.

2. Aesthetic change to asphalt

One of the most prominent aspects of Courtyard A is the large, yellow paint that designates the “No Parking” area. Since there are picnic tables and raised garden beds in the zone, it’s already implied that no cars will park there. Covering this message and replacing it with plain asphalt or a painted art piece would change the tone of the space at a relatively low cost to the museum.

3. Replace asphalt with artistic tile display

Even though Courtyard A is outside any activity and use limitation, it should still probably remain a hard surface to support delivery trucks that use it every day. The asphalt could be replaced with an artistic tile display—for example, tiling that represent the site’s history or the many artists who have contributed to the museum. Other options include cobblestone or pavers.

#### 4. Install a water feature

Adding a water feature in the center of the courtyard would give the area a center anchor and mimic European city centers that are largely paved by still supporting community gatherings. It would give people a reason to linger in the courtyard and add aesthetic appeal to an area all visitors walk through. This option has a relatively high cost to install but a low operational cost to maintain. Fountains’ environmental impacts vary depending on the type and water source.



*Left: Artistic paving display in Lisbon city center. Photo: The Urge to Wander.*

*Right: A water feature with seating around it. Photo: Water Feature Pros.*

#### 5. Install a seasonal ice skating rink

The addition of a seasonal ice skating rink in Courtyard A would provide a great community engagement opportunity. Courtyard A has been home to a skating rink in the past, but a natural outdoor rink in the Berkshires, where winter temperatures are steadily increasing, is not a viable long-term solution since it will frequently become unusable. An artificial skating

rink, like the one in Rockefeller Center in New York City, is an option that the community could use for years to come. However, an artificial rink comes at a high price point, and maintaining refrigeration requires significant energy in a warming climate.



*Left: Bryant Park in Manhattan displays a green, pedestrian-only space surrounded by buildings. Photo: Wikipedia.*

*Right: The natural ice rink in Courtyard A from 2019. Photo: Live 95.9.*

#### 6. Turn $\frac{3}{4}$ of Courtyard A into a pedestrian-only space

The majority of Courtyard A could be turned into a pedestrian-only landscaped space while still preserving a track that allows cars to enter from the parking lot, drive by key businesses, and exit by the old guard house. Such a move opens up many creative opportunities for the courtyard, as the landscape no longer needs to be cleared nor paved over. Moreover, a pedestrian-only space recenters visitors, offering a welcoming space that feels meant for the MASS MoCA community.

b) Site of Former Building 3/Tree Logic



*Left: Site of Former Building 3.*

*Top Right: Pollinator garden. Photo: Sharon Audubon Society.*

*Bottom Right: Artistic playground. Photo: Earthscape Play.*

*History and Current Use:*

This area was originally the site of Building 3. In the years since MoCA opened, it was home to the iconic Tree Logic exhibit. Tree Logic was removed in Fall 2023 during the course of our project, and no long-term solution has been selected. An artist collective called Culture Bunker has plans to build an edible plant garden in this space over the next year (Schlatter 2023). It is not currently a highly functional space, but its location in front of the entrance of the museum lends itself to an engaging and artistic display. In our interview with Director of Public Programs Lisa Dent, she told us that children from KidSpace and Camp MASS MoCA use this space to play during their free time (Dent 2023). It is a convenient space for parents to oversee their children playing as well.

*Possible courses of action:*

1. No change

The area could sit empty after the closure of the edible plant exhibit.

2. Pollinator garden

In the Berkshires and Massachusetts, pollinator species like bees, butterflies, and beetles are at risk due to loss of habitat and growth of invasive species (Growing Wild Massachusetts). Pollinators benefit from regional networks, so expanding native plant resources in North Adams, which has less green space than the rural areas around it, would be highly beneficial (Kurman 2023).

3. Artistic playground

A key tenet of placemaking is leaning into the ways people already use a space. In this case, children currently use this area for play. MoCA could encourage continued engagement from children by installing a playground for their use. Given that the site is situated in front of the museum entrance, MASS MoCA could commission an artist to create a playground that is both artistic and functional.

c) Courtyard C



*History and Current Use:*

Courtyard C is located at the center of campus and serves as a major community gathering space. Dré Wapenaar's *Pavilion* provides shade from May to October. The colorful sculpture invites visitors to enjoy a meal at the tables and chairs underneath, which overlook the courtyard below. The site avoids much vehicular traffic, as most staff use the Speedway and Courtyard D to transport items. The space is also home to many events, performances, and concerts during warmer months. In the winter, *Pavilion* is taken down to prevent damage, and the space lies mostly vacant. Visitors located in Building 10 have an unobstructed view of — and access to — the courtyard.

Courtyard C falls under the restrictions of the AUL and is completely covered by pavement. Therefore, projects that require pavement removal or other major changes to the impermeable surface are inadvisable.

*Possible courses of action:*

1. No change

MASS MoCA could leave Courtyard C as is, with a seasonal cafe and seating area in warmer months and as an empty space during the rest of the year.

2. Reintroduce sing-along movie nights

Multiple long-time employees and North Adams residents mentioned their love for the outdoor summer movie nights in Courtyard A (Eastman 2023; Wein 2023). This was a practice that stopped during the COVID-19 pandemic and has not been revived. Reintroducing movie nights in the summer would be a relatively low cost way to engage community members in this space. While movie nights require some institutional lift, the events only happen a few days per year. This is a great way to build a community that bridges multiple socioeconomic, age, and artistic groups.



*Outdoor Movie Night at Courtyard C. Photo: Bruner/Cott.*

3. Art classes in the courtyard

Another option for Courtyard A is to engage visitors in creating their own art on campus. This option would require some funding and significant institutional support. Classes could be

taught by local artists and address different skill levels, age groups, and schedules. These could be held during warmer months.

#### 4. Transform pavilion wall into a green wall

Currently, the walls beneath Wapenaar’s *Pavilion* are blank concrete slabs, which appear to be aging rapidly. By transforming the slabs into a living wall, MASS MoCA could add aesthetic value to the space and plant life to the courtyard, breaking up some of the concrete and thus reinvigorating the space throughout the year. Living or “green” walls are not only visually appealing but can be designed to increase biodiversity and serve as habitat for pollinators. By choosing a diverse mix of plants, including perennials that maintain their foliage in winter, the living wall could act as a focal point for the courtyard over the entire year.

#### 5. Murals on Pavilion Wall

An alternative to a living wall would be to hire an artist to paint a mural on the retaining wall of Wapenaar’s *Pavilion*. Murals require less maintenance than a living wall and provide aesthetic value throughout the year, linking the art inside to the space outside. Such a wall could even have an interactive dimension, encouraging visitors to play with their environment (perhaps through a chalkboard section or mobile pieces).



*Left: Outdoor green wall example. Photo: Live Walls.*

*Right: Outdoor mural example. Photo: Reinforced Earth.*

## 6. Increase permanent seating

There is currently no permanent seating in Courtyard C, although during warmer months staff set out tables and chairs. MASS MoCA could invest in permanent seating in the courtyard that matches the overall aesthetic, like large concrete benches directly underneath the retaining wall and/or a few permanent seating options closer to the river. Having a few year-round seating options would help the space feel more welcoming. Outdoor seating could be used by guests and staff on warm days throughout the fall, winter, and early spring. Moreover, large seating could serve as a playspace for young children and be used during courtyard movie nights. As Courtyard C receives little traffic, large infrastructure can be built without interfering with vehicle mobility.



*Left: 3-D printed seating alternative. Photo: Urban Style.*

*Right: Example of possible permanent seating. Photo: Dornob.*

d) Courtyard D



*History and Current Use:*

Courtyard D is entirely covered by AUL restrictions and is capped with pavement, which makes the space very hot during the summer. It is framed by Buildings 5, 6, 7, and 8. The space is primarily used as a stage during large events at MoCA, such as FreshGrass and Solid Sound. *The Chalet*, an outdoor beer-garden event, is hosted in Courtyard D during the summer on Thursday evenings. Other performances and events may occur during warmer months but are relatively rare. There is a small existing patch of grass at the eastern entrance to Courtyard D grown through special grates, but the grass serves more as an aesthetic rather than functional area.

The space is not frequented by MoCA visitors due to its lack of engaging exhibits and tucked-away location west of Courtyard C towards the back end of the museum. However, staff frequent the courtyard because of the bridge connecting Joe's Field and the other side of the Hoosic River. Trucks and other large machinery travel through Courtyard D to transport items

through the campus. There are fabrication labs and a loading dock where items are routinely deposited and picked up. Therefore, significant portions of pavement must remain in this space.

*Possible courses of action:*

1. No change

MASS MoCA could leave Courtyard D as is, and it would only be used a few days a year as a stage during the large music festivals.

2. Pop-up holiday market

The museum could host a holiday market with art, crafts, food, and music in Courtyard D. This option would draw people to the MASS MoCA campus and could come at relatively low cost to the museum. It would require some organization from staff but could be largely self-directed by individual vendors. This is a great opportunity to collaborate with local businesses, which would benefit North Adams's economy.



*Example of a holiday market. Photo: Washingtonian.*

3. Raised garden beds

Raised garden beds like the ones found in Courtyard A could be added to Courtyard D to green the space and break up the concrete and brick. This is a relatively low-cost and low-maintenance option.

#### 4. Rental scooters and skates

Non-motorized scooters and skates could be available for visitors for use in MASS MoCA's outdoor spaces. This would be a highly engaging way to invite visitors to explore and play on the campus, especially coupled with a self-guided tour of the grounds (potentially a tour that focuses on the site's industrial history). This alternative could also be implemented in the other courtyards. This would be an opportunity to collaborate with local businesses and sports groups. This option might introduce higher equipment and maintenance costs as well as possible liability concerns.



*Rental scooters at the Museum of Transport Lucerne. Photo: Museum of Transport Lucerne.*

#### 5. More plants and diverse plant species in the grates

A variety of plants could be grown in the special grates. Perennials would ensure the area is aesthetically engaging year-round. In our interview with Kurman, he suggested growing a thyme garden (Kurman 2023). This is a relatively low-cost and low-maintenance option.

#### 6. Removable swing-sets and seating around the edges of the courtyard

Swing-sets and seating could be placed around the edges of the courtyard, lining the buildings. This would allow the courtyard to become a place where people can stop to rest, eat,

or play. These facilities could be used during *The Chalet* and could easily be removed during festivals.



*Example of a removable swing-set. Photo: Eastern Jungle Gym.*

#### 7. Pavement games

Game templates could be painted or chalked on the pavement area next to the special grates, where service personnel vehicles do not circulate. In our interview with Dent, she mentioned that children who leave the galleries from Building 6 would end up at Courtyard D with their families, and, upon seeing the open space, would immediately start to run around, ready to play (Dent 2023). Pavement games would introduce something engaging for children in the courtyard. This would be a low-cost option.



*Example of pavement game. Photo: EverLine Coatings.*

e) The Hoosic



*History and Current Use:*

The nature of the flood chutes at MASS MoCA make any attempts to “green” the riverbanks difficult (Holden 2023). Changes to flood chutes would have major impacts on site contamination, as the wetlands along the river are filled with coal ash, brinks, and “junk” that are highly contaminated. Building a natural channel would be challenging and would require changes to the remediation plan to protect the site. There are opportunities to further highlight the natural beauty of the Hoosic, including the infrastructure that surrounds it.

1. No change

MASS MoCA would leave the Hoosic as is, with the river remaining a background element and the flood chutes often detracting from the overall aesthetic experience of the museum.

## 2. Add lighting

By installing lights on the sides of the Hoosic flood chutes, MASS MoCA could inexpensively transform the river into a highlight of campus, playing with the reflections and contours of the moving water. Such a move would bring attention to the river at evening and nighttime events, like concerts and festivals, as well as for those visiting campus in the winter when the sun sets early. MoCA could play with lighting and projection to turn the river into a moving art piece. Projection and light could also add aesthetic appeal to the otherwise blank concrete slabs of the sides of the flood chutes. This addition could also extend to the bridges, which can be strung with lights. To ensure the lighting is sustainable, the display could run off of MoCA's solar panels or wind turbines. This installation would have the added benefit of helping guests and staff navigate the campus before dawn or after dusk. Currently, visits to Skyspace for dawn showings require staff due to the difficulty of navigating the campus during darkness. Lighting the flood chutes could serve as a wayfinder, decreasing the need for staff guides.



*Left: Artist installation using projection mapping in Chicago. Photo: Anko Chang.*

*Right: River lighting in South Bend, IN. Photo: Visit South Bend.*

*Bottom: Bridge lights in Chicago. Photo: Chicago Tribune.*

## 3. Vegetation on bridges

MoCA could incorporate greenery into the campus while maintaining its current flood chutes infrastructure by transforming its bridges into skygardens with hanging vegetation. By adding planters to pedestrian and vehicular bridges, MoCA would add interest for visitors and develop its section of the Hoosic into an overall greener space. As Hoosic River Revival's South Branch conceptual plan noted, "Selected native vine species shown below would grow from narrow areas near the edge of the existing chute walls and would be directed to grow over wall edges and structures, providing shade, habitat, and visual interest in a limited amount of space" (Hoosic River Revival, 2015). Bridge vegetation could also join the greater Hoosic's attempts to create a pollinator corridor.



*Left and Right: Sasaki design firm renderings of vegetated bridges at MoCA. Photos: Hoosic River Revival.*

#### 4. Hydropower generation

To integrate the Hoosic into MoCA's ongoing sustainability efforts, the museum could harness the renewable energy of water. This could be accomplished by adding a hydropower generator to the river, providing both visual intrigue and generating renewable energy to further offset the campus's fossil fuel use. Pownal, VT, operates a hydroelectric dam on the Hoosic and serves as inspiration for the project. The best place for any installation would likely be at the edge of campus, past the confluence. The combined branches generate greater flow and thus

greater potential power for a generator. The MoCA site is at somewhat of a disadvantage because the river runs through a low point of campus, making it difficult to divert any flow for a typical microhydropower system. Many other methods of generating hydropower require the construction of a dam — the feasibility of which would need to be assessed. However, General Electric offers a self-contained module made of single or twin turbines, generators, and electrical cabinet, that can be assembled and mounted with a self-stabilized concrete structure that requires no civil works. This installation would not require significant vertical elevation to function. Still, installing hydropower would be labor intensive and require significant upkeep. Hydropower could also have important implications for the biological composition of the river, meaning this project would need to be done in conversation with the greater Hoosic River community. For a clearer understanding of hydropower's potential on campus, MoCA would need to dedicate or hire a specific team.



*Microhydroelectricity unit. Photo: GE Renewable Energy.*

f) Joe's Field



*History and Current Use:*

Joe's Field is the largest swathe of green space on the MASS MoCA campus, serving as an outdoor concert venue during the warmer months. However, beyond concerts, the space appears to be underutilized. Visitors briefly enter Joe's Field to view the James Turrell exhibit, but there is no seating or outdoor activities to pull them deeper into the space. The field is open to the larger community whenever MASS MoCA is open but doesn't see much use — likely due to its lack of shade, seating, and activities (Schlatter 2023). Our conversation with Eastman revealed that while he enjoys using the space to take breaks and eat lunch, he has to bring his own chair, and he would appreciate greater infrastructure (Eastman 2023). Former Director of Development Jennifer Trainer recalled staff softball games on Joe's Field in the early days of the museum (Trainer 2023). Joe's Field is also the site of multiple soil caps for contaminated soil,

meaning that any activity reaching below four feet of the soil and thus disturbing the cap is not permitted (Holden 2023). However, Holden (the LSP for MASS MoCA) highlighted that work in the remediated soil should be possible with proper supervision (Holden 2023).

Joe's Field thus presents a unique opportunity to develop infrastructure that would activate the space and make the field a place staff and visitors of all ages actively seek out. The Field is slightly constrained by its double function as a concert venue: items placed or built outdoors would need to be moveable to accommodate a concert crowd or occupy the space outside of the concert schedule.

*Possible courses of action:*

1. No change

This option is the least expensive and safest, but would leave all user groups in the same spot — unable to meaningfully use this space aside from a few days per year.

2. Picnic tables, Adirondack chairs, and raised garden beds

This option is relatively low-cost and would improve the ability of staff and visitors to take advantage of the space. With benches and tables (preferably with shade), staff could eat lunch and host meetings outside, and visitors would be able to linger in the space and appreciate campus with somewhere to sit and relax. The features could be removed a few times a year to clear the area for large performances.



*Left: Ping Pong in Bryant Park. Photo: NY1.*

*Right: Outdoors picnic tables. Photo: Yesterday Island.*

### 3. Lawn games and pavement games

The addition of lawn games like cornhole, bocce, and table tennis are also relatively low-cost. Additionally, game templates like hopscotch, Twister, and tic-tac-toe could be chalked onto the pavement. These additions would transform Joe's Field in a space for recreation and play, a function that currently does not exist anywhere else in the museum's outdoor space.

### 4. An embankment slide (or several) down the grass slopes

The grass lawn on Joe's Field is sloped, which presents an exciting opportunity to build embankment slides. Embankment slides are slides built into the ground, so they would require some amount of digging (11 inches). However, the digging would not go as deep as the 4-foot digging restriction for Joe's Field. The slides would be accompanied by steps to access the top (without steps, children will step on the grass, which would cause erosion). This would be an excellent leisure installation for visitors to engage with this part of campus.



*Example of an embankment slide. Photo: Natural Playgrounds Company*

#### 5. Implement “No Mow May”

With the majority of Joe’s Field already covered by grass, introducing No Mow May to the site offers an opportunity to support local pollinator habitat. Not mowing Joe’s Field during May, which is the warmest spring month in the Berkshires, will allow flowering plants to thrive and provide habitat for traveling bees, butterflies, and other pollinators. This recommendation can be customized to the needs of MASS MoCA employees. If a higher operational lift is possible, a small path could be mowed through the field for visitors to frolic in the meadow. If a lower operational lift is the target, Joe’s Field can be left alone for the month of May to grow freely. At the month’s end, many of the planter boxes across the campus will be full of blooming flowers and greenery, providing pollinators with another habitat after the grass in Joe’s Field is mowed.

g) Marshall Street Parking Lot



*Marshall Street Parking Lot looking north towards the entrance of the museum.*

*History and Current Use:*

The Marshall Street Parking Lot serves as the main parking lot for museum guests. It has one entrance and exit on Marshall Street. Visitors are greeted by the museum's large "MASS MoCA" sign and billboard-like advertisements for current and upcoming events and installations. The Route 2 overpass looms over the south end of the parking lot, while the Hoosic River frames the east and Building 12 frames the north. Marshall Street creates the parking lot's western border.

Visitors enter the museum after a two-three minute walk through the northeast corner of the parking lot. There is no dedicated walkway from the parking lot to the museum's front

entrance, so visitors must navigate through parked and moving cars into Courtyard A and then to the entrance. There is dedicated signage along the way, but it is easy to lose sight of the entrance as one passes through parking spots, archways created by buildings, and Courtyard A. There are other sources of parking for visitors, such as the Holden Street Parking Lots behind Big Y World Class Market and the Northern Berkshire District Court. Metered parking exists on St. Anthony's Drive.

The Marshall Street Parking Lot is one of the only areas with impermeable surface at MoCA not constrained by the AUL. The parking lot slopes westward toward the Hoosic River, where stormwater eventually empties. Currently, there are no rain gardens or capture basins for stormwater in the parking lot.

*Possible courses of action:*

1. No change

This option is the least expensive and would require no additional operational lift. It would leave the current parking structure in place but would keep a key area outside of the AUL completely paved. There would also be no changes to stormwater management and leave the entrance to the museum as a shared car and walking path.

2. Install rainwater capture basins and vegetated bioswales

This option would introduce rainwater capture basins to the parking lot. Since the parking lot naturally slopes west, the majority of rainwater capture would happen along the border of Building 13 and the edge of the Hoosic River. Curb opening inlets could be added to low spots within the parking lot, and vegetated bioswales could be placed between parking rows. This is a medium-cost option that requires third-party contractors, approval from the city of North Adams,

and operational lift from stakeholders across MoCA. It will increase the aesthetic and ecological value of the site while providing opportunities for artistic collaboration with the ecological design of the bioswales and increasing pollinator-friendly species on the campus. Since the Marshall Street Parking Lot is not constrained by the AUL, this option offers a chance to reduce impermeable surface on the campus without major shifts to traffic flow. Roughly 50 parking spaces will be eliminated with the redesign.



*Vegetated bioswales with native plantings. Photo: Rainwater Harvesting for Drylands and Beyond.*

3. Install green zone and pedestrian walkway replacing half of the Marshall Street Parking Lot

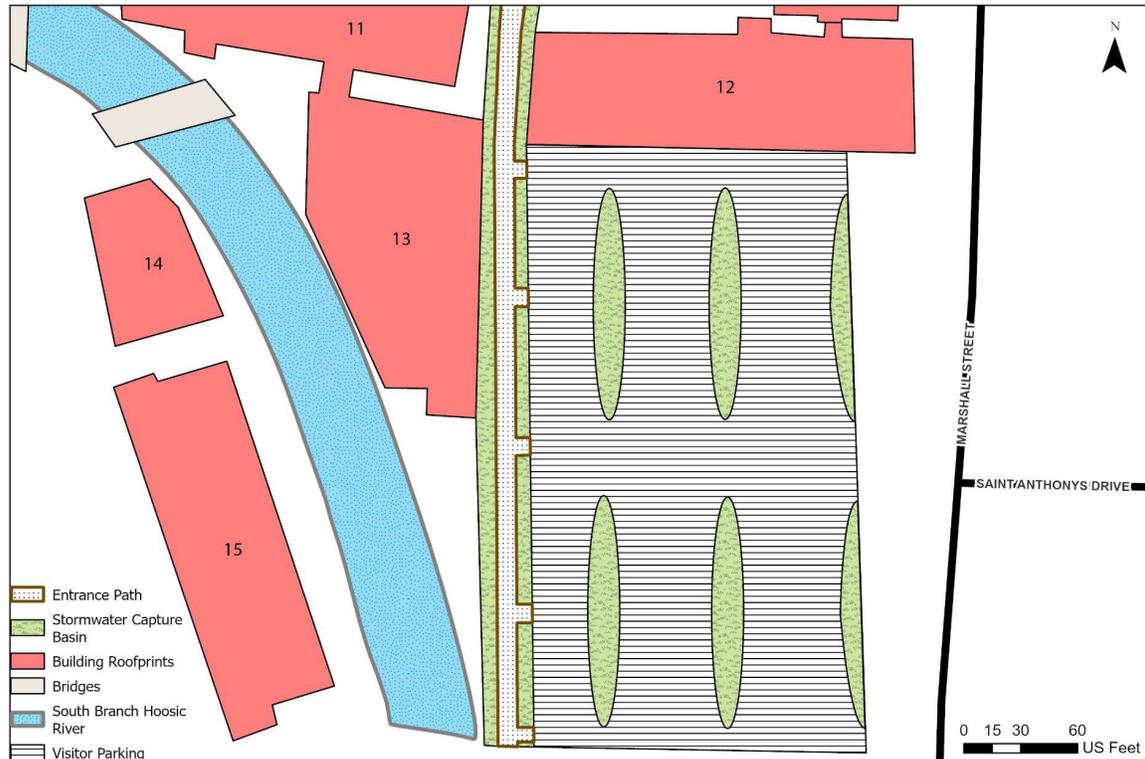
In addition to introducing vegetated rainwater capture basins throughout the parking lot, MoCA could redesign the western half of parking spaces to prioritize pedestrians and maximize



*Proposed green zone and entry pathway overlaid onto existing site.*

environmental benefits. The first fifteen feet removed from the impermeable surface abutting Building 13 could be a green zone to absorb runoff from nearby buildings and pavement. This area could include native and pollinator-friendly vegetation and offer opportunities for artist design collaborations. The next section could be a pedestrian-only walkway for anyone parked in the Marshall Street Lot. Since the area is not constrained by the campus AUL, existing pavement could be removed and replaced with a permeable material that allows for stormwater absorption

into the new capture basins. There are accessible parking spaces located in Courtyard A and ample parking for able-bodied visitors at the Holden Street Parking Lots. As a result, the loss of roughly 80 parking spaces on the western half of the parking lot would cause more visitors to park in the Holden Street parking lot and enter the campus through the eastern entrance to Courtyard A. Cars could not travel on this green pathway, but golf carts and other small motorized vehicles could travel through the area, allowing for continuity of operations for many staff members at MoCA.



*Proposed introduction of stormwater capture basins and entrance path surrounded by green zone in Marshall Street Parking Lot. Map credit: Brian Lavinio.*

This change would be valuable in all seasons and provide strong environmental benefits. The costs and associated operational lifts are the highest of proposed changes to the site — construction and maintenance would require both time and significant investment of resources. Changes would require significant third-party contractors, including landscape architects, environmental engineers, and construction firms, along with approval from the city of North Adams. It would also require improvements to signage at the Holden Street Parking Lot and updating online and paper resources for visitors.

#### 4. Removal of Marshall Street parking lot in favor of large green space

Removing the entire Marshall Street parking lot may appear to be a drastic site intervention, but this is one of the only outdoor spaces at MoCA not subject to any activity and use limitation, meaning it has the highest number of possibilities for digging and creating additional green space. In the place of asphalt and parking spaces could be the second largest green space on campus after Joe's Field. The site's proximal location to downtown North Adams, an area of the city that lacks green space, and abutting the South Branch of the Hoosic River, increase the placemaking value of converting the parking lot to green space.

To activate the green space, MASS MoCA could install community garden beds for local residents. The existing parking lot lacks trees and other potential sources of shade, so gardens should grow well during warm seasons. Exterior water connections could be added to Buildings 12 and/or 13 to provide gardeners with the necessary water to care for their gardens. A small pavilion or other gathering area could be added to further support placemaking and community engagement within the space. This would facilitate community events like harvest and seed sharing, engagements at the intersection of art and gardening, and other community-focused events.

Another possible vision for the space after removing the parking lot is installing a maze garden. In the spirit of MASS MoCA, this may not take on the traditional look of an Italian-style garden with arbors as the "walls of the maze." Possibilities include repurposing old building materials or sourcing local wood, stone, or other natural materials to commission an artist and landscape architecture firm to produce a designed maze. Trees and other planting would be included within and surrounding the maze to increase green space in the area and add shade for visitors in the hot summer months. A completely accessible installation and increased seasonality through greenery would ensure the maze is visited by all. Additional art installations could be

added throughout the maze to further partnerships with local artisans and continue an existing museum goal of bringing art into downtown North Adams. The maze would be visible from the Route 2 overpass, making it a new element of MASS MoCA's already iconic place in the North Adams cityscape.



*A maze of bamboo screens with a central seating area surrounded by greenery. Photo: Architizer.*

## h) Holden Street Parking Lots



*Holden Street Parking Lot behind Big Y World Class Market.*

### *History and Current Use:*

The Holden Street parking lots are located behind Big Y World Class Market and Northern Berkshire District Court. They serve as the primary parking area for staff of the museum and as overflow parking for visitors. In order to access MoCA's entrance, visitors travel down a pathway adjacent to the Northern Berkshire District Court. At the terminus, they must cross Marshall Street and enter Courtyard A. This is a larger parking area than the Marshall Street lot and often sits unfilled. It functions well on high-traffic days at MoCA, such as during FreshGrass and SolidSound. This parking lot is not constrained by the AUL. Currently, there are no rain gardens or capture basins for stormwater management in the parking lot.

*Possible courses of action:*

1. No change

MASS MoCA would continue instructing visitors to park in the Marshall Street parking lot, and the Holden Street lot would remain underutilized except during high-traffic days at the museum. This is a no cost option and has no additional operational lift for staff.

2. Convert the Holden Street Parking Lot to the main parking area for visitors



This option would be selected in conjunction with changes with the Marshall Street Parking Lot outlined in section 6(b). MoCA would instruct visitors to use the Holden Street Parking Lots as the primary parking area of the museum. Additional signage would be needed to guide people towards the museum. This intervention offers an opportunity for artist collaborations to design creative and functional signage to point visitors on Split-Rock Lane, which runs toward

the museum parallel the Northern Berkshire District Court. Artists could design installations for the cement tiles of the pathway or sculptures that could be placed nearby. Since part of the path is vegetated with trees, greenery could be planted on the remainder of the path to increase shade for pedestrians and make the walk a more comfortable experience. This would also help protect artworks from the harsh sun and elements throughout the year. Reshaping the pedestrian flow towards the museum would radically shift sight-lines of the museum for visitors. Rather than entering the museum from the Marshall Street Parking Lot and making a left turn towards the

entrance at Building 10, visitors will have a clear sight line of Courtyard A and MoCA's iconic Belltower as they enter the campus. Costs associated with this option would be directed towards changes to signage and commissioning artists to design pieces for the walkway. MoCA has the authority to include as many artworks as deemed appropriate for their operating budget. This option does require operational lift from multiple departments across the campus but considerations from outside contractors is limited. Permits from the city of North Adams do not seem necessary at this time.



*Photo: Downtown Pittsburgh.*

i) Other general recommendations

The following recommendations are not attached to a single site in MASS MoCA but are worth considering across the entire campus.

1. Vertical gardens on unused metal structures

There are large unused metal structures around campus, such as the ones above the bridge connecting Courtyard C to the Speed Way. These structures are suitable for hanging plants or a vertical garden.



*Left: Unused metal structures at MASS MoCA.*

*Right: Vertical gardens. Photo: Tensile Design & Construct.*

## 2. Remove or modify fences that currently surround MASS MoCA

In our interview with Thompson, he suggested the campus grounds would be more inviting to local residents if there were less fences surrounding the site, making it permeable. We recommend removing unnecessary fences or turning them into art installations.

## 3. Outdoor light installations

Given that the James Turrell exhibits are a highlight of MASS MoCA's galleries, we recommend bringing the theme of light to the museum's outdoor spaces by exploring possibilities to install lightworks or illumination installations. Outdoor lights would not only be aesthetically pleasing but would serve a functional purpose at night.



*Light installation by Jonathan Park at Landschaftspark Duisburg-Nord, Germany. Photo: Landschaftspark Duisburg-Nord.*

4. Create a guided tour or self-guided tour about MASS MoCA's industrial past

We think more information about site history could be made available and accessible to visitors. MASS MoCA's industrial history is an important part of its relationship with North Adams, but visitors may not be aware of the site's past. An engaging guided tour or a self-guided audio tour/pamphlet could be a way to encourage visitors to spend time exploring MASS MoCA's outdoor space.

9. **Matrix Evaluation of Alternatives and Final Recommendations**

In order to determine the best course of action on all parts of MASS MoCA's campus, we designed an evaluation matrix to assign a quantitative value to our set of qualitative recommendations. For each site, we evaluated all potential courses of action on a scale from one to five based on their cost, sustainability, risk, operational lift, placemaking/community-building value, and benefits to multiple user groups. We summed the criteria to determine a final score — low numbers indicate poor performance on the matrix, while high sums indicate strong options

for MASS MoCA to pursue.

Solution	(Low) Cost	Sustainability	(Lack of) Risk	(Ease of) Operational lift	Placemaking/ community building	Benefits to multiple user groups	Sum
No change	5	3	5	5	1	1	20
Repaint asphalt	4	1	5	4	1	3	18
Aesthetic paving	3	1	5	3	2	4	18
Water feature + seating	2	2	5	3	5	5	22
Skating rink	2	1	3	1	5	4	16
Park-like 3/4 Pedestrian only space	2	4	5	2	5	5	23

*Example matrix layout for Courtyard A.*

Given the output of the matrix, our final recommendations for each site are as follows:

**Courtyard A:** Create a park-like 3/4 pedestrian space with a water feature and seating.

**Building 3:** Install a pollinator garden.

**Courtyard C:** Revive movie nights, install mural on the wall.

**Courtyard D:** Add plants in the grates, raised garden beds, and pavement games.

**Hoosic:** Install river lighting, add vegetation on bridges.

**Joe's Field:** Add embankment slides, picnic tables, and lawn games; implement "No Mow May."

**Marshall Street lot:** Create a pedestrian walkway and add vegetated bioswales, replacing 80 parking spots.

**Holden Street lot:** Convert to main visitor parking lot.

## **10. Conclusions**

By examining MASS MoCA's industrial past, we gained an essential understanding of the reason for the current environmental limitations on the museum's site use. Arnold Print Works and Sprague Electric both contributed to the contamination of the site, leaving specific areas of the campus more or less polluted due to their specific roles in the manufacturing

process. Grounding ourselves in the site's historic uses and the subsequent remediation efforts — excavation, capping, and natural attenuation — allowed us to understand the Activity and Use Limitation and determine what actions would be permissible for MASS MoCA as it seeks to activate its outdoor spaces.

After studying the AUL and its implications for construction and site use, we were able to generate recommendations that corresponded to each area's specific use limitations and functions, enlivening these spaces while continuing to protect the health and safety of MoCA staff and visitors. Harnessing a placemaking approach allowed us to work within the framework of the AUL to generate recommendations that were feasible and built community. We then employed a quantitative matrix evaluation to rank our ideas, ultimately emerging with a few key recommendations for each main outdoor area of the museum.

Throughout our project, we were reminded of the fact that nothing is permanent at MASS MoCA, a guiding thread that encouraged us to think freely and creatively about the future we envisioned for the museum (Schlatter). When we arrived on the campus for our first site visit, the iconic *Tree Logic* was still in place. The very next week, it had been taken down after nearly 20 years. We acknowledge that MoCA is constantly in flux, and hope our recommendations — as well as the placemaking process we used to find them — will play a role in the next evolution of the campus.



*The team at our final presentation on December 13, 2023 with Professor Sarah Gardner. Left to right: Brian Lavinio, Tiffany Wu, Dover Sikes, Kitt Urdang, and Sarah Gardner. Photo: Judy Grinnell.*

## 11. Appendix: A Brief Environmental History of 87 Marshall Street

The following handout was distributed at the Dec. 13 final presentation at MASS MoCA and can be used as needed by Schlatter and others at the museum.



Photo Courtesy of Andy Schlatter

The story of 87 Marshall Street in North Adams, Massachusetts can be told through the physical characteristics of the site — the river, the buildings, and the soil. Situated at the confluence of the North and South branches of the Hoosic River, 87 Marshall Street has been used for multiple industrial processes before hosting MASS MoCA. In 1861, **Arnold Print Works** constructed the iconic red-brick factory buildings to manufacture and finish textiles. Printing, bleaching, and dyeing fabric required toxic chemicals and heavy metals; without proper disposal methods, such contaminants often leaked into the surrounding soil.

In 1942, **Sprague Electric Company** purchased the property to produce electrical components, including capacitors. To lubricate and insulate electrical devices, Sprague employed PCB-laced oil. While not found throughout the site, one oil spill by the train track contaminated the Building 21 Site, or what is now Joe's Field, with PCB-laced oil. Sprague also harnessed other toxic materials, like antimony, to make its products fireproof.

When Sprague shuttered operations, **MASS MoCA** began examining the development of the property into an art museum despite the enormous environmental liability looming over the site. To make the sale, Sprague's parent company took on the liability through a parent insurance company, Great American Financial Resources, Inc. (GAFRI). GAFRI took on any contamination or pollution that occurred from the ground down, while MoCA was responsible for any contamination from the ground up. Experts who visited the site found pollution accumulated by the operations of Arnold Print Works and Sprague remained in the form of **chlorinated volatile organic compounds (VOCs), metals (including antimony), PAHs, and PCBs.**

GAFRI funded numerous remediation efforts to ensure the site posed no significant risk for visitors and workers. Due to the varied industrial processes within the site, different areas were subjected to distinct remediation processes. These have included:

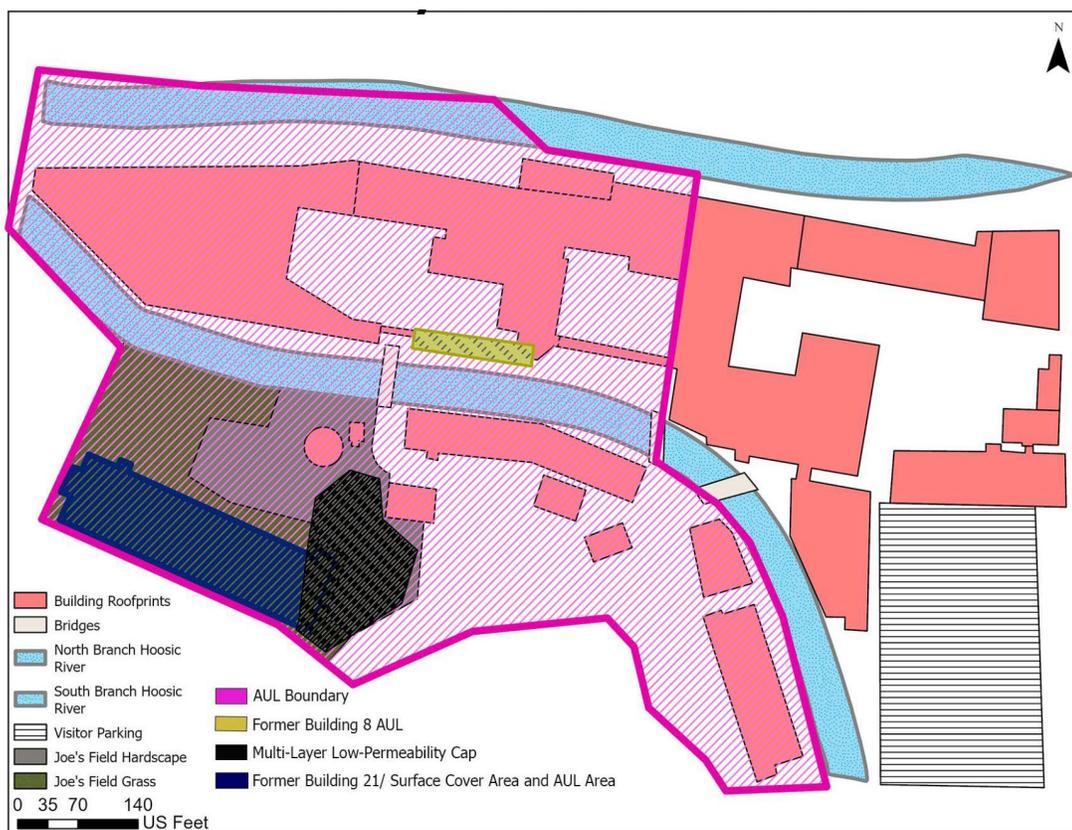
1. **Soil Excavation:** excavating and transporting contaminated soil to a waste disposal facility
2. **Capping:** covering contaminated soil with an impermeable cover (e.g. clay, asphalt)
3. **Natural attenuation:** allowing organic processes to clean up pollution in soil and groundwater.

Some remediation is ongoing — groundwater is still monitored to see the progress of biological attenuation of VOCs.

Due to space constraints, comprehensive citations can be found in the full environmental planning report, "Beyond Art and Asphalt: Re-envisioning Outdoor Space at MASS MoCA."

### AULs and Current Constraints at the MASS MoCA site

Most of the Mass MoCA site is under an **Activity and Use Limitation (AUL)** — meaning that the contaminants have been capped and the area is safe to visit, but some activities are risky and therefore prohibited. These activities include building for occupied use, agricultural use, and routine excavation. The AUL does not extend to the visitor parking lot, Buildings 1, 2, 3, 10, 11, 12, 13, 26, and 34, or the part of Mass MoCA closest to Marshall Street. The site of Building 21, now known as Joe’s Field, was the site of particularly severe contamination and is subject to its own AUL, as is the site of Building 8. However, the 87 Marshall Street site in its entirety has been able to gain a Class C Temporary Solution RAO, with established use limitations protective of health under current and reasonably foreseeable conditions. This means that there is **“no significant hazard”** to human health at the site under current conditions.



Map Credit: Brian Lavinio/Williams College

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