

AGENDA

Economic Development Commission

In-Person / Electronic Meeting

New Brighton City Hall; 803 Old Hwy 8 NW Upper Level Conference Room / Zoom January 5th, 2022 | 7:30 a.m.

- Attend the meeting in Person: Members of the public and the Economic Development Commission may attend the meeting in person. Attendees required to wear masks and comply with social distancing parameters regardless of vaccination status.
- Watch the meeting electronically: To observe the meeting electronically, visit the City website or tune into CTV Channel 8023 (CenturyLink) or Channel 16 (Comcast).
- Join the meeting electronically: Members of the Economic Develoment Commission may attend the meeting remotely persuant to MN Statutes 13D.021. If you would like to interact with our public officials or staff but are not comfortable attending the meeting in person, you may join the meeting electronically. Visit: https://us02web.zoom.us/j/82196592215?pwd=VGVZZE9DU2xjMUtVQIViRGNKVTA1dz09
 (no app needed) or use your Zoom app to join by entering: Meeting ID: 821 9659 2215 and Passcode: 672150

I. Call to Order

II. Roll Call*

- Chair Harry Carter
- Commissioner Bob Benke
- Commissioner Bret Fynewever
- Commissioner Mike Murlowski
- Commissioner Max Nundahl
- Commissioner Anthony Pledger
- Commissioner Jacqui Sauter
- Commissioner Paul Zisla
- Appointment Pending

III. Approval of Agenda

IV. Approval of Minutes

1. November 3rd, 2021

V. Report from City Council Liaison

^{*} A quorum of the City Council may be present.

VI. Business Items

- 1. Business Outreach Program Updates
 - a) Member Assignment Updates
 - b) Draft Newsletter Review
 - c) Ice Castles Postcard
- 2. Public Art and Event Tourism Follow-Ups
- 3. Silver Lake Road Mixed Use Planning Project Status Update
- **4.** Review of MN Economic Trend Articles (Dec 2021)

VII. Adjournment



MINUTES

New Brighton Economic Development Commission Regular Meeting – November 3, 2021 7:30 a.m.

I. Call to Order

Chair Carter called the meeting to order at 7:30 a.m.

II. Roll Call

<u>Members Present:</u> Chair Harry Carter, Commissioners Bob Benke, Bret Fynewever, Mike Murlowski, Max Nundahl (arrived at 7:42 a.m.), Anthony Pledger (attending via Zoom), Jacqui Sauter (joined the meeting via Zoom at 8:23 a.m.) and Paul Zisla

Members Absent: None

Also Present: Ben Gozola- Assistant Director of Community Assets & Development, Jennifer Fink-Director of Parks and Recreation, and Councilmember Pam Axberg

III. Approval of Agenda

Motion by Commissioner Zisla, seconded by Commissioner Benke to approve the agenda as presented.

A roll call vote was taken. Approved 6-0

IV. Approval of Minutes

Motion by Commissioner Fynewever, seconded by Commissioner Benke to approve the minutes from the October 6, 2021 meeting.

A roll call vote was taken. Approved 6-0

V. Report from Council Liaison

Councilmember Axberg provided the EDC with an update from the City Council. She thanked the Parks and Recreation Department for their efforts on the Pumpkin Walk noting this event was very well attended. She reported the Council met with CPY recently at a worksession meeting and discussed the great work they were doing in the community. She indicated another worksession meeting was spent with the Ramsey County Sheriff's Department discussing SWAT operations and the partnerships the New Brighton Public Safety Department has with Ramsey

County. She reported the Council has been addressing several Special Use Permit requests at recent City Council meetings. She explained the City was forming an Equity Commission and was taking applications at this time and noted appointments would be made in December.

VI. Business Items

A. Event Tourism Discussion with Director of Parks and Recreation Jennifer Fink

Fink discussed event tourism in New Brighton, along with the current limitations the City has when it comes to event tourism and suggested specific ways that the commission can support increased traffic and publicity to the City. She discussed the work being done to draw people to the community by Twin Cities Gateway. She commented on the events New Brighton sponsors currently, which included a Chalk Fest, a tails on the trails event, community bonfires, snow sculpture, ice castle, pumpkin walk, the Eagle's Nest, and farmers market.

Discussion included:

- The Commission encouraged the City to find ways to capitalize on the visitors that come
 into New Brighton for the ice castle and recommended a winter night market with food
 trucks be pursued. Staff explained this may be difficult to plan because the ice sculpture
 was weather dependent, but noted staff could work to expand the community bonfire
 events.
- The Commission suggested a cycling or Ironman competition be considered for New Brighton.
- Staff noted a concert series was being considered for Veteran's Park in 2022. The vision for Veterans Park and the Community Center was discussed with the Commission.
- A snow sculpture contest was discussed.
- Staff provided further information regarding the monument signs that would be pursued in the coming years.

B. Business Outreach Update from Commissioner Sauter

Gozola reported staff would like to take an opportunity on to update the commission on our initial outreach efforts, feedback received to date, and share a first draft/template of the quarterly newsletter we intend to publish as part of this program.

Commissioner Sauter explained she met with Guardian Property Management, Wilson Wolf and Johnson Screens since the past EDC meeting. She discussed the information she gained from these businesses and learned what their challenges were in the community. She reported all three businesses were facing labor and supply shortages. She noted the City could help these businesses by posting their job openings. She indicated the businesses were also interested in being highlighted within a quarterly business newsletter.

Discussion included:

- The Commission supported sending out additional letters to businesses in the community and posting jobs within a newsletter.
- The benefit of compiling an email list for all local business owners was discussed.
- Further discussion ensued regarding how the Commission would continue to engage local business owners.

C. Zoning Code Update

Gozola updated the commission on the progress being made on the zoning code and relayed what this means for businesses in New Brighton. The timeline for the project was discussed and it was noted staff was working on the zoning code update in house. Staff estimated the zoning code update would be completed by the end of 2022.

Discussion included:

• The Commission thanked staff for the update and for their efforts on this project.

VII. Adjourn

Motion by Commissioner Benke, seconded by Commissioner Zisla to adjourn the meeting.

A roll call vote was taken. 8 Ayes, 0 Nays, Motion carried

Meeting adjourned at 8:59 am

Respectfully submitted,

Ben Gozola Assistant Director of Community Assets and Development



New Brighton Business Outreach Newsletter

JANUARY 2022 ISSUE: 1

BUSINESS SPOTLIGHT

Wilson Wolf

Every quarter the city would like to highlight a different business in our community. If you're interested in highlighting your business in our newsletter please contact Jill Cady with a picture and short blurb about your company. This quarter we're spotlighting Wilson Wolf a medical device manufacturer located off Old HWY 8.

Wilson Wolf creates hope for cancer patients, one device at a time. They accomplish this by way of simplifying T-cell therapy through our G-Rex platform. Current Focus: To provide the field of immunotherapy with the best technology for cell production. Their G-Rex® product line is quickly being adopted by the field as the gold standard. Two: To provide those performing routine cell culture with a far superior alternative to traditional culture ware such as plates, flasks, and bags.



2100 Old Hwy 8 NW, New Brighton

WHAT'S NEW IN NEW BRIGHTON?

Holiday Cheer!

The City is pleased to announce that we will once again be hosting The Ice Castle in Long Lake Regional Park. Weather permitting, the castle will open as early as New Year's Eve a run until (most likely) end of February.

In additional to the Ice Castle there will also be a monthly <u>winter farmers</u> <u>market</u> at the New Brighton Community Center the 2nd Wednesday of the month from 3:00-7:00 PM.



Upcoming Meetings

January 11, 2022 City Council Meeting 6:30 PM (in-person)

January 18, 2021 Planning Commission Meeting 6:30 PM (in-person)

February 2, 2021 Economic Development Committee Meeting 7:30 AM (in-person)



Reimagining Silver Lake Road

The Silver Lake Road Mixed Use Planning Project is looking at the future of three key areas along the roadway in New Brighton.

The purpose of this project is to have the community provide guidance for the future zoning standards for the mixed use areas along Silver Lake Road. <u>Visit the project website</u> to register for email updates, participate in surveys and leave your comments on the interactive map!

Phase 1 of community engagement has already wrapped but please sign up to give us feedback on the proposed concepts for each of these nodes!



Old Highway 8 Opens

New Brighton is pleased to announce Old Highway 8 has officially opened! After four months of construction our engineering team wrapped this project in early November. Thank you to the residents who were so patient during this process. We hope you are enjoying the new corridor!



New Housing Development

North Shore Development Partners LLC and Kaas Wilson Architects are excited to present New Brighton with its first, Class A, market rate apartment building at 2299 Palmer Drive. The proposal on the former, now vacant, U.S. Bank site located in the northeast quadrant of the I-694 & Silver Lake Blvd adds a first-class multifamily rental building comprising of 132 units, enclosed parking, and offers several highly desirable amenities for residents has broken ground.

The site was originally developed in 1974 and home to a 69-stall surface parking lot and a functionally obsolete, vacant U.S. Bank building. Thoughtfully designed to revitalize and diversify New Brighton's housing stock, this proposed development not only meets, but progresses the housing goals of New Brighton by removing a vacant building and adding an attractive new building that will bring approximately 200 renters to the community. To further contribute to the City's goals, 14 units in the building will be offered to residents with 60% of the area median income.

Funding Opportunities

- Open to Business Small Business Load Program
- Small Business Association Covid-19 Relief Options

Economic Development Commission

- Bob Benke
- Harry Carter
- Clint Kuipers
- Bret Fynewever
- Max Nundahl
- Anthony Pledger
- Jacqui Sauter
- Paul Zisla

Let Us Help You!

Are you thinking about expanding? Moving? Hiring? The City is in contact with people every day who are looking to sell property, rent space, or relocate their family to the City, and we may be in a position to help you make a connection that could otherwise be missed. We'd love to have the opportunity to participate in your success, and will happily forward prospects your way – just let us know your needs so we can work on your behalf.

If your business is interested in being partnered with one of the commissioners to help your business reach its goals please <u>click here</u> to sign up for our new business liaison program.



newbrightonmn.gov



Agenda Section: VI

Item: 2

Report Date: 12/30/21

Commission Meeting Date: 01/05/22

REQUEST FOR COMMISISON CONSIDERATION

ITEM DESCRIPTION: Public Art & Event Tourism Follow-ups
DEPARTMENT HEAD'S APPROVAL:
CITY MANAGER'S APPROVAL:
No comments to supplement this report Comments attached

Recommendations:
Consider and provide feedback/recommendations on options for

weaving public art into public works initiatives

History: • During previous EDC meetings, commissioners have discussed public art

initiatives in other cities and ways New Brighton could leverage art to

create a sense of place within New Brighton.

Financial Impact: • Ancillary financial benefits can and will arise as a unique sense of place is

nurtured in the Community.

Summary: • As a follow up to discussions on public art and event tourism held this year,

staff will be presenting some examples we've found of how art and public works projects have been intertwined in other communities to determine

if any of those strategies is recommended for New Brighton.

Attachments: A) Asphalt Art Guide

B) Place Making Initiatives (Tactical Urbanism Organizers)

Ben Gozola, AICP.

Assistant Director of Community Assets and Development

Asphalt Art Guide

How to Reclaim City Roadways and Public Infrastructure with Art



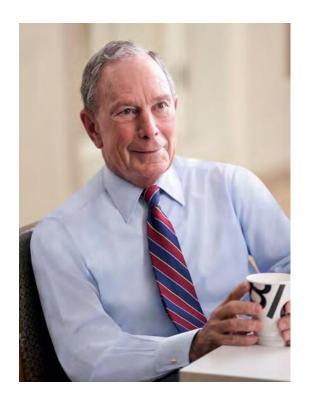
3	ABOUT THE GUIDE
9	CASE STUDIES
12	Art in the Roadway
34	Art in Pedestrian Space
48	Art on Vertical Infrastructure
65	TOOLS & TACTICS
68	Project Initiation
74	Assembling a Team
79	Managing a Budget
82	Design Development
90	Engaging the Community
92	Implementing the Project
96	Maintenance and Stewardship
100	Project Evaluation

ABOUT BLOOMBERG PHILANTHROPIES

Bloomberg Philanthropies invests in 510 cities and 129 countries around the world to ensure better, longer lives for the greatest number of people. The organization focuses on five key areas for creating lasting change: Arts, Education, Environment, Government Innovation, and Public Health. Bloomberg Philanthropies encompasses all of Michael R. Bloomberg's giving, including his foundation and personal philanthropy as well as Bloomberg Associates, a pro bono consultancy that works in cities around the world. In 2018, Bloomberg Philanthropies distributed \$767 million.

Cover photo: The Oval, Philadelphia, PA (Case study on page 31). Mural by Jessie and Katey. Photo by Steve Weinik,

A MESSAGE FROM MICHAEL R. BLOOMBERG

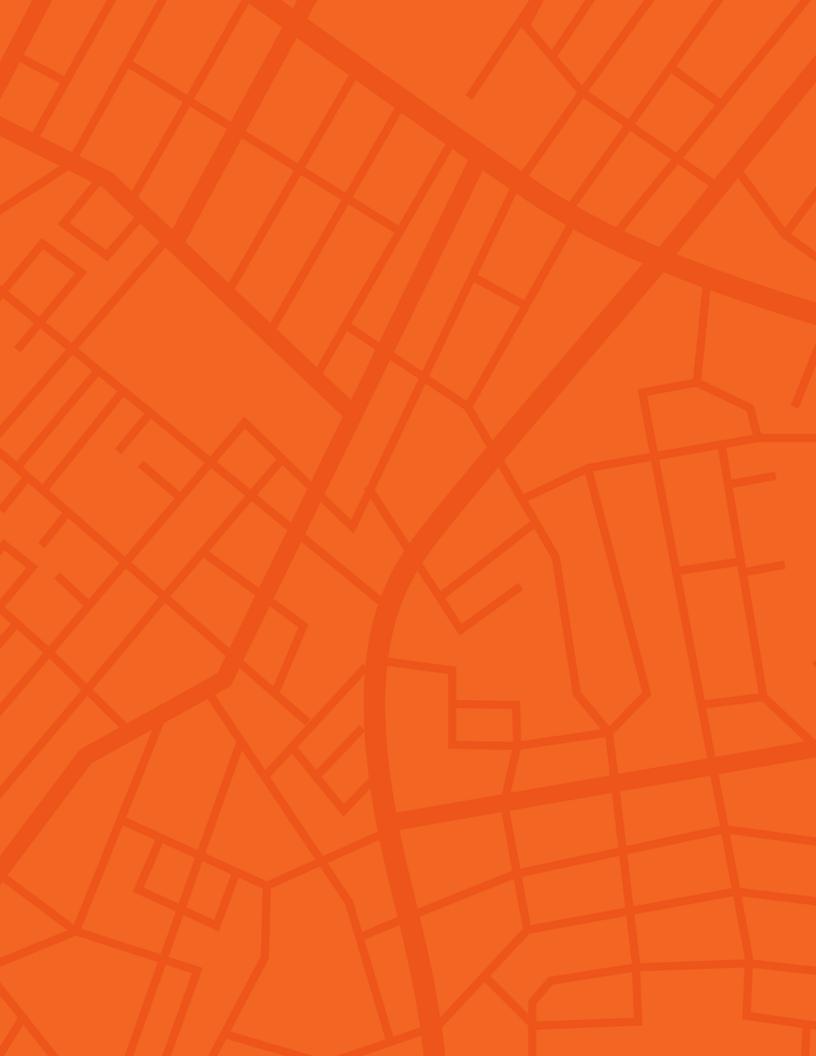


Public art has the power to reshape the way we experience our cities. We saw that time and again during my time as Mayor of New York City: art could remake streets and improve public safety, inspire people, draw in visitors, and enhance residents' quality of life. And when we combined our public art projects with our efforts to strengthen city infrastructure through new public plazas or bike lanes, we created even safer, more vibrant streets for everyone.

Now, we're working to share our experience and enliven streets and plazas around the world. Bloomberg Associates, our pro bono consulting firm that advises cities worldwide, has worked in collaboration with the experts at Street Plans Collaborative and with public art consultant Renee Piechocki to produce this guide for cities and city leaders.

The Asphalt Art Guide highlights more than two dozen art installations on streets, sidewalks, plazas, and utility boxes in cities across the U.S. and the world. We hope these case studies inspire more cities to develop and pursue their own projects to brighten city infrastructure and enhance neighborhoods. The guide also includes practical tips and best practices to help city agencies, community organizations, and artists carry out successful asphalt art installations.

Every project is unique, and every city will have its own approach – that's part of what makes this work so dynamic. But we believe that by sharing lessons we learned in New York City, and that dozens of others have learned through their own projects, we can give more city leaders the tools and inspiration to create brighter, safer, more welcoming streets for residents and visitors alike.



ABOUT THE GUIDE

Asphalt Art on City Streets and Public Infrastructure



Cities and citizens around the world are recognizing the potential of art to reimagine roadways and vertical infrastructure, improving street safety, revitalizing public spaces, and bringing communities together. The increasing demand for these arts-driven transportation projects has inspired the creation of this Guide. Our goal is to share ideas and step-by-step tips for city agencies, community groups, and artists interested in undertaking these kinds of projects.

While cities incorporate art into public spaces in a variety of ways, the specific focus of this Guide is what we're calling *asphalt art*: visual interventions on **roadways** (intersections and crosswalks), **pedestrian spaces** (plazas and sidewalks), and **vertical infrastructure** (utility boxes, traffic barriers, and underpasses).

Taken together, these relatively low-cost, often shortterm and scalable projects can create immediate positive impact and catalyze long-term improvements to the public realm.

The Guide documents a wide variety of project types and champions – from formal city-sanctioned programs to citizen-driven interventions. It also identifies key considerations, including liability and permitting, community engagement, artist curation, and installation methods.



Every city and every street are different. Not all the examples or processes in these pages will be relevant to every project, and not all streets are appropriate candidates for these kinds of treatments. But with the right local teams, sites, and projects, asphalt art has been proven to reshape the public realm quickly, affordably, and effectively.

By gathering insights and advice from dozens of projects around the world, the *Asphalt Art Guide* can inspire and inform professionals, advocates, and residents looking to make their streets and communities safer, more attractive, and more welcoming.

Colourful Crossings, London, UK (Case study on page 23)

Mural by Office for Crafted Architecture Photo by Better Bankside

About the Authors

BLOOMBERG ASSOCIATES

Bloomberg Associates is a philanthropic consulting organization founded by Michael R. Bloomberg in 2014. We work side by side with client cities to improve the quality of life for residents, taking a strategic, collaborative, and results-oriented approach to make cities stronger, safer, more equitable, and efficient. Our team of globally recognized experts and industry leaders has worked with cities across the globe on hundreds of projects in order to ignite change and transform dynamic vision into reality.

The Transportation team, led by Janette Sadik-Khan, former Commissioner of the New York City Department of Transportation, helps city leaders leverage their street infrastructure to deliver smarter, safer street designs that improve mobility for people on foot, bicycle, or transit.

The Cultural Assets Management team, led by Kate D. Levin, former Commissioner of the New York City Department of Cultural Affairs, works to make the creative sector a vital element of each client city's economy, identity, and quality of life.

For more information on the consultancy, please visit bloombergassociates.org or follow us on Twitter @BloombergAssoc.

Bloomberg Associates Project Team: David Andersson Tracey Knuckles Nicholas Mosquera Andy Wiley-Schwartz

Design: Bloomberg L.P.

STREET PLANS COLLABORATIVE

Street Plans is an internationally recognized urban planning and architecture firm with offices in New York and Miami. We believe that the key to creating healthy, prosperous communities rests in the design of great streets and public spaces. We work with clients to identify ways to create and activate public spaces, while at the same time designing streets and neighborhoods that make it easy and safe to bike, walk, and take transit.

Street Plans is recognized as the leading global practitioner of tactical urbanism, which is an approach to neighborhood-building using short-term, low-cost, and scalable interventions to catalyze long-term change. We've produced over a dozen publications on street design and public space. Principals Mike Lydon and Tony Garcia are the authors of the acclaimed *Tactical Urbanism*, published by Island Press in 2015. For their contributions to the field of architecture and planning, they were awarded the Seaside Prize in 2017.

For more information on our work, visit street-plans.com or follow us on Twitter @StreetPlans.

Street Plans Project Team: Tony Garcia Mike Lydon Irene Balza Dana Wall

RENEE PIECHOCKI

Renee Piechocki is passionate about developing projects and initiatives to engage artists and communities in the public realm. She is an artist, administrator, advocate, and consultant. In recognition of her contributions to the field, she received the 2018 Public Art Network Leadership Award from Americans for the Arts.

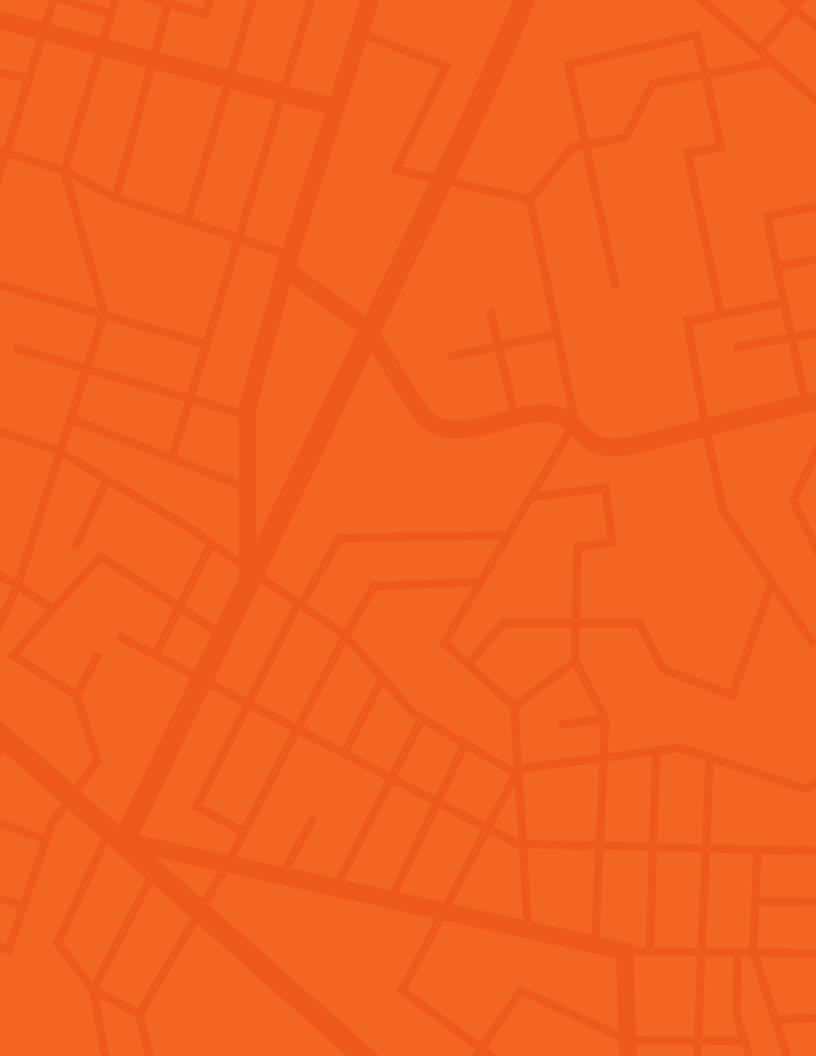
How to Use the Guide

Piazze Aperte Porta Genova project, Milan, Italy (Case study on page 45) Photo by Bloomberg Philanthropies The Guide is organized into two distinct sections:

Case Studies – A look book of 26 asphalt art projects from around the world. Led by either a municipal agency or the local community, each description includes general background as well as a "best practice" highlight detailing a particularly noteworthy aspect of that project.

Tools & Tactics – An overview and discussion of key process steps for planning a project, as well as pro tips for aspiring asphalt artists. This summary of best practices includes information on community involvement, materials, and design as well as project implementation and maintenance.





CASE STUDIES





Case Studies

This section takes a close look at 26 projects from around the world implemented in the past decade, showcasing the variety of successful ways to incorporate artwork on city streets and public infrastructure.

Each project team has a story to share about its challenges and keys to success. Some of the highlighted installations were one-off projects, while others were part of ongoing initiatives. Project organizers range from city agencies to nonprofit organizations, neighborhood groups, or even individual artists. The initiating impulses for the projects often include traffic calming as well as community-building and celebrating cultural identity within a neighborhood.

The case studies include information on project attributes like material types and associated costs, design and engineering justifications, project creators, installation methods, collaborative strategies, project evaluation, and lessons learned. Each case study also features a "best practice" spotlight on a specific project element that led to successful implementation or catalyzed meaningful policy or infrastructure change.

Projects have been divided into categories based on the type of infrastructure involved:

ART ON THE ROADWAY

This category includes mural projects on paved areas that are accessible to motor vehicles, such as intersections, crosswalks, and other surfaces within the active roadway.

ART IN PEDESTRIAN SPACE

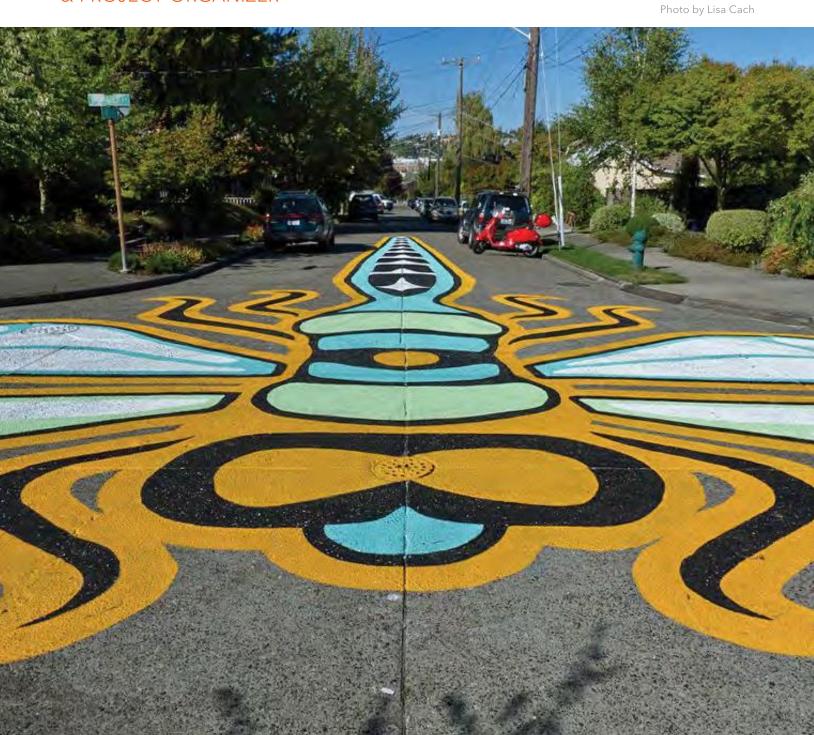
Projects in this category are on paved areas that are inaccessible to motor vehicles while the artwork is in place, such as curb and sidewalk extensions as well as any surface that has been temporarily or permanently converted into a public space or plaza.

ART ON VERTICAL INFRASTRUCTURE

This category features art projects installed on vertical infrastructure, including utility boxes, traffic barriers, and highway underpasses.

"The biggest impact from this project has been the lasting relationships that have been built in the neighborhood from collaborating together."

LISA CACH COMMUNITY MEMBER & PROJECT ORGANIZER



Green Lake Dragonfly

LOCATION

Seattle, WA

TYPE

Standalone Project

LEAD ENTITY

Team Dragonfly

ARTIST

Lisa Cach (community member)

TIMELINE¹

1.5 years

DURATION

Indefinite, maintained every 1-3 years

MATERIALS

Latex traffic marking paint

COST

Materials: \$1,000

Design Fee: (community designed)

Labor: (volunteer)

THE PROJECT

The Green Lake Dragonfly mural is a community-driven project that was funded by the City of Seattle's Neighborhood Matching Fund (NMF) program. To be eligible for funding, the group of neighbors near the project, deemed Team Dragonfly, needed to obtain approval from all community members with properties adjacent to the site and demonstrate that the project would enhance public space. After successfully securing the funds, the team worked with the City of Seattle's Department of Neighborhoods and local partners to obtain permits and coordinate the installation.

BEST PRACTICE HIGHLIGHT: TEAM COOPERATION

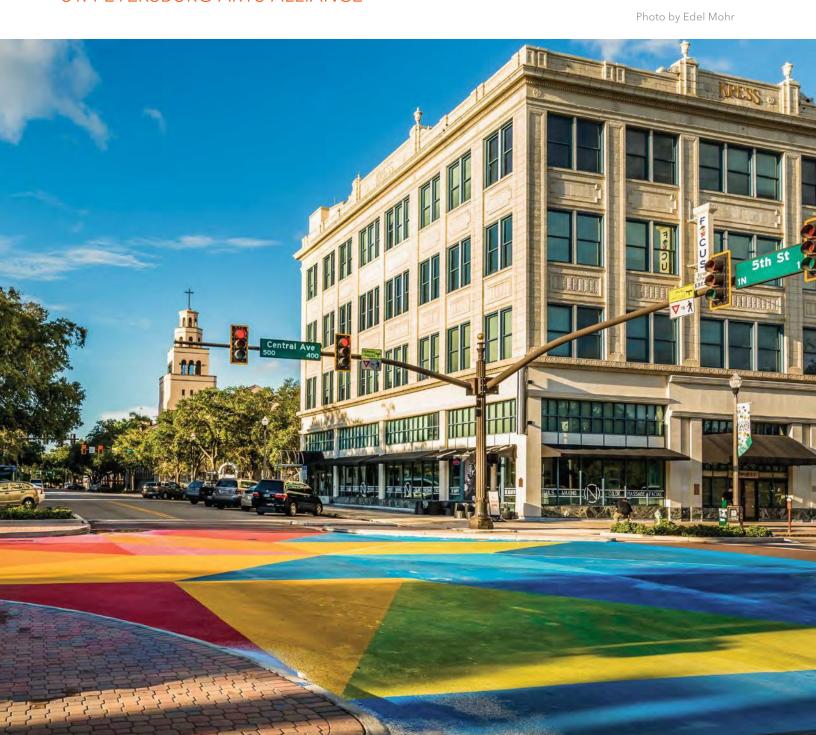
Prior to the installation, each team member assumed different roles, including applying to the NMF, creating the design, obtaining permits, and gathering signatures, supplies and donations. The success in building community relationships led the team to repaint the Dragonfly mural in 2014, 2015, 2016, and 2019.

¹ Indicates time between the project's initiation and completion.

"The mural was a great way to bring the community and politicians together around a unique and unusual project that celebrates art in the city."

JOHN COLLINS

EXECUTIVE DIRECTOR, ST. PETERSBURG ARTS ALLIANCE



Common Ground

LOCATION

St. Petersburg, FL

TYPE

Standalone Project

LEAD ENTITY

St. Petersburg Arts Alliance

ARTIST

Cecilia Lueza

TIMELINE

1 month

DURATION

Indefinite

MATERIALS

Latex traffic marking paint, non-slip additive

COST

Materials: \$4,000 Design Fee: \$1,000 Labor: (volunteer)

THE PROJECT

In 2016, the St. Petersburg Arts Alliance installed St. Pete's first asphalt intersection mural, Common Ground, as part of the city's SHINE Mural Festival, a city-wide mural festival highlighting local and international artists. The installation took place at an intersection in a central location of the city after the Arts Alliance saw the activity as an opportunity to involve the community in the festival.

To accomplish this task, the organization reached out to Cecilia Lueza, an artist and local resident, after seeing a similar project of hers in Fort Lauderdale. Given her experience, Lueza was able to advise the Arts Alliance about paint types, liability concerns, and other resources needed to carry out the installation. The Arts Alliance led a public engagement campaign and promoted the installation to the community, inviting them to take part. Over 50 volunteers participated in the single-day installation, which kicked off the week-long festival during which the Arts Alliance oversaw the installation of 18 additional murals throughout the city.

BEST PRACTICE HIGHLIGHT: FUNDING

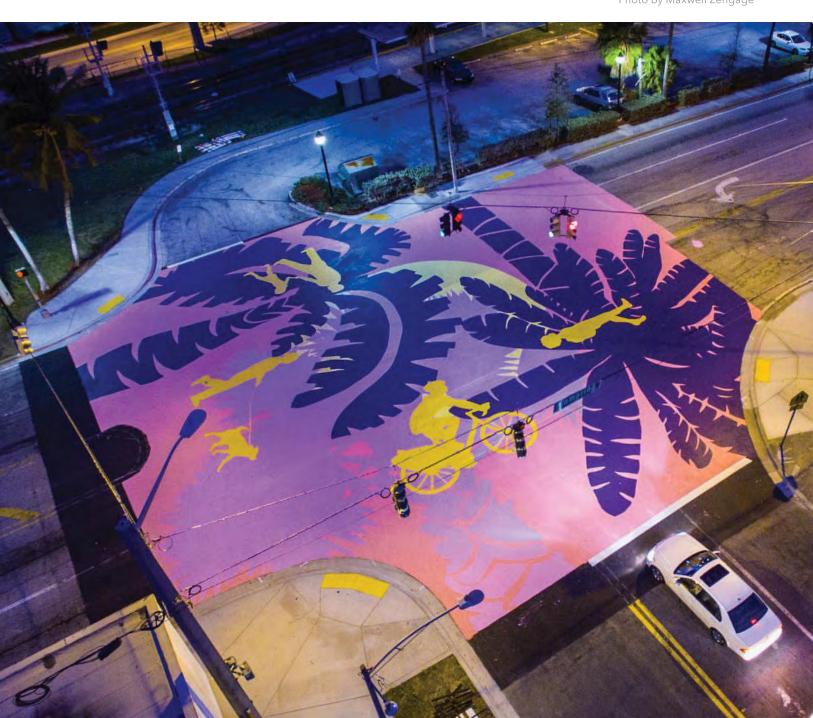
In 2014, the Mayor's Office of Cultural Affairs recognized mural art as an important practice in the city and awarded the St. Petersburg Arts Alliance, an umbrella arts nonprofit supporting the city's cultural sector, with a \$25,000 grant to initiate the SHINE Mural Festival. The Arts Alliance then matched this contribution with \$75,000 in private, in-kind donations to kick-start the first year of the festival. Since its inauguration in 2015, the festival has installed more than 70 murals in the city. Every artist who participated in the SHINE festival, including Lueza, received \$1,000 upon completion of the murals.

"The key to these projects is in finding great partners that will provide the necessary knowledge for each step."

HEATHER DANFORTH

SENIOR PLANNER,
CITY OF WEST PALM BEACH

Photo by Maxwell Zengage



Walks of Life

LOCATION

West Palm Beach, FL

TYPE

Standalone Project

LEAD ENTITY

City of West Palm Beach

ARTIST

Alexander Dreyfoos School of the Arts Students

TIMELINE

6 months

DURATION

3 years

MATERIALS

Commercial-grade driveway paint

COST

Materials: \$15,000

Design Fee: (student designed)

Labor: (volunteer)

THE PROJECT

In 2016, the City of West Palm Beach received technical assistance from Street Plans Collaborative as part of a Knight Foundation-funded tactical urbanism program funding short-term, low-cost interventions to repurpose a neighborhood intersection as a community space. The city partnered with the visual arts department at the Alexander Dreyfoos School of the Arts to have students design a street mural with high visual impact for the busy intersection of Tamarind Avenue and Fern Street near the city's Tri-Rail station, the nearby commuter rail service.

The project's goals were to slow motorists down, further the goals of the city's mobility master plan, and improve street safety, particularly for pedestrian commuters. The artwork, titled Walks of Life, was installed in March 2017 by over 100 volunteers in two days. In 2019, the same partners came together to redesign and install a new iteration of the project while the city continues to plan for an eventual capital redesign of that intersection.

BEST PRACTICE HIGHLIGHT: INTERDEPARTMENTAL COLLABORATION

To make this project happen, city planners, engineers, economic development staff, the Development Services Department's Art in Public Places coordinator, Street Plans, and a local arts school all formed part of the team. Street Plans, hosted a workshop with the students where designs were developed, materials were tested, and a design voted on. Street Plans coached the city and students during the process, but implementation was led entirely by the city, which began coordination efforts with the team four months prior to the installation.

The Planning Department handled all project coordination and public outreach. The Art in Public Places program facilitated the call for artists and managed all aspects of the design installation. The Economic Development Department oversaw the project budget and public relations efforts. Last, the Engineering Department reviewed installation plans and provided traffic control and site preparation.

"There is a real sense of empowerment when the community is allowed to play a leadership role to create something special in their neighborhood."

GREG RAISMAN

LIVABLE STREETS PROGRAM SPECIALIST,
PORTLAND BUREAU OF TRANSPORTATION

Mural by Colleen Smith Photo by Greg Raisman



Intersection Repair

LOCATION

Portland, OR

TYPE

Ongoing Program

LEAD ENTITY

City Repair; Portland Bureau of Transportation

ARTIST

Community-determined for each site

TIMELINE

Online applications accepted on a rolling basis

DURATION

1-25 years

MATERIALS

Acrylic deck stain, acrylic traffic paint, non-slip additive

COST

Materials: \$500-\$3,000 Design Fee: (volunteer) Labor: (volunteer)

THE PROJECT

City Repair is a Portland nonprofit organization that promotes placemaking projects by transforming streets into community spaces. Its most popular initiative, Intersection Repair, encourages community members to work together to build gathering spaces by making creative use of the right of way. As a result of the popularity of these projects, the City of Portland Bureau of Transportation (PBOT) created a streamlined permitting program called Street Paintings. Through this program, community members can propose an intersection mural design and location and work with the City Traffic Engineer to obtain design approval and technical guidance for the implementation. The mural designs are typically developed by an artist from the community by gathering community input and translating their collective vision into a physical design.

For all proposals, PBOT requires a signed petition from all residents with properties adjacent to the mural and within 400 feet along the road that is being painted. Although some city grant programs are available to community members for these projects, the murals are typically entirely funded by the community and maintained every one to three years until they fade away. As of 2019, City Repair and PBOT have overseen over 70 Intersection Repair projects.

BEST PRACTICE HIGHLIGHT: PUBLIC PRIVATE PARTNERSHIPS

The grass-roots movement to reclaim public space for community use began in 1996 among Portland neighbors who came together to organize. Over time, the group eventually gained municipal support by demonstrating that these projects shared many of the city's planning goals for improving quality of life and creating public safety by bringing communities together.

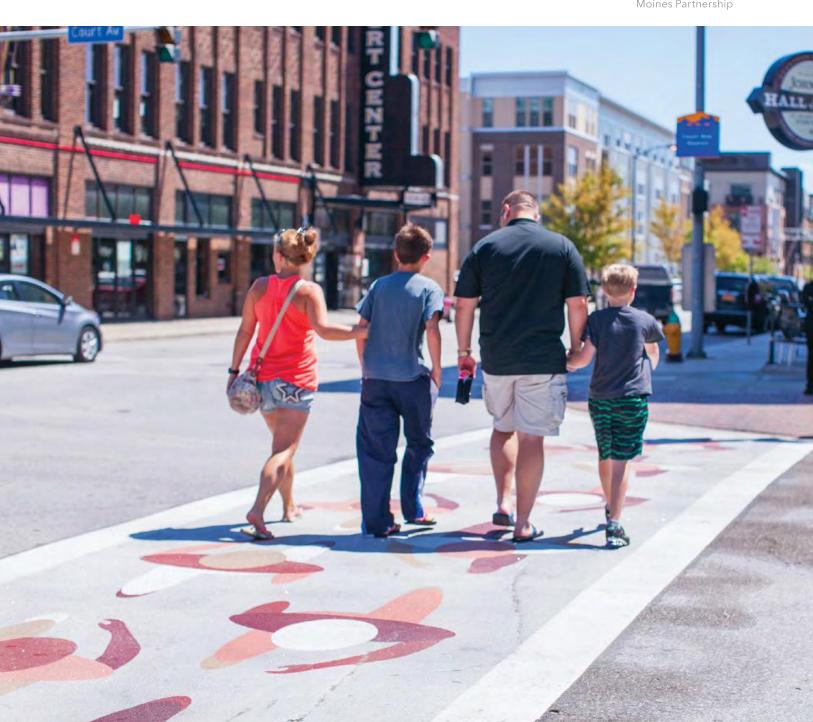
The initiative was formalized in a series of municipal ordinances, the first in 1997 that permitted a pilot study of intersection murals, and a second in 1998 that established the Intersection Repair City Ordinance to legally allow communities to design and designate public places that reflect local culture. PBOT now works with the City Repair organization to support community efforts to obtain an approved design of the murals, build community consensus, and manage the street painting.

"Art Route has helped broaden and season the conversations about increasing walkability and implementing temporary public art on both the city and community level."

TIFFANY TAUSCHECK

CHIEF STRATEGY OFFICER,
GREATER DES MOINES PARTNERSHIP

Photo by Greater Des Moines Partnership



Art Route Des Moines

LOCATION

Des Moines, IA

TYPE

Standalone Project

LEAD ENTITY

Greater Des Moines Public Art Foundation

ARTIST

Peter Gibson

TIMELINE

6 months

DURATION

5 years

MATERIALS

Thermoplastic

COST

Materials: \$240,000 Design Fee: \$3,500

Labor: (included in materials cost)

THE PROJECT

The Greater Des Moines Public Art Foundation launched the Art Route Des Moines in 2016 as an opportunity to connect 87 pieces of public art in the city with artistic interventions on sidewalks and crosswalks. In collaboration with the Greater Des Moines Partnership and with the Greater Des Moines Convention & Visitors Bureau, the project team developed a trail that spanned six miles, including 14 crosswalks designed by a single artist.

With around 750,000 people visiting the city each year specifically for artistic and cultural attractions, Art Route Des Moines would prove successful as a wayfinding tool for public works of art. The route also serves as a traffic-calming measure that emphasizes the planned Connect Downtown project, an effort to enhance walkability in Des Moines led by the City and Urban Land Institute Iowa.

BEST PRACTICE HIGHLIGHT: SITE SELECTION

The project team identified six intersections with high traffic volumes that would also tie into the trail connecting public art. The team then initiated a public call for artists to design the crosswalk art and selected Canadian artist Peter Gibson. The final trail design included the crosswalk art and sidewalk wayfinding markings.

In addition to obtaining permits for the design and installation, the team also entered into a temporary public art operating agreement with the city in order to perform work on public property. As part of the agreement, the team determined a five-year duration for the murals based on the durability of the materials and identified the Public Art Foundation as the responsible party for repairing any damage to the murals within that timeframe. Along with the crosswalks and sidewalk wayfinding markings, the team also developed a GPS-enabled app so that users on the route can obtain information about each public art piece.



"With Colourful
Crossings we
explored how we
can change the
perception of city
infrastructure by
trying new ideas
that make public
spaces work better
for everyone."

VALERIE BEIRNE
URBAN FOREST MANAGER,
BETTER BANKSIDE

Better Bankside Colourful Crossings

LOCATION

London, England

TYPE

Standalone Project (3 iterations)

LEAD ENTITY

Better Bankside

ARTIST

Office for Crafted Architecture 2015, Camille Walala 2016, Thierry Noir 2017

TIMELINE

6 months

DURATION

2 years

MATERIALS

Year 1: Road marking paint; Years 2 and 3: Preformed thermoplastic

COST

Materials: (donated) Design Fee: £2,500 Labor: (volunteer)

THE PROJECT

In 2007, Better Bankside, a nonprofit Business Improvement District (BID), launched a placemaking strategy and partnership called Bankside Urban Forest, an umbrella approach for improving streetscapes and public spaces with tactical interventions and urban greening projects across the Bankside neighborhood in Central London. The Colourful Crossings initiative was conceived by Better Bankside within this context.

An opportunity arose in 2015 to bid for funding from Transport for London's (TfL) Future Streets Incubator Fund. This fund, part of the Mayor's Transport Strategy, targeted innovative pilot projects for improving streets and public spaces in London. The proposal by Better Bankside BID was one of the ten pilot projects awarded funding during an open call held by TfL in 2015. The Bankside BID then commissioned the Office for Crafted Architecture to implement the first Colourful Crossing, which would serve as a prototype for the crossings designed in 2016 by Camille Walala and in 2017 by Thierry Noir.

The Bankside neighborhood, home to many world-class art galleries and design studios, became the first "design district" south of the River Thames in London Design Festival in 2015. As the neighborhood's identity continued to grow, community members and business owners started to show a desire to invest in public art projects that would improve public spaces and street safety. The BID used this opportunity to show how a low-cost intervention on the street could foster a strong creative identity, encourage pedestrian activity, and improve people's perception of the street.

BEST PRACTICE HIGHLIGHT: TESTING MATERIALS AND DESIGN

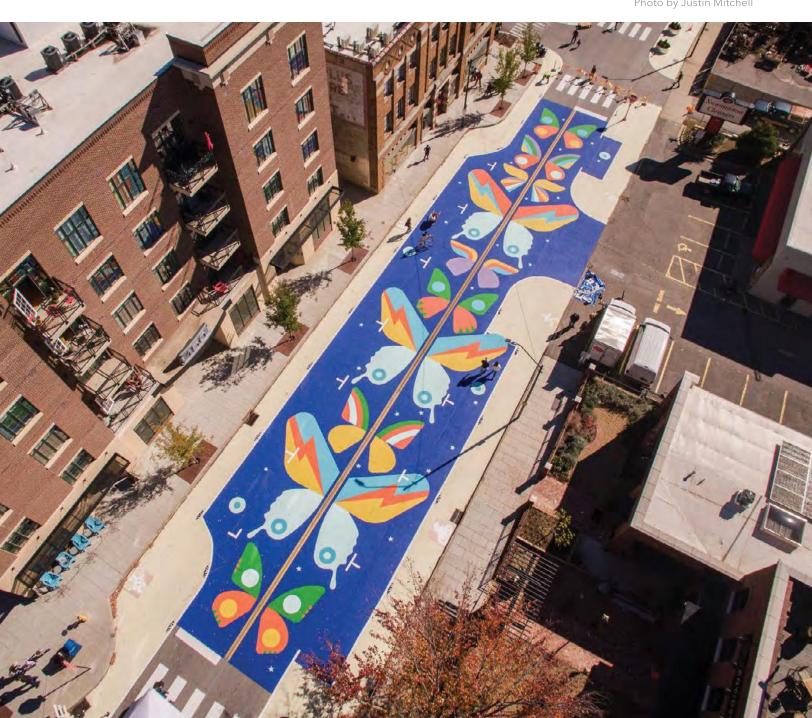
In its first year, the Bankside Colourful Crossings were created with road marking paint. While the paint was a very accessible material, it proved less durable than originally thought. Being able to test different materials such as concrete and preformed thermoplastic, a heat-applied material used for traffic markings on pavement, in subsequent crosswalks gave the BID the opportunity to inject color and creativity with a more durable material.

"This project reinforces all the qualities of urban and commuter cycling in Asheville and provides a safer and more beautiful way for anyone living on the Southside of downtown to access the city."

MIKE SULE

EXECUTIVE DIRECTOR, **ASHEVILLE ON BIKES**

Photo by Justin Mitchell



Coxe Avenue

LOCATION

Asheville, NC

TYPE

Standalone Project

LEAD ENTITY

Asheville on Bikes

ARTIST

Sound Mind Creative

TIMELINE

6 months

DURATION

l year or until streetscape reconstruction

MATERIALS

Acrylic exterior paint

COST

Materials: \$3,000 Design Fee: \$55,000 Labor: (volunteer)

THE PROJECT

Asheville on Bikes, the city's bicycle and multimodal advocacy nonprofit organization, partnered with Street Plans Collaborative, AARP, and the Blue Ridge Bicycle Club to create a 0.3-mile barrier-protected multiuse path along Coxe Avenue. Although the intervention included various bicycle and mobility facilities, the centerpiece of the installation was a 6,000 square-foot mural designed by Sound Mind Creative and installed by a group of volunteers from the community.

The asphalt design sits in the middle of the South Slope, Asheville's emerging residential and small business development district. While the pilot project was designed to last only a year, it will ultimately inform the city's redesign of Coxe Avenue for the long term.

BEST PRACTICE HIGHLIGHT: DESIGN DEVELOPMENT

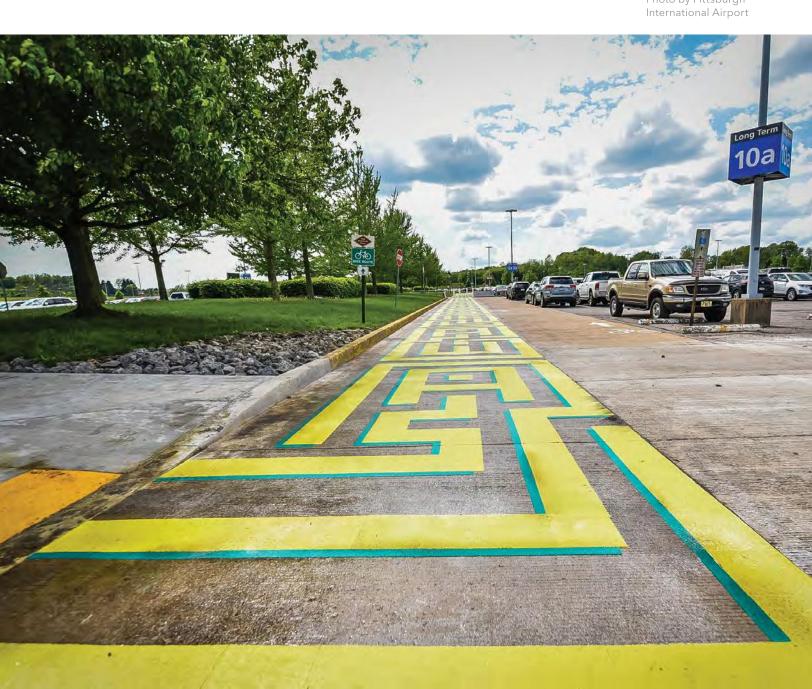
This project kicked off in June 2018 with a public workshop during which community members defined the goals of the intervention. Following that first workshop, a Project Advisory Committee was formed to review project goals and select a final design to be implemented during the first week of November 2018. A second public workshop was held in August 2018 to further develop and refine recommendations tailored to local needs.

Thanks to Asheville's large bicycle advocacy community, many people were eager to participate in the volunteer team and support Asheville on Bikes' efforts to reimagine the city's infrastructure in a way that benefits all users.

"Successfully working with public works teams means super clear and concise communication, and being willing to step away from artistic myopia to engage in practical discussions concerning installation, timing, materials, etc."

ANN LEWIS PROJECT ARTIST

Photo by Pittsburgh



CASE STUDIES: ART ON THE ROADWAY

Same Same, but Different

LOCATION

Pittsburgh, PA

TYPE

Standalone Project

LEAD ENTITY

Allegheny County Airport Authority

ARTIST

Ann Lewis

TIMELINE

9 months

DURATION

Indefinite

MATERIALS

Preformed thermoplastic

COST

Materials: \$35,000 Design Fee: \$15,000 Labor: (in-house)

THE PROJECT

The Art in the Airport program at Pittsburgh International Airport has a rotating program featuring local and regional artists, with exhibits selected by the city's Arts and Culture Manager and an Advisory Committee.

In early 2018, the committee decided to use the large parking lot space for the airport as a canvas for creative wayfinding and an art mural to enhance visibility and guide airport users to a safe walking route. The Airport Authority partnered with the Office of Public Art, a program of the Greater Pittsburgh Arts Council, to hold a call for artists and selected Ann Lewis because of her experience with public art and large-scale installations.

BEST PRACTICE HIGHLIGHT: MATERIAL SELECTION

The material chosen for this installation was a runway-grade thermoplastic, which is much thicker than the typical thermoplastic used in crosswalks or other roadway markings. Provided by traffic marking company Ennis Flint, the material is engineered to last for up to 20 years, reducing the lifetime maintenance costs for this project. For a project of this scale, it was essential for the artist to work closely with the material supplier to ensure that the thermoplastic was applied properly and to avoid any unnecessary delays or additional expenses.

This installation was completed after four days of work, however, there was a lapse in between the beginning and the completion of the project due to cold weather. Most products and paints for these types of projects will perform better when applied in warm and dry conditions, so it is important to consider this factor when choosing an installation date.

"I get to be a part of a growing movement away from an over-dependence on cars and towards a more socially and environmentally beneficial way of being that is more in line with our humanity."

PETER GIBSON ARTIST

Photo by Melanie Dusseault



CASE STUDIES: ART ON THE ROADWAY

Sexapus

LOCATION

Montréal, Canada

TYPE

Standalone Project

LEAD ENTITY

City of Montreal Borough of Mercier-Hochelaga-Maisonneuve

ARTIST

Peter Gibson; En Temps et Lieu

TIMELINE

9 months

DURATION

1 year (for the featured mural)

MATERIALS

Acrylic traffic marking paint

COST

Materials: \$5,400 Design Fee: \$1,800

Labor: (included in design fee)

THE PROJECT

In recent years, the City of Montréal has developed programs that encourage sustainable mobility and aim to reduce the city's dependence on cars. In 2014, the Borough of Mercier-Hochelaga-Maisonneuve launched a shared streets initiative called Zone de Rencontre Simon-Valois. The project implemented transitional interventions over a three-year period on Ontario Street to redefine the area surrounding an existing plaza as a shared space and improve the safety and accessibility for active transportation users.

During the interventions of 2015, 2016, and 2017, the city was able to evaluate the impacts of the project to inform the permanent construction of the shared street that will take place in 2020. The first two iterations explored "shared street" scenarios by creating an asphalt art mural of a six-legged octopus called Sexapus on the main intersection and on the sidewalks to evaluate the receptiveness of the local community and business owners to the shared street concept. The last phase in 2017 further enhanced the streetscape with furniture and landscaping.

BEST PRACTICE HIGHLIGHT: PATHWAY TO A PERMANENT DESIGN

The goal of this pilot project was to create a shared street where pedestrians have priority and drivers respect the most vulnerable users of the road. The results of the first interventions were very positive and proved popular with the community.

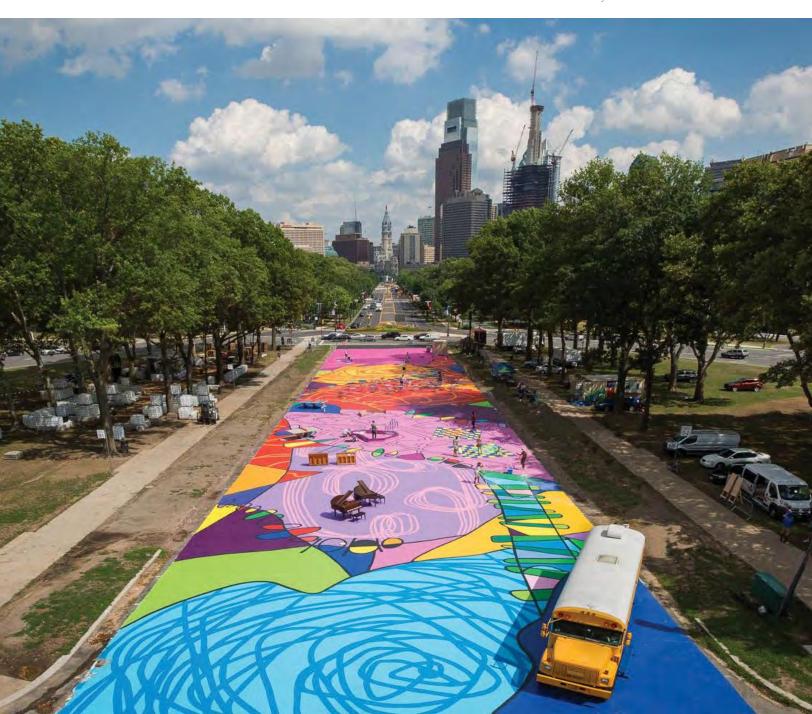
After seeing the benefits of a shared street, local businesses and residents pushed for a permanent version even though Quebec's Highway Safety Code (HSC) did not yet allow for such shared street configurations. But thanks to the wide support for this public art intervention, the province added an amendment to the HSC in 2018 creating new traffic rules to allow such spaces. In 2019, the borough held a national design competition for the permanent implementation and received \$3.2 million Canadian from the Central Administration for the reconstruction of the designated shared area.

"When multiple city agencies partake in the process, it is important to manage expectations and communicate about the mural's expected lifespan to determine the best materials and application method."

KATE JACOBI

PROJECT MANAGER,
MURAL ARTS PHILADELPHIA

Rhythm & Hues Mural by Brad Carney Photo by Steve Weinik



ART ON THE ROADWAY: PAVEMENT MURAL

The Oval

LOCATION

Philadelphia, PA

TYPE

Ongoing Program

LEAD ENTITY

Mural Arts Philadelphia

ARTIST

Multiple, selected each year by Mural Arts Philadelphia

TIMELINE

Annual

DURATION

5-6 weeks

MATERIALS

Acrylic exterior paint

COST

Materials: \$20,000 Design Fee: \$5,000 Labor: \$15,000-\$25,000

THE PROJECT

The Eakins Oval is a revenue-generating parking lot that transforms into eight acres of public space each summer. For five to six weeks, the space becomes The Oval+, a pop-up summer park with free community programming that includes a large-scale mural installed by Mural Arts Philadelphia. The program launched in 2013 with the eventual goal of transforming the entire Benjamin Franklin Parkway corridor into a public park.

This initiative builds on Green2015, a sustainability plan launched by the city's Parks and Recreation Department in 2010 with the goal of adding 500 acres of new publicly accessible green space to the city. To meet this goal, the Parks and Recreation Department searched for potential spaces to temporarily transform through creative placemaking projects and selected the Eakins Oval to run a one-year pilot. Given the pilot's success with the community, the space has been transformed each year, and will continue until the construction of a permanent plaza is funded.

BEST PRACTICE HIGHLIGHT: PROJECT IMPLEMENTATION

The need to include an artistic component for the site's activation prompted the Parks and Recreation Department to initiate a partnership with Mural Arts Philadelphia to select a mural artist, curate the design, and oversee the installation process. The production team allocates five days to paint the mural with a group of trained artists to ensure quality implementation.

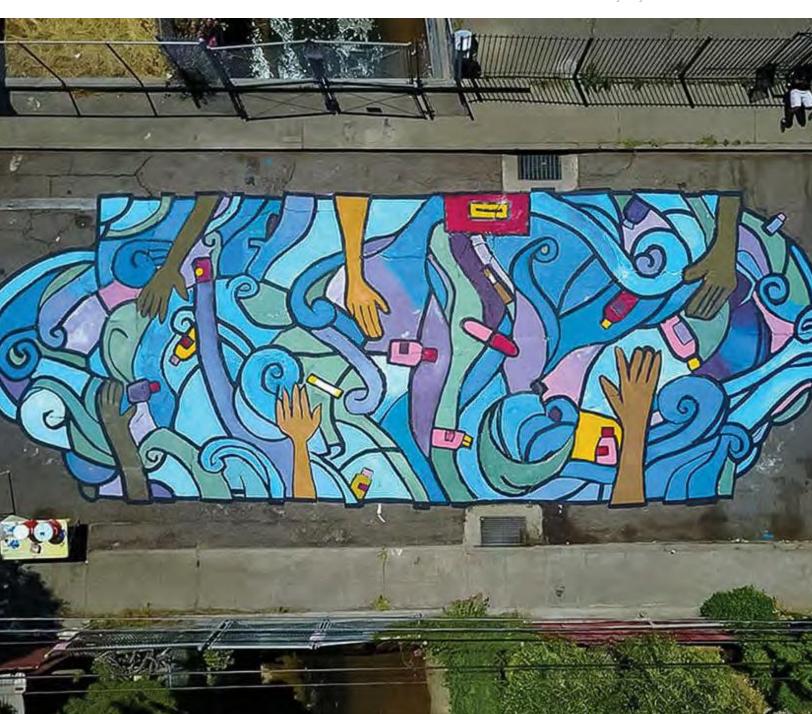
Once the mural is installed, the Parks and Recreation Department, in partnership with the Fairmount Park Conservancy, organizes free public programming throughout the Oval's summer duration. After six years of activating the Oval, the project team has developed efficient strategies for selecting artists, developing a design, managing a budget, procuring materials, installing the mural, and programming the space. This has allowed the program to be continuously supported by multiple entities and organizations that help fund and implement the project each year.

"Every transportation department should give the community it serves the pens for its plans and the paintbrushes for its places."

RYAN RUSSO

DIRECTOR,
OAKLAND DEPARTMENT OF TRANSPORTATION

Zero Litter Mural by the Earth Team Photo by City of Oakland DOT



CASE STUDIES: ART ON THE ROADWAY

Paint the Town

LOCATION

Oakland, CA

TYPE

Ongoing Program

LEAD ENTITY

Oakland Department of Transportation

ARTIST

Multiple

TIMELINE

1.5 years

DURATION

1 year

MATERIALS

Acrylic Exterior Paint

COST

Materials: \$300 - \$600

Design Fee: (community designed)

Labor: (volunteer)

THE PROJECT

In 2017, the City of Oakland Department of Transportation (OakDOT) launched a pilot program called Paint the Town. The program was set in motion to advance OakDOT's goals to encourage community ownership of public space by inviting Oakland residents to design and organize mural projects on the pavement.

OakDOT held an open application process that invited community members to paint temporary street murals on Oakland's roads. The department received 42 submissions and ultimately selected 30 proposals. Locations were chosen based on community support and the desire to facilitate projects in underserved neighborhoods. The city worked with a private funder, Oakland Fund for Public Innovation (OFPI), to fund a partnership with local nonprofit Walk Oakland Bike Oakland to help community members implement the projects. Mural installation for the selected designs began in Spring 2018 and eleven designs were completed within the year. OakDOT plans to finish the remaining murals by 2020.

BEST PRACTICE HIGHLIGHT: ELIMINATING BARRIERS TO ENSURE EQUITY

OakDOT's Paint the Town program has become a model for how cities can address the major barriers for community members to undertake a project of their own. Although applicants are responsible for obtaining special event permits, engaging the community, recruiting volunteers, and helping to implement the project, OakDOT and OFPI provide significant resources along the way to facilitate these tasks. The city has waived permit fees and provided street closure materials at no cost to the applicant, while OFPI provided funds for paint and supplies as well as design assistance and installation day support.

OakDOT held application clinics at libraries to assist with the application and developed a comprehensive toolkit that outlined program guidelines and helped walk applicants through the implementation process. In its toolkit, the department outlines the responsibilities of both the community members and OakDOT staff for design development, mural installation, and any future maintenance and repair needs. The success of this pilot program shows that with proper support, community residents can make a meaningful and large-scale impact on city streets.

"There is so much underutilized asphalt on our streets that can be easily reclaimed for pedestrians through art."

KYLIE WALZAKLEAD PROGRAM MANAGER, LIVING STREETS ALLIANCE



CASE STUDIES: ART IN PEDESTRIAN SPACE

Corbett Porch

LOCATION

Tucson, AZ

TYPE

Standalone Project

LEAD ENTITY

Living Streets Alliance

ARTIST

Living Streets Alliance and Community

TIMELINE

4 months

DURATION

In place until permanent roadway construction begins (1+ years)

MATERIALS

Commercial-grade driveway paint

COST

Materials: \$17,500 Design Fee: (in-house)

Labor: \$11,000

THE PROJECT

Led by the Living Streets Alliance (LSA), a nonprofit advocacy group, Corbett Porch is Tucson's first asphalt art intervention. The group initiated this project to demonstrate the benefits of adopting policies that would enable Tucson to build a safe, accessible, and equitable transportation network to improve mobility for all residents.

To do this, the group selected a well-known dangerous intersection in the middle of a rapidly growing business district after local shop owners expressed an interest in creating a more pedestrian-friendly space in front of their businesses. The intersection is also part of a future roadway improvement project led by the Regional Transportation Authority called Downtown Links, which aims to improve multimodal connections. In addition to temporarily addressing pedestrian safety concerns, this project is meant to inform the design of a permanent intersection reconfiguration.

In October 2018, a group of over 200 volunteers helped LSA transform the intersection using low-cost, temporary materials like planters, concrete paint, and flexible delineators to demarcate the newly created space for pedestrians. The data collected by the University of Arizona found that once the installation was in place, drivers were more likely to stop at the stop bar (from 27% to 34% compliance) and come to a full stop (from 69% to 82% compliance), improving street safety.

BEST PRACTICE HIGHLIGHT: LEADING AS A NONPROFIT

Organizing an intervention around an existing municipal project was key to getting city and community support for the Corbett Porch. LSA applied for grant funding from the AARP Community Challenge in early 2018 and partnered with the City of Tucson Department of Transportation on securing permits and implementing the project. LSA also gathered input from the community for the design and engaged United Way's Days of Caring to find local volunteers to help with the installation as well as the University of Arizona College of Architecture for data collection and analysis of the impacts of the intervention.

"This project has created an identity for the intersection and cemented that corner as a focal place for the community rather than a barrier for pedestrians."

LEE CRANDELL

FORMER EXECUTIVE DIRECTOR,
LAKEVIEW CHAMBER OF COMMERCE

Photo by Lakeview Chamber of Commerce



CASE STUDIES: ART IN PEDESTRIAN SPACE

Lakeview Lincoln Hub

LOCATION

Chicago, IL

TYPE

Standalone Project

LEAD ENTITY

Lakeview Chamber of Commerce

ARTIST

Site Design Group

TIMELINE

18 months

DURATION

4 years until the city's permanent streetscape reconstruction project begins

MATERIALS

Epoxy-based pavement coating

COST

Materials: \$50,000 Design Fee: \$20,000

Labor: (included in materials)

THE PROJECT

The curb extension known as Lincoln Hub is a project led by the Lakeview Chamber of Commerce that transformed a four-block stretch along Lincoln Avenue and reclaimed 5,000 square feet of space for pedestrians. The project shortens the crosswalk distances and reduces traffic speeds at the Lincoln/Wellington/Southport intersection, encouraging more pedestrian activity along the avenue and supporting local businesses. In addition to the curb extension murals, the streetscape project includes seating, planters, and other wayfinding measures.

Once the project was initiated, the Lincoln Avenue Placemaking Project Task Force was formed to gather community input from residents and business owners and select the designer and other contractors to install the curb extensions. The temporary streetscape project was made possible by funding and support from the Special Service Area 27 tax levy. It was designed by Site Design Group and installed in the Spring of 2015. The project also earned a 2015 Charter Award from the Illinois Chapter of the Congress for the New Urbanism.

BEST PRACTICE HIGHLIGHT: PLANNING AROUND AN EXISTING CAPITAL PROJECT

The Lincoln Hub project came from the Chicago Department of Transportation's (CDOT) Lincoln Ashland Belmont Reconstruction Plan, a multimodal roadway improvement plan to transform the Lincoln Avenue into a vibrant commercial corridor. Building on the momentum behind that plan, the Chamber of Commerce launched the streetscape project by identifying three key priorities: traffic calming, greening and landscaping improvements, and pedestrian safety enhancements.

CDOT's Make Way for the People program invites local organizations and community groups to propose street improvement projects and grants them the necessary permits for the interventions. Through this program, the task force was able to use low-cost, short-term improvements that could be implemented before the permanent overhaul of the streetscape. Once the installation was completed, the city incorporated the temporary geometry changes into the reconstruction project that will begin in the near future.

"When developing a design for a street mural, consider yourself as the user. What is the user experience for someone biking, walking, driving through the project? Is the design legible? Is it effective?"

KRISTEN RAMIREZ

ART & ENHANCEMENTS PROJECT MANAGER, SEATTLE DEPARTMENT OF TRANSPORTATION

Burke-Gilman Trail Curb Bulbs Photo by Seattle Department of Transportation



Curb Bulb Program

LOCATION

Seattle, WA

TYPE

Ongoing Program

LEAD ENTITY

Seattle Department of Transportation

ARTIST

In-house artist within SDOT

TIMELINE

Applications received on a rolling basis

DURATION

1-3 years

MATERIALS

Preformed thermoplastic

COST

Materials: \$5,000-\$15,000 Design Fee: (in-house) Labor: \$5,000-\$10,000

THE PROJECT

The Seattle Curb Bulb Program is one of 20 projects and programs led by the Seattle Department of Transportation (SDOT) that focus on making the city more livable, connected, and affordable. Affiliated projects, including the Curb Bulb Program, are made possible by a tax levy that allocates \$91 million for pedestrian-friendly improvements that increase visibility at crossings and reduce the number and severity of crashes.

BEST PRACTICE HIGHLIGHT: PROJECT MANAGEMENT

SDOT's program for asphalt art allows residents to request improvements from the city by facilitating the design and implementation process. The city designates a project manager who is a professional artist and art administrator to help solicit potential designs and work with other city agencies to implement the project. The program staff at SDOT works with communities to identify a project location and design, and with city crews to install the asphalt art. Although some of these improvements might include a permanent curb and gutter treatment, SDOT encourages communities to opt for temporary, decorative treatments to achieve the desired effect using fewer resources. The mural location can be suggested by the community or identified by SDOT. In both cases, the department works with its resident artist to come up with creative designs for the curb bulb mural and holds a community review and voting process to select a final design.

Once selected, SDOT works with the city's ADA Compliance Team to ensure that all projects are properly reviewed and permitted for installation. SDOT continues to evaluate these projects and monitor collision data to ensure that crossing improvements increase the number of vehicles yielding to pedestrians and decrease speed at intersections. These improvements have served as one of the many tools in SDOT's Vision Zero plan to end traffic deaths and serious injuries in Seattle by 2030.

"For artists, listening to feedback and making changes is important and necessary – this is your work but it's also for the community so it's important this context is understood."

MOLLY DILWORTH PROJECT ARTIST

Photo by Molly Dilworth



CASE STUDIES: ART IN PEDESTRIAN SPACE

Cool Water, Hot Island

LOCATION

New York, NY

TYPE

Standalone Project

LEAD ENTITY

New York City Department of Transportation Art & Event Programming

ARTIST

Molly Dilworth

TIMELINE

6 months

DURATION

18 months

MATERIALS

Epoxy modified acrylic coating

COST

Materials: (included in labor cost)

Design Fee: \$15,000 Labor: \$150,000

THE PROJECT

In 2010, New York City Department of Transportation's Art & Event Programming Unit (NYCDOT Art) launched a design competition to install a temporary mural on the asphalt surface in Times Square. At the same time, the agency began planning for a permanent capital transformation of the space into a pedestrian plaza through the Green Light for Midtown project. The mural would serve as an interim intervention before the major reconstruction began in 2012. More information about this project can be found at www.nyc.gov/dotart.

BEST PRACTICE HIGHLIGHT: DESIGN DEVELOPMENT

NYCDOT Art worked alongside the Times Square Arts Alliance, the Mayor's Office, the Public Design Commission and other public art professionals to review 150 design submissions and select the winning design by artist Molly Dilworth. Her design, titled Cool Water, Hot Island, was a graphic representation of the urban heat-island effect observed by NASA's infrared satellite. The intervention, funded by donations to the Mayor's Fund to Advance New York City, was completed in one month and further reinforced Times Square as a destination for public art.

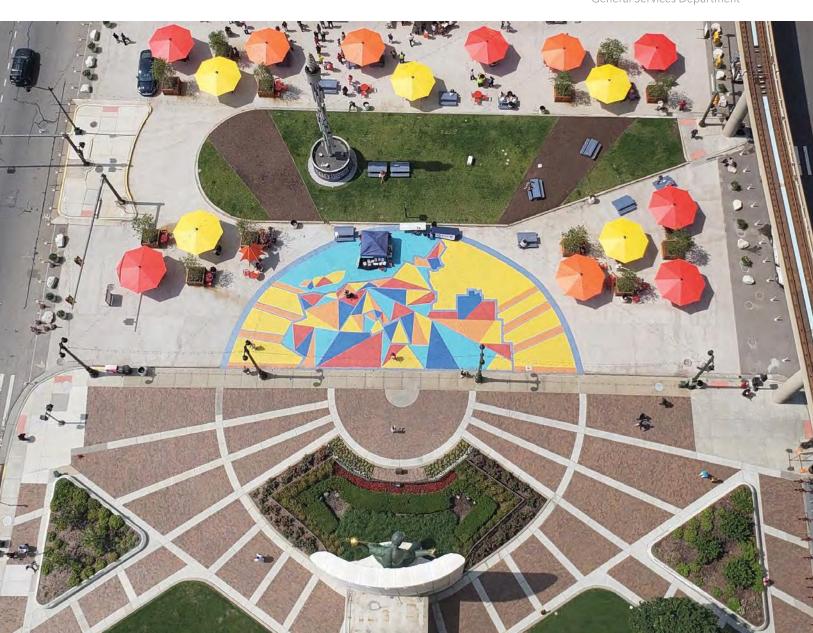
NYCDOT Art created a project committee that met regularly to go over design development and implementation. Committee members included NYCDOT Art staff, the Times Square Alliance, the Mayor's Community Affairs Unit, the artist, and the paint contractor who would oversee the installation. The group worked closely with the artist to realize a final design that could be efficiently implemented over 50,000 square feet of open space. The mural became a model for creating and enhancing pedestrian space to improve safety, health, and well-being for the public.

"Spirit Plaza is a unique public space in the heart of the city, designed for all citizens to come together, get involved, learn about local initiatives, and enjoy civic, culinary, and cultural attractions that highlight the many Detroit voices and unique identity."

MARIA GALARZA

PROJECT MANAGER,
CITY OF DETROIT PARKS & RECREATION DIVISION

Photo by City of Detroit General Services Department



CASE STUDIES: ART IN PEDESTRIAN SPACE

Spirit Plaza

LOCATION

Detroit, MI

TYPE

Standalone Project

LEAD ENTITY

City of Detroit Parks and Recreation

ARTIST

City of Detroit Planning and Development Department

TIMELINE

12 months

DURATION

3 years

MATERIALS

Acrylic traffic marking paint

COST

Materials: \$1,500 Design Fee: in-house Labor: (volunteer)

THE PROJECT

Spirit Plaza was launched by the City of Detroit Planning and Development Department (PDD) and Department of Public Works (DPW) in June 2017 as a three-month pilot public space programmed in collaboration with the Downtown Detroit Partnership (DDP). The city hoped that this intervention would promote a more walkable downtown for workers, residents, and visitors and consolidate traffic flow to create a more inviting street and safer pedestrian crossings.

Five months after its inauguration, the Detroit City Council agreed to continue the pilot of the plaza to allow officials to evaluate its impact on local businesses and traffic flow. For the summer of 2018, to renew excitement and kick off summer programming led by Parks and Recreation Division (DPRD), a temporary colorful mural was designed and installed on the plaza.

BEST PRACTICE HIGHLIGHT: FROM TEMPORARY TO PERMANENT

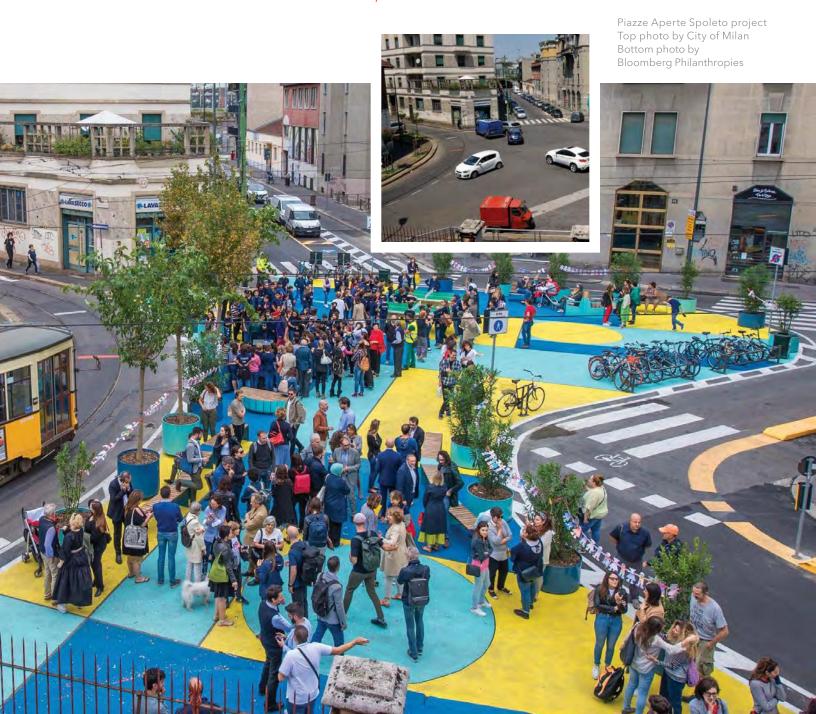
In 2018, as the space became more established, PDD engaged with DPRD to continue to seek ideas for programming and come up with a more permanent design iteration for the space. The new mural, depicting the map of Detroit, is an example of collaboration between these city agencies and DDP. Together, these organizations worked to create and program the space for the summer, fall, and winter.

To implement the mural, DPRD partnered with the nonprofit Summer in the City, an organization of young volunteers who paint murals across the city. In 2019, given two consecutive years of successful programming, the Detroit City Council voted to make Spirit Plaza a permanent public space downtown. A semi-permanent design will be installed in 2019, and the city plans to develop a permanent design through robust community engagement.

"This program has transformed the city's design approach from a slow-moving, top-down process into a collaborative effort that involves the community and allows them to test a design before committing to a permanent change."

DEMETRIO SCOPELLITI

ADVISOR TO THE DEPUTY MAYOR FOR URBAN PLANNING, GREEN AREAS AND AGRICULTURE, CITY OF MILAN



CASE STUDIES: ART IN PEDESTRIAN SPACE

Piazze Aperte

LOCATION

Milan, Italy

TYPE

Ongoing Program

LEAD ENTITY

City of Milan

ARTIST

In-house

TIMELINE

3-6 months

DURATION

12 months, maintained after a year

MATERIALS

Water-based paint

COST

Materials: €30,000-€40,000 Design Fee: (in-house)

Labor: (included in materials fee)

THE PROJECT

The Piazze Aperte (Open Plazas) program was established by the City of Milan as a way of accelerating the creation of public spaces within the city. The program began in 2018 after the release of the Milan 2030 Master Plan and the Neighborhoods Plan, which identified an immediate need for additional public spaces around the city. City leaders lamented the delays of the conventional design and construction process and looked for ways to quickly implement the projects and solicit community feedback.

Working together with Bloomberg Associates and the National Association of City Transportation Officials Global Designing Cities Initiative (NACTO-GDCI), the city identified five interim pilot projects to implement using low-cost materials and volunteer labor. In some cases, the spaces had been originally designed as plazas but had been converted into parking lots in the 20th century, while in other cases, large intersections were redesigned with a smaller footprint for car travel. The spaces were designed by city staff in various departments and implementation was led by a local nonprofit, Retake Milano. Survey results from the first space to be transformed showed that 86% of people prefer the pedestrian plaza, 72% now use more of the space, and 84% would like the redesigned space to become permanent. In 2019, two of the plazas entered a design process for a permanent capital reconstruction.

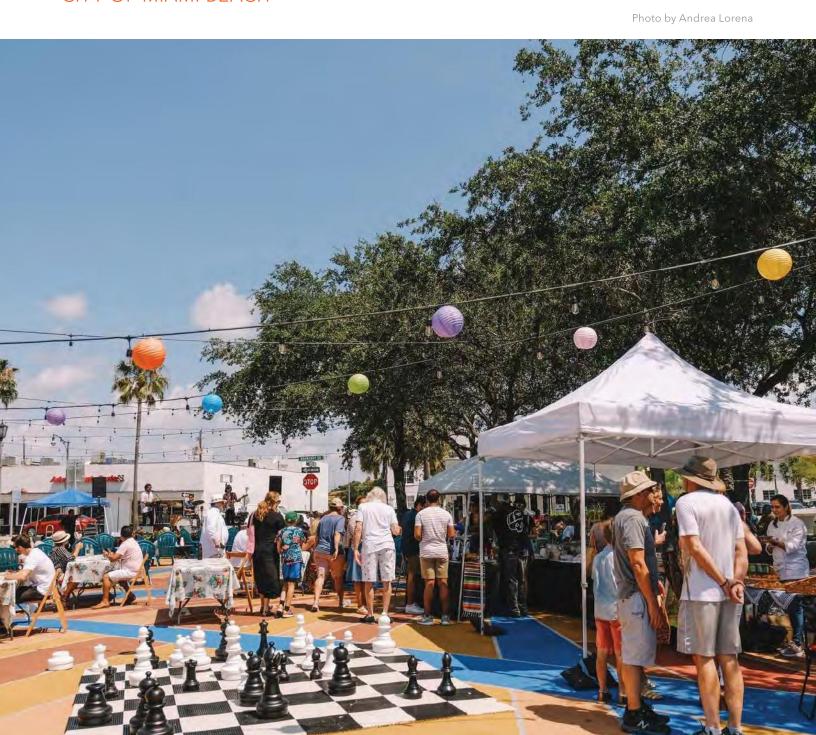
BEST PRACTICE HIGHLIGHT: BREAKING DOWN SILOS

Given the success of the first five interventions and the results of the survey, the city initiated an expanded second phase in which it invited citizens to make proposals for future Piazze Aperte installations. This expansion was possible because of the removal of bureaucratic silos both within municipal government and between government and the community. Within the city, an "urban lab" division was created that brought together staff from urban planning, transportation engineering, and public space design. Where previously these departments had operated independently, leading to inefficiencies in the design process, now they work hand-in-hand to facilitate the design process and coordinate the installations. The city also partnered with Retake Milano to generate a platform where citizens can volunteer in the physical creation of the piazze. The team works regularly with community members to maintain the space and schedule neighborhood events.

"Placemaking is an essential function for a 21st-century municipality. It is not enough to build public spaces – we must create experiences that allow community connections to be forged."

RICKY ARRIOLA

CITY COMMISSIONER, CITY OF MIAMI BEACH



CASE STUDIES: ART IN PEDESTRIAN SPACE

Rue Vendome

LOCATION

Miami Beach, FL

TYPE

Standalone Project

LEAD ENTITY

City of Miami Beach

ARTIST

Street Plans Collaborative

TIMELINE

10 months

DURATION

2 years

MATERIALS

Epoxy-based pavement coating

COST

Materials: \$7,000 Design Fee: \$35,000

Labor: (included in design fee)

THE PROJECT

In August 2017, the City of Miami Beach set in motion its North Beach Master Plan by transforming a nine-space parking lot into a public plaza with an art mural and community activities. The Miami Beach Commissioners voted unanimously to conduct a three-month "soft closure" of the parking lot to study the response from the community as well as any traffic impacts the plaza may have caused.

After the vote, the city engaged Street Plans Collaborative to design the 3,565 square-foot asphalt pattern, procure materials, and engage with the local community to find volunteers for the installation. In the spring of 2018, the team closed off the space to vehicles and was joined by the City of Miami Beach staff and local volunteers to paint the plaza over three days.

BEST PRACTICE HIGHLIGHT: PROGRAMMING

Once the three-month pilot ended, the site remained closed to vehicles because of the community's interest in keeping the space as a public plaza. The interim plaza has been maintained and used by the city for farmers markets and smaller neighborhood events since its installation. The plaza received new life a year later when the city engaged local creative marketing and events firm Prism Creative Group to organize and host large community events in the space and build public support for a permanent transformation.

With a community events manager on board to continuously activate the space, the plaza's popularity rose and, in January 2019, the city started the design process for the permanent transformation of the space.



"We are offering community members the opportunity to reclaim spaces normally used for vehicles into safe zones and to test these changes to determine the future use of the space."

CARLOS MARIO
URREGO DURAN
PROGRAM MANAGER,
BOGOTÁ DISTRICT
MOBILITY OFFICE

Plazoletas Bogotá Inglés project Photos by Bogota District Mobility Office

Programa Plazoletas Bogotá

LOCATION

Bogotá, Colombia

TYPE

Ongoing Program

LEAD ENTITY

Bogotá District Mobility Office

ARTIST

District Mobility Office staff designers

TIMELINE

Yearly cycle; 6 months from initiation to implementation

DURATION

1-3 years or until permanent construction of plaza

MATERIALS

Traffic marking paint

COST

Materials: \$3,000-\$10,000 Design Fee: (in-house) Labor: (volunteer)

THE PROJECT

The Plazoletas Bogotá – Spaces for All program is an urban intervention strategy led by the Mayor's Office to recover and build public spaces that improve pedestrian mobility and road safety. The program, a collaboration with Bloomberg Associates and the National Association of City Transportation Officials Global Designing Cities Initiative (NACTO-GDCI), links communities and local businesses in a participatory process that seeks to transform underutilized streets into community hubs.

As part of the program, the District Mobility Office created a streamlined process to allow communities to manage their public spaces through quick and low-cost activations. The District Mobility Office works with the District Administration and the Department of Public Works to oversee the interventions and community programming activities. Since the program's launch in 2016, almost 90,000 square feet have been transformed, creating 12 new plazas in Bogotá.

BEST PRACTICE HIGHLIGHT: SELECTION PROCESS

Every year, the Plazoletas program invites community and local organizations to propose spaces that are in need of improvement. Applicants register using an online portal, then the Mobility Department evaluates each proposal, selecting those that will most positively impact the community, provide needed public space in under-served areas, and enhance mobility.

Once selected, the District Mobility Office works with local community leaders to design the spaces that respond to the needs of the surrounding neighborhoods. The District Administration also works with communities to outline the duties of all participants and define the responsible actors for outreach, maintenance, insurance, design, programming, and budgeting.

"Stewardship is a really important aspect of these projects. By making sure that there is someone who cares and can address any issues, you can ensure the longevity of the project."

STEPHANIE FORTUNATO

DIRECTOR, PROVIDENCE DEPARTMENT OF ART, CULTURE, AND TOURISM



Right: Save Our Planet mural by Brent Bachelder Photos by Michael Christofaro

CASE STUDIES: ART ON VERTICAL INFRASTRUCTURE

Art Transformer Program

LOCATION

Providence, RI

TYPE

Ongoing Program

LEAD ENTITY

City of Providence Department of Art, Culture, and Tourism

ARTIST

Multiple, selected by jury

TIMELINE

Applications received on a rolling basis

DURATION

1-3 years

MATERIALS

Acrylic paint

COST

Materials: (included in design fee) Design Fee: \$350 per box Labor: (included in design fee)

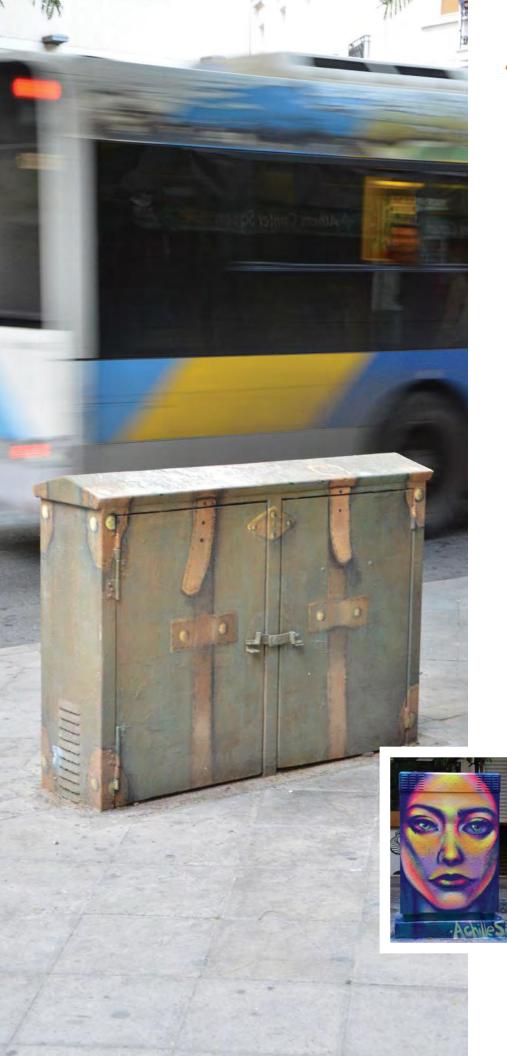
THE PROJECT

The Art Transformer Program was launched in 2010 by the Providence Department of Art, Culture, and Tourism to celebrate local artists and beautify unattractive infrastructure. The interventions are part of a city-led corridor improvement project that included wayfinding and bus shelter enhancements within various business districts to contribute to the vibrancy and vitality of the streetscape and discourage graffiti.

The department worked with the Planning Department and the transit agency to integrate arts and culture into planning projects by identifying five heavily traveled corridors for installation of utility box murals. Artwork was selected by a jury comprised of city and community representatives, and each chosen artist received a \$350 stipend for their work.

BEST PRACTICE HIGHLIGHT: STEWARDSHIP

The program has now evolved into an "Adopt a Box" strategy that allows community groups or nonprofit organizations to become stewards of utility boxes that have been vandalized, replaced, or are otherwise in need of repair. Once a group has applied to adopt a utility box, the Department of Art, Culture, and Tourism reviews the application and facilitates the permitting process for the community group or organization to curate murals on the selected utility boxes and maintain the artwork.



"Step by step, Trigono is turning into a model neighborhood. A new normal with walls and facades that are maintained clean from tags, while at the same time encouraging conversation around art that respects and enriches the city."

GEORGIOS KAMINISFORMER MAYOR
OF ATHENS

Suitcase mural by Dimitris Kretsis Womans Face mural by Achilles Photos by Athens Trigono

Trigono Pedestrianization Project

LOCATION

Athens, Greece

TYPE

Standalone Project

LEAD ENTITY

Municipality of Athens

ARTIST

Multiple, selected by open call

TIMELINE

8 months

DURATION

Indefinite

MATERIALS

Acrylic spray paint

COST

Materials: €100 per box Design Fee: (volunteer) Labor: (installed by artists)

THE PROJECT

The Art on KAFAO project (using the Greek acronym for utility boxes) was launched in 2016 by the City of Athens as part of a broader €10 million donation for a number of programs from the Stavros Niarchos Foundation to the city. The program aimed at revitalizing the area by improving the safety, cleanliness, and walkability of the city's historical center.

Graffiti removal was a key component of the Trigono program, which involved eleven city agencies and was managed by the local nonprofit Athens Partnership. The Art on KAFAO project was designed both for aesthetic reasons and to prevent future graffiti tagging on these surfaces. The Trigono program has inspired other programs: in 2019, the city's historical center launched its This is Athens – Polis program aiming to paint 100 electric boxes across the neighborhood.

BEST PRACTICE HIGHLIGHT: MENTORING LOCAL ARTISTS

The city was looking for a way to reduce illegal tagging activity and used the utility box mural program to engage young street artists and enlist their participation to showcase their talents.

To achieve this, the mayor appointed a six-person artistic committee to hold an open call and select 37 emerging, local artists. Thanks to the educational component of the project, the municipality has noticed a decrease in tagging activity since the murals were installed and an increase in the willingness of artists to engage with city agencies in other creative placemaking projects.



"It is always better to start small and build the program over time. Each year there is something new to learn and more support to obtain."

CATHERINE CAMPBELL
PROGRAM MANAGER
STREETARTORONTO

Left: Mural by Erin McCluskey Right: Mural by Daniela Rocha Photos by Jocelyn Reynolds

StreetARToronto Outside the Box Program

LOCATION

Toronto, Canada

TYPE

Ongoing Program

LEAD ENTITY

City of Toronto Transportation Services Division, Public Realm Section

ARTIST

Multiple, selected through open call

TIMELINE

Yearly cycle; 3 months from initiation to implementation

DURATION

5+ years

MATERIALS

Acrylic spray paint, vinyl wraps

COST

Materials: \$500

Design Fee: \$500 per box Labor: (included in design fee)

THE PROJECT

The StreetARToronto (StART) program was launched in 2012 by the Public Realm Office in the City of Toronto's Transportation Services Division. The program was designed to proactively replace graffiti vandalism with vibrant and community-engaged street art. The street art installations enhance the safety and beauty of Toronto streets, encouraging active forms of mobility, like cycling and walking, while showcasing and mentoring local artists.

Each year StART publishes a call to artists, secures permits, and monitors the installation process of 50-100 murals on traffic signal boxes. It has also designed an Outside the Box mentorship program to connect emerging artists to a wide network of experienced artists and creative community members. The Graffiti Management Plan and StreetARToronto program are fully funded with third-party, private-sector revenues generated through a Street Furniture Agreement with Astral Media Outdoor L.P. and do not involve taxpayer money.

BEST PRACTICE HIGHLIGHT: CREATING A CITY PROGRAM

The program's popularity has grown over the years and now receives more than 200 applications annually. The designs are often connected to themes of diversity and inclusion, generating widespread community support and more "eyes on the street." Given this widespread support, the StART program has expanded to include walls of all sizes, from utility boxes to 20+ story buildings.

The Outside the Box program also reduced the city's infrastructure maintenance costs by counteracting graffiti vandalism. In 2016, the city removed 200,000 square feet of graffiti; that number dropped to 135,00 in 2017 and to just 75,000 in 2018. As of 2019, almost 400 utility boxes have been hand-painted or vinyl-wrapped across the city.

"There is a specialized skill set and sensitivity that goes into coordinating with artists and curating artwork within an agency whose primary mission is not commissioning art. Cities should consider hiring arts administrators to formulate a workable structure for art programs within their departments."

EMILY COLASACCO

DIRECTOR,
NYCDOT ART & EVENT PROGRAMMING

Alphabet City mural by Elizabeth Hamby Photo by NYCDOT



ART ON VERTICAL INFRASTRUCTURE: TRAFFIC BARRIER MURAL

Barrier Beautification Program

LOCATION

New York, NY

TYPE

Ongoing Program

LEAD ENTITY

New York City Department of Transportation Art & Event Programming

ARTIST

Multiple

TIMELINE

Yearly cycle; 2 months from initiation to implementation

DURATION

1 year

MATERIALS

Acrylic exterior household paint

COST

Materials: \$1,000-\$2,000 Design Fee: \$3,000 Labor: (volunteer)

THE PROJECT

Launched in 2010, the Barrier Beautification Program is one of the many programs run by the New York City Department of Transportation's Art and Event Programming Unit (NYCDOT Art). The unit collaborates with community organizations and artists to curate and manage temporary art installations and programming in the public realm throughout the city.

NYCDOT's Bike Program continues to expand and enhance the existing bike infrastructure in the city, and NYCDOT Art staff works with that unit to identify priority bike routes that have concrete safety barriers. Once identified, the selected artist and volunteers paint murals on the barriers that can be 400 to 2,200 feet long. The program has implemented 40 barrier murals as of 2019. More information can be found at www.nyc.gov/dotart.

BEST PRACTICE HIGHLIGHT: PROCESS FOR COMMISSIONING ARTISTS

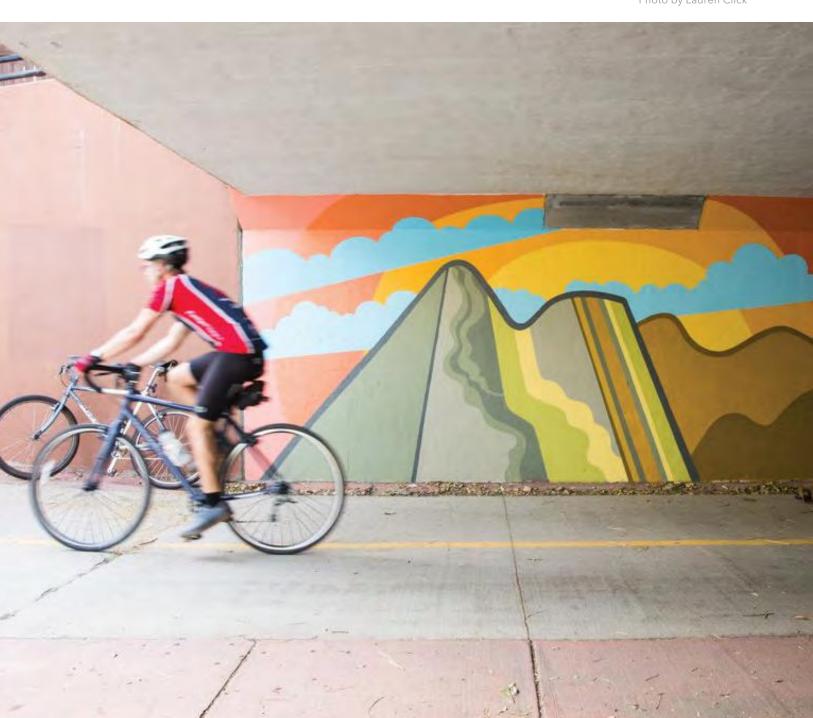
Every year the department issues an RFP to solicit ideas and awards the selected artist \$3,000 to produce the design and stencils and oversee the painting of murals on the selected concrete barriers.

The RFP includes information for the artist to consider, including site specifications and the varying abilities of the volunteers that help paint the mural. The RFP also includes language (and examples of projects) to encourage artists to use bold, simple patterns and colors. The artist is selected and assigned a barrier site by a project-specific committee that ranks all submissions based on criteria such as quality of past work, design approach, and ability to work on large-scale, team-based projects. The program partners with the nonprofit, volunteer recruitment agency New York Cares to provide up to 75 volunteers for each artist during the installation, depending on the scale of the site. The installation is typically accomplished over the course of six hours on one day.

"There is a tendency for neighborhood gatherings to occur around political or economic reasons. We want to use art as a way to get the community together in a positive and creative environment."

LEAH BRENNER CLACKFOUNDER, ARTS MARTIN ACRES

Photo by Lauren Click



CASE STUDIES: ART ON VERTICAL INFRASTRUCTURE

Moorhead Underpass Mural

LOCATION

Boulder, CO

TYPE

Standalone Project

LEAD ENTITY

Arts Martin Acres

ARTIST

David Polka

TIMELINE

12 months

DURATION

Indefinite

COST

Materials: \$500 Design Fee: \$4,000

Labor: (included in design fee)

THE PROJECT

Arts Martin Acres (AMA) was initiated by South Boulder community members to encourage community building through creative means. In 2017, the organization received a \$20,000 grant from the City of Boulder Neighborhood Enhancement Grant program to develop the Martin Acres Neighborhood Arts Plan. AMA worked with the community to select the Moorhead Drive underpass along the Parks and Recreation Department's Bear Creek bike path as an ideal mural location.

Once the site was identified, AMA partnered with And Art Space on an open call for design proposals that would best represent the diversity and natural beauty of Martin Acres. David Polka was selected from over 70 applicants to install the mural during the summer of 2017. The project team worked with the City of Boulder Parks and Recreation and Arts and Culture departments to obtain permits and a temporary public art agreement, coordinate traffic control, prime the walls for painting, and apply anti-graffiti coating.

BEST PRACTICE HIGHLIGHT: COMMUNITY OUTREACH

AMA partnered with Friends of Martin Acres to initiate a public outreach process to advance the existing neighborhood arts plan. The stakeholder outreach, which was collected through an online survey and a community input event, ignited a lot of excitement about art in Martin Acres among community members, schools, local businesses, and neighborhood organizations.

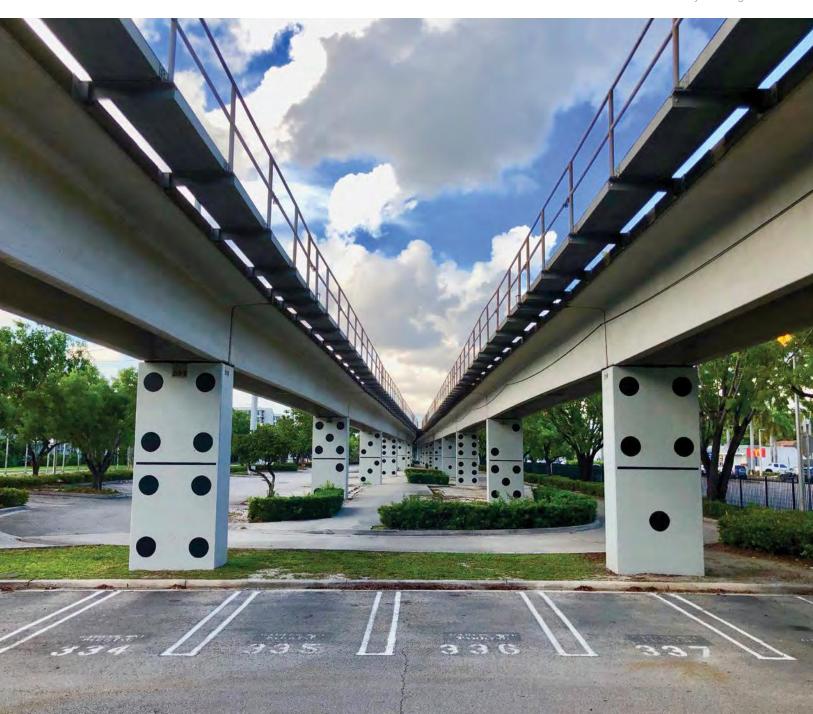
The results from the outreach process found that 90% of participants were in favor of bringing more art into their community. During the engagement activities, participants indicated their desired types of art and their priority project, and the murals in the Moorhead Underpass received the greatest support.

"Being a newcomer to Miami and not knowing the logistics of how to get the project up and running, I had to find local resources from agencies and organizations that support artists. I also had to ask a lot of people for favors."

BO DROGA

PROJECT ARTIST

Photo by Bo Droga



CASE STUDIES: ART ON VERTICAL INFRASTRUCTURE

Underline Miami Dominoes

LOCATION

Coral Gables, FL

TYPE

Standalone Project

LEAD ENTITY

Bo Droga, Artist

ARTIST

Bo Droga

TIMELINE

12 months

DURATION

10 years

MATERIALS

Acrylic traffic marking paint

COST

Materials: \$30,000 Design Fee: (volunteer) Labor: (volunteer)

THE PROJECT

Unlike most other case studies in this Guide, this underpass mural project was not led by the city or a community group, but instead was initiated, designed, and installed by Australian artist Bo Droga. The mural, located on the structural supports for Miami's Metrorail, celebrates the city's Cuban and Latin American heritage with giant-sized dominoes painted on the concrete pylons over a total distance of 2,750 feet.

This area is undergoing a redevelopment process known as The Underline that will create a ten-mile mobility corridor that integrates multiple forms of transportation, connects communities, and improves the safety of pedestrians and cyclists. Droga saw this ongoing effort as an opportunity to transform a public space that lacked cultural and aesthetic character into a place of pride for the local neighborhood and is now frequented by the greater Miami community and tourists.

BEST PRACTICE HIGHLIGHT: ARTIST AS PROJECT LEAD

Droga was able to develop and implement this project on his own thanks to a \$2,500 Ellies Award grant awarded to him by Oolite Arts. In late 2018, Droga presented his ideas to the Miami-Dade County Transit Department, the owners of the structural system of the Metrorail, and received support to move forward with his proposal.

With this agreement, the county presented guidelines for paint type, volunteer safety, and liability concerns and also issued contractor permits for the artist and the volunteers to work on county property. In the Spring of 2019, the artist and nine volunteers painted the first section of the overall project using large aluminum stencils for the dominos, while also leveraging in-kind donations on the paint, insurance, and engineering support.



"Based on the success of Underground at Ink Block, we will look for additional opportunities in future urban development projects to incorporate more street art to aid in branding, placemaking, and open space invigoration."

KATHY MCMAHON

SENIOR VICE PRESIDENT, NATIONAL DEVELOPMENT

Cranes in the Sky mural by Marka27 Photo by National Development

CASE STUDIES: ART ON VERTICAL INFRASTRUCTURE

Underground at Ink Block

LOCATION

Boston, MA

TYPE

Standalone Project

LEAD ENTITY

National Development

ARTIST

Multiple, selected by curator

TIMELINE

26 months from initiation to implementation

DURATION

Indefinite

MATERIALS

Acrylic spray paint

COST

Materials: (included in design fee)

Design Fee: \$53,000

Labor: (included in design fee)

THE PROJECT

Underground at Ink Block is a newly created public space and public art project launched to activate underutilized infrastructure spaces. Developed as part of the Massachusetts Department of Transportation's (MassDOT) Infra-Space program, the \$8.5 million project transformed an eight-acre interstate underpass between the South End and South Boston into an active urban park with landscaped pedestrian and bicycle paths and ten mural walls. The project ultimately created a link between neighborhoods previously divided by uninviting and unsafe highway infrastructure.

The first round of murals was completed in 2017; two years later the project was expanded to include nine additional murals. Underground at Ink Block now has one of Boston's largest displays of public art and has become a must-see destination for residents and visitors.

BEST PRACTICE HIGHLIGHT: PUBLIC-PRIVATE PARTNERSHIPS

The planning, permitting, design, and construction efforts were led by MassDOT in cooperation with the City of Boston Planning & Development Agency, the FHA, engineering and construction partners, and local development and arts organizations. After the space was completed, real estate firm National Development was selected through a public bid process and granted a lease to manage the park with art, community programming, and parking to generate revenue for operating the space.

National Development partnered with Street Theory to select local and national artists and curate the mural designs. Street Theory's experience in large-scale public art installations and artist management was a crucial factor in the planning and execution of the space as a cultural amenity. Additionally, given Street Theory's broad artist network, the artists were directly commissioned by the creative agency with no need for an open call or lengthy review process. Since its inauguration, the installation has received several awards and recognitions for its innovative approach to enhancing urban connectivity, walkability, and safety.



TOOLS & TACTICS



Tools & Tactics

This section breaks down the steps required to implement an asphalt art project.

When it comes to assembling a team, who does what? What difficulties should we expect, and what are some options for handling them? How can funding be acquired? How do we engage the community? What are some good ways for the city and neighborhood groups to work together to implement the project?

These questions and more are addressed here, drawing on the experience of successful project teams across the globe.

There is no one-size-fits-all process for asphalt art – each project will vary depending on its stakeholders, location, complexity, and scale. But the most common elements are discussed in detail in the following pages. They can serve as touchpoints for every step of your your project, troubleshooting along the way, and leveraging the best results throughout.

PROJECT INITIATION (PAGE 68)

- Initial Project Considerations
- Project Management & Schedule

ASSEMBLING A TEAM (PAGE 74)

- What Will the Project Team Do?
- Role of a Community Member or Nonprofit Organization
- Role of the City

MANAGING A BUDGET (PAGE 79)

- Establishing a Project Budget
- Design Fees
- Fundraising

DESIGN DEVELOPMENT (PAGE 82)

- Artist & Art Selection
- Contracts, Legal Agreements & Permits
- Community Engagement & Design Review
- Design Process & Standards
- Materials & Site Considerations

ENGAGING THE COMMUNITY (PAGE 90)

IMPLEMENTING THE PROJECT (PAGE 92)

- Materials Storage
- Construction Documents
- Site Safety & Traffic Control
- Documentation

MAINTENANCE & STEWARDSHIP (PAGE 96)

PROJECT EVALUATION (PAGE 100)

Same Same but Different, Pittsburgh, PA (Case study on page 27)

Mural by Ann Lewis Photo by Pittsburgh International Airport

Project Initiation



Asphalt art projects can be initiated in many ways. They may originate from a community group seeking to slow traffic in their neighborhood or in City Hall as part of a broad planning effort. Some projects are intended only for a short time, while other may be more permanent. There are many details to coordinate, but with the right team and sufficient planning, the project can be reasonably managed.

Generally, a project is initiated after someone identifies a potential site for an intervention and has either the resources, time, or passion to make it happen. Leadership from one person in particular is critical to the success of these projects; there should be someone who is ultimately responsible for managing the schedule and budget, whether that is a project manager assigned by the city or an executive director of a nonprofit.

While every project has basic elements, some of the recommendations in the pages that follow will depend on the initiating entity (community group or city) and the municipality's permitting structure, if any.

Projects are typically initiated in one of three ways:

- Proposed by a community entity such as a nonprofit organization, informal group, independent artist, designer, or creative collective to address a community goal without a formal municipal approval process.
- 2. Implemented by a local government or municipal agency based on previous planning efforts or community requests.
- 3. Implemented through an ongoing initiative or program typically run by a local government agency. This might mean that an agency commissions an artist as part of a regular program for a particular space or that the city has an established permitting process for outside entities to do these projects on their own.



Generally, a project is initiated after someone identifies a potential site for an intervention and has either the resources, time, or passion to make it happen.

This intersection mural in Portland, OR, is one of many done by City Repair, a nonprofit organization that works hand-in-hand with the Portland Bureau of Transportation to accomplish these projects. This is a successful example of how nonprofit organizations often lead asphalt art projects. (Case study on page 19)

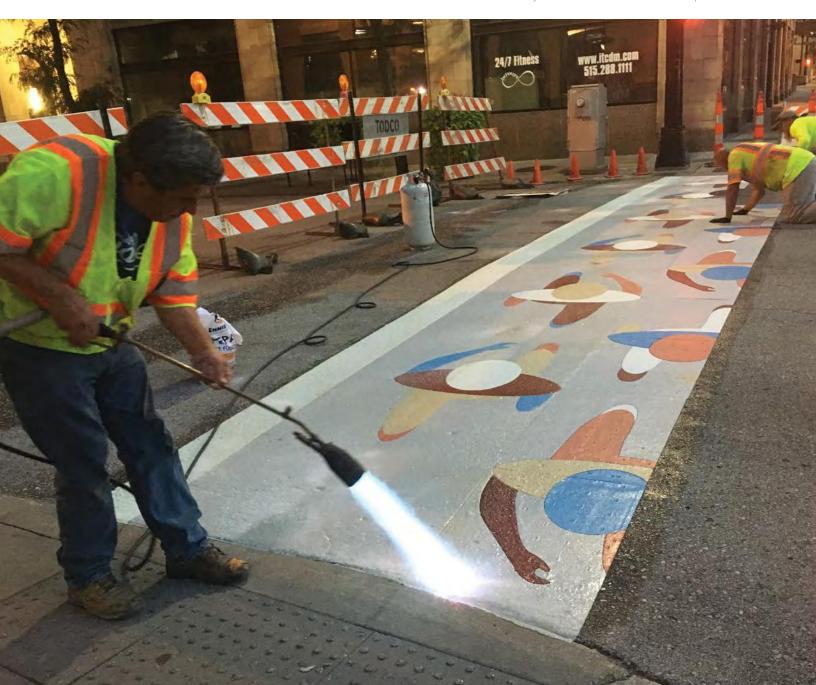
Mural by community member Colleen Smith Photo by Greg Raisman

INITIAL PROJECT CONSIDERATIONS

Depending on who initiates the project, some preliminary research and planning will be needed. In the first stages of planning, consider the questions on the following pages regarding the location, ownership, creation, and longevity of a project. Knowing the answers to these questions up front will help with a smooth implementation later and raise any red flags about the selected site. We suggest documenting and discussing these details and sharing them with all of the project partners. These questions assume a project location has been selected, though they are useful for someone scouting out potential locations as well. Don't be disheartened if at first you do not have answers to every question! Most projects don't address many of these items and are still successful.

Some paint applications, like this one in Des Moines, may need to be applied by professional contractors. (Case study on page 21)

Crosswalk Mural by Peter Gibson Photo by Greater Des Moines Partnership



SITE CONSIDERATIONS

Who controls the site? What entities must be involved in design review and permitting? (i.e., department of transportation or public works, art commission, historic commission, or other entity).

This is an essential first question because it may be that the controlling entity has a permitting process for asphalt art projects that will impact the project schedule or the entity may not allow asphalt art projects in the first place.

If you are working on private property, getting permission in writing from the site owner early on is also key. You may still need building permits, street closure permits, or permission from a local arts commission or historic review commission. Inquire about master plans, community plans, or other long-term goals for the site. Inquire about any upcoming projects that may impact your project. What is a vacant lot this summer might be a retail location next year. Having that information will help you evaluate your site and plan for the longevity of your project.

How might the project complement a previous planning effort or a local community goal?

Project teams should determine if there are any existing planning efforts or community goals that this project might advance. Perhaps the project can be tied to an ongoing public planning process as an outreach activity. There may also be funding available for projects that are a part of a master plan.

What is the condition of the pavement?

Pavement that is in bad shape may need additional coats of paint or simply need to be patched or repaved. Crosswalks in particular should be fixed before the project begins. Paint may make it difficult for pedestrians to see cracks or other breaks in the pavement, leading to injury. Some cities repave or micro-surface asphalt before applying a coating, which will dramatically improve the longevity of the project as the coating will adhere much better to fresh asphalt. If this is not feasible, cities should consider requiring certain pavement conditions for accepted projects, and communities should make sure the area being requested is in good condition before applying for a

new project. See "Materials & Site Considerations" on page 88 for more information on how to choose the right coating, pre-treatments, and other methods to lengthen the life and general durability of a project.

What type of street is being considered and what is the volume of traffic?

High car volumes will lead to faster wear on the mural, which should be considered as a factor in paint choice. Streets with a car volume of 80,000-100,000 ADT (Average Daily Traffic) may not be suitable candidates for art in the roadway. Wide streets (50'+ or more than five lanes) are also very challenging, but not impossible. The higher the volume and speed of cars on the street, the less appropriate a street is for art in the roadway. For art in pedestrian spaces, the threshold can be higher based on the judgment of the project team and relevant permitting agencies.

Will the site require complex traffic control for installation? How will the installation affect traffic flow and the right of way?

Signalized intersections or high-volume roads (over 20,000 ADT) may require more complex traffic control and redirection. The city may not have the necessary internal traffic control equipment, and the budget may not allow for the rental of such equipment, which can be very costly.

Are there existing marked crosswalks, curb extensions, or other traffic pavement markings?

Consider how these interact with a potential design. Some traffic engineers require designs in the crosswalk to be within the white lines, while others are more permissive depending on context. Other pavement markings may be within the area considered for an asphalt art project. These may be painted over or they may be incorporated into the design.

Are there other street design elements such as: ADA ramps, bus stops, electrical poles, on-street parking, or driveway curb cuts?

These might conflict with proposed curb extensions or crosswalks and should be considered when developing the design.

PROJECT DEVELOPMENT

What is the projected duration of the project? How long is it intended to last?

This will have implications later for maintenance and paint type. For permanent projects, choose more durable paints. If the installation will be repainted within a year, then less durable paint can be used. More durable paints will also be more expensive. See page 88 for more about paint types and duration.

What is the time frame for implementation? Is there a specific deadline for project completion that needs to be met (e.g., the opening of a road or a public event)? Is the deadline flexible?

Consider factors such as weather, local events, seasonal changes in population, or holidays as these might impact the schedule for the installation. See "Project Management & Schedule" on the following page for more information on setting a "build date."

Who is on the core project team? Who are the key decision makers?

It is important to have representatives from both the city and the community on the core team. See "Assembling a Team" on page 74 for more on project team roles and responsibilities.

Who will create required drawings and construction documents for the project?

If the city is the lead, this may mean using an existing on-call contract for the creation of striping plans and maintenance of traffic plans or asking the nonprofit partner to take on the work of hiring an architect to create the plans.

What is the budget? Who is paying for the project?

This will impact material procurement. If the city is the source of funding, then procurement may be challenging: materials may be limited to those the city already has available or can procure with existing contracts. City leads should consider working with nonprofit entities that have more flexibility when spending grant funding.

PROJECT IMPLEMENTATION & STEWARDSHIP

Will the project team utilize volunteers in the implementation?

If so, the team will need liability waivers for volunteers, a volunteer management plan, and amenities for volunteers during the install (water, food, shade, etc.). Volunteers will need to be trained on the material application and safety. See "Site Safety & Traffic Control" on page 95.

Are there any business owners and/or residents adjacent to the site?

If so, these should be the first groups approached about the project. Getting their support and participation may be critical to the success of the project. See "Engaging the Community" on page 90 for more information about different outreach methods.

How will the project be maintained? Will it be allowed to fade after one application or will it be reapplied? Who will maintain the project once it is complete? Has that entity agreed to participate in the project? For how long?

All paint and other materials will fade and require maintenance. How this is addressed might depend on the entity: is a longer term reconstruction of the street planned, or is the project intended to be permanent? If the city is the lead and no upcoming repaving/reconstruction is in the works, then the city will need to repaint. If a community group is leading, then the city may require them to agree to maintain the project for a certain amount of time. If the project is temporary, the city will need to consider a removal plan. This will be a critical detail when choosing materials. See "Planning for Longevity" on page 88.

For projects that create pedestrian plazas, how will programming and stewardship be addressed on an ongoing basis?

Long-term stewardship is a critical part of the success of a project. Project teams need to consider how the space will be used after the project is complete. These responsibilities are often given to local arts organizations or Business Improvement Districts (BIDs).

PROJECT MANAGEMENT & SCHEDULE

One of the first steps when initiating a project is establishing a time frame and deadline for the design and implementation of the artwork, along with an overall schedule of milestones. Set a date that works for you and your team given local weather, important holidays, or other events. This is especially important if you plan on working with volunteers or if your installation requires a complex traffic control plan.

For example, consider that many communities have seasonal peaks in tourist activity. You may want to plan the install around these seasons to avoid a traffic control conflict or, alternatively, install during the season as a way of showcasing local art and culture. In the case of the Coxe Avenue example on page 25, the installation was planned around the Fall "leaf" season, when Asheville sees a spike in tourists coming to see the leaves change color. The main mural painting activity became an attraction for many visitors.

Your schedule should act as a to-do list of tasks to be completed and matters to be addressed, outlining responsible partners for each task as well as internal deadlines to meet. Some items might function as an ongoing task, such as community and business outreach, while others may need to meet strict deadlines, like ordering materials and finalizing the design.

Your schedule should act as a to-do list of tasks to be completed and matters to be addressed, outlining responsible partners for each task as well as internal deadlines to meet.

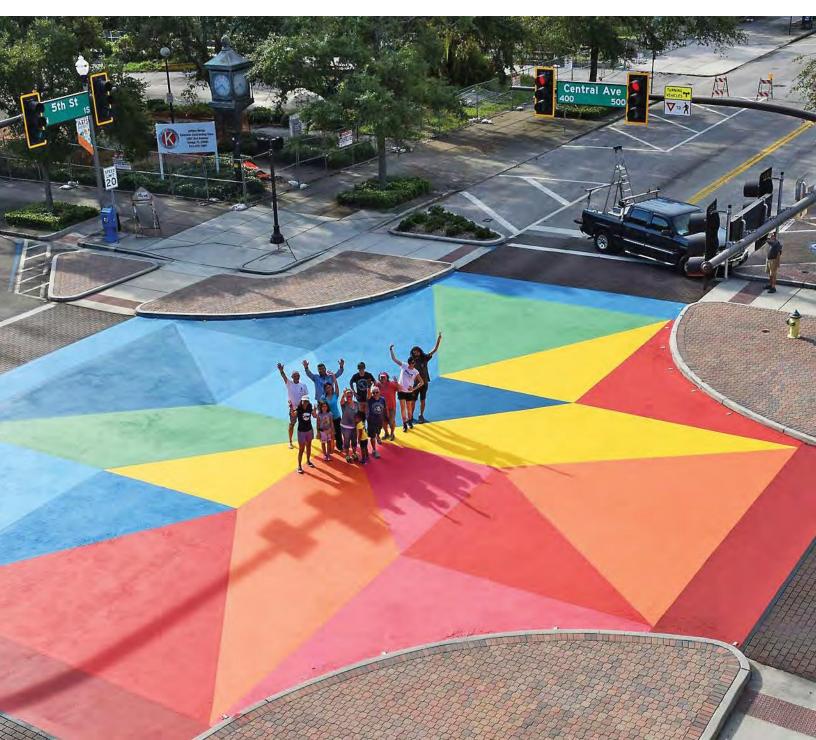
Consider the following common tasks as you lay out your schedule:

- Identify partners and stakeholders (ongoing task)
- Identify regulatory and political framework
- Pre-evaluation of the site
- Develop budget and procurement list
- ☐ Select artist or designer
- ☐ Meet with local government staff (if relevant)
- Outreach to local businesses and residents (ongoing task)
- □ Develop final design (make sure to incorporate time for revisions based on community feedback)
- ☐ Develop construction documents/striping plans
- ☐ Acquire permits/traffic control
- ☐ Material and supply procurement
- ☐ On-site programming or activation
- ☐ Create maintenence plan
- ☐ Create evaluation plan and monitor performance

Assembling a Team

A successful project team, like this one in St. Petersburg led by the Arts Alliance, will have representatives from city agencies, community organizations, and other members of the community. (Case study on page 15)

Intersection mural by Cecilia Lueza Photo by Beth Reynolds



The ideal team includes representatives from each entity collaborating on the project and a project manager(s) who will lead the team at every step of the process. Once the project manager(s) have been selected, their role is to identify the skills needed to complete the project and to find the balance between an inclusive team and an effective team that can make quick decisions. Those leading the project will direct other team members in their tasks, make sure deadlines are met, and make final decisions on any component of the project (e.g., designs, materials used, duration).

Many projects have a small executive Project Team and a larger Steering Committee. The Project Team makes critical decisions about the project and must be empowered to move things forward on a frequent (perhaps weekly) basis. The Steering Committee convenes less frequently (perhaps once a month) and is meant to include a larger pool of partners with varied expertise.

The Project Team makes critical decisions about the project and must be empowered to move things forward

Team members may include:

- Entity initiating the project
- Site owner(s)
- Public works, transportation, planning, or other government departments that oversee the public right of way
- Entities that will implement the project, if different from above
- Community member(s) who will use the project
- Community member(s) who live or work near the project
- Artist or designer creating the content for the project

WHAT WILL THE PROJECT TEAM DO?

- ☐ Decide on roles and responsibilities for each team member
- ☐ Establish answers to the questions listed above
- Manage the administration of the project by coordinating funding, permission, reviews, permits, contracts, budgeting, payments, and communication
- ☐ Make sure the community impacted by the project is aware and supportive of the project
- Develop process for selection of the artist or designer to create the project
- ☐ Participate in design development and review
- Secure materials, equipment, and other necessary project materials
- Manage the implementation of the project by developing a detailed plan of action for painting and installation, being physically present at the site to assist with hands-on activities from painting to answering questions from passersby, managing project volunteers, assisting with day of site needs, and planning a celebration when it is finished
- Develop a schedule for repair, maintenance, or refreshing of the project

The most successful projects are collaborations between the city and a community partner. There is no one-size-fits-all blueprint for distributing roles and responsibilities. These will depend on the lead entity, the permitting framework established by the city, the capacity of the community organization, and the resources within the city. In the following sections, we describe some common roles for both community organizations and municipal agencies.



This project in Bankside, London, was awarded funding by the Transport for London's Future Streets Incubator Fund, a program created by the mayor to encourage projects that improve public spaces in London. (Case study on page 23)

Colourful Crossings mural by Camille Walala Photo by Better Bankside

THE ROLE OF A COMMUNITY MEMBER OR NONPROFIT ORGANIZATION

Some of the common responsibilities of a community organization on the team are to convene the community to gather input, conduct volunteer and business outreach, and ensure an equitable and transparent process. The community group can be the communication conduit between the city and the community at large. Schools, churches, businesses, and other nonprofit organizations may all be potential partners.

If a community group is the project lead, it is imperative that they find a partner within the city government, either staff or an elected official, to champion the project and help with any regulatory issues. Making contact early with the city is key. Check in with your local planning, public works, or transportation departments to ask about permits, the design review process, potential partnerships, and how to implement your project within their workflow. They may have an existing program or funding stream to facilitate your idea, information about insurance requirements, as well as recommended materials. For example, the City of Austin has a creative crosswalk program for communityinitiated projects. Ask members of these departments to join your project team and be sure to keep them informed as your plans evolve.

If a community group is the project lead, it is imperative that they find a partner within the city government to champion the project

The community group or other third-party entity in many cases can also handle procurement of materials as a way of working around complex municipal procurement rules. They may also take on the programming or stewardship of a space once completed.

THE ROLE OF THE CITY

Some of the main roles of the city when leading a team or in a support role are to ensure an efficient and easy design and permitting process (e.g., waive fees, offer design review support), to provide traffic control for implementation, and to participate in or lead the marketing and data collection efforts. Many cities have created standards for the creation of asphalt art that also provide a permitting pathway for community-led projects.

The city should take the lead on those project elements for which they have resources or existing processes. These may include cleaning and preparing the site in advance of the project and providing any necessary restriping or touching up of existing striping. If available, the city should provide transport for or store materials for the implementation. In many cases, the city can provide support for implementation through the use of existing city equipment.

If this is the city's first time working on a creative street project, you must enlist the participation of local community members to bridge the gap between municipal leaders and the community at large. Many community organizations and artists may be inspired by your work and want to participate. Your role as the city is to help the community group identify key stakeholders and support the outreach effort by providing resources such as meeting space, printing costs, and other logistics.

Once a project has been identified, seek a variety of partners who can fill roles on the team. As a municipality, your public works and transportation departments have deep knowledge about the kinds of materials that work on your streets, taking into consideration climate, use, and future plans for specific locations. Involve these colleagues in the early planning stages to discuss materials, equipment, process for street closures, staffing requirements and availability, and other technical project needs.

After projects have been completed, conduct an exit interview with project participants to learn from your pilot, including artists, volunteers, and others who were on site during implementation. Consider establishing guidelines and procedures for ongoing projects to make it easy for community entities and artists to participate.





Managing a Budget

The projects featured in this Guide demonstrate typical funding sources for asphalt art projects:

- Municipal capital improvement funds or other construction funds
- Municipal art funds (usually based on a percentage of construction funds allocated for art)
- Grants or funds from local, state, federal, or private sources (e.g., Seattle Neighborhood Matching Fund, AARP Community Challenge grant program)
- Private or public sponsorships

For this ground mural in Times Square, artist Molly Dilworth was selected from over 150 submissions to NYCDOT's design competition launched in 2010. (Case study on page 41)

Cool Water, Hot Island mural and photo by Molly Dilworth.

PROJECT BUDGET

One of the main reasons why people turn to ground murals for improving streets and public infrastructure is that they are quick and relatively inexpensive. That said, a reasonable project budget is needed to account for everything from insurance to paint. Creative street projects can be affordable – you may be able to secure donations of high-quality supplies, and some work can be done by volunteers. However, there are hard costs associated with all of the project types in this Guide.

The following is a list of potential hard and soft costs that may be included in the budget, though not all of these items will apply to every project:

Planning:

- □ Administrative staff time
- ☐ Permits or application fees
- Legal fees
- ☐ Insurance
- ☐ Fundraising and managing project funds

Design:

- Artist / designer fees
- ☐ Testing materials or design elements
- Producing design review documents and presentations

Implementation:

- Materials and supplies
- Equipment
- ☐ Fabrication of components from specialty contractors
- ☐ Labor
- Maintenance of traffic (street closure fees, police, traffic control barriers)
- ☐ Water, cloths, and tarps for on-site cleanup
- Shade structures or cooling areas
- On-site hospitality for crew and volunteers, including water, food, and access to a restroom

- On-site storage or security for supplies, equipment, and personal belongings
- Opening celebration
- □ Documentation (during install)

Post-Installation / Maintenance for Long-Term Installation:

- Programming planned during the life of the project
- □ Documentation (post-install)
- ☐ Labor and materials to refresh project
- ☐ Labor and equipment to remove project

DESIGN FEES

To ensure a high-quality asphalt art project, many project teams formally hire an artist, architect, or designer to produce a design, develop design documents, and/or help organize volunteers or the installation crew to implement the project. In some cases, an artist may be willing to donate their time and design for the project, though it is best practice to include a design fee in a project budget so that artists get paid fairly for their work. Either way, someone will need to be responsible for both the creation of a design and the translation of that design into a built work – from permit drawings to stencil creation. A good benchmark for artistic design and project management is 10-20% of the project budget.

Keep in mind that if an artist or designer is fabricating parts of the project or materials needed for the installation such as stencils, funds will need to be allocated for materials in addition to the design and management fee.

FUNDRAISING

If your project is not fully funded from the start, a fundraising plan will need to be developed. Every member of the project team should participate in brainstorming funding sources. Consider approaching multiple funding sources with interests in the different aspects of these types of projects. For example, asphalt art projects are appealing to corporations and foundations that support placemaking, community



Each year, Mural Arts Philadelphia hires different artists to design and install a mural at the Eakins Oval. (Case study on page 31)

Summer Kaleidoscope mural by Jessie and Katey. Photo by Steve Weinik

development, public art, walkability, and community health. Other funders may be interested in the content of the artwork. For example, a project with natural and environmental content may be of interest to funders with an interest in those areas. Utility boxes wrapped with community photographs may be of interest to a funder who supports photography or journalism. It is also important to research foundations, corporations, and individuals who support the geographic area where your project is located.

When you involve artists in your project, you may become eligible to apply for funds from local and state arts councils. Larger-scale projects with ample time frames could apply to the National Endowment for the Arts.

Inquire if your municipal or county public works department could fund the project with capital construction dollars. If government capital funds are not available, government support could also come in the form of allocations from local or state elected officials. Be sure to meet with representatives from their offices to discuss other grant programs for which your project may be eligible. Small budgets could be covered or small gaps in larger projects could be bridged through an individual contribution campaign or crowd sourcing.

Finally, city departments and community organizations commonly work with fiscal sponsors to accept funding and facilitate contractual relationships. Fiscal sponsors are nonprofit organizations that provide their legal and tax-exempt status to other organizations in furtherance of charitable and civic goals and projects. It is important to determine whether the city or community partners will need a fiscal sponsor to accept funding, hold contracts, or facilitate other aspects of the project.

Design Development



ARTIST & ART SELECTION

Some of the projects included in this Guide were produced by ongoing arts programs with established methods for choosing artists and design professionals. If you are not collaborating with an ongoing program on your project, methods for artist selection include:

- Open call process by request for proposals or request for qualifications
- Invitational where a small group of artists are pre-qualified for the project
- Directly approaching a specific designer for a proposal
- Utilizing an in-house designer or other creative member of the project team

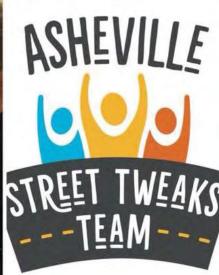
How the art is chosen is important to consider. Selecting the art will require care and expertise to run a process that is fair, sensitive to relevant communities, and will ensure a final product of high artistic quality. In order to execute an efficient and effective artist selection and engagement process, cities should consider working with an experienced arts administrator to oversee the artist selection process and to coordinate participating artists, such as in the Same Same, but Different project in Pittsburgh (page 27). If there is a request for proposals, the arts administrator could coordinate a jury of community members and/or arts professionals who can judge the artistic quality, feasibility, and community relevance of the proposals. Otherwise, selection may be led internally by the project team, but should enlist input from visual arts and design professionals and local











community members. In some cases, other selection models have been employed, such as in the Walks of Life mural in West Palm Beach (page 17), in which students at a nearby art school voted on several design options created by their peers with professional coaching from Street Plans.

In some selection processes, cities select a handful of finalists and request that they develop their design concepts beyond their initial proposals. Note that best practice is to offer compensation for additional design development even if the artists are not selected for the project. Once the winning artist is chosen, they must be given a contract to continue working on the project.

The butterfly mural in Asheville underwent several rounds of design review. The first step was meeting with the community to choose a location for the mural. The project team then worked with artist Jenny Faires to translate the initial sketches into an implementable design. The design drawing shown above was used by the team during the painting process. (Case study on page 25)

Aerial photo by Justin Mitchell Drawing and additional photos by Street Plans Collaborative

CONTRACTS & LEGAL AGREEMENTS

Unless you are working with an in-house designer to implement the project, you will need a contract. Most likely you will be working with an artist, designer, or other creative collective who should be paid for their work. The contract should outline all of the expectations for products, services, responsibilities, payments, ownership of the physical project, ownership of the copyright, liability insurance, maintenance, life span, and more. For the design and implementation of the project, the contract will likely engage the entity who owns the site, the entities implementing the project, and the entity who will own the project.

For projects on public property, work with your local planning, public works, or transportation department to see if other agreements will need to be put into place. For example, on public property, the government entity that owns the site may need to execute an agreement with the entity implementing the project to legally access the project site (see the Miami Dominoes project on page 61).

Your local government arts agency, public art program, or arts council will likely have a public art contract to adapt for the project. If you are starting from scratch or if you are an artist initiating a project, two good resources are Sarah Connelly Odenkirk's A Surprisingly Interesting Book About Contracts: For Artists and Other Creatives (2014, AMMO Books) or the Americans for the Arts' Public Art Network (publicartnetwork.org).

If you are seeking outside resources from a local, state, federal, or private entity, there will also likely be a contract to accept and distribute the funds.

Note that artists will retain the copyright of their work unless the project is specifically designated as a work-for-hire. The artist and commissioning organization can agree on how images of the artwork will be used



PERMITS

Depending on the jurisdiction of the project and the entity leading the project, a permit may be required. These permits will allow the project team to occupy and use the right of way temporarily during the installation and ensure that safety and mobility won't be compromised.

Some common requirements for submitting permits include:

- Description of the project and a detailed installation plan
- List of materials
- Traffic control plan if the project will occur in the right of way
- Proof of liability insurance, typically naming the site owner and other project partners as additionally insured on the certificate.
 This is typically a special event coverage for the installation.
- Approval from all or a percentage of property owners adjacent to the installation site
- Site use agreement outlining the responsibilities of all parties involved in relation to ownership, maintenance, and removal

For information on model legal agreements, permits, and insurance, see asphaltart.bloomberg.org.

COMMUNITY ENGAGEMENT & DESIGN REVIEW

Whether the project is being designed in-house (by members of the project team) or by contracted artists, developing a design with the community will require ongoing communications and meetings. Key members of the community should be a part of the core project team. Either the city or a lead nonprofit organization should convene a public meeting to discuss the site and preliminary design considerations. The team artist or designer should participate and might even co-lead this meeting. Following this meeting, the artist or designer should develop draft concepts for review by the project team. This offers the team the chance to share feedback about the content and the materials in a constructive environment and provides the artist or designer with enough time to evolve their concept as they respond to the feedback. Work with the artist or designer to develop a realistic timeline for revisions, and adjust the project schedule accordingly.

Once the design has been reviewed internally, it should be shared with the public at large at a community event in addition to any other reviews required of your project by community, art commission, design commission, site owner, traffic engineer, or other entities.

Ongoing regular meetings with the community and continued in-person outreach where designs are shared with both municipal partners and community members are critical factors in developing an authentic and informed design.

This mural at the Pittsburgh Airport was installed using runway-grade thermoplastic, a material that is engineered to last longer than other paint applications. This ensures the longevity of the project and reduces its maintenance costs. (Case study on page 27)



DESIGN PROCESS & STANDARDS

Several factors go into a successful and beautiful design. The first driver of a design should be the identity of the surrounding neighborhood, cultural characteristics, and diversity of the community. This may mean looking to local architectural or cultural traditions for inspiration or to the natural world.

For example, the design of Plaza Rue Vendome on page 47 was inspired by the local art deco architecture that is prevalent in Miami Beach. The design team made three potential designs and brought them to the public at a community workshop to vote on the design.

Another factor in the design process should be consideration of how the project will be implemented. Designers must find a balance between the complexity of a proposal and how difficult it will be to implement. This depends in large part on the resources available for things like paid contractor labor and stencils or if the project will be implemented with volunteer help.

For Rue Vendome, a specialized street paint was used that is meant for pedestrian spaces. The paint supplier flew to Miami Beach to train the city and project team in the application, while the city worked with existing contracts for other items like planters and chairs. (Case study on page 47)

Photos by the Street Plans Collaborative

Scale is also an important consideration in the design process. Consider how the project will be viewed and what the experience of a pedestrian will be when walking over the mural. Some designs look great as a drawing on an $8.5" \times 11"$ paper, but do not translate to full scale. Similarly, some street murals look great in photos taken from a helicopter, but may be hard to decipher when standing directly on them. Using repetitive patterns and solid background colors may help create a design that can be appreciated from multiple angles and distances.

For projects that impact the layout of the street, the design may need to be submitted for approval to the city's or other government entity's traffic engineering department. No single national standard exists for art in the right of way. While the Manual of Uniform Traffic Devices (MUTCD) is the document that traffic engineers use to guide the use of pavement markings and paint colors, art on the street is not considered a traffic control device and thus is not regulated by MUTCD. However, where art is used as part of a striped crosswalk, the Federal Highway Administration has provided some guidance: "subdued-colored aesthetic treatments between the legally marked transverse crosswalk lines are permissible provided that they are devoid of retroreflective properties and that they do not diminish the effectiveness of the legally required white transverse pavement markings used to establish the crosswalk."²

Every city solves for approval differently based on local context. For example, some cities, such as Houston, allow for any combination of colors, symbols, and words, as long as they occur within the white transverse crosswalk lines. Other communities use the volume of cars or character of a street as a determinant of what is allowed. An engineer may allow for a brightly colored installation on a low-volume residential street, while being more restrictive on a higher-volume, suburban location.

Some city engineers may provide more specific color or pattern recommendations about what they find acceptable, while others might have a more flexible interpretation of the guidelines. The important thing is to have open communication with the approving traffic engineer to translate the community vision into an approved plan.

Asphalt art projects, particularly murals, are generally not considered advertising as long as they do not incorporate commercially recognizable symbols or draw attention to a product, activity, or service. The inclusion of logos or commercial symbols and characters may be subject to regulation as a sign or advertising in certain jurisdictions and thus should be avoided. Be sure to check the local sign ordinance to verify any additional regulations.

The first driver of a design should be the identity of the surrounding neighborhood fabric.

² "Interpretation Letter 3(09)-24(I) – Application of Colored Pavement" Memorandum, U.S. Department of Transportation Federal Highway Administration, August 15, 2013.

PLANNING FOR LONGEVITY

Before developing a design and implementing the project, decide how long the project will last, if it will be allowed to fade, if it will be maintained, or if it will be replaced by another project after a predetermined amount of time. In addition, decide who will be doing the hands-on work of maintenance and removal. Options include the artist or designer, the site owner or manager, city staff, or community volunteers.

It is important to make this decision in the planning stages, since these factors impact the choice of materials, content, and qualifications of an outside artist or designer. For example:

- An asphalt art project with a one-season life span will require a material easy to remove with a power washer. It may also be a good opportunity for project teams working on this scale for the first time.
- A project with a multiple-year life span that will not be maintained will require sturdier materials and a design with continued aesthetic appeal as the project becomes worn by pedestrian, bike, and vehicular traffic.
- Asphalt art projects that will be maintained will require materials, design, and a project site appropriate for the reapplication of materials.
- Artwork meant for spaces that will be eventually driven on will fade much more quickly than artwork on pedestrian-only spaces.

MATERIALS & SITE CONSIDERATIONS

When it comes to materials, each project will require a different selection. Materials will vary depending on the project's desired use and duration. For most projects, local government entities will also require the selected paint to be mixed with a non-slip additive such as Shark Grip® to avoid surfaces from becoming slippery once the installation is in place. Below is a list of common products used for asphalt art projects that range from very temporary to more permanent:

- Tempera paint
- Water-based field-marking paint
- Latex or acrylic household paint
- Acrylic traffic marking paint (Roadzilla* MMA, Rustoleum*)
- Epoxy-based pavement coating
- Thermoplastic (TrafficPatterns®, DuraTherm®, DecoMark®)

To ensure the paint's durability or to extend its life, you may also consider the following methods:

- Power wash and clean the site from any debris the day before or a few hours before the installation begins
- Apply a primer coat prior to the artwork installation



- Apply a sealant once the artwork has cured or, in the case of vertical infrastructure murals, apply anti-graffiti coating. Some projects in this guide have used products like Graf-X WB anti-graffiti coating and Clear Shield anti-graffiti coating.
- Make sure the artwork area is completely closed off to vehicles and foot traffic until the paint has completely dried
- If using light colors, consider applying a white base coat
- Freshly paved areas will absorb more paint. Make sure to account for extra layers of paint if painting over a recently paved surface.
- Consider testing a range of installation tools before purchasing them and making sure the installation crew or volunteers receive proper training to ensure the application process matches your expectations
- If using stencils, make sure they are cleaned before reusing to avoid damaging other parts of the project
- Set up a workstation that will hold all of your painting materials in one place by covering the surface with a large tarp. This will ensure that your working area remains clean even if some paint spills.
- Some cities utilize materials that combat particular environmental challenges. For example, innovative new paving materials have been developed to mitigate rising urban temperatures. "Cool pavements" come in a variety of forms, from a coating on street surfaces that increases the solar reflectivity to entirely new, permeable concrete that can absorb water, which later evaporates and cools the surrounding area.

For Lincoln Hub, the project team used an epoxy traffic paint that is durable enough to be driven over, but can also be used for pedestrian spaces like curb extensions and sidewalks. This paint was intended to last 3 years, but has lasted several years longer with a yearly application of sealant. (Case study on page 37)

Photo by Lakeview Chamber of Commerce

CONNECT WITH SUPPLIERS & MANUFACTURERS

The people who make and distribute products will have information to share about application methods, curing time, reaction with different temperatures and materials, maintenance, and removal. Much of this information can be found on material spec sheets/cut sheets. They may even be willing to participate in the application. Ask for color samples and examples of where the product has been used, giving you a chance to follow up with questions. Share this information with the entire project team, including the artist or designer developing the project. They may consider design adjustments based on how the product performs. In many cases, designs may have to be changed based on available colors.

PROCUREMENT

One challenging part of asphalt art projects can be the procurement of materials. Many cities have procurement rules that prescribe specific brands or materials or require a minimum number of bids when the cost a material exceeds a certain threshold. If the project is being led by a city, they may be able to work within these rules by breaking material orders into smaller increments that fall below procurement thresholds or they may include the material costs within a larger contract with an on-call vendor. Depending on the source of funding, the city may consider offering a grant to a local community organization to procure materials or the city and community group may work together to pool resources. The city may also have some types of paint stock that can be used in conjunction with materials procured by others.

TESTING MATERIALS & TRAINING CREW

Unless the artist, designer, or your community has extensive experience working with a specific material on your project surface, it is wise to test materials ahead of time. It is also a good idea to test the application of the materials with the tools you will be using. Additionally, set aside time to train your installation crew if they are not yet familiar with the materials or application process. The test should approximate the pavement conditions as closely as possible – and also use this as an opportunity to test paint removal. Spending an hour testing now can keep you from making costly mistakes later.

Engaging the Community



There are many opportunities to involve community members in the process of asphalt art projects. It is a best practice to inform and engage people who are physically or conceptually connected to a site's location through live, work, play, and interest. Having a variety of engagement strategies will increase the diversity and number of participants as well as support for the project.

Not everyone has the time or ability to attend a public meeting, but they might have time to attend a free event where they can see the design and meet the design team or artists. Transportation, time of day, language spoken, cost, and daycare are common barriers to participation. The project team can develop solutions to remove barriers to participation in your community. For communities with little public participation, building awareness of the process is a way to increase community enthusiasm for future projects. Making the effort to widely engage the community is a strategy to build broad support for the arts.

For all projects, whether undertaken by city departments, local organizations, or neighborhood groups, community engagement tools can include the following:

- Door-to-door outreach
- Handing out flyers and creating educational signage
- Public meetings for presenting the project idea and design options
- Allowing the community to vote on the design or be involved in the review process
- Inviting locals to become volunteers during the installation and participate in the creation of the artwork
- Engaging local businesses or institutions such as schools and art organizations to become part of the project team

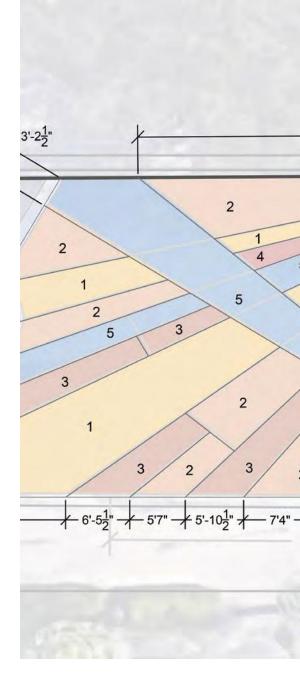


- Purchasing materials and supplies from local businesses
- Hosting a celebration party once the installation is complete
- Building an ongoing program for activating the space with community events
- Conducting pre- and post-installation surveys to evaluate the community's expectations and receptiveness to the project

In Tucson, the Living Streets Alliance worked as a liaison between the city and the community. They handled community outreach both during the design development phase and handled volunteer management during the installation event. (Case study on page 35)

Photo by Taylor Miller

Implementing the Project

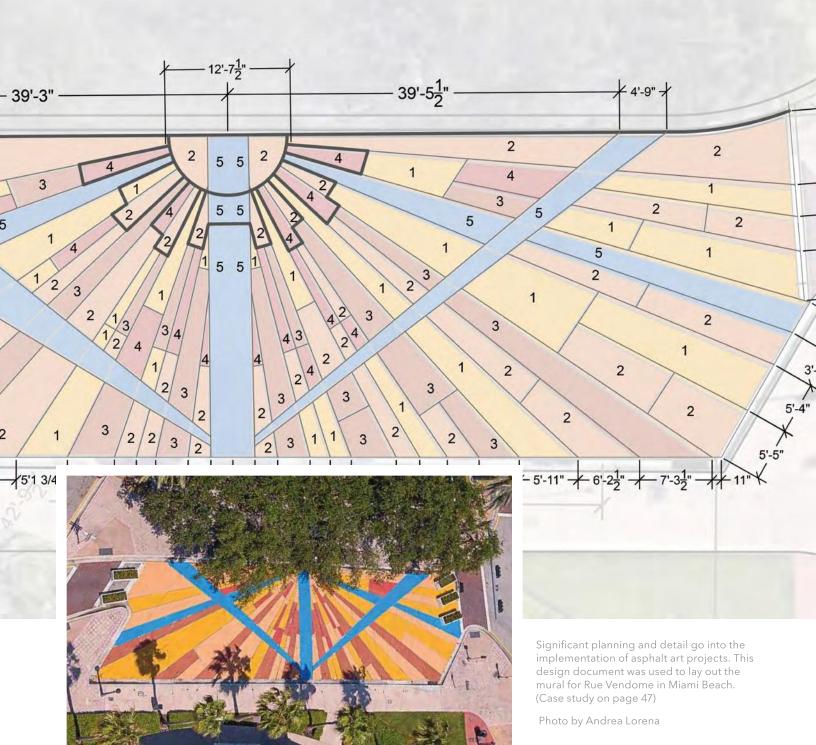


MATERIALS STORAGE

Project teams should secure materials and place them in storage at least a few weeks before the installation begins. Consider longer lead times for custom or large orders of paint and think about the size of any stencils or other equipment needed for install. Work with a local business or public facility near the project site to store supplies, materials, and personal belongings prior to and during the installation. If a space is not available, you can rent a portable storage locker for the site.

CONSTRUCTION DOCUMENTS

Asphalt art projects are guided by a set of construction documents that describe both the final design and the traffic control needed to implement them. These documents will allow the project leaders to instruct the on-site crew and volunteers and include instructions for how to lay out the design, dimensions of the site, and other important design measurements as well as a color key.







SITE SAFETY & TRAFFIC CONTROL

Everyone on site producing the project will benefit from having a safe, secure, and comfortable place to work. Long days in the summer sun painting a mural on the street are physically challenging, and dehydration and heat stroke are a risk. Make sure that you have water, food, bathrooms, seating, and shade structures available to everyone during the installation so that the experience is safe and enjoyable.

Another part of project implementation involves traffic control. If the project will be installed on the right of way or will require a temporary detour of traffic, you will need a traffic control plan. The plans will show the area to be closed off to vehicles and a temporary plan for how to guide road users through the work zone with traffic control devices. This document will ultimately ensure the safety of all crew and volunteers moving through the installation site. It is always helpful to plan the installation during hours with low traffic volume and to allow time for the artwork to dry before the road is driven on again.

To ensure the public is aware that the project happening is a sanctioned activity, install temporary signage describing the project. Be sure to train volunteers in case they are questioned by community members not familiar with the project and keep copies of permits on site in case they are needed.

DOCUMENTATION

It is important to have professional-quality documentation of the project. Many teams draft documentation plans that describe the types of documentation needed of both the installation process as well as of the completed project. Consider bird's-eye locations for before/after shots taken from adjacent buildings; aerial drones may be very useful in documenting these projects. Also consider getting action shots of the project being installed on the build day.

The documentation produced will be a helpful reference for maintaining and reapplying the project and will provide examples to show other communities who are interested in the work. Photos may also be needed for grant reports and will be the only way to show the history of what is usually a temporary project. In addition, proper documentation can also serve as a tool to visually showcase the project's success and will help cities or other project stakeholders defend their asphalt art projects or advocate for new ones. Be sure to share the documentation with the artist/designer who developed the content of the project.

Traffic control for the Walks of Life project in West Palm Beach was provided by the city's Engineering Department. (Case study on page 17)

Maintenance & Stewardship



PROGRAMMING & ACTIVATION

For projects that seek to use asphalt art to create pedestrian spaces or plazas, activating the project site with programming and events will help ensure the project's longevity. It is important to build a robust program around a newly created public space for the project to grow on the community and for the space to become a celebrated and stewarded neighborhood spot.

One way to host successful events and create traditions around a space is by partnering with local art or cultural organizations that specialize in event production and have the necessary expertise to plan activities that celebrate the creative reclamation of public space (see Rue Vendome project on page 47). From markets and live music to children's games and community-building activities, these organizations will likely know

which entities to involve in event planning and program building and how to engage locals from across your community.

PROJECT ADJUSTMENTS OR REPLACEMENT

Note that some projects may require adjustments if the results are not performing as intended or if the installation has unexpected outcomes. These changes may include readjusting the size or boundary of the design or changing the design's overall geometry. If a project will be replaced with a different design in the future, the artist's or designer's contract must outline the predetermined life span. Plans also need to be made to prepare the surface for the next project. This is the responsibility of the site owner or entity managing the project.



MAINTENANCE

If the project will be maintained by someone other than the artist or designer, the artist or designer can help develop a maintenance manual that includes the following information:

- Images of the original project
- Description of how much fading and wear are expected
- Detailed descriptions of each material used in the project, including exact colors
- Application instructions for each material
- List of equipment and tools needed for application
- Tips from the artist or designer about the site and materials

The entity managing the project or the owner of the project will need to organize the permits, street closures, and other steps to ensure the project can be maintained. Proper maintenance will always require a plan and budget. Costs for materials, labor, permits, street closures, and other needs should be included in the project budget, and a new budget should be developed for ongoing maintenance.

Once the Sexapus mural was completed in Montreal, the City of Montreal hosted events and activities that were crucial for creating community buy-in for the project to transition from an interim pilot project to a permanent shared street. (Case study on page 29)

Sexapus mural by Peter Gibson. Photo by Melanie Dusseault

STEWARDSHIP

Spaces that reflect a sense of community ownership and stewardship, especially those that encourage individuals to actively engage in social behavior, usually generate a greater place attachment among visitors. Involving the community in the planning and design stages of the project can create a space that is conducive to social gatherings and can adapt to and support the communities they serve.

Public space enhancement projects and programs are a benefit to the community and should be maintained accordingly. An effective stewardship model can be created through cooperative agreements made between municipal agencies and private entities to maintain public space projects with help from the local community. These agreements should include a written understanding outlining duties and responsibilities of each party involved in the process as well as a set of goals and recommendations for the durability of the project.

The following recommendations can help your project team play a leadership role in project management and stewardship:

For community-led projects:

- Identify fiscal sponsorship resources that will help fund your community project
- Find organizations that specialize in mobilizing volunteers, managing clean up, landscaping, and events such as Detroit's Summer in the City or Tucson's Days of Caring
- Support the sharing of organizational knowledge and practices among grassroots groups
- Designate funding for project maintenance in the planning stages

For city-led projects and programs:

- Ensure that future public space policies and programs emphasize maintenance needs and identify the responsible parties
- Create a permit structure to allow community groups to host a series of small-scale community events in one public space site
- Consider creating an open-source guide for the creation of asphalt art projects in your city

To complete the Underground at Ink Block murals in Boston, development firm National Development worked hand in hand with the Massachusetts Department of Transportation to test materials and manage the planning and permitting of the highway underpass murals. (Case study on page 63)



Project Evaluation



A key factor in measuring the success of asphalt art projects is using data to quantify the impact of the project, whether it is tied to mobility, walkability, or general livability. Whether its measuring the speed of vehicles, the perception of safety, or people's likeliness to use the space after the installation, this information will help effectively communicate the intentions behind any given project. In addition, any data collected along with community input will allow the leading entity to make better decisions when implementing similar projects in the future and creating a streamlined process for project approval, funding, and buy-in.

Below are some metrics that can be used to measure a project's impact:

- Speed of vehicles before and after implementation
- Stop bar compliance
- Pedestrian crossing behavior
- Foot traffic counts
- Likeliness to use the intervened space before and after implementation
- Perception of safety before and after implementation
- Amenity use before and after implementation



Tools to collect data include surveys (either in person or online), speed guns, counting machines, digital counters, or other data collection methods. Data-driven evaluation will allow project teams to justify their project and demonstrate its impact, and ultimately lead to a more effective approach for implementing asphalt art projects. See the Corbett Porch case study on page 35 for an example of project metrics.

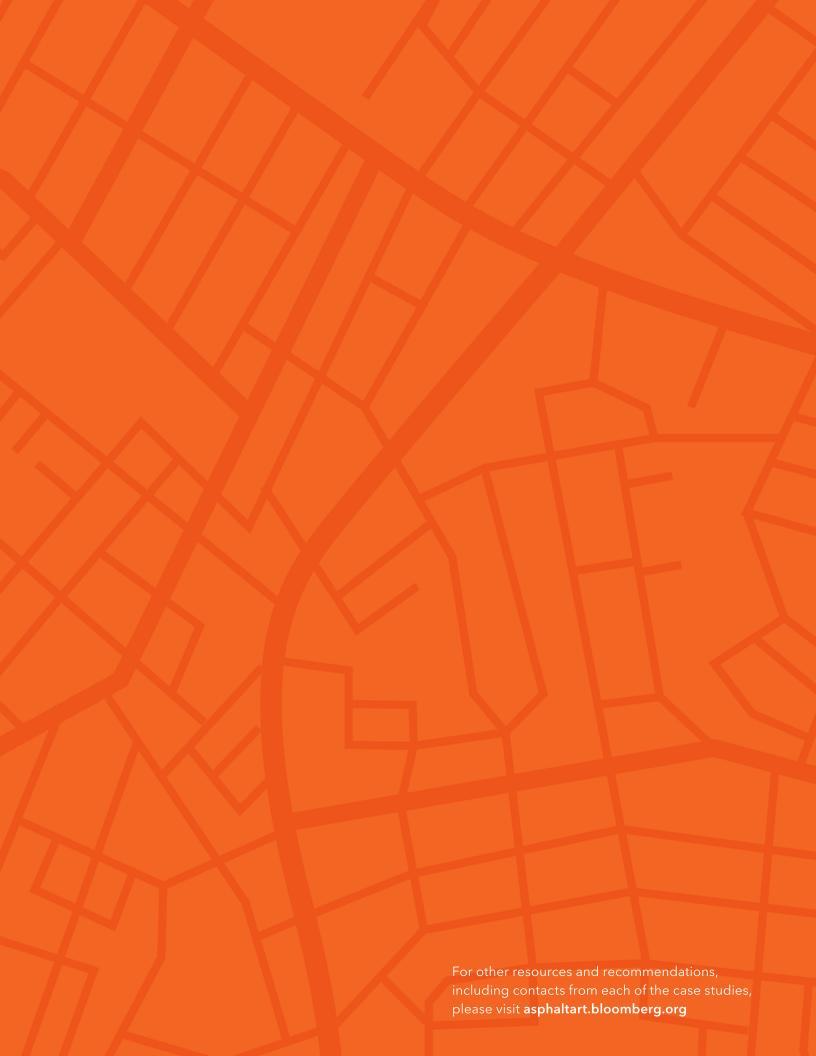
This project in Miami Beach has ongoing programming and events organized by third-party organization Prism Creative Group. (Case study on page 47)

Photo by Andrea Lorena

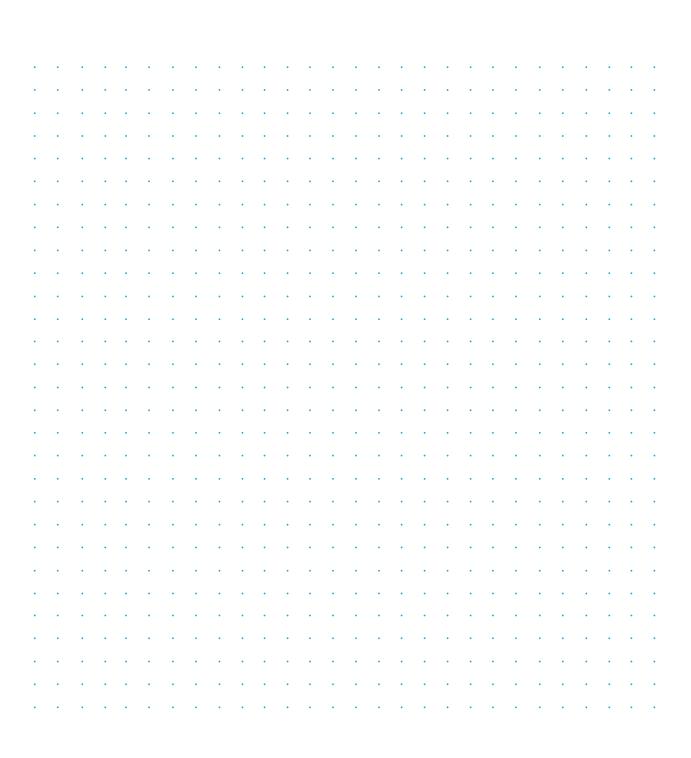


To guarantee the longevity of the murals created for the StreetArtToronto Program, each utility box is primed before artists arrived and coated with anti-tagging material by Goodbye Graffiti, the city's graffiti management contractor, once the mural is completed. (Case study on page 55)

Colorful Horizon mural by Yasaman Mehrsa. Photo by Jocelyn Renyolds







TACTICAL URBANISM ORGANIZERS PROJECT CATALOG

The mission of the Nashville Civic Design Center is to elevate the quality of Nashville's built environment and to promote public participation in the creation of a more beautiful and functional city for all. Towards this end, the Nashville Civic Design Center:

PROMOTES the Ten Principles of The Plan of Nashville, a vision for growth and development, created and endorsed by the citizens of Nashville;

EDUCATES the public about civic design through lectures by prominent speakers and workshops;

PROVIDES professional staff and highly-qualified design interns to consult on civic and other community development projects;

FACILITATES public dialogue about civic design through community engagement and participatory design practices.

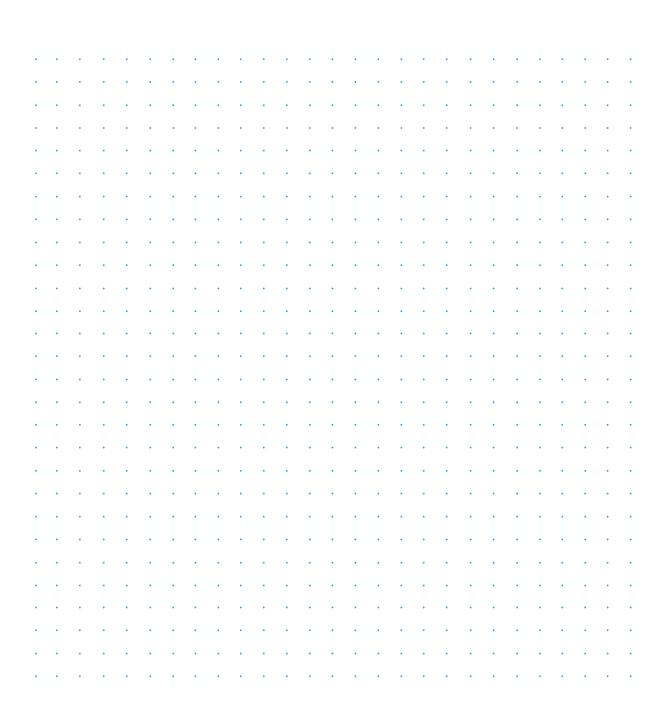
RESEARCHES and PUBLISHES reports on various civic design issues.

The TURBO Catalog was authored and edited by Eric Hoke, Design Director, and Mike Thompson, Project + Evaluation Manager, Co-Coordinators of TURBO, with assistance from Emmett McKinney, NCDC Design Fellow; Catalog design by Emmett McKinney.

NCDC would like to give special thanks to the community members, volunteers, and designers that lead TURBO projects and support the work in this publication.

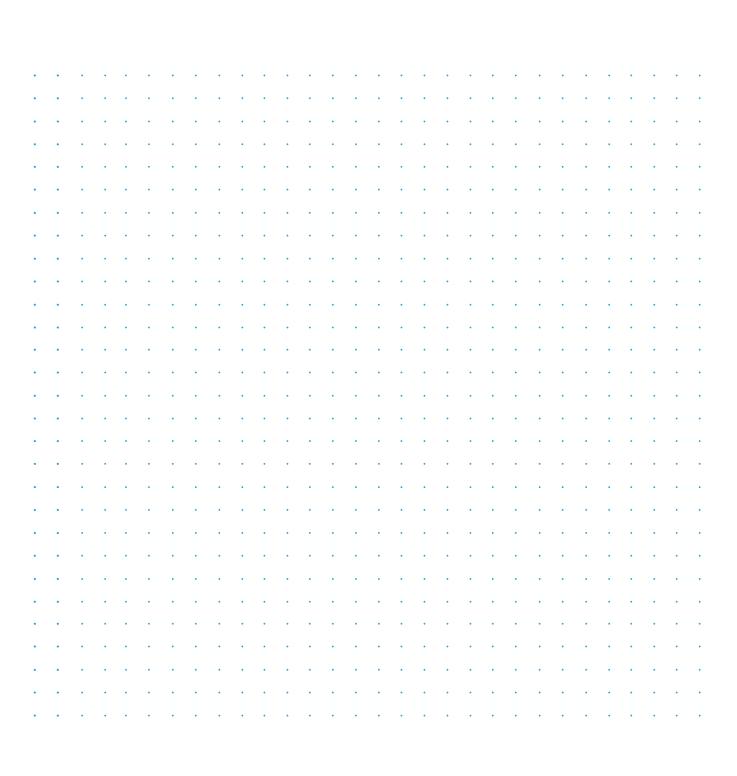
civicdesigncenter.org

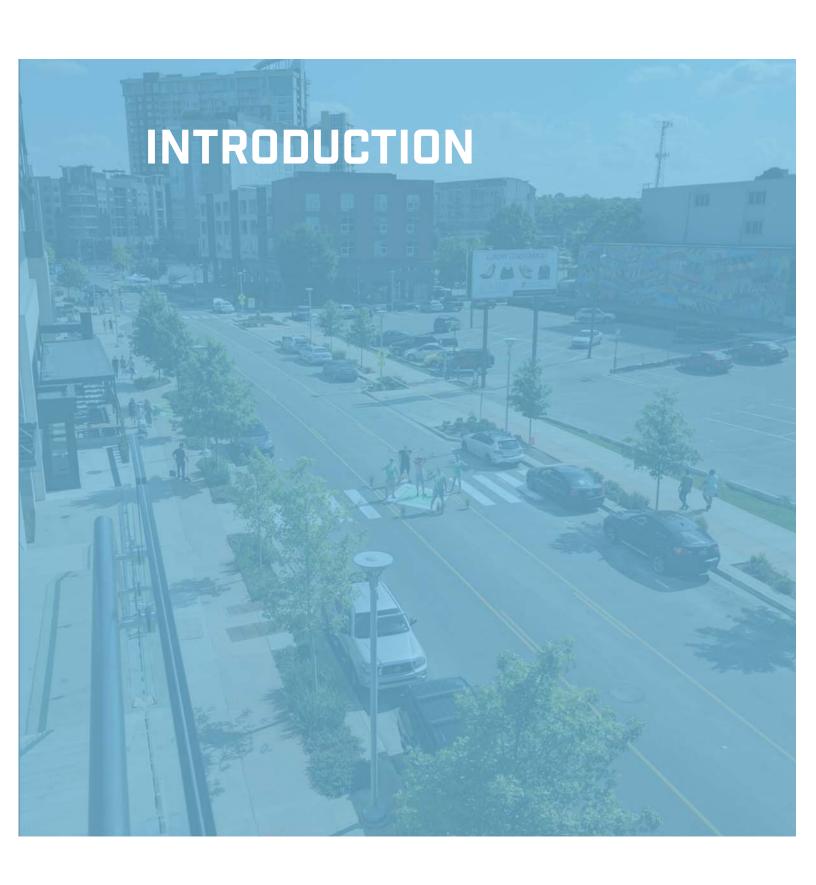
September 2019

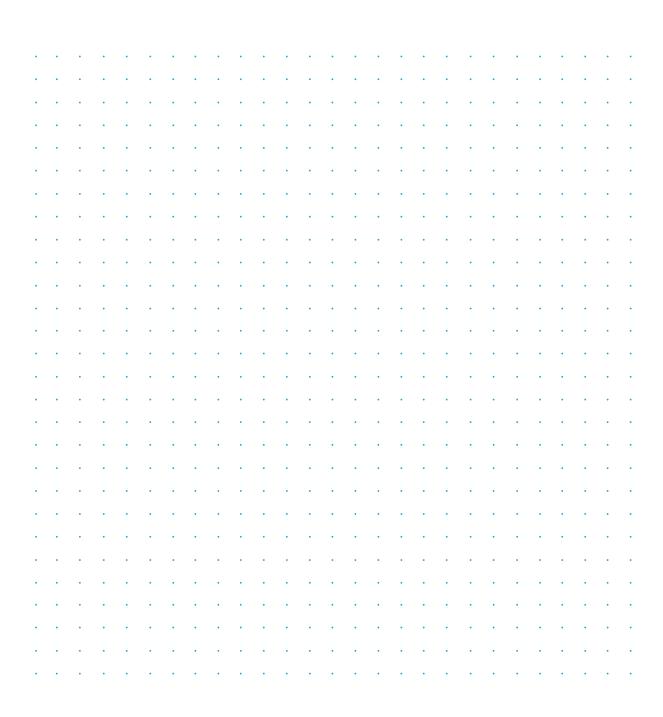


CONTENTS

INTRODUCTION	7
CATALOG	13
MATERIALS COMPONENTS	
INSTALLATIONS	32
TURBO PROJECTS	
1 Five Points Triangle East Nashville	
2 Elizabeth Park North Nashville	
3 15th Ave S. & Elmwood St. Traffic Circle Belmont-Hillsboro	
4 Amqui Elementary Traffic Calming Madison	
5 Modular Bus Stops Nolensville Pike	
CONCLUSION	44







INTRODUCTION

WHAT IS TACTICAL URBANISM?

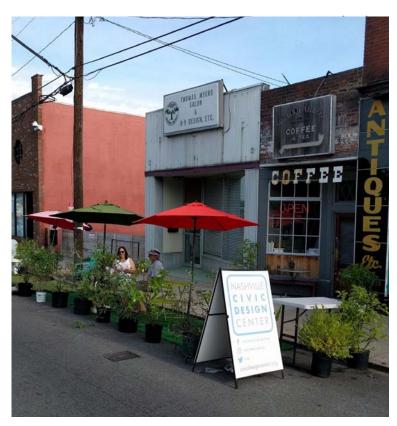
Tactical urbanism is an umbrella term that describes temporary, low-cost projects used to improve and beautify our streets and public spaces, while informing long-term permanent change. Tactical Urbanism is also sometimes referred to as guerilla urbanism, pop-up urbanism, city repair, or D.I.Y. urbanism.

Tactical urbanism is intended to be done quickly, cheaply, and with participation from everyday citizens. Through this, these demonstration projects avoid expensive construction costs and city bureaucracy, while informing long-term permanent change.

TURBO HISTORY

TURBO, or "Tactical **URB**anism **O**rganizers", is a group of Nashvillians dedicated to enhancing the beauty, safety, and livability of Nashville's public spaces. Part of the Nashville Civic Design Center's Reclaiming Public Space (RPS) initiative, TURBO has been coordinating and installing tactical urbanism projects across Nashville since 2014. More information on TURBO, its history, and past projects can be found by visiting <u>tacticalurbanism.org</u>.

As it has grown, TURBO has created a process for soliciting interest, and working with neighborhood associations to design and install tactical urbanism projects. To inquire about the process or submit a TURBO work order visit tacticalurbanism.org.



Richland Park Marketfest 2017, Charlotte Pike

THE TURBO PROCESS

1. IDENTIFY & RESPOND

Communities identify a need within their neighborhoods that can be solved by tactical means. TURBO may actively solicit project ideas from neighborhoods, neighborhoods may submit an online work order, or opportunities may be identified through word of mouth.

2. ANALYZE

After initial neighborhood input is gathered, TURBO meets with selected neighborhood group(s) to define the scope of the need and brainstorm approaches to address it. This helps TURBO gauge neighborhood enthusiasm and resources, and ensure that chosen projects are likely to succeed.

3. CONCEPTUALIZE

TURBO then begins working with the neighborhood group to brainstorm interventions and initial designs. Using different engagement methods, TURBO solicits local feedback, incorporating that input into a final, site-specific design proposal

4. PLAN & EXECUTE

With designs finalized, TURBO works with neighborhood leaders towards contacting necessary partners, purchasing materials, organizing volunteers, and creating a maintenance plan. For most projects, TURBO manages all permitting and installation logistics, while training and overseeing volunteers. During the installation, TURBO coordinators provide on-site supervision, documentation, and assistance.











SCOPING YOUR TURBO PROJECT

HOW TO USE THIS CATALOG

This catalog is designed to help estimate the costs associated with a TURBO project facilitate by NCDC. It is intended to help identify materials you may need, and brainstorm potential design ideas to enhance public spaces in your neighborhood. Because different locations will be better suited for some interventions, its is recommended that you consult with NCDC staff when identifying eligable design solutions. Similarly, final costs will vary based on specific design decisions, including the scale and intensity of the final design. Take this catalog with you to scope out underutilized sites in your neighborhood, and also access it online at tacticalurbanism.org

SECTIONS

Materials & Pricing

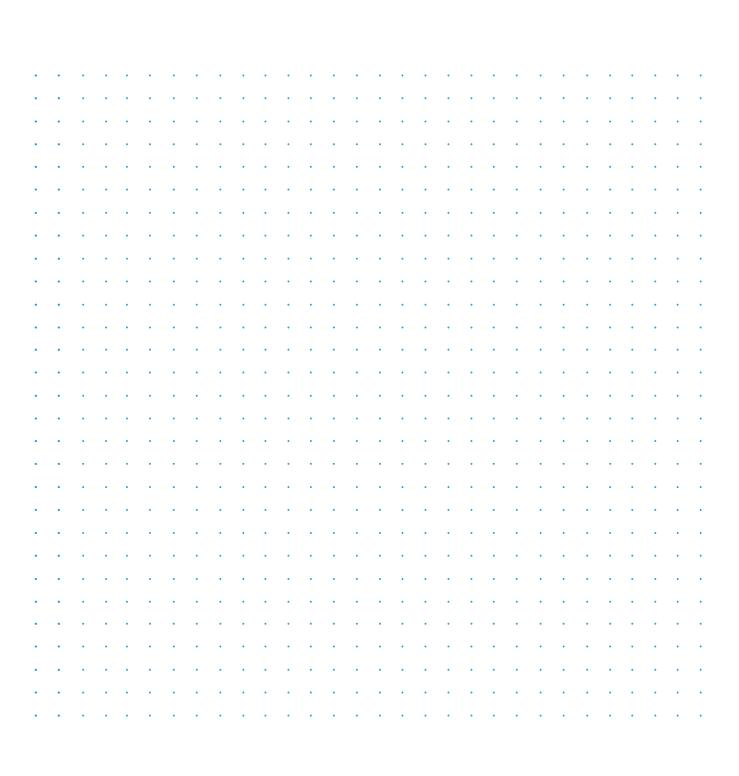
Included are a list of commonly used and easily accessible materials for a wide range of TURBO projects. With each are provided rough cost estimates to help begin pricing out your installation. Final materials and costs will depend on the size, scale, and duration of an installation.

Components

Every tactical urbanism project presents opportunities for different interventions and designs. The list of models shown cover many commonly used installations, the types of materials used for each, and some general cost estimates based on comparable projects. Final costs will depend on size, scale, and duration of an installation.



Park(ing) Day 2011, Broadway





MATERIALS

The following is a list of materials frequently used for TURBO projects. This list can be thought of as a "starter pack" - designed to give a rough cost estimate of basic materials. Additional materials not on this list can certainly be used for TURBO projects.



BISTRO LIGHTS

\$ 35.00 - PER STRING

\$ 45.00 48 FT STRING WITH SHATTER-PROOF WARM L.E.D. BULBS



4 INCH PAVEMENT MARKING TAPE

\$1.00 PER LINEAR FOOT

FOIL-BACKED VINYL, REFLECTIVE, SAND-COATED



TEMPORARY SIDEWALK PAINT (1-2 DAYS)

\$ 0.27 PER SOUARE FOOT

POWDERED CORNSTARCH, FOOD COLORING, WATER



TEMPORARY SIDEWALK PAINT [7-14 DAYS]

\$ 6.00 PER 15 OZ. CAN

SPRAY OR AEROSOL INVERTED MARKING PAINT



LONG-TERM PAINT (6 MONTHS OR MORE)

\$ 23.00 PER GALLON

STRIPING LATEX PAINT



TRAFFIC BARRIER

\$40.00 STARTING PRICE, EACH

45" X 24" PLASTIC, FOLDING, REFLECTIVE,



TEMPORARY WIEGHTED FLEX DELINEATORS

\$40.00 STARTING PRICE, EACH

WHITE OR YELLOW,



STATE LAW CROSSING SIGN

\$250.00 - STARTING PRICE, EACH

\$ 350.00 I2" X 36", REFLECTIVE SHEETING ON BOTH SIDES, RUBBER BASE,



LAWN GAMES

\$ 100.00 APPROXIMATE STARTING PRICE, PER SET

CORN HOLE, GIANT CHECKERS, CHESS



BATTERY POWERED STAGE LIGHTS

\$70.00 STARTING PRICE, EACH

70W SUPER-BRIGHT LED PAR LIGHTS, IOW PER LIGHT



MOVABLE WEIGHTED UMBRELLLA

\$ 100.00 STARTING PRICE, EACH

WHEELS AND HAND CRANK



\$100.00 - EACH

\$ 200.00 *WOOD, WITH BACK*



\$ 50.00 STARTING PRICE, PER SET

METAL, WOOD, OR PLASTIC

SANDBAGS

\$ 10.00 PER 50 LB. BAG

PRE-FILLED, 30 LB. NYLON BAG

SHIPPING PALLETTES

\$100.00 - EACH

\$ **150.00** 6' X 6', PLASTIC OR WOOD, CAN BE RECOVERED

SPEED CUSHIONS



\$1,000.00 STARTING PRICE, PER SET

CUSTOM DESIGN DEPENDENT

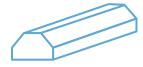


PROTECTIVE BIKE INFRASTRUCTURE

PRICE HITCHING POST: \$150 30 BIKE SHELTER: \$

VARIES DERO BIKER BAR, POWDER FINISH: \$450

MODULAR CURB / WHEEL STOP



\$40.00 EACH

70" X 5.5" X 3.5", RUBBER WITH VISIBILITY STRIPS & HARDWARE



ROUND END SHEEP STOCK TANK

\$70.00 - EACH

\$ 90.00 *50 GAL., STEEL, WITH BOTTOM*



TIRE PLANTERS

\$ 0.00 EACH

RECOVERED, RUBBER



POTTING MIX

\$ 15.00 PER 50 QUART BAG

ORGANIC OR MOISTURE CONTROL



TREE

\$ 35.00 - EACH

\$ 40.00 LOOK FOR TREES THAT ARE HARDY IN USDA ZONE 7



SHRUB

\$20.00 - EACH

\$ 30.00 CONSULT VENDOR FOR SEASONAL RECOMMENDATIONS



POTTED FLOWERS

\$15.00 - EACH

\$ 25.00 CONSULT VENDOR FOR SEASONAL RECOMMENDATIONS



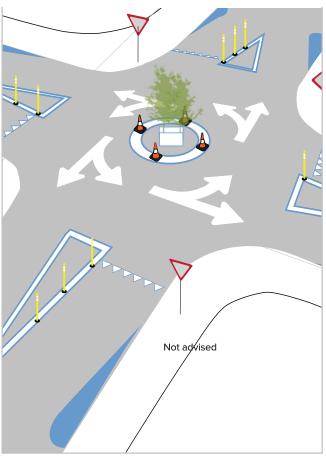
ASTROTURF

\$ 0.42 PER SQUARE FOOT

SOLD IN ROLLS & CAN BE CUT TO SIZE

COMPONENTS

The following is a list of intervention designs frequently used in TURBO projects. These interventions comprise a suite of options for public space improvements, and can often be used together to further engance a given area. The associated diagrams are intended as inspiration, though dimensions and material costs will vary based on site specifics.



Traffic circle with supportive yield signs, lead-ins, and bulb-outs.

TRAFFIC CIRCLE

DESCRIPTION

Traffic circles are comprised of central circle at least 10' in diameter, and travel lanes of at least 10' in width (depending on road type and location) winding around the circle. Angled "lead-in" lanes on the roadways direct traffic into the intersection and around the traffic circle.

Painted arrows and reflective bollards alert motorists to the circle's presence as they approach the intersection, and extend the traffic calming effect. The traffic circle itself can be either raised or at-grade.

PURPOSE

Traffic circles are used for calming traffic, particularly through an intersection. They also provide opportunities for placemaking, adding green space, and establishing neighborhood identity with plantings, public art, and signage.

RECOMMENDED LOCATIONS

Intersections at least 40' across, which vehicles may pass through at speeds higher than appropriate for the neighborhood.

Length of Installation	Cornstarch Paint	Paint	Pavement Tape	Planters*	Delineators*	Signage*	Flex Curb+	Art
Day (not advised)	Not advised	Not advised	Not advised	Not advised	Not advised	Not advised	Not advised	Not advised
Week	Not advised	Not advised	\$1 per linear foot	\$10-\$50, every 5 ft.	\$40 each, every 5 ft.	Price varies	\$ 1,100 per set	Advised*
Month or Longer	Not available	\$0.10 per sq. ft.	\$1 per linear foot	\$10-\$50, every 5 ft.	\$40 each, every 5 ft.	Price varies	\$ 1,100 per set	Strongly advised*

^{*}Pending design, scale, and longevity of installation

MARKED CROSSWALK

DESCRIPTION

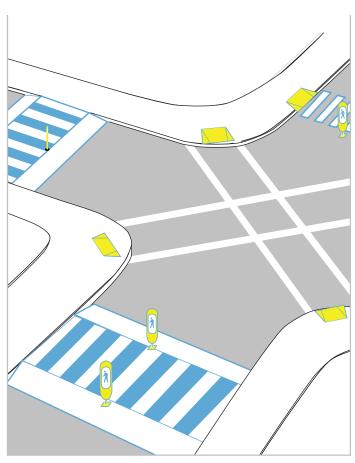
Under TN Law all intersections constitute as legal crosswalks, regardless of if they are marked. However, marking them with paint or tape significantly improves their safety and effectiveness. Crosswalks can also exist midblock, but only if they are marked. Marked crosswalks in Nashville must either be solid white bars or solid white lines.

PURPOSE

Crosswalks designate a location for pedestrians to cross the street, and notify drivers that pedestrians may be crossing. Crosswalks also act as connective infrastructure, and may incorporate public art and placemaking.

RECOMMENDED LOCATIONS

Any intersection, and especially crossings to locations frequented by seniors, children, and the disabled such as grocery stores, schools, community organizations, and libraries.



Crosswalks can be raised, extend diagonally across the intersection, or simply be stripes. Reflective signs increase visibility and calm traffic.

Length of Installation	Cornstarch Paint	Paint	Pavement Tape	Delineators*	Signage*	Art*	Flex Raised Crosswalk
Day	\$0.27 per sq ft	Not advised	\$30 per bar**	\$40 each, every 5 ft	Pending context	Advised*	Not available
Week	Not advised	Not advised	\$30 per bar**	\$40 each, every 5 ft	Pending context	Advised*	Pending design
Month or Longer	Not available	\$0.10 per sq ft	\$30 per bar**	\$40 each, every 5 ft	Pending context	Strongly advised*	Pending design

^{*}Pending design, scale, and longevity of installation

^{**} Number of bars = total width in feet / 4

BULB OUTS OR CURB EXTENSION

DESCRIPTION

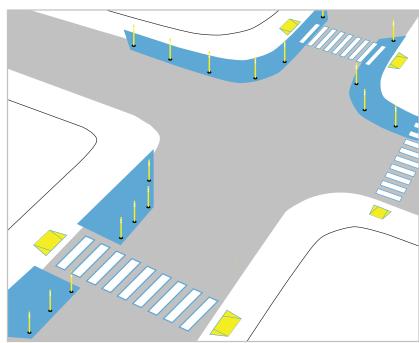
Bulb-outs extend an existing curb and/or sidewalk into a travel lane, thereby reducing the lane width. Generally, bulb-outs are used at intersection corners and at mid-block crosses. When used at an intersection, bulb-outs tighten vehicle turn radii, thereby slowing vehicles moving through an intersection where pedestrians generally cross.

PURPOSE

Bulb-outs slow travel speeds, extend the sidewalk, and reduce the distance for pedestrians crossing the street. Bulb-outs also reduce illegal parking space particularly near intersections. Increasingly, bulb-outs are being used for plants, drainage, public art, community gathering spaces, and parking for bikes and scooters.

RECOMMENDED LOCATIONS

Intersections with heavy pedestrian traffic, slim sidewalks, or large turning radii.

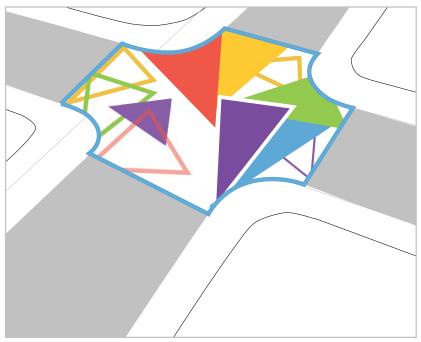


Bulb-outs can be used at corners or mid-block to shorten crossing distances and slow traffic. .

Length of Installation	Cornstarch Paint	Paint	Pavement Tape	Planters*	Delineators*	Flex Curb+	Signage*	Art*
Day	\$ 0.27	Not advised	\$1 per linear foot	Not advised	Not advised	Not advised	Pending context	Advised*
Week	Not advised	Not advised	\$1 per linear foot	Starting at \$70 each, every 5 feet	\$40 each, every 5 feet	\$1,100 per set	Pending context	Advised*
Month or Longer	Not available	\$0.10 per sq. ft.	\$1 per linear foot	Starting at \$70 each, every 5 feet	\$40 each, every 5 feet	\$1,100 per set	Pending context	Strongly advised*

^{*}Pending design, scale, and longevity of installation

COMMUNITY MURALS AND ART



DESCRIPTION

Generally, community art is any art in the public realm, creating with and for a specific community. Community art can range from ground and wall murals, to mosaic benches and fountains, to 3D sculptures and artistic bike racks. Art may also be interactive, allowing residents to change it and shape their own space.

PURPOSE

Community art may have many purposes, including placemaking, messaging, beautification, and/or being incorporating into traffic calming measures.

RECOMMENDED LOCATIONS

Walls, underutilized pavement, crosswalks, and intersections. It is highly recommended to work with local artists to help design and implement the art in a way that reflects the community character and history.

Example intersection mural.

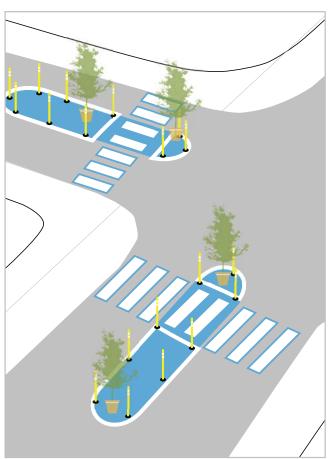
ESTIMATED COSTS AND MATERIALS

Length of Installation	Cornstarch Paint	Paint	Pavement Tape	Delineators*	Signage*	Art*	Planters
Day	\$ 0.27 per sq ft	Not available	Not advised	\$40 each, every 5 feet	Pending context	Advised*	Not advised unless small scale
Week	Not advised	Not advised	\$1 per linear foot	\$40 each, every 5 feet	Advised	Advised*	Start at \$70 each
Month or Longer	Not available	\$ 0.10 per sq ft	\$1 per linear foot	\$40 each, every 5 feet	Strongly advised	Strongly advised*	Start at \$70 each

^{*} Pending design, scale, and longevity of installation

(22)

CATALOG: COMPONENTS -



Potted plants and bollards can provide vertical protection to pedestrians.

PEDESTRIAN REFUGE

DESCRIPTION

Pedestrian refuge islands are small protected sections in between travel lanes, and offer a safe space for pedestrians as they cross a street. Refuge islands can be located at an intersection or mid-block.

PURPOSE

A refuge island provides safety as pedestrians wait for safe crossing. The design of the island can and should cause passing vehicles to slow down, and supportive plants can often be included. Iconic artwork can also signal the entrance to a neighborhood and enhance the sense of

RECOMMENDED LOCATIONS

Roads with 3 or more lanes in commercial or residential districts. Pedestrian refuges should have a "nose" that extends past the crosswalk, to protect pedestrians on the island.

Length of Installation	Cornstarch Paint	Paint	Pavement Tape	Planters*	Delineators*	Signage*	Art*	Flex Curb+
Day	\$0.27 per sq ft	Х	Not advised	\$70 each, every 5 feet	\$40 each, every 5 feet	Advised	Advised*	Not advised
Week	Not advised	Not advised	\$1 per linear foot	\$70 each, every 5 feet	\$40 each, every 5 feet	Strongly advised*	Advised*	\$1,100
Month or Longer	Not available	\$0.10 per sq ft	\$1 per linear foot	\$70 each, every 5 feet	\$40 each, every 5 feet	Strongly advised*	Strongly advised*	\$1,100

^{*}Pending design, scale, and longevity of installation

BICYCLE LANES

DESCRIPTION

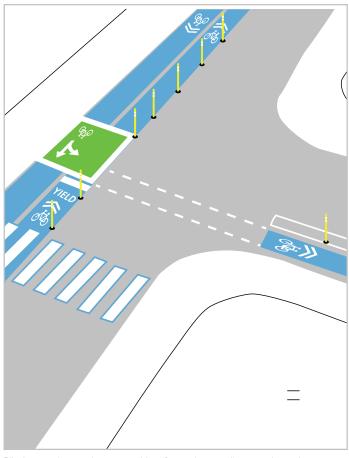
A portion of the roadway that is marked and designated specifically for bike usage. There are many types of bike lanes such as sharrows, striped, protected, buffered, two-way, and counter-flow

PURPOSE

Provides a designated, safe, and connective network for bike usage. Can be incorporated with artwork and traffic calming measures to improve appearance and safety.

RECOMMENDED LOCATIONS

Corridors connecting residential and commercial districts, key commuting routes along collector and arterial streets. Bike lanes should be adapted for the surrounding context.



Bike boxes at intersections can enable safe crossings to adjacent cycle ttracks.

ESTIMATED COSTS AND MATERIALS

Length of Installation	Cornstarch Paint	Paint	Pavement Tape	Planters*	Delineators*	Signage*	Art*	Flex Curb+
Day	\$0.27 per sq ft	Not advised	Not advised	Not advised	Pending context	Pending context	Advised*	Not advised
Week	\$0.27 per sq ft	Not advised	\$1 per linear foot	Starting at \$70 each, every 5 ft.	\$40 each, every 5 ft	Strongly advised	Advised*	\$1,100 per set
Month or Longer	Not available	\$0.10 per sq ft	\$1 per linear foot	Starting at \$70 each, every 5 ft.	\$40 each, every 5 ft	Strongly advised	Strongly advised*	\$1,100 per set

^{*}Pending design, scale, and longevity of installation

(24)

CATALOG: COMPONENTS -

BUS STOP IMPROVEMENTS

DESCRIPTION

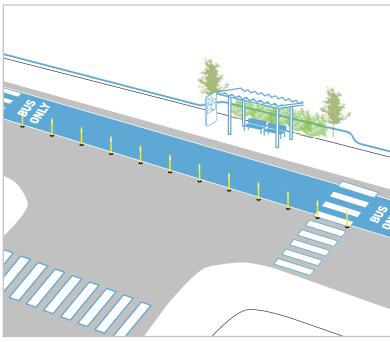
A designated location where public buses stop. Can be enhanced through including a shelter, seating, signage, plants, and clear access to and from the stop.

PURPOSE

Bus stops, particularly when well designed with sufficient amenities, can encourage bus usage and ridership. When strategically incorporated with other design features bus stops can support traffic calming efforts.

RECOMMENDED LOCATIONS

Any bus stop, especially those lacking seating or shelter, or which are heavily used. Crosswalks should be located behind the bus stop, so that passengers can stay out of the path of the bus as it departs. Bus stops can also be integrated with pedestrians islands, allowing bikes to pass behind. "Hanging" bus stops also facilitate seamless board-

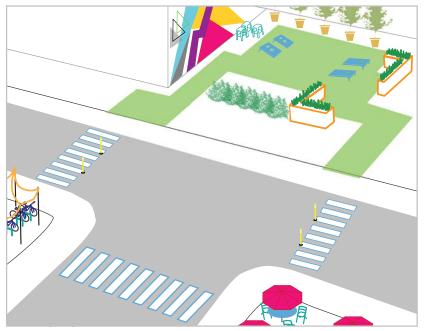


Dedicated bus lanes make bus stops more efficient, as the stop remains clear from cars., and the bus need not merge lanes to pick up pasengers.

Length of Installation	Cornstarch Paint	Paint	Pavement Tape	Planters*	Delineators*	Signage*	Art*
Day	\$0.27 per sq ft	Not advised	Not advised	\$70 each, every 5 feet	\$40 each, every 5 feet	Strongly advised	Advised*
Week	Not advised	Pending context, \$0.10 per sq ft	\$1 per linear foot	\$70 each, every 5 feet	\$40 each, every 5 feet	Strongly advised	Advised*
Month or Longer	Not available	Pending context, \$0.10 per sq ft	\$1 per linear foot	\$70 each, every 5 feet	\$40 each, every 5 feet	Strongly advised	Strongly advised*

^{*}Pending design, scale, and longevity of installation

PUBLIC SPACE ACTIVATION



Seating, planters, bike racks, games, art, and lighting can all welcome people in.

DESCRIPTION

The creation or facilitation of things to do, see, and enjoy when people are in a public space. This can include seating, games, events, music, art, and food among a nearly endless list of ideas.

PURPOSE

Activated public spaces draw people to them, encourage their usage, and help foster a vibrant public realm. Similarly, activated spaces often help spur economic activity in surrounding areas.

RECOMMENDED LOCATIONS

Neighborhoods in need of outdoor gathering places; entrances to parks and transit stations, neighborhood centers and squares.

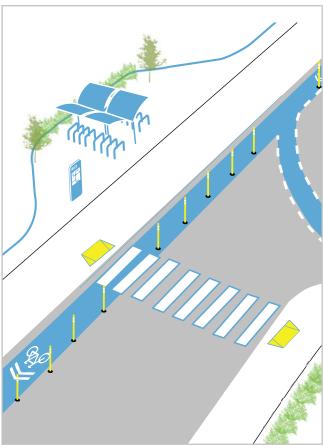
ESTIMATED COSTS AND MATERIALS

Length of Installation	Cornstarch Paint	Paint	Pavement Tape	Planters*	Delineators*	Signage*	Art*	Astroturf
Day	\$0.27 per sq ft	Not available	Not available	Pending context, starting at \$70 each	Pending context, \$40 each, every 5ft	Strongly advised	Advised*	\$0.42 per sq ft
Week	Not advised	Not advised	Pending context, \$1 per linear foot	Starting at \$70 each	\$40 each, every 5ft	Strongly advised	Advised*	\$0.42 per sq ft
Month or Longer	Not available	\$0.10 per sq ft	Pending context, \$1 per linear foot	Starting at \$70 each	\$40 each, every 5ft	Strongly advised	Strongly advised*	\$0.42 per sq ft

^{*}Pending design, scale, and longevity of installation

(26)

CATALOG: COMPONENTS —



Bike racks work best when located near bike infrastructure, and points of interest.

BICYCLE RACKS

DESCRIPTION

A structure, usually anchored to the ground, that bikes can be securely attached to. Bike racks provide designated areas for storing personal or shared bike, and their location supports bike usage. Bike racks can also be artistically designed, such as in the shape of a guitar or music note, and be leveraged towards place making.

PURPOSE

Provide a designated space to park and secure bikes. When designed well, bike racks can incorporate art while supporting surrounding bike infrastructure like bike lanes. Covered bike parking, signage, and traffic calming around bike stops enable safe mounting and dismounting.

RECOMMENDED LOCATIONS

Links between multimodal networks, such as pedestrian walking paths, bus routes, and other bike paths. Major points of interests, such as schools, offices, and retail centers are often also good locations.

Length of Installation	Cornstarch Paint	Paint	Pavement Tape	Planters*	Delineators*	Signage*	Art*
Day	\$0.27 per sq ft	Not advised	No	Pending context, start- ing at \$ 70 each	Not advised	Pending context	Advised*
Week	\$0.27 per sq ft	Not advised	Pending context, \$1 per linear ft	Starting at \$ 70 each	Pending context, \$40 each, every 5 ft.	Advised	Advised*
Month or Longer	Not avaiable	\$0.10 per sq ft	Pending context, \$1 per linear ft	Starting at \$ 70 each	Pending context, \$40 each, spaced every 5 ft	Strongly advised	Strongly advised*

^{*}Pending design, scale, and longevity of installation

PARKLET

DESCRIPTION

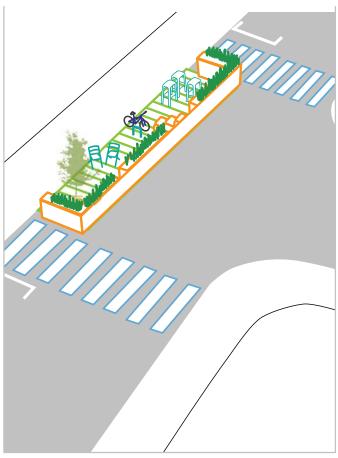
A parklet is a small public park-like space constructed in an area usually occupied by an on-street parking spot. However, these "pocket parks" can also be built on corners, in alleys, or in other small spaces. Parklets may feature greenery, furniture, games, public art, bike racks, seating, and other interactive pieces.

PURPOSE

Parklets provide new and flexible public space within smaller footprints. For those along streets, they also calm traffic by narrowing driving lanes, and providing a protective buffer between pedestrians and cars.

RECOMMENDED LOCATIONS

Neighborhoods with excessive parking, underutilized small urban spaces, corners, and areas lacking shade and vegetation.



Example parklet featuring planters, seating, shade, and bike racks.

ESTIMATED COSTS AND MATERIALS

Length of Installation	Cornstarch Paint	Paint	Pavement Tape	Planters*	Delineators*	Signage*	Art*	Bike Racks*
Day	\$0.27 per sq ft	Not advised	Not advised	Not advised	\$40 each	Advised	Advised*	Price varies
Week	\$0.27 per sq ft	Not advised	\$1 per linear foot	starting at \$70 each	\$40 each	Strongly advised	Advised*	Price varies
Month or Longer	Not available	\$0.10 per sq ft	\$1 per linear foot	starting at \$70 each	\$40 each	Strongly advised	Strongly advised*	Price varies

^{*}Pending design, scale, and longevity of installation

(28)

CATALOG: COMPONENTS -

BICYCLE OR SCOOTER CORRALS & BOXES

DESCRIPTION

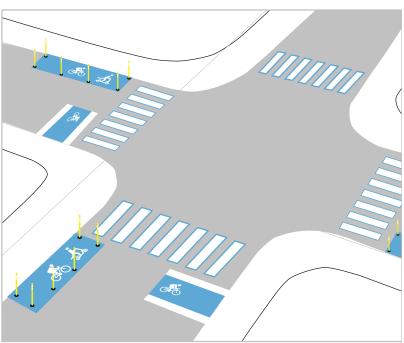
A bike or scooter corral is an on-street location where bikes and scooters can be parked and kept. A bike box is an area within the travel lane, behind the crosswalk and near an intersection, where cyclists and scooter riders can wait

PURPOSE

Corrals are meant to designate a specific and safe area in which to park bikes and scooters. By doing so, corrals keep streets and sidewalks clear and accessible. When designed well corrals may also include plants, art, and education materials. Boxes provide a buffer between cars and riders waiting to cross through the intersection.

RECOMMENDED LOCATIONS

Scooter and bike corrals should be situated at intersections, ideally behind crosswalks, so as to be out of the turn radius of approaching cars and also providing an additional pedestrian refuge. Bike boxes should be placed at intersections that already

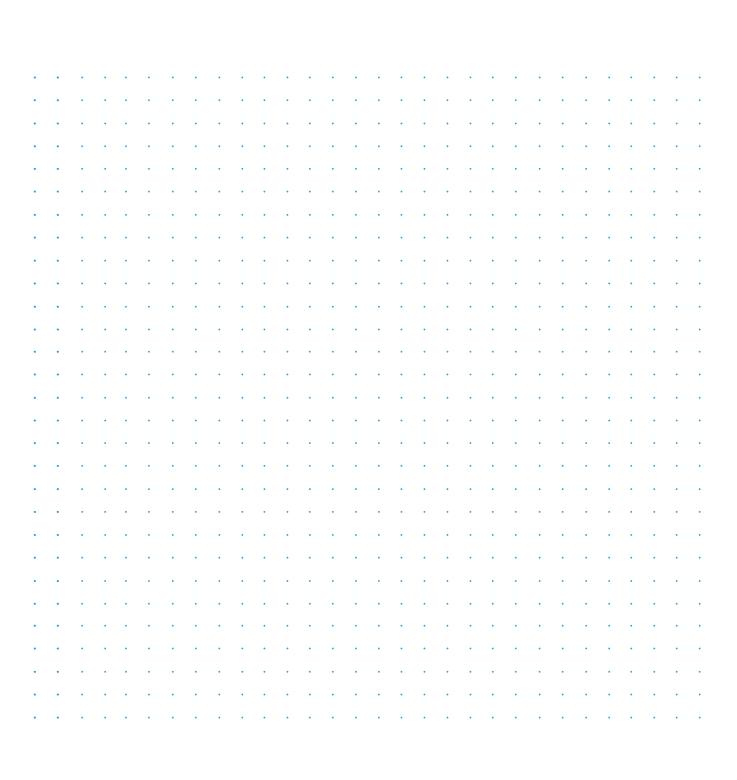


Bike and scooter boxes at an intersection.

ESTIMATED COSTS AND MATERIALS

Length of Installation	Cornstarch Paint	Paint	Pavement Tape	Planters*	Delineators*	Signage*	Art*
Day	\$0.27 per sq ft	Not advised	Not advised	Not advised	Pending context, \$40 each, at every corner	Advised	Advised*
Week	\$0.27 per sq ft	not advised	\$1 per linear ft	starting at \$70 each	\$40 each, at every corner	Strongly advised	Advised*
Month or Longer	Not avaiable	\$0.10 per sq ft	\$1 per linear ft	starting at \$70 each	\$40 each, at every corner	Strongly advised	Strongly ad- vised*

^{*}Pending design, scale, and longevity of installation





15TH AVE. & ELMWOOD TRAFFIC CIRCLE

BELMONT-HILLSBORO

In March 2017, the Belmont-Hillsboro neighborhood sought TURBO's help in constructing a temporary traffic circle at the intersection of 15th Avenue and Elmwood Street. Nestled between Belmont Boulevard and 12 South, the historic neighborhood is within easy walking distance of many businesses and parks. However, few of its intersections feature protection for walkers and cyclists. Drivers often sped through the neighborhood connecting the two commercial corridors, making it dangerous for walking or biking in the area.

This week-long installation used sandbags, planters, temporary paint, signs, and reflective bollards to define a traffic calming island. Data collected during the project informed Metro's design and implementation of a permanent traffic circle at the intersection, which was completed in April 2019.

FOOTPRINT: ~3600 SQ FT

TOTAL COST: 1600

MATERIAL COST: \$400.00

ADDITIONAL COST: TRAFFIC CONTROL

DURATION: I WEEK

Total cost incorporates NCDC Staff Time, which includes public engagement, design services, permit application, installation assistance, evaluation, and deconstruction.



Volunteers install the TURBO traffic circle, with traffic control help from the Metro Police department.



Neighbor's worked with TURBO coordinator's to design and install the circle

PROJECT MATERIAL BUDGET

Material	Quantity	Cost
Temporary Paint	7 cans	\$80
Rope	30'	\$10
Standard Traffic Control Cones	4	\$110
Woven Sand Bags	24	\$70
Broom Handle	4	\$20
Weather-Proof SIgns	4	\$50
Total		\$400



Permanent traffic circle installed by Metro, modeled on TURBO's design and

FIVE POINTS TRIANGLE

EAST NASHVILLE

The Five Points triangle is located in East Nashville's Five Points District, adjacent to Gallatin Ave and within an area of rapid growth in residents and businesses. Located across the street from East Nashville High School, adjacent to the East branch Public Library, and near stops for several bus lines, the Triangle is an essential gathering space and transition spot. A largely underutilized asphalt triangle at the time, TURBO and area stakeholder's recognized the opportunity to create a new and exciting local gathering space.

TURBO first began exploring improvements through an one-day installation at the 2015 Tomato Festival. Over 100 comments were collected during the festival, with neighbors contributing ideas for a safe, and improved gathering place. During the 2016 school year, students from East High School congregated at the Library's after school

program to give input on the space they use every day. This input eventually culminated in a permanent installation in March, 2018. With the help of local volunteers and the Greater Nashville REALTORS®, TURBO faciliated a series of improvements including a large mural across the entire plaza. Local artist Ellie Caudill designed the mural, titled Dancing Dogs and Sad Men, which featured wayfinding to help orient people to the surrounding neighborhood. Other design featuers included color-cord wrapping along a central pole, a series of planters and plants around the parameter, and placing moveable tables and chairs throughout the plaza. To improve accessibility, TURBO installed a marked crosswalk and placed weighted delineatores along Gallatin Pike at the existing crosswalk.

Thanks to the durability of the materials, the installation can remain up with only minor maintenance needed. Future improvements are currently being explored to futher build out



Permanent installation of triangle plaza in March 2018.





Left: East Nashville High School students brainstorm new uses for the triangle. Right: Volunteers help paint the triangle mural

Material	Quantity	Cost
Parachord	3000 ft	\$350
Paint	12 gallons	\$300
PVC Pipe for bench, 10' segments	35 segments	\$700
4" x 4" x 12' fence posts	6 posts	\$90
4' x 8' plywood signs	3 signs	\$70
Trees	7 trees	\$350
Plants	3 troughs full	\$75
Potting Soil, 1' cubic bags	24	\$200
Concrete painter tape	3 rolls	\$25
State Law Crossing Sign	2 signs	\$500
Crosswalk concrete tape	4 rolls	\$230
Stencils	15 stencils	\$750
Total		\$3,640

FOOTPRINT: 2,300 SQUARE FEET

TOTAL COST: \$22,520

MATERIAL COST: \$3,640

ADDITIONAL COSTS: ARTIST FEE AND

DOCUMENTATION VIDEO

DURATION: 2+ YEARS

Total cost incorporates NCDC Staff Time, which includes public engagement, design services, permit application, installation assistance, evaluation, and deconstruction.

ARTHUR AVENUE

NORTH NASHVILLE

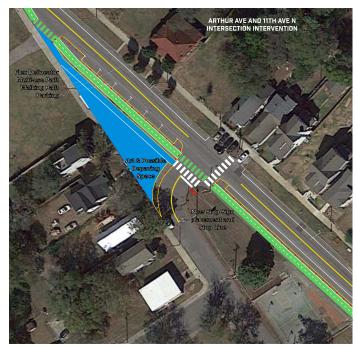
Arthur Avenue in North Nashville provides a critical component of the City's larger bike and pedestrian network. One of the few streets left intact from the construction of Highway 40, Arthur Ave remains one of the crucial connections from North Nashville to Downtown. In 2017 TURBO was invited by the neighborhood association to rethink Arthur Ave's infrastructure, particularly it's intersection with 11th Avenue next to Elizabeth Park.

As the site of a senior center and basketball court, Elizabeth Park itself is frequented by neighbors, seniors, and youth. The existing triangular intersection at 11th Avenue however created a dangerous crossing and a large expanse of underutilized road space.

During a lead-up engagement session, TURBO partner with Neighbor2Neighbor's annual Good Neighbor Day to create a demonstration project and solicit feedback. During the day-long event, hundreds of neighbors interacted with the site and provided feedback. Additional feedback was gathered from Pearl Cohn Entertainment

Magnet High School, and a local student bible study.

Utilizing this feedback, TURBO design and installed a one-month installation to test out design options. TURBO squared up 11th Avenue, to create a triangular plaza protected from car traffic with a buffer of planters and bollards. A new painted bike lane connected the avenue to downtown, while crosswalks and intersection restriping helped to calm traffic. Using data gathered from the installation period Metro is now planning a permanent installation that will include improve bike and pedestrian infrastructure, and is exploring opportunities to activate the new plaza space.



Conceptual design of the intersection intervention.

FOOTPRINT: 12,000 SQUARE FEET

TOTAL COST: \$15,000

MATERIAL COST: \$ 2.253

ADDITIONAL COST: PERMITING, TRAFFIC CONTROL, INPUT

DEMONSTRATION COSTS

DURATION: I MONTH

Total cost incorporates NCDC Staff Time, which includes public engagement, design services, permit application, installation assistance, evaluation, and deconstruction.

Material	Quantity	Cost
Pavement Tape, 4" x 50 yd rolls, yellow and white	16	\$856
State Law STOP Crosswalk Sign + Base	2 signs	\$265
Yellow LED Solar Road Stud	8 reflectors	\$264
Gorilla Glue Construction Adhesive	2 tubes	\$16
Duct Tape, 2" x 60 yds, fluorescent green	6	\$111
Delineators	22	\$741
Planters	10	donated
Total		\$2,253



Community members provide input during Good Neighbor day



A "T" intersection at Arthur Ave and 11th increases visibility for pedestrians and cyclists.



Planters and bollards protect the bike lane from traffic.

AMQUI ELEMENTARY TRAFFIC CALMING

MADISON

In 2019 TURBO partnered with WalkBike Nashville to design and install a traffic calming project that promoted students' safe access to Amqui Elementary School. Two public design sessions were hosted at the school to brainstorm potential designs, locations, and artistic features that could be incorporated. Neighbors identified a series of calming measures, and expressed a desire to beautify the school frontage. The resulting design included a large mural, inspired by Amqui students, wrapped by protective planters and delineators. New bulb-outs and a cross walk were also included to further calm traffic and support safe mobiliy.

The mural was designed by Andee Rutloff, and used Amqui students to help paint it. In addition to the public identified featuers, TURBO also added a series of paw-prints to alert drivers to students' presence,







Left: Painted bulb-outs lined with potted plants. Right: Amqui students painting the mural. Top: Traffic calming speed limit paw prints.



Conceptual design of Amqui Elementary street mural and bulb-outs.

Materials	Quantity	Cost
Paint	25 gallons	\$400
Planters	6	\$110
Plants	6 planters full	\$300
Delineators	24	\$808
Yield signs	4 signs	\$120
Temporary striping	10 rolls white, 3 rolls yellow	\$1,144
Total		\$2,882

FOOTPRINT: 8,000 SQUARE FEET

TOTAL COST: \$4,792

MATERIAL COST: \$2,882

ADDITIONAL COST: ARTIST FEE, TRAFFIC CONTROL,

DURATION: 6 MONTHS

Total cost incorporates NCDC Staff Time, which includes public engagement, design services, permit application, installation assistance, evaluation, and deconstruction.

MODULAR BUS STOPS

NOLENSVILLE PIKE

Bus stop enhancements help enable people of all ages and abilities to use bus stops more easily, while creating a more pleasant and sage experience for all users. Some of TURBO's earliest projects were a series of pop-up shelters and improvements aimed to provide temporary refuge for transit users. This low-cost, modular structure was designed to be flexible and able to be used in various locations across the city,.

In early 2015, TURBO installed several variations of these bus stops along Nolensville Pike and Midtown. Locations included a stop in front of Caza Azafran, a cultural community center, La Hacienda, a popular taqueria, and near Vanderbilt University. The heavily traveled corridor is a key bus and car route. However, the streets are largely hostile to pedestrians and cyclist. Improving the user experience of bus stops in these areas promoted the use of multimodal travel, safe access to community gathering places, and better connectivity to downtown Nashville along the Nolesnville Bus Rapid Transit system.

FOOTPRINT: 100 - 200 SOUARE FEET

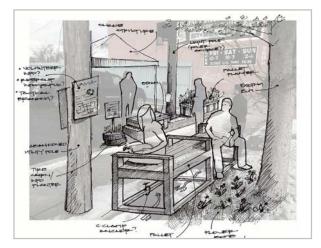
TOTAL COST: \$3,000

MATERIAL COST: \$430

ADDITIONAL COST: NONE

DURATION: I MONTH - I YEAR

Total cost incorporates NCDC Staff Time, which includes public engagement, design services, permit application, installation assistance, evaluation, and deconstruction.





New shelter for existing bus stop at Casa Azafran.



Additionally, TURBO volunteers installed a series of bus stop enhancements such as planters and seating to further improve the user experience. Using donated plants from Acer Landscape Services, voluteers were able to make simple, yet drastic improvements to the site. Bus stop enhancements included the installation of box planters, as well as new vegetation along the park strip. A colorful bench with armrests but no back enables pedestrians to face whichever way they feel most comfortable. Reclaimed tire planters and colorful sidewalk decorations add visual interest, as well as a protective barrier between the parking lot and pedestrian throughway.

Signage facilitates wayfinding, to connect this public space along a network of other bus stops. Together, these improvements enhance the sense of place along Nolensville Pike.

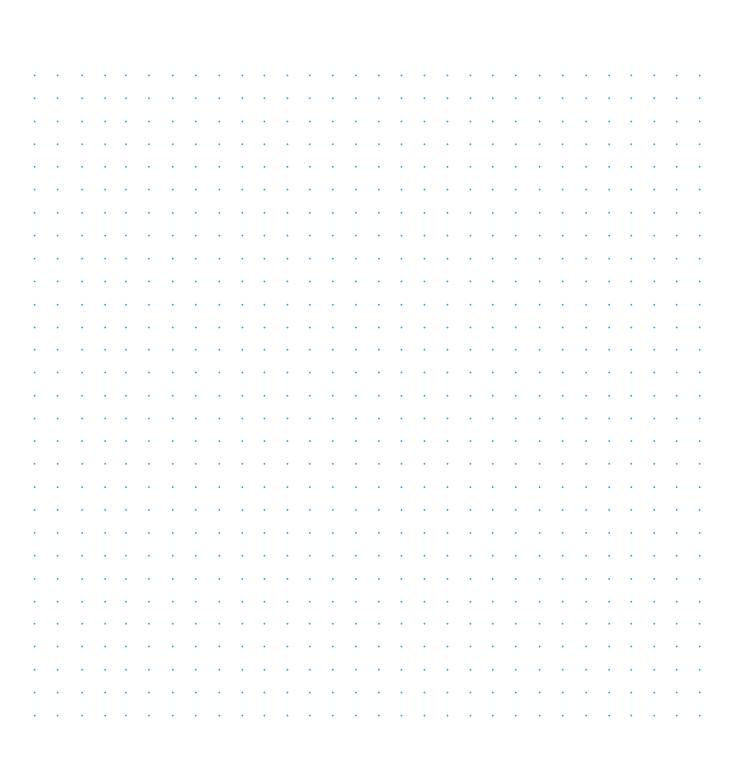
Materials	Quantity	Cost
4" x 4" x 12' Fence post	2	\$30
10 ft. corrugated steel utility gauge roof panel	1	\$20
2" x 6" x 12' Fence post	12	\$72
Potting Mix, 50 qt. bag	2	\$30
#4 x 5 in. common steel nails	50 lb. pack	\$62
Tire planters	12	\$0
Paint	6 gallons	\$150
Plants	3 troughs full	\$75
Pedestrian crossing signs	1	\$25
Total		\$439

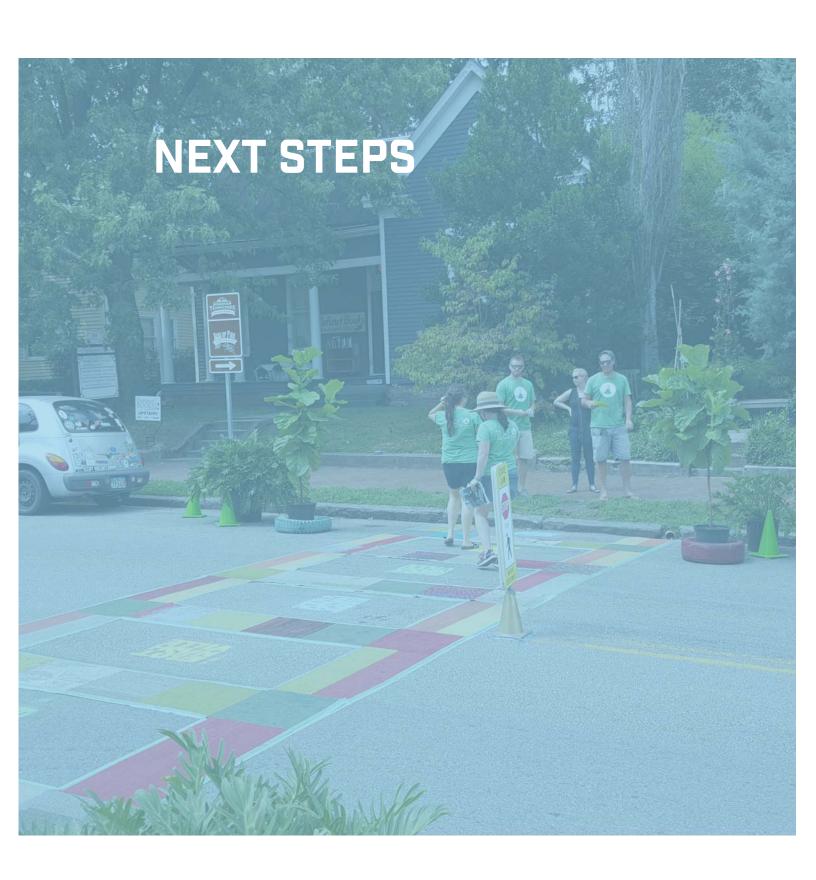






Top: Installation of planters. Middle: Conceptual Sketch Bottom: Recovered tires and chalk paint beautify the sidewalk.





ORGANIZING YOUR NEIGHBORHOOD

Engaging a wide range of neighbors in your community is essential to project success. Engagement generates new ideas to improve the quality of the project and promotes local ownership of the project after its installed.

Start by asking questions of your neighbors: what places are important to them, and what issues do they perceive there? What are the unique attributes and needs of the neighborhood that could be address through improving its public spaces?

Also consider who will be users of the space. Children, seniors, pets, persons with disabilities, and other groups may expect or need different features and have different expectations. A project should be created to maximize accessibility, and be designed to be as inclusive as possible.

When communicating your project idea to neighbors, be clear about the scope of your project idea, as well as the timeline. Managing expectations can help everyone focus on the success of the project.

Think about the neighborhood's personality, and use TURBO as an opportunity to express the what makes your neighborhood unique. Consider what designed projects have been tried in this neighborhood in the past, and how they turned out. Similarly, be flexible and prepared to tryout several different options. TURBO projects are meant to be experiments to help find what works.

If possible, activate your space with a kick-off celebration, and make sure to document the process with before and after photos and videos. Also consider opportunities to share your experience with other neighborhoods.

Have fun! These public spaces belong to YOU!



Neighborhood feedback for a TURBO project in Wedgewood Houston



SUBMIT A WORK ORDER

Ready to get started? Submit a work order to TURBO! Work orders can be submitted at www.tacticalurbanism.org.

Once your work order is received, TURBO will follow up and do an initial consultation.

INFORMATION TO INCLUDE

- Location of the Problem
- Neighborhood
- Street Address
- Description of Concern
- Ideas for Solution
- Contact Person (First and Last Name)
- Contact Email Address

TURBO WORK ORDER MAP

A map of TURBO Work Orders around Nashville is available at www.turbonashville.org. See which other sites have already been flagged, and which neighborhoods need

TYPES OF PROPERTIES TO CONSIDER

- Alleyways
- Uncontrolled intersections
- Vacant lots
- Parking lots
- Main arterial streets
- Bus stops
- Frequent crossing zones
- Entrances to neighborhoods
- Transit connection points
- Areas of cultural importance
- Schools, parks, and playgrounds



OTHER RESOURCES

Tactical Urbanism Volume 1 & 2: Short Term Action, Long-Term Change.

The Streets Plan Collaborative (2012)

An essential guide and introduction to tactical urbanism covering process strategies, designs, and where best to implement tactical urbanim projects.

Tactical Urbanist's Guide to Materials and Design (V.1.0)

The Streets Plan Collaborative (2016)

The materials and design guidance for Tactical Urbanist demonstration, pilot, and interim design projects. Funded by the James L. Knight Foundation.

Urban Street Design Guide

National Association of City Transportation Officials (NACTO)

NACTO's mission is to build cities as places for people, with safe, sustainable, accessible and equitable transportation choices that support a strong economy and vibrant quality of life.

Wikiblock

Better Block (betterblock.org/wikiblock)

Wikiblock is an open-source toolkit of designs for benches, chairs, planters, stages, bus stops, beer garden fences, and kiosks that can be downloaded for free and taken to a makerspace where a CNC router (a computer-aided machine) can cut them out of a sheet of plywood. Most products can then be assembled without glue or nails, and used instantly to make a block better.

Slow Your Street: A How-To Guide for Pop-Up Traffic Calming Trailnet (2016)

The guide is a toolkit created from the Plan4Health project with the support and guidance of the American Planning Association and American Public Health Association.

The Planner's Guide to Tactical Urbanism

Laura Pfeifer (2013)

Prepared as part of a larger supervised research projectat the McGill School of Urban Planning (2013).

Intrigude & Uncertainty: Towards New Traffic-Taming Tools
David Enqwicht, Creative Communities International

This book give cities and residents new tools to tame traffic, particularly around schools and in neighborhoods. However, taming traffic is really a means to an end: creation of vibrant neighborhoods, enrichment of the social and cultural life of the city and creation of a robust local economy. Rfocusing on these ends (rather than the means) may automatically tame traffic.

Insurgent Public Space: Guerilla Urbanism and the Remaking of Contemporary Cities

Jeffrey Hou (2012)

In cities around the world, individuals and groups are reclaiming and creating urban sites, temporary spaces and informal gathering places. These 'insurgent public spaces' challenge conventional views of how urban areas are defined and used, and how they can transform the city environment. No longer confined to traditional public areas like neighborhood parks and public plazas, these guerrilla spaces express the alternative social and spatial relationships in our changing cities.

Public Space Stewardship Guide:

Street Plans, San Francisco Planning Dept., & MJM Management

A living document that provides community groups and city leaders with models, case studies and ready-to-use tools for funding, programming and maintaining a successful public space.

City of Fayetteville Tactical Urbanism Projects

City of Fayetteville, Arkansas

The City of Fayetteville encourages citizens to develop their own Tactical Urbanism projects using TURBO's Guide and Permit Application. Projects completed by citizens will help to inform the City's planning and development processes.

ACKNOWLEDGEMENTS

NASHVILLE CIVIC DESIGN CENTER

The mission of the Nashville Civic Design Center is to elevate the quality of Nashville's built environment and to promote public participation in the creation of a more beautiful and functional city for all.

Nashville Civic Design Center Staff:
Gary Gaston, Chief Executive Officer
Melody Gibson, Education Director
Eric Hoke, Design Manager
Joe Mayes, Program + Membership Manager
Mike Thompson, Project + Evaluation Manager
Jule Shainberg, Financial Manager
Jule Shainberg, Financial Manager
Jolie Ayn Yockey, Special Projects
Taylan Tekeli, Design and Research Assistant
Emmett McKinney, Design Fellow
Kayla Anderson, Research Fellow
Taylor Young, Research Fellow
Berenice Oliva, Research Intern
Anastasiya Skvarniuk, Design Intern

civicdesigncenter.org









Agenda Section: VI

Item: 3

Report Date: 12/30/21

Commission Meeting Date: 01/05/22

REQUEST FOR COMMISISON CONSIDERATION

ITEM DESCRIPTION: Silver Lake Road Mixed Use Planning Project Status Update				
DEPARTMENT HEAD'S APPROVAL:				
CITY MANAGER'S APPROVAL:				
No comments to supplement this report Comments attached				

Recommendations: • Listen to staff updates on Silver Lake Road public engagement efforts to

date

History: • The City began outreach of the Silver Lake Road planning project in July 2021, and the initial community engagement portion of this project wrapped in late November 2021. This month staff will be sharing the results of the initial outreach, and discussing what comes next in this

planning project.

Financial Impact: • Significant. The three mixed use nodes along Silver Lake Road represent

significant opportunities to address local housing needs and increase the

City's tax base via redevelopment.

Summary: • Staff would like to take an opportunity on January 5th to update the

commission on the status of the Silver Lake Road mixed-use development

project and share the results from the recent visioning survey for

consideration and discussion.

Attachments: A) Community Engagement Survey Results

Ben Gozola, AICP,

Assistant Director of Community Assets and Development



COMMUNITY ENGAGEMENT SUMMARY

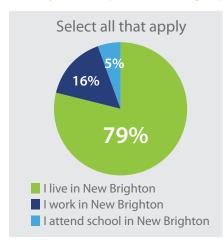
PHASE 1

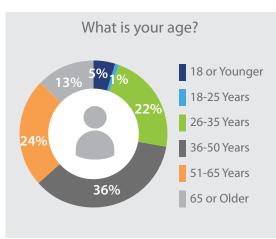
Community Engagement Overview

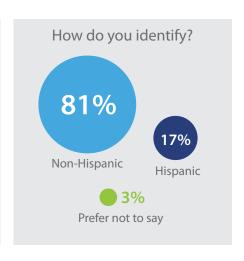
Summary Overview



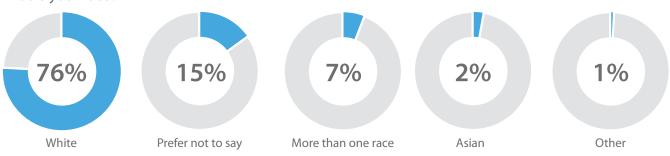
Survey Participant Demographics:







What is your race?



0% Black or African American

0% American Indian or Alaskan Native

0% Native Hawaiian or other Pacific Islander

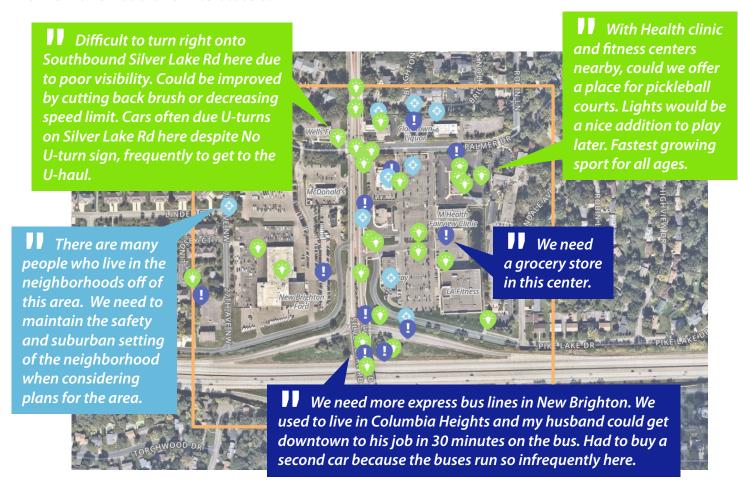
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Interactive Map Comments Summary

The interactive map received over 120 comments across the three project areas. The following maps show where comments were placed within the three focus areas as well as highlight some comments for reference.

Rice Creek and Mississippi





St. Anthony

I think planting pollinators and native plants on the boulevard stretches of grass would be wonderful, or offering grants for groups to "adopt a boulevard" to plant and take care of those stretches (with consistent plant types provided by the city). Also offering grants for families living along SLR to beautiful their boulevard strip (same rules with consistent plant types, etc.).

The building aesthetic standards along this corridor should be improved. Silver Lake is such a high-visibility road. New buildings should use nicer and more durable materials, as the strip mall style looks run down quickly. Stone, brick, or a modern material set instead of siding would improve the aesthetic.

Wong's is a neighborhood landmark!

This gas station is also hard to get out of, just like the one further north on silver lake. I'm not sure there's much to be done now that it's built, but these corner lots should have their driveways further away from the intersection. Especially for a gas station which is guaranteed to be vehicle traffic.

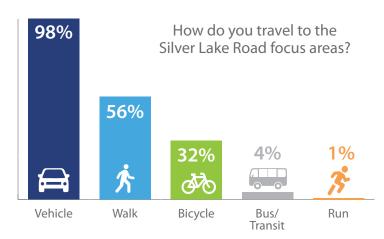


Vision Survey Summary

The vision survey received over 120 comments across the three project areas. The 3 topic areas below help to summarize the comments received into common themes of ideas proposed.



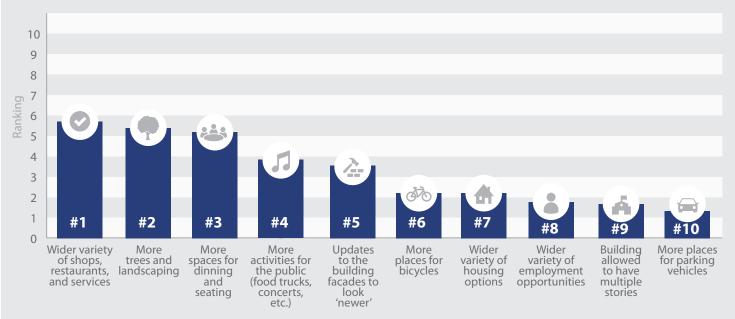




Please explain:

- A drive this whole route almost daily, and often walk the Rice & Mississippi and I-694 areas.
- I don't bike here often because there isn't a safe bike route, I'd love it if there was a safe bike route on Silver Lake Road.
- I live in the neighborhood to the north of Ford dealership and commute by car on Silver Lake Road daily.
- · I wish it were easier to bike to stuff.
- These locations are not pedestrian friendly. They were built in such a way that requires you to drive and park at each destination. This is much different from how the downtown White Bear area functions, which allows individuals to park and walk to multiple destinations within the commercial district.

The following are a number of zoning-level elements that could be an outcome of this project. Please rank these topics based on how important they are to you when you think about the Silver Lake Road focus areas and whether or not you'd like to shop, work, live, or relax there.



Please give a brief description of why your top elements are they important to you and how you feel about the Silver Lake Road focus areas?



Are there any other elements that are important to you that we should know?

```
buildings
                 walk
                           access
                                                          entertainment
                                      space
                   Future dedicated
       overpopulate
                                  Attractive small
                          nice
           residential disgraceful OptionS
                                               residents
                                    location traffic independent
                   noise commercial
                                                 District neighborhoods
                  public-friendly safe family density
                        thriving focused continue live property Street before
 important
                         focus I
                                                               pedestrian
 designed
                                                               consider
                Permeable natural community paths
            areas additional
                                   Iew sidewalks
                     parks park \big|
management
                           going green people lanes streets
            sidewalks/bike
                  laws division racks signage
                                                         biking
                                                 further
                                          safety activities
                                                       love communities
                             restaurant
               especially
                           bike large stormwater
  development transit
                                        zoning walking Mass
                           add look
```

Summary of Phase 1

The intention of Phase 1 of Community Engagement was to find out how community members feel about the focus areas along Silver Lake Road and to asses how those sentiments could influence zoning standards in the future. The response from community members has been great, and with it, there are patterns to pull from comments that help us understand the best strategy forward.

Not all of the comments related to things that could be implemented through zoning, but they are important nonetheless. The City Council and other decision-makers should consider these summaries when deciding on future projects as well.



Summary: Themes Related to Zoning Standards

Uses

- Many responders want to see a greater variety of retail, restaurants, and services within these areas
- A number of comments recognized that adding more housing options to these areas would benefit local businesses
- Commenters wanted to find a balance between convenience uses and destination uses

We should take advantage of this desirable location and allow apartments over these businesses. I think more foot-traffic and neighbors would support stronger businesses

I am the owner of Adagio's Pizza Factory and do believe the area my business is in does need updates. However, I do not want to see only apartments go into that area. I would like t see higher end shopping and other businesses that will drive people into the area. Please make the roads, entrances and exits easy to navigate

If this dated bldg was to change, it would be better to have the parking out of public sight, and the establishment in the foreground. With lots of evergreen landscaping and tall grasses around

If that area is to be redone, it would be good to turn it into a sustainable environment. Making walking paths w lighting, trees, pond, fountains, and native indigenous plant tree, plants, shrubs, getting rid of so much black top, add permeable topping. Add stories and restaurants that have higher end foods like organic, farm to table create an environment that folks what to come to and hang out in an environment that speaks of diversity

Dimensional Standards

- Want building heights to fit with surrounding neighborhoods (6 stories not appropriate for Rice & Mississippi or St. Anthony)
- Acknowledgment that taller buildings could accommodate more housing and businesses
- Don't want tall buildings to dominate the sky (if higher building heights allowed, make sure they're spaced out)
- Make buildings be closer to front yard (reduce setback)
- Don't allow parking between front and lot line
- Orient entrances to the front lot line
- Most people would like more open space (landscaped and/or active) and less impervious surface





Site Design & Layout

- · Orient entrances to the front lot line
- Site layout needs to consider building orientation, pedestrian, bicycle, and vehicle circulation, and relationship to neighbors
- Pedestrian & Bicycle circulation on site should be at the forefront of approval
- Include amenities that encourage walking & biking
- Reducing conflict points between vehicles and pedestrians is a priority
- Sites should be required to combine driveways where possible
- Reduce required parking and size of existing parking lots
- Encourage shared parking and reutilization of over-parked areas

My top concern is keeping each of these areas as a public space for locals, and not turning it into a vehicle-heavy drive-through corridor! I want to see these areas become more pedestrian/bike focused and better neighborhood hubs. Apartments that utilize the public space with first-floor retail help to achieve that. When adding housing we need to be especially mindful of unsustainable increases in car traffic, so any improvements need to come with pushes towards walking/biking

Need more trees and shrubs, please keep suburban sprawl down, the asphalt and concrete are hideous without trees/shrubs (preferably evergreen for year round interest)

This area could be redeveloped which would add to the character of this town. Front facing friendly looking updated buildings. Silver Lake road is not a highway; lets make it feel like what it is a connector for community.

This area should be walkable and safe. I hate how everything is parking lot first and then retail. It has no sense of community. I feel this way about downtown new brighton as well. Any redevelopment should focus on a community feel

I feel that the way the buildings and parking lots are laid out are a waste of space and not very appealing. Does not look cohesive. Also I feel the NB could use more variety in retail

Aesthetics & Environment

- Adding landscaping and spaces that can be actively and passively enjoyed is one of the main priorities for commenters
- Many commenters mentioned innovation with stormwater as a way to improve the sustainability of the area
- Building materials should be high-quality and easy to maintain over a long period of time

Are all these parking spots needed? Can we break up some of the asphalt and bring in some surfaces That allow rainwater to seep in? This looks like a heat island and not healthy





Safer Streets

- Numerous commenters wanted to see vehicle traffic slowed down along Silver Lake Road
- Concerns over visibility at intersections as well as driver compliance with roadway signals were peppered throughout responses

We drive 3,000 ft to get to this DQ, cause the idea of taking a bicycle and either negotiating the narrow sidewalk with other users, or trying to fight 45 mph traffic (that's actually doing 50+) scares me. I bicycle 2 miles down rice creek trail to a dog park cause it's easier/faster than driving 4 miles to the same park. Make cycling/walking short distances easier than driving them, there are lots of benefits to this.

Currently these areas mostly serve cars and not people/pedestrians. I would love to these areas become places where people can gather, dine, and bike. I would also like to see a protected bike lane/path on Silver Lake rd because New Brighton is pretty disconnected to Minneapolis with bike transportation (I understand that bike lanes are not a part of zoning but wanted to voice my support for more bike-friendly options). I also think New Brighton would benefit from more restaurants, particularly breweries. More nearby/connected retail and restaurants would improve walkability and livability greatly.

Support Local Businesses

 Participants like the number of local businesses along the Silver Lake Road corridor & would like to see more opportunities for local businesses to grow I see people constantly run this stop sign going well over 30 MPH (specifically when going east or west on 16th). Might there be a way to call more attention to it? Maybe a "stop ahead" sign or lights on the current sign?

Wishing the speed limit was way under 40 here, with so many intersections and other entrances/exits with no stop signs or traffic lights. This is not a simple place to drive through, and the speed limit should reflect that. I am amazed there are not more accidents here!

Bicycle & Pedestrian Connections Needed

- Commenters consistently mentioned the lack of sidewalk and trail connections from surrounding neighborhoods and parks to these focus areas as a barrier to patronizing local businesses
- Particularly, a consistent and safe trail along both sides of Silver Lake Road through the whole corridor was mentioned

It would be really nice if we could widen sidewalks into biking trails to connect parks, business and residential areas. This is a key feature missing in uniting the city of New Brighton.

As someone who lives within walking distance, I can understand that this area can be improved (the parking lot is much larger than necessary), but I'm concerned that we do it without hiking up rents so that the current businesses can no longer afford to be here. I love the fact that I can walk to a grocery store, Thai and More, The Spectacle Shoppe, and yes, Dairy Queen in the neighboring strip mall, among other businesses. Can we make improvements while retaining valued businesses?



Agenda Section: VI

Item: 4

Report Date: 12/30/21

Commission Meeting Date: 01/05/22

REQUEST FOR COMMISISON CONSIDERATION

ITEM DESCRIPTION: Review of MN Economic Trend Articles (Dec 2021)				
DEPARTMENT HEAD'S APPROVAL:				
CITY MANAGER'S APPROVAL:				
No comments to supplement this report	Comments attached			

Recommendations: • Consider latest reports and information from the MN Department of

Employment and Economic Development (DEED)

History: • The Minnesota Department of Employment and Economic Development

(DEED) releases quarterly articles relevant to this Commission's mission. Staff will endeavor to share the most relevant articles as they are released.

Financial Impact: • None.

Summary: • Three articles are provided from DEED which examine current economic

trends in MN. The articles focus on the State's aging workforce, the impact of the pandemic on some of the state's top job providers, and a current

look at the state's job vacancy rate.

Attachments: A) Article: Minnesota's Aging Workforce

B) Article: Pandemic Top Jobs Offering Remote Work

C) Article: Minnesota Vacancies Surge in 2021

Ben Gozola, AICP,

Assistant Director of Community Assets and Development



Minnesota's Aging Workforce



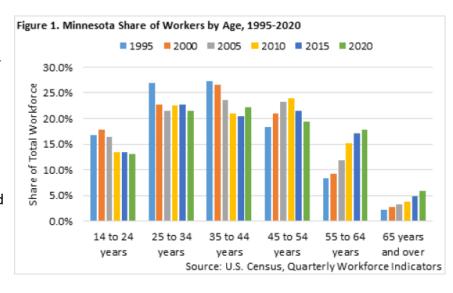
By Tim O'Neill December 2021

How we compare with others states and what industries have the oldest workforce

Much like the state's population overall, there is no doubt that Minnesota's workforce is getting older. The Department of Employment and Economic Development (DEED) has kept an analyzing eye on this trend for quite some time. Two data sources, DEED's Quarterly Employment Demographics (QED) and the U.S. Census Bureau's Quarterly Workforce Indicators (QWI), have allowed us to track this over several decades. This trend will continue to be seen as the baby boomer generation continues to age, unless there is an increase in immigration or an unlikely increase in birth rate. The following article will reveal how Minnesota's share of older workers has shifted in recent history, as well as how this aging compares with other states and the nation.

Quarterly Workforce Indicators

According to QWI data, the share of jobs held by workers aged 55 years and over in Minnesota has increased significantly over the past 25 years. In 1995, for example, about one-in-ten jobs in the state (10.6%) were held by workers 55 years of age and over. By 2005 this share increased to 15.1%, and by 2015 it increased further to 21.9%. In 2020, the share of total jobs held by workers aged 55 years and over was approaching one-in-four (23.8%). Broken down, this increase has been attributable to significant increases in the share of

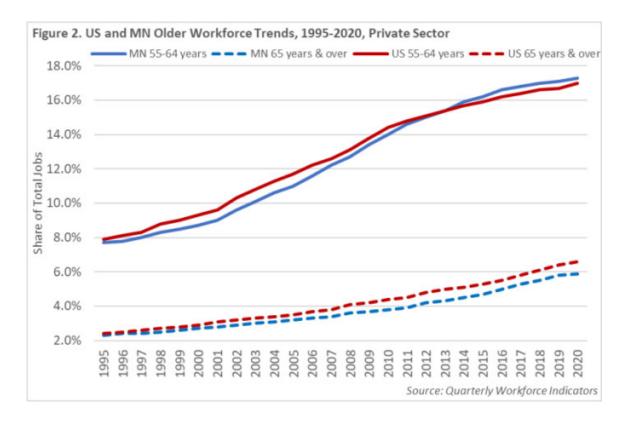


workers both 55 to 64 years of age and 65 years of age and over. Meanwhile, the share of jobs held by workers in Minnesota aged 14 to 24 years, 25 to 34 years, and 35 to 44 years have all decreased over the past 25 years. Interestingly, as the baby boomer generation (people born between 1946 and 1964) moved through demographic age categories, the share of jobs held by workers aged 45 to 54 years increased between 1995 and 2010 before decreasing through 2020 (Figure 1).

Minnesota's shifting workforce shines a spotlight on aging trends that nearly all employers will increasingly face. This is especially so as the state experiences ever-tightening labor market conditions during its recovery after the COVID-19 recession. For example, employers in Minnesota reported more than 205,000 vacancies during the second quarter of 2021. At that time there were approximately 123,600 unemployed persons, resulting in 0.6 unemployed persons for each job vacancy. There simply are not enough workers in the state to fill current job openings. People retiring earlier than what would have been expected during the pandemic has likely exacerbated the current labor shortage. But it is important to keep in mind that Minnesota's aging workforce was contributing to a tight labor market pre-pandemic and it will continue to impact Minnesota's labor force after the pandemic finally ends. This will result in employers continuing to utilize new and creative strategies to meet workforce demand, while opening new opportunities for younger workers in the state.

How Minnesota Compares

Aging workforce trends are not unique to Minnesota. At the national level, the share of jobs held by workers 55 years of age and older has steadily risen for more than a quarter of a century. Analyzing national private sector employment, the share of jobs held by workers 55 years and older was 10.4% in 1995. This increased to 15.2% in 2005, 18.7% in 2010, 21.2% in 2015, and 23.6% in 2020. Zooming in, the share of jobs held by workers 65 years and older increased from 2.4% in 1995 to 3.5% in 2005, 4.4% in 2010, 5.3% in 2015, and 6.6% in 2020. While maintaining very similar workforce aging trends, Minnesota has had slightly smaller shares of older workers than the United States. As of 2020, the share of Minnesota's private-sector employment held by workers 55 years and over (23.2%) was 0.4 percentage points below the national share (23.6%). The share of Minnesota's private-sector employment held by workers 65 years and over (5.9%) was 0.7 percentage points below the national share (6.6%) (Figure 2).



In both the United States and Minnesota, workers between the ages of 25 and 54 years make up the largest share of total jobs. In Minnesota, the share of jobs held by these workers fell from 71.6% in 1995 to 67.5% in 2010 to 62.8% in 2020. Nationally, the share of jobs held by these workers fell from 72.1% in 1995 to 67.7% in 2010 to 63.6% in 2020. So, as of 2020, the share of Minnesota's total employment held by workers 25 to 54 years is 0.8 percentage points below the respective national share.

Where Minnesota has a slightly smaller share of jobs held by workers 25 to 54 years of age than the nation, it has a slightly higher share of jobs held by workers under the age of 24 years. As of 2020, Minnesota's share of jobs held by workers under 24 years (14.0%) was 1.1 percentage points above the respective national share (12.9%). However, both Minnesota and the United States witnessed a decline in the share of jobs held by younger workers between 2000 and 2010, accelerated by a drop in teen participation during the Great Recession. In Minnesota this share dropped from 19.3% to 14.6%. Nationally, this share dropped from 17.1% to 13.6%. Thanks to a decade-long economic recovery, the share of jobs held by younger workers has held largely steady over the past decade in both Minnesota and the nation.

Using data from Quarterly Workforce Indicators, we can also look at how Minnesota's workforce trends compare with other states. Table 1 highlights the share of jobs held by older workers for states either geographically close to Minnesota or with a similar number of total jobs to Minnesota. Analyzing these states, the share of jobs held by older workers in Minnesota is below the average in both 2005 and 2020. For example, the share of jobs held by workers 55 years and older in Minnesota increased from 15.0% in 2005 to 23.8% in 2020. The average share of jobs held by workers 55 years and older in these select states increased from 16.1% in 2005 to 24.0% in 2020.

State	2020 Total Jobs	Share of Jobs held by Workers 55 Years and Over		Share of Jobs held by Workers 65 Years and Over		2005 to 2020 Employment Change	
		2005	2020	2005	2020	Total, All Jobs	Jobs held by Workers 55+
Illinois	5,537,832	16.6%	24.9%	3.9%	6.9%	-126,396 (-2.2%)	+438,735 (+46.7%)
Indiana	2,924,895	16.5%	24.0%	3.6%	6.3%	+79,618 (+2.8%)	+232,213 (+49.5%)
Tennessee	2,898,402	16.0%	23.0%	3.3%	6.1%	+264,318 (+10.0%)	+245,398 (+58.1%)
Arizona	2,779,212	15.4%	23.3%	3.5%	6.6%	+372,004 (+15.5%)	+276,591 (+74.4%)
Wisconsin	2,749,801	16.1%	24.6%	3.5%	6.0%	+24,325 (+0.9%)	+236,428 (+53.9%)
Minnesota	2,729,832	15.0%	23.8%	3.2%	5.9%	+147,343 (+5.7%)	+257,889 (+66.0%)
Missouri	2,636,007	15.9%	23.8%	3.5%	6.2%	+29,577 (+1.1%)	+214,633 (+51.9%)
Colorado	2,545,291	15.1%	22.5%	3.2%	6.5%	+427,744 (+20.2%)	+252,527 (+79.1%)
lowa	1,484,552	17.0%	24.3%	3.9%	6.3%	+54,883 (+3.8%)	+117,934 (+48.6%)
Montana	447,488	17.0%	25.7%	3.4%	7.6%	+48,202 (+12.1%)	+47,237 (+69.5%)
South Dakota	407,021	16.5%	25.4%	4.2%	7.4%	+44,301 (+12.2%)	+43,571 (+72.8%)
North Dakota	393,716	15.9%	22.8%	3.7%	6.1%	+75,353 (+23.7%)	+39,442 (+78.1%)
Average		16.1%	24.0%	3.6%	6.5%	+8.8%	+62.4%

Of these select states, those with the largest share of jobs held by workers 55 years and older in 2020 include Montana, South Dakota, Illinois, and Wisconsin. Those states with the smallest share of jobs held by workers 55 years and older include Colorado, North Dakota, Tennessee, and Arizona. Interestingly, while Arizona and Colorado have lower shares of jobs held by workers 55 years and older, they have higher shares when looking at jobs held by those 65 years and older. Of these select states, Minnesota had the smallest share of jobs held by workers 65 years and older in 2020.

According to QWI data, Minnesota's total employment increased by 147,343 jobs (5.7%) between 2005 and 2020. Note that this does include significant employment decline between 2019 and 2020, due to the COVID-19 recession. Between 2005 and 2020, the number of jobs held by workers 55 years and older in the state increased by 66.0% (257,889 jobs). This percentage increase in the number of jobs held by older workers is slightly above the average increase for those select states highlighted in Table 1 (+62.4%). So, while Minnesota does have slightly smaller shares of older workers, it has witnessed slightly faster aging trends over the past 15 years. Those select states with faster aging trends include Colorado, North Dakota, Arizona, South Dakota, and Montana. Those select states with slower aging trends include Illinois, Iowa, Indiana, Missouri, and Wisconsin (Table 1).

Table 2 presents 2020 employment data, as well as workforce aging trends between 2005 and 2020, for all available states in the U.S., noting that employment data is not available for Alaska, Arkansas, and Mississippi. Minnesota ranked 14th in the nation for the largest proportional increase in the number of jobs held by workers 55 years and older between 2005 and 2020. The state's 66.0% increase in the jobs held by these workers was 5.8 percentage points above the average for all available states (60.2%). Those states with the largest proportional increases in older workers during that period include Utah, Texas, Colorado, Idaho, North Dakota, Washington, and Arizona. Those states with the smallest proportional increases in older workers during that period include Massachusetts, West Virginia, Connecticut, and Nevada (Table 2).

	2020 Empl	oyment Data	2005 – 2020	Employment Change	
State	Total Jobs	-	Jobs Held by Workers 65+	Total, All Jobs	Jobs Held by Workers 55+
California	16,354,669	24.0%	7.2%	+9.9%	+68.9%
Texas	11,967,948	22.3%	6.3%	+28.3%	+94.6%
New York	8,729,797	24.8%	6.7%	+4.7%	+53.3%
Florida	8,461,009	25.6%	7.2%	+11.6%	+64.3%
Illinois	5,537,832	24.9%	6.9%	-2.2%	+46.7%
Pennsylvania	5,480,178	26.1%	7.0%	+1.2%	+51.3%
Ohio	5,089,615	24.4%	6.2%	-2.4%	+45.4%
North Carolina	4,295,501	23.8%	6.4%	+13.8%	+67.3%
Georgia	4,231,672	22.3%	5.7%	+11.7%	+71.4%
Michigan	3,990,151	23.9%	5.7%	-6.3%	+47.6%
New Jersey	3,750,513	27.3%	7.6%	-2.5%	+46.9%
Virginia	3,587,834	24.6%	6.7%	+5.8%	+62.9%
Massachusetts	3,350,374	25.6%	7.0%	N/A	N/A
Washington	3,211,901	23.0%	6.4%	+19.8%	+75.8%
Indiana	2,924,895	24.0%	6.3%	+2.8%	+49.5%
Tennessee	2,898,402	23.0%	6.1%	+10.0%	+58.1%
Arizona	2,779,212	23.3%	6.6%	+15.5%	+74.4%
Wisconsin	2,749,801	24.6%	6.0%	+0.9%	+53.9%
Minnesota	2,729,832	23.8%	5.9%	+5.7%	+66.0%
Missouri	2,636,007	23.8%	6.2%	+1.1%	+51.9%
Colorado	2,545,291	22.5%	6.5%	+20.2%	+79.1%
Maryland	2,386,343	25.6%	7.3%	+0.4%	+54.6%
South Carolina	2,022,690	24.0%	6.6%	+13.3%	+63.8%
Alabama	1,862,899	22.9%	6.0%	+2.1%	+49.7%
Oregon	1,839,042	23.8%	7.1%	+13.8%	+60.5%
Kentucky	1,794,664	22.2%	5.6%	+5.2%	+60.1%
Louisiana	1,753,778	23.7%	6.7%	-0.8%	+55.2%
Connecticut	1,534,435	27.6%	7.5%	-5.6%	+42.7%
Oklahoma	1,517,747	23.5%	6.8%	+8.3%	+55.7%
Iowa	1,484,552	24.3%	6.3%	+3.8%	+48.6%
Utah	1,477,690	18.8%	5.5%	+36.8%	+100.8%
Kansas	1,327,772	25.2%	7.3%	+4.1%	+57.4%
Nevada	1,285,288	23.2%	6.8%	+7.9%	+44.5%
Nebraska	937,777	24.4%	6.8%	+7.5%	+58.1%
New Mexico	763,723	24.7%	7.2%	+3.4%	+59.1%
Idaho	739,711	. 22.1%	6.2%	+24.0%	+78.2%
West Virginia	630,658	24.7%	6.7%	-6.8%	+41.7%

526,495				
220, 133	28.0%	7.5%	+1.8%	+67.7%
576,300	27.9%	7.6%	-1.1%	+55.3%
480,267	26.9%	8.5%	-4.5%	+52.9%
147,488	25.7%	7.6%	+12.1%	+69.5%
440,000	27.1%	7.3%	-6.3%	+47.9%
426,861	25.0%	6.8%	+3.1%	+57.7%
407,021	25.4%	7.4%	+12.2%	+72.8%
393,716	22.8%	6.1%	+23.7%	+78.1%
278,915	28.4%	8.2%	-6.8%	+50.8%
255,914	24.7%	7.1%	+3.0%	+56.3%
4 3 2	07,021 93,716 78,915	707,021 25.4% 93,716 22.8% 78,915 28.4%	07,021 25.4% 7.4% 93,716 22.8% 6.1% 78,915 28.4% 8.2%	07,021 25.4% 7.4% +12.2% 93,716 22.8% 6.1% +23.7% 78,915 28.4% 8.2% -6.8%

Source: Quarterly Workforce Indicators

Note, state data is absent for Alaska, Arkansas, and Mississippi

It should be noted that with the COVID-19 recession, all states with available data witnessed either no growth or decreases in the shares of jobs held by older workers between 2019 and 2020. After decades of aging workforce trends, the share of Minnesota's jobs held by workers 55 years and older dropped by 4.9% between 2019 and 2020. This decline may be temporary or it could be more long lasting, depending upon whether these older workers decided to permanently retire early or are waiting out the pandemic and plan to return to the labor force.

Quarterly Employment Demographics

While data from the U.S. Census Bureau's QWI and DEED's QED tool rely on differing methodologies, they both reveal Minnesota's aging workforce. According to DEED's QED data, the share of workers in the state aged 55 and over increased from 13.7% in 2005 to 19.7% in 2015 to 22.4% in 2020. Those workers aged 65 and over increased from 2.8% in 2005 to 4.0% in 2015 to 5.1% in 2020, according to QED data.

With DEED's QED data, we can also break down aging trends by industry. This provides for a unique look at those industries in Minnesota that have older workforces. In 2020, Transportation & Warehousing had the state's oldest workforce with 30.8% of its workers being 55 years of age and older. Other major industry sectors having at least one-fourth of their respective workforces being 55 years of age and older were Real Estate & Rental & Leasing (28.0%), Utilities (27.0%), Public Administration (26.7%), Wholesale Trade (26.6%), Manufacturing (26.1%), and Educational Services (25.7%). Except for Accommodation & Food Services, Construction, and Administrative & Support Services, the other remaining major industries all had between one-fifth and one-fourth of their respective workforces aged 55 years and over (Figure 3).

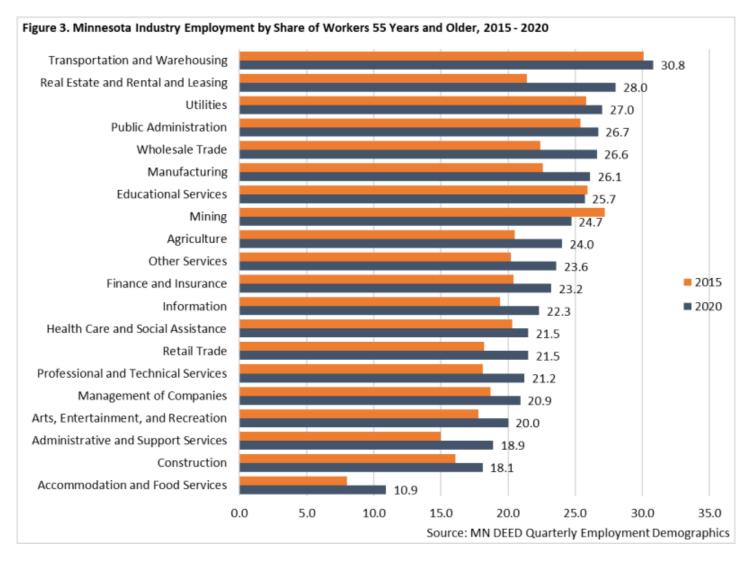
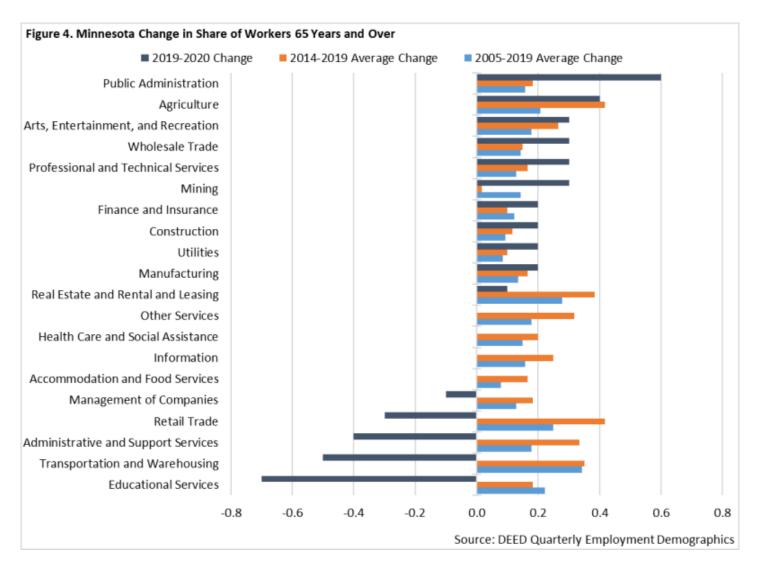


Figure 3 further highlights how the share of workers aged 55 years and over has changed by major industry sector between 2015 and 2020. Except for Mining and Educational Services, every industry sector in Minnesota had a higher share of workers aged 55 years and over in 2020 than they did in 2015. The change in share of such workers increased especially so for Real Estate & Rental & Leasing (+6.6 percentage points), Wholesale Trade (+4.2), Administrative & Support Services (+3.9), Agriculture (+3.5), Manufacturing (+3.5), Other Services (+3.4), Retail Trade (+3.3), and Professional & Technical Services (+3.1). Again, the share of workers aged 55 and over increased by 2.7 percentage points during that period, from 19.7% in 2015 to 22.4% in 2020.

Zooming out with DEED's QED data, Figure 3 highlights the average yearly change in the share of workers aged 65 years and over by major industry sector. Between 2005 and 2019, most industries witnessed their respective workforces aged 65 years and over increase by a yearly average of 0.1 to 0.2 percentage points. Those industries averaging faster average annual growth for this older age cohort included Transportation & Warehousing, Real Estate & Rental & Leasing, and Retail Trade.

More recently, between 2014 and 2019, the average annual growth in the share of workers aged 65 years and over accelerated for 13 of 20 major industry sectors. During that period, industries where their respective workforces aged 65 years and over increased by an annual average of 0.4 percentage points included Retail Trade, Agriculture, Real Estate & Rental & Leasing, and Transportation & Warehousing (Figure 4).



Between 2019 and 2020, the change in the share of workers aged 65 years and over by industry proved to be much more erratic and unpredictable. Again, this is likely due to COVID-19's major impact upon Minnesota's labor markets. At one end of the extreme were Educational Services, Transportation & Warehousing, Administrative & Support Services, Retail Trade, and Management of Companies. Where each of these sectors had been witnessing historical growth in their respective workforces aged 65 years and over, 2020 brought sudden decreases. For example, where the share of workers aged 65 years and over in Transportation & Warehousing increased by an annual average of 0.4 percentage points between 2015 and 2019, it decreased by 0.5 percentage points between 2019 and 2020 (Figure 3). Average annual growth in the share of such workers slowed to zero over the past year of available data as well for Accommodation & Food Services, Health Care & Social Assistance, Information, and Other Services, while also slowing over-the-year for Real Estate & Rental & Leasing.

Interestingly, the share of workers aged 65 years and over increased the most between 2019 and 2020 for Public Administration and Mining, while also increasing slightly in Professional & Technical Services, Wholesale Trade, Construction, Finance & Insurance, and Utilities.

Understanding Minnesota's aging workforce is vital as the state's labor market continues to recover from the impacts of COVID-19. It is also vital to understand such trends as workforce shortages intensify and Minnesota employers struggle to adapt to tight labor market conditions.

¹Senf, Dave. "Accelerated Retirements May be Playing a Role in the Current Workforce Shortage." *Minnesota Economic Trends*, Sept. 2021, https://mn.gov/deed/newscenter/publications/trends/september-2021/retirement.jsp).

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Pandemic-era Job Postings Reveal Top Occupations Offering Remote Work



By <u>Alessia Leibert (https://mn.gov/deed/business/help/lmi/)</u> December 2021

Data Offers Glimpse at Potential Future Trends

According to job postings collected from June 2020 to October 2021, the share of Minnesota jobs offering the option of working remotely nearly doubled, going from 5.3% to 10.4% (see Table 1). The possibility to perform remote work obviously differs by job type, with certain jobs having 0% incidence and others having more than 30% incidence.

Table 1: Incidence of remote work and growth in the shares of remote work in job postings by occupation group from 2020 to 2021, ranked by incidence of remote work in 2021

soc	Occupation group	Share allowing Telework,	Share allowing Telework,	Difference	
code		June-Sept 2020*	July-Oct 2021*		
	Total, all occupations	5.3%	10.4%	5.1%	
15	Computer and Mathematical	17%	31%	14%	
	Occupations	1770	31/0	1170	
23	Legal Occupations	20%	29%	9%	
13	Business and Financial Operations Occupations	15%	22%	7%	
11	Management Occupations	13%	21%	8%	
27	Arts, Design, Entertainment, Sports, and Media Occupations	8%	11%	4%	
21	Community and Social Service Occupations	7%	10%	4%	
43	Office and Administrative Support Occupations	5%	10%	5%	
17	Architecture and Engineering Occupations	8%	9%	1%	
19	Life, Physical, and Social Science Occupations	7%	9%	2%	
25	Education, Training, and Library Occupations	5%	6%	1%	
41	Sales and Related Occupations	2%	5%	3%	
29	Healthcare Practitioners and Technical Occupations	4%	4%	0%	
39	Personal Care and Service Occupations	2%	2%	0%	
31	Healthcare Support Occupations	1%	1%	0%	
37	Building and Grounds Cleaning and Maintenance Occupations	1%	1%	0%	
33	Protective Service Occupations	0%	1%	1%	
35	Food Preparation and Serving Related Occupations	0%	0%	0%	
49	Installation, Maintenance, and Repair Occupations	0%	0%	0%	
53	Transportation and Material Moving Occupations	0%	0%	0%	
47	Construction and Extraction Occupations	0%	0%	0%	
51	Production Occupations	0%	0%	0%	
45	Farming, Fishing, and Forestry Occupations	0%	0%	0%	

Source: National Labor Exchange (NLX) job postings, author analysis

* For 2020, 12 days in June are included in the examined time frame. For 2021, October was added to the examined time frame to pick the most recent trends.

The top 11 occupational groups displayed in Table 1 were suitable for being performed remotely even before the pandemic, but the pandemic accelerated existing trends. On top of the list, not surprisingly, we find Computer and Mathematical Occupations, which nearly doubled from a 17% incidence of remote work in 2020 to 31% a year later.

While remote work in IT and other occupations that involve spending many hours in front of a computer is not surprising, it could be surprising in occupations that are commonly thought of as requiring a high degree of face-to-face contact, like social service workers and salespeople. During the pandemic some social services were transitioned online, including mental health and correctional treatment counseling. The 4% growth in the incidence of remote work in Community and Social Service Occupations suggests that some clients or patients appreciated remote service delivery options. Even Sales and Related Occupations experienced growth in the availability of remote work, going from very low levels (2% in June-Sept 2020) to 5% in the second half of 2021.

And some direct health care jobs proved suitable for remote work. Job roles such as "telephone registered nurse" and "nurse case manager -remote" existed before the pandemic and may continue to exist.

Other types of jobs, in contrast, did not offer any or only very few remote work options in 2020 and continued to remain unaffected by these trends due to the nature of the work: food preparation, construction/maintenance/repair, transportation, manufacturing, farming.

A new talent recruiting tool

The COVID-19 pandemic, and the resulting economic disruption caused by closures and layoffs, changed job searching methods and job-seekers expectations forever, creating winners and losers among employers in the talent recruiting race. At a time when telecommuting and flexible work schedules are becoming the norm, employers who cannot offer these perks to jobseekers find themselves at a disadvantage. In fact, it is not an accident that the jobs employers are currently struggling the most to fill are more concentrated at the bottom of Table 1: Healthcare Support, Food Preparation & Serving, Installation, Construction, Manufacturing, Transportation & Material Moving.

Which workers have the advantage when employers can hire from anywhere? In terms of occupation, those with the flexibility most likely to be able to work remotely are listed in Table 2. All of these jobs require post-secondary credentials except for Sales Representatives of Services and Customer Service Representatives. This suggests that workers who are already in high skilled and high paid positions are most likely to benefit from the availability of remote work options

Table 2: Incidence of remote work in job postings by occupation from January to October 2021, occupations with 2,000 job postings or more, ranked by incidence of remote work in 2021

Occupation	Job postings	Total job	Share	Typical education level
	allowing remote	postings		to enter the
	work			occupation
Network and Computer Systems Administrators	1,725	4,533	38%	Bachelor's degree
Sales Representatives, Wholesale and	1,138	3,262	35%	Bachelor's degree
Manufacturing, Technical and Scientific Products	1,130	3,202		
Computer Systems Analysts	2,139	6,252	34%	Bachelor's degree
Computer User Support Specialists	2,063	6,238	33%	Postsecondary non- degree award
Marketing Managers	3,959	12,019		Bachelor's degree
Management Analysts	3,519	12,124		Bachelor's degree
Information Security Analysts	1,288	4,503		Bachelor's degree
Computer and Information Systems Managers	1,420	5,064	28%	Bachelor's degree
Sales Representatives of Services, Except				High school diploma or
Advertising, Insurance, Financial Services, and Travel	1,090	3,976		equivalent
Market Research Analysts and Marketing Specialists	1,745	6,630		Bachelor's degree
Sales Managers	1,682	6,740	25%	Bachelor's degree
Loan Officers	635	2,698		High school diploma or equivalent
Human Resources Specialists	1,503	6,469		Bachelor's degree
Medical and Health Services Managers	1,063	4,988		Bachelor's degree
Financial Analysts	675	3,169		Bachelor's degree
Mental Health and Substance Abuse Social Workers	608	3,054		Master's degree
Architectural and Engineering Managers	447	2,368		Bachelor's degree
Accountants and Auditors	1,194	7,677	16%	Bachelor's degree

General and Operations Managers	888	6,544	14%	Bachelor's degree
Customer Service Representatives	2,193	16,112		High school diploma or equivalent

Sales probably provides the largest group of remote work opportunities for people with a high school education. Jobs in sales, especially business-to-business sales, that are advertised on LinkedIn with the keyword "remote work" attract more applicants than those that do not offer this option (author's analysis).

In terms of geographic location, Table 3 shows that firms in the Twin Cities metro have an advantage, with a 12% incidence of remote work in postings from June 2020, likely because that's where most high-tech firms are concentrated. Large high-tech companies have the technology and the resources to offer remote work policies, in part because they are increasingly developing and selling them to other businesses.

Table 3: Incidence of remote work in job postings by Planning Region

Planning Region	Share allowing Telework, Jan-Oct 2021
Twin Cities Metro	12.9%
Northeast	8.2%
Southeast	7.5%
Northwest	2.4%
Central	2.0%
Southwest	2.0%

At a time when a greater than typical number of workers are voluntarily quitting their jobs presumably to look for work that is a better fit for them and their families, flexible hours – including remote work options – can be a powerful retention and recruitment tool for employers who can offer them.

Will remote work persist after the pandemic?

How do we know if these trends towards greater use of remote work are here to stay even after the pandemic is over? One clue of the long-term nature of this trend can be gleaned by the emergence of new job roles related to remote work technologies. Based on an analysis of job title keywords, there has been an increase in demand for workers with skills in cloud computing, data/network security, and technologies enabling the safe transmission and analysis of large volumes of data to be accessed virtually. One example of these trends is the two-fold increase from Q3 2020 to Q3 2021 in job postings classified as Computer & Mathematical Occupations containing the keyword "cloud" in the job title¹. Furthermore, some job postings explicitly promote the availability of remote or hybrid work models in the long term. Here are four examples that point to a broader trend:

- Currently working remotely and following local COVID-19 bylaws and guidelines with the majority of our
 offices being remote until July 2021. Upon return, we will be embracing a hybrid work environment
 consisting of in-office and remote work.
- Long-term, this position offers you the flexibility to work remotely 1-2 days per week

- We are a remote company (this isn't temporary).
- Our hybrid work model gives you the flexibility and choice so you can create a career that enhances your life, allowing you to work remotely 1-2 days/week.

These trends are not generalizable to all job roles, but to those most suitable for remote work.

Besides attempting to gauge, like we've done in this study, the potential for remote work to be extended indefinitely in certain sectors, an even more important question to try to answer is the following: What could be the impact of remote work technologies on day-to-day tasks and skills sets required to work in the jobs of the future? Since the technologies that enable remote work proved very successful at boosting productivity, they have the potential to transform the skills sets needed in many jobs even in the event that workers will return to their physical office locations after the pandemic emergency is over.

The ability to use remote/virtual technologies to communicate with customers wherever they are (for example through web presentation applications like Zoom), enter and share records using Salesforce or other cloud-based applications aimed at centralizing customer information, ensure data security and privacy, and search patterns in data to support sales and product development/testing are poised to become increasingly valuable skills sets across a variety of industries and occupations. These trends should be monitored very closely by education and training institutions to better align their curriculum to the most in-demand skills businesses are going to need in the near future.

Which categories of workers might be most attracted by remote work options?

Expanding remote work options could be a game-changer for many job seekers, including women with schoolage children, workers in rural areas of the state, workers without independent transportation, worker with disabilities and workers with underlying health issues or who are over 60 who are worried about exposure to COVID-19 in the workplace. Given Minnesota's winter weather conditions, the ability to work from home would translate to real savings in terms of commuting time and transportation costs.

However, these opportunities can be seized only by workers with reliable access to high-speed internet² and with a minimum level of digital literacy. If remote work will become permanent in certain job roles, and if remote work technologies will be adopted across the economy, it is essential to start boosting digital and data literacy in the workplace, especially among workers with no formal education beyond high school who are more at risk of being left behind by these global transformations.

¹ The number of unique postings related to cloud technologies (cloud computing, cloud engineering, cloud migration, cloud architecture) rose from 384 in 3rd quarter 2020 to 791 in 3rd quarter 2021.

² From a job posting for a nurse case manager: "Must have accessibility to high speed DSL or Cable modem for a home office (for data confidentiality/security reasons, satellite internet service is NOT allowed for this role).



Minnesota Vacancies Surge in 2021



By Cameron Macht
December 2021

Through the first 10 months of 2021, Minnesota employers added just over 190,000 jobs back onto their payrolls, climbing back above 2.9 million jobs in October. Though the state is still below pre-pandemic employment levels, this is an encouraging sign of continuing recovery from the COVID-19 recession in 2020. Minnesota's job gains are outpacing the U.S. growth rate so far this year, but much like the past five years, the state's labor market tightness has constrained even faster economic growth.

From the end of the Great Recession in early 2010 until March of 2020, the state's economy continued to reach new employment peaks each year in the longest-running economic expansion on record. However, the state's steady – but slowing – labor force growth constrained even more potential job growth. If we had more workers, we could have filled more jobs.

In fact, DEED's semiannual <u>Job Vacancy Survey (https://mn.gov/deed/data/data-tools/job-vacancy/)</u> has revealed a progressively increasing number of vacancies each year since 2010 as employers struggled to find workers for available jobs. This trend continued all the way up to the start of the pandemic – and is even more pronounced coming out of the pandemic recession. With the state's labor force currently still down about 85,000 workers compared to February 2020, Minnesota employers posted a record high 205,700 job vacancies in the second quarter of 2021. That number was up nearly 95,000 vacancies compared to last summer, during the outset of the pandemic, and broke the previous record from the second quarter of 2019, prior to the pandemic, by almost 60,000 vacancies (see Figure 1).

250,000 Number of Unemployed ■ Number of Job Vacancies 225,000 200,000 175,000 150,000 125,000 100,000 75,000 50,000 25,000 2004Q2 2004Q4 2005Q2 2005Q4 2006Q2 200604 200702 200704 200802 200804 200902 200902 201002 201202 201204 201302 201304 201402 2014Q4 2015Q2 2015Q4 2016Q2 2016Q4 2017Q2 01704 201004 2011Q2 2011Q4

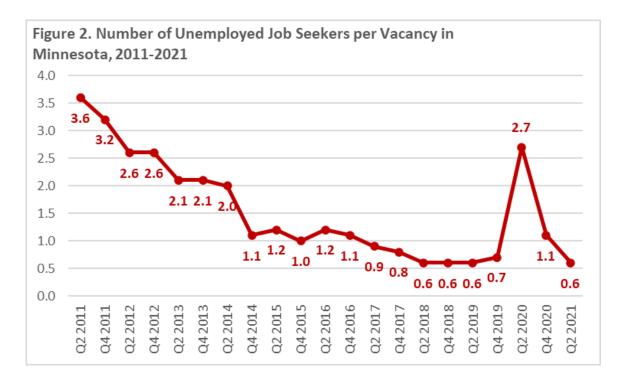
Figure 1. Minnesota Job Vacancies and Unemployed, Second Quarter 2001 to Second Quarter 2021

After reporting a low of just over 25,000 vacancies at the low point of the Great Recession in the fourth quarter of 2009, employers began to increase hiring demand in spurts over the next 10 years. Employers averaged just over 54,000 vacancies per year from 2010 to 2013; which then nearly doubled to almost 94,000 vacancies between 2014 and 2016; and then climbed another 40,000 to an average of more than 131,600 vacancies from 2017 to 2019.

The state set new record highs each year in the second quarter of 2017, 2018, and 2019 before dropping to 111,750 vacancies in the second quarter of 2020 as the state and national economy reacted to the COVID-19 pandemic. The drop in vacancies did not last long, however, with fourth quarter 2020 vacancies immediately returning to pre-pandemic levels. This rebound in hiring demand was unprecedented based on data from past recessions. In fact, it took five full years - until the second quarter of 2012 - to get back to 2007 vacancy levels coming out of the Great Recession.

Less than One-to-One

Job Vacancy Survey data show that from 2017 to 2019, the state had less than one available job seeker for each vacancy as hiring demand outpaced labor force growth. There was a short reversal during the second quarter of 2020 as unemployment spiked and employers paused hiring activity due to the coronavirus, then with more than 205,000 vacancies and less than 125,000 unemployed workers in the second quarter of 2021, there were again nearly twice as many open positions as available job seekers in Minnesota (Figure 2).



This unprecedented spike in postings translates into a job vacancy rate of 8.0%, or eight job openings per 100 filled jobs. This is the highest on record, and is double the 4.0% rate one year ago and also up from around 5.0% in 2018 and 2019. The job vacancy rate got as low as 1.0% in the fourth quarter of 2009, and had hovered between 1% and 3% from 2002 until 2014, when vacancies began outpacing worker availability. The current ratio suggests that the labor market is the tightest it's ever been, with employers in every industry finding it difficult to fill open positions.

Industrial Revolutions

As highlighted in bold in Table 1, 12 of 20 industries reported new record numbers of vacancies in the second quarter of 2021, reflecting intense demand for workers across the entire economic spectrum. Only two industries – Information and Public Administration – saw declines over the past year, though both were still relatively high in historic terms.

Table 1. Minnesota Job Vacancies by Industry, Second Quarter 2021

Industry	Number of Job Vacancies	Vacancy		Requiring Post- Secondary Education	'	Median Wage Offer
Total, All Industries	205,714	8.0%	32%	32%	50%	\$16.64
Health Care & Social Assistance	39,727	8.3%	39%	53%	50%	\$17.39
Accommodation & Food Services	37,363	20.2%	47%	3%	33%	\$13.31
Retail Trade	36,174	13.1%	34%	12%	31%	\$14.06
Manufacturing	14,621	4.8%	3%	34%	50%	\$19.23
Transportation & Warehousing	11,346	11.7%	24%	35%	80%	\$23.36
Educational Services	9,046	5.0%	51%	54%	74%	\$19.62
Construction	9,007	6.5%	9%	26%	59%	\$19.93
Professional & Technical Services	8,450	6.0%	4%	76%	86%	\$30.13
Arts, Entertainment, & Recreation	6,590	16.5%	64%	19%	45%	\$14.89
Other Services	6,336	8.7%	27%	50%	52%	\$19.46
Wholesale Trade	5,444	4.9%	24%	47%	71%	\$19.84
Finance & Insurance	5,360	3.8%	6%	69%	91%	\$37.36
Administrative & Waste Services	5,120	7.2%	18%	17%	34%	\$17.26
Public Administration	3,344	2.5%	35%	38%	47%	\$16.57
Management of Companies	2,687	3.2%	13%	67%	89%	\$25.21
Real Estate & Rental & Leasing	1,776	5.3%	23%	24%	38%	\$13.23
Information	1,701	4.0%	10%	55%	76%	\$21.88
Agriculture, Forestry, Fish & Hunt	1,125	4.7%	28%	13%	45%	\$14.55
Utilities	307	2.3%	16%	59%	65%	\$23.21
Mining	190	3.5%	0%	49%	65%	\$23.81
				Source: DEED Job	Vacancy Survey, 2	nd Qtr. 2021

Health Care & Social Assistance posted nearly 40,000 vacancies in the second quarter of 2021, an increase of nearly 16,000 in comparison to the previous year, and about 8,150 more vacancies than the previous high, posted in the fourth quarter of 2020. At that level, Health Care & Social Assistance accounted for nearly one-inevery-five vacancies in the state and remained the industry in highest demand.

The median wage offer for health care postings was \$17.39, which was up \$2.29 compared to the second quarter of 2020, suggesting extreme demand and legislative action is leading to higher wages. Still, many of the openings are for lower wage occupations including Personal and Home Care Aides, Nursing Assistants, and Medical Assistants, as well as culinary and janitorial openings. However, vacancies also reached new peaks for higher wage healthcare practitioner openings including Registered Nurses, Licensed Practical Nurses, Clinical Laboratory Technologists and Technicians, Therapists, and Physicians and Surgeons.

After seeing decreased demand in the summer of 2020 at the outset of the pandemic, **Accommodation & Food Services** came charging back in 2021 with a strong tourism season to try to satisfy pent-up consumer demand for food and travel. With 37,363 vacancies, which was an increase of 22,210 vacancies compared to 2020, the industry saw the largest over-the-year increase of any industry, a nearly 150% jump over the year.

With so many unfilled jobs, Accommodation & Food Services has the highest job vacancy rate of any industry, at 20.2% - which means there were 20 job openings for every 100 filled jobs. The next highest was **Arts**, **Entertainment & Recreation**, which had a job vacancy rate of 16.5%, but a much smaller number of vacancies total. After adding 4,871 vacancies compared to the fourth quarter of 2020; during the second surge last winter, that industry reported a record high of 6,590 vacancies this year.

Among the lowest paying sectors in the state, these two Leisure & Hospitality industries had been struggling to find workers for several years. At the occupation level, wage offers climbed more for Building & Grounds Cleaning & Maintenance, Supervisors, and Food Prep and Cooking occupations, but not as much for Waiters, Bartenders, and Maids and Housekeeping Cleaners. About two-thirds of openings in Arts, Entertainment & Recreation and less than half of postings in Accommodation & Food Services were part-time, and only about a third of openings offered healthcare benefits, though that was up in comparison to past years as employers compete for workers.

Retail Trade did not see the large decline in demand in 2020 as consumers still required basic needs like food and beverages, health and personal care, and building materials and supplies. Instead, Retail both added jobs over the year and posted more than 36,000 vacancies in 2021, which was a 62% increase. This was very different from the Great Recession, when Retail Trade saw nearly 5,000 fewer vacancies from 2006 to 2009 due to falling consumer confidence and reduced demand.

Like Leisure & Hospitality industries, Retail tends to offer lower wages, less healthcare benefits, and more parttime work, which makes it harder to attract new workers. Surprisingly, the median wage offer actually went down slightly in Retail, but that may reflect a shift back to higher demand and more postings for lower paying occupations including Cashiers and Retail Salespersons, which were muted last year. It may also reflect a more significant wage decline for First-line Supervisors of Retail Sales Workers. Retailers are offering more full-time work in order to attract new workers, and there was a slight increase in the percent of jobs offering healthcare benefits.

Manufacturing saw a quick rebound after a huge dip in the second quarter of 2020, producing 14,621 vacancies, a massive 347.5% increase over the year. In the Great Recession, manufacturing vacancies dropped for three years before coming back up; and didn't reach 7,000 vacancies until the second quarter of 2014 - four years into the recovery. The median wage offer increased exactly \$1.00 over the year to \$19.23, while work experience requirements went down to attract more and different workers, though 50% of manufacturing openings still require one or more years of experience.

The fastest over-the-year increase of any industry happened in **Transportation & Warehousing**, which racked up 11,346 vacancies, a 379% jump in comparison to the second quarter of 2020. It was also nearly double the previous high of just over 6,000 vacancies in 2018. This was an extreme swing considering the unexpected drop in the second quarter of 2020, despite rising demand for package delivery during the pandemic. However, last year's decline included a lot of bus companies, where demand was down due to schools and transit demand, and also included airlines. Demand for travel and school transportation returned this year.

This has created huge demand for Transportation & Material Moving workers; especially since those jobs are also in demand in other industries, such as Manufacturing, Wholesale Trade, Retail Trade, and more. This includes about four times as many openings for Light Truck & Delivery Drivers, and about double the number of Heavy & Tractor-trailer Truck Drivers. Median wage offers jumped \$3.36 over the year to \$23.36, the fifth highest increase of all 20 industries.

As schools returned to in-person learning, **Educational Services** returned to record-high demand levels, posting 9,046 vacancies, which was up 42.5% compared to the second quarter of 2020. That was up 700 vacancies from the previous high in the second quarter of 2018, and included steady increases for Preschool, Elementary, Middle School, and High School teachers; Special Education teachers; and Substitute Teachers. However, the fastest increases were for Education Administrators, which more than doubled in vacancies over the year. Schools also reported big increases in demand for support staff including Speech-Language Pathologists; Educational, Guidance & Career Counselors; and Child, Family & School Social Workers.

Construction built up payrolls throughout the year with growth outpacing the national rate but could have grown faster. The 9,007 vacancies posted in Construction in the second quarter of 2021 was the highest on record, up from an average of about 7,000 vacancies per year over the past 5 years. More notably, this is up 1,167% compared to low point in 2009 during the Great Recession. Employers have been struggling to find new workers amongst a lost generation of blue collar workers – there were seven years of low vacancies in Construction from 2006 to 2012 leading into and coming out of the Great Recession, which kept people away from the industry.

Demand for white collar workers in **Professional & Technical Services** doubled over the past year up to 8,450 vacancies in the second quarter of 2021, primarily in Computer Systems Design, Management Consulting, Advertising & Public Relations; Accounting, Tax Preparation, Bookkeeping & Payroll Services; and Architectural & Engineering Services. These openings offer the second highest median wage among all 20 industries at \$30.13, which was up \$2.32 compared to 2020, but they also have strict requirements – 76% of vacancies require postsecondary education and 86% require one or more years of experience.

Likewise, 91% of the 5,360 vacancies in **Finance & Insurance** require one or more years of experience and 69% require postsecondary education, and consequently wage offers were the highest among all 20 industries at \$37.36. Not only did the industry see a huge 205% increase in vacancies over the year, but Finance & Insurance also saw the biggest increase in wage offers in 2021.

Other Services, which includes Hair & Nail Salons, Auto Repair & Maintenance, and Civic & Social Organizations such as American Legions, YMCAs, and more, posted 6,336 vacancies in the second quarter of 2021, a strong recovery compared to 2020. Even more striking: that number is up more than 500% compared to the second quarter of 2010 during the Great Recession, when consumer demand dropped even more for these services. Instead, Other Services is up about 250 vacancies from the previous high in the second quarter of 2002, and up about 600 vacancies from recent high in the second quarter of 2018.

Demand for workers in the **Management of Companies** industry more than tripled over the year, to 2,687 vacancies, with a median wage offer of \$25.21. Openings quadrupled in **Agriculture, Forestry, Fishing and Hunting** to 1,125 in 2021, making that the fourth highest number of vacancies ever recorded in that industry. **Utilities** also more than doubled and had median wage offers above \$23 an hour, while **Mining** increased 67% and offered similarly high wages.

After setting a record high with 3,295 vacancies last year, **Information** postings were cut nearly in half with 1,701 vacancies in 2021. While that was down, it was still the fourth highest number of Information vacancies ever posted in the second quarter going all the way back to 2001. This sector includes Newspapers, Radio Stations, Telecommunications, and Software Publishers. Though the industry has seen long-term employment declines, hiring demand remains elevated.

Lastly, **Public Administration**, which includes city, county, state and federal government, posted 3,344 vacancies in the second quarter of 2021, which was just 5 fewer than in the second quarter of 2020. However, that was down more than 600 vacancies from its peak in the second quarter of 2019 and is the third lowest share of total job vacancies in the second quarter since 2001 – showing that hiring is much more robust in the private sector than the public sector.

The state's surge in job vacancies in the second quarter of 2021 shows that Minnesota's economy is rapidly recovering. Thousands of jobs are being added each month, but thousands more are still open and waiting for workers to fill them. Employers have responded by raising wages, increasing hours, offering benefits, and changing experience and education requirements. But the return to pre-pandemic labor market tightness, pinched even more by the nearly 85,000 workers who exited the labor force over the past year and half, is leading to unprecedented opportunities and challenges.