

Public Art and Public Transportation

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Building communities that rely on transit and walking will require greater attention to humanizing transit stations and integrating them into their surrounding context. Public art has a role in this process: it can help make transit stations more than just places to wait. To build the image of transit as an amenity in the community requires recognition of and sensitivity to the fact that the quality of the transportation experience directly affects the quality of the lives of transit users. The experience of travel by transit should be an attraction in itself. To build transit systems that are competitive with, if not better than, the experience of moving by automobile requires attention to those things that make the public spaces serving transit successful. Spaces that serve to accommodate waiting, as well as sidewalks and paths to stations that connect surrounding activity centers and land uses to transit, can be more interesting and made more secure by including public art in their design. Public art can draw out the identity of a space, aid the understanding of the historical or cultural significance of a neighborhood and its residents, and help to forge a connection to the social needs of the 1990s. Combining the skills of artists with those of transit engineers, planners, and architects in the design of public spaces related to transit has been successful and at times difficult. Involvement of public art in the design of transit-related public spaces is not a mere aesthetic issue. It has become a means whereby community values are expressed and a sense of ownership is fostered between the community and the transit-related facilities. As a result these transit spaces have become more secure and active by virtue of the

stewardship assumed by the community. Artistic expression, though, at times has been at odds with public opinion. There can be an underlying fear of public art and the inclusion of artists in the design of transit-related spaces. Public art can be too provocative and seen as appealing to an elite audience rather than to regular people. Where has the inclusion of public art in transit projects been successful? What methods have been used to achieve positive results? How do constructive collaborations between artists, designers, and engineers happen? In what ways has the inclusion of public art served to encourage pedestrian access to transit stations? These questions are addressed.

The purpose of this paper is to examine success factors in transit-related public art and architecture. Believing that the quality of the transit experience directly affects ridership levels, the author will examine how public art affects this experience by looking at examples and reviewing case studies of places, methods, and processes that have achieved some success in public art for transit.

SUCCESS DEFINED

Public art that has been highly successful reveals certain common features that transit system planners should understand: high-quality design, timeless appeal, environmental enhancement, and functionality.

High-Quality Design

The first success factor is excellence in the overall architectural design and engineering. Artists cannot transform poorly designed, ugly projects by adding artwork later. Public spaces need to be inviting and pleasant in themselves as well as functional and safe. This means that planners, architects, and engineers must strive to plan quality and attractiveness into public transit designs. In any field, a truly excellent design is simple and functional and integrates each part effectively into the whole.

The result of the pursuit of excellence is continuity, and this becomes aesthetically evident during the design decision-making process. There is great pressure to cut amenity budgets in order to solve utility or other civil engineering problems. The execution of the design will affect results aesthetically. In many cases, the choice of building materials will influence the perception of the transit-related space. No amount of public art added later can overcome the image projected by low-quality materials. Space, however, is not artifact. Public art has long held a place in public spaces as an artifact that expresses a community's values and beliefs.

Scattering historical symbols about does not create a true sense of place. The inclusion of artists in the early architectural programming for a transit-related space has become popular as a better way to achieve more humanized public spaces while avoiding the "plop art" syndrome. This has become known as environmental art and has resulted in more successful realizations of the objectives in public art inclusion.

Timeless Appeal

Another feature of successful public art is that it endures not just physically, but also in its appeal. Plans, projects, and public art that are well designed will endure, because the public will like them and keep coming back. This quality of physical endurance is inherent in public art, since once it is incorporated into a public space, unless damaged, it becomes permanent. Large outdoors statues, murals, and other kinds of public art will be in the public eye indefinitely. It is important to their success that the style of art chosen be enduring in the public favor. If so, area residents and travelers will still want to look at it 20 years later, and, when the need arises, they will be willing to contribute to its restoration.

Timelessness is a difficult accomplishment. Society is caught up in fashion. The primacy of style over substance is what contemporary society is all about. One of the main points of style is that it will not remain current. In traditional societies, public art imagery was

used to invoke perpetuity. Today, style speaks to a society in continual search for something new. Style has always been an elitist idea. The answer to finding timelessness lies in appealing to popular taste.

Successful public art has come out of the museum circuit that defines what is good and bad art. Art critics have almost no place in reviewing the success of public art, or of public spaces for that matter. What will endure must be drawn from what is meaningful to the residents of the surrounding communities and the users of the transit systems.

Despite its price tag, there was virtually no opposition to the Grand Central Station restoration project currently under way because the enduring beauty of its architecture, statuary, and Works Progress Administration (WPA) murals has made it one of New York City's landmarks. This is success in public transit art and architecture on a grand scale. There is still an element of prestige in entering Manhattan through Grand Central Station, but what made the station meaningful was the work of the WPA artists who worked during the Depression to connect the station to its community.

As excellent public art endures, its value appreciates, bringing enhanced prestige to the city or development. The very best public art endures so well that it is transformed into a landmark that symbolizes its city.

Public Acceptance

An obvious but sometimes neglected success factor in public art and architecture is whether or not the public likes it. A piece of modern sculpture that would look provocative in a museum may not be what people want to look at every day as they pass by on their way to work.

A case in point is Andrew Calder's *Flamingo*. It is considered by professionals to be great art, but few ordinary Chicagoans like it. It's too big, too red, and too reminiscent of something residents would prefer to forget: Chicago's short but virulent mosquito season. Popularly named the "Mosquito," the Calder sculpture looks to pedestrians like a giant predator from a science fiction movie. It is used by some particularly jaded Chicagoans as evidence that the mosquito is Illinois' state "bird"! Public art that succeeds is attractive to ordinary citizens rather than appealing to elite taste. But this does not necessitate reduction in quality. Another piece of public art located just a few blocks away holds a similar artistic value but much greater favor with the public. Created by another famous artist, Marc Chagall's mosaic uses softer colors and a much less severe style to please commuters as well as art critics.

Popular public art attracts people to business areas. In New York City, sculptures of angels blowing trum-

pets are erected in Rockefeller Center every Christmas season. Fifth Avenue is lined with colorful, larger-than-life-size Nutcracker figures. Because of this, people from suburbs saturated with shopping malls come every year by train and subway, bringing their children—and their credit cards—to begin the Christmas shopping season in the city.

Similar success can be seen year-round in New York at the Statue of Liberty. It is not generally considered to be great art, but people come from all over the globe to see it, bringing in lots of revenue to the city via tourism and sales. Planners who want similar success would do well to provide the public with what it likes rather than what art critics think it ought to like.

Environmental Enhancement

Improvement of Appearance

Art has always been used to beautify, and successful public art improves the appearance of its surroundings.

Carl Nesjar's sculpture fountain at Nicollet Mall in Minneapolis, Minnesota, designed in collaboration with BRW, not only withstands Minnesota's brutal cold, but capitalizes on it. The steel sculpture fountain, lovely in itself, serves as a framework on which winter wind and cold create ice sculptures. This ever-changing interaction between art and nature can encourage commuters struggling to get to work in Minnesota's infamous weather. While sprucing up the appearance of the mall, it also improves the morale of transit patrons.

Harmonization with Context

Successful public art is well integrated with its surroundings to enhance rather than disturb its environment. Designers may find inspiration in the materials, colors, and shapes of the existing or planned structures or from the indigenous natural environment. These then become design elements for art objects or larger plans. Much art is conceived to jar the senses, to call attention to itself. This approach is anathema to good public transit art. Remember that public dollars are usually funding transit-related public art. The public relations problems of the National Endowment for the Arts in recent years serve to point out the public's expectations in this regard.

Multiculturalism is an important aspect of public art, and society as a whole. Many questions are being raised regarding what is proper for socially responsible art.

BRW's design for the West River Parkway in Minneapolis linked the city to the river while developing it for commercial and recreational use. The natural features of the shoreline, historic sites, and buildings were

preserved carefully. The design, which extends over 6 mi, changes to suit varying landscapes and buildings. The result is that the natural landscape is enhanced while its potential for transportation via river, sidewalk, and roadway is developed. The involvement of public art served to harmoniously tie the site to its history.

Reinforcement of Community Values

Consciously or not, art reflects a society's characteristics and values. Good art expresses and thereby reinforces the best qualities of its culture. In Portland, the Metropolitan Arts Commission has charged public artists to remember that "the art be the common language of all those using the system, connecting riders with their environment, their history, and with the technology that moves them" (1, p. 13).

Artist Kirk Newman reinforced the experience of subway riders by creating whimsical, shadow-like silhouettes of dashing figures on the walls of the Michigan Avenue Station in Detroit. In Boston, Mags Harries' bronzed items (gloves dropped by commuters) transform lost items into sculpture.

Diversity is the cornerstone of interest. Artists bring varying points of view to a project that might otherwise be focused by only one designer's vision. Public spaces can be given layers of meaning when several artists are included. This makes them interesting places to be and to revisit, an important aspect for transit spaces used every day by transit patrons.

Elimination of Negative Expression

Public art can be provocative. Whose taste should prevail? Translating values into spatial or artifact design is not new. These projects cross cultural boundaries from the high to the low brow. The abstract is not always seen as practical. The ideal is not always pragmatic. Members of the cultural elite see a role for themselves in defining what should happen in transit-related public spaces. This can lead to an exclusionary reaction because public art is seen as just too much trouble.

Some may question spending the money needed to include public art. But these dollars are an investment that will build the community as well as its infrastructure. On the other hand, neglecting these concerns creates a vacuum that tends to be filled in unwanted ways. Blank walls and ugly places attract amateur "artists" whose efforts are not appreciated. Short-sighted planning produces waste through vandalism, street crime, and the need to make major changes later on. Art and cleanliness must be maintained: attractive, inviting public spaces invite responsible use rather than graffiti and vandalism.

On the Nicollet Mall project, extensive glass in the transit shelters was etched by an artist to reflect the various periods of architecture and culture in Minneapolis' history. The main concern in making the investment was that replacing the large glass panels would be expensive compared with replacing unembellished panels. To everyone's surprise not one of the etched panels has been damaged since the opening of the project 5 years ago. A plausible explanation is that the public appreciates the art and has chosen to preserve rather than to destroy it.

Stimulation of Public Interaction

Public art can also invite and inspire creative activity. Some artists have created works that invite public interaction.

A highly imaginative piece is *The Kendall Band* by Paul Matisse, a set of large-scale musical instruments hung over the subway tracks at Cambridge, Massachusetts' MIT station. Waiting commuters can play chimes, a gong, and a thunderous sheet of steel by manipulating cranks and pulleys from the platform. A less intentional example is the excellent acoustics built into many a subway and station tunnel that attract amateur musicians to play for donations from the waiting public. Here, excellence in architecture (as well as a lot of hard surfaces) have produced public spaces that invite the public to interact in an aesthetic way. Some places, like Grand Central Station in New York, schedule young musicians to play, thus providing performance opportunities for students from New York conservatories while promoting New York's culture.

Functional Utility

Whether providing beauty or enhancing design, good public art should serve a positive function. Examples of public art that is also functional are the wooden benches sculpted by William Keyser, Jr., for the Alewife subway station in Cambridge, Massachusetts. Here, the artist has met a practical need for public seating while adding much-needed warmth and beauty to the station. The result is a sculpture that would not be out of place in a fine museum.

An example of an aesthetic and functional architectural design is Sixth Street Station in Minneapolis. Echoing traditional vaulted European train station designs in a contemporary style, the architect has created an open, inviting gateway as well as a waiting area. This gateway shelter connects the street with a plaza and pocket park behind the station, where people can relax or enjoy outdoor performances. The enclosure is transparent, allowing views of approaching buses while shel-

tering passengers from wind and weather. This elegant, arched shelter, with its glass and brass portal, is both functional and beautiful, enhancing public activity and access to transit. It also serves as a performing space for the adjacent Hennepin Center for the Performing Arts. Located on the site of a former vaudeville theater frequented by Charlie Chaplin, the center has helped the community to celebrate the connection of past and present.

SUCCESS ACHIEVED: CASE STUDY PROCESSES

The success factors in public art are high-quality aesthetic design, enduring appeal, public acceptance, environmental enhancement, and positive function. Now comes the perennial question of transit planners: how do we get there from here? What are the methods and processes that create excellent, enduring, functional public art that enhances its environment?

Basically, two approaches toward public art have been taken in this country in the past 20 years. The earlier approach was to make funds available for commissions for artists to create pieces for projects that were already designed (and, in some cases, already built). The second, more recent approach has been to involve artists early in the project's planning and design, replacing plop art with an artist-based conception. Artists have been given an increasing role and influence in these projects. This has developed into a third approach, in which an artist's concept defines the entire project design.

The case study approach will be used to look at a project in which artists were included from the beginning of the process and collaborated with architects and engineers to produce excellent aesthetic design of the overall system and its individual elements.

Next, the author will examine how artists commissioned to embellish already-designed transit spaces with art works fostered a sense of ownership between the community and the transit project by including the public in the process of creating works of art that reflected their values and culture.

Finally, ways of incorporating art to increase the appeal of public transit by creating a welcome walking experience, which is an attraction in itself, will be presented.

Creating Aesthetic Design Continuity Through Collaboration—St. Louis MetroLink

Planning

The St. Louis MetroLink, 16 m of which opened in July 1993, is a case study for developing excellent aesthetic

design. This project's success resulted from planning, unifying design concepts, collaborating, and responding to the community. The collaboration among artists and civil engineers in designing the overall system was just one success factor in a system that attracted six times the estimated ridership in its first year, 76 percent of which were new public transit riders.

The Bi-State Development Agency's goal was high-quality design. Reaching this goal took a team approach that involved artists with architects. Bi-State formed AIT, Arts in Transit, to select artists to work with architects and engineers to design the new system under the guidance of a design review committee of outside experts. Two visual artists and two landscape artists created a master plan. Their approach was to integrate art and artists into the design process rather than simply to commission separate art works.

Funding was allocated from the National Endowment for the Arts, the St. Louis Regional Arts Commission, and the Urban Mass Transit Administration, now the Federal Transit Administration (FTA).

Six nationally known visual artists developed their ideas about design goals and features: Alice Adams, Gary Burnley, Jody Pinto, Lella Daw, Michael Jantzen, and Anna Valentina Murch. The senior architecture and engineering firm was Kennedy Associates, Inc., of St. Louis. Tod Williams & Billie Tsien, A New York City architectural firm, was hired because of its successful record on projects involving artists and builders.

Unifying Design Criteria

Having planned for a workable collaborative process, the agency charged the artists with developing a unifying design theme. The following criteria were established:

- The system should grow from what is native to and characteristic of St. Louis.
- The system should be a whole set of related components—a single entity, like a work of art.
- The system should be considered from the viewpoints of the transit rider, the neighbor, the passerby, and others who will be affected by it.
- The design should be dynamic rather than static and should incorporate changeable elements.
- The design should orient people to their location and direction.
- The functional and working elements of the system should be made visible.
- The design should deal with the ordinary as if it were extraordinary, making use of what is there in a new and poetic way.

The first design criterion identified the arc as the outstanding feature of St. Louis' best existing public designs, such as the St. Louis Gateway Arch, Union Station, Eads Bridge, and Lambert International Airport, all adjoining the MetroLink alignment. This led to the adoption of the arc as the basic unifying design element for the entire project.

Collaboration by Artists, Architects, and Engineers

Artists, architects, and engineers, using agreed-upon design criteria and the unifying principle of the arc, worked together to produce improved engineering and architectural designs that gave the overall system an aesthetic unity. Two specific examples of aesthetic designs developed through collaboration were the bridge supports and the station canopies.

Artists worked with engineers to modify a heavy post-and-lintel bridge design that was considered unappealing by those who reviewed the drawings at the 30 percent stage. A good deal of give and take was required before a solution was developed, as engineers' attempts to cut costs detracted from aesthetics. Artists were challenged to create a design that would be practical and within budget as well as aesthetically pleasing and would fit in with the overall arc theme. The result was an elegant design featuring slingshot piers and a haunched superstructure. "Their aesthetically pleasing and unusual shape received positive media attention and considerable community response, and have served as a marketing tool" (A. R. Ruwitch, *Building Bridges: Artists Collaborate as Designers for a Light Rail System*, March 1992, unpublished manuscript).

A second collaborative challenge for St. Louis MetroLink was designing the canopies for outdoor station platforms. Practical issues included the needs to offer protection from weather extremes while providing a safe, open area; allow maximum light; enable ease of maintenance; and ensure coordination with platform features. Design goals were to incorporate the arc and a sense of movement and direction into a design that would fit historical, business, and residential station areas. The canopies needed to look consistent while varying in length. All six artists worked on the design, and Kennedy Associates brought in an architect with an interest in integrating art, architecture, and engineering. "The approach taken by the team regarding the canopy's architecture was to understand and appreciate its function and reveal its engineering" (2, p. 41). The result: Plexiglas-covered arched steel struts with winged flanges.

Through collaboration by artists, architects, and engineers, the arc theme was designed into every major part of the MetroLink project. Underground stations

were built with curved ceilings. Park-and-ride lots retained the curved contours of the natural landscapes. "Successful design work depended upon a willingness to expose early concepts to study by colleagues; success of the final product depended upon the ability of the larger community to grasp the importance of a sound and comprehensive aesthetic philosophy for this new urban component" (3). Stephen E. Willis, Deputy General Manager of MetroLink, sums up: "I knew we had started something by having engineers work with artists, but I was cautious with my expectations. I was wrong. It's terrific!"

Responsiveness to Community

MetroLink's collaborative method went beyond relationships on the design team. In addition to good planning, a unifying theme, and collaboration among architects, engineers, and artists, an important factor in the overall success of the MetroLink project was community participation.

Projects such as school programs, art exhibits, and public speakers were organized to involve the public and elicit its input on the unique qualities of its neighborhoods. These qualities were then reflected in graphics on or in the station walls. Landscape and visual artists on the right-of-way design team studied the areas between station sites along the MetroLink route and created a comprehensive plan for opportunities. The purpose was to highlight existing features to the riding public. A variety of methods were used, including creating distinctive plantings that could be viewed along the alignment. An artist-in-residency program expresses the buildings' industrial activity to MetroLink riders. Art pieces were created to underline the historical and cultural significance of various sites. "A Bi-State bus [was] refitted and transformed into a colorful traveling art gallery to bring exhibitions out past Art Link projects and information materials about MetroLink to multiple sites and neighborhood events . . . Art Link projects helped to build relationships with neighborhood leaders, created a core of supporters for MetroLink and set the tone for a high-quality arts program" (2). Arts in Transit is continuing to market MetroLink through a series of public arts projects in station areas. These and other community efforts, including offering free fares the first 2 days, generated so much public interest in the project that when MetroLink opened, people waited for hours for the chance to ride.

The St. Louis MetroLink project demonstrates how involving the viewpoints and efforts of artists in planning, design, and community involvement phases can create a light rail system that generates public enthusiasm, support, and ridership.

Creating Enduring Appeal Through Timeless Design with Broad Public Appeal—Minneapolis Nicollet Mall

Purpose

The Nicollet Mall was redesigned and rebuilt in 1989 and 1990 to overcome several of the shortcomings of the first design, which opened in 1967. In its first incarnation the Nicollet Mall grew to become the main retail street, main public space, and main transit street in downtown. Its park-like design imposed many limitations on its use, and inadequate maintenance of low-quality building materials led to the need for total reconstruction. In the 23-year life of the first mall, the retail environment around it changed significantly, evolving from a street of shops into a series of internally oriented retail complexes connected by skyways.

The objectives of the new design were to make it more flexible in its accommodation of public space activities both known and unpredictable, to expand its transit ridership capacity, and to help the retail environment be competitive with suburban regional centers. Designed as a quintessential snapshot of what was fashionable in landscape architectural design of the times, the first mall was also more kitsch than desired.

BRW designed the new mall of sustainable materials, (granite, bronze, and steel with indigenous landscape materials) in a timeless vocabulary. Although the designers frequently recommended that artists be made a part of the interdisciplinary design team, there was an extended reluctance on the part of the client board to the involvement of artist-based visions that, like the first mall, may be quickly dated.

Process

The notion that artists were too uncontrollable prevailed until the final design drawings were out for bidding. It was then believed safe to include the work of artists in the project. The design team had incorporated several ideas on ways in which public artists could contribute to the design throughout the design process, so it was still possible to bring artists on board, albeit in a more limited manner than the designers considered ideal.

A selection process was conducted that called for national artist interest by a committee of the board and the project architect. Several environmental artists were interested in the project, but it was mutually agreed that the project was too far along for them to be involved in the design in a manner considered appropriate. Eight artists were ultimately selected to contribute to the project: five local and three national and international.

Nine shelter glass etching projects were conducted by a single artist previously described. The ice fountain celebrating Minneapolis' winter season was also previously described. A single artist designed two granite boat hulls as functional benches. Other projects included a fountain featuring regional bird species, man-hole covers highlighting several Minnesota agricultural and wildlife themes, a Native American pavement mosaic, another bench, and an abstract work.

Almost \$1.5 million representing 5 percent of the project budget was invested in these eight works. The process of artist selection and implementation took almost 2 years to complete and close out. What was learned?

Popular Appeal

The art on the Nicollet Mall appeals to popular taste, in the sense that critics are at a loss to describe it to their elitist audiences, as they are also at a similar loss to describe the design of the entire mall space. This has not in any way detracted from the enjoyment of the mall by its users. The temptation to cater to highbrow territorial behavior with respect to public art should be avoided. Public art in transit-related spaces is not a social filter. It should be designed to draw people together. Highbrow art belongs in museums, where everyone expects to see it.

Clients and in fact the public at large can be apprehensive about the inclusion of public artists in the design process. Artists have, in some cases, a deserved reputation for catering to their own individualized visions. Public art is not as yet a collectivist process. Many artists fight for their right to express personal political or social viewpoints that are unpopular. Many people believe that art should be about form and beauty, not controversy. Involving a review committee in the selection and periodic monitoring of artists' works as they evolve can solve this problem in part.

This apprehension can lead to the reduction of artist involvement to the mere adding of ornamentation. On the Nicollet Mall this was mostly avoided by the early inclusion of ideas for the involvement of artists in an effective retrofit. These ideas were integrated into the design of components in a way that made the late entry of artists effective and efficient.

Public Realm

Public art can address substantially the desire for a public realm with meaning. The public spaces in the United States have been devastated by the focus on consumerism and privatization of those spaces that serve as stages for shopping activity. There is a pent-up yearning for a public realm in which genuine mixing of the clas-

ses can take place. If properly designed, transit spaces can serve as a well point for social interaction. Transit can serve as a link to a sense of a larger purpose.

Combining the skills of design professionals and visual artists can ensure that public spaces related to transit become inviting to all users. The more activity that can be encouraged in public space, the more secure and otherwise successful those spaces will be. Often it is necessary to sequence the involvement of designers on a project for reasons listed earlier as well as others. This sequential involvement need not lead to the exclusion of effective public art if proper planning and understanding of the role of public art in humanizing transit spaces are present on the design team.

The process of design collaboration is not simple. Artists, engineers, and architects at times appear to speak a different language. Facilitating the process of collaboration takes special skills and commitment to the ideals of what can be accomplished. This genuine commitment seems to be a differentiating factor in determining the success of public art on transit projects.

Terminal for Tomorrow: Integration of Art, Architecture, and Music—Chicago United Airlines Terminal

Michael Hayden's "Sky's the Limit," United Airlines Terminal for Tomorrow, O'Hare Airport, Chicago, is a good example of a different kind of involvement. Here is a familiar situation with a difference. Like most public art projects, especially early ones, the artist was brought in after the buildings were designed and built and was asked to create a work of art to fill the space. What created success here was the selection of the right artist and the provision of artistic freedom to execute his vision as well as the budget to make it a reality.

This artwork incorporates light sculpture, music, and architecture to create a 744-ft-long aesthetic environment that projects 1960s disco happenings on a grand scale. Created to enhance United's 900-ft people-mover tunnel joining its two concourses, Hayden's sculpture uses white and colored neon lights—466 of them—that create a rainbow of abstract shapes over a full hour to music by Gary Fry. Since travelers along the people-mover pass through the sculpture in 3 to 5 min, each trip can be a different experience. This transforms the mundane need to shuttle people from one place to another into a breathtaking multimedia experience. Tourists travel hundreds or thousands of miles to view such examples of public art as the Statue of Liberty. Works like "Sky's the Limit" could well become tourist attractions in their own right, drawing business to the airport. A similar effect is possible on a smaller scale at transit situations.

CASE STUDY RESEARCH

Boston/Cambridge, Massachusetts

Arts on the Line

The success of the 1985 Red Line Northwest Extension in Boston, which was the first American city to put art in its subway stations, is a tribute to the courage of those who stood up and said "no" to more highways through their communities, to the vision of the leaders who found the way to take highway funds and build mass transit, and to the skills and labor of the craftsmen who built the line. Although the "T," as Boston's Massachusetts Bay Transportation Authority (MBTA) is called, was the first organization to place works in the Boston subways, the Cambridge Arts Council's Arts on the Line has become a baseline of sorts for similar projects elsewhere (4). Arts on the Line began as a design initiative of the U.S. Department of Transportation (DOT). Joan Mondale helped to spearhead this policy shift at a national level: 1978 initiatives by DOT include airport art in Atlanta, architectural restoration of Baltimore's railroad station, and the pilot for subway art, Cambridge. Most installations for Arts on the Line were completed by 1985 with the opening of the Alewife Station at the end of the line.

Mid-1960s Modernization of Turn-of-Century Stations Arlington Street Station is one of the oldest stops, dating to the turn of the century. It was assigned to the architectural firm Cambridge Seven, which installed some graphics and some photomurals of the neighborhood at the rehabilitated station. These photomurals show underground riders where they were as well as brighten the underground environment. They are still in place.

Park Street Station, built in 1897, is the oldest subway station in the country. The architects for that job, Arrow Street, and MBTA selected artists to create art for the site. The choice was a ceramic by Lili Ann Killen-Rosenberg, *Celebration of the Underground*. The ceramic and found-object mural incorporates old trolley parts and rusty tools, nails, fossils, and horseshoes unearthed on the site into scenes of Boston's transportation history.

Flaw in "T" Program As far as the arts community was concerned, the program's main flaw was its failure to work out a selection process for choosing artists. One earlier project did not use a competitive selection process; the architectural firm asked a well-known artist to design something for the Harvard Station, and there had to be negotiations for the architectural firm

to accept other artists. Gyorgy Kepes was the artist selected for the Harvard Station, and his work, *Blue Sky on the Red Line*, a 110-ft-long stained glass wall, has been described as one of the glories of the transit system.

To select permanent works, the Cambridge Arts Council worked hard to develop procedures that would involve users, neighbors, artists, historians, local businesses, and public officials. Each station had a committee and a jury.

Other Artists and Works The firm Cambridge Seven encouraged artists to wander around the neighborhood and fantasize. The firm used some of its own design money to support the artists' brainstorming.

Artist Joyce Kozloff did a ceramic mural based on *New England Decorative Arts* for the Harvard Station. Mags Harries produced the most significant work of any "T" station: the famous *Glove Cycle* formed with lost gloves cast in bronze that appear as scattered items alongside an escalator.

William Wainwright's *Light at the End of the Tunnel*, a mobile that refracts daylight underground, won a Governor's Design Award. *The Kendall Band* is a work that enjoys a big crowd at the Kendall/MIT Station. A set of large-scale musical instruments designed and tuned by Paul Matisse hangs between the tracks, safe from vandals. By a system of cranks, pulleys, and hammers located on the platforms, a set of aluminum chimes, a gong, and a slab of thunderous sheet steel can be played by commuters waiting for their rides.

Lesson Artists must be involved from the beginning—to work with designers, architects, contractors, and the community—to make public art more public.

Boston Artery Arts Program

The Boston Artery Arts Program, sponsored by the Massachusetts Highway Department, must be included in any discussion of public art (5). Boston's mission is to create a comprehensive program of public art in public spaces. The Artery Arts Program invited professional artists to submit slides and register with an Artists' Bank. Twenty permanent public artworks were selected for the Central Artery (I-93)/Tunnel (I-90) project. Funding sources include the Massachusetts Highway Department and Federal Highway Administration with a proposed budget of between 0.25 and 0.5 percent of total project construction and program costs and recommended target of \$20 million. Private funding will be sought as well.

The Artery Arts Program fosters a collaboration among artists, architects, and city planners. A high de-

gree of community participation is involved in the selection and design process. Public art selected by and for Boston's diverse neighborhood communities will invite communication by all and encourage these groups to share in creating an inviting environment.

Dallas, Texas

Initial light rail transit service by the Dallas Area Rapid Transit (DART) will consist of 20 mi of light rail development linking the Dallas central business district (CBD) with residential and other activity areas within the North Central, West Oak Cliff, and South Oak Cliff corridors. The initial starter system will have nine line sections.

The DART art program and policies were adopted by the DART Board of Directors in June 1990 (6). Development of the program was funded by a grant from the City of Dallas Cultural Affairs Office, a grant from the Texas Commission on the Arts, and local DART funds. DART is building a transit system to link communities in its region, and it will also structure a public art program that enhances these linkages.

Public Spaces and Local Culture

The transit systems of cities in other countries, such as Amsterdam, Paris, Seoul, and Stockholm, as well as those in Atlanta, Boston, Buffalo, and Pittsburgh illustrate the contribution of public art as a tool in establishing relations with the community.

Research into the strengths and weaknesses of transit system art programs indicates that separating the artists and the art program from the rest of a systems' design process creates major coordination and installation problems. When art is applied as an afterthought, there is limited success. The DART art and design program is a team effort that include communications staff (community), facilities planning, and engineering staff, and section design team and artists.

The DART program requires that artists, architects, landscape architects, and engineers collaborate at the beginning of the design process. Funding and budgeting can then be structured in the most cost-effective way, because locations for art opportunities may be provided during the design and construction stages.

In addition, art projects will be designed with consideration to minimum maintenance requirements and maximum resistance to vandalism.

Funding

The budget to develop and implement art projects for the light rail and commuter rail stations is based on an

assessment of up to \$50,000 per station or facility as determined by the DART art and design program. Opportunities identified for the prototype station will enhance the facilities' capital budgets. For example, a floor or wall in the facility budget could be developed from the overall facility budget and not from art program funds. Each artist finalist (individual or team) will be paid a \$500 proposal fee, which is paid after the delivery of a completed proposal.

Denver, Colorado

Mayor's Office of Art, Culture, and Film Master Plan

Denver Mayor Wellington E. Webb initiated Ordinance 717, which was passed by the city council in 1991 and requires the allocation of 1 percent of eligible city projects for acquiring public art. The Mayor's Commission on Art, Culture, and Film has developed a public art master plan. Under the ordinance any city project that provides public service is eligible (hospitals, parks, recreation centers, airport, etc.). The money is allocated within the actual construction or renovation of eligible projects.

Artists apply through "calls for entries" advertised through the media and mailed directly to all eligible artists on file with the Mayor's Office on Art, Culture, and Film. Artists may also leave slides and support material on file with their registries.

Artwork is selected by a project evaluation panel (PEP) with consideration of Denver's public art master plan. Whenever possible, an artist or team of artists is selected at the design stage of a project so that the selected artist, or team, can work with the design team or integrate artwork into the project site. A new PEP is organized for each project by the Mayor's Commission on Art, Culture, and Film.

A commitment to public art helps to create goodwill. It shows that a developer has the community's interest as well as its own financial interest in mind, and experience demonstrates that attractive public spaces are less prone to vandalism.

Denver Airport Art

The art at Denver International Airport represents one of the largest and most impressive public art programs in the entire United States. Thirty-nine artists created original works for the project, integrating the art itself into the design and structure of the airport.

"Journey" is the unifying theme of the program, relating to the concept of travel that the airport itself embodies. The idea of journey plays on another level, too,

as people constantly move from one place to another in their lives.

To some artists, the journey relates to the history of the land on which the airport sits as a Native American migratory land. To others, it is the journey of air travel or the journey west as America explored the frontier.

Dade County, Miami

Metro-Dade Art in Public Places

Since 1978 federal Art in Transit programs have accompanied new rapid transit construction in the United States. In South Florida, art for 16 Metrorail stations was developed with federal funding during the multi-year construction of the system. As a group, these works represent major trends in contemporary American art and an evolution in the relationship between a public artwork and its site. Like many other areas, Metro-Dade has a depository or registry for artists that may be reviewed by consultants and architects.

Funding For more than 9 years Art in Public Places has recommended the purchase of close to 400 artworks, for a total of more than \$2 million. Its funding was derived from 1½ percent of the construction costs of these buildings. At that time the county manager was responsible for the purchase of artwork, on the recommendation of the Art in Public Places Council.

Community The master plan developed by the Dade County Art in Public Places includes a section on *Responsibility to the Community* that states, in part, that

The trust recognizes that works of art often significantly alter public places, becoming a major new presence in the environment. In recent decades, visual art has rapidly evolved and diversified, creating at times a gap between contemporary art and its appreciation by the general public. The program shall endeavor to bridge this gap, by broadening community awareness of the issues involved in contemporary art and its historical context, and encouraging informed debate among all segments of the community.

Conservation and Maintenance Arts in Public Places has also established, under county ordinance, funds for conserving and maintaining its collection. It is actually a part of the commissioning process whereby the artists' proposals are reviewed by a qualified specialist conservator and that person works with the artist to draw up a schedule of maintenance and instructions

for the maintenance department of the facility housing the work.

Artists

In May 1994 Metro-Dade Art in Public Places announced that eight art installations were created for the new Metromover stations. Included are Buster Simpson's sculptural seating installations at three stations and Noreen Morelli's a ceramic mural created with students from Design and Architecture Senior High School for the School Board Metromover Station. "New Calypso" at the Park West Station, an old neighborhood in Miami, is a floor formed from bluestone slabs that become a circular cosmogram; artists are Houston Conwill, Estella Conwill Majozo, and Joseph DePace, all of New York City. They worked closely with the Black Archives Foundation to identify historical figures and sandblasted poetic texts and song lines into the stone. Other artists include Connie Lloveras, who created a ceramic mosaic at the Brickell Station.

Los Angeles

Los Angeles Metro stations along the 22-mi Blue Line (Long Beach to Los Angeles) and the 20-mi Green Line (Norwalk to El Segundo) will feature installations and designs by artists. Los Angeles County Transit (LACT) policy allocates half of 1 percent of the rail project's construction costs for public art.

LACT Chairwoman Christine Reed believes that "this art program will help build neighborhood interest in the rail lines and a sense of pride. The more people who enjoy the system, use it and respect it, the bigger success it will be" (7, p. 8). And Mary Kilroy, a public art consultant, noted that "Los Angeles, like many large cities, is most concerned with the creation of vibrant streetscapes—places where people want to be. Public art enhances that goal. Our cities are discovering that their public spaces should symbolize their commitment to their future" (1, p. 12).

Phoenix, Arizona

Commission's Book on Public Art

Public Art Works: The Arizona Models is "a collaborative project funded and published by the Phoenix Arts Commission, the Arizona Commission on the Arts, the Design Center for American Urban Landscape and the University of Minnesota" (8). Elegantly designed and rich with colorplates, the book includes projects related to three categories: (a) building construction, interior or

exterior; (b) outdoor spaces; and (c) infrastructure, networks, and systems.

Artists and Funding

The three transportation-related projects described here are the Thomas Road Overpass, Patrick Park Plaza, and Dunlap Avenue Tree Guards. With funding from Percent for Art funds from the City of Phoenix Street Transportation Department, artist Marilyn Zwak worked with Cannon and Associates, Inc.; the City of Phoenix Street Transportation Department; and the Phoenix Arts Commission. Marilyn Zwak's artistic concept for the three-bridge structure was motivated by two concerns: How could art serve as a healing factor for the wounds inflicted on the neighborhoods bisected by the Squaw Peak Parkway? and How could the historical significance of the parkway/Thomas Road site, where remains of more than 40 Hohokam Indians were discovered, be acknowledged and preserved? Plans included inviting public citizens to develop their own designs in the freshly laid adobe. Hand prints, initials, abstract scribbles, and even images of "teenage Mutant Ninja Turtles" have been etched into the wet adobe surfaces.

Artist Jody Pinto jumped in with the construction workers as she worked on a double-spiral fountain spanning 85 ft in a small park on Southern Avenue near 30th Street: the construction foreman stated that this was the only project that he had worked on with an artist who got right in and helped. The fountain consists of a shallow concrete channel that coils into a pair of flat spirals at ground level; the spirals resemble a nautilus shell split in half. Water will flow from the nearby San Francisco Canal into the channel and then back into the canal. Concrete benches shaded by elm trees will surround the fountain.

Artist Garth Edwards has designed and produced a series of individualized tree guards for the newly widened streetscape of Dunlap Avenue. They feature larger-than-life-size cut-out metal shapes of human figures that represent typical and not-so-typical residents of Sunnyslope.

Neighbors' Battle

An article in the *Phoenix Gazette* tells how a South Phoenix neighborhood won a battle with the city over road design.

Residents fought for two years to get what they wanted, against the city's original vision of an unadorned six-lane highway. They even got an artist to design their park. A homeowner said they wanted an exceptional street because of people's negative perception of the

South Mountain community. They asked the Phoenix Arts Commission to become involved—wanted the money that this project generated for the Arts Commission to come back to this community. Under the city's 1% for arts construction budget, this community battled for their fair share. (9)

St. Louis, Missouri

St. Louis' MetroLink AIT program, described earlier in the paper, is an excellent example of the successful integration of public art and public transit. Ann R. Rutch, AIT director, wrote in 1992:

For the first time on a large public works project, visual artists worked as equal partners in a collaboration with engineers and architects designing all aspects of the infrastructure. The following case study highlights the process for the design of new bridge structures for Metro Line, the St. Louis light rail system. Arts in Transit, the sponsoring organization, is a national model and project of the Bi-State Development Agency.

A team of visual artists critiqued preliminary engineering for MetroLink, and developed aesthetic criteria for the project. Subsequently, the artists worked on design development for all the functional elements of the system. In collaboration with the civil engineers, the artists designed a distinctive new bridge structure featuring a slingshot pier and haunched superstructure. This design is part of a unified concept which ties together various parts of MetroLink and relates them to structures in the St. Louis region.

San Francisco, California

Capp Street Project is a nonprofit arts organization, announced in July 1994; six artists and artist collaboratives will participate in Art in the Urban Landscape, the new public art program. Each recipient will be given a grant from the Wallace Alexander Gerbode Foundation and Capp Street Project. All of the art selected for the program is temporary (2 to 5 years).

Artist Connie Hatch's photographically based project will be located in several transit stations. For more than a decade, artist Carolyn Marks has created "peace walls," ceramic tile mosaics devoted to the theme of world peace. Her most recent wall is located in a San Francisco Bay Area Rapid Transit (BART) district station in Oakland's Fruitvale neighborhood. Marks says she sees the public art installation as a way for the Fruitvale community to claim BART as its own—it will not be an "ugly, anonymous place any longer. Kids claim walls all the time with graffiti. This

will provide a more positive space." Tiles have been painted by local schools, community groups, merchants, BART officials, and local politicians. Other contributors include members of the Oakland-based Golden State Warriors basketball team, actress Whoopi Goldberg, and the family of U.S. Transportation Secretary Federico Peña. Marks hopes that this "ceramic quilt" peace wall will cover the entire transit station over the next several years.

The Capp Street Project complements a larger effort to redevelop the area surrounding BART into a pedestrian plaza with a mix of retail shops, affordable housing, cultural facilities, and offices for local social service agencies (10, p. 12).

Seattle, Washington

In 1984 Seattle's Metro Council elected to dedicate to art 1 percent of the cost of the stations and surface improvements for the 1.3-mi Downtown Seattle Transit Project (DSTP). "The objective of the Metro (DSTP) Arts Program is to transform a functional transit facility into a place of human interest and creativity. The program will add inspiration and delight to the rider's experience of comfort and efficiency."

Seattle prepared a big, practical handbook intended to be used by anyone contemplating planning a public arts program (11). The index covers every possible subject from design team approach to contracts and how to pay the artists. It was also designed to be read and used.

Architect, landscape architect, and engineer, plus an artist, equal the design team. The central assumption is that by incorporating the artist's perspective—from the inception of the project—in materials selection, spatial considerations, overall design approach, and the inclusion of artwork, facilities can become more aesthetically fulfilling and humanly oriented places.

The players are as follows: Metro Council, Metro, the Metro Arts Committee, the arts program coordinator, the community, the Metro project manager, the art and architecture coordinator, engineers, architects, landscape architects, and artists.

Sally Turner offered one viewpoint of the collaboration: "Engineers are nuts and bolts people—you do things this way because . . . Engineers are comfortable with parameters, linear progression. Art doesn't have parameters. It makes [most] engineers nervous" (11, p. 73).

In the appendix of the handbook, the prospectus for the DSTP (scope of work definition) was written by someone whose philosophy would probably be shared by many professionals; it is stated in full as follows:

The foremost objective of the Metro Arts Program is to transfer a functional transit utility into a place of human interest and creativity; it should add inspiration and delight to the transit rider's experience of comfort and efficiency. The design team approach is intended to create artwork which will integrate these objectives and communicate to the transit rider both a sense of continuity through the tunnel and a sense of neighborhood in the stations. Three to five artists shall work together as a team in developing the overall design concept for the Downtown Seattle Transit Project with [name of engineering firm] and shall make proposals for the inclusion of artwork in the final design.

The proposals shall include drawings and written materials with regard to types of art, sites, scope of work (i.e., scale), utility requirements and budget estimates. Artists' approach may include works of art which are an integral part of the architectural and functional aspects of the project and/or additional or separate elements of the DSTP. All elements of the project may be considered by the design team artists including sound, light, color, surface treatments, and circulation. (11)

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