

Summary of Previous Studies Relevant to 16th Street Mall Alternatives Analysis and Environmental Clearance

The Transitway/Mall: A Transportation Project in the Central Business District of Metropolitan Denver, 1977

Background

This report details the conceptual design submitted by I.M. Pei and Partners, Hanna-Olin, and the design team to the Regional Transportation District.

Purpose

The purpose of the report was to provide information about the conceptual design that would meet the three primary goals of the creation of the Transitway/Mall in downtown Denver:

1. To lessen traffic congestion in the downtown area.
2. To provide more efficient bus service to the city and suburban neighborhoods.
3. To create a new pedestrian environment in the downtown – a place for people.

Recommendations

The recommended design was to transform 16th Street into a tree-lined pedestrian precinct with electric shuttles carrying passengers to and from the transportation transfer facilities at each end of the Mall. Express commuter buses would enter the transfer facilities at below-street concourses, where riders would transfer to Mall shuttles at ground level. The Mall shuttles would leave the transfer facilities every 70 seconds, stopping at each block along 16th Street. Basic elements of the design concept included:

- A double row of trees flanking a promenade in the center of the street
- Two transitway paths on either side of the promenade
- Sidewalks along the storefronts
- Patterned paving over the entire street surface
- A combination of light fixtures creating a variety of lighting levels
- Shelters, benches, fountains, and places for displays, sidewalk cafes, and special events

Relevance to Current Study

This concept became the Transitway/Mall Alternative in the *Denver Central Business District Transitway and Transfer Facilities Environmental Assessment*.

Denver Central Business District Transitway and Transfer Facilities Environmental Assessment, 1978

Background

In 1973, the Regional Transportation District (RTD) voted to authorize the issuance of \$425 million in revenue to finance development of a multimodal public transportation system. The City and County of Denver (CCD) and the downtown Denver business community partnered with RTD in developing a solution.

Purpose

Increased population growth in the Denver area led to severe transportation and environmental quality problems associated with the commuting of people to and from the central business district (CBD). The future social, economic, and environmental well-being of downtown Denver was intimately tied to reducing traffic congestion and improving transit and auto travel times to and within the CBD.

Recommendations

With then-current modes of transit expected to reach capacity by 1983, an environmental study was conducted to evaluate three alternatives to approach the transit issues in the CBD: a No-Build Alternative, a bus street along 16th Street that would create travel lanes for conventional buses, and a Transitway/Mall Alternative that would use electric rail to shuttle passengers between transportation transfer facilities on each end.

RTD investigated the three alternatives with the following goals in mind: to provide more efficient bus service to city and suburban neighborhoods, to lessen traffic congestion in the downtown, and to create a new pedestrian environment in the downtown – a place for people.

The No Build Alternative was ruled out because traffic congestion would worsen with no improvements. The No Build Alternative would create an environment that was less conducive to pedestrians than was present at the time.

It was determined that the bus street concept would create congestion rather than lessen it because of less efficient bus service. The bus street concept would not separate local and express buses and would double the bus traffic by the year 2000 on 16th Street (compared to the No Build Alternative).

The Transitway/Mall Alternative was the recommended alternative because it met all the transportation goals by creating a more efficient bus service, lessening congestion, and creating a pedestrian area.

Relevance to Current Study

This concept serves as applicable background information, and supplies historical and population data on 16th Street before the 1970s.

Downtown Multimodal Access Plan, 2005

Background

This access plan was a joint planning exercise by the CCD, RTC, Colorado Department of Transportation, Downtown Denver Business Improvement District, and Denver Regional Council of Governments, to ensure that the evolution of downtown Denver was timely, efficient, and cost effective.

Purpose

To plan for the integration of vehicular, freight, pedestrian, bicycle, and transit access into and throughout downtown Denver through 2025.

Recommendations

The plan recommended improvements for the following facility types and modes:

- Streets into and out of downtown
- Streets bordering downtown
- Streets within downtown
- Transit
- Bicycles
- Pedestrians

Relevance to Current Study

The 16th Street Mall (Mall) transit service is listed as an existing condition and described as “the cornerstone of the system.” The study is included in the model used to project transportation system needs.

Denver Downtown Area Plan, 2007

Background

CCD, in collaboration with the Downtown Denver Partnership (DDP), updated the 1986 Denver Downtown Area Plan with this 2007 plan.

Purpose

The Denver Downtown Area Plan was a tool to help community leaders, decision makers, and citizens build on the downtown’s assets and guide future development to reflect the community’s vision of a livable, healthy, sustainable, and vibrant downtown.

Recommendations

The Denver Downtown Area Plan had five elements that supported the vision of a vibrant downtown area: prosperous, walkable, diverse, distinctive, and green. The Plan suggested the following implementations:

- **Prosperous City**
 - Energize the commercial core.
 - Enhance pedestrian and transit experiences by strengthening the vitality of the Mall, as follows:
 - Create and enhance recognized subdistricts along the Mall, including theater and visitor districts. Create and implement a Mall activities strategy.
 - Develop a balanced retail strategy that includes entertainment, dining, and specialty retailers.
 - Conduct a study of Mall infrastructure to assess needs, and reconstruct to meet the goals of sustainability, usability, and respect for the existing design.

- Re-evaluate Mall transit service in light of the downtown circulator frequency, operation, and technology.
- **Walkable City**
 - Build on transit.
 - Reinforce Denver Union Station as the regional transit hub and Civic Center Station as the local transit hub.
 - Develop a comprehensive streetscape plan and funding strategy, as follows:
 - Require surface parking lots to comply with landscaping requirements.
 - Improve the pedestrian environment on named streets; start with Larimer, Curtis, California, and Tremont.
 - Extend connections into surrounding neighborhoods to include the enhancement of existing infrastructure, particularly over I-25 along West 23rd Avenue, Colfax Avenue, and Park Avenue.
 - Enhance pedestrian crossings through the use of bulb-outs, midblock crossings, pedestrian refuge islands, pedestrian count-down signals, and improved signage and striping.
 - Designate downtown as a “pedestrian priority zone,” incorporating universal access standards, Complete Streets policies that ensure safe and convenient access for all transportation modes, and priority to capital investments in pedestrian-oriented improvements in the public right-of-way.
- **Diverse City**
 - Embrace adjacent neighborhoods.
 - Integrate fun features such as fountains and play environments into the Mall, streetscapes, and open places.
 - Provide enhanced pedestrian crossings at key locations to connect downtown with established and emerging neighborhoods.
- **Distinctive City**
 - Use distinctive ground floor retail, other active uses, and the street environment to reinforce district identity.
 - Retain and reuse historic buildings to fortify the distinct identity of districts.
- **Green City**
 - Create a green public realm in downtown by adding street trees and landscaping in the right-of-way.
 - Provide pocket parks or other publicly accessible open spaces in underserved areas.
 - Rejuvenate the Civic Center.
 - Establish sustainable street design practices, beginning with 14th street.
 - Integrate green street elements, such as bioswales, along streets and in parking lots to attenuate surface runoff.

- Establish parking lot landscaping requirements that reduce heat island and stormwater impacts.
- Encourage reuse of existing buildings.
- Install energy efficient street lighting that meets “Dark Skies” standards.

Relevance to Current Study

The Denver Downtown Area Plan provides key strategies that can be used to create options for innovative design.

16th Street Mall Denver, Building on Success, 2008

Background

The DDP requested that the Urban Land Institute explore opportunities to reconstruct the Mall transit way.

Purpose

Five main goals were established for this study:

1. Explore the Mall’s audience and recommend retail and nonretail uses that support a lively urban environment.
2. Suggest ideas to improve the Mall’s retail mix and encourage property owners to enhance their spaces by providing them with incentives.
3. (3) Suggest opportunities to reshape the Mall to better connect adjacent streets, sidewalks, and open spaces.
4. Advise on infrastructure upgrades and technology.
5. Recommend changes to the Mall to enhance the Mall’s pedestrian environment.

Recommendations

The study recommended and offered suggestions on each area outlined in the goals. Recommendations for the three goals relevant to the current National Environmental Policy Act (NEPA) study are summarized as follows:

- **Opportunities to reshape the Mall for better connectivity**
 - Develop a network of primary and secondary “great streets” that knits the downtown districts together.
 - Position local transit for supporting new development.
 - Create a downtown circulator on 14th, 18th, and 19th streets.
 - Create a downtown transit fare-free zone to promote growth.
 - Transform one-way streets into high-quality, two-way streets.
 - Design all streets as high-quality pedestrian environments with on-street parking and wide sidewalks.

- **Recommendations on infrastructure upgrades and technology**
 - Make upgrades and repairs with full respect for the original design.
 - Feature the latest in communication techniques such as interactive signing and advertising.
 - Consider two paving system suggestions: under-sidewalk, snow-melting technologies and a rooftop solar energy system that would heat water for a deicing loop.
 - Preserve original light fixtures and upgrade the electrical infrastructure; study benefits and location for underground conduits to support a public music system or Wi-Fi.
- **Enhancing the pedestrian environment**
 - Focus on development efforts that create a mixed-use, pedestrian-friendly, civic, cultural, and residential urban village in the heart of downtown and at the center of the Mall.
 - Surround the core blocks of the Mall and fill the area bounded by 14th, 17th, and Market Streets and Glenarm Place with the urban village. The new neighborhood will fill a hole in the center of downtown with new development on currently vacant and underused sites.
 - Plan for pedestrian-friendly streetscapes, high-density residential areas, appropriate parking and circulation, and open space green design.

Relevance to Current Study

This study provides information on the land use and community data in the area that can be used to inform the project's purpose and need and alternatives.

Technical Assessment and Rehabilitation Study, 2009; 16th Street Urban Design Plan, 2010

Background

Following the recommendations of the Urban Land Institute Panel in May 2008, RTD, CCD, DDP, and the Downtown Denver Business Improvement District agreed to share funding of a planning process for the Mall that would address rehabilitation of the pavement, upgrade and renovation of other design elements, evaluation of the physical design for the next 25-year horizon, and economic development and management.

Purpose

The purpose of the plan was to review the physical condition of the Mall and determine a course of action that would respect the importance of the original Mall design, including its purpose, general layout, and building materials. The plan makes recommendations for the Mall's future that address the following points in the 2007 Denver Downtown Area Plan:

1. Create and enhance recognized subdistricts along the Mall.
2. Conduct a study of Mall infrastructure to assess its needs and to make recommendations to meet the goals of sustainability, usability, and respect for existing design.
3. Re-evaluate the Mall's transit service considering the downtown circulator frequency, operation, and technology.

Recommendations

The plan summarizes the existing conditions for various urban design elements and transit service, and references the detailed technical assessment conducted to support the plan in 2009. The plan provides recommendations for the paver system, infrastructure, urban design features, and transit technology derived from the analysis of existing conditions, assumptions, and guiding principles. One key recommendation in the plan is to maintain the rubber tire bus as the technology used to provide transit service along the Mall because of impacts that would be caused by implementing other technologies and the increased ridership demand predicted for the future.

Relevance to Current Study

The plan recommends maintaining rubber tire bus as the transit technology on the Mall. This report includes an assessment of the physical existing conditions of the Mall, which are used in development of the current study's purpose and need.

16th Street Mall Pilot Repair Project, 2011 (finalized in 2014)

Background

The report was prepared for RTD and is the culmination of the Pilot Repair Project on the 300 block of the Mall. The project included design, construction, and maintenance activities that began in 2011. The activities were evaluated during a 2-year inspection and reporting period.

Purpose

The report provides informative feedback on each component of the paving system and maintenance records providing patterns that should be useful in guiding future maintenance. The purpose of the project was to conduct a pilot repair project and then observe how various paver maintenance techniques performed.

Recommendations

The report provides recommendations for future maintenance, including spreading the wheel load of buses over additional tires, using polymer admixture in the setting bed mortar, and using sanded epoxy mortar at the surface.

Relevance to Current Study

The pilot repair project report provides background information on existing paver condition and possible solutions.

16th Street Mall Rehabilitation Categorical Exclusion, 2013

Background

RTD's 16th Street Mall rehabilitation project included a comprehensive capital improvements program that would rehabilitate portions of the original Mall, using methods being tested through the pilot paver program that began in 2011.

Purpose

The purpose was to rehabilitate and reconstruct elements of the Mall infrastructure so that the Mall remained viable for transit and pedestrian use, and retained the character and vitality it has had since its construction in 1982.

Recommendations

It was recommended that portions of the original Mall from Market Street to Lawrence Street and from Court Place to Broadway be rehabilitated using methods that were tested and proven successful through the 2011 pilot paver program. The project included paver rehabilitation (remove, clean, and reset pavers and improve sub-base); subsurface utility upgrades; tree replacement; fountain upgrades; lighting rehabilitation; increased pedestrian safety at cross streets through bulb-outs; provision of new furnishings, and refurbishing of existing furnishings; and upgraded wayfinding on the Mall.

The project was never constructed because of cost considerations.

Relevance to Current Study

The 16th Street Mall rehabilitation is a previously approved NEPA document, which contains applicable baseline information. Recommended improvements were unable to be implemented because of cost considerations.

Small Steps Towards Big Change, 2014/2015

Background

CCD commissioned the *Small Steps Towards Big Change* report, which was finished in 2016. In 2014 and 2015, the first steps of a “Measure-Test-Refine” approach were carried out. Through an iterative process of measuring people’s use of 16th Street, testing changes that activate the street, and refining initiatives (rejecting or making those changes permanent), the project team made recommendations for improvements to the downtown experience. This process of decision making relies on a constant feedback loop among the City, stakeholders, and citizens. These tests and measurements are already informing next steps.

Purpose

The study focused on identifying ways to increase the number of people spending time on the Mall rather than moving through it (“stickiness”). The project tested approaches to activate the street and recommended short-, medium-, and long-term improvements to increase the number of people spending time on the Mall.

Recommendations

The following recommendations were made: test pilot programs and implement successful programs that encourage people to spend time on the Mall, accommodate people while they spend time on the Mall, and keep people coming back to the Mall. Specific recommendations included the following: extending patio seating next to restaurants, changing restrictive regulations for outdoor serving areas, preserving pavers in some areas and reinterpreting in others, and creating an entertainment district on the Mall.

Relevance to Current Study

This report includes an assessment of the existing social conditions of the Mall, which informs the purpose and need.

RTD Transit Way Rehabilitation Study, Started in 2015

Background

After the 2013 16th Street Mall rehabilitation project was not implemented, another approach to rehabilitating the Mall was started.

Purpose

The purpose of the study was to identify and evaluate alternative surface materials or treatments for rehabilitation and maintenance of the Mall transitway. Alternative surface materials should address the current safety issues and high maintenance costs associated with the existing granite pavers and improve the reliability of the Mall's shuttle service.

Recommendations

The project was started in 2015, but a preferred alternative was not selected, and the project was not finished. An Area of Potential Effect (APE), purpose, need factors, a list of alternatives, and an alternatives screening process were developed. The APE, need factors, and list of alternatives are defined as follows:

- **APE:** Direct effects on the APE include the Mall to the intersection of the building and sidewalk, and the indirect effects on the APE include the buildings on each side of the Mall.
- **Need Factors:** To maintain reasonable maintenance costs, minimize frequency of maintenance, increase safety, improve transit operations during weather events, maintain aesthetics, minimize impacts, and be feasible to implement and maintain.
- **List of Alternatives:** No Action, Rehabilitation, Full Concrete, Full Colored Concrete, Full Scored and Colored Concrete, Full Concrete with Aggregate, Hybrid, and Modular Pavers.

Relevance to Current Study

The study provides applicable project background information and started the consultation process under Section 106 of the National Historic Preservation Act.