Union Station Intermodal Transportation Center

Office of Economic and Neighborhood Development, Economic Development Division
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**PROJECT DATA**

Please answer questions in space provided. Applicants should feel free to use photocopies of the application forms if needed. If possible, answers to all questions should be typed or written directly on the forms. If the forms are not used and answers are typed on a separate page, each answer must be preceded by the question to which it responds, and the length of each answer should be limited to the area provided on the original form.

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<tr>
<th>Project Name</th>
<th>Union Station Intermodal Transportation Center</th>
<th>Location</th>
<th>Worcester, MA</th>
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<tr>
<td>Owner</td>
<td>Worcester Redevelopment Authority</td>
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<tr>
<td>Project Uses</td>
<td>Amtrak and MBTA rail service, Inter/Intra city bus terminal, restaurant/banquet hall, retail, parking</td>
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<td>Project Size</td>
<td>180,000 sq/ft</td>
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<tr>
<td>Total Development Cost</td>
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<td>Annual Operating Budget (if appropriate)</td>
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<td>Date Initiated</td>
<td>1994</td>
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<td>Project Completion Date (if appropriate)</td>
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<td>Attach, if you wish, a list of relevant project dates</td>
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Application submitted by:

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<tr>
<th>Name</th>
<th>Timothy J. McGourthy</th>
<th>Title</th>
<th>Director of Economic Development</th>
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<tbody>
<tr>
<td>Organization</td>
<td>City of Worcester</td>
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<tr>
<td>Address</td>
<td>44 Front Street, Suite 530</td>
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<td>Key Participants (Attach an additional sheet if needed)</td>
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<tr>
<td>Organization</td>
<td></td>
<td>Key Participant</td>
<td>Telephone/e-mail</td>
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<td>Architect/Designer</td>
<td>Finegold Alexander + Associates James Alexander / Maguire Group</td>
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<td>Developer</td>
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<td>Professional Consultant</td>
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<td>Community Group</td>
<td>Preservation Worcester Deb Packard 508-754-8760 / <a href="mailto:info@preservationworcester.org">info@preservationworcester.org</a></td>
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Other

Please indicate how you learned of the *Rudy Bruner Award for Urban Excellence*. (Check all that apply).

- Direct Mailing
- Magazine Advertisement
- Previous RBA entrant
- Other (please specify)

- Professional Newsletter
- Previous Selection Committee member
- Online Notice
- Brune/Loeb Forum

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Signature: Timothy J. McGourthy
1. Give a brief overview of the project, including major project goals.

Opened in 1911, Union Station is one of Worcester’s most historic structures, functioning as an intercity transportation hub, servicing Amtrak, MBTA commuter rail, Greyhound and Peter Pan bus lines, restaurant and banquet hall facilities, parking facilities, and retail space. Union Station was redeveloped by the Worcester Redevelopment Authority in 1999 after abandonment in 1972. This beautiful structure is internationally regarded as one of the finest public transportation structures in the world. Originally the union of all major rail and transportation networks, Union Station currently acts as a center of access to the City of Worcester. Its redevelopment aimed to restore the building to its original stature, reintroducing the area as a gateway to the City and linking Worcester with the surrounding communities. Union Station’s redevelopment reconnected Worcester to Boston as a major transportation hub, and a critical link to Central Massachusetts, the Commonwealth, and the New England region.

In addition to its use as a transportation station, Union Station is a vital component to the City’s transit-oriented development goals. Newly reconfigured Washington Square connects Worcester’s east and west sides and the Downtown and UMass/Massachusetts Biotechnology Park employment centers. It provides easy access to Shrewsbury Street’s Restaurant Row and the burgeoning Canal District. It will be a critical link in the extended Front Street as part of the CitySquare project. These areas are vital components of development efforts that are linking livable space with a vibrant urban culture, combining the historic qualities of old mill buildings with the funky appeal of boutiques and restaurants. The City of Worcester is supporting development efforts that connect people with their environment through development that limits dependence on personal vehicles and encourages foot traffic, public transportation, and alternative modes of movement.

2. Why does the project merit the Rudy Bruner Award for Urban Excellence? (You may wish to consider such factors as: effect on the urban environment; innovative or unique approaches to any aspect of project development; new and creative approaches to urban issues; design quality.)

Union Station Intermodal Transportation Center connects the city, state, and region through various transportation ports, bringing together both people and goods in the Heart of the Commonwealth. Critically acclaimed, Union Station draws in the passerby through its landmark towers, marble-finished entryway, striking presence, and monumental design. It exerts a great sense of grandeur - standing inside the hall one is transported back in time to the 1920s when area merchants and residents gathered to buy and sell goods or meet loved ones.

During the redevelopment process, Union Station architects focused on maintaining the historic nature of the building, restoring rather than adjusting architecture. The addition of the garage created the opportunity to design a building that complemented the existing structure, tying in surrounding neighborhoods. The reconstruction of Washington Square makes for a more pedestrian-friendly entrance and throughway. As a result of the Union Station project, Worcester is becoming more pedestrian friendly and less reliant on the automobile. Combined with the planned CitySquare development project by Berkeley Investment, Inc. - over 2 million square feet of residential, commercial, and retail space - all of Downtown Worcester will be accessible by commuter rail and alternative transportation. The principles of transit-oriented design and smart growth underlie the Union Station redevelopment effort.
PROJECT DESCRIPTION

Please answer questions in space provided. Applicants should feel free to use photocopies of the application forms if needed. If possible, answers to all questions should be typed or written directly on the forms. If the forms are not used and answers are typed on a separate page, each answer must be preceded by the question to which it responds, and the length of each answer should be limited to the area provided on the original form.

1. Describe the underlying values and goals of the project. What, if any, significant trade-offs were required to implement the project?

Union Station's redevelopment aimed to restore the building to its original stature, reintroducing the area as a gateway to the City and linking Worcester with the surrounding communities. Union Station's redevelopment reconnected Worcester to Boston as a major transportation hub, and a critical link to Central Massachusetts, the Commonwealth, and the New England region.

Outside of its role as a transportation center, Union Station is a vital component to the City's transit-oriented development goals. Right outside, Washington Square connects Worcester's east and west sides and the Downtown and UMass/Massachusetts Biotechnology Park employment centers. It provides easy access to Shrewsbury Street's Restaurant Row and the burgeoning Canal District. It will be a critical link in the extended Front Street as part of the CitySquare project. Union Station is the centerpiece of a development effort that reaches into neighborhoods and pulls them together as one unified city.

During redevelopment, the Worcester Redevelopment Authority had to make the decision to restore the tower component of the station using different material. In the 1920's the station's three towers were taken down because the material could not withstand the constant passing of trains. Rather than use similar material to restore the building to an ultimately structurally unsound state, the City appealed to the Federal Government for more money. The towers were designed from fiber glass, while looking the same, cost significantly more. Likewise, the internal portion of Union Station remained raw upon completion of exterior renovation. There were insufficient funds to build out each room. As a result, finding tenants for the space took longer than expected.

2. How has the project impacted the local community?

During the restoration of Union Station, various community groups were intimately involved in the redevelopment process. Preservation Worcester, a local group committed to preserving and promoting Worcester's historic heritage, worked alongside the Worcester Redevelopment Authority to bring community members through the building for tours, and executing a Preservation Ball attended by 1,500 area residents. Likewise, the Union Station Alliance, the Worcester Regional Transit Authority, the Massachusetts Historical Commission, and the Massachusetts Bay Transportation Authority all worked with the City of Worcester to involve area residents in the restoration process, both by including and promoting the project to area stakeholders.

Since its completion, Union Station has impacted the community by serving as an intermodal transportation center. Daily commuter service to and from Boston serves residents who work outside of the City. Intra-city bus service provides transportation options for residents within Worcester, while inter-city bus service connects Worcester with the surrounding region. Additionally, Union Station stands as a monument to Worcester's working history, and a constant reminder of the ways that Worcester welcomes visitors from afar and supports our neighbors in their travels.

The catalyst for area development, Union Station has spurred efforts to develop retail, business services, and restaurants in the surrounding area. Up and coming development will include liveable space where residents can walk or utilize various forms of public transportation to access the city.
3. Describe the key elements of the development process, including community participation where appropriate.

The station's main entrance is characterized by three elegant arches, which are buttressed by huge Ionic columns. Originally, the building featured two ornate terra cotta towers, rising 175 feet on either side of the main arches. The towers were removed in 1926, probably due to structural weakness. An important part of the restoration project involved the reintroduction of the towers, using lightweight structural steel and fiberglass cladding. Significant restoration work was done on the building's glazed terra cotta façade. The elliptical vaulted and stained glass skylit ceiling and the marble, terra cotta, granite, and mahogany details, which originally adorned the main waiting room, were almost entirely destroyed as a result of vandalism and exposure. An elegant curved freestanding staircase has been introduced in the Rotunda to take passengers to the second level train platform. This sculptural element is clearly recognizable as a contemporary addition to the historic fabric of the building.

During the initial stages of restoration, community groups convened to discuss the development plans. As plans move forward with the garage and retail component, local business associations, neighborhood groups, and preservation organizations all met to voice support and concerns over design plans and intentions. The project moved forward with the back of many area stakeholders.

4. Describe the financing of the project. Please include all funding sources and square foot costs where applicable.

Union Station renovations cost a total of $32 million. Fifty percent of funding for the Union Station project was provided by the federal government’s Congestion Mitigation and Air Quality Improvement (CMAQ) Program, which is an Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) program. This progressive program supports many new and effective efforts to improve air quality through transit improvement projects. In total, $32 million came from the Federal Government, $8 million from the Commonwealth of Massachusetts, and $100,000 from a Mass Historical Commission Grant. Because the retail and office space was left rough finished, the build out cost were estimated at $850,000, or $57 a square foot.

The Union Station parking garage cost a total of $21.5 million. The 500-space garage utilized $8.5 million from the Federal Transit Authority, $8.1 million from the Executive Office of Transportation and Executive Office of Administration and Finance, as well as $4.8 million of City revenue to complete the project. The work on the surrounding Washington Square was completed through Mass Highway for a total of $7.7 million dollars.

The Union Station bus port was completed by the City of Worcester, the State of Massachusetts, and the Federal Government for a total cost of $5.4 million.

5. Is the project unique and/or does it address significant urban issues? Is the model adaptable to other urban settings?

Union Station has served as a landmark in the City of Worcester since 1911. This National Register, Beaux Arts building, a symbol of this major industrial and transportation center, had been vacant for 25 years and suffered major deterioration from neglect, vandalism and exposure to the elements. The owner, the Worcester Redevelopment Authority played a vital role in ‘saving’ this building through their plans to recreate the station as an important commuter link to other regions. Its restoration ultimately transformed an abandoned "problem property" into a regional gem, while also encouraging development and growth based on transit oriented design principles.

The restoration of historic buildings into transportation centers could certainly be replicated in other urban settings. While Union Station’s redevelopment is unique to Worcester, the concept is applicable to any region where the desire to spur development from a major transportation hub is possible. Union Station, the building, was one component to the redevelopment of an area ripe for attention and investment.
2. Signature

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Signature

1. What role did your agency play in the development of this project? Describe any requirements made of this project by your agency (e.g., zoning, public participation, public benefits, impact statements).

The Union Station Intermodal Transportation Center was renovated by the Worcester Redevelopment Authority, with the Worcester Regional Transit Authority acting as a major advisor and fiscal conduit of the effort. Through the renovation efforts of the WRA, Union Station brought five (5) bay intercity bus ports ($5 million) and the 500 - space Union Station parking garage ($17 million) into the City of Worcester. Additionally, the redevelopment efforts eliminated the rotary in front of the building, replacing it with a roundabout. Besides enhancing the architectural significance of the station, this project increased pedestrian safety and development pads for future economic development projects.

The Worcester Regional Transit Authority worked alongside the Worcester Redevelopment Authority to ensure that there was significant public involvement in the planning process. From these recommendations, the establishment of a citizen action committee consisting of lawyers, businessmen, community activists, environmentalists met regularly with the developers of Union Station. The WRA engaged the committee to solicit ideas, review plans and offer insight into how the property could become an intermodal transportation center. As the bus ports and the parking garage were constructed, the Worcester Regional Transit Authority contributed to discussions as to how best to integrate area transportation needs with transportation services. The WRTA, as the local provider of bus service in the City of Worcester, encouraged design and development efforts that would complement existing services, while leaving room for growth in the public transportation sector, thus minimizing the impact of cars on the environment.

2. How was this project intended to benefit your city? What trade-offs and compromises were required to implement the project? How did your agency participate in making them?

The intent to acquire, renovate and construct these projects was to provide viable and alternative modes of transportation between two major cities, Worcester and Boston. Commuter rail train service originally consisting of ten (10) trains from Worcester to Boston now has fourteen (14) trains with over 1,300 passengers using the service; Peter Pan and Greyhound provide intercity bus service and Amtrak provided service to New York City and Washington DC. Furthermore, the region's regional transit carrier, the Worcester Regional Transit Authority, is exploring the potential for moving is hub to the station providing yet more seamless transportation. Actually, the project had a benefit not only to the city, but for the entire central Massachusetts region. Benefits to the city include: the renovation of an abandoned, derelict building into a beautifully restored facility housing a restaurant and caterer, an architectural and engineering company, a regional transportation agency, Amtrak and a small coffee shop.

Many trade-offs and compromises were reached during the planning process for the Station and Garage. Because the footprint of the building was large, the City agreed to reduce the adjacent road from two lanes, to one. Likewise, initial plans for the Station took liberties with land that actually belonged to the Worcester & Providence Railroad Company. These issues were resolved through meetings, ongoing communications, and negotiations, of which the Worcester Regional Transit Authority participated in.
3. Describe the project's impact on your city. Please be as specific as possible.

With the introduction of trains, bikes, cabs and buses, transportation options are now available where previously they were not. For example, a Worcester resident can place his/her bike on a bus operated by the Worcester Regional Transit Authority, arrive at union station, place the bike on the commuter train and travel to Boston to use its bike trail system. Since the completion of these projects, an ancillary impact is that the area behind the station has seen additional economic activity including the creation of several new businesses and new housing units, done solely with private investment. Benefits to the region include: access to multimode transportation options convenient parking and air quality improvements opportunities between the various modes.

4. Did this project result in new models of public/private partnerships? Are there aspects of this project that would be instructive to agencies like yours in other cities?

The creation of the citizen action committee to offer input to the Redevelopment Authority was vital in moving the project from an idea to eventual design. Once the project received all local, state and federal permits it became the typical public expenditure to leverage private sector involvement. This is evident not only in the project, but in the area located behind the project whereupon significant private investment has already occurred in new businesses start-ups and new housing opportunities.

Creating support for the project through a citizen participation committee early in the process is essential. Early stakeholder buy-in helps move the development process through the myriad of impediments that will undoubtedly occur. The stakeholders, feeling they have a part in the process, can be used as sounding boards for additions and deletions for the project and they can act as proponents to nudge wavering politicians when additional funds are required. Also, it’s important to keep politicians, project funders and the press up to date through periodic briefings to eliminate surprises. Finally, once embarking upon such a project, be extraordinarily patient. These project take a lot of time and effort as items such as moving utilities, obtaining easements and funding are not entirely within the control of the project proponent, nor do these items fall neatly into established project timelines.

5. What do you consider to be the most and least successful aspects of this project?

The most successful aspect is Union Station is that it has fulfilled its goal of being the transportation hub for the city and the region. More people are using the facility as envisioned; tenant space is almost completely filled.; adequate parking is available. Moreover, the building is an icon recognized by all who experience its offerings just how beautiful it is. The building offers a remembrance of the past where Worcester's Greatest Generation left for war; today it offers a truly creative reuse with a mixture of public and private uses.
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This sheet is to be filled out by the person who took primary responsibility for project financing or is a representative of the group which did.

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1. What role did you or your company play in the development of this project? Describe the scope of involvement.

The Worcester Redevelopment Authority initiated the process of restoring Union Station to its former grandeur in 1994 by purchasing the Station for the sum of $50,000 from Bankruptcy Court. Simultaneous to that process, application was made to the Federal Highway Administration, the Federal Transit Administration, the Commonwealth of Massachusetts and the Massachusetts Historical Commission for restoration funds for this building which is on the National Registry of Historic Buildings. The Worcester Redevelopment Authority was successful in its funding efforts, and the firm of Finegold Alexander + Associates was chosen for the design of the renovations following a Request for Proposals (RFP) process. A construction management company and an engineering firm were subsequently hired following the same process, and the construction firm of JL Marshall & Company was retained in accordance with the Chapter 149 public bidding process. This team, complemented by WRA staff including the Executive Director, Budget Director, Environmental Coordinator, Landscape Architect, Architect, Attorney and administrative staff, worked together for a number of years to bring about the goal of restoring the Station to its original state and its eventual operation as the City's intermodal transportation center. Amtrak train service, MBTA train service, and the eventual addition of bus ports provide commuters with several means of transport throughout the City, State, region, East Coast and points west.

2. What trade-offs or compromises were required during the development of the project?

The original Union Station was built with two (2) towers framing the front of the building which could be seen for miles and came to epitomize the public's impression of the Station. For safety reasons due to structural concerns, the towers were taken down within 20 years of the Station's opening. In an attempt to restore those towers without the problems associated with the original building material, a concession was made and funding approved to replicate the towers utilizing fiberglass material.
3. How was the project financed? What, if any, innovative means of financing were used?

The Union Station renovation, approximately $40 Million in total, came from the following sources:

- $32 Million Federal Transit Administration
- $8 Million Commonwealth of Massachusetts Executive Office of Administration & Finance
- $100,000 Massachusetts Historical Commission Contribution

A coordinated effort between the Worcester Redevelopment Authority and the Worcester Regional Transit Authority qualified the project not only for federal transportation funds but also tax credits.

4. What do you consider to be the most and least successful aspects of the project?

The success of the project is its operation as a hub for intermodal transportation connections, providing bus and train service for commuters and visitors throughout the area. Worcester boasts several state-of-the-art medical centers, one of which is within walking distance of the Station, and most of which are easily accessible from the Station. Worcester also is home to many colleges and their faculty, students, and their families and friends depend on the transport provided at the Station. The MBTA has 14 trains running between Worcester and Boston on a daily basis, servicing well over 1,000 commuters who travel each day for work, business or pleasure. Amtrak has daily service. Peter Pan and Greyhound run regular service between Union Station and bus terminals around the region.
1. How did you, or the organization you represent, become involved in this project? What role did you play?

Preservation Worcester (PW) doggedly fought for the restoration of Union Station. Abandoned in 1975, there was a strong belief that the historic station was beyond repair and should be demolished. In 1992, PW approached the city to preserve Union Station and spearheaded the formation of a city-wide task force charged with restoring the Station as an intermodal center. In 1993, PW nominated the structure to Historic Massachusetts' first annual 10 Most Endangered Historic Resources Program. Union Station was selected. In 2009, Preservation MASS (AKA Historic Massachusetts) selected Union Station as the most significant restoration triumph in the first 15 years of the program. PW also worked with the WRA to make certain that a top-notch architectural team was secured. Finegold Alexander & Associates was selected. PW nominated Union Station for a MA Historical Commission Preservation Award (bestowed 2000) and also in conjunction with the AIA Central Massachusetts presented Union Station a 2000 Honor Award for Historic Preservation.

2. From the community's point of view, what were the major issues concerning this project?

Union Station was derelict, abandoned and falling down. There was no roof and there were substantial concerns about what was going on in the abandoned building. Commuter rail was coming back on line while AMTRAK was simply dropping passengers off on the railroad tracks. Area buses were serviced in a different location. The city needed and deserved an intermodal transportation center. Although Worcester is centrally located in Massachusetts, the city had been isolated because of the lack of assessable and affordable public transportation. Importantly, the Union Station is located in a highly visible area and the condition of the structure perceived as a glaring reflection of the negatively changing face of downtown Worcester. Restoring Union Station became symbolic of the need to restore downtown Worcester and was an impetus in those efforts.

3. What trade-offs and compromises were required during the development of the project? How did your organization participate in making them?

The original building featured two ornate terra cotta towers, rising 175 feet on either side of the building. The towers were removed in 1926 because of structural weakness. It was determined that the foundation could not support replicated towers and the associated expense was prohibitive. The organization felt that the towers were important to the building and to the community. Our historic preservation organization supported the installation of steel and fiberglass towers. Another issue was the overall expense of the project. PW worked with the Union Station Alliance (a private, not-for-profit) securing funds for the restoration. Unfortunately, the expense of the project prohibited the investment of resources beyond the public parts of the building. Over time, the City of Worcester has worked diligently to develop spaces for tenants, recently completed a major parking lot for the building and has made improvements in the Washington Square area. The process of fully developing and using the building has been hampered by the lack of funds to initially complete the project.
4. Has this project made the community a better place to live or work? If so, how?

Union Station is a source of great community pride. The importance of the building in to the Worcester Community is clearly demonstrated by the fact that 5,000 members of the public lined up outside that building for public tours provided by PW the day it was first available for public viewing, and that a PW Ball attracted 1,500 people. Annually, PW brings approximately 1,000 third grade students to Union Station to learn about Worcester’s past, present and future.

Union Station is now a significant intermodal center. Worcester is the western terminus for the MBTA and train service from Worcester to Boston recently increased. Worcester is also a stop for AMTRACK connection to Albany with connections to Chicago. Bus stations are also located in the facility. Union Station is a significant connection to Worcester’s up and coming Canal District. Also, the City has plans to reconfigure the downtown area so that Front Street connects Main Street with Washington Square and Union Station. The Station is also an important facility for a wide array of community functions.

Community pride, the important construction of an intermodal transportation hub, the key role that Union Station plays in the development of downtown and the use of the structure for public events and private enterprise make Union Station critical to the prosperity of the city.

Would you change anything about this project or the development process you went through?

We would have welcomed more funds originally earmarked for the project. The development of the garage, the reconfiguration of Washington Square, and the ability to lure tenants to usable space have taken longer because of the lack of funds. The project has taken longer, but couldn’t have served the community any better.
1. Describe the design concept of this project, including urban design considerations, choice of materials, scale, etc.

The design concept was to create a new Intermodal Transportation Center at a major urban crossroads utilizing an abandoned National Historic Landmark as its core. The historic Union Station was restored and complemented by a new pedestrian access plaza and roadway system, contemporary commuter rail platform, new bus ports and waiting area, as well as a 500 car parking structure. At its 1911 dedication, this 90,000 square foot Beaux Arts building was called "a poem in stone" and was the rail hub for this major industrial center. The station had been vacant for 25 years and suffered major deterioration from neglect, vandalism and exposure to the elements.

Originally, the building featured two ornate terra cotta towers, rising 175 feet on either side of the main arches. The towers were removed in 1926 (due to structural weakness). An important part of the restoration project involved the reintroduction of the towers, using lightweight structural steel and fiberglass cladding that are a major public expression of civic pride and commitment to the revitalization of the City. We worked with conservators and the client to develop traditional and contemporary detailing for the restoration of the historic interior spaces for public use.

New construction—accessible platforms, parking garage, bus station and landscaping—is designed to contemporary standards and play a major urban design role in the city while drawing upon the design vocabulary of Union Station. A new roadway and pedestrian access with generous landscaping complement the redevelopment.

2. Describe the most important social and programmatic functions of the design.

When speaking of Union Station, Senator John F. Kerry said, "This building is a great statement about how to build a community." The importance of this building to the Worcester community was clearly demonstrated in late 1999, when 5,000 members of the public lined up to take advantage of an invitation to tour the renewed station. People traveled from across the country to witness the rebirth of the station that played an important role in their personal history.

Beyond the initial celebratory aspects of reopening Union Station, this transportation center has become an ongoing economic engine for this area by providing improved commuter access along the Worcester-Boston corridor, and encouraging development of support services (such as retail) needed by commuters. The station also contains commercial office space, food service and the InterCity bus waiting area. The station has direct access to both a 500 car parking garage, 12 InterCity bus ports and various shuttle and intra-city bus lines. The spectacular Great Hall of the station has been completely restored to its original grandeur and is available for major civic and community gatherings, and offers an income source through rentals for weddings and similar private functions.
3. Describe the major challenges of designing this project and any design trade-offs or compromises required to complete the project.

Reconciling the multiple vehicular access requirements travel modes and pedestrian movement patterns into a vital public transportation center was a major goal of the design team. The need for expanded commuter rail service, continuation of Amtrak passenger and Conrail freight activity; the provision of a new inter-intracity bus facility, a 500 car parking garage—all within a renewed, restored landmark building and site—while providing a 100% accessible environment was a significant project achievement. The restoration alone was a challenge considering the high degree of deterioration of the original building fabric and the many changes that occurred over the 95 year history of the station. Since no original construction drawings could be located, the design team relied on abundant photographic evidence—much of it supplied directly by the citizens of Worcester—to document the restoration. There was a surprisingly abundant response to our “call for photographs and artifacts” from the community, which facilitated the accurate recreation of the station.

The team utilized an innovative technique to overcome the extraordinary cost of recreating the signature Beaux Arts towers. By designing a structural framework and attaching reinforced fiberglass panels, the team re-created the original 175 foot high towers at 1/3 the cost of the original terra cotta on a masonry shell construction.

In order to achieve overall project goals within a reasonable budget, this urban redevelopment was phased over a nine year period.

4. Describe the ways in which the design relates to its urban context.

The Union Station Intermodal Transit Center re-establishes the primary historic rail, pedestrian and vehicular access point to the City. The linking of busy commercially active Shrewsbury Street to the revitalized Union Station advances this traditionally active city area to the redeveloped Washington Square and Worcester Center Boulevard. Union Station is the final link to the new mixed use development at CitySquare. This emerging project, joined with Union Station, will complete the re-integration of the Shrewsbury corridor into the center of the city at City Hall Square and Main Street.

The revitalized station and its towers provide a literal beacon for both urban activity and civic pride. Union Station is a major link in reuniting a thriving retail and residential district with the activity of Main Street. The planned redevelopment of an adjacent underutilized in-town shopping center into the mixed use CitySquare adjoining City Hall will complete the revitalization of the core of the City.
1. Describe the design concept of this project, including urban design considerations, choice of materials, scale, etc.

Worcester's Union Station, one of the Commonwealth's most beautiful structures, was originally built in 1911, but was abandoned in 1975 and fell into disrepair. It underwent a magnificent restoration in 1998-1999. Today it serves as an inter-modal hub, hosting Amtrak, Massachusetts Bay Transportation Authority commuter rail service to Boston, taxi service, as well as both intra- and inter-City bus services. In July 2008, a new 500-space parking garage was completed behind Union Station, giving commuters and visitors a convenient means of parking next to this transportation hub. The garage is across the tracks from the Station, and connects to the Station via a newly remodeled underground tunnel.

The design of the garage is intended to compliment the architecture of this beautifully restored and historic Station. The precast concrete structure takes its design cues from Union Station, and incorporates cast-in ornamentation in various designs, masonry arches, decorative metal grillage, metal canopies and buff-colored thin brick. Three-D studies were made to assure that the garage would be of a height and scale that would compliment and not detract from the Station. Retail space was carefully integrated into the ground level of the building, and a covered retail arcade faces the street. The main pedestrian entrance to the garage links the street, garage lobby, tunnel and Station, creating a new and convenient entrance to the Station from the neighborhood known as the Canal District.

2. Describe the most important social and programmatic functions of the design.

The garage has been a long planned compliment to the Station, and part of a major initiative to encourage the use of public transportation. The rail service between Boston and Worcester is a major commuter and cargo conduit, yet greater use of this valuable asset has been hampered by the lack of convenient parking at the Station. The construction of the garage is an important investment to encourage the use public transit.

Another important goal of the project is to catalyze redevelopment of the adjacent neighborhood. The neighborhood behind the Station, which the garage faces, is known as the Canal District - named for the Blackstone Canal, an important industrial route completed in 1828, which ran from Providence, RI to Worcester. It passed directly adjacent to where the Station and Garage now lie.

Many old brick industrial buildings lie in this neighborhood, and some progress has been made in recent years to convert many of them to new uses such as offices, restaurants, and clubs. The City would like to encourage this to continue, and the garage, with its retail space and streetscape improvements, is designed to bring more life and private investment into this area.
3. Describe the major challenges of designing this project and any design trade-offs or compromises required to complete the project.

The goal of creating a 500-car garage on a tight site, while keeping it low enough to not impede views of the Station, posed a challenge. Many configurations were studied, with the final solution having fairly regular floor plates, and a helical ramp at one end.

The efficient design of the floor plates meant that the proposed site, which was triangular in shape, would not suffice. The City decided that Franklin Street, which runs in front of the Garage, could be reduced in width from three lanes to two, providing enough width for the garage. This in turn necessitated a significant amount of utility work in the street.

The tunnel portion of the project also had numerous technical challenges. Located underground and partially below the tracks, the new pedestrian tunnel was inserted into an existing, deteriorated freight tunnel. Vibration and water infiltration were major concerns, but the work was not allowed to interfere with the tracks above.

Finally, the garage foundations had to be located within inches of a massive, century-old underground brick sewer conduit that could not be disturbed.

4. Describe the ways in which the design relates to its urban context.

The design of the Union Station Garage is intended to compliment the architecture of the beautifully restored and historic Union Station. It takes its architectural language from the Station, yet it is unquestionably modern. It has the "big bones" inherent in a precast parking structure, yet it is highly detailed, and scaled to the pedestrian. It has 6 levels of parking, yet it measures only 62' from grade to the top of its highest wall, and 71' to its roof.

The Garage acts as a link between the beautifully restored Union Station and the struggling and gritty Canal District. To one side, it abuts an 8 story brick and concrete office / industrial building. Facing the Garage is a collection of small businesses – auto body shops, used car dealerships, and the like. By directing new attention to this neglected part of the City, Worcester City planners have created a bold stimulus to further renovation and revitalization of the Canal District.
Individual tenants.

Presently, the building has approximately 40,000 square feet of space available for lease. Much of this space requires additional fit-out to suit the needs of the facility. The facility totals over 80,000 square feet, including its public spaces.

at a cost of over $32 million.

This extensive renovation work commenced in 1995 and was completed in 1999. Mahogany wood trim, elliptical stained glass ceilings, interior marble columns, terrazzo floors, and auxiliary supporting services.

The property was acquired to develop an Intermodal Transportation Center with resources.

Intermodal Surface Transportation and Efficiency Act coupled with share

Worcester Redevelopment Authority for $50,000, using federal funds from the

The Station was acquired from a private owner in 1995 by the City and the

when the Union Station was shut down and abandoned.

In the early days it was the place to depart for various destinations throughout the

needs of the city and the region.

Union Station, built in 1913, has a rich history of serving the transportation

Union Station: History
opportunities. Activity that will create new jobs, community rail network and generate looking to locale along the region's development by attracting residents also stimulate transit-oriented Lincoln Square. Importantly, it will and link the Canal District to Shrewsbury Street to Main Street neighborhoods. It will connect both Worcester's core and its Marathon Center, Union Transportation Center, Worcester's core, and its surrounding area. As an intermodal opportunity throughout the region, its neighbors' economic Union Station is a "catalyst project."

Dictionary:
House Webster's College or change: Random that precipitates an event Catalyst: A person or thing
Shrewsbury Street
Canal District
Gateway Park
Massachusetts Biotechnology Research Park
Grand Palace Theatre
Worcester Common Reconstruction
Massachusetts College of Pharmacy and Health Sciences
Regional Justice Center
Hilton Garden Inn Hotel
Busport
Union Station Parking Garage
Washington Square Reconstruction
Citysquare Project

Development Activity
Surrounded by Union Station
Tax Credits
$800,000 from Historic Funds
$4.2 million Federal
$5.27 million Project
Greyhound and Peter Pan
Service Provided by
5 bus bays
riders
200,000 projected annual
Intercity bus service

Union Station: Bus Port
Catalyst * Challenge * Opportunity

Union Station...
Making Connections: Transit Centers

Ten transit stations raise the profile of public transportation in the civic landscape.

The paradox of designing transit centers is that although they are way stations en route to somewhere else, rather than destinations in themselves, they must somehow respond to the specific place they inhabit. A series of look-alike stations makes it difficult for some passengers to know where they are. While budgets for transit facilities are rarely lavish, the quality of a station’s appearance and functionality is crucial in making public transportation appealing for an auto-centric world, an important task as global warming intensifies and gasoline prices continue to rise.

Public art, contextual design, region-specific landscaping, and the reuse of historic landmark structures are all possible strategies to give these facilities an identity appropriate for their civic role. Some municipalities have chosen a different architecture firm to design each station—or a few stations each—on a new rail line, as with the Jubilee Line extension to London’s Underground metro, Tokyo’s Oedo subway line, Minneapolis’s Hiawatha light-rail transit line, and Vancouver’s Millennium Line SkyTrain extension.

The ten mass transit stations described below range from small to large, from single mode to intermodal and multimodal. Two of them are integrated into university campuses, not only relieving traffic congestion and parking shortages but also—some hope—hooking members of the younger generation on the conveniences of public transit.

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1. Athens–Clarke County Multimodal Transit Center
ATHENS, GEORGIA

Architect: Hines Delson Associates, Atlanta, Georgia

Located in the heart of Athens, the multimodal transit center is the centerpiece of the Athens–Clarke County Multimodal Transit Center in the vicinity of the University of Georgia. Designed by Hines Delson Associates, the center includes a parking garage, a transit concourse, and a retail component. The facility is designed to be pedestrian-friendly and to connect the university with the downtown area. The design features include a large atrium, a symbolic gateway, and aStudent Union extension to the Athenaeum, making it a focal point for the university community.
2. Brentwood Town Centre Station

BURNABY, BRITISH COLUMBIA
Architect: Busby Perkins+Will, Vancouver, British Columbia

How can cities entice motorists to step out of their cars and board rapid transit? One way might be to design a sleek, curved glass and wood station and set it directly above a busy highway. For the 12.4-mile (20-km) Millennium Line extension of the Vancouver metropolitan area's elevated SkyTrain system, officials chose several British Columbia–based architecture firms to give each of the 12 new stations its own distinctive look. One of the line’s flagship stations is Brentwood Town Centre Station, straddling the Lougheed Highway in Burnaby with a streamlined shape that suggests speed. A pedestrian bridge passes through the mezzanine level below the platform, bridging the highway and linking to the Brentwood Town Centre shopping mall and a major bus interchange. Glass panels and glass-clad elevators and stairways bring in natural light, enhance security, and provide views to help travelers orient themselves. The 22,600-square-foot (2,100-sq-m) station was completed in 2003.

3. Britomart Transport Centre

AUCKLAND, NEW ZEALAND
Architects: Marlo Madayag Architecture, Auckland, New Zealand; Jasmax Limited, Auckland, New Zealand

Two of the transit centers on this list occupy revamped historic train stations: Britomart represents the creative reuse of a historic post office building. To encourage more people to take public transit, Auckland City Council brought rail access back to the central business district and linked it to ferry and bus services. Completed in 2003, the Britomart Transport Centre incorporates the 1912 Chief Post Office building, vacant since 1992. The refurbished structure now serves as the main entry to the transit center and connects to a transparent glass structure leading to an underground diesel train station. The glass structure, in conjunction with 11 skylights along the length of the concourse, brings daylight deep into the station. The station has increased public transportation ridership significantly and helped spark historic renovations and office and retail development in the downtown waterfront area. The downtown's first farmers market opened in the Britomart precinct in 2006.

4. Clarkson Transit Center

PERTH, AUSTRALIA
Architects: Woodhead International, Perth, Western Australia

Because affordable housing in Perth is scarce and traffic congestion widespread, integrating land use and transportation infrastructure is crucial. One of the first transit-oriented developments in Perth is Somerley, a new estate located 21.1 miles (34 km) north of the central business district that is planned to contain more than 2,000 homes. It is designed around a mixed-use town center whose focal point is Clarkson Transit Station, located at the end of Ocean Quays Boulevard. The railway station comprises a six-bus terminus, bus shelters, a taxi stand, and park-and-ride bays for 800 vehicles. Public art includes a stainless-steel tower and a large terrazzo tile series. A walkway over the freeway and rail line provides convenient pedestrian access. By easing access to the central business district, the transit station, completed in 2005, has helped stimulate development in nearby suburbs along the northern coast such as Mindarie.
5. Expo Station
SINGAPORE
Architect Foster + Partners, London, United Kingdom

Although the sculptural elements of Expo Station's roof—a stainless-steel disc 130 feet (40 m) in diameter hovering above the main entrance, a long titanium blade sheltering the platform—make for an eye-catching futuristic landmark, they have practical functions as well. They reflect daylight into the interior, reducing the need for electrical lighting, while deflecting the sun’s rays in Singapore’s hot climate. Passenger volume can rise to as many as 57,000 people during peak periods, depending on activities at the Expo Centre conference and exhibition facility. Therefore, the design had to provide clear wayfinding and handle large crowds efficiently. A long section cut out of the floor between the elevated platform and ground-floor concourse allows passengers to see trains arriving and departing and get their bearings. Openings on both sides of the station facilitate air flow and offer views to a tropical garden between the station and Expo Centre.

6. J. Douglas Gelvon Depot
GREENSBORO, NORTH CAROLINA
Architect Moser Mayer Architects, Greensboro, North Carolina

Since 1927, Greensboro, an important business, cultural, and transportation hub, has had an ornate train station downtown. However, the facility slumped during an era when rail travel declined, as railroads shifted from passenger service to making room freight yards. The city made major efforts to attract passenger service back to Greensboro, but until civic leaders and the city funds to rehabilitate the depot, the building was unused and help anchor downtown revitalization. Completed in two phases in 2003 and 2005, the depot has been reconfigured to serve not only Amtrak but also local and regional buses, Greyhound buses, and taxis. Now, travelers once again arrive in the grand concourse, with its vaulted ceiling, restored wood benches, and large 1920s mural of the Southern Railway's passenger network.
In 1989, when university officials learned of the metropolitan transit system's plans to expand San Diego's trolley system, they lobbied hard—and successfully—for the new trolley line to veer south into the heart of campus. As a landlocked institution, the university was looking to grow without having to add parking, but 90 percent of its more than 20,000 students reached campus by automobile. The university opened in 2005 next to the student center, including an above-grade bus transit center and pedestrian walkway, a first-floor level, and a station platform. The green space on the north side of the station tilts down toward the station, a solution that allows daylight to penetrate large open-plan spaces. Water fountains bring in additional natural light. Art by San Diego–based artist Ann Mudge includes sculptural screens and brick patterning. Now students can travel from campus to downtown easily, and community members have improved access to the university's cultural and educational offerings. In the first year of the transit center's operation, campus parking pass sales reportedly dropped 20 percent.

Given the role public transportation has in reducing greenhouse gas emissions, it makes sense for the construction of new transit centers to incorporate sustainable strategies. To decrease traffic congestion and make riding the Fort Collins bus system easier for residents and Colorado State University students, the municipality and university collaborated to create a new transit center at the edge of campus along the city's major transportation corridors. Completed in 2006, the center includes a 14,000-square-foot (1,300-sq-m) addition to the Loy Student Center and renovation of 7,000 square feet (650 sq m) of existing space. The facility houses an indoor waiting area, a customer counter, monitors displaying departure times, and a campus information desk. Sustainable features such as reflective roofing, high-performance glazing, daylighting, lighting controls, and water-efficient landscaping earned a Gold rating in the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) system.
9. Transportation Centre, Incheon International Airport

SEOUL, KOREA

Architects: Terry Farrell and Partners, London, United Kingdom
Associate Architects: Sauno Architects, Seoul, South Korea

Incheon International Airport is one of the largest airports in Asia, and it is still expanding. To coordinate ground travel to and from a massive, busy airport, the 820,000-square-foot (76,180-sq-m) transportation centre connects together trains, taxis, buses, and airport services as well as parking. Passengers enter the airport terminals through the entrance designed to recall Victorian railway stations, with 590.5-foot (180-m) clear spans offering views of arriving and departing aerofoils of white stainless-steel glass gives the building the form of a flight. To further create a sense of scale appropriate to its context, gardens lands filled with Indigenous style occupy the space between roads and railway platforms. The centre was completed in 2002, in time to support the hosting of the World Cup in Seoul. A 25-mile (40.3-km) high-speed rail line opened last year, linking to Gimpo Airport and to Seoul’s subway lines.

10. Union Station Intermodal Transportation Center

WORCESTER, MASSACHUSETTS

Restoration Architects: Finegold Alexander + Associates Inc., Boston, Massachusetts

Worcester’s Union Station, originally opened in 1899, was considered one of the finest transportation stations in the eastern United States during its original construction. It spanned a 200-car parking structure and is in the process of being restored to its original glory. The station is now connected to the downtown by an underground tunnel, which is in the process of being completed. The tunnel connects the Union Station and the downtown, which is in the process of being restored to its original glory.