Urban Movement

Designing a Facilities System for Mass Transit in the Indianapolis Metropolitan Area

A Thesis Project by
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Forward and Acknowledgements

This project was made possible by a lifetime of experiences, months of development, and a bit of luck.

Even before I came to Ball State University, ideas about “community” and “urban fabric” fascinated me. During a summer studio in May and June of 1998, I participated in a AIA design charrette for the 38th Street Corridor in Indianapolis with Professor Michel Mounayar, Indianapolis Architects, and other Ball State students. This was my first introduction to 38th Street.

During the summer of 1999, there was a video running on public access called “ConNECTions”, which was a study by the Metropolitan Planning Organization looking at the Northeast Corridor and the transportation alternates. At the time, I was working at Ratio Architects and I talked with Ken Boyce, Director of Urban Planning and Landscape Architecture, and John Jackson, Planner, about the study. They provided information that they had received concerning the study as well as information from the Central Indiana Regional Citizens League (CIRCL). From the information, I was able to contact Mike Peoni, a planner for the MPO as well as the in-charge for the ConNECTions study. I, also, was able to contact Tracy Nixon, a planner for Parsons Brinkerhoff. Parsons Brinkerhoff was a consultant for both the ConNECTions study and CIRCL’s “Vision Plan.”

I discussed my findings with my studio instructor, Professor Andrew Seager, and with my thesis advisor, Professor Anthony Costello. And with their blessings and enthusiasm, I was off...

I want to thank Mike Peoni, Tracy Nixon, Ken Boyce, John Jackson, Andy Seager, Tony Costello, Michel Mounayar, Francis Parker (Professor of Urban Planning at BSU), Suzanne Fischer (Historic Landmarks Foundation of Indiana), John Hay Jr. and all the folks at CIRCL, and everyone who contributed an opinion during reviews and presentations.

Also, I want to thank Daniele Roth, for her extreme patience.
Introduction

In April of 1999, the Central Indiana Regional Citizens League (CIRCL) sponsored the publication of a study titled "Central Indiana Transportation and Land Use Vision Plan." The goal of the study is to "identify current and future transportation and land use issues, concerns, and priorities that reflect the goals of area residents and that can be incorporated as policies into the decision-making process." The study area for this publication is the nine county central Indiana region.

Also, in April of 1999, the first draft of "ConNECTions: The Major Investment Study and Draft Environmental Impact Statement of Northeast Corridor Transportation" was released by the Indianapolis Metropolitan Planning Organization. The study's goal is to "arrive at a locally preferred, economically feasible solution for improving transportation efficiency in the Northeast Corridor, and elsewhere in the Indianapolis MPA, using a review process that incorporates consistent application of evaluation criteria and extensive public involvement."

The studies are independent of each other, but they are not exclusive of each other. Both studies recognize that rail transit systems can have a positive impact on the Indianapolis area. Rail transit, both light rail and commuter rail, can increase the accessibility of residents and visitors to the region. Rail transit can assist in alleviating congestion along the Indianapolis roadways and reduce commute times. Additionally, rail transit will contribute to the air quality in Indianapolis by reducing the number of vehicles on the road.

As rail transit plans are implemented, shelters and structures will be designed and constructed for the users. The stations and stops are points of transfer between the rail system and the neighborhoods that they serve. At certain stops and stations, the facility also serves as a point of transfer between the rail system and other modes of transportation (bikes, automobiles, buses, other rail routes, etc.).

The stops and station also serve as a gateway to the rail system. It needs to look and be friendly, safe, enjoyable, and reliable, giving people a reason to select mass transit over the automobile.

Often, the stops and stations serve more purposes that just providing a point of transfer. New Urbanism and Transit-Oriented Development view the station as an instigator of development and the focal point of a community. Portland, Oregon's Tri-Met MAX light rail system provides a testimony that stations attract growth. "Nearly 7,000 housing units are completed or under construction with a half mile of Westside MAX stations. Vibrant new communities are taking shape around several of the stations. In all, private developers in Westside MAX station areas have invested some $500 million, a heady start, considering trains are not yet running." Historically and currently, the stations include commercial establishments and government offices, giving the facility multiple uses. Often, the facility is a landmark structure in the community.

In the design of a system of facilities for the Indianapolis metropolitan area, 38th Street was selected as a study area. Along 38th Street, there are 4 proposed stations under a ConNECTion's RB-4 Transportation Alternative. The stations range in size, requirements, and stature.
Issues and Positions
When considering the facilities I will be designing for mass transit in Indianapolis, there are four issues that will be addressed in this thesis inquiry.

The first issue concerns public attitudes. In Indianapolis, there has historically been an unfavorable or negative public image of public transportation. The design of the entire system, including the stations, needs to portray a positive image. A mass transit structure needs to look and be friendly, safe, enjoyable, and reliable. It needs to give people a reason to select mass transit over the automobile.

The second issue concerns nodes. A mass transit system has several points of intersection. What are the issues pertaining to the points of intersection and transfer between rail and bus? Rail and bike? Bus and automobile? Transit system and neighborhood? Movement and destination? People and experiences? The structures need to be able to accommodate the use of rail, bus, automobile, and bike and be a point of movement between these different modes of transportation. The structures need to be identifiable with the system and the neighborhood or context that it serves. The structures need to identify to the users the various directions of movement and points of destinations within itself.

The third issue deals with the functioning transit stations. How does the facility handle large numbers of people? How are tickets sold? How are tickets collected? Are bathrooms incorporated into the design? How about luggage lockers? Bike lockers? Advertising? How are people directed through the station? How is safety maintained?

The fourth issue focuses on the concept of the station as more than a traditional station, in terms of its contribution to its context. New Urbanism and Transit-Oriented Development view the station as a instigator of development and the focal point of the community. Many times the stations include commercial establishments and government offices. What other services can or should the structures provide besides a point of transfer for the various modes of transportation?

Portland, Oregon’s Tri-Met: A system of Space and Structures

Portland’s dedication to the careful design and planning of its public transit system has paid off. By shifting government dollars away from freeway development, Portland has become a role model for urban development. The shift to public transportation has spurred a reinvestment in the downtown region and the growth of “New Urbanism” neighborhoods along its transit lines. So, not only does Portland have a wonderful light rail transit system to travel on, but a collection of spaces and structures that serves the light rail system and adds to the urban environment. The system and its designers have received numerous awards from the AIA, the U.S. Department of Transportation, and other organizations and agencies. Other cities have been looking towards Portland as a model for their own urban and transit design.
Calatrava's Station at Lyon

When the French government called for a new example of a rail station, Calatrava met the challenge by designing a structure using “high tech” materials that establishes a landmark or icon for the station and connecting with the high speed rail transports.

Henriksen's Slependen Station

Connecting Levels; Creating Rhythms

The site, located on the outskirts of Oslo, Norway, has steep slopes and several levels. Henriksen connects the entries at the different levels by several ramps and stairs, guiding the visitor through in particular ways, and creating an architectural rhythm through the placement of materials and openings.

Quigley's Solana Beach Station

A Contextual Response

The design of the station was designed by two commonly seen items in the Solana Beach area: WWII style Quonset huts and greenhouses. Quigley's design creates a train station that leaves a lasting impression on the minds of those who travel through or past it.

Hannover's Bus Stop Competition '94

A Collection of Individuals

Hannover, Germany held an international competition for the design of a series of bus stops to be placed around the city. Each piece is more sculptural than it is architectural. However, the collection is an example of how the individual pieces can be so extremely different, but still be related by association.
Physical, Social, and Cultural Context

The sites range from being in a downtown, urban environment to being in the middle of a corn field planned to become a node of development in the future. The sites in Indianapolis, inside the “outer loop” of I-465, include dense residential areas, commercial corridors (like 38th Street, Allisonville Road, and Binford Blvd./former S.R. 37), and the dense downtown.

Downtown Indianapolis, within the “inner loop”, is the regional center. The downtown area has implemented a great deal of redevelopment and experienced substantial growth over the past two decades.

Development has occurred along the “outer loop” (I-465) as well. Joel Garreau, a reporter for the Washington Post, talks about a new type of city that develops major highways that encircle a metropolitan area, circulating highways. There is “a brand new form of city; this is not a suburb at all...this has got all the functions that a city has always had...people live here, they shop here, they go to work here.” Garreau calls these automobile-created cities “edge towns”. Several “edge towns” has developed along I-465, including the Castleton area and the Keystone at the Crossing area. Beyond the “outer loop”, outside of Indianapolis and Marion County, are the communities of Fishers, Noblesville, and Carmel. Fishers is a suburb that is attempting to retrofit ideas based on the principals of New Urbanism in its design. Largely, this is a “edge town”, home to mostly upper income residents. Noblesville, the county seat of Hamilton County, is an established town that has been engulfed by the spread of suburbia. Carmel, much like Fishers, is a town that has embraced New Urbansim and is an “edge town”, again home to mostly upper income residents. The transit system has the best potential of serving the greatest numbers of commuters by connecting these “edge towns” and downtown.

The space between the regional center and the “outer loop” is home to many older and established neighborhoods. These neighborhoods are home to mostly lower and middle-income residents, with nodes of established commercial and industrial developments (the exceptions are the Meridian-Kessler, Butler-Tarkington, and Broad Ripple neighborhoods, which are home to upper-income residents). With many jobs and upper and middle-income residents moving to the suburbs, low and low-moderate income people that live in the inner-city neighborhoods are cut off from possible employment and segregated from the rest of society. John Plunkett, founder of Suburban Job-link (a transportation company that connects inner-city residents of Chicago with jobs in the suburbs) says, “a pre-requisite for survival in this country should not be that you own and maintain a car.” The transit system has the potential of connecting the “the space in between” with the “outer loop” and the regional center. The transit system has the potential of connecting people with jobs and each other.
There are several "destinations" in "the space in between", including the Butler University, Marian College, Monon Rail/Trail, the State Fairgrounds, Crown Hill Cemetery, the Indianapolis Art Museum, Methodist Hospital, Winona Hospital, the Children's Museum, and Ivy Tech State College. Also, there are several "destinations" in the regional center, including the State House, the Convention Center, Union Station, Circle Centre Mall, and White River State Park. Along the "outer loop", there are shopping nodes that include Keystone at the Crossing and Castleton, along with the Deer Creek Music Center east of Noblesville. The transit system has the potential of connecting visitors and residents of Indianapolis to these various destinations and attractions. The rail system will serve people from all socio-economic classes, thus there is a good possibility that people from various ways of life will mingle while using the system. Influences on the design vary from site to site. The typical aesthetics, planning, and needs of the context will affect the aesthetics, planning, and amenities of the transit stations. In the downtown Indianapolis area stops, the landmarks, historic structures, and density will have an influence. Likewise the museums, school, and home in the "old Northside" area will influence stations in that location. In Fishers, Noblesville, and Carmel, the principles of New Urbanism could influence the way that the structures are designed, organized, and planned. In New Urbanism, communities are planned with the hopes of decreasing the use of the automobile. Places of residence, commerce, and employment are moved within walking distance of each other. In situations where this can not happen, a mode of mass transit needs to be provided. Peter Calthorpe mentions in his book, The Next American Metropolis, that when a transit stop is established, extensive development occurs within a half mile. Often, the station becomes the focus or landmark of a neighborhood. So in some cases, the station's planning and design can influence the development or redevelopment of the community that the station serves.

Another element to be considered is the public attitude toward use of transit systems. The document Assessment of Transportation Issues in the Northeast Corridor provides evidence that public transportation is not viewed favorably by residents. The situation with the Indygo bus system is so bad that about one-third of the residents said that there is nothing that could be done to convince them to ride the bus. However, residents also state that there are things that can be done to convince them to use public transportation. Most residents look favorably upon light rail and commuter rails. Over half of the residents questioned in this survey said that they would use the rail transit at least once a week.
There are criteria to be addressed in the design of the stop or station. The first is the station's relationship with the users. The stations should provide psychological reassurance for the users. The users should feel safe and secure, relaxed and comfortable. The station should protect the users from the weather elements (rain, snow, wind, etc.). They should have a sense of orientation in the facility. The station should accommodate people with disabilities. Signage and advertisements should be integrated with the overall design of the structures.

The second criteria to be addressed are the station's relationship with the neighborhood and as a part of the urban design. The station should be identifiable as a train stop or station and identifiable with the neighborhood that it serves. The station should be treated as a quasi-public building. The structures are often mixed-used multipurpose facilities.

The third criteria to be addressed is the spatial relationships within the stop or station. There are three possible general areas in a stop or station: the core area, the platform area, and exterior spaces. The core area includes the general public spaces and the office spaces. Anybody is allowed to enter the core area. Spaces included inside the core area include ticket offices, commercial spaces, staff offices, and waiting concourses. The platform area is the space where users wait for the train or bus. There are two different types of platforms. The first is platforms serving commuter lines. The commuter trains generally collect fares or tickets before moving onto the platform. Thus, the platform is a controlled space. Platforms serving light rail and buses, however, are different. On light rail trains and buses, the fares or tickets are collected upon entry. Therefore, the platform is not a controlled space. The exterior spaces include facilities outside the core and platform areas. They generally include drop-off areas, parking, and bike lockers.
System Design Standards

A part of designing a cohesive transit system is designing a cohesive standard for graphics and signage that will be used at all points along the system, creating a continuity and familiarity for the users.

Signage Location Standards:
1. System, route, & direction on side and front of vehicle
2. Station i.d. on surface(s) parallel to path of movement
3. System, route, & direction on surface(s) perpendicular to path of movement
4. Station i.d. on end of shelter or stand alone structure

Chicago's "L": Signage and systems of the CTA

With a large city like Chicago, moving people from place to place can be chaotic if it is not controlled and organized. Here is some of the signage and items used in the subways and elevated trains.
System Design Standards

8" sign w/
6" square logo &
4" tall letters
route (color coded)

system

destination/direction

Downtown Indy:
"Green" with Envy

Over the past couple of years, the city
and its designers have had the hope of
uniting the downtown Indianapolis
streetscape system. What has been
created is a system of traffic lights, stop
lights, directional signage, newspaper
vending machines, and bus shelters.

16" sign w/
8" tall letters
optional station or neighborhood logo

station name or identification

color matches
route color

38/MONON

unified newspaper vending machines
directional signage
ad on back of newspaper machine
map at typ. downtown bus stop
38th Street Corridor

Using downtown Indianapolis as an inspiration, I have set out to define the 38th Street Corridor, both as sub-sections and as a whole. I have schematically designed a cohesive streetscape system that can be used throughout the corridor and adjusted to respond to the sub sections. Shown are examples of a traffic control signal, a light rail power line support tower, and a street light. I was aiming for a "retro" look with modern materials. Some of my ideas come from reflecting upon my experience with a charrette for the 38th Street Corridor and the input of residents and design contributors.

Steel trusses reflect the era of the 1920's and 1930's (the railroad era as well as the high point of 38th street history) when steel structures were constructed piece by piece.

glazed c.m.u. s. providing multiple color options; also relates to masonry buildings and the art deco style buildings in the area.

38th/Illinois
"CBD"

38th/College
"Center of Diversity"

38th/Monon
"Past meets Present"

State Fair
"Landmark & Gateway"

Images of 38th street overall model
38th and Illinois Station: continuing the urban edge

The intersection of 38th and Illinois streets is often viewed as the Central Business District of the 38th Street corridor. North of 38th Street along Illinois, there is a collection of one and two story commercial structures that resemble a typical Mid-West downtown street. The intersection is viewed as the "downtown" of Midtown and the open space at the northeast corner has the potential to become a "town square", a focal point for the "Maple Road Corridor." Either side is lined with young trees. Along the southside of 38th Street is a collection of newer commercial structures, including McDonald's, Burger King, Amoco, and CVS Pharmacy. There is a definite contrast between the two sides of 38th Street. The north side approaches the streets. The south side sets itself back.

Also, along the northside of 38th Street, between existing commercial structures and a historic church, is a large site that is home to a few run-down abandoned small buildings and a large collection of parking spaces. The construction of the transit center creates the possibility to continue the "urban edge" that is created by the older existing structures. Also, with the importance of the site to the residents, the proximity to the busy intersection of 39th and Meridian, and the visibility from the Light Rail line that connects the area to downtown Indianapolis, the site could be a landmark site for both 38th Street and the Light Rail line.

The station will be modeled after the "Mainline Station". The site is the northeast and southeast corner of the intersection. The north site is a large open space that is adjacent to the Central Business District and a church. The south side is a small space adjacent to a gas station and fast food restaurant combination. A pedestrian bridge will connect the two sites. The stop will serve several residents and employees of this densely populated neighborhood. The stop will serve several apartment buildings, elderly citizens, and families with lower to middle incomes.
site analysis

The area of 38th and Illinois Streets is considered to be a central business district. The area is heavily commercial and is home to several shops, restaurants, and services. As shown in the photos, along Illinois Street, there is a feel or notion of a typical downtown region. For the “North Site” structure, located at the northeast corner of 38th and Illinois, I decided to incorporate the continuity of the existing storefront facades and horizontal lines (a) in the creation of an enclosed “shop” that will serve the needs of transit users and filling in the vacant space (b). In addition, I will incorporate the canopies, seen along the westside of Illinois Street (c), to be used as a shelter for waiting transit users. This site is also an ideal location for a public, community plaza space. In contrast, 38th Street is very suburban in that there are several new fast food restaurants, gas stations, drug stores, etc. (d). For this reason, the “South Site” structure, located along the southside of 38th Street, will be an independent structure.

looking at the northeast corner of 38th and illinois streets, notice the “fast food” developments at the right

sidewalk along westside of illinois street; notice the 2 implied zones: the “structure” zone (e) and the “movement” zone (f).
site/floor plan
scale 1" = 32'
a.) ticket office
b.) ticket office lobby
c.) maple street plaza
d.) leasable space
e.) shelter
f.) existing structure
plaza layout alternatives

developmental layout
The most common layout that will be used is this developmental layout. Through the use of moveable benches, planters, tables and chairs, the space can be utilized in a number of ways. In this layout, the benches and planters frame a diagonal pedestrian movement through the plaza as well as framing a space for possible outdoor eating.

theater layout
A possible layout is a theater layout which can be used for music or performance events, religious events, etc. The stage is set up in the northeast corner, using the building as a backdrop. Folding chairs are set up in the main portion of the plaza, leaving aisles for movement through the plaza. The plaza markers can be used as lighting and sound towers.

market layout
Another possible layout is the market layout which can be used for flea markets, festivals, and carnivals. The space is broken up to allow sections for booth setup. Aisles are left for easy movement through the plaza.

elevation along eastside of Illinois street  scale 1" = 32'

existing buildings  plaza & marker  ticket office  38th street  shelter

elevation along northside of 38th street  scale 1" = 32'

existing bldg.  Illinois street  ticket office  maple road plaza & marker  leasable space
sketch of 38th & illinois north site from the southwest

section sketch of ticket office at 38th & illinois
the main concept of this structure is to create a
building that fits in with the surrounding buildings,
follows the same building set-backs, and approaches
the corner, giving the light rail system some visibility
along 38th street and illinois street. the walls are
made of CMUs with brick veneer. the canopy is
made of steel and aluminum. the outer edge is deep
so that signage can be attached within, making it
visible only to the pedestrians. also, lighting can be
attached within to limit the amount of light that
spreads out to the street. inside the building is
located a ticket office as well as vending machines,
signage, advertisements, and other information. the
interior space is very open and filled with natural
light, welcoming users of the light rail and bus
systems.
38th and College Stop: marking the intersection

This stop is located at the intersection of 38th Street and College Avenue, about three blocks north of the Martin University campus. This neighborhood is a mix of new and old commercial, residential, and mixed-use buildings. College Avenue is a collection of older single family residences, with the Meridian Kessler neighborhood to the north. 38th Street is a collection of new and old commercial buildings, older mixed-use buildings, and older multiple-family residences. There are a variety of architectural styles in the area. The Art Deco style appears a number of times. The southeast corner was the site of a former Art Deco style store. The neighborhood is a center of a diverse collection of cultures, sometimes viewed as an epicenter of ethnic diversity. The stop serves the Light Rail line as well as the IndyGo bus line. The stop serves the patrons and residents of the surrounding neighborhood. The stop will be modeled as an “Unmanned Urban Station”.

Formerly on the southeast corner stood an Art Deco building that housed a market. The building has been replaced with a modern drug store, but some of the art deco detailing remains. A “corner stone” has been erected with Art Deco designs, and the “cookie-cutter” drug store even has some Art Deco pieces added to it. In addition, there is a laundry facility housed in an Art Deco building to the east of the drug store site.

The stop will serve several residents and employees of this densely populated neighborhood. The stop will serve several apartment buildings, elderly citizens, and families with lower to middle incomes.

There will be a shelter on the southeast and northwest corners of the intersection.

The transit center will assume the role of “connector” and “landmark”. It will connect users of the Light Rail line to the neighborhood. It will, also, mark the intersection’s character and diversity.

38th street corridor model

site map
38th and Monon Stop: marking the intersection

This stop is located at the intersection of 38th Street and the Monon Trail, just west of the Indiana State Fairgrounds. The Monon Trail is a former rail right-of-way that was turned into a recreation trail by the Indianapolis Parks Department. The trail connects to the Broad Ripple neighborhood. The site straddles both sides of 38th Street. On the north site, there is an existing depot that will be remodeled by the parks department. The south site is a large, open space. The stop serves the Light Rail line as well as the IndyGo bus line. The stop serves the patrons and residents of the surrounding neighborhood. It will, also, be a secondary stop that serves the fairgrounds. The stop will be modeled as an "Unmanned Urban Station", while considering the needs of the Monon Trail Users.

There will be a shelter on both sides of 38th Street serving this stop. Since this stop will also serve the users of the Monon Trail, there will be additional amenities, including bike lockers and restrooms. Other amenities will be added at the Indianapolis Parks Department's discretion. A traffic control signal will be added to this intersection to allow trail and train users to cross 38th Street safely.

The stop will assume the role of "connector". It will connect users of the recreation trail and the Light Rail line. It will, also, connect the spaces of the trail, the fairgrounds, the residential areas, and 38th Street.
The intersection of 38th Street and College Avenue is considered an intersection of diversity for various reasons. One reason has to do with the diverse mix of social, economic, and ethnic groups that live within a mile of this intersection. Another reason is the diverse mix of uses in the area (commercial, single family and multi-family residences, offices). Another reason is the diverse mix of architecture. There are a number of older brick and stone structures (a) and newer fast food, commercial, and office structures (b). There is also a collection of art deco structures in the vicinity, which is rare for Indiana (c). The northwest corner is one site (d) serving the west bound rail traffic and south bound bus traffic. The site is currently a small, open green area. I would like to maintain this park-like setting. The southeast corner is another site (e) serving the east bound rail traffic and north bound bus traffic. The site used to be home to another art deco structure which was demolished to make way for a "cookie-cutter" drug store and its parking lot. I would like to arrange the new shelter for this site so that it hides the parking lot and reinstate the former edge that previously approached the sidewalk.

design development: attempts to link shelter with marker, context, and technology
site analysis

The intersection of 38th Street with the Monon Trail could be considered where past and present meet. The Monon Trail (a) is an abandoned rail line that has been transformed into a recreational trail by the Indy Parks & Rec Department. This includes an old depot (b) which will be rehabilitated by the parks department for use by the trail users. This is the past form of rail transit. The present form of rail transit is the new light rail that will be running along 38th Street. The “North Site” is located on an open space in front of the depot (c). This would be an ideal location for the incorporation of a park space with the shelter, including facilities used by trail users in addition to facilities used by transit users. In this area, there is also a collection of signage used to inform the trail users as well as users of 38th Street (d). The “South Site” similarly is located on a large open space (e) and could incorporate some of the same facilities as the “North Site”.

design development: attempts to link shelter with marker, context, and technology
typical shelter plan at intersection of light rail
and bus routes
scale: 1" = 16'
a.) large shelter for light rail
b.) small shelter for buses
c.) intersection marker
d.) bench
e.) ticket/token vending machine
f.) periodical vending machine
g.) concessions vending machine

elevation of typical shelter  scale: 1" = 8'
38th street and college avenue stop site plan
scale: 1" = 32"

a.) north site
b.) south site
c.) green space
d.) existing building
e.) parking lot
38th street and monon trail stop site plan
scale: 1" = 32'
a.) north site
b.) south site
c.) former depot
d.) state fairgrounds
e.) green space
Material Selection
It was important for me to select a versatile material to be used with the shelters. I found that a glazed CMU (such as Spectra-Glaze) allowed many possibilities. There are a vast array of colors, to match contextual color needs. There are a number of scoring patterns. The glazing is resistant against graffiti. And graphics can be customized printed on the blocks, allowing the integration of signage and graphics into the structure.

elevation along southside of 38th street at college avenue scale: 1" = 32'

existing art deco building setback existing bldg. south shelter marker & shelter college avenue existing mixed use building

elevation along northside of 38th street at monon trail scale: 1" = 32'

drive/alley north shelter marker & shelter monon trail state fairgrounds & fence
State Fairgrounds Transit Center: establishing a landmark; continuing the movement

The 39th Street and Millersville Road site is located in an industrial/residential neighborhood along the east bank of the Fall Creek. Connecting the site to the Indiana State Fairgrounds is a bridge that is limited to pedestrian traffic only. The existing rail line is used every year to run a steam engine between Noblesville and this site, a novelty that connects the suburbs to the State Fair.

This site will be the location of a transfer that connects the Noblesville/Downtown commuter line to the Light Rail line that serves 38th, Illinois, and Capital. This site also will serve those who use and visit the fairgrounds. And, to a lesser extent, the station will serve the residents of the neighborhood. The transit center will be modeled as a "Mainline Interchange Station".

There are three points of entry into the site: from the 39th Street bridge (pedestrian), from Millersville Road (pedestrians, vehicular and bus drop-offs), from the train platforms (train users). From the 39th Street and Millersville Road entries, the users will proceed to the core area, where they will purchase tickets and tokens. Also in the core area will be staff offices, retail spaces, restrooms, and a waiting concourse. From the core area, the user will proceed to one of the platform areas. The Commuter Rail line and Light Rail line have separate platforms because they have different means of ticket control. The Commuter Rail line collects its fares before the user enters the platform. The Light Rail line collects it fares from the user as they enter the train.

Because of its proximity to the fairgrounds, the station could become a landmark or gateway that marks the movement to the fairgrounds. Also, the proximity to the Fall Creek and the adjacent wooded areas lead to the conclusion that some sort of visual connection to the natural aspects of the site should be made.
With the design of the State Fairgrounds Transit Center, I was set out several criteria. When a user of the rail lines approached the structure, I want them to feel the importance of this station. I want to create a landmark. When a user approaches the station to use a rail line, I want them to be able to identify the structure as a part of the transit system. I want the building to move with the trains. When the user is in the station, I want them to feel comfortable in the space and feel that being in there is an event in itself. I want the station to connect with the State Fairgrounds. I want the station to reflect the image and feeling that old train stations have. And I want movement between train and platform, platform and concourse, concourse and fairgrounds, concourse and entry plaza, and entry plaza and auto or bus to be easily identified and achieved by the users.

view from the site south along the rail corridor and west across ped. bridge

looking at fall creek

looking across existing ped. bridge
option #1: leave the tracks at grade, elevate concourse
problem: complexity in moving people between levels
several times; isolation of concourse level, leaving it
undesirable to lessees

option #2: move the tracks below grade, leaving
concourse at grade
problem: complexity of dropping tracks below grade
and then bringing them up to grade at 38th street; not
enough land for this option.

option #3: leave the tracks at grade, elevate concourse,
build up land to concourse, eliminating additional level
changes
problem: complexity in building up the land around
the structure.

option #3 revised: build up land on eastside, allowing
buses and autos to pull up to concourse level; pedes-
trian bridge from state fair over fall creek inclines to
meet structure at platform level.
site/roof map of state fairgrounds transit center
scale: 1" = 100'
a.) front lawn
b.) auto/bus drop off/pick up
c.) i.a.r.t. office bldg.
d.) transit center
e.) entry/plaza
f.) tracks
g.) pedestrian bridge
h.) performance plaza
i.) state fairgrounds
concourse level plan of state fairgrounds transit center
scale: 1" = 32'
a.) concourse space
b.) waiting space
c.) dining/waiting space
d.) ticket control
e.) stairs/escalators
f.) ticket sales
g.) restrooms
h.) cafe
i.) new stand/shop
j.) mgmt. office
k.) r.r.t. office bldg.
l.) entry plaza
m.) ped. bridge
n.) elevator
o.) auto/bus drop off/pick up
platform level plan of state
fairgrounds transit center
scale: 1" = 32'
a.) stairs/elevators to concourse
b.) elevator lobby
c.) track 1 platform
d.) track 2 & 3 platform
e.) track 4 platform
f.) elevator
g.) housekeeping/storage
h.) mech. room
i.) hvac room
east elevation from main lawn  scale: 1" = 32'

west elevation from across fall creek  scale: 1" = 32'
south elevation from the tracks  scale: 1" = 32'

north elevation from the tracks  scale: 1" = 32'
looking down to the entry plaza on east side of station

viewing the station from southeast (from 38th Street)

viewing the station from the northwest (across fall creek)

looking at the track 4 vestibule

viewing north towards the station at track level

viewing the station from southwest (across fall creek)
section/perspective sketch of station

looking in towards a ticket control point

looking in at the box office and retail space

information signage at concourse level

information signage inside middle platform vestibule at platform level

looking south at the station and platform from track level
sketch of clock tower on the south elevation

looking through the entries from the west

sketch of performance plaza with circus tent style canopy in place

sketch of ticket office

viewing station from southeast (from 38th Street)
movement diagrams and scenarios

scenario #1 (red): a woman is dropped off by bus at the station; she enters the station, orientates herself, and then proceeds to purchase a ticket; she then re-orientates herself, noticing the shop, and sits at a waiting area; her train is called, she moves through ticket control and heads down the escalator to track #1.

scenario #2 (blue): a man enters the station after attending an event at the fairgrounds; he orientates himself, purchases a ticket, and then proceeds to go down the escalator to track #3.

scenario #3 (red): a man is dropped off by his wife; he has already purchased a multi-trip pass; he enters the station, orientates himself, grabs a snack at the cafe, and sits down to eat it; he hears his train called; he procedes to ticket control and goes down the stairs to track #1.

scenario #4 (blue): a man enters the station from the fairgrounds side; he orientates himself and purchases a ticket; he goes to the restroom and then to the news stand to purchase a magazine; he sits down in the waiting area to read it; he hears his train called, goes to ticket control and then heads down to track #4.

scenario #5 (red): a woman enters the station via track #1; she goes through ticket control and then stops at the news stand to purchase a paper; she goes to the ticket office to buy a token for the bus and exits the building; she waits underneath the canopy for her bus; the bus pulls up and she boards.

scenario #6 (blue): a man with his son enters the station from track #2; his son needs to use the restroom, so after going up the escalator, he takes him to the mensroom; then, his son's thirsty, so he gets him a pop at the cafe; they then exit the station to go to a hockey game at the fairgrounds, and they live happily ever after...
Reflections

I have to begin by saying how much I enjoyed this thesis project. Since I was a little boy, I played with model trains and designed layouts for them. Designing stations for light and commuter rail has been like a game for me.

I was generally pleased with my process. I began with doing research on urban design, transit facility design, and other precedent studies. During the design process, I moved back and forth between the different stops and stations, which I believe kept me from burning out on a particular station design.

If I had it to do over again, I think I would have messed with schematic design earlier in the process, before winter break maybe. I delayed designing to make sure I did not miss any steps in the research process. I think that I should have done otherwise.

I, also, wish I would have developed some of the designs more, in particular, the shelter used at 38th & College and at 38th & Monon. Additionally, I would have liked to continue looking at the plaza space at 38th & Illinois. I think it still has a lot of possibilities.

I would recommend a project like this to others. Working with several sites that are all connected yet separate at the same time allowed me to work at several different scales and levels. And the variety of station types and sites allowed me to work in different ways with different designs.

I want to thank Andy Seager and Tony Costello again for their continuous support. This has been really enjoyable.

Sincerely,

Jason Larrison
April 26th, 2000
[Re]Sources


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