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Synopsis

The idea of the light rail is not new to Utah. In 1891 Simon Bamberger brought several small steam engines and established the Great Salt Lake and Hot Springs Railroad. In 1908 Bamberger's trains began carrying passengers to Ogden, in 1910 the trains became electrified. By 1913 the entire Wasatch front was connected by electric mass transit servicing 800 passengers on 26 trains daily.

Many in Utah believe the Wasatch Front can once again benefit from an interurban transit system. The result was the idea for an Intermodal Hub. Salt Lake City, UTA, Greyhound, Amtrak, IBI Group and AJC Architects worked together to plan a facility that would continue the revitalization of west Salt Lake City while providing for each entities needs.

The program of the inter-modal hub was originally imagined as a way for the Utah Transit Authority (UTA) along with Amtrak and Greyhound to consolidate disparate transit services. With the growth of the new Gateway district, the original program was expanded and seen as a means to further the revival of this old warehouse district. The Intermodal Hub became a capstone public building. The two major clients, UTA and Salt Lake City, engaged Amtrak, Greyhound, and entrusted IBI Group to create a new public space.

The facility enlivens the existing barren street front and continues the growth of the gateway district westward. The ‘Hub’ is a collection of buildings to be built in five phases two of which are completed. A realignment of the Amtrak lines and a temporary passenger structure concluded the first phase of the project. The second and cornerstone phase of the hub consists of a Greyhound terminal, bus parking for UTA and Greyhound, and a bus service station. The final phases are currently under development, but plan to include street level retail, office space and a parking structure.
Creation of the Intermodal Hub had unique constraints needing to be addressed. The initial planning and design phases spanned two mayoral offices while accommodating the 4 clients. The facility consolidated multiple transit companies Amtrak, Greyhound, UTA (Trax Buses and Commuter rail). Four warehouses located on the site had historical character the State Historical Preservation Office (SHPO) wanted to preserve. Desires for LEED certification ultimately added another level to the constraints that IBI Group had to sort and address.

The importance of the project is the value it adds to the city of Salt Lake. It will achieve the goal to receive LEED certification. It has preserved the industrial image of the site. It is enlivening a once desolate part of the city, and the Hub operates in a way that suits the many clients occupying the space.

This case demonstrates how the design process can resolve issues of built structures and public transportation, a multi client use facility, sustainable and historical issues, and revitalization of the Cities wareh
The Clients

When Mayor Ross “Rocky” Anderson took office, he wanted to reexamine the selection for the Intermodal Hub. Mayor Anderson, Mary Guy-Sell, and Union Pacific, held a workshop to discuss, and come to a conclusion as to where to site the new hub. Several locations were looked at before settling with the current site at 400 South and 600 West.

Based upon the competition for the Salt Lake City Library, Mary Guy-Sell issued a Request for Proposal (RFP) for a competition of the new Hub. Only 5 firms responded, 4 of which were invited for the competition, and finally narrowed down to 3 (Prescott Muir & Associates, Cooper Roberts Simonsen Architects (CRSA), and IBI Group. The competition had two workshops where each firm presented their concepts and ideas. From the final competition, IBI was awarded the project. One of the stipulations for being awarded the competition was the firm had to work with a Disadvantaged Business Enterprise Program (DBE) firm. IBI then selected ajc architects and began work on the Intermodal Hub.

The Intermodal Hub came to be because of Guy-Sell’s work in preparing the competition, but the competition would not have been successful had it not been for other entities and donors [UTA, Greyhound, Amtrak] that were involved in the juries.
**Story**

The Intermodal hub project began with the I-15 viaducts reconstruction on the west side of Salt Lake City. The city studied three sites, the historical Rio Grande train station, the historical Union Pacific train station, and the current location of the new Intermodal Hub. The goal of the Intermodal Hub was to combine Salt Lake City’s different mass transportation systems into one central facility and provide prominent building for the revitalization of the west side area. The facility was originally going to consolidate UTA Trax, UTA bus, Amtrak, commuter rail, and the Greyhound bus terminal. The choice of the final site was determined and approved through the federal Environmental assessment process. It included three initial site studies and involved members of the political, private, and public communities. The Union pacific site and the Rio Grande site were not selected based on this study. The current Intermodal Hub site at 200 South 600 West was determined to be the best site for its circulation, adjacency, and revitalization potential. The property was originally the site of three warehouses owned by Southern Pacific rail lines and acquired by Union Pacific (insert date). The railroad ceased operation on that line in the 1992 and the warehouses were abandoned.
In 1999 the city proceeded with the first phase of the Intermodal hub project, which cost 8.5 million dollars. This phase included the realignment of the Union Pacific rail line that allowed the construction of a temporary facility used to house Amtrak. The triple wide was also completed in the first phase. After the completion of the first stage the city underwent an administration change, Ross “Rocky” Anderson replaced Deedee Corradini as Mayor of Salt Lake City. In 2000 the new mayoral administration reevaluated the environmental assessment documents of the proposed Intermodal Hub location. The environmental study was reconfirmed and it was determined that the current Intermodal hub location was best suited to transportation system integration.

As the project continued, the City published a request for qualifications (RFQ) to begin the design competition. From the five original design proposals the city created a short list including Prescott Muir Architects, Cooper Roberts Simonson Architects, and the team of IBI Group with ajc architects. The design teams worked with the clients and city members in three workshop sessions to help satisfy all the needs of the client. The design selection committee consisted of one representative from each of the current clients as well as a number of city officials. The review was held at the City County building where the decision was made to award the project to the team of IBI group and ajc architects.
Constituencies

Many clients were involved in this project from the beginning. Mary Guy-Sell saw a need to collect information from UTA, Amtrak and Greyhound and developed a conceptual program, which she then transferred to the three design teams involved in the competition. She felt by shrinking the communications line through one person, the potential confusion, and conflict between clients and architects would be abated. This enabled IBI and ajc to focus on the architecture of the project.

As stated in the RFQ the Salt Lake City wanted to preserve the warehouses, apply for LEED accreditation, and provide an important public presence. The architects felt preserving the building was the right thing to do however it was costly. Mary Guy-Sell and the Salt Lake City administration felt that it was important to preserve the building because of its historic industrial nature. Furthermore, the federal grant financing the project required the State Historic Preservation Office (SHPO) to approve the project. SHPO approved the project with the understanding that the warehouses located on 600 West were historically significant and would be preserved. As a result ajc architects consulted the State Historic Preservation Office during the initial phases of the design for the Greyhound Terminal.
The second and originally final phase of the project was to include a permanent facility for Amtrak, the greyhound bus terminal, bus service bay, the UTA bus drop off, as well as the ‘kiss and ride’ building entry. This scope changed during the design phase when Salt Lake City found that a more prominent building would be supported, however they did not have the funds or leases in place to build the expanded scope. Amtrak was asked to wait on their permanent facility and the project scope was reduced to the Greyhound bus terminal, bus service bay and UTA bus drop off. The project was now to be completed in five phases instead of the original two. This affected the architectural team of IBI and ajc architects as they had negotiated their contract with the original scope in mind. Other than the bus service station a large portion of IBI’s design would no longer be needed. This included the south wing of the project including the main entry and the Amtrak terminal. The roles of IBI and ajc had been reversed as ajc was the architect of record for the greyhound terminal and the main focus of the project became the Greyhound Bus terminal. IBI still held the contract for the bus service bay as well as the new entry to the greyhound terminal due to the change in program.
Protocols

IBI Group and ajc architects divided the project responsibilities in the following manner: IBI was to be responsible for the majority of the design for the project and held the prime contract with Salt Lake City Corporation. Tony Gill, the project architect, lead the team at IBI. Initially both firms agreed that ajc architects would create the design of the Greyhound terminal and that it would reuse the existing warehouse to fulfill the E.I.S., while IBI would design the Amtrak terminal as well as the Greyhound bus service island. The team at ajc architects included Jill Jones, Principal, Myron Wilson project architect, and Brandon Budd project manager. After these responsibilities were determined changes took place in the project. Amtrak was asked to wait for their permanent facility to be designed and constructed, to accommodate the expanded vision of the Hub. Also, changes in architectural administration at Greyhound created confusion during the design of office space and layout. IBI was asked to developed the new master plan of the site along with an extensive transit oriented development (TOD) study. The master plan was developed as a marketing device to illustrate Salt Lake City's vision expanding the scope with future phases of the Hub. Their scope of facility design was reduced to the bus maintenance facility. The reuse of the existing warehouse for the Greyhound terminal became the larger portion of the project. IBI then collaborated with ajc on the south end of the Terminal to accommodate for future construction of the Hub.

As the project moved into the construction phases the City was once again closely involved. Gaylord Smith from the city's engineering staff became the project manager. Gaylord was responsible for approval of change orders and general construction questions as they arose. He worked closely with the two architectural firms as well as the contractor to bring the project to realization.
Business

IBI Group and ajc architects were the architectural team for the project. IBI Group is a large international multidiscipline firm, based in Canada, with offices throughout the world. The firm’s expertise covers 4 categories: Urban Land, Facilities, Transportation, and Systems. The work performed for the Intermodal hub falls into the Urban Land and Facilities development. ajc architects is a full service architectural firm that has been providing complete planning, design, and construction administration services to Utah and surrounding states since 1991. The firm is based in Salt Lake and has worked on projects in Utah and 35 other states.
While developing of the firm’s expertise in transportation IBI has designed a number of projects dealing with urban transit. Some of the larger projects they have been involved with include CenterLine LRT in California, York Rapid Transit in Ontario, and Al Madina Rapid Transit in Madina, Saudi Arabia. ajc has a wide range of expertise ranging from commercial to governmental to residential projects. Their local counterpart ajc has experience working with local governmental entities, including work for Salt Lake City Corporation on multiple projects. Examples include mixed use pedestrian pavilions, and public access restroom facilities in Liberty Park downtown Salt Lake City.

The IBI Income Fund is a business income trust established under the laws of the province of Ontario, Canada. The IBI Management Partnership comprising the active Directors and Associate Directors of IBI Group retain a minimum of 50% interest in the fund with the balance owned by the public. The IBI Income Fund is administered by a board of trustees and managed by IBI Group (http://www.ibigroup.com/profile/structure.html)

ajc is a privately owned full service architectural firm. Jill Jones is the founder of the firm, and because the firm is owned by a female it qualifies as a disadvantaged business entity (DBE). Jill Jones is managing principal of the firm with a supporting staff of project architects and project managers and intern architects.

The teaming of the firms was very strategic. IBI brought a great deal of experience concerning transportation systems and planning while ajc fulfilled the clients desire to work with a DBE and included their experience working for Salt Lake City Corporation. The joint venture proved successful in procuring the project.
The project impacts the local city of Salt Lake and the surrounding region. A series of transportation hubs have been planned through the Wasatch front from Ogden to Salt Lake. The project is a linking node for the region.

The project had clearly defined parameters for initial conceptual submissions, and the succeeding design competition. Initially IBI and ajc created concept boards together for pre-design competition selection, and they worked together as partners during the competition and throughout the realization of the Intermodal Hub. During the design competition the teams had exposure to the community input regarding the needs of the projects users. The community has and will continue to benefit from the revitalization of the site that the hub occupies.
Delivery

According to Mary Guy-Sell of the Salt Lake City Administration department the performances and expectations of the new Intermodal hub were met and surpassed. The design team provided a building with clear functions, material choices, and character. The re-use of many of the original materials helped the Intermodal hub retain its industrial warehouse character and allow it to fit into its environment without being too flashy. There is a definite definition of the building as a n Intermodal hub.

Salt lake City held the construction contract with Ascent construction and the architectural contract holder for the design of the Intermodal Hub project was the IBI Group. ajc architects was subcontracted by IBI to do the design for the Greyhound terminal. The Intermodal hub was built with a majority of federal money (80% federal, 20% local) and this affected the contract with Ascent. It was necessary for Salt Lake City and UTA to oversee wages and benefits according to the “David Bacon” Wages Act. It was also necessary to participate in the “Buying America” program where a percentage of the product in a building must originate from American companies.

Tony Gill, of the Vancouver B.C. offices, was the project architect for the IBI Group and Myron Wilson was the architect for ajc architects. When the scope was scaled back to the greyhound terminal and bus maintenance shed, IBI group and ajc architects retained their contractual agreement. ajc architect continued as the architect of record for the greyhound terminal, however Salt Lake City and IBI renegotiated a portion of their contract. The IBI Group was asked to do a master plan for the future phases of the Intermodal hub in lieu of the Amtrak construction documents.

The Intermodal Hub was a design-bid-build project and the project award amount to Ascent construction was for $6,392,500. The final cost of the Intermodal Hub was $8,163,987 with, according to Ascent, more than 200 changes driven by supplemental requests for information and change orders. These were recorded by the contractor and reviewed by IBI or their consultants. IBI would then make recommendations for approval and Salt Lake City engineering department would review the change orders. Change order disputes between IBI and the engineering department was mediated by the Salt Lake Administration Department.
Project construction began on September 26, 2003 with a completion date set for the following year; however scope changes occurring as late as June of 2004 pushed final delivery to spring of 2005. As with any adaptive reuse project, it was necessary to bring the existing structure up to current code standards and the vast majority of which were life safety and seismic retro fitting. The Intermodal Hub was envisioned as a LEED test case project from the initial request for proposal. LEED accreditation is now under review following extensive documentation of product disposal, reuse, purchase, and regional origination.

Salt Lake City in conjunction with the UTA is currently planning marketing and community outreach based on the new Intermodal hub master plan. This includes facilitating interest in retail space as well as marketing other portions of the facility.
Services

The city obtained the funds to buy the property for the Intermodal Hub from receiving a federal government grant and by being given a grant from the UTA. When the land was bought three warehouse structures existed on the property. Two warehouses were completely torn down, saving materials for later use. The last remaining warehouse was split into two separate buildings. One structure being used as a storage house for the materials removed from the first two existing buildings that were demolished.

IBI group is a firm that has an extensive experience in transportation facilities and joined with ajc because they were a local minority firm, the combination of these two figures helped the team receive that project. During the design competition process IBI and ajc had two workshop sessions with the clients to more completely understand what the scope of work was enabling the designers to create an appropriate facility for the end user. In the design process IBI and ajc split the projects responsibilities and the realm of is work between the two firms. ajc architects had the responsibility of taking the existing warehouse and adapting it to the use of the new Greyhound bus facility. IBI would take on all other efforts needed to complete the project which included the site design and master planning of the facility; the design of the kiss and ride, the Amtrak office building, new parking garage, and bus maintenance facility.

ajc architects did construction contract administration, documentation, management and architect of record while IBI was the prime contract holder. IBI negotiated all change orders. IBI did the master planning of the site and transportation routes that would be utilized by the different users moving light rail from the back of the property to the front on 600 west.
Due to the lack of bid document information given during the bid process, and the fact that nobody did a bid estimating checklist, cost estimation was incorrect leading to the project being over cost. Information lacking includes the soil contamination of the site and the extent of the decaying structure. The existing produce warehouse had no historical significance but the city pushed to reuse it. The city also pushed for the Intermodal Hub to become a LEED certified building. ajc was accountable for the paper work that would be turned in to make the building to become LEED certified. The contractor Ascent reached LEED by 65.7% with recycling and reusing materials. Other ways that the building became to be a LEED certified building was in the use of environmentally friendly paint and motion sensor lighting. Clerestory windows were placed throughout the building to bring in daylight. Part of the building’s existing steel structure was reused but most of the steel was so decomposed that a new steel structure needed to be put in. The existing buildings concrete floor was of non-reinforced and was replaced by a reinforced concrete. The steel structure and reinforced concrete were required for seismic upgrading to meet current code. All existing windows had to be replaced with double pane glazing for energy compliance in meeting LEED standards. Accessibility compliance was another issue that needed to be achieved in order to allow this building to be brought to functional standards.
Resources

From the initiation of the project, UTA, Amtrak, and Greyhound were established as the clients of the Hub. Since UTA was going to be a major client to the Hub, they qualified for the federal grants. These grants offered significant help, and realization of the project, but also had stipulations as to its use.

One of these requirements was to work with the State Historic Preservation Office. SHPO deemed the warehouse to have a historic significance and expressed the industrial nature of the neighborhood, and decided to keep it. Also, the grant required the use of the Davis Bacon Wage Determinations. The Wage and Hour Division of the U.S. Department of Labor determines prevailing wage rates to be paid on federally funded or assisted construction projects.

The original defining decision of Salt Lake City Corp to create a prominent urban building, which could be an example for further development in the area, has been accomplished with the new Intermodal Hub Terminal. The project teams of ajc and IBI, along with the contractors, and in conjunction with the clients and Salt Lake City, have created a successful project that they believe will spur new commercial and residential development in the area.
Measures

The Intermodal Hub is a case study in navigating professional, logistical, and community labyrinth in order to create a successful architecture as well as an active urban site. The second phase of the project as originally designed by IBI and ajc consisted of the three main tenants: Amtrak, Utah Transit Authority, and Greyhound. A Greyhound bus service bay, Greyhound terminal, UTA bus stops as well as a permanent Amtrak terminal were part of the original scope. The City budgeted eight million dollars for construction of the project and although it was bid at six million dollars the final cost of the second phase was slightly over eight million. Because of the scope reduction most of the south end of the project including the Amtrak terminal was removed from the project design leaving the Greyhound terminal as the major focus. Salt Lake City views this project as an important part of the revitalization of the Gateway district and the project was then master planned by IBI as an integral part of this. The greyhound terminal completed in 2005 is now considered the second of five phases in the Intermodal hub project which is now projected to include convention space, administration offices, and a parking structure.

The original defining decision of Salt Lake City Corporation to create a prominent urban building, which could be an example for further development in the area, has been accomplished with the new Intermodal Hub Greyhound terminal. As defined in the RFP, the project team of ajc and IBI were able to create a space that is interactive and enjoyable in program as well as built form. The circulation corridor and retail bays of the terminal building are prominently displayed through the glazed façade, while the winding sidewalk along with the preservation of the loading dock aesthetic provide a strong urban edge along 600 West street. The design team retained the industrial quality of the original warehouse and the neighborhood by salvaging the key elements of the original canopy roof, docks, and clerestory windows. They also salvaged and reused the original timbers, bricks, and steel columns.

Notwithstanding the obstacles incurred by the re-use of the existing warehouses, Mary Guy-Sell of the Salt Lake City administration believes that the Intermodal Transportation Hub is a success as it has achieved its goal of beginning to interlink the disparate transportation systems of the Wasatch front and its surrounding region. It also creates a new urban gathering place while revitalizing an old warehouse district in the process. It fulfills its initial conceptual and ideological purposes of providing an important public building, activating an underdeveloped area of the city, preserving a historical building, and pursuing LEED accreditation.