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## M E M O R A N D U M

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**DATE:** July 18, 2008  
**TO:** City Council Members  
**FROM:** Russell Weeks  
**RE:** Proposed Resolution: Sugar House Transit Corridor Locally Preferred Alternative  
**CC:** Cindy Gust-Jensen, David Everitt, Lyn Creswell, Esther Hunter, Ed Rutan, Frank Gray, Mary De La Mare Schaefer, Bob Farrington, Tim Harpst, DJ Baxter, Jennifer Bruno, Kevin Young, Janice Jardine

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This memorandum pertains to a proposed joint resolution by the City Council and Mayor Ralph Becker adopting a locally preferred alternative for the Utah Transit Authority to extend transit options within the Sugar House transit corridor. The transit corridor includes a UTA railroad right of way at about 2300 South that stretches about two miles between 200 West Street and Highland Drive. The City Council discussed the alternatives analysis at its July 1 meeting and scheduled a July 22 public hearing on the proposed resolution.

New information based on the July 1 City Council discussion will follow the Options section of this memorandum.

### **OPTIONS**

#### **PUBLIC HEARING:**

- Close the public hearing.
- Continue the public hearing until a later date.

#### **PROPOSED RESOLUTION**

- Adopt the proposed resolution.
- Do not adopt the proposed resolution.

### **POTENTIAL MOTIONS PERTAINING TO THE RESOLUTION**

- I move the City Council adopt a joint resolution of the City Council and the Mayor adopting a locally preferred alternative for the Utah Transit Authority to extend transit options within the Sugar House Transit Corridor.
- I move that the City Council consider the next item on the agenda.

## **NEW INFORMATION**

During City Council discussion July 1 there was some question about whether the preferred alternative contemplated having streetcars operate on single or double track.

According to information provided by UTA and its consultant, Fehr & Peers, the preferred alternative would primarily be a single-track system along the entire length of the two mile corridor.<sup>1</sup>

However, both ends of the corridor might contain double tracks. Here is the system described:

**Central Pointe TRAX Station** (West End): Double track connection for through service or single-track non-revenue connection with a separate platform track(s) for both Central Pointe TRAX Station and Sugar House shuttle trains.

**Curve east of Central Pointe TRAX Station to a point west of West Temple Crossing:** Double track, if used, would extend completely around this curve and extend for a short distance onto the next tangent, ending before crossing West Temple. Otherwise, the line would single track for the entire distance.

**Point west Temple Crossing to 500 East Crossing:** Single track throughout.

**500 East Crossing to 700 East Crossing:** A passing siding would be located in this segment to allow rail cars traveling in opposite directions to pass. Actual length will be determined at the preliminary engineering phase.

**700 East Crossing to approximately 1000 East:** Single track throughout.

**East of approximately 1000 East to Highland Drive:** The proposed Sugar House terminal will be located at the end of the UTA right-of-way (near Highland Drive) in the vicinity of the planned Granite Block development. For conceptual design and cost estimating, a simple two-track terminal with a center platform has been assumed. Platform length would be sufficient to handle two cars on each track.<sup>2</sup>

## **KEY POINTS**

- If the City Council adopts the proposed resolution, UTA, in financial partnership with the City and South Salt Lake would initiate either an environmental impact statement or an environmental assessment. The proposed resolution also could help determine funding sources for the project.
- One of the chief aims of the project is to provide alternate ways of transportation to help alleviate projected automobile congestion on 2100 South Street and streets around it.
- The project studies include participation by UTA, Salt Lake City and South Salt Lake.
- The corridor in the study varies in width from 66 feet to 35 feet (between 900 East and Highland Drive) which may pose problems for multiple uses of the corridor at some points.
- The Parley's Rail, Trail and Tunnel Coalition's master plan calls for using the corridor as part of a trail from Parley's Canyon to the Jordan River. Salt Lake City and South Salt Lake have expressed support for the idea. The Department of Public Utilities also has indicated an interest in using the corridor for a water line.

## **Issues/Questions for Consideration**

- How would 30-minute intervals during off-peak hours encourage use of the proposed transit line?
- What kind of traffic constraints might UTA face in crossing 700 East and State streets with a rail line?
- What is the probability of funding a streetcar line within the next five years?

## **BACKGROUND/DISCUSSION**

The proposed locally preferred alternative is for a streetcar of modern design, powered by electricity through overhead catenary wires, running on tracks with stations at the Granite Block between Highland Drive and 1000 East, 900 East, 700 East, Kearns/ St. Ann's School, 300 East State Street, and the Central Pointe TRAX station at about 200 West Street. The streetcars would run every 15 minutes during the peak hour of demand and every 30 minutes at other times.

The Utah Transit Authority acquired a rail corridor in about 2001 as part of a larger purchase of rail corridor and rights of way that led to the construction of the FrontRunner commuter rail line between Ogden and Salt Lake City.

In 2007 UTA and its consultant, Fehr & Peers, initiated an alternatives analysis of the corridor to determine how best to use the corridor for transportation if 2100 South Street could not handle more traffic. It should be noted that Fehr & Peers also was hired by Salt Lake City to work on the PRATT master plan.

The study area encompassed an area about two miles long roughly bordered by 200 West, 1700 South, 1300 East and 2700 South streets and includes portions of Salt Lake City and South Salt Lake. The study describes the area as one with "a broad mix of land uses ranging from light industrial to residential."<sup>3</sup> The report goes on to say, "The portion of the study area between 900 East and 1100 East is one of the few areas along the Wasatch Front with land uses that facilitate non-motorized travel." It also lists the following high-activity centers within the study area: Westminster College, Sprague Library, Fairmont Park and Aquatic Center, Forest Dale Golf Course, Kearns-St. Ann's School, the Columbus Center, the Granite Education Center, and the Salt Lake County Government Complex.<sup>4</sup>

The analysis estimates that the population of the study area will increase from 33,000 to 36,000 people between 2005 and 2030. It also projects that employment will increase from 41,300 jobs to 54,400 – a 31 percent increase – in the same period.<sup>5</sup>

The study estimates that there are about 15,200 motorized and non-motorized daily trips within the area. The trips are projected to increase to 23,000 per day by 2030 – a 51 percent jump.<sup>6</sup> According to the study:

"Strong travel demand between the Salt Lake City Central Business District ... and the western part of the Salt Lake Valley will create future regional sub-markets for the Sugar House Transit project. Between the Sugar House study area and the CBD trips are predicted to grow by approximately 45 percent, to approximately 57,000 trips overall. Between Sugar House and western Salt Lake Valley, the demand for trips is expected to double, growing from approximately 16,000 to 34,000 by 2030."<sup>7</sup>

The analysis goes on to say most current trips that begin or end within the Sugar House corridor study involve three locations: to and from downtown Salt Lake City, to and from the University of Utah and to and from the Holladay area. The analysis projects that the highest demand for travel to and from the study area will involve the Holladay area and downtown by 2030.<sup>8</sup>

The analysis concludes, among other things, “Traffic analysis shows that by 2030 traffic congestion will worsen during peak hours on 2100 South, the major east/west arterial within the study area. The traffic volumes projected for the area will use all of the existing capacity of every roadway within the study area and present an additional demand on the entire street network.”<sup>9</sup>

The analysis indicates that the purpose of the proposed project would be to “increase mobility, reduce congestion, and preserve the cultural identity within the Sugar House area of Salt Lake City and South Salt Lake” in the face of projected travel demand increases and the goals of South Salt Lake and Salt Lake City to encourage residential and commercial development.

If the City Council adopts the proposed resolution, UTA, in financial partnership with the City and South Salt Lake would initiate either an environmental impact statement or an environmental assessment. The future study would address the following items, including some that were started by the current analysis:

- Ridership, including the overall system user benefit (cost effectiveness)
- Station locations
- Engineering and design constraints and/or opportunities
- Traffic analysis and determination of consequences
- Transit and trail interface, including space requirements for separation
- Noise and vibration impacts
- Cultural and historical impacts
- Impacts to public parks and recreation lands
- Wetland, waterway or aquifer impacts
- Vegetation and wildlife<sup>10</sup>

It might be noted that people who attended open houses sponsored by UTA and the two cities supported the idea of using the corridor as a linear park as well as a streetcar conduit. As noted earlier, people involved in the PRATT trail project were stakeholders in the analysis and support the linear park as part of the route to the Jordan River. However, the corridor is narrow in some places which may pose problems for allowing people to walk and play near a street car track. That is one reason for any future study to include “engineering and design constraints and/or opportunities,” and “transit and trail interface, including space requirements for separation.”

## **PUBLIC PROCESS**

This has been the public process to date:

- UTA and the City conducted public meetings in the community in 2007 to arrive at the proposed alternative.
- At an October 2, 2007, briefing about the proposed alternative a UTA representative told the City Council that a resolution would be non-binding but would facilitate the next step, an environmental study of the locally preferred alternative. It might be noted that at the



2007 briefing a UTA representative also told the City Council that the federal government might have funds available to help build the line.

- UTA and its consultant briefed the Transportation Advisory Board in December 2007 and the Planning Commission on February 13, 2008. Both boards adopted motions recommending adopting the locally preferred alternative. It should be noted that the South Salt Lake City Council adopted a resolution supporting the locally preferred alternative at its January 23, 2008, meeting.
- In addition, the City's budget for Fiscal Year 2008-2009 contains a \$67,000 allocation, and the RDA budget for the same year contains a \$33,000 allocation for the environmental analysis and a study of financing options.
- UTA owns the corridor and has not filed any petitions to change land use along it.

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<sup>1</sup> Sugar House Transit Corridor Alternatives Analysis, Page 38.

<sup>2</sup> Ibid.

<sup>3</sup> Ibid. Page 6.

<sup>4</sup> Ibid.

<sup>5</sup> Ibid. Page 5.

<sup>6</sup> Ibid. Page 5.

<sup>7</sup> Ibid. Page 17.

<sup>8</sup> Ibid. Pages 12 and 13.

<sup>9</sup> Ibid. Page 15.


<sup>10</sup> Ibid. Page 41


**SALT LAKE CITY CORPORATION**  
DEPARTMENT OF COMMUNITY & ECONOMIC DEVELOPMENT  
OFFICE OF THE DIRECTOR



**CITY COUNCIL TRANSMITTAL**

**TO:** David Everitt, Chief of Staff  **DATE:** May 28, 2008

**FROM:** Mary De La Mare-Schaefer, Community & Economic Development Interim Director 

**RE:** A resolution adopting a locally preferred alternative for the Utah Transit Authority to extend transit options within the Sugar House transit corridor 

**STAFF CONTACT:** Tim Harpst, Transportation Director, at tim.harpst@slcgov.com or 535-7148  
Doug Dansie, Senior Planner, at doug.dansie@slcgov.com or 535-6182

**RECOMMENDATION:** That the City Council schedule a public hearing and adopt a resolution

**DOCUMENT TYPE:** Resolution

**BUDGET IMPACT:** \$100,000 (\$67,000 from General Fund and \$33,000 from the RDA) for the next phase to study the financing options and do the environmental analysis. South Salt Lake and UTA will also each contribute \$100,000 for this phase.

**DISCUSSION:**

**Issue Origin:** The Utah Transit Authority (UTA) recently engaged the consultant team of Fehr & Peers and LTK Engineering Services to conduct a study of possible transit modes and alignment for an east-west corridor that runs from the Central Pointe TRAX station (approximately 200 West and 2100 South) to roughly 1100 East. The study was a partnership between Salt Lake City, South Salt Lake, and UTA, with each contributing funds to cover its cost. The purpose of the study was to look at neighborhood transit options, review transit connections to regional transit, determine if transit in the area supports economic and community development, determine whether transit use would increase with such a project, and assess whether such project would relieve congestion on 2100 South.

**Analysis:** The study examined alternatives for transit in the area that included bus service along 2100 South, Bus-Rapid Transit, modern streetcar, historic trolley, and light rail. The options were analyzed with respect to anticipated ridership, cost to implement and operate, compatibility with the community, land use impacts, effectiveness in meeting travel needs, and public support.



The study concludes that the locally preferred alternative is a modern streetcar service along UTA's existing railroad right-of-way. The transit line would have stops between 0.1 and 0.3 miles apart, be electric powered, have steel wheels, have low floors, and use curb stops. This transit option would connect to the TRAX system at the Central Pointe station, and run every 15 minutes during peak travel times and every 30 minutes during other times.

UTA now needs confirmation from the Salt Lake City Council that a Sugar House rail transit alternative is supported by the City.

**Master Plan Considerations:** The Sugar House Community Master Plan (2005) references the desire and necessity for a transit mode in this corridor that will serve the Sugar House Business District and overall community. The Master Plan includes the following policies that support this effort:

- Provide multi-modal transportation options that include transit and light rail, bicycle and pedestrian facilities, as well as improved public streets to facilitate better mobility, access, and reduce hazards
- Support the construction of light rail along the Sugar House rail corridor and determine locations for future transit stations and park and ride facilities within the Sugar House Business District, near the Brickyard Plaza and on 2100 South near 2300 East
- Direct land use decisions to support a light rail station in the Sugar House Business District

## **PUBLIC PROCESS:**

On December 3, 2007, the Transportation Advisory Board heard a presentation regarding the Sugar House transit study. After hearing the presentation and discussing the issue, the Board unanimously passed a motion in support of the locally preferred alternative of a modern streetcar.

On February 13, 2008, the Planning Commission reviewed information submitted by UTA regarding the draft final Sugar House Transit study that contained the recommended Locally Preferred Alternative. A draft resolution supporting the recommended Locally Preferred Alternative was included for the Planning Commission's review. After discussing the project, the Planning Commission passed a motion to forward the Commission's support of the resolution to the City Council.

Because this proposed transit line will partially be located in South Salt Lake, the Locally Preferred Alternative was also presented to the South Salt Lake City Council. On January 23, 2008, the South Salt Lake City Council formally adopted the Locally Preferred Alternative.

## **RELEVANT ORDINANCES:**

None

## Attachment A: Proposed Resolution

**A JOINT RESOLUTION OF THE SALT LAKE CITY COUNCIL AND MAYOR  
ADOPTING A LOCALLY PREFERRED ALTERNATIVE FOR THE UTAH  
TRANSIT AUTHORITY (UTA) TO EXTEND TRANSIT OPTIONS WITHIN  
THE SUGAR HOUSE TRANSIT CORRIDOR**

**WHEREAS**, the Utah Transit Authority (“UTA”) is a public transit district, which presently owns and operates a high capacity rail fixed guideway system serving portions of the Salt Lake Valley; and

**WHEREAS**, this rail fixed guideway system has been a major success with ridership substantially exceeding pre-construction projections and public sentiment strongly supporting rapid expansion of high capacity fixed guideway systems; and

**WHEREAS**, UTA proposes to expand fixed guideway systems to include, among other things, a 3-mile rail fixed guideway system from the Sugar House community of Salt Lake City to the City of South Salt Lake, as more particularly described herein (the “Sugar House Transit Corridor”); and

**WHEREAS**, UTA purchased an existing railroad right of way within the Sugar House Transit Corridor from Union Pacific in 2002, anticipating the future need for light rail transit expansion within Salt Lake City; and

**WHEREAS**, Salt Lake City’s Sugar House Community Master Plan (adopted December 13, 2005, Ordinance 89 of 2005) explicitly identifies in its ‘Business District Goals and Objectives’ the theme of “directing development to be transit and pedestrian oriented”; and

**WHEREAS**, the Sugar House Community Master Plan explicitly states in its ‘Multi-modal Priorities’ that future land use patterns in Sugar House should support the implementation of mass transit throughout the community; and

**WHEREAS**, the Sugar House Community Master Plan explicitly states support for the construction of “rail along the Sugar House rail corridor and determine locations for future transit stations and park and ride facilities within the Sugar House Business District”; and

**WHEREAS**, current planning efforts within the Sugar House Transit Corridor such as the Market Station Development (South Salt Lake) and the Granite Block (Salt Lake City) development area have anticipated the extension of rail transit along the existing UTA owned right of way; and

**WHEREAS**, the Sugar House residential and business communities have demonstrated interest and grass roots support for a surface rail alternative to improve mobility and enhance economic opportunities within the area; and

**WHEREAS**, the expansion of transit alternatives via the UTA right of way in the Sugar House Transit Corridor has been reviewed and approved as part of the Wasatch Front Regional Council 2007-2030 Transportation Master Plan, (May 2007); and

**WHEREAS**, construction and operation of a fixed guideway transit system in the Sugar House Transit Corridor will reduce reliance on the private automobile, improve air quality, reduce the growth of vehicle miles traveled, and support the objectives of the Wasatch Front Regional Council's Regional Transportation Plan; and

**WHEREAS**, Salt Lake City and the City of South Salt Lake (the "City Sponsors") along with UTA, commissioned a study of public transportation alternatives within the Sugar House Transit Corridor (the "Alternatives Analysis"); and

**WHEREAS**, prior to conducting the Alternatives Analysis, the City Sponsors agreed upon a list of criteria to be considered to help guide the decision to determine the proper public transportation alternative to operate within the Sugar House Transit Corridor; and

**WHEREAS**, the criteria include: (1) the public transit conveyance operating within the corridor should serve the needs of citizens living and working along the corridor by promoting "walkable neighborhoods" where citizens can conveniently use public transit; (2) it should make stops at least every two blocks; (3) it should not travel more than 30 miles per hour; (4) it should stop at all residential road crossings; (5) it should use noise reducing technology; and (6) the corridor should include a landscaped parkway that increases beauty, enhances socialization and contributes to the walkable nature of the surrounding neighborhoods; and

**WHEREAS**, the federally required Alternatives Analysis is now complete, and Salt Lake City has reviewed the Sugar House Transit Corridor Alternatives Study Final Report, dated January 2008, and finds that it complies with the criteria established by the City Sponsors and accepts its analysis of impacts, costs, environmental constraints, and ridership; and

**WHEREAS**, Salt Lake City Transportation Master Plan Rail Transit Corridors Map updated in July 2006 identifies the Sugar House area as a potential transit corridor; and

**WHEREAS**, the Sugar House line will be a community level streetcar line and would better serve the transit-friendly Sugar House District, parallel a portion of one of UTA's best performing bus routes, and provide an east-west connection with the West Valley Line and a direct connection to the main north-south light rail line; and



**WHEREAS**, Salt Lake City understands that more specific environmental issues will be reviewed, evaluated, and addressed during subsequent design and engineering phases of the project as well as the final terminus of the line and at that time more specific mitigation measures related to specific impacts will be determined; and

**WHEREAS**, Salt Lake City believes that this proposed project best meets the needs of the City as a whole, and is in the best interest of the public health, safety, and welfare of the City; and

**WHEREAS**, at its meeting on Monday 3 December 2007, the Salt Lake City Transportation Advisory Board approved a motion supporting the findings and recommendations of the Sugar House Transit Corridor Alternatives Analysis for a modern rail streetcar along the existing UTA-owned right of way within Salt Lake City and South Salt Lake City, and

**WHEREAS**, at its meeting on Wednesday 13 February 2008, the Salt Lake City Planning Commission approved a motion supporting the findings and recommendations of the Sugar House Transit Corridor Alternatives Analysis for a modern rail streetcar along the existing UTA-owned right of way within Salt Lake City and South Salt Lake City; and

**WHEREAS**, at its meeting on January 23, 2008, the City Council of South Salt Lake City approved a motion supporting the findings and recommendations of the Sugar House Transit Corridor Alternatives Analysis for a modern rail streetcar along the existing UTA owned right of way within Salt Lake City and South Salt Lake City.

**THEREFORE**, BE IT RESOLVED by the Salt Lake City Council and Mayor as follows:

1. **Locally Preferred Alternative.** That the proposed construction of the rail fixed guideway system for purposes of operating a modern rail streetcar along the existing UTA owned right of way within Salt Lake City and South Salt Lake City, identified in the Sugar House Transit Corridor Alternatives Study Final Report, dated January 2008, is endorsed and approved by the Salt Lake City Council and Mayor as the Locally Preferred Alternative.
2. **Effective Date.** This Resolution shall become effective immediately upon its passage.

Passed and Adopted by the City Council of Salt Lake City, Utah, this \_\_\_\_\_  
day of \_\_\_\_\_, 2008.

**SALT LAKE CITY COUNCIL**

By: \_\_\_\_\_  
**CHAIRPERSON**

**ATTEST AND COUNTERSIGN:**

\_\_\_\_\_  
CHIEF DEPUTY CITY RECORDER

**SALT LAKE CITY MAYOR**

By: \_\_\_\_\_

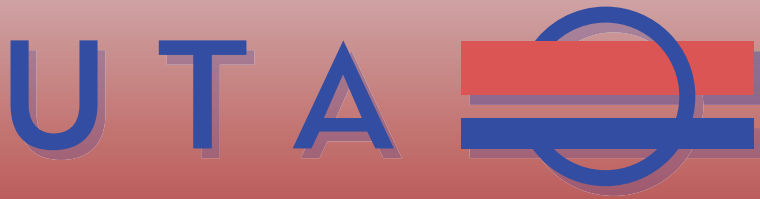
**ATTEST AND COUNTERSIGN:**

\_\_\_\_\_  
CHIEF DEPUTY CITY RECORDER

APPROVED AS TO FORM:

  
\_\_\_\_\_  
SALT LAKE CITY ATTORNEY





# Sugar House Transit Corridor Alternatives Analysis

DRAFT FINAL REPORT



**FEHR & PEERS**  
TRANSPORTATION CONSULTANTS

**LTK**  
LTK Engineering Services

*January 2008*

*Sugar House Transit Corridor  
Alternatives Analysis  
January, 2008*

*Special Acknowledgments to the Project Steering Committee*

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## Sugar House Transit Corridor Alternatives Analysis

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## **Sugar House Transit Corridor Alternatives Analysis** **Executive Summary**

### ***Project Background***

Salt Lake City and the City of South Salt Lake, in cooperation with Utah Transit Authority (UTA), are considering extending a higher-frequency, higher-capacity transit service along an east-west corridor that extends from the Central Pointe TRAX Station at approximately 200 West and 2100 South to approximately 1100 East, and between 1700 South and 2700 South. Through a joint selection by UTA and the cities, the consultant firm of Fehr & Peers, along with LTK, was chosen to conduct the study. The study scope was broad and considered many possible modes and alignments through a comprehensive alternatives analysis process. Included among the alignments within the study area that were considered was an existing rail right-of-way. UTA currently owns this rail right-of-way at approximately 2300 South. This rail corridor is no longer actively used for freight and is considered for a potential fixed-guideway transit solution in this analysis.

### ***Purpose and Need for the Project***

The purpose established for this project includes: reducing automobile congestion on 2100 South, providing multi-modal travel choices, providing access to a regional fixed guideway transit network, supporting community and economic redevelopment, and the enhancement and support of community goals for growth in the area. The project will increase mobility for shorter trips as well as provide a connection to the larger regional transportation system. In addition, this project will preserve the cultural identity within the Sugar House area of Salt Lake City and South Salt Lake. The project will enhance the unique community identity with a transportation improvement that is pedestrian friendly and compatible with the traditional character of the surrounding neighborhoods.

The need for this project is to increase local and regional mobility and reduce automobile congestion in the corridor through the year 2030. The project will increase multi-modal trip options and reduce automobile travel, thereby decreasing congestion and pollution.

In addition to the purpose and need, the local communities jointly agreed to the following outline of specific characteristics of the selected transit technology including:

- Slow speeds
- Frequent stops
- Accommodates an urban linear park (trail)
- Safe and standardized pedestrian crossings
- Broad local support
- Varied funding options
- Promotes transit to transit connections

### ***Public Outreach***

Almost one third of the effort in this study involved public outreach and education. Through a series of community groups, one on one interviews, and visits with the public at large, the communities built their own goals for the project, which the study team used to develop the criteria by which to evaluate a range of alternatives.



## *Alternatives Development and Analysis*

The study team consisted of members from South Salt Lake, Salt Lake City, UTA, UDOT, and Fehr & Peers. Through collaborative effort, the team developed multiple alternatives and performed three levels of screening and evaluation to determine the suitability of these alternatives based on the previously defined project objectives and project purpose and need. The first two levels of screening were qualitative. The most detailed and quantitative evaluation occurred once the final four most practical alternatives had been identified. These final alternatives consisted of:

- 1) A Baseline Alternative of enhanced bus service on 2100 South. (This is the alternative against which the other alternatives were measured).
- 2) Bus Rapid Transit (BRT) on the UTA right-of-way
- 3) Streetcar or Historic Trolley on the UTA right-of-way
- 4) Light Rail Transit (LRT) on the UTA right-of-way

With these final alternatives, the study team applied both quantitative and qualitative data to arrive at a Locally Preferred Alternative (LPA). The table below shows the final quantitative data assembled for each of the four alternatives as well as for existing bus service on 2100 South. In the end, the Modern Streetcar alternative best met the purpose and need as well as meeting the locally required characteristics.

<b>Table ES1 Analysis Results for Screening Categories</b>					
	<b>Bus on 2100 South</b>	<b>Bus Rapid Transit (BRT)</b>	<b>Modern Streetcar</b>	<b>Historic Trolley</b>	<b>Light Rail</b>
<b>Ridership (daily users)</b>	2,100	1,800	2,300	2,300	2,200
<b>Capital Investment</b>	\$9.8 m	\$17.7 m	\$36.7 m	\$29.0 m	\$35.6 m
<b>Annual Operating Cost</b>	\$2.5 m	\$1.4 m	\$1.6 m	\$1.6 m	\$1.6 m
<b>Community Compatibility</b>	High	Medium	High	High	Low
<b>Positive Land Use Effect</b>	Low	Medium	High	High	High
<b>Meets Travel Needs</b>	Medium	Medium	High	Medium	Medium
<b>Public Support</b>	Low	Medium	Very High	Very High	Medium



## ***Selection of the Locally Preferred Alternative***

Given the results of the final screening, the Locally Preferred Alternative selected was streetcar service operating between the Central Pointe TRAX Station and the Sugar House vicinity utilizing the UTA railroad right-of-way for the entire distance. The route length is approximately 2 miles. Figure ES-1 shows the route, stations, and areas of possible constraints. The box at right identifies the general characteristics, stations, frequency and connectivity of the Locally Preferred Alternative.

## ***Next Steps Towards Implementation***

Once the LPA has been formally adopted by each of the cities and recognized as part of their master transportation plans, the next phase of study for this project is a full environmental evaluation of the LPA. Within this next document, the full effects and impacts of the Locally Preferred Alternative along the corridor will be quantified and evaluated in more detail.

If Federal Funding of this project (through the Federal Transit Administration) is going to be pursued, the cities of Salt Lake City and South Salt Lake, with the support of UTA, should begin evaluating the financial feasibility of providing the matching funds for the construction of the LPA.

## **Sugar House Streetcar**

### **Characteristics**

*Within the UTA right of way  
Stops 0.1-0.3 mi. apart (or approximately every  
other block)  
Electric power  
Steel wheels  
Some construction of stations*

### **Stations**

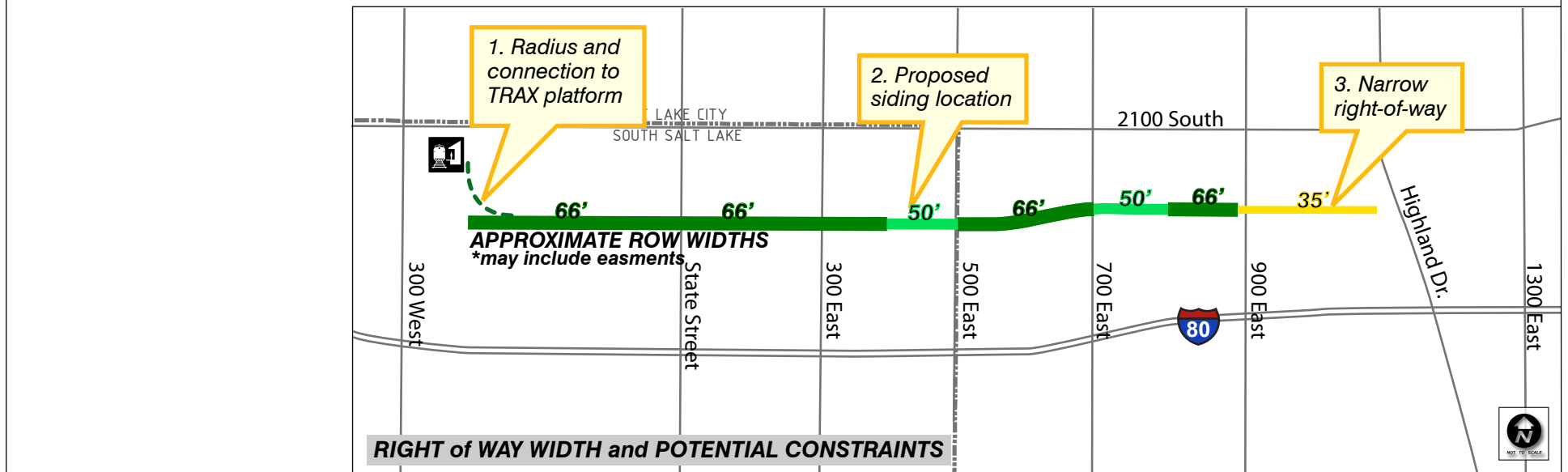
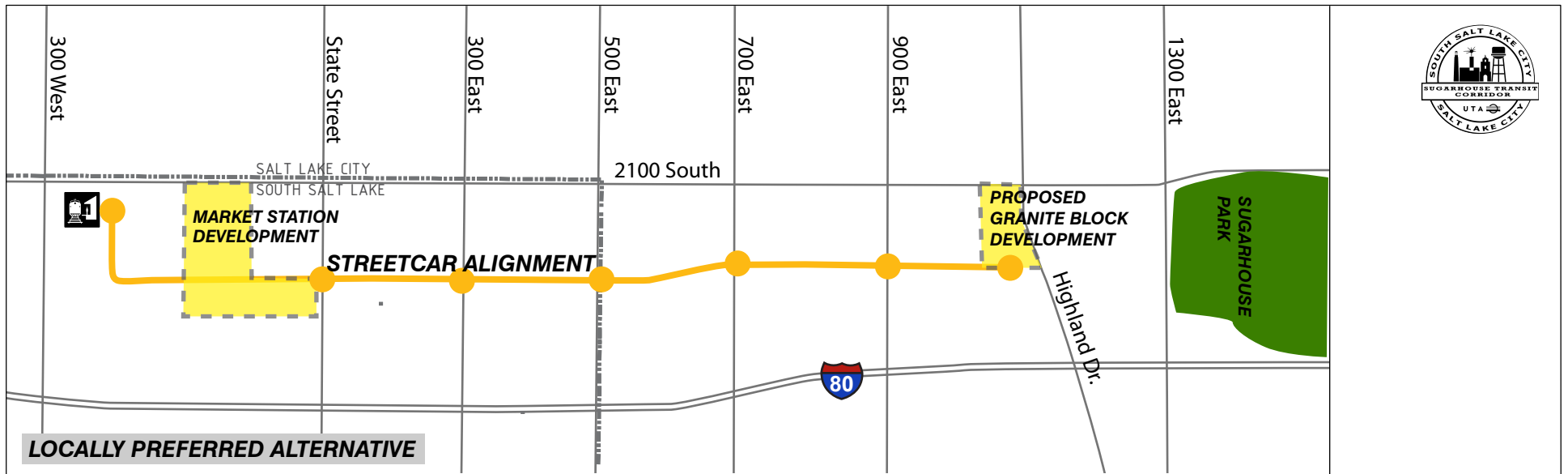
*Granite Block  
900 East  
700 East  
Kearns/St. Anne's (450 East)  
300 East  
State Street  
Central Pointe TRAX*

### **Frequency**

*Peak hour – every 15 minutes  
Off peak – every 30 minutes*

### **Connectivity**

*Shared platform with TRAX at Central Pointe*





## Sugar House Transit Corridor Alternatives Analysis

### 1. PROJECT HISTORY AND BACKGROUND

#### 1.1. Background and Context

Salt Lake City and the City of South Salt Lake, in cooperation with Utah Transit Authority (UTA), are considering extending a high-frequency, high-capacity transit service along an east-west corridor that extends from the Central Pointe TRAX Station at approximately 200 West and 2100 South to approximately 1100 East, and between 1700 South and 2700 South. The current study of this corridor evolved as a result of the initiatives of Salt Lake City and the City of South Salt Lake. Located within this corridor is an existing abandoned rail right-of-way (located at approximately 2300 South) owned by Utah Transit Authority. The cities both recognize the right-of-way as a potential resource for a community transit system that would connect to the larger regional transit system. Both cities collaborated to prepare a list of important characteristics that they wanted to see developed within the corridor. These characteristics became the foundation for the overall goals for the project. The characteristics included slow speeds, frequent stops, the accommodation of a trail, safe pedestrian crossings, broad local support, and creative funding sources (see inset box). With the framework for the study established, the cities and UTA jointly selected the consulting firm of Fehr & Peers to conduct the study.

The scope of the study was broad, and through a comprehensive alternatives analysis process many possible modes and alignments were considered. Included among the potential alignments was the UTA owned rail right-of-way. The rail corridor is no longer actively used for freight and so was considered as a potential fixed-guideway transit solution in the analysis. In Phase III of its Regional Long Range Transportation Plan, the Wasatch Front Regional Council (WFRC) has identified a transit project within this right-of-way. The right-of-way is located at approximately 2300 South and extends east/west between the Central Pointe TRAX Station (near 2100 South and 200 West) and 1100 East. The corridor is approximately 2 miles long and the width of the corridor varies between 35 and 66 feet.

The study area for the Sugar House Transit Corridor Alternatives Analysis encompasses sections of both Salt Lake City and South Salt Lake between 200 West and 1300 East, and between 1700 South and 2700 South. This area is shown in Figure 1. Central Pointe TRAX Station and Granite Block redevelopment area in Sugar House at approximately 1100 East are the studied termini.

#### 1.2. Public Process

The public process for this study was a multi-leveled approach to educate residents, business owners and city officials about the potential for a transit way in the area and receive input and comments. Outreach efforts consisted of

#### Community Desired Characteristics

##### Developed by South Salt Lake and Salt Lake City

*Serve local trips with frequent stops*

*Travel at slow speeds*

*Accommodate an urban linear park (trail)*

*Provide safe and standardized pedestrian crossings*

*Broad local support*

*Pursue creative funding sources*

*Provide efficient transit to transit connections*

stakeholder committee meetings, interviews with individual stakeholders, public scoping meetings, and presentations to city councils.

## Committees

A Steering Committee was established to guide the process and assist in the analysis of alternatives. The Steering Committee consisted of representatives from each of the cities. Representatives included staff from public works, transportation, mayors' offices, community and economic development, and the Redevelopment Agency (RDA). The Steering Committee also included representatives from UTA, the Utah Department of Transportation (UDOT) and WFRC. This Steering Committee met monthly, beginning in January 2007 and ending in October 2007. The committee was responsible for reviewing and evaluating all project information and progress to be sure it was consistent with the project goals as well as meeting the Purpose & Need.

A separate stakeholder committee was also established consisting of community council members, special interest groups, developers, and individual citizens. This group met four times at critical milestones over the course of the study. Meeting topics included project introduction, development of goals and objectives, alternatives evaluation, and project wrap-up to discuss next steps and funding options.

## **Stakeholders**

*Parleys Rails Trails and Tunnels Coalition  
(PRATT)*  
*Mecham Investment Co.*  
*Sugar House Trolley Association*  
*Sugar House Community Council*  
*Liberty Wells Community Council*  
*People's Freeway Community Council*  
*Sugar House Merchant's Association*  
*Salt Lake County*  
*Cascade Partners*  
*Red Mountain Retail Group*  
*Westminster College*  
*Salt Lake City Council*  
*South Salt Lake City Council*  
*South Salt Lake Chamber of Commerce*

The study team also conducted individual interviews with each stakeholder. Interviews occurred in April and May and the study team used these interviews to gain an overall understanding of sentiments towards a major transit project in the area. Seventeen interviews were conducted in total.

## Public Meetings

Two public open houses were conducted at critical points during the process. On April 2<sup>nd</sup>, 2007, UTA hosted the first of two public open houses. The first open house was held from 5 – 8 p.m. at the Columbus Community Center located at 2530 South 500 East in South Salt Lake. The purpose of the open house was to introduce the project to the public and to gain feedback from the public on the development of goals and objectives for the project. Advertising for the event utilized several strategies:

- Direct mailers to over 1,500 residents along the UTA right-of-way
- Media advisory and publication of newspaper article prior to first event
- Postings on city websites
- Announcements at Salt Lake City Community Council meetings
- Announcements in city newsletters regarding the open house and the project



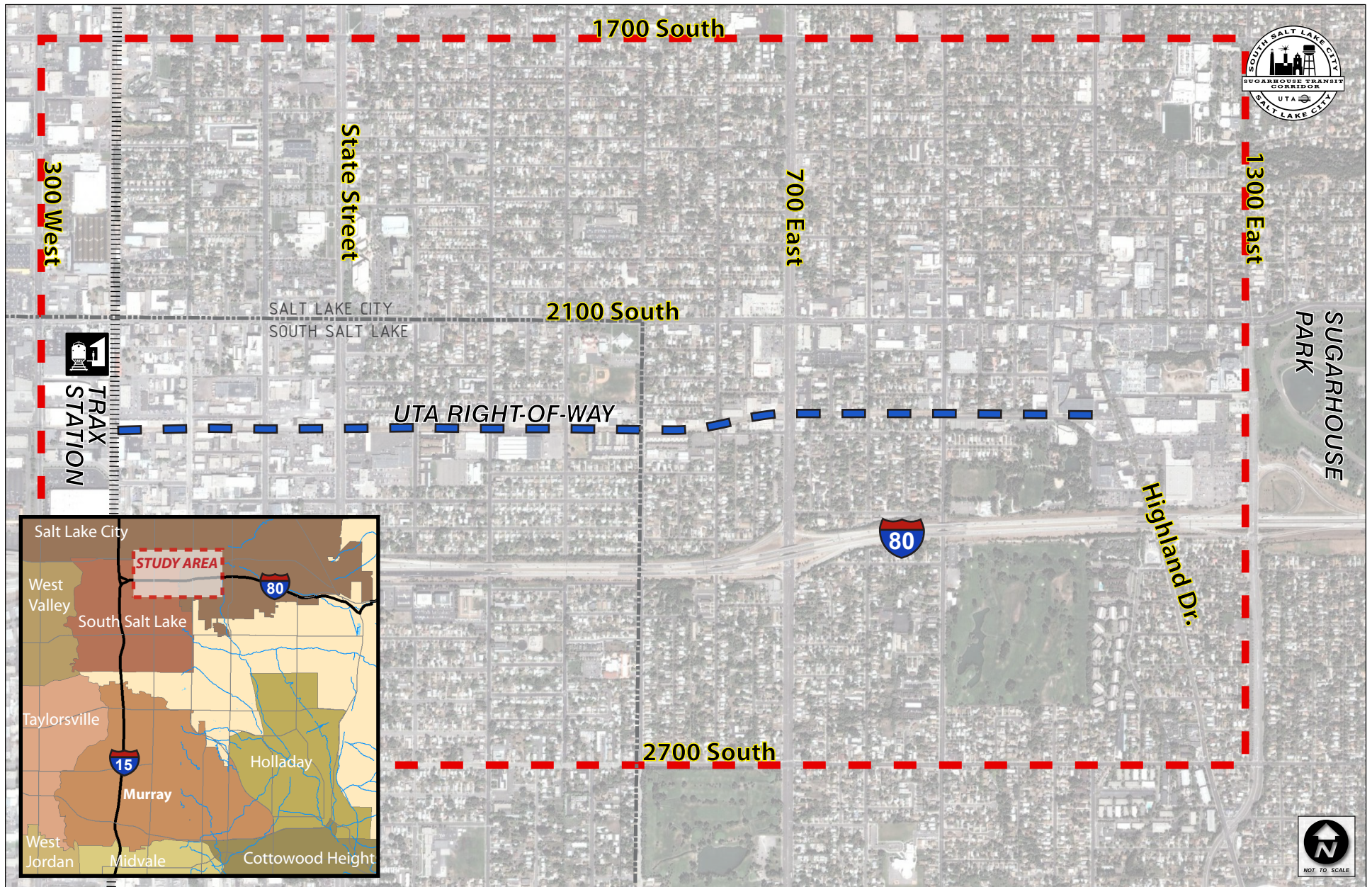
A second open house was held July 12<sup>th</sup>, 2007. The open house was held at the Sprague Library located at 2131 South 1100 East in Sugar House from 5 – 7 p.m. The purpose of the open house was to present the short list of alternative alignments and modes to the public, and receive feedback for a preferred mode, alignment and station locations. Advertising for the event utilized the same strategies as the first event in

## Sugar House Transit Corridor



addition to posting fliers throughout the study area. At each open house, educational materials were presented and project staff was available to answer questions and to instill a general understanding of the process and technical information being presented. Participants at each open house were informed of how they could contribute to the process by written comment, verbal comment (via court reporter), as well as on the UTA website. A summary of comments from each of these open houses and comments received online are included in the appendix of this document.







## 2. EXISTING AND FUTURE CONDITIONS

### 2.1. Population and Employment Trends

To examine population, employment and predicted growth in the study area, Fehr & Peers used data directly from the Wasatch Front Regional Council (WFRC) Travel Demand Model, which is based on population and employment projections published by the Governor's Office of Planning and Budget (GOPB). WFRC divides data into Transportation Analysis Zones (TAZ). TAZ's are used to divide the entire region into smaller districts for more accurate analysis. Demographic data is included in these zones and is the basis for predicting travel patterns. According to WFRC, the 2005 population of the study area was approximately 33,000. At an average household size of 2.2 people, the number of households in the study area is approximately 15,543. The regional model shows 41,413 jobs in the study area.

Model data projected to 2030 shows a slight decline in population and households within the study area, which is not consistent with the growth patterns in the region, or in each city. To adjust the WFRC model data, Fehr & Peers made assumptions about population growth based on relevant knowledge of the area, including knowledge of future land use projects, individual meetings with each city, and population projections completed by GOPB.

Much of the land within the entire study area is developed and the opportunity for increased residential growth (except for multi-family housing) is limited. For the Salt Lake City portion of the study area, Fehr & Peers assumed a three percent total growth rate for population. The overall growth rate for Salt Lake City between 2005 and 2050 is 12% (Source: GOPB). This document assumed that much of this 12% growth rate would occur in the western neighborhoods of the City. Given the limited availability of land, a 3% growth rate was applied within the study area. A meeting was held with Salt Lake City planners during which this assumption and methodology was validated.

In South Salt Lake, sufficient information about future residential development was available to evaluate and adjust growth data within specific Traffic Analysis Zones (TAZ) where growth is planned by the City in the future.

Jobs in the study area are expected to grow to approximately 54,000 by 2030. Table 2.1 shows the projected changes in population, households and employment from 2005 to 2030.

<b>Table 2.1</b> <b>Study Area Population, Households and Employment</b>			
	<b>2005</b>	<b>2030</b>	<b>% Change</b>
<b>Population</b>	33,000	36,000	8%
<b>Households</b>	15,500	17,200	11%
<b>Employment</b>	41,300	54,400	31%
Source: WFRC, updated by Fehr & Peers			

## 2.2. Land Use and Future Projects of Significance

The Sugar House Transit Corridor study area has a broad mix of land uses, ranging from light industrial to residential. The portion of the study area between 900 East and 1100 East is one of the few areas along the Wasatch Front with land uses that facilitate non-motorized travel. This area has residential densities that are close to businesses. West of 900 East, land uses transition to commercial strips along 2100 South, with higher density residential to the north and south.

The western portion of the study area is characterized by a mix of big box development and light industrial uses, bordered by higher density residential. The proximity of mixed land uses keep walking distances short, ultimately promoting walking as a mode of transportation.

In addition to these general land uses, several high intensity activity centers are located within the study area. These centers include:

- Westminster College (1300 East)
- Sprague Library (Highland Drive)
- Fairmont Park & Aquatic Center (Sugarmont)
- Forest Dale Golf Course (900 East)
- Kearns- St. Ann's School (500 East)
- Columbus Center (500 East)
- Granite Education Center (State Street)
- Salt Lake County Complex (State Street)

Land use in the study area is expected to change over time, primarily becoming denser and more diversified. Two major future activity centers will be added to the study area in the near term. These significant projects



("Market Station" Source: Deseret Morning News)

are Market Station (located at approximately 2300 South State Street) and the Granite Block (located on the south side of 2100 South at 1100 East). The Market Station development, located in South Salt Lake, will be a mixed-use development. Plans for this development include approximately 900 dwelling units and 360,000 square feet of retail space.

The Granite Block in downtown Sugar House will be redeveloped with a mix of residential, commercial and office use. Plans for the project are conceptual, but Salt Lake City zoning regulations dictate that any building over 50 feet in height requires the development of residential units within the zone to offset the height increase. In preliminary conversations with Salt Lake

City, staff indicated that as many as 400 new residences could be possible with redevelopment plans over the next several years.

**Figure 2** shows activity centers and proposed developments.



## Figure 2: Future Land Use Including Future Activity Centers

This map includes:

Everything from study area map

PLUS

Activity Centers

Areas of proposed developments with numbers associated

Granite Block

Market Station

## 2.3. Traffic and Congestion

A network of arterial and collector class roadways traverses the study area. This street network is established on the typical Salt Lake County street grid system. Major arterials include State Street, 700 East, 1300 East and 2100 South. Other important minor arterials include 300 East, 500 East, 900 East, 1700 South, 2700 South and Highland Drive. A network of local collector streets, all on the same grid network system, serves the communities between these major roadways. Described below are the roadways within the study area that carry the highest traffic levels.

State Street is a major north/south arterial in the Salt Lake Valley. In the study area, it consists of three travel lanes in each direction, parking lanes on each side and a center raised median. Protected single lane left-turn pockets are located at intersections. State Street intersects with I-80 at approximately 2400 South and there is access from State Street to I-80 in both east and west bound directional movements.

700 East is a major north/south arterial in the Salt Lake Valley. In the study area, it consists of three travel lanes in each direction and a center raised median. Protected single lane left-turn pockets are located at intersections. 700 East intersects with I-80 at approximately 2400 South.

1300 East is a north/south arterial in the Salt Lake Valley. In the study area, north of 2100 South, it consists of a single travel lane in each direction with a continuous center two-way left-turn lane. South of 2100 South, it consists of three travel lanes in each direction, a center raised median and single protected left-turn lanes at intersections. It has an interchange with I-80 at approximately 2300 South.

2100 South is an east/west arterial in the Salt Lake Valley. In the study area, it consists of two travel lanes in each direction. Some intersections have left and right turn storage lanes. 2100 South has signalized intersections with West Temple, Main Street, State Street, 200 East, 300 East, 500 East, 700 East, 900 East, 1100 East/Highland Drive, and 1300 East.

Fehr & Peers conducted a preliminary traffic analysis of existing conditions using Synchro/Sim Traffic software. The function of intersections are typically measured by level of service (LOS) A through F, A representing free flow conditions and F representing failure of the intersection from high congestion. The results of this analysis reflect currently congested conditions at major intersections in the study area, as shown in Table 2.2.



Table 2.2 2007 p.m. Peak Hour LOS and Delay					
Intersection	Worst Approach			Overall Intersection	
	Approach	LOS	Delay	LOS	Delay <sup>1</sup>
2100 South / 900 East*	Blank <sup>2</sup>			F	> 80
2100 South / 700 East*				F	> 80
2100 South / State Street*				E	58.5
Sugarmont / 900 East	Westbound	E	39.8	B	10.5
Simpson / 700 East	Westbound	F	> 50	D	25.3
Truman / State Street	Westbound	F	> 50	A	7.7
* - Indicates a signalized intersection 1. Intersection LOS and delay (seconds/vehicle) values represent the overall intersection average. Source: Fehr & Peers, April 2007 2. Approach LOS is typically not calculated for signalized intersections, however for unsignalized intersections approach LOS is shown.					

The unsignalized intersection analyses show that vehicles attempting to access the major roads from the stop-controlled side streets experience excessive delay. Overall though, the unsignalized intersections show an acceptable level of service because the higher volume through movement of the major streets has no delay, which reduces the overall delay of the intersection.

## Future Traffic

Figure 3 shows the existing traffic volumes and LOS for each of these intersections as well as projected average annual daily traffic (AADT) for 2030. Fehr & Peers calculated the projected AADT using the existing AADT as reported by UDOT and the growth rate anticipated by the WFRC model.

Table 2.3 2030 p.m. Peak Hour LOS and Delay					
Intersection	Worst Approach			Overall Intersection	
	Approach	LOS	Delay	LOS	Avg. Delay <sup>1</sup>
2100 South / 900 East*	Blank <sup>2</sup>			F	> 80
2100 South / 700 East*				F	> 80
2100 South / State Street*				F	> 80
Sugarmont / 900 East	Westbound	F	> 50	F	> 80
Simpson / 700 East	Westbound	F	> 50	F	> 80
Truman / State Street	Westbound	F	> 50	F	> 80
* - Indicates a signalized intersection 1. Intersection LOS and delay (seconds/vehicle) values represent the overall intersection average. Source: Fehr & Peers, April 2007 2. Approach LOS is typically not calculated for signalized intersections, however for unsignalized intersections approach LOS is shown.					

Table 2.3 shows that by 2030, all of the signalized and unsignalized intersections will operate under failing conditions (LOS F) during peak hours under no build conditions. The traffic volumes projected for the area will use all of the existing capacity of the roadways and present an additional demand on the network.



## Figure 3: Existing and Future Traffic Conditions

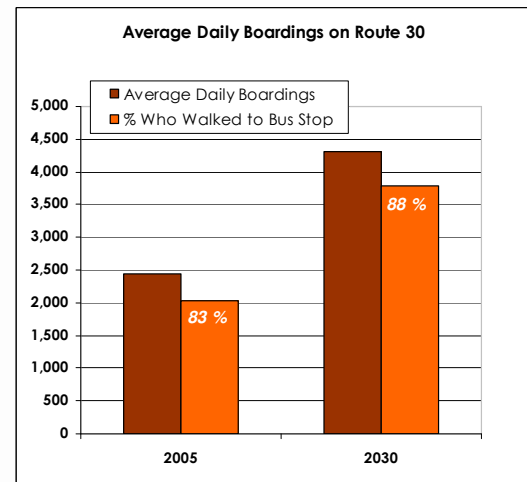
This figure includes everything from the study area map plus what Lynn produced for traffic, which shows existing and future LOS at intersections, as well as ADT's.

## 2.4. Transit Routes and Usage

The existing transit facilities in the study area include several bus routes and a north/south TRAX Light Rail Transit (LRT) line. UTA currently operates Route 21 along 2100 South; prior to a recent Countywide re-design of the entire UTA bus system, this route was formerly Route 30. Because this study began before the re-design of the bus route network, the data below reflects Route 30 at 30-minute headways. The new Route 21 is the only east/west transit line within the study area, and is the primary route used by transit riders to access locations at either end of the study area.

Route 21 currently operates on a 15-minute headway schedule. The former Route 30 operated at 30-minute headways. Route 30 carried approximately 15,000 passengers for the year in 2006, down from approximately 20,000 passengers in 2005.

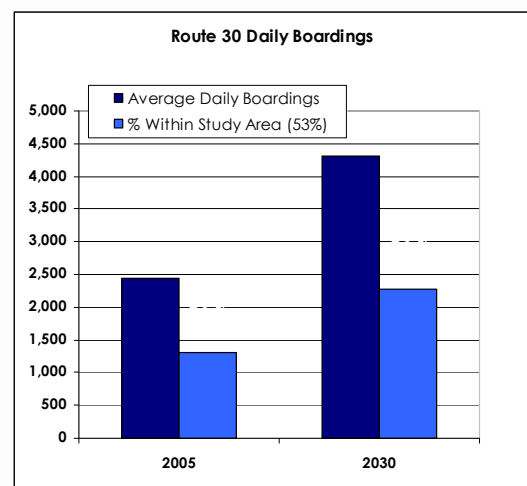
According to the WFRC Travel Demand Model, most transit trips accessed this route by walking. The chart to the right shows the average 2005 daily boardings along the entire Route 30 and projected boardings for 2030. Approximately 88 percent of these riders access the bus by walking to a stop. The chart below right illustrates the number of riders (53 percent) on Route 30 that board the bus only from stops within the study area.



TRAX LRT is a major transit mode in the region, facilitating trips to and from downtown Salt Lake City and the University of Utah. Within the study area there is one park and ride lot located at the Central Pointe TRAX station with 57 parking spaces available. Approximately 1,800 passengers board TRAX at Central Pointe each day.

### Future Transit Routes and Predicted Usage

In August of 2007, UTA introduced a new re-designed region-wide bus network; Route 21 (formerly Route 30), a benchmark for comparison of alternatives, changed from 30-minute headways to 15-minute headways. Based on this service change, the WFRC travel demand model predicts transit usage on the new Route 21 to increase by approximately 2,000 daily riders between 2005 and 2030. Also planned in the study area by 2030 is a Bus Rapid Transit (BRT) line on 1300 East.



## 2.5. Non-motorized Travel

Bicycle facilities within the study area include signed shared roadways on 1700 South to West Temple, 600 East, and 2700 South. Formal bicycle lanes currently exist on 1700 South (west of West Temple), 300 East, 700 East and Sugarmont. Pedestrian facilities throughout the study area include sidewalks, marked pedestrian crosswalks on the entire street network, and signal countdown timers at some locations.

# Sugar House Transit Corridor



## Plans for future facilities

The Salt Lake City Bicycle and Pedestrian Plan shows proposed facilities on the following roadways:

- Main Street
- 800 East, connecting to Fairmont Park
- 900 East
- 1100 East continuing to Highland Drive

In addition to on-street facilities, a multi-use trail is proposed to connect the mouth of Parley's Canyon on the east side of the Salt Lake Valley to the Jordan River Parkway in the middle of the valley. This connection extends through the study area. The Parley's Trail Master Plan includes the use of the existing UTA right-of-way for a linear park and trail.



## 2.6. Travel Demand

### Current Travel Demand

Based on the socio-economic and trip pattern information contained in the WFRC travel demand model, trip tables are developed that estimate travel demand between various locations. The model can estimate who is traveling where, by which mode and for what purpose. Within the study area, both motorized and non-motorized trips generate approximately 15,000 trips daily. The majority of the trips that begin or end in Sugar House are to and from downtown Salt Lake City, the University of Utah area, and the Holladay area. Table 2.4 shows a summary of existing and future travel demand projections for trips to and from the Sugar House study area. The numbers reported represent daily person trips.

Table 2.4 Regional Travel Demand to and from the Sugar House Study Area			
	2006 Daily Trips	2030 Daily Trips	% Change
Within Sugar House	15,200	23,000	51%
Salt Lake City CBD	39,400	57,100	45%
East SLC/University Area	27,700	29,800	8%
Western Salt Lake City	16,400	22,500	37%
Mid-Valley East	52,700	70,600	34%
Mid-Valley West	16,400	34,000	107%
South Valley East	11,500	20,600	79%
South Valley West	14,700	19,700	34%
Source: Fehr & Peers, taken from the WFRC Travel Demand Model, V6.0 Beta April 2007			

### Future Travel Demand

Fehr & Peers assessed future travel demand by correlating demographic and land use patterns with the increased number of trips generated by these changes between 2006 and 2030. The model used to calculate these trips also accounts for major transportation projects that are planned to be built by 2030, not including any proposals that might arise as a part of the Sugar House Transit Corridor study.



Table 2.4 above along with **Figure 4** below shows the highest demand for travel will be between the study area and the Holladay area, and between the study area and downtown Salt Lake City. West Valley City, the second largest city in the state, is the largest growth market between 2005 and 2030, and also shows strong trip attraction.



**Figure 4: Existing and Future Travel Demand**

This one should be done and ready to go into the report as is, except for changing the figure number.

## 3. PURPOSE AND NEED AND MARKET OBJECTIVES

### 3.1. Purpose and Need

The entire Wasatch Front has experienced tremendous growth over the last two decades. While residential growth has spread to more suburban and rural areas, densification and redevelopment has occurred in the heart of the Salt Lake Valley, including Salt Lake City and South Salt Lake. The infrastructure throughout the study area consists of a network of existing roadways, bound by homes and businesses, which often cannot keep pace with the increased demand for local and regional travel.

The Sugar House community has a unique identity in Salt Lake City. This small urban area is more walkable than the average location in the Salt Lake Valley, with residences, schools, and businesses located in close proximity to one another. Residents take pride in their historic and traditional neighborhoods, which include a mix of residential, small retail and office uses. To reflect these values, Salt Lake City has adopted a Sugar House Community Master Plan to preserve the character of the Sugar House neighborhood, encouraging mixed-use development and transportation choices beyond automobile travel.

Further west, the portion of South Salt Lake that lies within the study area consists of older historic and traditional neighborhoods as well. These neighborhoods are home to well established life-long residents of South Salt Lake. The largest concentration of commercial square footage located within the study area is in South Salt Lake and borders the residential neighborhoods to the west.

#### Purpose

The purpose of this project is to increase mobility, reduce congestion, and preserve the cultural identity within the Sugar House area of Salt Lake City and South Salt Lake. The project will increase multi-modal trip options to reduce automobile travel, reduce congestion and improve air quality. The purpose is also to increase mobility for short range destinations, especially pedestrian trips, as well as provide a connection to the regional transportation system. The project will preserve and enhance the unique community identity with a transportation improvement that is pedestrian friendly, compatible with surrounding neighborhoods, and supports economic and community redevelopment.

#### Need

The need for a transit project in the Sugar House area is based on several factors including traffic congestion, community redevelopment, public desire, and context sensitivity. More specifically, these factors are:

- *Provide an alternative to congested 2100 South*  
Traffic analysis shows that by 2030 traffic congestion will worsen during peak hours on 2100 South, the major east/west arterial within the study area. The traffic volumes projected for the area will use all of the existing capacity of every roadway within the study area and present an additional demand on the entire street network.
- *Integrate multi-modal travel choices*  
The Parley's Rail, Trail and Tunnel Coalition (PRATT) recently completed a master plan that includes the construction of a segment of their east-west trail project within the UTA right-of-way. Both Salt Lake City and South Salt Lake have expressed their desire to see this trail incorporated alongside a transit-way to function as an urban linear park. By incorporating the PRATT trail





program into the transit-way, the entire project will promote the integration of transit, bicycle and pedestrian travel, which will enhance the reduction of automobile traffic in Sugar House.

- *Support community redevelopment*

Two major redevelopment projects (Market Station and the Granite Block) are proposed within the study area, adding an estimated 900 dwelling units and over 10,000 square feet of commercial space. In addition, Westminster College anticipates expansion that will add to their overall estimate of 400 daily transit users. Based on the demographic analysis discussed in Chapter 2, the estimated population growth in the study area will grow by 8% in 2030 to approximately 36,000. Employment will grow by 30% by 2030, to approximately 54,000 jobs in the study area. An east/west transit solution is needed to minimize the automobile trips generated by overall population and employment growth. A major transit corridor will also reduce the additional automobile trips created by redevelopment, densification and expansion as well as provide opportunities for residents to live and work within the study area.

- *Enhance and support community goals*

Residents have expressed that the transit project must be sensitive to the existing context of the Sugar House community and the residential neighborhoods of South Salt Lake. A major transit project within the study area must be in keeping with the historic and small urban character of Sugar House, while protecting adjacent homes from potential impacts.

Some key community oriented project characteristics were established by both Salt Lake City and South Salt Lake at the outset of the project. These include slow speeds, frequent stops, accommodation of a trail, standardized pedestrian crossings, and creative funding of the project. The ability of the project to accomplish these community goals is an important consideration in the overall evaluation of the project. Through input at the first public meeting these goals were supported and validated.

## Public Meeting #1

### Goals

*Contribute to development of project goals and market objectives*

*Introduce transit options and provide education*

### Outcomes

*Approximately 80 participants*

*Validation of key project characteristics*

*Forty-five written comments in support of adding east/west transit facility*

*Twenty-one comments specifically addressed the desire for a trail alongside the transit option.*

## 3.2. Market Objectives

There is a growing need for east/west travel throughout the Salt Lake Valley. Major transportation improvement projects in the region have focused on north/south travel over the last several years, resulting in neglected and worsening traffic conditions on major east/west routes. Based on the data collected for existing and future conditions as well as the input received from the community to date, the following market objectives for transit service are proposed:





## **Market Objective 1: Intra – Sugar House trips**

Intra-Sugar House trips consist of shorter trips within the study area, and will consist of work, school and ‘errand’ type trips between stops along the 2-mile corridor. According to the WFRC Regional Travel Demand model, the total predicted travel within the study area for 2030 is 23,000 trips, which is 51% higher when compared to current conditions.

## **Market Objective 2: Regional Connection Trips**

Regional connection trips consist of trips made to access the regional transit system, either at the Central Pointe Station, or to other bus routes serving the area. These trips are anticipated to be for work or school purposes, serving downtown and the University, as well as the growing western part of the Salt Lake Valley. Major connection points would be:

- *TRAX, Bus and BRT Trips*  
In 2005, 56% of all transit trips within the study area were made on TRAX. In 2030, 48% of transit trips are predicted to take TRAX, while 27% of transit users will take BRT, which is expected to be completed along 1300 East by 2030.
- *Regional trips for work purposes.*  
Jobs are predicted to grow by approximately 30% within the study area, which will ultimately draw employees to the area from a wide range of locations throughout the region. In 2005, approximately 5.8% of all transit trips were made for work purposes. By 2030, this percent is predicted to grow to an estimated 14%.
- *Regional trips for school purposes.*  
Salt Lake Community College, Westminster College, the Granite Education Center, and Kearns/St. Anne’s Elementary School are all within the study area and each draw students region-wide. The University of Utah is located not far from the study area and is another significant trip generator. In 2005, 13.2% of all transit trips were made for school purposes. This percent will grow to an estimated 16%.

Strong travel demand between the Salt Lake City Central Business District (CBD) and the western part of the Salt Lake Valley will create future regional sub-markets for the Sugar House Transit project. Between the Sugar House study area and the CBD, trips are predicted to grow by approximately 45%, to approximately 57,000 trips overall. Between Sugar House and western Salt Lake Valley, the demand for trips is expected to double, growing from approximately 16,000 to 34,000 by 2030.

## **Market Objective 3: Multi-modal Trips**

WFRC estimates that approximately 5.6% of all trips within the study area are non-motorized and this number is predicted to remain nearly the same in 2030 (5%). Compared with regional averages of approximately 2%, this percentage reflects a tendency towards non-motorized multi-modal transportation. In addition, over 85% of transit trips within the study area are accessed by walking. With concurrent discussions about the Parley’s Trail and the community desire to locate this trail within the UTA right-of-way, non-motorized multi-modal travel becomes more achievable with the implementation of an additional east/west transit option.

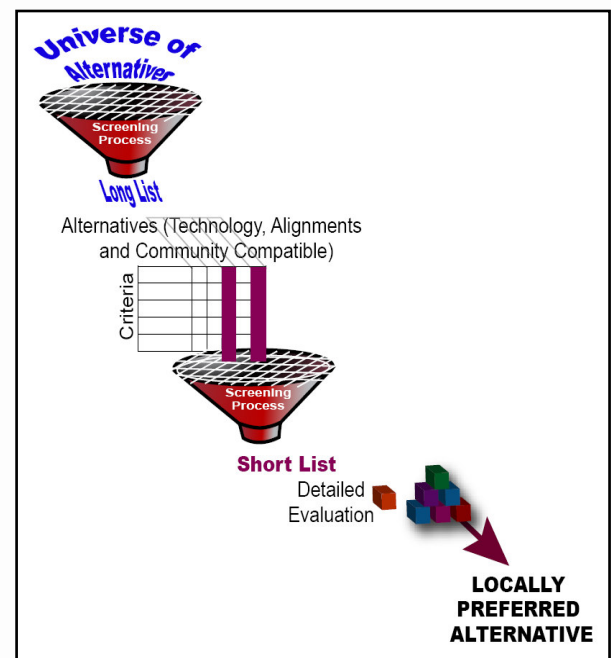
## 4. ALTERNATIVES DEVELOPMENT

### 4.1. Process

The process to arrive at a short list of alternatives for detailed consideration consisted of:

- Development of the universe of alternatives including all possible modes and alignments
- First level screening based on broad qualitative criteria to arrive at a long list of alternatives
- Second level screening based on a narrower list of qualitative criteria to arrive at a short list of alternatives
- Third level screening based on both quantitative and qualitative criteria to arrive at the Locally Preferred Alternative (LPA) (discussed in Section 5 of this report).

### 4.2. First Level Screening - Universe to Long List Alternatives



#### Definition of Universe of Alternatives

The first step of alternative development involved defining a universe of alternatives, consisting of every possible transit technology and alignment location within the study area. The following technologies were considered in the universe of alternatives:

- High Speed Train
- Magnetic Levitation Transport (MAG-LEV)
- Gondola / Aerial Tramway
- Monorail
- Commuter Rail
- Diesel Multiple Units
- Light Rail
- Streetcar
- Historic Trolley
- Group Rapid Transit (GRT) / People Mover
- Personal Rapid Transit (PRT)
- Bus

The following alignments within the study area were included in the universe of alternatives:

- UTA right-of-way at approximately 2400 South
- 2100 South
- Local Streets

## Screening Criteria

The first level screening criteria used to evaluate the universe of alternatives were comprised of logical assumptions that would eliminate technologies and alignments that were inappropriate for application to the Sugar House corridor and did not otherwise meet the purpose and need for the study. These criteria were only qualitative in nature, and included:

- The mode and alignments fit within the context of the community.
- The technology is proven and has been implemented in other similar communities.

## Results and Alternatives Moved Forward

Table 4.1 shows the results of this screening process for technologies.

<b>Table 4.1 Level 1 Screening Results</b>			
<b>Alternative</b>	<b>Description</b>	<b>Proven Technology</b>	<b>Fits Local Context</b>
<b>High Speed Train</b>	High speed regional rail serving long distances.	Yes	No
<b>MAG-LEV</b>	High speed trains that hover magnetically over rails to decrease friction and increase speed. Used exclusively for regional transport.	Yes	No
<b>Gondola</b>	A car or set of cars suspended by an overhead cable.	Yes	No
<b>Monorail</b>	An elevated railway running on a single center track.	Yes	No
<b>Commuter Rail</b>	High speed, less frequent stops, designed to carry many people for longer distances.	Yes	No
<b>Diesel Multiple Units</b>	Operate with an internal diesel motor that requires no overhead wires.	Yes	No
<b>Light Rail</b>	Sub-regional rail providing more frequent stops than commuter rail, moderate speeds and medium distances.	Yes	Yes
<b>Streetcar</b>	Slow speed, more frequent stop rail, serving neighborhood and sub-regional riders.	Yes	Yes
<b>Historic Trolley</b>	Slow speed, more frequent stop rail, serving neighborhood and sub-regional riders. In addition, they can impart an identity or history in a particular area.	Yes	Yes



Table 4.1 Level 1 Screening Results			
Alternative	Description	Proven Technology	Fits Local Context
<b>Group Rapid Transit</b>	GRT and people movers offer transportation on a fixed guideway. GRT is usually on-demand service, while people movers are more typically scheduled service.	<b>Yes</b>	<b>Yes</b>
<b>Personal Rapid Transit</b>	A small car with limited capacity that operates on a fixed guideway to pre-determined locations.	No	Yes
<b>Bus</b>	The most common technology for mass transit, and the most prevalent in the Salt Lake Valley.	<b>Yes</b>	<b>Yes</b>
Source: Fehr & Peers (2007)			

This analysis shows that the following technologies met both of the Level 1 screening criteria, and were further analyzed within the long list of alternatives:

- Light Rail
- Streetcar
- Historic Trolley
- Group Rapid Transit
- Bus

Given these alternative technologies, the potential alignments within the study area where these could be implemented included:

- UTA right-of-way at approximately 2400 South. This corridor consists of an existing, abandoned right-of-way owned by UTA.
- 2100 South. This corridor consists of a four-lane roadway with high levels of traffic and many access points to businesses.
- Local Streets. These streets range from 32 feet to 44 feet wide and are typically one lane in each direction.

## 4.3. Long List of Alternatives

Based on the application of these criteria, the following alternatives were forwarded for further analysis in a second level screening exercise:

- *Improvement to Existing Bus Service on 2100 South*  
Bus service was recently increased to every 15 minutes, which took effect in August 2007. This alternative would also consider revising stop locations, increasing amenities at stops, alternative



and more attractive bus technology options (for example low floor), and better accommodation of bicycles. This alternative is considered the Baseline Alternative.

- *Light Rail Transit (LRT) on 2100 South*  
Construction of a light rail line within the current right-of-way on 2100 South connecting the Central Pointe TRAX Station and Sugar House Center.
- *Streetcar/Historic Trolley on 2100 South*  
Construction of a streetcar line on 2100 South, connecting the Central Pointe TRAX Station and Sugar House Center.
- *Bus Rapid Transit (BRT) on 2100 South*  
Construction of BRT on 2100 South. BRT requires a separate lane dedicated to bus-only traffic.
- *LRT in UTA right-of-way*  
Construction and operation of LRT in UTA right-of-way.
- *Streetcar/Historic Trolley in UTA right-of-way*  
Construction and operation of streetcar within the existing UTA right-of-way.
- *BRT in UTA right-of-way*  
Construction and operation of BRT within the existing UTA right-of-way.

Local streets were dropped from consideration as a corridor in the build alternative due to frequent non-signalized intersections, disruption to the local residential traffic and the inability to accommodate significant transit improvements within the narrow cross section of the streets. With regard to utilizing local streets for a transportation systems management alternative (TSM), which would seek to increase capacity through targeted, small-scale investments in technology and incremental infrastructure improvements, the unsignalized intersections and local street speed limits would not allow for improvements to the existing public transit system. Also, neither the build nor the TSM alternative operating on local streets meets the Community Desired Characteristics for the project.

## 4.4. Second Level Screening - Long List to Short List of Alternatives

### Level 2 Screening Criteria

The following evaluation criteria are based on the purpose and the need statements that were developed for the Sugar House Transit Corridor, as well as the Community Developed Transit Characteristics established at the outset of the project and shown in Section 1.0 of this document. The following criteria were used to screen the long list of alternatives in order to produce a short list of alternatives:

- *Maintains conditions on 2100 South*  
Traffic data collection has indicated that traffic will worsen in the future at several locations along 2100 South. Alternatives were evaluated based on their anticipated ability to maintain conditions on 2100 South.
- *Minimizes right-of-way impacts*



As part of any future improvements to 2100 South, right-of-way impacts must be minimized to maintain traffic flow - as well as to preserve businesses and access - and ultimately the character of the Sugar House community. These criteria include the preservation of historic structures.

- *Serves neighborhoods with frequent stops*  
The community has expressed the desire for a neighborhood service that has frequent stops, slower speeds, and minimizes noise impacts. Alternatives were evaluated on their ability to provide this type of service.
- *Fits the context and culture of Sugar House and South Salt Lake neighborhoods*  
The transit solution must be compatible with the Sugar House community and South Salt Lake neighborhoods. Alternatives were evaluated based on their ability to maintain or enhance the existing character within the study area.
- *Able to be designed for efficient pedestrian access*  
Pedestrians must be able to easily access stations and stops, which means the transit alternative must be conveniently located to pedestrian generators. Pedestrian access to the vehicle was also a consideration.
- *Safety*  
In the context of a long list evaluation, safety refers to the interface of the transit alternative with activities outside of the transit vehicle. For example, if a trail existed adjacent to the transit corridor, how well could the chosen technology respond to pedestrians in close proximity?
- *Integration with traffic operations along streets and at street crossings*  
The transit alternative will need to be integrated with traffic at both crossings and with traffic flow if it is a street running alternative. Alternatives were evaluated for their potential impact on traffic operations.

## **Screening Results and Short List of Alternatives**

Table 4.2 illustrates the results of the level 2 screening process. As shown in Table 4.2, the second level screening process eliminated the following alternatives:

- Bus Rapid Transit on 2100 South
- Light Rail / Streetcar / Trolley on 2100 South
- Group Rapid Transit on the UTA right-of-way

The final short list of alternatives is fully explained in Section 5. The list consists of:

- Bus Service Upgrades on 2100 South
- Light Rail on the UTA right-of-way
- Streetcar / Historic Trolley on the UTA right-of-way
- Bus Rapid Transit on the UTA right-of-way



Table 4.2 Level 2 Screening Results									
	2100 South Congestion	Available ROW	Service	Context Sensitive	Ped. Access	Safety	Traffic Operations	Tally	Rank
<i>2100 South Options</i>									
Bus Service Upgrades (Baseline)	/	/	+	/	/	/	/	1 + 6 / 0 x	4
Bus Rapid Transit	X	⊗	/	/	/	/	/	⊗	⊗
Light Rail/ Streetcar/ Trolley*	X	⊗	/	+	/	/	/	⊗	⊗
<i>Right-of-Way Options</i>									
Light Rail	/	+	+	X	+	/	X	3 + 2 / 2 x	3
Streetcar/ Historic Trolley	/	+	+	+	+	/	X	4 + 2 / 1 x	1
Group Rapid Transit**	/	+	+	+	+	⊗	⊗	⊗	⊗
Bus Rapid Transit	/	+	+	/	+	/	X	3 + 3 / 1 x	2
<p>* Though light rail, streetcar, and trolley each have unique characteristics, when considered in the 2100 South ROW they are all similarly disadvantaged, therefore, they have not been separately considered in the Level 2 screening process.</p> <p>**Group Rapid Transit is primarily a driverless system and therefore poses significant problems for safety and traffic operations.</p> <p>Source: Fehr &amp; Peers (2007)</p>									

- +
  - /
  - X
  - ⊗
- = Improves/Compatible  
= Average/No Impact  
= Worsens/Incompatible  
= Fatal Flaw

## 5. ALTERNATIVES ANALYSIS

### 5.1. Short List Alternatives Detailed Description

The short list of alternatives consists of a baseline alternative (the best that can be done without a major capital investment) and three build alternatives. Each of the build alternatives are within the UTA right-of-way, although attributes and service characteristics differ. For the purposes of this study and consistency in comparison of alternatives, the termini will be the same for each build alternative and will be:

- Western terminus: Central Pointe TRAX Station (250 West)
- Eastern terminus: Granite Block Redevelopment Area (1050 East)

Each of the build alternatives is listed below with a brief explanation of how each would function in the corridor. Each alternative will essentially function as a shuttle route between the two termini, which means that service will run between the two points. The study team initially discussed interlining and rail alternatives with the existing TRAX system at the Central Pointe Station. Through further discussions with UTA and its rail service operations, the operational constraints of several light rail lines, plus an additional rail service converging on this section, eliminated this from further discussion at this time.

#### Alternative A: Baseline

The baseline alternative refers to improvements made to the existing transit system without major investments. This baseline alternative would make only modest upgrades to the local transit infrastructure and would require the lowest level of capital investment of the options under consideration. Upgrades would be performed using TSM principles. There would be no additional capacity generated by the large-scale provision of new infrastructure.

In the past, UTA operated fixed-route bus service (now called Route 21) on 2100 South between the Central Pointe TRAX Station (250 West) and Foothill Boulevard (2700 East), on 30-minute headways. UTA recently increased frequency from 30 minutes to 15 minutes. Stops are currently approximately every other block and would remain so in the baseline alternative. The baseline alternative for this study retains 15-minute frequencies and adds other features to improve overall performance. These include:

- Transit signal priority
- Streamlined transfers for riders
- Improved rider facilities (shelters, benches, etc)
- Real-time audio and visual traveler information (“next bus in five minutes...”)
- Schedules and route maps posted at bus stops
- Route terminals would remain outside of the Sugar House corridor and no transit-related use would be made of the existing UTA right-of-way.
- Transfer to TRAX would be available at the Central Pointe TRAX station



Service would be provided by conventional transit buses operating in mixed traffic as per current operations. Service frequencies would be adjusted as necessary to accommodate ridership changes occurring over time.

Buses would be diesel-powered or could utilize alternative fuels. Frequencies less than every 15 minutes along the 2100 South corridor would not be justified due to the rest of the bus and light rail system operating on 15 minute frequencies.

Route 21 buses presently are scheduled at 15 minute headways in each direction between Central Pointe and 2100 South/1100 East. Buses would continue to operate in mixed traffic and would be subject to the same delays as other street traffic. As future traffic conditions on 2100 South worsen over time, transit service quality will subsequently deteriorate.

## **Alternative B: Bus Rapid Transit (BRT)**

Bus Rapid Transit employs rubber-tire transit vehicles in reserved or dedicated lanes to provide a high level of service in comparison to ordinary bus operations. BRT would function as a shuttle system, as described above, or could be integrated into the planned BRT on Highland Drive, shown in Phase 3 of the WFRC Long Range Plan. UTA is currently designing and planning to operate a BRT line within the 3500 South right-of-way in West Valley City. BRT systems are in operation in Los Angeles, Ottawa and Las Vegas. BRT has the following general characteristics:



- Fuel-powered, either by diesel or alternative fuel sources
- Stop spacing typically 1/2-mile to 1 1/2-mile – in the Sugar House Transit Corridor stops spaced every three blocks
- Rubber-tire vehicles
- General capital cost of approximately \$20 million per busway mile
- Station boardings
- Estimated running time: 8.5 minutes, assuming no delays at road crossings
- Infrastructure may include platforms, stations structures, signal pre-emption, and off-vehicle fare collection
- Vehicles could be 'branded' buses, or rubber tire trolley shuttles, and could be either diesel powered or use alternative fuels

BRT will require an investment by UTA in physical plant and technical infrastructure and represents an incremental increase in the minimal level of investment associated with the baseline. Because of the small number of vehicles required for this length of corridor, it is not anticipated that a new bus maintenance facility would be needed and that special BRT vehicles, if purchased, would be stored and serviced at one of the existing UTA bus maintenance facilities.

## **Alternative C: Streetcar/Trolley**

Streetcar and Historic Trolley are considered together because they would provide identical service with the only difference being in vehicle design. A streetcar or trolley system would provide a shuttle-type service within the study area and would not be interlined with any other existing or planned rail transit systems, except with a transfer between modes. Examples of a modern streetcar include Tacoma and Portland. Vintage trolley systems are in operation in Little Rock and New Orleans. The modern streetcar and vintage trolley have the following general characteristics:

- Powered by electricity
- Steel wheels on tracks
- Curbside boarding possible, smaller stations than typical LRT
- Frequent stops – in the Sugar House corridor stops spaced approximately every two blocks
- General range of \$20 - \$30 million per mile in capital infrastructure costs
- General range of \$1 - \$3 million per vehicle (new)
- Estimated running time of 9 minutes, assuming no delay at intersections
- Single track, with double track at one location to allow trains to pass near the center of the alignment



The Streetcar/Historic Trolley options employ comparatively small rail cars of moderate performance to provide a relatively high level (i.e. high frequency, high capacity) of transit service. Dedicated right-of-way corridors are often used in Streetcar/Historic Trolley applications, similar to the Sugar House Transit Corridor, but street running streetcar applications in mixed traffic are also often employed to bring transit service into tight urban settings. Street running operations along 2100 South in the Sugar House Transit Corridor has been eliminated due to the added congestion and limited right-of-way along 2100 South.

Modern streetcars are a new technology optimized to operate in an urban setting. Top speed is kept relatively low while the ability to quickly accelerate and brake is maintained. Car body width and length are constrained to potentially accommodate a narrow street-running urban environment. Vehicle turning capability is typically better than for light rail vehicles (LRV) reflecting the shorter car bodies and more flexible running gears utilized.

Historic trolleys date from the “golden age” of electric railway traction in the first portion of the 20<sup>th</sup> century. These vehicles are largely authentic, in that much of the electrical and mechanical equipment is original or at least of the same vintage as the car itself. Car structures are usually a mix of original and replacement construction.



Historic trolleys can also be “replica” cars. Such cars typically combine new replica car bodies with vintage electrical and mechanical parts to create a “new” car which looks and performs much like a car built many decades earlier. Performance characteristics of historic trolleys can vary widely, depending upon the pedigree and condition of the car and the original design employed.

Historic streetcars and trolleys are generally simpler and less sophisticated than modern streetcars, but also carry with them the potentially costly operations and maintenance issues related to equipment that is no longer manufactured or serviced. The key distinctions between streetcars, trolleys and light rail vehicles are evident in car size, passenger capacity, vehicle performance and reliability, and the on-board environment. Table 5.1 shows typical values associated with each type of car.

<b>Table 5.1</b> <b>Comparison of Rail Vehicles</b>			
Characteristic	Historic or Replica Trolley	Modern Streetcar	Light Rail Vehicle
Car Length	40'-50'	67' and longer	88.5'
Car Width	8.0'-8.5'	8.0-8.5'	8'9"
Capacity	50-80	90-100	125-140
Top Speed	20-40 mph	30-40 mph	55 mph
Acceleration/Braking	~2.0 mphps	~2.5 mphps	2.4 mphps
Min. Horizontal Curve	40' – 50'	60'	82' (25 m)
Air Conditioning	Varies	Yes	Yes
Passenger Information Systems	Varies	Yes	Yes
ADA Compliance	Difficult to achieve with true vintage car; mandatory for replica car	Mandatory	Mandatory
Reliability	Varies with age and condition of car and its components	Good	Good

## **Alternative D: Light Rail Transit (LRT)**

LRT exists in the Salt Lake Valley with the UTA TRAX lines. Proposed LRT in the UTA right-of-way would connect to the north/south TRAX line at Central Pointe. LRT employs large, high performance rail cars (typically electrically powered) in combination with reserved or dedicated trackage to provide a high level of transit service. Characteristics include:

- Powered by electricity
- Able to increase capacity by adding units
- Stops spaced every ½-mile to 1½-mile – in the Sugar House Transit Corridor stops spaced every four blocks
- Board at stations
- Steel wheels and tracks
- General range of \$25 - \$30 million in capital infrastructure costs per mile
- General range of \$3 - \$4 million per vehicle
- Estimated running time of approximately 7 minutes, assuming no delays at intersections
- Infrastructure includes platforms, station structures, substations, communications equipment and maintenance shops

The stop spacing for light rail is based on an average between existing urban and suburban service in Salt Lake City. In suburban areas where trains operate in a fully dedicated right-of-way and can accelerate to full speed (55 mph) between stops, station spacing is at least one to one and a half miles apart. In the Salt Lake City CBD where maximum speeds are not possible, stops are every other block. Because Sugar House is a small urban area, stops would be more frequent.

Table 5.2 shows specific service attributes for each alternative. Figure 5 graphically represents each alternative.



# Sugar House Transit Corridor



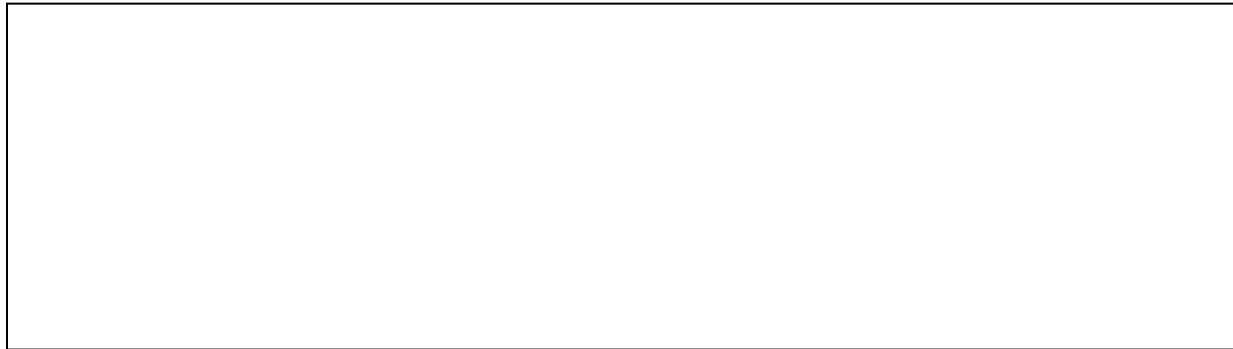
**Table 5.2**  
**Short List Alternatives – General Design Characteristics Summary**

	Baseline Alternative - Bus	Bus Rapid Transit	Streetcar/Historic Trolley	Light Rail
<b>Alignment</b>	2100 South	UTA Right-of-way (~ 2250 South)	UTA Right-of-way (~ 2250 South)	UTA Right-of-way (~ 2250 South)
<b>Termini</b>	Normal bus route end of line stops	<ul style="list-style-type: none"> <li>Central Pointe TRAX</li> <li>End of UTA right-of-way</li> <li>Possibility to connect to future 1300 E. BRT</li> </ul>	<ul style="list-style-type: none"> <li>Central Pointe TRAX</li> <li>End of UTA right-of-way</li> </ul>	<ul style="list-style-type: none"> <li>Central Pointe TRAX</li> <li>End of UTA right-of-way</li> </ul>
<b>Stations/Stops</b>	<b>On-Street Every 2 blocks</b>	<b>Designated Approx. every 2 blocks:</b> <ul style="list-style-type: none"> <li>Central Pointe TRAX</li> <li>Market Station (approx. State Street)</li> <li>Kearns/St. Anne's (450 East)</li> <li>700 East</li> <li>900 East</li> <li>Granite Block</li> </ul>	<b>Designated Approx. every 2 blocks:</b> <ul style="list-style-type: none"> <li>Central Pointe TRAX</li> <li>Market Station (approx. State Street)</li> <li>Kearns/St. Anne's (450 East)</li> <li>700 East</li> <li>900 East</li> <li>Granite Block</li> </ul>	<b>Designated Approx. every 4 blocks:</b> <ul style="list-style-type: none"> <li>Central Pointe TRAX</li> <li>Market Station (approx. State Street)</li> <li>Kearns/St. Anne's (450 East)</li> <li>700 East</li> <li>Granite Block</li> </ul>
<b>Frequency</b>	15 minute	<ul style="list-style-type: none"> <li>15 minute peak hours</li> <li>30 minute off-peak</li> </ul>	<ul style="list-style-type: none"> <li>15 minute peak hours</li> <li>30 minute off-peak</li> </ul>	<ul style="list-style-type: none"> <li>15 minute peak hours</li> <li>30 minute off-peak</li> </ul>
<b>Service Reliability</b>	Low	High	High	High
<b>Track/Lane</b>	N/A	<ul style="list-style-type: none"> <li>Single with passing lane at approximately 450 East</li> </ul>	<ul style="list-style-type: none"> <li>Single with passing lane at approximately 450 East</li> </ul>	<ul style="list-style-type: none"> <li>Single with passing lane at approximately 450 East</li> </ul>
<b>Vehicle Attributes</b>	Enhanced bus Rubber tires	<ul style="list-style-type: none"> <li>Low floor</li> <li>Rubber tires</li> </ul>	<ul style="list-style-type: none"> <li>Low floor</li> <li>Rail-bound</li> <li>Short turn radius</li> </ul>	<ul style="list-style-type: none"> <li>High floor</li> <li>Rail-bound</li> <li>Longer turn radius</li> </ul>





Figure 5: Short List Alternatives



## 5.2. Third Level Screening Criteria

The third level of screening for the short list of alternatives consisted of a combination of quantitative and qualitative criteria. Quantitative criteria included ridership, capital cost, operations and maintenance while qualitative criteria focused on community compatibility, potential land use effects and public support.

### Ridership

Fehr & Peers used Version 6 of the WFRC Travel Demand Model to forecast changes in transit ridership patterns associated with each alternative. Each modeled scenario included road and transit networks as well as population and employment projections for 2030. Modifications to the regional travel demand model included:

- Updates to study area socio-economic data reflective of significant residential and employment developments anticipated in the near future
- Alternative-specific transit network coding that accounts for route attributes such as speed, stop locations, and headways

The ridership results used in this screening reflect the fact that the service would operate as a shuttle, with no interlining with the existing TRAX light rail system.

### Capital Cost

LTK prepared capital cost estimates drawing on their team's collective experience with road and transit construction, systems and vehicle procurements throughout the U.S. LTK developed unit costs for capital costs based on extensive and ongoing involvement in similar projects, adjusting for any special conditions unique to the specific modal alternatives and/or the Salt Lake metropolitan area, and updating as necessary to current dollars.

### Operations and Maintenance Cost

LTK prepared operating and maintenance (O&M) estimates for each alternative covering the functional categories of transportation (vehicle operations), equipment maintenance, facilities maintenance (for fixed guideways), and general and administrative expenses (including operating and service agreements, if any).

The O&M cost estimates reflect all the previous assumptions regarding vehicle operation, fare collection methods and staffing levels. Labor costs were priced at appropriate existing UTA or other Salt Lake region wage and fringe rates for equivalent positions.

### Public support

The public provided input on the project on several occasions through various means, including the open house held on April 2<sup>nd</sup> 2007. In addition, stakeholder interviews yielded valuable insights on expectations and preferences for the corridor. At the July 12<sup>th</sup> 2007 open house, the public was asked to indicate which of the four alternatives they prefer most. This was one of several criteria used to determine the Locally Preferred Alternative.

## Community and social compatibility

One measure of compatibility focused on the relationship of the alternative to the surrounding community, including broad environmental impacts, such as noise and vibration. The compatibility analysis included the following considerations:

- Does the scale of each alternative fit within the context of the community?
- Are neighborhood residents able to access stops or stations within a short walking distance?
- How will pedestrians and vehicles interact with the transit alternative at crossings?
- How will the transit alternative affect the planned Parley's Trail?
- Can the transit alternative be built without acquiring significant additional right-of-way?
- Is the transit alternative quiet and does it create vibration?

## Potential land use effects

Most discussions on transportation and land use focus on how transit-oriented development (TOD) can potentially increase ridership. However, the corollary can also be true. Evidence suggests that particular transit modes can encourage development around those transit facilities. For instance:

- Commuter rail can encourage new development, particularly around stations. Examples include the New Jersey Transit Villages, and a new sports arena in Brooklyn along New York's commuter rail line.
- Light rail can also spur new economic development. In Portland, Oregon, Tri-Met opened Interstate MAX in 2004 and within one year 51 new businesses opened along the corridor. Twenty new businesses were recipients of Portland's "storefront improvement" grants. In Salt Lake City, at least two TOD's are underway surrounding TRAX stations.
- A new streetcar line, opening in Seattle in 2007, is the impetus behind a 250-acre neighborhood revitalization, and is the focus of an emerging commercial district (*Maria Rosario, RailVolution, September 2005*).

Private sector investment and development are becoming more prevalent along fixed guideways because the guideways represent a tangible fixed investment and commitment by the public sector to improve mobility. In contrast, bus routes have greater flexibility but may attract less economic development and new construction as they represent a lower perceived level of public investment.

## 5.3. Results of Analysis and Recommendation of a Locally Preferred Alternative (LPA)

Analysis of the short list alternatives was based on the evaluation criteria for each category. Table 5.3 highlights the results of the analysis.



<b>Table 5.3</b> <b>Analysis Results for Screening Categories</b>					
	Bus on 2100 South	Bus Rapid Transit (BRT)	Modern Streetcar	Historic Trolley	Light Rail
<b>Ridership (daily users)</b>	2,100	1,800	2,300	2,300	2,200
<b>Capital Investment</b>	\$9.8 m	\$17.7 m	\$36.7 m	\$29.0 m	\$35.6 m
<b>Annual Operating Cost</b>	\$2.5 m	\$1.4 m	\$1.6 m	\$1.6 m	\$1.6 m
<b>Community Compatibility</b>	High	Medium	High	High	Low
<b>Land Use Effects</b>	Low	Medium	High	High	High
<b>Meets Travel Needs</b>	Medium	Medium	High	High	Medium
<b>Public Support</b>	Low	Medium	Very High	Very High	Medium
Note: Costs are in 2007 dollars					

At a workshop specifically designed to evaluate alternatives, the Steering Committee was asked to rank alternatives based on the technical information developed, as well as qualitative characteristics such as public support and land use effects. Ten Steering Committee members participated in the process to rank the alternatives, using the information contained in Table 5.3 and on the evaluation criteria established at the outset of the project. Steering committee members were asked to rank from 1 to 5 (5 being least desirable) the performance of each alternative based on the evaluation criteria established at the outset of the project. For qualitative criteria, definitions were given for each ranking category (1 through 5). The results from this workshop were summed to produce a total score for each alternative. The results were as follows:

<b>Table 5.4</b> <b>Aggregate Score and Ranking of Short List Alternatives</b>					
	Bus on 2100 South	Bus Rapid Transit (BRT)	Modern Streetcar	Historic Trolley	Light Rail
<b>Aggregate Score*</b>	156	199	286	253	203
<b>Rank</b>	5	4	1	2	3
*Reflects the sum of all steering committee members					

Based on the cumulative results of all of the technical screening evaluations and the results of the qualitative evaluation by the Steering Committee, the modern streetcar alternative operating in the UTA owned right-of-way was recommended as the Locally Preferred Alternative. Steering Committee members discussed why modern streetcar was preferred over historic trolley. Several justifications were made regarding this distinction, including:

- Accessibility**  
 Historic trolleys must be retrofitted to meet federal ADA accessibility standards and accommodate wheelchairs and those who are mobility impaired. In addition, the historic trolley is more difficult for bicycle users to embark and alight the vehicles, which is not in keeping with the purpose and need of this project to enhance multi-modal options.
- Capacity**  
 Passenger capacity is much greater on the modern streetcar than the historic trolley. Modern streetcars typically have 20% more capacity per car than historic trolleys. Should capacity warrant, the modern streetcar can also be operated as a double consist (two linked vehicles), whereas historic



trolleys operate as single vehicle consists only. As ridership demand increases, higher capacity vehicles increase the flexibility of system operations and would allow the system to be operated on a single track.. This single track operation plan is also in keeping with the purpose and need, which states the importance of accommodating a trail system within the right-of-way.

- *Expandability and compatibility*

Steering Committee members and Stakeholders both expressed the desire for a transit solution to be scalable and able to expand to other areas of the city as the demand increases. Historic trolley systems are typically implemented in a single area or specific corridor to identify a special type of commercial corridor or tourist attraction (Little Rock , AR, Memphis, TN). Modern streetcar technology allows the vehicles to be interlined with one another, and are more efficient in a network-type system of similar vehicles. In addition, modern streetcars can be built with similar specifications as LRT vehicles, which means separate maintenance facilities and tools may not be necessary.

## 6. THE LOCALLY PREFERRED ALTERNATIVE

### 6.1. Detailed Description

#### Route Characteristics

The Locally Preferred Alternative is a modern streetcar service operating between the Central Pointe TRAX Station and Sugar House utilizing the UTA rail right-of-way for the entire length of the route. The route length is approximately 2 miles. The route, stations and areas of possible constraints are shown in **Figure 6**. Characteristics, stations, frequency and connectivity are shown at right.

#### Ridership Refinement

Fehr & Peers developed initial ridership estimates using the officially adopted WFRC Travel Demand Model. The official model uses a standard four-step approach to travel demand modeling, the regional nature of the model tends to be less accurate at a local or small area level, as with the Sugar House Transit Corridor.

To supplement the regional model and to understand the relationship between changes in land use and its effect on transit patronage, Fehr & Peers used a Direct Ridership Modeling (DRM) approach. DRM calculates the number of potential transit riders at each station based on the types and quantities of land uses. Boardings are estimated at each station location and aggregated to

arrive at a total ridership for the entire two mile corridor.

Based on the DRM approach, an upper limit of approximately 5,000 riders per day could be assumed. This ridership assumption is based on the projected future land uses for the corridor. Under this methodology, the highest number of boardings are forecast to occur at the Granite Block redevelopment and at Market Station. These results would support the assumptions of the DRM methodology. Boardings at each station are shown in the graph to the right.

### Sugar House Streetcar

#### Characteristics

*Within the UTA right of way  
Stops 0.1-0.3 mi. apart (or approximately every other block)  
Electric power  
Steel wheels  
Some construction of stations*

#### Stations

*Granite Block  
900 East  
700 East  
Kearns/St. Anne's (450 East)  
300 East  
State Street  
Central Pointe TRAX*

#### Frequency

*Peak hour – every 15 minutes  
Off peak – every 30 minutes*

#### Connectivity

*Shared platform with TRAX at Central Pointe*

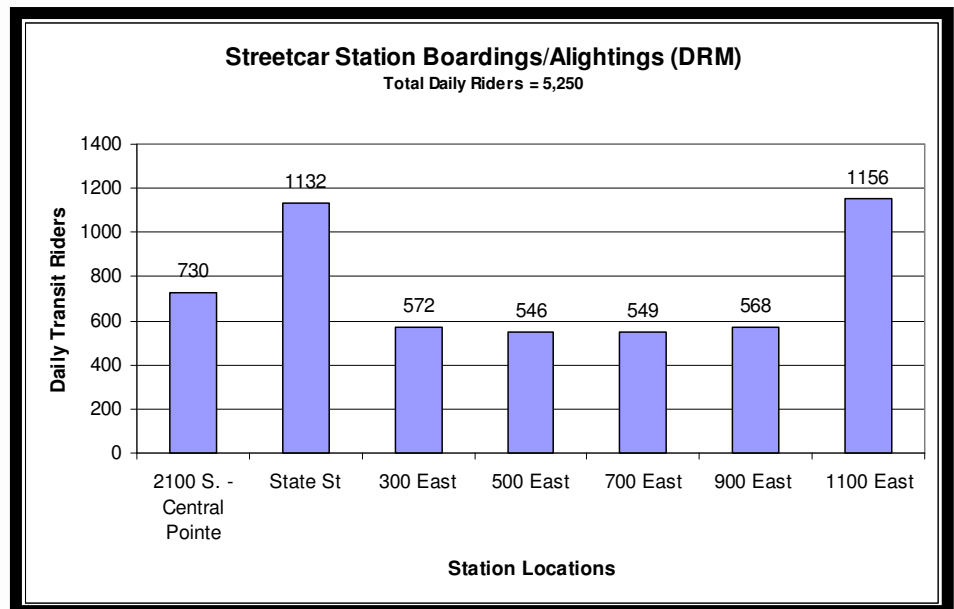






Figure 6: The Locally Preferred Alternative

General map showing terminus, stops, granite dev. and market station dev.

map showing terminus, stops, overlaid ROW and identification of “pinch points” or issues for further study (I will help with this)



## Typical Cross Section

Illustrative cross sections of the streetcar alternative are shown in **Figure 7**. These cross sections are based on varying widths of the right-of-way along the corridor as well as the accommodation of a future trail. In addition, a passing siding location is illustrated with stations and a trail to represent the maximum width that may potentially be required at one point along the right-of-way.

## Estimated Running Time

By providing dedicated transit capacity which avoids congestion on 2100 South and the local road network, the modern streetcar option will offer higher service levels and increased reliability when compared to the baseline bus option, particularly in the later years of the planning horizon as congestion on 2100 South increases. Assuming five intermediate stops and no delays at cross streets or intersections (see “Road Crossing” below), one-way running time for modern streetcars or historic trolleys is estimated at 9.0 minutes between Central Pointe TRAX Station and Sugar House (Granite Block).

## Track Connection and Technical Standards

This study strongly recommends that any rail option employed in the Sugar House Transit Corridor have a physical connection to the TRAX Line and utilize track, power and signal standards which are fully-compatible with TRAX light rail vehicles. Advantages of this approach include:

- Ability to utilize UTA rail shop facilities for car storage and routine maintenance
- Potential to operate UTA light rail vehicles for special circumstances
- Ability to provide a “one-seat ride” between the Sugar House corridor and points on the TRAX system, if feasibility is determined at a later date

Technical standards, which should follow the UTA design standards established for the TRAX light rail system, should include the following items:

- Wheel/rail compatibility
- Switches and crossings
- Traction electrification voltage (nominal and tolerances)
- Power collection/overhead line design
- Signal system
- Vehicle structural details, including anti-climbers
- Communications
- Fare collection
- ADA compliance

## Road Crossings

All 13 at-grade road crossings of the UTA rail right-of-way would remain open under this scenario. It is assumed that all crossings would be gated and signalized. Additional warning devices would be installed at the crossings at State Street and 700 East (both are 7-lane major arterials owned and operated by UDOT). UTA will coordinate with UDOT on future phases of study to address the safe crossing of these arterials by any rail vehicles.



Figure 7: Illustrative Cross Sections



Residents have raised concerns over the addition of noise from rail vehicles to the neighborhood. Additional noise and vibration analysis will occur during the environmental study to determine the level of severity of any noise generated by the vehicles or warning devices. Additional analysis will also be conducted as part of the environmental study to determine if gated and signalized crossings will be necessary at every intersection. It is assumed that no grade separation of the rail will be necessary.

## **Track Configuration**

The proposed line would be primarily a single-track system along the entire length of the corridor. Potential track configurations would be as described below:

- Central Pointe TRAX Station: Double track connection for through service or single-track non-revenue connection with a separate platform track(s) for both Central Pointe TRAX Station and Sugar House shuttle trains.
- Curve east of Central Pointe TRAX Station to a point west of West Temple Crossing: Double track, if used, would extend completely around this curve and extend for a short distance onto the next tangent, ending before crossing West Temple. Otherwise, the line would be single track for the entire distance.
- Point west of West Temple Crossing to 500 East Crossing: Single track throughout.
- 500 East Crossing to 700 East Crossing: A passing siding would be located in this segment to allow rail cars traveling in opposite directions to pass. Actual length will be determined at the preliminary engineering phase.
- 700 East Crossing to approximately 1000 East: Single track throughout
- East of approximately 1000 East to Highland Drive: The proposed Sugar House terminal will be located at the end of the UTA right-of-way (near Highland Drive) in the vicinity of the planned Granite Block development. For conceptual design and cost estimating, a simple two-track terminal with a center platform has been assumed. Platform length would be sufficient to handle two cars on each track.

## 6.2. Preliminary Assessment of Effects on Traffic

A preliminary review of traffic conditions near the State Street and 700 East crossings was undertaken to understand the potential effects of operating a rail vehicle at mid-block on these arterials. Fehr & Peers used VISSIM traffic modeling software to illustrate the results obtained during the initial data-gathering phase of this project. The results shown below represent only a preliminary traffic analysis and met the needs of this study. Additional traffic analysis will be needed for the environmental phase of this project. Comprehensive traffic impacts, as well as mitigation strategies, will be explored in the environmental study.

### **Modeling of Traffic Conditions with Streetcar**

In order to model the potential traffic impacts of streetcar at the crossing locations, the transit line was assumed to have the following characteristics:

- Gated crossings where the streetcar crosses State Street and 700 East
- Streetcar operating speed of 15 miles per hour

Table 6.1 shows the LOS and average delay results for each study intersection.

<b>Table 6.1</b>					
<b>2007 Conditions + Streetcar PM Peak Hour LOS and Delay</b>					
Intersection	Worst Approach			Overall Intersection	
	Approach	LOS	Delay	LOS	Delay <sup>1</sup>
<b>2100 South / 700 East*</b>	Blank <sup>2</sup>			D	39.5
<b>2100 South / State Street*</b>				D	39.8
<b>Simpson / 700 East</b>	WB	F	84.8	A	4.1
<b>Truman / State Street</b>	WB	E	47.9	A	7.5
* - Signalized intersection 1. Intersection LOS and delay (seconds/vehicle) values represent the overall intersection average. 2. Approach LOS is typically not calculated for signalized intersections, however for unsignalized intersections approach LOS is shown.					

As shown in Table 6.1, the transit crossing at 700 East and State Street has a minimal impact to the intersections of 2100 South / 700 East and 2100 South / State Street. The largest impact of streetcar on the existing traffic conditions is to the unsignalized intersections at Simpson / 700 East. The westbound leg of this intersection had high levels of delay under existing conditions and the addition of streetcar further increases this delay. However, the overall delay at the intersection continues to operate at acceptable levels, since the overall delay includes all legs of the intersection.

## Existing + Streetcar + Pedestrian Crossing Traffic Conditions

Another analysis included a pedestrian activated signal at the same location as the streetcar crossing. The streetcar was modeled in the same manner as previously described and the pedestrian crossing was added with the assumption that there would be one pedestrian in each direction each cycle length (60 pedestrians / hour). Table 6.2 shows the LOS and average delay at each intersection.

<b>Table 6.2</b>					
<b>2007 Conditions + Streetcar + Pedestrian Crossing p.m. Peak Hour LOS and Delay</b>					
Intersection	Worst Approach			Overall Intersection	
	Approach	LOS	Delay	LOS	Delay <sup>1</sup>
<b>2100 South / 700 East*</b>	Blank <sup>2</sup>			D	39.0
<b>2100 South / State Street*</b>				D	43.0
<b>Simpson / 700 East</b>	WB	E	46.7	A	3.5
<b>Truman / State Street</b>	WB	E	39.6	B	10.4
* - Signalized intersection 1. Intersection LOS and delay (seconds/vehicle) values represent the overall intersection average. 2. Approach LOS is typically not calculated for signalized intersections, however for unsignalized intersections approach LOS is shown. Source: Fehr & Peers, April 2007					

The pedestrian crossing improves traffic operations for the side streets at the unsignalized intersections. This is because of an increase in acceptable gaps for side street traffic to access 700 East and State Street.



However, overall delay increases at the adjacent intersections with the addition of a pedestrian signal. This delay is shown to remain at LOS D. Operationally, the pedestrian signal and the streetcar gate crosses the southbound left turn bay at 700 East / Simpson. This creates some safety concerns as well as an increase in queue spillback due to the loss of storage space. This issue will be addressed with further study and analysis of the streetcar alternative.

## 6.3. Funding Options

### Federal

The Federal Transit Administration (FTA) has several programs to fund new capital transit projects. Small Starts and Very Small Starts were recently created by FTA in an effort to make development of smaller projects easier, faster, and less costly; of particular interest to FTA are BRT and streetcar projects. Three funding categories have been established to categorize projects:

- *New Starts*  
Major capital investment grants of \$75 million or more. The statutory local match for New Starts funding is 80 percent federal, 20 percent local. However, FTA continues to encourage project sponsors to request a Federal New Starts funding share that is as low as possible in all of the funding categories.
- *Small Starts*  
Capital investment grants less than \$75 million with a total project cost not to exceed \$250 million.
- *Very Small Starts*  
Capital investment grants less than \$25 million with a total project cost not to exceed \$50 million and \$3 million per mile (excluding vehicles).

The Sugar House Streetcar project would likely fall into the Small or Very Small Starts category. As mentioned above, each category in the program would provide only a portion of the total capital for the project and requires a local government matching contribution.

### Local

Regardless of federal funding, local governments should be prepared to provide a substantial portion of capital funding for this project. Both local option taxes and beneficiary sources can and should be considered. Salt Lake City and South Salt Lake should consider:

- Local option taxes including sales and property taxes
- Beneficiary changes could include impact fees and Special Improvement Districts
- General obligation bond

In addition to the conventional approaches listed above, the cities could consider the possibility of an independent operator or perhaps operations in cooperation with UTA. This arrangement would allow the cities flexibility in planning and operating the new line but may require the acquisition of the UTA property.



## Private

With private development occurring along the corridor and developers willing to participate in city and transportation planning processes, the cities and UTA should discuss opportunities for public-private partnerships whereby developers can contribute to the cost in return for direct benefits to their developments. Another private funding option is a Developer-Build-Operate-Manager (DBOM) that would allow a developer to take on the risks associated with the construction and operations of the line in return for any profits that could be generated from the line.

## 6.4. Additional Study Necessary

### Environmental Document

The next phase of study for this project is a federally guided environmental document. Typically, these documents range from a full environmental impact statement (EIS) to an environmental assessment (EA) or in some cases a categorical exclusion (CATEX). The decision about which level of environmental analysis to pursue is determined by the known and potential environmental risks within the corridor. The more risk that is assumed to exist within the corridor, the higher the level of analysis that would be expected by the Federal Transit Administration before they would be willing to grant federal funds for the construction of the project. Within this next environmental document, all of the impacts of the Locally Preferred Alternative along the corridor will be assessed. The following tasks that were initiated in the Sugar House Transit Corridor Alternatives Analysis will be further analyzed and refined:

- Ridership, including the overall system user benefit (cost effectiveness)
- Station locations
- Engineering & design constraints and/or opportunities
- Traffic analysis and determination of consequences
- Transit and trail interface, including space requirements for separation

In addition to the further study of the topics listed above, some of the other environmental issues that will be evaluated include:

- Noise and vibration impacts
- Cultural and Historic impacts
- Air Quality impacts
- Impacts to public parks and recreation lands
- Wetland, waterway or aquifer impacts
- Vegetation and wildlife

### Eastern Terminus Revisited

The Salt Lake City Transportation Master Plan includes plans for the realignment of Sugarmont and Wilmington Avenues, which could create opportunity to extend the proposed streetcar service to Highland Drive, or to termini further east of Highland Drive. As Salt Lake City pursues the realignment, UTA should consider extensions beyond the existing owned right-of-way to the following eastern termini:

- Extension to the intersection of Highland Drive and Sugarmont Drive.
- Extension to Highland Drive, through the intersection of Highland and 2100 South, and continuing along 1100 South to 1700 South. This option would serve Westminster College, and would support

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the college's plan to establish 1100 East as a gateway for the college. No new right-of-way along Highland Drive or 1100 East would be acquired to implement this option.

- Extension across Highland Drive, on to Wilmington Street, terminating at the Salt Lake City RDA property on Wilmington. Salt Lake City and UTA could explore future transit oriented development opportunities.
- Extension to Sugar House park, as suggested by some Stakeholder Committee members



Figure 8: Termini Options for Future Consideration.



## APPENDIX SUMMARY OF PUBLIC COMMENT

## *Sugar House Transit Corridor Alternatives Analysis Open House Summary – Open House #1*

### **I. Event Summary**

On Monday, April 2<sup>nd</sup>, 2007 UTA hosted an open house for the Sugar House Transit Corridor Alternatives Analysis. The open house was held at the Columbus Center in South Salt Lake, from 5 – 8 p.m. The purpose of the open house was to introduce the project to the public, and gain input on several topics. Advertising for the event utilized several strategies:

- Direct mailers to over 1,500 residents along the UTA right-of-way
- Media advisory
- Postings on city websites
- Announcements at Salt Lake City Community Council meetings
- Blurbs in city newsletters regarding the open house and the project

At the open house there were several different stations to present information to participants, on a variety of topics:

- *Study Background* – reasons for completing an Alternatives Analysis, steps in the process, general schedule
- *Existing Conditions* – activity centers, traffic volumes, transit ridership, bicycle and pedestrian networks, land use, travel demand
- *Transit Alternatives* – the “universe” of alternatives, and the “long list” of alternatives



In addition to the information stations, participants were encouraged to provide input on several different issues. At one of the interactive stations, participants were invited to use color-coded stickers on a map to indicate their daily trip origins and destinations throughout the valley. At another station they were invited to share their opinions (from “strongly agree” to “strongly disagree”) on the key project criteria identified at the outset of the project by Salt Lake City and South Salt Lake. In addition, general comment cards were available for participants to leave behind written comments for the consultant team.

The graphic boards displayed at the open house are attached as an appendix to this document, and the comments received at the open house are summarized in the following sections.

### **II. Stated Travel Patterns**

Open house participants placed stickers (green for origin, yellow for destination) on an aerial map of the Salt Lake Valley to indicate:

- Where they live
- Where they work

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- Other places they go (school, shopping, recreation, etc.)

In general, the final map indicated that the attendees who participated in the exercise lived throughout the Salt Lake Valley but were concentrated in the part of the study area between 2100 South and I-80, from State Street to Highland Drive. Work destinations were also spread across the valley. There were several clusters of work destinations identified in or near the study area, including:

- Sugar House (1700 South – 2700 South, 700 East – 1300 East)
- Near Home Depot/Costco along 300 West and north of 2100 South
- South of 2700 South between 300 – 500 East

Participants also indicated their travel patterns for other destinations. The University of Utah was a destination for several participants, and the largest cluster of non-work destinations was in central Sugar House, from 900 East to Sugar House Park and from 1700 South to I-80.

### III. Validation of Key Project Criteria



Participants were asked to rate the key project criteria on a scale from “strongly agree” to “strongly disagree”. Participants were provided with stickers to place in boxes correlating with their opinions. The table below summarizes participant’s opinions on the criteria.

The preferred alternative should have:	<i>Do You:</i>				
	Strongly Agree	Agree	No Opinion	Disagree	Strongly Disagree
Frequent Stops	27	18	0	7	0
Slow Speeds	18	16	2	3	0
Pedestrian-Friendly Crossings	32	10	1	0	0
Urban Linear Park	32	10	3	2	6
Broad Community Support	11	16	3	3	4
Creative Funding Solutions	11	12	4	4	3
Community & Economic Development Benefits	18	14	3	1	3
Connectivity to TRAX	35	4	0	1	3
Connectivity to Buses	22	13	1	0	4

### IV. Actual Comments Received

#### From Flip Chart Near “Key Project Criteria” Station

“We need a TRAX station on 27<sup>th</sup> South and 2<sup>nd</sup> West with an East-West Bus route to 20<sup>th</sup> East that goes to the U of U using the “107” route to 2<sup>nd</sup> South and University Street.” (Another participant wrote: “good idea!” next to this.)



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*"Scale and character must fit scale and character of neighborhood(s)---a trolley or streetcar would appear to fit this criteria---small, historic look, frequent stops, slow-to-moderate speeds. It should be combined with a bike and pedestrian trail with amenities (sitting, recreation, play areas, etc.)."* (Another participant wrote "yes!" next to this)

*"When you finish with this, please look into an East-West route on 1300 South. I find it very annoying that the only East-West routes in this area are on 2100 South (route 30 bus) and the TRAX on 400 S. to the U."*

*"Please, we need public transportation to the airport. And we need to think more about the older people that will not be able to drive."*

*"We need alternative transportation regardless of community and economic benefits."*

*"The best would be a single TRAX station at Fairmont Park with a single train starting at the 2100 S. station and returning with a linear trail system (if room)."*

*"2100 South is too narrow for any type of rails. Use the other right-of-way. "*

*"SLC is sorely lacking citywide, perimeter, and cross-town bike right-of-ways. Especially in relation to the bicycling community. Please look to Albuquerque and Boulder, CO, for shining examples. Please link Jordan River Parkway to Sugar House Park. "*

*"Agree with previous comment to link Jordan River Parkway to Sugar House Park without TRAX as a bike and pedestrian trail."*

*"Don't make auto traffic worse."*

*"The TRAX should serve the working commuters."*

*"We need a NON polluting source of transit and more green space or trails. Provided that no one loses their home, the old railroad spur seems like the best choice."*

*"Please incorporate a bike lane into the priorities – also, any method for reducing PM's is preferred."*

*"We like the idea of a bike/pedestrian lane along the route of the rail spur and connecting to other trails, i.e. Jordan River Parkway, Parley Trail (??), etc."*

*"Gondolas look fun!"*

*"Lots of trees, public art, bike and pedestrian and equine trails – low impact on our neighborhood."*

## **From Comment Cards**

*"I am greatly in favor of the proposed line using the existing UTA right-of-way WITH room for PRATT. It's very important that both be built at the same time. I am not particularly concerned about the mode of transport, although the trolley would probably be the most popular and cost effective. As for residents along the corridor who are concerned about possible noise/traffic/etc., I'm sure they'll change their minds when their property values go through the roof. Let's do something positive with that crime-ridden, weed-infested corridor, and make it a positive for our community. And let's reduce pollution and money spent on roads by offering friendly, easy-to-use public transportation. Thanks!"*

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*"I am excited to see an alternative route heading east and west besides the U of U TRAX line. I absolutely love the idea of being able to shop, eat, and enjoy myself without driving in traffic. I lived in Boston and found I never needed a car and I'm glad UTA is helping the Sugarhouse area become hopefully a walking city (community). I'm excited to see it paired up with the Pratt Trail and that to me means more security, lighting, and beautifying the community. Way to go! Thanks for allowing us to voice our opinions – it is most appreciated."*

*"As a resident of the city, a property owner along the corridor, and a person working in an office along the corridor, I can't say enough good about these concepts. In our firm, we will follow this closely and offer whatever support we are able."*

*"Any transit facility must fit the scale and character of the area, the neighborhood it runs through. This means it should be small, quiet, historic-appearing, moderate to slow moving. A trolley or streetcar would work well. This could be an important transit attraction and economic benefit for Sugarhouse/SLC/SSL area. A bike and pedestrian trail/park should be combined with the trolley/streetcar. Ideally, it should be energy-efficient, using photo-voltaics, bio-fuels, etc. Be innovative. Think out-of-the-box. Think future. Think sustainability: environmental, economic, social."*

*"As a resident of the area I believe the 2100 South corridor is blighted and I believe that a trolley would be ideal and the area surrounding the tracks would make an ideal walking/jogging/path. The trolley, though whimsical, would outdo TRAX in ridership level. Now get finished with this and start on the airport extension."*

*"Would like a small, slow-moving small bus on balloon tires. Stops at every street. Sound walls for residents. Locked gates at night. Train should only operate from 9 a.m. – 9 p.m. Only non-diesel vehicles should be used. UTA should provide their own security and upkeep of the corridor. No bells, flashing lights, or horns."*

*"The only vehicle we as a community would recommend would be a small balloon tire bus with stops at every street. These buses should stop for traffic. Traffic should not stop for them. Sound walls. This vehicle would hurt the business that are in S. Salt Lake already. Locked gates. Trains to shut down at 9 p.m. open again at 9 a.m. Gates locked to all other traffic at night. Only a non-diesel engine should be allowed in the neighborhood. UTA should supply their own private security and complete upkeep of property. Proper lighting, landscaping. No bells, flashing lights, or horns. This is a novelty trolley for Sugar House and should not make South Salt Lake supply police protection at any time. This is dividing the neighborhood in South Salt Lake again. We are not an extension of Sugar House. We are very proud of being South Salt Lake City Utah!"*

*"I would like to see bus service improvement on 2100 South and around other parts of Sugar House. For new transit options, I think the UTA right-of-way is more possible. My preference would be for a slow-moving, frequent-stopping options, such as a trolley or streetcar. This type of option would work well with a bike/pedestrian trail alongside---the trail is a priority for me. I would like to see the trail phased in first, while the final transit option is being decided, funded, etc."*

*"I favor doing something like the streetcar or trolley---would make the most sense and be the most reasonable in terms of cost and efficiency. I also think an old-fashioned trolley fits with the character of Sugar House and the community's desire to preserve its great history. Thank you!"*

*"Bus to Sundance Festival and Park City (year-round). Drivers on my current routes say their routes won't change."*

*"Be sure to accommodate the Parley's Trail! Low speed; few stops---compatible with trail."*

*"Whatever you do, try to make transit a supplement to automobile transit, not a substitute. Don't decrease carry capacity of streets with transit. I guess this means using the RR right-of-way."*

*"We prefer the old "right-of-way" option."*

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- Method of transport preferred would be: trolley, light rail
- Linear park is a MUST! Whether it's trail or paved, does not matter. Must be bike friendly.
- Our property touches the right-of-way. We have some concern about: noise, traffic, and aesthetics. If done right we fully support living right next to the project!"

"I definitely support bringing transit to the proposed corridor (2200 S), and would use it on a daily basis. Preferred mode would be TRAX light rail or streetcar."

"It doesn't seem to me that this is needed – or at least not for now and in the near future. However, if such a line is desired, then it should be as undisruptive as possible. For example, people should be able to cross the right-of-way at any point without having to walk to designated crossing areas---i.e. the tracks should not be fenced off. Also, the vehicle chosen should be as quiet as possible. Finally, a trolley, bus, or streetcar makes more sense in such a short distance."

"Light rail should go down the middle of 2100 South, reducing auto traffic to one lane in each direction. The old railroad easement should be part of a hike-bike trail that links the Jordan River Parkway & the Bonneville Shoreline Trail. The railroad right-of-way is a stupid place for a public transit line. It's too far away from everything."

"This appears to be a very forward-thinking project. I have been a volunteer for all three openings for TRAX and I hope to still be around for the Sugar House Transit Corridor. I hope this project meets with approval from the citizens of Salt Lake."

"Something needs to be done with the property soon, even if it is to clean up the weeds and trash found there now. It is an eyesore to the neighborhood! Also, the sidewalk on the east side of State Street where the old line crosses needs to be replaced, similar to what was done at 300, 200, and 500 East. What use will the line be except to transport people from 1100 E. to downtown and back, if they will even use it."

"If you're going to make the investment, build the system to service the working commuters. Build the system to go on 2100 South to Sugar House so the workers will ride it. Don't use the old track in order to save money."

"If no houses are in jeopardy of being removed and if green space and/or trails are alongside a non-polluting transit system, I think the right-of-way is probably the best choice. Stops on 600 E. would also be nice. 2100 South is too crowded already."

"I see great benefits from a light rail line and a dedicated bike lane. Please don't just upgrade bus service! Thanks!"

"I like the transit alternatives (streetcar, etc.) that explore the options available. However, as the study progresses I wonder which of them are actually viable choices given the surrounding environment (road widths). Personally – I prefer the UTA right-of-way instead of using 2100 South as the corridor."

"I would really like to see the UTA right-of-way corridor used by a historic trolley or streetcar with park, lots of stops, and slow speeds. The public transportation option is badly needed and this unique and unusual corridor is perfect. A personal plus for me is that it might reduce traffic on Simpson Ave."

"My husband and I would like to see any transit option connect to a TRAX station or be within walking distance of one. I would prefer light rail but a bus would be fine."

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*"I believe the best alternatives would be the streetcar or the bus rapid transit to provide the most efficiency while giving South Salt Lake residents access. I also feel the urban linear park provides SSL an important feature."*

*"There is no question that a form of transit is needed between Sugar House and South Salt Lake. It is what form it takes. I feel that a rubber-wheeled trolley along the existing railway would meet the needs of the traffic demand and the neighbors living along the rail way."*

*"1. Use the rail corridor  
2. Combine something slow, that also allows a walking/ bike trail"*

*"If there is truly a need for this system, the current right-of-way doesn't seem to serve a long-standing purpose. I would need to see some alternatives to connecting where the right-of-way ends at 1100 E. 2100 S. may work to go farther east, but the Sugar House area would not be able to serve automobile traffic on 2100 S. any more. It really seems more like a complete waste of time and money. Use it [to] develop more eco-friendly buses."*

*"If a mass transit vehicle system is going to be placed in the Sugar House area on the UTA property, I would prefer that it NOT be a TRAX – rather, a streetcar system or trolley with a tree-infested--yes, I meant to use that word!--linear park. As far as location, I would prefer it to be on 2100 South and the UTA property become part of the Bonneville Trail – with pedestrian, bike, and equine trails. I'd been told that this was part of the master plan originally and this was a factor in purchasing my home where I now lie. Thank you for the info."*

*"I love going on the train.  
I love riding the train."*

*"Provide a rail-based system. The Sugar House community needs this system, and needs it soon! It would really boost ridership on N-S LRT. Also, please make it compatible with Parleys Trail."*

*"Trolley!?"*

*"Let's build it."*

*"Concerned about noise, crime along the tracks. How will this affect the value of my property?"*

*"I believe the UTA right-of-way should be used. I also feel that a trail should also be in the corridor creating a pleasant multi-user area. I also envision a trolley to best fit this plan due to the trail, quiet, safe, slow speeds, frequent stop ability. It would also be unique and a great fit for old Sugar House. TRAX is overkill for the right-of-way."*

*"I'm so pleased that this project is moving forward. I support any use of the corridor. Especially a multi-use (TRAX and trails) system. I live on the corridor and hope to see a system on line as soon as possible."*

*"As a pedestrian and bike/TRAX/bus rider the Sugar House corridor is a much needed addition to the current transit system. The right-of-way can easily be converted to a green/single track line that would bring riders from Central Pointe to the Granite Block. I hope that future shops will add to the already existing local shops to create a vibrant shopping location. As it is – I walk 2100 S. and the existing right-of-way (dangerous!) and would welcome alternative modes to get from West to East."*

*"Overall, the transit corridor is a very positive and useful system. The preliminary impact may be great, as far as inconveniences, but overall it will decrease auto traffic hopefully and increase foot and commuter traffic. I would be interested*

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*in seeing example figures in other cities, on the impact of property values around the corridor. Is there a completed study from other cities i.e. Boston's T system that can substantiate these figures. "*

*"The need for rapid transit is minimal. The destination to 1100 E. will only cause more congestion on 2100 S. east of 1100 E. Improving I-80, 2100 S. and better bus transportation seems a less intrusive and less expensive fix. Just because you own the right-of-way doesn't mean you HAVE to put a train on it. I-80 and 2100 South need improving now anyway. Why not do it right?"*

*"2100 South is already pretty crowded, especially approaching Highland Drive, and since the "right-of-way" is already available, it might as well be used. It would save time and money. I think the simplest solution is the best. Something like a high-speed train is overkill for a small neighborhood. Buses are clunky. I say add a TRAX line to connect downtown and Sugar House. "*

*"I'm very glad you are developing public transit alternatives between South Salt Lake and Sugar House. I live in South Salt Lake and attend Westminster college. It takes me an hour on the bus to get to school but only ten minutes to drive. I never drive up 2100 S. because it is too busy. I think a TRAX line is the most environmentally responsible alternative."*

*"Highland & 2100 South  
2100 South & 1300 East  
Living here tells me these are worse. "*

*"Old Granite tracks (UTA right-of-way) I feel would be best used as a bike and pedestrian trail. As running transit would in my opinion disrupt the residential neighborhood (children, pets and peace). "*

*"I am against using the Rio Grande tracks or the right-of-way – it would be a waste of tax payers' money! 2100 S. would be a better option! Buses on 2100 South going from TRAX line [are?] nearly empty".*

*"Use the existing corridor to connect TRAX to Sugar House. Prefer a streetcar/trolley option with frequent stops. Low speeds to preserve residential corridor. Encourage re-development west of State Street. Keep neighborhood residential. "*  
(no attribution)

*"Looks like we need a volume public transport alternative. I like the trolley with bypass or even two tracks. Seems volume can be some above 500 riders per day with one set of tracks and over 1,000 with two sets. Seems a viable feeder to the rest of UTA system. Prefer "old-style" trolley with hi-tech engineer inside."*

*Service is needed sooner rather than later. The valley is polluted enough, steps must be taken to curb this problem. I favor the existing UTA right-of-way tracks with PRATT access along this route. A trolley would seem a useful compromise for all concerned. We need to utilize existing property to avoid buying up large parcels of land along 2100 south. Any modes of travel other than rail will only increase the demand on already overburdened roadways. The future is now!"*

*"What a great place for a new TRAX line. Please build it soon!"*

*"Let's go for it. I think it is a good thing. "*

*"- Options that allow commuters into Sugar House to access other forms of transit (bus, TRAX, etc.) are preferable.*



# Sugar House Transit Corridor



- Please consider the quality of life for residents along the corridor Thanks. ”

”1 – I attended prior meeting and studies here at Columbus School

2 – I know the West side needs TRAX. But I am upset at the trolley in the middle of South Salt Lake. We do own our own streets. I feel very sorry for our citizens who will deal with noise in their backyards. A safety issue. Who will pay for police help? We are already taking care of more than our share of traffic (workers) in our city daily. Who is going to take the safety issues of stop and go on each block. We have a large number of native (African) immigrants who roam the streets by the track. Who is responsible in case of death? South ”Salt Lake will not benefit from this trolley. How much easier to have one go up 2100 South (who doesn’t have the traffic flow through our city via workers). It’s great to project the traffic flow but I didn’t see one showing – the amount is much more than on 2100 South.

I really hope you do look at the trolley with the citizens of South Salt Lake who are mostly going to be affected. I hope you do have input like we heard about in other areas of the valley. But use input of honesty not just the “Big Developers” who want to help their sales!”

”I do not think any type of rails can be put on 2100 South. It is too narrow already. If this is to be done, it should be on the UTA right-of-way.”

”1<sup>st</sup> – Great opportunity – thank you!

2<sup>nd</sup> – Caution: F&P employees expressing bias towards a preferred transit option. ”

3<sup>rd</sup> – Transit Concerns:

1. Even with a transit on UTA right-of-way (rail), auto pressure on surface streets will continue to increase.
2. According to UTA’s plan construction would not begin for 10-15 years. Surface street capacity will exceed load.
3. Because of 1&2, the transit choice will be limited to high volume, speeds & low-frequency stop options---opposing the community’s requirements.
4. Reorganization of UTA bus routes may decrease north/south routes and thereby eliminate rail transit stops in SSL. ”

General Suggestions from participants:

- At next meeting, F&P should provide (if possible) some way to measure how different transit options will impact road traffic conditions now and project projection date. (i.e. ridership projections, how many cars off road from using transit) – for three transit options (not necessary for ditched ones). – at intersections (including secondary intersections)
- At next meeting show UTA’s bus redesign route map. If 500 E. and 300 E. are on the chopping block, then the study (F&P) should indicate how that would impact transit stops (how many end up in plan), and demand on roads.

Random Thoughts & Reiterations:

- I support a public transit option along the UTA rail corridor.
- I support the city’s 6 points (slow, frequent stops, trail, etc.)
- How do we ensure the option we choose in the end gets implemented 10-15 years down the line when UTA gets to it?
- I feel the streetcar or trolley option is the best option



# Sugar House Transit Corridor



- Thanks again!
- I fear 15 years from now light rail without frequent stops will be imposed upon us due to traffic conditions at the time.



## Sugar House Transit Corridor Alternatives Analysis

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### Summary of Comments from Open House #2

#### Summary

Total written comments received:	29
Total comments in favor of transit in the ROW	17
Total comments expressing concerns	9
Total comments against transit in ROW	3

#### Modes

In favor of Modern Streetcar	3
In favor of Historic Streetcar	3
In favor of either Modern or Historic Streetcar	2
In favor of LRT	2
In favor of BRT	2
In favor of Bus on 2100 South (do nothing)	4
Negative comments about LRT	1
Negative comments about bus on 2100 South	3
Negative comments about Historic Trolley	1

#### Issues

Include trail	5
Concerned about parking	2
Concerned about transients in Fairmont Park	3
Frequent stops (at least every block or every other)	2

## Sugar House Transit Corridor Alternatives Analysis Study Open House Comment Sheets Thursday, July 12, 2007

*"The historic trolley would provide a valid mode of transportation to desirable areas without any of the blight and continued destruction of the Sugar House culture. Keep our area free of TRAX. "*

*"Before deciding which type of Alternate Transportation method, I'd request UTA fund some kind of plan to deal with the Fairmont Park denizens . . . if they don't, now we're giving them an easy ride back & forth from State Street to Sugarhouse. They are a huge problem, & this proposal offers them valet service. "*

*"Due to long-term connectivity concerns I'd recommend LRT along a corridor which utilizes loop traffic – i.e. follows the UTA ROW and 2100 S in one direction, connecting the two along Highland Dr. - M.F. "*

*"1) Interested in environmental impacts of each alternative. 2) Will there be parking lots at each of the stops? "*

*"BRT is the option to use in your corridor. It is a good compromise between slow/fast/cheap/expensive. It is (necessary)! as this line must eventually connect to something N-S to the U etc. That is, it's quite fact. "*

*"The problem you have in your (study)! corridor does not go far enough east. You HAVE GOT TO GET IT East and north 13<sup>th</sup> along the park to near the high school.*

*The H.S. has a bridge N-S over I-15 the 11<sup>th</sup> or 13<sup>th</sup>. Use the bridge N-S as you eventually expand south. GET PAST Highland Drive and 13<sup>th</sup> and you 1) make this thing much more useful now and 2) years from now. – T.M.S. "*

*"One concern we have is with parking in the neighborhood of the stops. We would prefer to have more stops, so that there won't be too much traffic and parking in the neighborhood of each individual stop. – S.D. "*

*"I prefer the Historic Trolley option. I dislike the bus alternatives, because the exhaust fumes combined with the jerky stop & go driving make me sick. I prefer the smooth ride & permanence that would be provided with a light rail or Trolley station. I would prefer the historic trolley over light rail, because it would be more fun. I think it would make transit cool. And create the best overall experience of all options. – J.M. "*

*"I definitely support transit in the UTA R.O.W. A historic streetcar is preferred for neighborhood compatibility - - TRAX light rail for system wide integration. – M.M. "*

*"Thank you"*

*"First, thanks for the opportunity to see the available options and for answering all the questions.*

*Second, This is the second card I have submitted (did one @ Columbus Center) so if my voice only count once use the earlier comments.*

*Again I support the historic and modern streetcar alternative, with the criteria determined by the established community recommendations. The trail component is critical to the success of this project.*

*Kudos on the Dot – Vote Chart ☺. – L.S. "*

*"Boards – very informative & designed well. I really would like to see streetcar. I would not like BRT because it pollutes too much. Also, historic trolleys are not close enough to ground for me to load my bike, plus I feel people won't take them*

<sup>1</sup> Handwriting unclear – italic text in ( ) is best guess of what the word appears to be.

# Sugar House Transit Corridor



*seriously. Might be too industrial for the residential neighborhood. Thus, I like the streetcar option. It would be good for the economic vitality of S. SLC & SLC. Good Job! – J.B. ”*

*”1. I prefer the streetcar first; TRAX second; and Express Bus third.*

*2. The idea of improving public transport in SH is wonderful – it will make us (as a family) less dependent on our cars. – P.P. ”*

*”If you run a transit system down this corridor, two things are very important:*

*1) That it is accessible to the people that live in the communities through which it runs (i.e. more stops), and*

*2) SAFETY – These are residential streets with kids who walk to school. Lights & arms that raise & lower should be everywhere!! – J.L. ”*

*”Sugar House is a beautiful area. I love the ambiance. However, I would prefer busses and or light rail. Light rail is big, but it feels safer to me. A train will usually win any accident. UTA Trax drivers are very safe, cautious, and competent. Busses are smaller and slower then BRT, which I fear may pose a danger to those who are walking, running, playing etc. Streetcars are cool, but are they more expensive? I want to commend all those who work so hard to make UTA work with all of us! It is an honor to take UTA! – A.H. ”*

*”Could a ground level electrical source be safely developed? If so BRT, TRAX, or Trolleys would be great. Existing bus cross traffic needs to be shown for we who live away from 21<sup>st</sup> South. – A.P. ”*

*”Anyway that UTA can make my commute faster would be greatly appreciated! – C.G. ”*

*”I believe each choice has its values, I didn’t see any reference to a trail. Is that part of the study? And what about funding, how and when would that information be out. Thank you. ”*

*”I think the streetcar or historic trolley would keep the unique feel of Sugarhouse. Although, with the stop being at 900 E. I worry about the existing transient problem at Fairmont Park. – W.T. ”*

*”I am interested in who will ride this system? The only viable stop on the east side of State Street will be the end of the line at Fairmont Park. ”*

*”Please keep us informed on upcoming events. – D.S. ”*

*”What precautions are going to be made around Fairmont Park and the transient population? ”*

*”- Your open house was well organized & was easy to understand & follow -*

*- Stopping every block or two is a must as residential is on both sides of the line along the entire proposed corridor.*

*- 2100 South is much too congested to support mass transit other than bus, therefore the existing rail line should be utilized.*

*- In addition to all the benefits that mass transit provides, the utilization of the existing rail line will provide for a cleaner, safer environment that currently exists there.*

*- Line will help synergize improvement & continued development along the corridor.*

*- The rail corridor should be used in conjunction to the Parley’s Pratt trail system.*

*- My preference would be for a streetcar System (Modern) – S.A. ”*

*”The Bus Rapid Transit allows greater flexibility for future development. Our neighborhood, Highland Park, was recently eliminated from the areas UTA Services. To stop at 11<sup>th</sup> rather than 13<sup>th</sup> disenfranchises us a second time. Continuing to 13<sup>th</sup> brings choices to our neighborhood, serves a private college w/ 400 potential daily riders, and brings people to a major area shopping center. – R.R. ”*

# Sugar House Transit Corridor



*"Since this looks like a done deal – South Salt Lake has the right to say what happens in our city – Not UTA telling us what we'll do!*

- 1.- You pay for your own Policing*
- 2.- Lots of Safety Issues*
- 3.- No resident homes (condemned) for this service to use a bus stop station (or whatever)*
- 4. The stopping of traffic every few minutes in Peak Times is not happening*
- 5. No increase in Taxes for Support – U.M. "*

*"I support an alternative that creates & enhances the/a community environment in the Sugar House area. Sugar House is one of the unique neighborhoods of SLC. Let's enhance & build on that. Increase pedestrian traffic, reduce vehicle traffic. – B.R. "*

*"I am hugely impressed by your approach to this process and the careful analysis. "*

*"I support the streetcar / trolley option because it seems the most compatible with community needs. My special interest is in the rails – with – trails component ensuring that transit users can start and complete their trips using safe, off-site trail corridors. I have faith that transit in the UTA corridor will be a wonderful engine for new economic development in South Salt Lake and a great enhancement to proposed development in Sugar House. – L.O. "*

*"As a citizen of South Salt Lake, I have a very hard time justifying any type of transit going down the backyards of our residents – especially when it will not benefit them. Going to work on TRAX or a bus is not the same as going shopping on the transit system. As our city has a majority elderly population this makes any use of this mode of transportation not very attractive. Noise, pollution, etc., are not acceptable in a neighborhood. – J.S. "*

*"Improve the bus service on 21<sup>st</sup> South and create the green way through the proposed Transit corridor – this keeps vehicular traffic on 21<sup>st</sup> – where it already is – and provides foot / bicycle traffic where there currently is none. I think this will be more environmentally and people friendly. Just because you own a right-of-way and can build through people's backyards doesn't mean you should. – R.H. "*

*"Keep the bus line on 21<sup>st</sup>"*

*"I am most interested in a paved bike/footpath in the "corridor". I am within walking distance of the corridor (one of those who this transit is supposedly design for) and I am not interested in another transit line in this area. – E.R. "*

*"There should be service west of Central Pointe Trax on the 2100-2400 S. Corridor  
The 2100 S – 2400 S should interconnect to service to Westminster and Univ. or Utah and Univ. Hospital"*

*"I am interested that the pedestrian trail be incorporated with Bus/Trolley routes. – R.O. "*

*"I used Trax every day until I moved to Sugarhouse and started working from home (Sandy -> the U and back)."*

*"If the Public transit is low-impact pollution, I will use it often to go from Sugar House to Downtown. – B.C."*

# Sugar House Transit Corridor



#	Date	Comment
1	4/2/2007	<i>"At Zellerbach (2255 S 300 E), we are concerned about the impact on our wholesale distribution business, i.e., employee parking, truck loading and un-loading and any change to traffic access to our facility. Please keep us informed. Thank you. "</i>
2	4/3/2007	<i>"I attended the open house last night and didn't find the answers I was looking for. My house (per my address) is within 15 feet of the rail line! What hours would the public transportation be running? What will be the impact on my property values? Will sound barriers be installed? I would LOVE to see a bike/walking path on this space, i.e., either just a bike/walking lane or along with the public transportation. "</i>
3	3/29/2007	<i>"Please include good pedestrian and bike trails from the west end of the area to the east, and connect them into Sugarhouse Park, too. "</i>
4	4/6/2007	<i>"I attended the meeting at the Columbus Center the other evening and felt it was most interesting. As I have driven and walked on 2100 South since the openhouse, I have kept in mind all the alternatives presented. I think there is one more that wasn't even presented, because UTA owns the railroad tracks, UTA thinks only in terms of mass transit. Here is idea number next. Turn the abandon tracks into a two lane road parallel to 2100 South, allowing locals to take this new back road to the Sugar House shopping area. 2100 South is a busy street, but there is no East West corridor close by. 1700 South is four blocks from the shopping area. Why would one go four blocks north to double back???! 2700 North is six blocks too far south. However, it is used by people coming from the south if they know the north/south through streets. Rather than the expense multiple person transportation, which may or may not be used, why not put in a road which will be. Thank you. "</i>
5	4/18/2007	<i>"I attended the open house on April 2 and have these comments. I disagree that a slow-speed, frequent stop transit service is the best option for the UTA ROW property. In my opinion that would be a duplication of the service currently available on 2100 South - UTA's local bus service. Additionally, the display graphics indicated that most of the existing pedestrian crosswalks exist on 2100 South, further identifying that corridor as having the same characteristics being considered for the UTA ROW. While it is true that 2100 South is congested and probably one of the reasons for slow speed bus service, I think using the UTA ROW corridor to bypass or avoid that congestion is a better use. I believe the corridor is wide enough to accommodate both a transit option and and a linear urban park with trail for non-motorized use. If not, the alignment is short enough that maybe a single track shuttle type system would suffice. I believe it would be better for the Sugarhouse ! economy to tap into the traveling population that already exists on the north-south TRAX line by providing a faster (few stops) connection to the shopping opportunities at the end of the ROW. Thank you for the opportunity to comment. Sincerely, Kerry Doane"</i>
6	4/24/2007	<i>"I think that the most important element of this study is to allow for a pedestrian trail along with the rail. South Salt Lake needs more open spaces and pedestrian-friendly designs. "</i>
7	4/26/2007	<i>"I would love to see a trolley or tram that did a circuit 1700 S &amp; 250 W, 1700 S &amp; 1300 E, 2100 S &amp; 1300 E, 2100 S &amp; 300 W, 1700 S &amp; 250 W. This would include 2 colleges (SLCC &amp; Westminster College) which would then be linked into the TRAX system, as well as provide easy access into shopping @ Sugarhouse. "</i>
8	5/2/2007	<i>"I would love to be able to use a trolley along the existing rail line in the Sugarhouse area. I think this solution would improve traffic and parking congestion and bring more business into the area. "</i>



# Sugar House Transit Corridor



9	5/11/2007	<i>"That would be great if there was a bus that went along back and forth (east/west) on 2700 south"</i>
10	6/29/2007	<i>"I Live in Sugarhouse and work in West Valley. I am just wondering why the 2100 S. bus route stops at 300 W. ? It would be nice if continued westward to Redwood Rd. As it is, I would have to go downtown first and then to Redwood down to Decker Lake. There are alot of businesses in the Decker Lake area and West Valley Areas. Why not connect these two areas with a bus line along 2100 S. to Redwood. "</i>
11	6/28/2007	<i>"I live in the heart of Sugarhouse, right on 13th East, which is narrow and congested because it hosts both heavy traffic and buses. I can see the same thing happening if we use 21st South for fast transit, unless we close it to all other traffic (except those entering local stores and businesses). At the same time, I feel for the people who live right on the edge of the 2200 So. corridor because the noise and traffic really do affect your lifestyle. For example, we can't use our front yard or even sit out on the front porch, unless we want all the people who are lined up waiting to get on the freeway to look at us. It sounds like a TRAX system has already been ruled out, because 2 of the 6 community priorities are that the new alternative be slow moving and stop frequently. I know that I would use the TRAX system if there were an east-west route that stopped at Sugarhouse park and went down to the 200 West connection on 21st South. I have never seen the sense in driving my car down to the TRAX station and leaving it there, so that I could jump on a rail that would take me a few blocks further north to downtown--I might as well just drive it. One more consideration--most of us who work in the city "live in the fast lane" nowadays, anyway-- and the slowness of a trolley or streetcar, while it may be recreational and downright quaint, may not be very efficient for those of us needing to get somewhere in less than an hour. This is one of the 2 reasons I don't take public transportation very often. The other is that buses, etc are not very easy to take when you have to drag a bunch of junk back &amp; forth to work with you, even if you have it in rolling luggage. Nonetheless, I would very much like to be able to use the public transportation system--if only it were a little more convenient for me. "</i>
12	7/12/2007	<i>"I think it would be worthwhile to include the Downtown Southwest Extension (700 South/600 West to the Intermodal Hub) with the Sugar House Study. Depending on the mode of transit there will be a need to create a western end of line and a way to turn around. "</i>
13	7/13/2007	<i>"Use the existing rail corridor. Old style rehabilitated trolley like MUNI "F" Line in San Francisco. Single Line track, distance is too short for two lines. Trails, bike, and walking. Surface crossing, minimal fencing. Implement and build it now, not in 10-20 years. Consider room for adding a "T" line to run North and South on 700 East to Trolley Square [4th south TRAX station] "</i>
14	7/15/2007	<i>"I would prefer that the Sugar House option for mass-transit would be to use the abandond rail line at 2200 S for a Light-rail system. "</i>
15	7/15/2007	<i>"I am very Happy with the bus. UTA has cancel alot bus routes. Making it harder for the disabled, elderly and people that do not have a car to get around. Please do not keep hurting that need public transit. Thank You! "</i>
16	7/17/2007	<i>"Either a trolley or the lightrail would be the best option. Although the initial cost would be significantly more, I feel that the ridership would pay off in the long run. This type of transit has worked as a viable option in this area before when the trolley was prevalent in Salt Lake City. "</i>
17	7/17/2007	<i>"As someone who works in Sugarhouse and have enjoyed visiting the neighborhood for years, I would be very excited to be able to take Trax. I would happily ride it at least 4 times a week. Please do not wait 20 years! "</i>
18	7/18/2007	<i>"Connecting the SugarHouse neighborhood to downtown would not only be a great way to minimize driving, congestion and reduce pollution, it would assist in driving more economical</i>

# Sugar House Transit Corridor



		<i>activity to both areas and strengthen the community. I work in SugarHouse and would most definitely utilize public transportation if a trax line was created. "</i>
19	7/18/2007	<i>"Please put a trax line that runs to Sugarhouse. Pretty please . . . ? "</i>
20	7/18/2007	<i>"I think that a light rail system would be used the most and could most easily be connected with the Sandy Trax line. It would greatly ease congestion in Sugarhouse too. "</i>
21	7/18/2007	<i>"Please have trax service sugarhouse! Also, is there active discussion about a bus/mass transit up and down Parley's Canyon? "</i>
22	7/18/2007	<i>"I think this a great spot for Light rail to be used, it would be good to use to get to the shopping areas of Sugarhouse and also to use to commute downtown which is where I work this is needed for this area the traffic on 2100 South is horrible day and night. I think this would help with the traffic congestion along 2100 South"</i>
23	7/23/2007	<i>"I personally favor the idea of a trolley from the South Salt Lake Traxx stop to 1100 E. I think that area has so much charm and a trolley would fit perfect into it. I think it would be unique, VERY cost effective compared to traxx and very very environment friendly compared to bus rapid transit or the like. ... I personally am legally blind and do not own a car and find it to be quite a task to get to sugarhouse. I think a trolley would be a very good decision because it is reliable, it would fit great into the already historic and artsy community that is sugarhouse and it would provide a sure shot route to the sugarhouse business district from traxx. It would fit great with the market station development planned for that area, and the turn around time would be a lot faster than building traxx. My vote is foOr Doug White's trolley. Thank you.</i>
24	7/23/2007	<i>Do whatever you can to keep traffic low and slow on 1700S please. That makes less noise for me and keeps my well-used, unpainted, bike lane safe(er) for everyone (except on that deadly hill above 1300E). I vote for a small quiet trolley from Traxx to/through the re-ramped Granite block with a bike lane along side in the existing right-of-way. Include a stop at Sugarhouse BBQ in case I'm hungry. :)"</i>
25	7/28/07	<i>"I would much prefer to see a trolley service Sugar House, which could evolve into something similar to San Francisco's F-line. That line runs vintage streetcars and enjoys high ridership in large part due to being able to travel back in history. My lowest preference is for a bus. "</i>
26	7/29/07	<i>"No bus above 2100 East to the University of Utah is concerning. We have so many apartments in our neighborhood and a far amount of folks that ride the bus. Who will clean the sidewalks so that we can get to 2100 East and 2100 South to catch a bus early in the morning. Landlords are certainly not concerned. Why such a drastic change. "</i>
27	8/2/07	<i>"As a property owner and commuter in the Sugarhouse area I would love to have options to get out of my car. However, if the transit mode is not competitive time wise and cost wise (with me in my car) then I would rarely use it except in the case that there is an event that would make parking impossible. I know long term the price of being a single occupant in a car will be too high (environmentally, cost and time) but I'd like to go green sooner. I assume there will be noise and vibration impacts to the adjacent properties BUT they will also reap the biggest reward in soaring property values --thinking long term. I wonder what slow-speed actually means --the same speed as TRAX/light rail or less? It would be good to have that listed --it isn't intuitive. A historic trolley; is this a joke --looks cute for tourists but how often or needed is that? Frequent stops will slow the train too --what is proposed for distance between stations? TRAX downtown seems frequent enough to accommodate riders. Walking a few blocks is doable for most of the population. I think the park and ride lots in Sugarhouse proper should be minimized --or if needed build the ugly things underground. This seems to be a land use and aesthetic issue. I think a streetcar like Portland OR or a LRT line that connects with north-south TRAX and CRT is what is needed for long term mobility. Sugarhouse has appeal because of shopping, the park, and I-80 access but this could change. (And in the near</i>

# Sugar House Transit Corridor



		<i>future it undoubtedly will with building demolition and highway expansion work looming) The population rise and associated traffic problems will only increase with time. Long term transportation solutions need to be overarching and include fast transit, a linear park with bicycle trails (grade separated from roadway and track), accommodate a pedestrian friendly community and offer handicap accessibility. The most efficient use of available land needs to happen with this project. The hours of operation need to fit the overall demand -6 am to 10 pm Mon-Sat would seem to be the minimum. It would be really forward thinking -but- to have the "urban park" xeric landscaped would be great! Bravo on moving the study forward --I can't wait to get out of my car for good. "</i>
28	8/20/07	<i>"I really feel that it's quite unfair to totally eliminate Rt. 7, which has served this area for many years. To have to walk to 20th E. or 13th East, or So. to 33rd So., is very difficult for many sr. citizens in this area. Please reconsider. You say you're improving service in some areas, but it should NOT be at the expense of residents of other areas by totally eliminating their service, or at the very least, making it very inconvenient for them to get to an area where a bus or TRAX is available. "</i>
29	8/21/07	<i>"I used to live near 27th south and 21st East &amp; have fond memories of going to Sugar House. Ever since working in Portland, OR a few years ago, I was very impressed with their Portland street trolley (<a href="http://portlandstreetcar.org/index.php">http://portlandstreetcar.org/index.php</a>). Very neighborhood friendly, low impact, quick construction, relatively low cost, and a more permanent transit solution thus more enticing to development than bus routes which are not. "</i>
30	8/23/07	<i>"I like the quaintness of the trolley but light rail on 2100 S would be preferred because: 1. The rail corridor would be for trails only. Using the corridor for rail will reduce trail options. 2. Commuters will be the majority of the riders. The preferred solution does not require a transfer at Centerpointe to get downtown. 3. 2100 S option would provide a better opportunity to extend the line in the future. Extending the line east to Parley's Way or South to Brickyard would add significant value to the project. IF The 2100 S option unreasonably impedes traffic flow. OR A transfer is required at Centerpointe THEN The trolley would be the preferred solution because it meets all of the other criteria better. 1, 2100 S is preferred unless the traffic impact is too great. -The usefulness of the project is significantly limited if either option stops short of 1300 E"</i>
31	8/23/07	<i>"Although beyond the scope of this Sugar House study, consider creating Sugarhouse-University-Downtown loop. Extend the current Sugar House proposal to Parley's Way and the University line from the Medical Center to Parley's way. This would benefit the many Sugar House and other eastside University commuters and increase ridership from Millcreek and Holliday. While this would triple the cost it would triple ridership as well. "</i>
32	8/30/07	<i>"It seems like Trax would be better on a main road, like 21st south instead of a small residential street. Businesses are usually found on busy roads, and they're less likely to complain than residents who might have a Trax line right out of their front door. I think it's odd to have a train on a small residential street, and If I lived there, I'm not sure I would welcome it. Other than the initial construction, I would think businesses would welcome a Trax line on their street and would welcome the foot traffic. So, put Trax on main roads, and not down quiet residential streets. "</i>
33	8/31/07	<i>"I favor light rail or a streetcar along the existing Sugarhouse Line right-of-way all the way to the Granite Furniture Building or even all the way to 1300 East. It's a great idea to include a trail along the right-of-way too. "</i>
34	9/5/07	<i>"Are You Sure ? "</i>

# Sugar House Transit Corridor



35	9/10/07	<i>Its wonderful, Wow</i>
36	9/22/07	<i>"Your streetcar map ends at Highland, short of Sugarhouse. SO, either change the name or extend the range...I'm a SL native temp. in the east"</i>