



UNIVERSITY AVENUE MOBILITY PLAN

9.0 INTRODUCTION

The implementation of the Refined Concept Plan will be a multi-step process. At the time this report was completed, project funding had not been procured. This chapter will lay out the next steps in moving forward with the Refined Concept Plan, from continued public outreach to environmental documentation to final design and construction.

9.1 ESTIMATE OF PROBABLE COSTS

Proposed improvements along the corridor can be broken into six categories:

- ❖ Roadway Improvements
- ❖ Parking Improvements
- ❖ Pedestrian Improvements
- ❖ Traffic Signal Improvements
- ❖ Transit Improvements
- ❖ Streetscape Improvements

Each of these six categories incorporates several elements of the design included in the Refined Concept Plan. Table 9-1 summarizes the probable costs for the design, construction and administrative costs associated with the project, in year 2004 dollars. Overhead costs, including contingencies, mobilization, and project reserve are based on SANDAG guidelines for preparing cost estimates. As shown in the table, these overhead costs account for an 84% markup over the proposed construction costs.

Table 9-1
Estimate of Probable Costs
University Avenue Mobility Plan – Refined Concept Plan

Design Element	Probable Cost
Roadway Improvements	\$1,513,394.00
Parking Improvements	\$315,040.00
Pedestrian Crossing Improvements	\$855,950.00
Traffic Signal Improvements	\$583,000.00
Transit Improvements	\$1,734,000.00
Streetscape Improvements ⁽¹⁾	\$154,400.00
Subtotal	\$5,155,784.00
Mobilization (4%)	\$206,231.36
Engineering/Administration/Construction (30%)	\$1,546,735.20
Project Reserve (30%)	\$1,546,735.20
Contingency (20%)	\$1,031,156.80
TOTAL	\$9,486,642.56

Note: (1) Streetscape estimate based on KTU+A Study, November 2002.
(2) Actual costs will be available at the time of construction bid award.



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Roadway Improvements

Roadway improvements include all physical modifications to University Avenue. Table 9-2 summarizes the individual costs associated with the proposed roadway improvements, such as the construction of bulb-outs and raised median, paving and striping, and utility relocation. It does not include pedestrian crosswalks at unsignalized locations. Those costs are outlined with the pedestrian improvements.

Table 9-2
Estimate of Probable Cost for Roadway Improvements

Description	Quantity	Units ⁽¹⁾	Unit Cost	Total Cost	
Bulb-outs					
1	Remove Existing Curb & Gutter at Bulb-outs	3,000	LF	\$ 5.00	\$ 15,000.00
2	Construct Curb & Gutter for Bulb-outs	3,000	LF	\$ 17.00	\$ 51,000.00
3	Sidewalk improvements at Bulb-outs	32,300	SF	\$ 5.00	\$ 161,500.00
4	Reconstruction of Curb Inlets at Bulb-outs	11	EA	\$ 3,890.00	\$ 42,790.00
Raised Median					
5	Excavate for Raised Median	6,850	LF	\$ 2.00	\$ 13,700.00
6	Modify Sewer Manholes in Raised Median	22	EA	\$ 1,100.00	\$ 24,200.00
7	Construct Raised Median Curb & Gutter	6,850	LF	\$ 20.00	\$ 137,000.00
8	Landscaping for Median with Irrigation	32,000	SF	\$ 5.00	\$ 160,000.00
9	36" Box Trees with Planters for Median	200	EA	\$ 950.00	\$ 190,000.00
Roadway Paving & Striping					
10	2" Asphalt Overlay (Park to Boundary)	315,300	SF	\$ 1.00	\$ 315,300.00
11	Color Treatment to Asphalt in Transit Only Lane	62,676	SF	\$ 4.00	\$ 250,704.00
12	Refined Concept Plan Lane Striping & Pavement Markings	1	LS	\$ 31,000.00	\$ 31,000.00
Utilities Relocation					
13	Relocate Utilities	15	EA	\$ 5,000.00	\$ 75,000.00
14	Relocate Streetlight	11	EA	\$ 4,200.00	\$ 46,200.00
TOTAL				\$ 1,513,394.00	

Note: (1) LF = Linear Feet, SF = Square Feet, EA = each, LS = lump sum

Parking Improvements

The Refined Concept Plan recommends that parking be restricted along University Avenue in the transit only lane during the peak hours (7am –9am and 4pm –6pm). This will allow transit vehicles dedicated access to a transit only lane along the corridor when traffic congestion is the highest. This solution allows the community to maximize parking along the study corridor outside of the peak four hours of the day. The long-term goal would be to attract businesses to University Avenue storefronts that do not have a need for on-street loading/unloading. Such businesses would be encouraged to locate near corner loading zones or where adequate rear alley access is available. This would allow on-street parallel parking to ultimately be prohibited.



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To make up for the loss of parking due to the transit only lane, side street improvements are recommended that would convert on-street parallel parking to diagonal parking. Such improvements are recommended on streets with a minimum cross-section width of 52 feet curb-to-curb. Road improvements include potential widening, curb and gutter replacement, striping and signs. Table 9-3 summarizes the costs associated with the proposed parking improvements.

Table 9-3
Estimate of Probable Cost for Parking Improvements

Description		Quantity	Units	Unit Cost	Total Cost
1	Remove Existing Striping (per Street)	7	EA	\$ 5,000.00	\$ 35,000.00
2	Remove Existing Curb & Gutter (7 streets @ 600')	5,780	LF	\$ 5.00	\$ 28,900.00
3	2' Street Widening (7 streets @ 600')	11,560	SF	\$ 12.00	\$ 138,720.00
4	Construct New Curb & Gutter (7 streets @ 600')	5,780	LF	\$ 14.00	\$ 80,920.00
5	Striping of New Parking Stalls (per Street)	7	EA	\$ 4,500.00	\$ 31,500.00
TOTAL					\$ 315,040.00

Pedestrian Improvements

Five unsignalized enhanced pedestrian crossings are recommended along the University Avenue corridor. In addition, there are six side street enhanced pedestrian crossings. Enhanced pedestrian crossings include the following elements:

On University Avenue:

- ❖ In pavement flashing devices
- ❖ High contrast/highly reflective crosswalk marking
- ❖ Pedestrian activation button or automated detection
- ❖ Control assembly
- ❖ Wiring
- ❖ Side mounted pedestrian warning signs

On Side Street (controlled by stop sign):

- ❖ Pedestrian curb extensions (bulb-outs)
- ❖ High contrast/highly reflective paint crosswalk marking

In addition, new ADA pedestrian ramps with truncated domes would be constructed at all intersections where existing pedestrian ramps are not provided. This includes all unsignalized crossing locations. All existing pedestrian ramps should also be modified to the truncated dome design. Breaks in the median



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would be provided at all unsignalized pedestrian crossings along University Avenue. Therefore, pedestrians would not be required to step up onto the median, but would cross at-grade.

To meet the needs of visually impaired residents and visitors to North Park, the cost estimate includes audible and countdown technology at each intersection. The estimate of probable cost includes the installation of these systems at all signalized intersections along the corridor. However, not all signalized intersections may be recommended for audible pedestrian signals. Determination of these locations would be done in consultation with the City’s Disabilities Services section during the design phase of the project.

At the time this report was prepared, the City of San Diego has a pilot project underway to test the pedestrian countdown technology. Future city policy regarding the implementation of this technology will be applied with the Refined Concept Plan is constructed.

Table 9-4 summarizes the probable costs associated with the proposed pedestrian improvements.

Table 9-4
Estimate of Probable Cost for Pedestrian Improvements

Description	Quantity	Units	Unit Cost	Total Cost
1 Construct New ADA Pedestrian Ramps	47	EA	\$ 2,500.00	\$ 117,500.00
2 Retrofit Existing Pedestrian Ramps	27	EA	\$ 350.00	\$ 9,450.00
3 Restripe Existing Crosswalk with High Reflective Paint	36	EA	\$ 250.00	\$ 9,000.00
4 Install Unsignalized Enhanced Pedestrian Crossing With Overhead Sign	5	EA	\$ 45,000.00	\$ 225,000.00
5 Install Side Street Enhanced Pedestrian Crossing (No Overhead Sign)	6	EA	\$ 45,000.00	\$ 270,000.00
6 Sandblast Existing Pedestrian Crossing, Remove Overhead Sign & Flashing Lights, Sandblast crosswalks, Slurry Seal and Restripe	2	EA	\$ 2,500.00	\$ 5,000.00
7 ADA Audible Countdown with Actuator at Traffic Signals	11	EA	\$ 20,000.00	\$ 220,000.00
TOTAL				\$ 855,950.00

Traffic Signal Improvements

Two new traffic signals are included in the Refined Concept Plan. Both Arnold Avenue and Oregon Street are 3-leg intersections. Left turn phasing is recommended at Arnold Avenue, but not at Oregon Street. The traffic signal at Ohio Street will be removed and replaced with an enhanced pedestrian crossing.



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Traffic signal modifications are recommended at five intersections to convert existing permitted phasing to protected left turn phasing. Installation of a new left turn phase includes: installation of new traffic signal head on new mast arm, installation of new loop detectors and modifications to the traffic signal cabinet, and update of the traffic signal and system timing.

Table 9-5 summarizes the probable costs associated with the proposed traffic signal improvements.

Table 9-5
Estimate of Probable Cost for Traffic Signal Improvements

Description	Quantity	Units	Unit Cost	Total Cost
1 Install New Traffic Signal (Arnold & Oregon)	2	EA	\$ 150,000.00	\$ 300,000.00
2 Traffic Signal Modifications for Left Turn Phase	9	EA	\$ 30,000.00	\$ 270,000.00
3 Remove Traffic Signal at Ohio Street	1	EA	\$ 13,000.00	\$ 13,000.00
TOTAL				\$ 583,000.00

Transit Improvements

The Refined Concept Plan focuses on several transit improvements:

- ❖ Transit Only Lane
- ❖ Consolidation of Transit Stops
- ❖ Implementation of Transit Signal Priority Technology (TSP)

At all proposed transit stops, a sign, seating, trash receptacle, concrete bus pad and paved waiting area will be provided. New transit shelters will be constructed at all locations. Design of these shelters will be determined based on the streetscape design for the corridor. Two types of shelters were identified in Phase I (University Avenue Traffic Calming project). Type 1 shelters integrated a streetcar-oriented design Texas Street, Herman Street and Idaho Street. Type 2 shelters, “Silhouette” design, are similar to those currently constructed at 30th Street. This cost estimate accounts for approximately \$100,000 per transit stop for the construction of new Type 1 transit shelters and \$50,000 for Type 2 transit shelters. Additional costs may be incurred based on changes to streetscape design for the corridor.

A major component of the transit design is the operation of the transit signal priority (TSP) system along the corridor. This system would give priority to transit vehicles at signalized intersections, when the transit vehicle is running behind schedule. A TSP system would require a central control system and transit operation system. The central control system links all the traffic signals to the traffic operations system. The traffic operations system tells the traffic signals what to do when a signal is received from the bus. Since the TSP affects the operations of the traffic signal, it should be located at and operated by the



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City of San Diego. This would involve linking the communication system to a central computer located within a designated space (Traffic Control System Center) at the City of San Diego offices. A team of traffic engineers would also need to be trained to use the system. Cost for training staff or allocation of space for the system is not included in this cost. The system would not require a dedicated room, but would require a minimum of one designated computer and monitor for monitoring the system. In addition, each bus would require the necessary hardware to send a signal to the traffic signal controller. Typically, this involves mounting a device on the front of the transit vehicle that would most likely be automated, but could be activated by the transit operator, if a manual system is selected. Each traffic signal would be equipped with receiving devices, typically mounted on the mast arm that would receive the transmitted signal.

Table 9-6 summarizes the estimate of probable costs associated with the planned transit improvements along the corridor.

Table 9-6
Estimate of Probable Cost for Transit Improvements

Description	Quantity	Units	Unit Cost	Total Cost
1 Retain Existing Bus Stop with New Type 1 Shelter	2	EA	\$ 100,000.00	\$ 200,000.00
2 Install New Bus Stop with New Type 1 Shelter	3	EA	\$ 175,000.00	\$ 525,000.00
3 Install New Bus Stop with Type2 Shelter	5	EA	\$ 75,000.00	\$ 375,000.00
4 Install (Transit Only Lane (Bikes OK)) Signs @ 100 intervals	90	EA	\$ 500.00	\$ 45,000.00
5 Install TSP Communication System	1	LS	\$ 384,000.00	\$ 384,000.00
6 Install Traffic Control System Center (TCS)	1	LS	\$ 55,000.00	\$ 55,000.00
7 Install Transit Operation System (TOS)	1	LS	\$ 150,000.00	\$ 150,000.00
TOTAL				\$ 1,734,000.00

Streetscape Improvements

Although not studied as part of the University Avenue Mobility Plan, streetscape improvements were originally identified through the University Avenue Traffic Calming project. Table 9-7 summarizes the estimate of probable costs associated with the streetscape improvements identified in the first phase of this project.

The Georgia Street Bridge is the gateway to North Park at the western end of the corridor. The KTU+A study recommended that an illuminated “North Park” sign be installed on the bridge, which accounts for approximately \$25,000 of the total streetscape improvement costs.



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Table 9-7
Estimate of Probable Cost for Streetscape Improvements

Description	Quantity	Units	Unit Cost	Total Cost
1 Georgia Street Bridge Signage	1	LS	\$ 10,000.00	\$ 10,000.00
2 Georgia Street Lighting	1	LS	\$ 15,000.00	\$ 15,000.00
3 Over the road street signs	1	LS	\$ 15,000.00	\$ 15,000.00
4 Corner Street Signs	1	LS	\$ 64,400.00	\$ 64,400.00
5 Special Interpretive Signage at Transit Stops	1	LS	\$ 50,000.00	\$ 50,000.00
TOTAL				\$ 154,400.00

In addition, the plan calls for over the road street signs. These signs would be located on the traffic signal mast arm and constructed in the same design as the existing North Park sign located near 30th Street. It was recommended in the KTU+A study that these signs be located at all signalized intersections. In addition to the over the road street name signs, signs at each of the corners are recommended, mounted on standard poles. These street name signs would be decorative, again in the shape of the existing North Park sign located near 30th Street. A preliminary cost of \$79,000 was identified in the KTU+A study for these improvements. To date, North Park Main Street has identified \$60,000 in funding to implement these signage improvements.

In conjunction with the transit stop improvements, the KTU+A plan integrates “special interpretive signage at transit stops”. The cost for the electronic signage system at each transit stop has been estimated at \$50,000, and would be dependant upon the communications system identified under the planned transit improvements and the operations of a transit signal priority system.

Other Costs

As shown previously in Table 9-1, the estimate of probable costs includes approximately \$4.3 million dollars in overhead and/or contingency related costs. The percentages used in this analysis are consistent with SANDAG’s requirements for estimating probable costs. A description of each of these items is provided below:

- ❖ **Mobilization** is a construction related cost. It is the fee the contractor will charge to the City to get the necessary equipment on-site to do the identified work. Four percent of the probable cost has been included in the estimate to account for mobilization.
- ❖ **Engineering/Administration/Construction** is estimated at 30 percent of the probable cost. It relates to costs associated with final design engineering, city administrative costs, and city construction inspections.



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- ❖ **Project Reserve** is estimated at 30 percent of the probable cost of the project and provides funding for any additional analysis of the corridor. This may include city processing of the preliminary documents, environmental review, continued public outreach, changes to the preliminary design and other unforeseen costs associated with getting the project from preliminary design to construction.
- ❖ **Contingency** is included to account for any unforeseen final design or construction related events, changes to the design or change in construction costs and/or design due to delay to the project. A 20 percent contingency has been included in the estimate of probable costs for this project.

9.2 IMPLEMENTATION PROGRAM

There are many paths that could be taken to implement the University Avenue Mobility Plan. To minimize costs and impacts to the community, a preferred implementation plan has been established. This plan, outlined in the following sections, assumes that the necessary funding for the completed construction of the project is available for each of the elements of the plan. Exhibit 9-1 summarizes the three key elements of the plan as they relate to implementation.

Public Participation

Public participation will be a key element to keeping this project on track. It will take the commitment of the members of the Steering Committee and ongoing dedication of City staff, SANDAG and North Park Main Street to move the project forward. Recommendations from the Project Area Committee, Greater North Park Community Planning Committee, the North Park Main Street Board and the North Park Community Association will be key in acquiring the necessary funding to move on to the next stages of the project.

Grant Applications and Funding

North Park Main Street, in partnership with City of San Diego, has been successful in acquiring several hundred thousand dollars in grant money for the University Avenue plans. This dedication to the project will be necessary to continue to fund this project in the future. A detailed discussion of potential funding opportunities is provided later in Section 9.4 of this chapter. Grant funding will be the critical path toward moving the project from paper to construction over the next five to six years. As a pilot village project, North Park will have priority in moving projects through the City of San Diego.



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Exhibit 9-1
Implementation Plan



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City Approval Process

A formal recommendation on the University Avenue Mobility Plan should be made by both the Greater North Park Community Planning Committee and the Greater North Park Redevelopment Project Area Committee. Letters describing their recommendations should be incorporated at the front of this report. Once funding for environmental analysis final design has been identified, the University Avenue Mobility Plan can be incorporated into the City's Capital Improvement Program and an environmental document can be prepared. Once the environmental document and design are completed it can be brought before the City Council's Land Use and Housing Committee for a recommendation to the City Council for approval. The City Council should also be asked to authorize application for any grant funding relating to environmental analysis final design and construction.

Once the project is in the Capital Improvement Program, the Greater North Park Community Plan (including the associated traffic studies) should be amended to incorporate the project. An environmental document will need to be prepared at this time as well. This must be done before final design can begin. The amendment must be approved by the Planning Commission and the City Council.

To complete this process, City staff and financial resources will need to be allocated. This should include a fully funded method for maintenance of all special features such as the median, landscaping, signage, etc. Once financial resources are allocated to continuing this project, it is anticipated that the environmental documentation and Community Plan amendment process will take 1 to 2 years to complete.

Environmental Analysis and Final Design

The concepts presented in this report must be reviewed by the City's Engineering and Capital Projects Department, Fire and Rescue Department and others for feasibility prior to implementation and formal recommendation by community groups. After an initial review, final design plans can be prepared. The final design process will use the Refined Concept Plan shown in this report to develop construction documents. A second environmental document may need to be prepared in conjunction with the final design work depending on whether all the project impacts can be identified at the time of the Community Plan amendment and how much time has elapsed between the amendment and final design. During the initial feasibility review, environmental document development and throughout the final design process, all project features shown in this report will be evaluated and be subject to change to meet design standards and address constructability needs. It is recommended that the project be designed as one complete project, with an established phasing plan, as outlined in this chapter. It is anticipated that final design, which includes City approval of all construction documents and selection of a contractor to complete the project, will take approximately 2 to 5 years to complete, depending on the level of additional design refinement required, complexity of the environmental document, amount of



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coordination with outside agencies (including permitting), fund availability and significant other issues affecting the scope of the project.

Construction

Three independent paths have been established as part of the Implementation Program as illustrated in Exhibit 9-1: Transit Improvements, Roadway Improvements, and Parking Improvements. Roadway improvements will take the longest to complete and are the most disruptive to the traffic operations, residents and business owners along the corridor. It is anticipated that the roadway improvements along the corridor will take approximately 10 months to complete if funding is available to construct all the roadway improvements at on time. Transit improvements will be the least disruptive to the corridor, and should be conducted simultaneous to the construction of the roadway improvements included in the Refined Concept Plan.

9.3 FUNDING SOURCES

At the time this report was prepared, the University Avenue Mobility Plan was not included in the City Capital Improvement Program project list and funding had not been identified. North Park Main Street and the City have been successful at acquiring grant funding through Caltrans for the first two stages of this project. In order to move the project forward, additional grant funding, and possible local match funds, will need to be awarded. This section of the report focuses on the potential funding sources available for the University Avenue Mobility Plan.

Local Funding Sources

TransNet

Local funding for projects maybe available through TransNet, a 20-year, \$3.3 billion program managed by the San Diego Regional Transportation Commission. TransNet was initiated in 1987 and is a sales tax program that collects funds to improve the regional transportation system. Combined with federal and state funding, the TransNet program works to improve the regional transportation system in San Diego County. A proposition to extend TransNet beyond 2008 is expected to be on the November, 2004 ballot. If approved, the extension would provide funding for local street and road improvements including transportation related infrastructure improvements to support smart growth development. A portion of TransNet funds would also be set aside for smart growth incentives to fund enhancements to streets and public places and improved land use/transportation coordination. The University Avenue Mobility Plan would likely be eligible for these funds.



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Redevelopment Funds

University Avenue is included in the North Park Redevelopment Area. As such, it is eligible for tax increment funds to assist in final design and construction implementation.

Development Impact Fees

Any new development that occurs along University Avenue is required to pay development impact fees. By law, these fees must be used to pay a proportionate cost for public facilities based on the impact that the development would have in generating demand for the facilities. Road improvements are an eligible cost.

State Funding - Caltrans

Caltrans Division of Transportation Planning awards transportation planning grants annually. In Fiscal Year 2004/2005 Caltrans awarded approximately \$2.6 million for projects involving transportation and transit planning improvements throughout the state. Funding is allocated to the State of California through FHWA and FTA funding programs. These are one-time transportation planning grants. As this University Avenue Mobility Plan exits the planning stages and enters into design, this grant application process may not be applicable for this project. But this may be a source of funding for future traffic calming programs for the surrounding community.

Federal Funding Sources

Housing and Urban Development - Community Development Block Grant Funding & SuperNOFA

The Community Development Block Grant Funding (CDBG) program provides grant funding to develop viable urban communities. The goal is to provide decent housing and suitable living environments, and to expand economic opportunities primarily for low- and moderate-income persons. CDBG grants are awarded by the United States Department of Housing and Urban Development (HUD) through the Community Planning and Development office.

As of 2004, the HUD grant program was consolidated into one program called SuperNOFA (Notice of Funding Availability). Several grant funds are available through SuperNOFA, including Community Development Technical Assistance grants opportunities. In 2004, \$1.5 million was allocated to CDBG technical assistance programs. Funding availability and programs vary from year to year and should be monitored to determine if streetscape or corridor beautification improvements for the corridor would be applicable under this grant.



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TEA-21 – Transportation Equity Act for the 21st Century

The Transportation Equity Act for the 21st Century, or "TEA-21," refers to the massive federal transportation spending bill signed into law by President Clinton in June of 1998. It provided over \$3 billion in annual federal funding over a six-year period (federal fiscal years 1998 through 2003) to assist California's state department of transportation (Caltrans), metropolitan regions, and local governments with everything from building freeways to installing curb cuts on sidewalks.

This program was originally passed by Congress in 1965 and has been re-enacted every 5 to 6 year since. Since the passage of TEA-21 California has experienced many successful transportation programs that span from highways to sidewalks. Some of these include the transportation enhancements program, the safe routes to school program, the bicycle transportation account and the congestion mitigation and air quality (CMAQ) program.

The TEA-21 program expired in 2003. The United States Congress and Senate are in the process of negotiating the future of TEA-21 around a document entitled "Stay the Course – How to make TEA-21 Even Better". With the six-year extension of the TEA-21 program, funding will be come available for mobility projects such as the University Avenue project that demonstrate a balance between modes and the integration of smart growth principles in an urban core.

Federal Transit Administration – New Starts Program

Projects eligible for FTA Section 5309 New Starts funding include any fixed guideway system, which utilizes and occupies a separate right-of-way, or rail line, for the exclusive use of mass transportation and other high occupancy vehicles, or uses a fixed catenary system and a right of way usable by other forms of transportation. This includes, but is not limited to, rapid rail, light rail, commuter rail, automated guideway transit, people movers, and exclusive facilities for buses (such as bus rapid transit) and other high occupancy vehicles.

By implementing a dedicated transit only lane along University Avenue, both eastbound and westbound, this corridor may be eligible for New Starts funding. Application for this funding will require that parking along University Avenue be relocated to side streets.

The fiscal year 2005 New Starts budget was \$1.5 billion, which included funding for 32 existing, pending and proposed Full Funding Grant Agreements (FFGA). These agreements are multi-year contractual agreements between the FTA and project sponsors that formally define the project scope, cost and schedule. They also establish the maximum level of federal financial assistance and outline the terms and conditions of federal financial participation.

New Starts projects must undergo evaluation by the FTA throughout the entire project development process. Projects are evaluated according to a variety of criteria. As required in Section 5309 (e), the FTA



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assigns ratings of “highly recommended,” “recommended” or “not recommended” throughout the project development process as information concerning costs, benefits and impacts is refined. Based on these evaluations, the FTA makes decisions about moving projects forward, from preliminary engineering to final design, to annual funding recommendations to Congress, and to the execution of a FFGA. In the Annual Report on New Starts, FTA applies these evaluations to recommend funding for projects anticipated to be ready for an FFGA before the end of the budget fiscal year, and to recommend funding for other meritorious projects.

FTA evaluates the project justification and the local financial commitment according to the following measures:

Project Justification

- ❖ **Mobility Improvements.** Measured by travel time benefits per project passenger mile, low-income households served and employment near stations
- ❖ **Environmental Benefits.** Measured by change in regional pollutant emissions, change in regional energy consumption and EPA Air Quality Designation.
- ❖ **Cost Effectiveness.** Measured as the cost per hour of travel time saved.
- ❖ **Operating Efficiencies.** Measured by system operating cost per passenger mile.
- ❖ **Transit Supportive Land Use & Future Patterns.** Measured by existing land use, transit supportive plans and policies and performance, and impacts of policies.
- ❖ **Other.** Number of optional factors, including the projected economic impact of project.

Local Financing

- ❖ The proposed share of total project costs from sources other than Section 5309 New Starts, including federal formula and flexible funds, the local match required by Federal law, and any additional capital funding.
- ❖ The stability and reliability of the proposed capital financing plan.
- ❖ The ability of the sponsoring agency to fund operational and maintenance of the entire transit system (including existing service) as planned, once the project is built.



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To assign overall project ratings to each proposed New Starts project, FTA considers the individual ratings for each of the project justification and local financial commitment measures. FTA combines this information into summary “finance” and “project justification” ratings for each prospective New Starts project. Individual measures and summary ratings are designated as “High,” “Medium-High,” “Medium,” “Low-Medium” or “Low.”

Other Federal Transit Administration Funding Programs

Several other grant funding programs are available through the FTA for transit related projects. Grant programs are specific to the size of the urbanized area and the transit vehicle (rail vs. bus). Two grant programs defined by FTA that may be applicable to the University Avenue Mobility Plan are described below:

- ❖ **Bus and Bus-Related Projects.** Eligible purposes are acquisition of buses for fleet and service expansion, bus maintenance and administrative facilities, transfer facilities, bus malls, transportation centers, intermodal terminals, park-and-ride stations, acquisition of replacement vehicles, bus rebuilds, bus preventive maintenance, passenger amenities such as passenger shelters and bus stop signs, accessory and miscellaneous equipment such as mobile radio units, supervisory vehicles, fareboxes, computers, shop and garage equipment, and costs incurred in arranging innovative financing for eligible projects. Eligible recipients for capital investment funds are public bodies and agencies (transit authorities and other state and local public bodies and agencies thereof) including states, municipalities, other political subdivisions of states; public agencies and instrumentalities of one or more states; and certain public corporations, boards, and commissions established under state law. Funds are allocated on a discretionary basis.

- ❖ **Cities of over 50,000 Population.** Eligible purposes include planning, engineering design and evaluation of transit projects and other technical transportation-related studies; capital investments in bus and bus-related activities such as replacement of buses, overhaul of buses, rebuilding of buses, crime prevention and security equipment and construction of maintenance and passenger facilities; and capital investments in new and existing fixed guide way systems including rolling stock, overhaul and rebuilding of vehicles, track, signals, communications, and computer hardware and software. All preventive maintenance and some Americans with Disabilities Act complementary paratransit service costs are considered capital costs.

For urbanized areas with 200,000 population and over, funds are apportioned and flow directly to a designated recipient selected locally to apply for and receive



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Federal funds. For urbanized areas with populations of 200,000 or more, operating assistance is not an eligible expense. In these areas, at least one percent of the funding apportioned to each area must be used for transit enhancement activities such as historic preservation, landscaping, public art, pedestrian access, bicycle access, and enhanced access for persons with disabilities

Several other local, regional and federal grant programs develop annually depending upon the availability and need for projects. Walkable and livable community project rank high amongst organizations such as:

- ❖ The Funder’s Network – A philanthropic organization aimed toward creating livable communities through smart growth.
- ❖ The Smart Communities Network – Sponsored through the Department of Energy, this organization regularly posts funding opportunities throughout the United States focused on creating energy efficient communities.
- ❖ The Surface Transportation Policy Project - This organization is a diverse, nationwide coalition working to ensure safer communities and smarter transportation choices that enhance the economy, improve public health, promote social equity, and protect the environment. Through this organization links to local and federal funding opportunities are regularly published.

Continuous monitoring of these and other local programs will be necessary to ensure that adequate funding is obtained for public outreach efforts, final design and construction of the elements of this plan.

9.4 FINAL DESIGN ISSUES AND CONSTRUCTION PLAN

The University Avenue Mobility Plan prepared 30 percent conceptual design plans for the study corridor. Several design elements are like to emerge as the project moves from preliminary design to final design. Discussions with North Park Main Street staff indicated there is a desire to get the ball rolling and make an immediate change to the corridor. One suggestion was to stripe the corridor with the proposed changes. Although it may be possible to move forward with some elements of the plan, it is possible that if implemented early, some elements of the plan would need to be redone as the project moves forward. However, without the raised median, there is a high potential for violations and the community would experience many of the restrictive and undesirable aspects of the plan without the benefit of the safety enhancements and beautification elements. This may jeopardize full implementation.

This section focuses on some issues that should be considered when determining the phasing of the project and issues that may arise during final design.



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Roadway Improvements

During construction of the proposed improvements, work areas will need to be dedicated along the corridor to allow heavy machinery and work crews to do their job. This will typically require a lane closure in one direction or in both directions. Because of this requirement, it is recommended that the raised median be the last element of the plan to be constructed. By waiting to construct the median, traffic lanes can be shifted from one side of the centerline to the other to maintain the maximum capacity for the motoring public during the construction of the improvements. During construction, parallel on-street parking will be removed. Therefore, it will be critical that side street improvements to maximize parking be conducted in conjunction with the physical improvements along University Avenue.

- ❖ **New Traffic Signals and Traffic Signal Modifications.** The first element of the plan that should be constructed is the new traffic signals and traffic signal modifications. These improvements will be typically isolated to the intersections. Lane closures may be necessary when the new traffic signals are installed at Arnold Avenue and Oregon Street. Temporary lane closures may occur when the new traffic signal heads are installed for the protected-permissive signal phase improvements. Otherwise, traffic signal improvements are typically constructed outside the travel way.

Signal improvements do not include the installation of enhanced pedestrian crossings. The unsignalized pedestrian crossings should be constructed after the raised median and resurfacing of the roadway. If they are constructed prior to the resurfacing and/or reconstruction of the street, the in pavement flashers will need to be removed before the resurfacing occurs and replaced after the striping of the roadway is completed.

- ❖ **Construction of Curb Extensions (Bulb-outs).** Once signal modifications are completed, then bulb-outs should be constructed. Bulb-outs could be constructed simultaneous to signal improvements at any intersection where signal modifications or modifications to pedestrian access are not planned. Construction of the bulb-outs will require the closure of the outside lane and sidewalk adjacent to the construction. Therefore, it is recommended that bulb-outs be constructed on either the north or south side of University Avenue first, then switch to the other side of the street such that pedestrian access along the corridor is not hindered during construction. Pedestrian ramps should be constructed simultaneous to the construction of the bulb-outs at all locations.



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- ❖ **Construction of Raised Median.** Although the exact depth of the historic streetcar tracks under University Avenue is unknown, it is believed that the depth is approximately 8 to 10 inches below the surface. This may pose construction related problems associated with the raised median. To install the raised median, the road will need to be excavated by approximately 10 inches to a foot to account for a six-inch curb above the surface and irrigation. If the historic streetcar tracks are located approximately 8 to 10 inches below the surface of the road, the tracks will need to be removed to properly construct the raised median. Visual observations along the road also show that the crown of the road in many areas is more than six percent grade above the edge of pavement at the gutter line. A typical crossfall of a road is approximately 2 percent. Crossfall is the difference in grade between the centerline of the roadway and the edge of pavement. By removing the tracks, University Avenue could also be leveled out and constructed to a more normal crossfall. Flattening out University Avenue may further improve overall traffic and transit operations through the corridor. The decision to reconstruct the road or to remove the tracks will control the duration of this phase of the project. During this construction period, it is possible that the capacity of University Avenue could be reduced to two lanes (one in each direction).
- ❖ Simultaneous to the construction of the raised median, the concrete pads at the transit stops should be constructed. This will require some excavation along the curb at the new transit stops.
- ❖ **Resurface and Restripe Corridor.** If funding cannot be acquired to reconstruct University Avenue, then it is recommended that the roadway be ground down by two inches and resurfaced. This will ensure that the crown of the road does not get any higher than it currently is and so that no existing striping seeps through the new pavement. All proposed striping changes and the color treatment to the transit only lane can be implemented. At this time it is recommended that the proposed enhanced pedestrian crossings be implemented.

Transit Improvements

If transit improvements are a priority along the corridor, simple steps could be taken to complete this effort at a relatively low cost and in a short time period. Relocation of the transit stops will involve noticing the public at each of the transit stops. In addition, all property owners near the new transit stops will be noticed. Upon the approval of all adjacent property owners and upon the completion of the removal noticing period, the necessary bus stop signs will be removed and new bus stop signs will be erected along the corridor.



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To complete the relocation of transit stops, bus shelters, concrete bus pads, lighting, signage and seating will need to be provided. It is recommended that the transit stops be prioritized to determine the order for which improvements should be made once the transit stops are consolidated. A prioritization ranking based on ridership is provided in Table 9-8.

**Table 9-8
Transit Stop Improvement Ranking**

Transit Stop	Ridership Ranking	Existing to Remain	New Stop	Shelter Type	Prioritization Ranking	Improvement Cost
Westbound						
Iowa Street	6	Yes	No	Type 1	Medium	\$100,000
30 th Street	1	Yes	No	Type 2	High	\$75,000
Idaho Street	12	No	Yes	Type 2	Low	\$75,000
Texas Street	5	No	Yes	Type 1	Medium	\$175,000
Alabama Street	11	No	Relocate to Farside	Type 2	Low	\$75,000
Park Boulevard	3	Yes	No	Showcase Project		
Eastbound						
Park Boulevard	4	Yes	No	Showcase Project		
Alabama Street	8	No	Relocate to Farside	Type 2	Medium	\$75,000
Texas Street	10	No	Yes	Type 1	Low	\$175,000
Pershing Street	9	No	Yes	Type 2	Low	\$75,000
30 th Street	2	No	Relocate to Farside	Type 2	High	\$75,000
32 nd Street	7	No	Yes	Type 1	Medium	\$175,000

Note: Prioritization Ranking based on ridership:

- 1 through 4 = High
- 5 through 8 = Medium
- 9 through 12 = Low

30th Street, both eastbound and westbound, has the highest ranking of all transit stops along the corridor. As the highest transfer intersection along the corridor, 30th Street has high visibility to transit riders. Therefore, it is recommended that improvements to this stop be implemented first. Construction of the Type 2 transit stops at 30th Street is estimated to cost approximately \$150,000.

The **Iowa Street/32nd Street** pairing of transit stops are the only pair that received “Medium” priority ranking both eastbound and westbound. This pairing is also located at the eastern end of the corridor setting the tone for the corridor coming from the east. Therefore, it is recommended that this stop be implemented second. The estimated construction cost for the Iowa Street/32nd Street pairing is \$350,000.

Texas Street is one of two Type 1 shelter locations along the corridor. With a mixed ranking of Medium and Low (westbound and eastbound, respectively), this stop is highly visible to both transit users and the



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motoring public. It is recommended that Texas Street be implemented third. The cost to construct the transit stop improvements at Texas Street is \$350,000.

Alabama Street also received a Medium/Low ranking on both the eastbound and westbound approach. It is recommended that this low volume transit stop be the fourth stop improved. The cost to construct the transit stop improvements at Alabama Street is approximately \$150,000. It should be noted that improvements at this stop could increase in priority since the amenities at the existing stops in this portion of the corridor are limited and the stop is located on a steep slope resulting in a need for some transit passengers to sit down and rest upon arriving at the stop.

The lowest ranking of the ten transit stops were the **Idaho Street and Pershing Avenue**, resulting in the lowest priority for transit stop improvements. Improvements planned for this stop include the construction of Type 2 bus shelters. The estimated construction cost for improvements is approximately \$150,000.

In addition to the transit stop improvements, SANDAG and City of San Diego must work together to select a transit signal priority system for this corridor consistent with the systems implemented on El Cajon Boulevard and as part of the Showcase project. Once the technology is identified, the process of implementation, training and test operations will begin. It is anticipated that this process could take up to 3 to 4 years.

Parking Improvements

Parking in North Park is at a premium. In the next three to five years over 500 new parking spaces will be added with the construction of the parking structure on 29th Street and the construction of the library between Idaho Street and Oregon Street. The operational analysis of the corridor shows that maintaining the on-street parking during the peak hours results in significant delays to both buses and passenger vehicles. However, businesses on the north side of the corridor require loading along University Avenue.

The long-range plan for this project would be to eliminate all on-street parallel parking spaces on University Avenue. To meet the immediate needs of the businesses along University Avenue, it is recommended that parking in the transit only lane be restricted from 7:00 to 9:00 a.m. and from 4:00 to 6:00 p.m. in the business core (Idaho Street to Iowa Street). North Park Main Street should continue to work with business owners, both new and existing, to educate them on the long-range plans for the corridor. As businesses along University Avenue evolve, a focus should be to encourage businesses that have a need for heavy loading to locate in storefronts with rear access.

To improve the overall parking along the corridor, it is recommended that side streets be modified from parallel parking to diagonal parking on all streets where the curb-to-curb width is 52 feet or wider, and where such modifications would result in a net increase in parking. City standards require 52 feet curb to



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curb for diagonal parking on both sides of the street on non-through streets. For through streets, City standards require 54 feet curb-to-curb.

Construction along University Avenue will result in temporary parking losses. Therefore, it is recommended that side street parking improvements be constructed as the parking is lost along the corridor. The focus of parking improvements should be in the core of the corridor (Idaho Street to Iowa Street), which will be most impacted by construction.

9.5 CONCLUSIONS

The Refined Concept Plan identified in this report is estimated to cost approximately \$8.7 million, which includes environmental clearance, City processing of the necessary Community Plan Amendments, final design and construction. Funding for this project was not identified at the time this study was completed. It is anticipated that the funding for the remaining planning and design stages will be acquired through local state, and federal grant programs such as TransNet, TEA-21, and FTA related programs. It is recommended that the North Park Main Street Program work together with City staff and SANDAG to continue to seek opportunities on an annual basis to fund this project.

It is recommended that the University Avenue Mobility Plan be designed and constructed as a single project in several phases. It is recommended that the roadway section be determined through the final design process to determine if University Avenue should be reconstructed and to determine if the buried streetcar tracks need to be removed. This determination will set both the cost and the schedule for construction of the project. Regardless of the road reconstruction, it is recommended that the raised median be constructed in the final stage of the project. This will allow maximum flexibility in traffic control as the other elements of the plan are constructed, such as the traffic signal modifications and curb-extensions.

Although the plan could be implemented initially as a striping project, several elements would not be integrated in the preliminary striping project including the curb extensions, enhanced pedestrian crossings and access control at the side streets. These three elements will require the installation of the raised median and any necessary roadwork along the corridor. The greatest benefit to initially striping the corridor, without the physical improvements, would be the implementation of the transit only lanes.