

**RESOLUTION NO. 20090305-013**

**WHEREAS**, the 2008 Sidewalk Master Plan for the City of Austin, attached to this resolution as Exhibit A, sets forth policies that will encourage walking as a viable mode of transportation, improve pedestrian safety, and enable people to walk to and from transit stops; and

**WHEREAS**, the Sidewalk Master Plan will update the right of way portion of the City's Americans with Disabilities Act Transition Plan and set forth policies that will improve mobility for people with disabilities; and

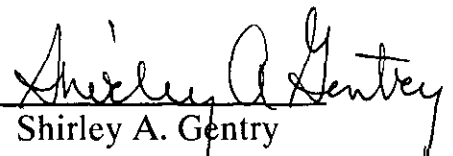
**WHEREAS**, the inclusion of sidewalks and other pedestrian facilities in the transportation system is necessary to help control air pollution and traffic congestion, and to improve the quality of life in Austin; **NOW, THEREFORE,**

**BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF AUSTIN:**

The Council adopts the 2008 Sidewalk Master Plan for the City of Austin, attached to this resolution as Exhibit A. The 2008 Sidewalk Master Plan supersedes the 2000 Pedestrian Master Plan. The Clerk shall file the 2008 Sidewalk Master Plan in the Clerk's office.

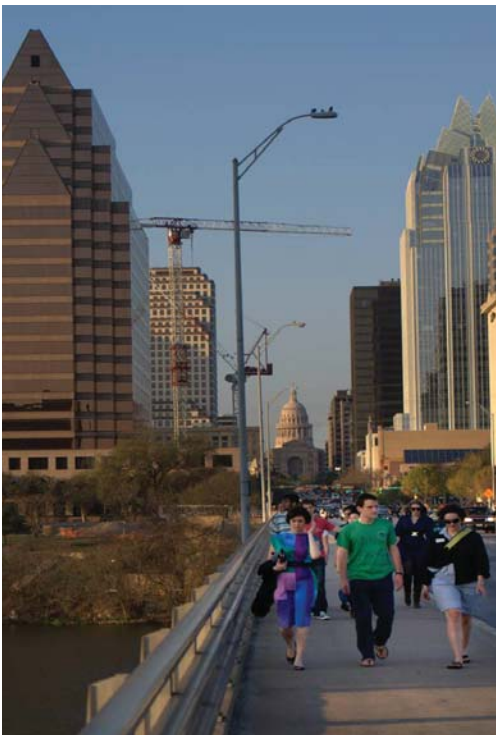
**ADOPTED:** March 5, 2009

**ATTEST:**

  
Shirley A. Gentry  
City Clerk

**EXHIBIT A**

# Sidewalk Master Plan



**PRESENTED TO:**



**CITY OF AUSTIN  
PUBLIC WORKS DEPARTMENT  
BICYCLE & PEDESTRIAN PROGRAM  
505 BARTON SPRINGS ROAD, SUITE 1300  
AUSTIN, TEXAS 78704**

**PRESENTED BY:**

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*March 3, 2009*



*Acknowledgements*

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**Stakeholders**

ADAPT

ADA Task Force  
Austin Neighborhood Council  
Citizens of Austin  
Comprehensive Subcommittee (Planning Commission)  
Design Commission  
Downtown Austin Alliance  
Mayor's Committee for People with Disabilities  
Mayor's Fitness Council  
Planning and Zoning Commission  
Urban Transportation Commission  
  
Zoning and Platting Commission





GOAL

of the

## SIDEWALK MASTER PLAN

In an effort to complete a City-wide ADA-compliant sidewalk network, the goal of the Sidewalk Master Plan is to provide an objective mechanism for the City's use in prioritizing sidewalk construction projects.





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*Executive Summary*

The City of Austin contracted with Lockwood, Andrews & Newnam (LAN) in 2003 to complete Phase I of a Pedestrian Infrastructure Management System (PIMS) to meet Austin’s needs for assessing and prioritizing sidewalk infrastructure and to update the existing ADA Title II Transition Plan. The scope of the project was to create an interactive software tool that uses spatial analysis of a predetermined set of criteria to identify and rank absent sidewalks, as well as provide a plan to execute improvements. Phase I covered 31% of the City’s area. In 2006, LAN began work on Phase II of the Pedestrian Master Plan to incorporate the entire City limits and further develop the prioritization matrix. The Phase II Matrix is more sophisticated and was developed through an extensive public process. The Phase II Matrix also includes an emphasis on components and elements that will improve pedestrian mobility for the ADA community.

**Absent Sidewalk Prioritization Matrix**

The absent sidewalk matrix is the basis of the sidewalk master plan and facilitates the prioritization of absent sidewalks throughout the city based on an objective, fact-based analysis.

The absent sidewalk matrix is divided into five parts: Pedestrian Attractor Score (PAS), Pedestrian Safety Score (PSS), Fiscal Availability Score, Neighborhood Plan Score, and Special Consideration Score. Points are awarded based on the following elements, with a higher score indicating a higher priority need for a sidewalk in the subject location.

The Pedestrian Attractor Score accounts for 50% of the base score. Points are awarded to a sidewalk segment based on the segment’s proximity to pedestrian attractors such as schools, transit stops, government offices, etc.; median household income; residential population density; presence of existing facilities on the street; ADA Task Force and/or 311 citizen requests; proximity to a core transit corridor; and existence of bicycle lanes on the adjacent street.

The Pedestrian Safety Score accounts for 40% of the base score. Points are awarded based on the street classification, health status of the area, and occurrence of automobile / pedestrian incidents.

The Fiscal Availability Score accounts for 10% of the base score. Points are awarded if fiscal posting exists for the segment.

The Neighborhood Plan Score is added to the base score for sidewalk segments requested in an adopted neighborhood plan. This is an additional score since not all neighborhoods have adopted a plan. The score is based on the age of the plan; one point per year can be added with a maximum of 10 points.

The Special Consideration Score is also added to the base score and allows for consideration of specific areas known to attract a higher volume of pedestrian traffic than would be suggested by the surrounding criteria (i.e. Zilker Park). Additionally, the special consideration score may be awarded to absent sidewalk segments which serve to implement an identified trail system within the City’s Trail Master Plan or included in the City’s safe route to school program. Points are discretionary and must be approved by the Director of Public Works with a maximum of 10 points.

The PIMS tool integrates with ESRI’s ArcGIS software and evaluates each sidewalk segment based on the criteria above. Every absent segment in the City is scored and then placed into five general categories: Very High, High, Medium, Low, and Very Low. These ranking categories will be used by the City to prioritize segments for development of short and long-term work plans based on anticipated budgets.

**ADA Transition Plan**

In addition to the sidewalk priority matrix, Phase II included an update to the City’s Title II ADA Transition Plan, including a field condition assessment for approximately 300 miles of existing sidewalk (13% of existing infrastructure). It is estimated that the City will require \$120 million to improve existing sidewalk infrastructure to ADA compliance and to complete the condition assessment. The Transition Plan includes a recommended example schedule for implementing improvements to existing infrastructure. An example of an aggressive schedule to make the repairs in 15 years includes spending \$5M for 2009 and 2014 and \$10M for 2015-2023. The potential Transportation User Fee, grants, sidewalk ordinance No. 20080214-096, neighborhood cost sharing, and public/private partnerships.





*Pedestrian Infrastructure Management System (PIMS) and Absent Sidewalk Priority Matrix*

**PEDESTRIAN MASTER PLAN UPDATE**

In November of 2000, the Austin City Council adopted a Pedestrian Master Plan as an answer to concerns related to a 1997 Austin Transportation Study (ATS) survey that found only 3% of Austin residents walked from home to work or school. The 1995 Nationwide Personal Transportation Survey reported that 50% of all trips made by respondents were less than 3 miles, which could reasonably be replaced with walking. The City of Austin recognized the need for a plan to provide a structured approach for improving pedestrian facilities.

The City's goal for their Pedestrian Master Plan was to "set forth policies that will encourage walking as a viable mode of transportation, improve pedestrian safety and enable people to walk to and from transit stops". Additionally, the plan identified that "inclusion of sidewalks and other pedestrian facilities in the transportation system are necessary to help control air pollution and traffic congestion, and increase the quality of life in Austin". The document covered justification for the adoption of such a plan, policies that outline criteria for proper pedestrian infrastructure, recommendations for facilities that need improvement, and a design guide to effectively follow through on the previously identified policies with compliance to standards set by the Americans with Disabilities Act.

A few years later, the City of Austin was prepared for an aggressive implementation plan with the purpose of identifying and prioritizing specific areas requiring new sidewalk infrastructure or sidewalk rehabilitation. The City needed a formal assessment of existing sidewalk conditions (including ADA compliance) together with an inventory of current City sidewalks in order to generate a priority list. This information would allow the City to prepare future budget allocations and institute a sidewalk installations and repairs program.

Lockwood, Andrews & Newnam, Inc. (LAN) of Austin was contracted in 2003 to complete Phase I of a Pedestrian Information Management System (PIMS) to meet Austin's needs for assessing and prioritizing sidewalk infrastructure. The scope of the project was to create an interactive software tool that uses spatial analysis of a predetermined set of criteria to identify and rank absent sidewalks, as well as to provide a transition plan to execute improvements. The tool would integrate with ESRI's ArcGIS 9.X software, currently used by the City of Austin GIS (Geographic Information Systems).

LAN provided updates to the existing 2000 Pedestrian Master Plan, as well as the City's ADA Transition Plan from the early 1990s. Phase I was completed in 2005. In 2006, LAN began work on Phase II of the Pedestrian Master Plan Update.

Phase II included updates to the existing Pedestrian Master Plan and Matrix, collection of field condition data, creation of new data, collection of existing data, and further development of the PIMS concept. The Phase I Matrix was more technically oriented whereas the Phase II Matrix is more sophisticated and included an extensive public process with a focus on ADA compliance.





TABLE 1 PEDESTRIAN MASTER PLAN UPDATE TIMELINE	
Year	Action
2000	Resolution No. 001130-12 adopts the Pedestrian/Sidewalk Master Plan Timeline
2003	Transportation, Planning and Sustainability Department initiates updates to 2000 plan
2005	Phase I of updated 2000 plan is completed
2006	Phase II of updated 2000 plan initiated
2007	Public process for Phase II plan conducted
2008	Phase II of 2000 plan completed



**GIS DATABASE DEVELOPMENT OF EXISTING AND ABSENT PEDESTRIAN INFRASTRUCTURE**

Raw existing sidewalk data was provided for Phase I and Phase II from aerial imagery flown in 2003 and 2006, respectively. Using this data as a template, a PIMS geodatabase was created along with a methodology for feature creation of new sidewalk segments<sup>1</sup>, curb ramps, street intersections, street centerlines, and absent sidewalks. The raw sidewalk data along with existing City of Austin street centerline data were corrected to match current aerial imagery. Phase I completed 31% of the City and provided data for use in Phase II, which covers the entire City limits.

**GIS METHOD TO SCORE AND PRIORITIZE PROJECTS**

A GIS methodology was constructed to analytically compare and rank sidewalks against each other with the intent of instituting installation projects in an order based on this ranking system. Any number of criteria relating to an increase of pedestrian traffic could increase a sidewalk’s rank. To make a fair and accurate assessment based on spatial location, a spatial query of the criteria existing near a sidewalk must be performed. To meet this end, a special program was developed to work within GIS to produce the output necessary to establish overall sidewalk “scores” which would determine project priority.

To serve as the backbone for such a program, LAN developed a scoring matrix to score and prioritize the need for new sidewalks in areas where none currently exist. The project prioritization aids in filling in missing sidewalk segments and providing connectivity in the system.

The matrix scores these potential sidewalks based on their proximity to certain criteria that would indicate a greater need for sidewalk infrastructure, i.e. areas near parking garages, or grocery stores, or areas in densely populated areas. Safety issues are also considered in the score, such as pedestrian/automobile incidents near absent sidewalk locations, nearby street classification (higher traffic volume = higher priority), and local health data. Proximity to attractors and pedestrian safety form the basis for each matrix, but there are additional elements to each that are further described below. The matrix focuses on transportation with over 60% of the score being derived from transportation-related elements.

<sup>1</sup> A sidewalk segment is any continuous length of sidewalk. Sidewalk segments may be continuous from intersection to intersection or may be terminated at driveways.



The premise of the matrix is that when all sidewalks have been scored, it will be possible to prioritize new sidewalks by assigning them a general classification relative to all other scored sidewalks of their type. This final classification will recognize their importance using the five simplified terms “very high”, “high”, “medium”, “low”, and “very low”.

The methodology of the matrix was chosen because of its ability to provide consistent, unbiased prioritization results in an analytical, objective manner to the City of Austin for over 30,000 locations. Consistent data updates made by the City will assist in maintaining the integrity of the sidewalk score output in the future.

This tool is intended to be used as a foundation for sidewalk prioritization, and a first step for analysis of sidewalk programs. City staff will verify the data prior to assigning funding to rule out anomalies in the results. The Director of Public Works shall have final approval of project recommendations with signature input from this plan. Potential steps to creating each sidewalk program are as follows:

- Identify Very High Priorities using the Matrix;
- Perform cost / benefit analysis;
- Conduct field assessment / verification;
- Solicit stakeholder input;
- Address safety concerns;
- Assess integration with Trails or Bicycle Master Plans;
- Develop short-and-long-term Work Plans based on anticipated budgets; and
- Obtain signature approval from the Director of Public Works.

**ABSENT SIDEWALK PRIORITIZATION MATRIX**

The absent sidewalk matrix is divided into five parts: Pedestrian Attractor Score (PAS), Neighborhood Plan Score, Fiscal Availability Score, Pedestrian Safety Score (PSS), and Special Consideration Score. The Neighborhood Plan can add an additional 10 points to the base score and can only be used when comparing projects within areas with adopted neighborhood plans.

1. The Pedestrian Attractor Score (**PAS**) accounts for 50% of the base score and includes the following elements:

**45% of PAS;** Proximity to pedestrian attractors such as schools, transit stops, government offices, etc. Points are awarded based on how many of these elements exist in a 1/8 or 1/4 mile buffer.

**5% of PAS;** Median Household Income uses 2000 U.S. Census data to identify sidewalk segments contained within a census tract that falls at or below Median Household Income (\$48,950).

**25 % of PAS;** Residential Population is based on the 2000 Census blocks and awards points based on the population within 1/2 mile buffer.

**10% of PAS;** Existing Facilities on Street awards points for arterial and collector streets if there are sidewalks on only one side of the street.

**10% of PAS;** Citizen/Organization Requests gives points if the sidewalk segment has been requested by either the ADA Task Force and/or a citizen request through the City of Austin 311 system.

**2.5% of PAS;** Core Transit Corridors allow for points to be awarded to sidewalks within 1/4 mile of designated thoroughfares.





**2.5% of PAS;** Bicycle Lanes add points if there are bicycle lanes on both sides of the street.

2. The Pedestrian Safety Score (**PSS**) accounts for 40% of the base score. This score looks at adjacent street characteristics, number of pedestrian incidents with motor vehicles, and public health data for the area. This score makes no judgment about existing infrastructure or faulty facilities.

**45% of PSS;** Street Classification gives points to sidewalks based on the classification of adjacent streets, adding more points to streets with higher traffic volume and speed limits.

**35% of PSS;** Pedestrian Health Risk uses public health data to look at the health needs at a zip-code level. Points are awarded by higher points given to very high, medium, low, or very low health need areas respectively.

**20% of PSS;** Pedestrian/Automobile incidents awards points according the number of incidents adjacent to the sidewalk segment. This element provides an indicator of pedestrian activity and does not imply fault or negligence on any party. The data is multiplied per occurrence; so locations with multiple incidents receive higher scores.

3. The Fiscal Availability Score represents 10% of the base score. This score is awarded if fiscal posting exists for a portion of, or for the entire absent sidewalk segment.

4. The Neighborhood Plan Score is added to the base score for sidewalk segments requested in an adopted neighborhood plan. This is an additional score since not all neighborhoods have adopted a plan. The score is based on the age of the plan, one point per year can be added with a maximum of 10 points.

5. The Special Consideration Score is also added to the base score and allows for consideration of specific areas known to attract a higher volume of pedestrian traffic than would be suggested by the surrounding criteria (i.e. Zilker Park). The City's safe routes to school program is another candidate for addition of the Special Consideration Score. Additionally, the special consideration score may be awarded to absent sidewalk segments which serve to implement an indetified trail system within the City's Trail Master Plan or implements a safe routes to school program objective. Points are discretionary and must be approved by the Director of Public Works or Director of Transportation with a maximum of 10 points.





**TABLE 1  
ABSENT SIDEWALK PRIORITIZATION MATRIX**

Pedestrian Attractors Score(PAS): 0 - 100			
Base Score Weight 50%			
Element	Criteria	Proposed Points	
		1/8 Mile	1/4 Mile
<b>Proximity to Attractors</b> Weight: 45%	<i>(Multiply Possible Points by number of attractors within specified radius)</i>		
	State or Local Government Offices	10x	5x
	Commuter Rail Stations	10x	5x
	Transit Stop (Max. of 50 pts.)	9x	4.5x
	Major Grocery Stores	9x	4.5x
	Places of Public Accommodation (parks, libraries, etc.)	8x	4x
	Public or Private Schools	8x	4x
	Employers with > 500 Employees	8x	4x
	Public Housing	7x	3.5x
	Public Parking Facilities	5x	2.5x
	Religious Institutions	5x	2.5x
<i>(max 100 pts.)</i>			
<b>Median Household Income</b> Weight: 5%	Within a census tract at or below Median Household Income (n=\$48,950)		
	a) Yes	100	
	b) No	0	
<b>Residential Population</b> Weight: 25%	Total population residing within 1/2-mile radius of proposed project		
	a) Population >= 8,000	100	
	b) Population >= 4,000 and < 8,000	75	
	c) Population >= 1,000 and < 4,000	50	
	d) Population >= 500 and <1,000	25	
	e) Population < 500	0	
<b>Existing Facilities on Street</b> Weight: 10%	For arterials and collector streets, are there complete sidewalks on <u>both</u> sides of the street?		
	a) Yes	0	
	b) No	100	
	For local / residential streets, is there an existing complete sidewalk on either side of the street?		
	a) Yes	0	
	b) No	100	
<b>Request</b> Weight: 10%	Project requested by ADA Task Force		
	a) Yes	75	
	b) No	0	
	Project requested by citizen through 311		
	a) Yes	25	
	b) No	0	
<b>Core Transit Corridors</b> Weight: 2.5%	Is the sidewalk within a 1/4 mile of a Core Transit Corridor?		
	a) Yes	100	
	b) No	0	
<b>Bicycle Lanes</b> Weight: 2.5%	Are there bike lanes on both sides of the street?		
	a) Yes	100	
	b) No	0	



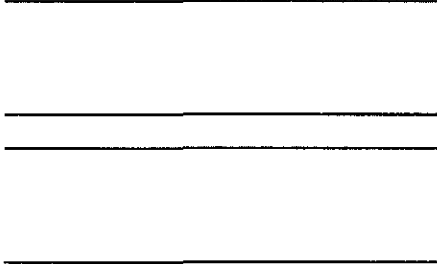












**PEDESTRIAN INFRASTRUCTURE MANAGEMENT SYSTEM (PIMS) TOOL**

The PIMS tool is a culmination of efforts to provide a simple, interactive and informative method for scoring absent sidewalk locations from a dynamic collection of datasets which will provide prioritization results. The tool was developed as an extension to work inside ESRI's ArcMap GIS software, using datasets saved in a file geodatabase. Functionality includes the ability to select a single sidewalk and score it, select multiple sidewalks and export results as a batch and add a special consideration score to a sidewalk, and create blockfaces for connected sidewalk sets.

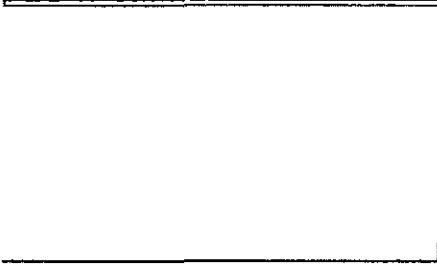


**CONCLUSION**

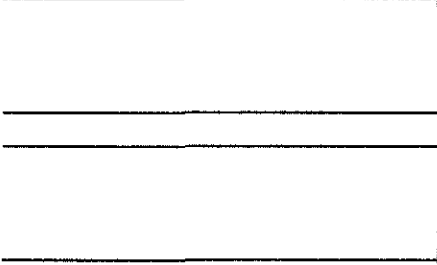
The Sidewalk Master Plan replaces any previous Pedestrian or Sidewalk Plan and provides an update to the City's 1995 ADA Transition Plan (Right of Way portion only).

The Sidewalk Master Plan provides guidance on creating an accessible and walkable City and allows for prioritization and planning of future sidewalk projects and associated funding to improve connectivity. It also provides the basis for which other City initiatives concerning the pedestrian realm can build upon. It assists the City in responding to requests with an analytical, objective review. Additionally, it serves to assist other City departments, such as development review planners, to more easily assess pedestrian infrastructure when considering sidewalk variances and waivers.

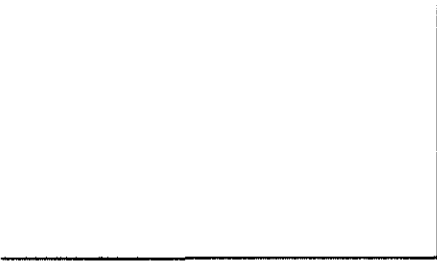
The incorporation of public health data into the Matrix is progressive and consistent with a national trend in city planning which looks at the affect of the built environment on public health. The Public Works Department and the Austin/Travis County Health and Human Services Department proudly partnered on this portion.



The Absent Sidewalk Prioritization Matrix represents input from various community stakeholders as well as City boards and commissions. LAN coordinated with multiple City departments including Public Works, Neighborhood Planning and Zoning, and the Communications and Technology Management (CTM) department, as well as the Captial Metro Transit Authority (CapMetro), the Texas Department of Transportation (TxDOT), and the ADA Task Force to access data necessary to complete the study. Solicitation of input for the Matrix was also obtained by placing information at all City libraries and on the City of Austin Bicycle & Pedestrian Program website.



Lastly, in April 2008, the Austin City Council adopted Resolution No. 20080424-64 related to the need for master trail planning as an effort to provide both open space and transportation connectivity. It is important to recognize that the City's sidewalk system will play an important role in realizing an off-road trail system. It is likely that, in many areas, sidewalks will provide the only viable way to fill gaps in the system. Appendix B of this plan contains the desired trail network for the City. Exhibit 2 (Appendix B) shall be reviewed prior to CIP sidewalk project selection by the Bicycle and Pedestrian Program and shall be considered by the Director of Public Works for points per the Special Consideration Add-on Score.





*ADA Transition Plan*

ADA regulations require that Cities with over 50 employees develop a Transition Plan. This Sidewalk Master Plan updates the City of Austin's Transition Plan as required.

**CHRONOLOGY OF DISABILITY NON-DISCRIMINATION**

Below is a chronology of the development of the ADA and Transition Plan requirements.

- **1973**-Most programs and activities of State and local governments are recipients of Federal financial assistance from one or more Federal funding agencies and, therefore, are covered by Section 504 of the **Rehabilitation Act of 1973**, as amended (29 U.S.C. 794) ("Section 504"), which prohibits discrimination on the basis of handicap in federally assisted programs and activities.
- **1990**-The landmark Americans with Disability Act of 1990 (ADA) was signed into law by George H. W. Bush, which provides comprehensive civil rights protections to qualified individuals with disabilities in the areas of employment, public accommodations, State and local government services, and telecommunications. Because Title II of the ADA essentially extends the nondiscrimination mandate of Section 504 to those State and local governments that do not receive Federal financial assistance, this rule hews closely to the provisions of existing Section 504 regulations.
- **1992**-Title II of the ADA took effect on **January 26, 1992** and covers programs, activities, and services of public entities. Title II requires the need for a Transition Plan.
- **1992**-Where physical modifications are necessary to achieve program accessibility, a public entity with 50 or more employees must develop a Transition Plan by **July 26, 1992**.

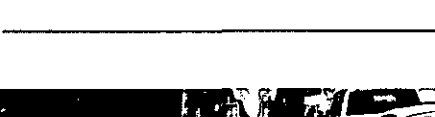
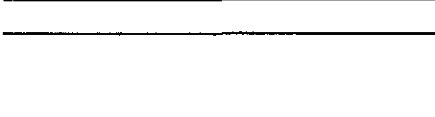


**REQUIREMENTS OF A TRANSITION PLAN**

Existence of an adequate Transition Plan may reduce a municipality's exposure of liability. The ADA regulations require a Transition Plan to contain the following elements:

1. A list of physical barriers in the public entity's facilities that limit the accessibility of its programs, services, or activities to individuals with disabilities; a detailed description of the methods to be utilized to remove these barriers and make the facilities accessible;
2. The schedule for taking the necessary steps to achieve compliance with Title II;
3. The name of the official responsible for the plan's implementation;
4. The proposed funding source for improvements; and
5. The opportunity for the disabled community and other interested parties to participate in the development of the Transition Plan.

This document includes an update to the City's Transition Plan with respect to the ROW only. The update includes cost estimates and scheduling to improve the City's existing infrastructure to ADA compliance.



**GPS SIDEWALK FIELD ASSESSMENT**

A field survey of sidewalk and curb ramp condition was conducted for priority corridors within the City. Field assessment areas were chosen based on areas with a high density of attractors and existing sidewalks. The assessment areas are shown in Exhibit 3. The condition data was collected using custom data collection software on Global Positioning System (GPS) enabled handheld devices. Sidewalks and curb ramps were evaluated to determine ADA and TAS compliance, as well as inspected for degradation, quality, and feasibility as a passageway (no permanent obstructions). A detailed data dictionary of the field assessment project can be found in Appendix C.



**UPDATE TO TRANSITION PLAN**

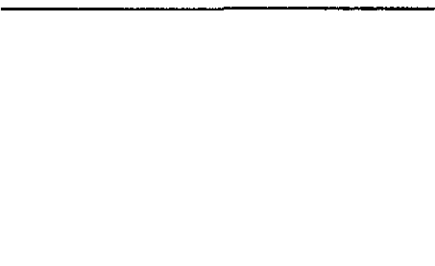
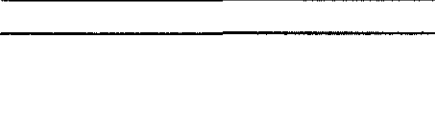
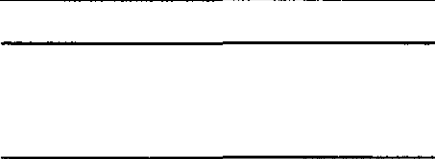
The following sections provide an update to the City of Austin's Transition Plan.

Inventory of Physical Barriers (in the ROW only). A desktop inventory of existing and absent sidewalks based on aerial imagery was completed for the City limits in 2007. Of these, a condition assessment to identify barriers has been completed on approximately 300 miles of the existing 2,400 miles of sidewalk (approximately 12.5% of the existing sidewalk network). This data was collected using a GPS and walking the existing sidewalks and is included in the delivery of the PIMS. The estimated cost to upgrade the ADA/TAS deficiencies within the area included in the condition assessment is \$15M. The straight-line extrapolated cost for the complete City is estimated to be \$120M.

This plan also includes a provision to complete the condition assessment that is required to review compliancy of the existing sidewalk network. It is anticipated that approximately \$1M will be required to complete the condition assessment for the City limits.

The assumptions and unit costs used to calculate these estimates are located in Appendix D.

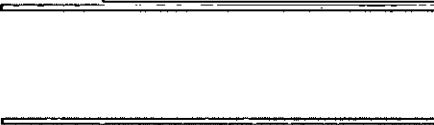
Schedule for improvements. The Director of Public Works shall develop and update a schedule and short-and-long-term Work Plans for sidewalk rehabilitation required by the ADA Title II Transition Plan. These Work Plans will be based on anticipated budgets.



The following table outlines a recommended spending strategy based on today's known potential funding sources. It uses a combination of existing bond monies from the Concrete Repair and the Street Reconstruction Bond Programs. In addition to monies required to repair the existing infrastructure, it is anticipated that approximately \$1M will be required to complete the condition assessment for the City limits. This condition assessment is recommended to be completed within the first two years of this plan. This plan is contingent upon availability of funds and approval of budgets.



TABLE 7 <sup>1</sup> EXAMPLE SPENDING PLAN – 15 YEAR ADA TRANSITION PLAN RECOMMENDED SPENDING (\$M)			
	2009 - 2014	2015 - 2023	Final
<b>Total</b>	5/Year	9/Year	120
<b>Estimates are in current 2008 dollars, not adjusted for inflation</b>			
<b>POTENTIAL FUNDING SOURCES</b>			
<ul style="list-style-type: none"> <li>• Bonds</li> <li>• Transportation User Fee</li> <li>• General Fund</li> <li>• Grants</li> <li>• Sidewalk Ordinance No. 20080214-096 passed in February 2008</li> <li>• Neighborhood cost sharing</li> <li>• Public / Private Partnerships</li> </ul>			



Person responsible for implementation. The Transition Plan will be implemented by the COA Director of Public Works and the Director of Transportation in consultation with the COA ADA/504 Coordinator.



Proposed funding source. The proposed funding sources include a combination of existing and future bonds listed below. In addition, it is anticipated that sidewalks will be constructed and repaired through new development and street reconstruction projects.



- Bonds,
- Transportation User Fee,
- General Fund,
- Grants,
- Sidewalk Ordinance No. 20080214-096 passed in February 2008,
- Neighborhood cost sharing, and
- Public / Private Partnerships.

Opportunity for disabled community input. The disabled community was included in the public process for input on the Sidewalk Prioritization Matrix. The City presented several times to the ADA Task Force, ADAPT, and the Mayor’s Committee for People with Disabilities. In addition, the City Bicycle and Pedestrian Program will meet no less than once per year in the future with the disabled community to provide updates and solicit input.

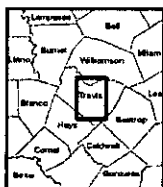


<sup>1</sup> As presented to City Council by ACM Goode in the 2008 Budget Briefing on August 21, 2008.

**APPENDIX A**  
**SIDEWALK PLAN**



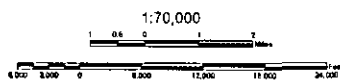
# City of Austin Pedestrian Plan Absent Sidewalk Scoring Results



  
 Lockwood, Andrews & Flannery is not an LRA. Neither  
 is the preparation of this map a public  
 utility or a public use of the information  
 provided in this map. No data is provided  
 or intended to be used for any purpose  
 other than that for which it was prepared.  
 The user is responsible for the accuracy  
 and reliability of the information shown  
 on this map. Lockwood, Andrews & Flannery  
 is not responsible for any errors or omissions  
 that may appear in this map.

Prepared by Richard L. Schaefer  
 "L.A." Schaefer  
 Bartlett, TX

 Lockwood, Andrews  
 & Flannery, Inc.



PIMS ABSENT SIDEWALK SCORE	ABSENT SIDEWALK SEGMENT COUNT
< 30.00 (Very Low)	15,072
30.01 - 40.00 (Low)	5,869
40.01 - 50.00 (Medium)	5,989
50.01 - 59.00 (High)	4,091
> 59.01 (Very High)	2,036

WATERBODIES:	SCORING DISTRIBUTION
RIVERS	Minimum: 0.00
Roads	Maximum: 81.43
	Mean: 40.01
	Median: 30.25

\* Absent sidewalk scores < 20.00 are omitted from the map.

# **APPENDIX B**

## **TRAIL NETWORK**

(TO BE PROVIDED BY COA AT A LATER DATE)

**APPENDIX C**  
**FIELD ASSESSMENT DATA DICTIONARY**



# Sidewalk Condition Assessment – ADA Data Dictionary

## Flag Type: ADA Sidewalk – Type 1

### Required data entry:

ADADesc1	Description of Sidewalk ADA issue
ADADesc2 (if applicable)	"
ADADesc3 (if applicable)	"
ADADesc4 (if applicable)	"
ADADesc5 (if applicable)	"
CondLength (if noted below)	If entire segment enter "999"

### ADADesc\* for Sidewalk Flags

Problem	Description
1- Cross slope 2.1-4%	Cross slope is 2.1-4%...also enter the CondLength
2- Cross slope 4.1-6%	Cross slope is 4.1-6%...also enter the CondLength
3- Cross slope >6%	Cross slope is > 6%...also enter the CondLength
4- Pt width <36"	A single point usually around an obstacle has a passing width less than 36"
5- Edge chg > 1/4"	Vertical edge change is greater than 1/4 inch
6- Cont Width <36"	A continuous length of sidewalk is narrower than 36" ...also enter the CondLength
7- Vert. Clear	Vertical clearance is less than 80" (7 feet)...also enter CondLength
8- > Road slope	The sidewalk slope exceeds the slope of the road...also enter CondLength
9- Obst Wid <48"	The radius around object less than 48" in width is less than 48"
10- No pass space	No passing space on sidewalks greater than 200' long...also enter CondLength
11- Pass int >200'	Interval between passing spaces is greater than 200'...also enter CondLength
12- Grate does not meet ADA standards	Spaces are wider than 1/2" or openings are not parallel to travel direction

## Flag Type: ADA Driveway – Type 3

### Required data entry:

ADADesc1-5	Description of Driveway ADA issue
------------	-----------------------------------

### ADADesc\* for Driveway Flags

Problem	Description
1- X slope 2.1-4%	Cross slope of driveway is 2.1-4%
2- X slope 4.1-6%	Cross slope of driveway is 4.1-6%
3- X slope > 6%	Cross slope of driveway > 6%
4- Edge chg > 1/4"	Vertical edge change is greater than 1/4"
5- Vert. clear	Vertical clearance is less than 80" (7')
6- Trans. Slope > 5%	Slope of transition between sidewalk and driveway is > 5%

## Flag Type: ADA Ramp – Type 2

### Required data entry:

ADADesc1	Description of Ramp ADA issue
ADADesc2 (if applicable)	"
ADADesc3 (if applicable)	"
ADADesc4 (if applicable)	"
ADADesc5 (if applicable)	"

### ADADesc\* for Ramp Flags

Problem	Description
1- Slope 8.1-9%	Slope of ramp face is 8.1-9%
2- Slope 9.1-12%	Slope of ramp face is 9.1-12%
3- Slope > 12%	Slope of ramp face is > 12%
4- X slope 2.1-4%	Cross slope of ramp face is 2.1-4%
5- X slope 4.1-6%	Cross slope of ramp face is 4.1-6%
6- X slope 6%	Cross slope of ramp face is > 6%
7- No ramp	No ramp
8- Flare > 10%	Angle of necessary flare is greater than 10%
9- No flares	Flares are missing where required
10- Edge chg > 1/4"	Vertical edge change at roadbed or sidewalk is greater than 1/4 inch
11- No discernable Surface	Ramp face is not a different material/color than the sidewalk
12- No landing/Landing not regulation	Landing missing or not 4'x4'
13- Width < 36"	Ramp face width is less than 36"
14- Rise > 30"	The height from the bottom to the top of the ramp is greater than 30" without a level landing area
15- Lng Rp Width < 44"	Ramp longer than X' is less than 44" wide
16- No handrails	Ramp longer than X' is missing handrails

## Ramp Type

Collect a point for all ramps. Specify the type of ramp in the RampType field.

- 1- Type 1 – Ramp has 2 flares and is perpendicular to street
- 2- Type 1A – Ramp has 1 flare and is perpendicular to street
- 3- Type 1B – Ramp has no flares and is perpendicular to street
- 4- Type 2 – Ramp is multi-direction (sends pedestrian into intersection)

## **Sidewalk Condition Assessment – Maintenance Data Dictionary**

### **General Sidewalk Data**

**swCondition** - Condition (1- Excellent, 2- Good, 3- Passable, 4- Limited Spot Failures, 5- Failed, 6- No Sidewalk)

**swCondLength** - Length of segment in same condition rating (ft)

**swCondWidth** - Width (ft)

### **Other Sidewalk Information**

**swFaulting** - Faulting (1- Severe, 2- Moderate, 3- Minor)

**swDistortion** - Distortion (1- Severe, 2- Moderate, 3- Minor)

**swSunken** - Sunken Sdwk @ InletTop (1- Severe, 2- Moderate, 3- Minor)

**swFailCause** - Primary Cause(s) of Failures (1- Unstable soils, 2- Erosion, 3- Utilities, 4- Poor Concrete Condition, 5- Tree Roots, 6- Water, 7- Thickness, 8- Unknown)

**swRepArea** - Estimate of Repair Areas Required (sq ft)

Temporary Repairs Completed? (1- Yes, 2- No)

Comments **Notes**

### **Related Data - Only As Necessary**

**swNSMaterials** - Non-Standard Materials? (1- Bricks, 2- Pavers, 3- Granite, 4- Asphalt, 5- Other **Notes**)

**swADAAccess** - ADA accessible path? (Y- Yes, P- Passable, N- No) If no, list Obstructions: **Notes**

**swIllegal** - Illegal use of sidewalk? (Y- Yes, P- Possible, N- No; Observation: **Notes**)

**swSteepSlope** - Steep Slope? (Y- Yes, M- Moderate, F- Flat)

**swSchoolZn** - School Zone? (Y- Yes, C- Close, N- No)

**swChildSafeZn** - Child Safety Zone? (Y- Yes, C- Close, N- No)

## **Commentary of Assessment Items**

### **General Sidewalk Data**

Condition: None is used for missing sidewalk areas adjacent to existing.

### **Other Sidewalk Information**

Faulting, Distortion, and Sunken at (Drainage) Inlet Top will all be rated using: Severe – frequent faulting or distortions > 4", Moderate – typical faulting or distortions > 2", Minor – typical faulting or distortions between 1/2" and 2")

Poor Condition is the primary cause of failure in old, broken concrete if no other causes apply. Underground water or springs can cause failures or slipping hazards. The thickness cause implies that the sidewalk is too thin for that location or was improperly constructed.

Repairs: square feet of remove and replace. Including non-standard or temporary asphalt sidewalk repairs which need a permanent concrete fix.

### **Related Data – Only As Necessary**

Sidewalks are assumed to be concrete if no other material is noted. Non-standard materials are common in CBD

Standard ADA accessible path: Passable means it is smooth and wide enough overall (36" minimum) when including the surrounding hardscape elements or ground. Problems can be benches, trees, signs, anchor bolts, poles, or other utility appurtenances. Obstructions do not include damaged sidewalk such as cracks and depressions.

Illegal use of sidewalks by cars, trucks, or construction equipment may be evident and recoverable.

Steep Slope>5%; Moderate>2%; Flat<= 2%

Special attention may be given to sidewalks in school zones.

Yes implies a school within 1 block or 500' of that location, Close implies a school within 4 blocks or 2,000' of that location.

Child Safety Zone could imply park area or common play area.

**Assessment Items (cont'd)**

- Driveways**
- drCondition** - Condition (1- Good, 2- Fair, 3- Broken, 4- Distorted, 5- Missing)
- drADAAccess** - ADA Accessible? (Y- Yes, P- Passable, N- No)
- drRepArea** - Estimate of Driveway Repairs Required (sq ft)
- Sidewalk Ramps**
- rpADAAccess** - Standard ADA ramp? (Y- Yes, P- Passable, N- No)
- rpCondition** - Condition (1- Broken, 2- Distorted, or 3- Missing)
- rpDrainage** - Drainage problems at ramp? (1- Severe, 2- Moderate, 3- None)
- rpRepArea** - Estimate of Ramp Repairs Required (sq ft)
- Inlet Tops**
- InCondition** - Condition (1- Broken, 2- Uneven, 3- MH Lid Problem)
- InRepArea** - Estimate of Inlet Repairs Required (sq ft)

**Other Maintenance Required**

- Overgrowth** - Overgrown with Weeds, Brush, or Trees? (1- Severe, 2- Moderate, 3- Minor)
- OvTrimArea** - Estimate of Clearing and Trimming Required (sq ft)

**Commentary (cont'd)**

**Driveways**

Driveways only noted if there is a problem.  
Continuous ADA accessible path across driveway?

**Sidewalk Ramps**

Note all missing Sidewalk Ramps and Curb Cuts.  
Ramp Condition is only noted if there is a problem.  
Passable ramp does not meet ADA exactly, but functions well.

**Inlet Tops**

Inlet tops only noted if there is a problem.

**Other Maintenance Required**

Overgrown areas may require grass removal, brush clearing, and/or tree trimming. Responsibility for the area may be PARD.  
Severe areas need immediate attention. Moderate areas are still passable, but getting marginal.

**APPENDIX D**  
**TRANSITION PLAN SUMMARIES**

## TASB Condition Assessment Cost Estimate Assumptions

Problem	Repair Strategy	Unit	Unit Cost	Area assumptions (if length and width were not included in the data)
<b>Sidewalks</b>				
1 - Cross slope 2.1 - 4%	Remove and Rebuild Sidewalk	SF	\$14	Assumed 50 sf (5' wide by 10' long - 2 panels)
2 - Cross slope 4.1 - 6%	Remove and Rebuild Sidewalk	SF	\$14	Assumed 50 sf (5' wide by 10' long - 2 panels)
3 - Cross slope > 6%	Remove and Rebuild Sidewalk	SF	\$14	Assumed 50 sf (5' wide by 10' long - 2 panels)
4 - Ft width <36"	Add Sidewalk Width	SF	\$14	Assumed 15 sf (3' wide by 5' long)
5 - Edge chg > 1/4"	Remove and Rebuild Sidewalk	SF	\$14	Assumed 50 sf (5' wide by 10' long - 2 panels)
6 - Cont Width <36"	Add Sidewalk Width	SF	\$14	Assumed 30 sf (3' wide by 10' long)
7 - Vertical Clearance	Clear Vegetation	LF	\$7.50	Assumed 5'
8 - Sidewalk > Road Slope	Remove and Rebuild Sidewalk	SF	\$14	Assumed 500 sf (5' wide by 100' long)
9 - Obst Wid <48"	Add Sidewalk Width	SF	\$14	Assumed 40 sf (4' wide by 10' long)
10 - No pass space	Add Sidewalk Width	SF	\$14	Assumed 30 sf (3' wide by 10' long)
11 - Pass int >200'	Add Sidewalk Width	SF	\$14	Assumed 30 sf (3' wide by 10' long)
12 - Grate doesn't meet standards	Grate Adjustment	EA	\$250	
<b>Driveways</b>				
1 - Cross slope 2.1 - 4%	Rehab Driveway	SF	\$14	Assumed 80 sf (4' wide by 20' long)
2 - Cross slope 4.1 - 6%	Rehab Driveway	SF	\$14	Assumed 80 sf (4' wide by 20' long)
3 - Cross slope >6%	Rehab Driveway	SF	\$14	Assumed 80 sf (4' wide by 20' long)
4 - Edge chg >1/4"	Remove and Rebuild Sidewalk	SF	\$14	Assumed 25 sf (5' wide by 5' long - 1 panel)
5 - Vertical Clearance	Clear Vegetation	LF	\$7.50	Assumed 5'
6 - Trans. Slope >5%	Build Ramp	EA	\$2,532	Assumed 1 per driveway
<b>Ramps</b>				
1 - Slope 8.1 - 9%	Build Ramp	EA	\$2,532	
2 - Slope 9.1 - 12%	Build Ramp	EA	\$2,532	
3 - Slope >12%	Build Ramp	EA	\$2,532	
4 - Cross slope 2.1 - 4%	Build Ramp	EA	\$2,532	
5 - Cross slope 4.1 - 6%	Build Ramp	EA	\$2,532	
6 - Cross slope >6%	Build Ramp	EA	\$2,532	
7 - No ramp	Build Ramp	EA	\$2,532	
8 - Flare >10%	Remove and Rebuild Sidewalk	SF	\$14	Assumed 30 sf (5' wide by 6' tall triangle on each side)
9 - No flares	Add Sidewalk Width	SF	\$14	Assumed 30 sf (5' wide by 6' tall triangle on each side)
10 - Edge chg > 1/4"	Remove and Rebuild Sidewalk	SF	\$14	Assumed 25 sf (5' wide by 5' long - 1 panel)
11 - No discernable surface	Granite Pavers	SF	\$25	Assumed 30 sf (5' wide by 6' tall)
12 - No landing	Add Sidewalk Width	SF	\$14	Assumed 52 sf (add two 4x4 panels on either side and one 4x5 panel behind ramp)
13 - Width <36"	Build Ramp	EA	\$2,532	
14 - Rise >30"	Build Ramp	EA	\$2,532	
15 - Lng tp Width <44"	Add Sidewalk Width	SF	\$14	Assumed 30 sf (3' wide by 10' long)
16 - No handrails	Add Handrails	LF	\$75	Assumed 20'

**City of Austin Transition Plan  
Inventory of Existing / Absent Sidewalks and Ramps**

RAMPS	Type Codes						TOTAL	
	Blank	0	1	1A	1B	2		3
Outside City	42	1,163	441	-	-	505	364	2,515
CBD	73	-	782	234	173	365	-	1,627
Central	504	-	83	18	35	34	-	674
E Margin	75	339	220	-	-	145	132	911
East	780	-	307	75	82	373	-	1,617
Far North	322	1,118	682	5	11	862	267	3,267
Far South	237	292	184	-	-	237	193	1,143
Holly St	140	-	43	19	41	104	-	347
Northeast	437	4	7	-	-	27	1	476
Northwest I	604	-	-	-	-	-	-	604
Northwest II	895	-	-	-	-	10	-	905
Southeast	509	-	-	-	-	-	-	509
Southwest	592	-	3	-	5	3	-	603
W Margin	118	1,930	386	-	353	448	-	3,235
West	288	4	2	-	-	32	13	339
<b>TOTAL</b>	<b>5,616</b>	<b>4,850</b>	<b>3,140</b>	<b>351</b>	<b>700</b>	<b>3,145</b>	<b>970</b>	<b>18,772</b>

SIDEWALKS	Type Codes						TOTAL MILES
	0	1	2	3	4	5	
Absent SW	Existing SW	Driveway	Marked Xing	Unmarked Xing	Other/Unknown	TOTAL FEET	TOTAL MILES
CBD	34,330	246,632	30,165	34,769	15,740	361,776	68.5
Central	283,991	278,665	39,607	13,497	22,293	638,160	120.9
E Margin	1,637,159	564,085	101,481	8,737	31,362	2,342,886	443.7
East	791,674	483,639	68,788	15,002	50,312	1,409,520	267.0
Far North	3,371,144	2,884,844	548,938	48,876	127,549	6,981,606	1,322.3
Far South	1,250,881	1,537,942	332,097	24,557	45,784	3,191,369	604.4
Holly St	70,157	92,371	12,802	2,522	8,314	186,166	35.3
Northeast	738,231	230,950	35,225	8,097	18,899	1,031,442	195.3
Northwest I	440,667	204,796	36,469	8,462	21,715	712,296	134.9
Northwest II	854,336	341,306	69,267	13,221	32,135	1,310,345	248.2
Southwest	395,924	291,734	36,914	8,029	22,214	754,910	143.0
Southwest	600,393	261,798	51,196	12,107	25,604	951,206	180.2
W Margin	6,262,147	2,940,879	515,604	30,962	97,482	9,847,398	1,865.0
West	1,325,699	393,756	53,660	9,801	23,700	1,806,681	342.2
<b>TOTAL FEET</b>	<b>18,056,734</b>	<b>10,753,398</b>	<b>1,932,215</b>	<b>238,638</b>	<b>543,102</b>	<b>31,525,762</b>	
<b>TOTAL MILES</b>	<b>3,419.8</b>	<b>2,036.6</b>	<b>365.9</b>	<b>45.2</b>	<b>102.9</b>	<b>0.3</b>	<b>5,970.8</b>

\*Margin refers to areas inside the City limits but not within the other 12 named areas.

**TASB / ADA Condition Assessment  
Cost Estimate  
Based on Limited Field Assessment (13%)**

Description	Work Order Item	Qty	Unit	Unit Price	Cost
<b>Sidewalks</b>					
Sidewalk exceeds 2% cross-slope	R&R Sidewalk	405,474	SF	\$ 14.00	\$ 5,676,636.00
Passing width < 36"	Add SW Width	702	SF	\$ 14.00	\$ 9,828.00
Edge chg > 1/4"	R&R Sidewalk	76,150	SF	\$ 14.00	\$ 1,066,100.00
Continuous length < 36"	Add SW Width	5,496	SF	\$ 14.00	\$ 76,944.00
Vert Clear < 80"	Clear Vegetation	785	LF	\$ 7.50	\$ 5,887.50
Sidewalk slope > Road Slope	R&R Sidewalk	24,576	SF	\$ 14.00	\$ 344,064.00
Obstacle Width < 48"	Add SW Width	4,420	SF	\$ 14.00	\$ 61,880.00
No pass space	Add SW Width	486	SF	\$ 14.00	\$ 6,804.00
Grate does not meet ADA standards	Grate Adjustment	2	EA	\$ 250.00	\$ 500.00
<b>Subtotal Sidewalks</b>					<b>\$ 7,248,643.50</b>
<b>Ramps</b>					
Slope exceeds 8%	R&R Ramp	448	EA	\$ 2,532.00	\$ 1,134,336.00
Cross slope exceeds 2%	R&R Ramp	146	EA	\$ 2,532.00	\$ 369,672.00
No ramp	Build Ramp	249	EA	\$ 2,532.00	\$ 630,468.00
Flare > 10%	R&R Sidewalk	3,450	SF	\$ 14.00	\$ 48,300.00
No flares	Add SW Width	3,570	SF	\$ 14.00	\$ 49,980.00
Edge chg > 1/4"	R&R Sidewalk	200	SF	\$ 14.00	\$ 2,800.00
No discernable surface	Add Granite Pavers	4,800	SF	\$ 25.00	\$ 120,000.00
No landing	Add SW Width	260	SF	\$ 14.00	\$ 3,640.00
No handrails	Add Handrails	40	LF	\$ 75.00	\$ 3,000.00
<b>Subtotal Ramps</b>					<b>\$ 2,362,196.00</b>
<b>Driveways</b>					
Cross slope > 2%	Rehab Driveway	125,536	LF	\$ 14.00	\$ 1,757,504.00
Edge chg > 1/4"	R&R Sidewalk	3,900	SF	\$ 14.00	\$ 54,600.00
Trans slope > 5%	Build Ramp	40	EA	\$ 2,352.00	\$ 94,080.00
<b>Subtotal Driveways</b>					<b>\$ 1,906,184.00</b>
<b>Total ADA Sidewalk Improvements</b>					<b>\$ 11,517,023.50</b>
Total Linear Feet of Existing Sidewalk: 2,167					
Total Linear Feet included in Field Assessment: 285					
Percentage of Sidewalk included in Field Assessment: 13%					
City-wide Extrapolated Construction Cost: \$90M					
<b>City-wide Extrapolated Total Cost: \$115M</b>					