

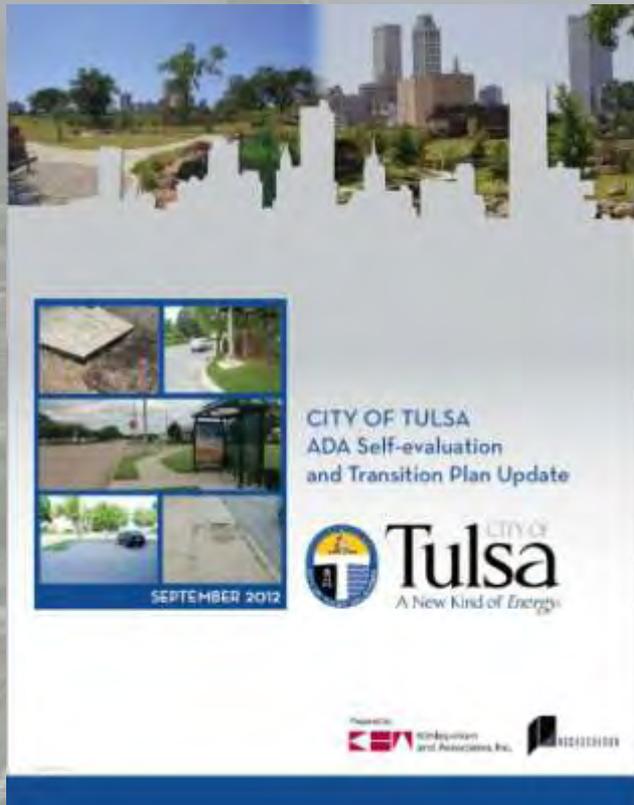
CITY OF TULSA BICYCLE & PEDESTRIAN INFRASTRUCTURE

TULSA CITY COUNCIL
CAPITAL IMPROVEMENT PROGRAM
TASK FORCE MEETING
JANUARY 31, 2013



CITY OF TULSA
ENGINEERING SERVICES DEPARTMENT

CITY OF TULSA ADA TRANSITION PLAN



AMERICANS WITH DISABILITIES ACT TRANSITION PLAN

- IDENTIFY PHYSICAL BARRIERS
- HOW TO REMOVE THEM
- REQUIRED FOR FEDERAL FUNDING
- ENFORCED BY THE DEPARTMENT OF JUSTICE
- 30 YEAR SCHEDULE



SIDEWALK CORRIDORS PRIORITIZATION

Issues	High	Medium	Low	Compliant
Cross slope of sidewalk is greater than 2.0%	Value > 6.00	$6.0 \geq \text{Value} \geq 4.0$	$4.0 > \text{Value} > 2.0$	Value \leq 2.00
Width of sidewalk is less than 48"	Value \leq 36.00	$48.0 \geq \text{Value} > 36.0$		Value > 48.0
Obstruction present along sidewalk (clear path < 32")		Yes		No
Heaving is present in sidewalk	Yes - dangerous	Yes		No
Sinking is present in sidewalk	Yes - dangerous	Yes		No
Cracking is present in sidewalk	Yes - dangerous	Yes		No
Ponding is present in sidewalk		Yes		No
Pavement is in poor condition at cross street		Poor		Good
Crosswalk markings are worn at cross street			Yes - worn	Yes
Cross slope of sidewalk at cross street is greater than 2%	Value > 6.00	$6.0 \geq \text{Value} \geq 4.0$	$4.0 > \text{Value} > 2.0$	Value \leq 2.0
Pavement is in poor condition at driveway		Poor		Good
Cross slope of sidewalk at driveway is greater than 2%	Value > 6.00	$6.0 \geq \text{Value} \geq 4.0$	$4.0 > \text{Value} > 2.0$	Value \leq 2.0
Width of sidewalk at driveway is less than 48"	Value < 36.00	$48.0 \geq \text{Value} \geq 36.0$		Value > 48.0



ADA TRANSITION PLAN ARTERIAL SIDEWALK CORRIDORS *SIDEWALKS ONLY*

Arterial Sidewalk	High	Medium	Low	Total
Costs	\$20,777,200	\$22,071,500	\$97,041,300	\$139,890,000



TRANSIT STOP PRIORITIZATION

Issues	High	Medium	Low	Compliant
No route to the transit stop	No			Yes
Cross slope at transit stop is greater than 2.0%	Value > 5.0	$5.0 \geq \text{Value} \geq 3.0$	$3.0 > \text{Value} > 2.0$	Value \leq 2.0
Slope of sidewalk at transit stop loading area is greater than 2.0%	Value > 5.0	$5.0 \geq \text{Value} \geq 3.0$	$3.0 > \text{Value} > 2.0$	Value \leq 2.0
Cross slope of lift deployment landing area is greater than 2%	Value > 5.0	$5.0 \geq \text{Value} \geq 3.0$	$3.0 > \text{Value} > 2.0$	Value \leq 2.0
No sidewalk connecting bus landing area to transit stop	True			False
No sidewalk network connection	True			False



ADA TRANSITION PLAN TRANSIT STOPS

Transit Stop	High / Medium	Low	Total
Costs	\$257,800	\$154,000	\$411,800



UNSIGNALIZED INTERSECTIONS PRIORITIZATION

Issues	High	Medium	Low	Compliant
Ramp does not land in crosswalk		No		Yes
No 48" extension into crosswalk			No	Yes
Ramp does not exist	True			False
Flare cross slope is greater than 10%	Value > 10.00			Value ≤ 10
Ramp running slope is greater than 8.33%	Value > 11.00	11.00 ≥ Value ≥ 9.50	9.50 > Value > 8.33	Value ≤ 8.33
Ramp cross slope is greater than 2%	Value > 6.00	6.00 ≥ Value ≥ 4.00	4.00 > Value > 2.00	Value ≤ 2.00
Ramp width is less than 36"	Value < 32.00	32.00 ≤ Value < 36.00		Value ≥ 36.00
Obstruction present in ramp or landing area	Yes			No
Textured surface at base of ramp		None, Grooves		Domes
No color contrast at base of ramp			No	Yes
Landing area is less than 5' x 5' or has a cross slope greater than 2%	None	Non Compliant		Compliant
Ramp transition onto roadway is greater than 0.25"	Yes			No
Ponding occurs at base of ramp			Yes	No



ADA TRANSITION PLAN UNSIGNALIZED INTERSECTIONS ONLY

Unsignalized Intersections	High	Medium	Low	TOTAL
Costs	\$24,955,000	\$1,015,000	\$90,000	\$26,060,000



SIGNALIZED INTERSECTIONS

PRIORITIZATION

IN ADDITION TO UNSIGNALIZED PRIORITIZIES

Issues	High	Medium	Low	Compliant
Pedestrian pushbutton diameter is not 2"			Not 2 inches	2 inches
Pedestrian pushbutton height is greater than 42"		Above 42 inches		Less than 42 inches
Pedestrian head offset is greater than 10' from the nearest crosswalk edge	Yes			No
Clear floor space for pedestrian pushbutton is less than 30" x 48" or has a cross slope greater than 2%	None	Non Compliant		Compliant



ADA TRANSITION PLAN SIGNALIZED INTERSECTIONS ONLY

Signalized Intersections	High	Medium	Low	Total
Costs	\$14,878,000	\$118,000	\$10,000	\$15,006,000



ADA TRANSITION PLAN

CITYWIDE ESTIMATED COSTS AND IMPLEMENTATION SCHEDULE

Facility Type	Citywide High & Medium Priorities Estimated Costs	Citywide Low Priority Estimated Costs	Citywide Total Estimated Costs	Proposed Implementation Schedule (Years)	Projected Approximate Annual Budget
Transit Stops	\$257,800.00	\$154,000	\$411,800	10	\$ 25,780
Signalized Intersections	\$14,996,000.00	\$10,000	\$15,006,000	20	\$ 749,800
Sidewalk Corridors	\$68,812,700	\$97,131,300	\$165,944,000	30	\$ 2,293,757
TOTAL	\$84,066,500	\$97,295,300	\$181,361,800.00		
Total Annual Budget (years 0-10)					\$ 3,069,337
Total Annual Budget (years 11-20)					\$ 3,043,557
Total Annual Budget (years 21-30)					\$ 2,293,757

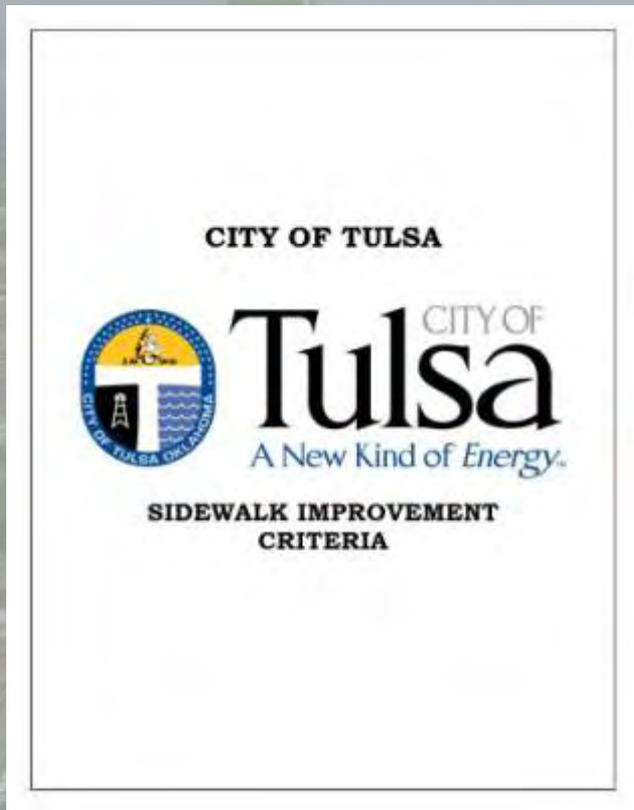
TOTAL FOR FIRST 5 YEARS:

\$15.4 MILLION



CITY OF TULSA

SIDEWALK IMPROVEMENT CRITERIA



9 SEPARATE CRITERIA USED

- SAFETY
- PEDESTRIAN GENERATORS
- STREET CLASSIFICATION
- SCHOOL WALKING ROUTE
- INFRASTRUCTURE CONCERN
- TRANSIT ROUTE
- SIDEWALK / TRAIL BUILD-OUT SEGMENT
- COST / FUNDING OPPORTUNITY
- NEIGHBORHOOD CONCERN



CITY OF TULSA

SIDEWALK IMPROVEMENT CRITERIA

Sidewalk Improvement Criteria

PRIORITIZATION PROCESS

Potential sidewalk project are scored and ranked using nine (9) criteria: Safety, Pedestrian Generators, Street Classification, School Walking Route, Infrastructure Concern, Transit Stop, Sidewalk / Trail Build-out, Cost / Funding Opportunities, and Neighborhood Concern. Scores are assigned based on the nine criteria as described below. This system is intended as an initial screening process for sidewalk project prioritization.

1. Safety

If it is known that the area serves handicap citizens, points will be assigned. Field investigation will determine if there is a tripping hazard present, and its severity, or if a barricade is in place to identify the safety concern. If there has been a pedestrian related accident at the location, points are given. A determination as to whether or not pedestrians are in hazardous proximity to moving vehicles is made. If there is a low spot in the existing sidewalk that holds standing water, that is recorded. Credit will be assigned if the sidewalk is located adjacent to a street with an Average Daily Traffic (ADT) volume of over 1,500 vehicles. Other identified safety concerns are to be documented. When there is a sight distance issue with vehicular traffic, credit is recorded for locations without existing sidewalks.

2. Pedestrian Generators

Points are given if the sidewalk is adjacent to a hospital, or in front of a park or library. A visual assessment of the area should be used if no sidewalk exists, to determine if there is a visible walking path. If the pedestrian volume is known in the area to be high or moderate then points are assigned accordingly. Points will be given if there is a pedestrian generator in the vicinity of the proposed project. Pedestrian generators are defined as hospitals, community centers, commercial areas, playing fields, trail heads, transit stations or other public places that host large numbers of people on a regular basis.

3. Street Classification

Depending on the classification of the street from the Major Street and Highway Plan, and the relative location of the street, credit is assigned to the sidewalk project. If the street is curbed, then the sidewalk location receives credit. If the sidewalk is in a residential street area, with one or more multi-family living facilities present, that will also be given credit.

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4. School Walking Route

The relative location of the proposed sidewalk project to the nearest school is determined. If the neighborhood near the school requests a sidewalk, through formal correspondence, credit is assigned.

5. Infrastructure Concern

If there is a sign post, a power pole, traffic signal cabinet, raised manhole or other infrastructure creating an obstruction to pedestrian traffic, credit is given. If the investigation of the existing sidewalk reveals large cracks, which are not a tripping hazard, credit is given. Defects present such as spalling or scaling of the concrete, or undermining due to erosion, are credited. If there is minor displacement or minor cracks with no displacement of the sidewalk panels, credit is given. No credit is assigned for streets with roadside ditches.

6. Transit Stop

Maximum credit is assigned when the sidewalk location is on a designated transit route. Partial credit is given depending on the distance of the proposed sidewalk location, from the designated transit route.

7. Sidewalk / Trail Build-out

Maximum credit is given for missing sidewalk lengths, or sidewalk that would be utilized as part of a trail, between existing sidewalk segments. Partial credit is assigned for sidewalk locations that would extend existing sidewalk.

8. Cost / Funding Opportunities

Full credit for this criterion is given when the potential sidewalk location is adjacent to another planned project, which may provide a possible funding opportunity for the sidewalk. If the location is within a designated redevelopment area, funding may be available for sidewalk improvements.

9. Neighborhood Concern

When the potential sidewalk location is included within a neighborhood plan, full points for this criterion are assigned. If there has been a formal neighborhood request for the project, submitted from a Homeowners Association for instance, that warrants partial credit for this item.

Additional points may be assigned by the inspector, depending upon specialized conditions. This finding shall be documented on the Sidewalk Criteria Rating Form.

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CITY OF TULSA

SIDEWALK CRITERIA RATING FORM



Sidewalk Criteria Rating Form

Location: _____ Date: _____
 Contact: _____ Council District: _____
 Phone #: _____ Maintenance Zone: _____
 Length: _____
 Residential: Artisan Downtown
 MAC #: _____ Sidewalk #: _____

Sidewalk Criteria	Observed	Points	Description
Safety			
Handicap object use (ADA)	<input type="checkbox"/>	10	_____
Sewers tapping hazard	<input type="checkbox"/>	10	_____
Service in place	<input type="checkbox"/>	10	_____
Accident history	<input type="checkbox"/>	10	_____
Prohibition in hazardous proximity to moving vehicles	<input type="checkbox"/>	5	_____
Wobbling stepping hazard	<input type="checkbox"/>	5	_____
Wet weather hazard (ponding)	<input type="checkbox"/>	3	_____
Adjacent to street with ADT-1, 3000 VPD	<input type="checkbox"/>	1	_____
Floor depth distance	<input type="checkbox"/>	1	_____
Other obstructive safety concerns	<input type="checkbox"/>	1	_____
Pedestrian Generators			
Adjacent to hospital / health or Assisted Living Facility	<input type="checkbox"/>	10	_____
In front of Public or Quasi-Public Facility (Park, Library, Church, etc.)	<input type="checkbox"/>	10	_____
Walkway path or high pedestrian volume	<input type="checkbox"/>	5	_____
Highly visible path or moderate pedestrian volume	<input type="checkbox"/>	3	_____
Pedestrian Generator within 1 Block	<input type="checkbox"/>	3	_____
Pedestrian Generator within 2 Blocks	<input type="checkbox"/>	2	_____
Pedestrian Generator within 3 Blocks	<input type="checkbox"/>	1	_____
Street Characteristics			
Artisan Sidewalk	<input type="checkbox"/>	4	_____
Downtown Sidewalk	<input type="checkbox"/>	4	_____
Residential Sidewalk	<input type="checkbox"/>	3	_____
One block off Adams street	<input type="checkbox"/>	3	_____
Outback street	<input type="checkbox"/>	1	_____
Residential area with one or more multi-family facilities	<input type="checkbox"/>	1	_____
School Walking Route			
Adjacent to School	<input type="checkbox"/>	6	_____
Within 1 block of School	<input type="checkbox"/>	5	_____
Within 1 block of School, on any walk	<input type="checkbox"/>	4	_____
Within 10 mile of School	<input type="checkbox"/>	3	_____
Farthest neighborhood beyond	<input type="checkbox"/>	2	_____

1 of 2



Sidewalk Criteria Rating Form
(continued)

Location: _____ Date: _____

Sidewalk Criteria	Observed	Points	Description
Infrastructure Concerns			
Sidewalk Obstruction (Power Pole, Sign, Road Marking, etc.)	<input type="checkbox"/>	6	_____
Major cracks (not a trapping hazard)	<input type="checkbox"/>	2	_____
Spalling / Scaling / Underpinning	<input type="checkbox"/>	3	_____
Worst displacement	<input type="checkbox"/>	3	_____
Worst cracks w/ no displacement	<input type="checkbox"/>	1	_____
See notes	<input type="checkbox"/>	6	_____
Transit Stop			
On Transit Route	<input type="checkbox"/>	3	_____
Transit Stop within 1 block	<input type="checkbox"/>	2	_____
Transit Stop within 3 blocks	<input type="checkbox"/>	1	_____
Transit Stop beyond 3 blocks	<input type="checkbox"/>	0	_____
Sidewalk / Trail Build-out			
Missing sidewalk / trail link	<input type="checkbox"/>	3	_____
Extension of existing sidewalk	<input type="checkbox"/>	3	_____
Cost/Funding Opportunities			
Adjacent to another project	<input type="checkbox"/>	3	_____
Within a designated redevelopment area	<input type="checkbox"/>	1	_____
Neighborhood Concerns			
In neighborhood plan	<input type="checkbox"/>	3	_____
Formal neighborhood request	<input type="checkbox"/>	3	_____
Engineering site sidewalk (Maximum 10 points)	<input type="checkbox"/>	_____	_____
Priority Rating			
Comments:	_____		

Inspected by: _____

1 of 2



SIDEWALK INVENTORY OF NEEDS

SIDEWALK DATABASE

- FILE NUMBER
- REQUEST ORIGATION
- INSPECTION DATE
- STATUS
- LOCATION/ADDRESS
- SCOPE
- SCORE
- MAINTENANCE ZONE/COUNCIL DISTRICT
- COST CALCULATIONS
- FUND NUMBER
- PERMIT NUMBER
- FINAL INSPECTION DATE



SIDEWALK INVENTORY OF NEEDS

EXISTING BACKLOG

- **CURRENT REQUESTS:** **\$33.4 MILLION**
- **ARTERIAL/CBD:** **\$20.1 MILLION**
- **NON-ARTERIAL:** **\$13.3 MILLION**

PROPOSED FUNDING

- **ARTERIAL/CBD:** **\$4.0 MILLION**
- **NON-ARTERIAL:** **\$4.0 MILLION**
- **CITYWIDE MEDIAN AND CURB
RETURN IMPROVEMENTS** **\$1.0 MILLION**



CITY OF TULSA

BICYCLE & PEDESTRIAN INFRASTRUCTURE

CITYWIDE MATCHING FUNDS:

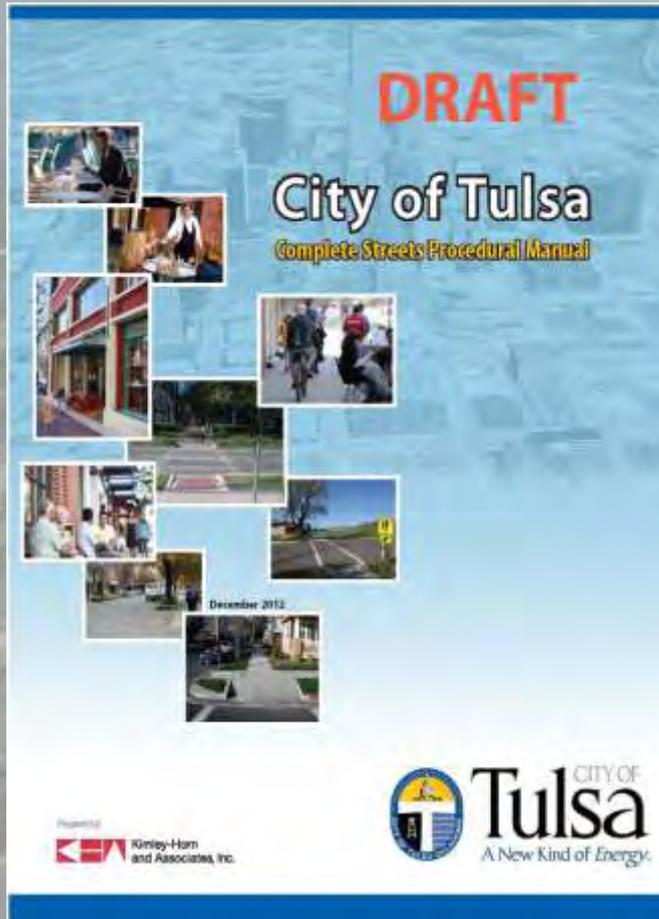
\$7.5 MILLION

- **FEDERAL TRANSPORTATION ALTERNATIVES AND RECREATIONAL TRAILS PROGRAM**
 - **MULTI-USE TRAILS**
 - **BIKEWAYS**
 - **SIDEWALKS**
- **OTHER GRANT PROGRAMS**
 - **FEDERAL TIGER GRANTS**
 - **COMMUNITY DEVELOPMENT BLOCK GRANTS (CDBG)**



CITY OF TULSA

COMPLETE STREETS INITIATIVE



- **Complete Streets Procedural Manual in final review stage. Will be in place before the new funding package is approved.**
- **Manual will aid designers in selecting appropriate Context Sensitive design elements for projects.**
- **Public input into the design process from the surrounding property owners will be obtained.**
- **Sidewalks, bicycle lanes, and other pedestrian and bicycle amenities will be incorporated into projects as appropriate.**
- **Currently developing Performance Measures for Complete Streets to determine desired and acceptable Levels of Service for vehicular, transit, bicycle and pedestrian users.**



BICYCLE & PEDESTRIAN INFRASTRUCTURE PROPOSED FUNDING AMOUNT

- CITYWIDE ADA (MINIMUM FOR 30YR SCHEDULE)
-HIGH AND MEDIUM PRIORITY ONLY \$15.4 MILLION
- ARTERIAL STREETS SIDEWALK IMPROVEMENTS \$ 4.0 MILLION
- NON-ARTERIAL SIDEWALK IMPROVEMENTS AND ASSESSMENT \$ 4.0 MILLION
- CITYWIDE MEDIAN AND CURB RETURN IMPROVEMENTS \$ 1.0 MILLION
- CITYWIDE MATCHING FUNDS \$ 7.5 MILLION



***Thank you....
Questions?***

CITY OF TULSA ENGINEERING SERVICES:

Project Manager – Brent Stout, PE, Lead Engineer, Project Planning and Coordination

Section Manager - Matt Liechti, PE, Manager, Project Planning and Coordination

Director - Paul Zachary, PE