Active Transportation Strategic Plan

URISA GIS in Transit Conference
September 3, 2015
Alex Rixey, Fehr & Peers
Agenda

• Background, Goals & Objectives

• Overview of ATSP Process

• Problems addressed with ArcGIS
  – Large-scale existing conditions analysis
  – Station area typologies

• Next Steps
ATSP Goals

1. Establish **active transportation improvements** as **integral elements** of the countywide transportation system.

2. **Enhance safety**, remove barriers to access, or correct unsafe conditions in areas of heavy traffic, high transit use, and dense bicycle and pedestrian activity.

3. Promote **clean transportation options** to reduce criteria pollutants and greenhouse gas emissions, and improve air quality.

4. Improve **public health and fitness** through traffic safety, reduced exposure to pollutants, and appropriate design and infrastructure for active transportation.

5. **Improve access to transit.**

6. Foster **healthy, equitable, and economically vibrant communities** where all residents have greater transportation choices and access to key destinations such as jobs, recreation, medical facilities, and schools.
ATSP Objectives

1. Identify improvements that increase access to transit by active modes.
2. Create a regional active transportation network.
3. Develop supporting programs and policies related to education, enforcement, encouragement and evaluation.
Los Angeles County

• 4,000 square miles
• 10M people
• 21,000 transit stops
• 460M transit trips
Problems Addressed with GIS

• Existing Conditions Analysis
  – How to analyze?
  – How to communicate?
  – How to organize?

• Station Area Access Improvements
  – How to scale?
Existing Conditions Analysis:

Objectives

• Inform
  – Typology development
  – Project development
  – Project selection / prioritization

• Provide easily-accessible and digestible data for grant applications

• Track improvements / Measure Performance
Existing Conditions Analysis: How to analyze?

Map Layouts:
- Walkshed analysis
- Bikeshed analysis
- Points of interest
- Land use
- Population
- Employment
- Bicycle facilities
- Transit ridership
- CalEnviroScreen
- Collisions

Additional Statistics:
- WalkScore
- BikeScore
- TransitScore
- Route directness
- Street density
- Age
- Journey to work
- Killed/severely injured (KSI) collisions
Existing Conditions Analysis: How to analyze?

**WALKSHELD ANALYSIS AREA**
Shows the area within a half mile walk along the street network.

**BIKESHELD ANALYSIS AREA**
Shows the area within a three mile bike along the street network.

- Walkshed with Slope
- Walkshed without Slope (for reference only)
- Bikeshed with Slope
- Bikeshed without Slope (for reference only)
Existing Conditions Analysis: How to communicate?
Existing Conditions Analysis:
How to communicate?

Sunset / Vermont
Walkshed Analysis - Existing Conditions
Existing Conditions Analysis:
How to communicate?

**WALKSHED ANALYSIS AREA**
Shows the area within a half mile walk along the street network.

**POINTS OF INTEREST**
Shows the location of key community destinations and the number of schools in the walkshed.

- Walkshed with Slope
- Walkshed without Slope (for reference only)
- Arts and Recreation
- Health and Services
- Schools
- Colleges/Universities
Existing Conditions Analysis: How to communicate?

LAND USE
Depicts the types of existing land uses around the station area.

LAND USE DIVERSITY
Each dot represents a household or job in the area. Dots are shown randomly in the area based on the totals in the census block.

- Residential
- Commercial
- Public Facilities and Institutions
- Mixed Urban
- Open Space and Recreation
- Industrial
- Other
- No Data

- Household
- Services
- Retail
- Entertainment
- Office

1 Dot = 10 Jobs or HHs
Existing Conditions Analysis: How to communicate?

**BICYCLE FACILITIES**
Shows existing and planned bike lanes, routes, paths, and protected facilities.

**RIDERSHIP ACTIVITY**
Shows the number of people getting off and on at each stop or station.
Existing Conditions Analysis: How to communicate?

**CALENVIROSCREEN SCORE**
CalEnviroScreen Scores represent a combination of pollution levels and demographic community characteristics. Higher scores represent a higher burden.

<table>
<thead>
<tr>
<th>Score Range</th>
<th>Color Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>1% - 25%</td>
<td>1% - 25%</td>
</tr>
<tr>
<td>25% - 50%</td>
<td>25% - 50%</td>
</tr>
<tr>
<td>No Data</td>
<td>No Data</td>
</tr>
<tr>
<td>50 - 75%</td>
<td>50 - 75%</td>
</tr>
<tr>
<td>Highest Scoring 25%</td>
<td>Highest Scoring 25%</td>
</tr>
</tbody>
</table>

Max: 72.0
Rank: 180

**COLLISION BY MODE**
Shows locations of all collisions including people walking, bicycling, driving, and train collisions from 2005 - 2013.

- Pedestrian
- Bicycle
- Train
- Streets with a posted speed over 35 mph

Max: 155
Rank: 205

Bike: 113
Ped: 63

Min: 0
Max: 89
Rank: 0
205
Existing Conditions Analysis: How to communicate?

**POPULATION AND EMPLOYMENT**
Population and employment within the walkshed.

- **6,401** Population
- **205** Rank
- **11,352** Employment
- **89** Rank

**AGE**
Displays the number and %s of people under 18 and over 64 in the walkshed.

- **830** Under 18
- **13.0%**
- **795** Over 64
- **12.4%**

**WALK SCORE (1-100)**
Reports the Walk Score for the station area.

- **95**

**BIKE SCORE (1-100)**
Reports the Bike Score for the station area.

- **59**

**TRANSIT SCORE (1-100)**
Reports the Transit Score.

- **71**
Existing Conditions Analysis: How to communicate?

**ROUTE DIRECTNESS**
Represents the amount of out of direction travel needed to get to destinations in the walkshed. Higher scores are more direct.

4.4

**INTERSECTION DENSITY**
Measures the number of intersections within walkshed.

122 Count
41 Score (1 - 100)

**JOURNEY TO WORK**
Shows the percentage of people who live in the walkshed area and how they get to work.

- 16.7% Walk
- 0.9% Bike
- 3.3% Rail
- 18.2% Bus
- 6.2% Carpool
- 54.0% Drive Alone
- 0.6% Other

**COLLISION BY MODE // KSI**
Shows the total number of collisions and the number resulting in someone being killed or severely injured from 2005-2013.

<table>
<thead>
<tr>
<th>Total</th>
<th>KSI</th>
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<tbody>
<tr>
<td>63</td>
<td>9</td>
</tr>
<tr>
<td>28</td>
<td>0</td>
</tr>
<tr>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>251</td>
<td>7</td>
</tr>
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</table>

Pedestrian
Bike
Train
Auto
Existing Conditions Analysis: How to organize?
Existing Conditions Analysis: How to organize?
Station Area Access Improvements: Typology Objectives

- Provide representative examples of station access improvements
- Develop countywide cost estimates
Station Area Access Improvements:
How to scale?

Land Use

Street Grid

Transit Type

Countywide Sustainability Policy (2012)

More Walkable

Less Walkable

Station

Bus Stop
Station Area Access Improvements: Station Typology Examples

<table>
<thead>
<tr>
<th>Suburban (e.g. The Brady Bunch)</th>
<th>Somewhat Urban (e.g. Modern Family)</th>
<th>Very Urban (e.g. Seinfeld)</th>
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<tbody>
<tr>
<td>Suburban Station, More Walkable</td>
<td>Somewhat Urban Station, More Walkable</td>
<td>Very Urban Station, More Walkable</td>
</tr>
<tr>
<td>Suburban Bus Stop, More Walkable</td>
<td>Somewhat Urban Bus Stop, More Walkable</td>
<td>Very Urban Bus Stop, More Walkable</td>
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Station Typology Examples

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</tr>
</thead>
<tbody>
<tr>
<td>Watts Towers / 103rd (LRT)</td>
<td>South Pasadena Gold Line (LRT)</td>
<td>Expo / La Brea (LRT)</td>
</tr>
<tr>
<td>Atlantic / Carson (Bus)</td>
<td>Gaffey / 1st (Bus)</td>
<td>17th and Hill (Bus)</td>
</tr>
<tr>
<td>Commerce Metrolink (Rail)</td>
<td>Palmdale Metrolink (Rail)</td>
<td>Warner Center (BRT)</td>
</tr>
<tr>
<td>San Gabriel / Garvey (Bus)</td>
<td>Sepulveda / Skirball Center (Bus)</td>
<td>Lakewood / Firestone (Bus)</td>
</tr>
</tbody>
</table>
Suburban station areas map, differentiated by walkable, less walkable, not walkable

Station Area Access Improvements: Station Typology

- Suburban, Less Walkable
- Suburban, More Walkable
- Somewhat Urban, Less Walkable
- Somewhat Urban, More Walkable
- Very Urban, Less Walkable
- Very Urban, More Walkable
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- Somewhat Urban, More Walkable
- Very Urban, Less Walkable
- Very Urban, More Walkable
Next Steps: Anticipated Project Schedule

Summer 2015 – Today

- Station Area Analysis
- Station Area Typology

Fall 2015

- Detailed Station Area Plans
- Regional Active Transportation Network

Winter 2015/2016

- Draft Active Transportation Strategic Plan
Thank you!

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