USING GIS TO IMPROVE MOBILITY

Presented by: Martyn James, RTC Southern Nevada and Devin Moore, Kimley-Horn and Associates, Inc.
Presentation Objectives

• What is mobility and why is it important?
• How can GIS be used to strategically evaluate mobility?
The movement of people through a variety of modes of transportation (bike, walk, transit)

Mobility can have a significant positive impact on a community:

• Serves all segments of the population
• Revitalizes developed areas
• Supports healthier lifestyles
Not so long ago, in a town not so far away
Las Vegas – a history in two graphs
They came, we built it.
We built for cars
And more cars
And we built for ....... ???
What we did not build ……

….. Was Community Mobility
Community Mobility Study for Central Las Vegas
Community Mobility Study for Central Las Vegas

Identifying Mobility Barriers

Grocery Store Service Area Analysis
Community Mobility Study for Central Las Vegas

Identifying Mobility Barriers
Community Mobility Study for Central Las Vegas

Identifying Mobility Barriers

Neighborhood Shopping Closest Facility Analysis
Community Mobility Study for Central Las Vegas
Identifying Strategic Improvements
Community Mobility Study for Central Las Vegas
Identifying Strategic Improvements

Route #1
Route #2
Route #3
Route #4
Route #5
Community Mobility Study for Central Las Vegas
Identifying Strategic Improvements

ROUTE SEGMENTS
Community Mobility Study for Central Las Vegas

Identifying Strategic Improvements

Route #1

Route #2

Route #3

Route #4

Route #5
Community Mobility Study for Central Las Vegas
Identifying Strategic Improvements
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Identifying Strategic Improvements

Existing Features
- Wasden Elementary School
- Wasden ES Attendance Boundary
- CCSD 2-Mile Walking Boundary
- Traffic Signal
- Pedestrian Flasher
- School Zone Flasher
- No Sidewalk
- School Crossing Guard

Number of Dwelling Units Utilizing Segment
- 1 - 50 dwelling units
- 51 - 100 dwelling units
- 101 - 250 dwelling units
- 251 - 500 dwelling units
- Greater than 500 dwelling units

Recommendations
1. Evaluate enhanced crossing opportunities
2. Evaluate the feasibility for sidewalk installation
3. Consider revising two-mile walk boundary
Regional Bicycle Network Gap Analysis

- Existing Inventory Database
- Network Connectivity Points
- Gap Identification
- Gap Prioritization
Regional Bicycle Network Gap Analysis
Existing Inventory Database
Regional Bicycle Network Gap Analysis
Destination-Based Connectivity Points
Regional Bicycle Network Gap Analysis
Demand-Based Connectivity Points
Regional Bicycle Network Gap Analysis
Latent Demand-Based Connectivity Points

EMPILOYMENT DENSITY
Source: Nevada Department of Employment, Training, and Rehabilitation (DETR)

POPULATION DENSITY
Source: Clark County GIS Management Office – GILIS 2013
Regional Bicycle Network Gap Analysis

Gap Identification

- Roadways (> 25 mph) within ½ mile of:
  - Parks
  - Schools
  - Regional Malls
  - Park and Rides
  - Census tracts with high bicycle ridership to work
  - Club Ride bicycle trip origins and destinations
  - Airports

- Demand (Population and Employment)
Regional Bicycle Network Gap Analysis

Gap Prioritization

– Corridor continuity
– Equity
– Potential
  • Lower traffic volume and higher number of lanes
– Corridors with high bicycle transit ridership
– Connectivity to US Bike Routes
In Closing
Questions?

Thank you!

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