I-710 Health Impact Assessment

Final Draft Report

Topic: Neighborhood Resources

Presented to the Technical and Advisory Roundtables

October 24, 2011

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Access to Neighborhood Resources
Literature Review

• Neighborhood Completeness
  o Research exists on how freeways are good for mobility and funneling people/goods through an area but how this makes them bad for “place-making” (Cervero 2009, Burden 2007)
  o Access to a mix of retail is important for health and quality of life: increases walking and biking, possibilities for healthful and meaningful work, and interactions among neighbors; reduces daily vehicle trips and miles traveled, air and noise pollution.
  o Links between the following neighborhood resources and health have been researched and documented: childcare, schools, libraries, parks, community centers, community gardens, post offices, banks, pharmacies, public art, food retail, health care facilities.
Access to Neighborhood Resources
Literature Review

• Perceptions of environmental quality influence health-related decisions:
  o Parents allowing children to walk/bike (Panter 2008)
  o Walking in adults (Gebel 2011)
  o Use of neighborhood stores (Kelta 2011)
  o Use of parks (Leslie 2010)
  o Crime rates (Boyle 2008)

• Neighborhood completeness influences social cohesion through impacts of parks, length of time someone lives in a community, presence of religious institutions, and safety/crime.

• Neighborhood completeness influences physical activity (Ewing 2005, Rodriguez 2009)

• After a freeway expansion, property values for residences nearest to the freeway (e.g., with more environmental impacts) decrease, while those further away (e.g., that may gain better access to the freeway or benefit from reduced commute times) increase. (Waddell 1993, Kilpatrick 2007)

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Existing Conditions Related to Access to Neighborhood Resources

- Service and retail outlets
- Perceptions of environmental quality
- Social cohesion
- Neighborhood wealth
- Health outcomes
Neighborhood Completeness

- Number of existing neighborhood services and retail outlets within 1 mile of the I-710:

<table>
<thead>
<tr>
<th>Services</th>
<th>Retail</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child Care Centers (140)</td>
<td>Banks (81)</td>
</tr>
<tr>
<td>Community Centers (29)</td>
<td>Pharmacies (156)</td>
</tr>
<tr>
<td>Community Gardens (9)</td>
<td>Healthy Food Retail Markets (578)</td>
</tr>
<tr>
<td>Primary Care Clinics (27)</td>
<td></td>
</tr>
<tr>
<td>Libraries (16)</td>
<td></td>
</tr>
<tr>
<td>Parks (74)</td>
<td></td>
</tr>
<tr>
<td>Post Offices (13)</td>
<td></td>
</tr>
<tr>
<td>Public Art (28)</td>
<td></td>
</tr>
<tr>
<td>Public School (79)</td>
<td></td>
</tr>
<tr>
<td>Recreation Facilities (21)</td>
<td></td>
</tr>
</tbody>
</table>

Source: HIP

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A map of the diversity of neighborhood resources (listed on previous slide) near the I-710.

Some neighborhoods (e.g., Long Beach and East LA) are more complete than others (e.g., Compton) in that they have a greater number of resources available.

Source: HIP

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The Final Tier 2 Report contains a lot of information about current perceptions of EQ in the I-710 Corridor:

• “Every action [of the I-710 Corridor Project] should be viewed as an opportunity for repair and improvement.”
• “Improvements [to the I-710 freeway] cannot be constructed in isolation from all of the other recommendations such as public health, community enhancement, and noise abatement.”
• Additional specific concerns raised regarding: air quality, safety, congestion, noise, community enhancements, economic development, and environmental justice

Similar concerns have been raised through the I-710 Participation Process.
Social Cohesion

- Crime rates in Commerce and Compton are more than 2x county crime rates; crime rates in 6 other Gateway Cities are above county rates (FBI)
- On average, residents have lived in their current homes about the same amount of time as people in the county have lived in their homes (median year of move in was 2000), though residents just west of the freeway have lived there longer (Census)
- Voter registration is higher in the study area than in the county, but the area has a higher percent of residents who are not citizens than the county (LA County Redistricting)
Neighborhood Wealth

• The I-710 Corridor Communities have less wealth than the county:

<table>
<thead>
<tr>
<th>Indicator</th>
<th>LA County</th>
<th>I-710 Study Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poverty rate (per 1,000 pop.)</td>
<td>154.43</td>
<td>207.20</td>
</tr>
<tr>
<td>Median household income</td>
<td>$60,073</td>
<td>$44,189</td>
</tr>
<tr>
<td>Unemployment</td>
<td>5.05%</td>
<td>6.73%</td>
</tr>
<tr>
<td>Severe household overcrowding</td>
<td>5.28%</td>
<td>8.60%</td>
</tr>
</tbody>
</table>

Source: U.S. Census 2005-2009 ACS

• In addition, the average assessed value of residential property parcels in the study area census tracts is an estimated $147,820 (about 40%) less than the average value of a residential parcel in Los Angeles County overall. (LA County Office of the Assessor, 2011)

Note: Unemployment rates shown are pre-recession. Current unemployment rates are higher and current rates in the Gateway Cities are higher than County rates.
Existing Health Outcomes Related to Access to Neighborhood Resources

- As seen in other sections of the HIA, cardiovascular disease rates near the I-710 are similar to county rates.
- Rates of obesity and diabetes appear to be higher in the corridor than in the county.
- Physical activity levels for both adults and children in the corridor are similar to county levels.

All health outcomes listed here are multi-factorial in nature and access to neighborhood resources is only one of many components that influence disease levels.

Source: LA County Health Survey, OSHPD
Summary of Existing Conditions Related to Access to Neighborhood Resources

- Adequately complete neighborhoods, with access to a reasonable variety of resources, though some areas have more access to this variety than other areas
- Concerns about the quality of their environment from the perspective of air quality, noise, traffic safety, traffic congestion, jobs, and neighborhood resources
- Reasonable but not strong social cohesion as judged by crime rates, the percent of people registered to vote, and the length of time people have lived in their homes
- Higher poverty rates, unemployment, and overcrowding and lower incomes and property values
- Disease rates similar to LA County for many health outcomes but higher rates of diabetes and obesity

Source: HIP

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Impacts Related to Access to Neighborhood Resources

- Other factors to consider as inputs to impact assessment
- Perceptions of environmental quality
- Neighborhood completeness
- Social cohesion
- Neighborhood wealth
- Health impacts

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Additional Factors to Consider

• Varied investments in some I-710 communities has resulted in reduced livability in communities with fewer investments
• The racial/ethnic distribution of cities near the I-710, with high concentrations of Hispanics living throughout the corridor
• The increase in traffic volumes on the freeways and arterials likely under all the alternatives being considered
• HIP predicts that:
  • Walking and biking environments likely to stay the same or worsen under all the alternatives being considered
  • Air quality likely to improve as a result of improved technology & fuels under all the alternatives being considered
  • Noise exposure likely to increase as a result of increased noise emissions from freeway, arterials, and other sources
  • Traffic safety on the freeway and arterials not likely to improve but there are some differences between the alternatives
  • Local employment likely to increase for all alternatives
  • Aesthetic treatments to freeway and arterial highways likely to improve community perceptions.

Source: HIP

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Predicted Impact on Perceptions of Environmental Quality

- Perceptions of environmental quality likely to correlate with actual changes in environmental quality; some aspects of environmental quality are likely to improve while others are likely to degrade
- Perceptions influenced by many factors outside the control of the project

→ It is not possible to predict how perceptions will change

Source: HIP
Predicted Impact on Neighborhood Completeness

- Displacement
  - Minimal impact
- Changes in access
  - Alternative 1: more traffic congestion, neighborhoods not more walkable → access not likely to improve
  - Alternative 5A: Minimal impact from physical changes (e.g., changes in interchanges); similar congestion; walking conditions unlikely to improve; transit service improvements → access not likely to improve for drivers or pedestrians, but some improvement from increases in transit service
  - Alternatives 6A/B/C: Minimal impact from physical changes (e.g., changes in interchanges); reduced congestion; walking conditions unlikely to improve; transit service improvements → access by car and transit likely to improve but access by walking not likely to improve

Source: HIP

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Predicted Impact on Neighborhood Completeness

- Access to parks:
  - Alternatives 5A and 6A/B/C: Better for Cesar Chavez Park

- Changes in investment:
  - The extent of government and business investment that will result from any proposed alternative is unknown. Significant investment could lead to improved neighborhood completeness.

- Changes in usability:
  - Some resources near the freeway (e.g., parks, schools, churches) may become more or less usable, difficult to predict. Actual use may not change (i.e., people may not have other choices)

Source: HIP

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Predicted Impact on Social Cohesion

• The extent of government and business investment that will result from any proposed alternative is unknown. Significant investment could lead to improved social cohesion.

• An expanded freeway under Alternatives 5A or 6A/B/C is not likely to increase one’s pride in one’s neighborhood for those living closest to freeway, though improvements described in the urban design toolkit may offset this somewhat.

• More congestion under Alternative 1 is not likely to increase one’s pride in one’s neighborhood.

• Those who have the resources to do so could decide to leave.

Social cohesion likely to stay the same or decrease for those living closest to freeway, while for those further away social cohesion may not be impacted.

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Predicted Impact on Neighborhood Wealth

• Residential property values close to freeway likely to decrease (from environmental factors) while those further away likely to increase (from faster commute times)

• People with higher wealth not likely to decide to move to locations with environmental exposures that may negatively impact property values

→ Neighborhood wealth unlikely to improve

Source: HIP
Predicted Impact on Health Outcomes

Health outcomes associated with access to neighborhood resources, social cohesion, and neighborhood wealth would be expected to get worse for some and improve for others. Health outcomes that could change include:

- Chronic disease levels associated with a physical activity, diet, access to needed services, and social cohesion
- Mental health issues associated with physical activity and changes in stress that can result from changes in social cohesion
- Changes in lifespan associated with physical activity and social cohesion
- Injuries and fatalities associated with crime levels that could result from a lack of social cohesion

Source: HIP
### Summary of Health Outcomes (2035)

#### Access to Neighborhood Resources

<table>
<thead>
<tr>
<th>Health Impact/Alternative</th>
<th>Impacts of Alternatives</th>
<th>Health Outcome</th>
<th>Uncertainties</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Impact</td>
<td>Magnitude</td>
<td>Severity</td>
</tr>
<tr>
<td>Chronic Disease (e.g., cardiovascular disease, diabetes; from changes in physical activity, social cohesion, &amp; stress)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alt 1</td>
<td>+/-</td>
<td>Potentially significant, non-quantifiable</td>
<td>Mod-High</td>
</tr>
<tr>
<td>Alt 5A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alt 6A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alt 6B</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alt 6C</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mental Illness (e.g., depression; from changes in physical activity, social cohesion, &amp; stress)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alt 1</td>
<td>+/-</td>
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<tr>
<td>Alt 6B</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alt 6C</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Decreased Lifespan (e.g., from changes in physical activity, social cohesion &amp; stress)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alt 1</td>
<td>+/-</td>
<td>Potentially significant, non-quantifiable</td>
<td>High</td>
</tr>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alt 6A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alt 6B</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alt 6C</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Injury and fatality (e.g., from crime)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alt 1</td>
<td>+/-</td>
<td>Potentially significant, non-quantifiable</td>
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</tr>
<tr>
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<td>Alt 6A</td>
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<td></td>
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</tr>
<tr>
<td>Alt 6B</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alt 6C</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Explanations:**
- *Impact* refers to whether the alternative will improve (+), harm (-), or not impact health (-).
- *Magnitude* reflects a qualitative judgment of the size of the anticipated change in health effect (e.g., the increase in the number of cases of disease, injury, adverse events): Negligible, Minor, Moderate, Major.
- *Severity* reflects the nature of the effect on function and life-expectancy and its permanence: High = intense/severe; Mod = Moderate; Low = not intense or severe.
- *Strength of Causal Evidence* refers to the strength of the research/evidence showing causal relationship between access to neighborhood resources and the health outcome: ♦ = plausible but insufficient evidence; ♦ ♦ = likely but more evidence needed; ♦ ♦ ♦ = high degree of confidence in causal relationship. A causal effect means that the effect is likely to occur, irrespective of the magnitude and severity.

Source: HIP

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Recommendations Related to Access to Neighborhood Resources

- Access to neighborhood resources
- Environmental quality
- Public investment
• Access to Neighborhood Resources:
  o Recommendations contained in the Mobility chapter would help ensure that access to goods and services is maximized (i.e., those that describe improvements to public transit infrastructure and accessibility as well as walking and biking infrastructure).
  o The I-710 Corridor Project could include additional improvements to neighborhood resources that are currently available.
  o Local jurisdictions could each be given funding as part of the project to invest in the neighborhood resources that are likely to be impacted by the project.
• Environmental Quality
  
  o Recommendations contained in the other chapters, including those related to future land use, would help ensure improvements to environmental quality. Improved perceptions of environmental quality are likely to follow actual improvements and lead to more investment in the corridor communities, improve social cohesion, increase physical activity, and lead to other neighborhood improvements.
• Public Investment
  - Increase direct government investment in community infrastructure and services to ensure that people have access to the goods and services they need to live healthy lives and to improve social cohesion in local communities. Such investment could help attract private investment and, together, these could prevent or break the cycle of poverty and disinvestment that I-710 communities have historically experienced, and that could continue without proper mitigations.
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