Environmental Committee

July 27, 2011
Agenda Overview

- Item A – Status and Schedule Update
  Scott Broten, ICF

- Item B – Participation Framework Committee Reports
  Susan DeSantis, Arellano Associates

- Item C - Deliverables Overview and Schedule
  Scott Broten, ICF

- Item D – Final Compendium
  Scott Broten, ICF
Agenda Overview cont.

- Item E – I-710 Construction Staging Concept  
  **Jerry Wood**, COG Staff

- Item F – I-710 HIA Presentation  
  **Jonathan Heller**, Human Impact Partners

- Item G - Gateway Cities COG Engineers Report  
  **Jerry Wood**, COG Staff
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### AQAP Task Update

<table>
<thead>
<tr>
<th>Technical Tasks</th>
<th>Status</th>
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<tr>
<td>Comm. Medical Needs Assessment</td>
<td>In Process</td>
</tr>
<tr>
<td>I-710 Near Roadway Modeling</td>
<td>In Process</td>
</tr>
<tr>
<td>I-710 Ultrafines</td>
<td>In Process</td>
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<tr>
<td>Air Quality Protocol</td>
<td>In Process</td>
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<tr>
<td>Compendium Update</td>
<td>In Process</td>
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<td>Quantitative Air Quality Analysis</td>
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<tr>
<td>I-710 Construction Staging and Phasing Assessment</td>
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<tr>
<td>The I-710 Health Impact Assessment</td>
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<tr>
<td>Health Risk Assessment</td>
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<tr>
<td>Develop Air Quality Strategies</td>
<td>Task starts in 2012</td>
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<tr>
<td>Analysis of New Air Quality Measures</td>
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<tr>
<td>Early Action Support</td>
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<tr>
<td>Develop AQAP Report</td>
<td>Task start in April 2012</td>
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<tr>
<td>Public Outreach</td>
<td>In Process</td>
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</table>
I-710 EIR/EIS and AQAP Scope of Work Relationship

I-710 EIR/EIS

- Technical Studies
- Noise
- AQ/HRA
- Comm. Impact Assessment
- and many more

Gateway Cities AQAP

- Emissions Inventory
- AQ/HRA
- Develop AQ Strategies
- Compendium Update
- CMNA
- I-710 HIA
- I-710 Construction Staging and Phasing
- I-710 Near Roadway Modeling (Ultrafines)
I-710 EIR/EIS and AQAP Scope of Work Relationship

I-710 EIR/EIS

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- Noise
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Gateway Cities AQAP

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*Gateway Cities AQAP

- CMNA
- HIA
- Construction Staging and Phasing
- Near Roadway Modeling (Ultrafines)
- Emissions Inventory
- Develop AQ Strategies
- Compendium Update

*The AQAP tasks indicated are scheduled to be completed by the end of November for consideration in Draft I-710 EIR/EIS
Project Study Areas

I-710

Gateway Cities COG Subregion
Project Study Areas

- **I-710**
  - I-710 EIR/EIS
  - Numerous Technical Studies (Noise, AQ/HRA)
  - I-710 HIA
  - I-710 Near Roadway Modeling (Ultrafines)
  - I-710 Construction Staging and Phasing

- **Gateway Cities COG Subregion**
  - Emissions Inventory
  - AQ/HRA
  - New AQ Measures
  - Compendium Update
  - Community Medical Needs Assessment

Scheduled to be completed in time for consideration in the I-710 EIR/EIS
AQAP Six Month Outlook

July
- Compendium Update
- I-710 HIA Scope

August
- Draft Community Medical Needs Assessment
- Draft I-710 Near Roadway Modeling (Ultrafines)
- AQ/HRA Protocol
- Draft I-710 Construction Staging and Phasing Analysis

September
- Final Community Medical Needs Assessment
- Final I-710 Near Roadway Modeling (Ultrafines)
- Final I-710 Construction Staging and Phasing Analysis
- Draft I-710 HIA Report
- Early Action Projects Report

October
- Draft I-710 HIA Report
- Final I-710 HIA Report
- Draft New Air Quality Measures Report

November - December 2011
- November
- Draft New Air Quality Measures Report
- December
- Final New Air Quality Measures

Note: Tasks shown in gold are scheduled to be completed in time for consideration in the I-710 EIR/EIS
### AQAP Project Overview

#### Schedule

<table>
<thead>
<tr>
<th>Task 1 - Project Plans, Schedule, Management</th>
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<tbody>
<tr>
<td>Data Collection</td>
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<tr>
<td>Task 2 - Compendium Update</td>
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<td>Comm. Medical Needs</td>
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<td>Near Roadway Modeling Evaluation</td>
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<td>Task 3 - Quantitative AQ Analysis</td>
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<td>I-710 Construction Staging and Phasing Impacts</td>
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<td>Task 4 - I-710 Health Impact Assessment</td>
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<td>Task 5 - Health Risk Assessment for the AQAP Study Area</td>
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<td>I-710 Construction Impacts Assessments</td>
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<td>Task 6 - AQ Strategies</td>
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<td>Task 7 - New AQ Measures</td>
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<td>Task 8 - Early Action Support</td>
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<tr>
<td>Task 9 - AQAP Development</td>
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<tr>
<td>Task 10 - Community and Public Outreach</td>
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AQAP Participation Goals

• Develop the AQAP through the participation process

• Engage in debate to help crystallize issues

• Through informed understanding of what the choices are, help evaluate merits of each possible option, and search for answers that will be mutually advantageous
AQAP Participation Framework

Advisory and Technical Roundtables

- AQAP Advisory Roundtable
- AQAP Technical Roundtable

Recommendations and Feedback

Gateway Cities COG

- GCCOG Board
- Transportation Committee
- Environmental Committee

I - 710 HIA TWG
AQ/HRA TWG
AQAP Participation Roles & Responsibilities

Advisory and Technical Roundtables

- AQAP Advisory Roundtable
- AQAP Technical Roundtable
- I - 710 HIA TWG
- AQ/HRA TWG

Recommendations and Feedback

Gateway Cities COG

- GCCOG Board
- Transportation Committee
- Environmental Committee

TECHNICAL WORKING GROUPS
Advise and provide input on protocols, scope and analysis of health risks and air quality
• Provide opportunity for in-depth analysis
AQAP Participation Framework

**Advisory and Technical Roundtables**

- AQAP Advisory Roundtable
- AQAP Technical Roundtable

**Gateway Cities COG**

- GCCOG Board
- Transportation Committee
- Environmental Committee

**Recommendations and Feedback**

- Review reports from the Technical Working Groups
- Provide input to Environmental Committee on policy (AR) or technical issues (TR)
AQAP Participation Framework

Advisory and Technical Roundtables

AQAP Advisory Roundtable

AQAP Technical Roundtable

Gateway Cities COG

GCCOG Board

Transportation Committee

Environmental Committee

ENVIRONMENTAL COMMITTEE

Provide Policy Direction/Recommendations to Board through Transportation Committee

Communicate with Public
AQAP Participation Framework

Update Format

Advisory and Technical Roundtables

- AQAP Advisory Roundtable
- AQAP Technical Roundtable

Update Format

- Participants
- Topics
- Issues
- Input

Input and Recommendations

I - 710 HIA TWG
AQ/HRA TWG
AQAP Participation Framework

I-710 Health Impact Assessment (HIA) Technical Working Group (TWG)

I-710 HIA TWG Update
AQAP Participation Framework
I-710 HIA TWG Update

Participants

U.S. Environmental Protection Agency, Region IX
U.S. Department of Transportation (MARAD)
South Coast Air Quality Management District (SCAQMD)
Southern California Association of Governments (SCAG)
Los Angeles County Metropolitan Transportation Authority (Metro)
Los Angeles County, Department of Public Health
City of Vernon Health Department
Port of Long Beach (POLB)
Port of Los Angeles (POLA)
BP Lubricants USA
AQAP Participation Framework
I-710 HIA TWG Update

Topics

- HIA Goals
- Overarching Parameters
- Health Determinants
- Pathways
- Research Questions
- Scope of Work

Meetings

May 12th, May 26th, July 11th, August 15th, September 12th
• Data and Schedule Limitations, including use of I-710 technical studies
• Quantitative versus Qualitative Analysis
• Growth Assumptions (No Build Option)
• Residual Impacts
• Jobs and Economic Development
• PM 2.5 - Mortality and Morbidity
Recommendations

I-710 HIA TWG agreed to:

- HIA Goals (5) and Overarching Parameters
- Set of Health Determinants (6)
- Set of Pathways (based on the selected determinants) as hypotheses.
- Set of research questions and ways to measure answers (indicators).
- HIA Scope
- Forwarded package to Roundtables
Recommendation

PM 2.5 - Mortality and Morbidity

- Considerable discussion
- EPA recommended adding PM 2.5 mortality to the Air Quality pathway diagram.
- Ports noted that mortality rates generally are in port EIR reports for informational purposes only.
- Add quantification of mortality and morbidity to AQAP analysis with full disclosure of uncertainties*.

*Note: Required emission data will not be available for analysis in the I-710 HIA, but will be included in the AQ/HRA Assessment
I-710 HIA does the best job possible with the limited data available; process is up against real constraints (data and schedule).
AQAP Participation Framework

Air Quality/ Health Risk Assessment Technical Working Group (TWG)

AQ / HRA TWG Update
AQ/ HRA TWG Purpose

- Methods used to assess air quality impacts and human health risks differ among the agencies.

- TWG will:
  - Ensure transparency and allow communication on technical issues among various stakeholders; and
  - Facilitate consensus on the technical tools and methodologies to be employed and utilized through this process.
AQAP Participation Framework

AQ / HRA TWG Update

Participants

U.S. Environmental Protection Agency, Region IX
Office of Environmental Health Hazards Administration (OEHHA)
California Air Resources Board (CARB)
South Coast Air Quality Management District (SCAQMD)
Los Angeles County Metropolitan Transportation Authority (Metro)
City of Vernon Health Department
Port of Long Beach (POLB)
Port of Los Angeles (POLA)
AQ/HRA Protocol and related issues

May 17th, June 21st, July 25th
• Use of the AQ and HRA in decision making
• Pollution Sources to be analyzed in AQAP
• Construction Staging Concept / Emissions Analysis
• Study Area
• Hotspot Analysis Methodology
• List of Air Toxics and pollutants to be modeled
• Model Options
  • Estimating emissions from on-road vehicles/mobile sources (*EMFAC Model 2007 vs. 2010*)
  • Air Quality Modeling (*AERMOD vs CALPUFF*)
• Model Options Off-road and Nonpoint Stationary Sources
Recommendations

Construction Staging Concept
Comment: **Construction Impacts** should be included in the I-710 EIR HRA

Response: The construction emission analysis for this possible staging plan will be provided to the I-710 EIR/EIS team in mid-August and with adequate time to estimate the construction impacts in the Health Risk Assessment as requested by the Corridor Advisory Committee and concurred with by the I-710 Project Committee.
Recommendations

Construction Staging Concept
Comment: Traffic during Freeway Construction-re-routing of traffic may have considerable air quality impacts due to increased congestion or altering of traffic patterns. These impacts should be evaluated in the I-710 EIR HRA and the AQAP HRA.

Response: The speculative construction phasing and staging plan does not include the level of detail required to estimate possible changes in traffic patterns during construction.
Recommendations

Construction Staging Concept
Comment: Cumulative Construction Impacts - potential cumulative impact of major construction on multiple freeways should be evaluated if there is a possibility of overlapping construction.

ICF Response: Other construction projects will be included to the extent that their emissions are incorporated into SCAQMD’s MATES III emission inventories, which will be used in the AQAP AQ/HRA.
Recommendations

Construction Staging Concept
Comment: “On the Ground” Spot Checking of Emission Sources

ICF Response: Spot-checking grid cells with high emissions using land use maps will be considered, depending on time and resource availability.
Mitigation Measures

Comment: An adequate framework for conceiving and implementing mitigation measures should be provided. As the mitigation measures are the most important part of the AQAP, care should be taken to ensure that adequate resources are made available to evaluate their effectiveness and to ensure public and stakeholder input.

Response: AQAP includes 2 tasks addressing identification and evaluation of air quality improvement strategies and measures.
Recommendations

Hot Spot Analysis of “Average” Area
Comment: AQAP may consider performing a hot spot analysis on the two highest freeway areas, and one “average” freeway area. In this way, the public could see a typical risk associated with proximity to freeways in comparison to background and hot spot levels.

Response: Selection of an “average” freeway hot spot will be considered. If hot spots not proximate to a freeway are found, they will also be considered for selection.
Recommendations

Study Area Expansion
Comment: AQAP Study Area should be expanded beyond the Gateway Cities geographic boundaries to include areas that may have significant impacts from goods movement and Port-related activities.

Response: The AQAP Study Area has been expanded to include Wilmington and Carson.
AQAP Participation Framework

AQAP Technical Roundtable (TRT)

TRT Update
Federal  US Environmental Protection Agency  
US Department of Transportation, MARAD  

Regional  SCAQMD, SCAG  

Public Works/Planning  
Cities of La Mirada and South Gate Community Development  
Cities of La Mirada, Compton, Lynwood Public Works  
Cities of Long Beach and Los Angeles Planning Departments  

Ports  Ports of Los Angeles and Long Beach  

Public Health  City of Long Beach Health & Human Services  
City of Vernon Health & Environmental Control Department  
Los Angeles County Department of Public Health  

At-Large  TIAX, BNSF Railway
• Compendium Update of Existing/Proposed Near-Term Air Quality Improvement Strategies

• I-710 Construction Staging and Phasing Concept

• I-710 HIA Goals, Parameters, Health Determinants, Pathways, Research Questions and Scope

Meetings

July 7th Briefing, July 13th Kick-Off Meeting
• Role of HIA in identifying potential mitigation measures for I-710 EIR/EIS
• Water Quality
• Assumptions used to assess Health Determinants, including full port build-out
• Potential community concern surrounding the exclusion of construction emissions
• Types of data that would be analyzed quantitatively and qualitatively
• Distinguishing between carrot-style and stick-style measures.
• Potential concerns over the credibility of the references
• PM 2.5 morbidity/mortality issues
• Process for providing feedback
• Use of standard language to communicate magnitude of impacts
• Keeping informed of results from I-710 EIR/EIS technical reports that have not become public information
• Incremental vs residual changes in health outcomes
Recommendations

• Allow comments to be submitted following each ART Meeting.

• Agreement on HIA Goals and Overarching Parameters as presented.

• Traffic Safety Effects Pathway: HIA should consider likely changes in passenger vehicle size and technology, especially as vehicles become smaller and lighter.

Daniel Ojeda was selected to serve as Technical Roundtable Liaison to the Environmental Committee.
AQAP Participation Framework

AQAP Advisory Roundtable (ART)

ART Update
• **Academic & Educational** – USC; UCLA; Cal State University, Long Beach; Tri-Cities Occupational

• **Community Representatives** - Mothers of East LA, Our Lady of Lourdes Church (East LA), Port of LA CAC, West Long Beach, Downey

• **Environmental Community** - NRDC, CCA, East Yard Communities, CBE, CSE

• **Public Health Advocates** - legal aid foundation, city and county health departments, Breathe LA, LABACA

• **Private Sector** - chambers of commerce, WSPA, PMSA, Future Ports

• **Public Sector** - ports, SCAQMD, CARB, Metro, utilities
AQAP Participation Framework

Topics

- Compendium Update of Existing/Proposed Near-Term Air Quality Improvement Strategies
- I-710 Construction Staging and Phasing Concept
- I-710 HIA Goals, Parameters, Health Determinants, Pathways, Research Questions and Scope

Meetings

July 7th Briefing, July 14th Kick-Off Meeting
• Process for formulating new air quality improvement strategies
• Indirect effects of freeway expansion on affordable housing
• Enumerating externalities such as tax subsidies for transportation and health care
• Evaluating of water quality impacts
• Assessing construction effects
• Expanding vulnerable population definition to include pregnant women
Issues

- Role of the Draft EIR/EIS schedule in driving the I-710 HIA process
- Expanding Goal 5 to include other data if it becomes available in time for DEIR submission
- Adding Goal 6 to specifically address the role of the HIA in identifying mitigation measures.
- Assumptions regarding Ports’ operating hours, port build-out and population projections
Recommendations

• Allow comments to be submitted following each ART Meeting.

• ART Members value the ability to discuss ideas with fellow Members; reschedule roundtable discussion on the I-710 HIA to the August 11th ART Meeting.

Angelo Logan, East Yard Communities and Luis Cabrales, Coalition for Clean Air, were selected to serve as Advisory Roundtable Liaisons to the Environmental Committee.
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Two Groups of Activities:

- AQAP
- I-710 Related Studies
Community Medical Needs Assessment

- Data collection complete
- Discuss Findings at August Roundtables
I-710 Near Roadway Modeling Assessment

- Modeling is complete
- Analyzing modeled data and comparing to monitoring (AQMD and USC) data
- Discuss Findings at August Roundtables

AQAP Task Update
AQAP Task Update

I-710 Ultrafines

- Literature review complete
- Report preparation initiated
- Discuss Findings at August Roundtables
Air Quality Protocol

- Final Protocol being prepared
- Discuss Findings at August Roundtables
Compendium Update

- Draft Compendium presented at July Technical and Advisory Roundtables
- Proceeding to Environmental Committee
Quantitative Air Quality Analysis

- This task will Implement the AQ/HRA Protocol (previous slide)
- Initiating Data Collection.
Impacts from I-710 Construction Staging and Phasing

- Completed Draft Modeling
- Expect revised population data for construction equipment (age, hp, qty.) from CARB in late July
- Update model
- Discuss Findings at August Roundtables
I-710 Health Impact Assessment

- Conducted 3rd HIA TWG
- Draft Scope Considered during recent Technical and Advisory Roundtables (feedback by 7/27)
- Draft Scope Proceeding to Environmental Committee
- Discuss Findings at August Roundtables
Health Risk Assessment

- Finalizing AQ/HRA Protocol
- Starting Model Input Preparation
Early Action Support

- Reviewing Early Action Items (9) from the 2007 AQAP Development Plan Report.
- Initiated Research on Measure Implementation.
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Compendium Update

Review of 2006 measures

Methodology

- Review 2006 compendium update
- Review regulations and other documents created over last 5 years
- Interviews with Port of Long Beach and Port of Los Angeles staff

For each of 154 measures

- Brief status update
- Identify as Implemented, Partially Implemented, or Not Implemented
- Identify responsible agency and relevant regulation(s)
Compendium Update

- In 2006:
  - I-710 MCS Tier 2 Community Advisory Committee: Strategy Recommendations
  - Gateway Cities COG Clean Air Program
  - Gateway Cities COG Safety Action Initiative
  - Ports-ACTA Truck Trip Reduction Program
  - Port of Long Beach Green Port Policy
  - Port of Los Angeles Clean Air Program
  - NRDC and CCA Recommendations to Ports
  - CARB strategies
Compendium Update

- Measures with significant emissions benefits adopted since 2006
  - ARB On-Road Heavy-Duty Diesel Vehicles In-Use Regulation ("Truck and Bus Rule") (2008)
  - ARB Drayage Truck Regulation (2009)
  - SPB Ports Clean Air Action Plan and Clean Truck Program (2006 and 2010)
## Summary of Findings

<table>
<thead>
<tr>
<th>Sector (Emissions Source)</th>
<th>Partially Implemented</th>
<th>Not Implemented</th>
<th>Total</th>
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<tbody>
<tr>
<td>Trucks</td>
<td>24</td>
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<tr>
<td>Rail</td>
<td>12</td>
<td>5</td>
<td>20</td>
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<td>Ocean Going Vessels</td>
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<td>Cargo Handling Equipment</td>
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<td>Various</td>
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<td>Other</td>
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<td><strong>Total</strong></td>
<td><strong>106</strong></td>
<td><strong>31</strong></td>
<td><strong>154</strong></td>
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</table>

**Number of Measures**
Examples of measures **Partially Implemented**

- Identify the level of air quality impacts from increasing trucking, rail and shipping
- Require all rubber-tired gantry cranes to be electrified
- Require all ships to shut down all diesel engines and use shore electric power
- Develop new near-dock rail yard
- Implement on-road heavy duty truck alternative fuels program
- Repower or replace all switching locomotives that do not meet EPA Tier 0 Standards with electric-hybrid or alternative-fuel engines
Examples of measures **Not Implemented**

- Require all trucks using the truck lanes on the I-710 to use alt fuels or other pollution controls.
- Electronic screening of commercial vehicles
- Virtual container yard
  - Alameda Corridor electrification
- Shuttle trains
- Graduated harbor fee system for ships
- Biofuels for harbor craft
- Install LNG terminal within the port
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  Jerry Wood, COG Staff

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  Jonathan Heller, Human Impact Partners

- Item G - Gateway Cities COG Engineers Report
  Jerry Woods, COG Staff
Air Quality Action Plan
I-710 Construction Staging
Concept Report

Presented by:
Gateway Cities Council of Governments
May, 2011
I-710 EIR/EIS Corridor Study Area
I-710
Major Corridor Study
Design Concept

2010
I-710 Major Corridor Study
Hybrid Design Concept

- 10 General Purpose Lanes
- Freight Movement Corridor
- Interchange Improvements

I-710 Corridor Project has been divided into seven segments

Segments Map

Segments 1-3
I-710 Corridor Project has been divided into seven segments

I-710 Corridor Project Segments Map (continued)

Segments

4-7

Note: This concept and related staging and phasing are based on the current geometric plans shown herein. As these plans change the staging and phasing and some project elements may change.
Concept: Construct Freight Corridor First Rationale

- Concept is based on building the I-710 Freight Corridor first - before the General purpose lanes. Why this concept?

1. Communities want cars and trucks separated.

2. Freight Corridor constructed first will significantly improve congestion, mobility and safety (reduce accident rates) in the General Purpose Lane. Will then allow rest of I-710 General Purpose Lane improvements to occur over time as funding becomes available.

3. Freight Corridor is potential P3 project (privately financed - or a portion thereof) - makes it quicker to implement.

4. May result in faster implementation of zero emission transportation technologies to be used in the freight corridor.

5. Construction of much of the Freight Corridor is next to existing freeway lanes - minimizing disruption to existing freeway lanes operations during its construction.

6. Construction of Freight Corridor first will also require some of I-710 General Purpose lanes and some interchange improvements, expediting those improvements.
Freight Corridor & I-710 GP Lanes

I-710 Corridor Segment 1 - Current Geometric Plan and Freight Corridor Projects

Freight Corridor Projects List

- Freight Corridor
- Shoemaker Bridge and East Side Ramps
- Pico Ave. Interchange
- Anaheim St. Interchange
- PCH Interchange
- General Purpose Lanes – Ocean Blvd. to South of Willow St.
Freight Corridor & I-710 GP Lanes

I-710 Corridor Segment 2 - Current Geometric Plan

Freight Corridor Projects List:
- Freight Corridor
- New I-710 N/B to I-405 N/B & S/B connector ramps
- Blue line & UP Rail Line Track Reconstruction
- Freight Corridor Connector Ramps
- Minor General Purpose Lane Improvements
- SCE Utility Lines Relocations
Freight Corridor & I-710 GP Lanes

I-710 Corridor Segment 3 - Current Geometric Plan and Freight Corridor Projects

Freight Corridor Projects List:

- Freight Corridor
- Freight Corridor/ SR-91 Connector Ramps
- SCE Utility Lines Relocations
Freight Corridor & I-710 GP Lanes

I-710 Corridor Segment 4 – Current Geometric Plan and Freight Corridor Projects

Freight Corridor Projects List:

- Freight Corridor
- Portion of N/B Rosecrans Blvd. Ramp Relocation
- Reconstruct Rosecrans Blvd. Bridge over I-710
- Freight Corridor Ramps in South Gate (Miller Way or Patata) – plus local street improvements at either location
**Freight Corridor & I-710 GP Lanes**

**I-710 Corridor Segment 5 – Current Geometric Plan**

**Freight Corridor Projects List**
- Freight Corridor
- Relocate DWP towers as needed

![Map of I-710 Corridor Segment 5](image)
Freight Corridor & I-710 GP Lanes

I-710 Corridor Segment 6 - Current Geometric Plan

Freight Corridor Projects List:

- Freight Corridor
- New N/B Bandini Blvd. off-ramp
- Construct N/B Freight Corridor off-ramp to I-710 with new N/B Bandini Blvd. on-ramp
- New N/B Washington Blvd. Interchange off-ramp
- Freight Corridor Ramps to I-710 General Purpose Lanes
- Freight Corridor Ramps to Washington Blvd. Intersection

Note: Don't rebuild existing S/B Washington Blvd. ramps or N/B on-ramps (with Freight Corridor built first)
**Freight Corridor & I-710 GP Lanes**

**I-710 Corridor Segment 7 - Current Geometric Plan**

**Freight Corridor Projects List**
- None

and Freight Corridor Projects
I-710 Freight Corridor Built First

ASSUMPTIONS & SCHEDULE SUMMARY

- Build Entire Freight corridor at same time
- EIR/ EIS certified by February, 2013
- Funding will be available to complete all I-710 corridor improvements by 2035
- Financing completed (for freight corridor) – 2013/ 2014
- PS & E – 2013 – 2016/ 17
- R/W Acquisition – 2015/ 16/ 17
- Utility Relocations – 2016-2018
- Start construction for Freight Corridor – 2018
- End construction for Freight Corridor – start operation -2023/ 24
## I-710 Corridor Freeway Improvements

### Segments’ Estimated Construction Schedule with Freight Corridor Built First Concept

<table>
<thead>
<tr>
<th>Segment</th>
<th>Stage</th>
<th>Construction Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Freight Corridor</td>
<td>1/19 – 6/22</td>
</tr>
<tr>
<td></td>
<td>Shoemaker Bridge &amp; Ramps</td>
<td>1/18 – 6/20</td>
</tr>
<tr>
<td></td>
<td>PCH Interchange</td>
<td>1/18 – 6/20</td>
</tr>
<tr>
<td></td>
<td>Anaheim St. Interchange</td>
<td>1/20 – 1/25</td>
</tr>
<tr>
<td></td>
<td>Pico Ave. Interchange</td>
<td>1/24 – 1/25</td>
</tr>
<tr>
<td></td>
<td>Willow St. Interchange</td>
<td>1/30 – 3/33</td>
</tr>
<tr>
<td>2</td>
<td>Freight Corridor</td>
<td>1/19 – 1/21</td>
</tr>
<tr>
<td></td>
<td>Wardlow Bridge Reconstruction</td>
<td>1/18 – 2/19</td>
</tr>
<tr>
<td></td>
<td>Blueline &amp; RR Bridge Reconstruction</td>
<td>1/19 – 1/20</td>
</tr>
<tr>
<td></td>
<td>Del Amo Interchange</td>
<td>1/23 – 6/24</td>
</tr>
<tr>
<td></td>
<td>New I-710 N/B to I-405 N/B &amp; S/B connector ramps</td>
<td>1/18 – 2/19</td>
</tr>
<tr>
<td></td>
<td>I-405 Interchange – remainder</td>
<td>1/28 – 8/32</td>
</tr>
</tbody>
</table>
### Segments’ Estimated Construction Schedule with Freight Corridor Built First Concept

(continued)

<table>
<thead>
<tr>
<th>Segment</th>
<th>Stage</th>
<th>Construction Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Freight Corridor</td>
<td>1/19 – 1/21</td>
</tr>
<tr>
<td></td>
<td>Long Beach Blvd. Interchange</td>
<td>1/23 – 7/25</td>
</tr>
<tr>
<td></td>
<td>SR-91 Interchange</td>
<td>1/28 – 4/34</td>
</tr>
<tr>
<td>4</td>
<td>Freight Corridor</td>
<td>1/19 – 7/21</td>
</tr>
<tr>
<td></td>
<td>Firestone Blvd. Interchange</td>
<td>1/19 – 7/22</td>
</tr>
<tr>
<td></td>
<td>Rosecrans Blvd. Interchange – portion</td>
<td>1/19 – 1/21</td>
</tr>
<tr>
<td></td>
<td>Rosecrans Blvd. Interchange – remainder</td>
<td>1/23 – 8/25</td>
</tr>
<tr>
<td></td>
<td>Imperial Hwy. Interchange</td>
<td>1/25 – 1/29</td>
</tr>
<tr>
<td>5</td>
<td>Freight Corridor</td>
<td>1/19 – 6/21</td>
</tr>
<tr>
<td></td>
<td>Florence Ave. Interchange</td>
<td>1/23 – 1/27</td>
</tr>
<tr>
<td></td>
<td>Slauson Ave. Interchange</td>
<td>1/28 – 3/31</td>
</tr>
</tbody>
</table>
## I-710 Corridor Freeway Improvements

### Segments’ Estimated Construction Schedule with Freight Corridor Built First Concept

(continued)

<table>
<thead>
<tr>
<th>Segment</th>
<th>Stage</th>
<th>Construction Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>Atlantic Blvd./ Bandini Blvd. – portion of interchange</td>
<td>1/18 – 6/20</td>
</tr>
<tr>
<td></td>
<td>Freight Corridor</td>
<td>1/19 – 6/22</td>
</tr>
<tr>
<td></td>
<td>Washington Blvd. Interchange</td>
<td>1/19 – 9/23</td>
</tr>
<tr>
<td></td>
<td>Atlantic Blvd./ Bandini Blvd. – remainder of interchange</td>
<td>1/24 – 4/29</td>
</tr>
<tr>
<td>7</td>
<td>N/ B I-710 to N/ B I-5 &amp; S/ B I-5 to S/ B I-710 connector ramps</td>
<td>1/28 – 12/32</td>
</tr>
</tbody>
</table>
Agenda Overview cont.

- Item E – I-710 Construction Staging Concept
  Jerry Wood, COG Staff

- Item F – I-710 HIA Presentation
  Jonathan Heller, Human Impact Partners

- Item G - Gateway Cities COG Engineers Report
  Jerry Wood, COG Staff
Factors Responsible For Population Health

Health status is determined by: genetics (20 – 30%); health care (10%); social, environmental conditions, and behavior (60 – 70%). Health Affairs, 2002
Health Impact Assessment:

A combination of procedures, methods and tools that systematically judges the potential, and sometimes unintended, effects of a policy, plan, program or project on the health of a population and the distribution of those effects within the population. HIA identifies appropriate actions to manage those effects.
### Steps of an HIA

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Screening</td>
<td>Determines the need and value of a HIA</td>
</tr>
<tr>
<td>Scoping</td>
<td>Determines which health impacts to evaluate, methods for analysis, and a work plan</td>
</tr>
<tr>
<td>Assessment</td>
<td>Provides:</td>
</tr>
<tr>
<td></td>
<td>1) a profile of existing health conditions</td>
</tr>
<tr>
<td></td>
<td>2) evaluation of potential health impacts</td>
</tr>
<tr>
<td>Recommendations</td>
<td>Provide strategies to manage identified adverse health impacts</td>
</tr>
<tr>
<td>Reporting</td>
<td>Includes:</td>
</tr>
<tr>
<td></td>
<td>1) development of the HIA report</td>
</tr>
<tr>
<td></td>
<td>2) communication of findings &amp; recommendations</td>
</tr>
<tr>
<td>Monitoring</td>
<td>Tracks:</td>
</tr>
<tr>
<td></td>
<td>1) impacts on decision-making processes and the decision</td>
</tr>
<tr>
<td></td>
<td>2) impacts of the decision on health determinants</td>
</tr>
</tbody>
</table>
Step 2: Scoping

Objective:

To create a plan and timeline for conducting an HIA for I-710 that defines priority issues, research questions and methods, and participant roles.
Scope Components

- Goals
- Health determinants that will be impacted
- Vulnerable populations that will be impacted
- Timelines
- Pathway diagrams
- Research questions
- Preliminary methods
I-710 HIA Goals

1. Provide I-710 decision-makers and other stakeholders with positive and negative health effects, findings and recommendations for alternatives being considered

2. Increase stakeholder participation and understanding of the I-710 project

3. Identify community health concerns/issues within Gateway Cities whose solutions may be unrelated to the I-710 project

4. Provide a model for future transportation and infrastructure HIAs (including evidence and utility of doing an HIA)

5. *Add value to the I-710 related analysis while utilizing the I-710 EIR/EIS technical data to the greatest extent possible to reduce redundancy.

*Note: Revised based on discussion of I-710 HIA Technical Working Group at its July 11th Meeting.*
Health Determinants

Selected by the HIA TWG:
- Air quality
- Noise
- Mobility
- Traffic safety
- Jobs and economic development
- Access to neighborhood resources *(parks, food, healthcare, etc.)*

Others Considered but not selected:
- Housing
- Education
- Neighborhood safety
- Social cohesion
- Water quality
- Disease Vectors
- Poverty
- Racism
- Segregation
- Inequality
- Political Participation
Alternatives to be considered:
- Alternative 1 (no build)
- Alternative 5A (10 lanes)
- Alternative 6A (5A + 4 lane freight corridor)
- Alternative 6B (6A + zero emissions)
- Alternative 6C (Tolled FC)
- Potential Alternative 6D (Tolled FC and GP Lanes)

Time Boundaries:
- Consider 2035 impacts only (other analysis covering construction impacts)

Geographic Boundaries:
- Vary by issue area (e.g., AQ vs noise vs jobs)

In addition to the general population, the following vulnerable populations will be considered:
- Age (0-5; 6-17; 65+)
- Race/ethnicity (African American; Hispanic; non-English speakers)
- Income (poverty; 200% of poverty)
- Pre-existing conditions (asthma; cardiovascular disease; diabetes)
Health Pathways

Scoping: Develop these pathways as hypotheses; from them, develop research questions and ways to measure answers (indicators)

Assessment: Use I-710 information and examine literature to confirm or refute links in pathways; find data to measure existing conditions for each indicator; predict changes to indicators for project alternatives
Overarching Scoping Parameters

- EIR has all necessary data
- EIR has most necessary data
- EIR has some necessary data
- EIR does not have necessary data
- TBD: Additional data request necessary

CQ – represents research question
1. Air Quality Effects

I-710 Corridor Project alternatives

- CQ4, AQ3 Δ in public transit access and ridership
- CQ1 Δ in # of vehicles on freeways and arterials
- AQ1 Δ in # of vehicles on local roads
- AQ2 Δ in vehicle speeds on freeways
- CQ2 Δ in vehicle speeds on arterials and local roads
- AQ2 Δ in other sources of pollution
- CQ5, AQ9 Δ in proximity of sensitive uses to freeway/air pollutants

- AQ1 Δ in vehicle emissions due to technology
- AQ1, AQ2, AQ11 Δ in air pollutants: (PM 2.5, PM 10, NO2, NOx, Ozone, Sox, Benzene, Diesel PM, Acrolein, other mobile air toxics, ultrafines, greenhouse gases)
- AQ1, AQ2, AQ9, AQ10 Δ in exposure to air pollutants
- AQ11 Climate change (change in rainfall, sea-level rise, marine life)

(Lower priority)

- AQ4, AQ5, AQ6, AQ7, AQ8, AQ12 Δ in heat related illness, water-, food-, vector-, or rodent-borne disease
- AQ4 Δ in effects from education, employment, and incomes & associated health outcomes
- AQ4 Δ in attendance at school or work

- AQ1, AQ2, AQ10 Δ in health outcomes:
  - Asthma/other respiratory diseases
  - Cardiovascular disease
  - Cancer
  - Mortality
  - Low birth weight, pre-term birth
  - Reproductive health
  - Children’s lung development

(see Neighborhood Resources)
2. Noise Effects

I-710 Corridor Project alternatives (including proposed mitigations)

N1
Δ in vehicle noise due to technology

CQ1
Δ in # of vehicles on freeways and arterials

CQ1
Δ in # of vehicles on local roads

CQ2
Δ in vehicle speeds on freeways

CQ2
Δ in vehicle speeds on arterials and local roads

N2
Δ in other sources of noise

CQ5, N6
Δ in proximity of sensitive uses to freeway/noise sources

N1, N2, N7
Δ in noise/vibration levels near local roads and freeways

N1, N2, N6, N7
Δ in exposure (modeled/measured at different times of day) (e.g., at home and school)

Δ in environmental quality

(see Neighborhood Resources)

N3, N4, N5
Δ in health outcomes:
- Hypertension
- Annoyance
- Sleep disturbance
- Cardiovascular disease
- Education outcomes (reading, recall, recognition, and attention)
• Health impacts of stress include: poor mental health, increased inflammatory response, decreased immune response
• Health impacts of chronic disease includes: heart disease, diabetes, hypertension,
• Health impacts of delayed emergency response times include: stress, potential for survival and recovery
I-710 Corridor Project alternatives (including separating cars and trucks, intersection improvements, and changes in freeway geometry)
5. Jobs and Economic Development Effects

REVISED DRAFT, for further discussion

- Health impacts of mental health include: stress-related illness, crime, substance abuse, domestic abuse, change in lifespan
- Health impacts of chronic disease includes: heart disease, diabetes, hypertension
6. Neighborhood Resources Effects

- Environmental hazards refers to air pollution, noise, odors, congestion, traffic safety
- Health outcomes include: injury and morbidity from crime; stress-related illness; effects from lack of social cohesion; and effects from lack of access to neighborhood resources

I-710 Corridor Project alternatives

- CQ4 Δ in public transit access
- M3 Δ in walkability
- CQ1 Δ in # of vehicles on freeways and arterials
- CQ1 Δ in # of vehicles on local roads
- CQ2 Δ in vehicle speeds on freeways
- CQ2 Δ in vehicle speeds on arterials and local roads
- CQ5, NR8 Δ in proximity of sensitive uses to the freeway/hazards

Δ in mobility (see Mobility)

NR1 Δ in access to local goods and services due to perceptions of environmental hazards or business investment

NR4 Δ in migration patterns (e.g., wealthier residents leave)

NR5 Δ in crime/safety (real and perceived)

NR6 Δ in stress & stress-related illness

NR6 Δ in chronic disease

NR3, NR6 Δ in social networks/cohesion & associated health outcomes

NR7 σ in stress & stress-related illness

NR1 Δ in ability to care for basic needs

NR2 Δ in walking, biking, recreation (physical activity)

NR4 Δ in usability and use of resources (schools, parks, playgrounds, streets)

NR6 Δ in concentrated poverty and associated health outcomes
## I-710 HIA Timelines

### May
- **May 12** I-710 HIA TWG: Draft HIA Goals, Parameters, Health Determinants
- **May 26** I-710 HIA TWG: Draft HIA Pathways

### July
- **July 11** I-710 HIA TWG: Draft HIA Pathways and Scope
- **July 13** AQAP Technical Roundtable: Draft HIA Pathways and Scope
- **July 14** AQAP Advisory Roundtable: Draft HIA Pathways and Scope
- **July 27** Environmental Committee: Draft Scope

### Aug
- **Aug 3** Transportation/GCCOG Board: Draft Scope
- **Aug 15** I-710 HIA TWG: Status Report
- **Aug 10** AQAP Technical Roundtable: Status Report
- **Aug 11** AQAP Advisory Roundtable: Status Report
- **Aug 24** Environmental Committee: Status Report

### Sept
- **Sept 7** Transportation/GCCOG Board: Status Report
- **Sept 19** I-710 HIA TWG: Final I-710 HIA Report
- **Oct 12** AQAP Technical Roundtable: Final I-710 HIA Report
- **Oct 13** AQAP Advisory Roundtable: Final I-710 HIA Report
- **Oct 26** Environmental Committee: Final I-710 HIA Report
- **Nov 2** Transportation/GCCOG Board: Final I-710 HIA Report
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Thank you for coming!

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  - Web Site: metro.net/gcaqap

- **Gateway Cities Council of Governments**
  - [www.gatewaycog.org](http://www.gatewaycog.org)

- **AQAP Roundtable Contacts**
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