FREIGHT TRANSPORTATION FRAMEWORK STUDY
Examining Freight and Multimodal Opportunities in the Sun Corridor

Joint Planning Advisory Council
October 30, 2012

STUDY BACKGROUND
Identifying freight related development opportunities

Tim Strow
Freight Study Project Manager
Today’s Presentation

Overview

Part 1: Framework Findings
   Global Supply Chain with the Sun Corridor

Part 2: Sun Corridor Supply Chain
   Opportunities

Part 3: Five-Point Plan
   Realizing the Freight Framework

Discussion

Background

Distressed Residential Properties: March 2010
Study Goal

Identify and develop freight related economic development opportunities.

Regional Objectives

- Capitalize on strategic position relative to goods movement.
- Identify added value for supply chain.
- Diversify regional economic base.
- Create jobs.
FREIGHT FINDINGS
Global Supply Chain within the Arizona Sun Corridor

Joe Bryan
Freight Practice Leader

Initial Findings

Sun Corridor needs to better promote advantages of the region to supply chain

Land availability, lower costs, solid workforce and legislation are seen as favorable

There is a general lack of understanding regarding the benefits of the region as part of the supply chain
Initial Findings

Northbound and westbound commodity flows offer greatest potential for Sun Corridor.

Bypass Southern California for distribution to AZ, SW and US, especially for imports from Mexico and Texas ports.

Location affects ability to compete with Southern California for west to east commodity flows.

Freight Framework ‘Big Picture’
Anchor Market

<table>
<thead>
<tr>
<th>City</th>
<th>5M Population</th>
<th>Metropolitan Statistical Areas</th>
</tr>
</thead>
<tbody>
<tr>
<td>New York</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Los Angeles</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chicago</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dallas</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Philadelphia</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Houston</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sun Corridor</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Sun Corridor is now a major anchor market.

Top 10 population in U.S. for combined MSAs.

Only top market between Texas and California.
Increases in transportation and labor costs are shifting economic advantage from Asia to Mexico (and U.S.).

More products are viable for production.

Mexico is now the lowest cost producer for many goods. Many companies are now contemplating near-shoring to the Americas.

Timelines for Near-Shoring Plans
If near-shoring is a consideration, what is your time horizon for near-shoring Asian/Indian operations to the Americas, including Latin America?
Freight Framework ‘Big Picture’

Leverage Strategic Location

Sun Corridor is now a logical hub for staging imports and distribution to West markets

Imports from Mexico, Gulf Coast ports and SE U.S. manufacturers

Distribution to local, California, and other West Coast markets

Location and transportation system gives Sun Corridor advantage for East to West commodity flow

Freight Focus Area Evaluation

Big picture overview brochure

Provides a concise reference for policy recommendations and marketing efforts
SUPPLY CHAIN OPPORTUNITIES
Freight Focus Areas and Typologies

Tom Hester
Urban Design Practice Leader

Land Use Context

Nexus of multimodal transportation, public policy & land use

Based on supply chain functions

Each function has unique requirements
Sun Corridor Supply Chain Opportunities

Sun Corridor can leverage core supply chain roles to capture ‘Big Picture’ opportunities

Supply Chain Process
Import of Materials & Goods
Supply Chain Process
Regional & Local Distribution

Supply Chain Process
Manufacturing
Supply Chain Process  
**Linking to Sun Corridor**

Linking supply chain opportunities to Sun Corridor locations

Sun Corridor analysis of commodity flow and major transportation infrastructure

Analysis formed basis for site selection

Freight Focus Areas  
**Identified by Study Partners**

Regional freight focus areas were identified by study partners

Sites were identified for potential to contribute to the ‘Big Picture’
Freight Focus Areas
Sixteen Unique Sites

Maricopa
- Phoenix Mesa Gateway
- West Valley
- Discovery Triangle
- West Phoenix
- Grand Avenue
- Deer Valley
- West Chandler
- Surprise

Pinal
- Pinal Airpark
- La Palma
- Eloy (Interstate 8 / Interstate 10)
- Maricopa / Casa Grande
- Magma Rail Road

Pima
- Tucson International Airport
- North Tucson
- Marana

Focus Area Evaluation

Evaluation elements
- Labor Force
- Land Use
- Land Ownership
- Location Typology
- Freight Generators
- Freight Activity
- Proximity to Markets
- Transportation Characteristics
- Economic Development Interests
- Prior Planning Efforts
- Incentive Programs
- Emerging Project
- Overview Proximity Map
- Next Steps to be Successful
Typologies

Purpose

Understand how any site could contribute to the “Big Picture”

Determine the majority use development type for particular sites

Understand the requirements of each typology to prepare a phased improvement plan for each site

Integrate regional recommendations & planned improvements into a business plan or funding strategy

Freight Focus Area

Typologies

Four typologies based on opportunities

- **Import Center** to receive imports and redirect goods to local and global markets
- **Manufacturing and Local Distribution Center** to produce goods for global market and/or distribution to local markets
- **Mixing Center** to store, consolidate and/or redirect domestic and import goods for distribution
- **Forward Distribution Center** to serve as a gateway for distribution to other regional markets

Typologies work within a regional supply chain system
Freight Focus Area
Typologies: Four examples

Focus Area evaluation helped identify freight typologies present in Sun Corridor

Maricopa
- Phoenix Mesa Gateway
- West Valley
- Discovery Triangle
- West Phoenix
- Grand Avenue
- Deer Valley
- West Chandler
- Surprise

Pinal
- Pinal Airpark
- La Palma
- Eloy (Interstate 8 / Interstate 10)
- Maricopa / Casa Grande
- Magma Railroad

Pima
- Tucson International Airport
- North Tucson
- Marana

Import Distribution Facility

Purpose
Commonly the first start for goods
Unloads containers/trailers, redirects goods to precise markets in demand
Preferably near port or border

Key Criteria
Proximity to border
Proximity to rail & highway system
Can benefit from air cargo
Freight Focus Area
Tucson International Airport

Key Opportunities
Leverage proximity to Nogales Port of Entry
Connect I-10 and I-19 with an East-West freeway linkage
Target investments to accommodate and compliment Port of Tucson
Establish and brand an intermodal logistics and intermodal hub for the Sun Corridor

Under current trends, no new industrial space would be required for the next 10 years and only 500 to 1,000 jobs would be created.
Freight Focus Area
Phoenix-Mesa Gateway

Key Opportunities
Leverage confluence of air, rail, and highway transportation connections
Preserve and protect developable areas surrounding airport
Connect SR-24 to future North-South Freeway
Provide skills training for technical capabilities needed in manufacturing and logistics
High commercial and industrial vacancy rates provide opportunities to repurpose facilities

Under current trends, no new industrial space would be required for the next 10 years and only 400 to 800 jobs would be created

Mixing Center

Purpose
Mixes domestic & import goods for distribution
Stores, consolidates, redirects goods
Can serve multiple markets

Key Criteria
Proximity to major highway interchanges
Land intensive for storage
Enroute to markets served
Freight Focus Area
I-10 and I-8

Key Opportunities
Preserve and protect developable areas surrounding optimal transportation assets (I-8 and I-10)
Promote industrial and freight uses in proximity to key transportation confluence
Identify opportunities for lands with additional rail spurs

Under current trends, 900,000 sq ft of new industrial space could develop over the next 10 years – only 5 to 10 new buildings

Forward Distribution Center

Purpose
Focuses of goods movement to the west and north from the east and south
Located at west gateways
Benefits from local market ("most forward western market")
More affordable to serve west

Key Criteria
Proximity to west markets
Proximity to major highway interchanges
Cross-dock truck-to-truck transfers
Freight Focus Area
West Valley

Key Opportunities
Expand areas for commercial and industrial around major transportation infrastructure

- Reevaluate areas designated for future residential uses

Preserve truck routes with existing and proposed freeway access

Support rail connections to promote efficient transportation of goods into and out of the area

Leverage access to available skilled labor

Under current trends, up to 620,000 sq ft of new industrial space could develop over the next 10 years, generating only 600 to 1,200 jobs
Recommendation #1

Coordinate regionally to position and market the Sun Corridor for freight related economic development

Coordinate freight transportation, land use, economic development and marketing to implement the regional freight framework

Emulate coordination and ‘one-stop shop’ approach successful in other regions

Build upon existing organizational frameworks

Clarify existing and future roles of related entities

Recommendation #2

Establish a Sun Corridor Freight Development Zone special land use designation

Strengthens general plan designations to establish consistent region-wide protection for key areas

Land use/zoning overlays can address current limitations and ensure adequate preservation for land in key areas

Incentives and other benefits can be tied to zones
Recommendation #3

Implement strategic transportation improvements to support efficient freight distribution

Update and expand regional and statewide plans to enhance infrastructure for freight movements

Define truck route networks to be inclusive

Prioritize investment on transportation infrastructure that accommodates goods movement, particularly in freight focus areas

Continue to invest in border crossing facilities, technology and staffing to maximize efficiency and safety at Arizona crossings

Recommendation #4

Assist municipal governments with related amendments to public policy

Provide guidance to municipalities during the development of general plans and capital improvement programs

Preserve areas most appropriate and advantageous for freight uses

Seek strategies to better integrate freight related land uses and transportation

Support the repurposing of existing unutilized and underutilized buildings to serve supply chain purposes
Recommendation #5

**Prepare conceptual business plans for specific freight related opportunities**

- Identify specific sites with Freight Focus Areas, including new development and redevelopment
- Identify Focus Area market opportunities within the context of the regional framework
- Ensure highest and best use based on market analysis
- Determine economic gap, if one exists, to better understand needs for incentives and funding contributions

Five-Point Plan

1. Coordinate regionally to position and market the Sun Corridor
2. Establish a Sun Corridor Freight Development Zone
3. Implement strategic transportation improvements
4. Assist municipal governments with related public policy
5. Prepare conceptual business plans
Freight Framework

Next Steps

Develop topical white papers to further investigate and elaborate on key recommendations

Better understand existing organization structures, framework, opportunities and limitations

Evaluate best practices

Provide **specific recommendations for action**

Regional Workshop/Retreat

Discuss White Papers
Determine Next Steps

March 6, 2013

DISCUSSION

With the Freight Team

Tim Strow
Joe Bryan
Darren Henderson
Tom Hester
Ryan Cook
Kristin Bornstein
Five-Point Plan

1. Coordinate regionally to position and market the Sun Corridor
2. Establish a Sun Corridor Freight Development Zone
3. Implement strategic transportation improvements
4. Assist municipal governments with related public policy
5. Prepare conceptual business plans