ACHD Transportation-Land Use Integration Plan (TLIP)

Stakeholder Workshop
September 28, 2006

The Current System

Current Outcomes & Issues

- The Current System
- Current Outcomes and Issues
- The Functional Classification Map
- Process and Uses
- Elements of Function
- Defining Corridors
- Defining Context
- Making the Match
- Interactive Work Session

Process and Uses for Map

- Federal Planning & Funding
- Guiding Development and Right-of-Way Acquisition
- "Sizing" of Arterial Streets in Local Plans and Capital Improvement Plan
- Traffic Impact Fee Policy

Current F.C. Map
### System Issues

- Volume and Demand as Primary Determinants of Design (Not Context)
- Standardized Designs
- Context Mismatches
- Changing F.C. To Fix Outcomes

### Elements of Function

### Hierarchies of Movement

- Main Movement
- Transition
- Distribution
- Collection
- Access
- Termination

“The complete hierarchy of circulations facilities relates especially to conditions of low-density, suburban development” — AASHTO, Geometric Design of Highways and Streets.

“Conflicts and congestion occurs... when the functional transitions are inadequate” — AASHTO, Geometric Design of Highways and Streets.
Frontage Elements

Network Elements

Reframing Key Transportation Conventions

Evolution of Integrated Land Use and Transportation Plans

What Elements Should Be Considered in Determining A Street’s Functional Classification?

**CURRENT**

- Attractiveness of Route (Volume or Demand)
  - High = Mobility; Low = Access
What Elements Should Be Considered in Determining A Street's Functional Classification?

CURRENT
- Attractiveness of Route (Volume or Demand)
  - High = Mobility ; Low = Access

SUGGESTED
- Options (Explored Collaboratively)
- Expected Trip Length
  - Long = Mobility ; Short = Access
- Cross Access or Land Access Requirements
  - High = Access ; Low = Mobility

### Determining Functional Classification

- Consider All Functional Criteria
  - Volume/Demand
  - Options
  - Trip Length
  - Access
- Collaborate
  - Input
  - Shared Responsibility
- Process for Change

### Defining Context

- Commercial
- Central Business District
- Major Employers
- Neighborhood Business District
- Residential

### Making the Match
"The Standard Process"
Define Roadway Type
Hierarchy & Functional Class
then
Establish Design Controls
Design Traffic (How Many Cars)
Design Speed (How Fast)
then
Fit Design Elements
Roadway Design Standards
- Geometric (Sight / Stopping Distance)
- Dimensions
- Design Elements – Trees / Parking / Transit
- AASHTO Design Guidelines
- State and Local Design Standards
- Design Variances and Exceptions

"A More Complete Process"
Define Roadway Type
Hierarchy & Functional Class
then
Establish Design Controls
Design Traffic (How Many Cars)
Design Speed (How Fast)
then
Fit Design Elements
Roadway Design Standards
- Geometric (Sight / Stopping Distance)
- Dimensions
- Design Elements – Trees / Parking / Transit
- AASHTO Design Guidelines
- State and Local Design Standards
- Design Variances and Exceptions

City Expansion along Abercorn Street
• 9 to 10 mile corridor spine that runs in the North South Direction
• Displays a range of urban conditions
• Chronicles the city’s expansion over 200 years
• Helps identify a range of contexts

Abercorn Street Helps Analyze:
• Street Patterns and Connectivity
• Built Density in a given area
• Street Character and treatments
• Character of Built Form

Abercorn Street: Landmark Historic District
10,000 Sq.Ft per Acre
(footprint density)
10.4 Miles of Streets
Abercorn Street: Historic District

- Footprint Density: 8,600 Sq.Ft per Acre
- 8.76 Miles of Streets

Abercorn Street: Historic Neighborhoods

- Footprint Density: 7,200 Sq.Ft per Acre
- 6.6 Miles of Streets

Abercorn Street: Suburban Pattern

- Footprint Density: 6,200 Sq.Ft per Acre
- 4.3 Miles of Streets

Abercorn Street: Retail Mall District

- Footprint Density: 6,700 Sq.Ft per Acre
- 3.3 Miles of Streets

Abercorn Street: Big Box Retail with Suburban Residential

- Footprint Density: 5,500 Sq.Ft per Acre
- 3.23 Miles of Streets

Traffic Speeds:

- 50 mph
- 45 mph
- 40 mph
- 35 mph
- School Zone

Footprint Density:

- 5,000
- 4,500
- 4,000
- 3,500
- 3,000
- 2,500
- 2,000
- 1,500
- 1,000
- 500
- 0
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TRANSITION FROM RURAL TO URBAN

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Reframing Key Transportation Conventions

Hierarchy & Functional Class

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30 mph                    25 mph

20 mph                  15 mph

Reframing Key Transportation Conventions

DESIGN SPEED - Speed / Flow Relationship

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Reframing Key Transportation Conventions

DESIGN SPEED - Roadway Safety

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NEW SOLUTION

A complete network of local roads rather than one new regional route.

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Reframing Key Transportation Conventions

DESIGN SPEED - Speed / Flow Relationship

NEW SOLUTION

A complete network of local roads rather than one new regional route.
Interactive Map Work

Session