


ACHD
Transportation-Land Use Integration Plan

ACHD Transportation-Land Use Integration Plan (TLIP)

Stakeholder Workshop September 28, 2006

Slide # 1






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Stakeholder Workshop - Agenda

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



Slide # 2

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The Current System



Slide # 3

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Current F.C. Map

Slide # 4






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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


Slide # 5

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Current Outcomes & Issues

Slide # 6



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Slide # 7

System Issues

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

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Slide # 8

Elements of Function

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Slide # 9

Hierarchies of Movement

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

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Slide # 10

Hierarchies of Movement

- Main Movement
- Transition
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"The complete hierarchy of circulations facilities relates especially to conditions of low-density, suburban development" – AASHTO, *Geometric Design of Highways and Streets*.

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Slide # 11

CAPACITY OF STREETS

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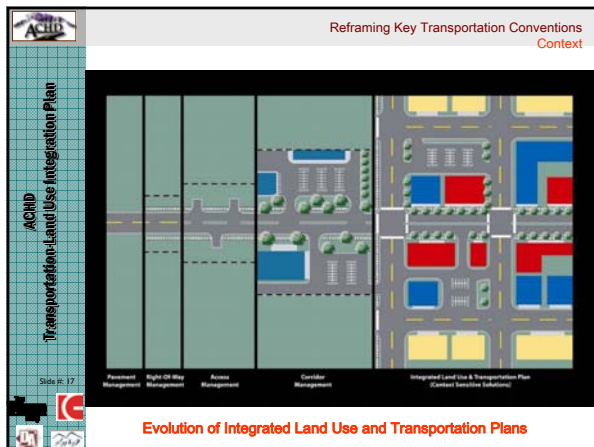
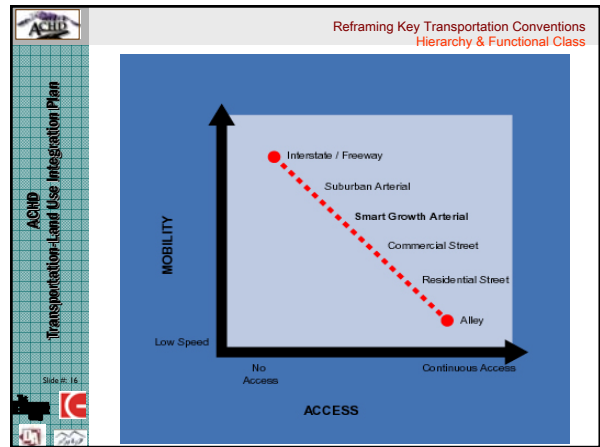
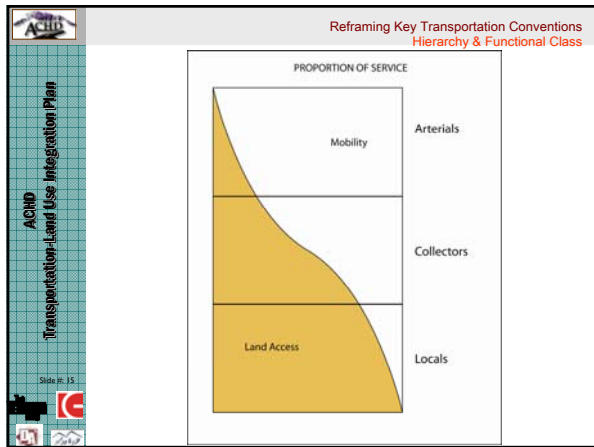
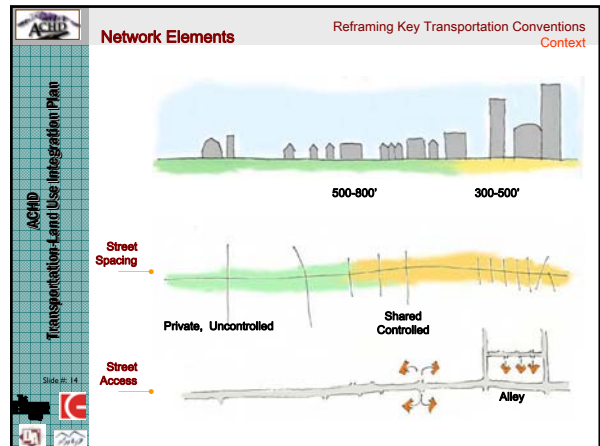
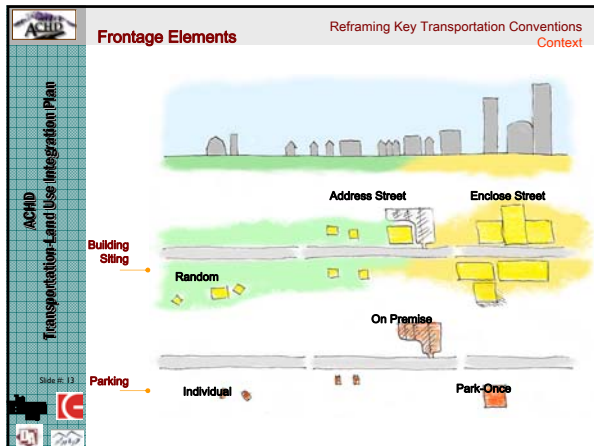
Slide # 12

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*.



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Reframing Key Transportation Conventions
Context

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

CURRENT

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

Slide #: 18

Reframing Key Transportation Conventions
Context

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

Defining Corridors

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

Residential

Neighborhood Business District

Making the Match

Reframing Key Transportation Conventions

"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

Slide # 23

Reframing Key Transportation Conventions

"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
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- AASHTO Design Guidelines
- State and Local Design Standards
- Design Variances and Exceptions

Slide # 34

"A More Complete Process"

Determine Functional Classification
Hierarchy & Functional Class
and
Context
then

Establish Design Controls

Design Traffic

- The Role of the Regional Model
- Travel Patterns – Trip Types
- Consider All System Users
- Interpreting Results – Capacity & Travel Time

Design Speed

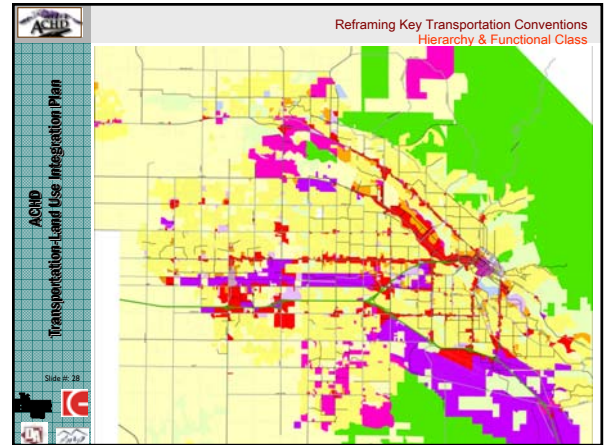
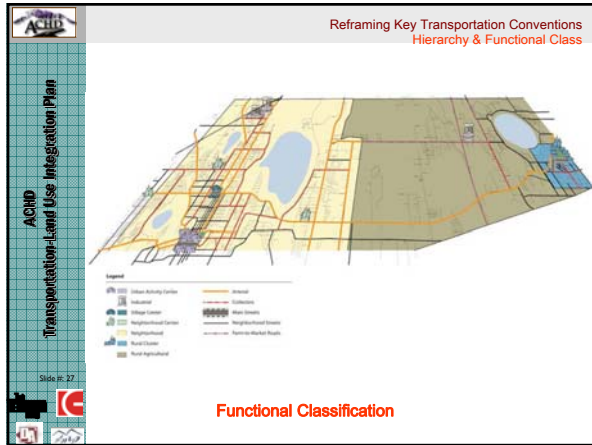
- Target Speed To Context
- Minimums vs. Maximums
- Roadway Safety For All Users
- Speed / Flow Relationship
- Speed & Roadway Geometrics

then

Fit Design Elements

Roadway Design Standards

- Geometric (Sight / Stopping Distance)
- 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

Slide # 29

Abercorn Street: Landmark Historic District

10.4 Miles of Streets

10,000 Sq.Ft per Acre (Footprint Density)

Abercorn Street: Historic District

8.76 Miles of Streets

8,600 Sq.Ft per Acre (Footprint Density)

Abercorn Street: Historic Neighborhoods

6.6 Miles of Streets

7,200 Sq.Ft per Acre (Footprint Density)

Abercorn Street: Suburban Pattern

4.3 Miles of Streets

6,200 Sq.Ft per Acre (Footprint Density)

Abercorn Street: Retail Mall District

3.3 Miles of Streets

6,700 Sq.Ft per Acre (Footprint Density)

Abercorn Street: Big Box Retail with Suburban Residential

3.23 Miles of Streets

5,500 Sq.Ft per Acre (Footprint Density)

ACND Transportation and Land Use Investigation Plan

Scale: 1" = 36'

50 mph

35 mph

45 mph


35 mph School Zone

40 mph

25 mph School Zone

Reframing Key Transportation Conventions
Context

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Slide #: 37

TRANSITION FROM RURAL TO URBAN

Reframing Key Transportation Conventions
Context

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Slide #: 38

TRANSITION FROM RURAL TO URBAN

Reframing Key Transportation Conventions
Context

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Slide #: 39

TRANSITION FROM RURAL TO URBAN

Reframing Key Transportation Conventions
Context

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Slide #: 40

TRANSITION FROM RURAL TO URBAN

Reframing Key Transportation Conventions
Context

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Slide #: 41

TRANSITION FROM RURAL TO URBAN

Reframing Key Transportation Conventions
Context

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Slide #: 42

TRANSITION FROM RURAL TO URBAN

Reframing Key Transportation Conventions
Context

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Slide # 43

TRANSITION FROM RURAL TO URBAN

Reframing Key Transportation Conventions
Hierarchy & Functional Class

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PROPORTION OF SERVICE

Mobility
Arterials

Collectors

Land Access
Locals

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Reframing Key Transportation Conventions
DESIGN SPEED Speed / Flow Relationship

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30 mph

25 mph

20 mph

15 mph

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Reframing Key Transportation Conventions
DESIGN SPEED - Roadway Safety

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SPEED	p(killing pedestrian)
15 mph	3.5 %
31 mph	37.0 %
44 mph	83.0 %

Slide # 46

Reframing Key Transportation Conventions
DESIGN SPEED Speed / Flow Relationship

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Speed (Mph)

Hourly Vehicles Per Lane

Maximum Volume
25-30 Miles Per Hour

Speed-Flow Relationship

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Increasing Benefits to Regional Traffic

Expressway

Parkway

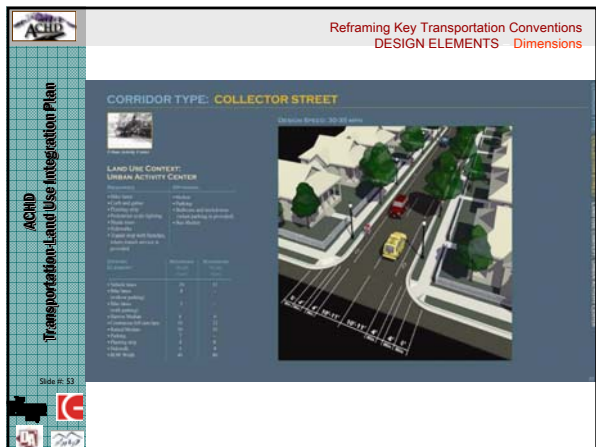
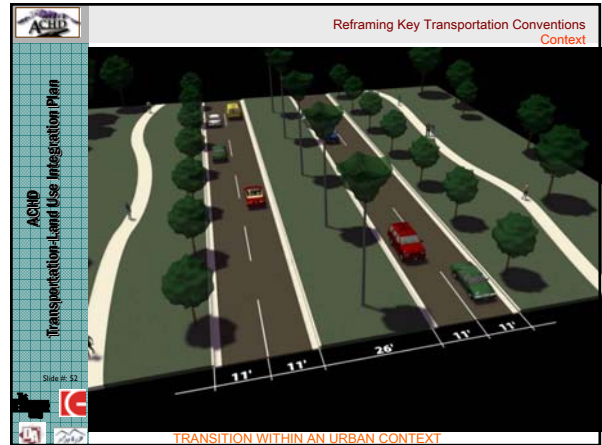
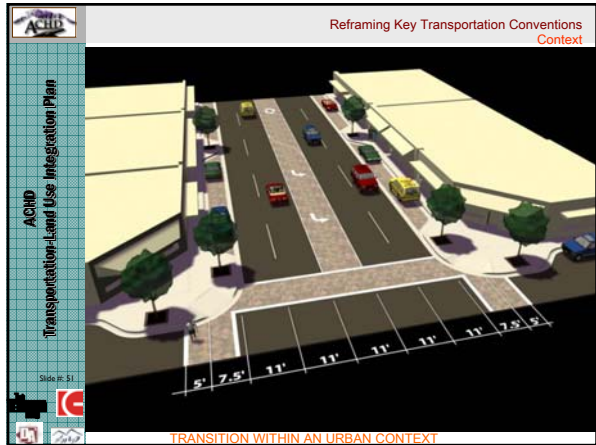
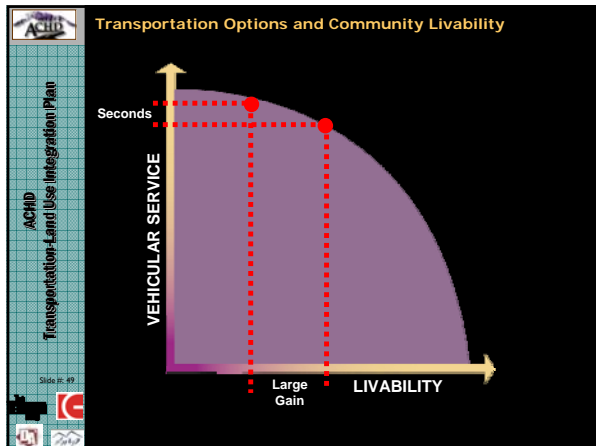
NEW SOLUTION
A complete network of local roads rather than one new regional route.

No-Build

NBP

Increasing Benefits to Local Traffic

Slide # 48



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Slide 15

Interactive Map Work
Session

This is a slide thumbnail from a presentation. The slide has a white background with a grey header bar at the top. On the left side, there is a vertical green grid pattern containing the text 'ACHD' and 'Transportation-Land Use Integration Plan'. Below this, it says 'Slide 15'. At the bottom left of the grid, there are small icons for navigation. The main content of the slide is the text 'Interactive Map Work' in a dark red font, followed by the word 'Session' in a larger, bold, orange-red font.