Making a Difference with Green Community Strategies – *Land Use and Transportation Planning*

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AICP Symposium - National Building Museum

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Topics

- Regional Blueprint Planning
- I-PLACE$^3$S Software
- New CA Climate Change Legislation Aimed at Cutting Sprawl
- Reauthorization of Federal Highway Bill
Planning and Urban Design
(Vision & Progressive Planning)

Blueprint
Sustainable Land Use Planning

Measurement & Analysis
(Data & I-PLACE3S)

Citizen & Agency Involvement
(Education & Political Support)
## Regional Blueprint Planning – 3 Components and 6 Steps

### 1. Establish Baseline
- Collect plans from throughout the region
- Estimate population and job changes

### 2. Project Future Conditions
- Apply current policy to 'see' the future
- Apply options, including smart growth planning

### 3. Establish Future Basecase
- Quantify and map region-wide future conditions
- Quantify differences among scenarios

### 4. Create Alternative Scenarios
- Quantify expected outcomes and track progress
- Make informed tradeoffs

### 5. Compare Future Scenarios
- Introduce process to a broad set of stakeholders
- Supply data and agree on numbers

### 6. Adopt & Implement
- Review and agree on Future Basecase
- Workshops and learning about choices
- Select best options
- Adopt plan, needed policy, and implement

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Example Application: Sacramento Regional Blueprint

- www.sacregionalblueprint.org
- Long term 2050 planning horizon
- Set level of expected growth
- Three levels of geographic analysis
- Scenarios test range of options for each level
Sacramento Metropolitan Region

- 6 Counties / 22 Cities
- 6,500 square miles
- 1.7 million more people by 2050
  - 1 million new jobs coming
  - 840,000 new dwellings needed

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Scenario Assessment Process

Four Levels

1. Regional Base Case
   “Long term No Action”
   1. Neighborhood
   2. County
   3. Regional Summary
Regional Base Case

- Quantify population and jobs for region through 2050:
- Assume no significant policy changes
- Map 2050 expected land uses
- Becomes database from which all scenarios are compared
- Issues become very clear
  - Generates political involvement
  - Press interested
  - Citizens focused
  - Partnerships created
How Would the Region Grow if Current Land Use Policy is Not Changed?

Created from summary of all adopted General Plans, state demographic projections and market forecast information

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Levels of Scenarios

1. **Regional**
2. **Neighborhood** level planning workshops
   - Educate citizens about integrated planning, links to sustainability
   - Explain demographic shifts and changing public needs; e.g., senior housing
   - Start planning at familiar street level
   - Professional outreach, including minority communities and age range
Neighborhood

- City planners select small (200-1000 Acre) study area
- One greenfield and one infill
- Workshop tables with aerial photo base maps
  - Short planning objectives lesson
  - Elected officials very involved
  - I-PLACE3S user logging input data at each table
- Lots of learning, ownership, smiles
- Great ideas, all plans captured and stored on web
## Land Use Menu

### Land Use Types

#### Residential Building Types

<table>
<thead>
<tr>
<th></th>
<th>Residential Building Types</th>
<th>Rural Residential</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Rural Residential</td>
<td>Rural residential includes very large lot residential (1 acre per lot).</td>
</tr>
<tr>
<td>2</td>
<td>Large Lot Single Family Residential</td>
<td>Arden Park has many large lots in the area. Other residential developments have grid patterns with 1 acre lots and small houses.</td>
</tr>
<tr>
<td>3</td>
<td>Medium Lot Single Family Residential</td>
<td>Standard single family lot of 50x100 ft. Allows cul-de-sacs or grid pattern.</td>
</tr>
<tr>
<td>4</td>
<td>Small Lot Single Family Residential</td>
<td>Small lot subdivisions: Villa Palazzo in Pasta (3,500 sq ft lots), standard lots in Laguna West and some low density suburban garden apartments.</td>
</tr>
<tr>
<td>5</td>
<td>Townhouse (Owner)</td>
<td>Metro Square in midtown is a detached townhouse project at approx. 20 DU/ac. Most standard 2-story units w/ surface parking are in this range.</td>
</tr>
<tr>
<td>6</td>
<td>Townhouse (Rental)</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Low-Rise Condos (Owner)</td>
<td>2-story attached units with structured parking (e.g., truck-under).</td>
</tr>
<tr>
<td>8</td>
<td>Low-Rise Condos (Rental)</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Mid-Rise Condos (Owner)</td>
<td>3-story mid-rise development. Less square footage dedicated to landscaping; more frontage on street.</td>
</tr>
<tr>
<td>10</td>
<td>Mid-Rise Condos (Rental)</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>High-Rise Condos (Owner)</td>
<td>8-story development with structured parking. Buildings include elevators, interior courtyards, and hallways.</td>
</tr>
<tr>
<td>12</td>
<td>High-Rise Condos (Rental)</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Urban Condos (Owner)</td>
<td>10-story urban development. Buildings may include a health facility, door man, etc.</td>
</tr>
<tr>
<td>14</td>
<td>Urban Condos (Rental)</td>
<td></td>
</tr>
</tbody>
</table>
Table Facilitators Enter Planning Ideas into I-PLACE$^3$S and Share Immediate Feedback

Neighborhood Level Workshops
One Table’s Proposal and Summary I-PLACE3S Expected Outcomes

Proposed Land Uses

476 Acres

Changes from base case:

- 1,800 more employees
- 2,900 more dwelling units
- - 44 %VMT
Levels of Scenarios

1. **Regional**
2. **Neighborhood**
3. **County** level planning workshops
   - Planners assemble neighborhood findings into four ‘starter’ scenarios – A, B, C, D
     - Base Case, and three variations of green field/infill growth
   - Citizens select one and adapt to their liking
   - Transportation larger role in county scenarios
Scenario C – Moderate infill, contiguous green field application
Land Use Place Type Menu for Larger Scale Planning

RESIDENTIAL BUILDING TYPES

A. Rural Residential
   - 3 acre average lot size range is from 1 acre to 25 acres and above
   - 100 acre chip = 535 dwellings

B. Single-Family Large Lot
   - 3,500 square feet average lot size range is from 2,500 square feet to 4,000 square feet
   - 100 acre chip = 674 dwellings

C. Single-Family Small Lot
   - 1,000 square feet average lot size range is from 500 square feet to 2,000 square feet
   - 100 acre chip = 1,226 dwellings

D. Attached Residential
   - Townhouse/condominium, apartment, mixed use
   - 30 dwelling units per acre average
   - Range of 30 units to 1,000 units per acre
   - 100 acre chip = 3,942 dwelling units

EMPLOYMENT BUILDING TYPES

E. Retail
   - 50 employees per acre average
   - 100 acre chip = 2,500 employees

F. Office
   - 150 employees per acre average
   - 100 acre chip = 2,250 employees

G. Industrial
   - 30 employees per acre average
   - 100 acre chip = 900 employees

H. Public/Quasi-Public
   - 20 employees per acre average
   - 100 acre chip = 2,000 employees

MEDIUM "LAND USE" TYPES

I. Agriculture

J. Forest

K. Open Space
   - Recreational use areas, open space division

L. Parks
   - Active use for recreation

RECREATIONAL "PLACE" TYPES

M. Low-Density Mixed-Use Center or Corridor
   - Mix of:
     - 50% Single Family Small Lot
     - 25% Attached Units: townhouses/condominiums, mixed use
     - 25% Office
     - 10% Retail
     - 800 acre chip = 5,732 dwelling units, 1,500 employees

N. Medium-Density Mixed-Use Center or Corridor
   - Mix of:
     - 65% Single Family Small Lot
     - 20% Attached Units: townhouses/condominiums, mixed use
     - 15% Office
     - 10% Retail
     - 300 acre chip = 6,732 dwelling units, 1,500 employees

O. High-Density Mixed-Use Center or Corridor
   - Mix of:
     - 20% Attached Units: townhouses/condominiums, mixed use
     - 35% Single Family Small Lot
     - 35% Office
     - 15% Retail
     - 100 acre chip = 1,475 dwelling units, 1,000 employees

EMPLOYMENT FOCUS MIXED-USE CENTER OR CORRIDOR

- Mix of:
  - 70% Office
  - 15% Retail
  - 15% Single Family Small Lot
  - 100 acre chip = 900 dwelling units, 5,000 employees

- Mix of:
  - 30% Office
  - 70% Retail
  - 15% Single Family Small Lot
  - 100 acre chip = 1,000 dwelling units, 5,000 employees
Neighborhood results contribute to initial scenarios used in each county level workshop.
Results of all levels of all workshops (maps, data and photos) can be found at: http://www.sacregionblueprint.org
Example Indicator Comparisons for Public Workshops
Understanding the difference between altering new housing and the effect on the long term housing stock.
POTENTIAL RESIDENTIAL OUTSIDE (LAWN) WATER USE

A: 100%
B: 48%
C: 45%
D: 40%
DAILY VEHICLE MINUTES OF TRAVEL
(per household)

Existing

A
B
C
D

63.8 minutes
92.7 minutes
67.1 minutes
65.7 minutes
63.3 minutes

100%
72.5%
71%
68.4%
PER CAPITA IN CARBON DIOXIDE AND SMALL PARTICULATES EMISSION
—FROM VEHICLES (2050)
How to think about transportation infrastructure costs
Scenario Comparisons are Effective

- People absorbed and worked with the data
- Made informed choices
- Consistently increased housing and employment density to get benefits
- Defend good planning at public meetings
- Value affordable housing

“Citizen Planners”
Levels of Scenarios

1. Regional
2. Neighborhood
3. County
4. Regional summary
   • Results of county workshops used to construct regional preferred plan
   • Over 5000 citizens attended workshops, learning and providing detailed input
Regional Forum 2004 – 1400 People, Elected Officials Run Tables
Elected Official’s Summit –
All local elected officials in region came together to give input on the draft plan
Results of Sacramento Blueprint – 2050 versus Base Case

- 305 square miles less development
- 12% less greenhouse gases & air pollutants per household by 2035
- 80+ hours less time in traffic per home
  - 2 weeks paid vacation!
- 10% more trips by transit, bike & walking
Preferred Scenario

Urban Footprint — 2050
Outcome of Neighborhood, County and Regional Input
same projected growth and market trends as Base Case
Base Case

Urban Footprint — 2050
Sum of Adopted General Plans with projected growth and market trends
Implementation of the Regional Blueprint by Cities and Counties

- City/County adopt Blueprint policy resolutions and map for General Plan updates
- City/County access to database and land use software
- Baseline for adopted RTP ($41B in projects through 2035)
- Legally enforceable Transportation Control Measures in RTP
- Environmental mitigation for RTP
- Community Development Grants
- Development project tracking and review service
Blueprint Process Pays RTP Dividends

- Became 2035 base map for 2007 RTP
  - Well supported and understood from start
- Parallel (now familiar) process for used RTP
- Less congestion and emissions
- More transit investment
- Time and cost savings for plan and CEQA / NEPA
- Attorney General satisfied with CEQA Climate Impact Analysis
I-PLACE³S = Software to Promote Blueprint Planning, Smart Growth Plans and Development

Internet accessed - PLAnning for Community Energy, Economic, and Environmental Sustainability

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I-PLACE³S Software

Recorded Web Ex demonstration
http://www.sacregionblueprint.org/sacregionblueprint/
the_project/technology.cfm

- GIS based decision-support / scenario analysis
- Perform integrated analyses to find “smartest” growth
  - Land use, transit, housing, employment, environment, economy
  - Manage very large data sets – greater accuracy
- Produce maps, data and tables
- Educate planners, citizens & elected officials
- Workshop speed – 2 second response
- Flexible, add new functions

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Basic GIS Data Needs

- General Plan or Zoning designations
- Existing Conditions:
  - Housing Units
  - Employees
  - Land uses
- Growth forecast:
  - Housing Units
  - Employees
- Parcel data
- Environmental Constraints
Example Indicators to Compare Alternative Scenarios

- Vehicle miles traveled and vehicle trips
- Change in walk/bike and transit mode shares
- Mobile source air emissions
- Electricity and natural gas demand
- Energy system emissions
- Economic feasibility (Return on Investment)
- Soon – detailed rural land and economic data
- Soon – public health effects of land uses
Tiered Information Flow

**Region**
- Assembles Region from City, County & State/Fed Data
- Conducts Regional-level Analyses: Land Use, Transportation, Energy, Climate Change, Natural Resources, Agricultural Land, Forestry, Economy

**City/County**
- Extracts from Regional Data Base
  - General Plans
  - Zoning Code
  - Redevelopment
  - Housing
  - Public Health
  - Infrastructure

**Neighborhood**
- Uses City/County data
  - Community Plans
  - Specific Plans
  - Project Analyses

State Agencies
- Sum regional data to statewide
  - Policy and Planning Value
  - Program Implementation
  - Tracking change

**Improved data consistency and lower costs**
New Climate Legislation

Senate Bill 375, Steinberg

- **Goal**: reduce greenhouse gas emissions from cars and light trucks through incentives for better development patterns so more people can choose to drive less (support Blueprint planning)
- Builds on SB 32, Global Warming Solutions Act of 2006

“In Hollywood, everyone loves a sequel”
– Governor Schwarzenegger
How will SB 375 accomplish its goal?

Regional Transportation Plan (RTP):

- Existing law requires RTPs to be based on a realistic land use plan that accommodates all expected growth for the region.
- SB 375 provides that the RTP development pattern should be designed to achieve regional greenhouse gas reduction targets (to be set by the CA Air Resources Board by Sept 2010).
SB 375 – Linking Land Use with GHG
Adds Four Things to CA’s RTPs:

1. Adds Sustainable Communities Strategy (SCS) to the RTP – leveraging existing transportation funding incentives to support growth in good locations.
2. Revises environmental impact analysis to assist land use decisions that implement the SCS.
3. Requires modeling improvements to accurately account for the transportation impacts of land use decisions.
4. Requires determination of the regional need for housing to be consistent with the SCS.
SB 375 will achieve better development patterns **only** through incentives

- Future transportation funding will be directed to projects that implement the climate sensitive RTP.
- Local governments with plans consistent with the RTP can simplify portions of their environmental review process.
SB 375 Collaboration

- 2 year process
- Started with need to implement Sacramento Blueprint
- Unprecedented alliance to integrate climate, land use, housing and transportation planning
  - builders, local governments, environmentalists and affordable housing advocates
- Senate leadership & devoted core team
Reauthorization of the Federal Highway Bill

- Likely new climate related approach
- Could require all MPOs to do Blueprint-style planning and make greenhouse gas reduction a priority for the Regional Transportation Plans
- ~ 1 – 2 years out