Transit and Land Use Design

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Outline:

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Goals

- Rethink land use/travel patterns to facilitate non-automotive travel
- Create human scale neighborhood
- Reduce dominance of automobile
- Enhance movement by pedestrians, bicycles and access to transit
- Facilitate internal circulation

New Directions for Land Use and Site Design

- Fundamentally there is a need to consider pedestrians, bicycles and transit in the land use process
- Provide and preserve choices for the future
- Need to ask how will people walk or bicycle safely before land use decisions are made
- Adopt a vision, positive approach, how to make it work, rather than reasons why it won't
- Increase awareness of the market and design to serve new land use and travel markets
- Minor modifications to accommodate transit prior to project review can have high payoffs
Transit based land use design

- Origins in Transit Community
- Corridor based design
- Land use is arranged to facilitate success of transit services.
- Pre-designate future transit routes
- Establish transit corridor zoning overlay districts
- Separate transit and auto oriented land uses
- Use mixed land uses
- Control of through auto traffic in transit corridor
- Provide a quality access system to transit by walking or bicycles

Node vs. corridor based design

Node-Based System

Corridor-Based System
**Administrative Guidelines**

- Modify state and local policies to include transit as an consideration in land development.
- Zoning should encourage transit-sensitive land use design through the designation of Transit Corridor Districts (TCDs)
- Provide for transit-sensitive review of site plans and development proposals.

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**Administrative Guidelines**

- Provide transit checklist for potential developers.
- Parking requirements in TCDs should reflect availability of transit services.
- Establish a Transportation Management Association to oversee transportation services and land use development along the transit corridor.
- Provide a mechanism for transfer of development rights (TDRs) for the land surrounding the TCDs
Systems Level Actions - Land Use

- Create transit corridor zoning overlay districts - areas that will have future transit service
- Separate transit oriented and auto oriented land uses. Land uses which are conducive to transit; should be located along transit corridors
- Predesignate a future system of transit corridors; areas that have higher densities, mixed use development, and are served by transit with quality pedestrian and bicycle facilities with control of through automobile movement

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Systems Level Actions -- Land Use

- Establish transit service zones along existing arterials.
- Explore public/private opportunities for transit stop joint development.
- Provide adequate population size and density to support transit use.
- Provide for mixed use development to facilitate shorter trips and use of non-vehicle travel

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System Level Actions -- Transit

- Relate services design to market conditions
- Provide for passenger safety and security
- Provide high quality transit service.
- Use Transit vehicles that are quiet and have low air pollution levels.
- Create a consistent Transit Identity: Signage, etc. and compatibility of stops.

System Level Actions -- Transit

- Avoid need for shuttle services
- Design for a phased implementation of transit corridors.
- Provide for Technological and infrastructure flexibility.
- Provide for high level geometric design of transit corridors.
- Provide regular maintenance at transit stops.
System Level Actions -- Pedestrian/Bicycle

- Develop standards for pathways to be included with arterial, and collector highway projects, parallel but separate from roadway
- Institute a plat review that includes consideration of pathway connections, safety of pedestrian and bicycle movement
- Control of through automobile traffic.

Transit Oriented Land Uses

The following land use categories have a high transit compatibility (ratings of 4 or 5) and should be located in areas to be served by transit.

- Commercial airport
- Park and ride station
- General heavy industry
- Apartments
- Residential condominiums
- High density residential
- Retirement community

- Hotel – non-CBD
- Stadium
- Elementary school
- High school
- Junior/community college
- University
- Hospital
- General office building
- Office park
- Shopping center
### Auto oriented land uses

The following have a low compatibility (a rating of 1) with transit. These land uses can generally be separated from public transit services.

- Water port
- General aviation airport
- Truck terminal
- Mini-warehousing
- Utilities
- Recreational homes
- Resort hotel
- Marina
- Golf course
- Day care center
- Nursing home
- State motor vehicle department
- Building materials and lumber
- Hardware/paint store
- Nursery/garden center
- Quality restaurant
- New car sales
- Service station
- Car wash
- Highway oasis
- Truck stop
- Furniture store
- Drive-in bank
- Drive-in savings and loan

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### Project Level Actions – Land Use

- Provide mixed land use including housing, office, retail, light industrial and recreational uses.
- Provide variety within the district.
- Locate buildings near streets; maximize utilization of curb space to serve many users.
- Locate higher densities close to transit.
- Sensitive to transit-generated noise and views.
Project Level Actions – Land Use

- Utilize appropriate land use adjacencies.
- Provide recreational opportunities and amenities.
- Accommodate multiple developers and development patterns.
- Use a parking density gradient.
- Develop a program to encourage shared parking facilities.

Building location and design should be

Transit vs. auto oriented land use
Project Level Actions – Transit

- Provide for better connections between adjacent development projects -- connect across "seams".
- Provide logical connections between buildings and pedestrians, bicycles and transit,
- Minimize the distance between vehicle door and building door.

Provide connectivity within neighborhoods

RELATING ADJACENT DEVELOPMENT
Tract A  Tract B  Tract C

Awkward Connections
**Project Level Actions – Pedestrian/Bicycle**

- Create a pedestrian/bicycle friendly environment (safe, secure, storage, interesting, human scale)
- Provide pathway connections between subdivisions, at ends of cul de sacs, to improve connectivity -- shortcuts
- Narrow neighborhood streets
- Provide Pedestrian/bicycle pathway system.
- Provide for safe, convenient pedestrian circulation.
- Promote bicycle access through high quality pathways and secure storage systems.

**Transit and Conventional Subdivision/Neighborhoods**

- Steps can be taken to accommodate transit in conventional projects that are not major transit oriented developments
- Use Good Traffic Management
  - Avoid driveways on main roads
  - Provide Proper sight distance
- Provide Good connectivity to adjacent parcels
- Use Access management
Provide connections to adjacent land use

Transit and Conventional Subdivision/Neighborhoods

- Avoid cul de sacs
  - Extra public cost
  - Extra travel
  - Concentrates traffic on arterials
  - Poor connectivity for pedestrians and bicycles
- Provide pedestrian and bicycle facilities
  - Shortcut connections
  - Paths parallel to main roads
- Use appropriate street geometry
  - Speed = f(width)
  - Be willing to accept narrow streets
Useful web sites

- Smart Growth Network
  http://www.smartgrowth.org/default.asp
- US EPA Smart Growth Policies
  http://cfpub.epa.gov/sqadb/browse.cfm
- Victoria Transportation Policy Institute TDM Encyclopedia
  http://www.vtpi.org/tdm/tdm45.htm
- Congress for a New Urbanism
  http://www.cnu.org/
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