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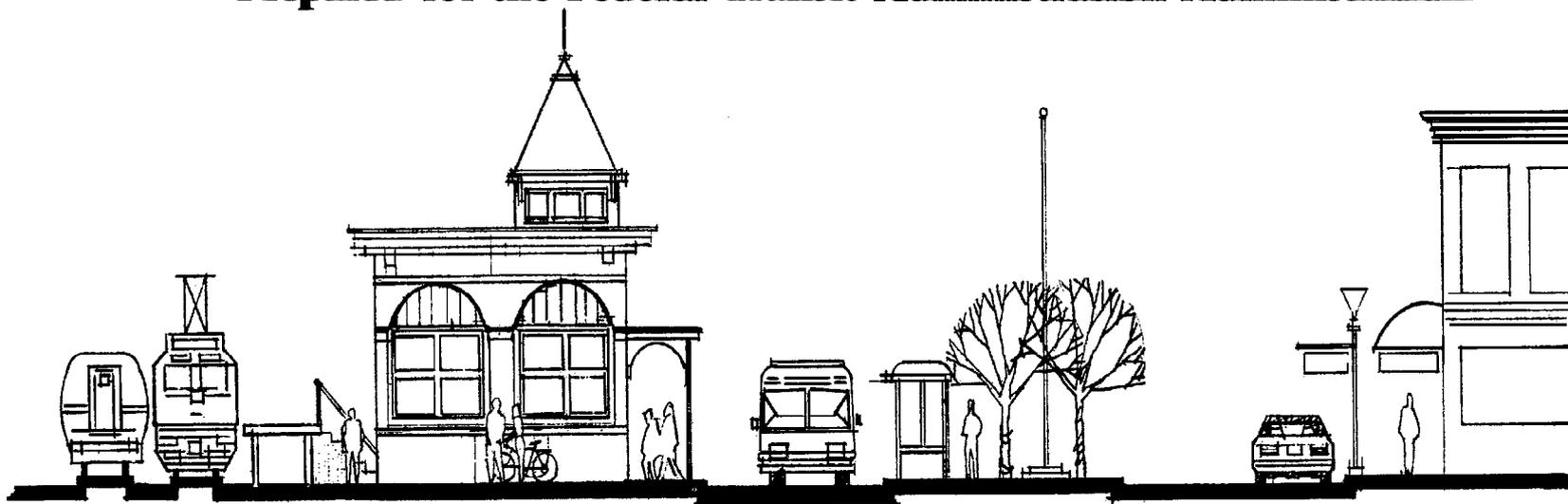
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# Planning for Transit-Friendly Land Use

A Handbook for New Jersey Communities

*June 1994*

Prepared for the Federal Transit Administration Administration



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## 1.2 What does “transit-friendly” mean?

**What is “transit-friendly” planning? It is creating an environment around a transit stop or station that supports pedestrian and transit use. That is done by providing for a mix of land uses, in a safe, clean, vibrant, and active place.**

Throughout this Handbook, communities that accomplish the goal of implementing plans with patterns of development and circulation that encourage transit use are referred to as “transit-friendly”.

“Transit-friendly” planning also involves designing outlying large-scale employment and residential complexes so that transit can effectively and efficiently serve them. This is done by clustering buildings and by creating a transit-friendly internal circulation system.

The goal of “transit-friendly” planning, whether transit is existing or new, is to re-examine land use and development patterns, in appropriate areas, with an eye towards moving from a large-lot, auto-dominated, dispersed, single-use pattern of development, to a pattern with a mix of land uses that easily relate to pedestrian activity and that have a focal point, or “center,” near to or at the station itself.

In the case of bus routes or light rail transit corridors, the

transit-friendly pattern of development may extend linearly along the route of service, with clusters of activity at the individual stops.

Making your community “transit-friendly” means making land use decisions that encourage residents to use transit as an alternative to the automobile for at least one or more of their trips between home, work, shopping, school, or services. It also means organizing land uses in a way that encourages workers, visitors and others coming to your community to use transit.

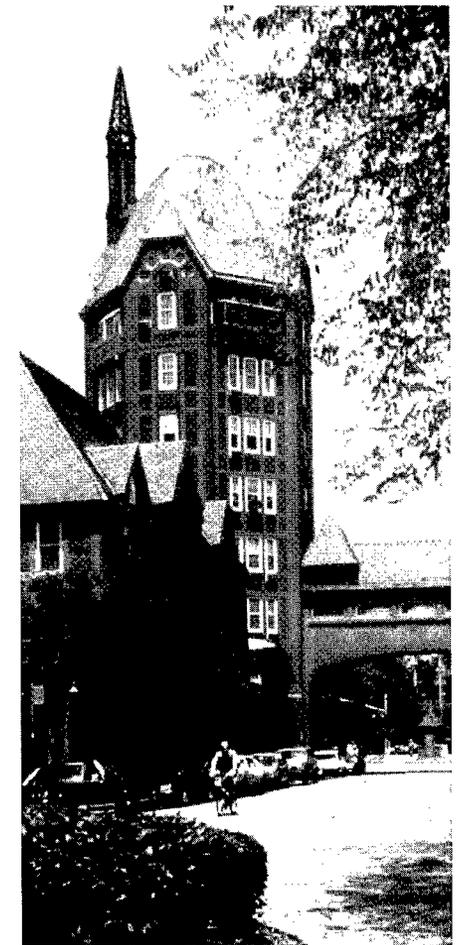
*In Newark, the variety and density of land uses close to transit encourages workers to choose transit as their primary means of travel.*



*Single-use, dispersed auto dominated development patterns are not transit-friendly and are discouraged.*



*Forest Hills, NY below, provides an early example of clustering multiple land uses and densities around transit to create an active pedestrian environment.*



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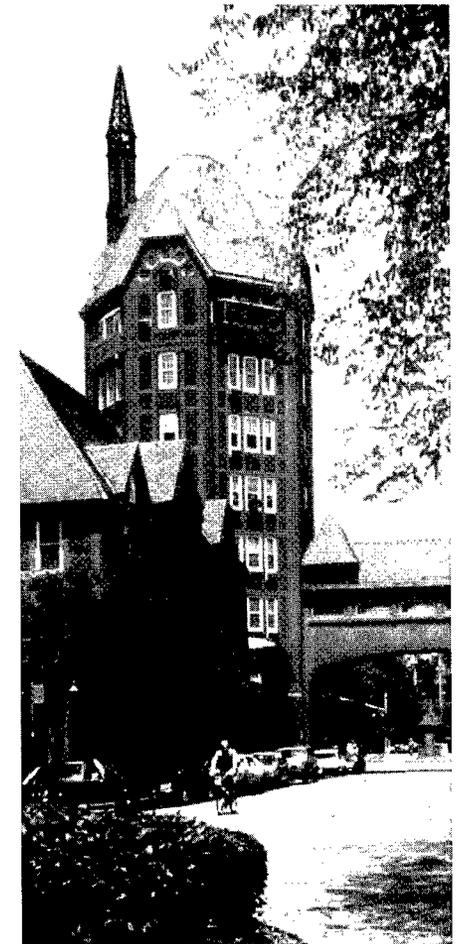
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## Why Transit ?

Last year, across the State of New Jersey, people took over 175 million trips on buses or trains. In doing so, they helped in many ways to contribute to the quality of life in our state. Their choice – to travel by transit rather than by private automobile – brings many benefits:

- Transit encourages pedestrian activity at and around train stations and bus stops, contributing to the vitality and activity of the communities it serves,
- Planning land use in relation to transit can be a powerful force in managing and directing growth and change.
- Transit, through its ability to transport more passengers in each vehicle, makes more effective use of existing investments in rail and road systems, reducing the need for new lanes, new signal systems, new or widened rights-of-way, and additional capital investments in the transportation infrastructure.
- Fewer vehicle trips mean less congestion, less total travel time, and less impact on air quality.

## Why Plan for Land Use Around Transit Stops and Stations?

Despite these advantages, communities are often concerned about the effects of planning for transit. They worry that it will bring undesirable change, in the form of more traffic, more people, and/or inappropriate development. The combined result may, they believe, threaten the very qualities of the community they hold dear. This fear need not be realized. Instead, careful planning for the areas which adjoin or surround transit stations and stops can both reinforce a community's planning goals and help implement its plans. Among the results of planning around transit facilities might be:

- An improved or enhanced station setting that helps establish community identity;
- Increased economic development opportunities with a stable market;
- A rational basis for defining where growth and change should and should not occur;
- Increased presence of convenience retail, such as delis and video stores and services, such as day care and dry cleaners, that serve the community at large, not just the transit riders;
- Strengthened connections between the community and the station for walkers and bicyclists;
- A heightened sense of shared responsibility for the interaction between transit owners and operators and community members and representatives: and,
- A greater sense of security,

### 1.3 How is transit-friendly planning achieved?

The basic focus of “transit-friendly” planning is the “transit planning area,” which is generally defined as the area within a reasonable walking distance of an existing or proposed transit stop or station.

Reasonable walking distance can vary, based on such factors as topography, sense of safety and security, and presence of interesting activity along the route of walking, but it is generally understood that most people

will walk from 5 to 15 minutes to get to or from a transit station or stop.

This walk time corresponds to approximately 1/4 mile to 1/2 mile. A circle with 1/4 mile radius contains 125 acres: a

circle with a 1/2 mile radius, 500 acres.

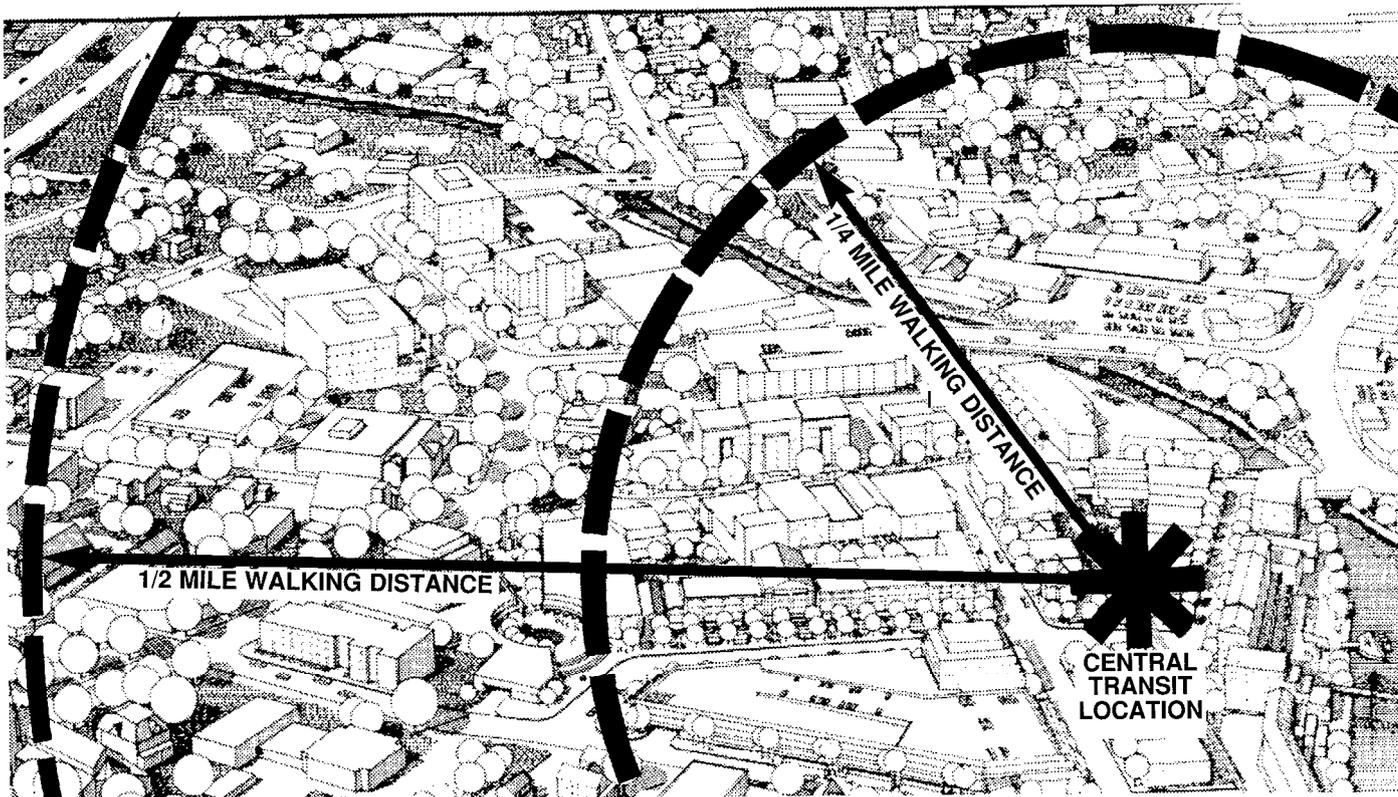
The size and extent of a transit planning area may also vary, based on built conditions and natural or built boundaries. Transit areas generally include both publicly and privately owned land. Publicly owned land may be exempt from local land use control: therefore, techniques implemented to achieve transit area planning goals will vary based on land ownership.

A Station Area Plan is a document created and approved by a municipality for the station area. This Handbook gives examples of how to prepare a Station Area Plan.

The Station Area Plan may be implemented through a Station Area Zone. The plan can be implemented through revisions to the Zoning Ordinance and Site Plan Approval Ordinance (see Appendices “A” and “B”, Chapter 8).

Other implementation tools for achieving transit-friendly design, including site plan approvals, circulation plans, joint development, etc., are also presented in this Handbook.

The transit planning area should initially be defined based on walking distances of approximately 1/4 mile to 1/2 mile.



## 1.4 Transit and the New Jersey Statewide Plan

As a regional issue, **transportation planning** is directly addressed in the NJ State **Development and Redevelopment Plan.**

The (1992) State Plan notes that

*“in our suburban and rural areas, we ~~should~~ encourage locations and patterns of development that.. ~~relieve~~ the dependence on the automobile as the sole means of travel.”* and that

*“we should, for instance, enhance the enormous economic power and growth potential of our major cities and urban areas and build better transportation linkages among our cities, suburbs, outlying employment/ residential centers and major transportation terminals.”*

The State Plan is in line with recent Federal initiatives which have also begun to address questions of improved infrastructure and inter-modal transit opportunities.

National transportation policies, notably the Clean Air Act (1990) and the Intermodal Surface Transportation Efficiency Act of 1991 known as “ISTEA”, have focused attention on the need to provide for, and encourage,

increased ridership on public transit, thereby reducing the dependence on private automobiles.

These public actions at the State and Federal level, make it increasingly clear that the continued development and improvement of a well planned public transit system, supported by transit-friendly municipal design, is critical to New Jersey as it prepares to enter the 21<sup>st</sup> century.

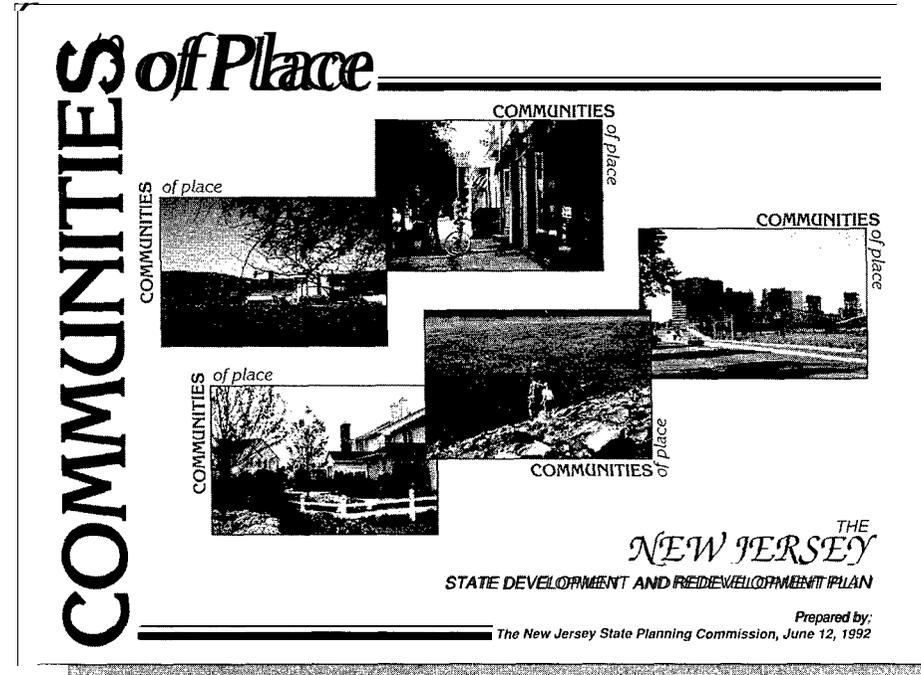
### Transportation Policies of the New Jersey State Development and Redevelopment Plan

#### Policy 2

Strengthen the linkages between transportation planning and land use planning. Transportation system improvements should underpin land use planning objectives.

#### Policy 17

Employ transportation planning, facilities and services as development and redevelopment tools to shape growth and leverage economic development opportunities



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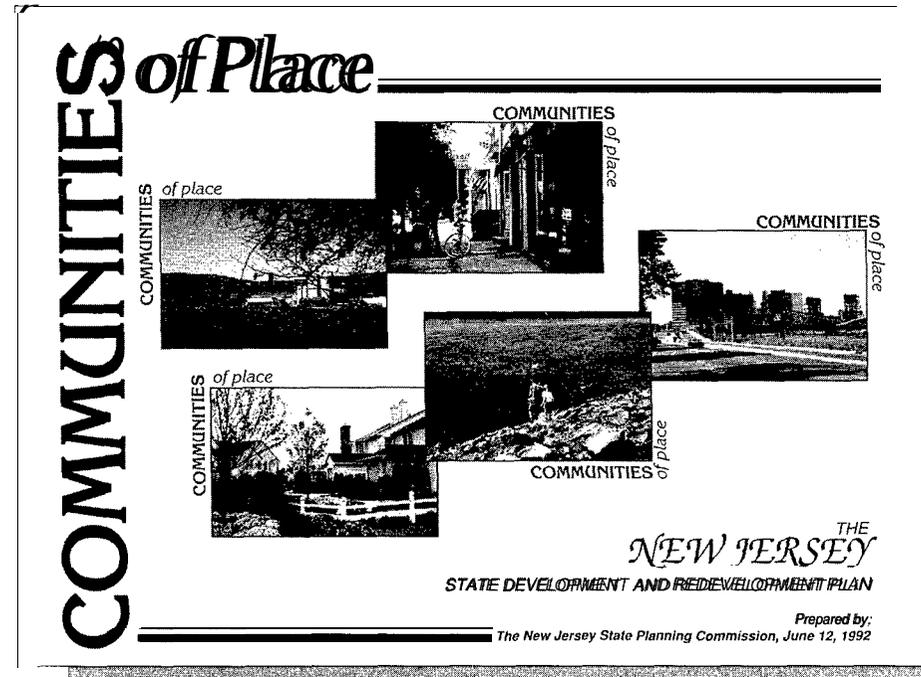
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## 1.6 Does this Handbook apply to my community?

**For purposes of this Handbook, six transit area types have been defined. Most communities will recognize their station area as generally falling into one of these types:**

**The Urban Center**, an area of intense development and a major employment location.



There should be residential uses and retail activity as well. Typically, the station will be served by express as well as local service. The station will generally accommodate more than one mode and may be a point of transfer between feeder lines and major regional service. Some parking for station users may exist, but it is often displaced by more intensive uses over time. *Examples: Newark, New Brunswick*

**The Regional Hub**, a significant area of development, although one that is smaller than an Urban Center. It may be a concentration of jobs or residences, or both. Like the Urban Center, it is typically served by both express and local transit service, and provides a point of transfer between feeder lines and regional routes. Some retail activity may also be present. Parking for commuters using the transit services is also provided.



*Examples: Summit, Westfield*

**The Traditional Town, Village, or Hamlet**, is a residential community organized, usually historically, with a focal point and a center that in some way provides a sense of community identity. This center varies from community to community, ranging from open space, to train station, to retail center, to civic and governmental center. It includes residential and retail uses, with professional offices, and institutional and/or civic activity. From a transit point of view, depending on its size and regional location, the town, village, or hamlet may be served by local transit service: if it also serves a larger commuter-shed, there may be regional service as well. *Examples: South Orange, Bernardsville*



**The Single-Use District or Neighborhood**, is an area where one use, such as single-family homes, suburban offices, or industrial uses predominates. These areas are generally dispersed rather than centered around the station or stop. They also include parking to serve commuters. Transit service may be local and/or express. It may accommodate a substantial commuter ridership without having realized the benefits of a mixed-use, centered place. *Examples: Hazlet, Short Hills*



**The Suburban Multi-Use Area**, a suburban area with no central focus and a mixture of land use types and intensity. These areas are dispersed, with some local concentrations. The station may accommodate some bus access. Transit service is usually local. These areas can be “retrofit” where feasible to achieve a better focus and more efficient land use pattern. *Examples: Edison, Convent Station*



**The Park-and-Ride Site**, defined for purposes of this Handbook as a station and parking facility, with little or no additional development beyond passenger amenities and services. The station may accommodate intermodal transfers, such as bus-to-rail or local bus-to-express bus. Transit service may be local and/or express. A park-n-ride site is specifically designed to accommodate an efficient move between car and transit, rather than a mixed-use environment. *Examples: Gordon's Corner; Jersey Avenue*



A ~~significant~~ question that each community **must** answer is the type ~~of~~ station area and ~~transit-friendly~~ design it wishes to have in **the future**, as ~~well~~ as the type of station area it has now.

To help you determine how ~~transit-friendly~~ your community is, check your score on the “Transit-Friendly Checklist” at the end ~~of~~ this chapter:

When **classifying** the six general types of station areas previously described, it became apparent that two major forms of settlements predominate in New Jersey: the more traditional centered model represented by the typical early **20th** century city or town; and the more recently occurring **non-**

centered development **exemplified** by a typical residential suburb or a park-n-ride facility. The distinction between these two primary patterns of development is **significant**, especially regarding the implications each has for transit and access to transit.

## **C e n t e r s**

**Originally**, centers were quite often based on some form of transit or, at a minimum, a **significant** road network. These locations tend not to be single use. Rather, a variety of uses (although sometimes located in distinct districts) are located within a centered development.

The size and scale of centers can range greatly from the largest urban concentrations such as Newark to small rural hamlets like Newfoundland. Centers tend to be the focus of activity for the adjoining environs, providing essential services as well as employment and retail opportunities. Land uses in centers tend to be compact and of higher densities than surrounding areas.

The following matrix **offers** a more detailed description of the six transit area types based on both the planning characteristics of the larger area as well as of the transit area itself

## **CENTERS**

### **General Characteristics of Planning Areas**



#### **Urban Center**

- Population - **40,000+**
- Jobs - **40,000+**
- Jobs: Dwellings - **1: 1**
- Compact central core of commercial and community services
- Pedestrian orientation
- Relatively high density



#### **Regional Hub**

- Population - 5,000 - 40,000
- Jobs - **5,000+**
- Jobs: Dwellings - **1: 1**
- Compact central core of commercial and community services
- Pedestrian orientation
- Mid to high density



#### **Traditional Town, Village, or Hamlet**

- Population - **1,000** to **25,000**
- Area - 2 square miles
- Compact center with community services in station planning area

### **Typical Characteristics of Transit Areas**

- Multiple modes of transit available
- Walking is a significant mode of access
- Parking provided, but may be limited
- Passenger services available
- Convenience retail at station
- Service area **10** miles or greater

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- Service area generally within **5-10** miles

- May have bus transfer except in the case of a Hamlet
- Walking is an important mode of access
- Parking is provided
- Convenience retail may be nearby
- Service area generally within **2 - 5** miles, except in the case of a Hamlet

## Non-Centers

Non-centers are a modern phenomena, the most common and well-known examples being the post World War II suburb. These forms of development are typified by a dispersion of land uses and a lack of any discernible hierarchy.

Quite often, a non-center is single use and lacks a specific focus of activity.

Densities tend to be lower than in centers and infrastructure systems less developed. Transit within non-centers tends to be less efficient because of the increased stops required to collect users resulting in decreased opportunities for high capacity transit.

Users are often unable to access transit as pedestrians,

and are required to drive to transit because of non-existing or poor pedestrian connections. Nonetheless transit in non-centers is feasible. Suburban rail stations and park-n-rides meet a crucial transit need. In some cases, they can be the focus of future-regional centers, as incremental redevelopment occurs.

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## NON-CENTERS

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### General Characteristics of Planning Areas



#### Single Use District or Neighborhood

- Uses ranging from predominantly residential to predominantly commercial and retail. Most often in the form of single use districts
- Density can range from 3-5 residential units per acre to mid-to-high density commercial uses
- Usually no central core



#### Suburban Multi-Use Area

- Commercial, retail, residential land uses
- No commercial core



#### Park-and-Ride

- Station and parking uses only
- May have convenience retail and/or passenger amenities

### Typical Characteristics of Transit Areas

- May have bus transfer
- Walking access limited (10% to 20 % share); parking provided
- Convenience retail may be nearby
- Service area generally within 2 to 5 miles

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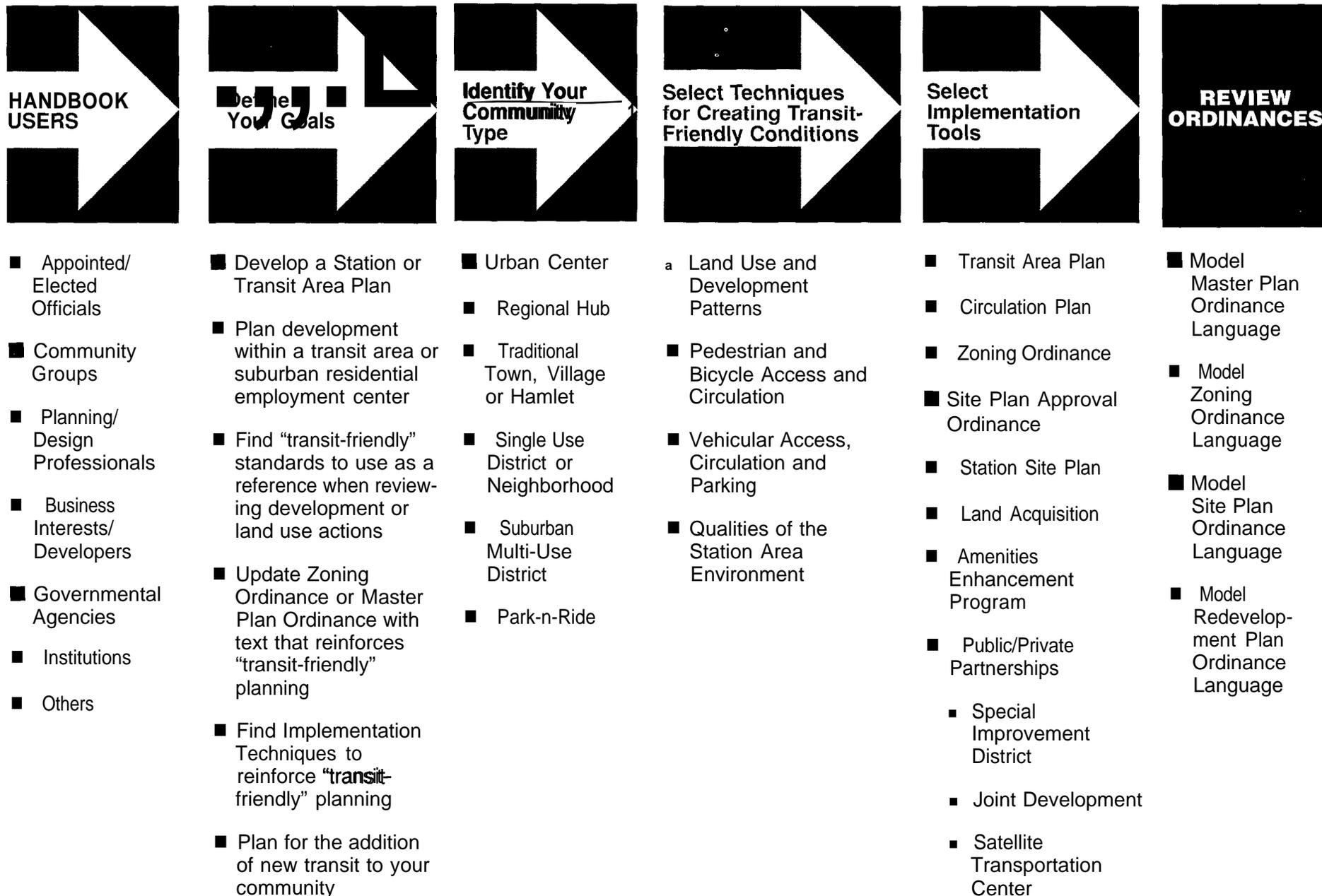
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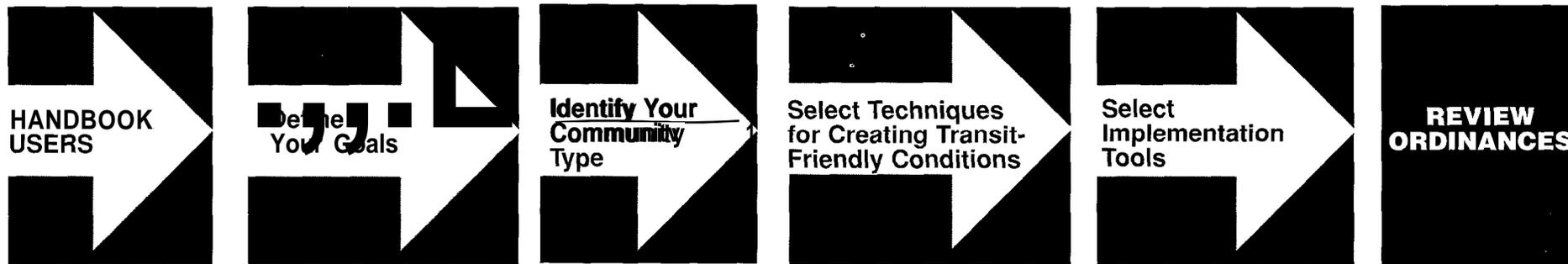
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- Appointed/Elected Officials
- Community Groups
- Planning/Design Professionals
- Business Interests/Developers
- Governmental Agencies
- Institutions
- Others

- Develop a Station or Transit Area Plan
- Plan development within a transit area or suburban residential employment center
- Find “transit-friendly” standards to use as a reference when reviewing development or land use actions
- Update Zoning Ordinance or Master Plan Ordinance with text that reinforces “transit-friendly” planning
- Find Implementation Techniques to reinforce “transit-friendly” planning
- Plan for the addition of new transit to your community

- Urban Center
- Regional Hub
- Traditional Town, Village or Hamlet
- Single Use District or Neighborhood
- Suburban Multi-Use District
- Park-n-Ride

- a Land Use and Development Patterns
- Pedestrian and Bicycle Access and Circulation
- Vehicular Access, Circulation and Parking
- Qualities of the Station Area Environment

- Transit Area Plan
- Circulation Plan
- Zoning Ordinance
- Site Plan Approval Ordinance
- Station Site Plan
- Land Acquisition
- Amenities Enhancement Program
- Public/Private Partnerships
  - Special Improvement District
- Joint Development
- Satellite Transportation Center

- Model Master Plan Ordinance Language
- Model Zoning Ordinance Language
- Model Site Plan Ordinance Language
- Model Redevelopment Plan Ordinance Language

## Integration of Land Use and Transportation

Residential Use	Commercial Use	Transportation Compatibility
15 to 24+ Units/Acre	150+ Employees/Acre	Supports rail or other high capacity service.
7+ Units/Acre	40+ Employees/Acre	Supports local bus service.
1-6 Units/Acre	2+ Employees/Acre	Supports cars, car pools and vanpools.

10. Do the densities mandated near transit facilities, by the various municipal ordinances, support transit use? (use the above chart as a guide)
- YES  PARTLY  NO

### Site Planning/Design

11. Are continuous sidewalks that radiate from your community's center to outlying districts encouraged?
- YES  PARTLY  NO
12. Are site designs that encourage buildings to cluster near transit facilities encouraged?
- YES  PARTLY  NO
13. In non-centers, are site designs that encourage buildings to cluster in centralized groupings encouraged?
- YES  PARTLY  NO

14. In centers, are buildings encouraged to locate at the street line, thus defining and enclosing the primary pedestrian paths?
- YES  PARTLY  NO
15. Are larger developments or redevelopments encouraged to conform to existing block patterns and provide multiple access points for pedestrians?
- YES  PARTLY  NO

16. Are subdivisions encouraged to conform to grid or modified grid patterns without cul-de-sacs or dead ends?
- YES  PARTLY  NO

### Parking

17. Are parking requirements reduced or shared parking provided for uses in close proximity to transit?
- YES  PARTLY  NO

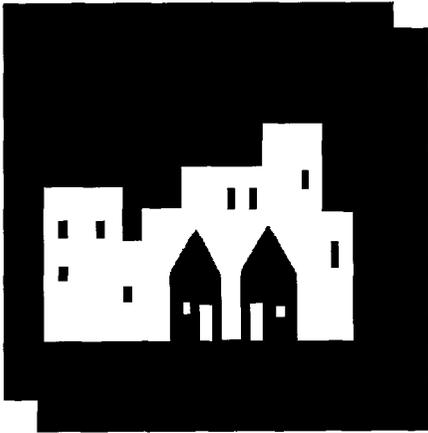
18. Is structured parking encouraged over surface lots in higher density centers?
- YES  PARTLY  NO

19. Are surface parking lots encouraged to be located off of main streets and away from front lot lines?
- YES  PARTLY  NO

20. If high capacity transit systems exist, are large commercial uses encouraged to provide shuttle service when located beyond walking distance from the facility?
- YES  PARTLY  NO

### Joint Development

21. Are key development sites adjacent to a planned or existing transit facility designated for transit compatible uses, densities and designs?
- YES  PARTLY  NO



# Chapter 2 – Land Use and Development Patterns

Historically, the relationships between land use and transportation were **quite clear and efficient**. Communities were organized so that the goods they produced could easily be shipped to others, by road, river, lake, or ocean, as the particular **geographic circumstance** dictated. **Personal travel** generally occurred by the same route. The relationships were based on the functional requirements of directly and efficiently moving goods and people, as well as on the limited availability of alternative modes of travel and transport.

This chapter; and the three that follow it, present a series of planning tools and techniques that can encourage transit-supportive conditions within your community.

These techniques are organized into four major “focus areas”:

- Land Use and Development Patterns
- Pedestrian and Bicycle Access and Circulation
- Vehicular Access, Circulation, and Parking
- Qualities of the Station Area Environment

As the road network began to expand throughout our country to accommodate increased automobile and truck use, this relationship between land use and transportation changed. The proliferation of the private automobile, as well as the increased number of cars per household, led to the creation of new patterns and densities of development. In the past 40 to 50 years, land use development patterns have generally taken the form of large-lot, decentralized, single-use districts, connected by a maze of roadways. Zoning and other government regulations have reinforced this trend.

As undeveloped land has become scarce and roadways have become more congested, people have begun to reexamine the original land use patterns within traditional “centered communities.” In New Jersey this effort has

been strongly supported by the New Jersey State Development and Redevelopment Plan. The opportunity now exists to redefine and develop new patterns of development that encourage active, safe, pedestrian-oriented communities that support, and are supported by, transit.

**Individual municipalities have the power to begin influencing land use patterns, densities, the general character of their communities, and eventually the overall quality of life, while at the same time encouraging increased ridership on transit systems that have been the focus of major public investments.**

Specific benefits of reconsidering the relationship between land use and transit may include:

- a more active and revitalized center of activity

and identity for each community:

- improved retail, service, housing, and employment opportunities;
- an improved pedestrian environment;
- a reduction in the number and length of automobile trips; and,
- improved air quality and attainment of the requirements of Federal Clean Air Act Amendments.

The following six policies, (2.1-2.6) each with multiple techniques, suggest methods for creating land use patterns and relationships that will improve the quality of life in your community and encourage conditions compatible with transit use.

## 2.1 Create a Pattern of Development that is Supportive of Transit Service

**The way *land* uses are laid out in relation to a transit facility or route is key to the success of efficient transit services.**

Uses that are oriented to the transit services and facilities, with physical and visual connections, will encourage transit usage.

Physical conditions that encourage pedestrian activity and that create a “sense of place” benefit both the community and transit.

### TECHNIQUES

#### Create a Pattern of Development with Frequent Streets and Pedestrian Rights-of-Way

Frequent opportunities for access encourage ease of

movement to and from the station area. The creation of small development blocks punctuated by pedestrian/vehicular or pedestrian easements will result in a system of circulation that facilitates access to and within the station area.

This pattern of frequent streets and blocks allows for ease of access to and through the varying land uses, while limiting “left over space” between uses on a single block.

#### Implementation

This technique may be

implemented through the following mechanisms:

- Zoning Ordinance
- Station Area Plan
- Circulation Plan
- Site Plan Ordinance
- **SID**
- Station Site Plan

#### Improve Pedestrian Connections

Enhance sidewalks and other paths with frequent points of connection and multiple routes of approach.

The creation of multiple pathways lined with uses that create visual interest and

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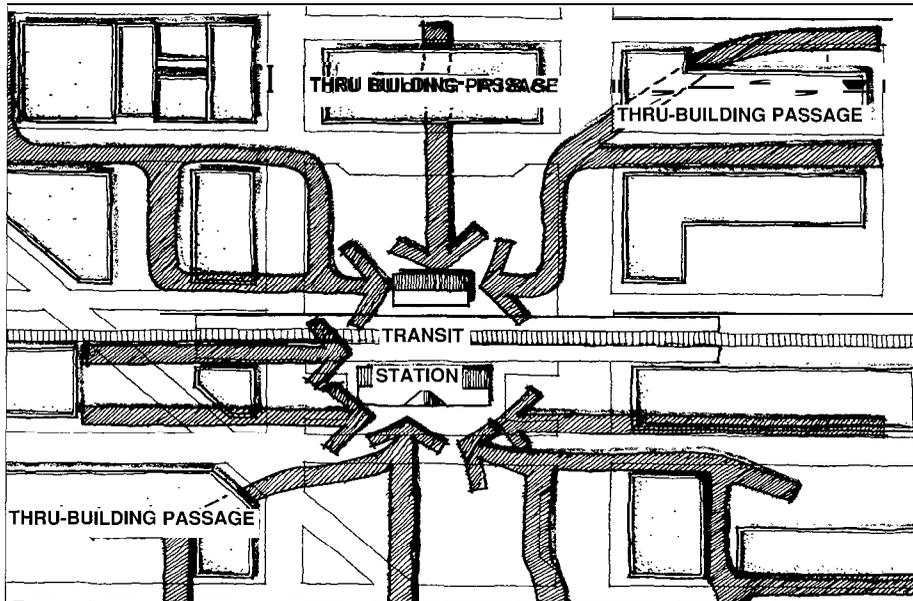
*Sprawling development patterns encourage auto dependency, are not efficient for transit service, and lack the vitality and energy of centered “Communities of Place”. This type of development is discouraged.*



*Centered communities can be more easily serviced by transit, allow people the opportunity to access and travel within the station area as pedestrians, and provide a focus for the surrounding region. This development pattern is preferred.*



Create and maintain multiple pathways within the station area, that quickly, safely, and in an interesting manner guide users to and from the station.



A central fountain acts as a visual focal point for the surrounding commercial development for transit users exiting the nearby Courthouse Square Station, Arlington County Virginia, on the WMATA transit system



activity offers pedestrians a choice of movement patterns to and through the station area to their destination. These choices also expand the potential number of pedestrians who can use the system to access specific points in an efficient and timely manner.

#### Implementation

This technique may be implemented through the following mechanisms:

- Zoning Ordinance
- Station Area Plan
- Circulation Plan
- Site Plan Ordinance
- SID
- Station Site Plan

#### Create Visual Focal Points

Identify the station or key landmarks within the station area as focal points for pedestrian paths and roadways leading to the station area.

These elements will help create an identity for the station area and provide the pedestrian and driver with a sense of orientation. Visual corridors into the station area and to important structures should be clearly defined as part of a station area plan or the master plan. When redevelopment efforts occur within a community, these structures or icons should receive special attention.

#### Implementation

This technique may be implemented through the following mechanisms:

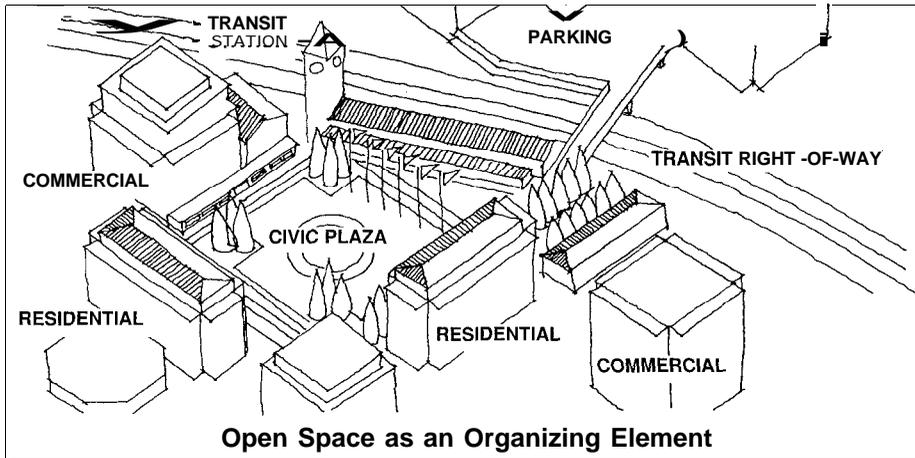
- Zoning Ordinance
- Station Area Plan
- Circulation Plan
- SID

#### Utilize Open Space

Use appropriately sized and designed public open space to help define the station area or activity center as a focal point of the community. Well planned and programmed open spaces often take on a civic role within a community, becoming locations for public events, a place to eat lunch, or a "forecourt" or waiting area for the transit facility. These spaces should be well defined by buildings and other structures and be integrally related to pedestrian paths.

Open space location and design should reinforce the activities that are generated by surrounding land uses. Residential areas have increased needs for active recreation, while commercial uses generate demand for passive open space such as village greens or civic plazas. Access to sunlight within spaces should be maximized.

A clear ongoing plan for maintenance should also be created. If open spaces are not well maintained and



Open spaces should be well defined by buildings, located along well travelled pedestrian paths, and adjacent to activity generating land uses.

programmed, they may become a blight instead of an amenity.

### Implementation

This technique may be implemented through the following mechanisms:

- Zoning Ordinance
- Station Area Plan
- **SID**
- Land Acquisition
- Station Site Plan
- Amenities Enhancement
- Public/Private Partnerships

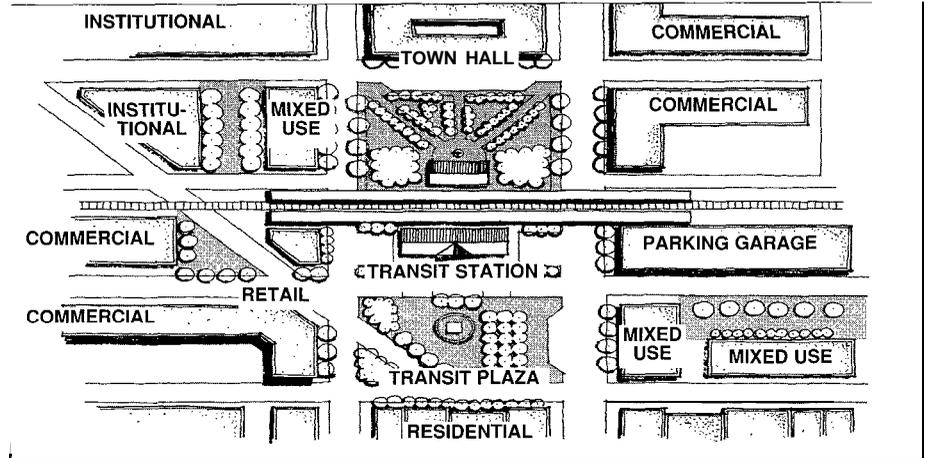
### Make the Transit Facility a Focal Point of Activity

Make the transit facility a functional focal point of the station area. This action will also encourage "trip linking," which is the ability to visit several destinations during one journey.

To help enhance the area as an activity center, the location of public facilities such as libraries, post offices, police dispatch centers, government or municipal centers, daycare centers, or educational facilities within the station itself or directly adjacent to it, should be investigated. Those public uses that generate pedestrian activity throughout the day (e.g. libraries and post offices) should be given preference along with those that are open 24-hours a day, such as taxi stands, all-night delis, and police stations. Such uses are important to creating a sense of security and surveillance around the station.

### Implementation

This technique may be implemented through the following mechanisms:



When used appropriately, open space can become a focus of the station area, improving the transit experience as well as the community itself.

- Zoning Ordinance
- Station Area Plan
- Circulation Plan
- Site Plan Ordinance
- **SID**
- Station Site Plan

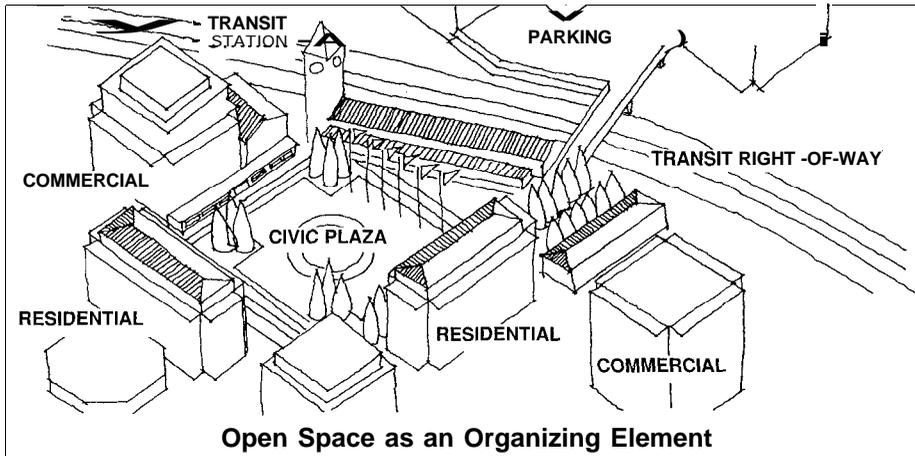
### Application

The focus of this group of techniques is the purposeful creation of relationships and linkages between land uses and transit that are mutually supportive. Because of this, these techniques can be generically applied and adapted to the following station area categories:

- Urban Center
- Regional Hub
- Traditional Town, Village, or Hamlet
- Single Use District or Neighborhood
- Suburban Multi-Use Area



Viewed from NJ TRANSIT's Madison station, this local post office generates pedestrian activity during the station's off hours helping to create a sense of security and surveillance in the station area.



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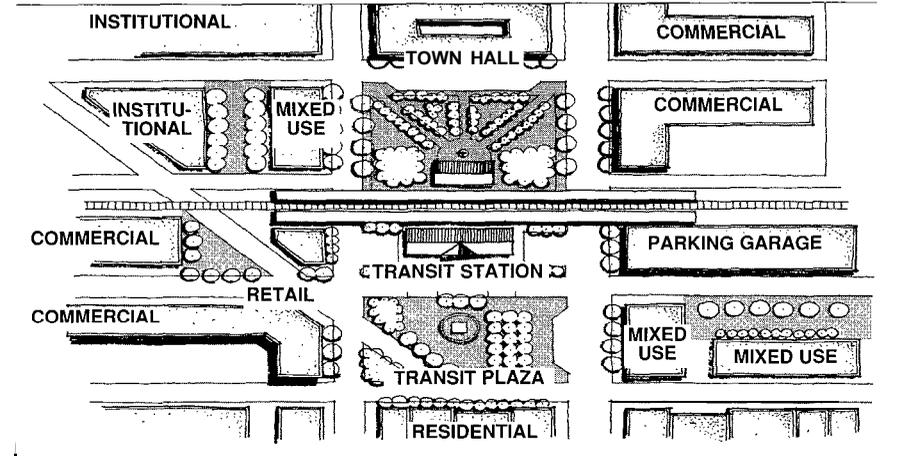
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<b>LAND USE / TRANSIT COMPATIBILITY MATRIX</b>	<b>URBAN CENTER CENTER</b>	<b>REGIONAL HUB</b>	<b>TOWN, VILLAGE OR HAMLET</b>	<b>SINGLE USE DISTRICT</b>	<b>SUBURBAN MULTI-USE AREA</b>	<b>PARK-N-RIDE</b>
Center Office	■	■	■			
Suburban Office			■	■	■	
Local Services	●	●	●	●	●	●
Medical Offices	●	●	●	●	●	●
Hospitals	■	■	■	■	●	
Hotels/Motels	●	●	●	●	●	
Movie Theatres	●	●	●	●	●	●
Restaurants	●	●	●	●	●	●
Local Shopping Center	●	●	■	■	●	
Regional Shopping Center	■	■		■	■	
Convenience Retail	●	●	●	●	●	●
Gym/Health Club	●	●	●	●	●	●
<b>Residential</b>						
0 - 7 Units per Acre		●	●	■	●	
7 - 15 Units per Acre	●	■	■	■	■	
15 - 24 Units per Acre	■	■	■	■	■	
24 Units + per Acre	■	■	■	■	■	
Regional Recreational	■	■	■	■	■	●
Cultural Facilities	■	■	■	■	●	
Day Care Centers	●	●	●	●	●	●
Colleges/Universities	■	■	■	■	■	
Governmental Agencies	■	■	■	■	●	
Other Institutions	■	■	■	■	●	
Manufacturing	●	●	●	■	●	
Auto Repair/Service	●	●	●	●	●	■

**■ Compatible as a Primary Use**  
 A Primary Use is an essential or highly desirable use within the Station Area.

**● Compatible as a Supporting Use**  
 A Supporting Use is a desirable or contributing use within the Station Area.

*Use this matrix as a guide to determine the general types of land uses that may be appropriate within your "transit-friendly" community. The more diverse the transit compatible uses within your community, the greater the potential for "trip linking".*

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Local Services	●	●	●	●	●	●
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Hospitals	■	■	■	■	●	
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Governmental Agencies	■	■	■	■	●	
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## 2.3 Encourage a Mix of Uses within the Station Area and Along Major Transit Routes to Reduce Dependence on the Auto

**A mix of uses on sites surrounding train and bus facilities can stimulate pedestrian activity. This in turn, can enliven an area and further reduce automobile trips, and consequently air pollution, by allowing people to undertake multiple activities on foot.**

For example, a mix of land uses, such as offices with retail and services, allows employees to take care of day-to-day errands within walking distance of their jobs; this could potentially help limit automobile trips outside of work hours.

### TECHNIQUES

#### Concentrate a Mix of Land Uses

Concentrate a mix of land uses at a scale and density appropriate for the community to produce a high level of pedestrian activity.

Rather than spreading out activity-generating uses over a large area and diluting their impact, these uses should be collected within defined areas for maximum impact.

Encourage new uses to locate along blockfronts near the transit facility to provide a focus for the community. Uses should be concentrated along major pedestrian routes that lead to the transit facility.

#### Implementation

This technique may be implemented through the following mechanisms:

- Zoning Ordinance
- Station Area Plan
- SID
- TDR/TDC

#### Application

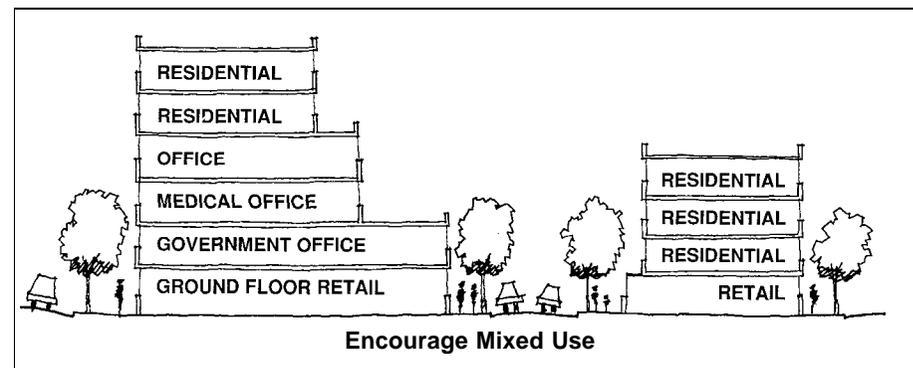
This technique may be applied to the following station area types:

- Urban Center
- Regional Hub
- Traditional Town, Village, or Hamlet
- Suburban Multi-Use Area

#### Create Continuous Activity

Identify land uses that generate continuous pedestrian activity over the course of the day and night. Examples of such uses include convenience retail, services, clothing stores, a variety of restaurant types from diners to more formal dining establishments, institutional uses such as colleges or hospitals, or entertainment uses such as movie theaters. Locate such uses on the ground floor of a building accommodating other pedestrian-generating uses, so that the surrounding streets benefit from the activity of people coming and going.

*A mix of land uses within smaller buildings helps generate increased pedestrian activity.*



*Located only a short walk from NJ TRANSIT's New Brunswick station, (foreground) Rutgers University generates transit use throughout the day.*



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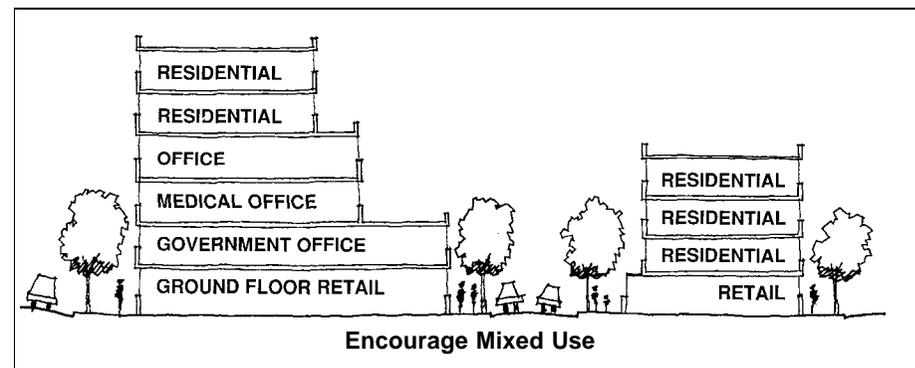
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*Located only a short walk from NJ TRANSIT's New Brunswick station, (foreground) Rutgers University generates transit use throughout the day.*



## 2.4 Implement Design Standards to Improve the Quality of the Public Environment

**The physical character of the station area and its surroundings has a direct relationship to the quality of the experience of pedestrians passing through it as well as the number of transit users who may choose to walk to transit rather than use an alternative mode of transportation.**

Focusing on improving the pedestrian level amenities and connections will require a reconsideration of current thinking about the configuration, relationship, and connections of land uses in suburban environments. Where appropriate, opportunities must be investigated that elevate the pedestrian at least to an equal level with the auto in terms of planning priorities.

### TECHNIQUES

#### Develop A Pedestrian Circulation Plan

Establishing design standards begins with the identification of a pedestrian circulation plan for the station area.

A plan of this nature should clearly note a coordinated system of pedestrian and bicycle paths connecting the outlying districts to the station area for a walking distance of one-quarter to one-half of a mile. With the plan in place, incremental improvements can begin to enhance the quality of the pedestrian environment.

The plan should be coordinated with the Zoning Ordinance and the Site Plan Ordinance to encourage private sector changes that support pedestrian activity.

#### Implementation

This technique may be implemented through the following mechanisms:

- Zoning Ordinance
- Station Area Plan
- Circulation Plan

#### Application

This technique may be applied to the following station area types:

- Urban Center
- Regional Hub
- Traditional Town, Village, or Hamlet
- Single Use District or Neighborhood
- Park-n-Ride

#### Encourage Pedestrian Activity

Encourage pedestrian-generating uses at the ground floor levels of both single- and multi-story buildings to activate the area

surrounding a transit facility or along a route. These uses should serve both transit users and the surrounding community, to help ensure their economic viability and success. On-street parking in

*Adjacent to the NJ TRANSIT station, Metuchen's main street offers a pleasant environment conducive to pedestrians travelling to and from the station.*



*Pedestrian-generating ground floor uses encourage street life and activate the areas surrounding transit stations or bus stops.*



appropriate locations should be available during off-peak hours so individuals from the whole community can use this resource during the day. Pedestrian-oriented uses may include:

- convenience stores
- video rental stores
- pharmacies
- dry cleaners
- variety stores
- hardware stores
- banks
- photocopying
- grocery stores
- bakeries
- shoe repair
- food take-out
- restaurants
- post office

#### **Implementation**

This technique may be

implemented through the following mechanisms:

- Zoning Ordinance
- Station Area Plan
- Site Plan Ordinance
- **SID**

#### **Application**

This technique may be applied to the following station area types:

- Urban Center
- Regional Hub
- Traditional Town, Village, or Hamlet
- Suburban Multi-Use Area

#### **Restrict Ground Floor Uses**

Restrict office space at the ground floor level along key pedestrian ways.

Long expanses of street-level office space without multiple

entries or visual interaction with the street create “dead zones” along pedestrian paths and should be discouraged. Encourage, instead, pedestrian-oriented uses that activate the street with customer traffic, especially those uses that are open beyond normal 9 am to 5 pm business hours.

When it is unavoidable to locate office space at the ground floor level, it should be designed with a maximum of visual variety. Individual building bays should be articulated, windows with views to more active uses within the building should be provided, and devices such as awnings should be used to create a traditional “streetscape.”

#### **Implementation**

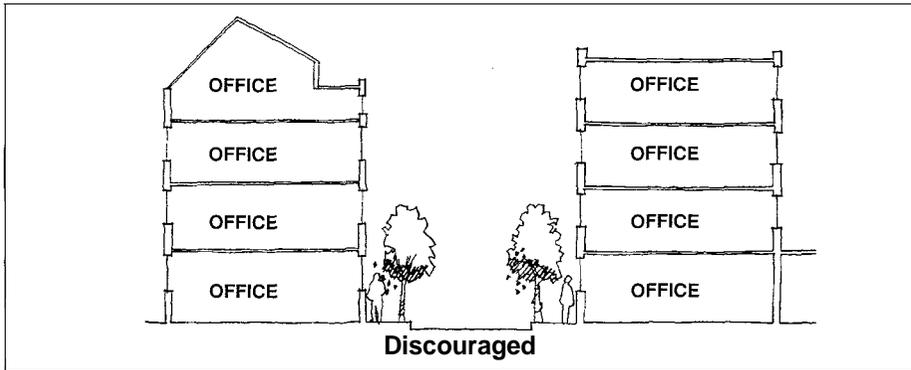
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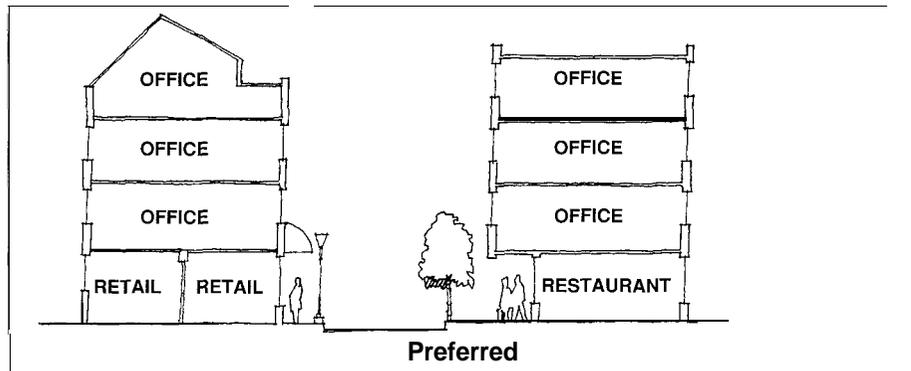
#### **Application**

This technique may be applied to the following station area types:

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- Regional Hub
- Traditional Town, Village, or Hamlet
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*Office uses at the ground floor level of major pedestrian streets add little to the streets' vitality and activity.*



*Replacing office space at the ground floor level with active pedestrian-oriented uses creates a lively and more secure street environment.*

## **Balance Architectural Variety with Continuity**

Encourage architectural variety within an overall framework of design continuity.

The visual variety created by building elements such as storefront entrances, canopies, and **signage**, helps to shorten the sense of walking distances and reduce the monotony of pedestrian trips.

Buildings should include, at the street level, design elements that encourage pedestrian interest such as large display windows, multiple entries, and clear **signage**. Building entries may be recessed into the facade and partially covered, allowing pedestrians to congregate or escape inclement weather.

### **Implementation**

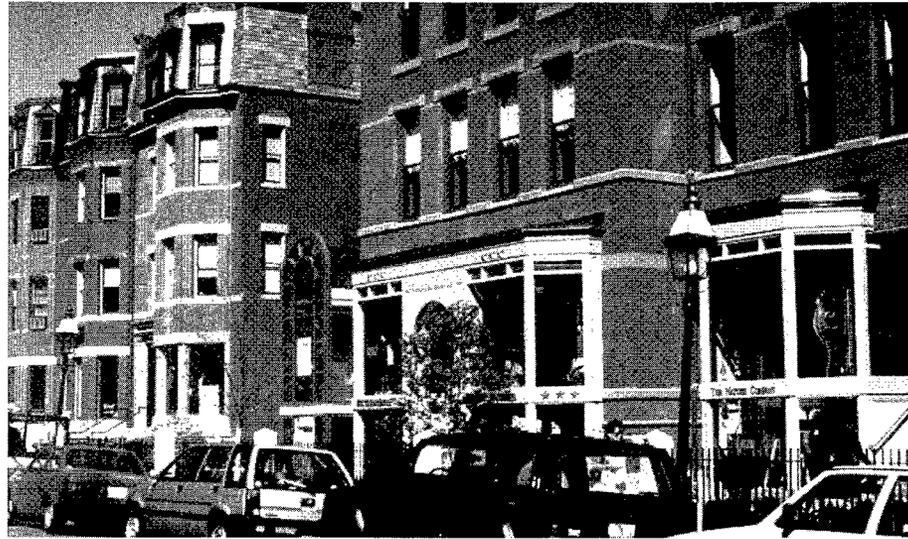
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- Site Plan Ordinance
- **SID**

*The character and activity level of this street, approaching the train station could have been enlivened if this building had provided pedestrian-oriented uses at the ground level.*



This ~~street~~front along Boston's Back Bay maintains a continuity of materials and style while providing a comfortable level of visual variety at the street ~~level~~.



### Application

This technique may be applied to the following station area types:

- Urban Center
- Regional Hub
- Traditional Town, Village, or Hamlet
- Suburban Multi-Use Area

### Regulate Design of Parking Structures

Control the location and limit the size of parking lots and structures along key pedestrian ways.

Parking structures are a poor generator of off-peak pedestrian activity: because of functional requirements, the architectural treatment of their lower levels often consist of blank walls. Parking structures should be limited

to not more than one-third of the street frontage of a lot and, when possible, should be located completely behind buildings. When parking structures are unavoidable along key pedestrian ways within a major commercial area, a “veneer” of pedestrian-generating uses (i.e. shallow retail shops and services) should be incorporated at ground level to activate the street. If this cannot be accomplished, the parking structure should be designed with a handsome, pedestrian-friendly facade, masking the parking within.

### Implementation

This technique may be implemented through the following mechanisms:

- Zoning Ordinance
- Station Area Plan

- Circulation Plan
- Site Plan Ordinance
- SID

### Application

This technique may be applied to the following station area types:

- Urban Center
- Regional Hub
- Suburban Multi-Use Area

### Control Ground Floor Building Treatments

Require a high percentage of glazing and multiple entries along street level uses on key pedestrian routes.

Pedestrians prefer active pathways with a variety of visual amenities. These paths also tend to be perceived as safe and secure due to the volume of pedestrian activity and “eyes on the street” surveillance provided by the occupants of the ground floor space.

A minimum of **50%** of the ground floor level of buildings along major pedestrian streets should be composed of clear transparent glass. Building entries should occur at least once for each **50'** or less of lot frontage. If grilles or gates are used when businesses are closed, open grilles that still permit a view into the shop or storefront are encouraged. This will increase the level of light and visual interest on the sidewalk.

### Implementation

This technique may be implemented through the following mechanisms:

- Zoning Ordinance
- Station Area Plan
- Site Plan Ordinance

### Application

This technique may be applied to the following station area types:

- Urban Center
- Regional Hub
- Traditional Town, Village, or Hamlet
- Park-n-Ride

### Regulate Building Height and Setback

Require that the **profile** of buildings and structures fronting along key pedestrian paths help to **define** these routes, while reinforcing a human-scale environment. Within the station area, buildings should be located at the street line, and their heights should relate to the context of the area. Taller buildings and towers should be set back above a street wall base.

As distance from the station area increases, buildings can be set back from the street line, and other features such as landscaping or fences can define and give scale to pedestrian paths.

In the case of very tall

buildings, a setback of not more than **20'** from the street line should be permitted. For some uses that attract a high percentage of auto trips, such as large retail establishments or supermarkets, deeper setbacks may be in order. In these instances, however, parking should be restricted or limited within the setback.

### Implementation and Application

This technique may be implemented through the following mechanisms:

- Zoning Ordinance
- Station Area Plan
- Site Plan Ordinance

and may be applied to all categories of station area types.

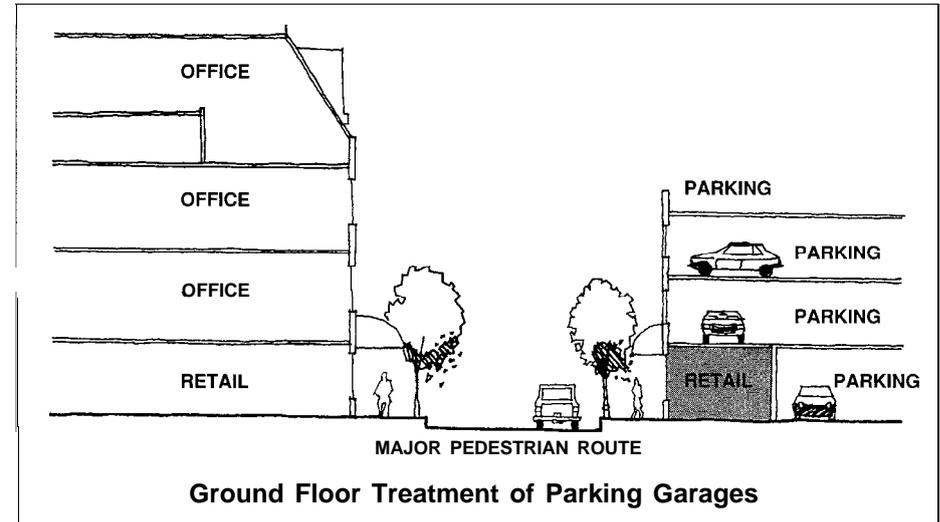
### Upgrade Streetscape Treatments

Improve the streetscape along key pedestrian paths with planting, special ground treatments, lighting, and clear **signage**.

The more interesting and aesthetically pleasing the walk to and from the station area is, the more pedestrians are likely to consider walking to transit as a viable alternative to driving.

At key points along these paths or at the juncture of intersecting paths, opportunities should be provided for pedestrians to stop and rest or reach

*Parking structures along major pedestrian routes should consider incorporating active **ground floor** uses along the **street frontage**.*



*The **large** expanse of windows in this storefront encourages browsing and window shopping and allows people inside to maintain a casual surveillance of street activity.*



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As distance from the station area increases, buildings can be set back from the street line, and other features such as landscaping or fences can define and give scale to pedestrian paths.

In the case of very tall

buildings, a setback of not more than **20'** from the street line should be permitted. For some uses that attract a high percentage of auto trips, such as large retail establishments or supermarkets, deeper setbacks may be in order. In these instances, however, parking should be restricted or limited within the setback.

### Implementation and Application

This technique may be implemented through the following mechanisms:

- Zoning Ordinance
- Station Area Plan
- Site Plan Ordinance

and may be applied to all categories of station area types.

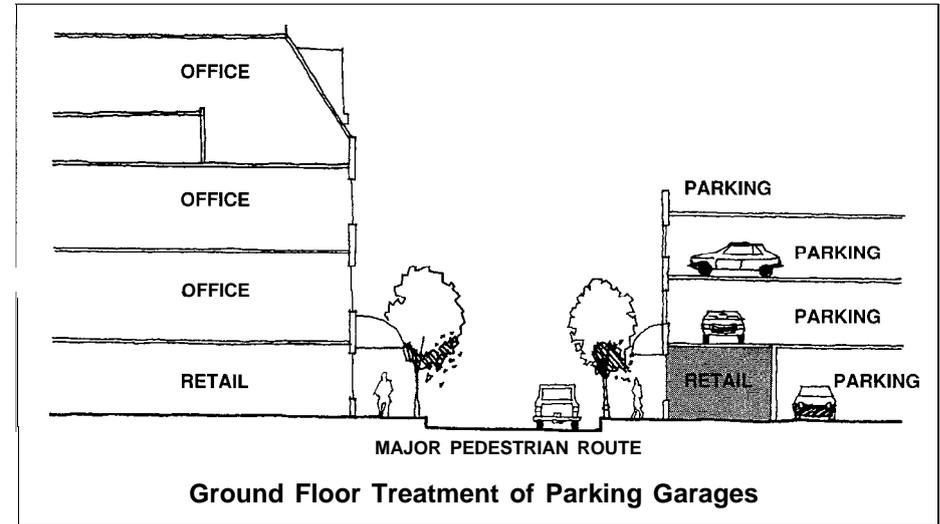
### Upgrade Streetscape Treatments

Improve the streetscape along key pedestrian paths with planting, special ground treatments, lighting, and clear **signage**.

The more interesting and aesthetically pleasing the walk to and from the station area is, the more pedestrians are likely to consider walking to transit as a viable alternative to driving.

At key points along these paths or at the juncture of intersecting paths, opportunities should be provided for pedestrians to stop and rest or reach

*Parking structures along major pedestrian routes should consider incorporating active ground floor uses along the street frontage.*



*The large expanse of windows in this storefront encourages browsing and window shopping and allows people inside to maintain a casual surveillance of street activity.*



## 2.5 Plan for an Appropriate Intensity of Uses in the Station Area and Along Transit Corridors

**A mix of land uses should be distributed throughout the station area at appropriate densities to help define a viable center as well as to support increased use of transit.**

Densities will vary based on the type of station area, land use, and distance from the station. In general, the intensity of use should be greatest close to the transit facility. As the distance from the transit facility increases, density can be gradually decreased.

An increase of density must occur in a coordinated manner based on the goals of the **specific** community. In some instances, increased density may entail mid-rise office buildings, while in others it may simply be residential townhouses. The primary objective is to move away from the practice of encouraging large lot, **auto**-dependent, dispersed development, and toward a more concentrated, **pedestrian**-friendly pattern of development.

### TECHNIQUES

#### Develop a Plan

Develop a station area plan or transit corridor plan that anticipates greater land use intensity in the station area.

Density changes should be coordinated with other issues crucial to the existence of the station area. These issues

include transit service, traffic capacity, parking, and pedestrian amenities.

A plan that addresses all these issues can allow for a planned incremental approach to increased density, while at the same time mitigating any potential adverse effects.

#### Implementation

This technique may be implemented through the following mechanisms:

- Zoning Ordinance

- Station Area Plan
- Land Acquisition
- Site Plan Ordinance
- Public/Private Partnerships

#### Application

This technique may be applied to the following station area types:

- Urban Center
- a Regional Hub
- Traditional Town, Village, or Hamlet
- Suburban Multi-Use Area
- Park-n-Ride



*The Village Mews townhouse development, **adjacent** to NJ TRANSIT's South Orange train station, exemplifies an appropriate increase in density within a station area.*

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The Village Mews townhouse development, adjacent to NJ TRANSIT's South Orange train station, exemplifies an appropriate increase in density within a station area.

to establish a growth boundary within your community. Within this boundary increased densities and more intense land uses should be encouraged. Outside of the boundary, land use density should be gradually diminished. The growth boundary may be established based on a reasonable walking distance from the community center.

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- Station Area Plan
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- Park-n-Ride

### **Encourage a Physical Transition**

Delineate the physical transition from station area densities to less dense uses on the periphery.

Physical cues should create a smooth transition from the

station area to surrounding areas. Local roadway widths should diminish upon leaving the station area and entering lower density residential neighborhoods.

Streetscape treatments should reflect the changing character of the neighborhoods. Heavily travelled streets in the station area should maintain a high percentage of hard surfaces while streets in residential areas should be more appropriate to their landscaped residences.

### **Implementation**

This technique may be implemented through the

following mechanisms:

- Zoning Ordinance
- Station Area Plan
- Land Acquisition
- Site Plan Ordinance
- Public/Private Partnerships

### **Application**

This technique may be applied to the following station area types:

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*In Ballston, Virginia, higher density development was limited to the area around the transit station to insure the integrity of the surrounding lower density neighborhoods.*

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## 2.6 Identify Key Development Opportunities Related to Existing and Future Transit

Opportunity for **change and the creation of “transit-friendly” municipal design is greatest in “centers” and other areas** where **development occurs near existing transit facilities. This can be encouraged by municipalities willing to plan for the future and anticipating joint development opportunities.**

### TECHNIQUES

#### Identify Opportunities to Focus Development at and Around Transit Stations

Designate specific sites at or adjacent to a station as transit development sites, rather than encouraging development in peripheral areas.

Development opportunities should be prioritized in coordination with existing plans and zoning. Development activity should concentrate at existing or planned transit facilities, and radiate outward from this hub.

By virtue of their proximity to transit, these sites should have reduced parking requirements and/or increased densities. These advantages will create added incentive to develop these sites before others.

#### Implementation

This technique may be implemented through the following mechanisms:

- Zoning Ordinance
- Station Area Plan
- Site Plan Ordinance
- Special Improvement

- District (SID)
- TDR's and TDC's
  - Land Acquisition
  - Station Site Plan
  - Public/Private Partnerships

#### Application

This technique may be applied to the following station area types:

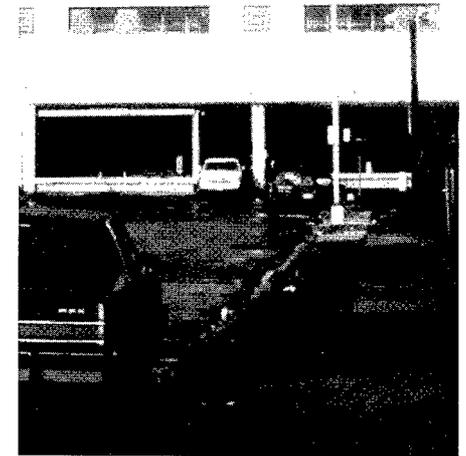
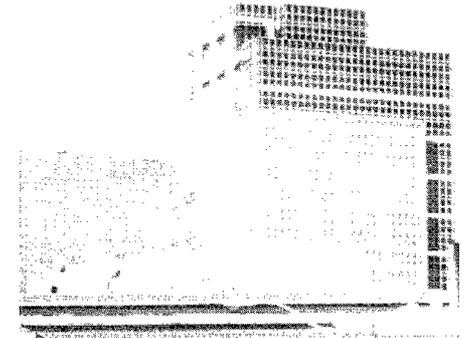
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- Regional Hub
- Traditional Town, Village, or Hamlet
- Single Use District or Neighborhood
- Suburban Multi-Use Area

#### Review Joint Development Options

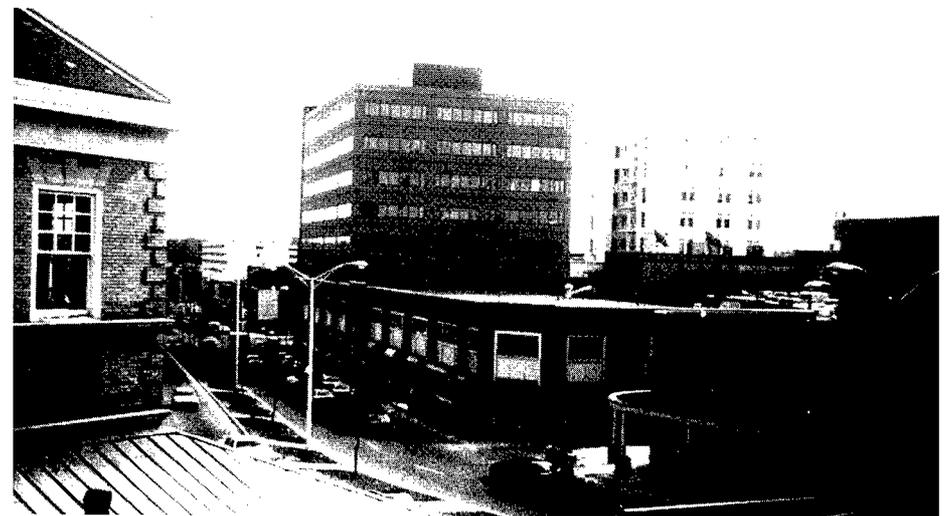
Identify opportunities that may exist to undertake joint development at/or near transit facilities.

Private owners, governmental agencies, or NJ TRANSIT may have properties beyond those necessary to carry out their mission and may be willing to discuss the possibility of joint development as part of an overall station area or transit corridor plan.

*High density development at and around Penn Station Newark reflects the easy access to the vast transit network centered on this station.*



*Recent development in downtown New Brunswick has been located in close proximity to the NJ TRANSIT station seen in the left foreground.*



Joint development opportunities could include a range of land uses, including joint-use parking facilities.

**Implementation**

This technique may be implemented through the following mechanisms:

- SID
- Land Acquisition
- Public/Private Partnerships

**Application**

This technique may be applied to the following station area types:

- Urban Center
- Regional Hub
- Suburban Multi-Use Area
- Park-n-Ride

**Consider Redevelopment**  
Consider redevelopment of existing buildings, as well as new infill development.

Many transit facilities are located in what are now peripheral areas of a community, sometimes surrounded by dilapidated or inefficiently utilized properties. Redevelopment of these areas should be considered as one alternative in planning the future.

**Implementation**

Redevelopment may be implemented through the following mechanisms:

- SID
- TDR's and TDC's
- Land Acquisition

- Public/Private Partnerships
- Zoning Ordinance
- Station Area Plan
- Site Plan Ordinance

**Application**

This technique may be applied to the following station area types:

- Urban Center
- Regional Hub
- Traditional Town, Village, or Hamlet
- Suburban Multi-Use Area

**Utilize Structured Parking**

Consider the option of replacing surface parking lots with structured parking.

In densely developed areas, where land is scarce and land costs are high, it may be desirable to reduce or replace surface lots with structured parking. Structured parking might also be appropriate in a joint development scenario, in conjunction with a commercial or institutional development. In this case, the structured parking can be jointly utilized both by the development's employees and transit users.

During the initial phases of redevelopment, surface parking lots may be used as an interim use. The lots and adjacent uses should be planned and designed for an eventual change over to structured parking as densities and land costs increase.

*Adjacent to the NJ TRANSIT New Brunswick train station this development parcel will eventually incorporate institutional, commercial and parking uses.*



**Implementation**

This technique may be implemented through the following mechanisms:

- ❑ Zoning Ordinance
- ❑ Station Area Plan
- ❑ Site Plan Approval Ordinance
- ❑ **SID**
- Land Acquisition
- ❑ Public/Private Partnerships

**Application**

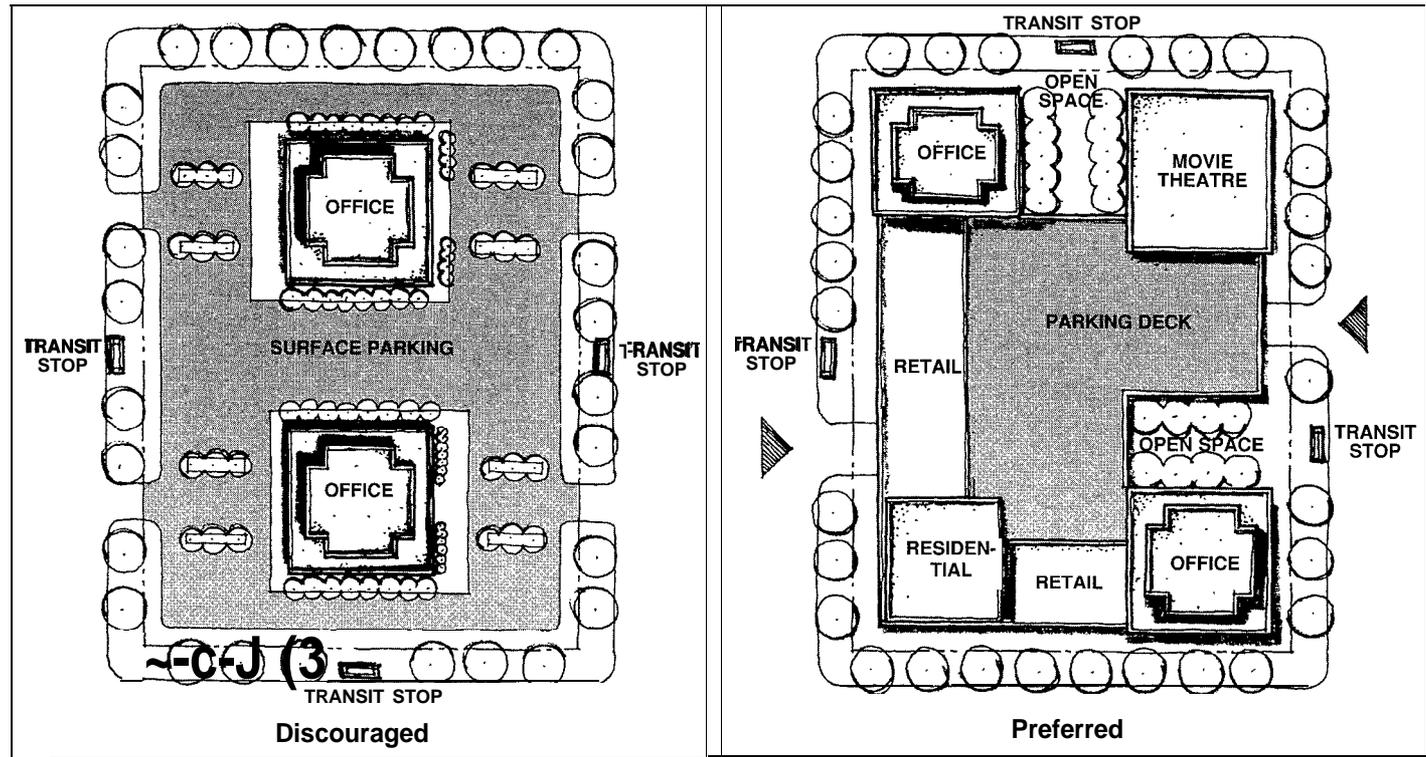
This technique may be applied to the following station area types:

- Urban Center
- Regional Hub
- Suburban Multi-Use

**Encourage Communication**

Provide for a clear transfer of information with NJ TRANSIT and other transit providers serving the area.

- ❑ Identify potential rail and bus ridership that could be generated from proposed station area improvements and proposed development plans for incremental development phases and ultimate build out;
- ❑ Review the impact of increased ridership on the transit system: and,
- ❑ Identify bus routes that may assist in linking uses and that might provide important intermodal links.



Single land uses surrounded by **surface** parking are **inefficient** users of land and do not maximize the potential of transit.

Multiple land uses with a **jointly developed** parking deck provide opportunities for shared parking and create transit destinations.

**Implementation**

This technique may be implemented through public/private partnerships.

**Application**

This technique may be applied to the following station area types:

- ❑ Urban Center
- ❑ Regional Hub
- ❑ Traditional Town, Village, or Hamlet

- Single Use District or Neighborhood
- Suburban Multi-Use Area
- Park-n-Ride

**Implementation**

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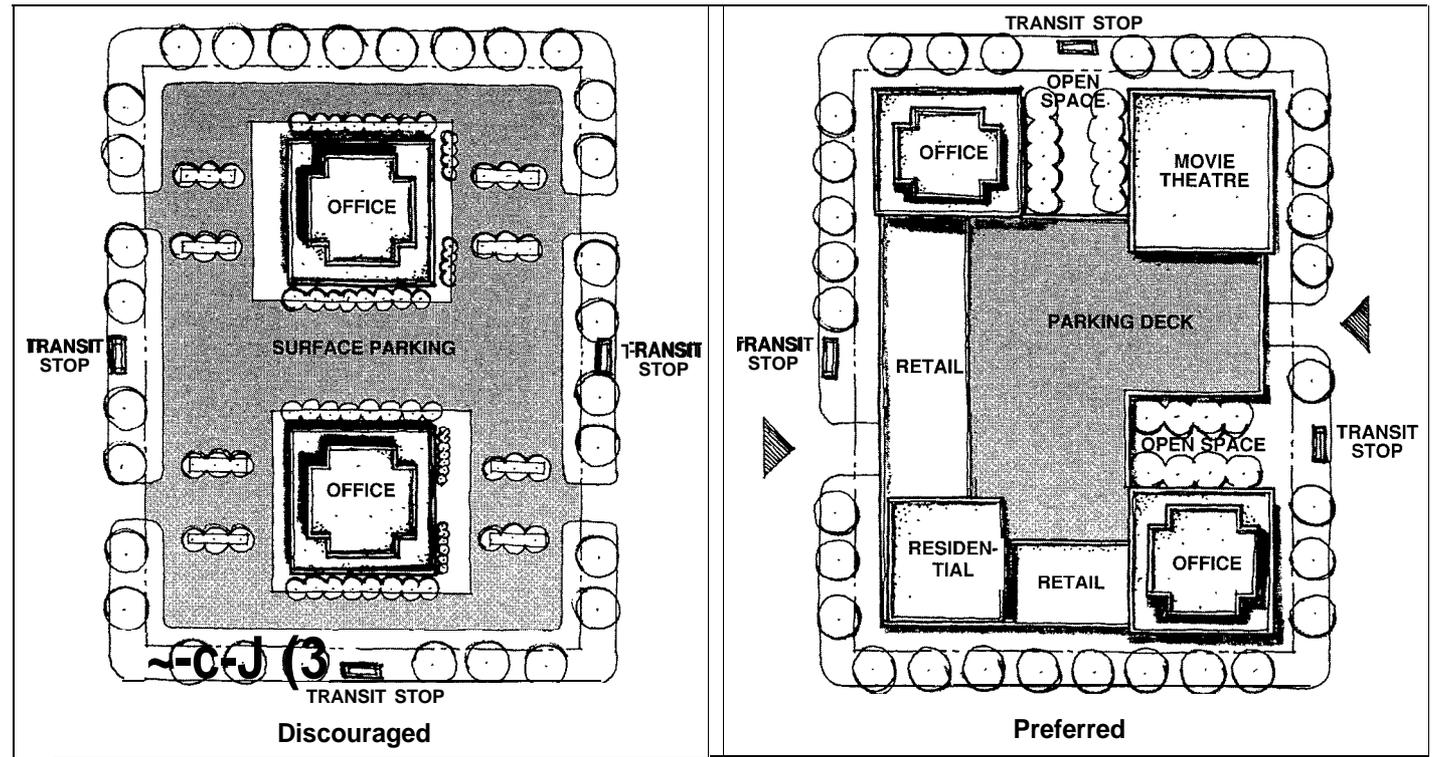
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### 3.1 Provide for Increased and Improved Pedestrian Circulation Opportunities

**Separate, direct, and continuous access routes for pedestrians between the station area and surrounding land uses can provide an impetus for increased transit use.**

Pathways should follow the most direct routes and should be safe, well lit, and easily identifiable for pedestrians. The development of site specific guidelines to be considered during site plan design or capital improvement planning can ensure the implementation of enhanced pedestrian circulation opportunities.

#### TECHNIQUES

##### Locate Walkways Carefully

Locate walkways in a manner which provides unimpeded access to commercial buildings, residences, and commercial or retail uses from transit stations, or streets with a transit stop.

Providing clear and direct pathways between stations and passenger destinations can increase the desirability of transit as a mode of travel. Walkways should be designed to be direct and continuous, and to minimize unnecessary turns, jogs or meandering. The width of these walkways should be designed in accordance with anticipated traffic; while a four-foot width may be adequate for low density residential areas, a

five-foot minimum width is necessary as land use intensity increases.

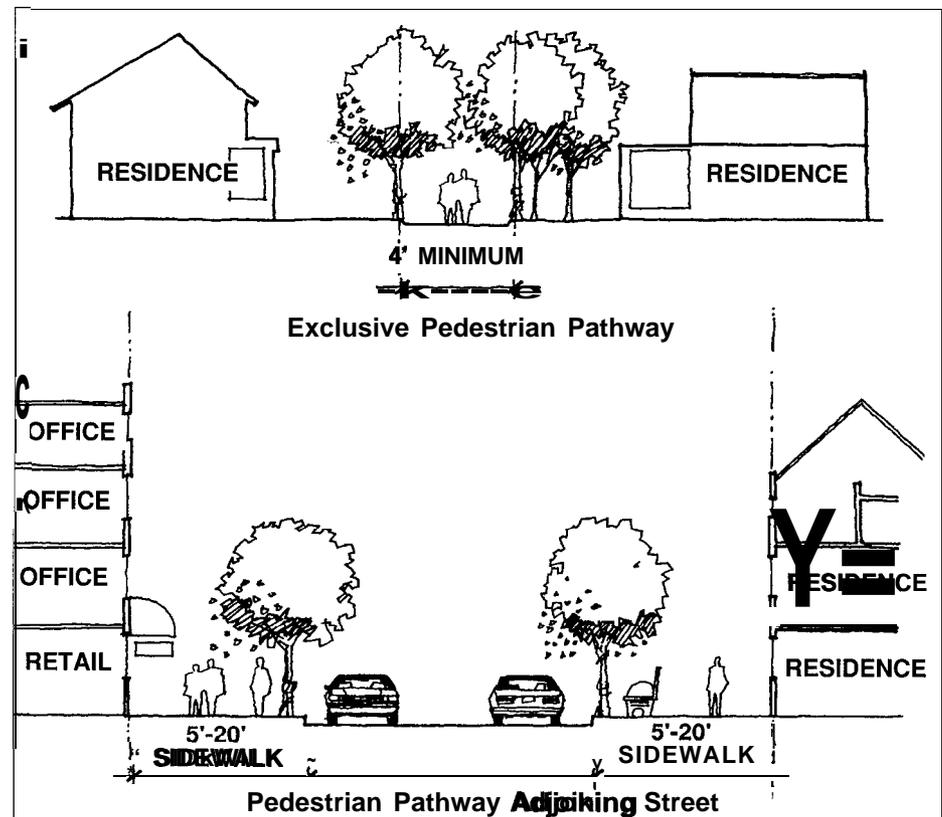
##### Facilitate Easy and Direct Access to Transit Stops from Office or Retail Uses

Bus stops should be located within short walking distances of the front door of offices and large retail uses. The walk to the bus stop should be shorter than the walk to the nearest parking space. Facilities for queuing passengers should be made by either providing larger entry spaces within the building, covered canopies or shelters. A pullout bay should be provided and clearly marked as a “no parking” zone.

##### Balance Pedestrian Flow through Parking Lots

Balance the location and flow of parking with pedestrian circulation, emphasizing the movement of pedestrians. Pedestrian circulation should be given a high priority when designing parking facilities. Access through parking facilities for pedestrians should not be burdensome, and should avoid barriers such as earthen berms,

Require pedestrian walkways to be incorporated into all new developments; walkway widths will normally range from a minimum of 4 feet to a maximum of 20 feet.



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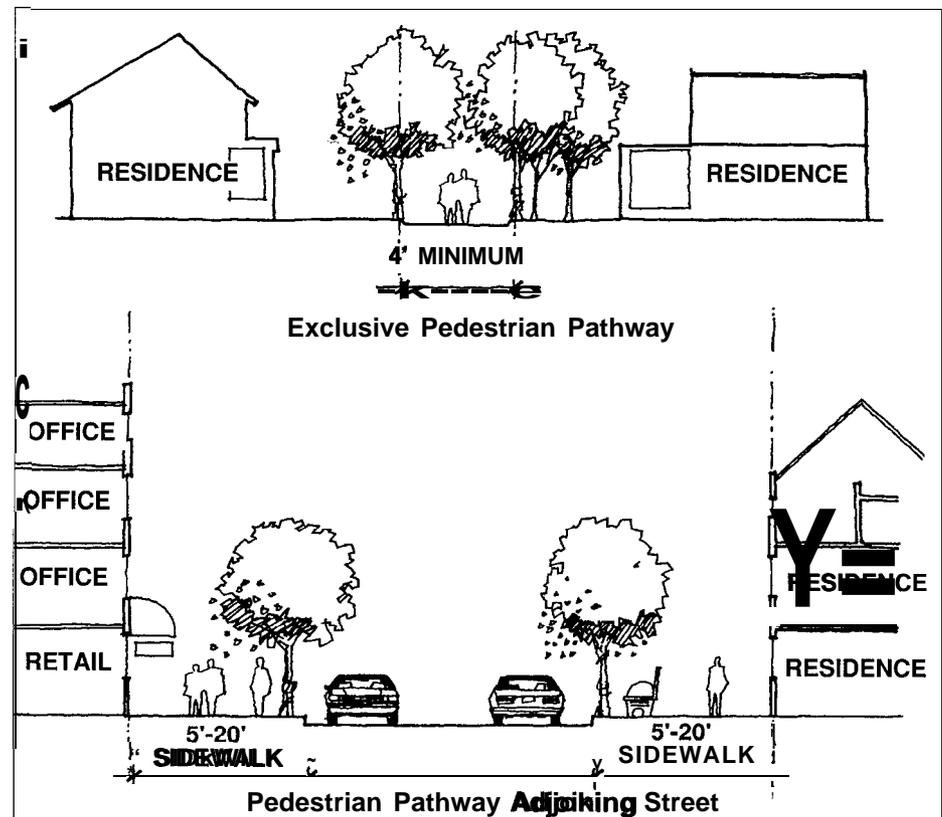
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## 3.2 Encourage Walking and Bicycling as Alternative Modes of Station Access

***Pedestrians and cyclists can be encouraged to travel greater distances when they feel secure and when they are in an interesting environment,***

Implementation of a program to identify, sign, and make secure, interesting paths leading directly to transit stops and stations, can increase system usage.

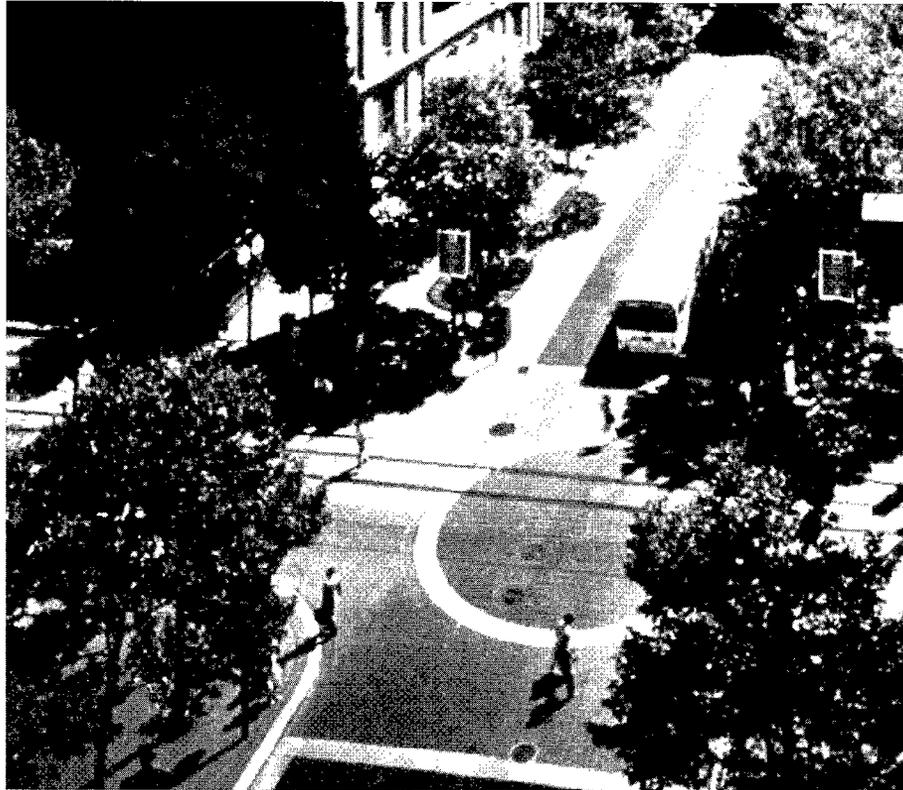
Since all transit passengers are pedestrians at some point during their commute, it is important to provide a clear and direct route for them. Natural and built barriers can discourage walking; removing them may be desirable if it can be accomplished inexpensively and with minimal effort.

### TECHNIQUES

#### Minimize

#### **Pedestrian/Vehicular Conflicts**

Provide convenient, readily identifiable crosswalks and phased traffic signals to accommodate pedestrian movements. Prolonged waits at intersections can frustrate pedestrians and discourage them from walking to their destination. Signal phasing should give priority to pedestrian movements, reduce wait time, and minimize potential safety problems. Crosswalks should be clearly identified by techniques such as pavement marking, pavement variations, and signage.



*Clearly marked crosswalks direct pedestrians to safe street crossings along the length of the Portland Transit Mall in Oregon.*



*Pedestrian pathways should be attractive, direct, and foster a sense of personal security. Building entries should open directly on to pathways to encourage activity and provide "exits" from the street in case of emergency.*

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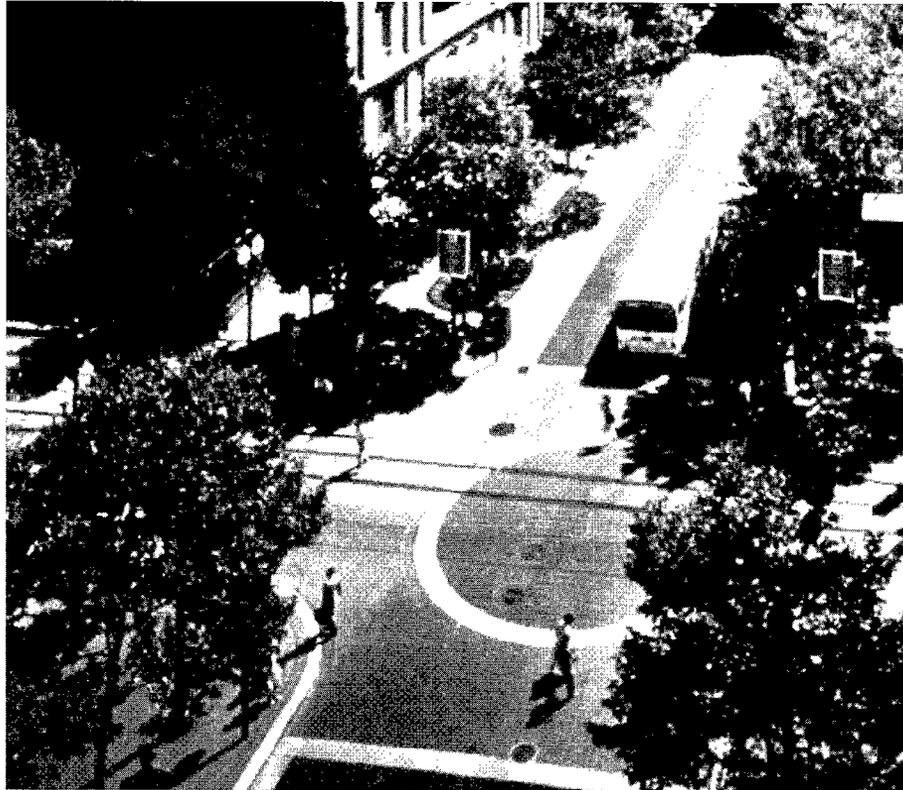
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centers, institutional uses and community facilities.

Bicycle access to transit stations can be adversely affected by barriers such as potholes, lack of bicycle grates on storm sewer inlets, and inadequate or insecure bicycle storage racks at the station. These disincentives to bicycle travel should be minimized or eliminated.

### **Provide Bicycle Storage at Transit Facilities**

Secure bicycle parking facilities at the transit station will encourage users to bicycle ride as one leg of their transit trip.

Bicycle racks or lockers located at the transit facility in an unobtrusive manner offer safe, secure and convenient storage space for bike users. The location of the lockers or racks should be coordinated with existing bicycle paths and should have clear signage directing users to them.

### **Consider Separation of Vehicular and Pedestrian Movements**

In extreme cases of potential pedestrian/vehicular conflict, utilize grade separation to remove pedestrian pathways from vehicular and transit traffic routes, if no other viable alternative exists.

Such techniques are generally undesirable and costly, and

should only be utilized as a last resort when other measures prove unfeasible. Attempts to maintain pedestrians at street level should be given priority. The techniques to separate traffic may include pedestrian bridges or tunnels. Careful planning is necessary to ensure that these spaces remain safe, defensible, and well maintained.

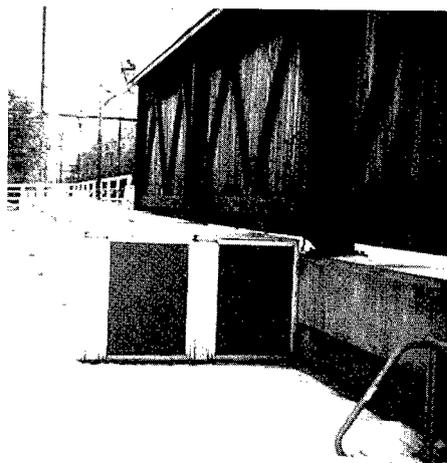
### **Implementation**

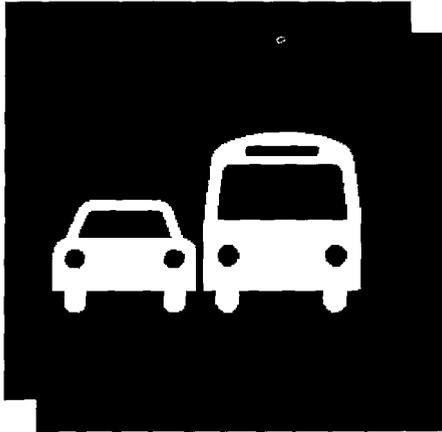
Land development ordinances should be amended to recognize the value of providing unimpeded circulation patterns for both pedestrians and bicyclists. The incorporation of proper design standards within local site plan subdivision regulations will assist in obtaining this goal.

### **Application**

Walking and bicycling are more likely to be modes of access as one moves closer to an urban area. Rural areas will have a limited number of such commuters, depending on existing and proposed land uses within the station area.

*Bicycle access to transit is of little use if secure storage facilities are not available. Both bicycle racks and storage lockers are provided at the Metuchen, NJ station, top two images, and adjacent to the Pentagon City station in Arlington County, Virginia (WMATA), bottom image.*





## Chapter 4 – Vehicular Access, Circulation and Parking

*The success of a transit system depends on its users being able to readily reach the station area by a variety of transportation modes, such as bus, auto, bicycle or walking. Therefore, it is of paramount importance that vehicular traffic is safely and efficiently accommodated by the street network surrounding a station; that it create minimal conflicts with pedestrians; that an appropriate amount of parking be available; and that the character of the area not be undermined by (vehicular) traffic.*

The ability to integrate the competing requirements of alternative modes of access to a transit facility is key to the success of the facility and the quality of life in the community. The type of transportation facility (e.g. park-n-ride vs. urban center) within your community will, to a large degree, dictate the

vehicular characteristics to be encountered when attempting to implement transit-supportive planning policies. For instance, a park-n-ride will normally have a very high parking demand while a large urban station will have more users arriving on foot or by other transit modes. These characteristics, however, can

be organized to create conditions that work for both your community and the transit users.

---

In heavily trafficked areas, prioritized access to the station and station area for buses and HOVs may reduce traffic conflicts and can allow greater numbers of people to reach transit.

*Easy access to connecting buses at the New Brunswick Station allows many Rutgers University students to use transit as their primary means of reaching the school.*



## 4.1 Encourage Intermodal Transfers Between Various Modes of Transit

**The ability of passengers to transfer *easily* between modes of transit plays a key role in encouraging transit ridership.**

Improving the physical relationship between different transportation modes will reduce the inconvenience associated with transfers. Intermodal transfers are simplified by designing clear and convenient transfer opportunities.

### TECHNIQUES

#### Encourage Convenient Intermodal Transfer

Design transit facilities to allow convenient intermodal transfer opportunities.

A coordinated transit system, linking bus stops and transit stations, will allow additional opportunities for riders to reach their destination without using automobiles.

The location of bus stops should not exceed a maximum of **660 feet (1/8 mile)** and should preferably be within **250 feet** of the point of transfer. This distance allows a walking transfer of no more than two and a half minutes, and preferably less than one minute.

#### Consider Implementing Exclusive Bus and HOV Lanes at the Station

Provide exclusive bus lanes, entrances and exits, and pickup and drop-off areas if

traffic volumes warrant.

Giving preference to bus and High Occupancy Vehicles (HOV) when entering and exiting the station area can help to increase ridership by getting greater numbers of people to and from the station efficiently. In addition, separate ingress and egress reduces potential modal conflicts, while increasing pedestrian and vehicle safety.

#### Implementation

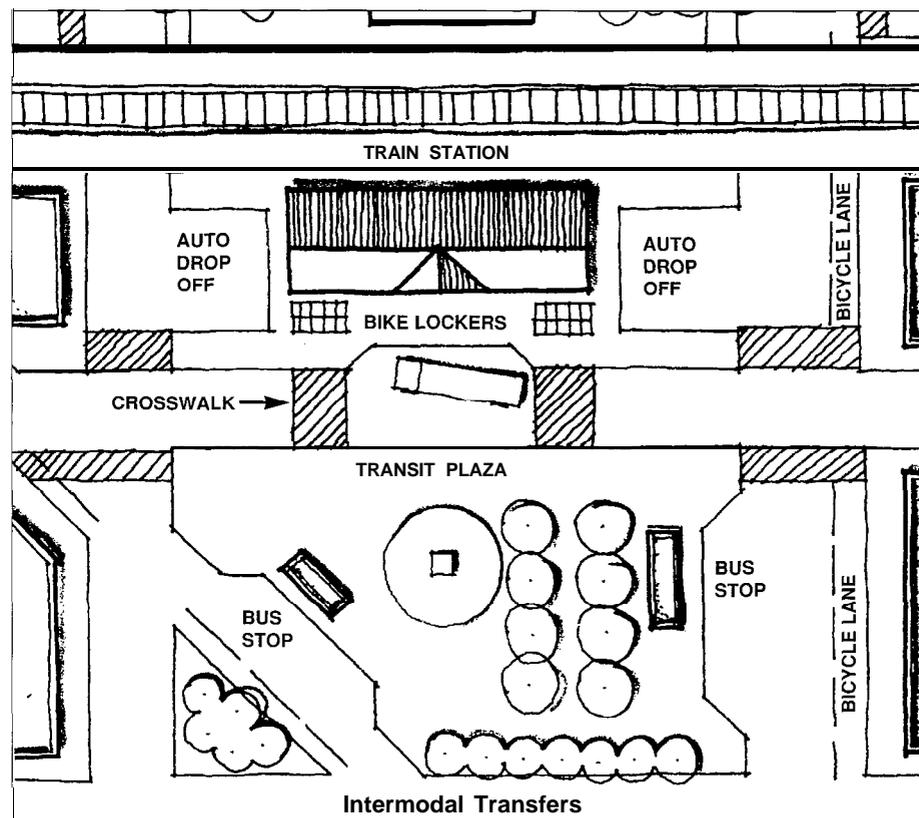
These techniques can best be implemented as transit facilities are planned, or as part of the site plan and subdivision review process for developer proposals.

Federal Clean Air Act and the New Jersey Air Pollution and Traffic Congestion Act, and the State Development and Redevelopment Plan Consistency Review also encourage intermodality.

#### Application

Opportunities for "intermodality" will likely decrease as distances from an urban center increase. However, linkages between various modes of transportation are available throughout the range of station areas in New Jersey.

*Intermodal transfers can be facilitated in the station area by providing prioritized and adjacent access for connecting buses and bicycles; and convenient and secure bicycle storage; and, easily accessible auto drop-off areas.*



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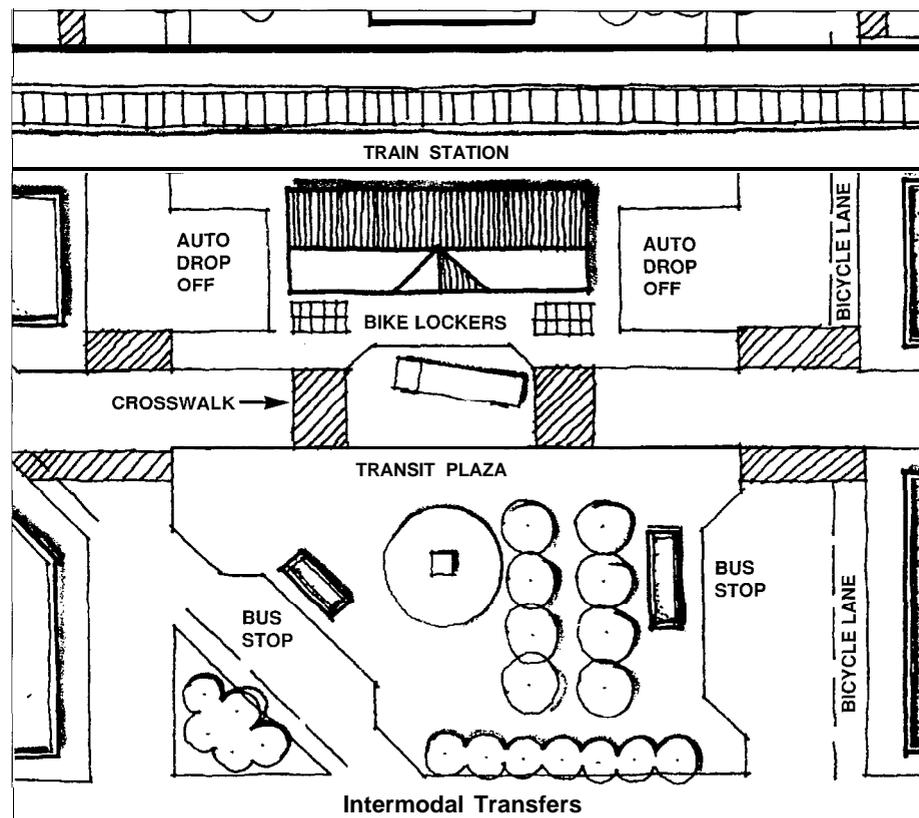
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#### Application

Opportunities for "intermodality" will likely decrease as distances from an urban center increase. However, linkages between various modes of transportation are available throughout the range of station areas in New Jersey.

*Intermodal transfers can be facilitated in the station area by providing prioritized and adjacent access for connecting buses and bicycles; and convenient and secure bicycle storage; and, easily accessible auto drop-off areas.*



maximizes opportunities for the operation of public transportation vehicles and access by pedestrians and bicycles. Transit vehicles cannot operate in ~~cul-de-sacs~~ or on excessively steep, narrow, winding streets. Therefore, street design of principal, arterial, and collector streets should accommodate the needs of public transportation vehicles. On arterial roads, maximum grades should not exceed 7%, and on local roads grades should not exceed 8%.

Passenger-collection points must be within a 5 - 10 minute walk of residences, necessitating frequent cross streets and the avoidance of numerous culs-de-sac. Without these provisions, bus routes serving an area become excessively lengthy and time consuming, thereby discouraging transit ridership or resulting in long walks to the transit stop.

### **Encourage a Priority of Circulation**

Formulate circulation plans for new development which reflect an emphasis on transit.

Preference should be given first to pedestrians and bicyclists, then to transit and High Occupancy Vehicles, and lastly, to private autos.

Walking distances to transit stops or stations from

adjacent development should be as direct as possible. Bicycle routes and High Occupancy Vehicle lanes should be given preference in the overall priority. Street design should also reflect this hierarchy.

Street systems should be designed with narrow secondary and local streets which contain on-street parking. Transit vehicles should be able to be accommodated on arterial, collector, and primary streets. On-street parking should be located so that it does not conflict with transit vehicle operation. The street hierarchy should feed into itself efficiently, and with a minimum of confusion, in order to allow for the efficient circulation of both transit and private vehicles.

### **Improve Street and Intersection Design**

Design streets and intersections to accommodate and give preference to transit vehicles, pedestrians, and bicycles. This is known as "traffic calming." One example of a "traffic calming" technique is to reduce widths of streets when possible to favor pedestrians over **non-**transit vehicles. Narrower cartways, slower vehicle speeds, and wider sidewalks will encourage pedestrian activity. Other specific actions

might include:

- providing a coordinated network of bicycle lanes, with the transit station as the central destination or **origin**
- providing signal-controlled pedestrian crosswalks at all major intersections
- allowing on-street parking as a buffer between pedestrians and vehicular **traffic**

Street design should include provisions for high occupancy vehicles. Collector and arterial roads should be designed with bus pullouts and sidewalks for pedestrian use. Intersections should be designed with curb return radii that accommodate bus turning movements but still allow pedestrians to easily cross the street. Queue-jump lanes and possibly signal pre-emption should be provided at intersections to allow for high occupancy vehicle preference.

### Encourage the Use of Mandated Pullout Bays

Include transportation amenities, such as bus pullouts, into street network design.

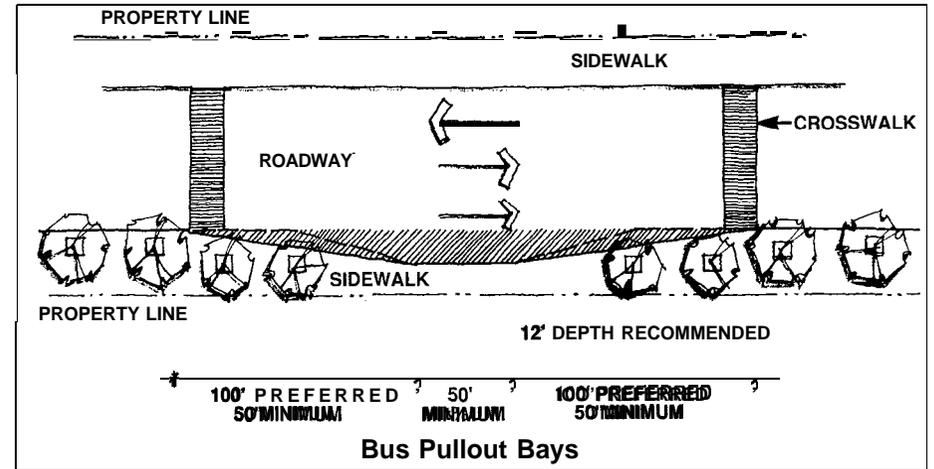
Bus pullout bays should be incorporated into the initial design of roadways, and should be retro-fitted, where possible, into the existing street network. Establishment of pullout bays increases safety for both transit riders and through traffic, by reducing potential vehicle conflicts.

NJ TRANSIT can work with communities to identify locations for, and design, bus pullout bays. Shelters should be provided to protect pedestrians from inclement weather.

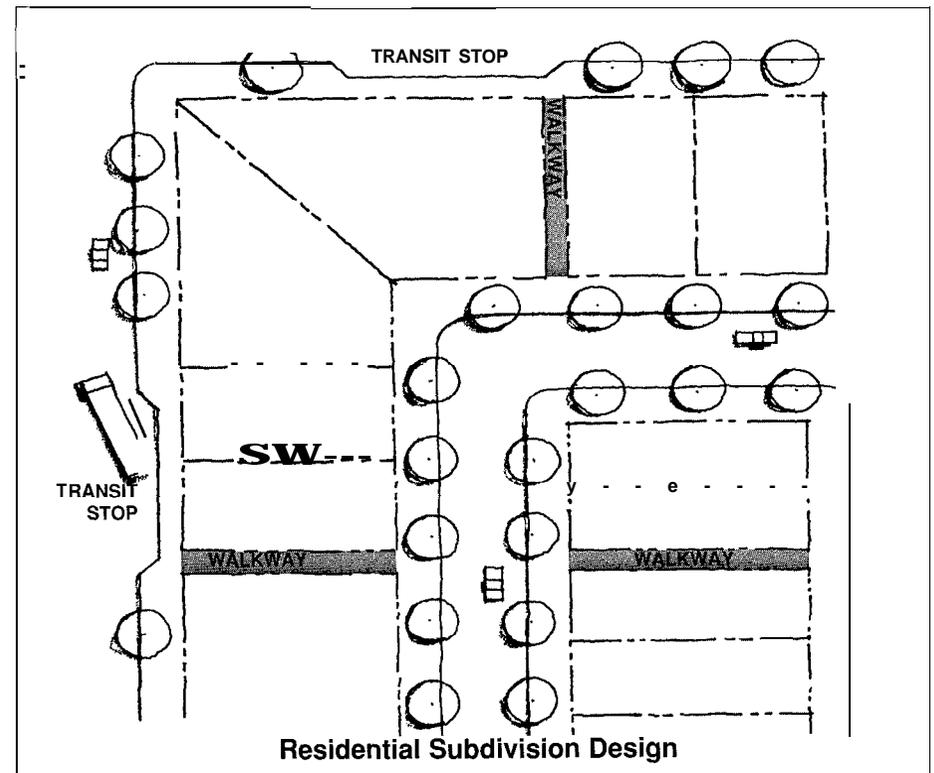
### Avoid Physical Barriers

Avoid designs which incorporate physical barriers between developed land uses and transit stops or stations.

Pedestrian traffic is of paramount importance to the success of any transit station. Avoid creating physical barriers such as berms, walls or fences between residences or commercial developments and transit stops. The removal of physical barriers which block direct and safe pedestrian access to the station or transit stop from surrounding development can result in increased reliance on transit service.



Bus pullout bays designed to the above standards will decrease potential vehicular conflicts by removing buses from the active traffic lane during passenger pick-up and discharge.



Subdivision design should incorporate walkways that allow direct pedestrian connections to transit stops.

### Link Transit Stops

Link transit stops or stations to residential subdivisions by a network of pedestrian pathways.

Providing walkways which link various sections of the subdivision to collector or arterial roads with bus stops will result in more efficient pedestrian circulation. Walkways should be identified during the initial design phases and preserved through an easement.

### Encourage Clustered Development

Suburban office developments should be configured to

capitalize on centralized bus stops.

Typically, suburban office developments are planned independently of each other, requiring large amounts of parking for each development and less efficient bus access. The clustering of these independent developments into a planned and centralized configuration permits easier transit access, a larger concentration of users, and the potential for decreasing the overall parking supply. The potential also exists to link a series of these planned developments with service roads to further increase the

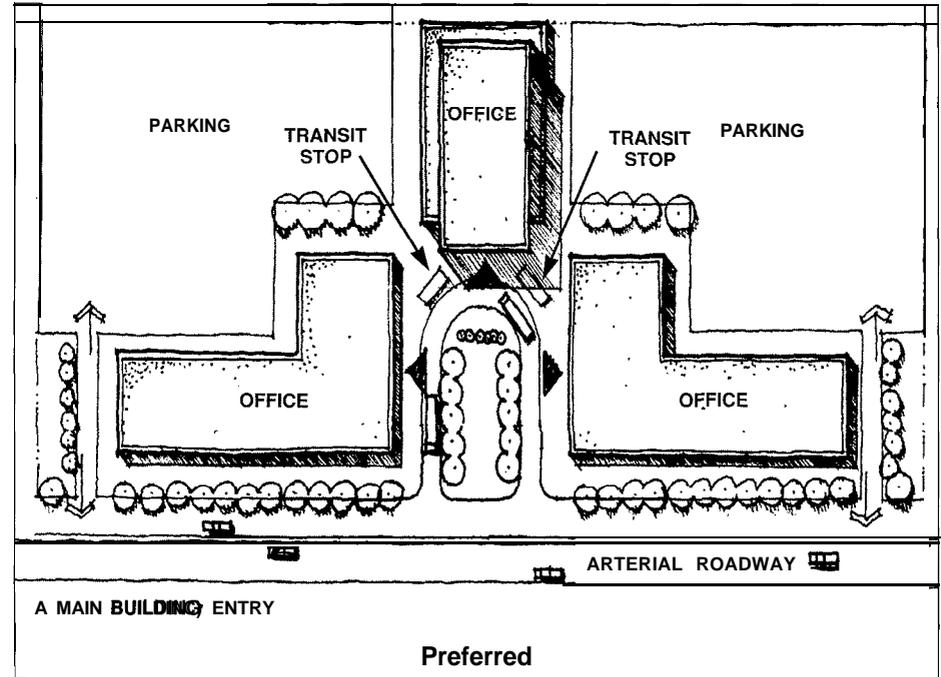
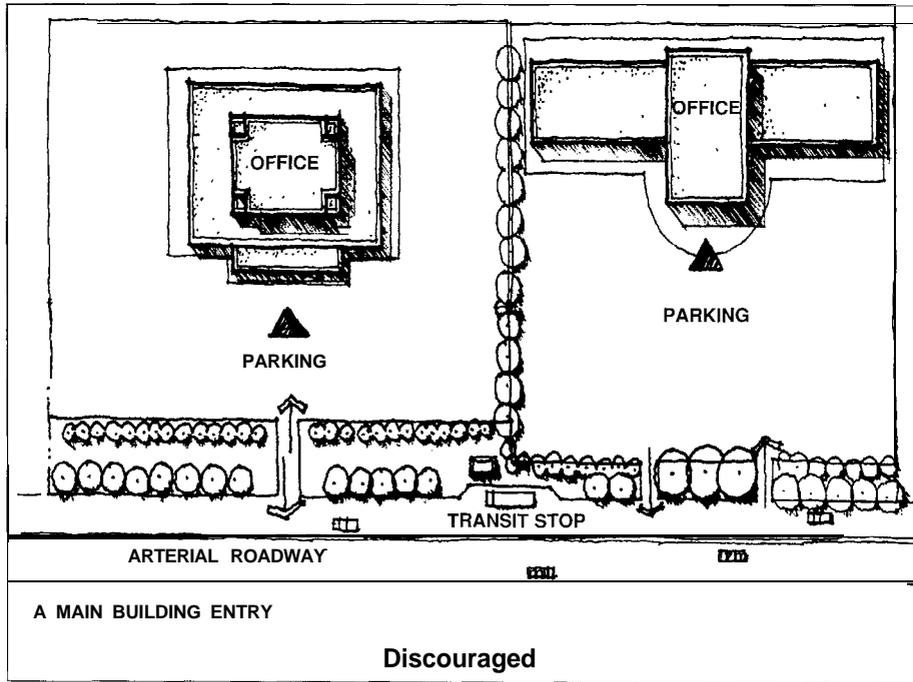
efficiency of transit service.

### Implementation

The inclusion of proper circulation patterns can be addressed in the circulation element of the municipal Master Plan, local and county design standards, as well as being incorporated into the capital improvement planning/design process.

### Application .

Establishing circulation patterns that support transit use should be applied throughout the State.



*Distinct suburban commercial developments, surrounded by parking and distant from transit stops, encourage auto use over transit use.*

*Clustered commercial developments with reduced parking requirements, centered on easily accessible transit stops, encourage the use of transit.*

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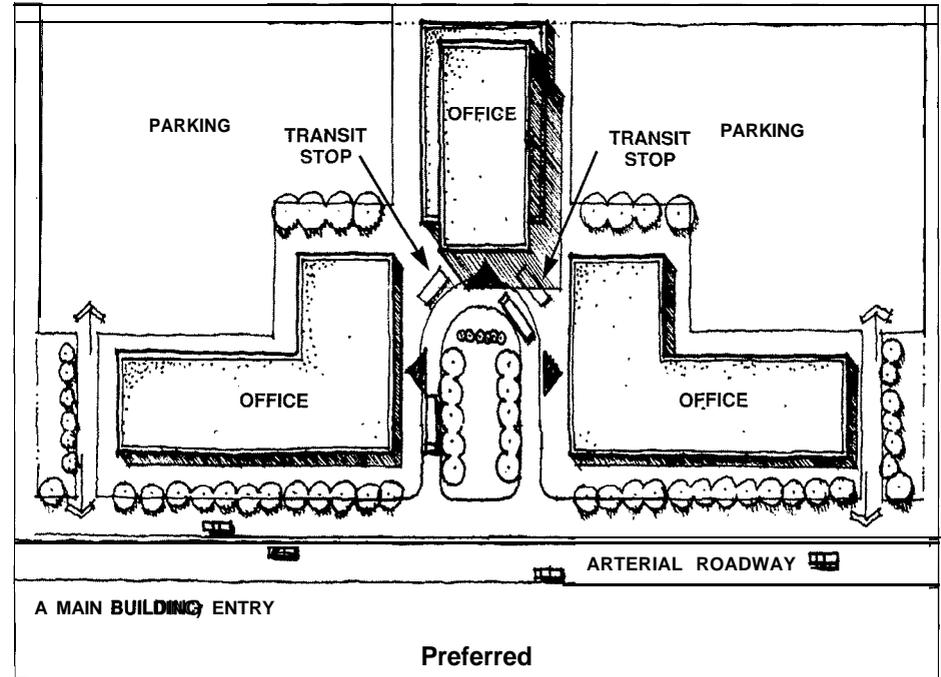
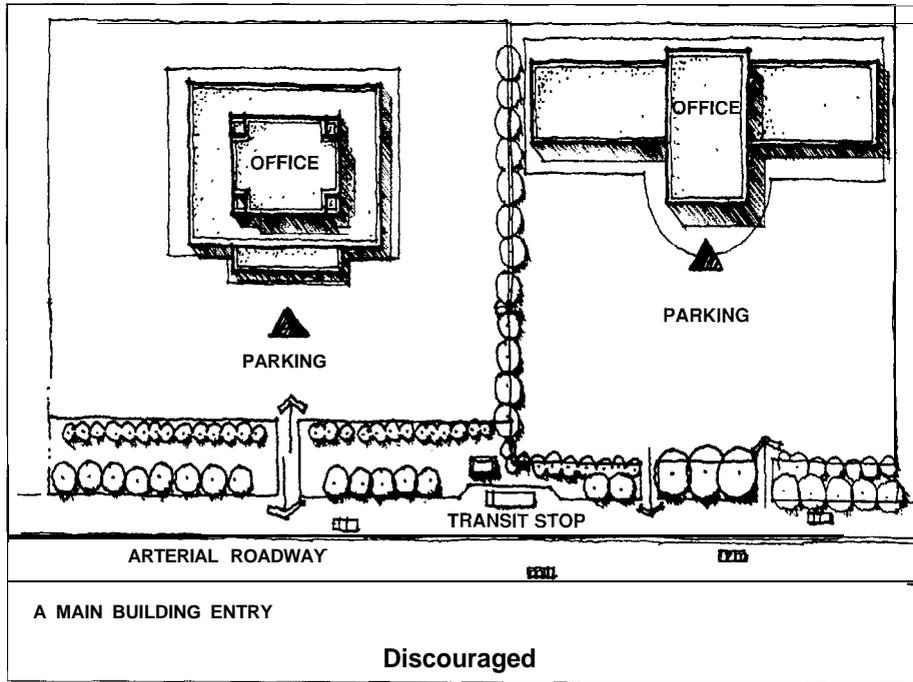
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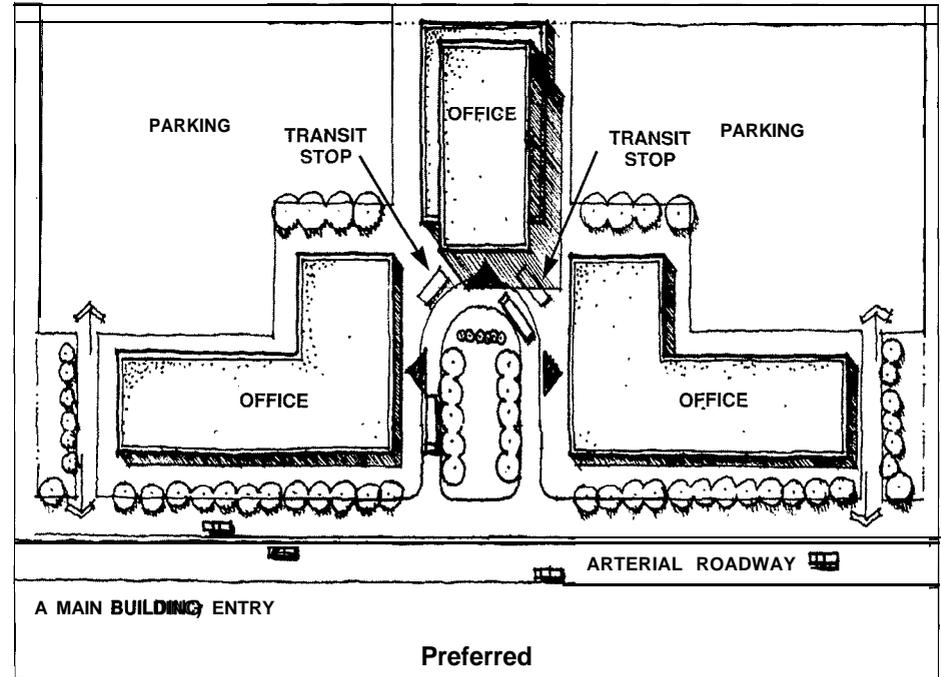
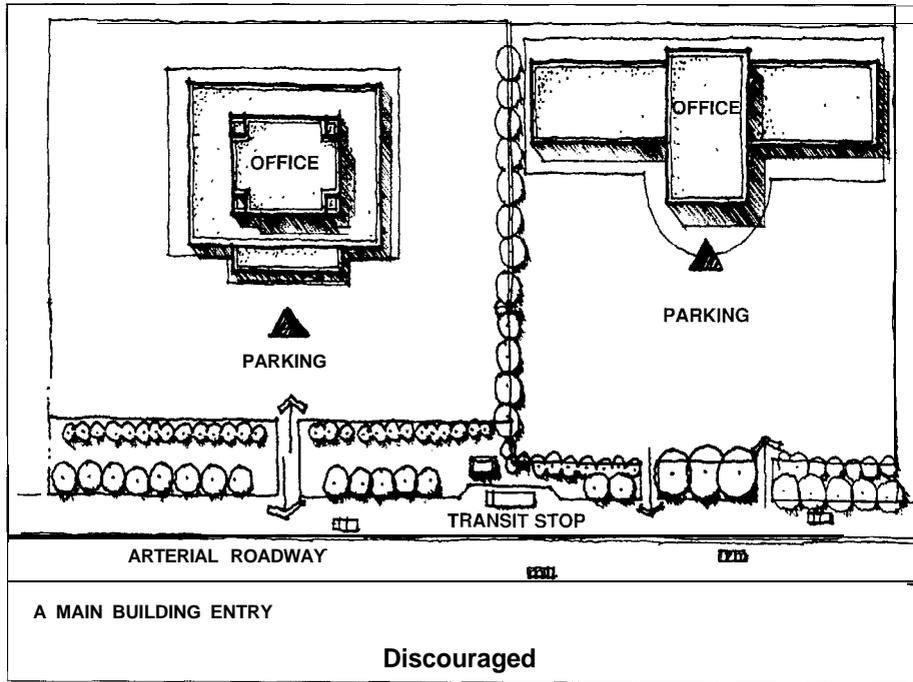
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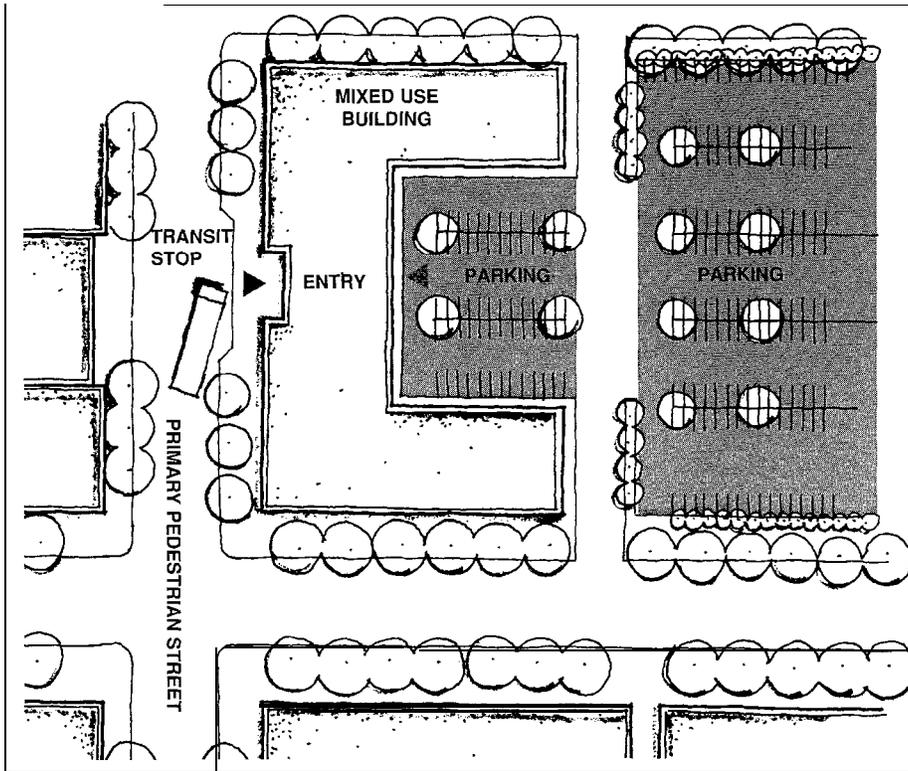
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Locate parking to the rear and sides of buildings to help diminish its visual impact and potential physical **conflicts** with pedestrians.

**Landscaping** around surface parking lots helps to visually integrate the lot with its surrounding context.



can stimulate pedestrian activity. Along primary pedestrian streets, parking lots should not occupy more than one-third of the lot frontage.

With the building located at the street line, direct visual and physical connections between the main entry and nearby transit stops should be encouraged. Such pedestrian connections can be identified by the use of **signage**, pavement variations, lighting, or landscaping. Locating buildings on the street line reinforces the importance of walking as the primary mode of access for transit users.

### **Create Small Scale Residential Parking and Kiss-Rides**

Due to the design and density of existing subdivisions, walking distances may be excessive to reach transit. In these cases, small scale (less than 50 spaces) parking lots or kiss-n-ride areas at the entrance to, or in an area near, the transit stop may be appropriate.

### **Develop Landscaping Guidelines for Surface Parking Lots**

The provision of appropriate landscaping around surface parking lots helps to integrate the lot with the surrounding streetscape, and acts as a buffer to the activity within.

Perimeter planting around

surface parking lots should obscure views of vehicles within the lot but should still allow people to see in and out. Low dense plantings with taller, ornamental trees along a parking lot's edges will **fulfill** this requirement.

Landscaping within the lot should provide shade along pedestrian walkways that lead to adjoining sidewalks. Walkways are usually provided in especially large lots to improve convenience and safety for pedestrians.

### **Implementation**

Developing zoning and land use regulations which support and encourage shared parking can greatly increase its desirability. Municipalities or counties should consider operating joint facilities whenever feasible. This can be accomplished through parking authorities or through a partnership with the transit agency.

### **Application**

Whenever opportunities exist for shared or joint use parking opportunities they should be explored. This may occur in large urban centers, small villages or hamlets. The degree to which opportunities exist may increase as the setting moves toward suburban or urban station areas.

## 4.4 Institute Transportation Management Plans that Give Preference to Vehicles Bound for the Station Area

**Transportation management plans are an effective technique to favor transit and pedestrian travel, and to improve circulation in and around the station area by prioritizing these modes as alternatives to the auto.**

Vehicle conflict is also reduced by the separation of high occupancy vehicles and automobiles. Implementation of transportation system management plans are simple, cost effective techniques to reduce station area congestion while limiting capital expenditures.

### TECHNIQUES

#### Provide priority treatment for transit and High Occupancy Vehicles

Providing transit priority lanes can enhance transit efficiency, often resulting in time savings of between 5 and 30 minutes. Vehicle conflict is reduced by the separation of routes designated for transit and high occupancy vehicles, and by the implementation of other roadway improvements, such as vehicle turning lanes.

#### Provide Direct Vehicular Linkages

Provide direct links between major commuter arterial roads and "park-n-ride" facilities.

Provision of direct access to these facilities may reduce traffic congestion on local roadways, thereby decreasing

travel time. Commuter road and "park-n-ride" links should avoid conflict with major pedestrian and transit routes.

Curb cuts for vehicles should not be permitted within 50' of intersections; along primary pedestrian streets, they should be prohibited completely.

#### Limit On-Street Maneuvering

Limit on-street parking and driveways at key conflict points near the transit station which might hinder the efficient movement of pedestrians, transit, or other vehicles accessing the facility. At key conflict points, on-street parking can result in increased delays for transit and high occupancy vehicles, by restricting the free flow of traffic on commuter roads. A greater emphasis should be placed on off-street parking for those land uses abutting transit routes.

The location of driveways to off-street parking areas should be limited to secondary streets and alleyways to avoid conflict with other transit vehicles.

#### Consider Using One-way Streets

Consider the establishment of a one-way street system within the station area to reduce congestion.

One-way street patterns, if developed properly, can serve to channel traffic along designated routes. Reducing congestion and redirecting traffic in the station area will lead to a more efficient circulation system that benefits commuters and residents of the community alike.

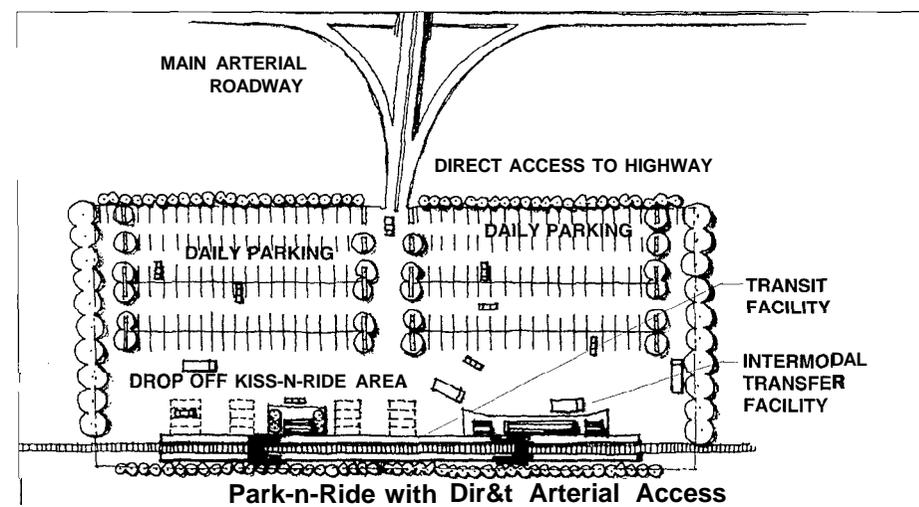
#### Implementation

Municipal or county level traffic management plans can be instituted in a variety of ways. Local plans can begin with the municipal Master Plan, while adoption of design standards for new development can assist in the overall effort.

#### Application

Traffic management systems are most effective in locations having greater traffic volumes.

*Direct vehicular linkages between major arterial roads and large park-n-ride lots help to increase access to transit and divert traffic from overloaded local streets.*



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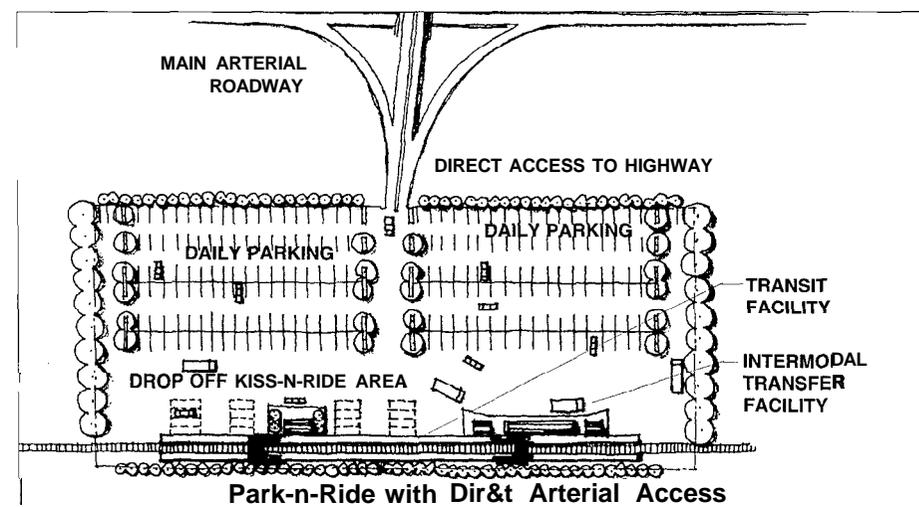
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## 5.1 Provide a Sense of Arrival, Order, and Orientation within the Station Area

**Transit users, whether walking out of a train station or stepping off of a local bus, should be able both to orient themselves to the community they have arrived in, and to gauge quickly the character of that community. They should feel that they have arrived.**

The ability to determine where you are and how to walk or get a bus to your next destination is crucial to creating a station area that is comfortable and a place to which users will want to return

### TECHNIQUES

#### Reinforce Sight Lines

Establish sight lines to and from the station to orient the traveller. Let travellers see where the community is as they leave a station building; upon exiting the station building, their attention should be focused towards the physical center of the community.

Streets should be used to enclose vistas of the community's center, important public buildings, monuments or open spaces. The key is to create a sense of personal orientation for the traveller and to make the community uniquely memorable. If this is not immediately possible, clear signage informing the travellers where they are, and orienting them to the activities in town should be provided.

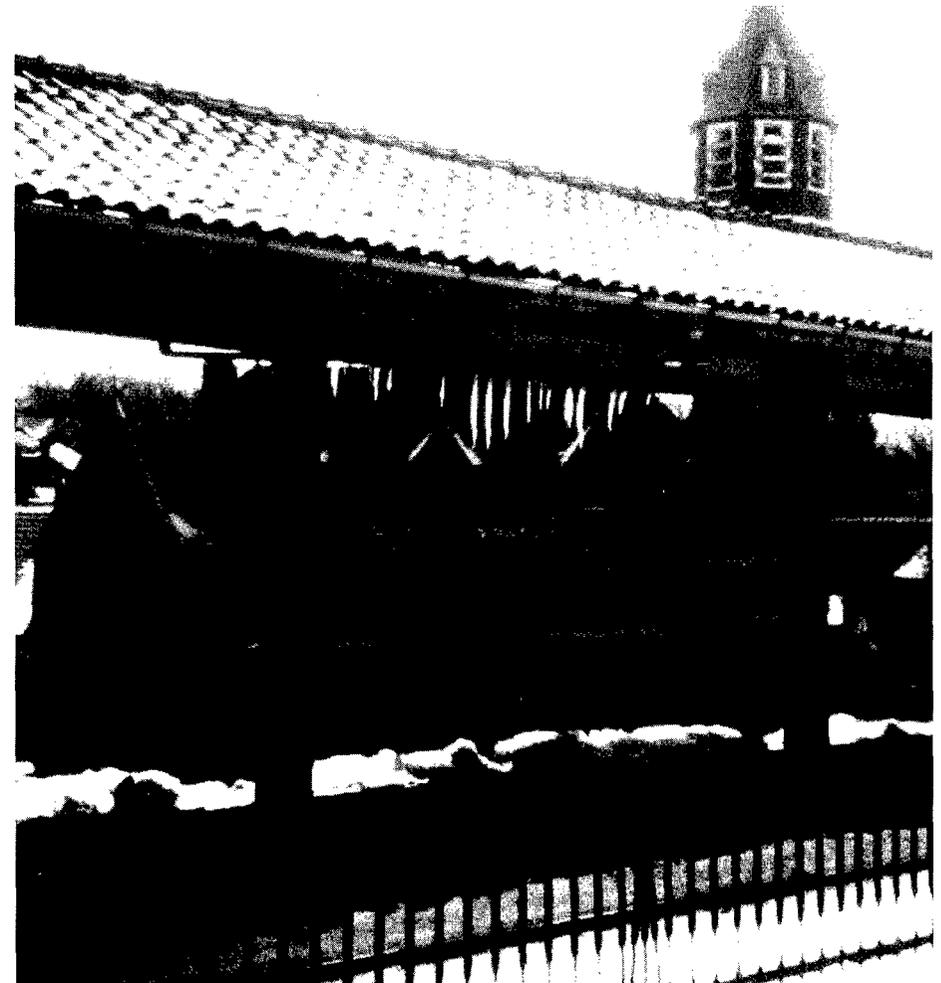
- Do trees, signs or fences block the view to town? Trees can be trimmed and fences or signs moved to clear the line of sight.
- Do buildings block the view corridors? As part of comprehensive station area redevelopment plans, consider the opportunity to create new building patterns which open up view corridors.
- Is the station area too open, leaving no guidance as to direction? Orientation can be enhanced by strategically placing vegetation, signs or street furniture to direct one's view.
- In areas of varied topography, new development should use the slope of the land to create visual landmarks.

#### Create Pedestrian Linkages

Establish pedestrian linkages and encourage their use.

People orient themselves to communities by moving through them. Encouraging residents to walk to, through,

The watch tower of the Tudor style South Orange Fire House provides a landmark and orienting feature for travellers arriving at the NJ TRANSIT train station shown in the foreground.



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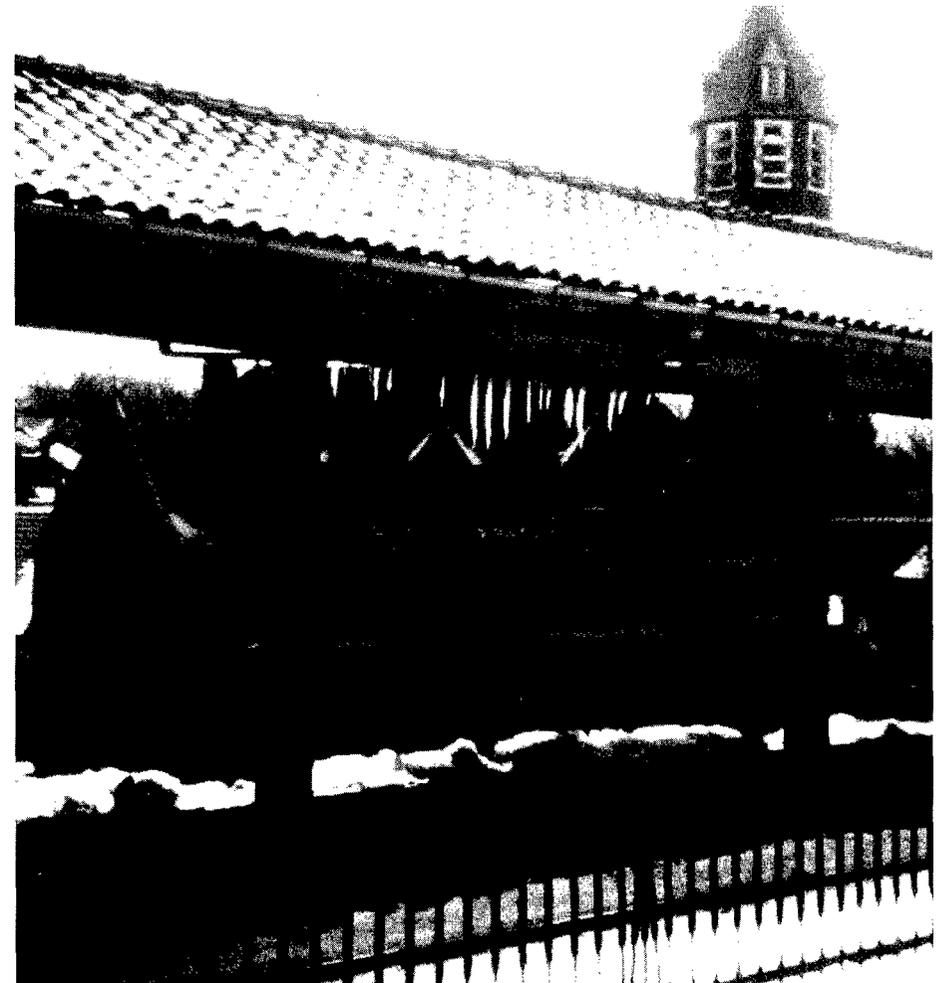
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## 5.2 Provide a Safe and Secure Environment within the Station Area

**Safety and security are essential - both at the transit facility and in the surrounding area, A traveller should not fear leaving the safety of the transit station or bus.**

Actual and perceived safety are equally important. Without the perception of a safe environment, riders will be deterred from using the transit system, and a process of decay and decline can rapidly evolve. Security measures should focus on creating “defensible spaces” through design and selection of appropriate materials and landscaping.

### TECHNIQUES

#### Create “Defensible Space”

“Defensible space” is a concept that encourages public areas to be designed in a manner that provides a sense of personal safety, while discouraging opportunities for criminal activity.

Public space should immediately be perceived as safe and secure by potential users. Without this, people will rarely choose to use the space or travel through it. Actions to encourage defensible space could include:

- providing direct and unobstructed views to major destination points through the space:
- encouraging adjacent users to maintain large windows to create the sense that the

space is constantly under visual inspection;

- choosing plantings and street furniture that do not create secluded and visually separated areas: and,
- locating or redesigning the space to be an integral part of a heavily traveled and active street network.

#### Facilitate Police Presence

Coordinate security operations and maintain a public police presence in station areas. Local officials and residents can meet regularly with local police to assure that effective policing is available. The scale of policing required at or around a transit facility should be directly linked to the scale of the community, the volume of transit activity, and the history of security problems. Your community may:

- establish a policy on frequency of police visits to the station area:
- increase police presence during off-peak hours when there are fewer people and less “self surveillance”:
- provide pay telephones (in working order) in train stations and throughout

the station area, and clearly post emergency numbers; and,

- provide, when possible, municipal police sub-

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### 5.3 Provide an Attractive and Well Maintained Station Area

**The perception of safety is intricately linked to the aesthetic quality of the environment. People feel safer (rightly or wrongly) in an environment which is attractive and well cared for. Consequently, the quality of maintenance provided in the station area will directly affect a person's perception of security.**

The value of frequent and regular maintenance in making people feel secure in their environment has been well documented; it is the key to successful theme parks, shopping centers, and private entertainment facilities which generate extensive amounts of public activity. The public environment demands the same level of care. A consistent, high standard of maintenance should be provided throughout the station area.

We all know litter won't mug you, but it can make you feel threatened. Burn holes and scratch marks in Plexiglas windows, broken or boarded-up windows, and graffiti all make an area appear to be uncared for, and therefore unsafe. While operational maintenance is critical to a station facility, a continuing effort should be made to assure that the aesthetic features of the station area are maintained and enhanced, where possible.

#### TECHNIQUES

##### Maintain All Areas

Maintain all public areas

within the vicinity of the station.

Neither transit users nor the citizens of a town care who has jurisdiction over a particular portion of the station area. They simply want the entire area to be well maintained. This means that the station, the public areas around it, and adjoining private property must all be kept in a good state of repair and cleanliness.

- Use low maintenance materials to reduce maintenance costs.
- Use attractive materials - aesthetics and maintenance are linked in the public eye.
- Maintain effective communication between the different parties involved.
- Organize local volunteers to assist in routine maintenance activities of public property.
- Strictly enforce ordinances requiring the repair and maintenance of private properties surrounding transit facilities.
- ⊕ Use Community Development Block Grant

or NJ Economic Development Authority funds to provide grants or loans to property owners facing expensive repairs. (See Appendix "D".)

##### Develop a Scheduled Maintenance Program

Establish a scheduled maintenance program providing for regular and frequent maintenance of the entire station area.

A scheduled maintenance program should include:

- definition of responsibilities of the municipality, private property owners, and other groups;
- establishment of a maintenance checklist, reviewed frequently; and,
- a plan for existing downtown business associations, to assure that all parties are meeting their scheduled responsibilities.

##### Encourage Station Area Upgrades

Prepare a station area improvement plan.

Periodically, conditions in the station area should be re-

examined to identify additional improvements which could be made to the visual environment. A joint program is required involving the transit agency, for the station site proper, and the local municipality, to work with surrounding property owners and to take responsibility for the public environment of sidewalks, streets, and parks. Actions which may be taken include:

- providing grants or loans to property owners in commercial areas for

facade improvements:

- upgrading street furniture, including lighting, in the station area; and,
- identifying areas where new vegetation can be provided and welcoming garden clubs and environmental groups to establish plantings in the station area.

such as brick, concrete paver blocks, or crushed stone: and,

- use excess areas not needed for pedestrian purposes, for planting or landscape.

*Transit systems and their surroundings can be designed to minimize paved areas and maximize "green areas", as shown here along the St. Charles streetcar line in New Orleans, LA.*



### **Eliminate Unneeded Pavement**

Organize vehicular areas and remove unnecessary paving. Past management practices have frequently resulted in the paving of areas which are not needed for parking or vehicular circulation.

In areas where there has been unnecessary paving, these areas should be converted to pedestrian or planted areas, as appropriate. They will look better, and frequently they will be easier to maintain. To implement this change:

- identify roadway areas actually needed for parking and access purposes;
- determine if there are remaining unused or unneeded roadway areas:
- unused areas may be used to support pedestrian movements or create public spaces:
- provide pedestrian/vehicular separation and pave non-roadway areas with an alternative material

### **Implementation**

Ensure that ordinances requiring the repair and maintenance of private property have been adopted, and then vigorously enforce them in station areas.

Periodically retain designers to identify methods by which the aesthetic quality of a station area can be enhanced. The review should not be limited to within the property line of the station, but reach into the community.

### **Application**

Providing attractive and well maintained station areas should be a goal in all types of communities. What changes from community to community will be the priorities and focus of these activities. Whereas cleaning up graffiti might be a priority in an urban center, providing new plantings and landscaping might be the focus of a small town. Each community should establish its own priorities, based on particular needs and conditions.

## 5.4 Provide Information About Transit Service

**Signs should provide critical directional and schedule information. Current information about the location and time of transit services should be conspicuously posted.**

The absence of essential information can make a **traveller** feel extremely insecure. Where is the town? How do I catch a bus or a taxi? Where are the tracks? When does the next bus or train come? How frequently do they run?

Decision points should be anticipated so that critical information will be available where it is needed. Providing information once is not sufficient: materials must be maintained and constantly updated. Given competition from the automobile, transit users must feel secure in knowing that they will be able to complete a trip in a timely and efficient manner, and without getting lost.

### TECHNIQUE

#### Provide Transit Information

Provide information in the station area regarding the transit facility and transit services.

Anticipate questions which users will ask. Posted transit information should include:

- directional **signage** for train tracks, bus route locations, etc.;
- up-to-date timetables

available in the station as well as at nearby street level businesses:

- large-type timetables posted on rail platforms and at bus shelters, with pocket-sized versions available for the rider to take away;
- local connecting bus information and schedules, with telephone numbers for additional information;
- prominently posted telephone numbers where additional transit information can be secured or direct phone lines to transit information services; and,
- information about activities at various destinations along the line.

#### Implementation

Much of the responsibility for establishing a comprehensive information program to serve transit users rests with the transit provider. However, municipalities can be helpful in defining the needs which exist. Frequently, local residents will have excellent anecdotal information regarding problems which are encountered regarding the adequacy of information.

#### Application

At major urban terminals, where the degree of complexity and the number of visitors is greatest, sophisticated information services should be provided. Large-scale vicinity maps, an information clerk, interactive displays, **signage** directing patrons to taxis and buses, and other information will be required.

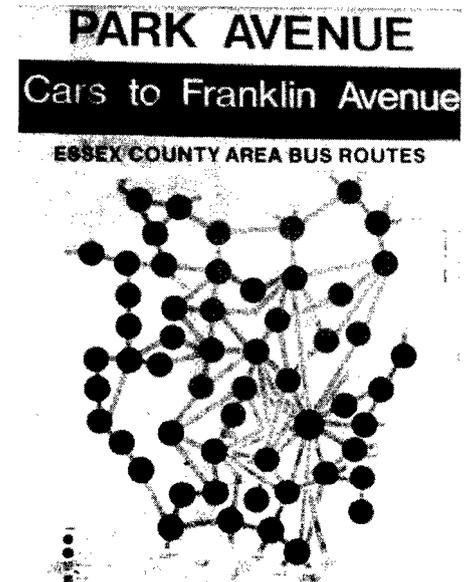
Municipalities need to match the complexity of information within a terminal with clear **signage** on surrounding streets so that transit patrons won't feel abandoned after leaving the station.

Remember to keep the level of information provided appropriate to your station area type. In a village center, for example, where most of what goes on is visible from the door of the station, only a limited amount of material may be required. Any information which a user might reasonably want, especially that required to orient the visitor, should be readily available.

Providing adequate information is especially difficult along a bus route.

The spread out nature and low density of usage at most stops limit the amount of information that can routinely be provided. However, at major stops vicinity maps can be provided on bus shelters, and directional **signage** to major attractions should be offered.

*Information signs should be located at **critical** decision points along the transit user's journey.*



## 5.4 Provide Information About Transit Service

**Signs should provide critical directional and schedule information. Current information about the location and time of transit services should be conspicuously posted.**

The absence of essential information can make a **traveller** feel extremely insecure. Where is the town? How do I catch a bus or a taxi? Where are the tracks? When does the next bus or train come? How frequently do they run?

Decision points should be anticipated so that critical information will be available where it is needed. Providing information once is not sufficient: materials must be maintained and constantly updated. Given competition from the automobile, transit users must feel secure in knowing that they will be able to complete a trip in a timely and efficient manner, and without getting lost.

### TECHNIQUE

#### Provide Transit Information

Provide information in the station area regarding the transit facility and transit services.

Anticipate questions which users will ask. Posted transit information should include:

- directional **signage** for train tracks, bus route locations, etc.;
- up-to-date timetables

available in the station as well as at nearby street level businesses:

- large-type timetables posted on rail platforms and at bus shelters, with pocket-sized versions available for the rider to take away;
- local connecting bus information and schedules, with telephone numbers for additional information;
- prominently posted telephone numbers where additional transit information can be secured or direct phone lines to transit information services; and,
- information about activities at various destinations along the line.

#### Implementation

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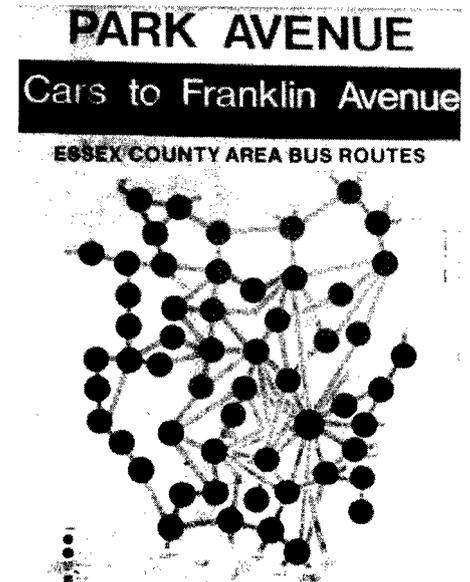
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destinations for which directions are most frequently asked): and,

- establishing obvious pathways to major destinations.

### **Consider Community Improvement Initiatives**

Allow community groups to improve the station area and its environs.

Community groups can be encouraged to decorate barren portions of the station area, provided that coordination and continuing oversight is provided by the owners of the property.

- Garden Clubs or environmental groups could be encouraged to landscape the station area and maintain the plantings.
- Tunnels and overpasses frequently can become dreary places. Can community groups add life to these spaces? In Maplewood, the local community painted a mural in the pedestrian tunnel which has helped that station become more a part of its community.
- Local merchants or businesses can be encouraged to sponsor amenities such as artwork, building upgrades, or improved street furniture and seating.

- Local neighborhood groups can provide “Adopt-a-Stop” services at bus stop shelters, cleaning them, picking up litter, planting flowers and reporting more serious problems to the transit operator.

### **Encourage Community Activities**

Program community activities at train stations, bus terminals, or at adjacent open spaces to bring people and activity into the station area.

Stations are public buildings. During the middle of the day, in the evening and on weekends, when commuting demand is reduced, various community events could be scheduled, including:

- Garden Club exhibits
- Hobby clubs
- Local non-profit information centers
- Public meetings (if space is available)
- Block parties/dances or outdoor concerts in the parking lot
- Farmers’ Markets
- Concerts

### **Provide Symbols of the Community**

Provide artwork illustrating features of the community. Murals, statues, montages and other displays can improve the aesthetic quality of a station area and, at the

same time, express values or noted characteristics of a community.

- Hang pictures of the community’s landmarks.
- Change the images from time to time to show that the community has more than a limited supply of landmarks.
- Ask local not-for-profit institutions to donate posters symbolizing their purposes.

### **Implementation**

The process of implementing a stewardship program for a station area requires that a partnership be developed between the transit provider (in most instances NJ TRANSIT): the local municipality; and, local business groups, institutions, and civic groups. Partnerships involve more than holding meetings at which separate sets of objectives are shared by various interested parties. Instead, leadership and time must be expended to develop understanding, respect, and trust for the varying interests and concerns of each of the participants in a stewardship program. The funding required to implement local stewardship programs will frequently be modest. As with many activities involving volunteerism, transit stewardship initiatives offer the potential of generating

more benefits than the simple sum of the investments would equal.

### **Application**

Stewardship techniques may be applied at all transit facilities. However, the approach taken in developing stewardship will differ based upon the location of the facility, its function, the nature of the community, and the amount of existing community interest in the transit facility.

A major terminal such as Newark Penn Station will warrant a complex management approach and can support a sophisticated programming schedule. A local rail station may warrant a more informal approach. In communities where interest is high, responsibility for programming may be delegated to a not-for-profit business or a civic association.

Stops along local bus lines may require less substantial or sophisticated programs. However, as indicated in the techniques, opportunities are available to work with neighborhood groups or local businesses to provide a sense of stewardship over a local stop.

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Stops along local bus lines may require less substantial or sophisticated programs. However, as indicated in the techniques, opportunities are available to work with neighborhood groups or local businesses to provide a sense of stewardship over a local stop.

- mixed use zones;
- parking and drop-off areas; and,
- open space or planting areas for visual amenity.

The Station Area Plan is a useful tool for all categories of station areas. The plan may recommend implementation measures, such as a Special Station Area Zone, which would permit or require particular zoning techniques. Measures which might be recommended by the Station Area Plan are:

- delineation of the “Station Area”, within which certain land uses would be mandated or encouraged:
- delineation of specific tracts for housing, retail and service, employment centers, parking, and open space:
- implementation measures such as a special Station Area Zone, a Planned Development District, a Special Improvement District, (SID) or a redevelopment project: and,
- proposals for land acquisition for parking or open space. Public spaces such as parking areas, parkland, or a historic site shown on an adopted Master Plan, can be reserved for municipal purchase for one year subsequent to development approval (see Section 6.7., Land Acquisition).

### Examples

The Princeton Junction Town Center Sub-Plan (West Windsor) proposes to link land use with transit to create a town center focal point around the train station. Other municipalities have included the station area in a business district plan (Lyndhurst). On a larger scale is the Secaucus/Allied Junction Rail Transfer Station Plan for a public/private transit facility and commercial complex in Secaucus.

### Sources For More Information

New Jersey Municipal Land Use Law (MLUL),

Article 3, Master Plan (C.40:55D-28);  
 Reservation of Public Areas (C.40:55D-44).  
*Transit-supportive Land Use Planning Guidelines*, Ontario, 1992. Chapter 2, also pp 75-6.

*Lund Use in Commuter Rail Station Areas: Analysis and Final Report*, Northeastern Illinois Planning Commission and METRA (undated), pp 55-72.

*Princeton Junction Town Center Plan*, West Windsor Township (adopted 1993).

## 6.3 Circulation Plan

The Circulation Plan is an element of a community's Master Plan, showing locations and types of facilities for all modes of transportation. It is adopted by the Planning Board after a hearing for public input. The Circulation Plan forms the basis for requiring off-site street improvements and for reserving land for future streets.

### Application

A Circulation Plan uses text, charts, and maps to examine conditions of existing transportation facilities, including rail and bus lines and their stations or terminals. It includes:

- standards and recommendations for auto, bus, and truck travel on the street system;
- recommendations for transit systems (rail, bus and subway or light rail, if any):
- projections of future traffic volumes and transit ridership, based on land use plans, transportation trends, and proposed service improvements; and,
- measures to accommodate increases in traffic and ridership.

The Circulation Plan should address the

interface between auto and mass transit with recommendations for improvements such as park-n-ride lots (both location and layout), rail station upgrading and bus stop facilities. Plan elements addressing transit might include:

- recommended improvements in service such as the institution of a bus or jitney connection to rail stations, or routing of bus lines to serve industrial or office park developments;
- proposed location, size, and possible layout of park-n-ride facilities for train and bus riders; (Prior to incorporation in the Circulation Plan, NJ TRANSIT should be consulted to review proposed ~~park-n-ride~~ locations and layout for compatibility of access with existing or proposed service, and for pedestrian and vehicular safety issues.)
- proposed road widening, lane striping or signalization improvements needed to facilitate auto and pedestrian access to transit stations: and,
- future physical pedestrian access improvements, including provisions for Americans with Disabilities Act (ADA) and for rider amenities created by any one of the other tools described in this chapter.

All categories of rail station areas as well as bus lines and other mass transit systems should be considered in the local Circulation Plan.

### Examples

Although many municipalities in New Jersey have proposed or adopted Circulation Plans, most of them currently need updating. Circulation plans recently developed include:

- the Circulation Element of **the Pompton Lakes** Master Plan:

- **the Weehawken** Waterfront Master Plan, which includes rail and road proposals;
- **the Princeton Junction** Town Center Plan, which uses the rail station as a focus, and has a Circulation Analysis section which constitutes a Circulation Plan for the rail station area; and,
- the **Millstone Borough** Circulation Study, which focuses on the village center.

### Sources For More Information

*Managing Transportation in Your Community*, NJ DOT, **1989**.

*NJMLUL*, Article 3 (**C. 40:55D 28b.(4)**).

*Communities of Place, State Development and Redevelopment Plan, 1992*, "State Policies: Transportation".

*Transit-supportive Land Use Planning Guidelines*, Chapters 3 and 4.

*Land Use in Commuter Rail Station Areas*, pp **59-62, 66-69**.

## 6.4 Zoning Ordinance

*The Zoning Ordinance is the principal tool for implementing a Station Area Plan and certain elements of the Circulation Plan. It is adopted by the governing body of a municipality after referral to the Planning Board for comment. Amendments to the Zoning Ordinance may be initiated by public entities, concerned community groups, or private developers. Often the Planning Board, sometimes with the aid of its consultant, develops a major amendment to the Zoning Ordinance. The language is checked by the municipal or Planning Board attorney before introduction.*

### Application

A special Station Area Zone, established either as an "overlay" district or a new zone, is a good tool for implementing a Station Area Plan or

other Master Plan recommendations for development of private property surrounding a station area. A Station Area Zone could provide designated areas for rider-related retail and service uses and/or rider-generating uses such as employment centers or apartments and townhouses. Alternatively, the Station Area Zone could provide for these uses mixed within the zone, with restrictions on total square footage or percentage of each use, to assure the desired mix. One way this could be done is by establishing a Planned Commercial Development (PCD) for predominately commercial or office use, or a Planned Unit Development (PUD) where residential and other uses are required to have a minimum size (10 acres for a PUD) and to be developed as a single entity with common open space. Planned Developments are best suited to sites controlled by one owner.

The Zoning Ordinance can use an array of measures to implement station area planning. These include:

- the Zoning Map, showing either zoning for specific land uses or a Station Area Zone or Planned Development District, both of which may be “overlay” zones;
- text delineating uses permitted in each zone, and the special regulations for a Station Area Zone or a Planned Development;
- special bulk regulations relating to the building envelope, height, and setbacks, particularly suited to the Station Area;
- regulations governing zoning lot conditions, such as minimum size, building coverage, yards, etc.;
- parking standards for the various uses, taking into consideration possibilities for shared parking and reductions from normal standards due to transit use or requirements of the Clean Air Act (the use of maximum permitted parking standards

rather than minimum requirements could be used to achieve reductions in required parking);

- special standards for signage in the station area;
- provisions to encourage rider services or rider-generating uses, such as increased density, floor area bonuses, or reduced parking requirements; and,
- geometric standards for parking lots and other site plan approval standards, if these are not in a separate ordinance.

### Examples

The **Princeton Junction** Town Center Plan recommends a special district overlay zone to implement its station area plan. **Weehawken** has a PUD District for its waterfront area. **Clifton** has planned development districts for certain areas where mixed use is planned. Many towns have a separate business zone for the “downtown” area. **Wyckoff** has a special business zone for an area changing from residential use to business uses.

### Sources For More Information

*NJ MULL*, Article 8, Zoning, C.40:55D-62-65,67.

*Managing Transportation in Your Community*, pp 20-36.

*Princeton Junction Town Center Plan*, pg 33.

*Weehawken Township Zoning Ordinance*.

*City of Clifton Zoning Ordinance*.

*Wyckoff Township Zoning Ordinance*.

*Transit-supportive Land Use Planning Guidelines*, pp 77-8, 93.

## 6.5 Site Plan Approval Ordinance

The Site Plan Approval Ordinance gives a ~~Planning~~ Board ~~the~~ power to review development applications in order to assure that they meet standards established by the ordinance. When the Board of Adjustment reviews an application for a use variance, that board has site plan approval power:

### Application

The Site Plan Ordinance can either be part of the Zoning Ordinance or a separate document.

As a separate ordinance, it has less stringent requirements for granting “exceptions” to the standards than if it were part of the Zoning Ordinance, which requires a variance procedure to allow a departure from the standards. A separate Site Plan Ordinance is often combined with the Subdivision Ordinance, since many of the standards required for each by the land Use Law are the same. A Site Plan Approval Ordinance may be used to make the areas surrounding the station safe and attractive, as well as to ensure that large-scale employment and residential complexes are transit friendly, through standards for:

- bus access and internal circulation;
- location of structures;
- driveways and sidewalks;
- parking;
- landscaping and buffer zones; and,
- lighting.

Requirements for off-site water, sewer, drainage, and street improvements can save municipal costs when major development or redevelopment takes place. If planned development is contemplated, special regulations in the Site Plan Ordinance are required.

Site plan approval power covers a range of measures that can be used to implement transit-friendly design policies. Site Plan Ordinance provisions required by the Municipal Land Use Law include:

- standards for streets, sidewalks, utilities, street lights, outdoor lighting, shade trees, fire hydrants and drainage facilities;
- standards for safe and efficient vehicular and pedestrian circulation, parking and loading, such as requirements for sidewalks linking parking and stores;
- provisions ensuring suitable size, shape and location of areas reserved for public use:
- standards for screening, landscaping and location of structures: and,
- provisions for reserving open space in a Planned Development.

Other provisions permitted by the Statute include requirements for off-site improvements, such as drainage or street improvements necessitated by the development, and provisions for planned development regarding common open space, density increases, timing of development, and encouraging flexibility in layout and design.

The Site Plan Approval Ordinance is an essential tool in implementing policies for all station area types, and transit-friendly land use development.

### Examples

**Weehawken** has a Site Plan Ordinance which includes a section for special regulations for a waterfront planned development including light rail and a transportation center.

### Sources for More Information

**NJMLUL**, Article 6, Subdivision and Site Plan Review and Approval (**C.40:55D-37 et.seq**).

Subdivision and Site Plan Handbook. Center for Urban Policy Research, Rutgers, The State University, 1989.

*Managing Transportation in Your Community*, pp 29-36, 42-51.

*A Guide to Planning Boards and Zoning Boards of Adjustment*, New Jersey Planning Officials, 1990, pp 85-100.

*Land Development Review Ordinance*, Weehawken, Township, N.J., with amendments. *The Growth Management Handbook*, Exactions and Impact Fees. MSM Regional Council, 1989.

## 6.6 Station Site Plan

*The Station Site Plan is a detailed plot plan showing proposals for a new rail station building or improvements to the existing station (or bus terminal). The plan would include the platform area, parking facilities and any existing or proposed structures on the station property. The Station Site Plan may be accompanied by explanatory text.*

### Application

Adoption of the Station Site Plan by the Planning Board, as part of either the Station Area Plan or the Land Use Element, forms the basis for future public action, particularly if all or part of the station site is owned by the municipality. Adoption of a Station Site Plan as part of the Master Plan would indicate Planning Board endorsement.

Improvements guided by the Station Site Plan, to the station area, the station building proper, or the parking facility, may be undertaken by the municipality, a station tenant, or a property owner. The Station Site Plan can be used as the basis for bids by prospective station tenants.

It should be noted that any changes made to a

building or an area with historic landmark status must be reviewed with the State Historic Preservation Officer (SHPO), and that NJ TRANSIT is not subject to municipal land use laws.

Improvements which might be shown on the Station Site Plan include:

- additional land to be acquired;
- new, enlarged or redeveloped parking areas, including bike parking, drop-off areas, facilities for the disabled and landscaping; and,
- existing or proposed open space or landscaped areas adjacent to the station.

Station Site Plan can be used in implementing a variety of goals and policies for all station types.

### Examples

Site plan changes for **East Orange and West Windsor** are being developed.

### Sources for More Information

Transit-supportive Land Use Planning Guidelines, pp 63-7.

## 6.7 Land Acquisition

*Land for station area improvements may be acquired for a public purpose by a municipal, county or state government or agency. Land may either be purchased from a willing seller or acquired through "eminent domain". "Eminent domain" is a process by which property needed for a public purpose is condemned and paid for at a price determined to be fair market value; land acquisition price may be settled through arbitration if necessary.*

### Application

If the Master Plan shows future streets or public areas within a proposed development,

the Planning Board (or Board of Adjustment) may require the street or area to be shown on the site plan or subdivision before approval. Should the municipality decide to acquire this property for public use, it has one year from the approval date to contract to purchase, or to start condemnation proceedings to acquire, the land. As part of a Station Area Plan, municipalities may acquire land when there is a need for:

- a parking lot, if no land is available on the station site or adjacent public property;
- a park or plaza, to enhance the station area or serve as a focus for station area development;
- property determined to be in an “area in need of redevelopment” in order to clear any deteriorated buildings, assemble larger development parcels, and provide for public/private improvement programs; and,
- road widening in rail station areas.

Land acquisition is available as a tool to improve any station area type.

### **Examples**

The **City of Passaic** has acquired a fire-damaged area for commercial redevelopment.

**Fair Lawn** purchased property for road widening to improve traffic flow through the retail areas adjacent to the **Radburn** station.

**The City of Elizabeth** and NJ TRANSIT have reserved land to construct an open space in front of the station, a bus terminal, and a commuter parking structure.

### **Sources For More Information**

*Local Redevelopment and Housing Law, Comprehensive Housing and Redevelopment Tax Exemption Law, and Comprehensive Tax Abatement and Exemption Law.*

New Jersey Statutes on Eminent Domain.

~~NJMLUL~~, Reservation of Public Areas  
(C.40:55D-44)

## **6.8 Transfer of Development Rights/Transfer of Development Credits**

*The ~~implementation~~ tools of Transfer of Development Credits (TDC's) and Transfer of Development Rights (TDR's) are an extension of planning tools developed to protect land uses or preserve open space on a parcel of land. One way this can be done is to transfer the development potential attributed to that parcel to another piece of property that can accept additional development.*

### **Application**

The implementation tool of Transfer of Development Credits (TDC's) allows development rights generated by a property to be transferred to, and developed on, a non-contiguous property. The property from which the development credits have been removed is generally required to be protected by a conservation easement dedicated to the municipality. TDC's must be authorized by the municipal zoning ordinance and a planning process created to facilitate transfers. The decision to both transfer and receive development credits is voluntary.

With Transfer of Development Rights, the rights to development associated with a piece of property can only be fully realized if they are transferred out of a “sending” district into a “receiving” district. Since the TDR process is mandatory and can limit a property owner's ability to develop his own property, except at a much lower density, its use is limited in New Jersey to jurisdictions where it has been specifically authorized by law.

In New Jersey, the concepts of **TDC's** and **TDR's** have been limited to the purpose of advancing land conservation objectives, either for open space or farmland protection. The **TDR** provisions have only been authorized in two specific areas of southern New Jersey having unique land qualities. **TDC's** usually require that the land from which development rights have been removed be permanently protected from development through the dedication of a conservation easement. In some instances, the land has been dedicated to the municipality in fee simple.

Both **TDC's** and **TDR's** could be used to advance concepts of Transit Area Development. Probably the most important method would be to require the application of transit area **planning** techniques within "receiving zones" created under **TDR's** or **TDC's**. Zoning and planning procedures which provide for the transfer of development credits, whether permissive or mandatory, must establish appropriate conditions governing how the increase in density should be managed within the "receiving" areas. Since increased development densities can usually be better supported if transit services are available, and since higher densities are desirable to support transit, the availability of transit is often an important condition used for determining areas which are appropriate for consideration as "receiving" sites. The mere presence of transit however, is not sufficient to capture transit ridership or ameliorate increased land use densities. The land needs to be developed in a pedestrian friendly fashion which promotes transit use.

Development ordinances which create receiving zones under either a **TDC** or **TDR** system could be structured to require the application of transit area planning techniques as part of a successful request for transfer of rights.

Development ordinances governing site **planning** in **TDR** or **TDC** receiving zones can require that transit area planning techniques be applied as part of any development application making use of transferred development credits. Specific proofs of pedestrian linkages or continuity, reduction in parking ratios for adjacent development, streetscape improvements, mixed or multiple use requirements, etc. can be required.

**TDC's** may also be important as a planning technique within a transit planning area. Numerous public spaces are required to support transit oriented development, including land for park-n-ride purposes, bus loading and operation, pedestrian linkages, and public areas such as open spaces. At the same time, higher densities of development and mixed uses are also desirable.

#### **Examples**

**TDC's** have recently been applied as part of a development proposal **in West Windsor** Township in **Mercer** County. Development rights on a private golf course were transferred to a Route 1 office and retail complex. The Route 1 Corridor site was within the county's designated regional development center, where increased development was considered desirable. The **TDC** process allowed for shifting development from one area of the township to another area where development was more appropriate. The process used was strictly voluntary.

Two **TDR** programs have been authorized to date **within New Jersey**. In the **Pinelands, the** Pinelands Commission has established an exclusive **TDR** system under which development rights in preservation areas can be sold, and property owners in development areas can purchase those rights. The **Pinelands** Commission has established a development credits "bank" to facilitate the

transfer between sellers of development rights and potential purchasers of those rights. The second **TDR** system exists **in Burlington County** where an experimental **TDR** system has been authorized, to encourage farmland preservation in areas of the county with highly productive agricultural soils.

To date, neither **TDC's** or **TDR's** have been employed specifically for the purpose of furthering transit oriented development.

## **6.9 Amenities Enhancement Programs**

*Revitalization of the station area can be aided by community volunteers and other workers at little or no cost to the municipality. Fixed amenities in the area surrounding a station, such as benches, planting, and attractive waste containers, as well as services such as clean-up and maintenance can be provided by volunteer groups or by persons assigned to community service by the courts or low-risk prisoners from county jails. Work by community groups increases public awareness of, and commitment to, the rail station area.*

### **Application**

A transit station and the area surrounding it can be made more attractive, visually and functionally, through projects such as:

- design and implementation of seasonal planting projects for the station site or adjacent park areas by garden clubs;
- provision of attractive street furniture, such as waste containers, signage elements, street planters, or trees by merchant associations and Chambers of Commerce;
- installation of benches adjacent to the station area by local civic groups (sometimes with advertising to help cover

the cost);

- periodic clean-up campaigns by scouts or other groups;
- incidental painting of the transit station and other public buildings by low-risk prisoners or persons assigned to community service (these groups can also help with other projects listed);
- painting of murals or other decoration on station walls, tunnels or overpasses by high school art classes or art clubs; and,
- occasional fund raising activities conducted by civic or school groups.

Amenities enhancement is applicable to all station area types. It should be noted, however, that all volunteer work needs to be coordinated with, and follow, historic preservation guidelines and specifications, when applicable. Enthusiastic community volunteer groups need always to be sure they are adhering to all applicable government rules and procedures.

### **Examples**

Inmates of the **Bergen County** and **Passaic County** jails have been assigned to paint or repair public and semi-public buildings in several towns. Many local Chambers of Commerce or merchant associations have provided benches or waste receptacles. A volunteer group painted a mural on the station underpass **in Maplewood**.

### **Sources For More Information**

*Land Use in Commuter Rail Station Areas, p 35.*

“Crew of Inmates is Sprucing up Paterson Schools”, *The Record*, 8/25/93 p. B-4.

County Sheriffs' offices.

Municipal Court Clerks.

## 6.10 Public/Private Partnerships – Special Improvement District (SID)

A *Special Improvement District (SID)* is an area designated by ordinance in which a special property assessment is imposed for the purpose of promoting the economic and ~~general~~ **welfare** of the district. The device is generally used in downtowns, where merchants, owners, and municipal **officials** work together to improve and promote the district.

### Application

New Jersey's **SID** law does not require the consent of property owners to create a Special Improvement District, but successful districts depend on a consensus among the participants. The law does require a "District Management Corporation" to determine what improvements are to be made and how the assessment funds are to be spent. The municipality may contribute funds to the district or to special projects; federal or private grants under various programs are also available to qualifying areas. Since the **1984 SID** Law was passed, **15** districts have been created in New Jersey and six more are planned.

**SID** funds for a rail station area district could be used to:

- formulate a plan for improvement of the district, including integration of the station with the commercial area;
- hire a district manager to oversee the business improvement project, provide ideas, work on promotion, recruit new businesses to the area, and coordinate stewardship projects at the station;
- install improvements such as "focal point" plazas, special pavers for sidewalks, landscaping, distinctive street lighting, or street furniture;
- provide matching funds for new **signage**,

awnings or storefronts, with the merchant or owner paying half;

- promote the district through group advertising, flyers, or special events; and,
- clean up and maintain streets, parking lots, and sidewalks.

**SIDs** are useful in station areas with business districts where commercial revitalization will both increase trade and enhance transit ridership.

### Examples

**Cranford** established a **SID** for its central business district in **1985**, the first in the State. Its success in revitalizing the district has increased pride **in the** township. **Englewood's SID**, focusing on maintenance, clean-up, and promotion of the downtown has resulted in increased business. **Bradley Beach** is planning two **SIDs**, one for the rail station and one for the adjacent downtown. **Red Bank** has a successful **SID** that extends to the rail station. **South Orange** is considering a **SID** for its station area.

### Sources for More Information

*New Jersey Planner*; "SIDs - Special Improvement Districts; **Putting** Life into Old Downtowns" December, **1992**.

*New Jersey Municipalities*, "Cooperative Efforts Can Revitalize **N.J.'s Downtowns**," February, **1992**.

*N.J. Statutes*, **1984 District Management Act (C.40:55-65 et.seq)**

*Woodbridge-Raritan Main Street Association*

### Joint Development

*A Joint Development is a planning and financial partnership among a developer and one or more public agencies, such as a municipality and/or a transit agency. For example, a retail developer agrees to make a capital contribution to upgrade the transit system, which in turn increases his profits by delivering the work force and store*

customers. The municipality gains higher revenue from real estate taxes, and increased transit use mitigates traffic impacts.

### Application

Joint Developments which include transit have been used mostly in urban or developing suburban areas. Developer contributions have included:

- a new transit station serving the development;
- direct connections between the station and the new development;
- improvements to the existing station, such as an expanded station building or new bus lanes;
- commuter parking lots or structures;
- infrastructure improvements, such as road improvements and recharge basins, to mitigate development impacts;
- payments to aid in the redevelopment of the surrounding area: and,
- land lease payments to the transit agency.

The transit provider may negotiate with the developer to improve the terms of the “deal” for both parties, trading either access rights or land for developer improvements. Some agencies utilize developer competitions through solicitation of proposals; others seek a developer for a concept plan, then work out the final plan with the municipality and the developer.

### Examples

NJ TRANSIT arranged for the purchase of **Newark Penn Station** from Amtrak through a private investor company. The process has allowed NJ TRANSIT to assume full control of the station and to improve the physical condition, security, ambiance, retail services, and non-fare box revenue to support NJ TRANSIT’s operating costs, while also encouraging increased use of the transit

system.

At the **Trenton** train station, an **1,800** car parking garage is being built pursuant to a ground lease between NJ TRANSIT and a private parking operator. The project will enhance the urban revitalization potential of parcels east of the train station, and will encourage commercial development in the future on adjacent NJ TRANSIT property.

**The City of Elizabeth** and NJ TRANSIT have embarked on a joint development project that will combine a **20-acre** commercial and residential development project with improved transit services in the midtown area of the city. This transportation, commercial, and real estate project will help revitalize the city with new jobs, housing, and retail space, while the more attractive environment and higher density of commercial and residential development should generate more transit usage.

### Satellite Transportation Center

“*Satellite Transportation Center*” is the name given by the Bergen County Department of Planning and Economic Development to its version of joint development applicable to mature suburbs. The Satellite Transportation Center (STC) is defined by Bergen County as a development or redevelopment capable of benefiting from private investment in transit capacity. The concept was tested by the Department for application to the County’s mature suburbs using a Federal grant, a team of consultants and an advisory committee of transportation agencies including NJ TRANSIT.

The transit element of an STC is a local site used to change travel modes, most often from walking or auto to transit or car-pool, usually incorporating a commuter parking lot and a bus stop shelter: This transit element lessens the auto congestion otherwise induced by the development, thus serving as a growth

management tool. Cooperation among the **developer**, municipality, and transit provider is seen as essential in the planning process.

### Application

In mature suburbs, the **STC** is an excellent device to:

- overcome municipal objections to development which would otherwise increase traffic;
- obtain a mix of uses, by developing office or other employment centers close to existing medium-to-high density residential areas and new, improved or relocated rail and/or bus stations;
- relocate a rail station close to highways and bus routes, or bring bus routes closer to rail stations; and,
- aid in redeveloping blighted or under-utilized land near rail lines.

### Examples

**Bergen County** examined three sites (winnowed from a potential 58) for economic feasibility, then developed site plans, working with municipal officials, the property owner, and the County's consultants. In **Fair Lawn**, the plan included developing a vacant site on Route 208 for four-story offices and apartments, a commuter parking lot (connected to the nearby **Radburn** Station by a covered walkway), and a bus stop shelter to serve existing and re-routed bus lines.

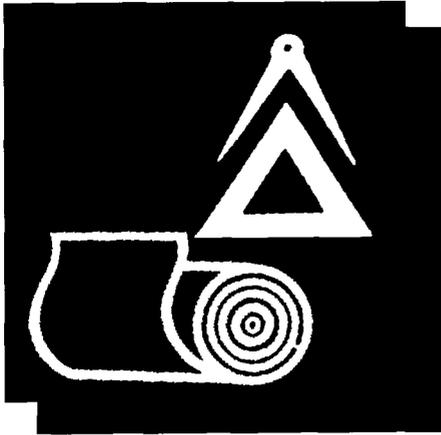
At an industrial park in **Saddle Brook**, the proposal included redevelopment with office and retail uses, a hotel, a Township Hall, day care center and park, a relocated rail station, a regional park-and-ride facility, and extensive road improvements, including ramps from the adjacent Route I-80 and the Garden State Parkway.

Redevelopment plans for a supermarket/department store site in **Hackensack** proposed a mixed-use development with office, retail and residential uses, a park-and-ride lot, a relocated train station, and a bus shelter. Current economic conditions have delayed the start of all this work. Changes in the plans to suit new market conditions may be necessary if development is pursued in the future.

### Sources for More Information

*Bergen County Satellite Transportation Center Study*. Bergen County Department of Planning and Economic Development, 1990.

*Satellite Transportation Center Study Briefing Book*. Bergen County Department of Planning and Economic Development, 1990.



# Chapter 7 – Sample Master Plan for Station Area

## 7.1 Adapting Model Station Area Plan Language to Local Conditions

*The purpose of this chapter is to introduce a key tool for implementation which sums up all the policies and principles outlined in the previous chapters of the Handbook. This tool is the Station Area Plan, which is an element of the municipal master plan: it is developed and adopted by the Planning Board. The sample Station Area Plan which follows can serve as a useful guide for incorporating the planning techniques recommended in this Handbook.*

Most communities will want to use the services of a planning staff or consultant in developing their Plan, since most planning boards lack the time, and/or the technical expertise, to undertake this task on their own. The staff member or consultant should meet with the Board or a Board Committee on a regular basis during the planning process to present sections of the plan and to get Board input and comments.

When the Station Area Plan is drawn up to the Board's satisfaction, a formal public hearing must be held. The Area Land Use Map and other plan maps such as a circulation plan or proposed zoning map are vital tools in presenting the Board's recommendations. The Board considers the comments of the citizens and affected landowners and merchants and may revise the plan before formally adopting it by resolution.

Developing and adopting a Station Area Plan is

estimated to take six months to a year, depending on the Planning Board's workload, the complexity of the Plan and community participation and response. The use of staff or a consultant greatly speeds the process. The advice and constructive suggestions of the Board's attorney, especially where complex regulations may be proposed, can also save time. Some Planning Boards hold extra work sessions when developing plans or ordinances. This also can reduce the time involved when the Board's development review workload is heavy.

## 7.2 Sample Master Plan for Station Area

### Introduction

*The sample Station Area Plan can easily be adjusted to plan for more or less intensive use so as to suit various station types. It can also be adapted to bus terminal areas.*

*The sample plan presented in this Handbook uses the fictional "Town of Greenwood", with a variety of problem areas near the station, so as to provide several examples of how to use the planning techniques in a local Station Area Plan.*

The first step in planning is to investigate and analyze existing conditions, in order to identify assets as well as problems of the area under consideration. Your community-wide Master Plan will have done this for the town as a whole, and may have given attention to the Station Area as well.

From this **analysis**, the Planning Board should develop goals **for** improving the station area while meeting community needs, then devising strategies to meet these goals. The strategies will be translated into a specific detailed plan for land use and pedestrian and vehicular traffic. The plan will usually also include recommendations for housing, community facilities, and economic development. Applicable techniques presented in previous chapters of this Handbook will be incorporated into the plan.

Finally, the Station Area Plan will recommend implementation measures to achieve the goals for the station area, including zoning, site plan ordinance changes, and other devices such as redevelopment ordinances or the establishment of a Special Improvement District, as appropriate. These and other implementation strategies are presented in more detail in Chapter **6**.

Public input and consensus are essential to the success of any community plan. If the people directly affected by the changes proposed are opposed to these changes and have not had an adequate opportunity to be heard, there is less chance of the plan being implemented. Meeting with the public is useful to the **Planning Board** in developing goals, and also in explaining to affected merchants, landowners, and citizens how implementation of the plan can benefit them. Public views should be sought through well-publicized meetings or questionnaires at the beginning of the **planning** process and again before any proposals are put into final form. (For an example of a checklist to evaluate how “**transit-friendly**” your community is, see Chapter 1 of this Handbook.) A formal public hearing on the Station Area Plan is required by New Jersey law before the plan can be adopted by the Planning Board.

# **Greenwood Station Area Plan (Fictional) Town of Greenwood, New Jersey**

## **Overview**

The Greenwood Station Area Plan proposes a strategy to revitalize the area by developing uses which will both increase trade in the Greenwood central business area and encourage transit ridership. The plan also aims to:

- create a stronger sense of community in the area, by using the rail station as a focus:
- redevelop the old industrial area north of the railroad: and,
- preserve the area’s residential neighborhoods.

The Greenwood Station Area Plan encompasses the area generally within a one-half mile radius of the railroad station. The boundaries of the area are High Street, State Highway **200**, Greenwood Brook, and the Green River which forms the Town’s western boundary. The major streets are Greenwood Avenue and Main Street, which intersect a block from the station and divide the Station Area into quadrants of approximately equal size.

## **Existing Conditions**

### **Land Use**

The core of the Station Area is Main Street, the principal business and shopping district in this part of the Town. Stores also extend along Greenwood Avenue for a block on each side of Main Street. The rail line runs parallel to Greenwood Avenue, one block north of it. North of the tracks are the station and its

parking lot, off Main Street. The station is hidden by an old industrial area which extends west of the station, along the tracks. The area has a mixture of small factories, warehouses, automotive uses, and a few residences; two of the buildings have been vacant for several years. Beyond the industrial area and west of Main Street, is a vacant tract of **18** acres, now zoned for office and research uses. (For a diagrammatic map of the downtown core, see next page.)

Two neighborhoods of single-family homes on ~~50-~~ and ~~60-foot-wide~~ lots occupy the two quadrants east of Main Street. The Town Hall, Library, and two churches separate the Greenwood Center (southerly) neighborhood from the rail line. The Valley neighborhood to the north has homes backed on the rail line, but their deep, wooded rear yards serve as a buffer. Each neighborhood has an elementary school and playground.

The quadrant south of the railroad, west of Main Street is a residential area, primarily composed of one and two family homes, with a garden apartment development located between Greenwood Avenue and the tracks. The homes in this area are among the oldest in the Town, but they are well-maintained and in sound condition. Most homes were developed on ~~50-foot~~ lots, but some are on double lots, making room for **infill** development. At the edge of this section is a large park and the community swimming pool.

The business area suffers from competition from newer shopping centers in other sections of the Town. Another general problem is the lack of a unifying character for the retail area. The west side of Main Street has stores in one or two-story buildings at the street line, while on the east side there is a mixture of small homes, street-line stores, and doctors' and lawyers' offices in converted homes which are

set back from the street. The area has lost the supermarket which served as its anchor, and some of the basic neighborhood **services** and retail stores have moved away. Aside from a diner and a stationery store with newspapers, there are no establishments such as dry cleaning, shoe repair or photo shops that provide convenient services for commuters.

### **Traffic and Transit**

Greenwood Avenue and Main Street are County arterial roads which connect with neighboring municipalities. The roads have two traffic lanes and two parking lanes for most of their length in the Station Area. Parking is prohibited only near the intersection. Traffic on these roads is congested at peak commuter hours, especially when the train blocks the grade crossing at Main Street. Traffic is constricted the rest of the day because of the heavy use of short-term, on-street parking. Many businesses have little or no off-street parking.

Both a local and a New York bus line serve the Station Area. These run from south of the Station Area along Main Street to Greenwood Avenue (one block south of the station) and along Greenwood Avenue east of Main Street. The local bus connects several sections of the Town to the station area, but does not serve the section north of the railroad. The Town minibus brings senior citizens from throughout the Town to the doctors and the municipal facilities in the area.

There are two stations on the rail line which serves the Town. At the Greenwood Station, rail service is good, with trains stopping at the station in the morning and evening rush hours. However, the other station a mile away has larger parking facilities and a greater concentration of residents within walking distance. This station has four additional trains which stop there.

Pedestrian traffic, except to the rail station, has declined as the neighborhood shopping stores have been replaced with offices and business services. There are no provisions for bicyclists. There has been no demand for bicycle paths and there is no room for them on the narrow streets. The only bicycle rack in the area is at the library, and it is seldom used.

*Note: The outline of existing conditions for your community can be made more detailed and should be accompanied by maps and tables showing land use, an analysis of stores by type, transit facilities, traffic volumes, and street capacities. Copies of a base map showing lots and structures (a scale of 1" = 30' is good for this purpose) should be utilized to record existing and proposed uses and other conditions.*

### Opportunities and Strengths

A review of the existing conditions shows that the Greenwood Station Area has a good potential for revitalization. Community facilities which draw people to the area are an asset, and the residential neighborhoods are sound. There is a need to attract more neighborhood and commuter service shopping facilities to the area in order to increase trade. The deteriorating industrial area to the north and west of the station, which discourages station use and isolates it from the business area, needs to be upgraded or redeveloped. The business district needs improvements in parking and appearance.

### Goals

The following goals have been developed for the Greenwood Station Area. They can be used as a guide to developing your revitalization plan:

- Increase trade in the business area to return it to a neighborhood shopping status;
- Encourage the creation of a pedestrian-oriented town center with the station as a focal point;

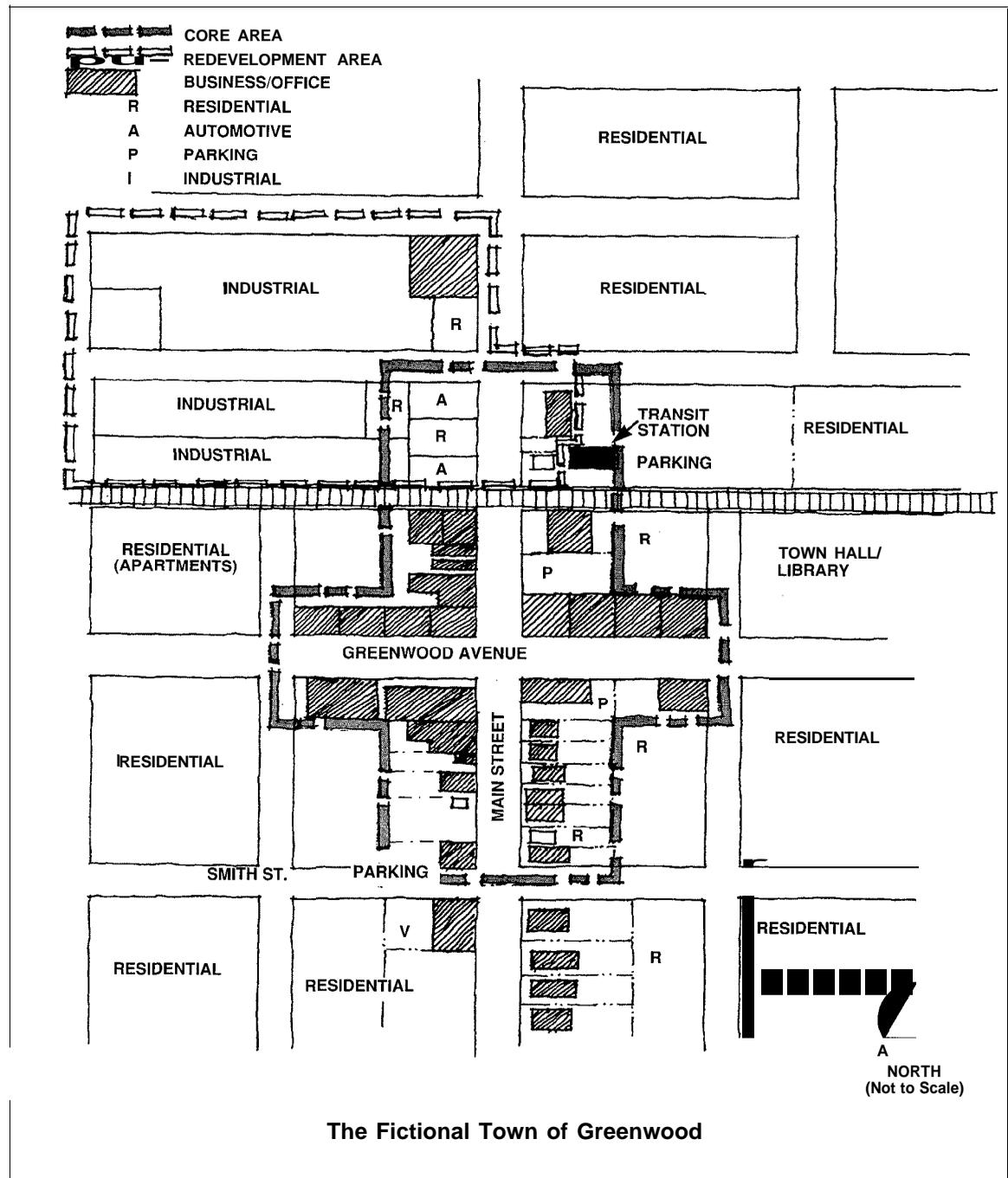


Diagram of Downtown Core (Existing Conditions)

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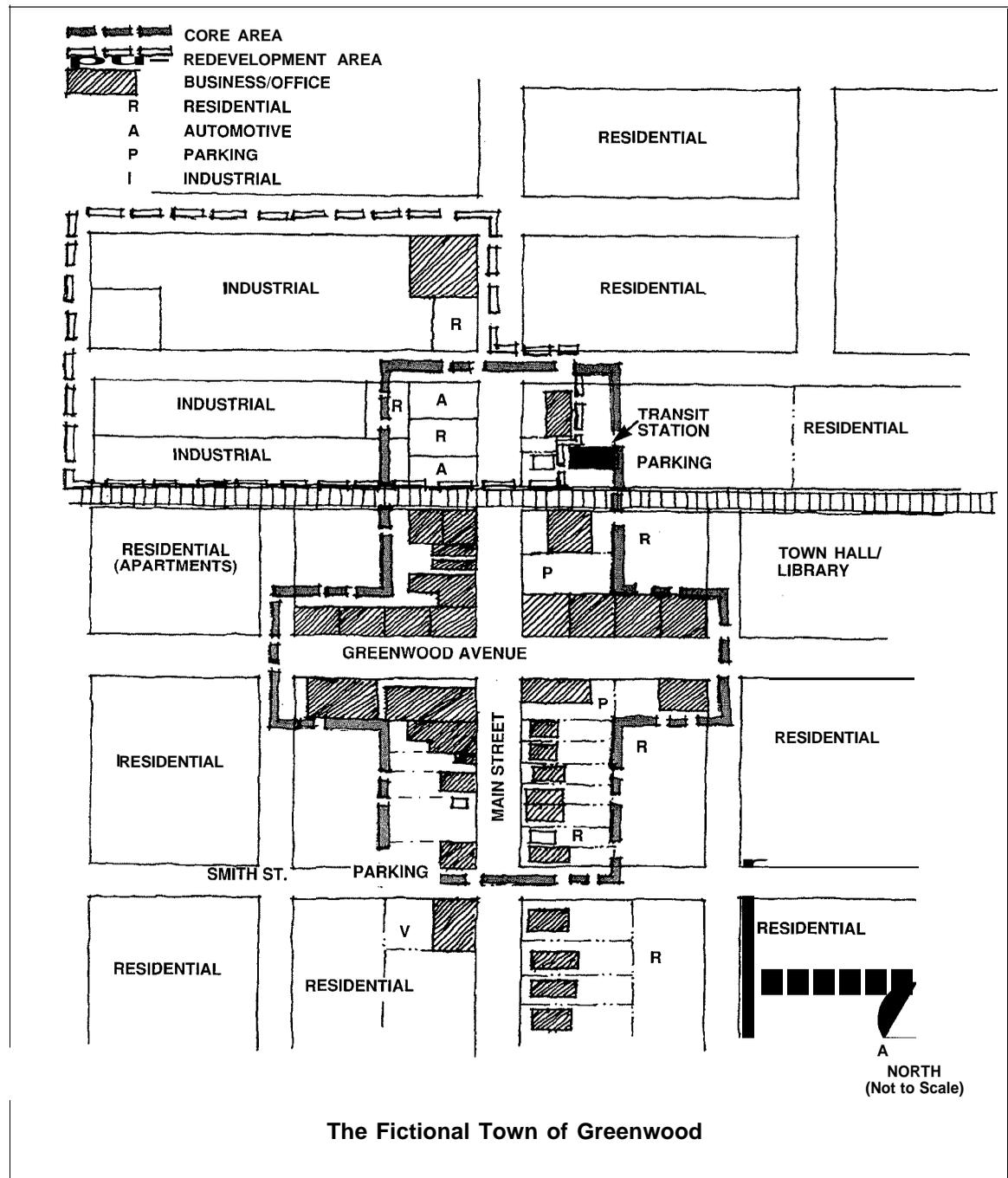


Diagram of Downtown Core (Existing Conditions)

one block to the east and west of Main Street. This is a narrow zone extending about **1,500** feet in length. The older commercial buildings are two stories in height, but since **1950** only one-story buildings have been permitted. Many one and a half story residences, about half containing offices on the ground floor, are also part of the business area fabric, which is patchwork in nature.

New policies are needed to encourage neighborhood retail and service stores to locate in the core area. These businesses would attract commuters on their way to or from the train or the bus. The greater the number and variety of neighborhood businesses concentrated in the core area, the more shoppers will be attracted to it, since all their needs can be met in one place. Similar uses reinforce each other while strengthening the concept of a town center; disparate uses dilute the “shopping center” atmosphere. The following policies are proposed:

- Reserve the **first** floor of business buildings for retail stores and service establishments that generate pedestrian traffic and serve neighborhood residents and commuters. These uses include retail sales of small goods: personal and household services such as dry cleaning, shoe repair, hairdressers, photo shops, and day care centers: certain business services that also serve residents, such as copy shops, fax and mailing services: restaurants and bars: and financial institutions. Also permitted in the core area would be public facilities such as the Post Office, Town offices, parks, and recreation buildings.
- Encourage the most-needed neighborhood shopping and commuter services, by permitting a second floor to be used for either office or residential use, provided that the first floor is reserved for the uses most needed in the area. These include:

laundromat; dry cleaner: shoe repair; bar; hairdresser; convenience food store; coffee shop: restaurant: delicatessen; newspaper store: film processing; photocopying and fax services; package mailing service: post office: video rental: drugstore; hardware store (not over **10,000** square feet): and, day care center. Residential use above stores would be subject to the density and minimum room size regulations for the garden apartment zone and a deed restriction would need to be placed on the property to insure the continuance of one of the listed uses on the ground floor.

- Permit a reduction in required parking spaces for all uses within the Station Area, in recognition of the pedestrian traffic these uses receive from neighborhood residents and transit riders. (For reduction rates, refer to the Parking Reduction Schedule in Section **10.5.2** of the Model Zoning Ordinance, Appendix “A”.) To further attract trade, merchants and owners should be encouraged to cooperate in working toward the Design Plan described below.

### **Station Vicinity Improvements**

The rail station is a handsome building hidden away in drab surroundings. The building is barely visible from Main Street since an old boarded-up commercial building separates it from the street. Major access to the station building is from the commuter parking lot to the east. The area along the railroad, on the north side of the tracks west of the station, is an old run-down industrial area with a mixture of small factories, auto services, and a few homes. Two of the factories are vacant.

The Station Area Plan proposes that part of this area be redeveloped with stores and small office buildings replacing the dilapidated structures along Main Street and to the west of it, thus establishing a “Redevelopment Area”, The conditions appear to meet the

requirements for designating the Main Street frontage and some adjacent area as an “area in need of redevelopment”. A major supermarket has been looking for a site in the Town. Promise of redeveloping the area and providing more customers nearby might induce the market to locate in the redevelopment area or at another site in the Station Area. The remainder of the industrial area could be designated as a rehabilitation area or could be gradually upgraded through the site plan approval process as owners apply for additions or new uses.

As part of the redevelopment process, it is proposed to demolish the boarded-up commercial building which separates the station from Main Street, and replace it with a landscaped pedestrian plaza. The plaza would have walkways radiating from the station to the Main Street sidewalk. Landscaping would include shade trees, flower beds, benches, a lawn area, and a central paved area with a fountain. The plaza could be used for special events connected with sales promotions for the Main Street merchants. It could have an information kiosk with material describing town services and amenities, and transit information and schedules.

The station parking lot should be refurbished with shade trees and provided with a bus stop and shelter and a separate “kiss-n-ride” drop-off area for transit riders, as detailed in the Circulation and Parking Plan.

### **Peripheral Area**

#### **Residential Uses**

Homes and apartments in the peripheral area are sound. **Infill** development in the neighborhood west of Main Street should be encouraged by recognizing the predominant lot size and rezoning the area from **60-foot** to **50-foot** lots. Now, almost all variance requests for lot size reductions are granted under New

Jersey case law. **Infill** development can result in an area upgrading as neighbors of the new homes are motivated to improve their properties. The garden apartment development on Greenwood Avenue is well buffered from the railroad by its parking lot and screening. The apartments are newer than the residences in the rest of this neighborhood and are in excellent condition.

#### **Business Uses**

The business blocks south of the core area should be free of the restrictions proposed for the core area. These blocks include mostly non-neighborhood establishments, such as the newspaper office, a dance studio, several business service establishments, and real estate, doctors’ and law offices. The Design Plan extends to these blocks, however, since the same improvements in appearance and parking facilities are needed here.

#### **Mixed Use Site**

The vacant tract north of the industrial area is proposed for a mixed use development of apartments and office buildings. The Housing Element for the Master Plan has designated a portion of this site for affordable housing and proposes **250** units in three and four story buildings with a portion of **20%** set-aside for **50** low and moderate income units to help the Town meet its affordable housing obligation. The housing should be on the part of the site closest to Main Street in order to be near both the existing residential development and the shops and stations. The height proposed is greater than the height of most apartment buildings in town, but this configuration will concentrate the housing near the Main Street shops and the railroad, and will provide more green space and separation from the office portion of the development.

The rear of the site is proposed for four-story office buildings limited through bulk requirements, so as not to overburden Main

Streets traffic carrying capacity. The concentration of additional residents and employees near the business district and rail station would both increase the merchants trade and encourage pedestrian and transit travel, thus reducing the traffic impact of the new development. The new office buildings provide an opportunity for reverse commuter use of the railroad.

The mixed use site could be rezoned from its present Research/Office Park designation to provide separate areas for the apartments and offices; alternatively, a Planned Unit Development (PUD) Zone could be created. A PUD would allow the developer more flexibility in layout and design, but would provide sufficient control over the percentage of land utilized for the various uses, including open space.

## Design Plan

A design plan is proposed for the Greenwood Center Business District as a means of identifying it and making it more attractive to shoppers, especially to pedestrians. The Design Plan also integrates the rail station into the business district.

**Two** elements of the Design Plan for the core area have been suggested in the Land Use Plan: the encouragement of two-story buildings and the integration of the station with the business district through clearance and reuse, including the provision of a pedestrian plaza between the station and Main Street.

To mark the other end of the core area, another pedestrian open space is proposed for the front of the vacant lot near the corner of Smith Street, at the southerly end of the core area. The open space would be a shallow area in front of the proposed parking lot; landscaping would separate the parking from the seating area of the plaza.

Other elements of the Design Plan are intended to create a unifying landscape and building treatment. The planting of flowering fruit trees

along Main Street within the Station Area will both beautify and identify the district. The creation of a unifying landscape and walkway treatment in the front yards of the set-back buildings on the east side of Main Street will tie these disparate elements together. These buildings are small residences, or former residences, with offices on the first floor. The Design Plan calls for their eventual replacement with two-story buildings at or near the street line and with no side yards. The zone change permitting the increased height and bulk should make this plan economically feasible as the area revives as a neighborhood and commuter shopping center.

The Design Plan also calls for the continuation of the fruit tree planting for the length of the business district outside the core area and for in-fill planting of shade trees along the streets bordering the Station Area in places where street trees are not now provided.

There is no off-street parking provided in front of any building in the business district now and the Zoning Ordinance should be changed so that none is permitted. The Circulation Plan which follows calls for an expansion and connection of parking behind the stores with limited access drives from Main Street, in order to foster pedestrian safety and to promote a more continuous facade of store fronts as a design feature. The Zoning Ordinance now requires no front yard. This provision should be strengthened, so that only a limited front yard is permitted, thus requiring additions and new buildings to be brought to or near the street lot lines.

## **Circulation and Parking Plan**

### **Reducing Congestion**

Implementing measures to ease traffic congestion in the business district is an important goal of the Station Area Plan. The congestion is a deterrent to shoppers who come by car, and also reduces the appeal of the area for pedestrians.

New land uses planned for the station area are located close to the station to encourage residents and employees to use transit or to walk, but it is recognized that a certain amount of increased traffic must be expected. Several measures are proposed to ease congestion.

### **Off-Street Parking**

An Off-street Parking Plan is proposed to increase the number of spaces and reduce the number of driveways by joining all parking lots and removing the rear yard garages that are still present behind some offices. As parking lots are connected, either voluntarily or through the site plan approval process, which can require adherence to the adopted Circulation Element, many Main Street driveways can be eliminated. New driveways from side streets at the ends of the blocks are proposed. New curb cuts on Main Street will not be needed under the Off-street Parking Plan, and they should be prohibited. Additional spaces can be gained through access to rear yards which now have no connection to the street.

The additional off-street parking will ease the congestion caused by frequent turnover in the on-street spots. It may not be possible to eliminate on-street parking, since it is expected that the additional off-street capacity will be utilized by the increased trade expected. However, if a parking structure should be provided in the future, parking on one side of

Main Street should be eliminated.

To further increase off-street parking, it is proposed that part of the long-vacant lot at the southerly end of the core area be utilized for a combination of parking and pedestrian plaza as suggested above. The lot has **200** feet of frontage on Main Street. It is proposed to purchase half of the lot so as to leave the owner a developable property. Purchase is expected to be through a combination of Town funds and monies raised through the Special Improvement District taxes. This new lot could initiate the program of the inter-connected parking lots.

*Note: A map showing the ~~off-street~~ parking plan should be included and adopted as part of the Station Area Plan.*

### **Bus Stop**

A bus stop for both local and commuter bus lines is located near the intersection of Main Street and Greenwood Avenue. This stop should be moved to the rail station to reduce congestion at this intersection, be closer to the proposed apartments and office buildings, and provide for an easy transfer from bus to train. The bus stop should be located so as not to interfere with parking or with pedestrian traffic to the rail station. A bus shelter with route and schedule information should be provided.

### **Traffic Signal Coordination**

Congestion can be reduced by coordinating the Greenwood Avenue/Main Street traffic signal with the grade crossing gates. As the train approaches, the light for Main Street should change to red so that cars do not block the intersection and prevent the flow of Greenwood Avenue **traffic**. The light should remain red for Main Street until the crossing gates are raised. Part of the funds for this improvement might be secured through a State or Federal grant or from the developer of the new apartment/office

complex as an off-site improvement to mitigate the impact of the increased traffic that the development will produce. (See Appendix “D”, Chapter 8, for a list of funding sources available for transit-related initiatives.)

### **Improvements to Areas Adjacent to Station**

The pedestrian plaza described in the Land Use Plan section will greatly improve the station’s visibility and pedestrian accessibility. To make the plaza more of a focal point for the shopping district, a flagpole, business district logo sign, or a row of banners could be installed near the Main Street sidewalk. These banners could also continue down Main Street. The municipally-owned station parking lot should be landscaped with evergreens at its boundaries with the adjacent residential area, to serve as a buffer, but openings should be left for pedestrian access to the station. Shade trees should be installed at the ends of parking bays to break up the large macadam area. Crosswalks, in a material to match the plaza pavement, should connect the ends of parking bays to the station building and platform. Similar pedestrian walks along the edges of the parking lot should link the station to the adjacent residential areas.

A “kiss-n-ride” drop-off area for transit riders could be provided between the station building and the bus stop to serve both modes of transportation.

### **Pedestrian Circulation**

Ample sidewalks along the shopping streets make for good pedestrian circulation. The proposed station plaza and pedestrian walks will improve access to the station from several directions. The grid system of streets in the Station Area makes for convenient pedestrian circulation along the sidewalks throughout the area.

### **Bicycle Facilities**

Because of the relatively narrow and heavily trafficked arterial roads in the area, bicycle access is constrained. A bicycle lane on Main Street, north of the core area, might be possible since no parking is allowed there. This would have to be approved by the County since Main Street is a County road. A sheltered bicycle rack or lockers should be provided at the station building. If it is well used, the provision of bicycle paths, where practicable, should be further explored. A survey of transit riders and the general public could be made to determine the extent to which bicycle lanes would be used, if provided.

### **Implementation Measures**

The adopted Station Area Plan forms the basis for the improvement of the Greenwood Center Business District and the Station Area. A variety of implementation measures are needed to translate the plan into the changes needed to revitalize the area. These measures involve both government and private undertakings.

The Zoning Ordinance and the Site Plan Approval Ordinance are the basic tools for implementing the Station Area Plan. Specific zoning provisions regarding zoning and site plan approval for the Core Area and for parts of the Peripheral Area are suggested in the Station Area Plan. To incorporate the incentives and restrictions proposed to stimulate business, an Overlay Zone is recommended. Through this device, the underlying regulations would remain but the additional requirements and incentives of the Overlay Zone would become effective whenever new development is proposed. A map of the Overlay Zone boundaries and the regulation as to use, setbacks, height, density and parking lots would be adopted as a Zoning Ordinance amendment. A division of the Overlay Zone into Core Area and Peripheral Area sections to match those of the Station Plan is recommended,

since some of the regulations are different for the two areas.

Rezoning will be needed to permit apartments and office buildings in the vacant **Office-Research Zone** parcel. As noted earlier, this can be done either by creating two separate zones with appropriate regulations based on the Station Area Plan, or by instituting a Planned Unit Development (**PUD**) Zone. The latter would involve changes to both the Zoning and Site Plan Approval Ordinances, as required by the Municipal Land Use Law.

In this case, where the Station Area Plan calls for an intensity of office use which will not overburden the carrying capacity of Main Street, but that intensity has not been determined, a **PUD** would be appropriate. The developer would submit a general development plan for the site. The plan would comply with the standards set forth in the **PUD** Ordinances for the percentages of area to be devoted to apartments, offices, and common open space, for determining intensity of office use, and for other controls such as density or height. The general development plan would include a traffic study. The Planning Board would then review the development plan and work out any changes desired with the developer.

Boundaries of the **PUD** Zone, and standards regarding the type, intensity and density of land uses would be incorporated in the Zoning Ordinance. Provisions regarding the reservation of open space, the timing of development if staged development is planned, and the findings required for approval by the Planning Board would be incorporated in the Site Plan Approval Ordinance.

### **Redevelopment**

The **first** step in redeveloping the old industrial area adjacent to the station would be a determination by the **Planning** Board, ratified by the Town Council, that the area is in need

of redevelopment under one or more of the standards set forth in the Local Redevelopment and Housing Law. Then a Redevelopment Plan would be drawn up and adopted by ordinance. The plan would set forth the proposed uses and bulk requirements and identify the areas to be acquired. If uses and bulk requirements are not in accordance with zoning, the Plan would constitute an overlay zoning district for the redevelopment area and would amend the Zoning Map.

The Town would seek one or more developers to redevelop the property according to the Redevelopment Plan. The developer could be selected through a competition which could include conceptual site plans and architectural drawings. It is recommended that the developer chosen be directed to attempt to purchase the property through private transactions, and to seek action from the Town if he is not successful. In this case, the Town would condemn the property and sell it to the developer for the purchase price.

### **Special Improvement District**

The merchants and property owners in the Greenwood Center business district have recently asked the Town Council to create a Special Improvement District (**SID**) to raise funds to improve the area. The merchants have expressed interest in a design plan similar to that of the Station Area Plan. Through a **SID**, a special property tax is imposed for the purpose of promoting the economic and general welfare of the District. A District Management Corporation determines what improvements are to be made and how the funds are to be spent.

A Special Improvement District would be the best tool to implement the Design Plan described above.

## Relationship to County, State, and Local Plans

The Station Area Plan is in agreement with the goals and objectives of the County Master Plan and the State Development and Redevelopment Plan, specifically as to concentrating development and redevelopment in centers and in areas already provided with the necessary infrastructure. The Station Area Plan is not considered to have any effect on the Master Plans of contiguous municipalities.

### 7.3 Adopting Model Ordinance Language

*Zoning and site plan approval ordinances are adopted by the municipal governing body after a public hearing. Since New Jersey law requires that a zoning ordinance be based on an adopted land use plan element and housing element of a master plan [except under certain conditions], the Planning Board is often assigned the task of developing the ordinance. The Site Plan Approval Ordinance also is frequently drawn up by the Planning Board, since it has the primary responsibility for administering the ordinance. Site plan approval regulations are often part of the Zoning Ordinance rather than a separate document.*

The local ordinances should be based on the Station Area Plan. The model ordinances, set forth in the Appendices which follow, are designed to serve as a guide for your community's work. These models may be used as guides for developing plans and ordinances to suit local conditions. Ordinances can be developed by the municipality's planning staff or consultant, the Planning Board or municipal attorney, a committee of the Planning Board, or any combination of these. If the ordinances originate with the Planning Board, they should be reviewed by the Board's attorney before

being recommended to the governing body. For Model Zoning Ordinance Language for a station area, Model Site Plan Approval Ordinance Language for a Station Area Zone, or Model Redevelopment Plan Ordinance Language, see Appendices "A", "B", and "C" respectively.

The governing body reviews the proposed ordinance and may make changes based on policy decisions or on recommendations of the municipal attorney (who reviews the ordinance for legal form if he or she has not originated it). Next, the governing body must refer the ordinance to the Planning Board, which has 35 days to report on consistency with the Master Plan and any other matter it deems appropriate. The governing body may change the language, based on the Board's advice, before it publishes the ordinance and holds the required public hearing. If changes made as a result of public input at the hearing are substantive, rather than technical, the ordinance must be re-advertised and another hearing held.

As with the Station Area Plan, the length of time necessary to develop and pass a zoning or site plan ordinance can take six months to a year, depending on the amount of professional help and the work load of the Planning Board and governing body.



# Chapter 8 – Appendices

## Appendix “A”

### Model Zoning Ordinance Language for Station Area

#### Introduction

*The model Zoning Ordinance language which follows **is** intended to provide a basis for a local zoning ordinance amendment for a Station Area Zone based on individual municipal aims and conditions. The local ordinance should be developed by the Planning Board, preferably after adoption **of** a Station Area section **of** the Master Plan. The Board’s planning consultant and/or attorney should help with developing the Ordinance language and their attorney should check it **for** legal integrity.*

The model ordinance is appropriate for most station types. The standards would have to be changed somewhat so as to be suitable for an Urban Center or Single Use District or Neighborhood. Some sections of the ordinance will not apply to the latter. Parts of the model will not apply to a Park-and-Ride Station, unless it is desired to develop the surrounding area for residential use or economic development. The model ordinance can also be adapted for bus terminal areas for local and commuter buses.

There are two approaches to translating a Station Area Plan into zoning: establishment of an Overlay Zone, and replacement of the existing zone through a map and text change.

An Overlay Zone is appropriate where the municipality has zones for various uses in the Station Area and **finds** no need to change zone boundaries. The controls of the underlying zoning districts would remain in effect, except as modified by the Overlay Zone, as development or redevelopment takes place. A

replacement of the existing zone is appropriate where the municipality wishes to encourage mixed use development or redevelopment and/or wishes to provide for uses not previously permitted.

This model reserves a central area, adjacent to the station, for shopper and commuter business in a Station Area Core Zone. Other desired uses are permitted in a Station Area Peripheral Zone comprising the remainder of the area covered by the Station Area Plan. Housing can be separated from other uses by appropriate setbacks and landscaped buffers. Minimum lot sizes can be made large enough to provide for substantial developments where land is available for development or redevelopment, in order to avoid a confusing or incompatible mix of uses.

The model zoning ordinance is designed to provide a range of purposes, land uses, and incentives from which each municipality can choose to suit its particular circumstances and objectives. The model assumes that the regulations for the Station Area Zone will be in a separate article of the local Zoning Ordinance (“Article **10**” is used here as an example) and uses a standard modern “multi-decimal” system for sections and sub-sections. A Definition section is found in Section **10.7** for terms which might differ from those of the local ordinance. This can be modified to conform to the local ordinance system. In the model:

(language in parentheses is an example)

[language in brackets is alternative or optional text]

*Italics ~~identify~~ a note which is not part **of** the Ordinance language.*

## **Basis for Station Area Zoning**

### **Article ( 10) Station Area (SA) Zones or [Station Overlay (SAO) Zones]**

#### **10.1 Purposes**

The general purpose of the Station Area Zones [Station Area Overlay Zone] is to implement the Station Area Plan element of the Master Plan. The specific purposes are:

- a) to provide for land uses and facilities beneficial to both the community and to transit users;
- b) to increase use of the rail station;
- c) to concentrate [a mix ~~of~~] retail, office, residential, public, [light industrial] and open space uses within walking distance of each other and the rail station, in order to increase convenience for residents, shoppers, commuters and employees and to reduce auto traffic by providing an environment conducive to pedestrians, bicyclists, and transit users;
- d) to provide for land uses that will generate and encourage transit ridership;
- e) to revitalize the Station Area [or local name such as Greenwood Section] and enhance economic vitality [encourage economic development] through zoning incentives;
- f) to provide for the safe and efficient flow of pedestrian and vehicular traffic, emphasizing a pedestrian-oriented environment;
- g) to preserve established residential neighborhoods in and adjacent to the Station Area;
- h) to provide for visual amenity, and to reinforce a sense of place or center;  
*and, where applicable, if the Housing Element shows an **affordable** housing site in the Station Area*
- i) to provide for the development of affordable housing to aid (Greenwood) in meeting its affordable housing obligation.

#### **10.2 Zoning Map**

The boundaries of the Station Area Core (**SA-C**) Zone and the Station Area Peripheral (**SA-P**) Zone [Station Area Overlay (**SAO**) Zone] are delineated on the Zoning Map of the (Borough, City, etc. of \_\_\_\_\_), revised \_\_\_\_\_ (date), which accompanies, and is hereby made part of this Ordinance.

*The Core Zone should be an area surrounding the station or on one side **of** the tracks and including the station, depending on ~~local~~ conditions and plans. The Peripheral Zone covers the remainder **of** the Station Area*

Or

The boundaries of the Station Area Core (**SA-C**) Zone and the Station Area Peripheral (**SA-P**) Zone [Station Area Overlay (**SAO**) Zone] are delineated on the amendment to the Zoning Map of the (Borough, City, etc. of \_\_\_\_\_), dated \_\_\_\_\_ which accompanies and is hereby made a part of this Ordinance.

*This alternative is **for** a drawing **of** a section **of** the Zoning Map showing the Station Area Zone and its surroundings.*

*Note: We do not recommend a metes and bounds description since this is ~~difficult~~ **difficult** for the general public to visualize. In all cases, the Zoning Map should be kept up-to-date.*

**USES - To ~~replace~~ current zoning with **Station Area Zones****

#### **10.3 Permitted Uses**

In order to further the purposes of the Station Area Zones, only the uses set forth in the following sections are permitted.

##### **10.3.1 Permitted Principal Uses in the **SAC** Zone**

In order to reserve the core area of the Station Area Zone for retail and service uses and other uses generating pedestrian traffic or serving commuters, only the following principal uses

are permitted in the **SA-C** Zone:

- a) Commuter parking facilities and passenger drop-off and pick-up areas;
- b) Retail sales, but excluding the sale of building material, plumbing supplies, motor vehicles, boats or swimming pools, saunas, **jacuzzi**, hot tubs, and similar items: [and furniture and large appliances such as refrigerators and washing machines];
- c) Personal and household services and business services as defined by this Ordinance;
- d) Restaurants and similar establishments selling food and/or beverages [except as Ordinance];
- e) Day care centers, including nursery schools;
- f) Public buildings such as municipal offices, a police station, library, post office, museum, [school] and similar uses that directly serve the public, but excluding [schools and] facilities such as a public works garage, water treatment plant, electric transformer station, and uses of a similar nature;
- g) [Non-profit private elementary and secondary schools];
- h) Banks and savings and loan institutions;
- i) Publicly or privately-owned open spaces, such as parks and plazas available to the general public;
- j) Publicly-owned outdoor active recreation facilities;
- k) [Townhouses and apartment buildings as permitted in the (Affordable Housing **Zone**)]

#### **10.3.2 Permitted Principal Uses in the SA-P Zone**

- a) Offices buildings, as permitted in Section \_\_ of the Zoning Ordinance;
- b) Townhouses, as permitted in Section- of

**the Zoning Ordinance, except that the density must be (10) units per acre; Density may be higher but should not be lower:**

- c) Apartment buildings, as permitted in Section \_\_ of the Zoning Ordinance except that the density shall be **(15)** units per acre; *Density may be higher but should not be lower:*
- d) Colleges, universities and commercial schools;
- e) Houses of Worship (*unless a conditional use in the Zoning Ordinance*);
- f) All uses permitted in the **SA-C** Zone;
- g) Retail, service and other uses not permitted in the **SA-C** Zone, as permitted in the (General Business Zone) as set forth in Section \_\_\_ of the Zoning Ordinance;
- h) Clubs and meeting places for community groups as permitted in Section \_\_\_ of the Zoning Ordinance;
- i) [Light industry uses as permitted in the (Light Industry) Zone];
- j) [public and private non-profit elementary schools] *[if not a permitted use in the SA-C Zone or a conditional use).*

#### **10.3.3 Conditional Uses in the SA-C Zone**

The following uses are permitted as Conditional Uses provided that such uses are located on a floor other than the street level floor of a building:

- a) Business and professional offices;
- b) Apartment units above the street level of a building [subject to the controls for apartments set forth in Section \_\_\_ of the Zoning Ordinance, except for the regulations for lot size, lot width and setbacks, and any other regulations which the Planning Board may determine are not consistent with apartment units in a mixed use building].

or; to permit apartment units as an incentive:

### 10.3.3[A] Conditional Uses of the SAC Zone

In order to encourage certain uses providing services to commuters in close proximity to the rail station, apartment units shall be permitted on the second or higher story of any building in the SA-C Zone, subject to the following conditions:

- a) That the street floor of such building be reserved for one or more of the following uses: dry cleaner, laundromat, shoe repair, barber, hairdresser, convenience food store, supermarket, not over 50,000 square feet in floor area, restaurant, delicatessen, newspaper store, film processing, photocopying, package mailing service, post office, video rental, drugstore, hardware store not over 10,000 square feet in floor area, health club or day care center:
- b) That apartment units shall be subject to the density and room size [floor area] regulations set forth in Section \_\_\_ of the Zoning Ordinance [or the desired regulations may be listed here or the language in the 10.3.3b) alternate above may be used]; and,
- c) That a deed restriction approved by the Planning Board Attorney be placed on property on which residential use is permitted as a conditional use above the first floor, so as to restrict the first floor uses to those listed, unless the apartment use is discontinued.

*Note: See Bulk and lot regulations and parking regulations for alternative incentives.*

### 10.3.4 Conditional Principal Uses in the SAeP Zone

- a) Automobile service stations, including car washing establishments, subject to the conditions set forth in Section \_\_\_ of the Zoning Ordinance:

- b) Nursing homes and hospitals, subject to the conditions set forth in Section \_\_\_ of the Zoning Ordinance:
- c) [Public and private non-profit elementary and secondary schools, as permitted in Section \_\_\_ of the Zoning Ordinance;] (~~is~~ not a permitted use)
- d) Houses of Worship, as permitted in Section \_\_\_ of the Zoning Ordinance (if not a permitted use); and,
- e) Single-family [and two-family] homes, provided that such homes are located no closer than 1/2 mile to the railroad station property.

### 10.3.5 Permitted Accessory Uses

Uses customarily accessory and incidental to any permitted or conditionally permitted use shall be permitted, provided however, that no outdoor storage shall be permitted.

### 10.3.6 Conditional Accessory Uses

The following accessory uses are permitted as conditional uses:

- a) Public or private parking facilities as an accessory to more than one principal use, provided that the Planning Board determines that the number of parking spaces provided equals the sum of the spaces for each use served by the parking lot as required by the Zoning Ordinance, or, if the uses served have non-overlapping operating hours or different peak use hours, that adequate assurances exist that the number of parking spaces provided will accommodate the requirements of all the uses served;
- b) Parking structures of no greater than (4) levels are permitted as a conditional use, approved by the Planning Board, provided that the following conditions are met:
  - at least (25)% of the spaces are reserved for commuters:

- the parking structure is located in the rear yard(s) of a building or group of buildings;
- no parking structure shall be located on a corner lot, if such lot has a side lot line which is the street line of a major [arterial] street as designated by an adopted Master Plan or as established by ordinance; and
- where a parking structure is adjacent to a street, an evergreen landscaped buffer at least five feet in width shall be provided.

*USES - To provide for a Station Area Overlay Zone. This section is a substitute for Section 10.3 where an overlay zone is desired.*

**10.3[A] Permitted Uses**

All uses permitted in the Zones underlying the Station Area Overlay Zone are permitted except as modified by the provisions of this Section.

**10.3[A]. 1 Permitted Principal Uses**

In order to further the purposes of the Station Area Overlay Zone, only the following principal uses are permitted within (1,000) feet of the railroad station property: [and, ~~for retail and service are planned for only one side of the~~ railroad track: on the (east) side of the (Mainline) railroad tracks:] This ~~language~~ reserves the **core area** for retail/service uses and other ~~uses generating pedestrian traffic~~ and/or serving commuters.

- a) through l) : ~~list the same uses as for 10.3.1.~~

**10.3[A].2 Conditional Principal Uses**

*or; to permit apartment units as an incentive.*

**10.3[A].2.1 Residential Uses**

The following uses otherwise permitted in the underlying zones within the Station Area Overlay Zone are permitted only as Conditional Uses, provided the conditions listed for each are met:

- a) Townhouses, provided that the density

shall be (10) units per acre; *Density maybe higher (12 units per acre is preferred) but should not be lower*

- b) Apartment buildings, provided that the density shall be (15) units per acre: *Density may be higher but should not be lower.* and,
- c) Single-family [and two-family] homes, provided that such homes are located no closer than 1/2 mile to the rail station property.

**10.3[A].2.2 Conditional Uses within the Core Area**

**10.3[A].2.2[A] Conditional Uses as Incentives**

*These sections are the same as for 10.3.3 and 10.3.3[A].*

**10.3[A].3 Permitted Accessory Uses**

**10.3[A].4 Conditional Accessory Uses**

*These sections are the same as 10.3.5. and 10.3.6.*

*Lot and Bulk Regulations for SA-C and SA-P Zones:*

**10.4 Lot and Bulk Regulations**

In the Station Area (SA) Zones, lot and bulk regulations as shown on the (Schedule of Lot and Bulk Requirements), Section of the Zoning Ordinance shall apply as shown in the following table, except as amended by Subsections 10.4.1 through 10.4.3:

**10.4.1 Regulations Within the Core Station Area Zone**

The following exceptions to the regulations in Section 10.4 shall apply in the Core Station Area Zone:

**10.4.1.1 Height**

An additional story shall be permitted to provide for apartment units when such units are permitted as a conditional use by Section 10.3.2.2(A).

**10.4.1.2 Front yard**

*Where buildings are now at the street line or*

Use	Applicable Requirements
Business uses	Same as the (B-I Neighborhood Business Zone) <b>[B-2 Downtown Business Zone]</b>
Townhouses	Same as the <b>(TH Town House Zone)</b>
Apartment Buildings	Same as the (GA Garden Apartment Zone) <b>[R-4 Apartment Zone]</b>
Office Buildings	Same as the (B-I Office Zone) <b>[OP Office Parks Zone]</b>
Industrial and Warehouse Uses	Same as the (I-I Industrial Park Zone)
Single-Family [and Two-family] Homes	Same as the (R-i <del>3 Single-family Zone</del> ) [and <del>R-2 Two-family Zone, respectively</del> ]
Other uses permitted the SA Zone such as schools, houses of worship, day care centers	Same as <del>the (R-1-3 in the in in Single-family-Zone)</del> <b>[B-2 Downtown Business Zone]</b>
Uses conditionally permitted in the SA Zone	Same as the <b>(B-2 Downtown Business Zone)</b> subject to any special lot and bulk restrictions which are conditions of the use

where new development or redevelopment is expected to take place:

No front yard is required: all new buildings shall be at the street line, except where set back not more than **(10)** feet to form a pedestrian plaza, which plaza shall be at least **(25)** feet in width measured parallel to the street line. There shall be no more than one such plaza for each **200** feet of street frontage and there shall be at least **100** feet between plazas.

or; where setback for existing buildings is greater:

#### **10.4.1.1.2[A] Front yard**

The front yard shall be the same as for adjacent buildings, or, where adjacent

buildings have different setbacks, the same as the building closer to the street line; except that for a corner building, the front yard may be reduced by up to **(10)** feet provided that the front line of the new building or addition is at least **50** feet in width measured parallel to the street line.

#### **10.4.1.3 Side yards**

No side yards are permitted unless necessary to provide access to parking behind the building or deemed necessary by the Fire Safety Officer for fire fighting access.

#### **10.4.2 Regulations for Townhouses and Apartment Buildings**

The following exceptions to the regulations set forth in Section **10.4** shall be permitted in Station Area Zones:

*Appropriate adjustments in setbacks, coverage and floor area ratio should be made ~~if an~~ increase in density has been permitted. In the case of apartments, the municipality may consider allowing ~~an~~ increased number of stories in lieu of decreasing setbacks and increasing coverage. For example:*

##### **10.4.2.1 Front yard**

The required front yard for townhouses and apartment buildings shall be reduced from **(30)** to **(25)** feet.

##### **10.4.2.2 Height**

The number of stories permitted for garden apartment buildings shall be increased to (three) stories.

*For large areas subject to development or redevelopment:*

##### **10.4.2.3 Lot Area and Width**

In order to provide for orderly development, prevent undue mixing of land uses and provide for the quiet enjoyment of residents in

townhouse and apartment developments, the minimum lot ~~size~~ for any Townhouse or Apartment Building development shall be ~~(5)~~ acres and the minimum lot width shall be ~~(300)~~ feet.

**10.4.3 Regulations for Business, Office and Industrial Uses in the Station Area Peripheral Zone**

The following exceptions to the regulations set forth in Section 10.4 shall apply:

**10.4.3.1 Building Coverage**

The permitted coverage may be increased by up to ~~(10)~~ percentage points (e.g. from ~~40%~~ to ~~50%~~) when parking is reduced as required or permitted by Sections 10.5.2 or 10.5.4.

**10.4.3.2 Floor Area Ratio**

The Floor Area Ratio may be increased by ~~10%~~ (e.g. from ~~2.0~~ FAR to ~~2.20~~ FAR) when parking is reduced as required or permitted by Sections 10.5.2 or 10.5.4.

*For ~~infill~~ areas subject to development or redevelopment:*

**10.4.3.3 Lot Area and Width in Established Business and Industrial Areas**

In established business and industrial areas, where redevelopment or ~~infill~~ development takes place on a single lot, the minimum lot requirements shall be the same as the lot area and width of the existing lot.

*For large areas where mixed use is permitted:*

**10.4.3.4 Lot Area and Width in Areas of New Development or Redevelopment Outside of Established Business and Industrial Areas**

In order to provide for orderly development and to prevent undue mixing of land uses, the minimum lot requirements shall be as follows:

business, office or	lot area - <del>(3)</del> acres
industrial development	lot width at the street line- <del>(200)</del> feet

*Lot and Bulk Regulations for a Station Area Overlay Zone:*

**10.4[A] Lot and Bulk Regulations**

In the Station Area Overlay Zone, the lot and bulk regulations for underlying zones shall apply, except as set forth below.

**10.4[A].1 Business Zone(s) within (1,000) feet of the Station Property [and on the (east) side of the (Mainline)]railroadtracks]**

**10.4[A].1.1 Height**

One story [~~2,3,4~~, etc. stories], except that an additional story shall be permitted to provide for apartment units, when permitted as a conditional use above certain uses, by Section 10.3[A].2.2[A].

**10.4[A].1.2 Front yard**

**10.4[A].1.3 Side yards**

**10.4[A].1.4 Coverage**

**10.4[A].1.5 Floor Area ratio**

*These sections are the same as for 10.4.1.2 to 10.4.1.5 above, except for the regulations for lot size which are not applicable.*

**10.4[A].2 Townhouse and Apartment Zones**

**10.4[A].3 Office and Industrial Zones**

*These sections are the same as for 10.4.2 and 10.4.3, above.*

**10.5 Off-Street Parking Requirements**

**10.5.1 Number of Spaces**

The parking requirements set forth in the following shall be considered to be the maximum number of parking spaces required in the Station Area Zone. See the "Parking Reduction Schedule" in Section 10.5.2, following, for parking space reductions recommended by facility type located within a station area or transit corridor.

## GUIDELINES FOR OFF-STREET PARKING REQUIREMENTS FOR NONRESIDENTIAL USES

Use	Maximum Off-Street Parking Spaces*
Assembly, Manufacturing and other Industrial uses	1 per 800 sq.ft. GFA
Bar	1 per 2 seats
Bowling Alley	4 per alley
Car Wash	10 per washing lane
Fiduciary institution	1 per 300 sq.ft. GFA
Hotel	.7 per guest room + 1 per 100 sq.ft. GFA non-room area
House of Worship	1 per 3 seats
Library	1 per 300 sq.ft. GFA
Medical Center	1 per 250 sq.ft. GFA
Nightclub	1 per 3 seats
Offices	
Under 50,000 sq.ft. GFA	4.5 per 1,000 sq.ft. GFA
50,000-99,999 sq.ft. GFA	4 per 1,000 sq.ft. GFA
100,000+ sq.ft. GFA	3.5 per 1,000 sq.ft. GFA
Research	1 per 1,000 sq.ft. GFA
Restaurant	1 per 3 seats
Fast food establishments	1 per 30 sq.ft. GFA
Retail store	1 per 200 sq.ft. GFA
Schools	
Elementary per teacher and staff	2 per classroom, but not less than 1
Intermediate per teacher and staff	1.5 per classroom, but not less than 1
Secondary per teacher and staff	2.5 per classroom, but not less than 1
Service station	4 per bay and work area
Shopping center	
Under 400,000 sq.ft. GLA	4 per 1,000 sq.ft. GLA
400,000-599,999 sq.ft. GLA	~ 4.5 per 1,000 sq.ft. GLA
600,000+ sq.ft. GLA	5 per sq.ft. GLA
Storage areas	1 per 5,000 sq.ft. GLA
Theater	1 per 3 seats
Theater in shopping center	1 per 4 seats
Warehouse, receiving, shipping	1 per 5,000 sq.ft. GFA

\*See "Parking Reduction Schedule" in Section 10.5.2, for recommended reductions by land use located within a station area or transit corridor.

Notes: **GFA** = Gross floor area  
**GLA** = Gross leasable area

Source: *Listokin, David and Walker, Carole*  
*The Subdivision and Site Plan Handbook*,  
Center for Urban Policy Research, New  
Brunswick 1989.

## GUIDELINES FOR OFF-STREET PARKING REQUIREMENTS FOR NONRESIDENTIAL USES

Use	Maximum Off-Street Parking Spaces*
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Bowling Alley	4 per alley
Car Wash	10 per washing lane
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Hotel	.7 per guest room + 1 per 100 sq.ft. GFA non-room area
House of Worship	1 per 3 seats
Library	1 per 300 sq.ft. GFA
Medical Center	1 per 250 sq.ft. GFA
Nightclub	1 per 3 seats
Offices	
Under 50,000 sq.ft. GFA	4.5 per 1,000 sq.ft. GFA
50,000-99,999 sq.ft. GFA	4 per 1,000 sq.ft. GFA
100,000+ sq.ft. GFA	3.5 per 1,000 sq.ft. GFA
Research	1 per 1,000 sq.ft. GFA
Restaurant	1 per 3 seats
Fast food establishments	1 per 30 sq.ft. GFA
Retail store	1 per 200 sq.ft. GFA
Schools	
Elementary per teacher and staff	2 per classroom, but not less than 1
Intermediate per teacher and staff	1.5 per classroom, but not less than 1
Secondary per teacher and staff	2.5 per classroom, but not less than 1
Service station	4 per bay and work area
Shopping center	
Under 400,000 sq.ft. GLA	4 per 1,000 sq.ft. GLA
400,000-599,999 sq.ft. GLA	~ 4.5 per 1,000 sq.ft. GLA
600,000+ sq.ft. GLA	5 per sq.ft. GLA
Storage areas	1 per 5,000 sq.ft. GLA
Theater	1 per 3 seats
Theater in shopping center	1 per 4 seats
Warehouse, receiving, shipping	1 per 5,000 sq.ft. GFA

\*See "Parking Reduction Schedule" in Section 10.5.2, for recommended reductions by land use located within a station area or transit corridor.

Notes: **GFA** = Gross floor area  
**GLA** = Gross leasable area

Source: *Listokin, David and Walker, Carole*  
*The Subdivision and Site Plan Handbook*,  
Center for Urban Policy Research, New  
Brunswick 1989.

### 10.52 Reduction of Spaces

The maximum parking requirements set forth in the three tables in Section 10.5.1, shall be reduced within a Station Area or Transit Corridor in accordance with the Station Area Parking Reduction Schedule, below. These reductions are based on progressive new standards which reflect the importance of a linkage between land use planning and transit planning.

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#### STATION AREA PARKING REDUCTION SCHEDULE

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	Approximate Percent Reduction*		
	Office Use	Non-Residential (non-office) Use	Residential Use
Transit Corridor	10%	5% - 10%	5% - 10%
Station Influence Area	5% - 15%	5% - 10%	15% - 20%
Transit Node	5% - 25%	10% - 15%	25% - 30%
Multi-Modal Transit Hub	60%	25%	60%

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#### Transit Corridor

An area within a 1/4 mile radius of a bus or light rail route with headways of 15 minutes or less during peak periods.

#### Station Influence Area

An area approximately within a one - two mile radius of a station, such as the stations on the Morris and Essex Line.

#### Transit Node

An area within a 1/4 mile radius of a fixed guideway station, such as the Summit Station, (light rail, commuter, or rapid transit).

#### Multi-Modal Transit Hub

An area within a 1/4 mile of a multi-modal downtown transit station, i.e., Newark Penn Station. At "Multi-Modal Transit Hubs", (such as Newark, Jersey City, Hoboken, or Atlantic City) parking may also be reduced by as much as 60% for non-residential, non-office uses, reflecting the proximity and high use of transit systems.

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*\*Variable ranges reflect density of /and use; i.e., reductions may be at the lower range in less dense locations..*

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### **10.53 Shared Parking**

For mixed-use developments, a shared parking approach to the provision of off-street parking shall be required where feasible, as determined by the approving agency. The methodology used by the developer to calculate the number of parking spaces required shall take into consideration the methods recommended in Shared Parking, published by the Urban Land Institute (1984) or other recognized standards, acceptable to the approving agency.

Any developer of a place of employment or public assembly shall undertake a study, conducted by a transportation planner or engineer, to determine the modal split for travel by its employers and/or visitors. Based on the expected distribution of travel modes, a parking requirement shall be determined and approved by the appropriate municipal agency. The agency shall require the applicant to construct or pave only the number of parking spaces determined to be necessary, based on the agreed-upon results of the modal split study. From time to time, the building inspector may conduct site visits to **confirm** that the amount of parking provided is being utilized by the development, and, in fact, that the parking remains sufficient to meet the needs of the development. If at any time it is determined that this is no longer the case, the construction of additional parking spaces may be required to meet the demand.

*Note: It is suggested **that** municipalities review their parking requirements to determine if they are excessive when measured against recent guidelines as set forth in The Subdivision and Site Plan Handbook (Rutgers, 1989), above. The book notes **that** some **of** these requirements are “informed estimates at best” and that the availability **of** mass transit and urban vs. suburban location can affect the number **of***

*spaces. However; we note that **standards for industrial** and suburban municipalities are **often** excessive **for** today’s automated facilities. This NJ TRANSIT Handbook adds suggested standards **for some uses not covered** by the Rutgers list. The Rutgers **list** **has** been **modified** to combine similar uses.*

*See also: Development and Implementation **of a** Downtown **Parking** Management Program Based on Highway Capacity - The Jersey City, New Jersey, Experience by Thomas **W. Marchwinski** and Suzanne Muck, **for a** method **of** calculating **office** reduction percentages.*

### **10.6 Signs, Awnings and Canopies**

In order to produce a sense of unity while allowing for visual interest, the regulations in this section shall apply to signs, awnings and canopies for business and office uses in the Core Area of the Station Area [Overlay] Zone. These regulations shall supersede the regulations in Section      of the Zoning Ordinance, as to permitted business and office signs, sign dimensions and placement, and awnings and canopies. Other regulations in Section      as to lighting, temporary signs, prohibited sign devices, and other matters not specifically covered in this ordinance, shall supplement the regulations in this Section **10.6.**

#### **10.6.1 Permitted Signs**

Only the following signs are permitted:

##### **10.6.1.1 Principal Signs**

One principal sign for the purpose of identifying and advertising the use of the premises is permitted on the front facade of the premises. Where there is a use with an entrance in a facade other than the front facade, facing on a parking lot, that parking lot facade may have a second principal sign.

Where a use is located at the corner of a building and the use has frontage on two streets, two principal signs are permitted, one on each street facade, provided, however, that a second sign shall not be permitted on a street facing a residential zone.

#### **10.6.1.2 Signs Required by Law**

Any sign, including a license or permit, required by law to be exhibited by the occupant of the premises, is permitted and such sign shall not count in the total permitted sign area.

#### **10.6.1.3 Window Signs**

A sign painted on, attached to, or placed within two feet of the inside window glass is permitted on each window on the first floor of any business premises, provided that such sign shall be limited to **20** percent of the area of each window and that there shall be no more than one sign in each window. A window within a frame consisting of head, jambs and sill or equivalent members shall be considered one window, whether or not divided by ~~muntins~~, mullions or dividers placed on one side of the window glass.

#### **10.6.1.4 Arcade signs**

Where the first floor of a building has a permanent architectural overhanging shelter, arcade or colonnade, a sign no larger than one foot high by four feet long shall be permitted. Such sign shall be hung below the overhang or arcade, perpendicular to the building. The sign area of such arcade sign shall be included in the total sign area permitted by the Zoning Ordinance for a particular use.

#### **10.6.1.5 Directory Signs**

Offices or other uses on the second or higher floor of a building or any use on the first floor which does not have frontage on a street or parking lot facade of the building shall be permitted one directory or tenant identification

sign for each such use. All such signs shall be placed on the wall at the entrance to the use and all signs for businesses using the same entrance shall be grouped together at such entrance, abutting each other, and shall be uniform in appearance and materials. Each such sign shall be no more than two square feet in area nor more than eight inches in height.

#### **10.6.1.6 Banners**

One banner is permitted for each retail or service use located at the ~~first~~ floor level of a building. Such banner shall not exceed three feet by three feet in outside dimension and shall not bear the business name or the business logo, only a picture symbolizing the business; a banner may also be purely decorative, with no picture or writing. Such banners shall be hung on a pole attached to the building, such pole to be either parallel to the ground or projecting upward at an angle to the building wall. The lowest part of any banner shall be no lower than seven feet from the ground level at the building facade. Such banners are in addition to any limits on sign size.

#### **10.6.1.7 Signs Above the First Floor**

Where there is a business or office floor above the first floor not the same as the business below, each such business shall be permitted one sign not more than **18** inches high nor more than three feet long, such sign to be placed or painted on the window of the business or office.

#### **10.6.1.8 Signs Permitted in Residential Zones**

Signs permitted in residential zones are permitted as regulated in Section      of the Zoning Ordinance.

Note: **This is a sampling of the usual types of signs permitted. Where there are local regulations for other sign types such as**

*theater marquees or sidewalk signs, they may be included by reference or the regulations may be altered to suit the Station Area and included here.*

### **10.6.2 Placement of Principal Signs**

A principal sign shall be attached securely to the facade of the storefront of the business advertised, installed parallel to the wall to which it is attached and shall not extend more than **12** inches from the structural face of such wall. The bottom of a principal sign shall be at least eight feet from the ground level beneath the sign and the top of the sign shall be no higher than one foot above the first floor ceiling of the premises.

### **10.6.3 Sign Dimensions**

The maximum vertical dimension of a principal sign shall be two feet. The maximum width of a principal sign shall not exceed **90** % of the width of the storefront premises to which it is attached. When a sign is permitted on the face of an awning or canopy, the area of the principal sign shall be reduced by the area of the awning or canopy sign. The area of all other permitted signs shall be in addition to the permitted area of principal signs.

### **10.6.4 Awnings and Canopies**

#### **10.6.4.1 Awnings**

Awnings shall be permitted to be attached to a building facade, provided that no awning shall extend more than six feet from the wall to which it is attached nor extend over the sidewalk within the right-of-way for more than four feet nor extend closer to the curb line than one foot. Awnings shall be made of fabric such as canvas, exclusive of structural members and shall be retractable, with a mechanism capable of being operated on a daily basis. The lowest part of any awning shall be a minimum of seven feet above the walkway or other surface below the awning.

#### **10.6.4.2 Awning Signs**

An unlighted horizontal sign on the flap or vertical portion of an awning is permitted provided that such sign does not exceed a height of eight inches nor a length of one-half of the length of the flap or vertical portion of the awning.

#### **10.6.4.3 Canopies**

Canopies shall be permitted to be attached to a building facade provided that no canopy shall extend more than four feet ~~from~~ from the wall of the building to which it is attached, nor closer to the curb line than one foot. Canopies may be constructed of rigid building material or of plastic or fabric on a rigid, ~~fixed~~ fixed frame. The lowest part of any canopy shall be a minimum of seven feet above the walkway or other surface below the canopy.

#### **10.6.4.5 Awning and Canopy Placement**

If an awning or canopy is ~~pre-existing~~ pre-existing on a building or a group of attached buildings with their facades in the same plane, any awning or canopy subsequently attached to such building or group of attached buildings shall be of the same vertical dimension and placement on the building as the existing awning or canopy to the extent practicable. If this is not practicable, then the top of the awning or canopy shall be at the same height as the top of the existing awning or canopy.

### **10.7 Definitions**

The definitions in this section shall apply to this Ordinance, unless the text indicates otherwise.

#### **“Approving Agency”**

The Planning Board or the Board of Adjustment whichever agency has jurisdiction over the application for development.

*Note: The Board Of Adjustment considers a site plan approval application Or other development application in lieu of the*

planning board when a use variance or other “d” variance is involved. ~~“Municipal agency”~~ is also ~~used for~~ “approving agency” in some ordinances.

**“Business service establishment”**

A business primarily engaged in rendering non-repair services such as advertising, photo copying, package mailing, building cleaning or equipment rental to business enterprises on a fee or contract basis, but such services may also be offered to the general public.

**“Commercial parking”**

A privately owned lot or structure for the parking of automobiles which is available to the general public and operated for gain.

**“Window”**

Any opening, covered by glass, plastic or other transparent material, in the exterior wall of any building for the purpose of admitting light. A window within a frame, consisting of head, jambs and sill or equivalent members, shall be considered one window regardless of ~~muntins~~ mullions or dividers.

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Note: These ~~definitions~~ may already appear in the local zoning ordinance: if so, they need not be repeated **here**.

# Appendix “B”

## Model Site Plan Approval Ordinance Language for Station Area Zone

### Introduction

The model Site Plan Approval (SPA) Ordinance language is intended to provide a basis for a local ordinance amendment to establish special site plan regulations for the Station Area Zone. The local ordinance may already incorporate some of these standards; any standard already included in the local requirements does not have to be repeated in the special regulations. The local SPA Ordinance may stand alone or be part of the Zoning Ordinance. This model is adaptable to either form.

As with the model Zoning Ordinance, the local SPA Ordinance should be developed by the Planning Board, or by the Board's attorney and/or planning consultant, working with the Board or a committee of the Board. The attorney should check the proposed ordinance for legal integrity.

The model Site Plan Ordinance language is appropriate for most station types and bus terminal areas. The suggested standards may be changed so as to be suitable for local conditions. Standards for buffers and landscaping may need to be modified for Urban Center station types in order to keep costs low enough to attract redevelopment, but should be retained to the greatest extent possible, to provide the green areas most needed in urban environments.

The model ordinance format is designed as a separate article of a freestanding SPA Ordinance (we have used Article 12 as an example), but is easily adapted to the SPA section of the Zoning Ordinance. The model uses a standard “multi-decimal” system for sections and sub-sections. This can be

modified to conform to the system used in the local ordinance. As in the Zoning Ordinance model:

(language in parentheses is an example)

[language in brackets is alternative or optional text]

Italics *identify a note which is not part of the ordinance language.*

## Basis for Site Plan Approval Ordinance

### Article 12 Special Regulations for Station Area (SA) Zones or [Station Area Overlay (SAO) Zones]

#### 12.1 Purposes

The purpose of this Article is to provide site plan standards specifically designed to implement the Station Area Element of the Master Plan. Specific purposes are:

- a) to encourage transit use by providing for convenient access to transit stations and bus stops, and by requiring design standards to accommodate buses:
- b) to provide for the safe and efficient flow of pedestrian and vehicular traffic, emphasizing a pedestrian-oriented environment:
- c) to provide for visual amenity:
- d) to reinforce a sense of place or center;
- e) to **separate** conflicting land use **by** the use of planted buffer areas, or other devices:  
**and,**
- f) to improve local air quality by encouraging the use of alternative transportation modes, such as public transit, van pools, bicycles, and walking, and through maximizing the use of plant material.

#### 12.2 Applicability

The standards set forth in this Article shall be

in addition to those set forth in Article (11) of this Ordinance, except that the standards in this Article for buffering, parking lot landscaping and pedestrian facilities [include other items covered by both Articles] shall replace such standards set forth in Article (11).

### **12.3 Site Design Standards**

#### **12.3.1 Development Design**

Design of the development shall take into consideration all existing local and regional plans for the site and the surrounding community. Site plans for developments of one acre or more may be submitted to NJ TRANSIT for its advice and comments concerning the relationship of the development to NJ TRANSIT facilities and services.

#### **12.3.2 Conformity with Master Plan**

If the Station Area Plan or other element of the Master Plan shows designated streets, public drainage ways, flood control basins, or public areas including pedestrian rights-of-way, parks, playgrounds, public open spaces, or sites for public structures within a proposed development, the approving agency, before approving the site plan, may require that such streets, rights-of-way, basins or public areas be shown on the site plan in location and sizes suitable to their intended uses. The reservation and compensation provisions of the Municipal Land Use Law, ~~C40:55D-44~~, shall apply to all such facilities except for streets, flood control basins, or public drainage ways necessitated by the development and required for final approval.

#### **12.3.3 Building Location**

Buildings, excluding parking structures and accessory structures, shall be located as close to the street lines of the lot as practicable while complying with the setback [yard] requirements of the Zoning Ordinance. Parking structures, where permitted, and

accessory structures shall be located behind other buildings and away from street lot lines to the extent practicable.

#### **12.3.4 Off-street Parking Location**

Off-street parking shall not be located between any principal building and the front street line of the lot. On corner lots, off-street parking shall not be located between a principal building and, the side street line where another location is practicable.

~~If there is a~~ Historic Structure, Site, Or District in the Station Area

#### **12.3.5 Historic Structures and Sites**

Historic Structures and sites, as listed on federal or State registers of historic places or as shown on or listed in the current adopted Master Plan or any adopted element thereof, shall be preserved to the extent consistent with the reasonable utilization of the lot and in accordance with applicable state and/or local regulations.

*Where there is an official historic preservation commission, add:*

The approving agency shall forward every site plan application submitted for development in historic districts or on historic sites designated on the zoning or official map or in any component element of the Master Plan to the Historic Preservation Commission. The Historic Preservation Commission may provide its advice in oral testimony at any hearing on the application, or in a written report explained at the hearing.

*If the zoning ordinance designates and regulates historic sites or districts pursuant to the Municipal Land Use Law (40:55D-65) also add:*

The approving agency shall require consistency with the Zoning Ordinance regulations for historic sites or historic districts including the design criteria and guidelines for such sites or districts.

## 12.4 Streets, Sidewalks and Pedestrian Paths

### 12.4.1 Street Design

Any street within the development intended to carry buses or high-occupancy vehicles, or any such off-site or off-tract street required to be reconstructed or improved under Article of the Site Plan Approval Ordinance, shall be designed with vertical and horizontal geometry and pavement section, according to the following standards.

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### STANDARDS FOR ROADWAY DESIGN

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Minimum Grade	0.5%
Maximum Grade	8.0%
Maximum Grade, within 50' of Intersection	5.0%
Minimum Centerline Radius	300 feet
Minimum Tangent between Reverse Curves	150 feet
Minimum Curb Radii	42 feet
Minimum Pavement Width	28 feet, with no parking permitted 36 feet, with parking on one side of the street 44 feet, with parking on both sides of the street

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Any off-site or off-tract street required to be reconstructed or improved under Article \_\_\_\_\_ of the Site Plan Approval Ordinance shall be provided with bus pullouts at existing bus stop locations. [Bus stop locations on such streets shall be provided with shelters.]

### 12.4.2 Intersection Design

Any street within the development intended to carry buses or any such off-site or off-tract street required to be constructed or improved under Article of the Site Plan Approval Ordinance shall have curb return radii of at least 45 feet at any intersection with a street designated as a bus route.

### 12.4.3 Driveway Intersections with Streets

Driveway openings to state highways shall

comply with the State Highway access management code. Driveway openings to County roads shall comply with any access management code adopted by the County. [Driveway openings to municipal streets shall conform to the municipal street Access Code in effect at time of Site Plan Approval.] In any case, driveway openings to streets carrying transit vehicles shall be avoided whenever possible.

### 12.4.4 Sidewalk and Pedestrian Walkway Design

a) Where pedestrian walkways or sidewalks shown on the Station Area Plan or other element of the Master Plan are within a proposed development, the site plan shall show such paths or sidewalks at the

locations shown on the Station Area Plan or Master Plan, to the extent practicable.

- b) Pedestrian walkways shall be provided between bus stops and building entrances, and, where practicable, between rail stations or bus terminals and adjacent buildings. Such pedestrian connections shall be identified by pavement variation, ground-level lighting, or landscaping.
- c) Pedestrian-way easements **(10)** feet wide, through the center of blocks more than **600** feet long, may be required by the approving agency in order to provide convenient pedestrian access to transit stops, a station, to shopping, or other community facilities.
- d) Where practicable, pedestrian walkways shall be raised above the grade of streets, drives, parking lots, and other paved areas. Where pedestrian walks cannot be raised, they shall be constructed of a material that is different from the adjacent pavement. Except where pedestrian walks and sidewalks cross streets and driveways, such walks shall be landscaped along their full length. Walks and sidewalks shall be adequately lighted. The approving agency may require appropriate signs indicating the direction to transit stations or other points of interest as it deems necessary.
- e) Walkways shall be designed to be direct and continuous.
- f) Walkways and sidewalks shall be a minimum width of four feet. Where parked cars might overhang a sidewalk or walkway, the minimum width shall be increased to five feet. The approving agency shall require an increased width near pedestrian generators and employment centers.
- g) Walkways and sidewalks shall be designed to comply with the requirements of the

Americans with Disabilities Act (ADA).

## **12.5 Parking Design Standards**

### **12.5.1 Conformance to Master Plan**

If the Station Area Plan or Circulation Element of the Master Plan shows an off-street parking plan for the area covered by a proposed site plan, the approving agency shall require that the parking layout on the site plan conform as closely as is practicable to such Master Plan element. Where immediate conformance is not practicable, the approving agency shall require that the parking plan be adaptable to future conformance to the Master Plan.

### **12.5.2 Connections Between Parking Lots**

Where possible, connections or provisions for future connections to abutting parking lots, serving retail or service uses, shall be shown on the site plan.

### **12.5.3 Pedestrian Circulation**

Pedestrian walkways shall be provided connecting parking areas to the buildings they serve by the most direct route. The walkways shall be unencumbered by parked cars, berms or plantings. Walkway standards set forth in Subsection **12.4** shall apply to parking lot walkways.

### **12.5.4 Commuter Droveoff Parking Areas**

Any parking lot serving retail or service establishments, accommodating more than **(20)** cars, and located within **(200)** feet of a rail station, bus terminal, or long-distance bus stop shall provide for a passenger drop-off area available during certain hours, if demand warrants. Such drop-off area shall be located in that portion of the parking lot closest to the transit stop. Appropriate signs shall be supplied by the municipality, clearly indicating which spaces are for commuter drop-off use. The signs shall limit drop-off and pick-up to off-peak hours or when the retail establishments are closed. If stores served by

the parking lot are open during all or part of the evening commuter hours, the sign may indicate that pick-up or drop-off of passengers is not permitted during those hours.

#### **12.5.5 Parking Priority at Employment Centers**

Where any office, industrial, warehouse, institutional or other use is projected to employ **50** or more persons, parking areas shall be designed and located so as to facilitate transit, bicycle and pedestrian access. Parking spaces closest to the building entrances, in order, shall be reserved for:

- people with disabilities (all types of parking);
- van pool vehicles; and,
- car pool vehicles.

Bicycle lockers and/or stands shall be provided as close to building entrances as possible [and may be located in front of the building]. If the building is served by a public bus line or if a company bus is expected to transport employees, a bus pullout or parking area and a bus shelter shall be provided as close to a building entrance as possible, either within the street right-of-way or on the site.

#### **12.5.6 Commercial Parking Lots**

Commercial parking lots designed for both commuter and shopper or other **non-**commuter use shall be divided into sections for commuter and non-commuter use. The sections shall be separated by a **5-foot** landscaped buffer strip. The sections shall have separate access, where practicable. Parking lots, or sections thereof, devoted to commuter parking may have a parking stall width of **8.5** feet, instead of the width required by Section \_\_\_ of the Site Plan Ordinance.

### **12.6 Landscaping and Buffer Areas**

#### **12.6.1 Landscape Plan**

A landscape plan (prepared by a certified landscape architect) shall be submitted with

each site plan in the Station Area Zone [Station Area Overlay Zone]. The plan shall identify existing and proposed trees, shrubs and ground covers and other landscape or streetscape elements including walls, fences, benches, planters, and sidewalk trash receptacles.

#### **12.6.2 Street Trees**

Where street trees are not already present at the required minimum spacing interval, shade trees or flowering fruit trees shall be installed by the developer. Where the Station Area Plan has identified a specific type of tree or a specific species for streets bordering the Station Area, or for certain streets within the Station Area, the type or species identified by the Station Area Plan shall be planted wherever additional trees are needed to meet the standards. All trees on both sides of a street, within a block, shall be the same species, except that where spacing of shade trees exceeds **40** feet, small ornamental trees may be placed between larger trees.

#### **12.6.3 Buffering**

##### **12.6.3.1 Function and Material**

Buffering shall provide a year-round visual screen in order to minimize adverse impacts. It may consist of fencing, evergreens, berms, mounds, or combinations thereof to achieve the same objectives.

##### **12.6.3.2 When Required**

Every development shall provide sufficient buffering when topographical or other barriers do not provide reasonable screening and when the Planning Board determines that there is a need:

- to shield neighboring properties from any adverse external effects of a development: or
- to shield the development from negative impacts of adjacent uses.

In multi-family residential developments, when building design and siting do not provide

privacy, the Planning Board may require landscaping, fences, or walls to screen dwelling units from the parking for privacy. Buffers shall be measured from side and rear property lines, excluding driveways.

#### **12.6.3.3 Amount Required**

- a) Where more-intensive land uses abut less intensive uses, a buffer strip **(15)** feet in width shall be required.
- b) Parking lots, garbage collection and utility areas [and loading and unloading areas] shall be screened around their perimeters by a buffer strip a minimum of **(5)** feet wide.
- c) Where residential developments abut higher-order streets, (collectors or **arterials**), adjacent lots shall front on lower-order streets, and a landscaped buffer area shall be provided along the property line abutting the road. The buffer strip shall be a minimum of **(15)** feet wide, or wider where necessary, for the health and safety of the residents. It shall include both trees and shrubs.

#### **12.6.3.4 Design**

Arrangement of plantings in buffers shall provide maximum protection to adjacent properties and avoid damage to existing plant material. Possible arrangements include planting in parallel, serpentine, or broken rows. If planted berms are used, the minimum width at the top of the berm shall be **(4)** feet, and the side slope angle shall be no greater than **30** degrees to the horizontal.

#### **12.6.3.5 Planting Specifications**

Plant materials shall be sufficiently large and planted in such a fashion that a year-round screen at least (eight) feet in height shall be produced within three growing seasons. All plantings shall be installed according to accepted horticultural standards.

### **12.6.4 Parking Lot Landscaping**

#### **12.6.4.1 Amount Required**

Parking lot street frontage screening and perimeter screening shall be a minimum of five feet wide.

#### **12.6.4.2 Location**

The landscaping shall be along the perimeter of the parking lot. All landscaping shall be placed so as not to obstruct sight lines.

#### **12.6.4.3 Plant Type**

Evergreens shall be used along the perimeter of the lot for screening. The area between trees shall be mulched, planted with shrubs or ground cover, or covered with paving material. Any area that will be under the overhang of vehicles shall be covered with mulch or paving material.

#### **12.6.5 Walls and Fences**

- a) Walls and fences shall be erected where required for privacy, screening, separation, security, erosion control, or to serve other necessary and reasonable functions.
- b) The design and materials used shall be functional and compatible with existing and proposed development.
- c) No fence or wall shall be constructed or installed so as to constitute a hazard to traffic or safety or to bar or obstruct access to a transit station or bus stop.

#### **12.6.6 Street Furniture**

- a) Street furniture such as, but not limited to, trash receptacles, benches, and phone booths, shall be located and sized in accordance with function.
- b) The different street furniture components shall be compatible in form, material, and finish. Design and materials shall be coordinated with existing and proposed site architecture. Selection of street furniture shall take into consideration function, durability, maintenance, and long-term cost.

### 12.7 Site Lighting

- a) Site lighting shall be provided in accordance with the standards set forth in the following tables:
- b) Lighting for safety shall be provided at intersections, along walkways, at entryway, between buildings, and in parking areas.
- c) Spacing of standards shall be equal to approximately four times the height of the standard.
- d) The maximum height of standards shall not exceed the maximum building height permitted, or **25** feet, whichever is less.
- e) The height and shielding of lighting standards shall provide proper lighting without hazard to drivers or nuisance to residents, and the design of lighting standards shall be of a type appropriate to the development and the municipality.
- f) Spotlights, if used, shall be placed on standards pointing toward the building rather than on the buildings and directed outward.

PARKING LOT ILLUMINATION		
Activity Level	Lux	Foot Candles
Low activity <sup>1)</sup>	2	0.2
Medium activity <sup>2)</sup>	6	0.6
High activity <sup>3)</sup>	10	0.9

<sup>1)</sup> Examples include Neighborhood shopping, industrial employee parking, church or recreational facility parking.

<sup>2)</sup> Examples include community shopping centers, office parks, hospital parking areas, cultural civic or recreational events, and residential complex parking.

<sup>3)</sup> Examples include major cultural or civic events, major league athletic events, regional shopping centers and fast food facilities.

Excerpted from *Listaker, David and Walker, Carole, The Subdivision and Site Plan Handbook*. New Brunswick 1989.

### PEDESTRIAN WALKWAY ILLUMINATION

Walkway Classification	Minimum Average Horizontal Levels-Lux	Average Levels for Special Pedestrian Safety-Lux
<u>Roadside Sidewalks</u>		
Commercial areas	10	22
Intermediate areas	6	11
Residential areas	2	5
<u>Walkways Distant from Roadways</u>		
Walkways and stairways	5	5
Pedestrian tunnels	43	54

Source: *Listaker, David and Walker, Carole, op.cit.*

# Appendix “C”

## Model Redevelopment Plan Ordinance Language

### Introduction

The model Redevelopment Plan Ordinance language is intended only as a framework to document the issues that must be addressed by the Redevelopment Plan. Some sections, such as those covering land use and building requirements, will need to be much more detailed.

Declaring an area in need of redevelopment gives the governing body an array of powers, including acquisition and clearing of land and buildings and adoption of very detailed plans, which can supersede the zoning.

The first step in creating a Redevelopment Plan Ordinance is to declare the area “in need of redevelopment”. The Planning Board at the direction of the governing body, determines whether the area meets one or more of the standards set forth in the local Redevelopment and Housing Law for declaring a redevelopment area. These standards include predominately substandard or obsolescent buildings: abandoned buildings: lack of utilization of areas because of faulty titles or diverse ownership; or areas of over five acres where buildings have been destroyed by fire, storm or other casualties.

After a public hearing, the Planning Board recommends whether the area should be declared in need of development. The governing body makes the declaration by resolution and either directs the Planning Board to formulate a Redevelopment Plan or has it formulated by a consultant or redevelopment agency. If the latter occurs, the Planning Board must review the Plan before the governing body adopts it by ordinance.

## (Fictional) Town of Greenwood Station Area Redevelopment Plan Ordinance

### Section 1. Objectives

The primary objective of the Greenwood Station Area Redevelopment Plan is to eliminate the substandard, unsafe, dilapidated and obsolescent building conditions in the Greenwood Station Redevelopment Area and to replace, or rehabilitate and reuse the buildings to provide for a mixed use commercial development, which will aid in the revitalization of the Greenwood center business district and promote the use of the rail station in accordance with the Greenwood Station Area Plan element of the Master Plan. Specific objectives are:

- a) to provide retail and service establishments which will serve the residents and transit riders in the area and strengthen the adjacent business district; such establishments shall include a **50,000** square foot supermarket which is expected to attract other stores to the area:
- b) to provide for offices or residences above the stores on Main Street and to rehabilitate and reuse industrial buildings as small office buildings:
- c) to provide landscaped open spaces and pedestrian walks focused on the rail station and to provide a pedestrian plaza and park adjacent to the station in order to provide a focal point for the business area and to help establish a “sense of place”:
- d) to establish an intensity of use compatible with that of the two-story portion of the adjacent business district, but allowing for adequate off-street parking; and,
- e) to reduce traffic congestion by promoting use of the rail station and bus lines.

## Section 2. Proposed Land Use

The following uses shall be required:

- a) A supermarket of approximately 50,000 square feet shall be constructed on lot #1 fronting on Main Street as designated on the Land Use Map which accompanies and is part of this Ordinance. The supermarket shall have a loading zone and off-street parking, as required, for supermarkets by the Greenwood Zoning Ordinance;
- b) A landscaped pedestrian plaza and park shall be developed on lot #5 fronting on the east side of Main Street adjacent to the rail station building and platform;
- c) The gasoline station and auto repair shop on lot #2 fronting on the west side of Main Street shall be refurbished and remain, since it is the only such facility in the vicinity and is used by residents, commuters, and employees;
- d) A two-story building for retail and service shops on the street level and apartments or offices above shall be developed on lot #6 fronting on the east side of Main Street. The store tenants shall be restricted to those neighborhood and commuter-service shops permitted by sub-section 10.3.3 of the Zoning Ordinance: all other regulations of that sub-section as to apartment density and room sizes and deed restrictions shall apply. Parking for the building shall be accessed from the side street with no access from Main Street; and,
- e) The vacant buildings on lots #3 and #4 shall be rehabilitated and converted to office space.

## Section 3. Building Requirements

Bulk regulations shall be as set forth in the Zoning Ordinance for the zone in which a building is located as modified by the Station Area Overlay Zone. Building materials for new construction or for re-facing of existing

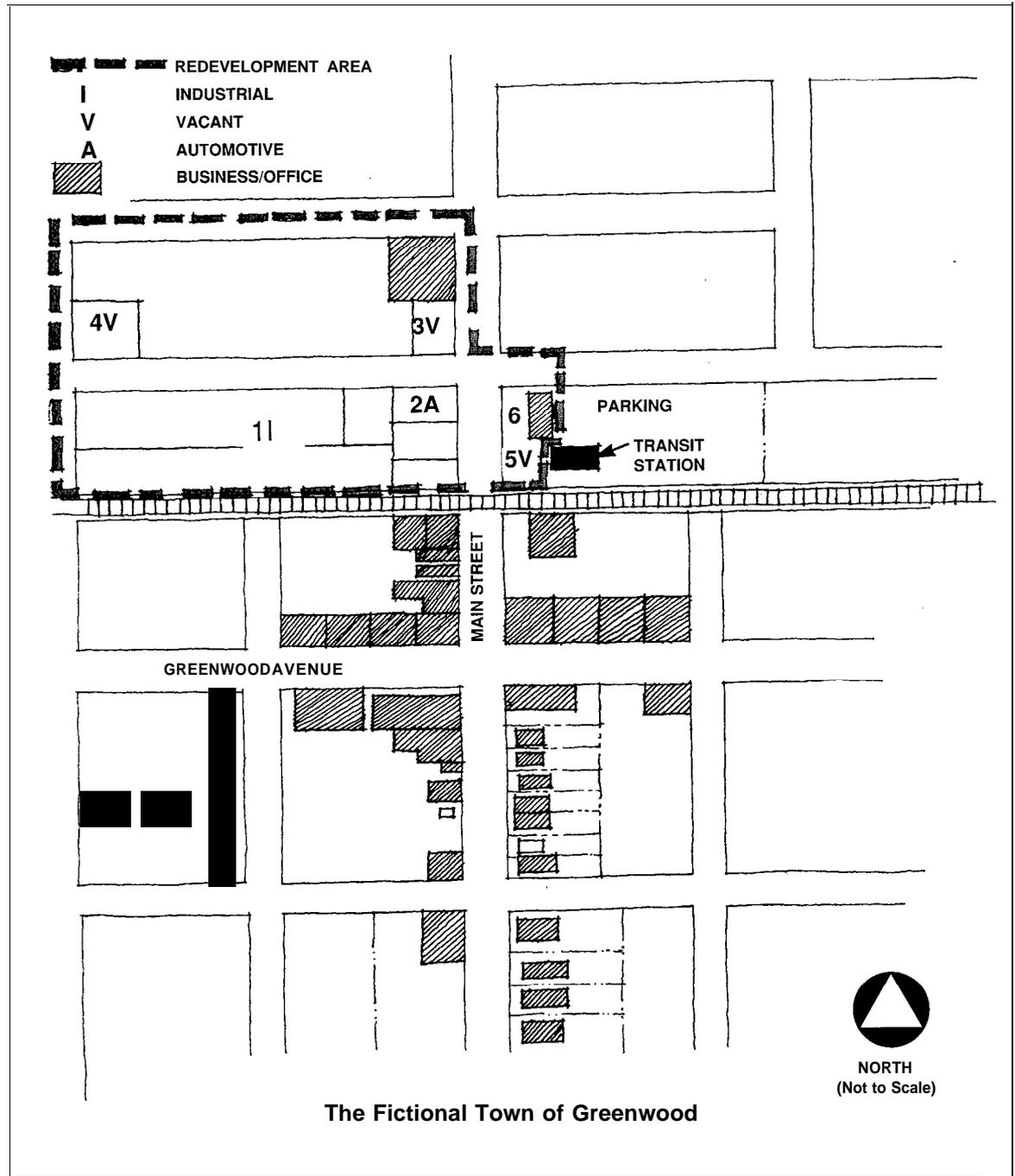


Diagram of Redevelopment Area

buildings fronting upon or visible from Main Street shall be of red brick or brick veneer to match the brick of the rail station building as closely as practicable.

#### **Section 4. Parking and Landscaping**

Parking and landscaping requirements shall be as set forth in the Zoning Ordinance for the zone in which a building is located, as modified by the Station Area Overlay Zone. The required street trees on Main St. shall be Bradford Pear, planted at ~~30-foot~~ intervals. The required street trees on other streets within the redevelopment area shall be Red Maple.

#### **Section 5. Properties to be Acquired**

The Town of Greenwood intends that the developer selected to carry out the redevelopment plan shall attempt to acquire all of the property within the redevelopment area through private transactions. If the developer is unable to acquire any property, then the developer may request the Town to institute public actions, including condemnation, to acquire such property or properties and sell them to the developer for rehabilitation or reuse in accordance with the redevelopment plan.

#### **Section 6. Relocation of Residents**

Two households in the Redevelopment Area will need relocation. Assistance in finding appropriate housing will be provided by the Greenwood Social Assistance Department. A wide variety of decent, safe and sanitary housing is available in Greenwood. Some apartments and homes are affordable to those in the upper range of moderate-income households. If the households needing relocation are found to need a rent subsidy, the County Housing Authority will be asked to provide a Section 8 or another subsidy. Households displaced by government action have priority for subsidy funds. (See Appendix

"D" for funding sources.) All State and Federal relocation laws will be observed in providing relocation assistance.

#### **Section 7. Conformance with the Master Plan**

The Redevelopment Plan is consistent with the Station Area Plan element of the Greenwood Master Plan and is designed to implement that Plan, which calls for redevelopment of the area covered by the Redevelopment Plan.

#### **Section 8. Relationship to County and State Plans**

The Redevelopment Plan is in agreement with the goals and objectives of the County Master Plan and the State Development and Redevelopment Plan, specifically as to concentrating development and redevelopment in centers and in areas already provided with the necessary infrastructure. The Redevelopment Plan is not considered to have any effect on the Master Plans of contiguous municipalities

#### **Section 9. Relationship to Local Development Ordinances**

The Redevelopment Plan complies with all the regulations of the Zoning, Site Plan, and Subdivision Ordinances of the Town. Therefore, the Redevelopment Plan does not need to contain an amendment to the Zoning Map.

# Appendix “D”

## List of Current State, Federal, and Transit Agency Initiatives and Resources Related to Development Around Transit Facilities

### Transportation Programs

No specific state or federal transportation programs provide resources related to development around train stations.

NJ TRANSIT does have a Real Estate Division which manages development and leasing activities within train stations or on other property which NJ TRANSIT owns, including air rights over rail properties. Federal transit funds may be used to conduct planning and development studies related to transit facilities. As with most federally funded transit programs, such a study would be funded as part of the Section 8 program administered either by NJ TRANSIT or through the Metropolitan Planning Organizations. Municipal requests for Section 8 funding would have to be submitted to the Metropolitan Planning Organization through the County Planning Board.

Unless a direct relationship to a transportation investment can be shown, federal transportation funds cannot be used to construct development projects. In a joint development scenario, it may be possible to share transit related costs with a developer, or for the developer to contribute to transit improvements. For example, in Mount Olive, the developer is sharing the costs of transit related improvements. If lands must be condemned for a new or expanded transit facilities, it may be more efficient to acquire a lot which may be larger than necessary for the station, thus providing the opportunity to

undertake adjacent transit related and transit supportive development activities.

Federal and state transportation funds can be used to fund transportation infrastructure surrounding a station. In particular, NJDOT operates a local aid program which can be used to fund local street construction or reconstruction.

**The Intermodal Surface Transportation Efficiency Act (ISTEA)** authorizes expenditure for “transportation enhancement” projects including restoration of historic transportation structures (including train stations), construction of bicycle and pedestrian facilities, and environmental improvements around transportation facilities. **ISTEA** requires that **10%** of a state’s Surface Transportation Program (**STP**) be used for these transportation enhancements. A state may choose to use more of its **STP** funds for enhancement purposes, and it also may “enhance” projects funded using other federal transportation funding categories. For example, pedestrian and bicycle facilities may be funded in conjunction with a highway project constructed through the National Highway System funding program.

However, funding for enhancement projects is highly competitive, with only about **2%** of requested projects being approved for funding. Therefore, it is essential that the justification for the project be carefully considered and the grant program requirements be fully understood.

### Other Funding Sources

A wide array of grant and loan programs are available to promote development activities, and all of these programs can be administered to advance development programs in station areas. Major programs include:

**The Community Development (CD) Block Grant Program** may be used for a wide variety

of housing and commercial development activities. State administration of the program has been divided into two components:

- an entitlement program for municipalities having **qualifying** demographic characteristics:
- a Small Cities program for competitive grants to other municipalities for projects which **qualify** for one of two reasons:
  - a) to eliminate blight; or,
  - b) to provide improvements to areas in which more than **70%** of residents have low or moderate income.

**Special Improvement Districts (SIDs) are** special taxing districts which municipalities may establish to assist in providing improvements within specially defined development areas and to pay for the cost of maintenance activities or programming activities. Sometimes also called Downtown Improvement Districts, these districts provide municipalities with the opportunity of providing special services for these types of areas. An advisory committee or corporation is required to oversee the use of funds generated by taxes within **SIDs**.

*For additional information regarding the federal Community Block Grant ((CDBG) Program or the municipal Special Improvement Districts (SIDs), you may contact:*

**CDBG Small Cities Program**  
NJ Department of Community Affairs  
**CN 806**  
Trenton, New Jersey **08625**  
**(609) 633-6278**

The **New Jersey Economic Development Authority (NJ EDA)** provides low interest loans for a number of economic development activities. Loan recipients must demonstrate the capacity to repay the loans. **EDA** supports private development projects and also funds municipal infrastructure investments needed

to support development activities. **EDA** may provide tax exempt financing for development of mass transit commuting facilities by either public or private applicants.

*For additional information regarding NJ EDA development planning and financing assistance, you may contact:*

*New Jersey Economic Development Authority*  
**CN 990**  
Trenton, New Jersey **08625**  
**(609) 292-1800**

**NJDEPE's Green Acres Program** may be used to finance public open space acquisition and improvements. Green Acres funding is available through combinations of grants and loans.

Some **specific** application for these and other programs are described on the following page.

FUNDING PROGRAM	PURPOSE OF PROGRAM
<b>Housing Programs</b>	
NJ Housing & Mortgage Finance Agency NJ Dept. of Community Affairs	Construction of rental housing Subsidies to low and moderate income households for purchase of housing in order to promote balanced housing programs.
Various banks in support of community reinvestment objectives.	Down payment assistance for low and moderate home purchasers
US HUD Section 202 program	For construction assistance for senior citizen housing.
US IRS Low Income Tax Credits	For construction of low income rental housing developments.
Community Development Block Grants	Home Owners Loan Program for improvements and to correct violations. Grant programs to eligible home owners to correct violations. Loans or grants to non-profit corporations to renovate housing or construct new units. Various other qualifying activities.
<b>Economic Development Projects</b>	
Urban Enterprise Zone Program	Taxes received within zone are retained for use in funding community improvements within zone.
Community Development Block Grant Program	Variety of economic development purposes, including: <ul style="list-style-type: none"> <li>■ Acquisition and clearing of land for redevelopment as well as provision of needed infrastructure improvements.</li> <li>■ Merchant facade improvements.</li> <li>■ Building code enforcement efforts.</li> </ul>
NJ Economic Development Authority  Economic growth bonds  Bond financing  Urban Centers Small Loans  Variety of other programs	Provides development loans to developers and municipalities. <b>20</b> year loans for real estate acquisition <b>10</b> year loans for plant and equipment In addition to above, taxable bonds may be used to provide businesses with working capital. Loans to existing businesses in commercial districts of targeted municipalities. Loans must be used primarily for renovations. <b>EDA</b> provides a wide variety of additional programs which can aid municipalities or businesses in station areas.
Green Acres Program	Acquisition and development of public open space to serve station areas. Acquisition and restoration of stream corridors through station area. Development of pathway system on publicly owned open space properties in station area.

# Appendix “E”

## Outline of Coordination Procedures with Transit and Other State Agencies for Transit Related Development

Preparation and implementation of a successful station area development requires that a municipality coordinate intensively with a number of other public agencies at the state, county and local levels. This section outlines some of the coordination steps which should be considered. Ideally, as planning for the development of the station area evolves, a team should form between the different public partners so that the best possible development can emerge.

The following is just a sample of the agencies which may have to be involved in the development and execution of a plan. Specific circumstances may not require all of these actors to be involved at all station locations. Conversely, many municipalities may require that additional parties be brought into the planning and execution of a station area plan.

### Station Area Master Plan

Development of a station area plan should be conducted in an open environment encouraging participation from all affected parties.

State agencies may not have the staff resources to attend all public meetings required in developing a municipal plan for the station area. However, they may be able to respond to specific requests for information or data.

Generally, the most effective procedure is for a town’s planning professional to meet with state agency staff to resolve specific issues during

normal working hours and then report written findings back to the municipal planning board.

A station area development plan should:

- identify specific public improvements needed:
- propose municipal, county, and/or creative private financing to pay for such improvements: and,
- identify appropriate public agencies who would implement the improvements.

### Memorandum of Understanding

Once a station area development plan has been adopted, an efficient method of implementing the public components of the plan is to enter into a memorandum of understanding (**MOU**) between the municipal governing body and each affected agency.

These **MOUs** would set forth goals, objectives, actions, deadlines and funding responsibilities. For a public agency whose actions are not guided by permit reviews, an **MOU** may be the only effective means of clearly documenting the role the agency would have in helping to implement the development project.

### Permit Requirements

Once a project has proceeded into the development stage, a large number of permits may be required. Both the time and the cost of project development can usually be minimized by anticipating the permits required for a project. Examples of permits which may be required in association with station area development include:

- **County Planning Board Review and Approval**

County planning board review is required for any project which fronts on a county highway or affects a county drainage structure. The drainage provisions of almost all development projects must be approved

by the county since almost all developments will eventually affect a county drainage facility.

■ **NJDEPE** Permits

A broad range of development permits are managed by **NJDEPE** including Stream Encroachment Permits, Wetlands Permits, etc. Specific permit requirements required to implement the plan should be identified during the planning process so that applications may be submitted in timely fashion.

■ **NJDOT** Permits

Properties fronting on a state highway will require a variety of permits from the **NJDOT**. **NJDOT** coordinates its permitting function through the Access Review process. Permit coordination with that unit should begin during the plan development process. However, formal review of specific permit requests can only occur when an application or request for review is submitted by the property owner affected.

■ **NJ TRANSIT**

Because **NJ TRANSIT** does not have specific permit authority, any formal coordination with **NJ TRANSIT** must rely upon a memorandum of understanding or specific property agreements, such as leases or easements, if **NJ TRANSIT** property is affected.

# Appendix “F”

## Selected Annotated Bibliography

**Access By Design: Transit’s Role in Land Development**, Maryland Department of Transportation, September, 1988, Manual prepared for developers, planners, and engineers to provide information about basic operating criteria and physical access requirements for the MTA’s bus system. The document presents threshold criteria for new services, vehicle specifications, operational standards, passenger amenities, and geometric design standards. Included is a “Transit Accessibility Checklist” to help developers determine whether projects meet transit accessibility standards.

**Acting in the National Interest, Transportation Agenda, Surface Transportation Policy Project**

**Arrival Zones: How to make getting there more memorable**, Grady Clay, *Planning*, August, 1991

**An Assessment of Community Planning for Mass Transit** United States Congress Office of Technology Assessment, February 1976

**Ballston, Virginia, Folder of Material on Station Area Development, prepared by the Ballston Partnership** Materials gathered during a field visit to Arlington County Virginia. The Ballston Partnership is a not for profit group that guides the development of Ballston. Ballston is a mixed use development of several million square feet that used a stop on the Washington Metro as an anchor and impetus for its development.

**Bicycle Advocate’s Action Kit** The Bicycle Federation of America, 1993

**The Centers Designation Process, Document #99** New Jersey Office of State Planning,

Department of the Treasury Report from the New Jersey Office of State Planning that discusses the concept of “Centers” as well as the process for communities to be designated as centers. A hypothetical example of a municipality seeking to become a center is discussed within the context of a sample “Center Designation Report”.

**The Changing Apartment Development Market** Urban Land, Terry Jill Lassar, January 1993

Because of the decrease of new apartment construction in the late 1980’s and early 1990’s a market is developing for new high end multi-family residential units. Unlike apartments previously developed these units tend to incorporate characteristics common to single family units, such as fireplaces, porches, etc. The key input to the success of this market is employment growth within the region.

**The Clean Air Act Amendments of 1990** EPA  
**The Commuting Paradox: Evidence from the Top Twenty**, Peter Gordon, Harry W. Richardson, and Myung-Jim Jun, *APA Journal*, Autumn 1991, P. 416

**Communities of Place, State Development and Redevelopment Plan** The New Jersey State Planning Commission, June 12, 1992  
The result of a six year process involving the state, county, and municipal levels of government, as well as extensive public input, the report outlines a generalized concept for a future vision (year 2010) of the state’s physical development. The report offers a series of policy statements at the state level and creates a resource planning and management structure focused on “Centers” and “Planning Areas”. A generalized typology is developed that divides centers into the following types:

- Urban Centers
- Traditional Town, Village, or Hamlet
- Regional Centers

### **Core Area Requirements to Support Non-Auto Trips**

Memorandum to Bob Kraml, NJDOT/Eli Cooper, OSP, from Thomas Marchwinski, NJT, November 30, 1992

This memo presents NJ TRANSIT's recommended guidelines for various parameters regarding core areas, including mode splits. These recommendations are based on a review of the proposed Center Core Characteristics and the Regional Center Criteria in the New Jersey State Development and Redevelopment Plan, as well as the 1980 and 1990 Census, 1992 AVO surveys, and suburban regional center studies conducted by the National Cooperative Highway Research Program, other employee travel surveys conducted over the last five years in New Jersey, NJT bus ridership standards, and historic data. Included are Illustrative Characteristics for Town Core Areas and Regional Center Core Areas (PA 1,2,3 and PA 4 and 5). Attached to the memo is a Draft of the Centers Designation Process, Technical Reference Document #94 (New Jersey Office of State Planning, November 1992).

**Designing for Public Transit in Suburban Areas** ITE Compendium of Technical Papers Jerome M. Lutin and John D. Wilkins

Paper discusses the role of public transit in serving suburban commercial development. Guidelines are provided on planning cost-effective ways to extend bus service to suburban locations. Physical design considerations for improving bus access to serve suburban developments are described. Model master plan language for designing public transit in suburban areas is included.

**Designing for Transit, A Manual for Integrating Public Transportation and Land Development in the San Diego Metropolitan Area** Prepared by the Metropolitan Transit Development Board, (MTDB) San Diego, CA,

July 1993

**Development and Implementation of a Downtown Parking Management Program Based on Highway Capacity - The Jersey City, New Jersey, Experience ITE 1990** *Compendium of Technical Papers*, by Thomas W. Marchwinski and Suzanne Mack

**Development-Related Ridership Survey**, Final Report Prepared for Washington Metropolitan Area Transit Authority, by JHK & Associates, March, 1987

**Development-Related Ridership Survey II** Prepared for Washington Metropolitan Area Transit Authority, by JHK & Associates, December, 1989

**Draft Design Guidelines** (for consideration from NJ TRANSIT) Paul Sullivan  
A general series of design guidelines for station areas dealing with building height and bulk, streetscape, landscaping, parking, open space, and zoning.

**Eight State-Sponsored Growth Management Programs: A Comparative Analysis** APA Journal, 1992

**Fairfax County, Virginia, excerpts of interest from Comprehensive Plan (1991); Concept for Future Development and Land Classification System (1990); Countywide Policy Element of the Comprehensive Plan (1990)**

**Feasibility Study Of Joint/Multiple Use Of Development Of MTA Commuter Railroad Stations, Final Report** (Excerpts) Prepared for the MTA Real Estate Department. Study examines the potential for joint development adjacent to three suburban MTA Facilities.

**A Framework for Transit Planning in the New York Region**  
Regional Plan Association, 1986

**A Global View of Automobile Dependence**, a Book Review, *APA Journal*, Summer 1991, p. 376

**Gridlock: Facing Boston's Transportation Dilemma** Conservation Law Foundation, January, 1989

**The Growth Management Handbook: A Primer for Citizen and Government Planners, (MSM), 1989** Handbook prepared for the Middlesex Somerset ~~Mercer~~ Regional Council that examines the various aspects of growth management. Handbook presents concepts exploring existing planning structures and techniques vs. concepts and structures based on carrying capacity in graphic format and text. The Handbook also examines the issue of regional vs. local vs. site and the relationships between these three scales.

**Guide to Land Use and Public Transportation: Snohomish County, WA USDOT, 1989** Handbook prepared by the Snohomish County, Washington Transportation Authority. The Handbook develops an argument for the nexus between land use planning and transit use and suggests ways of better integrating transit within communities. Topics discussed include:

- Public transportation compatible land uses
- Public transportation compatible zoning
- Public transportation compatible subdivision design
- Public transportation compatible site design
- Public transportation compatibility worksheets

**Improving Transportation for New York City Residents, The Region's Agenda, A Regional Plan Association Publication, May 1993.**

**Inquiry-Does Growth Pay?** Urban Land Institute, Rita Curtis  
Article talks about the cost/benefit of various types of development for municipalities. A land use hierarchy, based on a review of fiscal impact studies shows that "research office parks, office parks, and studio or one-bedroom apartment and condominium developments

generate revenues in excess of costs". Low-density residential development, garden apartments with three or more bedrooms, townhouses, and retail, in general, are a drain on public expenditures. A review of literature has borne out that business pays its way.

**Joint Development at Ballston Metro Center** M. Richard Miller, Urban Land, June 1993.

**Kansas City Urban Design Guidebook: Ways to Promote and Improve the City's Value for Investment, Living and Working** City Development Department, August, 1978.

**Key Issues in Light Rail Transit Station Planning and Design,** Jerome M. Lutin and Gregory P. Benz, *Transportation Research Record* 1361, p.117-124.

**Land Use and Transportation: The Missing Link,** Marcia D. Lowe, *Worldwatch Institute, Surface Transportation Policy Project Bulletin,* October 1992, p. 1.

**Land Use In Commuter Rail Station Areas: Analysis And Final Report, Recommendations For Integrating Commuter Rail Stations With Surrounding Communities, 1992** Northeastern Illinois Planning Commission, METRA Study examines nine station areas and provides a profile of station use characteristics, surrounding land use, and station access characteristics. Stations examined were selected based on system of urban typologies. Guidelines for land use in station areas are provided.

**Land Use in Commuter Rail Station Areas: Guidelines For Communities-Summary Recommendations and General Land-use Patterns to integrate Commuter Rail Stations with Surrounding Communities, 1992** Northeastern Illinois Planning Commission, Metra Summary brochure for public distribution describing the recommendations and general study methodology. A typology is developed that

categorizes the existing and future stations within the **METRA** system. These categories are:

- Stations in High Density Urban Areas
- Stations in Suburban Central Business Districts
- Stations in areas outside of Suburban **CBD's**
- Stations in Underdeveloped or Developing Areas
- Stations in Highway Rights-of-way
- Stations in Office/Shopping Complexes

A general series of guidelines concerning **land-use**, implementation strategies, parking and access, and service amenities are provided and applied to each of the station types.

**Land Use Strategies for More Livable Places.** Prepared by the Local Government Commission, Sacramento, California; written by Steve **Weissman** and Judy **Corbett**, June **1992**.

This report considers an approach to accommodating California's growth over the next decade through new development that is more "compact," mixed-use, and pedestrian oriented. The report builds on a set of planning principles, known as the **Ahwannee** principles, which were developed by a group of architects and designers working with the Commission. The "principles" are presented in three parts: **(1)** Community Principles, **(2)** Regional Principles, and **(3)** Implementation Principles and are considered equally applicable to **infill** development, redevelopment, and new development. Addressing mobility (transportation) is a critical component of the principles and of this document. Principles directly related to issues of transportation and transit include:

- Community size should be managed so that housing, jobs, daily needs and other activities are within easy walking distance of

each other.

- The location and character of the community should be consistent with a larger transit network.
- Streets, pedestrian paths and bike paths should contribute to a system of **fully-connected** and interesting routes to all destinations. Their design should encourage pedestrian and bicycle use by being small and spatially defined by buildings, trees and lighting; and by discouraging high speed **traffic**.
- The regional land use planning structure should be integrated within a larger transportation network built around transit rather than freeways.

**Land Use/Transportation Scenarios Testing: A Tool for the 1990s** Michael **Replogle**, a paper presented at the **1993** Transportation Research Board Annual Meeting, **1993**.

**Light Rail Transit and Effective Land Use Planning: Portland, Sacramento, and San Diego** *Transportation Research Record* **1361**, p.75.

**Linking Land Use and Transportation, Papers AICP/Lincoln** Institute, **1993**

**Location and Design of Bus Transfer Facilities** Paul Box, *ITE Journal* August **1992**

**M, The Magazine of METRO** Fall **1989**

**Making the City Observable** Richard Saul **Wurman**, Walker Center, Minneapolis, MN and MIT Press, **1971**

**Managing Transportation in Your Community: A Municipal Handbook** New Jersey Department of Transportation, **1989** Handbook prepared for the New Jersey Department of Transportation that offers guidelines for incorporating good transportation planning concepts at the municipal level. Topics considered include: master planning, zoning, subdivision and site

planning, and reviewing development proposals.

**Managing Traffic on Roads & Waterways**  
Urban Land, 1990.

**MARTA So Far So Good**, Bert Roughton,  
*Planning*, April 1989.

**Mode Enhancement through Land Use Design: Development Strategies to Encourage the Use of Alternative Transportation Modes** (The County of San Diego Department of Planning and Land Use, prepared by Stevens/Garland Associates, Inc., in association with SR Associates, Comsis Corporation, July 1991).

The study's purpose was to identify specific development review mechanisms aimed at achieving an improved balance between the single-occupant vehicle mode choice, and shared vehicular and non-vehicular modes (i.e., car-pooling, vanpooling, transit, and walking). The study notes steps that can be taken to optimize land use planning and development to foster greater alternative mode management. Included in the study was an analysis of existing county conditions, review of existing land use policies and development ordinances, and the identification of alternative mode and other development strategies that could be incorporated into the County process. Of particular interest is the "Re-examination of Zoning Practices and the Challenge of a 'New Order' Community Design, "coordination with Mobility and Air Quality Programs," "Interaction of Alternative mode and Parking Strategies. Included at the end of the document is a "Draft Project Design Guidebook," which considers when and how Transportation Demand Management could be included in the County's site plan approval process and suggests which TDM strategies will offer the best trip reduction potential. The guidebook presents a matrix of the effectiveness and costs of selected TDM strategies for different

development types, a section on Design Evaluation Factors, and Public Transit Compatibility Worksheets — one to be used by developers, property owners and local jurisdictions, and the other to be used by the Public Transportation Agency.

**Municipal Land Use Law Chapter 291**, Laws of NJ 1975

**Neo-Traditional Neighborhood Design and its Implications for Traffic Engineering** Eva Lerner-Lam, Stephen P. Celniker, Gary W. Halbert, Chester Chellman, and Sherry Ryan  
*ITE Journal*, 1992

Article provides an overview of current Neo-Traditional Neighborhood Design in North America and summarizes some of the key traffic engineering issues encountered in those projects.

**Neotraditional Town Planning: Cars, Pedestrians, and Transit** Urban Land, 1992

Article examines the relationship between physical planning, auto access, and designing for transit. TND's (Traditional Neighborhood Developments) and TOD's (Transit-oriented developments) are discussed within the context of the work of their two major proponents: Andres Duany and Peter Calthorpe. The traffic impacts of both types of development are considered.

**The New Suburb: An Examination and Analysis of Recent Proposals, Study of Land Use and Transportation In The Suburbs Report One: July 1991** Center For Urban

Transportation Studies and the School of Architecture and Urban Planning The University of Wisconsin-Milwaukee  
The report provides an examination of the historical basis for suburban developments and analyzes recent trends and proposals for new suburban developments, especially as they relate to public transportation. The report finds that a study group of ten "exemplar" new or proposed developments were compatible

with public transit because of their higher densities, concentrated demand, and good pathway systems. However there are some limitations in the lack of direct transit routing, turns required, and right-of-way that could be obstacles to easy operation of transit.

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**Operations and Demand Management Programs to Enhance Mobility**  
ITE Conference, 199 1

**Planning & Design of On-Street Light Rail Transit Stations** *Transportation Research Record*, 1361 p.125

Planning for contemporary light rail transit (LRT) systems often presents the challenge of integrating modern stations into an on-street setting. In this context the planning and design of the station has consequences not only for the alignment and operation of the light rail line, but also for pedestrian movement, traffic flow, and safety. This report examines two key features of LRT planning and design: the specific feature of the stations and intersections; and second, the configuration of the station tracks and platforms on the street.

**Planning for Joint Development in Los Angeles** James R Gilson and F. Michael Francis, Urban Land June, June 1993

**Princeton Junction Mini Master Plan, March 20, 1992** Lenz, Mueller & Associates, Planning/Development Consultants Includes a discussion of rail-oriented community development patterns (pgs. 43-44).

**The Promise Of California's Rail Transit Lines In The Siting of New Housing**, A Report to the State Senate Office of Research, 1990 Case studies of development patterns adjacent to several rail systems are presented. The case is made that under the right conditions medium to high density residential

development with supporting retail services may be more desirable than commercial development.

**Public Transportation and Land Use Policy** Boris S. Pushkarev, Jeffrey M. Zupan

**Rail Transit as a Development Tool**, A Draft Paper, Eric Rothman, October, 1992.

**Rail Transit as an Economic Development Tool**, June 1993 NJ TRANSIT - Waterfront Transportation Division

**Rail Transit in North America** a series of maps prepared by Dennis McClendon, Planning, June 1984.

**Rail Station Improvements and Development Opportunities: A Look at the Northeast Corridor** Urban Land, Urban Land Institute, September 1981., Robert M. Byrne and Elizabeth D. Baker

Article presents findings of a ULI study which asked what types of uses are likely to locate around intercity rail station areas and what is the development potential for major regional centers, satellite cities, and independent markets located around rail stations.

**Railroad Rights-of-Way, Potential Development Opportunities** Urban Land Institute, February, 1986

**Regional Plan Association Annual Report, 1992**

**The Renaissance of Rail Transit in America** Regional Plan Association, June 199 1  
The report discusses the general historical development of rail transit systems in the US and around the world. The role of transit in the future development of urban areas is also discussed. Nine North American cities that have developed rail systems since World War II are profiled. The importance of the nexus between land use and transit planning is emphasized.

**Renovation of Market Square** Architectural Record, March 1993, Steve Hall

Article describes the renovation of Market Square, Lake Forest, Illinois, the country's first planned shopping center. Market Square contains a landscaped plaza, stores set behind an arcaded walkway, apartments and offices on the second floor, and a commuter train station. The renovation provides a lesson in how to plan a successful, mixed use development. By dispersing parking in several small lots around the site, cars are kept from overwhelming the architecture.

**Resolving the Suburban Transportation Dilemma** *The Region's Agenda, A Regional Plan Association Publication*, March 1993.

**A Review of the Transportation Element of Communities of Place: The Interim State Development and Redevelopment Plan for the State of New Jersey** Jeffrey M. Zupam, October 1991

Report reviews the transportation component and implications of the Interim State Plan. Possible implementation steps for the plan's specified transportation policies are offered. A discussion is provided concerning the levels of density inherent in the plans definition of centers and planning areas and their relationship to potential modes of transit. The following criticisms of the plan were offered:

- Policy objectives are too loosely defined to be definitive about whether the RPA thresholds and the objectives are consistent.
- The report ignores the 390 mile, 155 station rail network in New Jersey as a force for channeling compact development.
- Designing for transit is not discussed.
- No recognition is evidenced of difficulties inherent in making transportation demand management strategies work effectively.

**Revitalizing City Centers with Real World Planning** Wayne Ratkovich and Clifford L. Ratkovich, *Urban Land*, June 1993

**San Diego Gets a Grip on Gridlock: City Ordinance Helps Region Manage Growth**

Judith Corbett, *Surface Transportation Policy Project Resource Guide*, March, 1993.

**SEPTA "Model" Zoning/Development Standards for Parking and Station Areas**, Article X, Model Zoning Ordinance.

**South Station Transportation Center** *Architectural Record*, July 1981, p. 100.

**Southeast Corridor Tomorrow**

A Report prepared for The Denver Technological Center by Skidmore, Owings & Merrill.

**The Subdivision and Site Plan Handbook**, David Listokin and Carole Walker, Center for Urban Policy Research, Rutgers University, New Brunswick, 1989

**Tony Nelessen's Do-It-Yourself**

**Neotraditionalism** *Planning*, December, 1991.

Article discusses Tony Nelessen's approach to working with communities to develop implementable plans. Examines the hands on techniques of visual preference surveys and participatory planning with models and plans manipulated by community members.

**Towns and Town-Making Principles** Andres Duany and Elizabeth Plater Zyberk, 1991.

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- Joint-development programs in the US
- Joint development as public policy
- Agency perception of the joint-development process
- Real estate impacts of urban rail transit investments
- Revenue and ridership impacts of joint development

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# Glossary of Selected Transit and Land Use Terminology

## **Americans With Disabilities Act (ADA)**

Federal civil rights law, enacted in 1990, that mandates the provision of access for persons with disabilities. Title 2 of the law applies to transportation facilities and transit vehicles.

## **Automated Fare Control (AFC)**

A system of fare control that utilizes machines to issue tickets in return for a specified fare, or to confirm validity of pre-purchased tickets.

## **Bus Turnout**

A paved indentation at the side of a road, designed to allow buses to pick up and discharge without interrupting the continuing flow of traffic.

## **Commuter Bus**

Bus service provided along major arterial roads with limited stops accessing a major destination point. This service may be accessed by both pedestrians and people arriving in automobiles. Parking is sometimes provided at bus stops.

## **Commuter Rail (High Capacity Rail)**

Heavy gauge rail service accessing major employment centers as well as residential origins. This service can be both local and express, and may be accessed by both pedestrians and automobiles. Large amounts of parking are often associated with stops along this service.

## **Express Service**

Transit service between origin and destination with minimum or no stops along its route. Express service is most frequently provided on high capacity transit corridors. It is generally

used for longer distance trips, and trips between key destination and/or transfer points.

## **Federal Clean Air Act Amendments of 1990**

A Federal law enacted in 1990 that places new Federal controls on all sources of air pollution (including automobiles) which ultimately may affect all Americans. The law includes an implementation strategy, revised in 1992, that establishes air quality improvement goals.

## **Feeder Service**

A local transit service that collects or distributes riders and provides a direct transfer to other high capacity transit modes.

## **Headway**

The amount of time between transit vehicles operating on a particular transit route. Congestion can be created when headways become too small.

## **High Occupancy Vehicle (HOV)**

A vehicle carrying two or more individuals. HOVs are encouraged as a means of decreasing Vehicle Miles Traveled (VMT). Many locations in the country, including New Jersey, have begun to dedicate highway lanes during peak traffic hours to HOV vehicles.

## **Intermodal Transfer**

The ability to move from one mode of transportation to another (i.e. bus to train) during a transit journey. It is important that the transfer between modes be easily, safely, and efficiently made, be as short a horizontal distance as possible, (ideally within 250') and use a minimum of vertical changes (stairs,

escalators, elevators). Transit services should be scheduled to minimize transfer wait time.

### **Joint Development**

A shared effort on the part of two or more parties to develop a piece of property. In terms of transit, this quite often involves a private developer and a transit agency. The development may include parking, commercial uses, retail and/or residential uses. In return for the provision of the property the transit agency may receive a new or improved station facility, additional joint-use parking, the added ridership generated by the development, infrastructure improvements, and/or income.

### **Kiss-n-Ride**

Easily accessed short term waiting areas at transit facilities for drop-off and pick-up of transit users.

### **Local Bus**

Bus service that accesses multiple destinations and origins along a fixed route. Stops occur within close proximity of each other. The service may access one or several major destination or transfer points as a feeder service. Local service is most often used by pedestrians in more densely populated areas. Parking is not provided at bus stops.

### **Local Service**

Transit service that accesses frequent and closely spaced stops along its route. This service offers a high degree of choice and flexibility for its users wishing to access less frequented destination or origin points. It is most often used for short trips.

### **Master Plan**

A comprehensive long range plan intended to guide the growth and development of a community or region. In New Jersey, the municipal Master Plan is prepared and adopted by the Planning Board. It is

periodically updated and includes a survey of existing conditions, analysis and projections, and recommendations. The municipal Master Plan must contain land use and housing elements and a policy statement: it may also address population, economics, infrastructure, transportation, historic preservation, and community facilities.

### **Multiple Land Use**

Generally refers to different compatible land uses located within a defined area.

### **Mixed Use**

Generally refers to different compatible land uses located within a single structure or in close proximity to each other.

### **New Jersey Air Pollution and Traffic Congestion Act**

Legislation establishing a comprehensive program of transportation control measures to deal with traffic congestion and air pollution. The act authorizes the establishment of a "Travel Demand Management Program" requiring employers of 100 or more persons at one location to reduce peak period auto trips, to undertake surveys of the commutation patterns of their employees, and to prepare compliance plans identifying what transportation demand management strategies should be initiated by the employer.

### **New Jersey Municipal Land Use Law (MLUL)**

The State enabling legislation authorizing municipalities to adopt master plans, approve and administer zoning ordinances, site plan ordinances, and subdivision ordinances. The MLUL establishes conditions governing the operation and administration of municipal planning and development approval agencies.

## **New Jersey State Development and Redevelopment Plan**

A policy document prepared in response to the 1986 New Jersey State Planning Act. The plan establishes a series of statewide planning objectives regarding land use, housing, - economic development, transportation, natural resource conservation, agriculture and farmland retention, recreation, urban and suburban redevelopment, historic preservation, public facilities and services, and intergovernmental coordination. The plan has been formulated and amended based on a statewide planning process called “Cross-acceptance” that ensures that governments at all levels and the public participate in preparing the plan.

### **Park-n-Ride**

A type of transit stop, generally located on the periphery of a heavily urbanized area, that provides a large amount of parking. Intermodal transfers may also be available. The park-n-ride is often situated adjacent to the intersection of, or along, major arterial roads. This transit stop intercepts and decreases vehicular traffic from peripheral areas that might otherwise directly access major urban destination points. Park-n-rides may be served by high capacity bus or rail. The majority of users access this stop by auto.

### **Platforms, High**

High Platforms are raised several feet above grade at a train station that allow users to enter or exit the vehicle at the same level as the train floor, or several inches below it. These platforms expedite loading and unloading and allow the train to minimize the amount of time spent at each station.

### **Platforms, Low**

Low Platforms at a train station are located at grade or several inches above grade. The

transition to the higher train floor must be made by using stairs located in the train, at each entry point. These platforms normally require a longer loading or unloading time than high platforms.

### **Rail, heavy**

An electric railway with the capacity for a “heavy volume” of traffic, and characterized by exclusive rights-of-way, multi-car trains, high speed and rapid acceleration, sophisticated signaling, and high platform loading. Heavy rail is also known as “subway”, “elevated” (railway), or metropolitan railway (metro).

### **Rail, light**

An electric railway with a “light volume” traffic capacity compared to “heavy rail”. Light rail may use exclusive or shared rights-of-way, high or low platform loading, and multi-car trains or single cars. Also known as “streetcar”, “trolley car”, and “tramway”. Light rail is generally considered to be distinct from automated guideway transit, or “AGT” or monorail. Specifically, light rail usually assumes that there is an operator of the vehicle, an essential element for a system operating in mixed traffic.

### **Right-of-Way**

A corridor of land acquired by reservation, dedication, prescription or condemnation, and intended to be utilized as a road, rail line, utility service, buffer, or similar use.

### **Service Area**

The boundaries of an area from within which the majority of transit users will travel to a particular transit facility. Service area is influenced by the level of service provided by the transit facility, the destinations served by the transit facility, the amount of parking available at the transit facility, the quality and convenience of vehicular access and intermodal transfer available to the transit

facility, and the relative location of other competing transit facilities.

### **Shared Parking**

Parking facilities that can be utilized by transit users as well as the patrons and workers of other adjacent land uses. These facilities work best when the times and characteristics of the multiple users do not coincide or **conflict**. For instance, a use with a high evening and weekend parking demand, such as a movie theater, would be compatible with transit that has a high weekday and daytime parking use pattern. A primary advantage of shared parking is that the facility may be financed by multiple groups rather than one individual group.

### **Signage**

A coordinated system of public information (i.e. signs) that includes words or pictures describing location, directions, business names or products, services, or other information of public interest. A good **signage** system should clearly, creatively, and concisely convey its primary message. **Signage** should be readable to both pedestrians and motorists and should occur at key decision points for maximum effect. Many municipalities regulate the size, location, materials, and content of **signage** through their Zoning Ordinance.

### **Site Plan Ordinance**

A law or regulation adopted by the local municipality or County regulating the development of one or more lots. Specific aspects of the ordinance include: the approval process: application requirements: and, design standards.

### **Station Area Plan**

A plan developed and approved by a municipality for the station area or transit **planning** area. It **identifies** specific actions to encourage transit supportive conditions. The plan should include recommendations for land

use, circulation, and design guidelines. The plan can be implemented through a number of implementation mechanisms.

### **Street Classification Systems**

#### **■ Arterial Streets**

A street which is normally used for the conveyance of high volumes of vehicular traffic. The roadway generally has controlled access and is restricted from on-street parking. Right-of-way widths are normally **80 to 120** feet, except in the case of large highways.

#### **■ Collector Streets**

Streets that carry **traffic** from minor streets to the major system of arterial streets and highways, including the principal entrance streets of a residential development and streets for circulation within such a development. On-street parking is sometimes provided, depending on street width and traffic volumes. Right-of-way widths are normally **50 to 80** feet.

#### **a Minor or Local Streets**

Streets that are used primarily for access to the abutting properties. On-street parking is generally permitted. Right-of-way widths are normally **50 to 60** feet.

#### **■ Marginal Access Streets**

Minor streets which are parallel to and adjacent to arterial streets and highways and which provide access to abutting properties and protection from through traffic. The right-of-way width is approximately **50** feet.

#### **■ #●●||□•**

Minor ways that are used primarily for vehicular service access to the back or the side of properties otherwise abutting a street.

### **Streetscape**

The overall character, design quality, and particular physical elements that occupy the ground level public environment. Streetscape

elements may include the paving materials, curbs, landscaping, lighting, and street furniture such as benches, water fountains, or bicycle racks.

#### Streetwall

The vertical elements that **define** the edges of public streets. In most instances, streetwalls are the front walls of buildings along the street edge. Streetwalls, however, may also consist of elements that are not buildings, such as landscaping, fences, or other structures. A streetwall helps define the public street by providing enclosure and creating a **human**-scaled space.

#### Structured Parking

The provision of parking in a building, normally involving at least two levels. Structured parking offers the advantage of increasing parking supply without increasing the amount of land necessary to support it. In urban areas, the increased parking density allowed by structured parking permits open and vacant lots to be developed for higher and better uses.

#### Subdivision Ordinance

A law or regulation, adopted by the municipality's governing body after referral to the **Planning** Board and a public hearing. A Subdivision Ordinance governs the division of a lot, tract, or parcel of land into two or more lots, tracts, parcels or other divisions of land for sale, development or lease.

#### Transit Planning Area or Station Area

The area within a reasonable walking distance from a transit facility. This distance may extend as far as half a mile from the facility depending on the nature of the surrounding land uses, the sense of safety and security, topography, the quality and connectivity of the pedestrian paths, and the general climate of the region. This area should generally be the

focus of efforts when encouraging transit supportive conditions.

#### Transportation Management Plan

A comprehensive plan or program designed to more effectively use existing transportation resources in order either to reduce the existing demand for vehicular travel, or to reduce the future need to expand transportation infrastructure.

#### Travel Time

The amount of time spent in transit from an origin to a destination. Travel time on transit can be affected by the amount of transfers necessary to reach a destination, **traffic** conditions (in the case of bus service), whether the transit line is operating at or below its optimal capacity, and the mode of transit being used.

#### Trip

A single or one-way movement either to or from a subject property or study area.

#### Trip Ends

The total number of trips entering and leaving a specific land use or site over a designated period of time. (Each trip has two trip ends.)

#### Trip Generation

The total number of trip ends (person trips or vehicle trips) produced by a specific land use or activity.

#### Trip Linking

The ability to visit several destinations during one journey. For instance, one journey consisting of dropping the kids off at school, stopping at the post office, and **travelling** to work would be an example of trip linking. The advantage of trip linking is that it reduces Vehicle Miles Travelled (**VMTs**) by consolidating several trips into a single trip.

**Vehicle Miles Traveled (VMT)**

An average number that describes the total number of miles traveled in an automobile per individual for a particular area. An increase in **VMTs** within urbanized areas generally indicates more traffic and a worsening of air quality.

**Zoning Ordinance**

A municipal ordinance adopted after referral to the Planning Board for comment and a public hearing. The Zoning Ordinance divides a municipality into districts and prescribes land use type, land use relationships, densities, height and setback, bulk distribution, required and accessory parking, loading and servicing requirements, and performance standards, within a defined municipal boundary. In New Jersey, Zoning Ordinances must conform to the requirements set out in the Municipal Land Use Law.

**Notes:**

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**Prepared for the Federal Transit Administration**

