DESIGN STUDIES
# DESIGN STUDIES ELEMENT

## TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>INTRODUCTION</strong></td>
<td>11-1</td>
</tr>
<tr>
<td><strong>PURPOSE</strong></td>
<td>11-1</td>
</tr>
<tr>
<td><strong>PRESTON ROAD CORRIDOR</strong></td>
<td>11-3</td>
</tr>
<tr>
<td><strong>STATE HIGHWAY 190/PLANO PARKWAY CORRIDOR</strong></td>
<td>11-8</td>
</tr>
<tr>
<td><strong>DALLAS NORTH TOLLWAY CORRIDOR</strong></td>
<td>11-17</td>
</tr>
<tr>
<td><strong>STATE HIGHWAY 121 CORRIDOR</strong></td>
<td>11-23</td>
</tr>
<tr>
<td><strong>FIGURE</strong></td>
<td>11-2</td>
</tr>
<tr>
<td><strong>PLATES</strong></td>
<td>11-2</td>
</tr>
</tbody>
</table>

**FIGURE 1: DESIGN STUDY CORRIDORS**

**PLATES**

- PLATE 1: PRESTON ROAD CORRIDOR
- PLATE 2: STATE HIGHWAY 190/PLANO PARKWAY CORRIDOR
- PLATE 3: STATE HIGHWAY 190/PLANO PARKWAY CORRIDOR
- PLATE 4: DALLAS NORTH TOLLWAY CORRIDOR
- PLATE 5: STATE HIGHWAY 121 CORRIDOR
PLANO COMPREHENSIVE PLAN
DESIGN STUDIES ELEMENT

INTRODUCTION

The Design Studies are detailed analyses of four selected areas of the City deserving special attention for one or more of the following reasons:

- They represent areas of major development or redevelopment pressures.
- They will be highly visible to visitors and travelers, and will project a specific identity/image of the City.
- They are at a stage of development or redevelopment where the opportunity to establish or maintain a positive precedent still exists.
- They include opportunities to impact the design of both public and private structures, buildings and facilities in a complementary fashion.
- The development or redevelopment of these areas will significantly impact the development and long term viability of the surrounding areas.

The four areas selected for the Design Studies (see Figure 1) are:

- The Preston Road Corridor from the Santa Fe Railroad to State Highway 121;
- The State Highway 190/Plano Parkway Corridor from the Dallas North Tollway to Jupiter Road;
- The Dallas North Tollway Corridor from the Santa Fe Railroad to State Highway 121; and
- The State Highway 121 Corridor from Ohio Drive to Custer Road.

PURPOSE

The major Design Studies will serve the following purposes as part of the overall comprehensive planning effort. They will:

- Provide an opportunity to apply and evaluate the goals, objectives and policies of the Comprehensive Plan at specific locations.
- Provide a detailed scenario of the various elements that affect the overall design and function of the selected areas.
- Establish a standard for visual quality for both public and private sector development.
- Establish a specific role for each area within the context of overall City plans and policies.

Each Design Study Corridor is analyzed individually and addressed in four sections. The Background section describes the study area itself and the land uses and thoroughfares impacting it. Key Issues/Opportunities identify the various factors that affect (or are expected to affect) future development of the study area. Objectives are then presented which establish a framework for determining appropriate design criteria. Finally, Recommendations are made which propose future land use categories, development guidelines, and special treatments (e.g., landscaping, focal points and roadway design) for the study area.
Note: All Design Study Area Boundaries Are Shown in Approximate Locations.
PRESTON ROAD CORRIDOR

BACKGROUND

The Preston Road Corridor study area extends from the Sante Fe Railroad to State Highway 121, a distance of approximately six miles. The study area varies in depth on either side of the roadway from 1,000 to 2,500 feet. Its eastern boundary is clearly defined by Ohio Drive, while Ventura Drive serves as the western boundary for about 1/3 of the corridor's length.

Existing development is generally limited to the east side of the roadway from Plano Parkway to just north of Park Boulevard (F.M. 544). Here, development includes retail, office and multi-family residential. The only large development on the west side is a multi-family complex north of Park Boulevard. Scattered uses such as temporary banks, a restaurant and farm homes are found within the remaining portions of the corridor.

Approximately 2/3 of the study area have been zoned for uses including Patio Homes (medium density residential), Multi-Family Residential, Retail and High Intensity Office. There is approximately 1 and 2/3 miles of unincorporated land along the west side of Preston Road, extending from 1/3 mile north of Park Boulevard to the future Spring Creek Parkway. On the east side, there is a 2/3 mile stretch from approximately the same point north of Park Boulevard and extending to Parker Road.

Preston Road (S.H. 289) is a major state facility extending from Dallas to Sherman. It is currently a two-lane, undivided thoroughfare with four lanes, as a temporary measure, in some locations. Preston Road is proposed on the Thoroughfare Plan as a Type "B" thoroughfare (six-lane divided roadway with access lanes, deceleration lanes and grade separations at major intersections). This is generally consistent with the improved roadway sections in Dallas.

The ultimate extension of the Tollway to State Highway 121 will decrease the importance of Preston Road as a primary connection to Dallas' employment centers. However, construction of State Highway 190, improvement of State Highway 121, and continued development of the EDS site as a major employment center will increase the importance of Preston Road as a major link between centers of activity and other regional traffic facilities. Development along the roadway must present a clear and positive identity/image of the surrounding residential neighborhoods and of the community as a whole.

KEY ISSUES/OPPORTUNITIES

A number of key issues and opportunities inherent to the Preston Road Corridor are analyzed including surrounding residential development, positive precedents established by existing development, prominent natural features, the thoroughfare system, land configuration, and opportunities for focal points.

SURROUNDING RESIDENTIAL DEVELOPMENT

High quality residential subdivisions are in existence on both sides of the Preston Road Corridor, and are continuing to develop as infrastructure is extended to the north. Development within the corridor should not be of such intensity that it isolates these residential subdivisions from each other. Where possible, single-family residential neighborhoods should be considered as optional uses within the corridor. There are examples in Dallas of successful, high quality single-family development along the same roadway.
POSITIVE PRECEDENTS OF EXISTING DEVELOPMENT
The Preston Park project at the southeast corner of Preston Road and Park Boulevard is the first major development within the corridor. It is a combination of community retail and mid-rise office development characterized by extensive streetscape features and on-site landscaping. Preston Park and other projects in the corridor should provide a positive influence for guiding the design of future development.

PROMINENT NATURAL FEATURES
The White Rock Creek floodplain is the most significant natural feature in the study area. It parallels the corridor on the west side from Spring Creek Parkway to south of Hedgcoxe Road where it crosses Preston Road and continues toward the northeast. There are five other minor creeks and channels crossing Preston Road, which provide some topographical relief to the predominantly flat terrain. Significant areas of tree cover are found on the east side of the corridor between State Highway 121 and Hedgcoxe Road, on the east and west sides just north of future Spring Creek Parkway, and on the east side halfway between Parker Road and Park Boulevard.

THOROUGHFARES
In addition to State Highway 190 (which is just south of the study area) and State Highway 121, Preston Road will be crossed by 11 major and secondary thoroughfares (four- and six-lane divided roadways) and will include five grade-separated interchanges. There may also be other minor roadways interchanging with Preston Road at 1/4 mile intervals. The design of grade-separated interchanges will have a major impact on the types, pattern and quality of surrounding development. Overpass structures visually dominate an intersection and its adjacent land uses. They also have greater noise impact than at-grade or depressed roadways. Extensive use of elevated interchanges along a thoroughfare could create a "barrier" effect between neighborhoods on opposite sides.

Although Preston Road is not planned to be an expressway like State Highway 190 or U.S. 75, it will have major ingress and egress restrictions to preserve its capacity as a through thoroughfare. These access limitations will provide additional opportunities for streetscape treatments.

LAND CONFIGURATION
Although the corridor is relatively narrow at some points (1,000 feet), there is still adequate depth for single-family detached subdivisions. If single-family is to become a viable alternative use, smaller tracts under individual ownership and zoning designation will need to be combined into one development.

Several small, oddly shaped parcels have been created where the parallel thoroughfare system (Ohio and Ventura Drives) intersects other thoroughfares and floodplains. These parcels should be suitable for medium and high density residential uses and for some forms of non-residential development.

FOCAL POINTS
Two obvious opportunities for focal points exist at State Highway 121 and just north of State Highway 190, which represent key entrances to the City from major regional transportation routes. Another important focal point is the Preston Road/Legacy Drive intersection. This will be a primary entrance into the Legacy complex and should be appropriately highlighted. A fourth critical location is the Preston Road/Spring Creek Parkway intersection. Spring Creek Parkway is intended to be the City's major northern east/west traffic carrier.
OBJECTIVES

• Establish Preston Road as a major, but not primary, north/south transportation and development corridor.

• Link residential neighborhoods on both sides of the corridor.

• Provide for a combination of commercial, office and residential uses along the corridor with similar uses clustered together in large, developable sites.

• Establish setbacks between residential and non-residential developments that provide for a smooth transition between uses.

• Use special streetscape and landscape features to visually unify and coordinate the various land use types proposed for the corridor.

• Provide for prominent design features to create special focal points at the southern and northern entrances to the corridor, Legacy Drive, and Spring Creek Parkway.

• Accent key natural features, particularly the White Rock Creek floodplain.

RECOMMENDATIONS

Recommended land uses for each segment of the Preston Road Corridor are outlined in the following sections.

PROPOSED LAND USES

NORTH SEGMENT (FROM STATE HIGHWAY 121 TO HEDGCOXE ROAD)

Medium Intensity Office (MIO) is the highest intensity use recommended for the Preston Road Corridor, and is shown with Regional Commercial (RC) at the State Highway 121 intersection. This location provides excellent accessibility for both uses, and it is adequately spaced from other Regional Commercial areas to maintain an ample service area.

Light Intensity Office (LIO) is recommended along either side of Preston Road between McDermott and Hedgcoxe Roads. Residential (R) is proposed east of the White Rock Creek floodplain along Ohio Drive where it will be easily buffered from other uses.

Neighborhood Commercial (NC) is shown at the intersection of Ohio Drive and Hedgcoxe Road.

MIDDLE SEGMENT (FROM HEDGCOXE ROAD TO 1,000 FEET NORTH OF PARK BOULEVARD)

This area is proposed mainly for residential purposes with other uses carefully integrated as shown. Medium Intensity Office (MIO) and Community Commercial (COC) are shown at the intersection of Spring Creek Parkway and Preston Road. Light Intensity Office (LIO) and/or Neighborhood Commercial (NC) is shown at other key intersections, although residential uses can be easily substituted if properly designed. LIO is also shown along the west side between Hedgcoxe Road and Spring Creek Parkway where the property is part of the Legacy complex.

SOUTH SEGMENT (1,000 FEET NORTH OF PARK BOULEVARD TO THE SANTA FE RAILROAD)

This area is shown as a mixture of Medium Intensity Office (MIO), Light Intensity Office (LIO), and Residential (R) with Community Commercial (COC) shown at the Park Boulevard intersection. The proximity to future State Highway 190 and the convergence of other major thoroughfares justify a similar land use treatment to that proposed for the north segment.
DEVELOPMENT GUIDELINES

The following criteria are recommended for consideration when reviewing zoning and development requests for properties within the Preston Road Corridor. Where possible, the criteria should be added as stipulations when establishing Planned Development districts. Specific site conditions and surrounding land uses should also be considered when reviewing individual requests.

MEDIUM INTENSITY OFFICE (MIO)

- 0.75:1 maximum floor area ratio.

- 30% maximum lot coverage, 40% with structured parking.

- 10% minimum permeable surface.

- Eight-story maximum height.

- Structured parking height - three levels at- or above-grade (levels should be staggered when adjacent to residential uses).

- Setbacks from residential uses on either side of the corridor:
  - 50-400 feet - two stories
  - 400-600 feet - four stories
  - 600-800 feet - six stories
  - 800+ feet - eight stories

All of the above are measured from the zoning district boundary line. The standard zoning setback will apply from those residentially zoned tracts within the corridor.

LOW INTENSITY OFFICE (LIO)

- 0.4:1 maximum floor area ratio.

- 30% maximum lot coverage.

- 15% minimum permeable surface.

- Four-story maximum height.

- Structured parking height - two levels at- or above-grade (levels should be staggered when adjacent to residential uses).

- Setbacks from residential uses on either side of the corridor:
  - 50-400 feet - two stories
  - 400+ feet - four stories

All of the above are measured from the zoning district boundary line. The standard zoning setback will apply from those residentially zoned tracts within the corridor.

- Setbacks from streets:
  - From Preston Road, Ohio Drive, Ventura Drive, and all crossing major thoroughfares (Type "C" or above) - 50 feet or one foot for every one foot in height, whichever is greater, as measured from the property line.
  - From interior streets and secondary thoroughfares (other than Ohio and Ventura Drives) - 50 feet or 1/2 foot for every one foot in height, whichever is greater, as measured from the property line.
Setbacks from streets:
- From Preston Road, Ohio Drive, Ventura Drive, and all crossing major thoroughfares (Type "C" or above) - 50 feet or one foot for every one foot in height, whichever is greater, as measured from the property line.
- From interior streets and secondary thoroughfares (other than Ohio and Ventura Drives) - 50 feet or 1/2 foot for every one foot in height, whichever is greater, as measured from the property line.

Setbacks for side and rear yards - minimum of 50 feet.

Maximum height:
- Low/medium density - two stories
- High density - three stories

Setbacks in accordance with current zoning standards.

SPECIAL TREATMENTS
- 30-foot landscaped edge along Preston Road, Ohio Drive, Ventura Drive, and crossing major thoroughfares (Type "C" or above) as measured from the property line. (The area between the curb and property line should also be maintained in living condition by the property owner.)
- Landscaped screens around surface parking areas and planting islands within them.
- Open vistas (of White Rock Creek floodplain and other significant natural features) from Preston Road.
- Depressed interchanges of Preston Road and other major thoroughfares (Type "C" or above) where financially and physically possible.
- No billboards.
- All detached signs should be low profile monument signs, eight feet in height or less.
- Special focal point treatments at the northern and southern entry points, Legacy Drive and Spring Creek Parkway, including large landscaped areas, fountains, sculptures and pedestrian plazas.
- Underground utility lines (where feasible).

RETAIL (AS INCLUDED IN REGIONAL, COMMUNITY OR NEIGHBORHOOD COMMERCIAL)
- 0.3:1 maximum floor area ratio.
- Should conform to the "Retail Corner Guidelines".
- 30% maximum lot coverage.
- 10% minimum permeable surface.
- Two-story maximum height.
- No structured parking (unless in conjunction with office uses).
- Setbacks for front, side and rear yards - 50 feet.

RESIDENTIAL (R)
- Should conform to the density and locational policies of the Housing Chapter.
- Maximum lot coverage - 35-60% in accordance with current zoning standards.
STATE HIGHWAY 190/PLANO PARKWAY CORRIDOR

BACKGROUND

The State Highway 190/Plano Parkway Corridor study area runs along the southern boundary of the City, from the Dallas North Tollway on the west to Shiloh Road on the east.

The corridor is composed of three distinct areas of differing land use. The segment east of U.S. 75 (Central Expressway) is generally considered Plano's light industrial district. A number of light manufacturing, warehouse and office/warehouse facilities are located in this area. Most of the land is zoned Light Industrial.

From U.S. 75 to Preston Road, a combination of Light Industrial and Office/Retail zoning predominates. This segment is currently developing as one of the major corporate office areas in the community. Important facilities include ARCO's Exploration and Production Research Center, the headquarters of J.C. Penney Financial Services, and the headquarters of DSC Communications Corporation. The area also contains some retail development.

Most of the property between Preston Road and the Dallas North Tollway is zoned for low intensity, low-rise office development.

In the western part of the corridor, residential uses are found along the northern side of Plano Parkway. In the middle segment of the corridor, some residential uses are directly adjacent to Plano Parkway, while other areas are separated from the roadway by a strip of land which is zoned Light Industrial or Office/Retail. In the eastern segment, both sides of the corridor are zoned for non-residential uses.

State Highway 190 is envisioned as a regional freeway linking State Highway 78 in Garland with Interstate Highway 35 in Carrollton. When fully constructed to eight main lanes and six frontage road lanes, S.H. 190 will act as an "outer loop" similar to LBJ Freeway (I.H. 635). It will form the southern boundary of the City from just east of Jupiter Road to Preston Road, separating Plano from Richardson and Dallas to the south.

In contrast, Plano Parkway already exists as a four- to six-lane thoroughfare. It serves as one of the main truck routes through town and may eventually carry the F.M. 544 designation. Thus, the two roadways will serve as major regional and local traffic carriers. With State Highway 190 as the southern boundary of Plano, visitors' first impressions of Plano will be upon crossing the roadway.

This Design Study is predicated on the construction of State Highway 190. This regional freeway access makes possible the development intensities envisioned. If, for some reason, State Highway 190 is not constructed, a re-evaluation of the entire corridor would be necessary.

KEY ISSUES/OPPORTUNITIES

Several key issues and opportunities can be highlighted based on existing and emerging development trends. These include local and regional access, opportunities to create gateways into the City, natural features, and existing and emerging development patterns.
ACCESS
The State Highway 190/Plano Parkway Corridor has perhaps the best local and regional access in the City. Good east/west movement is complemented by connections to major north/south expressways such as the Dallas North Tollway and Central Expressway, and to other north/south thoroughfares such as Preston Road. Up to nine interchanges are planned along State Highway 190.

Access to Plano Parkway from State Highway 190 has not yet been resolved. Current plans of the State Department of Highways and Public Transportation show no direct access to Plano Parkway from State Highway 190 at the Central Expressway and Tollway interchanges. If possible, this access should be obtained. In addition, access from Central Expressway to Plano Parkway should be preserved. Traffic forecasts also show a significant demand for access from the Tollway to Plano Parkway, and if possible this connection should be provided as well. Along State Highway 190, frontage roads are proposed from Renner Road (just east of Jupiter) to the vicinity of Coit Road. Frontage roads will end west of Coit Road due to the existence of the Santa Fe Railroad on the north side and residential development on the south side in the City of Dallas. Access to State Highway 190 west of Coit Road will only be available at interchanges.

The Thoroughfare Plan (see Transportation Chapter, Plate 1) shows an initial collector street network in the area between Plano Parkway and State Highway 190. Additional streets may be needed in the area depending on the levels of development expected.

In addition to the Santa Fe Railroad, the St. Louis & Southwestern and the Southern Pacific Railroad lines also cross through the corridor. They enhance the potential for industrial development, particularly in the eastern segment.

GATEWAYS
The State Highway 190/Plano Parkway Corridor will serve as the southern gateway into Plano, making it one of the most visible areas in the City. Plano has the opportunity to create a distinctive visual image and identity for visitors and residents entering the City. The Dallas North Tollway and Central Expressway intersections will carry the most traffic. Here, "landmark" buildings and special amenities can be provided to mark entry into Plano. Other entries, such as Preston Road, Coit Road and Avenue K (S.H. 5), will also carry regional traffic. Some streets, such as Independence Parkway and Jupiter Road, will generally carry local traffic. The scale of development at gateways should relate to the type of roadway serving it, surrounding land uses, and site development constraints.

NATURAL FEATURES
East of Central Expressway relatively few natural constraints to development exist. West of Central Expressway, a number of creeks and drainage areas cross Plano Parkway, creating interesting horizontal and vertical curves and transitions along the roadway. Several of these creek areas are also wooded, providing additional design opportunities. In the western portion of the corridor, a large drainage area cuts through the center of several tracts between Plano Parkway and State Highway 190, serving as an additional development constraint.
EXISTING AND EMERGING DEVELOPMENT PATTERNS
The Plano Parkway corridor can be divided into three distinct areas, including low-rise development in the west, corporate "campus" development in the center, and light industrial development in the east.

Recently, retail uses have been constructed in the corridor, concentrating in the Coit Road area. These uses include strip retail development, retail warehousing outlets, and a number of car dealerships. While some retail is needed for employees within the corridor, extensive retail uses conflict with the intended development pattern. In the eastern portion of the corridor, land intended for Plano's industrial base might be used instead for retail. In the central portion, scattered small-site retail developments conflict with the envisioned corporate office image. Additional land zoned for retail is easy to find elsewhere in Plano. However, no large area exists for industrial development other than southeast Plano.

Nearby residential development also serves as a development constraint. In some areas of the corridor (from Preston Road to 15th Street, and from Ventura Drive to Parkwood Boulevard) residential development abuts Plano Parkway on the north side. In other areas (from Woodburn Corners to Alma Drive) a narrow, 200-800 foot strip of Light Industrial or Office zoned land separates Plano Parkway from residential areas. Careful attention must be given to the impact of development within the corridor on these residential areas. The siting of high-rise structures will be of particular significance.

OBJECTIVES
• Establish the State Highway 190/Plano Parkway Corridor as a primary east/west transportation and development corridor.

• Minimize the number of boundaries between incompatible land uses. Create a predominate use for each section of the corridor while discouraging incompatible uses. (The corridor is divided into three segments with only a limited number of uses encouraged in each segment.)

• Create an attractive and unified appearance for development along the corridor. Provide for landscaped open space areas, and for screened and landscaped parking areas.

• Maximize traffic flow along the corridor, while providing adequate access to adjacent developments. (Additional study of the transportation system may be required as development occurs in the area to ensure that the collector street network can properly handle the traffic, and that the corridor does not become an impediment to north/south traffic flow.)

• Provide sufficient land for Plano's industrial base in southeast Plano and in other appropriate locations with access to railroad service.

• Create an attractive appearance for all entries into the City. Develop secondary gateways with lower intensity uses and generous landscaping setbacks. Place high profile "landmark" buildings with special amenities, such as landscaping, sculpture and/or water features, at major entry points such as the Dallas North Tollway and Central Expressway.
• Seek to preserve natural features and incorporate them into private development plans.

• Place taller and more intense development away from residential areas so that the character of those areas is preserved and their stability ensured.

• Encourage street addressing and the designing of ceremonial/visitor entries on Plano Parkway, with employee and service access from the State Highway 190 service roads.

• Generally allow no retail development in areas designated Light Industrial, and limit retail uses in areas zoned as Office to those uses which are complementary to office functions.

• Primary access to retail development in the middle segment of the corridor south of Plano Parkway should be from State Highway 190, from intersecting north/south major thoroughfares, and from the internal collector street network. Retail development should have only limited exposure to Plano Parkway.

RECOMMENDATIONS

Recommended land uses for each segment of the State Highway 190/Plano Parkway Corridor are outlined in the following sections.

PROPOSED LAND USES

EAST SEGMENT (FROM SHILOH ROAD TO U.S. 75)

Light Industrial (LI) is appropriate for the area east of Central Expressway. This area has good rail service and convenient access to the regional thoroughfare system, and a significant concentration of warehouse, distribution and light assembly facilities already exists.

Retail is appropriate at selected intersections which are designated as Neighborhood Commercial (NC) on the Land Use Plan. Generally, however, Retail use should be discouraged as there are a variety of other locations to choose from in Plano.

Medium Intensity Office (MIO) and High Intensity Office (HIO) are appropriate adjacent to State Highway 190. These parcels have good regional and local access as well as high visibility along State Highway 190.

MIDDLE SEGMENT (FROM U.S. 75 TO PRESTON ROAD)

Low Intensity Office (LIO) is appropriate for the north side of Plano Parkway. Here, much of the office development will be directly adjacent to residential areas. The area between Ohio Drive and Independence Parkway (south of Plano Parkway) is also an appropriate location for this use. This area lacks direct access to State Highway 190 due to the Santa Fe Railroad.

Medium Intensity Office (MIO) is appropriate at Preston Road in recognition of the roadway’s secondary "gateway" status. MIO is also allowed in areas designated on the Land Use Map as High Intensity Office (HIO).

High Intensity Office (HIO) is appropriate for much of the State Highway 190 frontage from Central Expressway to Ohio Drive. These parcels have good regional and local access and high visibility along State Highway 190. The existing character of office buildings set back from Plano Parkway with well manicured landscaping should be maintained. Taller buildings should be placed closer to State Highway 190. Employee and service access to
office developments will be primarily from State Highway 190. Plano Parkway will be used for visitor and "ceremonial" entrances.

Light Industrial (LI) is appropriate for the area on both sides of the Santa Fe Railroad between Independence Parkway and Ohio Drive. LIO uses are also proposed for this area.

Retail should be allowed in conjunction with office development, but generally should be limited to approximately 5% of a development's planned floor area. On the north side of Plano Parkway, no more than 25% of any building's floor area should be devoted to retail uses, which should complementarily serve the office tenants. Uses such as snack bars, barbershops, newsstands, restaurants and specialty retail would be appropriate. Anchor tenants unrelated to the principal use, such as grocery stores, should be discouraged. Retail development should be oriented toward the collector street network which serves the office area, and exposure to Plano Parkway should be minimized. Access should be from State Highway 190, intersecting north/south thoroughfares, and the collector street network.

WEST SEGMENT (FROM PRESTON ROAD TO THE DALLAS NORTH TOLLWAY)
Low Intensity Office (LIO) is most suitable for this area due to its natural features which include creeks and large areas of tree cover. LIO would also be compatible with the residential uses on the north side of Plano Parkway. The lack of access to State Highway 190 created by the railroad makes retail and higher intensity office uses inappropriate.

Medium Intensity Office (MIO) is appropriate at the Preston Road and Dallas North Tollway entrances into Plano. MIO reflects the secondary nature of the Preston Road gateway (the road does not have controlled access), and reflects access and topographical limitations at the Dallas North Tollway entrance.

DEVELOPMENT GUIDELINES
The following guidelines are recommended for development in the State Highway 190/Plano Parkway Corridor.

LIGHT INDUSTRIAL (LI)
- 0.5:1 maximum floor area ratio.
- 50% maximum lot coverage.
- 10% minimum permeable surface.
- Four-story maximum height.
- No structured parking.
- 50-foot minimum building setback, 70-foot minimum setback from the south side of Plano Parkway.
- 30-foot minimum landscaped edge along Plano Parkway frontage.
- Screening for surface parking areas in front of the building line composed of plantings and/or earth berms.
- Setback from residential uses - height limited to two stories, not to exceed 35 feet, for a distance of 400 feet from the residential district boundary, and not to exceed 60 feet in height for distances beyond 400 feet.
• Setbacks from streets:
  - From crossing north/south major thoroughfares (Shiloh Road, Jupiter Road, Avenue K, Alma Drive, Custer Road, Independence Parkway, Coit Road, Ohio Drive and Preston Road) - 50 feet or one foot for every one foot in height, whichever is greater, as measured from the property line.
  - From interior collector streets - 50 feet or 1/2 foot for every one foot in height, whichever is greater, as measured from the property line.

LOW INTENSITY OFFICE (LIO)

• 0.4:1 maximum floor area ratio.
• 30% maximum lot coverage.
• 15% minimum permeable surface.
• Four-story maximum height.
• Structured parking height - two levels at- or above-grade.

• Setbacks from residential uses on north side of Plano Parkway:
  - 50 feet from residential property line
  - 50 feet from Plano Parkway
  - 50-200 feet - two stories
  - 200-300 feet - three stories
  - 300+ feet - four stories

• Setback from residential uses on south side of Plano Parkway - 70 feet, plus twice the height of the building above two stories, as measured from the south right-of-way line of Plano Parkway.

• Setback from Plano Parkway - 50 feet on the north side, 70 feet on the south side.
• Setback from State Highway 190 - 50 feet minimum.

• 30-foot minimum landscaped edge along Plano Parkway frontage.

• Setbacks from streets:
  - From crossing north/south major thoroughfares (Shiloh Road, Jupiter Road, Avenue K, Alma Drive, Custer Road, Independence Parkway, Coit Road, Ohio Drive and Preston Road) - 50 feet or one foot for every one foot in height, whichever is greater, as measured from the property line.
  - From interior collector streets - 50 feet or 1/2 foot for every one foot in height, whichever is greater, as measured from the property line.

MEDIUM INTENSITY OFFICE (MIO)

• 0.75:1 maximum floor area ratio.
• 30% maximum lot coverage, 40% with structured parking.
• 10% minimum permeable surface.
• Eight-story maximum height.
• Structured parking height - three levels at- or above-grade (levels should be staggered when adjacent to residential uses).

• Setback from Plano Parkway:
  - 70 feet minimum
  - 70-150 feet - one to four stories
  - 150-200 feet - six stories
  - 200+ feet - eight stories

• Setback from residential uses - 70 feet, plus twice the height of the building above two stories, as measured from the south right-of-way line of Plano Parkway.

• Setback from State Highway 190 - 50 feet minimum.
30-foot minimum landscaped edge along Plano Parkway frontage.

In general, 5% of a development’s planned floor area may be devoted to retail uses which are complementary to the office project.

Setbacks from streets:
- From crossing north/south major thoroughfares (Shiloh Road, Jupiter Road, Avenue K, Alma Drive, Custer Road, Independence Parkway, Coit Road, Ohio Drive and Preston Road) - 50 feet or one foot for every one foot in height, whichever is greater, as measured from the property line.
- From interior collector streets - 50 feet or 1/2 foot for every one foot in height, whichever is greater, as measured from the property line.

HIGH INTENSITY OFFICE (HIO)

0.75:1 to 1:1 maximum floor area ratios. FARs above 1:1 may be appropriate to offset land required for State Highway 190 right-of-way where traffic impacts, accessibility and effects on nearby residential areas are evaluated favorably. Existing Planned Development Office/Retail districts (as of March, 1987) with higher floor area ratios may be retained.

30% maximum lot coverage, 50% with structured parking.

10% minimum permeable surface.

Twelve-story maximum height. Heights above twelve stories may be appropriate adjacent to State Highway 190 to offset land required for right-of-way where good access to State Highway 190 is available, and where special amenities such as plazas, major open space areas, and extensive landscaping are provided.

Existing Planned Development Office/Retail districts (as of March, 1987) with approved greater building heights may be retained.

Structured parking height - six levels at- or above-grade (levels should be staggered when adjacent to residential uses).

Setback from Plano Parkway:
- 70 feet minimum
- 70-150 feet - one to four stories
- 150-200 feet - five to six stories
- 200-300 feet - seven to eight stories
- 300-400 feet - nine to twelve stories
- 400+ feet - above twelve stories

Additional setbacks may be appropriate in areas where residential uses are adjacent to Plano Parkway, or are only separated by a narrow Low Intensity Office (LIO) area. Visual impact, site constraints (such as unusual topography, tract size or accessibility problems) and all other pertinent factors should be evaluated in the setback and siting of high intensity office structures.

Setback from residential uses - 70 feet, plus twice the height of the building above two stories, as measured from the south right-of-way line of Plano Parkway.

Setback from State Highway 190 - 50 feet minimum.

30-foot minimum landscaped edge along Plano Parkway frontage.

In general, 5% of a development’s planned floor area may be devoted to retail uses which are complementary to the office project.
• Campus office with low- to mid-rise development should be the predominant image along Plano Parkway, with taller buildings placed closer to State Highway 190, south of the internal collector street system.

• Setbacks from streets:
  - From crossing north/south major thoroughfares (Shiloh Road, Jupiter Road, Avenue K, Alma Drive, Custer Road, Independence Parkway, Coit Road, Ohio Drive and Preston Road) - 50 feet or one foot for every one foot in height, whichever is greater, as measured from the property line.
  - From interior collector streets - 50 feet or 1/2 foot for every one foot in height, whichever is greater, as measured from the property line.

RETAIL

• 0.3:1 maximum floor area ratio in Neighborhood Commercial areas (up to 0.5:1 floor area ratio allowed when Retail is developed in conjunction with office buildings in Community Commercial areas).

• 30% maximum lot coverage (up to 50% lot coverage allowed when combined with office developments in Community Commercial areas).

• 10% minimum permeable surface.

• Two-story maximum height (office developments adjacent to Retail in Community Commercial areas may be allowed additional height in accordance with the guidelines applicable to the adjacent land use).

• No structured parking (unless developed in conjunction with offices in Community Commercial areas, in which case three levels at- or above-grade are allowed).

• 50-foot minimum setback from Plano Parkway on the north side, 70-foot minimum setback on the south side.

• 30-foot minimum landscaped edge along Plano Parkway frontage.

• 50-foot side and rear setback.

• Should conform to the "Retail Corner Guidelines".

• Setbacks from streets:
  - From crossing north/south major thoroughfares (Shiloh Road, Jupiter Road, Avenue K, Alma Drive, Custer Road, Independence Parkway, Coit Road, Ohio Drive and Preston Road) - 50 feet or one foot for every one foot in height, whichever is greater, as measured from the property line.
  - From interior collector streets - 50 feet or 1/2 foot for every one foot in height, whichever is greater, as measured from the property line.

RETAIL (WITHIN MIDDLE SEGMENT)

• Should be supportive and complementary to office uses.

• Minimize access to Plano Parkway on the south side, and encourage access from internal collector street network and from State Highway 190.

• In general, Retail should not be oriented directly onto State Highway 190, but should be focused toward the internal street network and surrounding office development.

• Encourage retail uses such as snack bars, barbershops, newsstands, restaurants, office supply stores, and specialty shops that are complementary to the principal use, and discourage general retail tenants such as grocery stores.
• Plan retail development as a part of the overall development pattern for office tracts at the time of preliminary site plan approval.

• On the north side of Plano Parkway, retail is generally limited to 25% of a project's built floor area.

SPECIAL TREATMENTS

• All detached signs should be low profile monument signs, eight feet in height or less.

• Underground utility lines (where feasible).

• No billboards.

• Avoid construction and fill within the floodplain to preserve mature trees and other significant natural features.

• Screen service, utility and trash collection areas from view. Where possible, screen such areas with the building itself, or use a combination of walls, berms and landscaping.

• Setback area used for landscaped open spaces, entry courts and screened visitor parking.

• Sidewalks located within the setback, and connected to buildings and adjacent developments. Meander sidewalks through the open space using sidewalk easements.

• Planting islands in surface parking areas.

• Views of parking areas buffered from Plano Parkway by locating them behind or beside buildings, and by screening them with berms and plantings.

• Primary access to service and parking areas from State Highway 190 or from other secondary streets rather than from Plano Parkway.

• 30-foot landscaped edge measured from the property line along the following crossing north/south major thoroughfares: Alma Drive, Custer Road, Independence Parkway, Coit Road, Ohio Drive and Preston Road. (The area between the curb and property line should also be maintained in living condition by the property owner.)

• Develop standards for landscaping along interior collector streets.

• Continuity of street lighting, street furniture, landscaping and signage to give a sense of special identity. Use private covenants and deed restrictions to this end.

• Development of pedestrian connections between office buildings and throughout the corridor.

• Encourage the provision of public art in the corridor.
DALLAS NORTH TOLLWAY CORRIDOR

BACKGROUND

The Dallas North Tollway Corridor study area extends from the Santa Fe Railroad to State Highway 121, a distance of approximately five and 2/3 miles. The study area varies in depth on either side of the Tollway from 500 to 1,800 feet. It is bounded on the east from Plano Parkway to State Highway 121 by Parkwood Drive, a Type "C" thoroughfare (six lanes, divided). Its western boundary is not as readily defined. Plano Parkway and two other Type "C" thoroughfares parallel the Tollway for approximately 3/4 of its length.

Two concrete two-lane roadways are in place south of F.M. 544, and extend to the Plano city limits. These will be the outside two lanes of the future Tollway's three-lane service roads. South of the City's limits the roadway is four lanes of undivided asphalt pavement.

The existing roadway north of F.M. 544 (Bishop Road) is intermittent with black top and white rock surfaces, and has several sharp turns as it follows existing property lines. The next phase of the Tollway construction will extend the two-lane service roads north from F.M. 544 to S.H. 121. The right-of-way location has been established through this section by zoning district boundaries. Extension of the main lanes in Dallas from Trinity Mills to S.H. 121 is anticipated within the next five years.

The Tollway and U.S. 75 (Central Expressway) will serve as the main north/south connections between Plano, other northern suburbs, and the commercial and employment centers of Dallas. Also, as the Legacy complex, the State Highway 190/Plano Parkway Corridor, and other primary locations develop as major business centers, the Tollway will be a critical connection between them and residential areas to the north and south.

All but two small sections of the corridor have been annexed and zoned. The eastern side of the future Tollway is unincorporated for a distance of about 1/2 mile extending south from State Highway 121. South of Spring Creek Parkway, another 1/4 mile stretch is unincorporated on the west side. A third parcel located approximately 500 feet west of the Tollway and south of F.M. 544 has been annexed and given the temporary designation of Agriculture. The remainder of the corridor is zoned for various non-residential uses.

The character of public and private development along the Tollway will become increasingly significant as the Tollway assumes its role as a primary regional route. It will project an image of the City to visitors, travelers and residents alike.

This Design Study is predicated on the construction of the Dallas North Tollway. Regional expressway access makes possible the development intensities envisioned. If, for some reason, the Tollway is not constructed, a re-evaluation of the entire corridor would be necessary.

KEY ISSUES/OPPORTUNITIES

Key factors addressed in consideration of the Dallas North Tollway Corridor include the lack of existing development and prominent natural features, the thoroughfare system, surrounding land uses, land configuration, and opportunities for focal points.
LACK OF EXISTING DEVELOPMENT
No major development precedent has been established within the Tollway Corridor. It has been the subject of significant zoning requests over the last several years in anticipation of the ultimate Tollway extension to State Highway 121. However, without an improved north/south roadway, there has been no opportunity for major development. The corridor remains dotted with farms and residences. Because no actual development precedent has been established, opportunities exist to propose development guidelines and optional land uses based on other factors.

LACK OF PROMINENT NATURAL FEATURES
The Tollway will extend across relatively flat land with the only significant tree cover located immediately north of the Santa Fe Railroad. The northern end is crossed by a wide drainage area that provides for some variation in topography and some light tree cover around old agricultural stock ponds. The southern end has two creek crossings, but the surrounding area maintains slopes of less than 3%.

THOROUGHFARES
In addition to State Highway 190 (which will cross just south of the study area) and State Highway 121, the Tollway will be crossed by nine major thoroughfares (six-lane divided roadways). Entrance and exit points are anticipated (but not confirmed by the Turnpike Authority) for locations near F.M. 544 (Park Boulevard), Spring Creek Parkway, State Highway 121 and several other major thoroughfare crossings. These crossing thoroughfares are typically spaced at intervals of 3/4 to one and 1/4 miles, except north of Spring Creek Parkway where 1/2 mile spacing is proposed to accommodate the core of the Legacy complex. The design of these crossings and their relationship to surrounding land uses is of vital concern. Elevated overpasses have significant noise and visual impacts on adjacent development, and they make ingress and egress to corner sites difficult.

SURROUNDING LAND USES
The land adjacent to the middle segment (from just north of F.M. 544 to the unnamed crossing thoroughfare south of Spring Creek Parkway) is proposed for residential uses, similar to the Preston Road Corridor. Residential use is also proposed on the west side between the noted unnamed thoroughfare and Spring Creek Parkway, and on the east side from just north of Plano Parkway to just north of F.M. 544.

Even though the Tollway is to be a primary regional thoroughfare and non-residential uses of significant intensities appear to be appropriate, the impact on adjacent residential uses must be minimized. Isolation of residential areas on either side of the corridor could result if the roadway and development along it are perceived as a barrier.

LAND CONFIGURATION
The distance between the Tollway and paralleling thoroughfares is extremely narrow (500 to 1,000 feet) from the southern boundary to a point approximately 1,000 feet south of Spring Creek Parkway, which represents about 2/3 of its length. This would make residential subdivision design difficult. In the middle segment of the corridor, where residential uses are planned for both sides, high intensity office uses would appear to be inappropriate. In this area, it would be difficult to provide for increased setbacks or a staggered setback arrangement and still attain floor area ratios of greater than 0.75:1.
FOCAL POINTS
The two principal opportunities for focal points are at State Highway 121 and near State Highway 190. These will be main entrances into the City and should be treated as primary gateways. Entrance treatments should be adequately spaced from the two interchanges, which will include elevated roadways and ramps, to permit good visibility. Other focal point opportunities include the two potential Tollway terminals at F.M. 544 and Spring Creek Parkway. It is important to create a positive and definite impression at the point travelers leave the main roadway and begin to interface with the "community" of Plano.

The proposed EDS core and its immediate surrounding area will also serve as a focal point. The intensity and height of this development will make it highly visible. It is essential that public and private signage, landscaping and other improvements in this area contribute to a common design theme.

OBJECTIVES
• Establish the Dallas North Tollway as a primary north/south transportation and development corridor.

• Establish intensities of development that are commensurate with a major regional thoroughfare, but which do not create a barrier between residential neighborhoods on either side of the corridor.

• Establish setbacks and buffers on the east and west sides of the corridor that permit reasonable use of the property within its narrower sections, and that provide for transition and gradation to surrounding residential uses.

• Provide for prominent design features to create primary gateways at the southern and northern entrances to the corridor, and for special focal points in the EDS core and at the Tollway terminals.

• Design the roadway system to reduce points of conflict and to minimize noise and visual impact on surrounding uses.

• Accent the area having significant natural features (near the Santa Fe Railroad in the southern portion of the corridor).

• Create an attractive and unified appearance for development along the corridor.

• Provide for visual connections between residential uses to the east and west of the corridor.

RECOMMENDATIONS
Recommended land uses for each segment of the Dallas North Tollway Corridor are outlined in the following sections.

PROPOSED LAND USES
NORTH SEGMENT (FROM STATE HIGHWAY 121 TO 1,000+ FEET SOUTH OF SPRING CREEK PARKWAY)
High Intensity Office (HIO) is the principal use designated for the north segment, and extends from McDermott Road to just south of Spring Creek Parkway. It is intended to provide for development similar to that found in downtowns or in the central business districts of most large cities. As previously noted, a roadway system has been proposed in this area to allow for concentrated development.
Medium Intensity Office (MIO) is proposed between State Highway 121 and McDermott Road where access will be limited due to design constraints of the State Highway 121/Tollway interchange.

**MIDDLE SEGMENT (FROM 1,000± FEET SOUTH OF SPRING CREEK PARKWAY TO 1,500± NORTH OF PARK BOULEVARD/F.M. 544)**

The entire middle segment is proposed for Medium Intensity Office (MIO). This will permit development of an appropriate magnitude for a primary corridor, while providing a reasonable transition to adjacent residential uses.

**SOUTH SEGMENT (FROM 1,500± FEET NORTH OF PARK BOULEVARD/F.M. 544 TO THE SANTA FE RAILROAD)**

The south segment is to be composed mainly of Medium Intensity Office (MIO) with a Regional Commercial (RC) tract shown at the northwest corner of Park Boulevard and the Tollway, and a Light Intensity Office (LIO) tract shown at the southeast corner of that intersection. MIO provides for uses befitting a primary gateway. High Intensity Office (HIO) is not recommended in this general area due to narrow land configurations and to access complications resulting from the convergence of roadways and multi-grade interchanges. A medium intensity use can also take better advantage of the existing natural features in this area.

The Regional Commercial (RC) area is far enough away from the Tollway/State Highway 190 interchange to permit reasonable circulation and access if surrounding intensities are minimized. It will have direct access to three major thoroughfares, and has ample size to accommodate a major facility. This area is also adequately spaced from other RC sites, and can accommodate customers and clients from other communities adjacent to Plano such as Carrollton and North Dallas.

The LIO site is intended to provide a buffer or transitional use between more intense uses and existing residential developments.

**DEVELOPMENT GUIDELINES**

The following criteria are recommended for development in the Dallas North Tollway Corridor.

**HIGH INTENSITY OFFICE (HIO)**

- 0.75:1 minimum floor area ratio.
- 50-100% maximum lot coverage. (In the Legacy "downtown" setting, lot coverages of up to 100% may be appropriate where joint parking facilities, community plazas and other amenities are included.)
- 10% minimum permeable surface. (In the Legacy "downtown" setting, permeable surface may be reduced to zero where community plazas and other amenities are included.)
- Twelve-story maximum height. (In the Legacy "downtown" setting, greater heights may be appropriate where joint parking facilities, community plazas, and other amenities are included.)
- Setbacks from residential uses should be in accordance with standard zoning setbacks.
- Setback from the Tollway (as measured from the property line) - 50 feet.
- Setbacks from other streets:
  - From major thoroughfares (Type "C" or above) - 50 feet or one foot for every one foot in height, whichever is greater, as measured from the property line.
  - From interior streets and secondary thoroughfares - 50 feet or 1/2 foot for every one foot in height, whichever is greater, as measured from the property line.

- Setbacks from other streets within the Legacy "downtown" setting may be reduced to zero where community plazas and other amenities are included.

- Setback for side and rear yards - 50 feet (may be reduced to zero within the Legacy "downtown" area).

- Retail uses should be complementary to the principal use, and limited to 5% of the built floor area of a project.

**MEDIUM INTENSITY OFFICE (MIO)**

- 0.75:1 maximum floor area ratio.
- 30% maximum lot coverage, 40% with structured parking.
- 10% minimum permeable surface.
- Eight-story maximum height.
- Structured parking height - three levels at- or above-grade (levels should be staggered when adjacent to residential uses).

- Setbacks from residential uses on either side of the corridor south of Spring Creek Parkway:
  - 50-200 feet - four stories
  - 200-350 feet - six stories
  - 350+ feet - eight stories
  - Cannot be closer than 50 feet plus twice the height above two stories.

The standard zoning setback should apply from those residentially zoned tracts within the corridor.

- Setbacks from residential uses on either side of the corridor north of Spring Creek Parkway - the standard zoning setback should apply.

- Setback from the Tollway (as measured from the property line) - 50 feet.

- Setbacks from other streets:
  - From major thoroughfares (Type "C" or above) - 50 feet or one foot for every one foot in height, whichever is greater, as measured from the property line.
  - From interior streets and secondary thoroughfares - 50 feet or 1/2 foot for every one foot in height, whichever is greater, as measured from the property line.

- Setback for side and rear yards - 50 feet.

- Retail uses should be complementary to the principal use, and limited to 5% of the built floor area of a project.
LOW INTENSITY OFFICE (LIO)

- 0.4:1 maximum floor area ratio.
- 30% maximum lot coverage.
- 15% minimum permeable surface.
- Four-story maximum height.
- No structured parking.
- Setbacks from residential uses on either side of the corridor:
  - 50-250 feet - two stories
  - 250+ feet - four stories

The standard zoning setback should apply from those residentially zoned tracts within the corridor.

- Setback from the Tollway (as measured from the property line) - 50 feet.

- Setbacks from other streets:
  - From major thoroughfares (Type "C" or above) - 50 feet or one foot for every two feet in height, whichever is greater, as measured from the property line.
  - From interior streets and secondary thoroughfares - 50 feet or 1/2 foot for every one foot in height, whichever is greater, as measured from the property line.

- Setback for side and rear yards - 50 feet.

- Retail uses should be complementary to the principal use, and limited to 5% of the built floor area of a project.

RETAIL (AS INCLUDED IN REGIONAL COMMERCIAL)

- Should conform to the "Retail Corner Guidelines".

- 0.3:1 maximum floor area ratio (combined retail and office FAR in Regional Commercial may be up to 1:1).

- 30% maximum lot coverage.
- 10% minimum permeable surface.
- Two-story maximum height.
- No structured parking (unless in conjunction with office uses).

- Setbacks for front, side and rear yards - 50 feet.

SPECIAL TREATMENTS

- 30-foot landscaped edge along the Tollway and all major thoroughfares (Type "C" or above) as measured from the property line. (The area between the curb and property line should also be maintained in living condition by the property owner.)

- Landscaped screens around surface parking areas and planting islands within them.

- Depressed interchanges and crossings of the Tollway and other thoroughfares where financially and physically possible.

- No billboards.

- All detached signs should be low profile monument signs, eight feet in height or less.

- Regularly spaced east/west walkways, plazas and roadways to provide visibility and access between residential areas across the corridor.

- Special focal point treatments at northern and southern entry points, at Tollway terminals and at the Legacy "downtown" area, including large landscaped areas, theme signage and lighting, fountains, sculptures, and pedestrian plazas.

- Underground utility lines (where feasible).
STATE HIGHWAY 121
CORRIDOR

BACKGROUND

The State Highway 121 Corridor study area extends from Custer Road to the future extension of Ohio Drive, a distance of approximately four miles. It is bounded on the south by the proposed extension of Ridgeview Drive from Custer Road to Coit Road, and by the proposed extension of McDermott Road from Coit Road to Ohio Drive. The corridor’s width ranges from approximately 1,700 to 3,500 feet.

The study area is largely unincorporated. A small tract on the western edge of the area has been zoned for single-family residential purposes, and a small parcel at the southwest corner of Custer Road and State Highway 121 has been zoned for commercial uses. Two recent zoning cases involving tracts at the southeast and southwest corners of the future Coit Road/State Highway 121 intersection have resulted in low intensity campus office districts, with commercial uses located adjacent to the corners and with a small multi-family parcel. Current use of the study area and outlying properties is mainly agricultural.

State Highway 121 is a major state facility that not only serves the Dallas region, but which also extends from Bonham to Fort Worth. Although it is currently a two-lane, undivided roadway, various cities have worked with the Texas State Highway Department to raise its designation to "freeway" status from U.S. 75 in McKinney to the Dallas/Fort Worth International Airport.

With the continued development of The Legacy and other employment centers in the northern Metroplex, State Highway 121 will increase in importance as a commercial traffic carrier and as the main east/west access to many growing suburbs such as The Colony, Frisco, Allen and Plano. Because it passes along the boundaries of these communities, the visual impact of development adjacent to the roadway will establish a specific image and identity for each community.

This Design Study is predicated on the improvement of State Highway 121 to freeway standards. Regional freeway access makes possible the land uses envisioned. If, for some reason, State Highway 121 is not improved as a freeway, a re-evaluation of the entire corridor would be necessary.

KEY ISSUES/OPPORTUNITIES

Key factors addressed in consideration of the State Highway 121 Corridor include the lack of existing development, prominent natural features, the thoroughfare system, and land configuration.

LACK OF EXISTING DEVELOPMENT

There has been no major development precedent established along State Highway 121, particularly on Plano’s side of the roadway. Three concrete and asphalt batching plants and service stations are located along the 3.8-mile stretch of land on the north (Frisco) side. As development pressures mount over the years, the batching plants may be replaced with more permanent uses. Therefore, the opportunity exists to base proposals for the future development of this corridor on factors other than established uses.
PROMINENT NATURAL FEATURES
This section of State Highway 121 is crossed by two major floodplains. White Rock Creek crosses the roadway approximately 3/4 mile east of Ohio Drive, and Rowlett Creek and two of its tributaries wind their way across the eastern third of the corridor. The floodplains represent significant changes in topography and major areas of tree cover that should be highlighted and preserved in any development concept for this area.

THOROUGHFARES
State Highway 121 will be intersected by four six-lane thoroughfares that will connect with similar roadways in Frisco. One of these roadways crosses between Preston and Coit Roads, but is not proposed to extend south of McDermott Road nor to interchange with State Highway 121. In addition, Ohio Drive, a four-lane divided roadway, is planned to cross State Highway 121 and extend into Frisco without an interchange.

The design and spacing of crossings, interchanges, and connections between intersecting roadways will have a significant impact on the types and arrangement of land uses along State Highway 121. This is particularly true if residential or low intensity non-residential uses are planned in the corridor. In such cases, the noise and visual impacts which are common to freeways should be minimized.

LAND CONFIGURATION
By locating Ridgeview Drive and McDermott Road at distances of 1,700 to 3,500 feet from State Highway 121, and by spacing north/south thoroughfares at intervals of approximately one mile, there will be adequate land area to develop large residential subdivisions or large, low density corporate office complexes. One exception may be the area between Ohio Drive and the unnamed Type "C" thoroughfare to the east where the distance between roadways is only about 1/2 mile. This section is further segmented by White Rock Creek. There may be other small pockets of land segmented by creek along State Highway 121 that would be best suited for small garden office or light manufacturing facilities. If these parcels are not developable for low density residential uses, they should have value for medium and high density residential and for low intensity office uses.

OBJECTIVES
- Establish State Highway 121 as a low intensity development corridor with an open "campus" setting.
- Provide for types and intensities of uses that can be readily integrated with topographical changes and existing tree cover.
- Provide for types and intensities of uses that do not significantly contribute to the City's existing overzoning situation.
- Provide for office as the primary use, but allow for optional residential uses with specific guidelines to ensure their viability and compatibility with non-residential uses.
- Confine major retail uses to the intersections of State Highway 121 and crossing major thoroughfares where proper access can be provided and to prevent scattered commercial "strip" uses along the corridor.
- Provide for a design of the main roadway and its interchanges that minimizes noise and visual impact on adjacent development.
RECOMMENDATIONS

PROPOSED LAND USES

Low Intensity Office (LIO) development for science and high-technology firms, research and development, and for other similar activities that are readily adaptable to "campus" settings is proposed as the main use.

Residential (R) uses are recommended as an option to provide for more immediate development opportunities and to meet changing market demand.

Public and institutional facilities such as colleges, parks and hospitals would be very compatible with other proposed uses.

Community Commercial (COC) uses are proposed at the intersections of State Highway 121 and crossing six-lane thoroughfares (excluding Ohio Drive and the unnamed Type "C" thoroughfare to the east which will not have interchanges with State Highway 121). Retail is limited to 5% of the total floor area for office developments that are not at the specified intersections to permit uses complementary to the principal use (such as snack bars, barbershops, newsstands, office supply stores, and specialty retail shops).

DEVELOPMENT GUIDELINES

The following guidelines are recommended for development of the State Highway 121 Corridor.

LOW INTENSITY "CAMPUS" OFFICE (INCLUDES PUBLIC AND INSTITUTIONAL USES)

- 0.3:1 maximum floor area ratio.
- 15% maximum lot coverage, 30% for sites of two acres or less (if 300 feet or more from major thoroughfares or arterials).
- 40% minimum permeable surface for large sites, 25% for sites under two acres (if 300 feet or more from major thoroughfares or arterials).

The noted guidelines for Low Intensity "Campus" Office are intended to reflect intensities typically required for this type of development. The City Council and the Planning & Zoning Commission may find it necessary to approve individual requests that vary from the guidelines to address a specific site or development condition. Such proposals should still be generally consistent with the "campus" concept.

- Six-story maximum height.
- Structured parking height - two levels at- or above-grade.
- Setbacks:
  - 150 feet from State Highway 121
  - 100 feet from major thoroughfares or arterials (may be reduced to 50 feet for buildings two stories or less if no parking is placed in front of the building)
  - 75 feet for side and rear yards
  - 150 feet from residential development
- 15% minimum landscaped area in surface parking areas.

RESIDENTIAL (R)

- Low Density:
  - 300 unit minimum
  - Five dwelling units per acre maximum
  - 150-foot setback from State Highway 121
  - Two-story maximum height
  - 35-60% maximum lot coverage, in accordance with current zoning standards
  - Setbacks in accordance with current zoning standards
Medium Density:
- 100 unit minimum
- 200 unit maximum
- 12 dwelling units per acre maximum
- 500-foot minimum separation from other medium and/or high density developments
- Two-story maximum height
- 35-60% maximum lot coverage, in accordance with current zoning standards
- Setbacks in accordance with current zoning standards

High Density:
- 150 unit minimum
- 500 unit maximum
- 1,000-foot separation from other high density developments
- 18 dwelling units per acre maximum
- Two-story maximum height
- 35-60% maximum lot coverage, in accordance with current zoning standards
- Setbacks in accordance with current zoning standards

COMMUNITY COMMERCIAL (WITH RETAIL AND OFFICE USES)

- Maximum floor area ratio:
  - Retail - 0.3:1
  - Office - 0.7:1

- Maximum lot coverage:
  - Retail - 30%
  - Office - 30% (40% with structured parking)

- Minimum permeable surface:
  - Retail - 10%
  - Office - 10%

- Maximum height:
  - Retail - two stories
  - Office - eight stories

- Structured parking:
  - Retail - none
  - Office - three levels at- or above-grade

- Should conform to the "Retail Corner Guidelines".

SPECIAL TREATMENTS

- Depressed interchanges and crossings of State Highway 121 and other thoroughfares where financially and physically possible.

- Open vistas of floodplains and other open space areas.

- 30-foot landscaped edge along State Highway 121, Ridgeview Drive, McDermott Road, Ohio Drive, and crossing major thoroughfares (Type "C" or above) as measured from the property line. (The area between the curb and property line should also be maintained in living condition by the property owner.)

- Wide medians with adequate space for landscaping.

- Meandering sidewalks.

- All detached signs should be low profile monument signs, eight feet in height or less.

- No billboards.

- Landscaped screens around surface parking areas and planting islands within them.

- Underground utility lines (where feasible).

- Encourage immediate construction of six-lane main roadway.

- Reserve 225 feet from the centerline of State Highway 121 as future right-of-way, and prohibit buildings or parking facilities within that area.