

# City of Rockwall Land Use Assumptions December 1995

## **I. Introduction**

The purpose of land use assumptions, as required by the State Impact Fee Legislation, is to serve as the basis for projecting the capital improvements that will be necessary to serve the City of Rockwall for the ten year planning period of 1995 to 2005. The land use assumptions reflect future estimates and projections of growth in the residential and commercial / industrial areas of the City. Growth will obviously create a demand on the City's water and wastewater facilities. Increased demands will, in some instances, necessitate improvements or upgrades to the existing systems. Accurate projections of the increased demand can be utilized to allocate the majority of the costs associated with necessary improvements to the new residents or businesses that will create those needs. The passing of these costs on to new development is accomplished by means of an Impact Fee.

### **Service Area**

The Service Area is defined by the Impact Fee Legislation as "the area within the corporate boundaries, or extraterritorial jurisdiction...of the political subdivision to be served by the capital improvements or facilities expansions specified in the capital improvements plan...". For the City of Rockwall, a single (1) service area is assumed, including the corporate limits and the extraterritorial jurisdiction (ETJ), and will apply to both water and wastewater.

### **Planning Units**

For this study, there are thirty-nine (39) Planning Units that cover the entire Service Area. Each Planning Unit represents a particular study area within Rockwall. The various defined characteristics of the Planning Units allow engineers to determine water demands and wastewater flows which will subsequently define pipeline sizes and other improvement needs. The Planning Units are designated in *Figure 1, Planning Unit Location Map*.

## **II. Existing Conditions**

The City of Rockwall actively utilizes good planning principals in preparing for the future development of the City. This is evident with the preparation of the 1995 Comprehensive Land Use Plan and the completion of other infrastructure master plans. These long-range plans provide direction for the City's development for the next 15 to 20 years, and will be updated as trends change. For the purpose of satisfying the requirements of the Impact Fee Legislation, however, a projection of ten year growth is mandated. For this reason, existing conditions must be identified as the basis from which to project population growth and commercial / industrial development for the ten year period between 1995 and 2005.

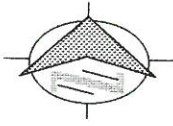
### **Residential Areas**

The City of Rockwall had approximately 4,831 residential units as of September 1994, according to the 1995 Comprehensive Land Use Plan for the City of Rockwall. Of these, 3,843 units are single family (79%), 947 units are multi-family (20%), and 41 units are mobile homes (<1%).

The residential population for the City of Rockwall as of September 1994 was approximately 12,973 persons. This figure was based on the persons-per-household multiplier for low density residential (single family), and mobile home residential of 2.9 persons per household, and for high density residential (multi-family) of 1.9 persons per household. These population multipliers were obtained from the 1995 Comprehensive Lane Use Plan for the City of Rockwall.

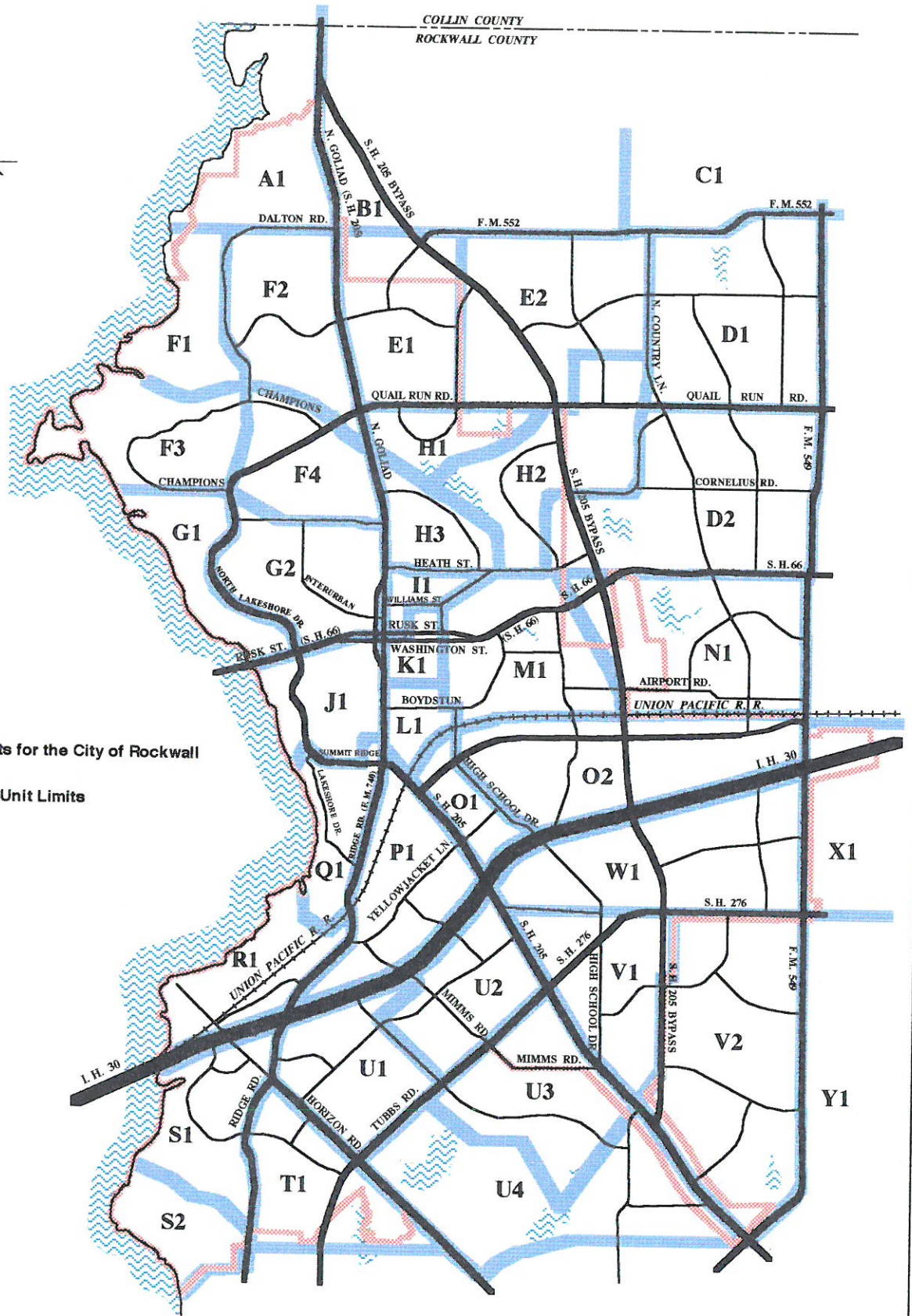
The number of residential units within each Planning Unit, as determined by the Existing Land Use Map in the 1995 Comprehensive Land Use Plan for the City of Rockwall, was multiplied by the persons-per-household multipliers listed above in order to determine the existing population within each Planning Unit. The results of these calculations are found on *Table 1, Existing and Projected Populations for Rockwall City Limits and ETJ*.

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ROCKWALL COUNTY



**Legend**

- City Limits for the City of Rockwall
- Planning Unit Limits



**CITY OF ROCKWALL  
PLANNING UNIT LOCATION MAP**

Table 1

**Existing and Projected Populations for Rockwall City Limits and ETJ**

Planning Units	1994		2005		Holding Capacity	
	Units	Persons	Units	Persons	Units	Persons
A 1	105	305	175	507	653	1,894
B 1	40	115	76	221	272	788
C 1	63	182	63	182	63	183
D 1	86	248	86	248	1,282	3,716
D 2	66	190	66	190	1,624	4,707
E 1	4	12	40	118	815	2,365
E 2	61	178	61	178	1,413	4,098
F 1	135	392	205	594	401	1,161
F 2	143	416	213	618	750	2,174
F 3	20	58	243	704	463	1,341
F 4	11	32	234	678	766	2,222
G 1	269	781	339	983	499	1,447
G 2	434	1,260	504	1,462	894	2,594
H 1	4	12	74	214	296	857
H 2	45	130	81	236	1,145	3,322
H 3	237	686	441	1,277	441	1,277
I 1	134	388	170	494	173	504
J 1	619	1,659	619	1,659	640	1,720
K 1	155	433	155	433	169	474
L 1	204	566	240	672	262	737
M 1	92	268	128	374	663	1,926
N 1	65	188	65	188	1,041	3,019
O 1	1	3	1	3	1	3
O 2	71	192	71	192	71	192
P 1	405	772	475	974	699	1,624
Q 1	361	1,047	397	1,153	431	1,253
R 1	288	836	358	1,038	801	2,323
S 1	334	766	557	1,412	631	1,628
S 2	482	1,243	552	1,445	604	1,595
T 1	53	153	123	355	728	2,110
U 1	262	761	485	1,407	527	1,530
U 2	37	106	107	308	343	992
U 3	2	6	38	112	849	2,465
U 4	496	1,437	496	1,437	1,819	5,273
V 1	3	9	39	115	948	2,750
V 2	3	9	3	9	2,663	7,722
W 1	6	17	6	17	6	17
X 1	1	3	1	3	1	3
Y 1	0	0	0	0	0	0
<b>TOTAL</b>	<b>5,797</b>	<b>15,859</b>	<b>7,987</b>	<b>22,210</b>	<b>25,847</b>	<b>74,006</b>

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### Non-Residential Areas

The non-residential land uses include commercial, industrial, public, and quasi-public land uses. The 1990 employment for all non-residential areas of Rockwall was estimated by the North Central Texas Council of Governments (NCTCOG) to be approximately 5,055 employees. The 2010 employment for all non-residential areas of Rockwall was also projected by NCTCOG to be 6,787 employees. Using these figures, an employment figure for 1994 of 5,362 employees, was developed by interpolating between the 1990 and the 2010 NCTCOG figures.

According to the data for existing land uses as provided in the 1995 Comprehensive Land Use Plan for the City of Rockwall, there was a total of 877 acres of non-residential land uses in 1994. The 1994 employment figure of 5,362 employees was divided by 877 acres of non-residential land uses. The result was a multiplier of 6.11 employees-per-acre in 1994.

The number of non-residential acres within each Planning Unit, was determined by using the Existing Land Use Map as provided in the 1995 Comprehensive Land Use Plan. These acres were then multiplied by the employees-per-acre multiplier listed above in order to obtain the existing number of employees within each Planning Unit. The results of these calculations are provided in *Table 2, Existing and Projected Employment for Rockwall City Limits and ETJ.*



Table 2

*Existing and Projected Employment for Rockwall City Limits and ETJ*

Planning Units	1994		2005	
	Acres	Employees	Acres	Employees
A 1	0	0	0	0
B 1	0	0	0	0
C 1	0	0	0	0
D 1	0	0	0	0
D 2	0	0	0	0
E 1	0	0	0	0
E 2	0	0	0	0
F 1	0	0	0	0
F 2	0	0	0	0
F 3	0.88	5	0.88	5
F 4	3.67	22	3.67	22
G 1	0	0	3.93	24
G 2	12.03	74	16.04	98
H 1	0	0	0	0
H 2	0	0	0	0
H 3	4.71	29	4.75	29
I 1	17.64	108	17.67	108
J 1	41.55	254	45.50	278
K 1	7.96	49	15.71	96
L 1	18.91	116	22.91	140
M 1	77.44	473	77.41	473
N 1	74.64	456	74.63	456
O 1	32.29	197	39.93	244
O 2	125.40	766	133.06	813
P 1	139.93	855	178.40	1090
Q 1	0	0	0	0
R 1	12.28	75	19.97	122
S 1	33.42	204	41.08	251
S 2	5.14	31	5.07	31
T 1	13.91	85	21.60	132
U 1	46.73	286	85.43	522
U 2	43.29	265	47.13	288
U 3	25.25	154	28.97	177
U 4	0	0	0	0
V 1	0	0	0	0
V 2	0	0	0	0
W 1	133.32	818	141.57	865
X 1	6.61	40	6.55	40
Y 1	0	0	0	0
<b>TOTAL</b>	<b>877</b>	<b>5,362</b>	<b>1,032</b>	<b>6,304</b>

### **III. Land Use Assumptions and Projections**

Land use assumptions serve as the basis for the projection of the required capital improvements that will be necessary to serve Rockwall for the ten year planning period of 1995 to 2005. These assumptions are estimates and projections of growth in the residential and non-residential areas of the City that will create a demand on City water and wastewater facilities. Increased demands will, in some instances, necessitate improvements or upgrades to the existing systems. Accurate projections of the increased demand can be utilized to allocate the appropriate part of the costs associated with necessary improvements to the new residents or businesses that will create those needs. Costs are then passed on in the form of an Impact Fee.

Land use assumptions are based on existing conditions and historical data currently available. As conditions change within the City due to development, modifications to the land use assumptions and subsequent Impact Fees will be necessary. State legislation governing this procedure mandates re-evaluation of these assumptions at least every three years.

#### **Assumption: Population Growth**

For the ten year planning period of 1995 to 2005, the projected population growth was determined in the 1995 Comprehensive Land Use Plan for the City of Rockwall. The population projection for the City limits and the ETJ for the year 2005 is approximately 22,210 persons, for a ten year growth of 9,237 persons.

#### **Assumption: New Residential Units**

Critical to the Impact Fee process is the identification of the areas of the City that are projected to absorb the residential growth during the ten year period. The identification of these areas together with the amount of corresponding projected growth will be utilized by engineers to determine those additional water and wastewater facilities that will be necessary to serve the new growth, and whose costs will be distributed among the new growth as Impact Fees.

The number of residential units necessary to accommodate the projected 9,237 person increase during the ten year period was calculated by utilizing the person-per-household multipliers obtained from the 1995 Comprehensive Land Use Plan.

Based on these assumptions, approximately 3,185 new residential units will develop in Rockwall to accommodate the projected population growth. All of these residential units are designated as single family, since no new multi-family or mobile home units are planned for Rockwall's future.

The projected population and new residential units for 2005 were then distributed among the 39 Planning Units based on that Unit's potential for future growth. Each Planning Unit was assigned a likely "growth category" based on the following criteria:

**Areas of Rapid Growth:**

Existing trends in the area indicate imminent growth; and / or  
Utilities and infrastructure are either existing or readily available; and / or  
There is available land area for residential development; and / or  
There is a continuation of existing growth.

**Areas of Moderate Growth:**

Adjacent to an Area of Rapid Growth; and / or  
Some development interest has been shown in the area; and / or  
There is available land area for residential development; and / or  
A continuation of the current growth trend is likely.

**Areas of Slight Growth:**

The area is close to build-out; and / or  
There is very little land area available for residential development; and / or  
Existing utilities and infrastructure are not available for new development.

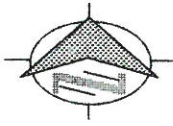
**Areas of No Growth:**

The area is outside of the City limits; and / or  
There is no land area available for residential development; and / or  
There are no utilities or infrastructure available for new development; and / or  
The area is greatly removed from developing areas.

The results of these efforts indicate generally those areas in Rockwall that have a greater potential for development according to the criteria listed above. Accordingly, it is indicated by this analysis that five (5) residential areas in Rockwall show a Rapid Growth Potential. These areas include Planning Units **F3, F4, H3, S1** and **U1**. These areas, as well as the Moderate Growth, Slight Growth, and No Growth Planning Units are referenced on *Figure 2, 2005 Residential Growth Rate Map*.

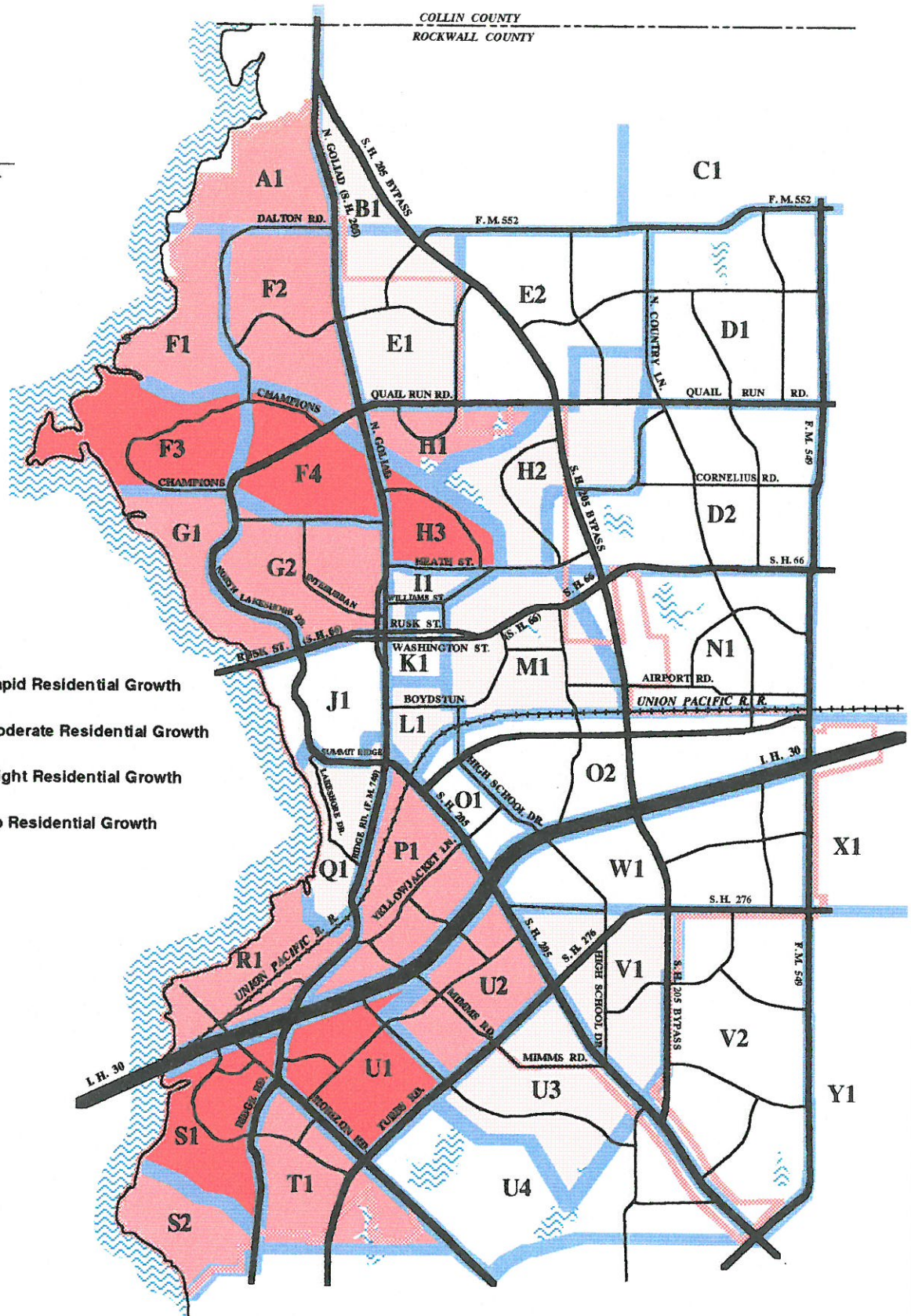


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**Legend**

-  Areas of Rapid Residential Growth
-  Areas of Moderate Residential Growth
-  Areas of Slight Residential Growth
-  Areas of No Residential Growth



**CITY OF ROCKWALL  
2005 RESIDENTIAL GROWTH RATE MAP**

Each "growth category" was then assigned a percentage of the projected population increase of 9,237 persons within the ten year planning period. For example, Areas of Rapid Growth were assigned a larger percentage of the 9,237 persons than Areas of Slight Growth. The assigned projected population for each Planning Unit was added to the existing population within each Planning Unit, in order to determine the total projected population for 2005 within each Planning Unit.

Once the projected population for 2005 was determined for each Planning Unit, the number of residential units within each Planning Unit for 2005 could be determined by using the persons-per-household multiplier obtained from the 1995 Comprehensive Land Use Plan. The results of these calculations are found on *Table 1, Existing and Projected Populations for Rockwall City Limits and ETJ*.

**Assumption: Employment Growth**

Based on NCTCOG figures, the 1994 estimate for the number of employees in Rockwall is approximately 5,362. The projection for the total number of employees in the year 2005 is approximately 6,304. This is an increase of 942 employees during the ten year planning period.

**Assumption: New Employment**

Critical to the Impact Fee process, is the identification of the areas of the City that are projected to absorb the non-residential growth during the ten year period. The identification of these areas together with the amount of corresponding projected growth will be utilized by engineers to determine those additional water and wastewater facilities that will be necessary to serve the new growth, and whose costs will be distributed among the new growth as Impact Fees. Using the 6.11 employees-per-acre multiplier obtained from the 1995 Comprehensive Land Use Plan, and assuming that non-residential development characteristics remain constant for the next ten years, approximately 155 acres of additional non-residential land will develop during the ten year period of 1995 to 2005.

The projected number of new employees and non-residential acreage for 2005 were then distributed among the 39 Planning Units based on that Unit's potential for future non-residential growth. Each Planning Unit was assigned a likely "growth category" based on the following criteria:

**Areas of Rapid Growth:**

Existing trends in the area indicate imminent growth; and / or  
Utilities and infrastructure are either existing or readily available; and / or  
There is available land area for non-residential development; and / or  
There is a continuation of existing growth.

**Areas of Moderate Growth:**

Adjacent to an Area of Rapid Growth; and / or  
Some development interest has been shown in the area; and / or  
There is available land area for non-residential development; and / or  
A continuation of the current growth trend is likely.

**Areas of Slight Growth:**

The area is close to build-out; and / or  
There is very little land area available for non-residential development; and / or  
Existing utilities and infrastructure are not available for new development.

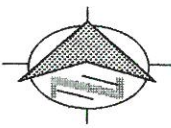
**Areas of No Growth:**

The area is outside of the City limits; and / or  
There is no land area available for non-residential development; and / or  
There are no utilities or infrastructure available for new development; and / or  
The area is greatly removed from developing areas.

The results of these efforts indicate generally those areas in Rockwall that have a greater potential for non-residential development according to the factors listed above. Accordingly, it is indicated by this analysis that two (2) non-residential areas in Rockwall show a Rapid Growth Potential. These areas include Planning Units P1, and U1. These areas, as well as the Moderate Growth, Slight Growth, and No Growth Planning Units are referenced on *Figure 3, 2005 Employment Growth Rate Map*.

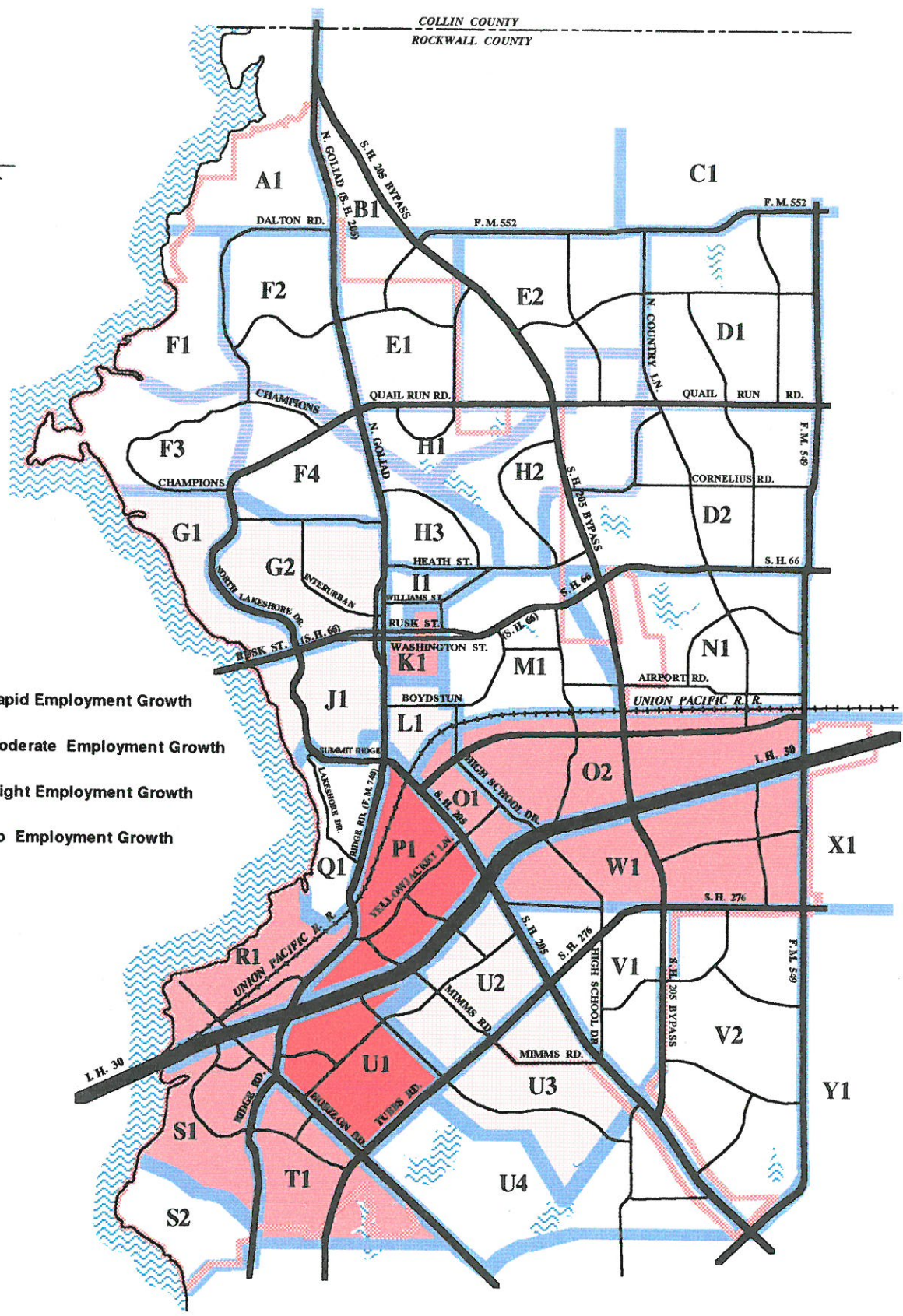


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**Legend**

-  Areas of Rapid Employment Growth
-  Areas of Moderate Employment Growth
-  Areas of Slight Employment Growth
-  Areas of No Employment Growth



**CITY OF ROCKWALL  
2005 EMPLOYMENT GROWTH RATE MAP**

Each “growth category” was then assigned a percentage of the projected employment increase of 155 acres of non-residential land within the ten year planning period. For example, Areas of Rapid Growth were assigned a larger percentage of the 155 acres than Areas of Slight Growth. The assigned projected number of acres for each Planning Unit was added to the existing number of non-residential acres within each Planning Unit, in order to determine the total projected number of non-residential acres for 2005 within each Planning Unit.

Once the projected number of acres for 2005 was determined for each Planning Unit, the number of employees required within each Planning Unit for 2005 could be determined by using the employees-per-acre multiplier obtained from the 1995 Comprehensive Land Use Plan. The results of these calculations are found on *Table 2, Existing and Projected Employment for Rockwall City Limits and ETJ.*