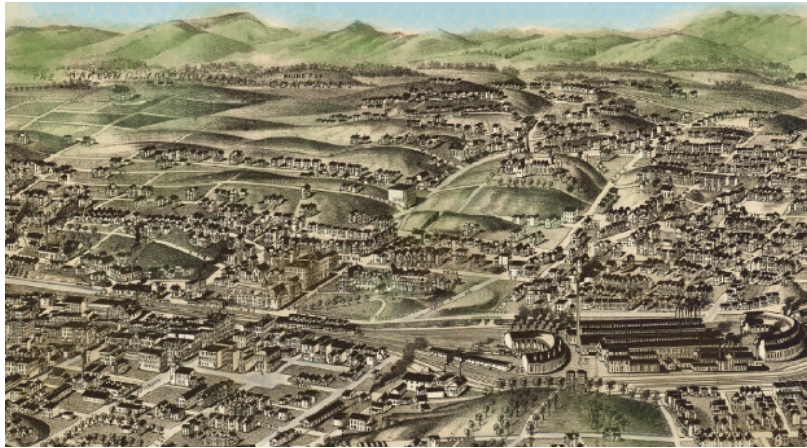


Roanoke Valley Area MPO 2035 Study Area Boundary and Traffic Analysis Zone Data Update



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Roanoke Valley Area Metropolitan Planning
Organization

August 2006

Roanoke Valley Area
MPO METROPOLITAN
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Overview

The Transportation Planning Data for the Roanoke Metropolitan Planning Area is a special tabulation of socioeconomic information intended to aid transportation planners in planning and designing responsive and needed transportation services and facilities in their communities. Transportation planning and design agencies use this data in the four step Unified Transportation Planning Process to assess the impact of changes in the transportation system on present demand. This process is of great importance in Roanoke Valley's development and evaluation of urban transportation plans and policies.

The Transportation Planning Data serves many other related transportation and regional planning purposes. The data provide dependable background information for large sub-area studies, public transportation and facilities plans, transportation demand analysis, and land use and rezoning studies. Historical comparisons of the Transportation Planning Data provide an indicator of the ongoing health of the region's socioeconomic assets.

Background

Under the direction of the Roanoke Valley Area Metropolitan Planning Organization (MPO), the staff of the Roanoke Valley-Alleghany Regional Commission compiles the transportation planning data.

Transportation Planning Data for prior years are known as the Data Maintenance Report (DMR) for the Roanoke Urban Study Area. Methodologies for the preparation of the DMR were published in fiscal years 1972, 1977 and 1998. It seems clear that previous attempts to compile DMRs were timed to coincide with the publication of the 1970 and 1980 census figures for the region. The availability of the Census data greatly simplifies the data collection process and, with continual maintenance, provides the most reliable source of data for modeling the Roanoke urban area transportation system.

The Census Transportation Planning Package

Base data is obtained from the US Census Bureau's Census Transportation Planning Package (CTPP). Historically, this product is released four to six years after each decennial census. For example, the 1990 CTPP was released in 1996, and the 2000 CTPP was released in 2003-2004.

The CTPP is a special set of tabulations designed primarily for transportation planners, policy analysts and engineers. It is developed by the Bureau of the Census using decennial census data, and provides detailed population, housing, worker, and commuter characteristics for a number of geographic levels. The CTPP data is compiled by place of work and by place of residence.

The urban element of the CTPP contains selected information at the Traffic Analysis Zone (TAZ) level. The urban element is especially designed to assist MPOs in carrying out their planning responsibilities. In 1999, commission staff participated in the US Census Bureau's "Taz-Up" program to better define TAZ boundaries based on Census block boundaries.

The 2000 and later TAZ boundaries and data should fix many errors that existed in prior data sets.

Traffic Analysis Zones (TAZ)

As previously mentioned, information collected for the Transportation Planning Data is published at the Traffic Analysis Zone (TAZ) level. TAZs are geographic units representing sizable portions of the region, which impact, or in some cases are predicted to impact, the transportation and transit networks. For this reason, TAZs in more heavily developed areas and rapid growth areas tend to be smaller than those in outlying zones. Ideally, TAZs have distinct geographic boundaries with relatively few access points to the region's overall transportation network. Ideal boundaries often include limited access highways, railroad lines, water boundaries and ridgelines. Because the impact of different types of trips (e.g. home to work, home to shopping, etc.) may be assessed, TAZs should be of fairly homogeneous land use. Of course, no urban area follows these ideal criteria. Therefore, a good deal of judgment is involved in determining appropriate TAZ boundaries. Two additional principles should be observed in delineated TAZ boundaries. First, TAZ boundaries should coincide with jurisdictional boundaries. Second, in order to compare previously developed Transportation Planning Data, adjusting TAZ boundaries should be avoided, if possible. This does not preclude the subdivision of existing zones, a natural process of individual zone urbanization.

The US Census Bureau defines a TAZ the following way:

"A traffic analysis zone (TAZ) is a special area delineated by state and/or local transportation officials for tabulating traffic-related data- especially journey-to-work and place-of-work statistics. A TAZ usually consists of one or more census blocks, block groups, or census tracts."

2035 Boundary Adjustment

As part of the 2035 projections, the MPO study area boundary was reviewed. The boundary should include areas that are expected to be “urbanized” (as defined by the US Census Bureau) within the projected time frame. The area also has to include all areas that were “urbanized” in the 2000 Census. This required the MPO to add areas in Bedford County; previously not part of the MPO study area.

Botetourt County provided input to remove TAZ 400, and remove a section of 411. These two areas were forested mountain areas that are not expected to be developed. A new TAZ 420 was added to Botetourt County. In Roanoke County, the old 368 was combined into TAZ 367. A new TAZ 368 was created. TAZs 379, 371 372 and 373 were also added to Roanoke County. The boundary of 366 was adjusted. TAZ 2 in downtown Roanoke was split into TAZ 2 and TAZ 46 (the number 46 was not used in the 2000 Census.) TAZs for Bedford County were delineated using the number 500-506. TAZ 506 is small, but had to be added to include a 2000 urbanized area in Bedford County.

The resulting map is attached as Appendix A.

Methodology for 2000 and 2005 Updates

Population

The population for each TAZ was calculated by aggregating the 2000 census block data for each TAZ. Estimates for 2005 were made by using documented county and city growth rates, and by local government input.

Employment

Employment data from the 2000 CTPP were used for most localities. Employment data from the US Census for Botetourt and Bedford counties did not seem to be accurate, so previous estimates were used. (Please refer to the *2025 Long Range Plan-Technical Document* (Chapter 2) for more information.). Employment data for 2005 was estimated using employment data obtained from the Virginia Employment Commission (VEC). Each locality was given the option to review the data and provide input on the increase or decrease of small businesses by TAZ.

Methodology for 2035 Projections

Population

The Virginia Employment Commission has projected population for each county to 2030. MPO staff created a linear regression that took population estimates for 2000-2030, in five-year increments, and projected them another five years to 2035. The resulting locality- wide growth rates were applied to each TAZ. Each locality reviewed the data and made changes to account for projected high and low growth areas. Overall growth rates are shown in Figure 1. Overall totals by locality can be seen in Figure 2.

Locality*	2000-2035 Population Growth	2000-2035 Employment Growth
Roanoke city	1.6%	13.0%
Salem City	7.5%	9.2%
Town of Vinton	5.2%	5.0%
Roanoke County*	18.4%	27.8%
Botetourt County*	60.0%	80.0%
Bedford County*	60.0%	50.0%

*Portions in MPO only.

Roanoke County data does not include Town of Vinton

Figure 1- Estimated Population and Employment Growth Rates

Employment

The Virginia Employment Commission has projected employment by locality to 2012. Using the growth rate from 2000-2012, in tandem with population growth rates, the employment for each TAZ was estimated. Each locality reviewed and adjusted the individual numbers as necessary. See estimated employment growth rates in Figure 1. Overall totals by locality can be seen in Figure 2.

Locality*	2000 US Census Population	2000 Employment Estimates**	2005 Population Estimate	2005 Employment Estimate	2035 Population Estimate	2035 Employment Estimate
Roanoke city	94911	74630	93586	70305	96432	84330
Salem City	24747	23740	25143	21841	26603	25922
Town of Vinton	7782	3547	7931	3582	8183	3724
Roanoke County*	73089	27644	76743	27920	86537	35317
Botetourt County*	15771	5213	17348	5213	25234	9383
Bedford County*	2822	197	2991	197	4515	296

*Portions in MPO only. Roanoke County data does not include Town of Vinton

Estimates made by the Roanoke Valley-Alleghany Regional Commission, 2006

Figure 2-Total Population and Employment for MPO Areas

Locality and Public Input

All localities were given several opportunities to review proposed boundary changes and projected TAZ data. Input was received from most member localities. A public information meeting was advertised and held in July 2006 to solicit public comment on the boundary and TAZ data. The public meeting did not have any attendance.

TAZ Detailed Data

The following table contains population and employment data for each Traffic Analysis Zone in the 2035 Study Area. Refer to the map in Appendix A for TAZ locations. In general, TAZs 1-91 are in the City of Roanoke, TAZs 100-135 are in the City of Salem, TAZs 200-208 are in the Town of Vinton, TAZs 300-369 are in Roanoke County, TAZs 400-420 are in Botetourt County, and 500-506 are in Bedford County.

Roanoke Valley Area MPO TAZ 2005 and 2035 Data2035

TAZ	2000 Population	2000 Employment	2005 Population	2005 Employment	2035 Population	2035 Employment
1	77	1190	76	1121	175	1250
2	88	9224	87	8689	585	9685
3	880	3557	868	3351	769	3735
4	1	300	1	283	1	2500
5	2829	900	2789	848	2744	945
6	424	800	418	754	411	840
7	1640	400	1617	377	1591	420
8	721	450	711	424	699	472
9	24	292	24	275	0	307
10	4842	1215	4774	1145	4697	1276
11	2073	110	2044	104	2011	116
12	1942	320	1915	301	2400	336
13	521	280	514	264	505	294
14	2421	372	2387	350	2348	391
15	1662	425	1639	400	1612	446
16	0	807	0	760	0	847
17	90	680	89	641	87	714
18	1082	360	1067	339	1050	378
19	338	225	333	212	328	236
20	1008	300	994	283	1178	315
21	1048	680	1033	641	1017	714
22	1349	1100	1330	1036	1309	1155
23	929	110	916	104	901	116
24	1165	2850	1149	2685	1130	3200
25	2012	350	1984	330	2147	368
26	316	50	312	47	307	52
27	1676	520	1653	490	1626	546
28	156	1100	154	1036	151	1155
29	1980	230	1952	217	1921	242
30	1461	753	1441	709	1417	591
31	596	178	588	168	578	187
32	1815	539	1790	508	1761	566
33	1976	839	1948	790	1917	881
34	36	650	35	612	0	1200
35	11	1850	11	1743	11	2000
36	240	640	237	603	233	672
37	712	220	702	207	711	231
38	716	30	706	28	715	32
39	656	276	647	260	656	290
40	690	580	680	546	669	609
41	724	430	714	405	702	452
42	1426	460	1406	433	1383	483
43	1565	562	1543	529	1518	590
44	360	1120	355	1055	349	1350
45	591	1210	583	1140	573	1450
46	702	3953	692	3724	981	4151
47	573	180	565	170	556	189
48	1113	420	1097	396	1080	441
49	985	150	971	141	955	158
50	513	210	506	198	498	220
51	287	430	283	405	278	452
52	273	120	269	113	465	500
53	1766	40	1741	38	1713	42
54	1833	630	1807	593	1778	662
55	785	350	774	330	761	368
56	910	110	897	104	883	116
57	1457	90	1437	85	1413	200
58	2026	104	1998	98	1965	109
59	1213	1240	1196	1168	1177	1302
60	1701	600	1677	565	1650	630
61	1505	390	1484	367	1460	410
62	138	324	136	305	134	340
63	1770	520	1745	490	1717	546

Roanoke Valley Area MPO TAZ 2005 and 2035 Data2035

TAZ	2000 Population	2000 Employment	2005 Population	2005 Employment	2035 Population	2035 Employment
64	3262	520	3216	490	3164	546
65	677	150	668	141	657	158
66	1148	480	1132	452	1114	504
67	3557	1041	3507	981	3450	1093
68	319	30	315	28	309	32
69	85	480	84	452	82	504
70	785	130	774	122	761	136
71	1800	760	1775	716	1921	798
72	587	320	579	301	869	336
73	506	1300	499	1225	491	1365
74	229	150	226	141	233	158
75	1226	970	1209	914	1089	1118
76	1035	650	1021	612	1054	1000
77	1245	199	1228	187	1208	209
78	2395	430	2361	405	2323	452
79	1332	390	1313	367	1292	410
80	1356	1500	1337	1413	2115	2500
81	101	3520	100	3316	98	3850
82	10	2060	10	1941	10	2163
83	2111	70	2081	66	2848	250
84	442	4250	436	4004	429	4800
85	1655	800	1632	754	1766	840
86	9	0	9	0	0	0
87	816	900	805	848	1042	945
88	946	1100	933	1036	918	1155
89	190	60	187	57	184	63
90	536	2950	528	2779	520	3448
91	132	25	130	24	128	26
100	36	510	37	469	39	536
101	110	320	112	294	118	336
102	2231	1110	2267	1021	2398	1166
103	235	270	239	248	253	284
104	139	350	141	322	149	368
105	462	470	469	432	497	494
106	196	250	199	230	211	263
107	1496	1800	1520	1656	1608	1890
108	1283	610	1304	561	1379	641
109	747	430	759	396	803	452
110	1126	1510	1144	1389	1210	1586
111	394	880	400	810	424	924
112	698	2910	709	2677	750	3056
113	132	780	134	718	142	819
114	300	510	305	469	323	1530
115	758	4005	770	3685	815	4205
116	1350	485	1372	446	1451	509
117	1963	165	1994	152	2110	173
118	770	1620	782	1490	828	1701
119	782	160	795	147	841	168
120	413	720	420	662	444	756
121	800	525	813	483	860	551
122	151	245	153	225	162	257
123	565	95	574	87	607	100
124	278	85	282	78	299	89
125	629	715	639	658	676	751
126	325	160	330	147	349	168
127	1020	190	1036	175	1097	200
128	27	885	27	814	29	929
129	1752	420	1780	386	1883	441
130	2313	225	2350	207	2486	236
131	501	95	509	87	539	100
132	619	195	629	179	665	205
133	68	25	69	23	73	26
134	53	15	54	14	57	16

Roanoke Valley Area MPO TAZ 2005 and 2035 Data 2035

TAZ	2000 Population	2000 Employment	2005 Population	2005 Employment	2035 Population	2035 Employment
135	25	0	25	0	27	0
200	685	225	699	227	720	236
201	7	187	7	189	15	196
202	697	722	711	729	732	758
203	661	450	674	455	694	473
204	1266	510	1291	515	1330	536
205	1689	125	1723	126	1774	131
206	301	212	307	214	317	223
207	781	656	797	663	821	689
208	1695	460	1722	465	1780	483
300	902	300	947	303	1068	360
301	1001	425	1051	429	1185	510
302	1281	210	1345	212	1517	252
303	1022	50	1073	51	1210	560
304	539	5	566	5	638	6
305	390	150	410	152	462	180
306	1060	40	1113	40	1255	48
307	2763	1225	2901	1237	3271	1470
308	294	1420	309	1434	348	1704
309	0	989	0	999	0	1187
310	432	385	454	389	511	462
311	3011	960	3162	970	3565	1152
312	4329	950	4545	960	5126	1140
313	2158	1100	2266	1111	2555	1320
314	1312	320	1378	323	1553	384
315	4195	1190	4405	1202	4967	1428
316	3389	300	3558	303	4013	360
317	2385	1350	2504	1364	2824	1620
318	884	56	928	57	1047	67
319	616	50	647	51	729	60
320	1074	50	1128	51	1272	60
321	91	950	96	960	108	1140
322	1108	1120	1163	1131	1312	1344
323	328	300	344	303	388	360
324	1219	95	1280	96	1443	114
325	592	30	622	30	701	36
326	51	0	54	0	60	0
327	448	10	470	10	530	12
328	99	0	104	0	117	0
329	515	110	541	111	610	132
330	13	95	14	96	15	114
331	127	115	133	116	150	138
332	1169	15	1227	15	1384	18
333	3286	1950	3450	1970	3891	2340
334	1492	1310	1567	1323	1767	2000
335	103	20	108	20	122	24
336	2052	850	2155	859	2430	1020
337	716	2650	752	2677	848	3180
338	264	510	277	515	313	612
339	877	422	921	426	1038	506
340	1217	340	1278	343	1441	408
341	1754	380	1842	384	2077	710
342	1674	870	1758	879	1982	1044
343	3321	680	3487	687	3932	816
344	802	620	842	626	950	744
345	793	380	833	384	939	750
346	3066	275	3219	278	3630	330
347	170	540	179	545	201	648
348	686	50	720	51	812	60
349	182	5	191	5	215	6
350	6	0	6	0	7	0
351	30	42	32	42	36	50
352	432	10	454	10	511	12

Roanoke Valley Area MPO TAZ 2005 and 2035 Data2035

TAZ	2000 Population	2000 Employment	2005 Population	2005 Employment	2035 Population	2035 Employment
353	314	20	330	20	372	24
354	973	22	1022	22	1152	26
355	594	110	624	111	703	132
356	663	125	696	126	785	150
357	241	5	253	5	285	6
358	685	60	719	61	811	72
359	686	285	720	288	812	342
360	706	35	741	35	836	42
361	273	2	287	2	323	2
362	495	56	520	57	586	67
363	1211	185	1272	187	1434	222
364	419	55	440	56	496	66
365	1144	195	1201	197	1354	234
366	417	25	438	25	494	30
367	597	35	627	35	707	42
368	327	5	343	5	387	6
369	1021	110	1072	111	1209	800
370	91		96	0	108	0
371	236	10	248	10	279	12
372	188	10	197	10	223	12
373	88	25	92	25	104	30
401	140	82	154	82	224	148
402	582	1100	640	1100	931	1980
403	2404	346	2644	346	3846	623
404	1317	788	1449	788	2107	1418
405	446	120	491	120	714	216
406	111	180	122	180	178	324
407	498	170	548	170	797	306
408	1645	68	1810	68	2632	122
409	1045	26	1150	26	1672	47
410	1913	27	2104	27	3061	49
411	196	85	216	85	314	153
412	708	422	779	422	1133	760
413	745	468	820	468	1192	842
414	408	245	449	245	653	441
415	1454	259	1599	259	2326	466
416	389	89	428	89	622	160
417	157	243	173	243	251	437
418	533	250	586	250	853	450
419	829	245	912	245	1326	441
420	251	0	276	0	402	0
500	190	5	201	5	304	8
501	564	50	598	50	902	75
502	816	45	865	45	1306	68
503	227	5	241	5	363	8
504	304	25	322	25	486	38
505	708	65	750	65	1133	98
506	13	2	14	2	21	3