Table 6. Selected FM Stations for Atlanta, Georgia

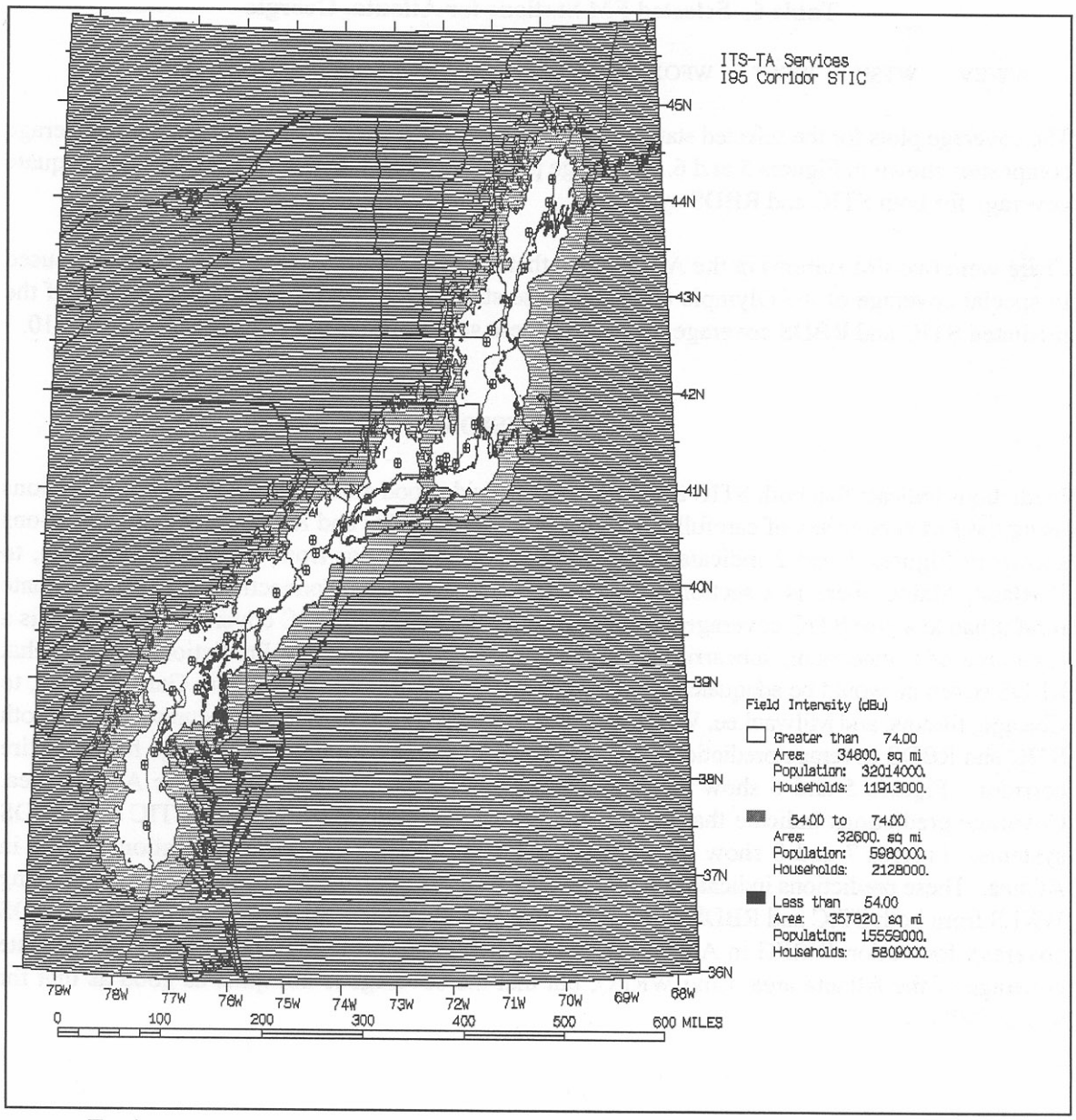
WWEV	WTSH	WGST	WFOX	WALR	WNNX	WJZF	WQUL	WJGA

The coverage plots for the selected stations in Table 6 were then combined to produce the coverage composites shown in Figures 5 and 6. Coverage predictions indicate that there would be adequate coverage for both STIC and RBDS systems.

There were two FM stations in the Atlanta area that are of particular interest since they were used in special coverage of the Olympic Games. These stations are WKLS and WRFG. Plots of the predicted STIC and RBDS coverage for each of these stations is shown in Figures 7 through 10.

5. CONCLUSIONS

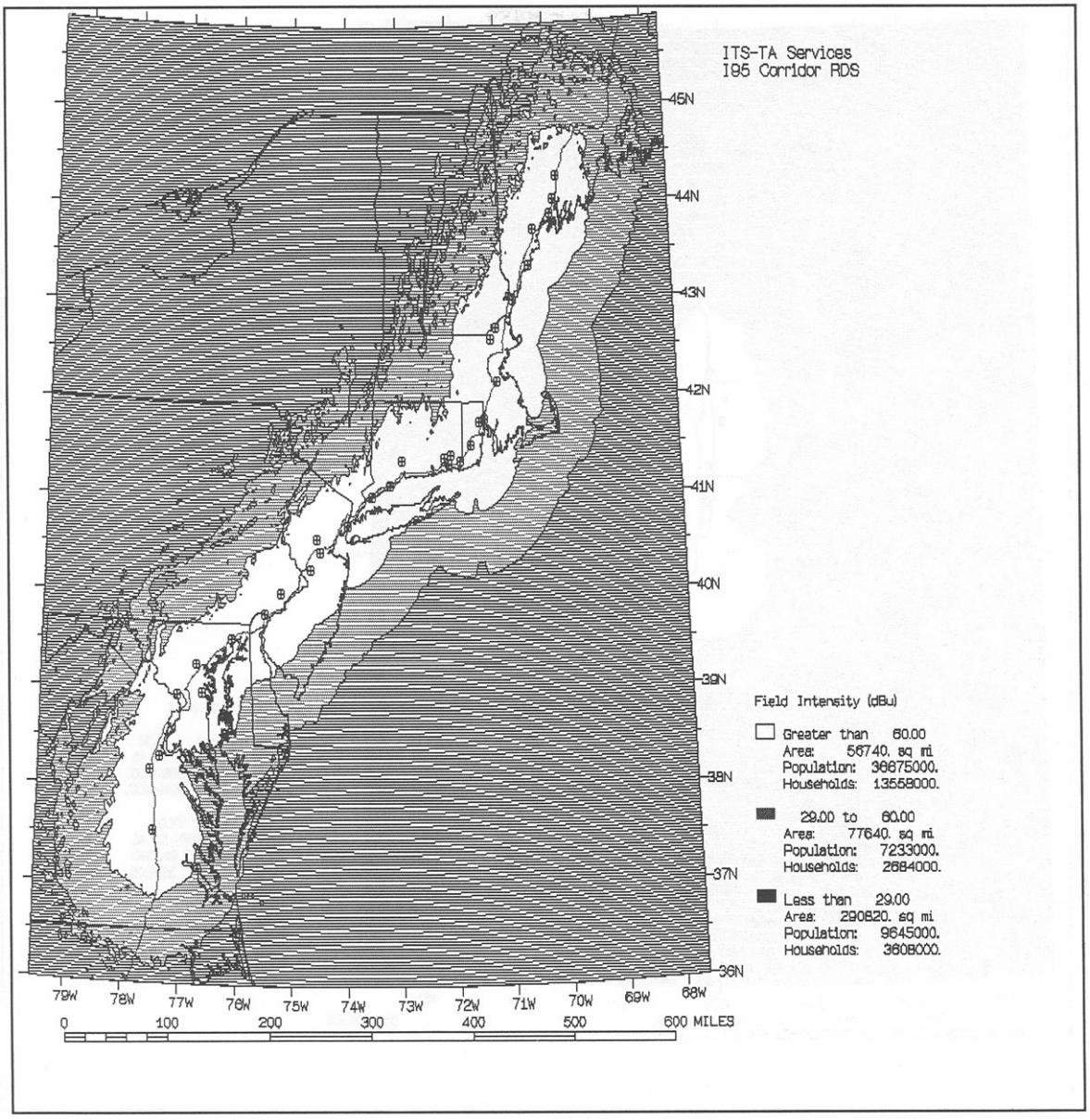
Predictions indicate that both STIC and RBDS can provide good area coverage for ITS applications using the FM subcarriers of carefully chosen FM stations. STIC and RBDS coverage predictions shown in Figures 1 and 2 indicate that for the interstate corridor from Richmond, Virginia, to Portland, Maine, there is a section of Interstate 95 in southeast Connecticut that has adequate rural/urban low-rise STIC coverage but inadequate urban high-rise STIC coverage. Since this is a rural area of Connecticut, subcarrier coverage is adequate in this area. Predictions indicate that RBDS coverage would be adequate for the entire corridor. For the corridor from Gary, Indiana, to Chicago, Illinois, and Milwaukee, Wisconsin, along Interstates 80, 90, and 94 (Figures 3 and 4), both STIC and RBDS coverage predictions indicate that there would be adequate coverage for the entire corridor. Figures 5 and 6 show the predicted STIC and RBDS coverage for the Atlanta area. Coverage predictions indicate that there would be adequate coverage for both STIC and RBDS systems. Figures 7 and 8 show the predicted STIC and RBDS coverage for station WKLS in Atlanta. These predictions indicate that there would be adequate coverage of the Atlanta area using WKLS from both STIC and RBDS systems. Figures 9 and 10 show the predicted STIC and RBDS coverage for station WRFG in Atlanta. These predictions indicate that there would be adequate coverage of the Atlanta area using WRFG, but that the coverage is not quite as good as that for station WKLS.



Environment	Threshold	Signal Coverage Area
urban high-rise	(>74 dBu)	90,178 sq km = 34,800 sq mi
urban low-rise	(54 - 74 dBu)	84,477 sq km = 32,600 sq mi
nonurban	(<54 dBu)	927,224 sq km = 357,820 sq mi

(note: 966 km = 600 mi)

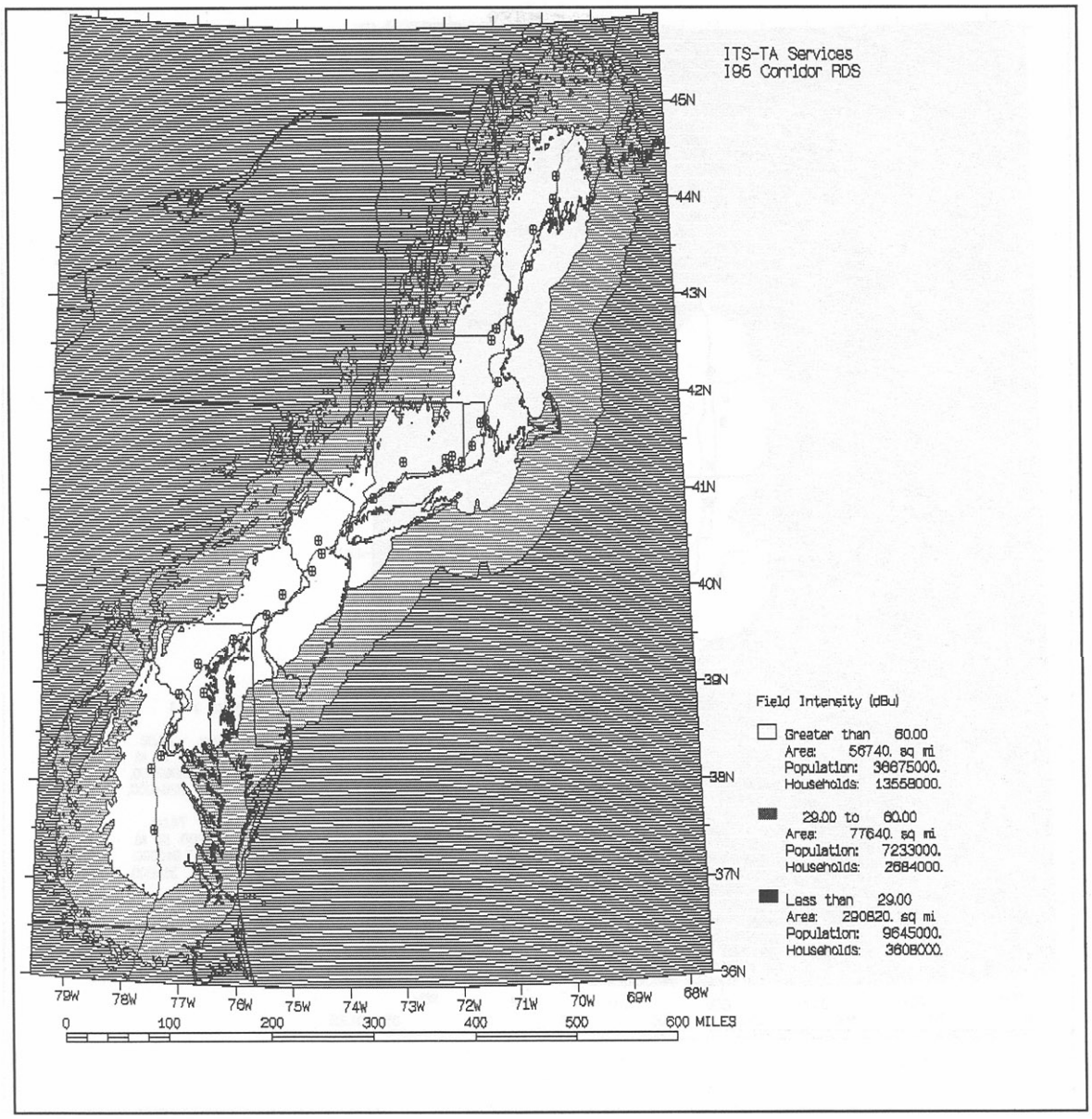
Figure 1. Composite FM station STIC subcarrier coverage for corridor 1, Interstate 95.



Environment	Threshold	Signal Coverage Area
urban high-rise	(>60 dBu)	147,031 sq km = 56,740 sq mi
urban low-rise	(29 - 60 dBu)	201,190 sq km = 77,640 sq mi
nonurban	(<29 dBu)	753,606 sq km = 290,820 sq mi

(note: 966 km = 600 mi)

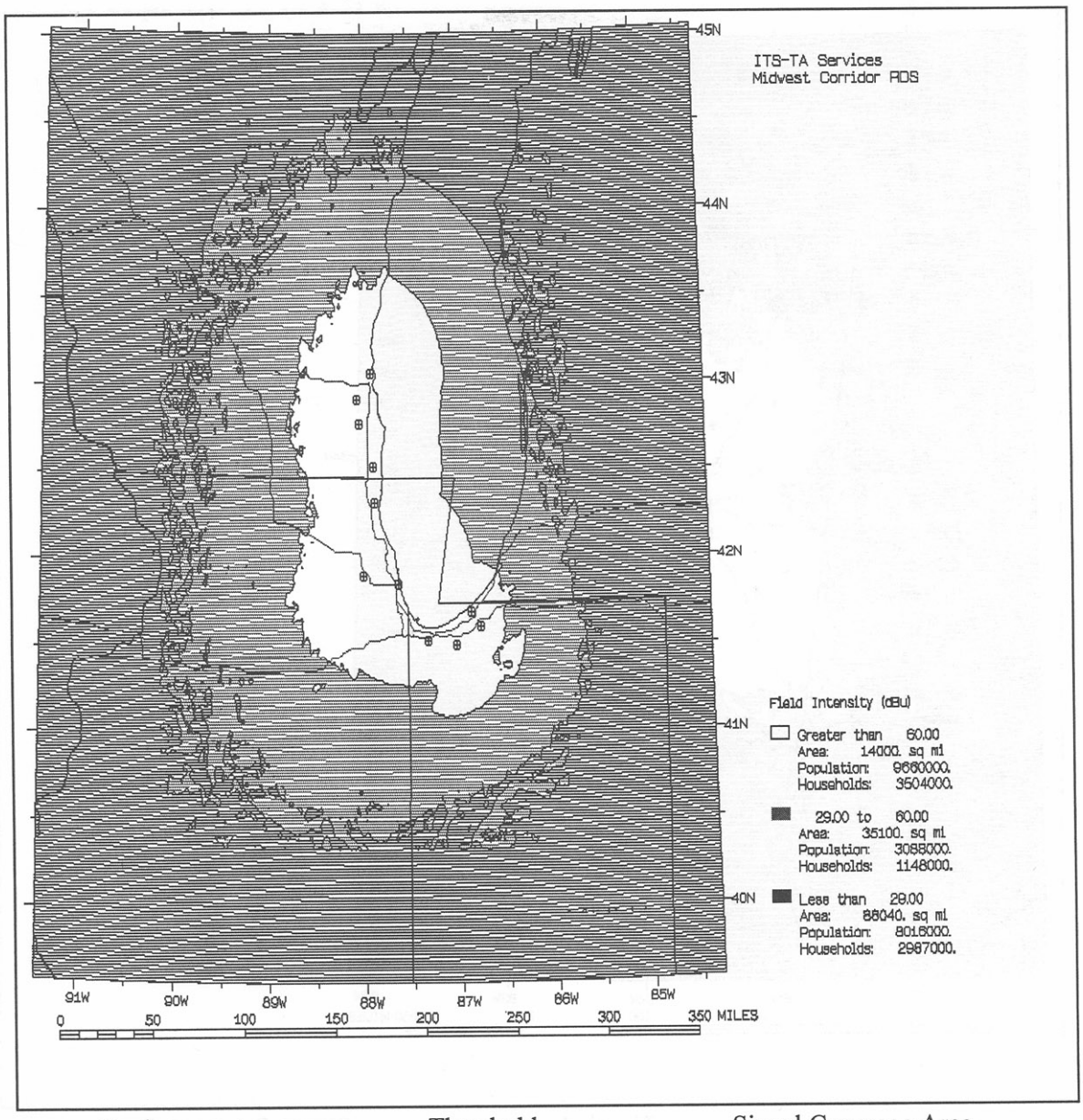
Figure 2. Composite FM station RBDS subcarrier coverage for corridor 1, Interstate 95.



Environment	Threshold	Signal Coverage Area
urban high-rise	(>60 dBu)	147,031 sq km = 56,740 sq mi
urban low-rise	(29 - 60 dBu)	201,190 sq km = 77,640 sq mi
nonurban	(<29 dBu)	753,606 sq km = 290,820 sq mi

(note: 966 km = 600 mi)

Figure 2. Composite FM station RBDS subcarrier coverage for corridor 1, Interstate 95.



Environment	Threshold	Signal Coverage Area
urban high-rise	(>60 dBuV)	36,278 sq km = 14,000 sq mi
urban low-rise	(29 - 60 dBuV)	90,955 sq km = 35,100 sq mi
nonurban	(<29 dBuV)	228,139 sq km = 88,040 sq mi

(note: 563 km = 88,040 sq mi)

Figure 4. Composite FM station RBDS subcarrier coverage for Corridor 2, Midwest.