

**CE 458/558 Public Transportation Systems
Spring Quarter 2006**

Assignment 1A: Transit Quality of Service

1. Thinking back to the trip you took in Assignment 1:
 - a. What was the origin and destination of your trip (I won't have seen Assignment 1).
 - b. At the time you took your trip, what was the frequency of each of the routes you took? (For example, if you took your trip on a Saturday afternoon, give me the Saturday afternoon frequency for those routes.) What is the corresponding LOS for each route?
 - c. What was the hours of service for each route on the day you took your trip (as a number and as an LOS grade)?
 - d. For each bus or train you boarded, were you able to get a seat immediately, or did you have to stand? Estimate what the passenger load LOS was on each transit vehicle when you boarded, and describe why you picked that LOS value.

2. The following tables provide year 2000 auto travel times during the weekday a.m. peak hour between selected activity centers in Jacksonville, Florida (from the regional model), and the corresponding bus travel times (from timetable data).

Existing (2000) auto times	Zone	656	472	289	1416	953	231	1117	545	227	463
Downtown FCCJ	656	0.00	22.50	18.72	35.41	15.31	22.35	38.36	38.49	48.30	29.81
St. Lukes Hospital	472	22.74	0.00	16.43	48.17	31.49	29.24	51.74	30.46	45.23	18.23
Regency Mall	289	17.96	15.56	0.00	50.27	30.17	16.36	53.22	41.93	31.06	16.24
Orange Park Mall	1416	37.97	43.79	53.42	0.00	24.63	58.15	15.07	30.47	80.44	51.31
Post/Cassett, Inner City Residential	953	16.56	33.88	32.00	22.81	0.00	36.74	25.30	40.17	61.37	42.32
Arlington, Older Suburban	231	21.57	28.89	16.22	55.05	34.95	0.00	58.00	49.05	44.85	29.14
Argyle Forest, Newer Suburban	1117	39.50	50.36	54.94	14.23	25.16	59.68	0.00	37.04	83.56	57.87
Marbon & San Jose Park-and-Ride	545	39.73	29.76	41.84	35.26	39.72	49.42	40.65	0.00	65.83	36.61
Mayport NAS	227	48.32	42.85	31.79	80.38	60.28	46.16	83.33	66.94	0.00	35.55
UNF	463	30.20	14.59	16.93	57.48	40.90	30.51	61.27	38.42	35.44	0.00

Existing (2000) bus times (minutes)	Zone	656	472	289	1416	953	231	1117	545	227	463
Downtown FCCJ	656		61	15	77	23	36	N/A	77	90	46
St. Lukes Hospital	472	42		57	144	82	71	N/A	N/A	144	88
Regency Mall	289	12	41		57	43	45	N/A	87	88	34
Orange Park Mall	1416	61	129	88		50	123	N/A	145	214	119
Post/Cassett, Inner City Residential	953	26	88	47	74		62	N/A	104	132	78
Arlington, Older Suburban	231	47	93	30	129	97		N/A	159	127	73
Argyle Forest, Newer Suburban	1117	66	48	87	60	55	141	N/A	58	188	124
Marbon & San Jose Park-and-Ride	545	53	62	97	145	101	100	N/A		143	119
Mayport NAS	227	86	160	93	146	132	128	N/A	176		90
UNF	463	35	90	28	136	90	91	N/A	106	84	

N/A = no service during the a.m. peak hour

- a. Calculate the difference between auto and transit in-vehicle times for each trip.
- b. Estimate out-of-vehicle time for each trip, and briefly describe how you developed your assumptions.
- c. Calculate the auto-transit travel time difference and the corresponding LOS for each trip.
- d. What do you think of the methodology (comparing auto times from the regional model to transit times from timetables)? What might be another way that one could obtain travel time data for both modes?