b. Example: Assume an airport pavement is to be designed for the following forecast traffic:

Aircraft	Gear Type	Forecast Annual Departures	Maximum Takeoff Weight lbs.	(kg)
727-100	dual	3,760	160,000	(72 600)
727-200	dual	9,080	190,500	(86 500)
707-320B	dual tandem	3,050	327,000	(148 500)
DC-9-30	dual	5,800	108,000	(49 000)
CV-880	dual tandem	400	184,500	(83 948)
737-200	dual	2,650	115,500	(52 440)
L-1011-100	dual tandem	1,710	450,000	(204 120)
747-100	double dual tandem	85	700,000	(317 800)

(1) Determine Design Aircraft. A pavement thickness is determined for each aircraft in the forecast using the appropriate design curves. The pavement input data, CBR, K value, flexural strength, etc., should be the same for all aircraft. Aircraft weights and departure levels must correspond to the particular aircraft in the forecast. In this example the 727-200 requires the greatest pavement thickness and is thus the design aircraft.

(2) Group Forecast Traffic into Landing Gear of Design Aircraft. In this example the design aircraft is equipped with a dual wheel landing gear so all traffic must be grouped into the dual wheel configuration.

(3) Convert Aircraft to Equivalent Annual Departures of the Design Aircraft. After the aircraft mixture has been grouped into a common landing gear configuration, the equivalent annual departures of the design aircraft can be calculated.

Aircraft	Dual Gear Departures	Wheel Load lbs.	(kg)	Wheel Load of Design Aircraft lbs.	(kg)	Equivalent Annual Departures Design Aircraft
727-100	3,760	38,000	(17 240)	45,240	(20 520)	1,891
727-200	9,080	45,240	(20 520)	45,240	(20 520)	9,080
707-320B	5,185	38,830	(17 610)	45,240	(20 520)	2,764
DC-9-30	5,800	25,650	(11 630)	45,240	(20 520)	682
CV-880	680	21,910	(9 940)	45,240	(20 520)	94
737-200	2,650	27,430	(12 440)	45,240	(20 520)	463
747-100	145	35,625 1/	(16 160)	45,240	(20 520)	83
L-1011-100	2,907	35,625 1/	(16 160)	45,240	(20 520)	1,184
					Total	16,241

1/ Wheel loads for wide-body aircraft will be taken as the wheel load for a 300,000-pound (136 100 kg) aircraft for equivalent annual departure calculations.