

PARKING LOT DESIGN HANDOUT

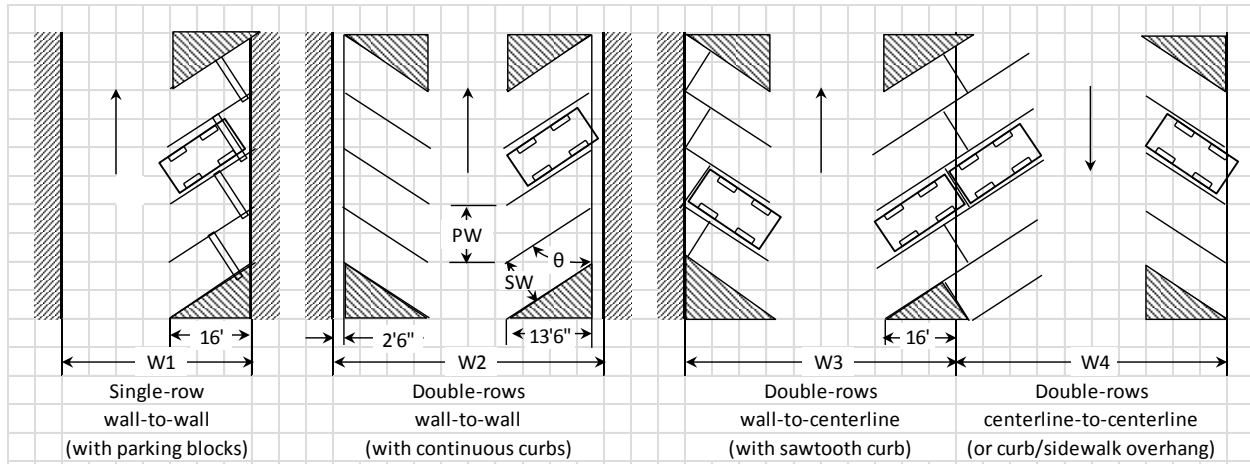


Figure 4.2 after p.142 of 5th ed. of Tompkins, et al. text (depicting Ramsey & Sleeper).

- Notes: If θ is other than 90° , one stall per row will be lost.
 θ must be the same in adjacent W3-W4 or W4-W4 modules.
 Approximately 2% to 5% of all stalls are designated for handicapped access.
 Approximately 1/3 of all stalls are typically sized for compact (small) cars.
 Assume 10' to 12' per lane of cross-aisle(s).

$$PW = \frac{SW}{\sin(\theta)}$$

| | |
|----------|-------|
| Stalls = | Depth |
| Row | PW |

Table 4.1 after p. 140-141 of 5th ed. of Tompkins, et al. text (Ramsey & Sleeper).

| | | Parking Angle (θ) | | | | | | | | | | | |
|---------------|-------|----------------------------|--------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-----|
| | | Stall Width | Module Width | 45° | 50° | 55° | 60° | 65° | 70° | 75° | 80° | 85° | 90° |
| Small Cars | 8'0" | 1 | 25'9" | 26'6" | 27'2" | 29'4" | 31'9" | 34'0" | 36'2" | 38'2" | 40'0" | 41'9" | |
| | | 2 | 40'10" | 42'0" | 43'1" | 45'8" | 48'2" | 50'6" | 52'7" | 54'4" | 55'11" | 57'2" | |
| | | 3 | 38'9" | 40'2" | 41'5" | 44'2" | 47'0" | 49'6" | 51'10" | 53'10" | 55'8" | 57'2" | |
| | | 4 | 36'8" | 38'3" | 39'9" | 42'9" | 45'9" | 48'6" | 51'1" | 53'4" | 55'5" | 57'2" | |
| Standard Cars | 8'6" | 1 | 32'0" | 32'11" | 34'2" | 36'2" | 38'5" | 41'0" | 43'6" | 45'6" | 46'11" | 48'0" | |
| | | 2 | 49'10" | 51'9" | 53'10" | 56'0" | 58'4" | 60'2" | 62'0" | 63'6" | 64'9" | 66'0" | |
| | | 3 | 47'8" | 49'4" | 51'6" | 54'0" | 56'6" | 59'0" | 61'2" | 63'0" | 64'6" | 66'0" | |
| | | 4 | 45'3" | 46'10" | 49'0" | 51'8" | 54'6" | 57'10" | 60'0" | 62'6" | 64'3" | 66'0" | |
| | 9'0" | 1 | 32'0" | 32'9" | 34'0" | 35'4" | 37'6" | 39'8" | 42'0" | 44'4" | 46'2" | 48'0" | |
| | | 2 | 49'4" | 51'0" | 53'2" | 55'6" | 57'10" | 60'0" | 61'10" | 63'4" | 64'9" | 66'0" | |
| | | 3 | 46'4" | 48'10" | 51'4" | 53'10" | 56'0" | 58'8" | 61'0" | 63'0" | 64'6" | 66'0" | |
| | | 4 | 44'8" | 46'6" | 49'0" | 51'6" | 54'0" | 57'0" | 59'8" | 62'0" | 64'2" | 66'0" | |
| | 9'6" | 1 | 32'0" | 32'8" | 34'0" | 35'0" | 36'10" | 38'10" | 41'6" | 43'8" | 46'0" | 48'0" | |
| | | 2 | 49'2" | 50'6" | 51'10" | 53'6" | 55'4" | 58'0" | 60'6" | 62'8" | 64'6" | 65'11" | |
| | | 3 | 47'0" | 48'2" | 49'10" | 51'6" | 53'11" | 57'0" | 59'8" | 62'0" | 64'3" | 65'11" | |
| | | 4 | 44'8" | 45'10" | 47'6" | 49'10" | 52'6" | 55'9" | 58'9" | 61'6" | 63'10" | 65'11" | |
| Large Cars | 9'0" | 1 | 32'7" | 33'0" | 34'0" | 35'11" | 38'3" | 40'11" | 43'6" | 45'5" | 46'9" | 48'0" | |
| | | 2 | 50'2" | 51'2" | 53'3" | 55'4" | 58'0" | 60'4" | 62'9" | 64'3" | 65'5" | 66'0" | |
| | | 3 | 47'9" | 49'1" | 52'3" | 53'8" | 56'2" | 59'2" | 61'11" | 63'9" | 65'2" | 66'0" | |
| | | 4 | 45'5" | 46'11" | 49'0" | 51'8" | 54'9" | 58'0" | 61'0" | 62'2" | 64'10" | 66'0" | |
| | 9'6" | 1 | 32'4" | 32'8" | 33'10" | 34'11" | 37'2" | 39'11" | 42'5" | 45'0" | 46'6" | 48'0" | |
| | | 2 | 49'11" | 50'11" | 52'2" | 54'0" | 56'6" | 59'3" | 61'9" | 63'4" | 64'8" | 66'0" | |
| | | 3 | 47'7" | 48'9" | 50'2" | 52'4" | 55'1" | 58'4" | 60'11" | 62'10" | 64'6" | 66'0" | |
| | | 4 | 45'3" | 46'8" | 48'5" | 50'8" | 53'8" | 57'0" | 59'10" | 62'2" | 64'1" | 66'0" | |
| | 10'0" | 1 | 32'4" | 32'8" | 33'10" | 34'11" | 37'2" | 39'11" | 42'5" | 45'0" | 46'6" | 48'0" | |
| | | 2 | 49'11" | 50'11" | 52'2" | 54'0" | 56'6" | 59'3" | 61'9" | 63'4" | 64'8" | 66'0" | |
| | | 3 | 47'7" | 48'9" | 50'2" | 52'4" | 55'1" | 58'4" | 60'11" | 62'11" | 64'6" | 66'0" | |
| | | 4 | 45'3" | 46'8" | 48'5" | 50'8" | 53'8" | 57'0" | 59'10" | 62'2" | 64'1" | 66'0" | |