



CITY OF WEST COVINA

**PARKING LOT DESIGN AND LIGHTING STANDARDS
REVISION NO. 9**

APPROVED BY THE WEST COVINA PLANNING COMMISSION ON
SEPTEMBER 25, 2012
PER PLANNING COMMISSION RESOLUTION
(PLANNING COMMISSION RESOLUTION NO. 2513, REVISION 9)

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These standards are designed to apply to sites with multi-family residential and non-residential uses.

SECTION 1. GENERAL REQUIREMENTS

Review Process	Parking designs shall be shown on plans to be reviewed by the Planning Commission. The Planning Director may, at his discretion, approve re-configurations of approved parking designs. The Planning Commission or Planning Director may approve deviations from certain standards if it is determined that it will result in an overall improved design and not impede traffic and pedestrian safety.
Parking Layout Design	Only those layouts shown on Attachment A are permitted, except that tandem parking spaces, either when parallel or perpendicular to an accessible driveway, may be permitted where parking is by assignment only (for employees or tenants).
Parking Layout Dimensions	Dimensional requirements for standard parking angles are shown on Attachment B
Parking Space Dimensions	9.0 feet wide by 18.0 long OR 8.5 feet wide by 18.0 long (both lengths include a 2.0 foot overhang; see standards under Curbing) See Section 4 regarding dimensions for compact-size spaces.
End Space Dimensions/ Curbing	<p>A Portland Cement Concrete raised slab or raised planter with a minimum height of 4 inches is required at the ends of all parking rows.</p> <p>When the end parking space is adjacent to a building, light standard, wall, or other obstruction, a minimum clearance between the curbface and the face of the obstruction shall be a minimum of 3.5 feet, except under certain circumstances in parking structures (see Section 6).</p> <p>In other cases, a curbed island shall be provided with a minimum exterior width of 4 feet or a larger size sufficient to accommodate landscaping, electroliers, and sign posts.</p>
Pavement markings	Pavement markings, including hatched crosswalks, stop messages, lane, lines, "compact" designation, parking space delineation lines, and arrows to indicate one-way aisles, shall be painted "white" (except where a different color is specifically required) on the ground surface per an approved plan. Parking spaces must be delineated with 4-inch wide paint lines
Screening and Landscaping	Screening and landscaping shall conform to the requirements of the City of West Covina Municipal Zoning Ordinance.
Signage	Any signing used in public parking lots for traffic control purposes shall conform to the requirements of the State of California Traffic Manual as to color, shape, legend, reflectivity and usage. Sizes may be varied as necessary to be compatible with prevailing conditions in the parking facility. No traffic control signing for public parking facilities shall be so located as to conflict with officially installed traffic control devices on public rights-of way.

SECTION 2. CIRCULATION/ DRIVEWAYS

Driveway dimensions	Do not serve adjacent parking space(s) or serve as a fire lane: Single-lane: 12 feet minimum Multi-lane: 11 feet minimum per lane	Serve adjacent parking space(s): See Attachment B
Circulation	Parking lot circulation shall be provided so that once a vehicle enters a site, it must be able to access every parking space without exiting the site onto the public right-of-way.	
Dead-end driveways	Dead-end driveways are not permitted, except under certain circumstances when allowed by the Planning Commission if it is determined that it will not cause a traffic safety hazard and adequate turnaround area is provided. Adequate turnaround areas may consist of a marked space with a minimum width of 12 feet width. The turnaround space shall not be counted as a required space and shall be painted with diagonal hatch marks and signed to indicate that it is not a parking space.	
Driveway approach location and number	The location of each driveway is subject to the approval of the City Engineer giving due regard to the type of land use, estimated traffic generation, width, geometric design, and traffic volumes of contiguous streets. In no case shall a driveway be located less than 10 feet from the beginning of a curb return. The number of driveways per lot is subject to the approval of the City Engineer.	
Driveway approach dimensions	Driveway approaches shall conform with City Engineer's Standard Plans A-103, A-104, A-104A, A-112, A-112A as required. The minimum width for one-way access is 15 feet; the required width for two-way access is 30 feet, with exceptions for special circumstances.	
Driveway entries	<p>Curbed entrance "throats" shall be provided to prevent the stacking of vehicles onto public streets at driveway entries. Parking layouts shall be designed so that backing from parking spaces into the public right-of-way is not required.</p> <p>Parking facilities with less than 300 parking spaces shall be provided "throats" with a minimum length of 20 feet measured from the street curb line and minimum width of 30 feet.</p> <p>Parking facilities with 300 spaces or more shall be provided "throats" with a minimum length of 50 feet measured from the street curb line and a minimum width of 30 feet.</p> <p>Longer "throats" may be required on the basis of land use, estimated traffic generation, existing traffic volume, vehicle delay, and accident rate.</p>	
Speed Humps	Speed humps shall have a maximum height of 3 inches and a minimum width of 3 feet, except under certain circumstances when allowed by the Planning Commission if it is determined that it will not cause a traffic safety hazard. Pavement marking shall be included to warn drivers of the location of the speed humps.	

SECTION 3. CURBING

Application	Curbing shall be provided for parking spaces facing a wall, light standard, or other obstruction over 4 inches in height and for planter islands except where next to a wall or sidewalk. (Curbing is not required for parking spaces facing another parking space unless a particular space faces a light standard or other fixed obstruction over 4 inches in height.)
Type/ Dimensions	<p>Curbing shall have a height of at least four inches above parking grade, provided that the overhang distance is in addition to the required walkway width (typically four feet), required planter width (typically three feet, not including curbs), width of light standard base (typically two feet), or the width of any other obstruction.</p> <p>If a walkway or planter is not provided in front of a parking space, a raised slab with a height of four inches and a width not less than the required overhang shall be provided. Freestanding wheelstops shall be permitted only after it has been determined that curbing described above is not practical from a design standpoint.</p>

SECTION 4. COMPACT-SIZE PARKING SPACES

Application	A precise plan is required to be approved by the Planning Commission for all lots requesting compact parking. Permitted on non-residential sites with more than 20 parking spaces, OR sites with more than the minimum number required by Code.	
Dimensions	8.0 feet wide and 16.0 feet long 1.5 foot overhang, see standards under Section 3.	
Location	Placement of compact car spaces shall be reviewed by staff and shall be indicated on the development plan to be approved by the Planning Commission. The Planning Director may approve revisions to a development plan where there is no increase in the number of existing parking spaces.	
Marking	Each approved compact car space shall be clearly marked on the pavement "COMPACT" in minimum eight inches high upper-case letters in white paint centered on the space's width.	
Number	<u>no. of required spaces</u> 0-1000 1001-1400 Over 1400 <u>no. of non-required spaces</u> (exceeds minimum required by code)	<u>maximum number of compact spaces counted as required</u> 35 percent * 40 percent 45 percent <u>maximum number of compact</u> 45 percent *in excess of first 20 parking spaces

SECTION 5. LIGHTING

Application	Lighting is required on all sites with public parking facilities. Lighting shall be operational during the hours of operation of the uses on the site. The level of illumination required for certain areas and/or sites shall be marked on plans approved by the Planning Commission.
Review Process	Detailed lighting plans shall require the approval of the Engineering Department and the Planning Department prior to issuance of electrical permits. The plans shall include fixture, lamp, accessory and support pole data (manufacturer's sheets), photometric data (isolux diagram for each fixture and an isolux overlay of site plan), electrolier foundation design, and other items deemed necessary by the Engineering Department to determine if standards are being met.
Location	Noting the location of light standards on the study plan approved by the Planning Commission shall be encouraged. Light standards may not be placed within the minimum dimensions of a parking space, including the overhang of a particular space or the clearance of an end parking space. Curbing as part of a raised slab or planter as stated in Section 3 shall be provided to protect the light standard base from damage. Light standards shall be placed 20 feet or more from trees and other objects that may potentially obstruct lighting.
Illumination levels on parking areas	The lowest illumination level at any point on the pavement for "open" parking areas shall not be less than 0.9 footcandles maintained horizontal illuminance. (For illumination levels in structured or covered parking areas: See Section 6) The average/ minimum uniformity shall not exceed 4 to 1. Particular sites, due to the potential to create high amounts of pedestrian and vehicular traffic, may be required to provide an average illumination level or greater minimum illumination level if deemed necessary by the Planning Director.
Illumination levels on main driveways	The illumination levels at driveway entries, passenger loading zones, and collector driveways shall be not less than twice-the average illumination level of the adjacent parking area or the adjoining street, whichever is greater.
Illumination levels on service areas	If the Planning Commission finds that a site has services areas and access roads where conflicts between vehicles and pedestrians are not likely to occur because these areas are not expected to be frequented by the public, a reduced standard of lighting may be provided for these specific areas. However, the maintained horizontal illuminance on the pavement in these areas shall not be less than an average of 1.0 foot-candles with an average /minimum uniformity shall not exceed 3 to 1.
Illumination levels for low-intensity uses (churches, educational facility)	If the Planning Commission finds that a particular site has a low level of nighttime activity that will create relatively low amounts of pedestrian and vehicular traffic, a reduced standard of lighting may be provided. However, the lowest illumination level at any point on the pavement shall not be less than 0.6 foot candles maintained horizontal illuminance with an average/minimum uniformity not to exceed 4 to 1. Low-intensity sites may include, but are not limited to, churches and educational facilities.
Illumination on Sites Abutting or Near Residential Parcels	Parking lot lights shall not create a negative impact from illumination and glare. Lights shall be hooded, louvered, aimed, or otherwise arranged so as to direct light away from any premises. Additional mitigation may be required by the Planning Director, including, but not limited to, relocation (height, setback) of the fixture, reduction of lamp wattage, or placement of planting or fencing as barriers. Lighting "spill over" shall not exceed 0.5 foot candles at any point on residential premises, churches, and other sensitive uses.

**SECTION 6.
STRUCTURED PARKING/RAMPS:**

Application	Structured parking areas shall include any parking area located beneath a roof, including those consisting of multiple levels, subterranean parking, and enclosed garage parking.	
Parking Space Dimensions/ Layout	Dimensions and layout shall be the same as "open" parking areas, except that parking spaces next to support structures shall not be subject to the standards for end spaces as stated in Section 1 if the total length of structures along the length of the parking space does not exceed one foot.	
Ramp Grade Maximums	<u>Ramps longer than 25 feet</u> Ramp grade shall not exceed 12 percent, with the first and last 8 feet of the ramp not exceeding 6 percent.	<u>Ramps 25 feet or less</u> Ramp grade shall not exceed 16 percent, with the first and last ten feet of the ramp not exceeding 6 percent.
Ramp breakover	Grade differentials shall not exceed 9-1/2 degrees	
Ramp Widths	<u>Single-lane ramp widths</u> Minimum clear lane width of 12 feet with minimum setbacks of 2 feet from the edge of the lane to fixed objects of 10 inches or more in height.	<u>Multi-lane ramps widths</u> Minimum clear widths of 12 feet per lane, plus 2-foot setbacks from the edge of end lanes to fixed objects of 10 inches or more in height.
Vertical clearance	Minimum clearance for all structured parking areas is 7 feet as required by the California Building Code. However, when a vanpool parking area (as stated in Section 26-751.1100 of the West Covina Municipal Code) is provided within a structured parking area or the route of travel to such facilities require passage through a structured parking areas, the facilities and the accessways to those areas shall meet the following: Vanpool preferential parking (as stated in Section 26-751.1100 of the West Covina Municipal Code): 7'2"	
Lighting levels	The maintained horizontal illuminance on the pavement shall not be less than an average of 5.0 foot-candles. Adequate illumination levels at entrance areas, ramps, and corners shall be provided during daylight hours. During daylight hours, entrance areas shall be provided with an average illumination level not less than 50 foot-candles (sum of artificial lighting and daylight). During daylight hours, ramps and corners shall be provided with an average illumination level not less than 10 foot-candles (sum of artificial lighting and daylight). The average/ minimum uniformity of all areas shall not exceed 4 to 1. See Section 5 regarding other standards regarding lighting. These illumination levels shall not apply to areas "open" to the sky, such as the top level of a multi-level structure (These areas are subject to Section 5).	

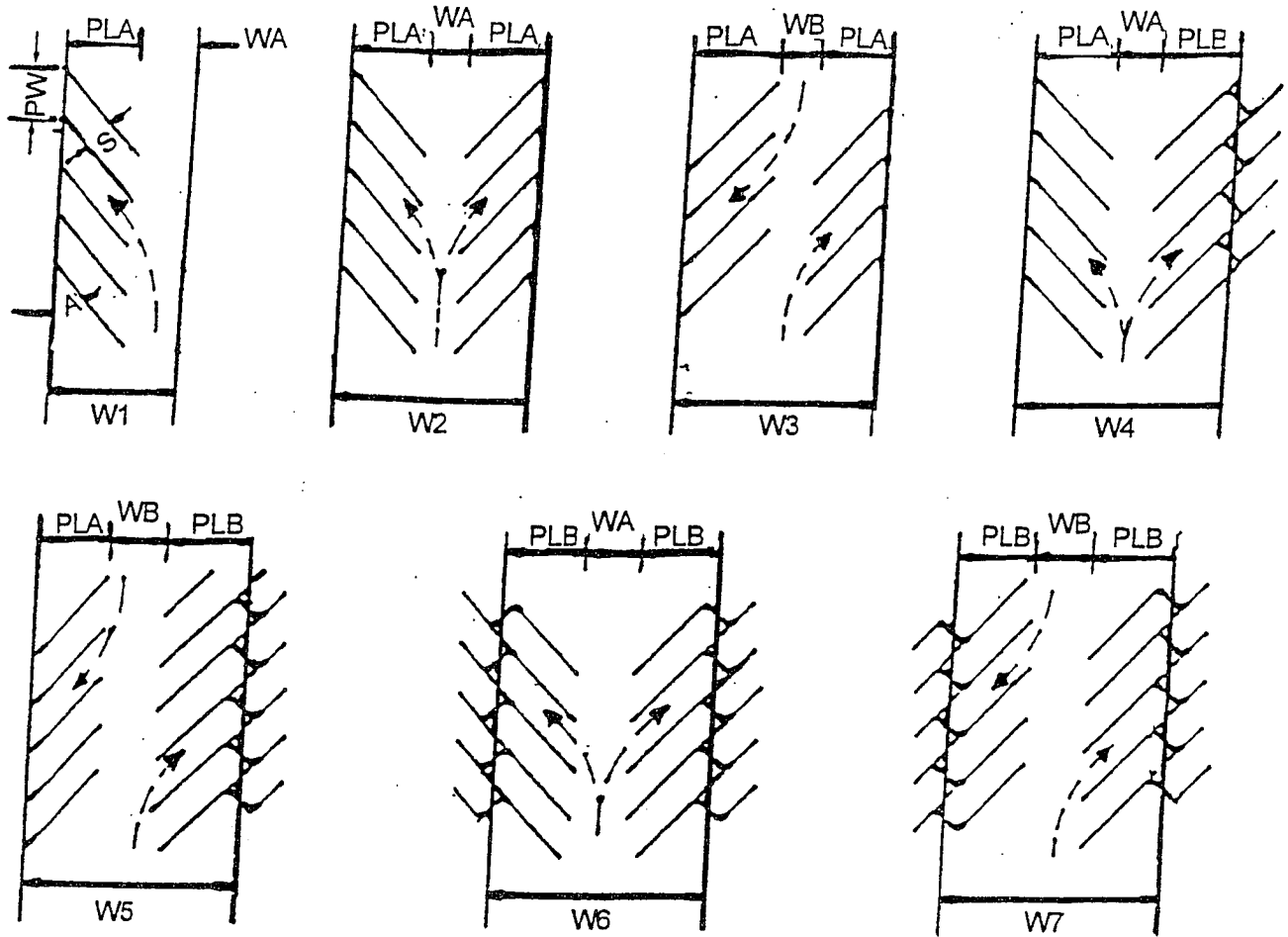
SECTION 7. PAVING/ DRAINAGE

Paving for parking areas and car sales areas	Provide a durable dust-free surface. The structural section of the pavement shall be designed in accordance with the "Flexible Pavement Structural Section Design Guide for California Cities and Counties," and a minimum Traffic Index of 4.0. The minimum structural section shall be 2 inches of asphaltic concrete on 4 inches of aggregate base material.
Paving for freight loading areas and aisles	Freight loading areas and aisles leading to loading shall be designed for a Traffic Index of 5.0. The minimum structural section shall be 3 inches of asphaltic concrete on 4 inches of aggregate base material.
Grading and Drainage	All parking areas shall be graded and drained so as to dispose of all surface waters. In no case shall such drainage be allowed across sidewalks except at driveway approaches. Refer to Chapter 9 of the West Covina Municipal Code for grading standards.

SECTION 8. MAINTENANCE

General	All pavement shall be maintained in good condition.
Markings	All surface markings shall be maintained by painting, cleaning, or otherwise, so as to remain clearly visible.
Wheelstops	All wheelstops shall be maintained in usable condition.
Signage	All signing shall be maintained clearly visible.
Other	All other improvements within the parking areas shall be maintained in a safe and usable condition.
Enforcement	A violation of this maintenance section must be corrected within 72 hours of notification of property owner/manager by the City.

Parking Lot Design Standards



Definition of Symbols

- A - Parking Angle
- PW - Projected Width of Stall
- S - Width of Stall
- PLA - Projected length of stalls against wall or curb over 4" high
- PLB - Projected length of stalls with interlocking bays
- WA - Aisle width, one way traffic
- WB - Aisle width, two way traffic
- W1 to 7 - Unit parking depth

**WEST COVINA PARKING LOT DESIGN STANDARDS
ATTACHMENT B1
STANDARD-SIZED STALL (9.0 FT WIDE X 18.0 FT LONG)**

ANGLE DEGREE	PW	PLA	PLB	WA	WB	W1	W2	W3	W4	W5	W6	W7
30	18.00	16.79	12.90	13.00	22.00	29.79	46.58	55.58	42.69	51.69	38.80	47.1
35	15.69	17.69	14.00	13.00	22.00	30.69	48.38	57.38	44.69	53.69	41.00	50.1
40	14.00	18.48	15.02	13.00	22.00	31.48	49.92	58.92	46.48	55.48	43.04	52.1
45	12.73	19.09	15.91	13.50	22.00	32.09	51.18	60.18	48.00	57.00	44.82	53.1
50	11.75	19.58	16.69	14.50	22.00	33.68	53.26	61.16	50.37	58.27	47.48	55.1
55	10.99	19.90	17.32	16.00	22.00	34.35	54.35	61.80	51.77	59.22	49.19	56.1
60	10.39	20.09	17.84	18.75	22.00	35.83	55.92	62.18	53.67	59.93	51.42	57.1
65	9.93	20.11	18.21	20.40	22.00	37.06	57.17	62.22	55.27	60.32	53.37	58.1
70	9.57	19.98	18.44	21.34	23.00	38.10	58.08	62.96	56.54	61.42	55.00	59.1
75	9.32	19.72	18.56	22.27	25.00	38.95	58.67	64.44	57.51	63.28	56.35	62.1
80	9.14	19.29	18.51	23.18	25.00	40.54	59.83	63.58	59.05	62.80	58.27	62.1
85	9.00	18.71	18.32	24.06	25.00	41.96	60.67	62.42	60.28	62.03	59.89	61.1
90	9.00	18.00	18.00	25.00	25.00	43.00	61.00	61.00	61.00	61.00	61.00	61.1

Figures above are in feet.

**WEST COVINA PARKING LOT DESIGN STANDARDS
ATTACHMENT B2
STANDARD-SIZED STALL (8.5 FT WIDE X 18.0 FT LONG)**

ANGLE DEGREE	PW	PLA	PLB	WA	WB	W1	W2	W3	W4	W5	W6	W7
30	17.00	16.36	12.68	13.00	22.00	29.36	45.72	54.72	42.69	51.69	38.8	47.8
35	14.82	17.29	13.81	13.00	22.00	30.29	47.58	58.58	44.69	53.69	41.00	50.00
40	13.32	18.08	14.83	13.00	22.00	31.08	49.16	58.16	46.48	55.48	43.04	52.04
45	12.02	18.74	15.73	13.50	22.00	32.24	50.98	59.48	48.00	57.00	44.82	53.82
50	11.10	19.25	16.52	14.50	22.00	33.75	53.00	60.50	50.37	58.27	47.48	55.38
55	10.38	19.62	17.18	16.00	22.00	35.62	55.24	61.24	51.77	59.22	49.19	56.64
60	9.81	19.84	17.71	18.75	22.00	38.59	58.43	61.68	53.67	59.93	51.42	57.68
65	9.38	19.91	18.11	20.40	22.00	40.31	60.22	61.82	55.27	60.32	53.37	58.42
70	9.05	19.82	18.37	21.34	23.00	41.16	60.98	62.64	58.54	61.42	55.00	59.88
75	8.80	19.59	18.49	22.27	25.00	41.86	61.45	64.18	57.51	63.28	58.35	62.12
80	8.63	19.20	18.30	23.18	25.00	42.38	61.58	63.40	59.05	62.80	58.27	62.02
85	8.53	18.67	18.30	24.08	25.00	42.73	61.4	62.34	60.28	62.03	59.89	61.64
90	8.50	18.00	18.00	25.00	25.00	43.00	61.00	61.00	61.00	61.00	61.00	61.00

Figures above are in feet.

**WEST COVINA PARKING LOT DESIGN STANDARDS
ATTACHMENT B3
COMPACT-SIZED STALL SIZE (8.0 FT WIDE X 16.0 FT LONG)**

ANGLE DEGREE	PW	PLA	PLB	WA	WB	W1	W2	W3	W4	W5	W6	V
30	16.0	13.0	11.9	13.00	22.00	26.0	39.0	48.0	37.9	46.9	36.8	4
35	13.9	13.8	12.9	13.00	22.00	26.8	40.6	49.6	39.7	48.7	38.7	4
40	12.4	14.6	13.7	13.00	22.00	27.6	42.2	51.2	41.3	50.3	40.5	4
45	11.3	15.3	14.5	13.00	22.00	28.3	43.6	52.6	42.8	51.8	42.0	5
50	10.4	15.9	15.1	13.00	22.00	28.9	44.8	53.8	44.0	53.0	43.3	5
55	9.8	16.3	15.7	13.00	22.00	29.3	45.6	54.6	45.0	54.0	44.4	5
60	9.2	16.6	16.1	14.26	22.00	30.9	47.5	55.2	47.0	54.7	46.5	5
65	8.8	16.8	16.4	16.58	22.00	33.4	50.2	55.6	49.8	55.2	49.4	5
70	8.5	16.9	16.6	18.90	22.00	35.8	52.7	55.8	52.4	55.5	52.0	5
75	8.3	16.8	16.6	21.21	22.00	38.0	54.8	55.6	54.6	55.4	54.4	5
80	8.1	16.6	16.5	23.50	23.50	40.1	56.7	56.7	56.6	56.6	56.6	5
85	8.0	16.2	16.2	25.00	25.00	41.2	57.4	57.4	57.4	57.4	57.4	5
90	8.0	16.0	16.0	25.00	25.00	41.0	57.0	57.0	57.0	57.0	57.0	5

Figures above are in feet