SECTION 11 12 33 - Parking Gates

PARKING GATE OPERATORS

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\*\* NOTE TO SPECIFIER \*\* DoorKing, Inc.; Vehicular gate operators.
 .
 This section is based on the products of DoorKing, Inc, which is located at:
120 S. Glasgow Avenue
Inglewood, CA 90301
Tel: (800)826-7493
Fax: (310) 641-1586
Email: ghendrix@doorking.com
Web: [www.doorking.com](http://www.doorking.com)
 .
DKS DoorKing, Inc. was founded in 1948 and is based in Inglewood, California. It is one of the largest and oldest manufacturers of access control and vehicular gate operator systems in the United States.

1. GENERAL
	1. SECTION INCLUDES

\*\* NOTE TO SPECIFIER \*\* Delete items below not required for project.

* + 1. Parking gates and operators.
		2. Sensors and controls.
	1. RELATED SECTIONS

\*\* NOTE TO SPECIFIER \*\* Delete any sections below not relevant to this project; add others as required.

* + 1. Section 26 05 33 - Raceway and Boxes for Electrical Systems.
		2. Section 26 05 00 - Common Work Results for Electrical.
		3. Section \_\_\_\_\_ - \_\_\_\_\_\_\_\_\_: Card readers, RF transmitters, and coin and ticket machines.
	1. REFERENCES

\*\* NOTE TO SPECIFIER \*\* Delete references from the list below that are not actually required by the text of the edited section.

* + 1. UL 325 - Standard for Door, Drapery, Gate, Louver, and Window Operators and Systems.
		2. ASTM F 2200 - Standard Specification for Automated Vehicular Gate Construction.
	1. SUBMITTALS
		1. Submit under provisions of Section 01 30 00 - Administrative Requirements.
		2. Product Data: Manufacturer's data sheets on each product to be used, including:
			1. Preparation instructions and recommendations.
			2. Storage and handling requirements and recommendations.
			3. Installation methods.

\*\* NOTE TO SPECIFIER \*\* Delete selection samples if colors have already been selected.

* + 1. Selection Samples: For each finish product specified, two complete sets of color chips representing manufacturer's full range of available colors and patterns.
		2. Verification Samples: For each finish product specified, two samples, minimum size 6 inches (150 mm) square, representing actual product, color, and patterns.
		3. Manufacturer's Certificates: Certify products meet or exceed specified requirements.
	1. QUALITY ASSURANCE
		1. Manufacturer Qualifications:
		2. Installer Qualifications:

\*\* NOTE TO SPECIFIER \*\* Include a mock-up if the project size and/or quality warrant taking such a precaution. The following is one example of how a mock-up on a large project might be specified. When deciding on the extent of the mock-up, consider all the major different types of work on the project.

* + 1. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
			1. Finish areas designated by Architect.
			2. Do not proceed with remaining work until workmanship, color, and sheen are approved by Architect.
			3. Refinish mock-up area as required to produce acceptable work.
			4. Accepted mock-ups shall be comparison standard for remaining Work
	1. DELIVERY, STORAGE, AND HANDLING
		1. Store products in manufacturer's unopened packaging until ready for installation.
	2. WARRANTY
		1. Warranty: Manufacturer's standard two year warranty.
1. PRODUCTS
	1. MANUFACTURERS
		1. Acceptable Manufacturer: DoorKing, which is located at:120 Glasgow Ave.Inglewood, CA 90301Toll Free Tel: 800-826-7493Tel: 310-645-0023Fax: 310-641-1586Email:  ghendrix@doorking.com;Web: <http://www.doorking.com>

\*\* NOTE TO SPECIFIER \*\* Delete one of the following two paragraphs; coordinate with requirements of Division 1 section on product options and substitutions.

* + 1. Substitutions: Not permitted.
		2. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.
	1. PARKING GATES
		1. Swing-Up Arm Barrier Gates and Operators: DoorKing Barrier Gate Operator; Microprocessor based solid-state control board interacting with card readers, RF transmitters, and coin and ticket machines; solid steel crank, connecting arm, and main shaft; 12 gage, 0.104 inch (2.6 mm) G90 galvanized steel operator housing painted white; adjustable automatic timer; manual toggle switch and power on-off switch; pre-wiring to receive accessory options; automatically reversing gate to full up position if obstruction is met during closing cycle.

\*\* NOTE TO SPECIFIER \*\* Delete two of the following three paragraphs.

* + - 1. For Gates Up to 12 Feet (3.7 m) Long: DoorKing Model 1601; 38 inches (965 mm) high by 15 inches (381 mm) wide by 14.75 inches (375 mm) deep; 2 inch by 2 inch (52 mm by 52 mm) PVC arm; operator arm rotating 90 degrees in 1.5 seconds, nominal.

\*\* NOTE TO SPECIFIER \*\* Delete three of the following four paragraphs.

* + - * 1. Motor: 115 V, 1 phase, 1/2 HP (373 Watts) continuous duty, 5.4 A; AC power.
				2. Motor: 230 V, 1 phase, 1/2 HP (373 Watts) continuous duty, 2.7 A; AC power.
				3. Motor: 230 V, 3 phase, 1/2 HP (373 Watts) continuous duty, 2.7 A; AC power.
				4. Motor: 460 V, 3 phase, 1/2 HP (373 Watts) continuous duty, 1.35 A; AC power.
			1. For Gates Up to 14 Feet (4.3 m) Long: DoorKing Model 1601; 38 inches (965 mm) high by 15 inches (381 mm) wide by 14.75 inches (375 mm) deep; 1 inch by 4 inch (25 mm by 102 mm) wood arm; operator arm rotating 90 degrees in 1.5 seconds, nominal.

\*\* NOTE TO SPECIFIER \*\* Delete three of the following four paragraphs.

* + - * 1. Motor: 115 V, 1 phase, 1/2 HP (373 Watts) continuous duty, 5.4 A; AC power.
				2. Motor: 230 V, 1 phase, 1/2 HP (373 Watts) continuous duty, 2.7 A; AC power.
				3. Motor: 230 V, 3 phase, 1/2 HP (373 Watts) continuous duty, 2.7 A; AC power.
				4. Motor: 460 V, 3 phase, 1/2 HP (373 Watts) continuous duty, 1.35 A; AC power.
			1. For Gates Up to 20 Feet (6 m) Long: DoorKing Model 1602; 38 inches (965 mm) high by 15 inches (381 mm) wide by 15.75 inches (400 mm) deep; three-piece wishbone style wood arm; operator arm rotating 90 degrees in 3 seconds, nominal.

\*\* NOTE TO SPECIFIER \*\* Delete three of the following four paragraphs.

* + - * 1. Motor: 115 V, 1 phase, 1/2 HP (373 Watts) continuous duty, 5.4 A; AC power.
				2. Motor: 230 V, 1 phase, 1/2 HP (373 Watts) continuous duty, 2.7 A; AC power.
				3. Motor: 230 V, 3 phase, 1/2 HP (373 Watts) continuous duty, 2.7 A; AC power.
				4. Motor: 460 V, 3 phase, 1/2 HP (373 Watts) continuous duty, 1.35 A; AC power.

\*\* NOTE TO SPECIFIER \*\* Delete one of the following two paragraphs.

* + - 1. Operator Mounting: Left hand.
			2. Operator Mounting: Right hand.

\*\* NOTE TO SPECIFIER \*\* The following three paragraphs are optional; delete if not required.

* + - 1. Battery Powered Back Up DC Drive System: Powers barrier arm in case of power failure to operator; resets operator to normal operation when power resumes.
			2. Heater Kit: Thermostatically controlled, for use where temperatures fall below 32 degrees F (0 degrees C).
			3. Fan Kit: Thermostatically controlled, for use in conditions where high humidity conditions prevail.

\*\* NOTE TO SPECIFIER \*\* The following paragraph is not intended to be used where vehicular traffic is uncontrolled or would cross over spikes at angle other than 90 degrees. The following two paragraphs are optional; delete if not required.

* + - 1. Traffic Control Spikes: 72 inches (1829 mm) long by 8-1/2 inches (216 mm) wide by 6 inches (152 mm) deep, allowing traffic to proceed in one direction only.
			2. Provide traffic control spikes warning sign.
	1. GATE OPERATORS
		1. Operators for Overhead Gates: DoorKing Vehicular Overhead Gate Operator; Microprocessor based solid-state control board; duty cycle of 60 cycles per hour; adjustable automatic timer; heavy duty trolley assembly powered by number 40 roller chain housed in 3 inch (76 mm) aluminum channels; tamper-proof built-in key release for manual operation; automatically reversing gate to full up position if obstruction is met during closing cycle.
			1. For Gates Up to 8 Feet (2.4 m) High: DoorKing Model 1150-80; 149 inches (3.78 m) long by 21 inches (533 mm) wide by 10-1/2 inches (267 mm) high.
			2. For Gates Up to 10 Feet (3 m) High: DoorKing Model 1150-81; 173 inches (4.4 m) long by 21 inches (533 mm) wide by 10-1/2 inches (267 mm) high.
			3. For Gates Up to 12 Feet (3.7 m) High: DoorKing Model 1150-82; 197 inches (5 m) long by 21 inches (533 mm) wide by 10-1/2 inches (267 mm) high.
			4. For Gates Up to 14 Feet (4.3 m) High: DoorKing Model 1150-83; 221 inches (5.6 m) long by 21 inches (533 mm) wide by 10-1/2 inches (267 mm) high.
			5. Motor: 1/2 HP continuous duty, 115 V, 1 phase, 5.4 A; AC power.
		2. Swing Gate Operator: DoorKing Vehicular Swing Gate Operator; Microprocessor based solid-state control board; duty cycle of 60 cycles per hour; adjustable clutch; built in lockable power switch and reset switch; automatically reversing gate to full up position if obstruction is met during closing cycle; built in manual release for manual operation.
			1. For Gates Up to 10 Feet (3 m) Long, Weighing Up to 400 lbs (181 kg): DoorKing Model 6050; 11 inches (279 mm) high by 13-3/4 inches (349 mm) wide by 20 inches (508 mm) long; operator arm rotating 90 degrees in 10 to 12 seconds, nominal.
				1. Class I, when tested in accordance with UL 325.
				2. Motor: 115 V, 1 phase, 1/3 HP (246 Watts) continuous duty, 4.3 A; AC power.
			2. For Gates Up to 14 feet (4.3 m) Long, Weighing Up to 500 lbs (227 kg): DoorKing Model 6100; 11 inches (279 mm) high by 13-3/4 inches (349 mm) wide by 20 inches (508 mm) long; operator arm rotating 90 degrees in 10 to 12 seconds, nominal.
				1. Class I, when tested in accordance with UL 325.
				2. Class II, when tested in accordance with UL 325.
				3. Class III, when tested in accordance with UL 325.
				4. Class IV, when tested in accordance with UL 325.
				5. Motor: 115 V, 1 phase, 1/2 HP (373 Watts) continuous duty, 5.4 A; AC power.
			3. For Gates Up to 18 Feet (5.5 m) Long, Weighing Up to 600 lbs (272 kg): DoorKing Model 6300; 12 inches (305 mm) high by 16 inches (406 mm) wide by 31 inches (787 mm) long; operator arm rotating 90 degrees in 15 to 18 seconds, nominal.
				1. Class I, when tested in accordance with UL 325.
				2. Class II, when tested in accordance with UL 325.
				3. Class III, when tested in accordance with UL 325.
				4. Class IV, when tested in accordance with UL 325.
				5. Motor: 115 V, 1 phase, 1/2 HP (373 Watts) continuous duty, 5.4 A; AC power.
				6. Motor: 230 V, 1 phase, 1/2 HP (373 Watts) continuous duty, 2.7 A; AC power.
				7. Motor: 230 V, 3 phase, 1/2 HP (373 Watts) continuous duty, 2.7 A; AC power.
				8. Motor: 460 V, 3 phase, 1/2 HP (373 Watts) continuous duty, 1.35 A; AC power.
				9. Motor: 115 V, 1 phase, 1 HP (746 Watts) continuous duty, 9.2 A; AC power.
				10. Motor: 230 V, 1 phase, 1 HP (746 Watts) continuous duty, 4.6 A; AC power.
				11. Motor: 230 V, 3 phase, 1 HP (746 Watts) continuous duty, 4.6 A; AC power.
				12. Motor: 460 V, 3 phase, 1 HP (746 Watts) continuous duty, 2.3 A; AC power.
			4. Entrapment Protection: Gate stopped and internal alarm activated when sensing an entrapment, allowing entrapment opportunity to free self without outside intervention; requires reset switch activation to return to normal.
			5. Battery Powered Back Up DC Drive System: Powers barrier arm in case of power failure to operator; resets operator to normal operation when power resumes.
		3. Slide Gate Operator: DoorKing Vehicular Slide Gate Operator; Microprocessor based solid-state control board; two convenience outlets, power switch, and reset switch; adjustable clutch; two convenience outlets; built-in lockable power disconnect and reset switch; adjustable automatic timer; automatically reversing gate to full up position if obstruction is met during closing cycle.

\*\* NOTE TO SPECIFIER \*\* Delete six of the following seven paragraphs.

* + - 1. For Gates Up to 16 Feet (4.9 m) Long, Weighing Up to 300 lbs (136 kg): DoorKing Model 9050; 24 inches (610 mm) high by 12 inches (305 mm) wide by 11-1/2 inches (292 mm) deep.
				1. Class I, when tested in accordance with UL 325.
				2. Actual Footprint: 14-3/4 inches (375 mm) wide by 11-1/2 inches (292 mm) deep.
				3. Pulling Medium: Number 41 roller chain.
				4. Motor: 115 V, 1 phase, 1/3 HP (246 Watts) continuous duty, 4.3 A; AC power.
			2. For Gates Up to 22 feet (6.7 m) Long, Weighing Up to 500 lbs (227 kg): DoorKing Model 9070; 24 inches (610 mm) high by 12 inches (305 mm) wide by 11-1/2 inches (292 mm) deep.

\*\* NOTE TO SPECIFIER \*\* Delete one of the following two paragraphs. See note above for information on specifying classes.

* + - * 1. Class I, when tested in accordance with UL 325.
				2. Class II, when tested in accordance with UL 325.
				3. Actual Footprint: 14-3/4 inches (375 mm) wide by 11-1/2 inches (292 mm) deep.
				4. Pulling Medium: Number 41 roller chain.
				5. Motor: 115 V, 1 phase, 1/2 HP (373 Watts) continuous duty, 5.4 A; AC power.
			1. For Gates Up to 30 Feet (9 m) Long, Weighing Up to 1000 lbs (454 kg): DoorKing Model 9100; 24 inches (610 mm) high by 12 inches (305 mm) wide by 11-1/2 inches (292 mm) deep.

\*\* NOTE TO SPECIFIER \*\* Delete one of the following two paragraphs. See note above for information on specifying classes.

* + - * 1. Class I, when tested in accordance with UL 325.
				2. Class II, when tested in accordance with UL 325.
				3. Actual Footprint: 14-3/4 inches (375 mm) wide by 11-1/2 inches (292 mm) deep.
				4. Pulling Medium: Number 41 roller chain.
				5. Motor: 115 V, 1 phase, 1/2 HP (373 Watts) continuous duty, 5.4 A; AC power.
			1. For Gates Up to 35 Feet (9 m) Long, Weighing Up to 1000 lbs (454 kg): DoorKing Model 9000; 28 inches (686 mm) high by 16.75 inches (420 mm) wide by 19 inches (475 mm) deep; operator housing of 1/4 inch (6 mm) ABS finished in charcoal gray, coarse suede texture.

\*\* NOTE TO SPECIFIER \*\* Delete one of the following two paragraphs. See note above for information on specifying classes.

* + - * 1. Class I, when tested in accordance with UL 325.
				2. Class II, when tested in accordance with UL 325.
				3. Class III, when tested in accordance with UL 325.
				4. Motor: 115 V, 1 phase, 1/2 HP (373 Watts) continuous duty, 5.4 A; AC power.
				5. Actual Footprint: 16.75 inches (420 mm) wide by 19 inches (475 mm) deep.
				6. Pulling Medium: Number 40 roller chain.
			1. For Gates Up to 30 Feet (9 m) Long, Weighing Up to 1000 lbs (454 kg): DoorKing Model 9150; 24 inches (610 mm) high by 15 inches (381mm) wide by 16-1/2 inches (419 mm) deep.

\*\* NOTE TO SPECIFIER \*\* Delete one of the following two paragraphs. See note above for information on specifying classes.

* + - * 1. Class I, when tested in accordance with UL 325.
				2. Class II, when tested in accordance with UL 325.
				3. Class III, when tested in accordance with UL 325.
				4. Actual Footprint: 18 inches (457 mm) wide by 16-1/2 inches (419 mm) deep.
				5. Pulling Medium: Number 40 roller chain.

\*\* NOTE TO SPECIFIER \*\* Delete three of the following four paragraphs.

* + - * 1. Motor: 115 V, 1 phase, 1/2 HP (373 Watts) continuous duty, 5.4 A; AC power.
				2. Motor: 230 V, 1 phase, 1/2 HP (373 Watts) continuous duty, 2.7 A; AC power.
				3. Motor: 230 V, 3 phase, 1/2 HP (373 Watts) continuous duty, 2.7 A; AC power.
				4. Motor: 460 V, 3 phase, 1/2 HP (373 Watts) continuous duty, 1.35 A; AC power.
			1. For Gates Up to 45 Feet (14 m), Weighing Up to 1500 lbs (680 kg): DoorKing Model 9150; 24 inches (610 mm) high by 15 inches (381mm) wide by 16-1/2 inches (419 mm) deep.

\*\* NOTE TO SPECIFIER \*\* Delete one of the following two paragraphs. See note above for information on specifying classes.

* + - * 1. Class I, when tested in accordance with UL 325.
				2. Class II, when tested in accordance with UL 325.
				3. Class III, when tested in accordance with UL 325.
				4. Actual Footprint: 18 inches (457 mm) wide by 16-1/2 inches (419 mm) deep.
				5. Pulling Medium: Number 40 roller chain.

\*\* NOTE TO SPECIFIER \*\* Delete three of the following four paragraphs.

* + - * 1. Motor: 115 V, 1 phase, 1 HP (746 Watts) continuous duty, 14.0 A; AC power.
				2. Motor: 230 V, 1 phase, 1 HP (746 Watts) continuous duty, 7.0 A; AC power.
				3. h. Motor: 230 V, 3 phase, 1 HP (746 Watts) continuous duty, 7.0 A; AC power.
				4. Motor: 460 V, 3 phase, 1 HP (746 Watts) continuous duty, 3.5 A; AC power.
			1. For Gates Up to 100 feet (30.5 m) Long, Weighing Up to 3000 lbs (1361 kg): DoorKing Model 9200; 35 inches (889 mm) high by 16 inches (406 mm) wide by 16 inches (406 mm) deep.
				1. Class IV, when tested in accordance with UL 325.
				2. Actual Footprint: 20 inches (508 mm) wide by 18 inches (457 mm) deep.
				3. Pulling Medium: Number 60 roller chain.
				4. Motor: 115 V, 1 phase, 1/2 HP (373 Watts) continuous duty, 5.4 A; AC power.

\*\* NOTE TO SPECIFIER \*\* The following paragraph does not apply to model 9200.

* + - 1. Entrapment Protection: Including primary and secondary sensing system reversing gate if obstruction sensed; gate stopped and internal alarm activated when sensing an entrapment, allowing entrapment opportunity to free self without outside intervention; requires reset switch activation to return to normal.

\*\* NOTE TO SPECIFIER \*\* Delete one of the following two paragraphs. The second paragraph applies to model 9200 only; delete if not required.

* + - 1. Manual Release: Built-in manual release allowing manual operation of gate.
			2. Manual Release: Removable crank allowing manual operation of gate; including integral interlock switch preventing start-up of gate operator during cranking operations.
			3. Gate Operator Speed: 1 foot (305 mm) per second.
			4. Operator Housing: 12 gage, 0.104 inch (2.6 mm) G-90 galvanized steel and aluminum with charcoal gray finish, unless otherwise indicated.

\*\* NOTE TO SPECIFIER \*\* The following paragraph is optional; delete if not required.

* + - 1. Provide timer override to reduce tailgating.

\*\* NOTE TO SPECIFIER \*\* The following paragraph is only available for models 9150 and 9300; delete if not required.

* + - 1. Battery Powered Back Up DC Drive System: Powers barrier arm in case of power failure to operator; resets operator to normal operation when power resumes.
	1. SENSORS AND CONTROLS

\*\* NOTE TO SPECIFIER \*\* Describe the actuator and safeties for gates. Delete the following paragraphs not required.

* + 1. In-Gate Actuator: \_\_\_\_\_\_\_\_\_\_\_\_.
		2. Out-Gate Actuator: \_\_\_\_\_\_\_\_\_\_\_\_.
		3. In and Out-Gate Actuator: \_\_\_\_\_\_\_\_\_\_\_\_\_.
		4. In-Gate Safeties: \_\_\_\_\_\_\_\_\_\_\_\_.
		5. Out-Gate Safeties: \_\_\_\_\_\_\_\_\_\_\_.

\*\* NOTE TO SPECIFIER \*\* The following five paragraphs are sensors to open the gate and to prevent gate from closing on vehicular traffic; delete if not required.

* + 1. In and Out-Gate Safeties: \_\_\_\_\_\_\_\_\_\_\_\_.
		2. Single Channel Loop Detector.
		3. Two-Channel Loop Detector.
		4. Infrared Thru-Beam; 165 foot (50 m) sensing distance.
		5. Photo-Reflective Beam; 30 foot (9 m) sensing distance.
		6. Contact Edge Sensors; Padded on leading edges of all gates.

\*\* NOTE TO SPECIFIER \*\* Data can be analyzed using DoorKing Remote Account Manager for Windows software. A DoorKing 1833, 1835, 1837, or 1838 access system is required for Gate Tracker operations. Contact manufacturer for details. The following paragraph is optional; delete if not required.

* + 1. DoorKing Gate Tracker; Control board maintaining time and date stamped detailed electronic records of cycles, input errors, loop detector errors, obstruction hits, and each time power is applied to operator.
1. EXECUTION
	1. EXAMINATION
		1. Do not begin installation until substrates have been properly prepared.
		2. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.
	2. PREPARATION
		1. Clean surfaces thoroughly prior to installation.
		2. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
	3. INSTALLATION
		1. Install in accordance with manufacturer's instructions.

\*\* NOTE TO SPECIFIER \*\* The following two paragraphs apply to all models except 9000, which is designed concrete pad mounting only, and 9200, which is designed to be pedestal mounted. Delete two of the following three paragraphs.

* + 1. Mount directly to concrete pad, firmly secured, plumb, and level.
		2. Mount post mounted; provide base plate.

\*\* NOTE TO SPECIFIER \*\* The following paragraph applies only to model 9200.

* + 1. Mount to mounting pedestal.
		2. Wire in accordance with national electric codes.
		3. Enclose all splices in easily accessible junction boxes or on terminal boards.
		4. Tag and identify all cable runs in all junction boxes.
		5. Test system and adjust to assure components and accessories are hooked-up and in working order.
	1. PROTECTION
		1. Protect installed products until completion of project.
		2. Touch-up, repair or replace damaged products before Substantial Completion.
	2. MAINTENANCE
		1. Provide Owner with two copies of operation, installation, and maintenance manuals including typical wiring diagrams.
		2. Provide Owner with two copies of risers, layouts, and special wiring diagrams showing any changes to standard drawings.
		3. Maintain at three-month intervals, checking external reversing devices once a month.

END OF SECTION