

DOOR KING SYSTEMS

ACCESS CONTROL SOLUTIONS™

PERIMETER ACCESS MANAGEMENT SOLUTION (P.A.M.S.)

Revision N, updated 01.12

PERIMETER ACCESS MANAGEMENT SOLUTION (P.A.M.S.)

- Design Concept
- How the System Works

TYPICAL SYSTEM LAYOUTS

- Swing Gate Layouts
- Slide Gate Layouts

KEYS THAT MAKE THE SYSTEM WORK

- Special inputs on 1601 Operators
- Utilizing relay contacts from Slide or Swing gate
- Critical Operator Settings and Options

SYSTEM WIRING GUIDELINES

- Swing Gate Applications
 - Slide Gate Applications
 - Dual Parking Gate Applications
-



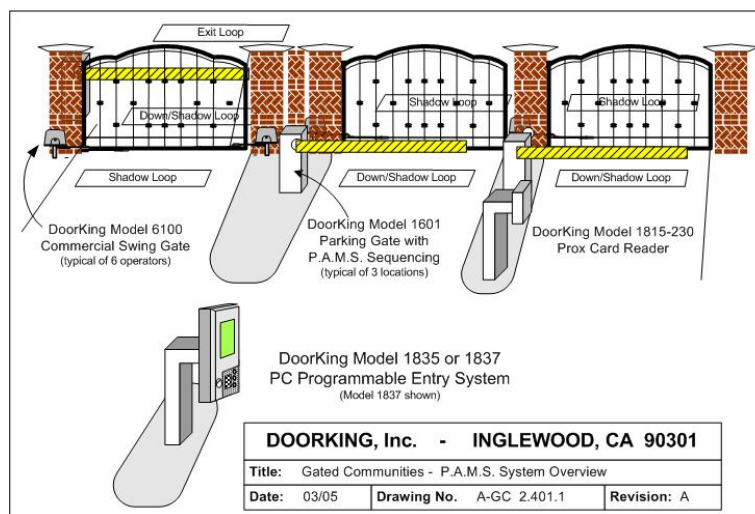
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PERIMETER ACCESS MANAGEMENT SOLUTION

HOW THE P.A.M.S. SYSTEM WORKS

EFFECTIVE CONTROL FOR VEHICULAR TRAFFIC

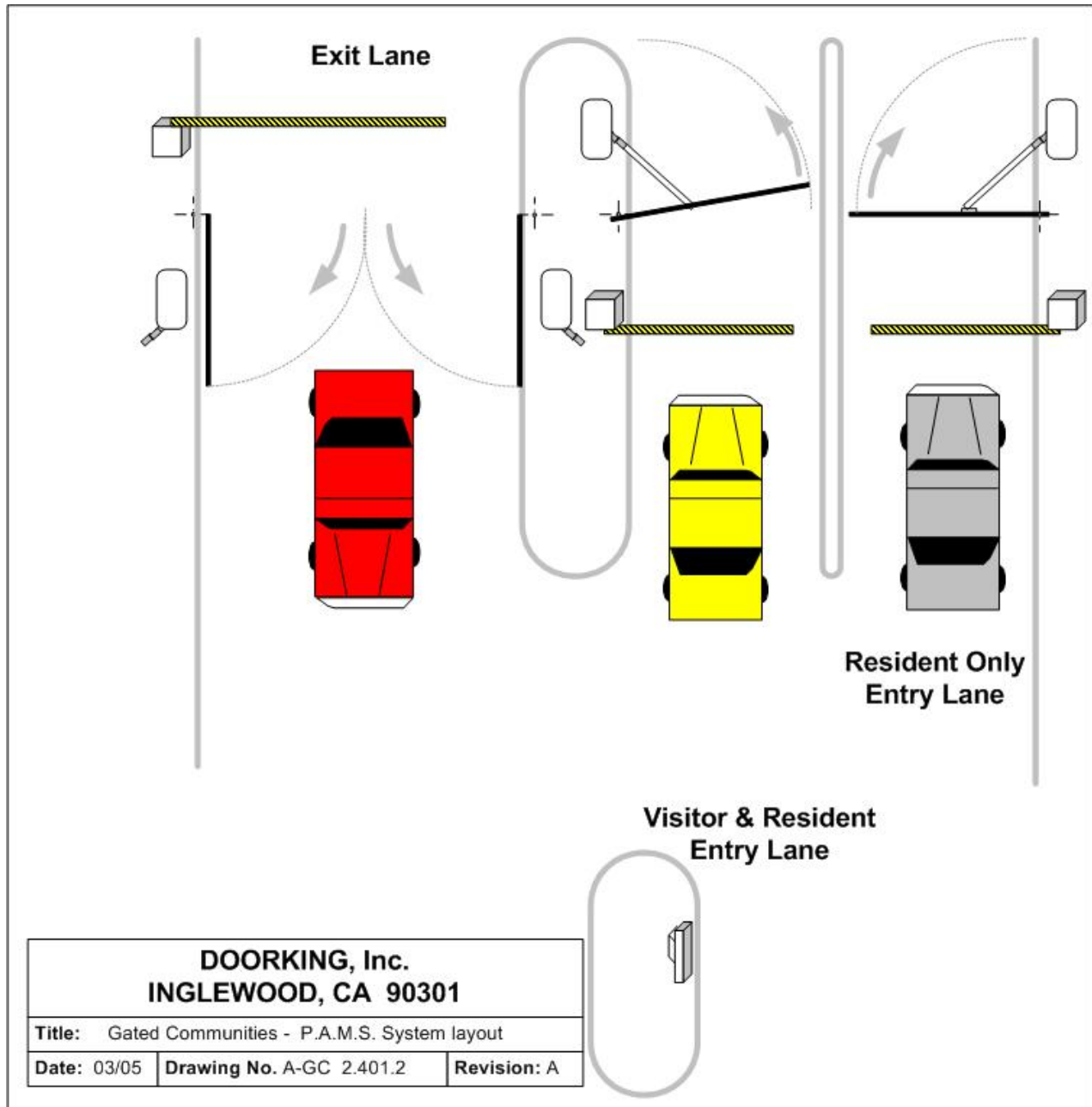
The Perimeter Access Management Solution, or P.A.M.S. for short, is based upon a pair of gate operators working in a specific operating sequence, to provide close control of vehicles entering and exiting a property. Each traffic lane is controlled by a combination of a Barrier Arm Operator and an Automatic Gate (with either a Slide or Swing Gate Operator). The sequencing of between these gate operators is a principal factor in controlling vehicular access. The start of this sequence begins with the main gate (slide or swing gate) at the full closed and the barrier arm in the down position.



When access is granted for a vehicle, the entry system relay will activate the Automatic (Slide/Swing) gate. **This gate will slide or swing open but the barrier arm will remain in the down position.** This vehicle, and any additional vehicles, will be held in position. Once the Slide/Swing gate reaches the full open position, it triggers the barrier arm, which raises to the up position. The first vehicle will accelerate and pass through the gates. **As soon as the first vehicle clears the Down Loop located beneath the barrier arm, the arm will move to the down position inhibiting another vehicle from following through.** The Slide/Swing gate will be held open by underground sensor loops. If no other vehicles are present, once the initial vehicle has passed through the gate entrance, then the Slide/Swing gate automatic close timer will count down and will close the gate after the programmed hold open time.

If additional vehicles are lined up at this entrance, the Slide/Swing gate will remain open. Additional vehicles may activate the card reader or access device and the barrier arm will cycle quickly to allow additional vehicles to enter one vehicle at a time. Once the last vehicle has entered and the Slide/Swing gate has started its closing cycle, the barrier arm will be deactivated. Activation of an access device will stop the Slide/Swing gate from closing and reopen it. Once the gate reaches the full open position, the barrier arm will be raised and the sequence will repeat itself.

PERIMETER ACCESS MANAGEMENT SOLUTIONS (P.A.M.S.)



P.A.M.S. - GATE SEQUENCING

At the heart of the P.A.M.S. concept is the sequencing of the gates. This is a principal factor in the effectiveness of this system. The following is an example of the operating sequence in a typical P.A.M.S. set up. The start of this sequence begins with the Swing (or slide) gate closed and the Barrier arm in the down position...

1 1st Vehicle: Open command is activated (Card Access, Telephone Entry, etc.)

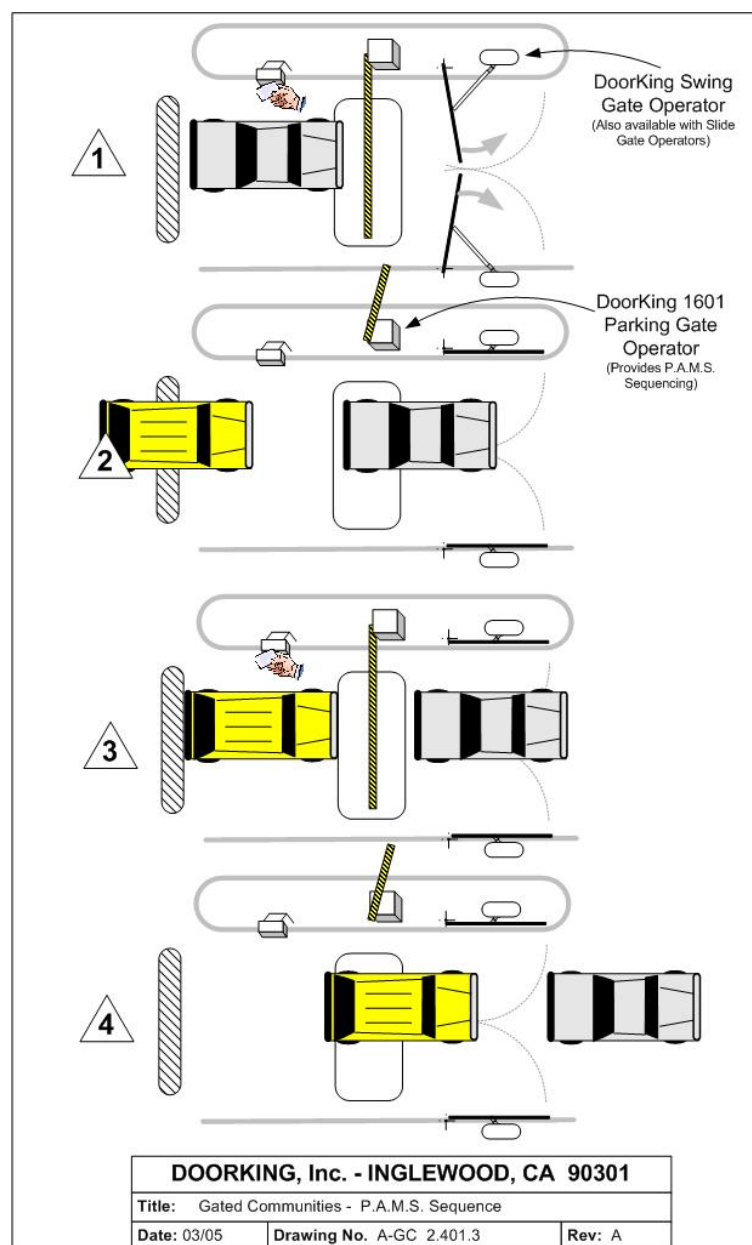
Main Gate responds and opens (Swing, Slide, Overhead, etc). Parking gate ignores open command.

2 When Main Gate reaches full open position it provides open command to **Parking Gate** for first vehicle.

3 First vehicle passes parking gate, Down Loop lowers parking arm.

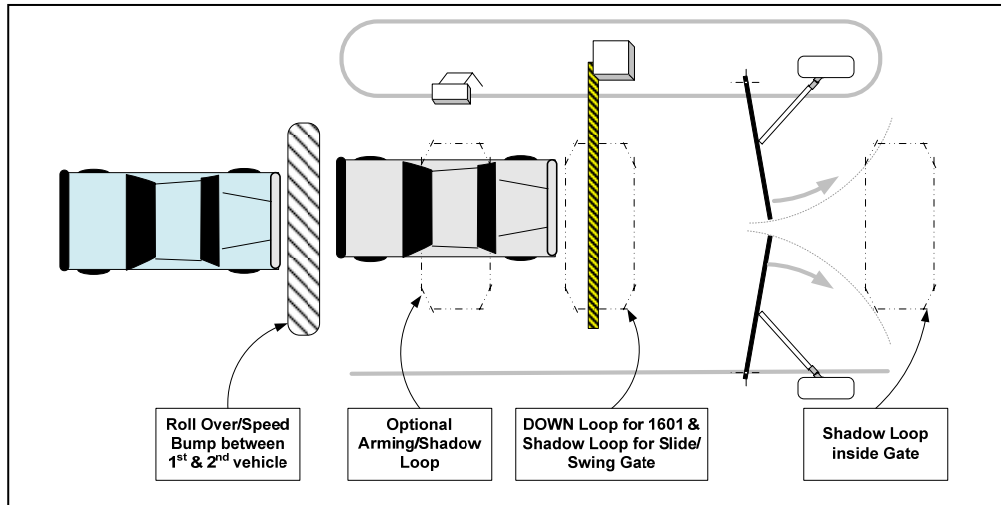
4 While Main Gate is standing open, **2nd Vehicle** can activate Card Reader, which will give Open Command to Parking Arm.

When Main Gate times out and starts to close, Parking gate is disabled. An Open Command will reverse Main gate. Parking gate will remain in Down Position until Main Gate reaches full open position.

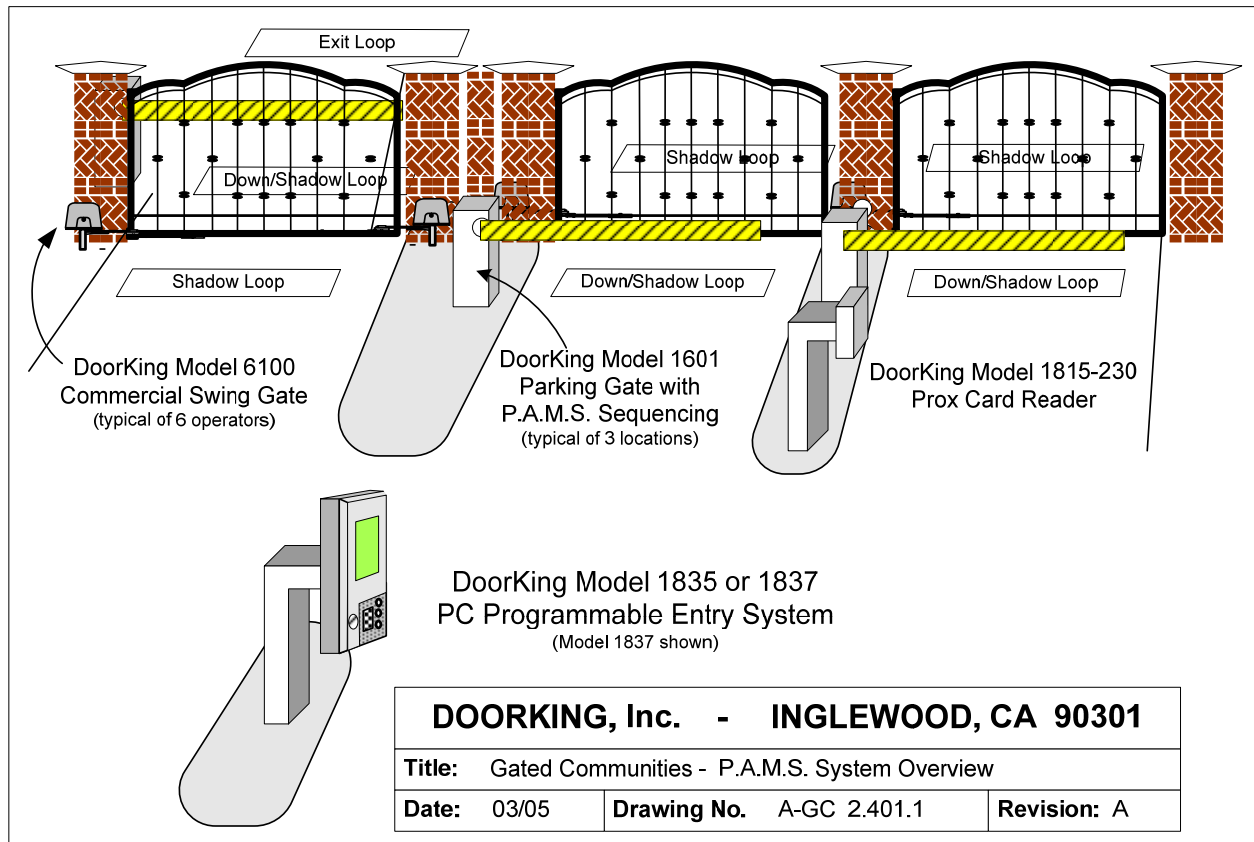


TYPICAL LAYOUTS

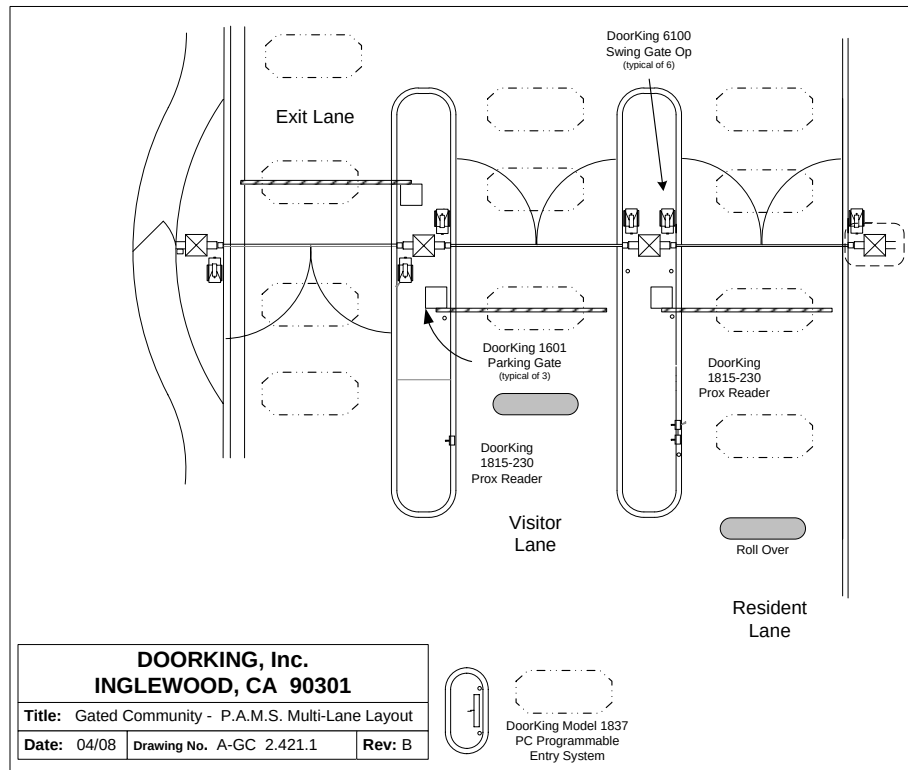
For the P.A.M.S. design to have the best results, it is important to follow the recommended guidelines on Lane Layouts, Gate Sequencing and how Access is Granted. There are several key elements to the Lane Layout:



For the P.A.M.S. concept to provide the best performance, it is strongly recommended to utilize a **3-Lane layout**. This provides an Exit Lane, a Resident Entry Lane and a Visitor/Resident Entry Lane. The separate entry lanes are necessary to ensure smooth movement of vehicles during peak traffic periods.



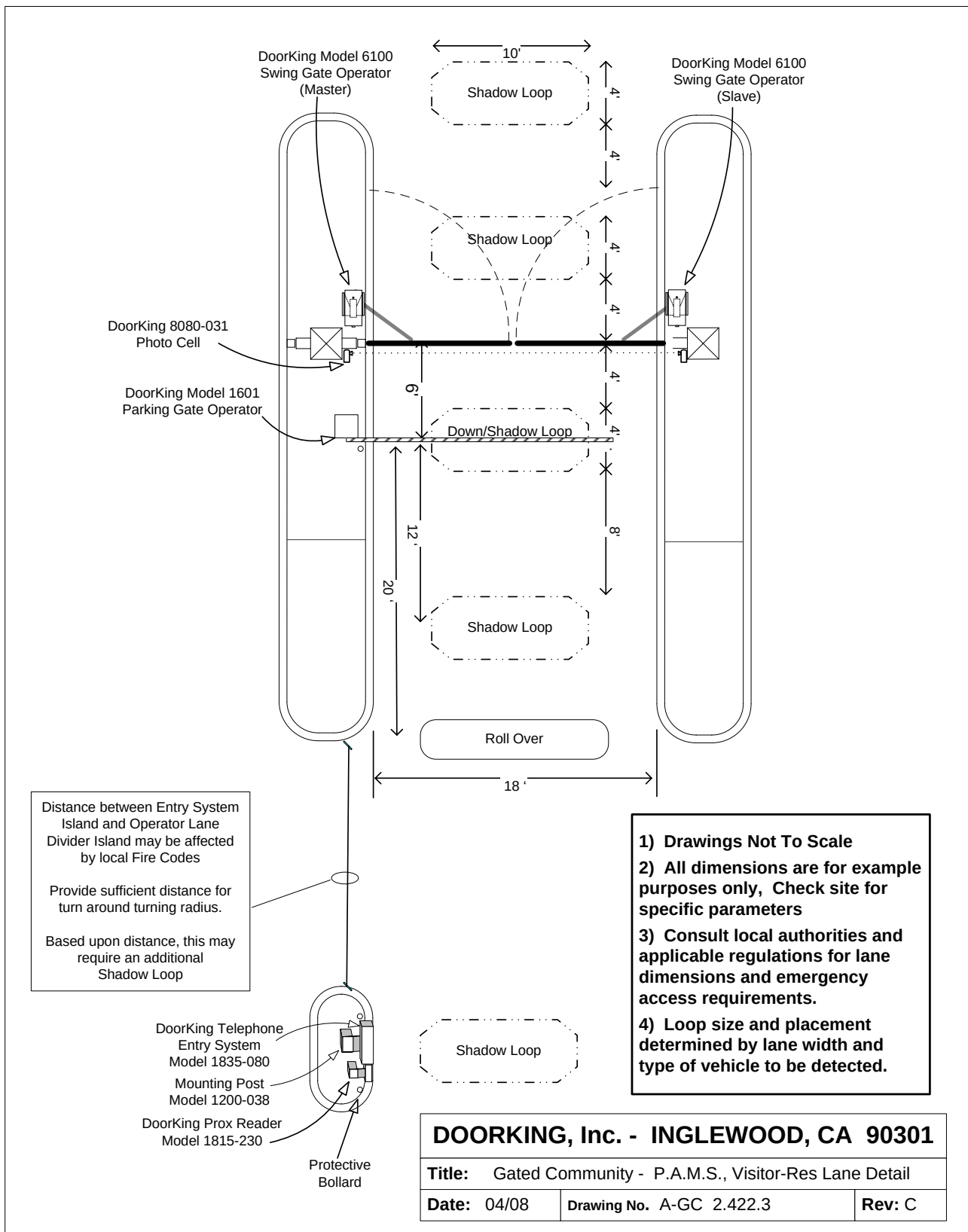
TYPICAL LAYOUTS



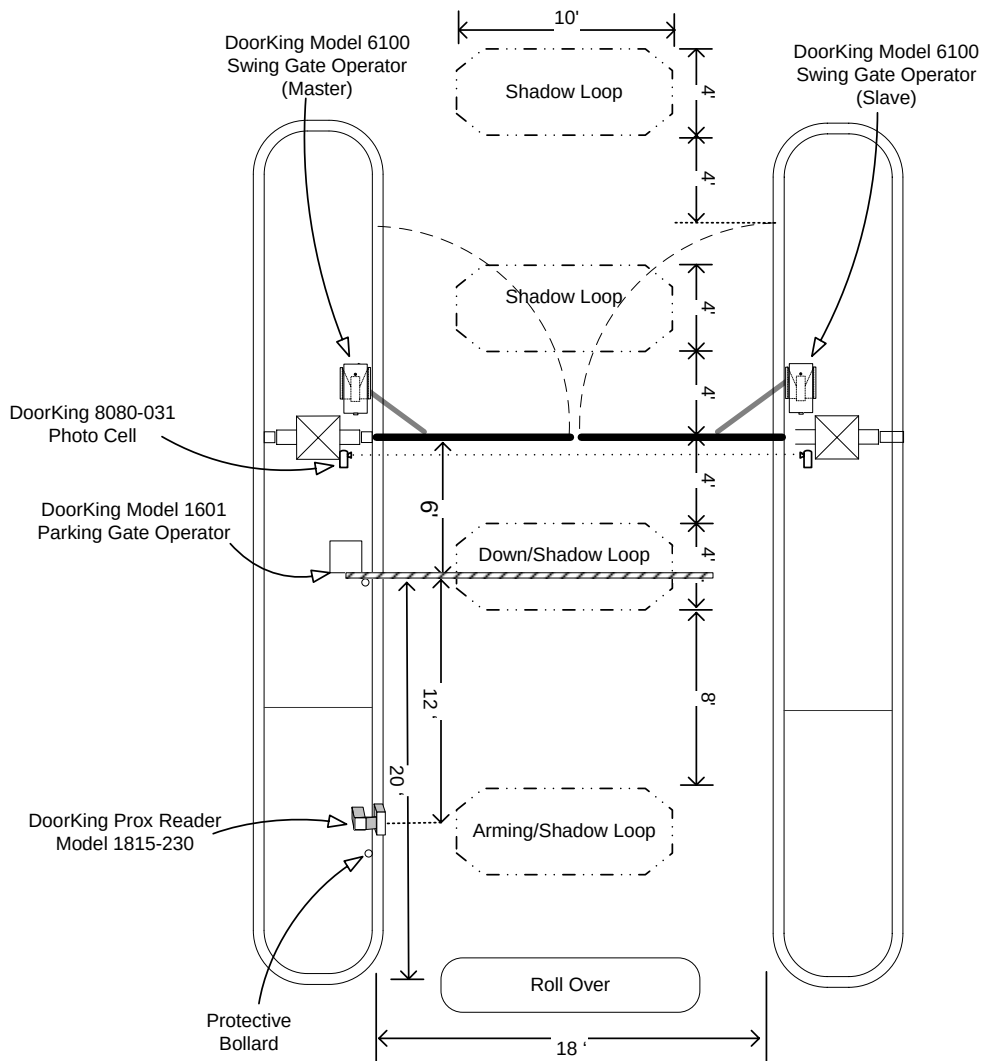
There are a few critical equipment and lane layout design specifications that should be adhered to in order for the P.A.M.S. System to provide optimum performance. These include:

- ☑ **Equipment Placement:** Follow the guidelines provided in the lane details pertaining to distances between the Iron Gate and the Parking Gate, and between the Parking Gate, Card Reader and Roll Over/Speed Bump.
- ☑ **Shadow Loops:** On the Visitor Lane, make sure coverage is provided between the Phone System and the Parking Gate to keep the system open and operational for slow vehicles
- ☑ **Arming Loops:** When utilizing an RF Control for entry, using Arming Loops will ensure that a vehicle is in the traffic lane and at the parking gate prior to initiating the gate cycle.
- ☑ **Gate Settings:** Follow the guidelines for gate settings, including Close Timer settings.
- ☑ **Entrapment Protection:** Gate System should meet standards as defined under UL-325 and ASTM F-2200.

P.A.M.S. DETAIL: VISITOR/RESIDENT LANE, SWING GATE



P.A.M.S. DETAIL: RESIDENT ONLY LANE, SWING GATE



- 1) Drawings Not To Scale
- 2) All dimensions are for example purposes only, Check site for specific parameters
- 3) Consult local authorities and applicable regulations for lane dimensions and emergency access requirements.
- 4) Loop size and placement determined by lane width and type of vehicle to be detected.

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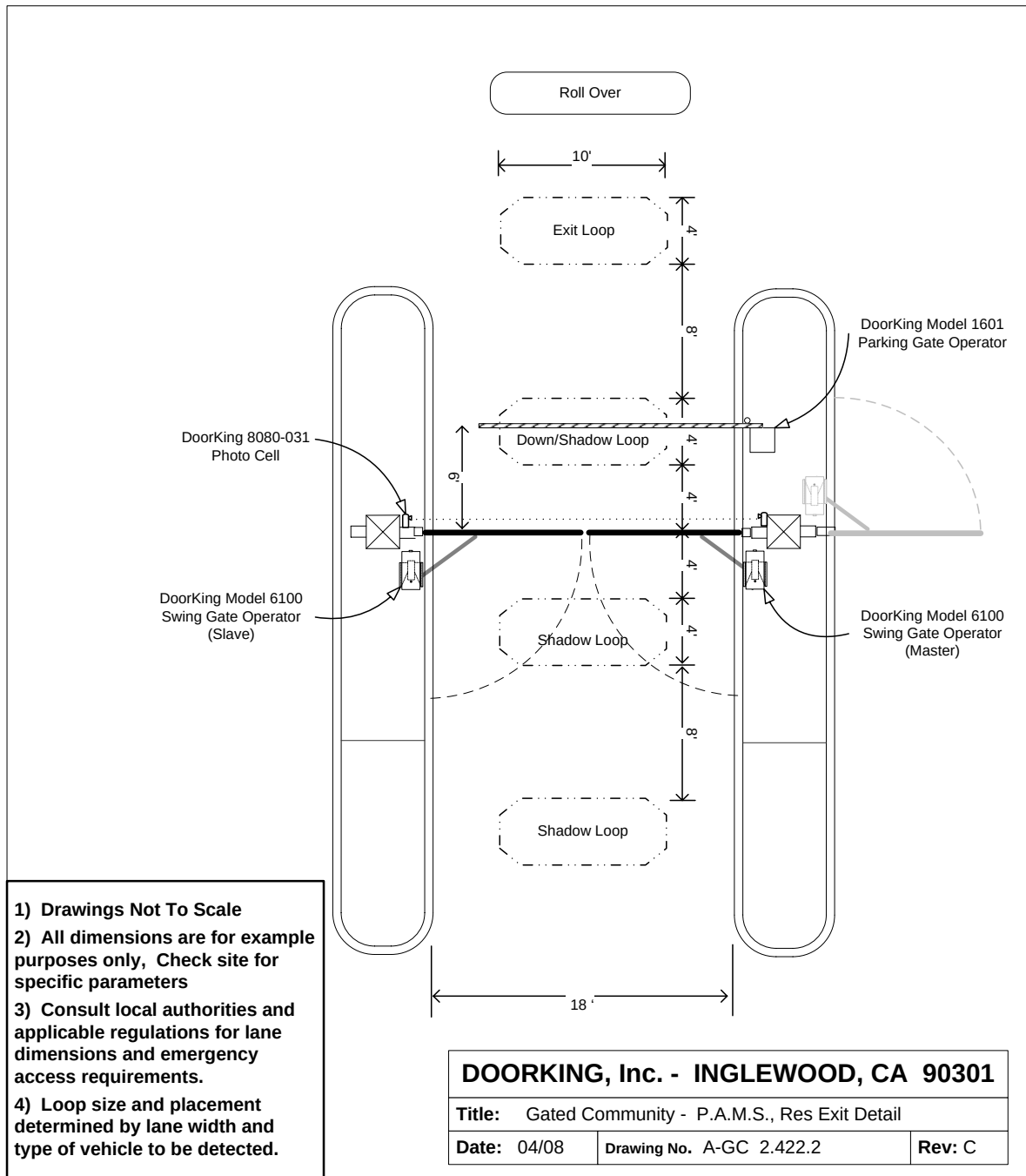
Title: Gated Community - P.A.M.S., Res Entry Detail

Date: 04/08

Drawing No. A-GC 2.422.4

Rev: C

P.A.M.S. DETAIL: EXIT LANE, SWING GATE



TYPICAL EQUIPMENT LIST - 3-LANE P.A.M.S. W/ SWING GATES

Please note that there are many options available when configuring the P.A.M.S. Gate System. These options include: Battery Back-up for Gate Operators, Operator Mounting Kits, Parking Gate Arm Styles, Access Device Options.

Description	Model #	Quantity
Bi-parting Vehicular Iron Swing Gate (by outside contractor)	N/A	3 sets
DoorKing Sealed Bearing Hinges	1200-019	12
DoorKing Commercial Swing Gate Operator, ½ hp Master	6100-080	3
DoorKing Commercial Swing Gate Op, ½ hp slave-unit	6100-081	3
DoorKing Swing Gate Accessory Kit, Pad Mount	2600-691	6
DoorKing Parking Gate Operator w/P.A.M.S. sequencing	1601-080	3
*DoorKing Aluminum Arm Hardware Kit	1601-242	3
*DoorKing Aluminum Arm, 14 ft.	1601-216	3
DoorKing Digital Loop Detector 2-channel (Down/Shadow Loops)	9409-010	3
DoorKing Digital Loop Detector Single Channel (Arming Loops and Shadow Loops at phone system)	9410-047	2
DoorKing Underground Loop Wire (XLPE) Black	9402-077	1000'
DoorKing Underground Loop Wire (XLPE) Blue	9402-079	1000'
DoorKing Infrared Thru-Beam Photo Cell	8080.031	3
DoorKing PC Programmable Phone Entry System, including 500 memory and Remote Account Manager Software	1835-080 1835-144	1 1
DoorKing Architectural series Gooseneck Mounting Post	1200-038	1
**DoorKing Proximity Card Reader in lighted housing	1815-230	2
DoorKing Gooseneck Mounting Post for prox reader	1200-046	2
DoorKing Prox Cards	1508-110	qty as needed
DoorKing Wiegand RF Receiver	8056-080	1
DoorKing MicroPLUS RF Transmitters	8069-080	as needed
Emergency Access Device	As required by local codes.	

NOTES:

* DoorKing also manufactures Wood and PVC arms for the 1601 Parking Gate Operator

** DoorKing has various card reader models available, including touch plate readers and proximity readers. We also have digital keypads available, which may be substituted for any access device.

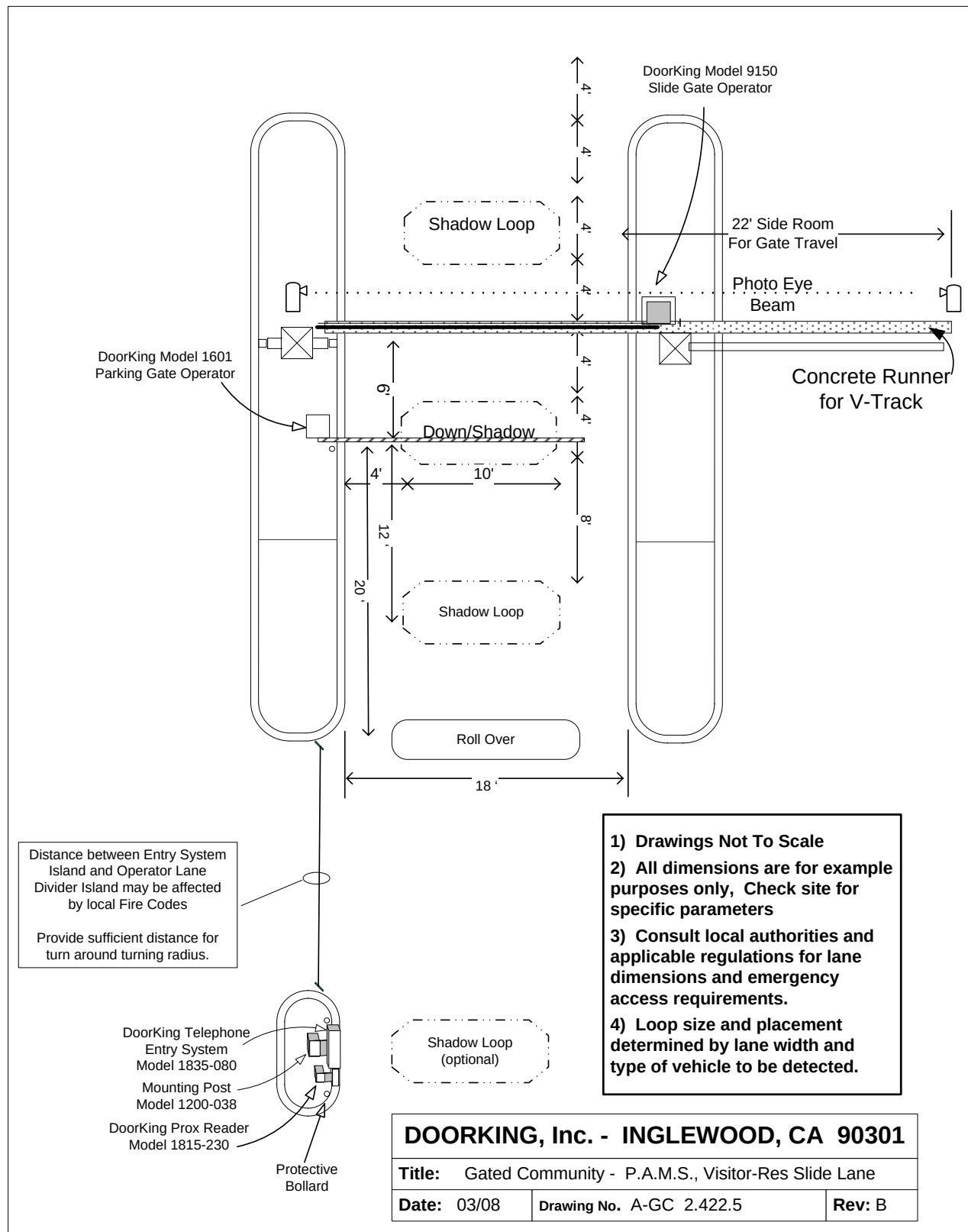
Options: Photo Reflective type photo cell available (8080-011). Standard Photo Cell layout provides separate Photo Cells for Opening and Closing cycles. A single photo cell may be used if placed close to operator.



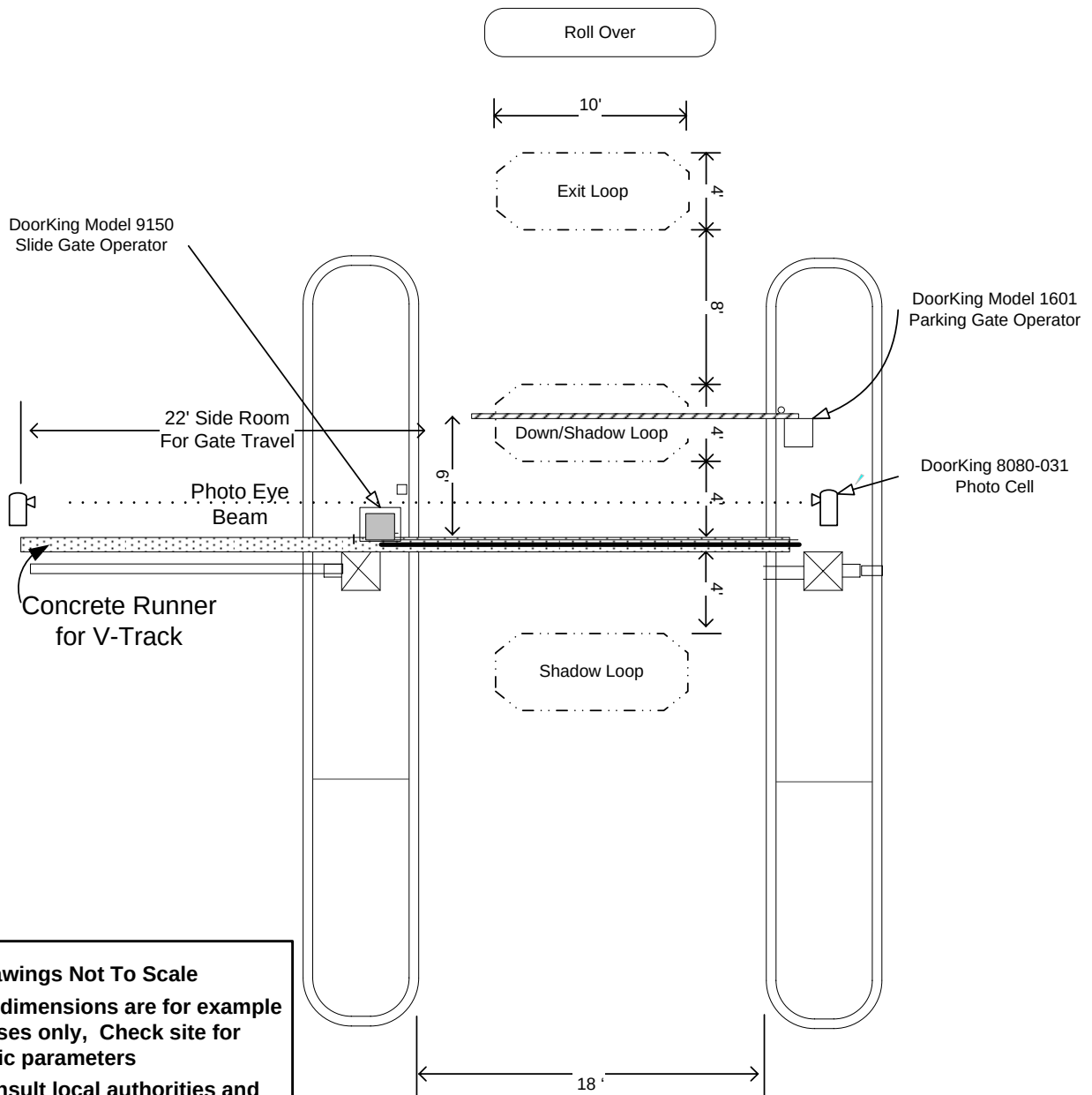
ACCESS CONTROL SOLUTIONS...

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P.A.M.S. DETAIL: VISITOR/RESIDENT LANE, SLIDE/OVERHEAD GATE



P.A.M.S. DETAIL: EXIT LANE, SLIDE/OVERHEAD GATE



- 1) Drawings Not To Scale
- 2) All dimensions are for example purposes only, Check site for specific parameters
- 3) Consult local authorities and applicable regulations for lane dimensions and emergency access requirements.
- 4) Loop size and placement determined by lane width and type of vehicle to be detected.

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Title: Gated Community - P.A.M.S., Res Exit Slide Detail

Date: 08/10

Drawing No. A-GC 2.422.6

Rev: A

TYPICAL EQUIPMENT LIST - 3-LANE P.A.M.S. SLIDE GATES

Please note that there are many options available when configuring the P.A.M.S. Gate System. These options include: Battery Back-up for Gate Operators, Operator Mounting Kits, Parking Gate Arm Styles, Access Device Options.

Description	Model #	Quantity
Vehicular Iron Slide Gate (by outside contractor)	N/A	3 sets
DoorKing Machined Steel V-Wheel Assy	1201-117	6
DoorKing Guarded Guide Rollers, 6" Single	1201-241	6
DoorKing Commercial Slide Gate Op, ½ hp	9150-080	3
DoorKing Parking Gate Operator w/P.A.M.S. sequencing	1601-080	3
*DoorKing Aluminum Arm Hardware Kit	1601-242	3
*DoorKing Aluminum Arm, 14 ft.	1601-216	3
DoorKing Digital Loop Detector 2-channel (Down/Shadow Loops)	9409-010	3
DoorKing Digital Loop Detector Single Channel (Arming Loops and Shadow Loops at phone system)	9410-047	2
DoorKing Underground Loop Wire (XLPE) Black	9402-077	1000'
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DoorKing Infrared Thru-Beam Photo Cell	8080.031	3
DoorKing PC Programmable Phone Entry System, including 500 memory and Remote Account Manager Software	1835-080 1835-144	1 1
DoorKing Architectural series Gooseneck Mounting Post	1200-038	1
**DoorKing Proximity Card Reader in lighted housing	1815-230	2
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DoorKing Prox Cards	1508-110	qty as needed
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DoorKing MicroPLUS RF Transmitters	8069-080	as needed
Emergency Access Device	As required by local codes.	

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** DoorKing has various card reader models available, including touch plate readers and proximity readers. We also have digital keypads available, which may be substituted for any access device.

Options: Photo Reflective type photo cell available (8080-011). Standard Photo Cell layout provides separate Photo Cells for Opening and Closing cycles. A single photo cell may be used if placed close to operator.

DOORKING SYSTEMS

Access Control Solutions™

PERIMETER ACCESS MANAGEMENT SOLUTION P.A.M.S.

REV N, 01.12

KEYS THAT MAKE THE SYSTEM WORK

- Special inputs on 1601 Operators
- Utilizing relay contacts from Slide or Swing gate
- Critical Operator Settings and Options

SYSTEM WIRING GUIDELINES

- Swing Gate Applications
 - ✓ Visitor Entry Lane
 - ✓ Exit Lane
 - Slide Gate Applications
 - ✓ Visitor Entry Lane
 - ✓ Exit Lane
 - Dual Parking Gate Applications
 - ✓ Swing Gate Lane
 - Alternative Wiring Method
 - ✓ 1601 HOLD OPEN Swing Gate when Arm is UP
-



PERIMETER ACCESS MANAGEMENT SOLUTION

KEYS FOR MAKING THE SYSTEM WORK

The DoorKing Perimeter Access Control System, or P.A.M.S., has proven to be very effective at controlling vehicular traffic and limiting access to one vehicle at a time. The key to the success of our P.A.M.S. concept is how we sequence the operation of the Barrier Arm Operator with the Swing or Slide Gate Operator.

This special gate sequencing is accomplished by utilizing some special features found in the DoorKing Gate Operators.

1601 BARRIER ARM OPERATOR: Two special inputs on this operator provide specifically designed functions, which help make the P.A.M.S. configuration work.

Momentary Up, Terminal 10 – This input provides two important functions:

- ◆ An input provided to terminal 10 will function as a “One Time UP” Command to the operator, raising the barrier arm. Once the arm reaches the UP position, any down command will lower the arm, even though the operator is still receiving a contact on terminal 10.
A continuous input on terminal 10 will only raise the arm one time. Once this contact is dropped, the sequence will start over again.
- ◆ An input on terminal #10 will also enable terminal #11. This input is only active while terminal 10 has a maintained contact present.

Enable UP, Terminal 11 - This input provides a controllable up command for the Barrier Arm:

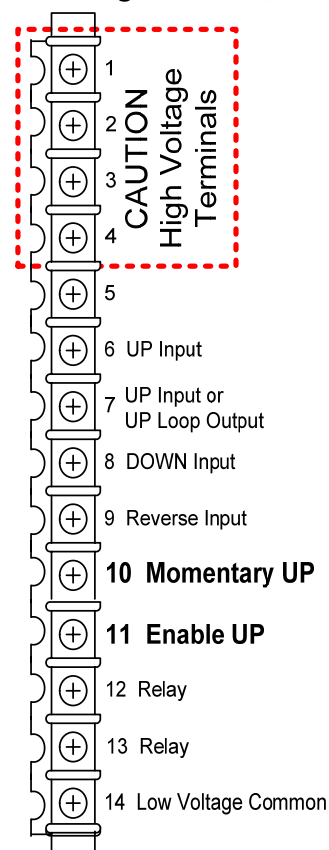
- ◆ When a contact is present at terminal 10, then terminal 11 will provide normal UP command performance for the Barrier Arm.
- ◆ If no input is present on terminal 10, then all commands received at terminal 11 are ignored.

Another important factor is the function of the dry relay contacts from terminals 12 & 13 on the 1601 Barrier Gate. These provide a link from the 1601 to the Slide or Swing gate for Shadow Loop operation.

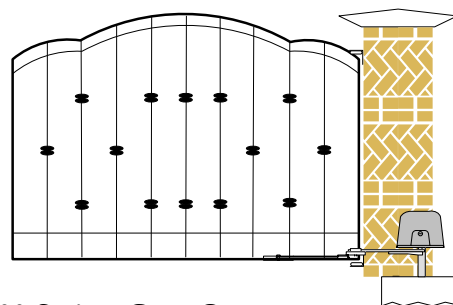
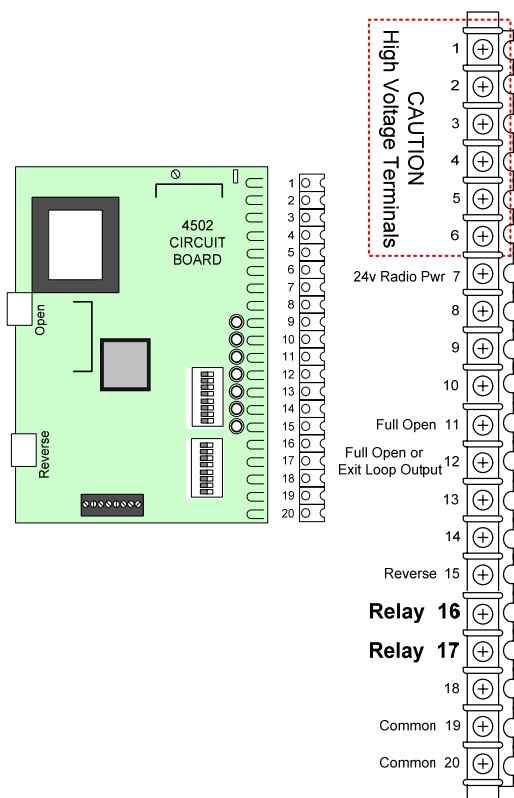
These are set to operate in conjunction with the Detector plugged into the DOWN Loop terminal.



**Model 1601
Parking Gate**



KEYS FOR MAKING THE SYSTEM WORK

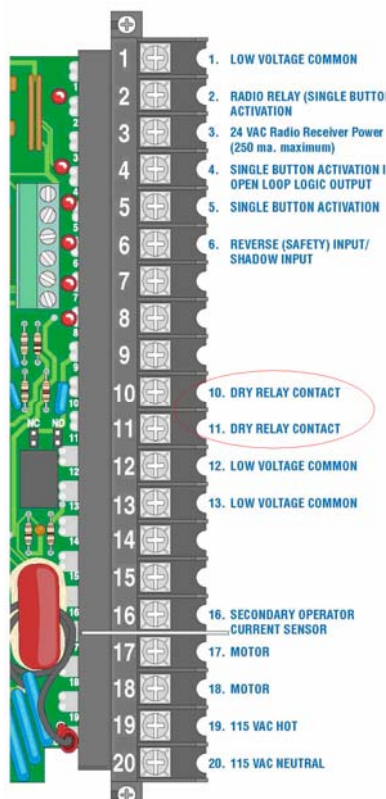


Model 6100 & 6300 Swing Gate Operator

From the Swing Gate Operator, we utilize the dry relay contact output for two basic functions:

Relay Output, Terminals 16 & 17:

- ◆ When the gate reaches the full open position, these contacts close. This provides a key input to the Momentary UP terminal (#10) on the 1601, raising the arm and activating the Enable UP terminal (#11).
- ◆ While these relay contacts are closed, this also routes the common leg of the shadow loop output from the 1601 to the 6100/6300 operator.



Model 6500 Swing Gate Operator Model 9000 Slide Gate Operator



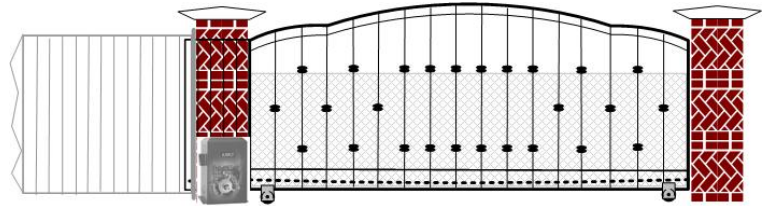
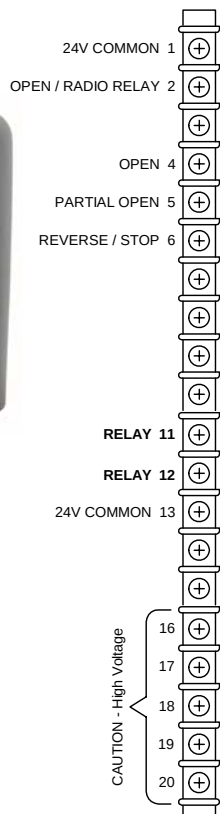
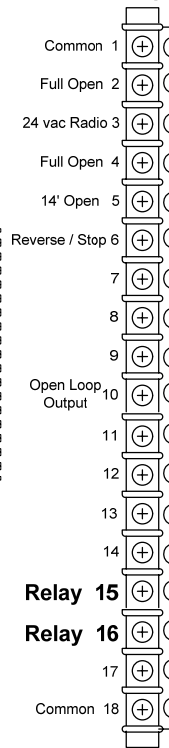
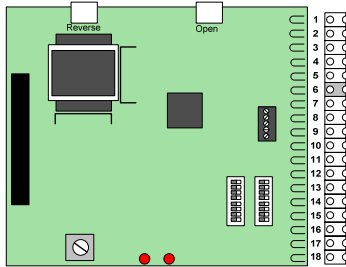
From the Swing Gate Operator, we utilize the dry relay contact output for two basic functions:

Relay Output, Terminals 10 & 11, Relay Contact:

- ◆ When the gate reaches the full open position, these contacts close. This provides a key input to the Momentary UP terminal (#10) on the 1601, raising the arm and activating the Enable UP terminal (#11).
- ◆ While these relay contacts are closed, this also routes the common leg of the shadow loop output from the 1601 to the 6100/6300 operator..

KEYS FOR MAKING THE SYSTEM WORK

Model 9100 / 9150 Slide Gate Op



Model 9100 & 9150 Slide Gate Operator

From the Slide Gate Operator, we utilize the dry relay contact output for two basic functions:

Relay Output, Terminals 15 & 16

- ◆ When the gate reaches the full open position, these contacts close. This provides a key input to the Momentary UP terminal (#10) on the 1601, raising the arm and activating the Enable UP terminal (#11).
- ◆ While these relay contacts are closed, this also routes the common leg of the shadow loop output from the 1601 to the 9100 operator.

Model 9310 Slide Gate Operator

Model 1150 Operator (terminals 12 & 13)

From the Slide Gate Operator, we utilize the dry relay contact output for two basic functions:

Relay Output, Terminals 11 & 12:

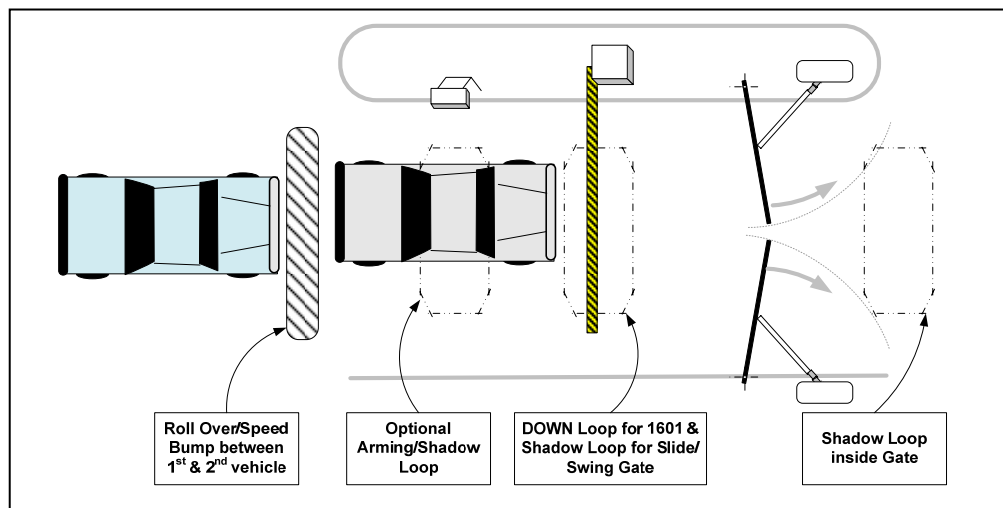
- ◆ When the gate reaches the full open position, these contacts close. This provides a key input to the Momentary UP terminal (#10) on the 1601, raising the arm and activating the Enable UP terminal (#11).
- ◆ While these relay contacts are closed, this also routes the common leg of the shadow loop output from the 1601 to the 9310 operator.



SYSTEM OPERATION

The P.A.M.S. Sequence:

- ☑ Open command is activated (Card Access, Telephone Entry, Free Exit Loop, etc.)
- ☑ Main Gate responds and opens (Swing, Slide, Overhead). Parking gate ignores open command.
- ☑ When Main Gate reaches full open position it's relay activates. This opens Parking Gate for first vehicle.
- ☑ First vehicle passes parking gate, Down Loop lowers parking arm.
- ☑ While Main Gate is standing open, any Open Command will raise Parking Gate Arm.
- ☑ When Main Gate times out and starts to close, Parking gate is disabled. An Open Command will reverse Main gate. Parking gate will remain in Down Position until Main Gate reaches full open position.
- ☑ All Loops function as Shadow Loops, holding Main Gate at full open position. However they will not reverse gate once it starts to close. They do not affect Parking Gate.



CRITICAL GATE OPERATOR SETTINGS

The P.A.M.S. system, by design, is complex and requires some very specific layout parameters and Gate Operator settings. Lane layouts, equipment locations, loop placement, wiring and sequencing of the gates are all critical factors in the system operating properly. Because of this, the system must be properly set up and maintained to minimize the potential for problems with the system operation. With this in mind, please consider the following items when evaluating a P.A.M.S. application:

Lane Layouts - We recommend utilizing the P.A.M.S. set up only in applications where there is sufficient room for separate Visitor and Resident Lanes. In applications where only a single entry lane is provided, with a visitor turnout, or where there is room for residents to pass around visitors, we recommend against utilizing the P.A.M.S. system.

Loop Operation, Gate Safety - It is important to remember that all loops in the P.A.M.S. system **operate as Shadow Loops**, not Safety Loops. The Barrier Arm provides the Safety function for the Iron Gate. **The system must be set up where the Barrier Arm operator will always close prior to the Swing/Slide Gate operator. This requires proper setting of the Auto Close timers in both gates.**

This means **if the Barrier Gate Arm is broken, there is no safety function in the gate system.** Shadow Loops will hold the gate open while a vehicle is present. However, once the gate begins to close, an approaching vehicle will not stop or reverse the gates. **Our First Recommendation is to Open Both Gates and Shut Down the System until the arm can be replaced.**

If the Barrier Arm breaks, Do Not Turn OFF the Power to the 1601. All system loops detectors are found inside the 1601 and turning off power will deactivate all system loops. The Iron Gates can then close on a vehicle at any time. **If the customer demands that the gates remain in operation with the Arm broken, then lock the operating switch inside the 1601 into the UP position.** This will allow all loops to function until the arm can be replaced.

Equipment Locations - Make certain that you have proper spacing between the Barrier Gate and the Iron Gate. Changing this spacing can affect the operation of the system.

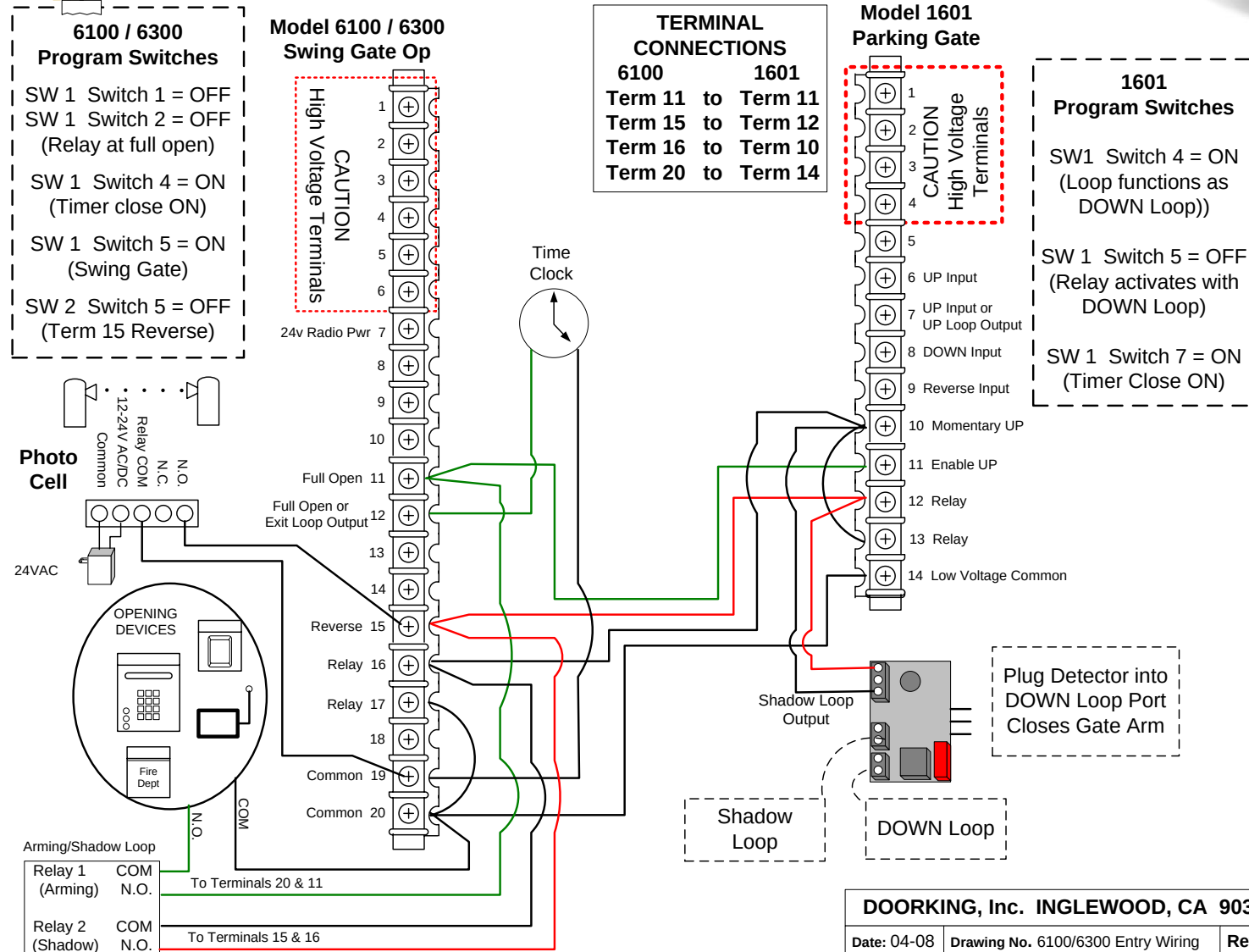
Loop Placement - Loops are a critical component of a P.A.M.S. system. This especially is true where there are long distances between the Phone System and the Gate. You may need to add Arming Loops, Shadow Loops or combined Arming/Shadow Loops.

Gate Operator Settings:

- ☒ **1601 Operator:** Set for Down Loop Function **AND** Automatic Close Timer operation. Timer should be set at around 5-10 seconds based upon the system layout. **1601 operator must always time out and close before the Swing or Slide Gate.** Set 1601 Relay to function with DOWN Loop (SW1 Switch 5 OFF, only works with DKS Plug In Detectors).
- ☒ **Swing/Slide Gate:** Set Automatic Close Timer long enough that 1601 closes prior to Swing or Slide Gate in all situations. Set Relay to provide contact closure while gate is at the Full Open position. On Swing Gates, set for terminal Reverse/Shadow input for REVERSE function (6100/6300 SW2 Switch 5 OFF), **do not set for Shadow operation.**



P.A.M.S. WIRING: ENTRY LANE WITH 6100/6300 SWING GATES



ACCESS CONTROL SOLUTIONS...

PERIMETER ACCESS MGMT SOLUTION. REV M

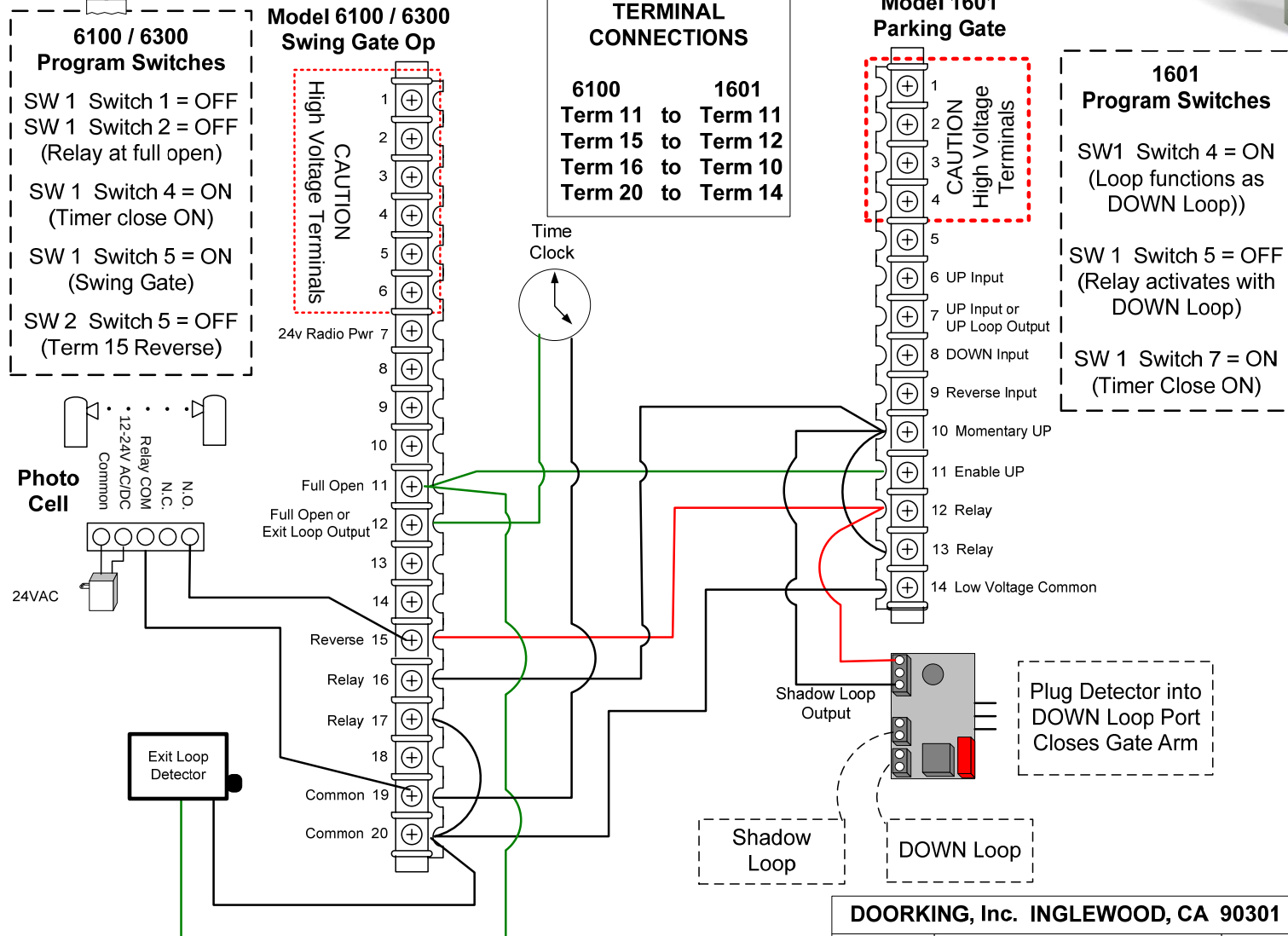
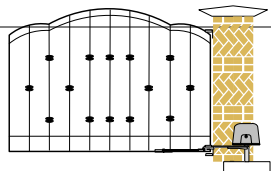
DOOR KING, Inc. INGLEWOOD, CA 90301

Date: 04-08 Drawing No. 6100/6300 Entry Wiring Rev: D

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SECTION 7: PARKING AND P.A.M.S.

P.A.M.S. WIRING: EXIT LANE WITH 6100/6300 SWING GATES



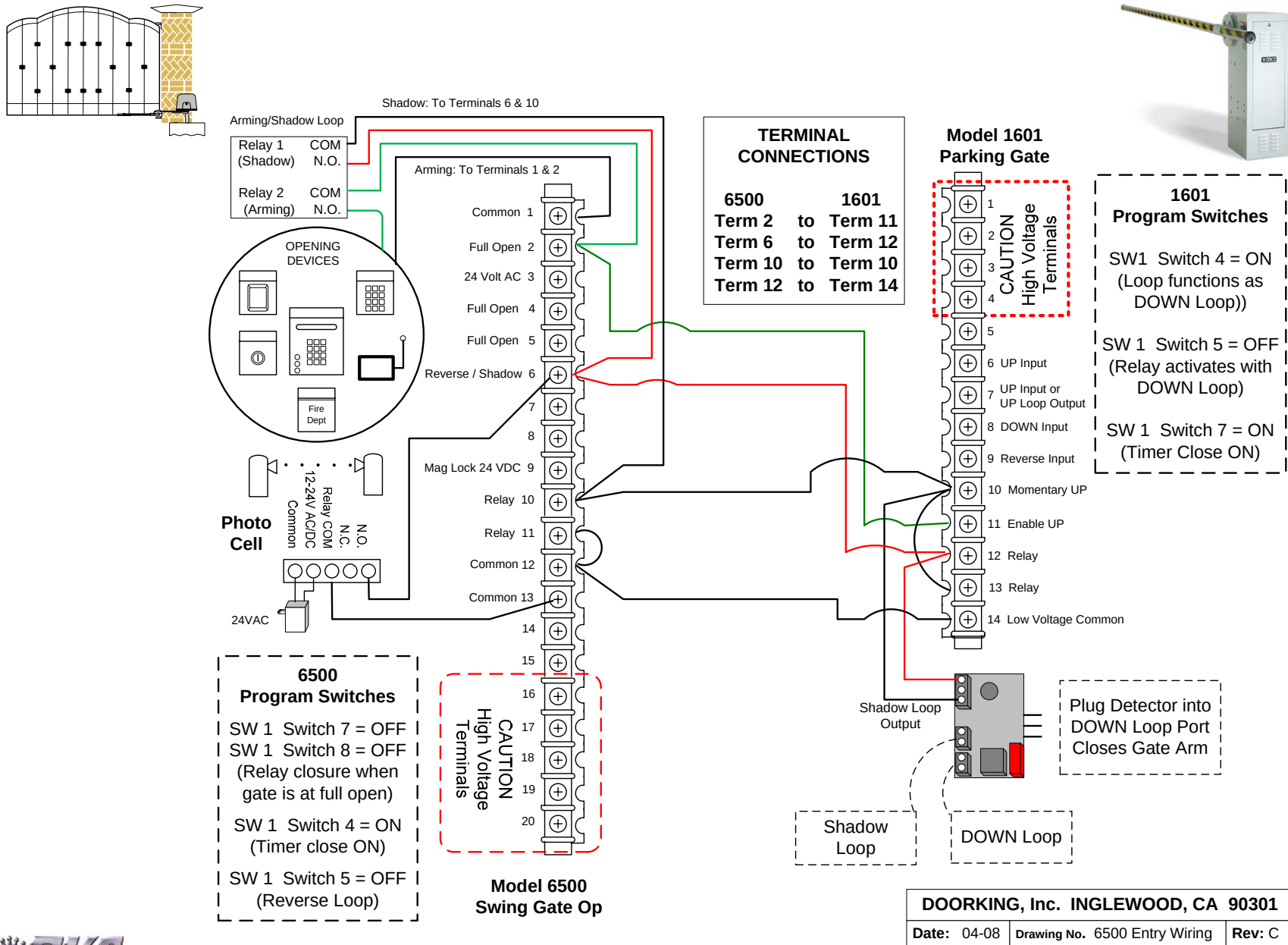
ACCESS CONTROL SOLUTIONS...

PERIMETER ACCESS MGMT SOLUTION. REV M

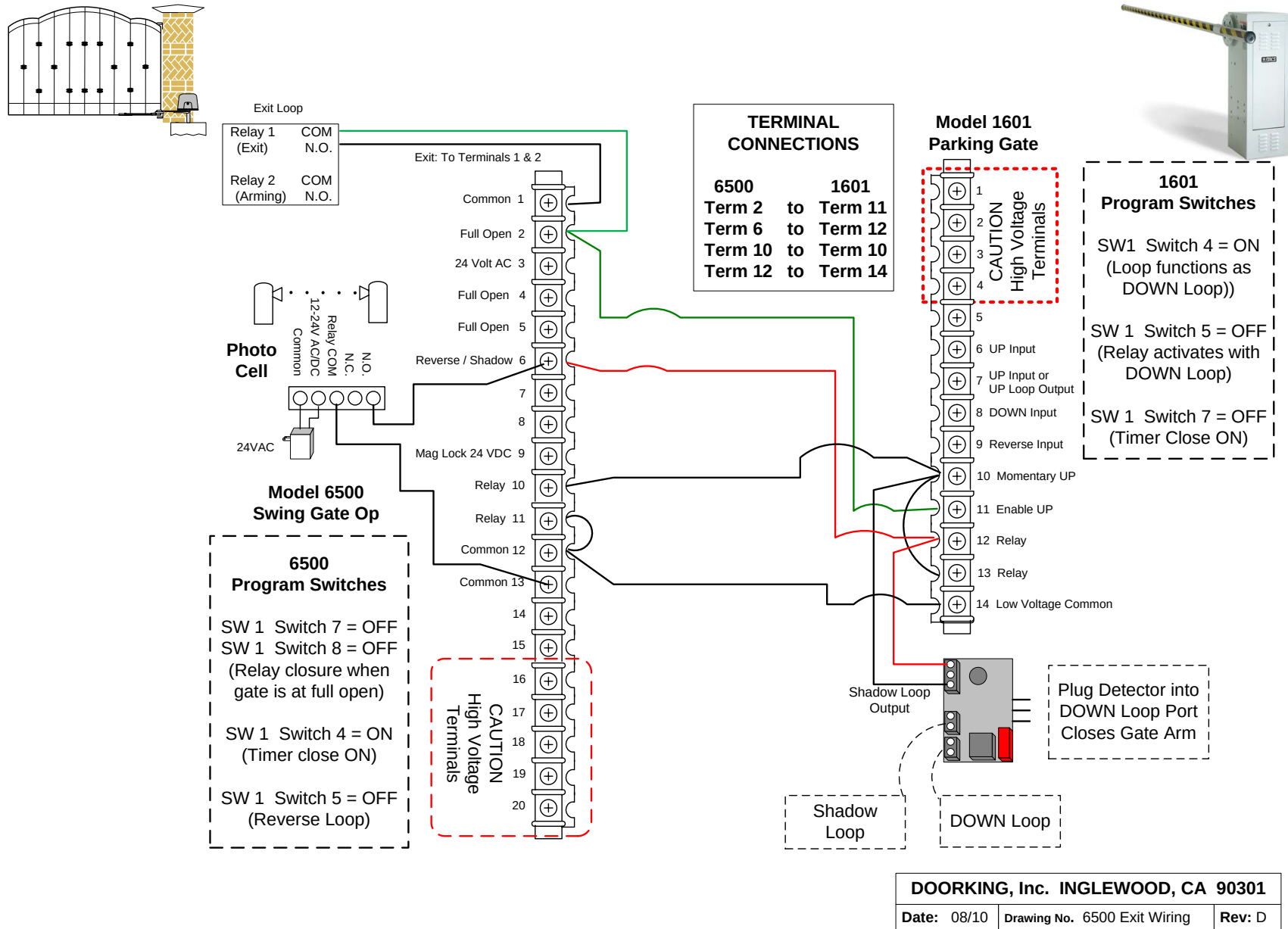
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Date: 04-08 Drawing No. 6100/6300 Exit Wiring Rev: D

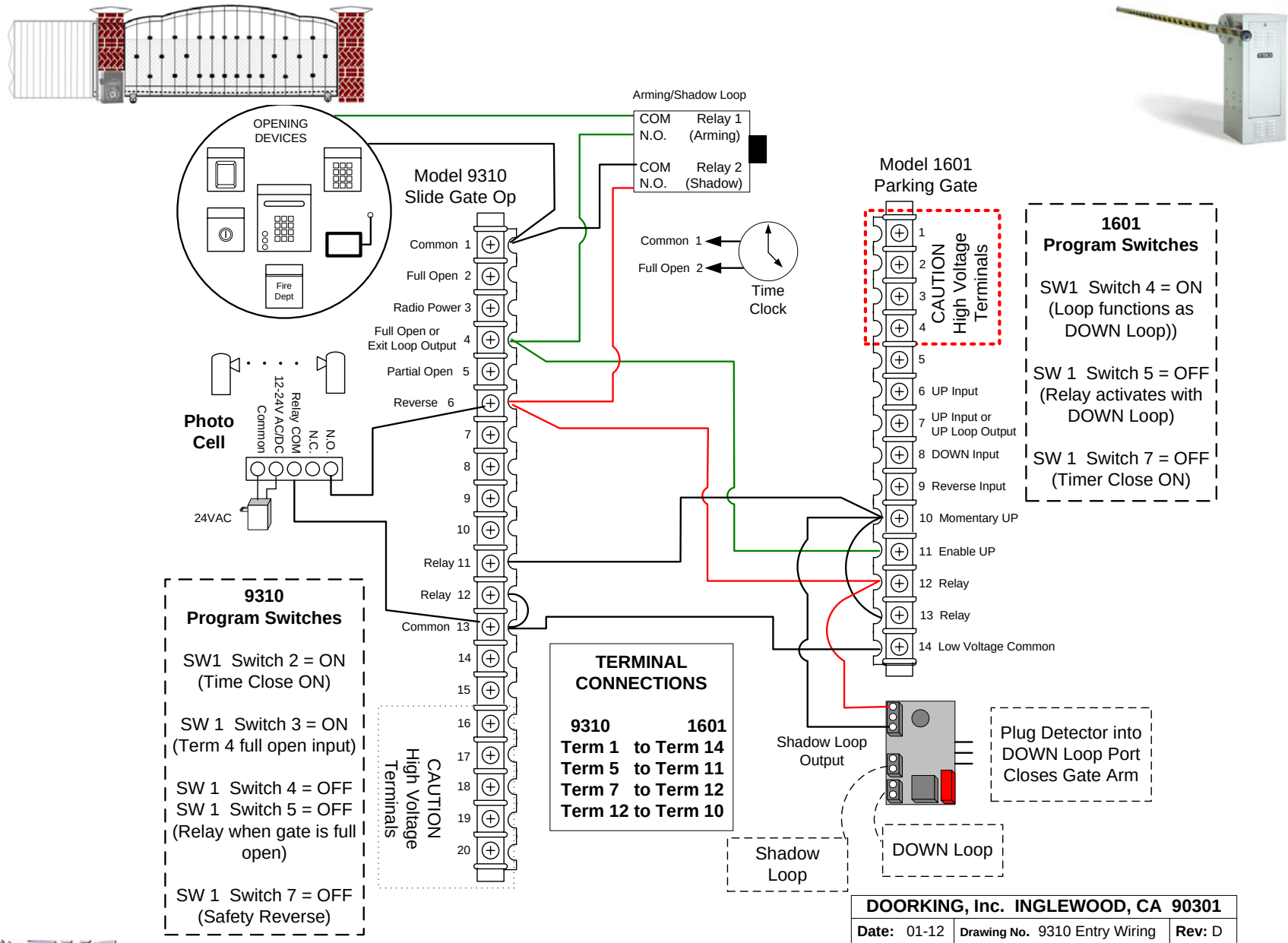
P.A.M.S. WIRING: ENTRY LANE WITH 6500 SWING / 9000 SLIDE



P.A.M.S. WIRING: EXIT LANE WITH 6500 SWING / 9000 SLIDE

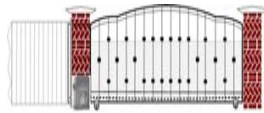


P.A.M.S. WIRING: ENTRY LANE WITH 9310 SLIDE





P.A.M.S. WIRING: ENTRY LANE WITH 9100/9150 SLIDE GATE

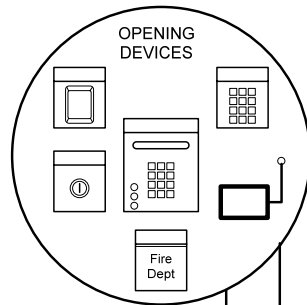
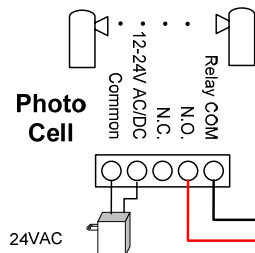


9100 / 9150 Program Switches

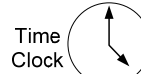
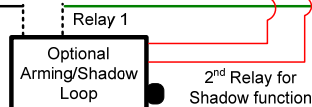
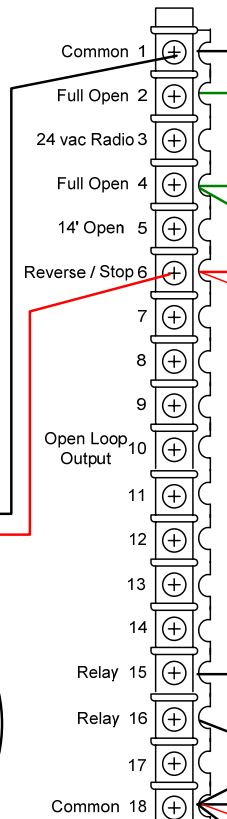
SW 1 Switch 2 = ON
(Time Close ON)

SW 1 Switch 4 = OFF
SW 1 Switch 5 = OFF
(Relay when gate
is at full open)

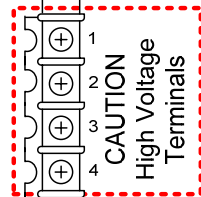
SW 2 Switch 2 = OFF
(Safety Reverse)



Model 9100 / 9150 Slide Gate Op



Model 1601 Parking Gate

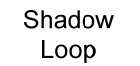
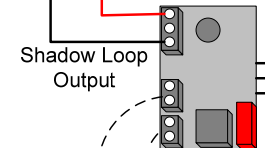


1601 Program Switches

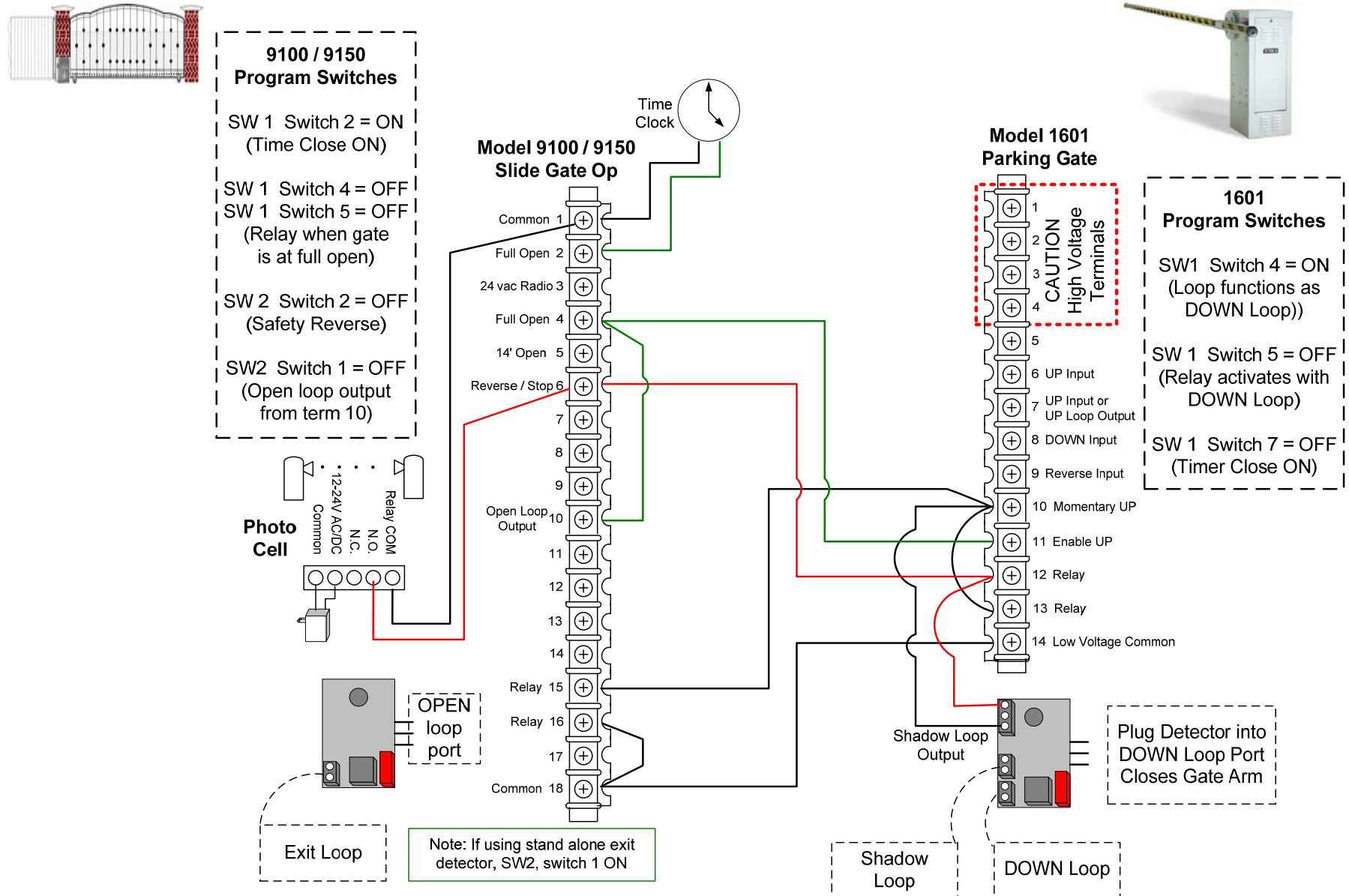
SW1 Switch 4 = ON
(Loop functions as
DOWN Loop))

SW 1 Switch 5 = OFF
(Relay activates with
DOWN Loop)

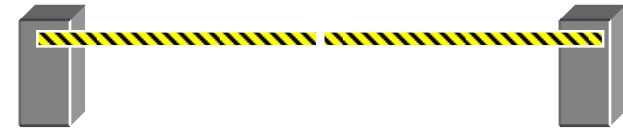
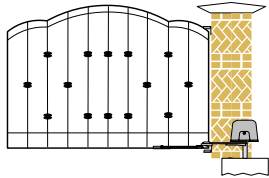
SW 1 Switch 7 = OFF
(Timer Close ON)



P.A.M.S. WIRING: EXIT LANE WITH 9100/9150 SLIDE GATE

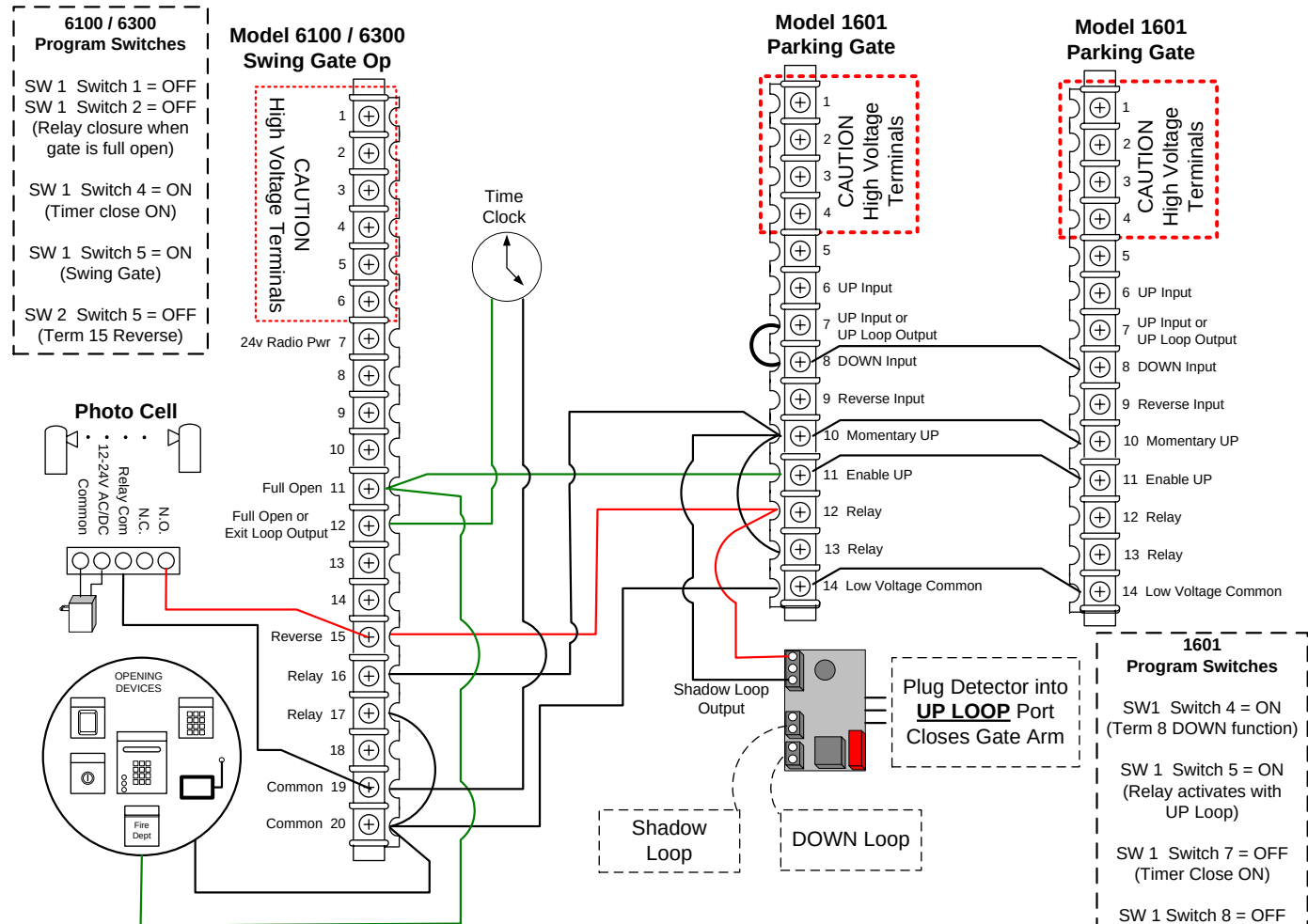


SPECIAL P.A.M.S. WIRING: ENTRY LANE WITH 6100 SWING AND BI-PARTING 1601

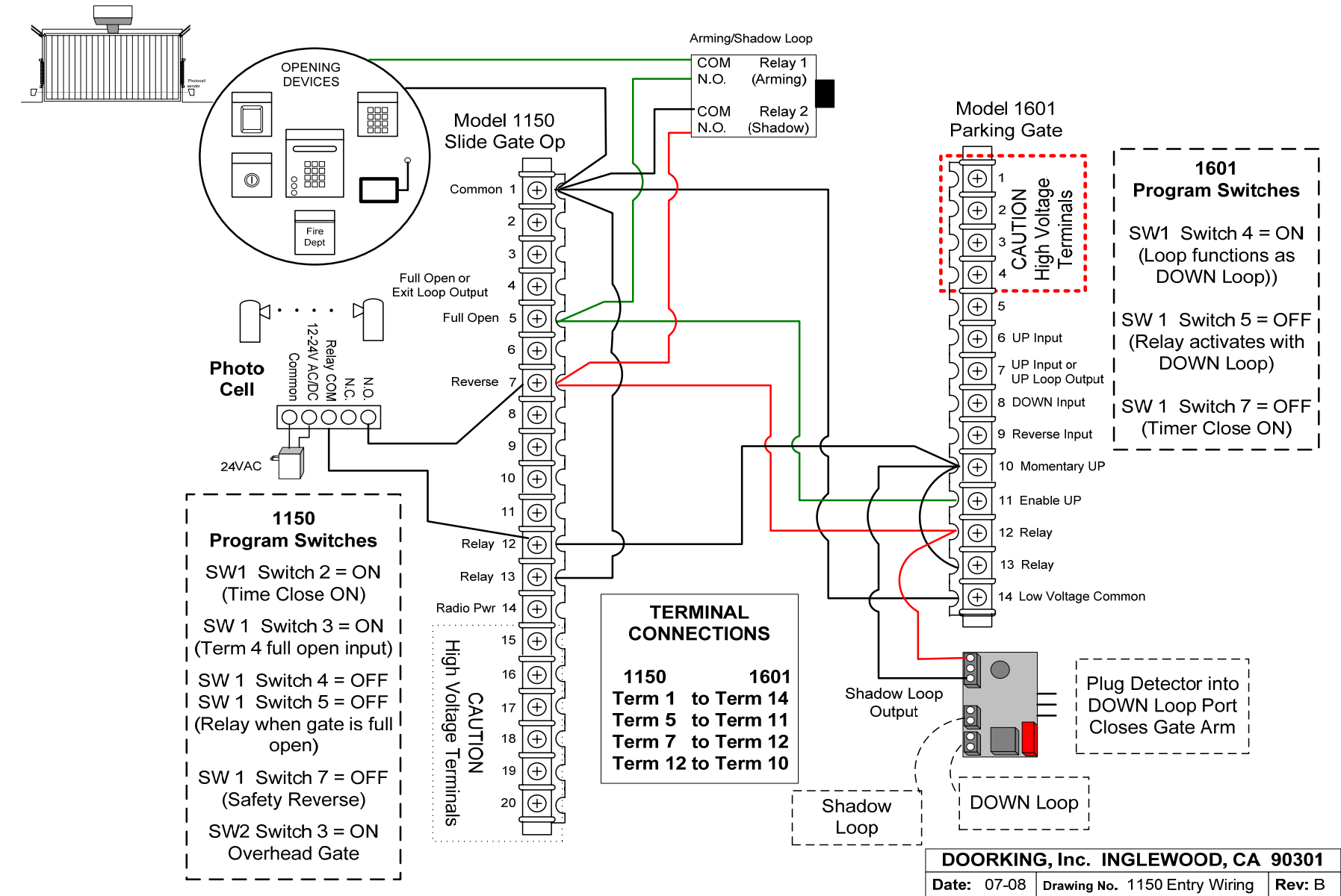


For Dual 1601 Operation

1. Plug Detector into "UP LOOP" port of 1601 board.
2. Set SW 1 Switch 8 to OFF position (sends loop output out terminal #7).
3. Run jumper wire between terminal #7 & #8 on 1601 board.
4. Run wires between the two 1601 operators to connect terminals #8, 10, 11 & 14.



SPECIAL P.A.M.S. WIRING: ENTRY LANE WITH 1150 OVERHEAD GATE



P.A.M.S. SYSTEM OPERATION

TROUBLE SHOOTING THE SYSTEM

“But the Gate hit My Car...” - This is probably the most common complaint from a P.A.M.S. System. It is important to identify which gate is involved; the 1601 Parking Gate or the Swing/Slide Gate.

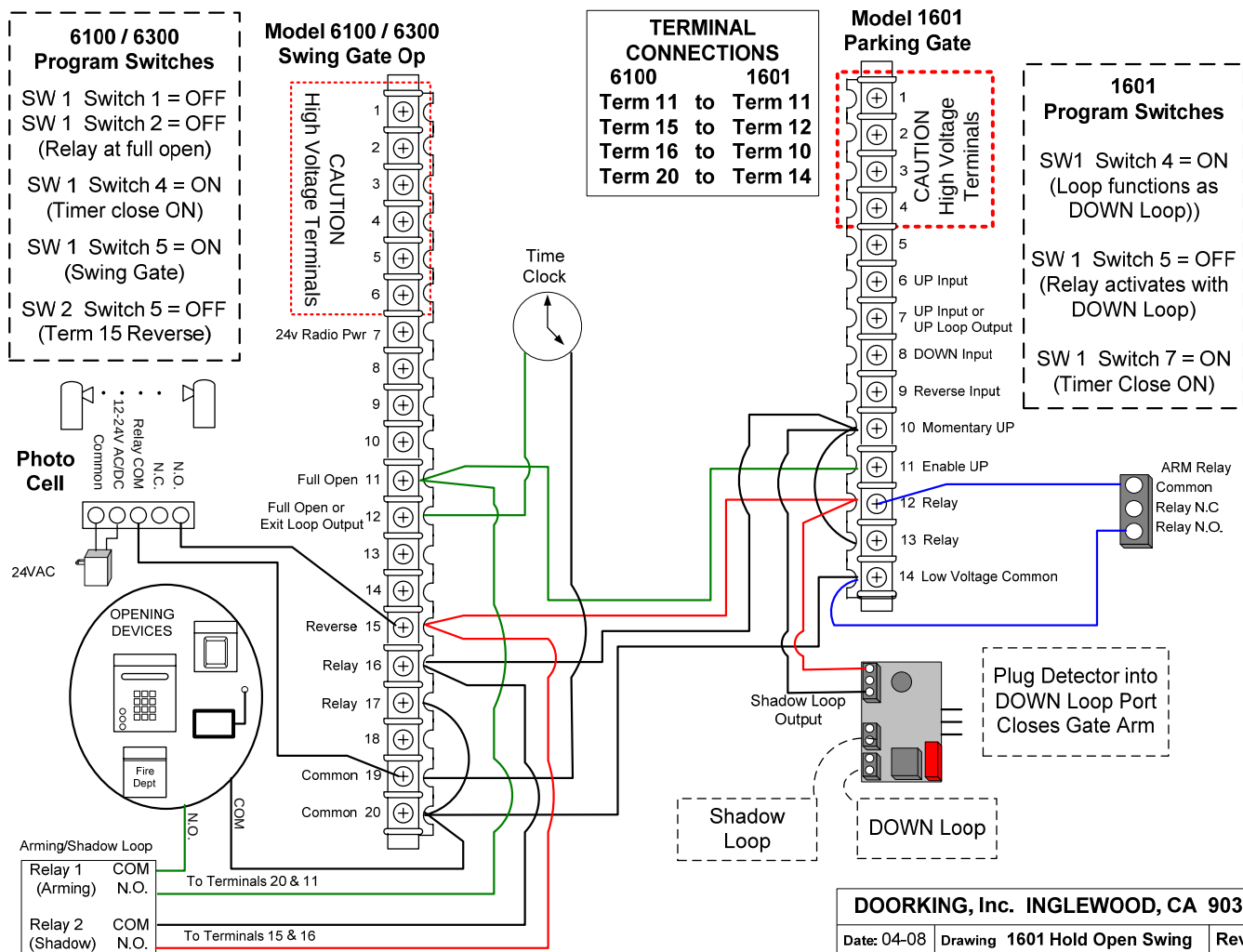
- ☑ **Parking Gate Arm hits vehicle:** In most cases, the P.A.M.S. system was just operating as it was designed, with the Arm closing behind an authorized vehicle, hitting a second vehicle that was attempting to enter. (Always check the system wiring, equipment locations and loop operations to ensure the system has been setup properly.) We want to address this with the customer, explaining to them that **a Vehicle Will Hit The Arm** if it attempts to follow another vehicle through the gated entrance. Advise them that this is part of the system design, not a defect in the operators.
- ☑ **Swing/Slide Gate hits vehicle:** This is a more serious situation. Remember, the safety for the Swing/Slide gate is the 1601 Parking Gate. In all situations the 1601 should close prior to the Swing or Slide gate. Things to check:
 - ✓ **Close Timing:** Make sure the 1601 Timer will close the gate prior to the Swing/Slide Gate timing out.
 - ✓ **Loop:** Make sure all loops are tied into the Swing/Slide gate. These reset the Close Timer to make sure that the vehicle clears the gate system before timing counts down. Double check the Arming/Shadow Loop for this function.
 - ✓ **Broken Barrier Arm:** If the Arm is broken, shut down the system. Since all loops are Shadow Loops, you have a situation where the swing gate could start closing just as a vehicle approaches.

In these situations, it is important that the Installing Dealer and the Management Co. fully understand how the P.A.M.S. system is designed to operate. Determine what level of Resident Training has been provided (see P.A.M.S. Tenant Instructions). In many cases where vehicle are hitting the gates, the residents have not been instructed on how the system function and they are not properly utilizing the gate system.



ALTERNATIVE P.A.M.S. WIRING: 1601 “ARM UP” WILL HOLD OPEN SWING GATE

OPTION, 1601 Hold Open Swing Gate when ARM is UP: Wiring the Arm Position Relay into the Reverse Input of the Swing Gate will HOLD OPEN the Swing Gate while the 1601 ARM is at the UP position. Once the 1601 ARM Lowers, the Swing Gate Timer will count down and close gate. **NOTE:** If 1601 Arm is broken, and gate is locked at UP position, the swing gate will also hold open.



P.A.M.S. SYSTEM OPERATION

TROUBLE SHOOTING THE SYSTEM

“But the Gate hit My Car...” - This is probably the most common complaint from a P.A.M.S. System. It is important to identify which gate is involved; the 1601 Parking Gate or the Swing/Slide Gate.

- ☑ **Parking Gate Arm hits vehicle:** In most cases, the P.A.M.S. system was just operating as it was designed, with the Arm closing behind an authorized vehicle, hitting a second vehicle that was attempting to enter. (Always check the system wiring, equipment locations and loop operations to ensure the system has been setup properly.) We want to address this with the customer, explaining to them that **a Vehicle Will Hit The Arm** if it attempts to follow another vehicle through the gated entrance. Advise them that this is part of the system design, not a defect in the operators. See next page for additional suggestions.
- ☑ **YOU ALSO WANT TO DETERMINE WHEN AND WHERE THE RESIDENT IS ACTIVATING THEIR TRANSMITTER** - Example: a vehicle activates the gate system. The Iron gate opens, keying the Barrier Gate. While the first vehicle is passing under the Barrier Arm (and is still over the Down Loop), a second vehicle is approaching the gate area and activates their transmitter. Expecting the Barrier Arm to respond and remain open, they accelerate towards the entrance. However, once the first vehicle passes the DOWN Loop, the Arm will come down. The second vehicle may not have enough time to stop, hitting the Arm.
- ☑ **Things you can try:**
 - Make certain **Speed Bumps or Roll Overs** are placed properly to help minimize this situation.
 - **Set 1601 DOWN Loop for “DOWN / STOP” Function.** (SW2 switch 4 ON)
 - **Set 1601 for Multiple Vehicle – 2nd Car Only function** (SW2, Switch 2 ON, SW2 Switch 3 OFF)



P.A.M.S. SYSTEM OPERATION

TROUBLE SHOOTING THE SYSTEM

- ☑ **Swing/Slide Gate hits vehicle:** This is a more serious situation. Remember, the safety for the Swing/Slide gate is the 1601 Parking Gate. In all situations the 1601 should close prior to the Swing or Slide gate. Things to check:
 - ✓ **Close Timing:** Make sure the 1601 Timer will close the gate prior to the Swing/Slide Gate timing out.
 - ✓ **Loop:** Make sure all loops are tied into the Swing/Slide gate. These reset the Close Timer to make sure that the vehicle clears the gate system before timing counts down. Double check the Arming/Shadow Loop for this function.
 - ✓ **Broken Barrier Arm:** If the Arm is broken, shut down the system. Since all loops are Shadow Loops, you have a situation where the swing gate could start closing just as a vehicle approaches.

HIGH BED VEHICLES / VEHICLES WITH TRAILERS - Most DOWN Loops are 4' x 6-8'. This gives you about 2 - 3' in detection height with a field about 8' along the path of the roadway. A high bed delivery truck may experience a detection dropout between the front and rear axles, which will result in the Arm coming down. A vehicle with a boat trailer may experience a detection drop between the rear bumper and the Trailer, again closing the Arm.

Things you can try:

- **Try utilizing a 2nd Down Loop inside the gate, or configure a longer Down loop, extending lengthwise with the flow of traffic.**
- **Set 1601 DOWN Loop for "DOWN / STOP" Function.** (SW2 switch 4 ON)

In these situations, it is important that the Dealer and the Management Co. fully understand how the P.A.M.S. system is designed to operate. Ask what Resident Training has been provided (see P.A.M.S. Tenant Instructions). In many cases, the residents are not properly utilizing the gate system.

