

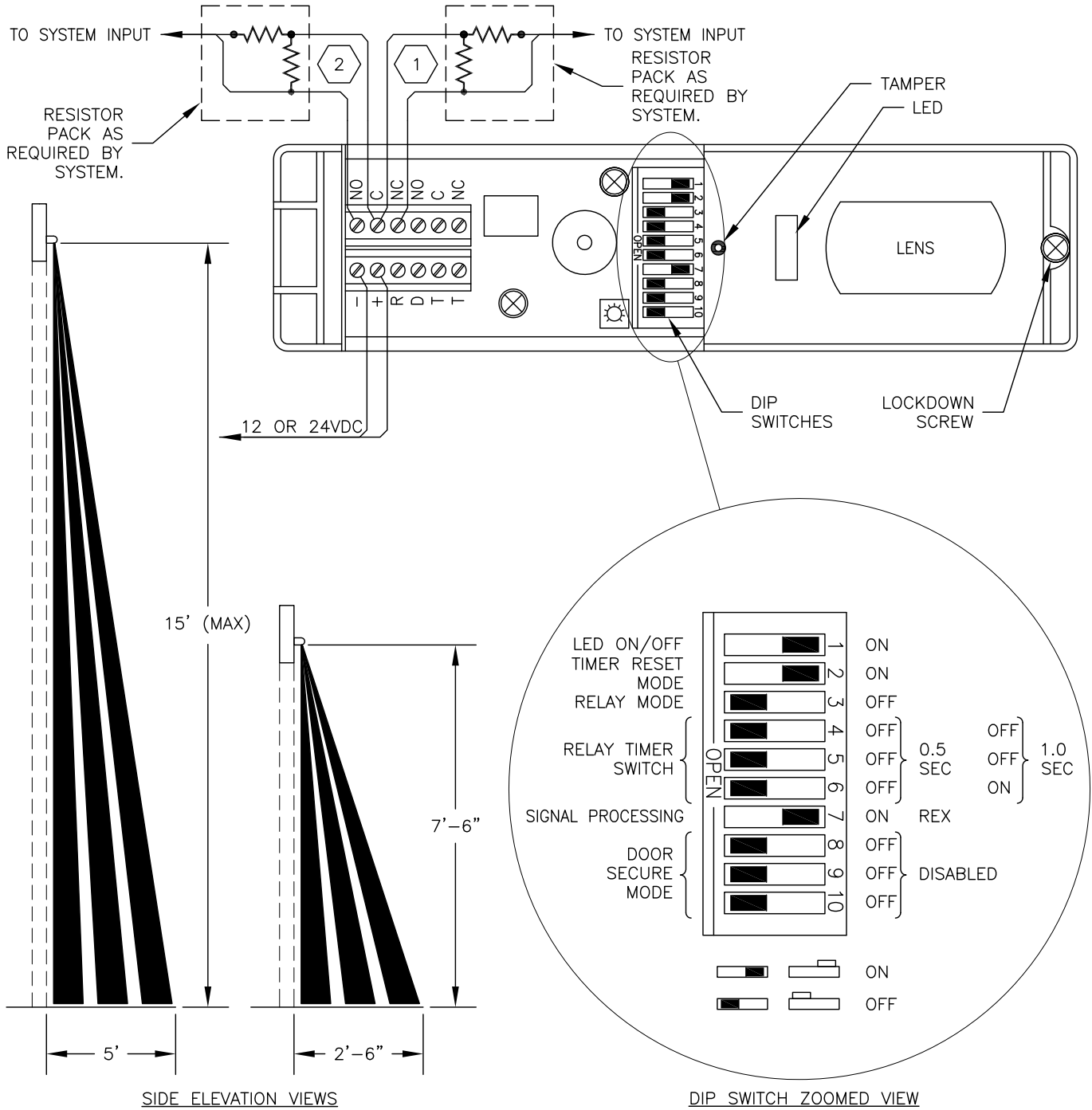
STANDARD CRITERIA			
DRAWING#	TITLE	REV	REV DATE
00.03.501	DS160, SETUP AND CONFIGURATION	4	01/27/17
00.05.501-7	WIRE MARKING FORMAT	24	02/01/18
00.06.501	WIRE SHIELD TERMINATION	2	09/04/15
00.06.502	SECURITY JUNCTION BOX	1	08/22/16

SCHEDULES			
DRAWING#	TITLE	REV	REV DATE
00.10.001	CABLE LEGEND	0	03/26/23

PANEL DIAGRAMS			
DRAWING#	TITLE	REV	REV DATE
07.05.001	MERCURY 16 READER CONFIGURATION ALTRONIX TROVE 2 MERCURY ENCLOSURE, POWER SUPPLY AND INTELLIGENT CONTROLLER	0	03/24/23

DETAILS			
DRAWING#	TITLE	REV	REV DATE
AC (DD,5)	SINGLE DOOR, CARD IN/FREE EXIT, RIM PANIC w/ELECTRIC TRIM & REX SWITCH, FAIL SECURE	0	03/26/23
AI (DD,5)	SINGLE DOOR, CARD IN/FREE EXIT, RIM PANIC w/QUIET LATCH RETRACTION & REX SWITCH, FAIL SECURE	0	03/26/23
AJ (DDa-b,5)	SINGLE DOOR, CARD IN/FREE EXIT, RIM PANIC w/QUIET LATCH RETRACTION & REX SWITCH, ADA ACTUATORS, OPERATOR, FAIL SECURE	0	03/26/23
AX (DD,5)	SINGLE DOOR, CARD IN/FREE EXIT, ELECTRIC LOCK w/CARD READER, REX SWITCH & DOOR SWITCH MONITOR, FAIL SECURE	0	03/26/23
BC (DD,5)	DOUBLE DOOR, CARD IN FREE EXIT, PANIC w/ELECTRIC TRIM, MANUAL PANIC, PIR/REX, FAIL SECURE	0	03/26/23
BI (DD,5)	DOUBLE DOOR, CARD IN FREE EXIT, PANICS w/QUIET LATCH RETRACTION, PIR/REX, FAIL SECURE	0	03/26/23
BJ (DDa-b,5)	DOUBLE DOOR, CARD IN/FREE EXIT, PANICS w/QUIET LATCH RETRACTION, PIR/REX, ADA ACTUATORS, OPERATORS, FAIL SECURE	0	03/26/23
BX (DDa-b,5)	DOUBLE DOOR, CARD IN/FREE EXIT, ELECTRIC LOCK w/CARD READER, REX SWITCH & DOOR SWITCH MONITOR, FAIL SECURE	0	03/26/23
EA (DD,5)	SINGLE DOOR, ALARMED	0	03/26/23
FA (DD,5)	DOUBLE DOOR, ALARMED	0	03/26/23
GA (DD,5)	SINGLE DOOR, ALARMED, LOCAL SOUNDER	0	03/26/23
HA (DD,5)	DOUBLE DOOR, ALARMED, LOCAL SOUNDER	0	03/26/23
NG (DD)	ELEVATOR CALL ENABLE, CARD READER	0	03/26/23
NR (DD,5)	SLIDING DOOR w/FULL BREAKOUT, CARD IN/FREE EXIT, INTEGRATED ALARM, LOCK INDICATOR, w/FAIL SECURE LOCK, PRESENCE SENSOR & REX SWITCH, PANIC HARDWARE	0	03/26/23
PA (DD,5)	ROLL-UP DOOR, ALARMED	0	03/26/23
PB (DD,5)	ROOF HATCH, ALARMED	0	03/26/23
PH (DD,5)	WINDOW, ALARMED, SURFACE MOUNT	0	03/26/23
TB (DD)	MAGNETIC HOLD OPEN	0	03/26/23
TD (DD,5)	SINGLE DOOR, TIMED UNLOCK/FREE EXIT, RIM PANIC w/QUIET LATCH RETRACTION, & REX SWITCH, FAIL SECURE	0	03/26/23

DETAILS			
DRAWING#	TITLE	REV	REV DATE
TE (DDa-b,5)	DOUBLE DOOR, TIMED UNLOCK/FREE EXIT, PANICS w/QUIET LATCH RETRACTION, PIR/REX, FAIL SECURE	0	03/26/23
TW (DD,5)	ROLL-UP COUNTER DOOR, AUTOMATED, ALARMED	0	03/26/23



#### NOTES

- 1 NORMALLY OPEN (NO) WIRING CONFIGURATION FOR MONITORING. THE OUTPUT OF THE PIR/REX MUST BE WIRED AND SETUP TO OPERATE AS FOLLOWS
  - WHEN THE DEVICE IS NOT POWERED, THE CONTACTS ARE OPEN.
  - WHEN THE DEVICE IS POWERED AND AT REST, THE CONTACTS ARE OPEN.
  - WHEN THE DEVICE IS POWERED AND IN ALARM, THE CONTACTS CLOSE.
- 2 NORMALLY CLOSED (NC) WIRING CONFIGURATION FOR MONITORING. THE OUTPUT OF THE PIR/REX MUST BE WIRED AND SETUP TO OPERATE AS FOLLOWS
  - WHEN THE DEVICE IS NOT POWERED, THE CONTACTS ARE CLOSED.
  - WHEN THE DEVICE IS POWERED AND AT REST, THE CONTACTS ARE CLOSED.
  - WHEN THE DEVICE IS POWERED AND IN ALARM, THE CONTACTS OPEN.

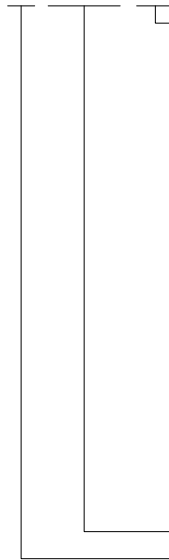
ALL CABLES AND WIRES SHALL HAVE BOTH ENDS TAGGED IN THE FOLLOWING FORMATS: SEE SPECIFIC DETAILS FOR EXACT WIRE MARKING NOMENCLATURE. USE LEADING ZERO'S (0) WHERE REQUIRED FOR THE FIVE (5) NUMBER (#) PLACES. (EXAMPLE: ##### = 00010).

I FIELD DEVICE TO PANEL

A. ACCESS CONTROL, IDS, SVS, INTERCOM, AUTODIAL PHONES

1. CABLES (WIRE BUNDLES)

XX ##### XXX



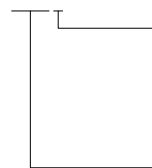
CABLE FUNCTION:

A = ALARM  
AP = AUTO-DIAL PHONE  
CR = CARD READER  
D = DATA  
DS = DOOR SWITCH MONITOR  
EDR = EMERGENCY DOOR RELEASE  
EP = ELECTRIC PANIC  
FCM = FIRE CONTROL MODULE  
HPB = HANDICAP PUSHBUTTON  
IC = INTERCOM  
GB = GLASS BREAK ALARM  
LN = LOCAL NOISE  
LP = LOCK POWER  
MD = MOTION DETECTION ALARM  
P = POWER  
PHPB= PANIC HARDWARE POWER BOOSTER  
REX = REQUEST-TO-EXIT  
RP = RELAY POWER  
TPR = TAMPER ALARM  
V = VIDEO SIGNAL

POINT NUMBER DESIGNATOR PER POINT SCHEDULE  
DETAIL TYPE DESIGNATOR

2. INDIVIDUAL WIRES

XXXX



WHERE APPLICABLE:

+ = + VOLTAGE  
- = VOLTAGE COMMON  
H = SIGNAL HIGH  
L = SIGNAL LOW

WIRE FUNCTION DESIGNATOR:

A = ALARM  
AP = AUTO-DIAL PHONE  
CR = CARD READER  
D0 = DATA 0  
D1 = DATA 1  
DS = DOOR SWITCH MONITOR  
EDR = EMERGENCY DOOR RELEASE  
EP = ELECTRIC PANIC  
EL = ELECTRIC LOCKSET POWER  
ES = ELECTRIC STRIKE POWER  
FCM = FIRE CONTROL MODULE  
GND = GROUND  
HPB = HANDICAP PUSHBUTTON  
IC = INTERCOM  
GB = GLASS BREAK ALARM  
LED = LED  
LN = LOCAL NOISE  
MD = MOTION DETECTION ALARM  
ML = MAGNETIC LOCK POWER  
PHPB= PANIC HARDWARE POWER BOOSTER  
REX = REQUEST-TO-EXIT  
RP = RELAY POWER  
SH = SHIELD  
TPR = TAMPER ALARM

3. FIBER OPTIC CABLE – INDIVIDUAL FIBERS

XX

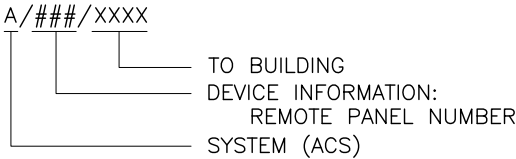


FIBER FUNCTION DESIGNATOR:

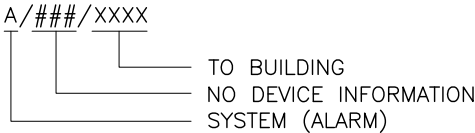
FR = FIBER RECEIVE  
FX = FIBER TRANSMIT  
FXR = FIBER TRANSMIT/RECEIVE

II INTER-BUILDING

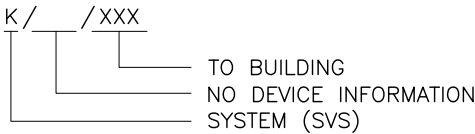
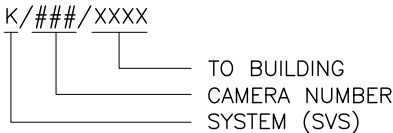
A. ACCESS CONTROL SYSTEM (ACS)



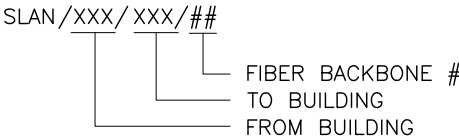
B. ALARM



C. SECURITY VIDEO SYSTEM (SVS) CAMERA TO HUB



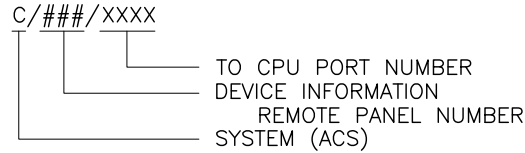
D. SECURITY LAN (SLAN) BUILDING TO BUILDING



III INTRA-BUILDING

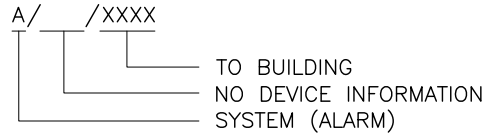
A. ACCESS CONTROL SYSTEM (ACS)

1. FOR EXAMPLE, CABLES BETWEEN REMOTE PANEL OR MODEMS AND THE CPU.

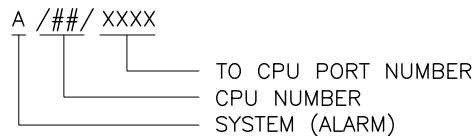


B. ALARM

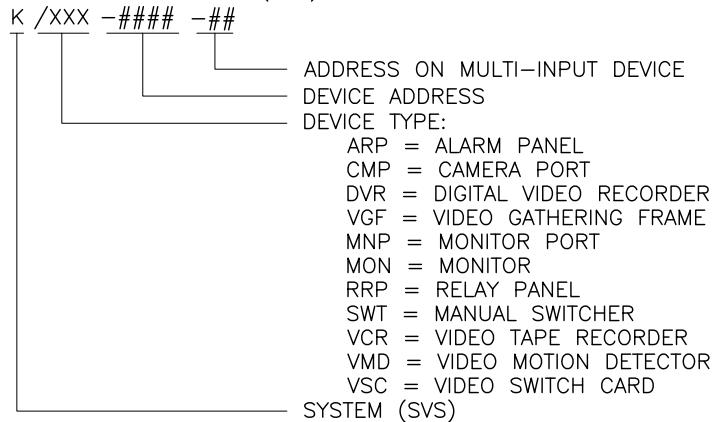
1. FOR EXAMPLE, CABLES BETWEEN TERMINAL BLOCKS, MODEMS AND ALARM CONTROLLER OR RECEIVER



2. FOR EXAMPLE, CABLE(S) BETWEEN ALARM CONTROLLER OR RECEIVER AND CPU

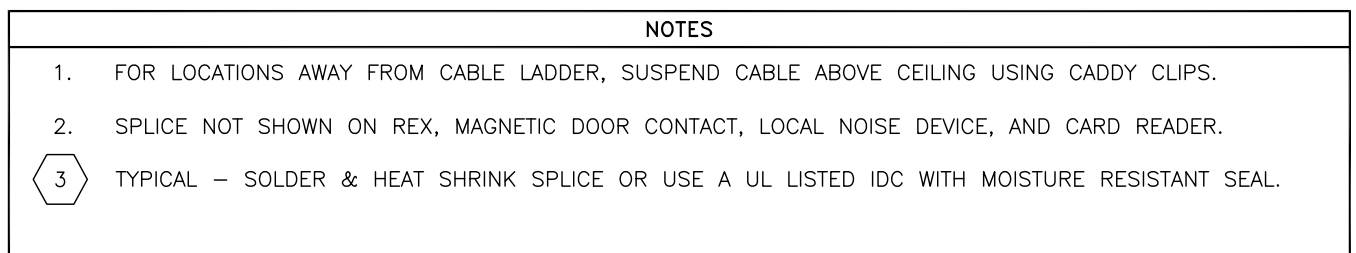


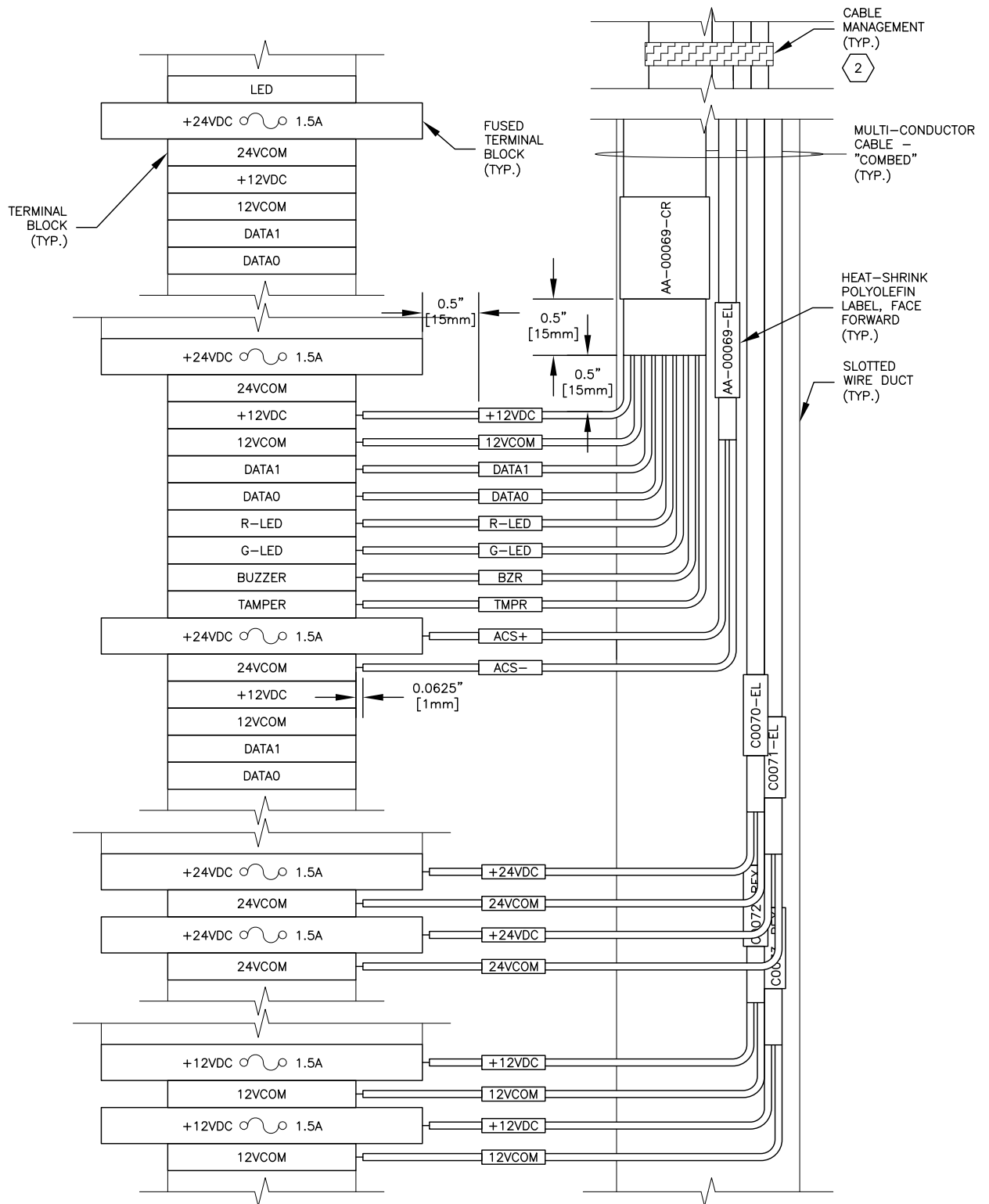
C. SECURITY VIDEO SYSTEM (SVS)



D. SECURITY LAN (SLAN) INTRABUILDING







#### NOTES

1. LABELS ARE FOR ILLUSTRATION PURPOSES ONLY. REFER TO THE SECURITY DETAILS FOR CABLE/WIRE REQUIREMENTS.

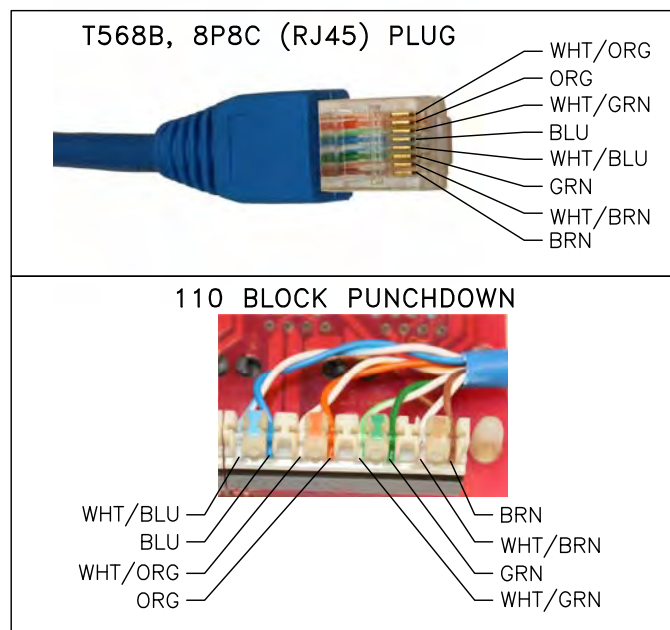
2 FOR CABLE MANAGEMENT – USE PLENUM RATED VELCRO WHENEVER CAT5e, CAT6, OR FIBER CABLE IS INCLUDED. IF NO CAT5e, CAT6, OR FIBER IS INCLUDED, USE EITHER PLENUM RATED VELCRO OR TEFLON TIES. PROVIDE WHERE REQUIRED TO KEEP CABLE NEAT, AND IN ALL CASES, SPACE LESS THAN 4 FEET.



THIS DOCUMENT REFERS TO ANSI/TIA 568c STANDARD AND THE PROJECT SPECIFICATIONS. IN THE CASE THAT THERE ARE ANY CONFLICTS, THE ANSI/TIA 568c CABLING STANDARDS SUPERCEDE ANY DIAGRAMS OR DESCRIPTIONS THAT FOLLOW.


CAT5e/CAT6/CAT6a

1. TOTAL CABLE DISTANCE FROM SWITCH TO DEVICE MUST NOT EXCEED 328' [100m].
2. WHEN TERMINATING CABLE TO 110 BLOCK AT PATCH PANEL OR JACKS, A MAXIMUM OF 1/2" OF WIRE PAIRS MAY BE UNTWISTED.
3. PATCH CABLES ARE TO BE FACTORY MADE WITH SNAGLESS MOLDED CONNECTORS.
4. MINIMUM BEND RADIUS IS 4 TIMES THE CABLE DIAMETER.
5. CONDUCTOR ORDER FOR TERMINATION TO 110 BLOCK OR 8P8C (RJ45) PLUG IS TO FOLLOW THE T568B PINOUT.

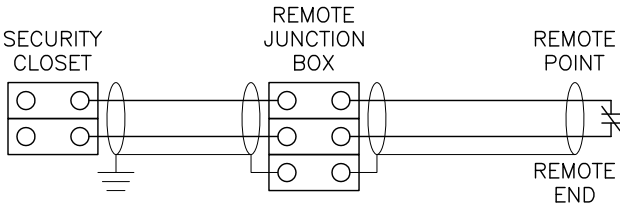


FIBER

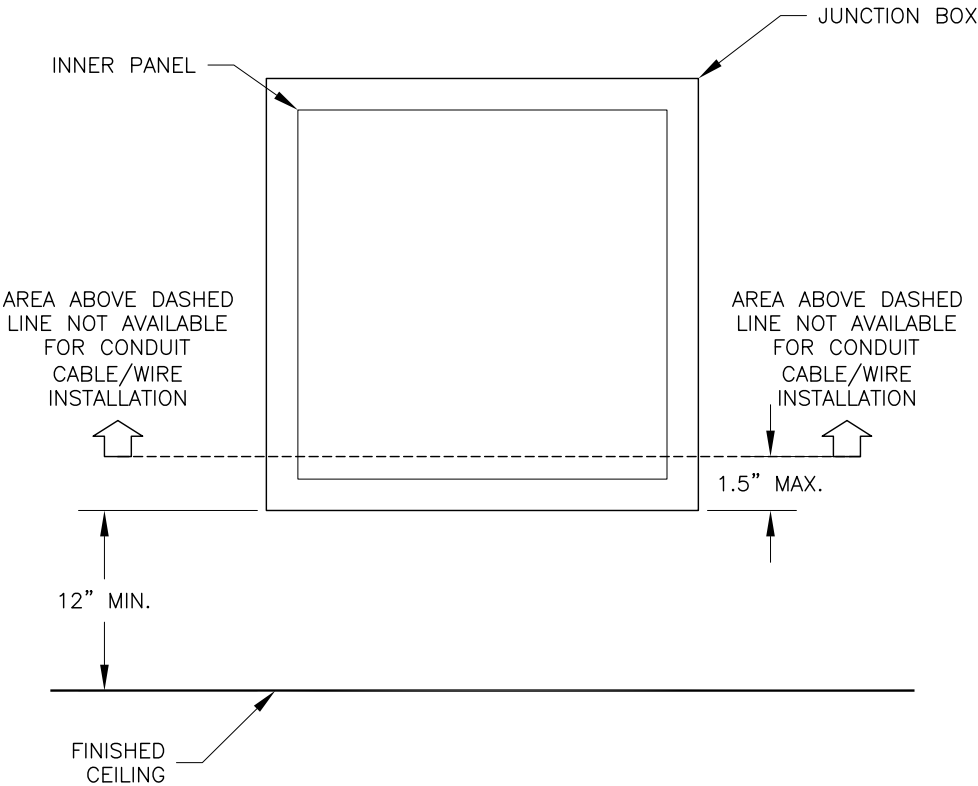
1. TOTAL FIBER DISTANCE FROM SWITCH TO DEVICE MUST NOT EXCEED THE SPECIFICATION OF THE FIBER TRANSCEIVER.
2. MINIMUM BEND RADIUS IS 16 TIMES THE FIBER CABLE DIAMETER. ALWAYS REFER TO THE MANUFACTURER SPECIFICATION FOR THE FIBER CABLE MINIMUM BEND RADIUS.
3. FIBER TERMINATION ORDER FOR FIBER PATCH PANEL (LIU), IS TO FOLLOW INDUSTRY STANDARD.

1		BLUE
2		ORANGE
3		GREEN
4		BROWN
5		SLATE
6		WHITE
7		RED
8		BLACK
9		YELLOW
10		VIOLET
11		ROSE
12		AQUA

THE FIRST 12 FIBERS ARE COLORED AS NOTED, A BLUE BUFFER TUBE MAY OR MAY NOT BE PRESENT DEPENDING ON NUMBER OF FIBERS IN THE CABLE. 2ND SET OF 12 FIBERS (13–24) WILL BE IN THE SAME COLOR PROGRESSION IN AN ORANGE BUFFER TUBE. 3RD+ SETS OF 12 FIBERS WILL BE IN THE SAME COLOR PROGRESSION IN THE SAME COLOR PROGRESSION OF BUFFER TUBES.



NOTES	
1. GROUND SHIELDS TO EARTH GROUND OR SIGNAL COMMON AT ONE END ONLY. ALWAYS FOLLOW MANUFACTURER’S RECOMMENDED GROUNDING PROCEDURES.	



NOTES

1. JUNCTION BOX SHOWN FOR CONCEPT ONLY. JUNCTION BOX SIZE WILL VARY BY DETAIL TYPE.

ID	NON-PLENUM	N/P OD (in.)	PLENUM	P OD (in.)	OSP	OSP OD (in.)	DESCRIPTION	REMARKS
B	BELDEN #5300UE	0.161	BELDEN #6300UE	0.157	ALPHA 35062	0.230	18 AWG, 2 CONDUCTOR	CCTV, POWER, ALARMS
C					WCW #4151150DB-FB	0.323	22 AWG, 2 TW PR, OVERALL SHIELD, LOW CAPACITANCE	CARD READER (OSDP)
D	BELDEN #5300FE	0.165	BELDEN #6300FE	0.164	WEST PENN #AQ293	0.310	18 AWG, 1 TW PR, SHIELDED	ALARMS
E	BELDEN #5541FE	0.206	BELDEN #6541FE	0.206	BELDEN #5541P1	0.239	22 AWG, 2 TW PR, SHIELDED	REX, AUTODIAL PHONE
F	BELDEN #5200UE	0.182	BELDEN #6200UE	0.178	BELDEN #5240U1		16 AWG, 2 CONDUCTOR	CCTV, POWER
G	BELDEN #5100UE	0.234	BELDEN #6100UE	0.222	BELDEN #5100U1		14 AWG, 2 CONDUCTOR	PANIC HARDWARE POWER < 100 FT
K	COMMSCOPE #65N4+	0.230	COMMSCOPE #6504+	0.220	COMMSCOPE #UN884019904/10	0.250	4 TW PR, CAT 6	UTP CAMERA, GLASS BREAKS
R	BELDEN #39114	0.097	N/A	0.000	N/A	0.000	14 AWG, SINGLE CONDUCTOR, STRANDED, GREEN JACKET	GROUND

AWG - AMERICAN WIRE GAUGE  
BC - BARE COPPER  
IMP - IMPEDENCE  
N/P - NON-PLENUM

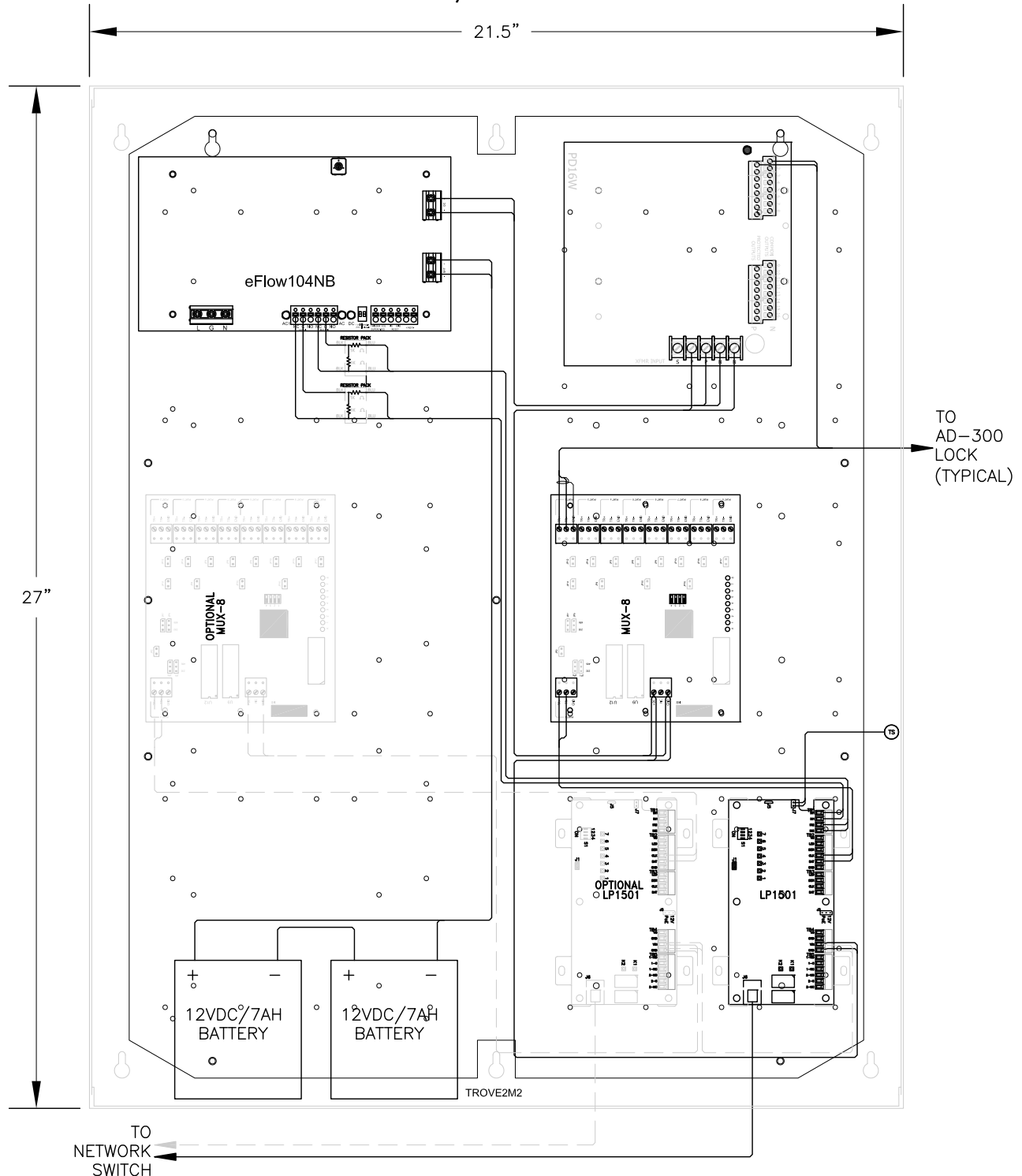
OSP - OUTSIDE PLANT (DIRECT BURIAL)  
P - PLENUM  
ST - STRANDED  
TW PR - TWISTED PAIR

MERCURY 16 READER CONFIGURATION  
ALTRONIX TROVE 2 MERCURY ENCLOSURE  
POWER SUPPLY AND INTELLIGENT CONTROLLER

**07.05.001a**  
**LAYOUT**

AS-BUILT	Building:	Door#:	Point#:
	Description:	SRB:	Address:

TROVE 2 ENCLOSURE  
EXAMPLE w/1 OR 2 LP1501

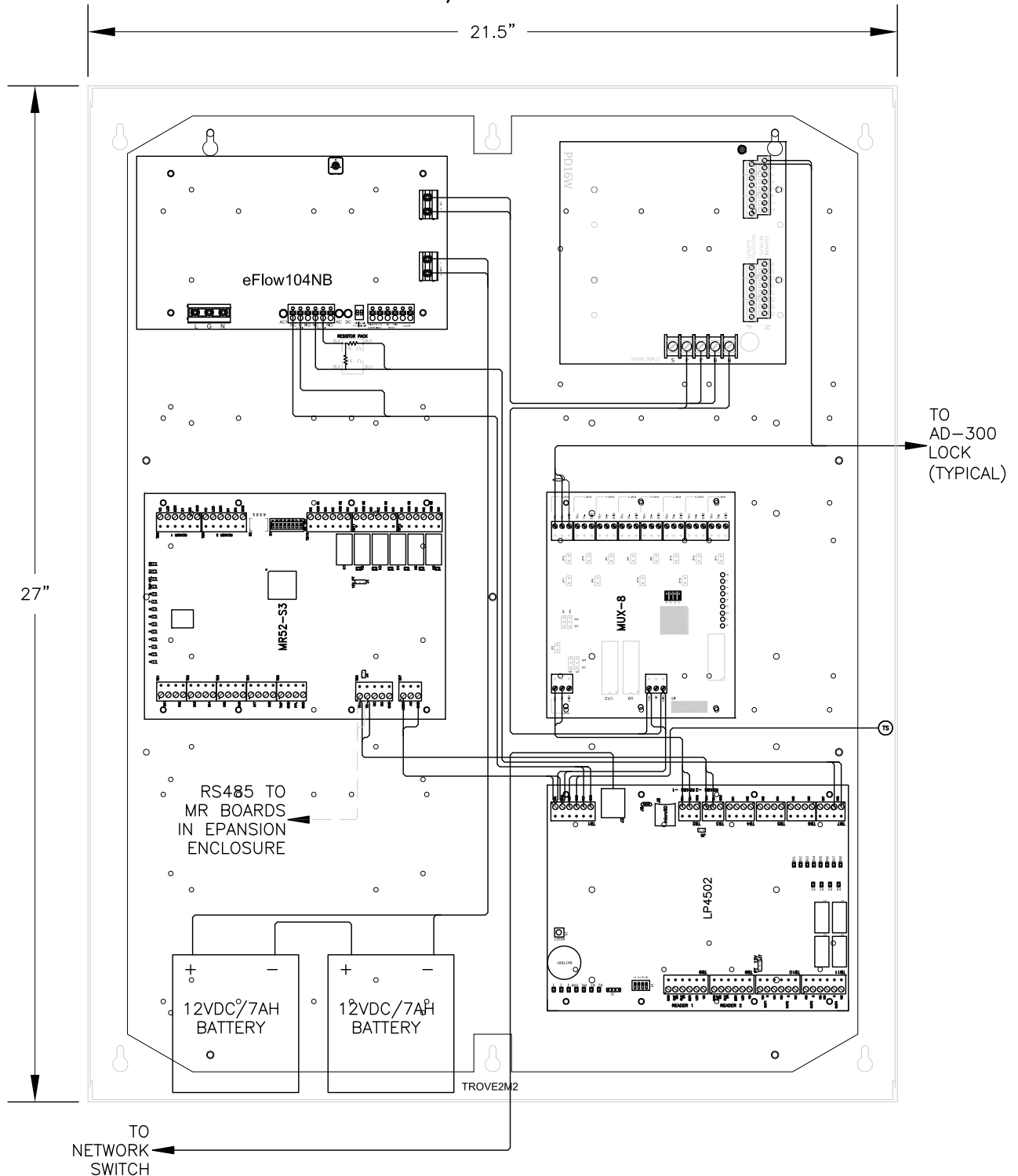


MERCURY 16 READER CONFIGURATION  
ALTRONIX TROVE 2 MERCURY ENCLOSURE  
POWER SUPPLY AND INTELLIGENT CONTROLLER

**07.05.001b**  
**LAYOUT**

AS-BUILT	Building:	Door#:	Point#:
	Description:	SRB:	Address:

TROVE 2 ENCLOSURE  
EXAMPLE w/LP4502 & MR52

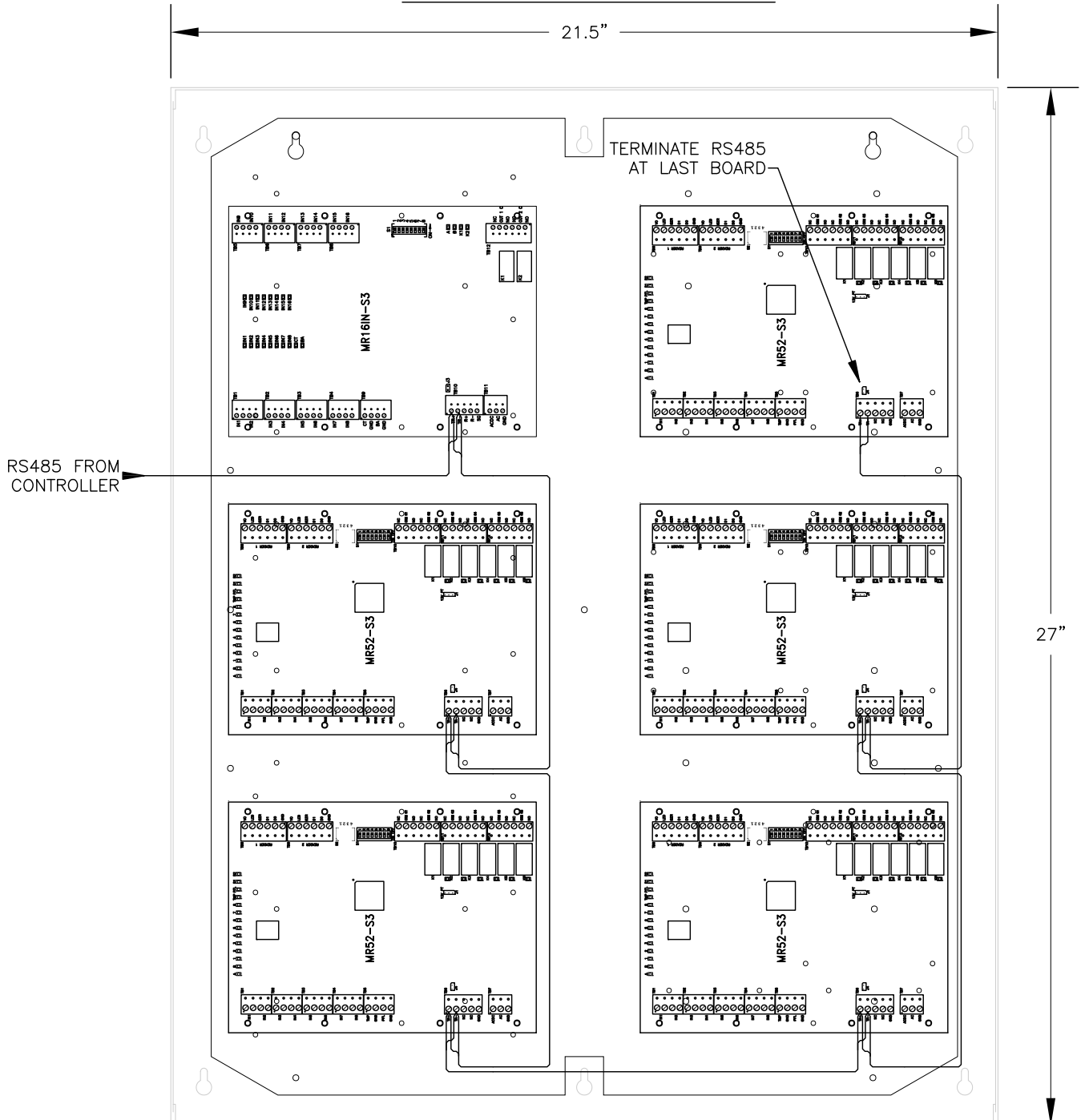


MERCURY 16 READER CONFIGURATION  
ALTRONIX TROVE 2 MERCURY ENCLOSURE  
POWER SUPPLY AND INTELLIGENT CONTROLLER

**07.05.001c**  
**LAYOUT**

AS-BUILT	Building:	Door#:	Point#:
	Description:	SRB:	Address:

**TROVE 2  
EXPANSION ENCLOSURE**










SECURITY EQUIPMENT					
#	QTY	DESCRIPTION	MODEL NUMBER	CODE	NOTES
1	AR	ALTRONIX – MERCURY ACCESS AND POWER INTEGRATION ENCLOSURE WITH BACKPLANE, TROVE 2 SERIES	TROVE2M2	A	1,3
2	AR	ALTRONIX – POWER SUPPLY CHARGER, SINGLE OUTPUT, 24VDC @ 10A, AUX OUTPUT, FAI, LINQ2 READY, 115VAC, BOARD	EFLOW104NB	B	3
3	AR	ALTRONIX – POWER DISTRIBUTION MODULE, 16 PTC OUTPUTS, BOARD	PD16WCB	B	3
4	AR	ALTRONIX – SINGLE POWER ON/OFF ROCKER SWITCH WITH MOUNTING BRACKET	RSB1	B	
5	AR	ALTRONIX – RECHARGEABLE BATTERY, SEALED LEAD ACID (SLA), 12VDC, 7AH	BT126	B	2
6	AR	MERCURY SECURITY – POE+ EDGE-CAPABLE INTELLIGENT CONTROLLER (2 RDRS, 2 INPUTS, 2 OUTPUTS)	LP1501	B	
7	AR	MERCURY SECURITY – INTELLIGENT CONTROLLER (2 RDRS, 8 INPUTS, 4 OUTPUTS)	LP1502	B	
8	AR	MERCURY SECURITY – INTELLIGENT CONTROLLER W/ EXTENDED APPLICATIONS (2 RDRS, 8 INPUTS, 4 OUTPUTS)	LP4502	B	
9	AR	MERCURY SECURITY – RS485 STAR TOPOLOGY, 8-PORT MULTIPLEXOR PANEL	MUX8	B	
10	AR	MERCURY SECURITY – DUAL-CARD READER INTERFACE PANEL, SERIES 3	MR52-S3	B	
11	AR	MERCURY SECURITY – 16-INPUT INTERFACE PANEL, SERIES 3	MR16IN-S3	B	
12	AR	MERCURY SECURITY – 16-OUTPUT INTERFACE PANEL, SERIES 3	MR16OUT-S3	B	
13	AR	AMP – RING TONGUE #14 AWG, TERMINAL, STUD #6	–	C	
14	AR	AMP – RING TONGUE #12 AWG, TERMINAL, STUD #6	–	C	
15	AR	INTERNAL LOCK WASHER #6	–	C	
16	AR	FLAT WASHER, #6	–	C	
17	AR	KEPNUT 6-32	–	C	
18	AR	DRAIN BUS	–	C	
19	AR	DIODE	1N4934	C	
20	AR	GRI – END OF LINE RESISTOR PACK	6644	B	

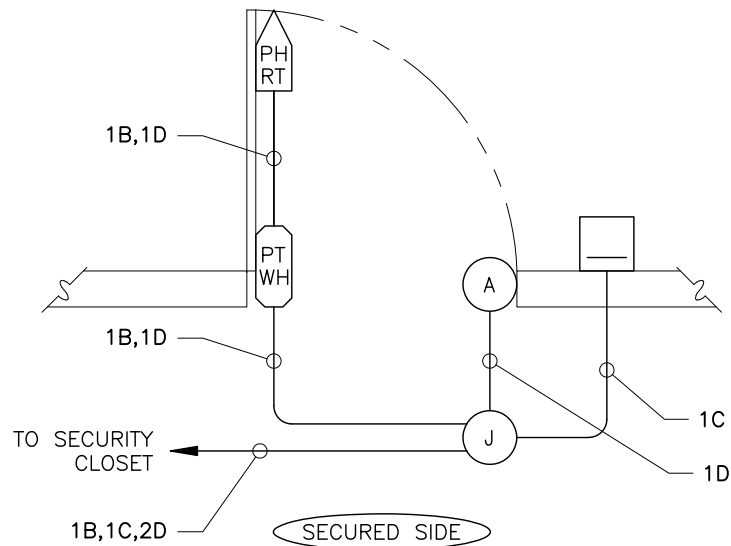
CODE INDEX

- |  |                          |
|--|--------------------------|
| A) BY SECURITY CONTRACTOR, NO SUBSTITUTE     | D) BY GENERAL CONTRACTOR |
| B) BY SECURITY CONTRACTOR, OR APPROVED EQUAL | E) BY OWNER              |
| C) BY SECURITY CONTRACTOR, OR EQUAL          | F) EXISTING              |

**EQUIPMENT LIST NOTES**

- KEY ALIKE ALL JUNCTION BOXES.
- INSTALL INSIDE POWER SUPPLY TO PROVIDE NOMINAL BACK-UP.
- IF A POWER SUPPLY IS PROVIDED OTHER THAN ALTRONIX, THE POWER SUPPLY MUST BE ABLE TO BE MONITORED FOR AC LOSS AND BATTERY TROUBLE CONDITIONS. POWER SUPPLIES THAT CANNOT BE MONITORED WILL NOT BE APPROVED FOR INSTALLATION.

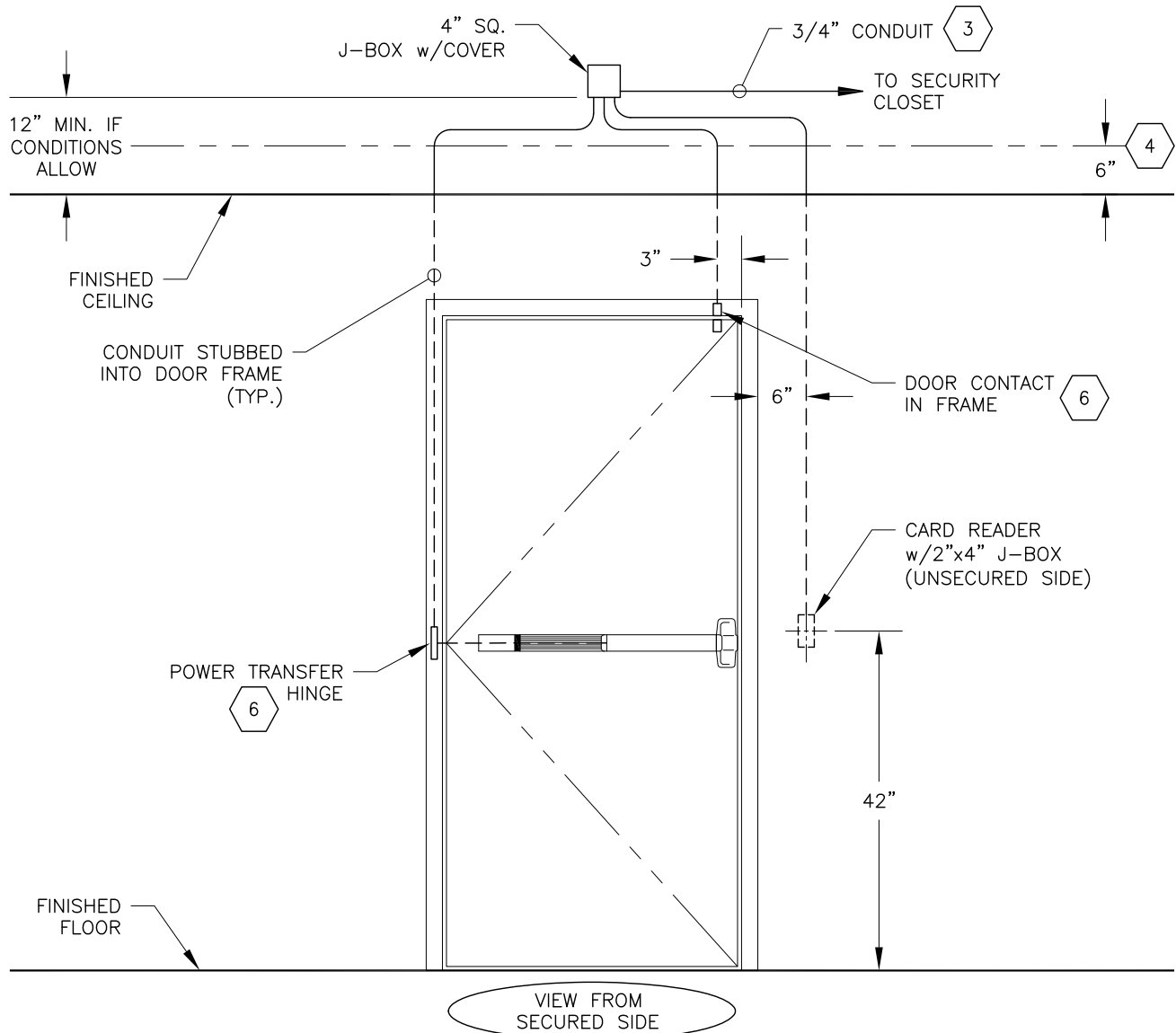
SYMBOLS LIST	
	ALARM CONTACT
	CARD READER
	J-BOX w/COVER
	PANIC w/REX SWITCH & ELECTRIC TRIM
	POWER TRANSFER WIRED HINGE



DOOR HARDWARE			
#	QTY	DESCRIPTION	MODEL NUMBER
1	1	VON DUPRIN – RIM PANIC BAR w/REX SWITCH & ELECTRIC TRIM, FAIL SECURE, 24VDC	RX LD 99L–NL x E996L 24VDC FSE
2	1	McKINNEY – ELECTRIC WIRE HINGE, 8–WIRE	TA2714CC8
3	1	GRI – ALARM CONTACT	184–12

OPERATION	
<p>IN THE NORMAL STATE, THE DOOR IS CLOSED, LOCKED ON THE UNSECURED SIDE, AND UNLOCKED FROM THE SECURED SIDE. NORMAL OPERATION IS BY ACCESS CARD ON THE UNSECURED SIDE AND BY PUSH BAR FROM THE SECURED SIDE. THE REQUEST-TO-EXIT MICROSWITCH, OPERATED BY THE SECURED SIDE PUSH BAR, WILL SHUNT THE ALARM BUT NOT UNLOCK THE LOCK. IF THE DOOR IS HELD OPEN LONGER THAN A PRE-DETERMINED AMOUNT OF TIME, AN ALARM WILL BE GENERATED. IF THE DOOR IS FORCED, AN ALARM WILL BE GENERATED. IF THE CARD READER IS REMOVED, A TAMPER ALARM WILL BE GENERATED.</p>	

DIAGRAM NOTES	
1.	THIS DRAWING IS FOR DIAGRAMMATIC PURPOSES ONLY. FOR ACTUAL HANDING AND SWING, REFERENCE FLOOR PLANS.
2.	IF USING OTHER DOOR HARDWARE MANUFACTURER, SUBMIT DOCUMENTATION TO SHOW FUNCTIONAL AND OPERATIONAL EQUIVALENCY.
3.	DOOR CONTACT SUPPLIED THROUGH SECURITY CONTRACT.
4.	HARDWARE SUPPLIED THROUGH THE ARCHITECT'S SPECIFICATION.
5.	FOR RATED ASSEMBLIES, THE DOOR AND FRAME MUST BE FACTORY PREPARED FOR ALL ELECTRIC HARDWARE AND SECURITY DEVICES.
6.	ORDER PANIC HARDWARE WITHOUT DOGGING FEATURE.
7.	PROVIDE THE VON DUPPRIN AX RX 99L–NL–F x E996L 24VDC FSE FIRE RATED HARDWARE FOR FIRE RATED DOOR.



### ELEVATION NOTES

- THIS DRAWING IS FOR DIAGRAMMATIC PURPOSES ONLY. FOR ACTUAL HANDING AND SWING, REFERENCE FLOOR PLANS.
- DIMENSIONS SHOWN FOR COORDINATION ONLY. EXACT LOCATIONS AND MOUNTING HEIGHTS TO BE FIELD COORDINATED WITH OWNER AND ARCHITECT.






3 IF PLENUM INSTALLATION, CONDUIT IS NOT REQUIRED FOR THIS CABLE RUN.

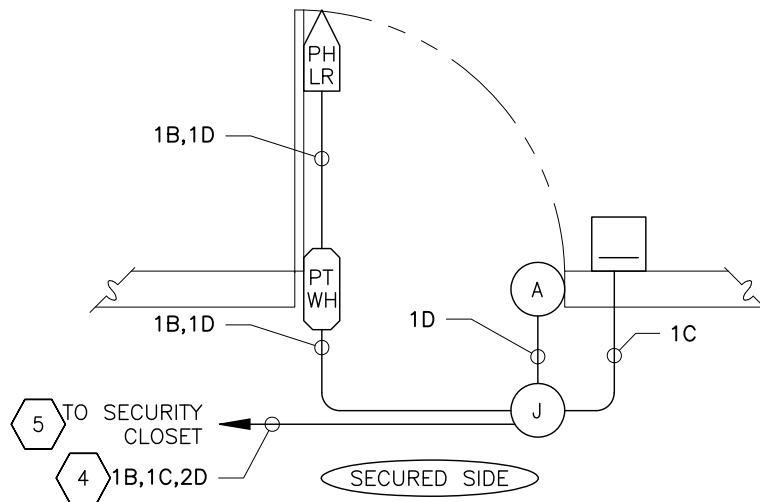
4 IF PLENUM INSTALLATION, STUB CONDUIT, w/PULL STRING, 6" ABOVE FINISHED CEILING.

5. ALL CONDUIT IS 1/2" UNLESS OTHERWISE NOTED.

6 IF EXISTING DOOR FRAMES ARE GROUTED OR OTHER CONDITIONS MAKE GETTING WIRE INTO THE DOOR FRAME IMPRACTICAL, USE DOOR CORD FOR POWER TRANSFER DEVICE.

#### SYMBOLS LIST

	ALARM CONTACT
	CARD READER
	ELECTRIC RIM PANIC w/LATCH RETRACTION & REX
	J-BOX w/COVER
	POWER TRANSFER WIRED HINGE



#### DOOR HARDWARE

#	QTY	DESCRIPTION	MODEL NUMBER
1	1	VON DUPRIN – ELECTRIC RIM PANIC w/QUIET LATCH RETRACTION & REX SWITCH, NIGHT LATCH, 24VDC	RX QEL 99NL-OP x 24VDC
2	1	McKINNEY – 8 WIRE TRANSFER HINGE	TA2714CC8
3	1	GRI – ALARM CONTACT	184-12

#### OPERATION

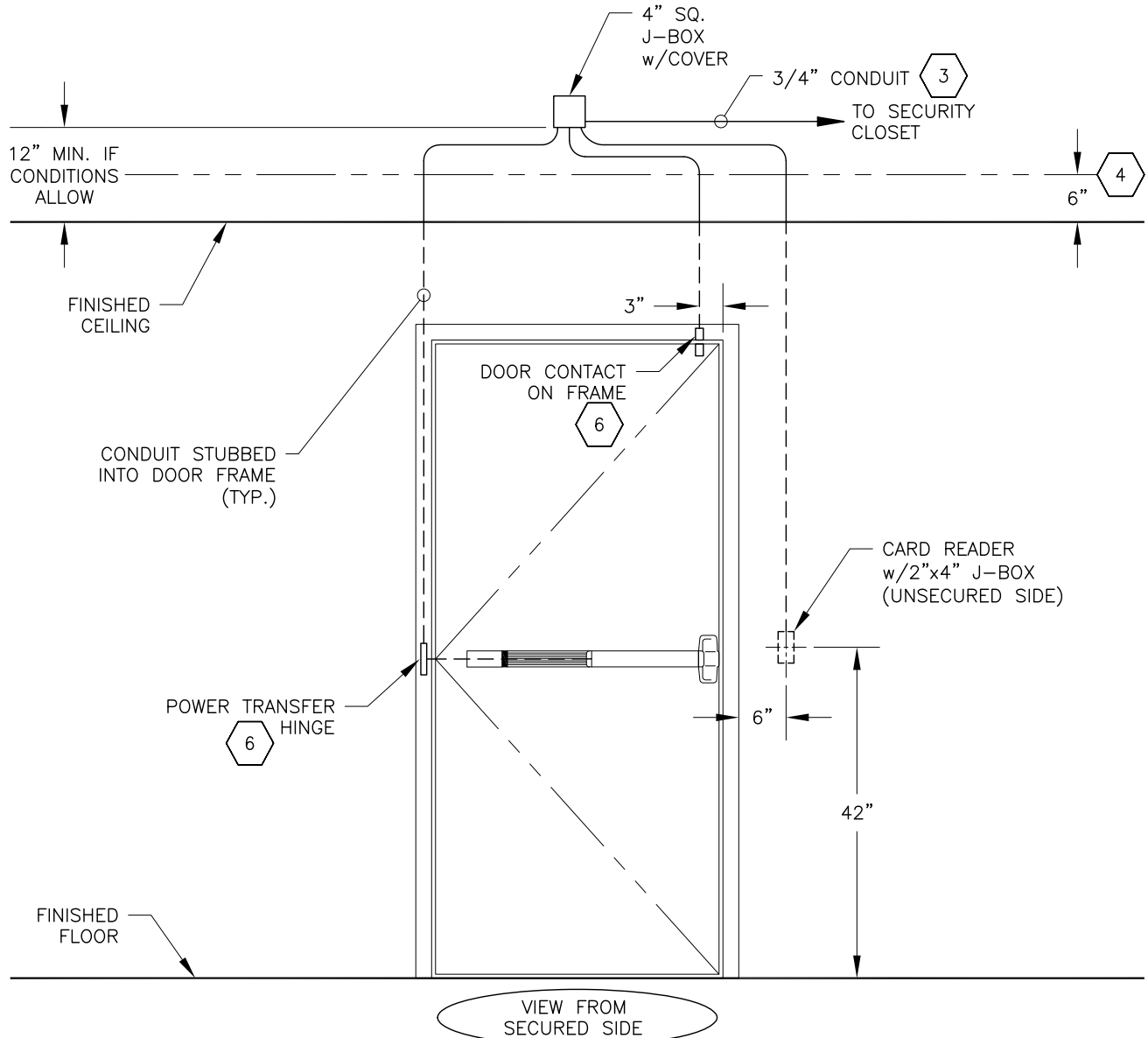
IN THE NORMAL STATE, THE DOOR IS CLOSED, LOCKED ON THE UNSECURED SIDE, AND UNLOCKED FROM THE SECURED SIDE. NORMAL OPERATION IS BY ACCESS CARD ON THE UNSECURED SIDE, AND BY PUSH BAR FROM THE SECURED SIDE. THE REQUEST-TO-EXIT MICROSWITCH, OPERATED BY THE SECURED SIDE PUSH BAR, WILL SHUNT THE ALARM BUT NOT UNLOCK THE LOCK. IF THE DOOR IS HELD OPEN LONGER THAN A PRE-DETERMINED AMOUNT OF TIME, AN ALARM WILL BE GENERATED. IF THE DOOR IS FORCED FROM THE UNSECURED SIDE, AN ALARM WILL BE GENERATED. IF THE CARD READER IS REMOVED, A TAMPER ALARM WILL BE GENERATED.



FOR FIRE RATED DOOR, APPLY NOTE 6 BELOW. DURING A FIRE ALARM THE QEL DEVICE IS LATCHED AND ELECTRICALLY DISABLED. FREE MECHANICAL EGRESS IS ALWAYS AVAILABLE.

#### DIAGRAM NOTES

- THIS DRAWING IS FOR DIAGRAMMATIC PURPOSES ONLY. FOR ACTUAL HANDING AND SWING REFERENCE FLOOR PLANS.
- IF USING OTHER DOOR HARDWARE MANUFACTURER, SUBMIT DOCUMENTATION TO SHOW FUNCTIONAL AND OPERATIONAL EQUIVALENCY.
- FOR RATED ASSEMBLIES, THE DOOR AND FRAME MUST BE FACTORY PREPARED FOR ALL ELECTRIC HARDWARE AND SECURITY DEVICES.
- IF CABLE LENGTH TO A SINGLE VON DUPRIN QEL DEVICE IS GREATER THAN 200', USE THE FOLLOWING GAUGE CABLES INSTEAD OF THE STANDARD 18 AWG "B" TYPE CABLE:  
201' TO 320', USE 1 PAIR OF 16 AWG  
321' TO 500', USE 1 PAIR OF 14 AWG  
501' TO 800', USE 1 PAIR OF 12 AWG
- FOR FIRE RATED DOOR. THE BUILDING FIRE ALARM WILL REMOVE POWER TO THE LOCK. USE FIRE ALARM RELAY CONTROLLED POWER OUTPUT.
- PROVIDE THE VON DUPRIN RX QEL 99-NL-OP-F FIRE RATED DOOR HARDWARE FOR FIRE RATED DOOR.



### ELEVATION NOTES









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- DIMENSIONS SHOWN FOR COORDINATION ONLY. EXACT LOCATIONS AND MOUNTING HEIGHTS TO BE FIELD COORDINATED WITH OWNER AND ARCHITECT.

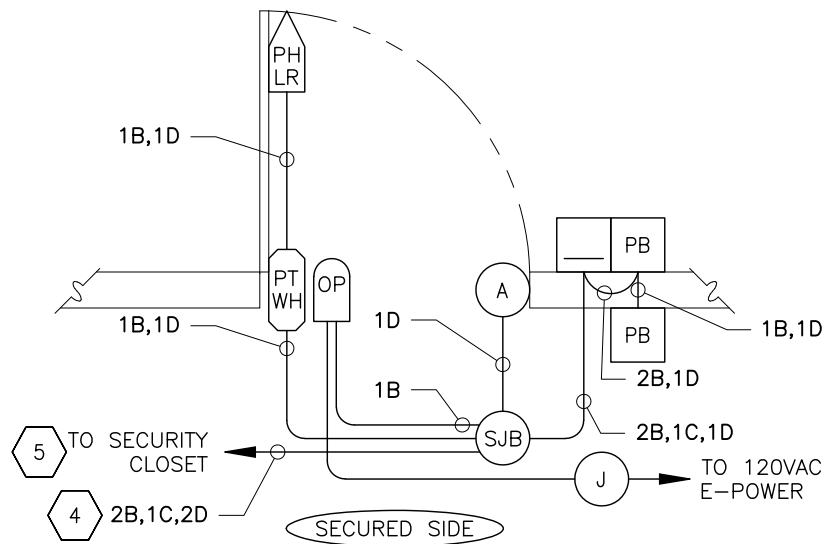
**3** IF PLENUM INSTALLATION, CONDUIT IS NOT REQUIRED FOR THIS CABLE RUN.

**4** IF PLENUM INSTALLATION, STUB CONDUIT, w/PULL STRING, 6" ABOVE FINISHED CEILING.

5. ALL CONDUIT IS 1/2" UNLESS OTHERWISE NOTED.

**6** IF EXISTING DOOR FRAMES ARE GROUTED OR OTHER CONDITIONS MAKE GETTING WIRE INTO THE DOOR FRAME IMPRACTICAL, USE DOOR CORD FOR POWER TRANSFER DEVICE.

SYMBOLS LIST	
	ADA ACTUATOR
	ALARM CONTACT
	CARD READER
	DOOR OPERATOR
	ELECTRIC RIM PANIC w/LATCH RETRACTION & REX
	J-BOX w/COVER
	POWER TRANSFER WIRED HINGE
	SECURITY J-BOX w/COVER



DOOR HARDWARE			
#	QTY	DESCRIPTION	MODEL NUMBER
1	1	VON DUPRIN – ELECTRIC RIM PANIC w/QUIET LATCH RETRACTION & REX SWITCH, NIGHT LATCH, OPTIONAL PULL	RX QEL 99NL-OP x 24VDC
2	1	McKINNEY – 8 WIRE TRANSFER HINGE	TA2714CC8
3	1	DOOR OPERATOR	–
4	2	SDC – ADA PUSH BUTTON DOOR ACTUATOR, FULL LENGTH	SDC484AA36
5	1	GRI – ALARM CONTACT	184-12



REFER TO SHEET AJ-b





SINGLE DOOR, CARD IN/FREE EXIT  
RIM PANIC w/QUIET LATCH RETRACTION & REX SWITCH  
ADA ACTUATORS, OPERATOR  
FAIL SECURE

## DETAIL AJ-b

### STANDARD

REFER TO SHEET AJ-a

#### OPERATION

IN THE NORMAL STATE, THE DOOR IS CLOSED, LOCKED ON THE UNSECURED SIDE, AND UNLOCKED FROM THE SECURED SIDE. NORMAL OPERATION IS BY ACCESS CARD ON THE UNSECURED SIDE, AND BY PANIC BAR OR ADA ACTUATOR FROM THE SECURED SIDE. ON VALID CARD READ, THE UNSECURED SIDE ADA ACTUATOR WILL BE ENABLED SO IF PRESSED, WILL ACTUATE THE OPERATOR. THE REQUEST-TO-EXIT MICROSWITCH, OPERATED BY THE SECURED SIDE PUSH BAR, WILL SHUNT THE ALARM BUT UNLOCK THE LOCK. THE SECURED SIDE ADA ACTUATOR WILL SHUNT THE ALARM, UNLOCK THE LOCK AND ACTUATE THE OPERATOR. IF THE DOOR IS HELD OPEN LONGER THAN A PRE-DETERMINED AMOUNT OF TIME, AN ALARM WILL BE GENERATED. IF THE DOOR IS FORCED, AN ALARM WILL BE GENERATED. IF THE CARD READER IS REMOVED, A TAMPER ALARM WILL BE GENERATED.



FOR FIRE RATED DOOR, APPLY NOTE 6 BELOW. DURING A FIRE ALARM THE QEL DEVICE IS LATCHED AND ELECTRICALLY DISABLED. FREE MECHANICAL EGRESS IS ALWAYS AVAILABLE.

#### DIAGRAM NOTES

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2. IF USING OTHER DOOR HARDWARE MANUFACTURER, SUBMIT DOCUMENTATION TO SHOW FUNCTIONAL AND OPERATIONAL EQUIVALENCY.
3. FOR RATED ASSEMBLIES, THE DOOR AND FRAME MUST BE FACTORY PREPARED FOR ALL ELECTRIC HARDWARE AND SECURITY DEVICES.
4. IF CABLE LENGTH TO A SINGLE VON DUPRIN QEL DEVICE IS GREATER THAN 200', USE THE FOLLOWING GAUGE CABLES INSTEAD OF THE STANDARD 18 AWG "B" TYPE CABLE:  
201' TO 320', USE 1 PAIR OF 16 AWG  
321' TO 500', USE 1 PAIR OF 14 AWG  
501' TO 800', USE 1 PAIR OF 12 AWG
5. FOR FIRE RATED DOOR. THE BUILDING FIRE ALARM WILL REMOVE POWER TO THE LOCK. USE FIRE ALARM RELAY CONTROLLED POWER OUTPUT.
6. PROVIDE THE VON DUPRIN RX QEL 99-NL-OP-F FIRE RATED DOOR HARDWARE FOR FIRE RATED DOOR.



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2. DIMENSIONS SHOWN FOR COORDINATION ONLY. EXACT LOCATIONS AND MOUNTING HEIGHTS TO BE FIELD COORDINATED WITH OWNER AND ARCHITECT.

6 IF EXISTING DOOR FRAMES ARE GROUTED OR OTHER CONDITIONS MAKE GETTING WIRE INTO THE DOOR FRAME IMPRACTICAL, USE DOOR CORD FOR POWER TRANSFER DEVICE.



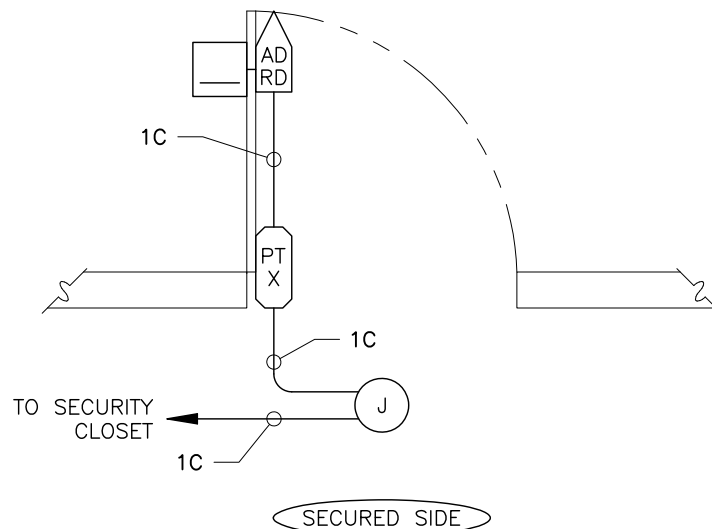


SINGLE DOOR, CARD IN/FREE EXIT  
ELECTRIC LOCK w/CARD READER  
REX SWITCH & DOOR SWITCH MONITOR  
FAIL SECURE

# DETAIL AX

## STANDARD

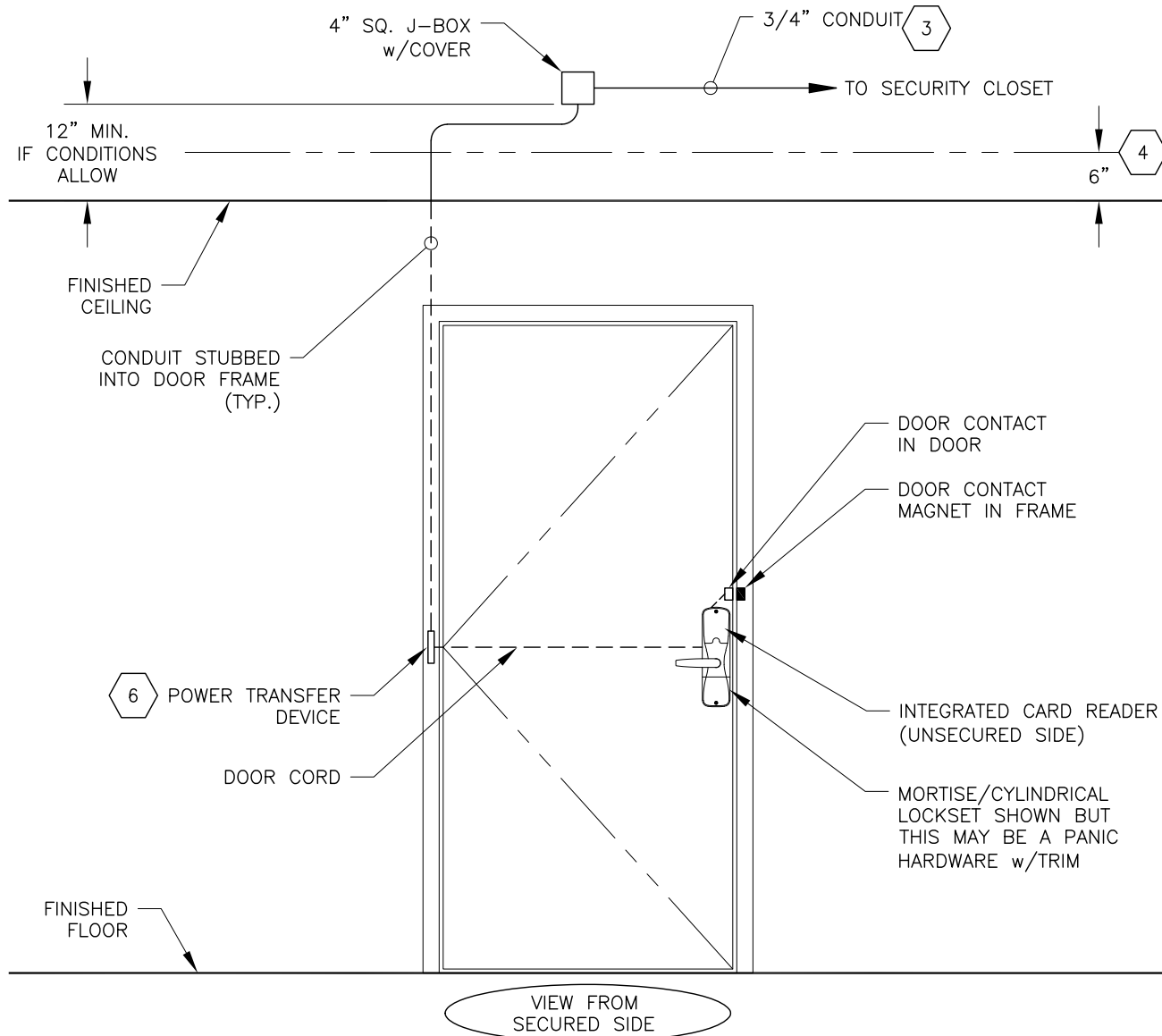
SYMBOLS LIST	
	ELECTRIC LOCK w/CARD READER, REX SWITCH & DSM INPUT, RS485
	J-BOX w/COVER
	POWER TRANSFER DEVICE, WIRED HINGE, OR DOOR CORD



DOOR HARDWARE			
#	QTY	DESCRIPTION	MODEL NUMBER
1	1	ALLEGION – NETWORKED MORTISE LOCKSET w/CARD READER, DSM, & REX SWITCH, FAIL SECURE, ADD MORTISE STRIKE	AD-300-MS-70-MT w/STRIKE: 10-072
		ALLEGION – NETWORKED CYLINDRICAL LOCKSET w/CARD READER, & REX SWITCH, FAIL SECURE, ADD CYLINDRICAL STRIKE	AD-300-CY-70-MT w/STRIKE: 10-025
		ALLEGION – NETWORKED ELECTRIC TRIM FOR PANIC HARDWARE w/CARD READER & RX-LC SWITCH, FAIL SECURE	AD-300-993R-70-MT
2	1	McKINNEY – POWER TRANSFER WIRED HINGE, 8-WIRE	TA2714-CC8
		VON DUPRIN – ELECTRIC POWER TRANSFER, 10-WIRE	EPT-10
		SDC – 20" ARMORED DOOR CORD, 3/8" ID, w/ALUMINUM BOX END CAPS	PT-3/8V

OPERATION
IN THE NORMAL STATE, THE DOOR IS CLOSED, LOCKED ON THE UNSECURED SIDE, AND UNLOCKED FROM THE SECURED SIDE. NORMAL OPERATION IS BY ACCESS CARD ON THE UNSECURED SIDE AND BY LEVER OR PANIC BAR FROM THE SECURED SIDE. THE REQUEST-TO-EXIT MICROSWITCH, OPERATED BY THE SECURED SIDE HANDLE OR PANIC BAR, WILL SHUNT THE ALARM BUT WILL NOT UNLOCK THE LOCK.

DIAGRAM NOTES
1. IF USING OTHER DOOR HARDWARE MANUFACTURER, SUBMIT DOCUMENTATION TO SHOW FUNCTIONAL AND OPERATIONAL EQUIVALENCY.
2. THIS DRAWING IS FOR DIAGRAMMATIC PURPOSES ONLY. FOR ACTUAL HANDING AND SWING REFERENCE FLOOR PLANS.
3. FOR RATED ASSEMBLIES, THE DOOR AND FRAME MUST BE FACTORY PREPARED FOR ALL ELECTRIC HARDWARE AND SECURITY DEVICES.



### ELEVATION NOTES

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






3 IF PLENUM INSTALLATION, CONDUIT IS NOT REQUIRED FOR THIS CABLE RUN.

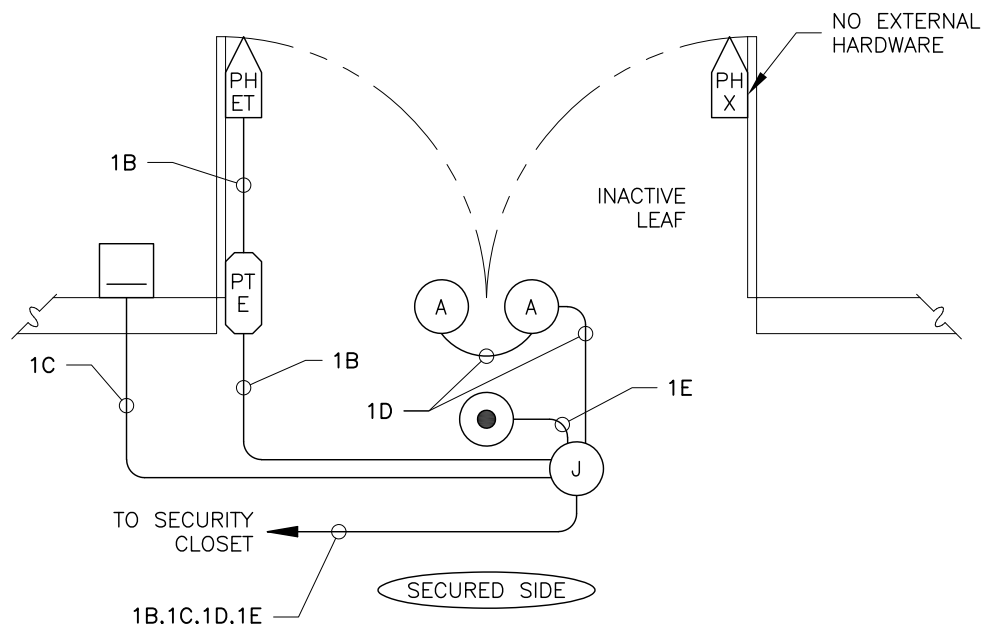
4 IF PLENUM INSTALLATION, STUB CONDUIT, w/PULL STRING, 6" ABOVE FINISHED CEILING.

5. ALL CONDUIT IS 1/2" UNLESS OTHERWISE NOTED.

6 IF EXISTING DOOR FRAMES ARE GROUTED OR OTHER CONDITIONS MAKE GETTING WIRE INTO THE DOOR FRAME IMPRACTICAL, USE DOOR CORD FOR POWER TRANSFER DEVICE.

## SYMBOLS LIST

- |   |                         |
|---|-------------------------|
|  | ALARM CONTACT           |
|  | CARD READER             |
|  | J-BOX w/COVER           |
|  | MANUAL PANIC            |
|  | PANIC w/ELECTRIC TRIM   |
|  | PIR/REX                 |
|  | ELECTRIC POWER TRANSFER |



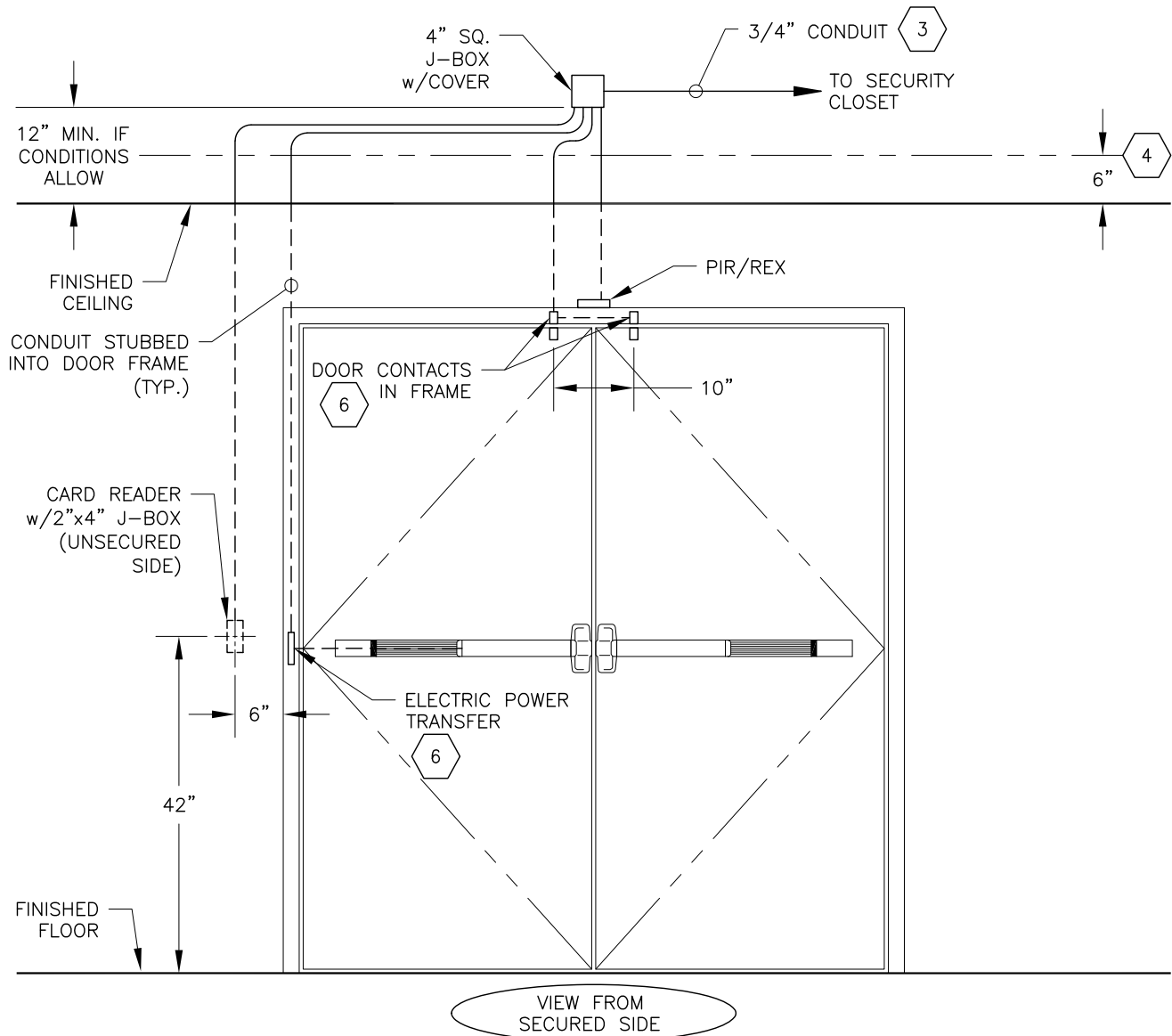
DOOR HARDWARE			
#	QTY	DESCRIPTION	MODEL NUMBER
1	1	VON DUPRIN – PANIC w/CONCEALED VERTICAL CABLES & ELECTRIC TRIM, FAIL SECURE, 24VDC	LD 9949L–NL x E996L 24VDC FSE
2	1	VON DUPRIN – MANUAL PANIC w/CONCEALED VERTICAL CABLES, EXIT ONLY	AX LD 9949–EO
3	1	VON DUPRIN – ELECTRIC POWER TRANSFER, 10–WIRE	EPT–10
4	2	GRI – ALARM CONTACT	184–12
5	2	BOSCH SECURITY – PASSIVE INFRARED, REQUEST–TO–EXIT	DS160

## OPERATION

IN THE NORMAL STATE, THE DOORS ARE CLOSED, LOCKED ON THE UNSECURED SIDE, AND UNLOCKED FROM THE SECURED SIDE. NORMAL OPERATION IS BY ACCESS CARD ON THE UNSECURED SIDE AND BY PUSH BAR FROM THE SECURED SIDE. THE PIR/REX WILL SHUNT THE ALARM BUT NOT UNLOCK THE LOCK. IF THE DOORS ARE HELD OPEN LONGER THAN A PRE-DETERMINED AMOUNT OF TIME, AN ALARM WILL BE GENERATED. IF THE DOORS ARE FORCED, AN ALARM WILL BE GENERATED. IF THE CARD READER IS REMOVED, A TAMPER ALARM WILL BE GENERATED.

DIAGRAM NOTES

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2. IF USING OTHER DOOR HARDWARE MANUFACTURER, SUBMIT DOCUMENTATION TO SHOW FUNCTIONAL AND OPERATIONAL EQUIVALENCY.
3. FOR RATED ASSEMBLIES, THE DOOR AND FRAME MUST BE FACTORY PREPARED FOR ALL ELECTRIC HARDWARE AND SECURITY DEVICES.
4. ORDER PANIC HARDWARE WITHOUT DOGGING FEATURE.
5. PROVIDE THE VON DUPRIN AX 9949L-NL-F x E996L 24VDC FSE AND THE AX 9949 EO F FIRE RATED DOOR HARDWARE FOR FIRE RATED DOORS.



### ELEVATION NOTES







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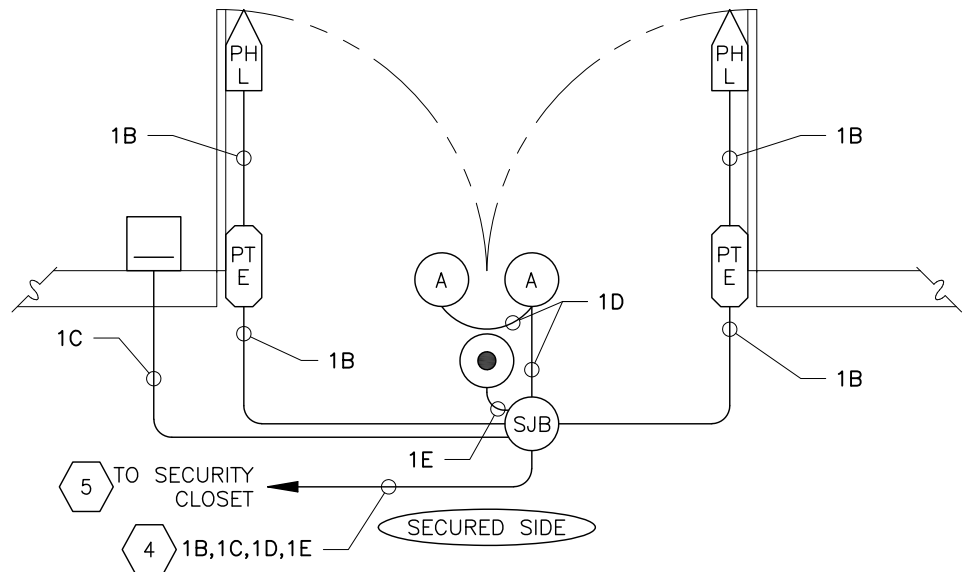
**3** IF PLENUM INSTALLATION, CONDUIT IS NOT REQUIRED FOR THIS CABLE RUN.

**4** IF PLENUM INSTALLATION, STUB CONDUIT, w/PULL STRING, 6" ABOVE FINISHED CEILING.

5. ALL CONDUIT IS 1/2" UNLESS OTHERWISE NOTED.

**6** IF EXISTING DOOR FRAMES ARE GROUTED OR OTHER CONDITIONS MAKE GETTING WIRE INTO THE DOOR FRAME IMPRACTICAL, USE DOOR CORD FOR POWER TRANSFER DEVICE.

SYMBOLS LIST	
	ALARM CONTACT
	CARD READER
	ELECTRIC POWER TRANSFER
	PANIC HARDWARE W/QUIET LATCH RETRACTION
	PIR/REX
	SECURITY J-BOX w/COVER



DOOR HARDWARE			
#	QTY	DESCRIPTION	MODEL NUMBER
1	1	VON DUPRIN – PANIC w/QUIET LATCH RETRACTION, CONCEALED VERTICAL CABLES, OPTIONAL PULL, 24VDC	QEL 9949–NL–OP, 24VDC
2	1	VON DUPRIN – PANIC w/QUIET LATCH RETRACTION, CONCEALED VERTICAL CABLES, EXIT ONLY, 24VDC	QEL 9949EO, 24VDC
3	2	VON DUPRIN – ELECTRIC POWER TRANSFER, 10 WIRE	EPT–10
4	2	GRI – ALARM CONTACT	184–12
5	2	BOSCH SECURITY – PASSIVE INFRARED, REQUEST–TO–EXIT	DS160




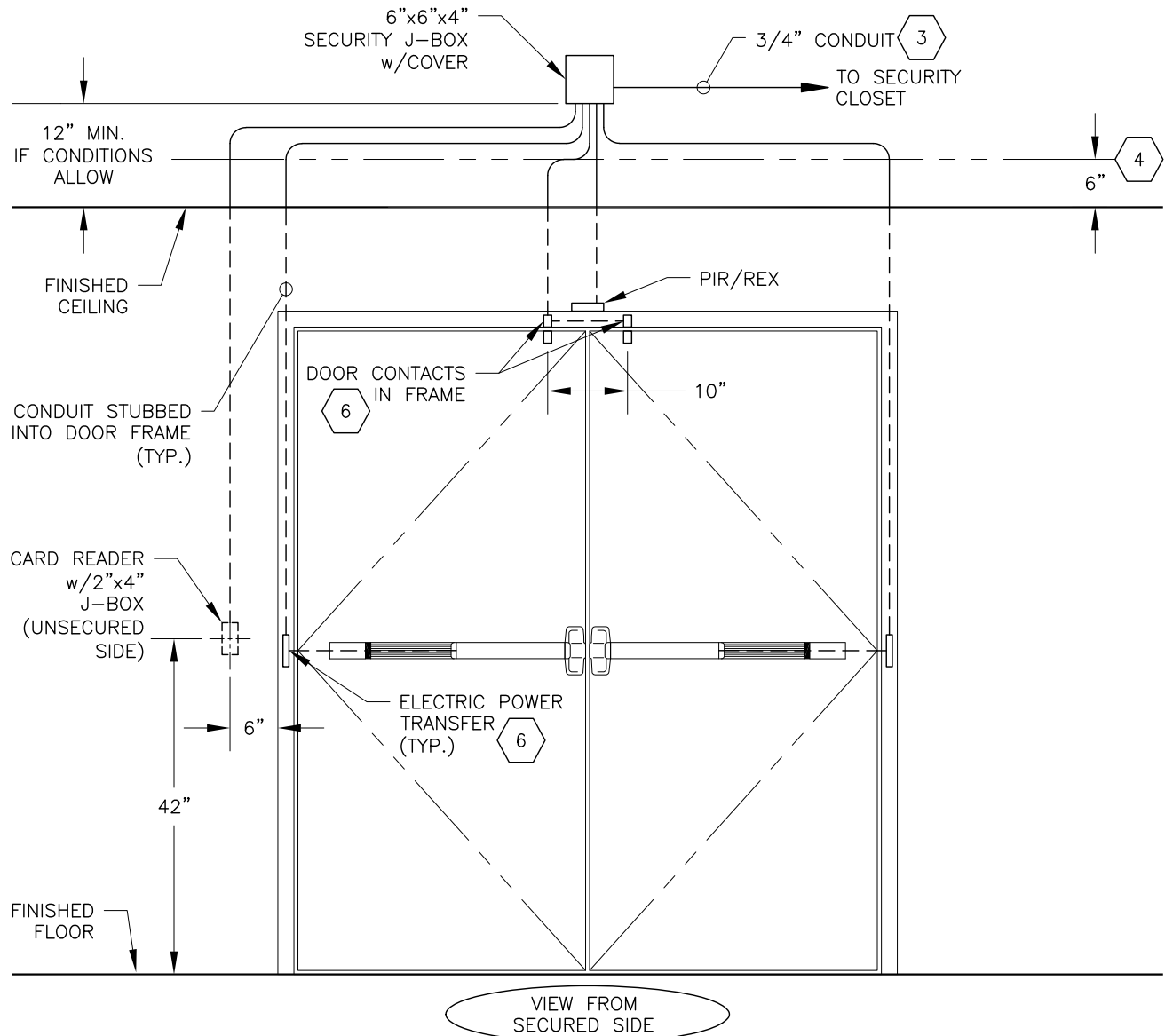
OPERATION	
<p>IN THE NORMAL STATE, THE DOORS ARE CLOSED, LOCKED ON THE UNSECURED SIDE, AND UNLOCKED FROM THE SECURED SIDE. NORMAL OPERATION IS BY ACCESS CARD ON THE UNSECURED SIDE, AND BY PUSH BAR FROM THE SECURED SIDE. THE PIR/REX WILL SHUNT THE ALARM BUT NOT UNLOCK THE LOCKS. IF THE DOORS ARE HELD OPEN LONGER THAN A PRE–DETERMINED AMOUNT OF TIME, AN ALARM WILL BE GENERATED. IF THE DOORS ARE FORCED FROM THE UNSECURED SIDE, AN ALARM WILL BE GENERATED. IF THE CARD READER IS REMOVED, A TAMPER ALARM WILL BE GENERATED.</p> <p> FOR FIRE RATED DOORS, APPLY NOTE 6 BELOW. DURING A FIRE ALARM THE QEL DEVICE IS LATCHED AND ELECTRICALLY DISABLED. FREE MECHANICAL EGRESS IS ALWAYS AVAILABLE.</p>	

DIAGRAM NOTES	
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### ELEVATION NOTES










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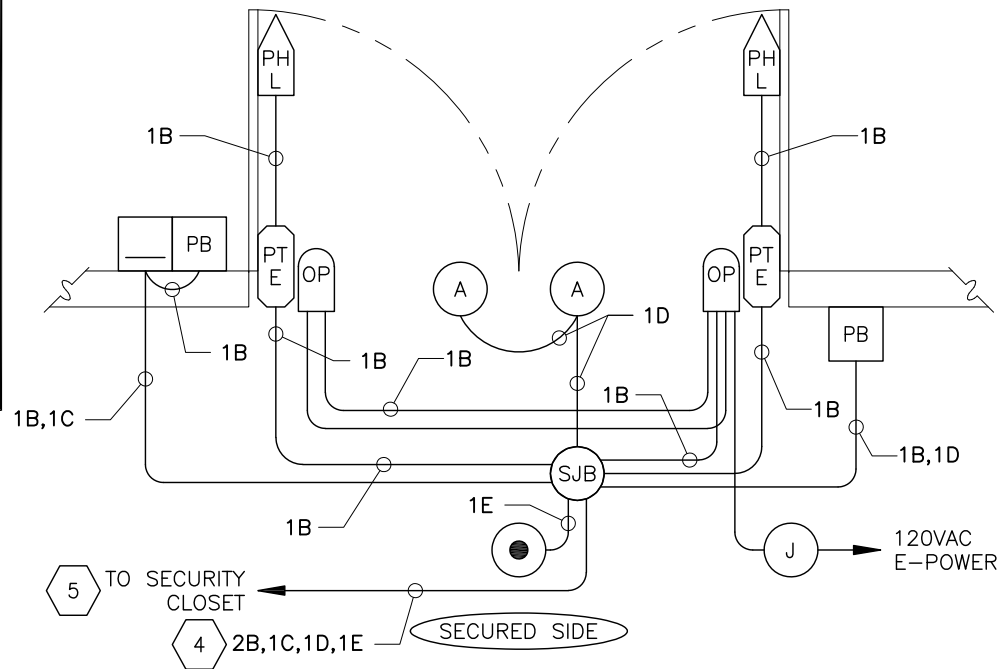
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(4) IF PLENUM INSTALLATION, STUB CONDUIT, w/PULL STRING, 6" ABOVE FINISHED CEILING.

5. ALL CONDUIT IS 1/2" UNLESS OTHERWISE NOTED.

(6) IF EXISTING DOOR FRAMES ARE GROUTED OR OTHER CONDITIONS MAKE GETTING WIRE INTO THE DOOR FRAME IMPRACTICAL, USE DOOR CORD FOR POWER TRANSFER DEVICE.

SYMBOLS LIST	
	ADA ACTUATOR
	ALARM CONTACT
	CARD READER
	DOOR OPERATOR
	ELECTRIC PANIC w/LATCH RETRACTION
	J-BOX w/COVER
	PIR/REX
	ELECTRIC POWER TRANSFER
	SECURITY J-BOX w/COVER



DOOR HARDWARE			
#	QTY	DESCRIPTION	MODEL NUMBER
1	1	VON DUPRIN – ELECTRIC PANIC w/QUIET LATCH RETRACTION, CONCEALED VERTICAL CABLES, NIGHT LATCH, 24VDC	QEL 9949-NL-OP, 24VDC
2	1	VON DUPRIN – ELECTRIC PANIC w/QUIET LATCH RETRACTION, CONCEALED VERTICAL CABLES, EXIT ONLY, 24VDC	QEL 9949-EO, 24VDC
3	2	VON DUPRIN – ELECTRIC POWER TRANSFER, 10 WIRE	EPT-10
4	2	DOOR OPERATOR	-
5	2	SDC – ADA PUSH BUTTON DOOR ACTUATOR, FULL LENGTH	SDC484AA36
6	2	GRI – ALARM CONTACT	184-12
7	1	BOSCH SECURITY – PASSIVE INFRARED, REQUEST-TO-EXIT	DS160
8	2	IDEC – DPDT RELAY w/INDICATOR LIGHT, DIODE, 24VDC	RH2B-ULD-DC24V
9	2	IDEC – DIN RAIL RELAY SOCKET, DPDT	SH2B-05
10	2	IDEC – PULL OVER WIRE SPRING, DPDT	SY4S-02F1

REFER TO SHEET BJ-b



DOUBLE DOOR, CARD IN/FREE EXIT  
PANICS w/QUIET LATCH RETRACTION  
PIR/REX, ADA ACTUATORS, OPERATORS  
FAIL SECURE

## DETAIL BJ-b

### STANDARD

REFER TO SHEET BJ-a

#### OPERATION

IN THE NORMAL STATE, THE DOORS ARE CLOSED, LOCKED ON THE UNSECURED SIDE, AND UNLOCKED FROM THE SECURED SIDE. NORMAL OPERATION IS BY ACCESS CARD ON THE UNSECURED SIDE, AND BY PANIC BAR OR ADA PUSH BUTTON FROM THE SECURED SIDE. PRESENTING A VALID CARD ON THE UNSECURED SIDE WILL UNLOCK THE LOCKS AND ENABLE THE UNSECURED SIDE ADA PUSH BUTTON. THE PIR/REX WILL SHUNT THE ALARM BUT NOT UNLOCK THE LOCKS, THE SECURED SIDE ADA PUSH BUTTON WILL SHUNT THE ALARM, UNLOCK THE LOCKS AND ACTUATE THE OPERATORS. IF THE DOORS ARE HELD OPEN LONGER THAN A PRE-DETERMINED AMOUNT OF TIME, AN ALARM WILL BE GENERATED. IF THE DOORS ARE FORCED, AN ALARM WILL BE GENERATED. IF THE CARD READER IS REMOVED, A TAMPER ALARM WILL BE GENERATED.



FOR FIRE RATED DOORS, APPLY NOTE 6 BELOW. DURING A FIRE ALARM THE QEL DEVICE IS LATCHED AND ELECTRICALLY DISABLED. FREE MECHANICAL EGRESS IS ALWAYS AVAILABLE.

#### DIAGRAM NOTES

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2. IF USING OTHER DOOR HARDWARE MANUFACTURER, SUBMIT DOCUMENTATION TO SHOW FUNCTIONAL AND OPERATIONAL EQUIVALENCY.
3. FOR RATED ASSEMBLIES, THE DOOR AND FRAME MUST BE FACTORY PREPARED FOR ALL ELECTRIC HARDWARE AND SECURITY DEVICES.



IF CABLE LENGTH TO A SINGLE VON DUPRIN QEL DEVICE IS GREATER THAN 200', USE THE FOLLOWING GAUGE CABLES INSTEAD OF THE STANDARD 18 AWG "B" TYPE CABLE:

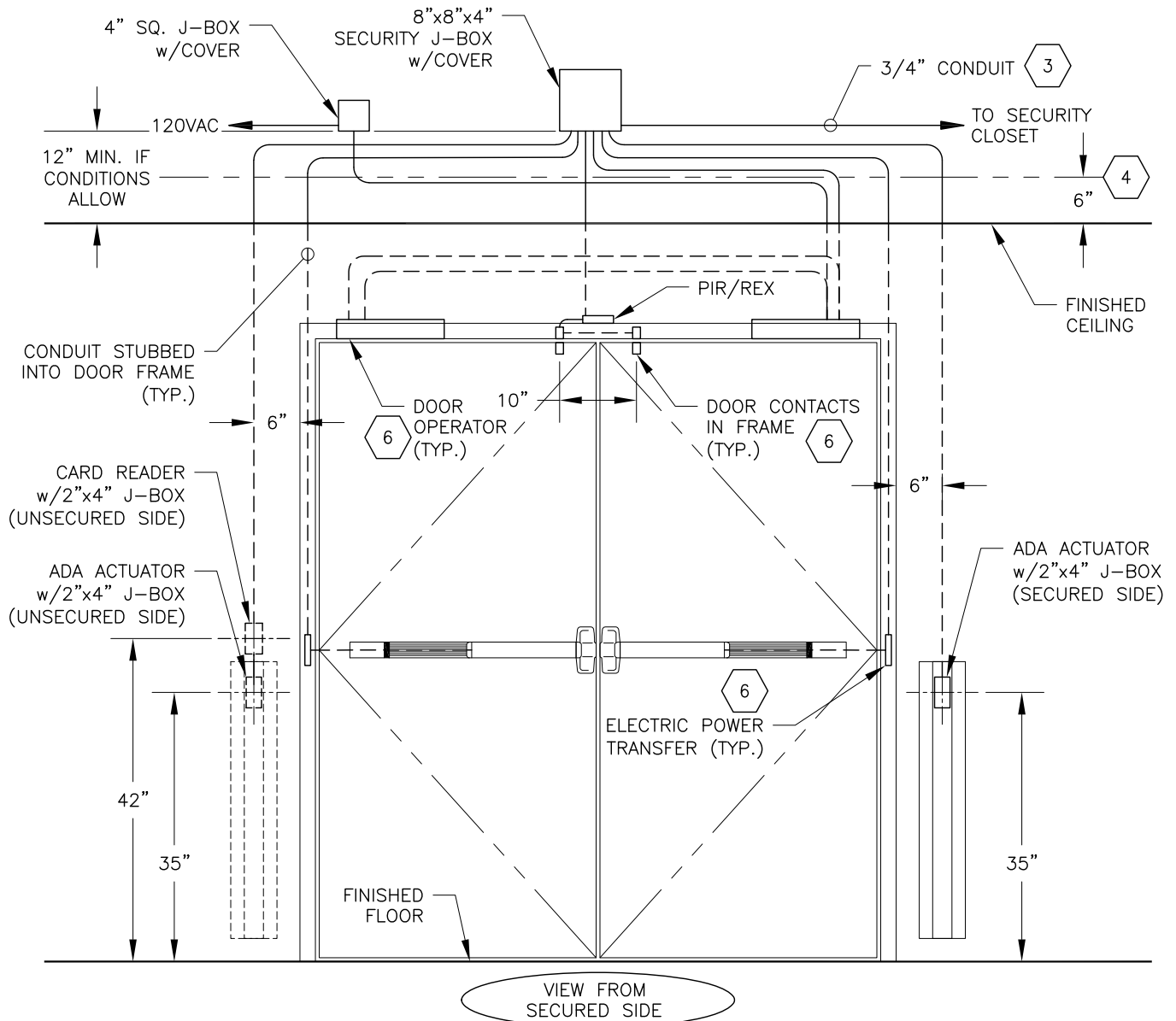
- 201' TO 320', USE 1 PAIR OF 16 AWG
- 321' TO 500', USE 1 PAIR OF 14 AWG
- 501' TO 800', USE 1 PAIR OF 12 AWG



FOR FIRE RATED DOOR. THE BUILDING FIRE ALARM WILL REMOVE POWER TO THE LOCK. USE FIRE ALARM RELAY CONTROLLED POWER OUTPUT.

6. PROVIDE THE VON DUPRIN QEL 9949L-NL-OP-F AND THE QEL 9949-EO-F FIRE RATED DOOR HARDWARE FOR FIRE RATED DOORS.





### ELEVATION NOTES

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3 IF PLENUM INSTALLATION, CONDUIT IS NOT REQUIRED FOR THIS CABLE RUN.

4 IF PLENUM INSTALLATION, STUB CONDUIT, w/PULL STRING, 6" ABOVE FINISHED CEILING.

5. ALL CONDUIT IS 1/2" UNLESS OTHERWISE NOTED.




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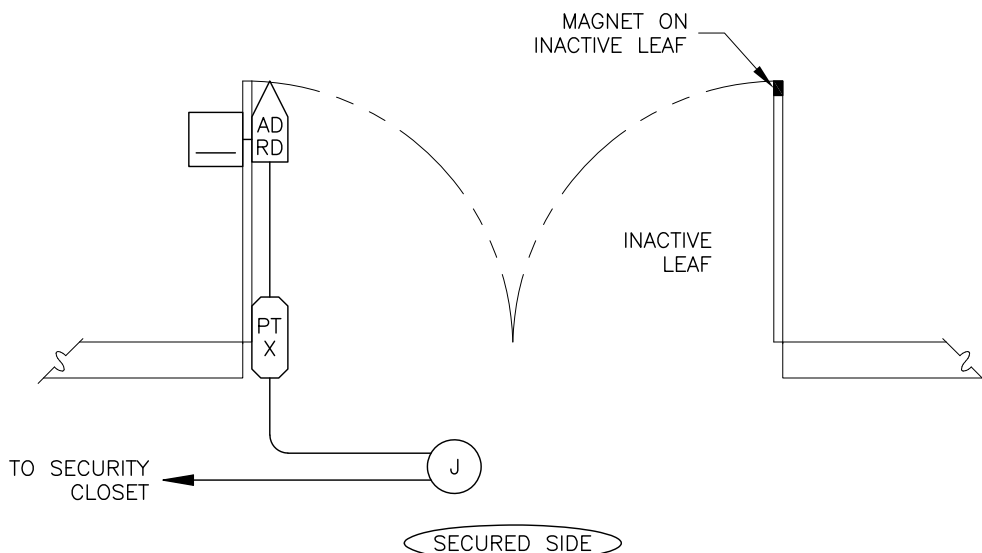


DOUBLE DOOR, CARD IN/FREE EXIT  
ELECTRIC LOCK w/CARD READER  
REX SWITCH & DOOR SWITCH MONITOR  
FAIL SECURE

## DETAIL BX

### STANDARD

SYMBOLS LIST	
	ELECTRIC LOCK w/CARD READER, REX SWITCH & DSM INPUT, RS485
	POWER TRANSFER DEVICE, WIRED HINGE, OR DOOR CORD
	J-BOX w/COVER



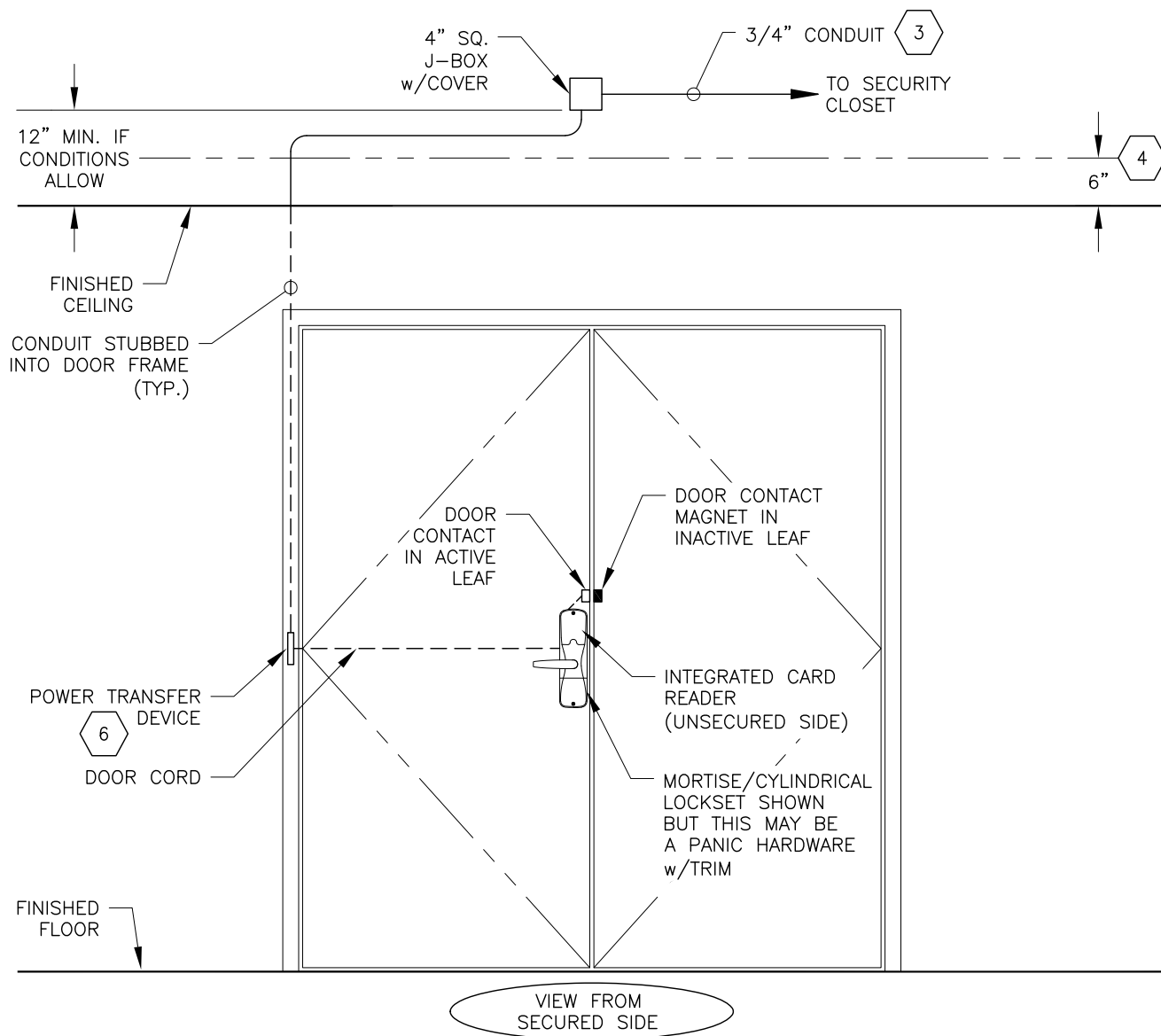
DOOR HARDWARE			
#	QTY	DESCRIPTION	MODEL NUMBER
1	1	ALLEGION - NETWORKED MORTISE LOCKSET w/CARD READER, DSM, & REX SWITCH, FAIL SECURE, ADD MORTISE STRIKE	AD-300-MS-70-MT w/STRIKE: 10-072
		ALLEGION - NETWORKED CYLINDRICAL LOCKSET w/CARD READER, & REX SWITCH, FAIL SECURE, ADD CYLINDRICAL STRIKE	AD-300-CY-70-MT w/STRIKE: 10-025
		ALLEGION - NETWORKED ELECTRIC TRIM FOR PANIC HARDWARE w/CARD READER & RX-LC SWITCH, FAIL SECURE	AD-300-993R-70-MT
2	1	McKINNEY - POWER TRANSFER WIRED HINGE, 8-WIRE	TA2714-CC8
		VON DUPRIN - ELECTRIC POWER TRANSFER, 10-WIRE	EPT-10
		SDC - 20" ARMORED DOOR CORD, 3/8" ID, w/ALUMINUM BOX END CAPS	PT-3/8V

#### OPERATION

IN THE NORMAL STATE, THE DOOR IS CLOSED, LOCKED ON THE UNSECURED SIDE, AND UNLOCKED FROM THE SECURED SIDE. NORMAL OPERATION IS BY ACCESS CARD ON THE UNSECURED SIDE AND BY LEVER OR PANIC BAR FROM THE SECURED SIDE. THE REQUEST-TO-EXIT MICROSWITCH, OPERATED BY THE SECURED SIDE HANDLE OR PANIC BAR, WILL SHUNT THE ALARM BUT WILL NOT UNLOCK THE LOCK.

#### DIAGRAM NOTES

- IF USING OTHER DOOR HARDWARE MANUFACTURER, SUBMIT DOCUMENTATION TO SHOW FUNCTIONAL AND OPERATIONAL EQUIVALENCY.
- THIS DRAWING IS FOR DIAGRAMMATIC PURPOSES ONLY. FOR ACTUAL HANDING AND SWING REFERENCE FLOOR PLANS.
- FOR RATED ASSEMBLIES, THE DOOR AND FRAME MUST BE FACTORY PREPARED FOR ALL ELECTRIC HARDWARE AND SECURITY DEVICES.



### ELEVATION NOTES

1. THIS DRAWING IS FOR DIAGRAMMATIC PURPOSES ONLY. FOR ACTUAL HANDING AND SWING REFERENCE FLOOR PLANS.
2. DIMENSIONS SHOWN FOR COORDINATION ONLY. EXACT LOCATIONS AND MOUNTING HEIGHTS TO BE FIELD COORDINATED WITH OWNER AND ARCHITECT.

(3) IF PLENUM INSTALLATION, CONDUIT IS NOT REQUIRED FOR THIS CABLE RUN.

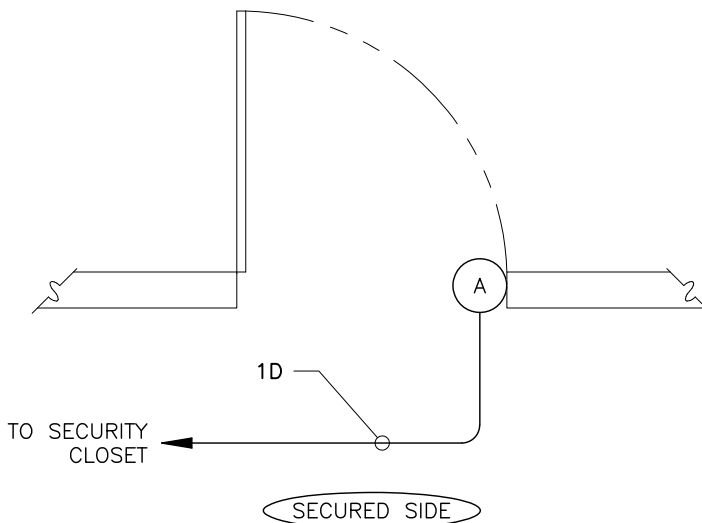
(4) IF PLENUM INSTALLATION, STUB CONDUIT, w/PULL STRING, 6" ABOVE FINISHED CEILING.

5. ALL CONDUIT IS 1/2" UNLESS OTHERWISE NOTED.

(6) IF EXISTING DOOR FRAMES ARE GROUTED OR OTHER CONDITIONS MAKE GETTING WIRE INTO THE DOOR FRAME IMPRACTICAL, USE DOOR CORD FOR POWER TRANSFER DEVICE.

SYMBOLS LIST

(A) ALARM CONTACT



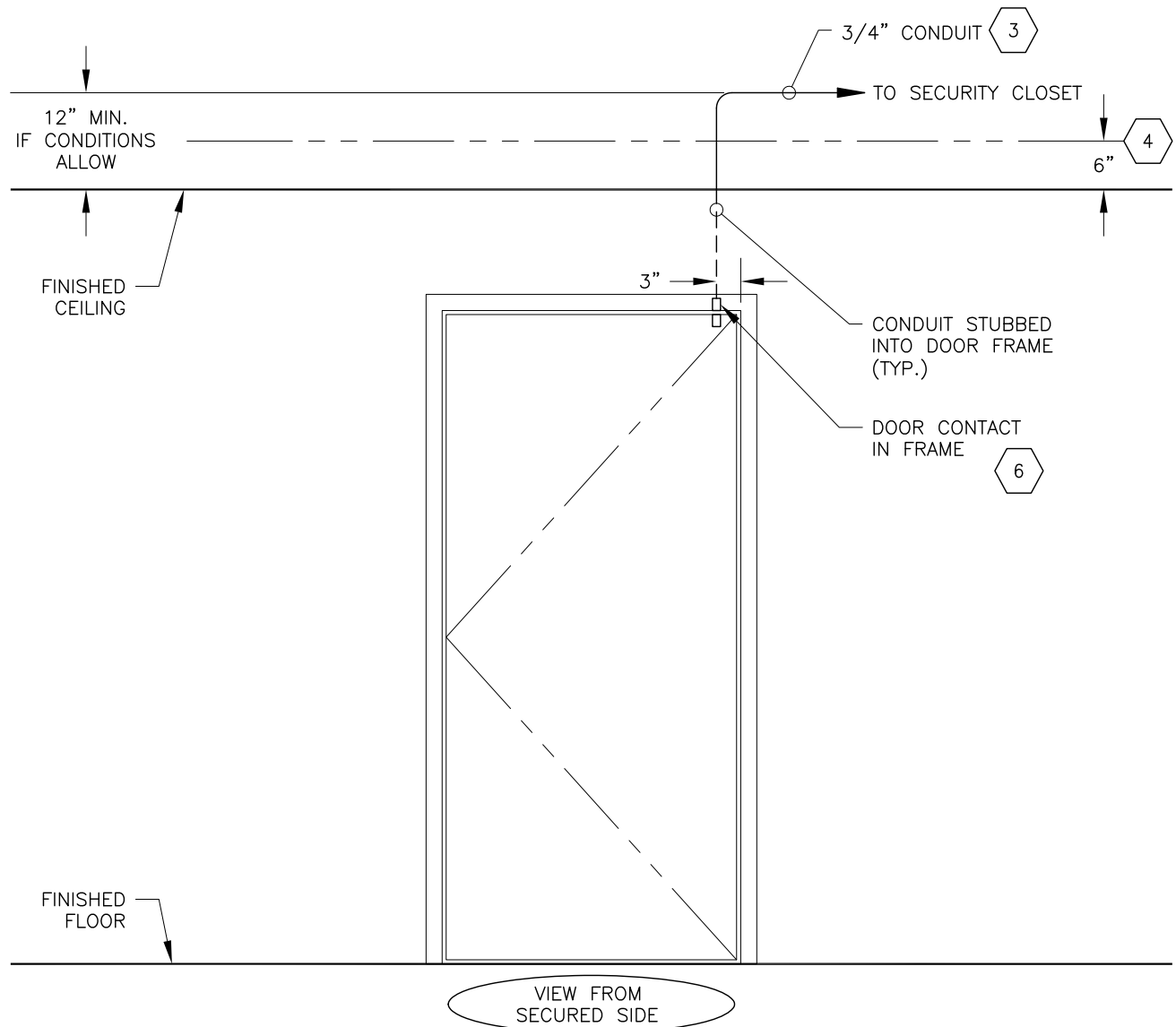
DOOR HARDWARE			
#	QTY	DESCRIPTION	MODEL NUMBER
1	AR	DOOR HARDWARE	TBD
2	1	GRI – ALARM CONTACT	184–12

OPERATION

IN THE NORMAL STATE, THE DOOR IS CLOSED, TYPICALLY LOCKED ON THE UNSECURED SIDE AND UNLOCKED ON THE SECURED SIDE. IF THE DOOR IS OPENED, AN ALARM WILL BE GENERATED.

DIAGRAM NOTES

- THIS DRAWING IS FOR DIAGRAMMATIC PURPOSES ONLY. FOR ACTUAL HANDING AND SWING REFERENCE FLOOR PLANS.
- IF USING OTHER MANUFACTURER FOR LOCKING HARDWARE, SUBMIT DOCUMENTATION TO SHOW FUNCTIONAL AND OPERATIONAL EQUIVALENCY.
- FOR RATED ASSEMBLIES, THE DOOR AND FRAME MUST BE FACTORY PREPARED FOR ALL ELECTRIC HARDWARE AND SECURITY DEVICES.



**NOTES**

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2. DIMENSIONS SHOWN FOR COORDINATION ONLY. EXACT LOCATIONS AND MOUNTING HEIGHTS TO BE FIELD COORDINATED WITH OWNER AND ARCHITECT.

(3) IF PLENUM INSTALLATION, CONDUIT IS NOT REQUIRED FOR THIS CABLE RUN.

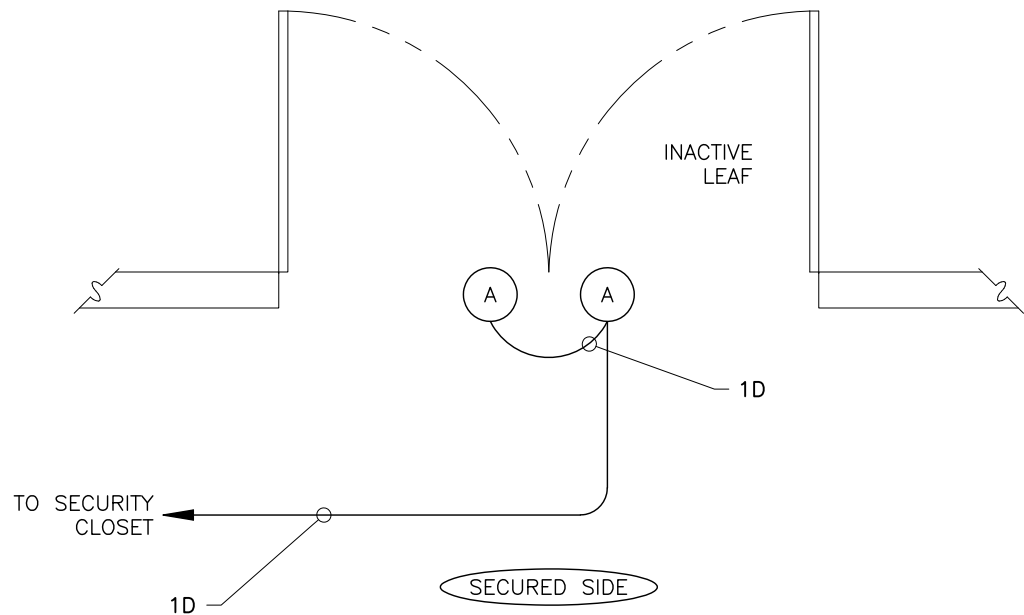
(4) IF PLENUM INSTALLATION, STUB CONDUIT, w/PULL STRING, 6" ABOVE FINISHED CEILING.

5. ALL CONDUIT IS 1/2" UNLESS OTHERWISE NOTED.

(6) IF EXISTING DOOR FRAMES ARE GROUTED OR OTHER CONDITIONS MAKE GETTING WIRE INTO THE DOOR FRAME IMPRACTICAL, USE DOOR CORD FOR POWER TRANSFER DEVICE.

SYMBOLS LIST

(A) ALARM CONTACT



DOOR HARDWARE

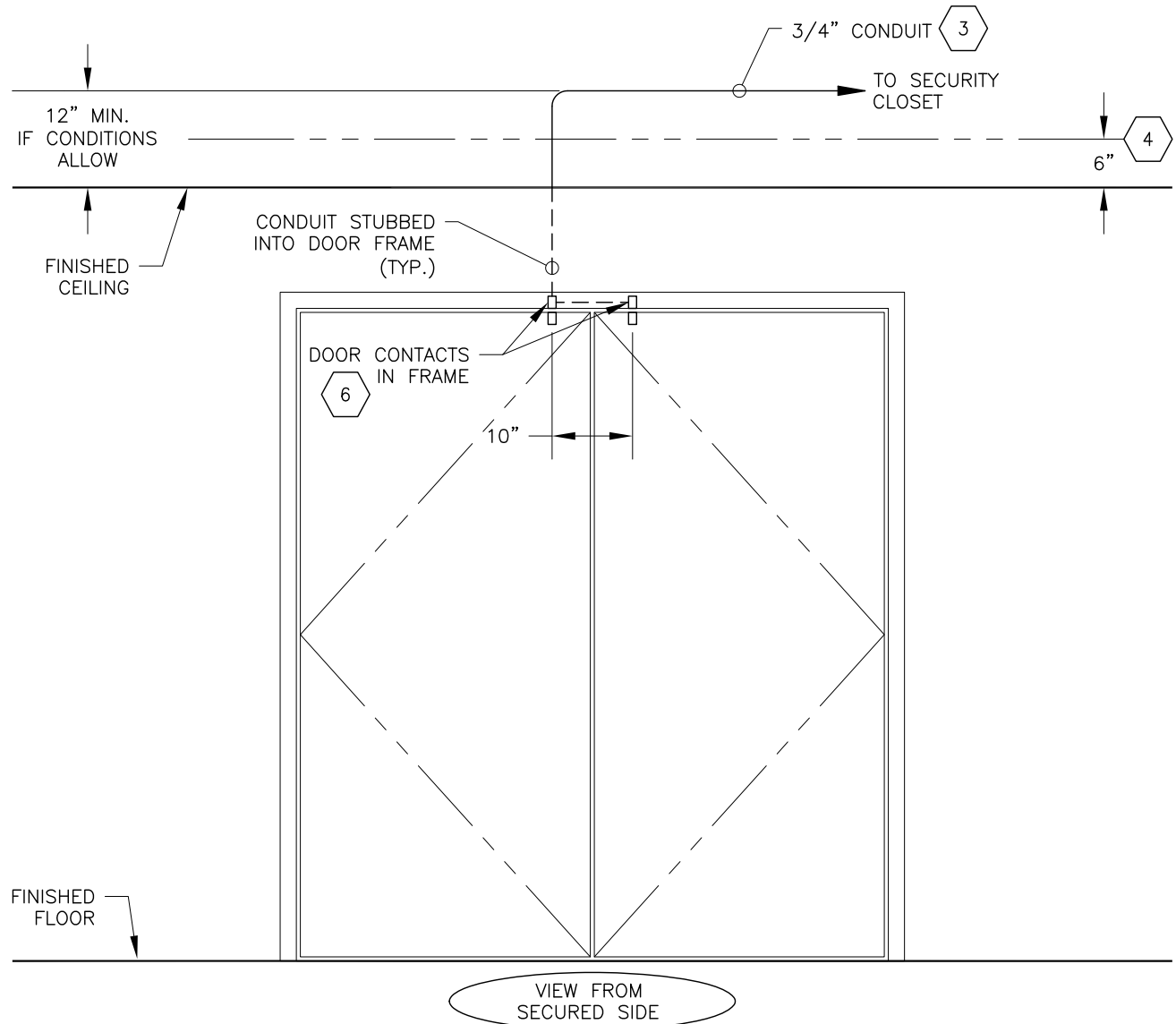
#	QTY	DESCRIPTION	MODEL NUMBER
1	AR	DOOR HARDWARE	TBD
2	2	GRI – ALARM CONTACT	184–12

OPERATION

IN THE NORMAL STATE, THE DOORS ARE CLOSED, TYPICALLY LOCKED ON THE UNSECURED SIDE AND UNLOCKED ON THE SECURED SIDE. IF THE DOORS ARE OPENED, AN ALARM WILL BE GENERATED.

DIAGRAM NOTES

1. THIS DRAWING IS FOR DIAGRAMMATIC PURPOSES ONLY. FOR ACTUAL HANDING AND SWING REFERENCE FLOOR PLANS.
2. IF USING OTHER MANUFACTURER FOR LOCKING HARDWARE, SUBMIT DOCUMENTATION TO SHOW FUNCTIONAL AND OPERATIONAL EQUIVALENCY.
3. FOR RATED ASSEMBLIES, THE DOOR AND FRAME MUST BE FACTORY PREPARED FOR ALL ELECTRIC HARDWARE AND SECURITY DEVICES.



**NOTES**

1. THIS DRAWING IS FOR DIAGRAMMATIC PURPOSES ONLY. FOR ACTUAL HANDING AND SWING REFERENCE FLOOR PLANS.
2. DIMENSIONS SHOWN FOR COORDINATION ONLY. EXACT LOCATIONS AND MOUNTING HEIGHTS TO BE FIELD COORDINATED WITH OWNER AND ARCHITECT.



(3) IF PLENUM INSTALLATION, CONDUIT IS NOT REQUIRED FOR THIS CABLE RUN.

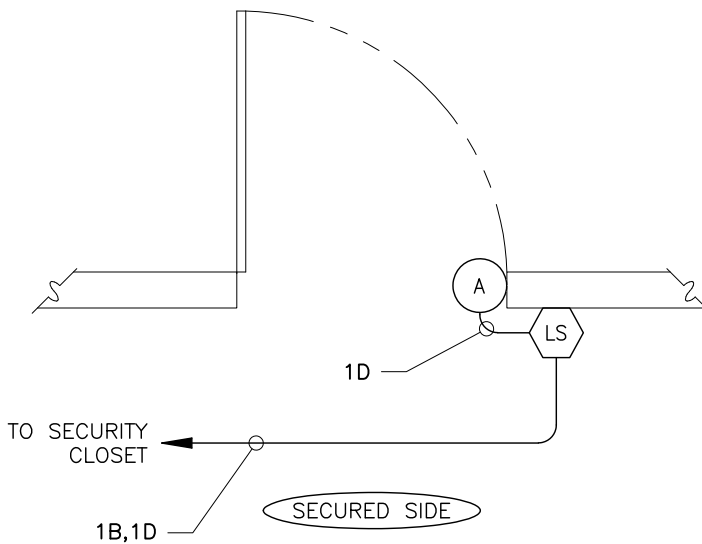
(4) IF PLENUM INSTALLATION, STUB CONDUIT, w/PULL STRING, 6" ABOVE FINISHED CEILING.

5. ALL CONDUIT IS 1/2" OTHERWISE NOTED.

(6) IF EXISTING DOOR FRAMES ARE GROUTED OR OTHER CONDITIONS MAKE GETTING WIRE INTO THE DOOR FRAME IMPRACTICAL, USE DOOR CORD FOR POWER TRANSFER DEVICE.

**SYMBOLS LIST**

	ALARM CONTACT
	LOCAL SOUNDER



**DOOR HARDWARE**

#	QTY	DESCRIPTION	MODEL NUMBER
1	1	DOOR HARDWARE	TBD
2	1	GRI – ALARM CONTACT	184–12
3	1	SDC – DOOR PROP ALARM, SINGLE GANG	EA–SN

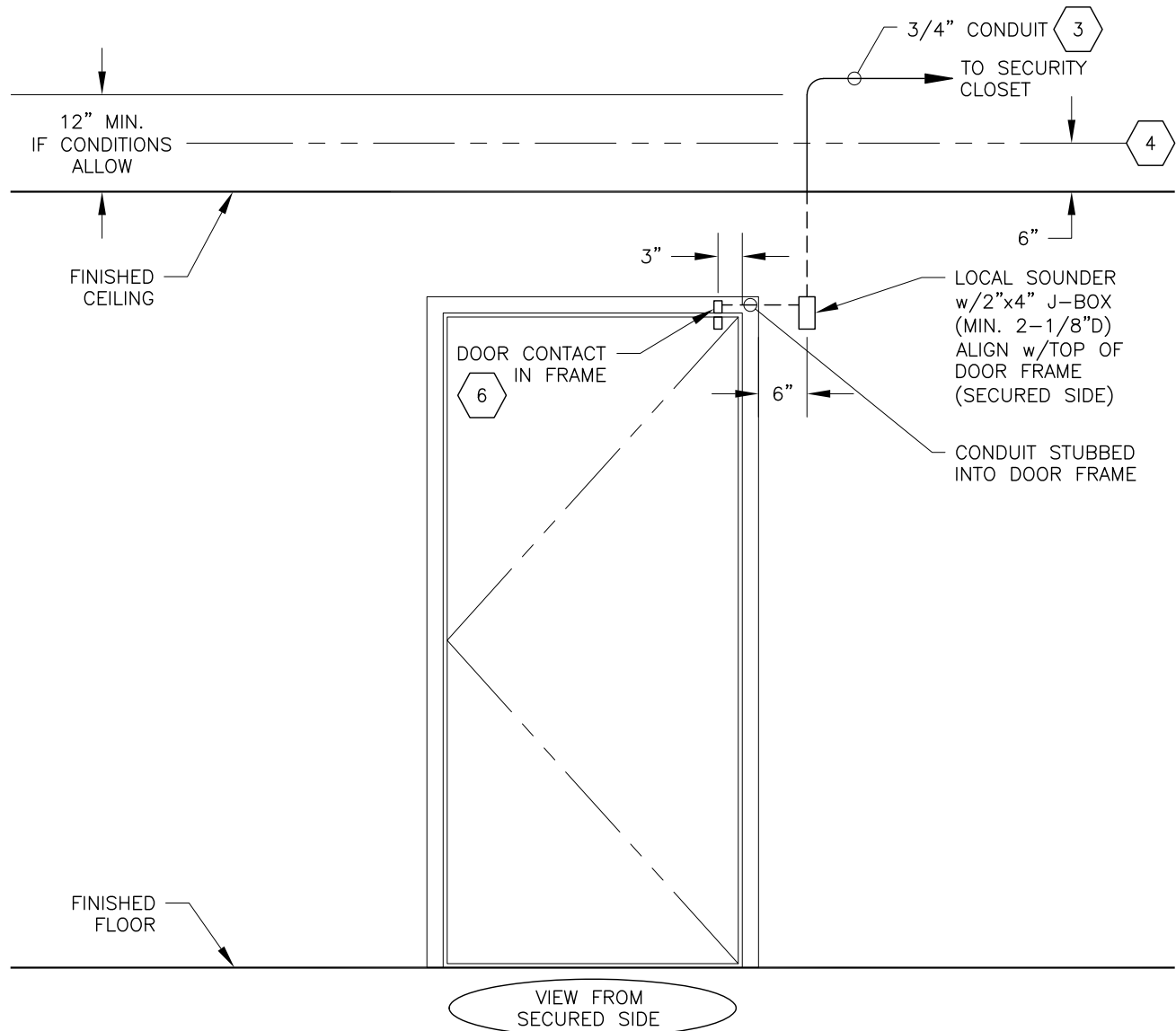
**OPERATION**

IN THE NORMAL STATE, THE DOOR IS CLOSED, TYPICALLY LOCKED ON THE UNSECURED SIDE AND UNLOCKED ON THE SECURE SIDE. IF THE DOOR IS OPENED, AN ALARM WILL BE GENERATED, AND THE LOCAL SOUNDER WILL SOUND UNTIL THE DOOR IS CLOSED.

**DIAGRAM NOTES**

- THIS DRAWING IS FOR DIAGRAMMATIC PURPOSES ONLY. FOR ACTUAL HANDING AND SWING REFERENCE FLOOR PLANS.
- IF USING OTHER MANUFACTURER FOR LOCKING HARDWARE, SUBMIT DOCUMENTATION TO SHOW FUNCTIONAL AND OPERATIONAL EQUIVALENCY.
- FOR RATED ASSEMBLIES, THE DOOR AND FRAME MUST BE FACTORY PREPARED FOR ALL ELECTRIC HARDWARE AND SECURITY DEVICES.





**NOTES**

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(3) IF PLENUM INSTALLATION, CONDUIT IS NOT REQUIRED FOR THIS CABLE RUN.

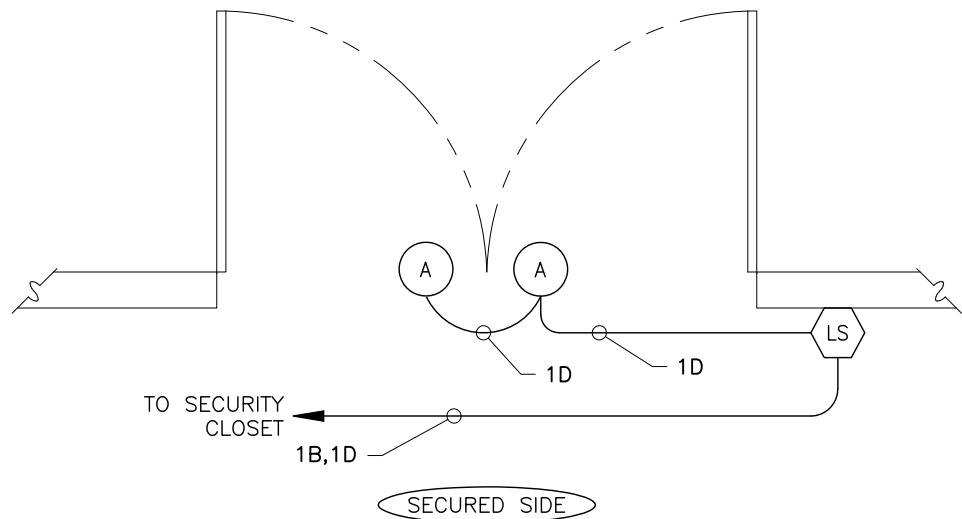
(4) IF PLENUM INSTALLATION, STUB CONDUIT, w/PULL STRING, 6" ABOVE FINISHED CEILING.

5. ALL CONDUIT IS 1/2" UNLESS OTHERWISE NOTED.

(6) IF EXISTING DOOR FRAMES ARE GROUTED OR OTHER CONDITIONS MAKE GETTING WIRE INTO THE DOOR FRAME IMPRACTICAL, USE DOOR CORD FOR POWER TRANSFER DEVICE.

**SYMBOLS LIST**

	ALARM CONTACT
	LOCAL SOUNDER



**DOOR HARDWARE**

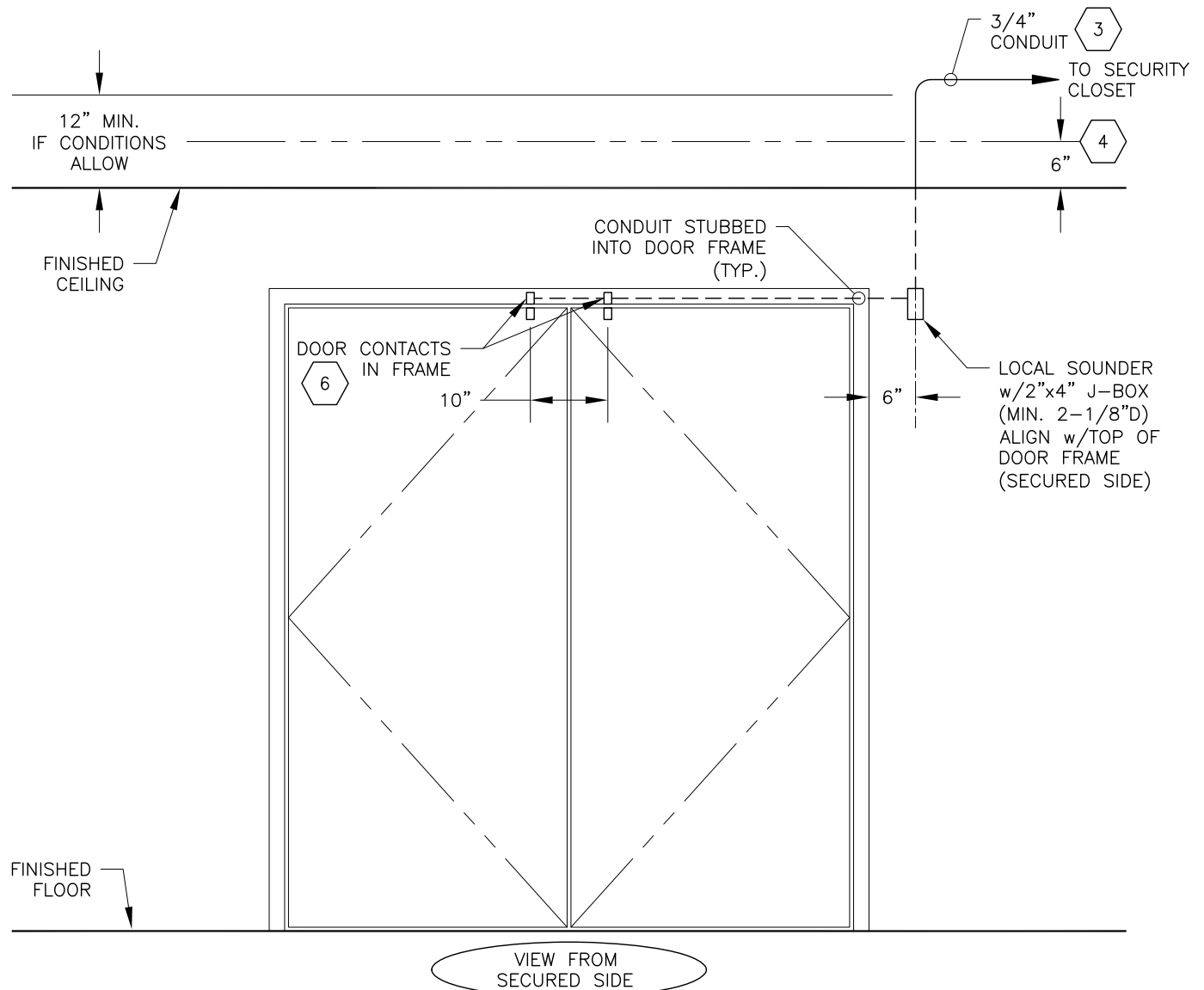
#	QTY	DESCRIPTION	MODEL NUMBER
1	AR	DOOR HARDWARE	TBD
2	2	GRI – ALARM CONTACT	184–12
3	1	SDC – DOOR PROP ALARM, SINGLE GANG	EA–SN

**OPERATION**

IN THE NORMAL STATE, THE DOORS ARE CLOSED, TYPICALLY LOCKED ON THE UNSECURED SIDE AND UNLOCKED ON THE SECURE SIDE. IF THE DOORS ARE OPENED, AN ALARM WILL BE GENERATED, AND THE LOCAL SOUNDER WILL SOUND UNTIL THE DOORS ARE CLOSED.

**DIAGRAM NOTES**

- THIS DRAWING IS FOR DIAGRAMMATIC PURPOSES ONLY. FOR ACTUAL HANDING AND SWING REFERENCE FLOOR PLANS.
- IF USING OTHER MANUFACTURER FOR LOCKING HARDWARE, SUBMIT DOCUMENTATION TO SHOW FUNCTIONAL AND OPERATIONAL EQUIVALENCY.
- FOR RATED ASSEMBLIES, THE DOOR AND FRAME MUST BE FACTORY PREPARED FOR ALL ELECTRIC HARDWARE AND SECURITY DEVICES.



#### NOTES

- THIS DRAWING IS FOR DIAGRAMMATIC PURPOSES ONLY. FOR ACTUAL HANDING AND SWING REFERENCE FLOOR PLANS.
- DIMENSIONS SHOWN FOR COORDINATION ONLY. EXACT LOCATIONS AND MOUNTING HEIGHTS TO BE FIELD COORDINATED WITH OWNER AND ARCHITECT.



3 IF PLENUM INSTALLATION, CONDUIT IS NOT REQUIRED FOR THIS CABLE RUN.

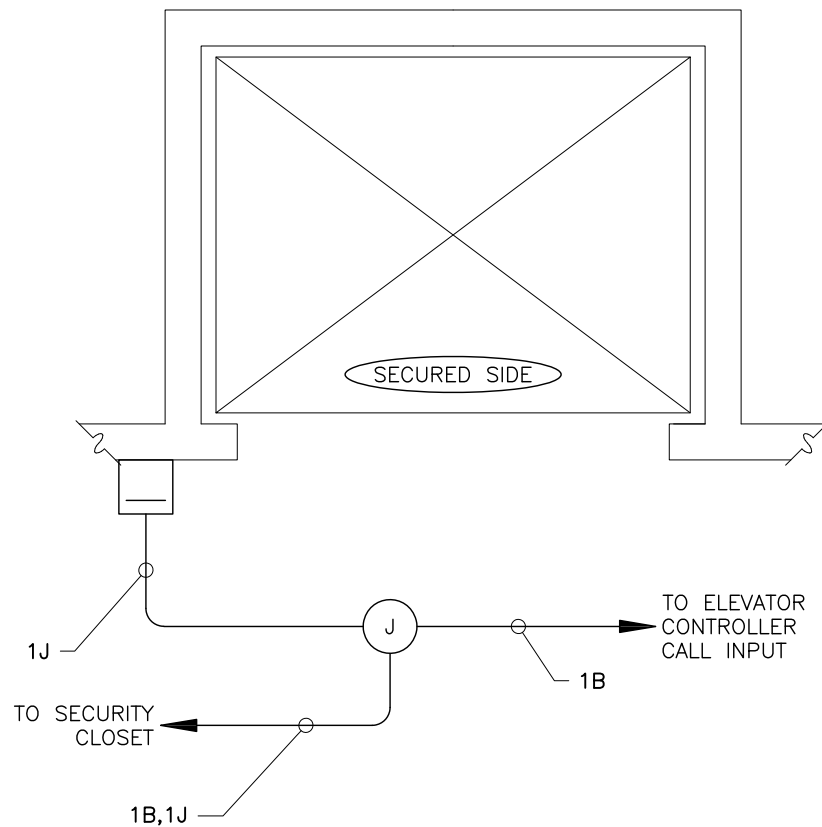
4 IF PLENUM INSTALLATION, STUB CONDUIT, w/PULL STRING, 6" ABOVE FINISHED CEILING.

5. ALL CONDUIT IS 1/2" UNLESS OTHERWISE NOTED.

6 IF EXISTING DOOR FRAMES ARE GROUTED OR OTHER CONDITIONS MAKE GETTING WIRE INTO THE DOOR FRAME IMPRACTICAL, USE DOOR CORD FOR POWER TRANSFER DEVICE.

SYMBOLS LIST

	CARD READER
	SECURITY J-BOX w/COVER



DOOR HARDWARE





#	QTY	DESCRIPTION	MODEL NUMBER
1	1	IDEC – DPDT RELAY w/INDICATOR LIGHT, DIODE, 24VDC	RH2B-ULD-DC24V
2	1	IDEC – DIN RAIL RELAY SOCKET, DPDT	SH2B-05
3	1	IDEC – PULL OVER WIRE SPRING, DPDT	SY4S-02F1

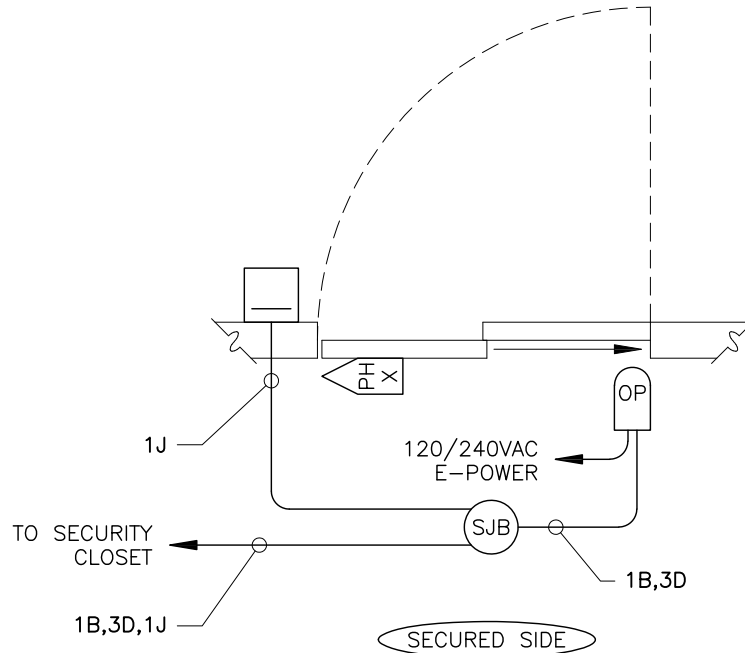
OPERATION

IN THE NORMAL STATE, THE ELEVATOR CALL PUSH BUTTON IS DISABLED. A VALID CARD READ BYPASSES THE ELEVATOR PUSH BUTTON AND CALLS THE ELEVATOR. IF THE CARD READER IS REMOVED, A TAMPER ALARM WILL BE GENERATED.

DIAGRAM NOTES

- THIS DRAWING IS FOR DIAGRAMMATIC PURPOSES ONLY.

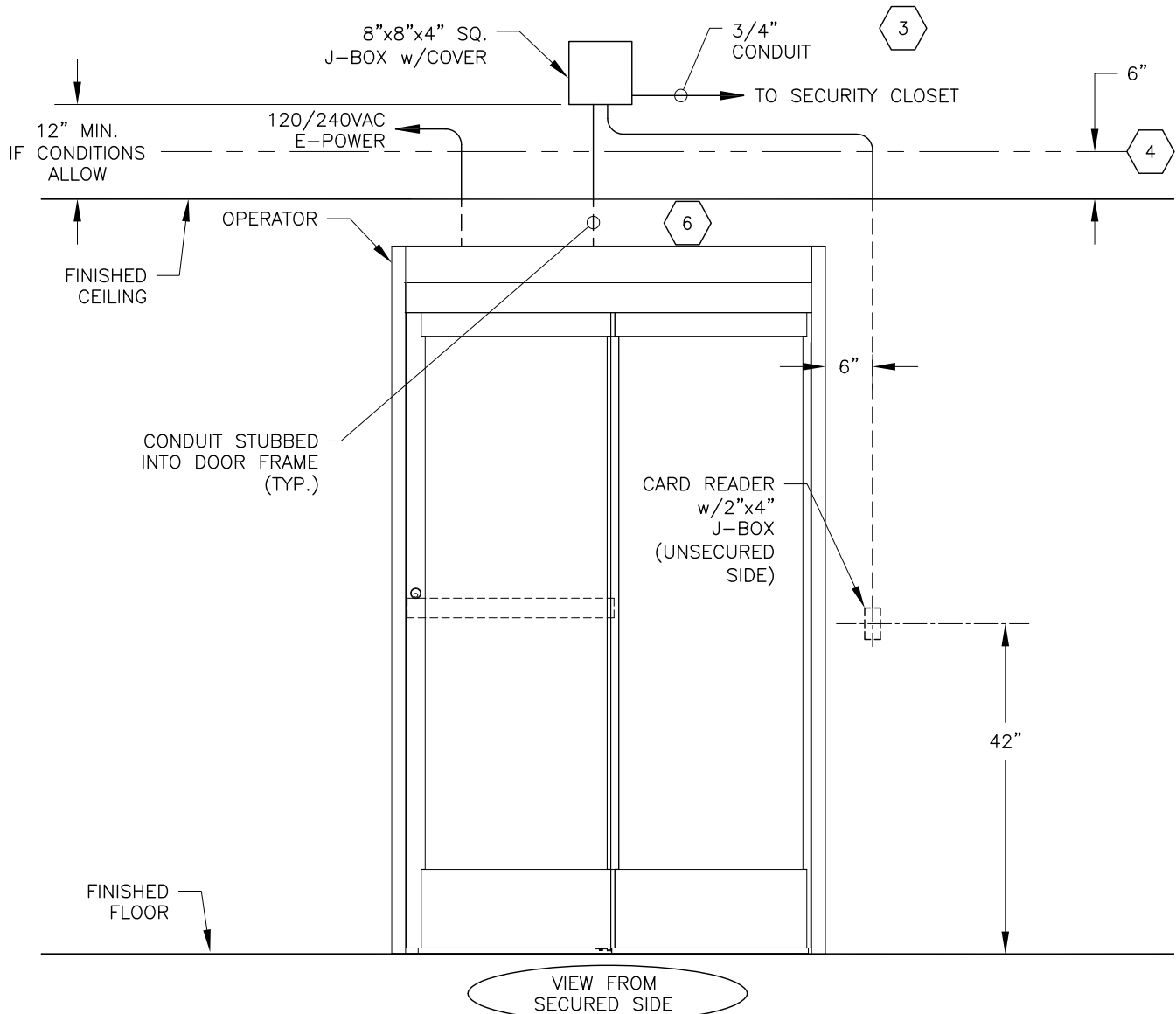
SYMBOLS LIST	
	DOOR OPERATOR
	CARD READER
	MANUAL PANIC HARDWARE
	SECURITY J-BOX



DOOR HARDWARE			
#	QTY	DESCRIPTION	MODEL NUMBER
1	1	SLIDING DOOR w/FULL BREAKOUT, OPERATOR, LOCK, PANIC HARDWARE, & PRESENCE SENSOR w/REX SWITCH, CLOSED LIMIT SWITCH	-
2	1	IDEC - DPDT RELAY w/INDICATOR LIGHT, DIODE, 24VDC	RH2B-ULD-DC24V
3	1	IDEC - DIN RAIL RELAY SOCKET, DPDT	SH2B-05
4	1	IDEC - PULL OVER WIRE SPRING, DPDT	SY4S-02F1

OPERATION
IN THE NORMAL STATE, THE DOOR IS CLOSED, UNLOCKED ON THE SECURED SIDE AND LOCKED ON THE UNSECURED SIDE. PRESENTING A VALID CARD ON THE UNSECURED SIDE WILL SHUNT THE ALARM AND OPEN THE DOOR. ON THE SECURED SIDE, THE DOORS MAY BE OPENED BY ACTIVATING THE PRESENCE SENSOR WHICH WILL SHUNT THE ALARM AND OPEN THE DOORS. THE DOOR MAY ALWAYS BE OPENED MECHANICALLY FROM THE SECURED SIDE BY PRESSING THE PANIC BAR. AN ALARM WILL BE GENERATED IF THE DOOR IS OPENED WITHOUT A VALID CARD READ OR INTERNAL PRESENCE SENSOR SIGNAL. IF THE CARD READER IS REMOVED, A TAMPER ALARM WILL BE GENERATED.

DIAGRAM NOTES
1. IF USING OTHER MANUFACTURER FOR LOCKING HARDWARE, SUBMIT DOCUMENTATION TO SHOW FUNCTIONAL AND OPERATIONAL EQUIVALENCY.
2. THIS DRAWING IS FOR DIAGRAMMATIC PURPOSES ONLY. FOR ACTUAL HANDING AND SWING REFERENCE FLOOR PLANS.
3. FOR RATED ASSEMBLIES, THE DOOR AND FRAME MUST BE FACTORY PREPARED FOR ALL ELECTRIC HARDWARE AND SECURITY DEVICES.
4. DOOR MAY BE A SINGLE, TELESCOPIC, OR BI-PARTING DOOR.



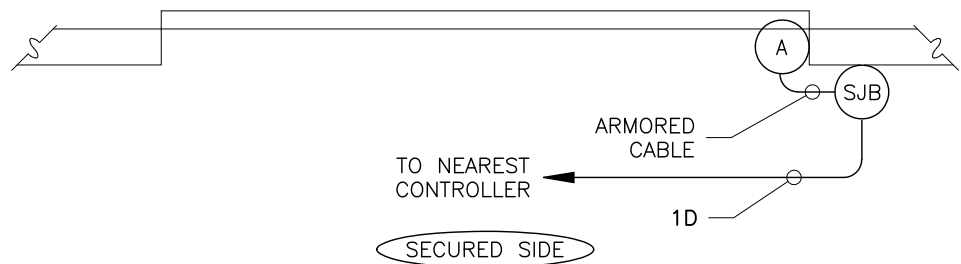
### ELEVATION NOTES

- THIS DRAWING IS FOR DIAGRAMMATIC PURPOSES ONLY. FOR ACTUAL HANDING AND SWING REFERENCE FLOOR PLANS.
- DIMENSIONS SHOWN FOR COORDINATION ONLY. EXACT LOCATIONS AND MOUNTING HEIGHTS TO BE FIELD COORDINATED WITH OWNER AND ARCHITECT.
- IF PLENUM INSTALLATION, CONDUIT IS NOT REQUIRED FOR THIS CABLE RUN.
- IF PLENUM INSTALLATION, STUB CONDUIT, w/PULL STRING, 6" ABOVE FINISHED CEILING.
- ALL CONDUIT IS 1/2" UNLESS OTHERWISE NOTED.
- IF EXISTING DOOR FRAMES ARE GROUTED OR OTHER CONDITIONS MAKE GETTING WIRE INTO THE DOOR FRAME IMPRACTICAL, USE DOOR CORD FOR POWER TRANSFER DEVICE.
- DOOR MAY BE A SINGLE, TELESCOPIC, OR BI-PARTING DOOR.



## SYMBOLS LIST

- (A) ALARM CONTACT  
(SJB) SECURITY J-BOX  
w/COVER



## DOOR HARDWARE

#	QTY	DESCRIPTION	MODEL NUMBER
1	1	DOOR HARDWARE	TBD
2	1	GRI - SURFACE MOUNT ALARM CONTACT GRI - FLOOR SURFACE MOUNT ALARM CONTACT	4400-A 4532
3	1	MOUNTING BRACKET	-

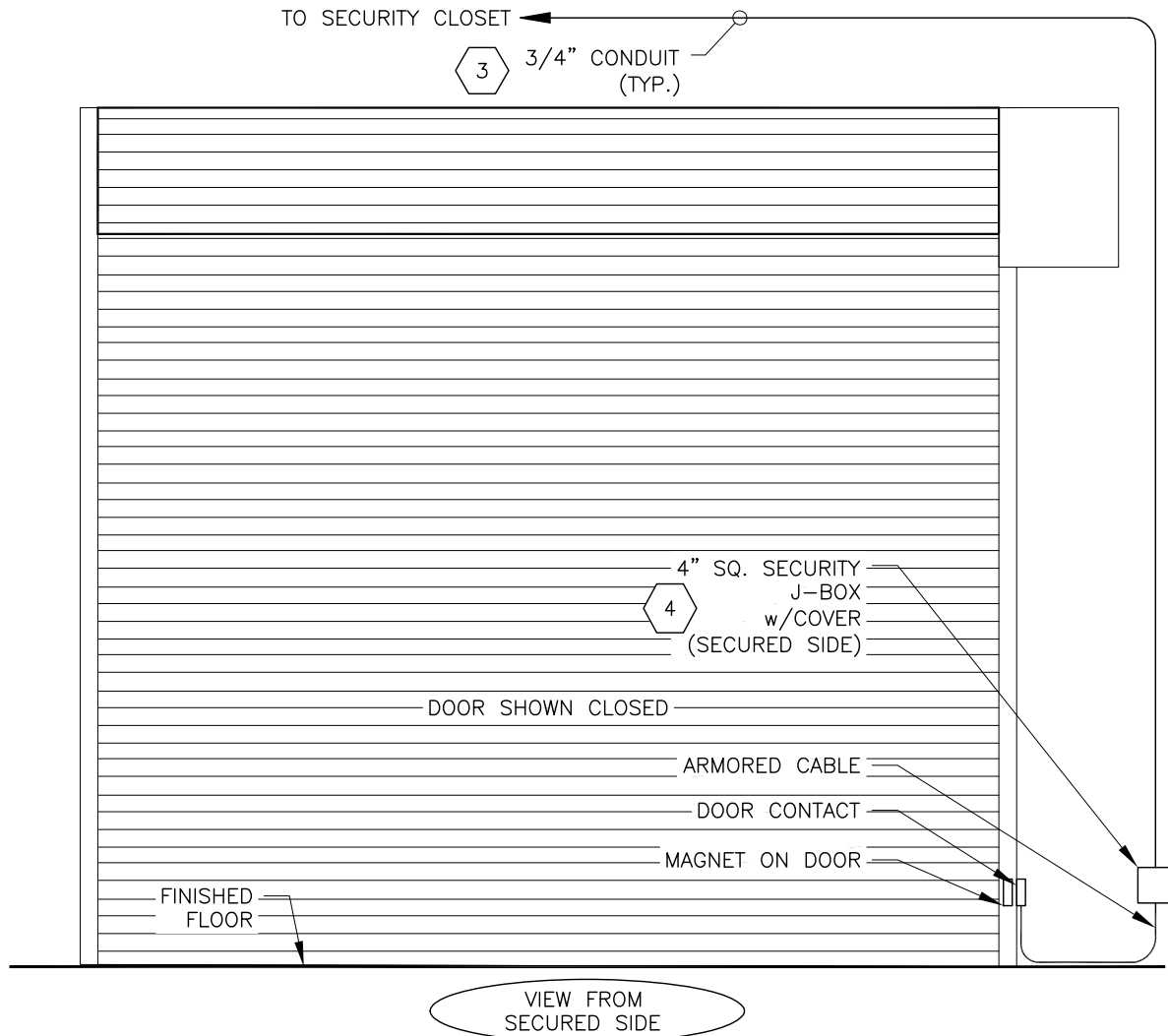
## OPERATION

IN THE NORMAL STATE, THE ROLL-UP DOOR IS CLOSED, LOCKED ON THE UNSECURED AND THE SECURED SIDE. IF THE DOOR IS OPENED, AN ALARM WILL BE GENERATED.

## DIAGRAM NOTES

1. THIS DRAWING IS FOR DIAGRAMMATIC PURPOSES ONLY.

2. SELECT ONLY ONE CONTACT DEPENDING ON FIELD CONDITIONS.



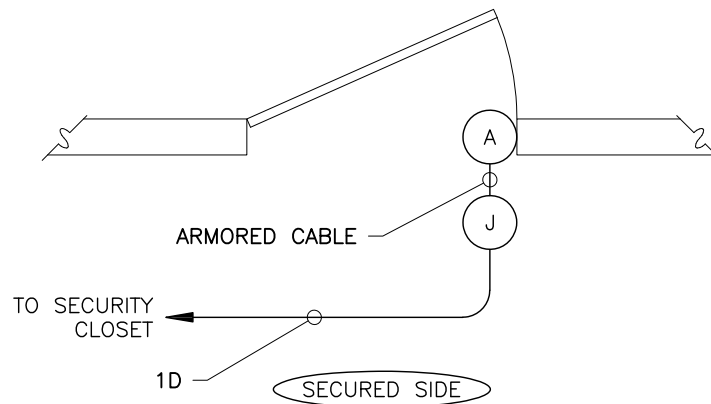
**NOTES**

1. THIS DRAWING IS FOR DIAGRAMMATIC PURPOSES ONLY.
2. DIMENSIONS SHOWN FOR COORDINATION ONLY. EXACT LOCATIONS AND MOUNTING HEIGHTS TO BE FIELD COORDINATED WITH OWNER AND ARCHITECT.
- 3 IF PLENUM INSTALLATION, CONDUIT IS NOT REQUIRED FOR THIS CABLE RUN.
- 4 MOUNT AT HIGHEST REASONABLE ELEVATION.



### SYMBOLS LIST

- (A) ALARM CONTACT
- (J) J-BOX w/COVER



### DOOR HARDWARE

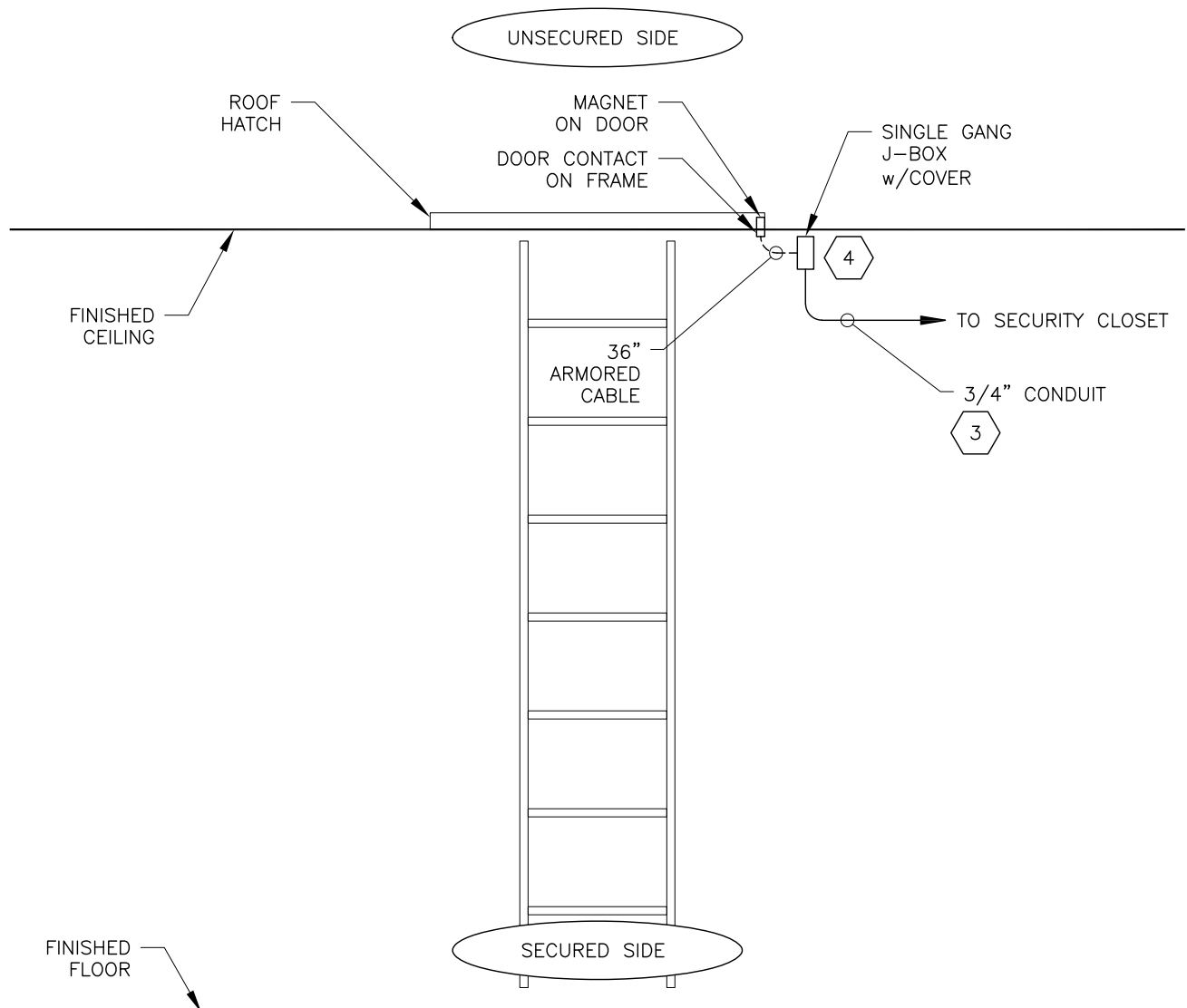
#	QTY	DESCRIPTION	MODEL NUMBER
1	1	GRI – SURFACE MOUNT DOOR CONTACT, 36" ARMORED CABLE	4405-A
2	1	GRI – MOUNTING BRACKET, AS APPROPRIATE	–

### OPERATION

IN THE NORMAL STATE, THE ROOF HATCH IS CLOSED, LOCKED ON THE UNSECURED AND THE SECURED SIDE. IF THE HATCH IS OPENED, AN ALARM WILL BE GENERATED.

### DIAGRAM NOTES

- THIS DRAWING IS FOR DIAGRAMMATIC PURPOSES ONLY. FOR ACTUAL HANDING AND SWING, REFERENCE FLOOR PLANS.



**NOTES**

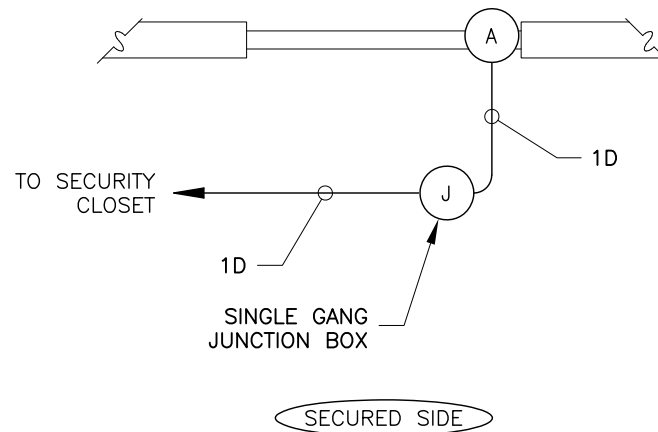
1. THIS DRAWING IS FOR DIAGRAMMATIC PURPOSES ONLY. FOR ACTUAL HANDING AND SWING, REFERENCE FLOOR PLANS.
2. DIMENSIONS SHOWN FOR COORDINATION ONLY. EXACT LOCATIONS AND MOUNTING HEIGHTS TO BE FIELD COORDINATED WITH OWNER AND ARCHITECT.

3 IF PLENUM INSTALLATION, CONDUIT IS NOT REQUIRED FOR THIS CABLE RUN.

4 MOUNT AT HIGHEST REASONABLE ELEVATION.

SYMBOLS LIST

- |   |               |
|---|---------------|
| A | ALARM CONTACT |
| J | J-BOX w/COVER |



HARDWARE

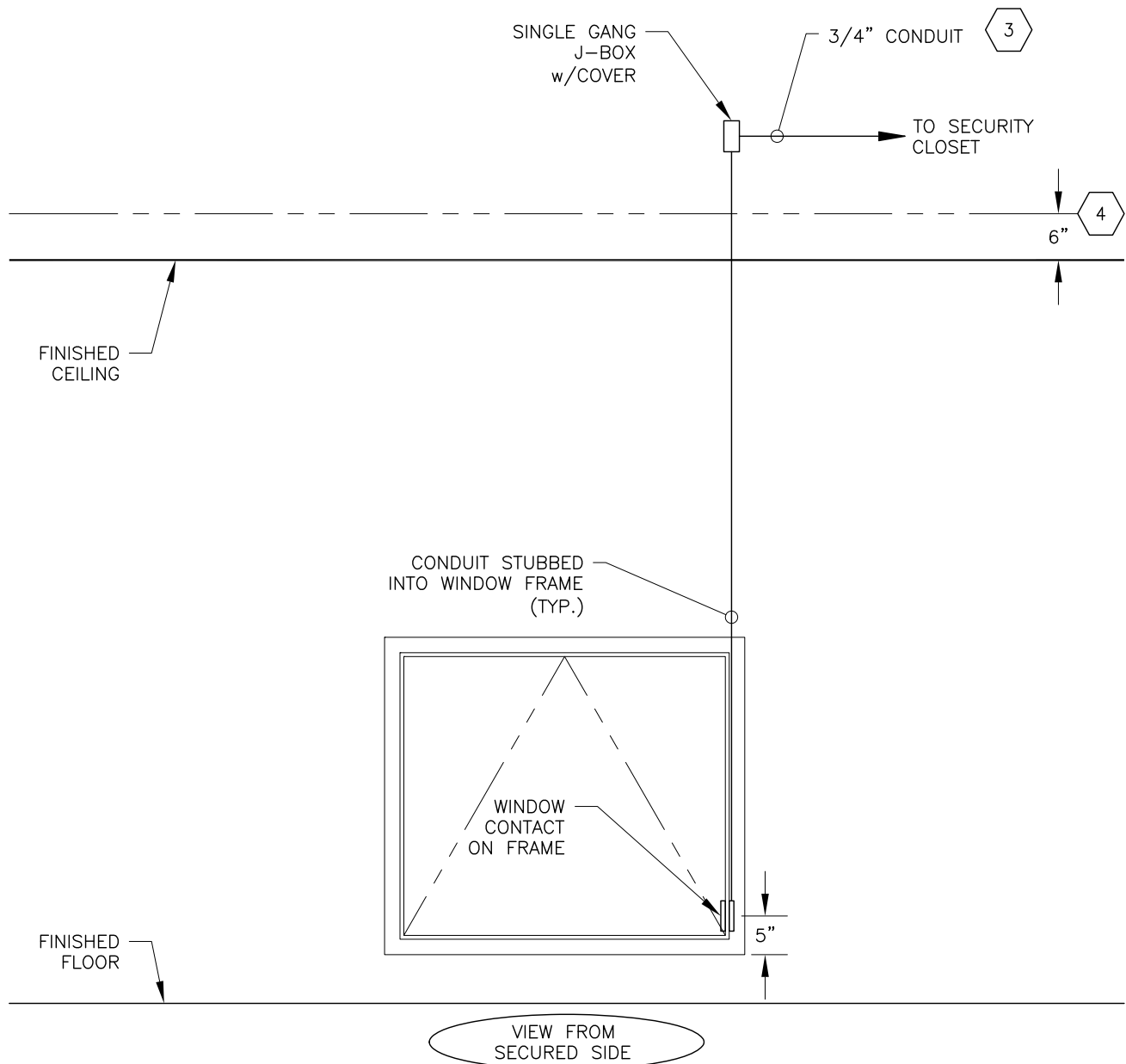
#	QTY	DESCRIPTION	MODEL NUMBER
1	1	GRI - ALARM CONTACT, SURFACE MOUNT	410PWG-G

OPERATION

IN THE NORMAL STATE, THE WINDOW IS CLOSED. IF THE WINDOW IS OPENED, AN ALARM WILL BE GENERATED.

DIAGRAM NOTES



- THIS DRAWING IS FOR DIAGRAMMATIC PURPOSES ONLY.

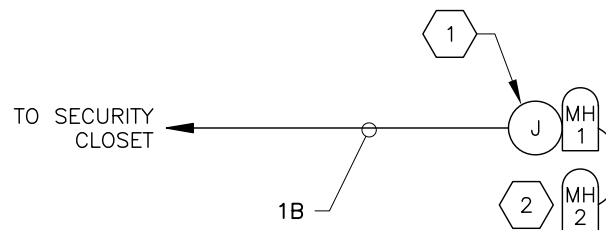


**ELEVATION NOTES**

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2. DIMENSIONS SHOWN FOR COORDINATION ONLY. EXACT LOCATIONS AND MOUNTING HEIGHTS TO BE FIELD COORDINATED WITH OWNER AND ARCHITECT.
- 3 IF PLENUM INSTALLATION, CONDUIT IS NOT REQUIRED FOR THIS CABLE RUN.
- 4 IF PLENUM INSTALLATION, STUB CONDUIT, w/PULL STRING, 6" ABOVE FINISHED CEILING.
5. ALL CONDUIT IS 1/2" UNLESS OTHERWISE NOTED.
6. ALL CONDUIT IS INSTALLED BY ELECTRICAL C-10 LICENSED CONTRACTOR.

**SYMBOLS LIST**

	J-BOX w/COVER
	MAGNETIC DOOR HOLD OPEN


**DOOR HARDWARE**

#	QTY	DESCRIPTION	MODEL NUMBER	CODE	NOTES
1	1	RIXSON – LOW PROFILE RECESSED ELECTROMAGNETIC DOOR HOLDER, 24VDC	900 SERIES, 24VDC	–	

**OPERATION**

DAY MODE: IN THE NORMAL STATE, A LOCAL RELAY IS ENERGIZED APPLYING POWER TO THE DOOR HOLD OPEN MAGNET OR MAGNETS DEPENDING ON THE DOOR APPLICATION. A FIRE ALARM WILL SHUNT POWER TO THE RELAY.  
NIGHT MODE: IN THE NORMAL STATE, A LOCAL RELAY IS DE-ENERGIZED REMOVING POWER TO THE DOOR HOLD OPEN MAGNET OR MAGNETS DEPENDING ON THE DOOR APPLICATION.







THE MAGNETIC DOOR HOLDER IS CONTINUALLY POWERED TO MAINTAIN A DOOR IN THE OPEN POSITION. LOSS OF POWER/BATTERY, OR FIRE ALARM ACTIVATION WILL RESULT IN LOSS OF POWER AND ALLOW THE DOOR TO CLOSE.

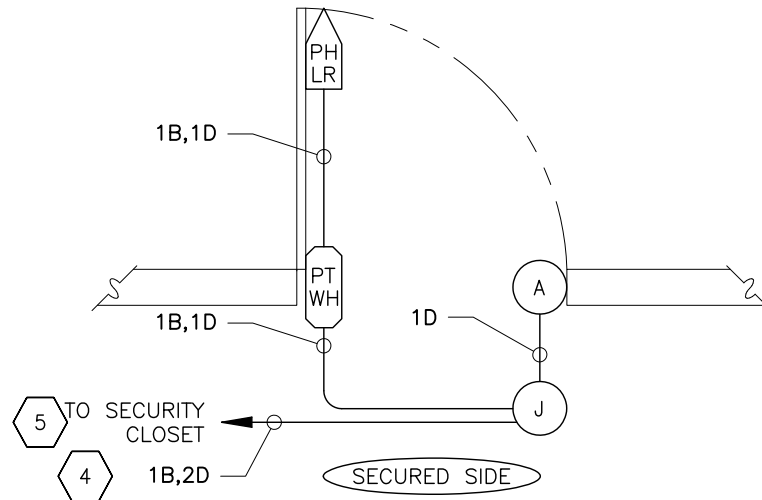
**DIAGRAM NOTES**


SECURITY JUNCTION BOX IS PROVIDED IN THE ASSOCIATED DOOR DETAIL.



WHEN APPLIED TO A SINGLE DOOR, ONLY USE ONE MAGNETIC DOOR HOLDER.

SYMBOLS LIST	
	ALARM CONTACT
	ELECTRIC RIM PANIC w/ LATCH RETRACTION & REX
	J-BOX w/COVER
	POWER TRANSFER WIRED HINGE



DOOR HARDWARE			
#	QTY	DESCRIPTION	MODEL NUMBER
1	1	VON DUPRIN – ELECTRIC RIM PANIC w/QUIET LATCH RETRACTION & REX SWITCH, NIGHT LATCH, 24VDC	RX QEL 99-NL-OP x 24VDC
2	1	McKINNEY – 8 WIRE TRANSFER HINGE	TA2714CC8
3	1	GRI – ALARM CONTACT	184-12




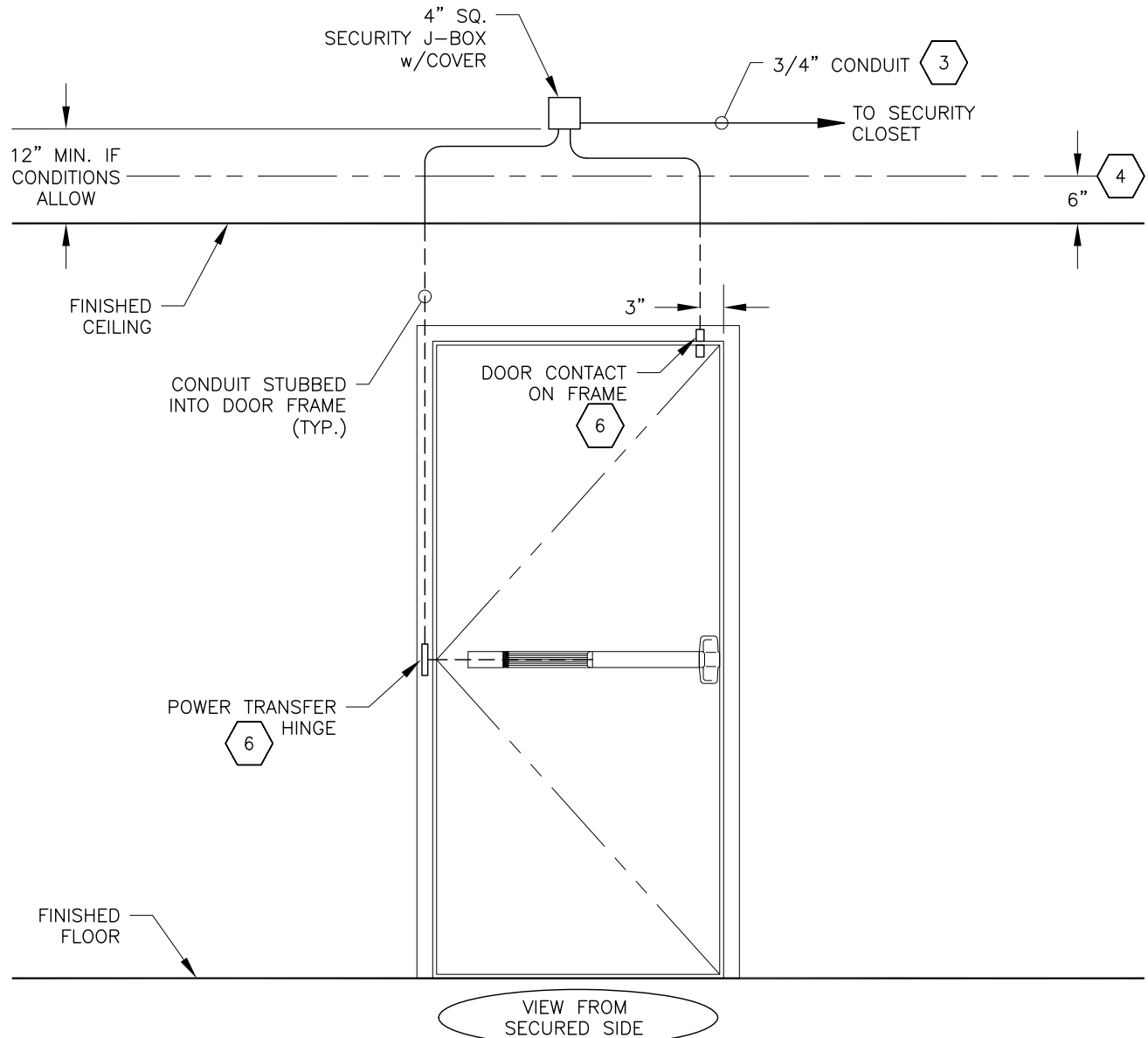
OPERATION	
<p><b>UNLOCKED MODE:</b> THE DOOR IS ELECTRICALLY UNLOCKED AND THE ALARM SHUNTED. NORMAL OPERATION IS BY DOOR PULL ON THE UNSECURED SIDE AND BY PANIC BAR ON THE SECURED SIDE.</p>	
<p><b>LOCKED MODE:</b> THE DOOR IS ELECTRICALLY LOCKED ON THE UNSECURED SIDE AND UNLOCKED ON THE SECURED SIDE. THE REQUEST-TO-EXIT MICROSWITCH, IN THE PANIC BAR, WILL SHUNT THE ALARM BUT WILL NOT UNLOCK THE LOCK. IF THE DOOR IS HELD OPEN LONGER THAN A PRE-DETERMINED AMOUNT OF TIME AN ALARM WILL BE GENERATED. IF THE DOOR IS FORCED AN ALARM WILL BE GENERATED.</p>	
<p> FOR FIRE RATED DOOR, APPLY NOTE 6 BELOW. DURING A FIRE ALARM THE QEL DEVICE IS LATCHED AND ELECTRICALLY DISABLED. FREE MECHANICAL EGRESS IS ALWAYS AVAILABLE.</p>	

DIAGRAM NOTES	
<p>1. THIS DRAWING IS FOR DIAGRAMMATIC PURPOSES ONLY. FOR ACTUAL HANDING AND SWING REFERENCE FLOOR PLANS.</p>	
<p>2. IF USING OTHER DOOR HARDWARE MANUFACTURER, SUBMIT DOCUMENTATION TO SHOW FUNCTIONAL AND OPERATIONAL EQUIVALENCY.</p>	
<p>3. FOR RATED ASSEMBLIES, THE DOOR AND FRAME MUST BE FACTORY PREPARED FOR ALL ELECTRIC HARDWARE AND SECURITY DEVICES.</p>	
<p> IF CABLE LENGTH TO A SINGLE VON DUPRIN QEL DEVICE IS GREATER THAN 200', USE THE FOLLOWING GAUGE CABLES INSTEAD OF THE STANDARD 18 AWG "B" TYPE CABLE: 201' TO 320', USE 1 PAIR OF 16 AWG 321' TO 500', USE 1 PAIR OF 14 AWG 501' TO 800', USE 1 PAIR OF 12 AWG</p>	
<p> FOR FIRE RATED DOOR. THE BUILDING FIRE ALARM WILL REMOVE POWER TO THE LOCK. USE FIRE ALARM RELAY CONTROLLED POWER OUTPUT.</p>	
<p>6. PROVIDE THE VON DUPRIN AX QEL 99-NL-OP-F FIRE RATED DOOR HARDWARE FOR FIRE RATED DOORS.</p>	



#### ELEVATION NOTES






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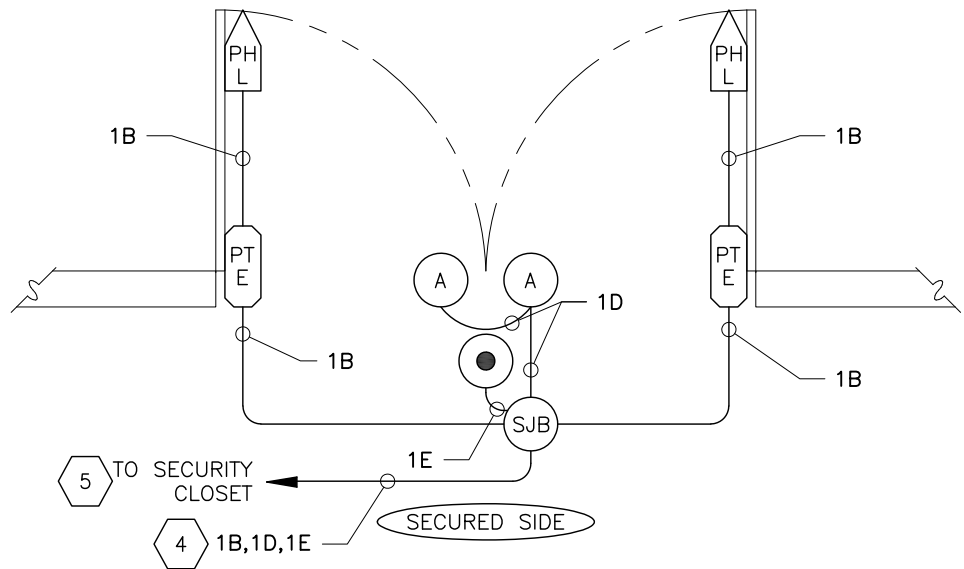
(3) IF PLENUM INSTALLATION, CONDUIT IS NOT REQUIRED FOR THIS CABLE RUN.

(4) IF PLENUM INSTALLATION, STUB CONDUIT, w/PULL STRING, 6" ABOVE FINISHED CEILING.

5. ALL CONDUIT IS 1/2" UNLESS OTHERWISE NOTED.

(6) IF EXISTING DOOR FRAMES ARE GROUTED OR OTHER CONDITIONS MAKE GETTING WIRE INTO THE DOOR FRAME IMPRACTICAL, USE DOOR CORD FOR POWER TRANSFER DEVICE.

SYMBOLS LIST	
	ALARM CONTACT
	ELECTRIC POWER TRANSFER
	PANIC HARDWARE w/LATCH RETRACTION
	PIR/REX
	SECURITY J-BOX w/COVER



DOOR HARDWARE			
#	QTY	DESCRIPTION	MODEL NUMBER
1	1	VON DUPRIN – PANIC w/QUIET LATCH RETRACTION, CONCEALED VERTICAL CABLES, OPTIONAL PULL, 24VDC	AX QEL 9949–NL–OP, 24VDC
2	1	VON DUPRIN – PANIC w/QUIET LATCH RETRACTION, CONCEALED VERTICAL CABLES, EXIT ONLY, 24VDC	AX QEL 9949EO, 24VDC
3	2	VON DUPRIN – ELECTRIC POWER TRANSFER, 10 WIRE	EPT–10
4	2	GRI – ALARM CONTACT	184–12
5	1	BOSCH SECURITY – PASSIVE INFRARED, REQUEST–TO–EXIT	DS160

REF. TO SHEET TE-b





DOUBLE DOOR, TIMED UNLOCK/FREE EXIT  
PANICS w/QUIET LATCH RETRACTION  
PIR/REX  
FAIL SECURE

## DETAIL TE-b

### STANDARD

REFER TO SHEET TE-a

#### OPERATION

##### UNLOCKED MODE:

THE DOORS ARE ELECTRICALLY UNLOCKED AND THE ALARM SHUNTED. NORMAL OPERATION IS BY DOOR PULL ON THE UNSECURED SIDE AND BY PANIC BARS ON THE SECURED SIDE.

##### LOCKED MODE:

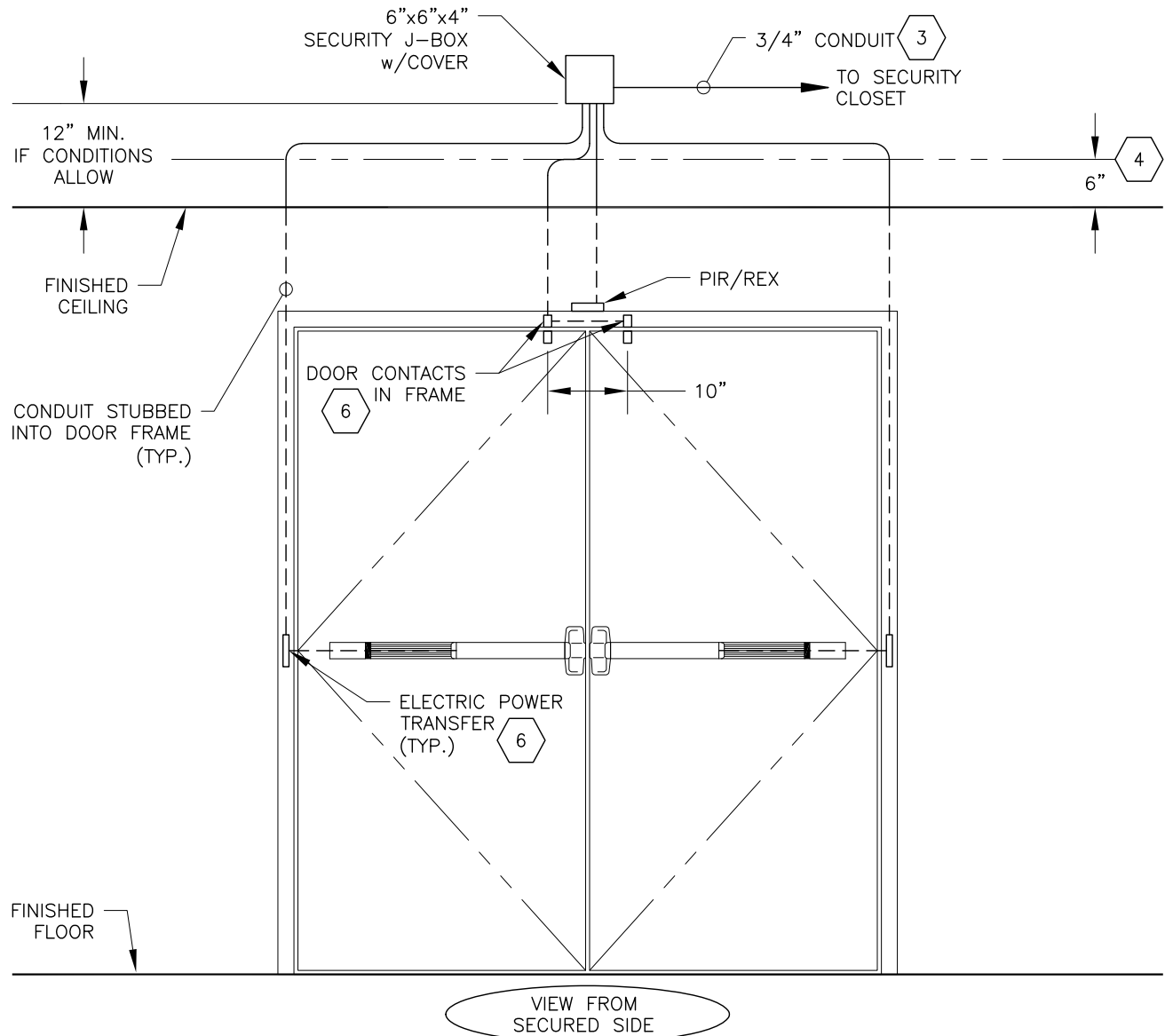
THE DOORS ARE ELECTRICALLY LOCKED ON THE UNSECURED SIDE AND UNLOCKED ON THE SECURED SIDE. THE PIR REQUEST-TO-EXIT WILL SHUNT THE ALARM, BUT WILL NOT UNLOCK THE LOCK. IF THE DOOR IS HELD OPEN LONGER THAN A PRE-DETERMINED AMOUNT OF TIME, AN ALARM WILL BE GENERATED. IF THE DOORS ARE FORCED AN ALARM WILL BE GENERATED.



FOR FIRE RATED DOORS, APPLY NOTE 6 BELOW. DURING A FIRE ALARM THE QEL DEVICE IS LATCHED AND ELECTRICALLY DISABLED. FREE MECHANICAL EGRESS IS ALWAYS AVAILABLE.

#### DIAGRAM NOTES

1. THIS DRAWING IS FOR DIAGRAMMATIC PURPOSES ONLY. FOR ACTUAL HANDING AND SWING REFERENCE FLOOR PLANS.
2. IF USING OTHER DOOR HARDWARE MANUFACTURER, SUBMIT DOCUMENTATION TO SHOW FUNCTIONAL AND OPERATIONAL EQUIVALENCY.
3. FOR RATED ASSEMBLIES, THE DOOR AND FRAME MUST BE FACTORY PREPARED FOR ALL ELECTRIC HARDWARE AND SECURITY DEVICES.
4. IF CABLE LENGTH TO A SINGLE VON DUPRIN QEL DEVICE IS GREATER THAN 200', USE THE FOLLOWING GAUGE CABLES INSTEAD OF THE STANDARD 18 AWG "B" TYPE CABLE:  
201' TO 320', USE 1 PAIR OF 16 AWG  
321' TO 500', USE 1 PAIR OF 14 AWG  
501' TO 800', USE 1 PAIR OF 12 AWG
5. FOR FIRE RATED DOOR. THE BUILDING FIRE ALARM WILL REMOVE POWER TO THE LOCK. USE FIRE ALARM RELAY CONTROLLED POWER OUTPUT.
6. PROVIDE THE VON DUPRIN AX QEL 9949-NL-OP-F AND THE AX QEL 9949EO-F FIRE RATED HARDWARE FOR FIRE RATED DOORS.



### ELEVATION NOTES






1. THIS DRAWING IS FOR DIAGRAMMATIC PURPOSES ONLY. FOR ACTUAL HANDING AND SWING REFERENCE FLOOR PLANS.
2. DIMENSIONS SHOWN FOR COORDINATION ONLY. EXACT LOCATIONS AND MOUNTING HEIGHTS TO BE FIELD COORDINATED WITH OWNER AND ARCHITECT.

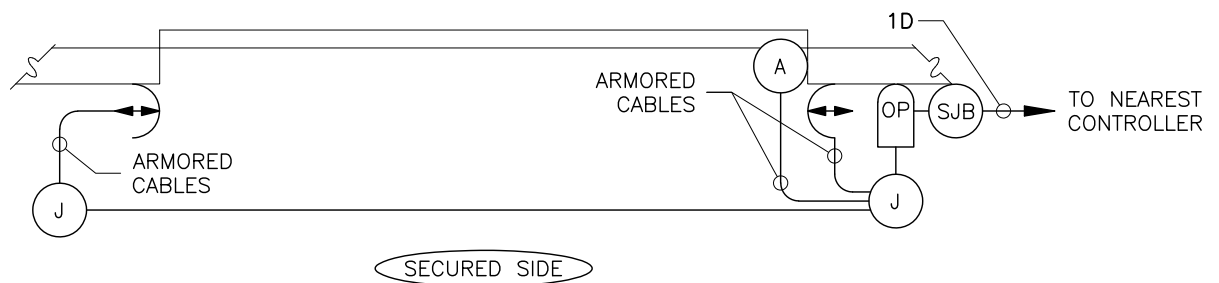
(3) IF PLENUM INSTALLATION, CONDUIT IS NOT REQUIRED FOR THIS CABLE RUN.

(4) IF PLENUM INSTALLATION, STUB CONDUIT, w/PULL STRING, 6" ABOVE FINISHED CEILING.

5. ALL CONDUIT IS 1/2" UNLESS OTHERWISE NOTED.

(6) IF EXISTING DOOR FRAMES ARE GROUTED OR OTHER CONDITIONS MAKE GETTING WIRE INTO THE DOOR FRAME IMPRACTICAL, USE DOOR CORD FOR POWER TRANSFER DEVICE.

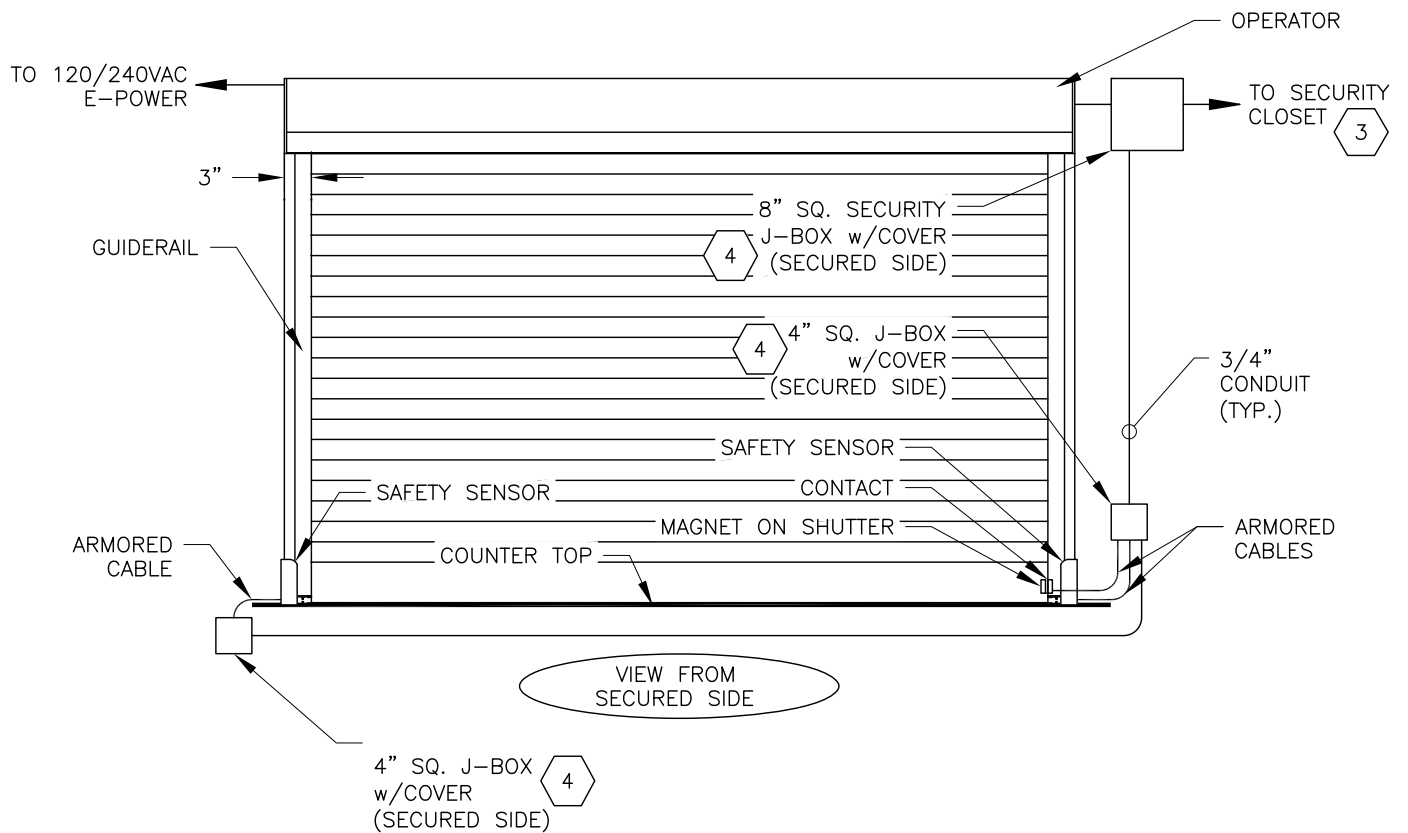
SYMBOLS LIST	
	ALARM CONTACT
	J-BOX w/COVER
	OPERATOR
	SECURITY J-BOX w/COVER
	SAFETY SENSOR



HARDWARE			
#	QTY	DESCRIPTION	MODEL NUMBER
1	1	ALUTECH – MAGNUM ROLLING SHUTTER w/REMOTE CONTROLLED OPERATOR & SAFETY SENSORS	–
2	1	GRI – MINIATURE ALUMINUM COMMERCIAL SWITCH SET	4461–A

OPERATION
IN THE NORMAL STATE, THE ROLL-UP DOOR IS CLOSED, LOCKED ON THE UNSECURED AND THE SECURED SIDE. IF THE DOOR IS OPENED, AN ALARM WILL BE GENERATED. WHEN THE FACILITY IS IN USE, ALARM WILL BE SHUNTED AND THE DOOR CAN BE OPENED. IN THE EVENT OF A LOCKDOWN, THE ROLL-UP DOOR WILL AUTOMATICALLY CLOSE. IF THE SAFETY SENSORS ARE OBSTRUCTED, THE ROLL-UP DOOR WILL STOP.

DIAGRAM NOTES
1. THIS DRAWING IS FOR DIAGRAMMATIC PURPOSES ONLY.



#### NOTES

1. THIS DRAWING IS FOR DIAGRAMMATIC PURPOSES ONLY.
2. DIMENSIONS SHOWN FOR COORDINATION ONLY. EXACT LOCATIONS AND MOUNTING HEIGHTS TO BE FIELD COORDINATED WITH OWNER AND ARCHITECT.

3 IF PLENUM INSTALLATION, CONDUIT IS NOT REQUIRED FOR THIS CABLE RUN.

4 MOUNT AT HIGHEST REASONABLE ELEVATION.