

Building E - Access Control Package

Project Name: **Security Upgrades**

Project Number:

Prepared for:

Rock Valley College
3301 N. Mulford Rd.
Rockford, IL 61114

Architect: N/A
Contractor: N/A
Engineer: N/A

Table of Contents

| | |
|---|---|
| Building E - Access Control Package | 1 |
| Specifications | 3 |
| Specifications.pdf | 4 |
| Drawings set..... | 5 |
| Drawing set.pdf | 6 |

Specifications

Access Control

1. Field devices:

- A. Existing Card Readers will be replaced with the new Schlage readers MT15 for regular single gang and MT11 for mullion.
- B. Replace the existing access control EOL resistor at the field devices from the 10K Ohm resistor to the GRI 6644 resistor pack. For wiring details, see drawing A_400.

2. Head-End:

- A. Utilized existing access control enclosures, demoed existing Continuum controllers, and replaced them with the new Genetec Mercury boards (see panel layout drawing A_700s).
- B. Trim existing head-end cables.
- C. Mount and trim the new Wireless lock Genetec LP2500 controllers.
- D. Set up and configure new wireless gateways.
- E. Check and Commission new access control controllers and wireless gateways.

Owner

The Owner will supply the following items for installation and connection by this Contractor:

1. IP Network connection from a network switch for new Wireless Locks. Document port name and number.

Drawings set

ROCK VALLEY COLLEGE BUILDING E

3301 N. MULFORD RD.
ROCKFORD, IL 61114

ACCESS CONTROL
PROJECT NUMBER: GA24G3142
ISSUED FOR REVIEW:

TABLE OF CONTENTS:

| <u>SHEET NO.</u> | <u>REV.</u> | <u>DESCRIPTION</u> | <u>DATE</u> | <u>SHEET DESCRIPTION</u> |
|------------------|-------------|--------------------|-------------|---|
| RVC_BE_A_001 | 1 | ISSUED FOR REVIEW | 07/26/24 | TITLE SHEET & TABLE OF CONTENTS |
| RVC_BE_G_100 | 1 | ISSUED FOR REVIEW | 07/26/24 | SYMBOL LEGEND & GENERAL NOTES |
| RVC_BE_A_210 | 1 | ISSUED FOR REVIEW | 07/26/24 | DEVICE LOCATIONS - ACCESS CONTROL - FIRST FLOOR & BASEMENT |
| RVC_BE_W_210 | 1 | ISSUED FOR REVIEW | 07/26/24 | DEVICE LOCATIONS - WIRELESS LOCKS - FIRST FLOOR & BASEMENT |
| RVC_BE_G_400 | 1 | ISSUED FOR REVIEW | 07/26/24 | ACCESS CONTROL & WIRELESS LOCK SYSTEM TERMINATION DETAILS - 1 |
| RVC_BE_A_700_PH1 | 1 | ISSUED FOR REVIEW | 07/26/24 | ACCESS CONTROL PANEL BUILD DETAILS - 00.ACC1.1 - DEMO |
| RVC_BE_A_700 | 1 | ISSUED FOR REVIEW | 07/26/24 | ACCESS CONTROL PANEL BUILD DETAILS - 00.ACC1.1 - NEW WORK |
| RVC_BE_W_700 | 1 | ISSUED FOR REVIEW | 07/26/24 | ACCESS CONTROL PANEL BUILD DETAILS - 00.WRLS1.1 |



1111 PASQUINELLI RD. / WESTMONT, IL 60559
PHONE: 708.271.4700

SITE NAME & ADDRESS

ROCK VALLEY COLLEGE
BUILDING E
3301 N. MULFORS RD.
ROCKFORD, IL 61114

REVISION RECORD

| REV | DESCRIPTION | BY | DATE |
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DATE: JULY 25, 2024
SCALE: NONE
DRAWN: A. BOLANOS
CHECKED: A. BOLANOS
APPROVED: A. GAGE

PROJECT NAME:
RVC – BUILDING E
WIRELESS LOCKS, ACCESS CONTROL
& INTRUSION SYSTEM


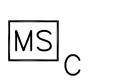



SHEET TITLE:
TITLE SHEET &
TABLE OF CONTENTS

PROJECT NUMBER:
GA24G3142
SHEET NUMBER:
RVC_BE_A_001

ACCESS CONTROL SYSTEM DEVICE LEGEND:

-  NDE SCHLAGE WIRELESS LOCK W/ BUILT-IN REQUEST TO EXIT, DOOR STATUS LOCK STATUS
-  GWE GATEWAY
-  SECURITY SYSTEM CABINET
-  EXISTING DOOR CONTACT
-  REQUEST-TO-EXIT MOTION SENSOR
-  CARD READER, PROXIMITY, WALL-MOUNT
-  ELECTRIC STRIKE LOCKING HARDWARE
-  ELECTRIC MORTISE LOCKING HARDWARE W/ BUILT-IN REX
-  ELECTRONIC CRASH BAR LOCKING HARDWARE

INTRUSION SYSTEM DEVICE LEGEND:

-  INTRUSION KEY PAD
-  CEILING-MOUNTED MOTION SENSOR
-  WALL-MOUNTED MOTION SENSOR
-  EXISTING DOOR CONTACT
-  AED CABINET DOOR CONTACT

POWER / NETWORK / MISC DEVICE LEGEND:

-  BURGLAR PANEL

WIRING SPECIFICATIONS & CONDUIT SIZING:

| # | WIRE TYPE |
|---|---|
| A | 18AWG / 2 CONDUCTOR, PLENUM |
| B | 18AWG / 4 CONDUCTOR, PLENUM |
| C | 18AWG / 5 CONDUCTOR, SHIELDED, PLENUM |
| D | 23AWG / 4 PAIR CAT-6, PLENUM |
| E | 22AWG / 1 PAIR AND AN 22AWG / 1 CONDUCTOR, SHIELDED, LOW-CAP, PLENUM (RS-485) |
| F | "NOT USED" |
| G | "NOT USED" |
| H | "NOT USED" |
| J | "NOT USED" |
| K | "NOT USED" |
| L | "NOT USED" |
| M | "NOT USED" |
| N | "NOT USED" |
| P | "NOT USED" |
| Q | "NOT USED" |
| R | "NOT USED" |

PERMISSIBLE CONDUIT FILL BASED ON OCCUPIED AREA (NEC RECOMMENDED 40% FILL FACTOR)

| CONDUIT SIZE (IN) | PERMISSIBLE FILL (SQ. IN.) |
|-------------------|----------------------------|
| 3/4" | 0.21 SQUARE IN. |
| 1" | 0.35 SQUARE IN. |
| 1 1/4" | 0.60 SQUARE IN. |
| 1 1/2" | 0.81 SQUARE IN. |
| 2" | 1.34 SQUARE IN. |
| 2 1/2" | 1.92 SQUARE IN. |
| 3" | 2.96 SQUARE IN. |
| 3 1/2" | 3.95 SQUARE IN. |
| 4" | 5.09 SQUARE IN. |

NOTE 1: TABLE DEVELOPED FOR STEEL OR ALUMINUM ALLOY CONDUIT ONLY.

NOTE 2: NEC PRESCRIBED 40% FILL FACTOR IS FOR (3) OR MORE CABLES. A SINGLE CABLE CAN OCCUPY 53% OR TWO CABLES ARE LIMITED TO 31% CONDUIT FILL.

GENERAL NOTES

- 1) ALL CONDUIT IS TO BE 3/4" WITH PULL STRING UNLESS OTHERWISE SPECIFIED ON DRAWING. ARROW DENOTES HOME RUN BACK TO SECURITY EQUIPMENT LOCATION AS NOTED.
- 2) ALL DEVICES ARE HOME RUN WIRED UNLESS OTHERWISE SPECIFIED.
- 3) VERIFY ALL SITE CONDITIONS AND REPORT ALL PROBLEMS TO SCHNEIDER ELECTRIC.
- 4) FOLLOW CONDUIT FILL REQUIREMENTS AS DOCUMENTED BELOW ON THE WIRING LEGEND AND PRESCRIBED CONDUIT FILL TABLES. CONDUIT SPECIFIED BY ELECTRICAL CONTRACTOR CANNOT EXCEED A 40% FILL UNDER ANY CIRCUMSTANCES.
- 5) ALL CONDUIT FOR SECURITY / CCTV SYSTEM SHALL ONLY CONTAIN SECURITY & CCTV SYSTEM CABLES. WIRE FROM OTHER TRADES IS NOT PERMITTED IN THE SECURITY / CCTV CONDUIT SYSTEM UNDER ANY CIRCUMSTANCES.
- 6) BURIAL RATED CABLE TO BE USED FOR ANY UNDERGROUND RUNS.
- 7) ALL DRAWINGS INDICATE CURRENT PROJECT SCOPE WITH DARKENED PRINT. GRAYED DEVICES & WIRING INDICATE WORK THAT WAS PREVIOUSLY COMPLETED BUT IS CURRENTLY PART OF THE FULL SYSTEM.
- 8) PLENUM RATED CABLE TO BE USED IN ALL PLENUM CEILING AREAS. CONDITIONS TO BE FIELD VERIFIED AND REPORTED BACK TO SCHNEIDER ELECTRIC IF DIFFERENT THAN SHOWN ON DRAWINGS.

SYMBOLS

- XX = FLOOR NUMBER OR "ST" FOR SITE
- A = BUILDING AREA OR QUADRANT
- B = SYSTEM TYPE (SEE SYSTEM TYPES/PANEL TYPES LEGEND)
- ?? = SEQUENTIAL NUMBER IDENTIFIER
- ZZZZ = PANEL/HEAD-END LOCATION NUMBER
- YY = CONDUIT DETAIL NUMBER
- B_??? = DRAWING NUMBER
- REVISION NUMBER IDENTIFIER
- KEY NOTE IDENTIFIER

SYSTEM TYPES

- A = ACCESS CONTROL FIELD LOCATION
- C = CAMERA SYSTEM FIELD LOCATION
- W = WIRELESS LOCKS
- B = BURG / INTRUSION DETECTION

PANEL TYPES

- ACC = ACCESS CONTROL PANEL
- CAM = CAMERA SYSTEM HEAD-END/PANEL
- WRLS = LOCK WIRELESS SYSTEM HEAD-END
- BURG = BURG / INTRUSION SYSTEM HEAD-END



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ROCKFORD, IL 61114

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DATE: JULY 25, 2024
SCALE: NONE
DRAWN: A. BOLANOS
CHECKED: A. BOLANOS
APPROVED: F. MACIEL

PROJECT NAME:
RVC – BUILDING E
WIRELESS LOCKS, ACCESS CONTROL
& INTRUSION SYSTEM

SHEET TITLE:
SYMBOL LEGEND &
GENERAL NOTES

PROJECT NUMBER:
GA24G3142

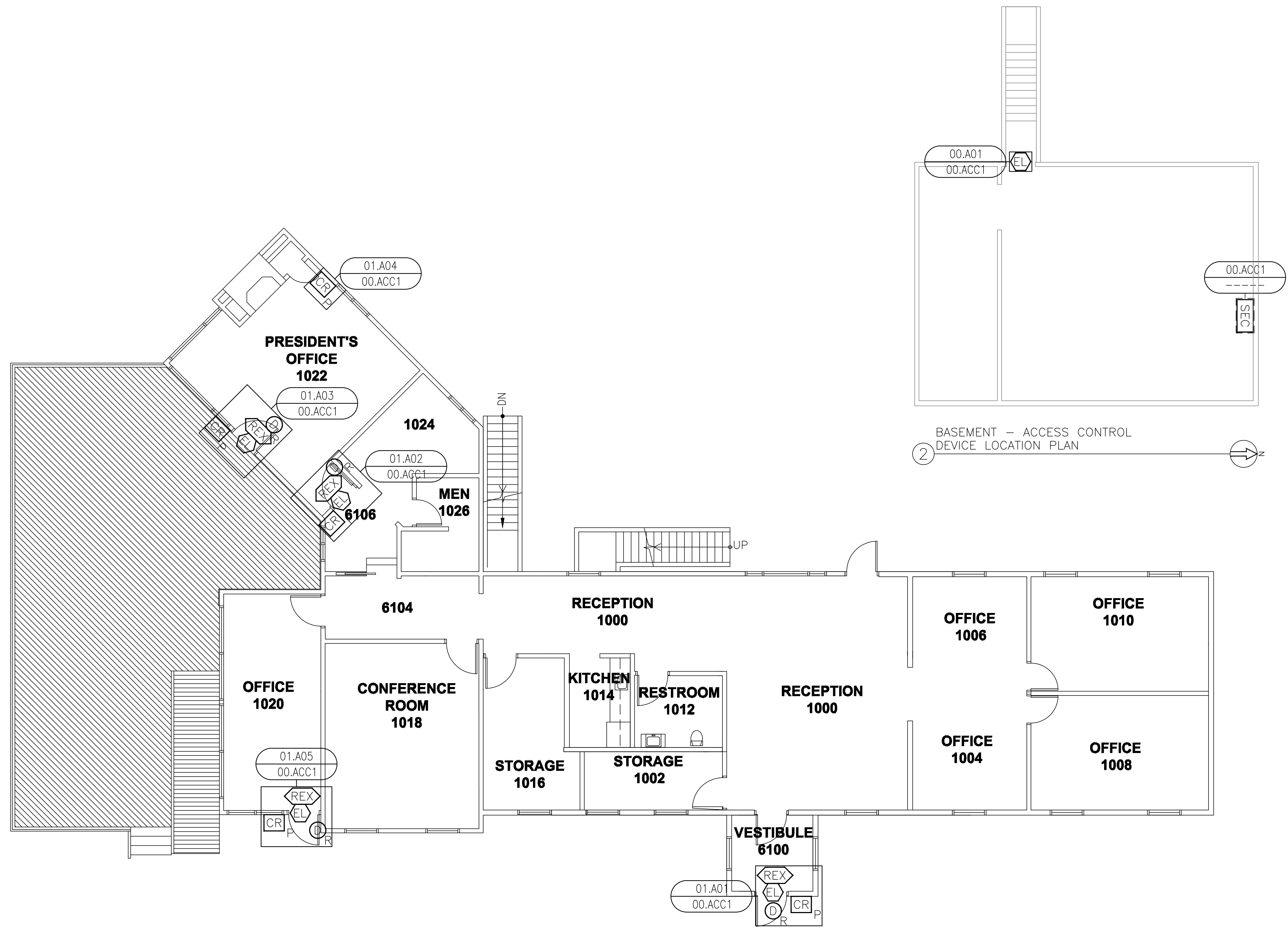
SHEET NUMBER:
RVC_BE_G_100

GENERAL NOTES:

REMOVE EXISTING ANDOVER ACCESS CONTROL CONTROLLERS AND REPLACE THEM WITH GENETEC CONTROLLERS.

REPLACE THE EXISTING CARD READERS WITH THE NEW SCHLAGE MTB SERIES AND UTILIZE THE EXISTING CABLING. BEFORE READER REPLACEMENT, FIELD VERIFY FOR PROPER MODEL REPLACEMENT, STANDARD WALL MOUNT, MULLION, OR READER W/ KEYPAD.

ACCESS CONTROL CONTRACTOR TO REPLACE EXISTING EOL RESISTOR AT THE FIELD DEVICE WITH THE GRI 6644 RESISTOR PACK. SEE DRAWING A_400 FOR WIRING DETAIL.



BASEMENT - ACCESS CONTROL DEVICE LOCATION PLAN

FIRST FLOOR - ACCESS CONTROL DEVICE LOCATION PLAN

SITE NAME & ADDRESS
ROCK VALLEY COLLEGE
BUILDING E
3301 N. MULFORS RD.
ROCKFORD, IL 61114

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DATE: JULY 16, 2024
SCALE: NONE
DRAWN: A. BOLANOS
CHECKED: A. BOLANOS
APPROVED: A. GAGE

PROJECT NAME:
RVC - BUILDING E
WIRELESS LOCKS, ACCESS CONTROL & INTRUSION SYSTEM

SHEET TITLE:
DEVICE LOCATIONS -
ACCESS CONTROL
FIRST FLOOR

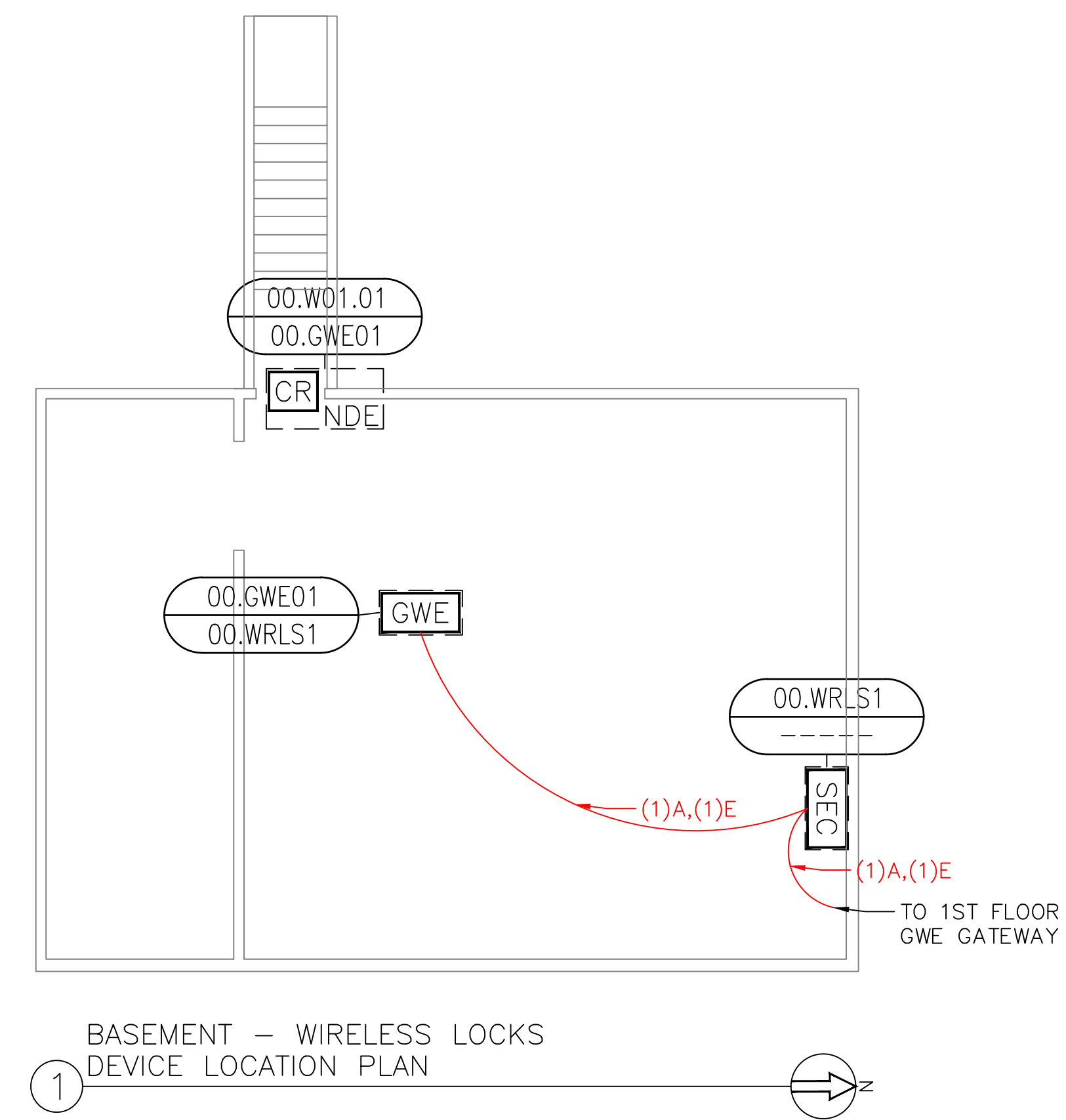
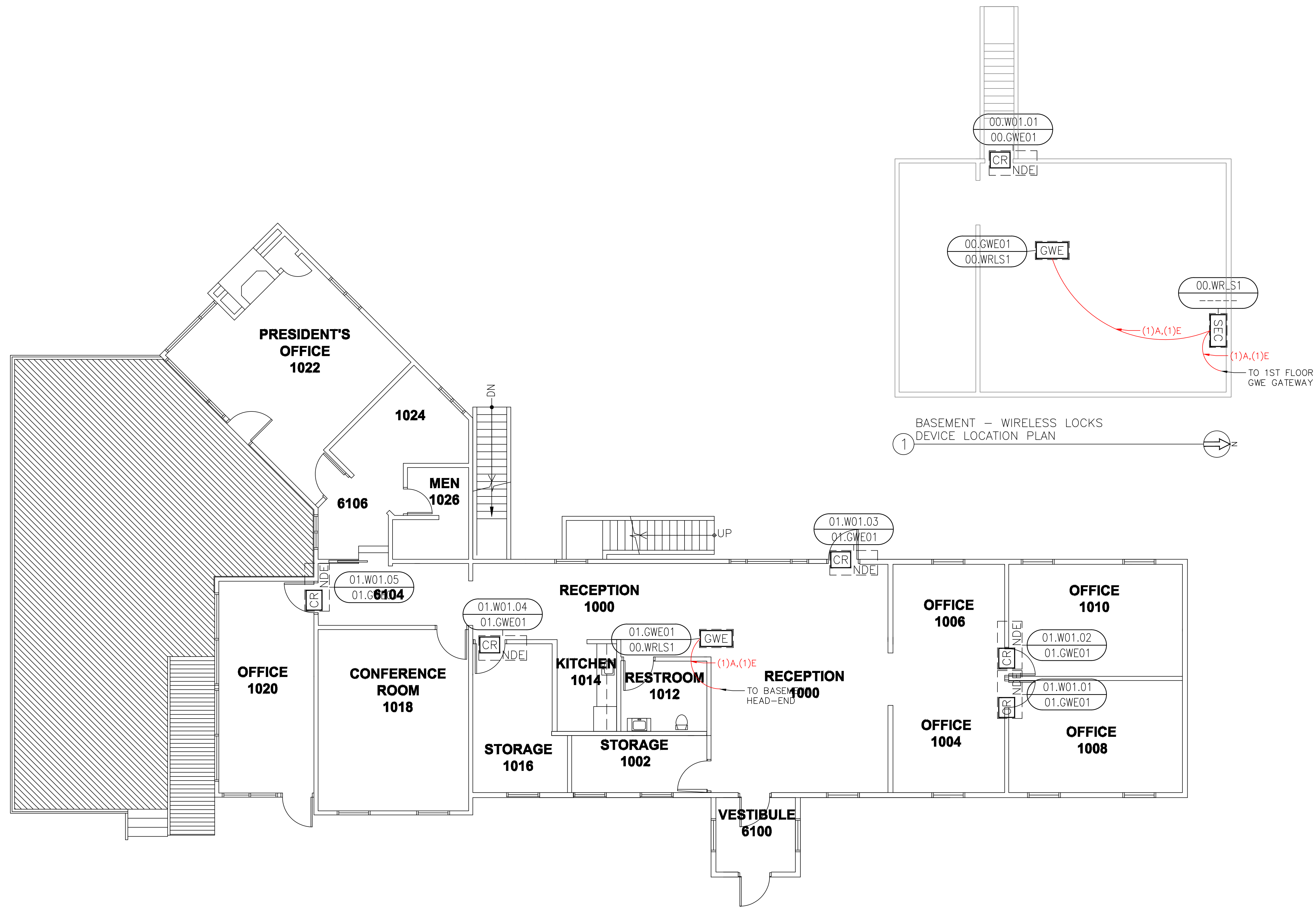
PROJECT NUMBER:
GA24G3142

SHEET NUMBER:
RVC_BE_A_210

SCOPE OF WORK:

ELECTRICAL CONTRACTOR:
RUN COMMUNICATION AND POWER CABLE FROM HEAD-END TO EACH WIRELESS GATEWAY. TRIM, TERMINATE AND SET THE GATEWAYS. SEE LEGEND DRAWING G_100, WIRING DETAIL E_400 AND ELECTRICAL CONTRACTOR SPECIFICATIONS.

ACCESS CONTROL CONTRACTOR:
TRIM AND TERMINATE COMMUNICATION AND POWER CABLES AT THE HEAD-END PANEL, PROGRAM AND CONFIGURE THE GATEWAYS.



FIRST FLOOR – WIRELESS LOCKS
DEVICE LOCATION PLAN

SITE NAME & ADDRESS
ROCK VALLEY COLLEGE
BUILDING E
3301 N. MULFORS RD.
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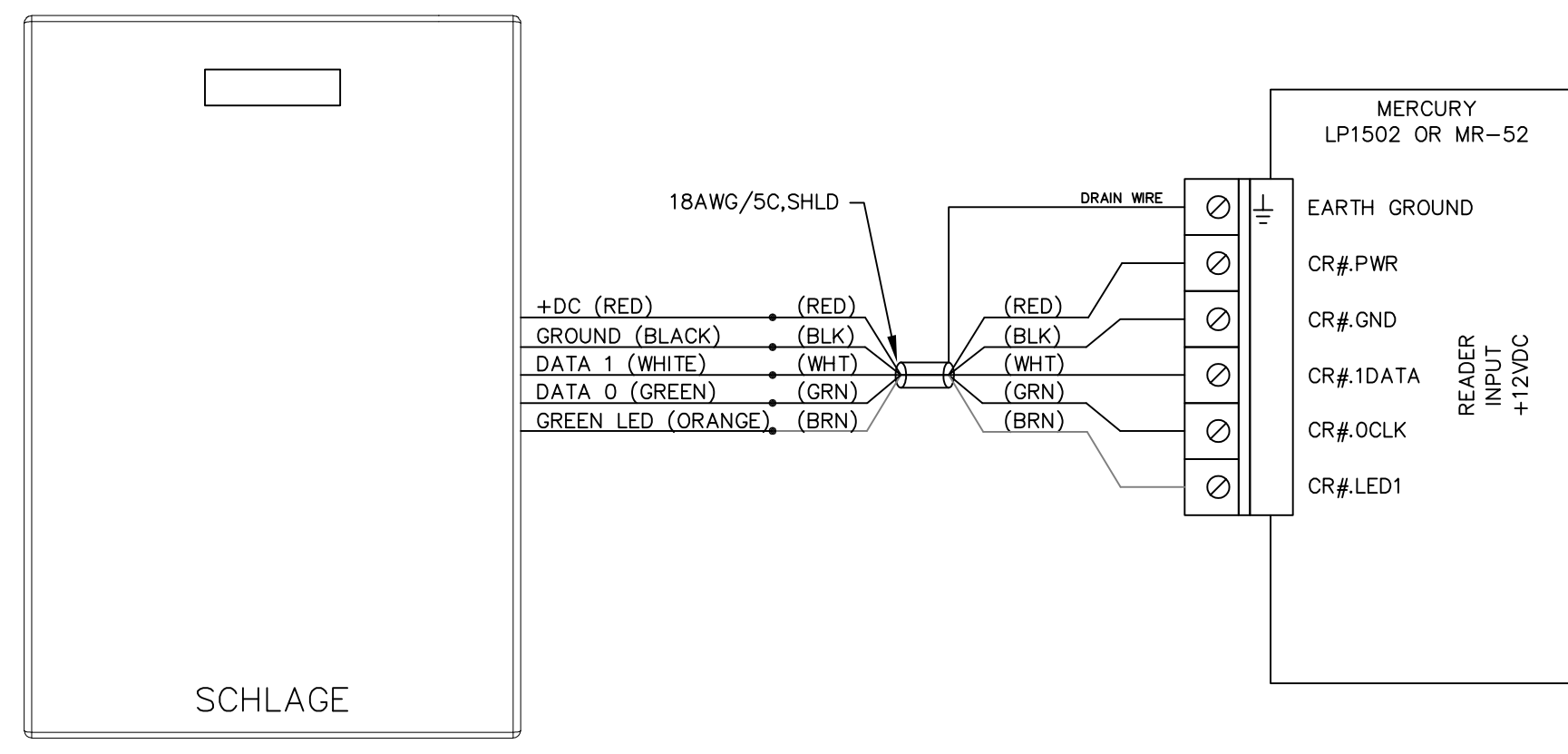
DATE: JULY 16, 2024
SCALE: NONE
DRAWN: A. BOLANOS
CHECKED: A. BOLANOS
APPROVED: A. GAGE

PROJECT NAME:
RVC – BUILDING E
WIRELESS LOCKS, ACCESS CONTROL
& INTRUSION SYSTEM

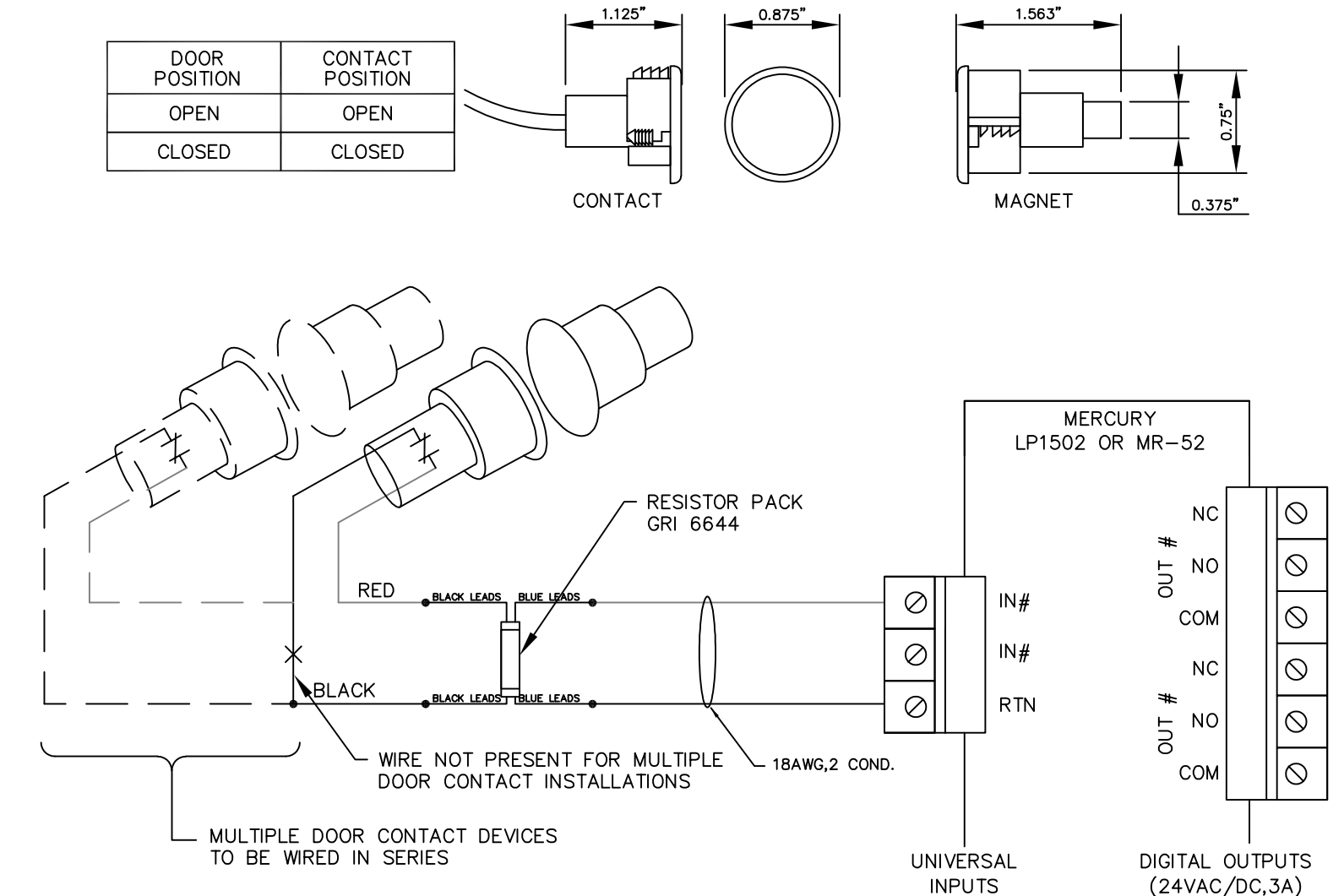
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DEVICE LOCATIONS –
WIRELESS LOCKS
FIRST FLOOR

PROJECT NUMBER:
GA24G3142

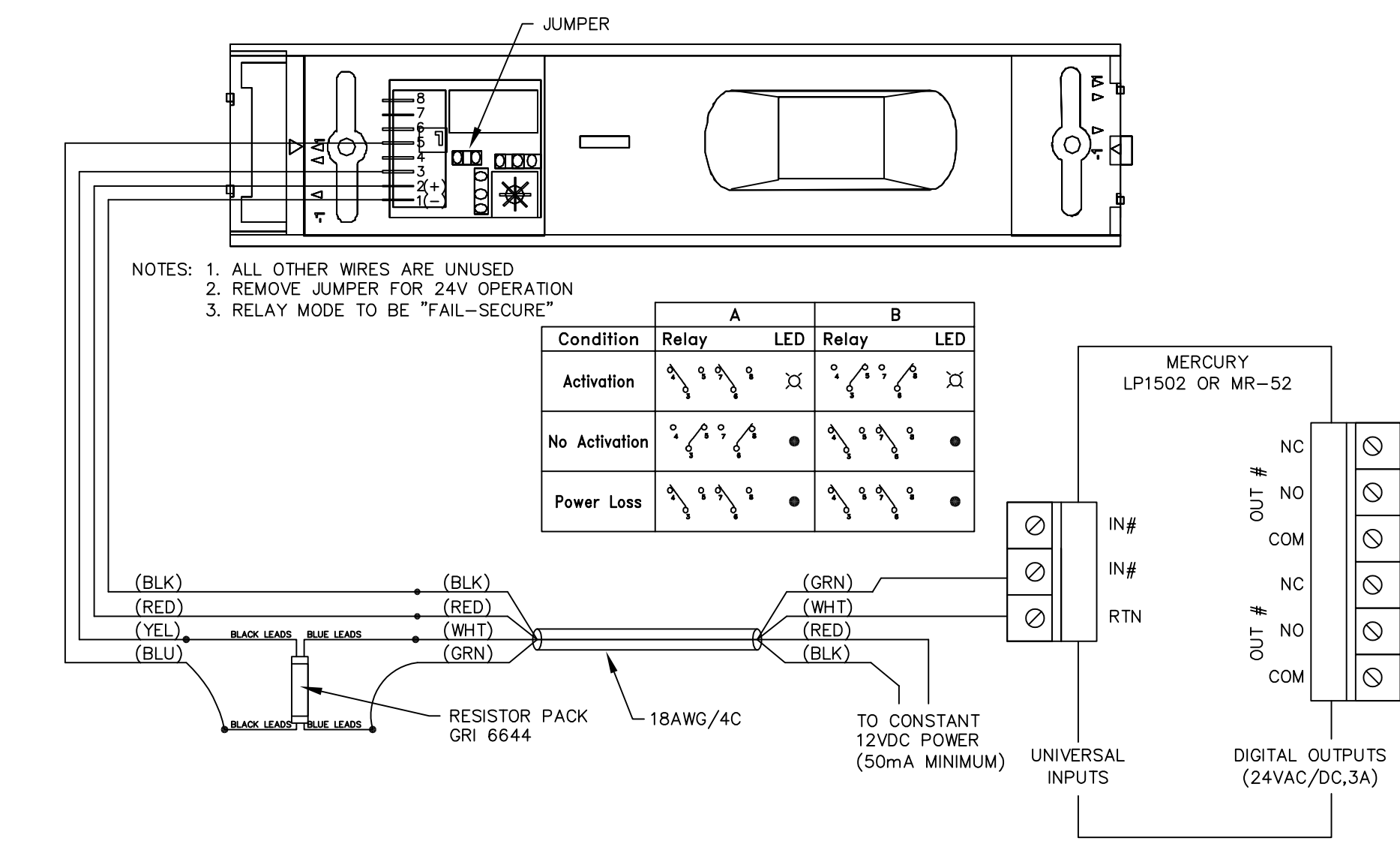
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RVC_BE_W_210



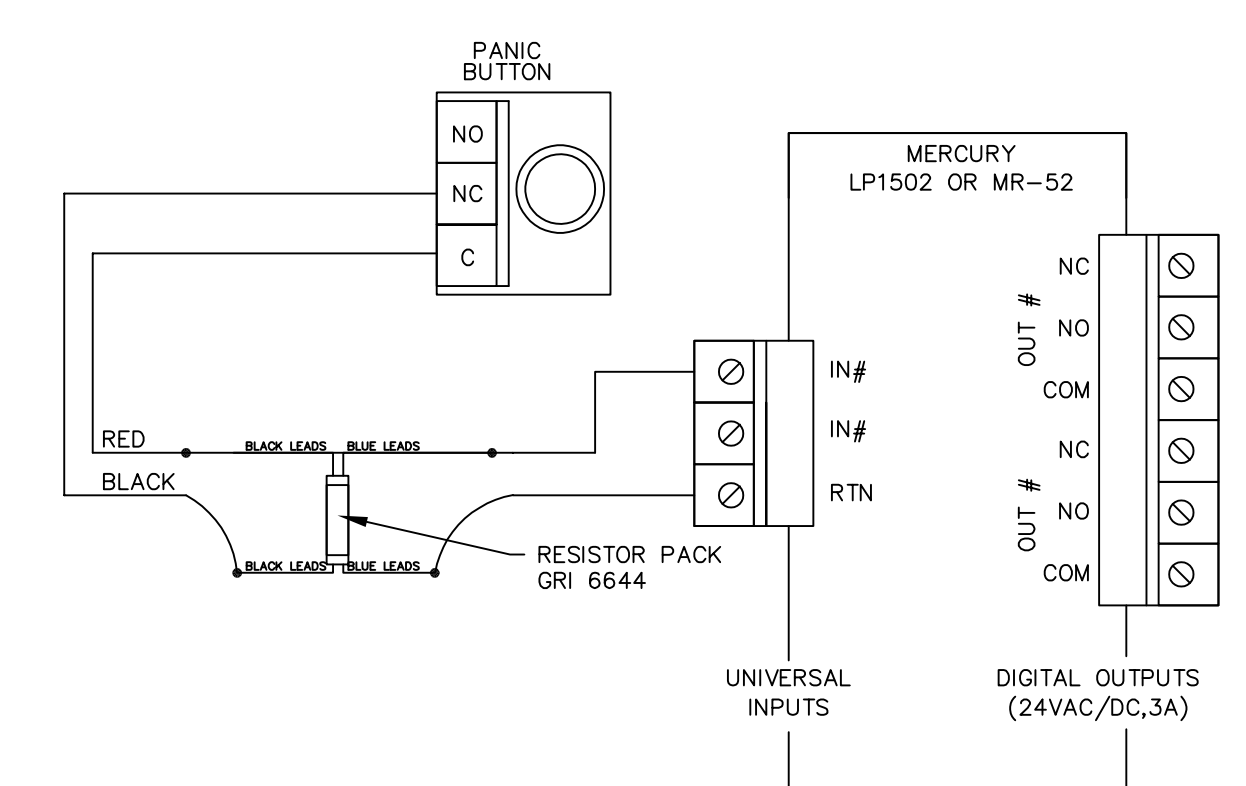
A TYPICAL SCHLAGE CARD READER WIRING DETAIL



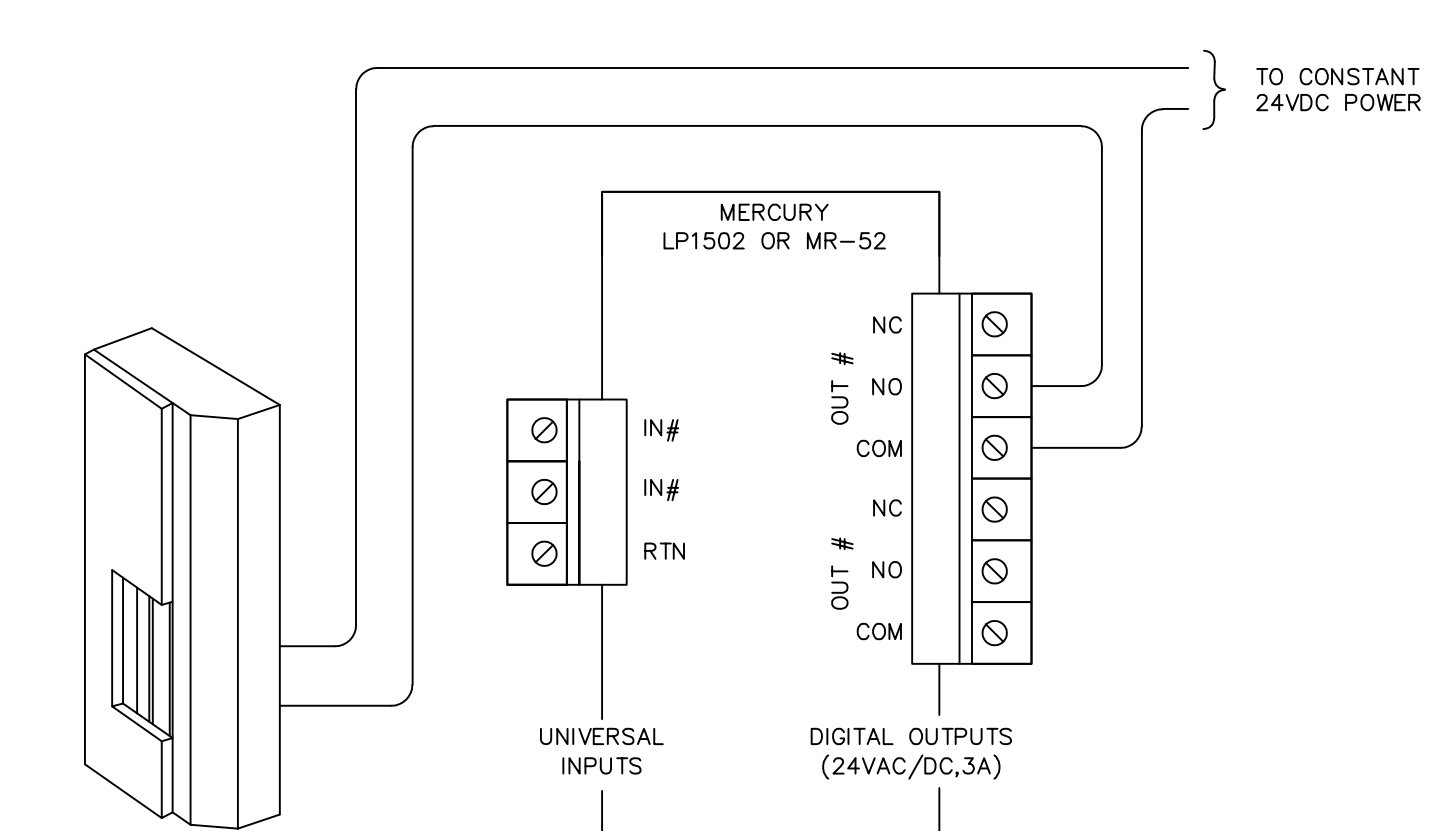
B DEVICE TERMINATION - RECESSED MULTIPLE DOOR MAGNETIC DOOR CONTACT
NOT TO SCALE



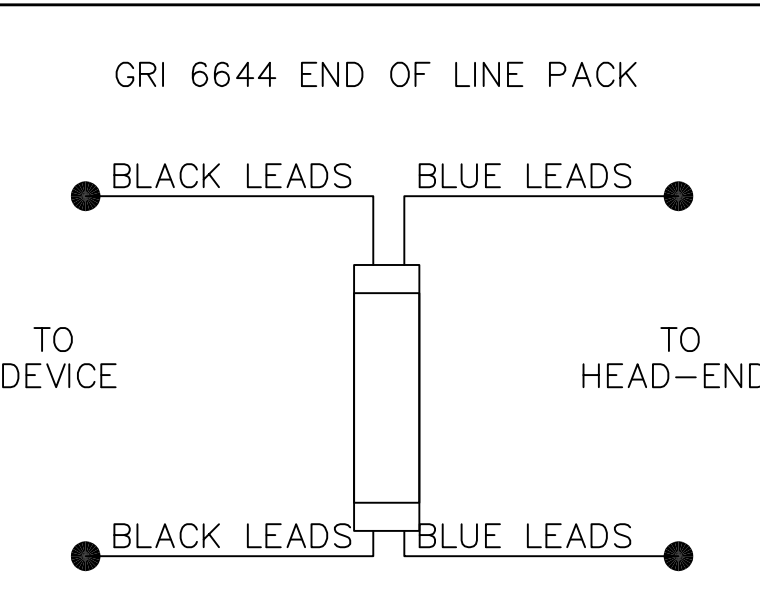
C TYPICAL REQUEST TO EXIT MOTION SENSOR WIRING DETAIL
NOT TO SCALE



D TYPICAL PANIC BUTTON WIRING DETAIL
NOT TO SCALE



E TYPICAL ELECTRIC DOOR STRIKE WIRING DETAIL
NOT TO SCALE



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ROCKFORD, IL 61114

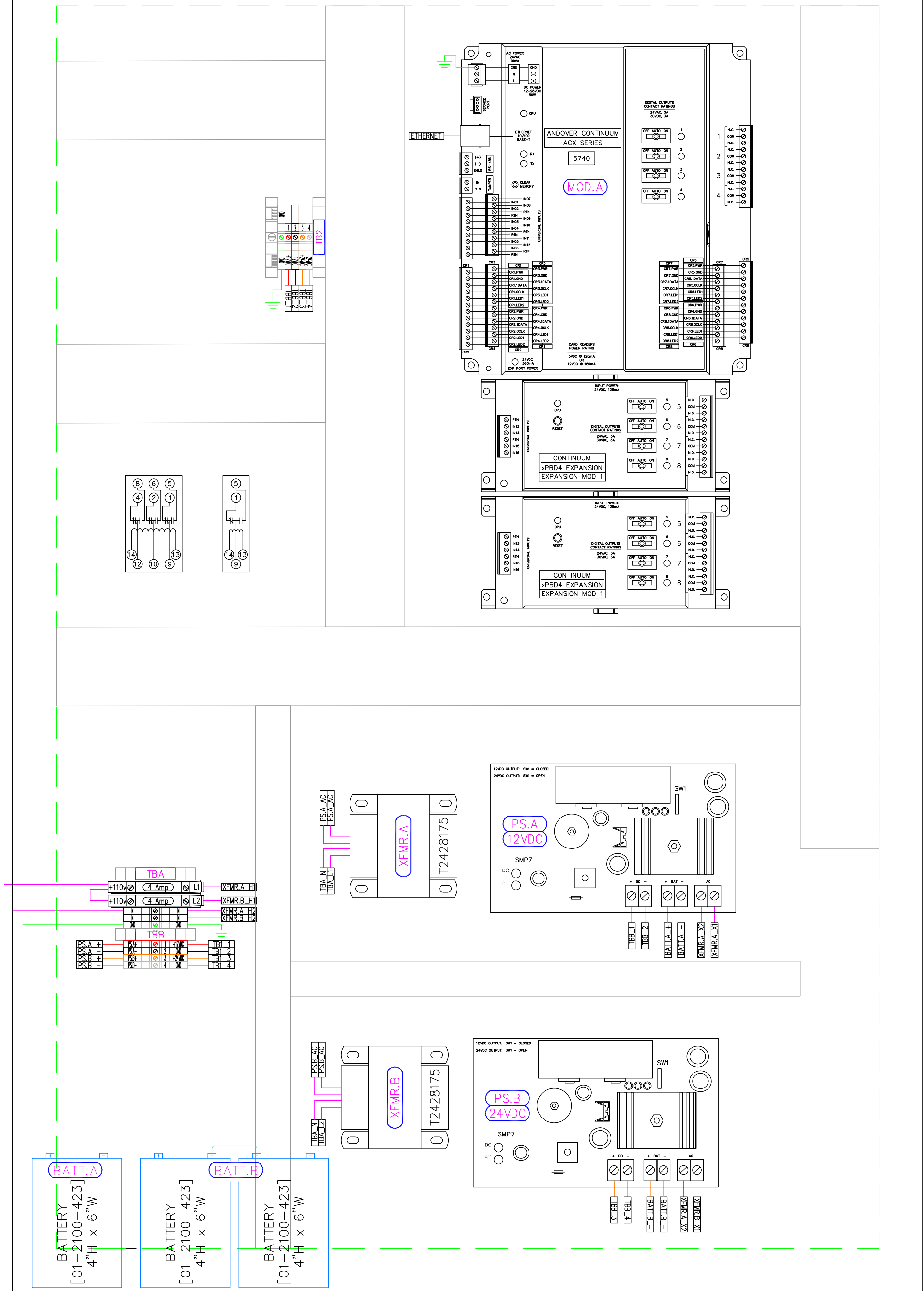
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DATE: JULY 25, 2024
SCALE: NONE
DRAWN: A. BOLANOS
CHECKED: A. BOLANOS
APPROVED: A. GAGE

PROJECT NAME:
RVC - BUILDING E
WIRELESS LOCKS, ACCESS CONTROL
& INTRUSION SYSTEM

SHEET TITLE:
ACCESS CONTROL & WIRELESS LOCK
SYSTEM TERMINATION DETAILS - 1

PROJECT NUMBER:
GA24G3142
SHEET NUMBER:
RVC_BE_G_400



KELE RET3826 ENCLOSURE
38"H x 26"W x 7"D

00.ACC1.1
BUILDING E BASEMENT

SITE NAME & ADDRESS

ROCK VALLEY COLLEGE
BUILDING E
3301 N. MULFORS RD.
ROCKFORD, IL 61114

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| REV | DESCRIPTION | BY | DATE |
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DATE: JULY 24, 2024
SCALE: NONE
DRAWN: A. BOLANOS
CHECKED: A. BOLANOS
APPROVED: A. GAGE

PROJECT NAME:
RVC - BUILDING E
WIRELESS LOCKS, ACCESS CONTROL
& INTRUSION SYSTEM

SHEET TITLE:
ACCESS CONTROL
PANEL BUILD
DETAILS - 00.ACC1.1 - DEMO

PROJECT NUMBER:
GA24G3142

SHEET NUMBER:
RVC_BE_A_700_PH1

GENERAL NOTES:

REMOVE EXISTING ANDOVER ACCESS CONTROL CONTROLLERS AND REPLACE THEM WITH GENETEC LP1502 & MR-52 CONTROLLERS.

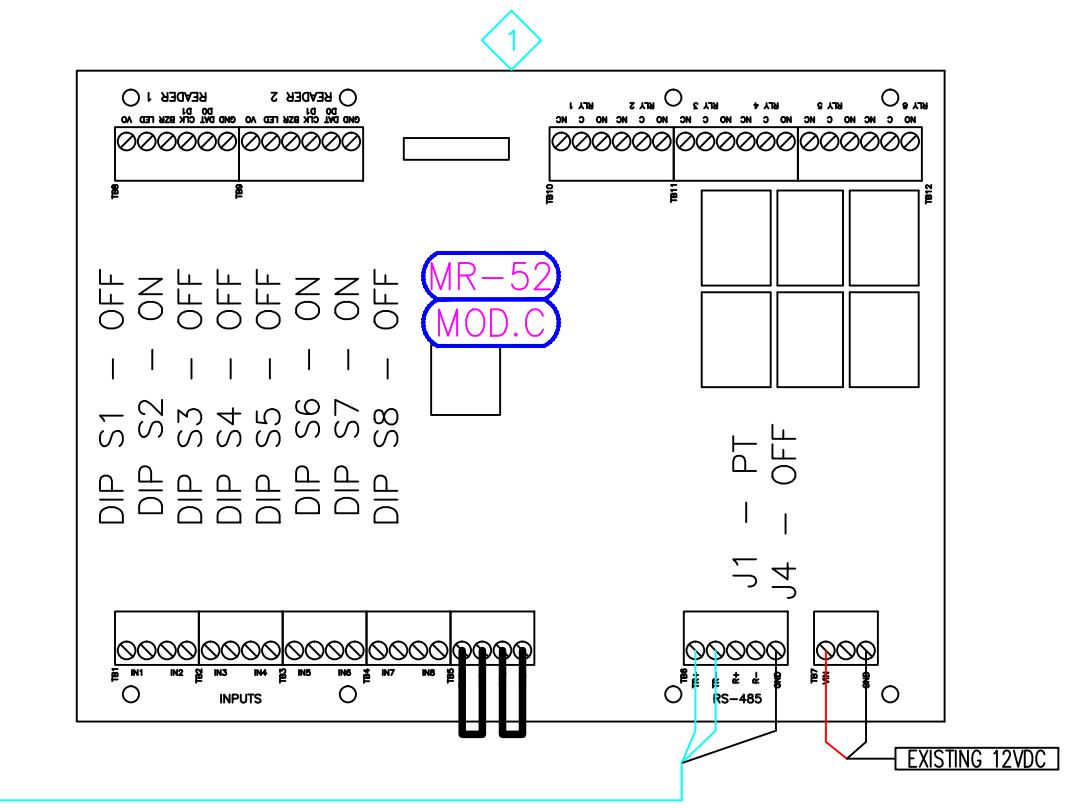
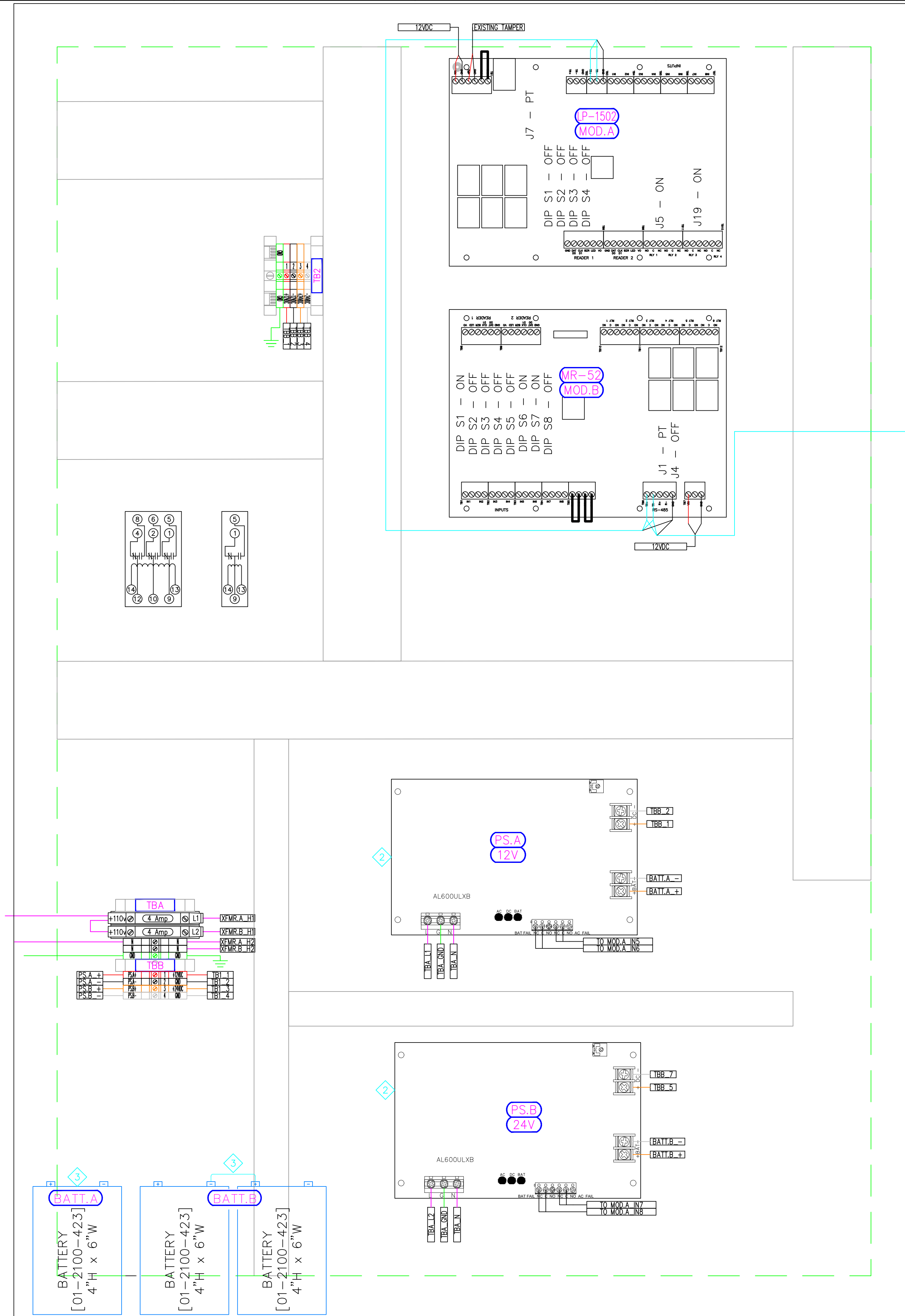
THE CUSTOMER IS TO PROVIDE NEW ETHERNET NETWORK CONNECTIONS FOR THE WIRELESS LOCKS.

KEY NOTES:

1 MR-52 CONTROLLER TO BE STACKED USING STANDOFFS.

2 REPLACE EXISTING 12 AND 24VDC POWER SUPPLIES AND WIRE THE AC FAIL AND LOW BATTERY ALARM TO NEW ACCESS CONTROL SYSTEM

3 PROVIDE 12V Ah BATTERY BACK-UP BATTERIES FOR THE NEW 12 AND 24VDC POWER SUPPLIES.



KELE RET3826 ENCLOSURE
38"H x 26"W x 7"D
00.ACC1.1
BUILDING E BASEMENT

SITE NAME & ADDRESS

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DATE: JULY 24, 2024
SCALE: NONE
DRAWN: A. BOLANOS
CHECKED: A. BOLANOS
APPROVED: A. GAGE

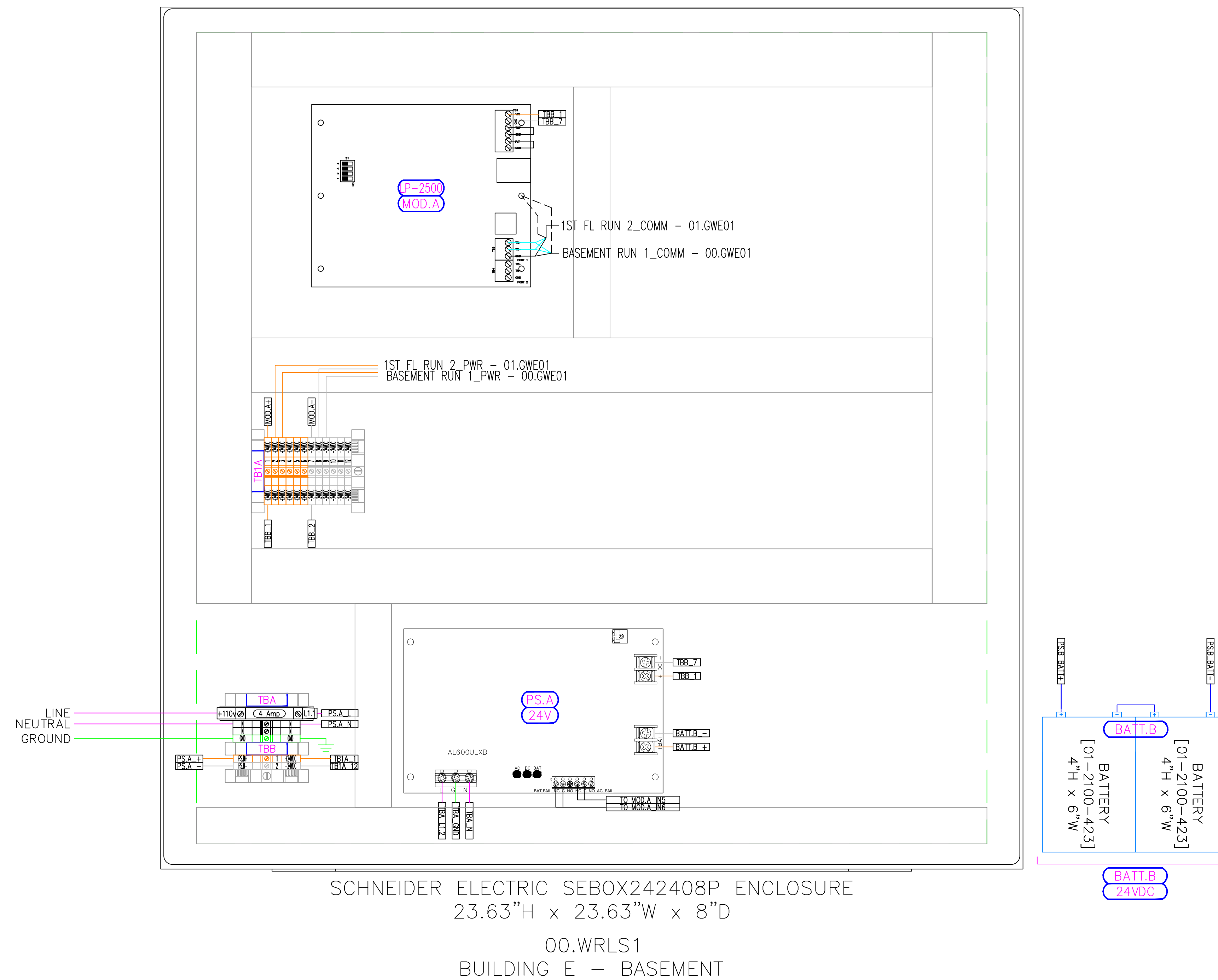
PROJECT NAME:
RVC - BUILDING E
WIRELESS LOCKS, ACCESS CONTROL
& INTRUSION SYSTEM

SHEET TITLE:
ACCESS CONTROL
PANEL BUILD
DETAILS - 00.ACC1.1

PROJECT NUMBER:
GA24G3142
SHEET NUMBER:
RVC_BE_A_700

GENERAL NOTES:

CUSTOMER TO PROVIDE A NEW NETWORK CONNECTION FOR THE NEW WIRELESS LOCK SYSTEM.



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BUILDING E
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ROCKFORD, IL 61114

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DATE: JULY 24, 2024
SCALE: NONE
DRAWN: A. BOLANOS
CHECKED: A. BOLANOS
APPROVED: A. GAGE

PROJECT NAME:

RVC - BUILDING E
WIRELESS LOCKS, ACCESS CONTROL
& INTRUSION SYSTEM

SHEET TITLE:

WIRELESS LOCK SYSTEM
PANEL BUILD
DETAILS - 00.WRLS1.1

PROJECT NUMBER:

GA24G3142

SHEET NUMBER:

RVC_BE_W_700

Building E - Door Contractor_Carpenter Package

Project Name: **Security Upgrades**

Project Number:

Prepared for:

Rock Valley College
3301 N. Mulford Rd.
Rockford, IL 61114

Architect: N/A
Contractor: N/A
Engineer: N/A

Table of Contents

| | |
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| Building E - Door Contractor_Carpenter Package | 1 |
| Specifications | 3 |
| Specifications.pdf | 4 |
| Drawings set..... | 5 |
| Drawing set.pdf | 6 |
| Door Schedule | 10 |
| Door Schedule.pdf | 11 |

Specifications

Door Contractor / Carpenter

Wireless Locks

1. Field Devices:

- A. Contractor to demo existing locking hardware and replace them with new Schlage NDE wireless locks.
- B. The contractor will provide any hardware needed for the wireless lock installation, such as scar plates, door drill templates, etc.
- C. Replace locking hardware batteries provided by the owner.

Owner

The Owner will supply the following items for installation and connection by this Contractor:

1. New batteries for the new wireless locks are only available upon upgrade from AD200 locks to AD400 locks or whenever necessary.

Drawings set

ROCK VALLEY COLLEGE BUILDING E

3301 N. MULFORD RD.
ROCKFORD, IL 61114

DOOR CONTRACTOR / CARPENTER
PROJECT NUMBER: GA24G3142
ISSUED FOR REVIEW:

TABLE OF CONTENTS:

| <u>SHEET NO.</u> | <u>REV.</u> | <u>DESCRIPTION</u> | <u>DATE</u> | <u>SHEET DESCRIPTION</u> |
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| RVC_BE_W_001 | 1 | ISSUED FOR REVIEW | 07/26/24 | TITLE SHEET & TABLE OF CONTENTS |
| RVC_BE_G_100 | 1 | ISSUED FOR REVIEW | 07/26/24 | SYMBOL LEGEND & GENERAL NOTES |
| RVC_BE_W_210 | 1 | ISSUED FOR REVIEW | 07/26/24 | DEVICE LOCATIONS - WIRELESS LOCKS - FIRST FLOOR & BASEMENT |
| RVC_BE_W_500 | 1 | ISSUED FOR REVIEW | 07/26/24 | ACCESS CONTROL & WIRELESS LOCK SYSTEM CONDUIT INSTALLATION DETAILS |



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PHONE: 708.271.4700

SITE NAME & ADDRESS

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REVISION RECORD

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DATE: JULY 25, 2024
SCALE: NONE
DRAWN: A. BOLANOS
CHECKED: A. BOLANOS
APPROVED: A. GAGE

PROJECT NAME:
RVC – BUILDING E
WIRELESS LOCKS, ACCESS CONTROL
& INTRUSION SYSTEM

SHEET TITLE:
TITLE SHEET &
TABLE OF CONTENTS

PROJECT NUMBER:
GA24G3142
SHEET NUMBER:
RVC_BE_W_001

ACCESS CONTROL SYSTEM DEVICE LEGEND:

- CR_NDE NDE SCHLAGE WIRELESS LOCK W/ BUILT-IN REQUEST TO EXIT, DOOR STATUS LOCK STATUS
- GWE GATEWAY
- SEC SECURITY SYSTEM CABINET
- D_E EXISTING DOOR CONTACT
- REX REQUEST-TO-EXIT MOTION SENSOR
- CR_P CARD READER, PROXIMITY, WALL-MOUNT
- ES ELECTRIC STRIKE LOCKING HARDWARE
- EL ELECTRIC MORTISE LOCKING HARDWARE W/ BUILT-IN REX
- CB ELECTRONIC CRASH BAR LOCKING HARDWARE

INTRUSION SYSTEM DEVICE LEGEND:

- KP INTRUSION KEY PAD
- MS_C CEILING-MOUNTED MOTION SENSOR
- MS_W WALL-MOUNTED MOTION SENSOR
- D_E EXISTING DOOR CONTACT
- D_AED AED CABINET DOOR CONTACT

POWER / NETWORK / MISC DEVICE LEGEND:

- BRG BURGLAR PANEL

WIRING SPECIFICATIONS & CONDUIT SIZING:

| # | WIRE TYPE |
|---|---|
| A | 18AWG / 2 CONDUCTOR, PLENUM |
| B | 18AWG / 4 CONDUCTOR, PLENUM |
| C | 18AWG / 5 CONDUCTOR, SHIELDED, PLENUM |
| D | 23AWG / 4 PAIR CAT-6, PLENUM |
| E | 22AWG / 1 PAIR AND AN 22AWG / 1 CONDUCTOR, SHIELDED, LOW-CAP, PLENUM (RS-485) |
| F | "NOT USED" |
| G | "NOT USED" |
| H | "NOT USED" |
| J | "NOT USED" |
| K | "NOT USED" |
| L | "NOT USED" |
| M | "NOT USED" |
| N | "NOT USED" |
| P | "NOT USED" |
| Q | "NOT USED" |
| R | "NOT USED" |

PERMISSIBLE CONDUIT FILL BASED ON OCCUPIED AREA (NEC RECOMMENDED 40% FILL FACTOR)

| CONDUIT SIZE (IN) | PERMISSIBLE FILL (SQ. IN.) |
|-------------------|----------------------------|
| 3/4" | 0.21 SQUARE IN. |
| 1" | 0.35 SQUARE IN. |
| 1 1/4" | 0.60 SQUARE IN. |
| 1 1/2" | 0.81 SQUARE IN. |
| 2" | 1.34 SQUARE IN. |
| 2 1/2" | 1.92 SQUARE IN. |
| 3" | 2.96 SQUARE IN. |
| 3 1/2" | 3.95 SQUARE IN. |
| 4" | 5.09 SQUARE IN. |

NOTE 1: TABLE DEVELOPED FOR STEEL OR ALUMINUM ALLOY CONDUIT ONLY.

NOTE 2: NEC PRESCRIBED 40% FILL FACTOR IS FOR (3) OR MORE CABLES. A SINGLE CABLE CAN OCCUPY 53% OR TWO CABLES ARE LIMITED TO 31% CONDUIT FILL.

GENERAL NOTES

- 1) ALL CONDUIT IS TO BE 3/4" WITH PULL STRING UNLESS OTHERWISE SPECIFIED ON DRAWING. ARROW DENOTES HOME RUN BACK TO SECURITY EQUIPMENT LOCATION AS NOTED.
- 2) ALL DEVICES ARE HOME RUN WIRED UNLESS OTHERWISE SPECIFIED.
- 3) VERIFY ALL SITE CONDITIONS AND REPORT ALL PROBLEMS TO SCHNEIDER ELECTRIC.
- 4) FOLLOW CONDUIT FILL REQUIREMENTS AS DOCUMENTED BELOW ON THE WIRING LEGEND AND PRESCRIBED CONDUIT FILL TABLES. CONDUIT SPECIFIED BY ELECTRICAL CONTRACTOR CANNOT EXCEED A 40% FILL UNDER ANY CIRCUMSTANCES.
- 5) ALL CONDUIT FOR SECURITY / CCTV SYSTEM SHALL ONLY CONTAIN SECURITY & CCTV SYSTEM CABLES. WIRE FROM OTHER TRADES IS NOT PERMITTED IN THE SECURITY / CCTV CONDUIT SYSTEM UNDER ANY CIRCUMSTANCES.
- 6) BURIAL RATED CABLE TO BE USED FOR ANY UNDERGROUND RUNS.
- 7) ALL DRAWINGS INDICATE CURRENT PROJECT SCOPE WITH DARKENED PRINT. GRAYED DEVICES & WIRING INDICATE WORK THAT WAS PREVIOUSLY COMPLETED BUT IS CURRENTLY PART OF THE FULL SYSTEM.
- 8) PLENUM RATED CABLE TO BE USED IN ALL PLENUM CEILING AREAS. CONDITIONS TO BE FIELD VERIFIED AND REPORTED BACK TO SCHNEIDER ELECTRIC IF DIFFERENT THAN SHOWN ON DRAWINGS.

SYMBOLS

- XX = FLOOR NUMBER OR "ST" FOR SITE
- A = BUILDING AREA OR QUADRANT
- B = SYSTEM TYPE (SEE SYSTEM TYPES/PANEL TYPES LEGEND)
- ?? = SEQUENTIAL NUMBER IDENTIFIER
- ZZZZ = PANEL/HEAD-END LOCATION NUMBER
- YY = CONDUIT DETAIL NUMBER
- B_??? = DRAWING NUMBER
- REVISION NUMBER IDENTIFIER
- KEY NOTE IDENTIFIER

SYSTEM TYPES

- A = ACCESS CONTROL FIELD LOCATION
- C = CAMERA SYSTEM FIELD LOCATION
- W = WIRELESS LOCKS
- B = BURG / INTRUSION DETECTION

PANEL TYPES

- ACC = ACCESS CONTROL PANEL
- CAM = CAMERA SYSTEM HEAD-END/PANEL
- WRLS = LOCK WIRELESS SYSTEM HEAD-END
- BURG = BURG / INTRUSION SYSTEM HEAD-END



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PHONE: 708.271.4700

SITE NAME & ADDRESS

ROCK VALLEY COLLEGE
BUILDING E
3301 N. MULFORS RD.
ROCKFORD, IL 61114

REVISION RECORD

| REV | DESCRIPTION | BY | DATE |
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DATE: JULY 25, 2024
SCALE: NONE
DRAWN: A. BOLANOS
CHECKED: A. BOLANOS
APPROVED: F. MACIEL

PROJECT NAME:
RVC – BUILDING E
WIRELESS LOCKS, ACCESS CONTROL
& INTRUSION SYSTEM

SHEET TITLE:
SYMBOL LEGEND &
GENERAL NOTES

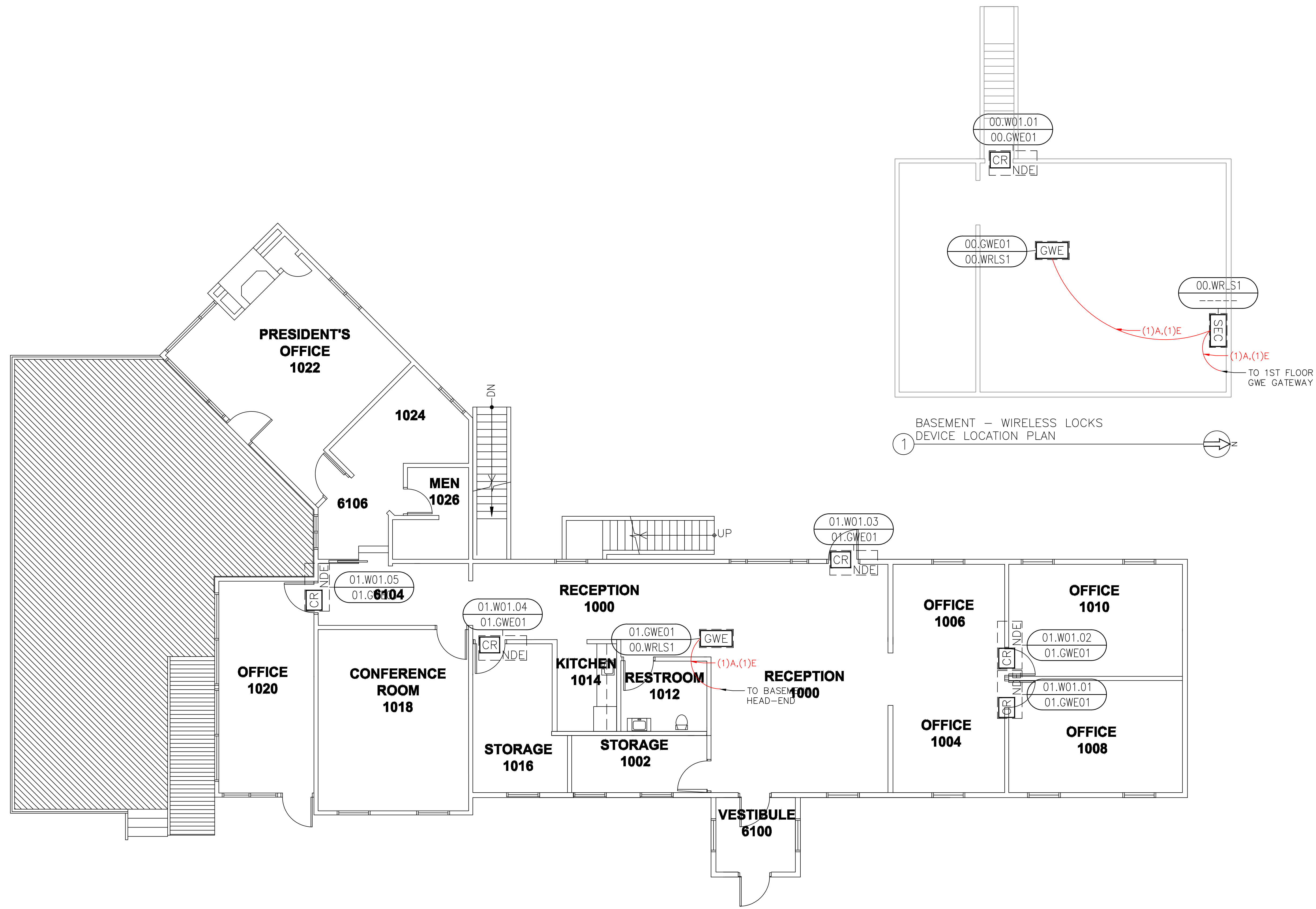
PROJECT NUMBER:
GA24G3142

SHEET NUMBER:
RVC_BE_G_100

SCOPE OF WORK:

ELECTRICAL CONTRACTOR:
RUN COMMUNICATION AND POWER CABLE FROM HEAD-END TO EACH WIRELESS GATEWAY. TRIM, TERMINATE AND SET THE GATEWAYS. SEE LEGEND DRAWING G_100, WIRING DETAIL E_400 AND ELECTRICAL CONTRACTOR SPECIFICATIONS.

ACCESS CONTROL CONTRACTOR:
TRIM AND TERMINATE COMMUNICATION AND POWER CABLES AT THE HEAD-END PANEL, PROGRAM AND CONFIGURE THE GATEWAYS.



1 BASEMENT - WIRELESS LOCKS DEVICE LOCATION PLAN

1 FIRST FLOOR - WIRELESS LOCKS DEVICE LOCATION PLAN

SITE NAME & ADDRESS
ROCK VALLEY COLLEGE
BUILDING E
3301 N. MULFORS RD.
ROCKFORD, IL 61114

REVISION RECORD

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DATE: JULY 16, 2024
SCALE: NONE
DRAWN: A. BOLANOS
CHECKED: A. BOLANOS
APPROVED: A. GAGE

PROJECT NAME:
RVC - BUILDING E
WIRELESS LOCKS, ACCESS CONTROL & INTRUSION SYSTEM

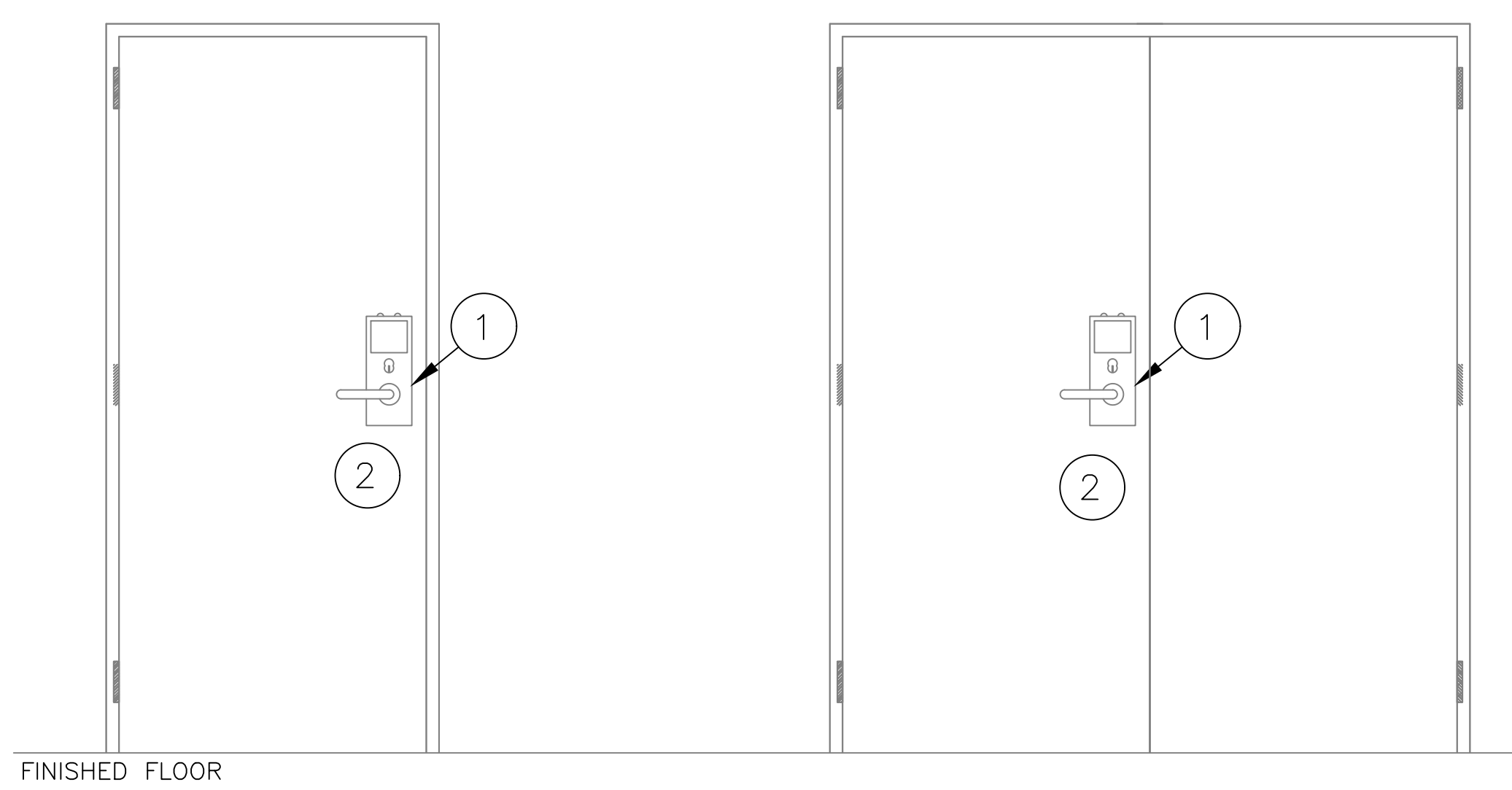
SHEET TITLE:
DEVICE LOCATIONS -
WIRELESS LOCKS
FIRST FLOOR

PROJECT NUMBER:
GA24G3142

SHEET NUMBER:
RVC_BE_W_210

GENERAL NOTES:

DOOR CONTRACTOR/CARPENTER TO PROVIDE ANY HARDWARE NECESSARY TO MOUNT NEW WIRELESS LOCK. SEE DETAIL 1.



- ① DOOR CONTRACTOR SHALL FOLLOW THE SCHLAGE NDE LOCK INSTRUCTIONS AND INSTALLATION MANUALS AND PROVIDE ANY SCAR PLATE OR HARDWARE NEEDED FOR THE RETROFIT OR NEW INSTALLATION.
- ② DOOR CONTRACTOR TO INSTALL NEW BATTERIES PROVIDED BY CUSTOMER.

① CONDUIT DETAIL – SINGLE AND DOUBLE DOOR NDE WIRELESS LOCK
NOT TO SCALE

SITE NAME & ADDRESS

ROCK VALLEY COLLEGE
BUILDING E
3301 N. MULFORS RD.
ROCKFORD, IL 61114

REVISION RECORD

| REV | DESCRIPTION | BY | DATE |
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DATE: JULY 25, 2024
SCALE: NONE
DRAWN: A. BOLANOS
CHECKED: A. BOLANOS
APPROVED: A. GAGE

PROJECT NAME:
RVC – BUILDING E
WIRELESS LOCKS, ACCESS CONTROL
& INTRUSION SYSTEM

SHEET TITLE:
WIRELESS LOCKS
DEVICES CONDUIT INSTALLATION
DETAILS

PROJECT NUMBER:
GA24G3142
SHEET NUMBER:
RVC_BE_W_500

Door Schedule

| Building E - Door Schedule | | | | | | | | | | | | | | | |
|----------------------------|-------------------|--------------|----------------|--------|---------|--------|-------|--------|---------------|-------------|----------|----------------|-----------------------------|----------------|-------|
| Room# | Location | Drawing Loc. | Series / Class | Chasis | Fuction | Reader | Lever | Finish | Cylinder Type | Keyway Type | Handling | Battery holder | Backset/Latch / Armor front | Door Thickness | Notes |
| 1008 | Office | 01.W01.01 | NDE / Allegion | | | | | | | | | | | | |
| 1010 | Office | 01.W01.02 | NDE / Allegion | | | | | | | | | | | | |
| 1000 | Reception | 01.W01.03 | NDE / Allegion | | | | | | | | | | | | |
| 1016 | Storage | 01.W01.04 | NDE / Allegion | | | | | | | | | | | | |
| 1020 | Office | 01.W01.05 | NDE / Allegion | | | | | | | | | | | | |
| | Basement Entrance | 00.W01.01 | NDE / Allegion | | | | | | | | | | | | |

Note: Door contractor / Carpenter to fill in door information

Building E - Electric Contractor Package

Project Name: **Security Upgrades**

Project Number:

Prepared for:

Rock Valley College
3301 N. Mulford Rd.
Rockford, IL 61114

Architect: N/A
Contractor: N/A
Engineer: N/A

Table of Contents

| | |
|--|---|
| Building E - Electric Contractor Package | 1 |
| Specifications | 3 |
| Specifications.pdf | 4 |
| Drawings set..... | 5 |
| Drawing Set.pdf..... | 6 |

Specifications

Electrical Contractor

COORDINATION DRAWINGS

1. Definitions:

A. Coordination Drawings: A compilation of the pertinent layout and system drawings that show the sizes and locations, including elevations, of system components and required access areas to ensure that no two objects will occupy the same space.

1). Electrical trades shall include, but are not limited to, electrical equipment, conduit 3/4" and larger, cable trays, pull boxes, raceway, receptacles, ceiling-mounted devices, and any item that may impact coordination with other disciplines.

Wireless Locks

1. Field Devices:

A. The electrical contractor shall provide cables for the wireless lock gateways, mount them, and trim them. For more information, see device location drawings (W_210), riser diagrams (W_300), wiring and mount details (W_400)

2. Cable requirements:

- A. RS-485 Data: Provide a 22AWG/1 pair and a 22AWG/1C, shielded, low-cap, plenum-rated, or equivalent.
- B. 12/24 VDC power: Provide 18AWG/2C plenum-rated for distances <200ft, otherwise 16AWG/2C plenum-rated.
- C. IP Communication: CAT-6 plenum-rated or better.

3. Head-End:

- A. Mount the new panel and provide any necessary conduit for the incoming field cables or any connection between existing and new panel modifications. See panel layouts.
- B. The existing access control Blue KELE panel at Building E to be moved slightly to the left to make room for the new Wireless and Intrusion panels. See panel layout drawing A_800.
- C. Provide 120 VAC from a dedicated circuit at the head-end if necessary. See panel Layout.

Intrusion

1. Head-End:

- A. Utilize existing 120 VAC to install a new 4 Amp fused receptacle for the new intrusion system panel.

Drawings set

ROCK VALLEY COLLEGE BUILDING E

3301 N. MULFORD RD.
ROCKFORD, IL 61114

ELECTRICAL PACKAGE
PROJECT NUMBER: GA24G3142
ISSUED FOR REVIEW:

TABLE OF CONTENTS:

| <u>SHEET NO.</u> | <u>REV.</u> | <u>DESCRIPTION</u> | <u>DATE</u> | <u>SHEET DESCRIPTION</u> |
|------------------|-------------|--------------------|-------------|--|
| RVC_BE_E_001 | 1 | ISSUED FOR REVIEW | 07/26/24 | TITLE SHEET & TABLE OF CONTENTS |
| RVC_BE_G_100 | 1 | ISSUED FOR REVIEW | 07/26/24 | SYMBOL LEGEND & GENERAL NOTES |
| RVC_BE_B_210 | 1 | ISSUED FOR REVIEW | 07/26/24 | DEVICE LOCATIONS - INTRUSION SYSTEM - FIRST FLOOR & BASEMENT |
| RVC_BE_W_210 | 1 | ISSUED FOR REVIEW | 07/26/24 | DEVICE LOCATIONS - WIRELESS LOCKS - FIRST FLOOR & BASEMENT |
| RVC_BE_W_300 | 1 | ISSUED FOR REVIEW | 07/26/24 | WIRELESS LOCKS SYSTEM RISER DIAGRAM |
| RVC_BE_E_400 | 1 | ISSUED FOR REVIEW | 07/26/24 | WIRELESS LOCK SYSTEM INSTALLATION ON MOUNTING DETAILS |
| RVC_BE_G_800 | 1 | ISSUED FOR REVIEW | 07/26/24 | MULTIPLE SYSTEMS PANEL ELEVATION |



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PHONE: 708.271.4700

SITE NAME & ADDRESS

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ROCKFORD, IL 61114

REVISION RECORD

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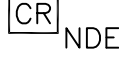


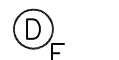


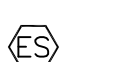


DATE: JULY 25, 2024
SCALE: NONE
DRAWN: A. BOLANOS
CHECKED: A. BOLANOS
APPROVED: A. GAGE

PROJECT NAME:
RVC – BUILDING E
WIRELESS LOCKS, ACCESS CONTROL
& INTRUSION SYSTEM


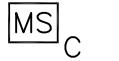



SHEET TITLE:
TITLE SHEET &
TABLE OF CONTENTS

PROJECT NUMBER:
GA24G3142
SHEET NUMBER:
RVC_BE_E_001

ACCESS CONTROL SYSTEM DEVICE LEGEND:

-  NDE SCHLAGE WIRELESS LOCK W/ BUILT-IN REQUEST TO EXIT, DOOR STATUS LOCK STATUS
-  GWE GATEWAY
-  SECURITY SYSTEM CABINET
-  EXISTING DOOR CONTACT
-  REQUEST-TO-EXIT MOTION SENSOR
-  CARD READER, PROXIMITY, WALL-MOUNT
-  ELECTRIC STRIKE LOCKING HARDWARE
-  ELECTRIC MORTISE LOCKING HARDWARE W/ BUILT-IN REX
-  ELECTRONIC CRASH BAR LOCKING HARDWARE

INTRUSION SYSTEM DEVICE LEGEND:

-  INTRUSION KEY PAD
-  CEILING-MOUNTED MOTION SENSOR
-  WALL-MOUNTED MOTION SENSOR
-  EXISTING DOOR CONTACT
-  AED CABINET DOOR CONTACT

POWER / NETWORK / MISC DEVICE LEGEND:

-  BURGLAR PANEL

WIRING SPECIFICATIONS & CONDUIT SIZING:

| # | WIRE TYPE |
|---|---|
| A | 18AWG / 2 CONDUCTOR, PLENUM |
| B | 18AWG / 4 CONDUCTOR, PLENUM |
| C | 18AWG / 5 CONDUCTOR, SHIELDED, PLENUM |
| D | 23AWG / 4 PAIR CAT-6, PLENUM |
| E | 22AWG / 1 PAIR AND AN 22AWG / 1 CONDUCTOR, SHIELDED, LOW-CAP, PLENUM (RS-485) |
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| G | "NOT USED" |
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| K | "NOT USED" |
| L | "NOT USED" |
| M | "NOT USED" |
| N | "NOT USED" |
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| R | "NOT USED" |

PERMISSIBLE CONDUIT FILL BASED ON OCCUPIED AREA
(NEC RECOMMENDED 40% FILL FACTOR)

| CONDUIT SIZE (IN) | PERMISSIBLE FILL (SQ. IN.) |
|-------------------|----------------------------|
| 3/4" | 0.21 SQUARE IN. |
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| 1 1/2" | 0.81 SQUARE IN. |
| 2" | 1.34 SQUARE IN. |
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| 3" | 2.96 SQUARE IN. |
| 3 1/2" | 3.95 SQUARE IN. |
| 4" | 5.09 SQUARE IN. |

NOTE 1: TABLE DEVELOPED FOR STEEL OR ALUMINUM ALLOY CONDUIT ONLY.

NOTE 2: NEC PRESCRIBED 40% FILL FACTOR IS FOR (3) OR MORE CABLES. A SINGLE CABLE CAN OCCUPY 53% OR TWO CABLES ARE LIMITED TO 31% CONDUIT FILL.

GENERAL NOTES

- 1) ALL CONDUIT IS TO BE 3/4" WITH PULL STRING UNLESS OTHERWISE SPECIFIED ON DRAWING. ARROW DENOTES HOME RUN BACK TO SECURITY EQUIPMENT LOCATION AS NOTED.
- 2) ALL DEVICES ARE HOME RUN WIRED UNLESS OTHERWISE SPECIFIED.
- 3) VERIFY ALL SITE CONDITIONS AND REPORT ALL PROBLEMS TO SCHNEIDER ELECTRIC.
- 4) FOLLOW CONDUIT FILL REQUIREMENTS AS DOCUMENTED BELOW ON THE WIRING LEGEND AND PRESCRIBED CONDUIT FILL TABLES. CONDUIT SPECIFIED BY ELECTRICAL CONTRACTOR CANNOT EXCEED A 40% FILL UNDER ANY CIRCUMSTANCES.
- 5) ALL CONDUIT FOR SECURITY / CCTV SYSTEM SHALL ONLY CONTAIN SECURITY & CCTV SYSTEM CABLES. WIRE FROM OTHER TRADES IS NOT PERMITTED IN THE SECURITY / CCTV CONDUIT SYSTEM UNDER ANY CIRCUMSTANCES.
- 6) BURIAL RATED CABLE TO BE USED FOR ANY UNDERGROUND RUNS.
- 7) ALL DRAWINGS INDICATE CURRENT PROJECT SCOPE WITH DARKENED PRINT. GRAYED DEVICES & WIRING INDICATE WORK THAT WAS PREVIOUSLY COMPLETED BUT IS CURRENTLY PART OF THE FULL SYSTEM.
- 8) PLENUM RATED CABLE TO BE USED IN ALL PLENUM CEILING AREAS. CONDITIONS TO BE FIELD VERIFIED AND REPORTED BACK TO SCHNEIDER ELECTRIC IF DIFFERENT THAN SHOWN ON DRAWINGS.

SYMBOLS

XX = FLOOR NUMBER OR "ST" FOR SITE

A = BUILDING AREA OR QUADRANT

B = SYSTEM TYPE (SEE SYSTEM TYPES/PANEL TYPES LEGEND)

?? = SEQUENTIAL NUMBER IDENTIFIER

ZZZZ = PANEL/HEAD-END LOCATION NUMBER

YY = CONDUIT DETAIL NUMBER

B_??? = DRAWING NUMBER

REVISION NUMBER IDENTIFIER

KEY NOTE IDENTIFIER

SYSTEM TYPES

A = ACCESS CONTROL FIELD LOCATION

C = CAMERA SYSTEM FIELD LOCATION

W = WIRELESS LOCKS

B = BURG / INTRUSION DETECTION

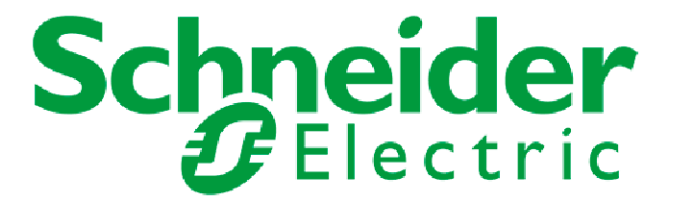
PANEL TYPES

ACC = ACCESS CONTROL PANEL

CAM = CAMERA SYSTEM HEAD-END/PANEL

WRLS = LOCK WIRELESS SYSTEM HEAD-END

BURG = BURG / INTRUSION SYSTEM HEAD-END



1111 PASQUINELLI RD./ WESTMONT, IL 60559
PHONE: 708.271.4700

SITE NAME & ADDRESS

ROCK VALLEY COLLEGE
BUILDING E
3301 N. MULFORS RD.
ROCKFORD, IL 61114

REVISION RECORD

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DATE: JULY 25, 2024
SCALE: NONE
DRAWN: A. BOLANOS
CHECKED: A. BOLANOS
APPROVED: F. MACIEL

PROJECT NAME:
RVC - BUILDING E
WIRELESS LOCKS, ACCESS CONTROL
& INTRUSION SYSTEM

SHEET TITLE:
SYMBOL LEGEND &
GENERAL NOTES

PROJECT NUMBER:
GA24G3142

SHEET NUMBER:
RVC_BE_G_100

GENERAL NOTES:

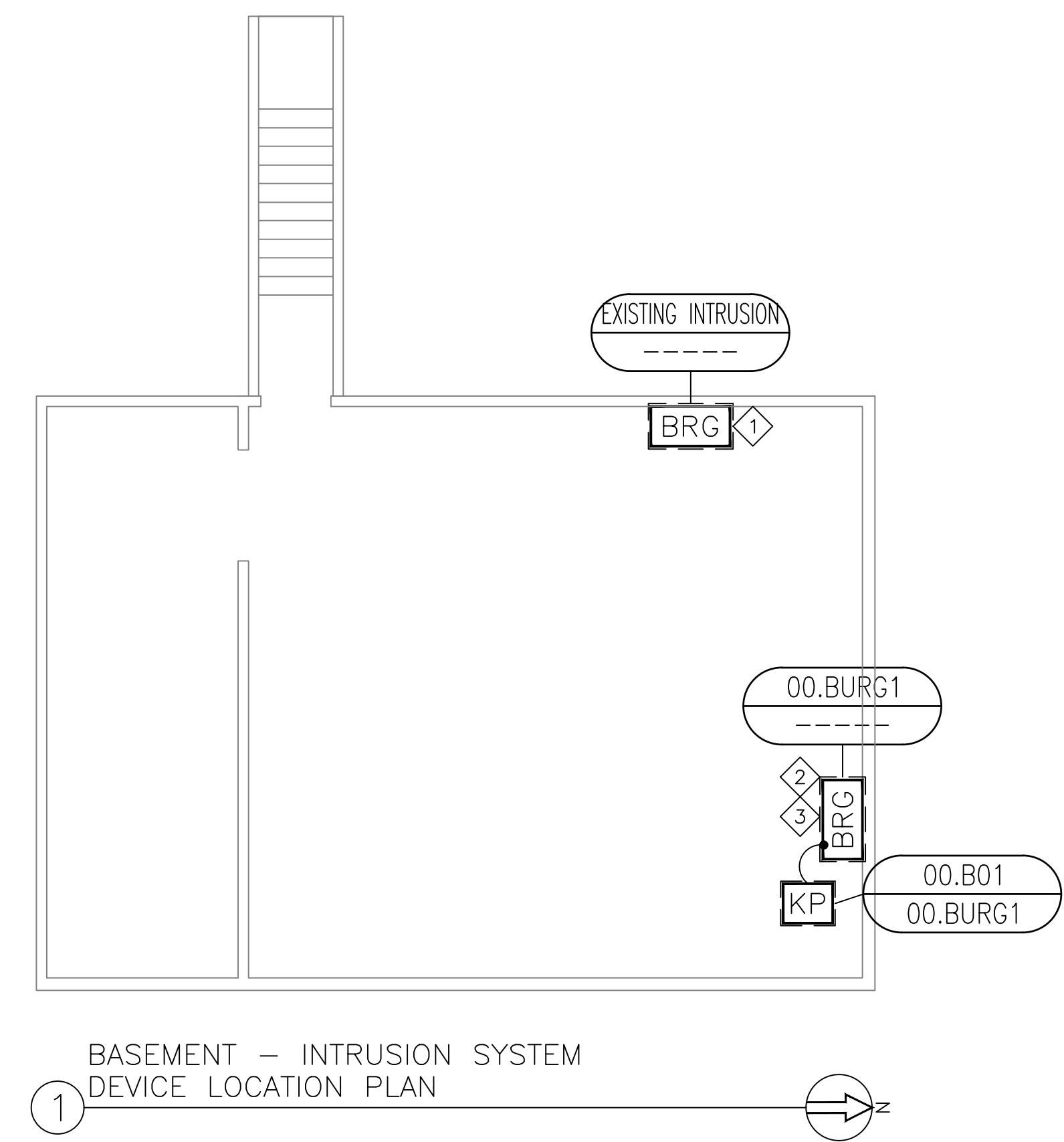
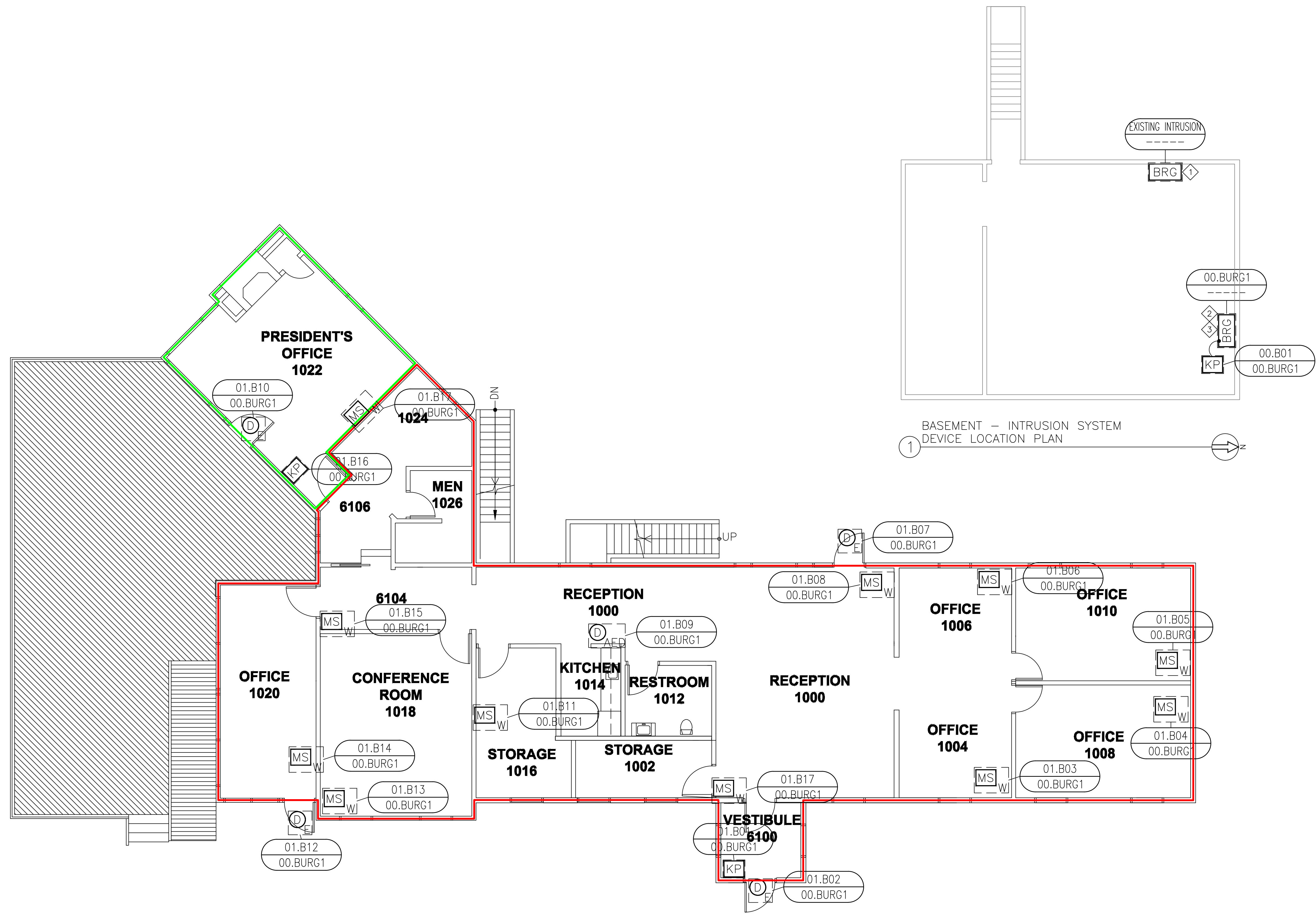
- UPGRADE EXISTING INTRUSION HEAD-END SYSTEM.
- INTRUSION CONTRACTOR TO REPLACE EXISTING SENSORS AND RESISTORS IF NEEDED. VERIFY FIELD RESISTOR TO BE 1K OHM.

KEY NOTES:

- EXISTING INTRUSION ENCLOSURE TO BE UTILIZED AS A SPLICING POINT FOR THE NEW INTRUSION SYSTEM.
- NEW INTRUSION PANEL. ELECTRICAL TO PROVIDE A NEW RACEWAY FROM THE EXISTING PANEL.
- CUSTOMER TO PROVIDE AN IP DROP FOR THE ACCESS CONTROL COMMUNICATION. ELECTRICAL CONTRACTOR TO PULL CAT-6 CABLE FROM CUSTOMER NETWORK SWITCH.

BUILDING PARTITIONS:

- PARTITION 1
- PARTITION 2



BASEMENT - INTRUSION SYSTEM
DEVICE LOCATION PLAN

FIRST FLOOR - INTRUSION SYSTEM
DEVICE LOCATION PLAN

SITE NAME & ADDRESS
ROCK VALLEY COLLEGE
BUILDING E
3301 N. MULFORS RD.
ROCKFORD, IL 61114

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DATE: JULY 16, 2024
SCALE: NONE
DRAWN: A. BOLANOS
CHECKED: A. BOLANOS
APPROVED: A. GAGE

PROJECT NAME:
RVC - BUILDING E
WIRELESS LOCKS, ACCESS CONTROL
& INTRUSION SYSTEM

SHEET TITLE:
DEVICE LOCATIONS -
INTRUSION SYSTEM
FIRST FLOOR

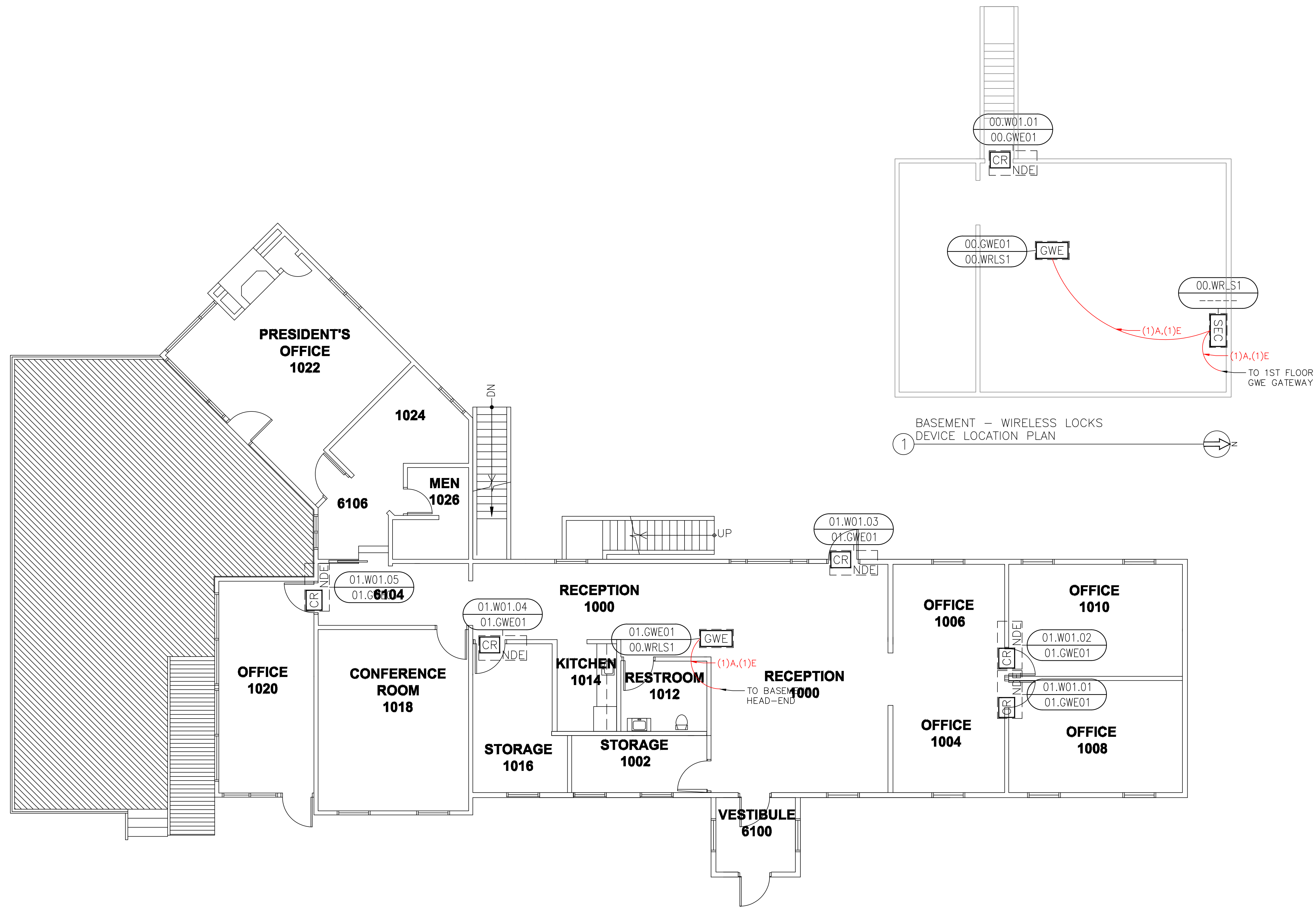
PROJECT NUMBER:
GA24G3142

SHEET NUMBER:
RVC_BE_B_210

SCOPE OF WORK:

ELECTRICAL CONTRACTOR:
RUN COMMUNICATION AND POWER CABLE FROM HEAD-END TO EACH WIRELESS GATEWAY. TRIM, TERMINATE AND SET THE GATEWAYS. SEE LEGEND DRAWING G_100, WIRING DETAIL E_400 AND ELECTRICAL CONTRACTOR SPECIFICATIONS.

ACCESS CONTROL CONTRACTOR:
TRIM AND TERMINATE COMMUNICATION AND POWER CABLES AT THE HEAD-END PANEL, PROGRAM AND CONFIGURE THE GATEWAYS.



BASEMENT - WIRELESS LOCKS
DEVICE LOCATION PLAN

FIRST FLOOR - WIRELESS LOCKS
DEVICE LOCATION PLAN

SITE NAME & ADDRESS
ROCK VALLEY COLLEGE
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3301 N. MULFORS RD.
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DATE: JULY 16, 2024
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DRAWN: A. BOLANOS
CHECKED: A. BOLANOS
APPROVED: A. GAGE

PROJECT NAME:
RVC - BUILDING E
WIRELESS LOCKS, ACCESS CONTROL
& INTRUSION SYSTEM

SHEET TITLE:
DEVICE LOCATIONS -
WIRELESS LOCKS
FIRST FLOOR

PROJECT NUMBER:
GA24G3142

SHEET NUMBER:
RVC_BE_W_210

SITE NAME & ADDRESS

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DATE: JULY 25, 2024
SCALE: NONE
DRAWN: A. BOLANOS
CHECKED: A. BOLANOS
APPROVED: A. GAGE

PROJECT NAME:

RVC – BUILDING E
WIRELESS LOCKS, ACCESS CONTROL
& INTRUSION SYSTEM

SHEET TITLE:

WIRELESS LOCKS
RISER DIAGRAM

PROJECT NUMBER:

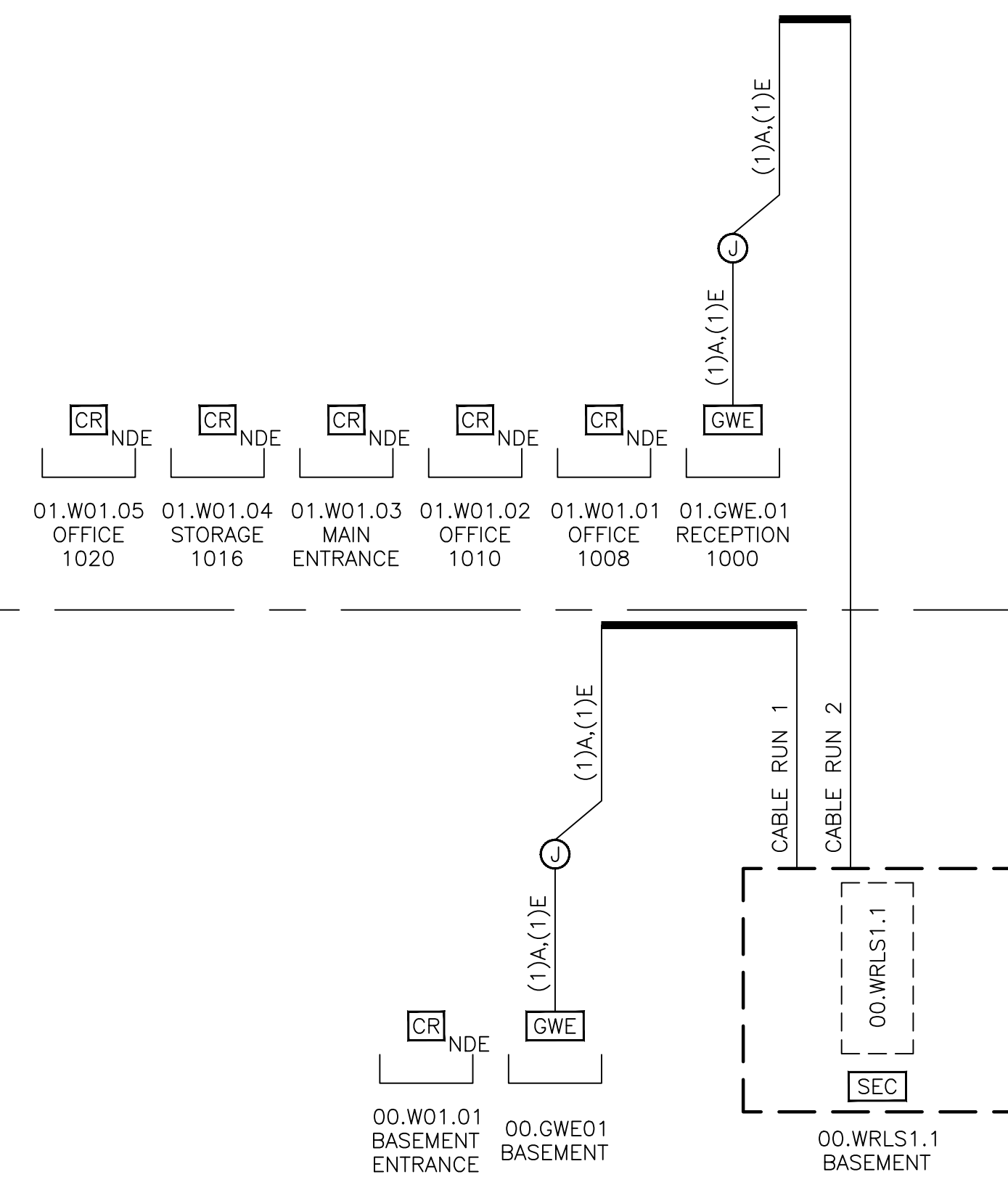
GA24G3142

SHEET NUMBER:

RVC_BE_W_300

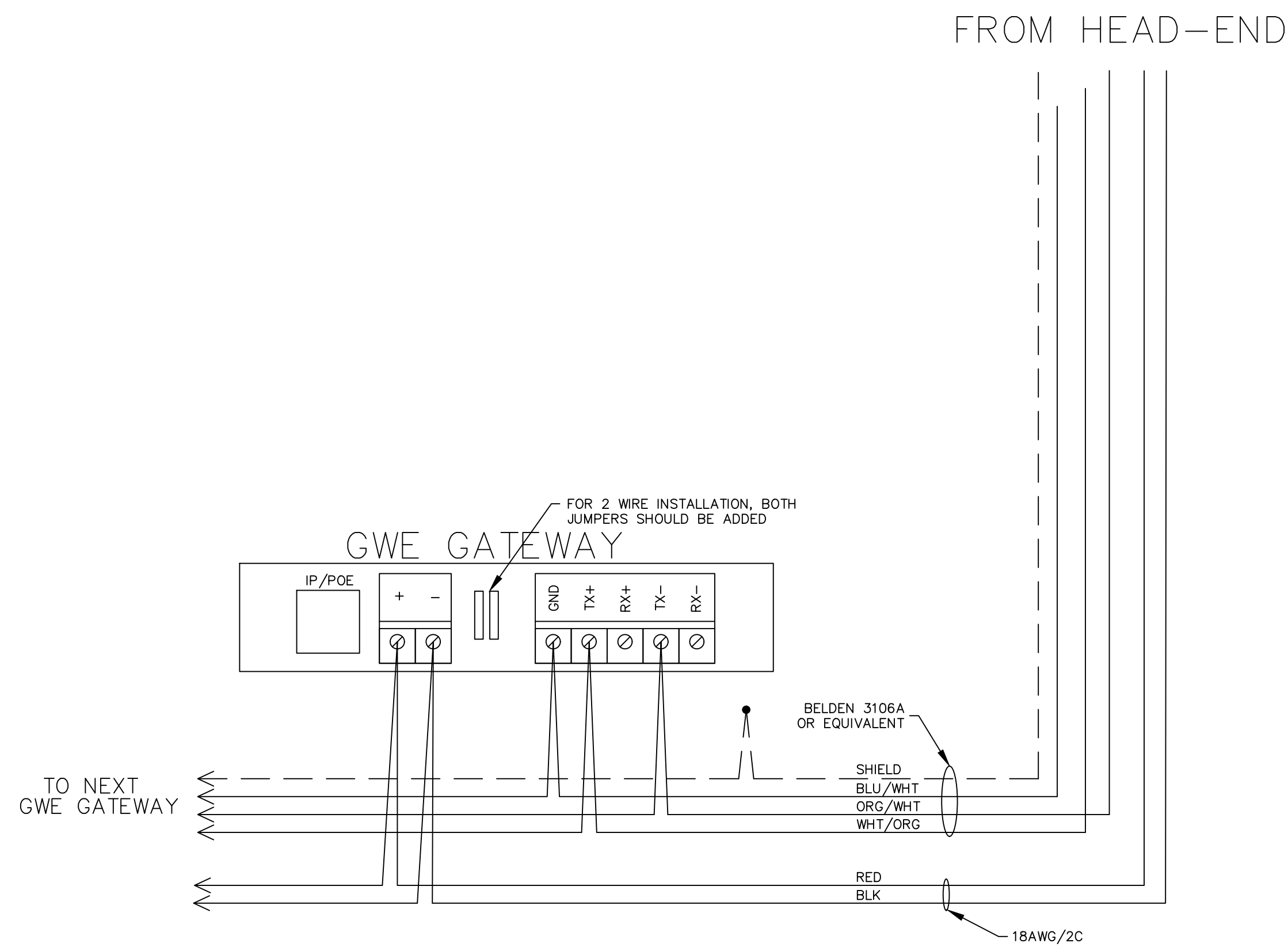
LOWER LEVEL

LOWER LEVEL

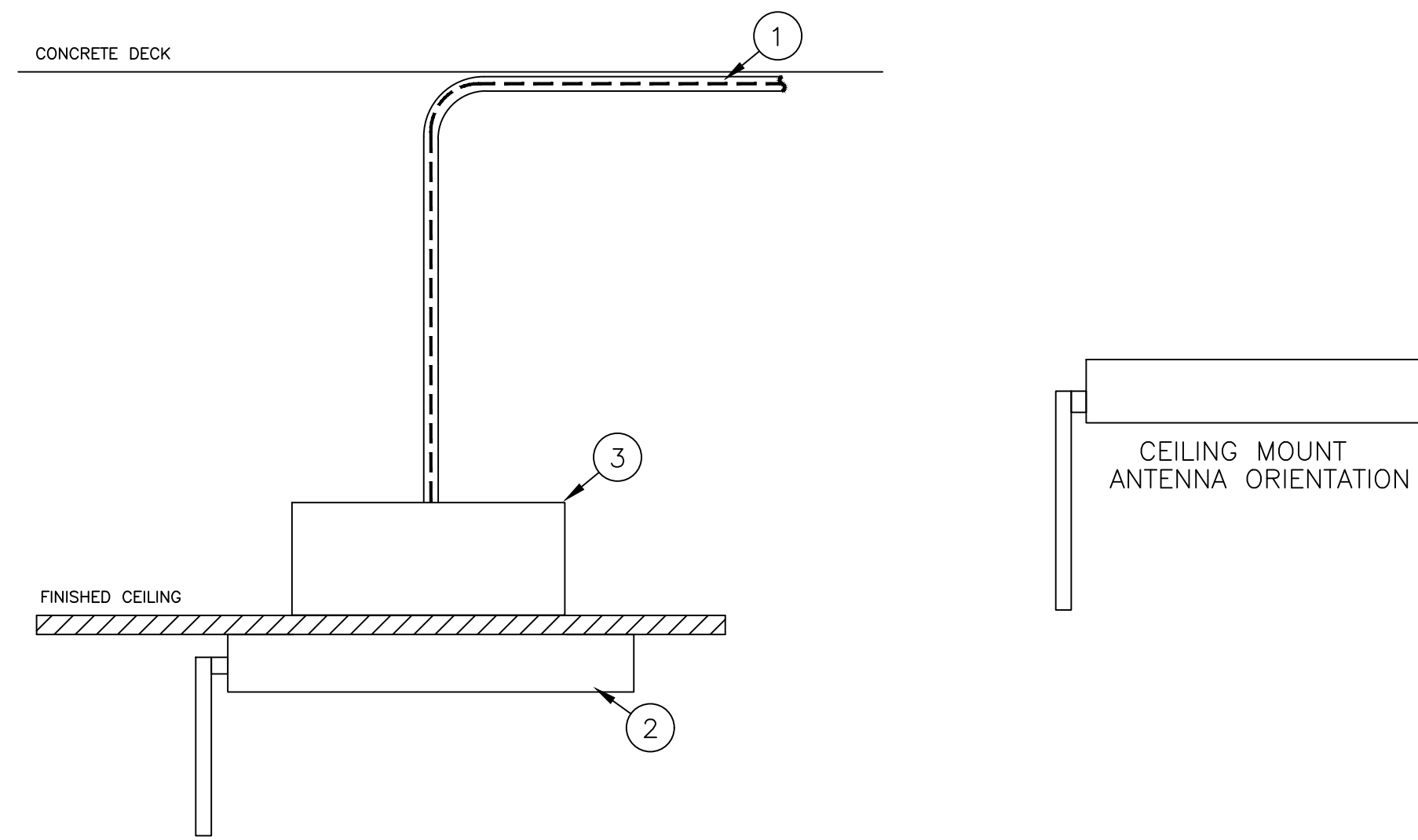


GENERAL NOTES:

ELECTRICAL CONTRACTOR TO MOUNT, TRIM AND SET THE WIRELESS LOCKS GATEWAYS. SEE ELECTRICAL CONTRACTOR SPECIFICATIONS.



(A) TYPICAL GWE GATEWAY WIRING DETAIL



- ① POWER AND COMMUNICATION CABLE TO BE RUN TO HEAD-END. SEE CABLE RISER DIAGRAM (W_300). CABLE TO BE OPEN RING ROUTED ABOVE CEILING TO THE HEAD-END. ELECTRICAL TO VERIFY PROPER BUILDING CABLING REQUIREMENTS PLENUM OR NON-PLENUM.
- ② GWE GATEWAY TO BE PROVIDED BY SECURITY CONTRACTOR
- ③ NEW GATEWAYS SHALL BE MOUNTED ON CEILING TILES. PROVIDE A 4" x 4" x 2 1/8" DEEP BOX TO MOUNT GATEWAY.

(B) CONDUIT DETAIL - GWE GATEWAY MOUNT DETAIL

SITE NAME & ADDRESS

ROCK VALLEY COLLEGE
BUILDING E
3301 N. MULFORS RD.
ROCKFORD, IL 61114

REVISION RECORD

| REV | DESCRIPTION | BY | DATE |
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DATE: JULY 25, 2024
SCALE: NONE
DRAWN: A. BOLANOS
CHECKED: A. BOLANOS
APPROVED: A. GAGE

PROJECT NAME:
RVC - BUILDING E
WIRELESS LOCKS, ACCESS CONTROL
& INTRUSION SYSTEM

SHEET TITLE:
WIRELESS LOCK SYSTEM
GATEWAY TERMINATION AND MOUNTING
DETAILS

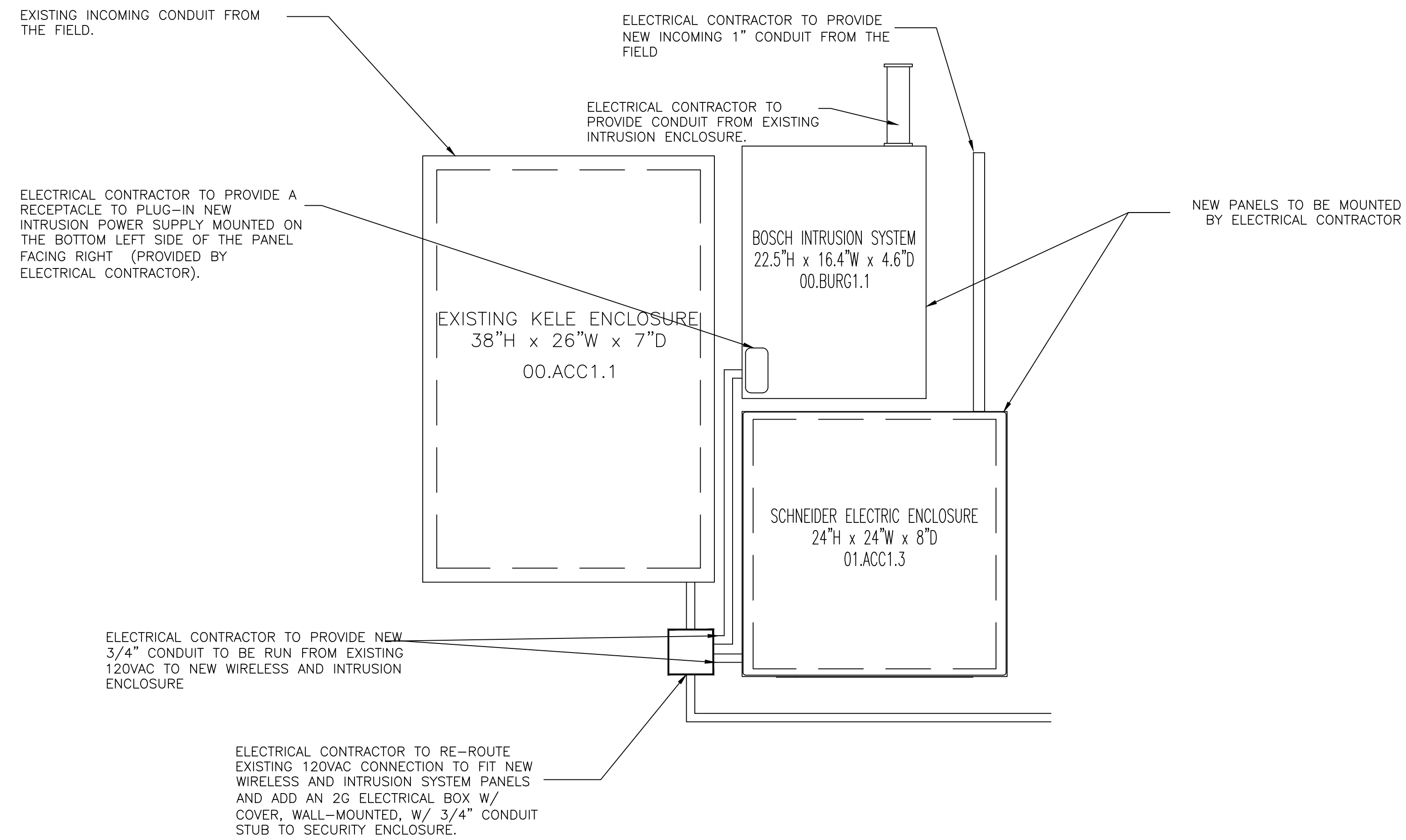
PROJECT NUMBER:
GA24G3142

SHEET NUMBER:
RVC_BE_E_400

GENERAL NOTES:

EXISTING ACCESS CONTROL ENCLOSURE TO BE MOVED TO THE LEFT TO MAKE SPACE FOR THE NEW ENCLOSURES.

NOTE: EXISTING BLUE KELE ACCESS CONTROL PANEL TO BE MOVE SLIGHTLY TO THE LEFT TO MAKE ROOM FOR THE NEW WIRELESS LOCKS AND INTRUSION SYSTEMS. REFERENCE TO DRAWING B_210.



FINISHED FLOOR

1 BUILDING E - BASEMENT - ACCESS CONTROL PANEL ELEVATION

SITE NAME & ADDRESS

ROCK VALLEY COLLEGE
BUILDING E
3301 N. MULFORS RD.
ROCKFORD, IL 61114

REVISION RECORD

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DATE: JULY 25, 2024
SCALE: NONE
DRAWN: A. BOLANOS
CHECKED: A. BOLANOS
APPROVED: A. GAGE

PROJECT NAME:

RVC - BUILDING E
WIRELESS LOCKS, ACCESS CONTROL
& INTRUSION SYSTEM

SHEET TITLE:

MULTIPLE SYSTEMS
PANEL ELEVATIONS

PROJECT NUMBER:

GA24G3142

SHEET NUMBER:

RVC_BE_G_800

Building E - Intrusion Package

Project Name: **Security Upgrades**

Project Number:

Prepared for:

Rock Valley College
3301 N. Mulford Rd.
Rockford, IL 61114

Architect: N/A
Contractor: N/A
Engineer: N/A

Table of Contents

| | |
|--------------------------------------|----|
| Building E - Intrusion Package | 1 |
| Specifications | 3 |
| Specifications.pdf | 4 |
| Drawings set..... | 5 |
| Drawing set.pdf | 6 |
| Points List | 10 |
| Intrusion Points List.pdf | 11 |

Specifications

Intrusion system

1. Field Devices:

- A. Demo and replace existing Intrusion field devices with new intrusion devices. See drawing B_210
- B. Replace any intrusion-supervised EOL resistors and install them by the field device if installed at the head-end.
- C. Provide an EN4204R and two EN1235F for the new wireless panic buttons in the office area. See drawing B_210

2. Head-End:

- A. Utilize the new in-cab 4 Amp fused receptacle for intrusion power supply.
- B. Replace the existing Intrusion system master with the Bosch B8512G (master controller) and power supply, and provide the right expansion module such as B208 (8 input expansion module), B308 (8 output expansion module), B921C (Keypad), etc; to account for the existing and new devices.
- C. Provide and install CAT6 plenum-rated cable from Bosch B8512G to the nearest RVC network switch for communication.

3. Programming:

- A. The intrusion contractor shall program all points as they were previously and separate them into partitions/zones. Verify with the owner if the existing partitions/zones must be updated or modified.
- B. Test and commission all intrusion points with Schneider Electric

Owner

The Owner will supply the following items for installation and connection by this Contractor:

1. IP Network connection from a network switch to the new Intrusion system. Document port name and number.
2. RVC to provide an IP port on an existing network switch.

Drawings set

ROCK VALLEY COLLEGE BUILDING E

3301 N. MULFORD RD.
ROCKFORD, IL 61114

INTRUSION SYSTEM
PROJECT NUMBER: GA24G3142
ISSUED FOR REVIEW:

TABLE OF CONTENTS:

| <u>SHEET NO.</u> | <u>REV.</u> | <u>DESCRIPTION</u> | <u>DATE</u> | <u>SHEET DESCRIPTION</u> |
|------------------|-------------|--------------------|-------------|--|
| RVC_BE_B_001 | 1 | ISSUED FOR REVIEW | 07/26/24 | TITLE SHEET & TABLE OF CONTENTS |
| RVC_BE_G_100 | 1 | ISSUED FOR REVIEW | 07/26/24 | SYMBOL LEGEND & GENERAL NOTES |
| RVC_BE_B_210 | 1 | ISSUED FOR REVIEW | 07/26/24 | DEVICE LOCATIONS - INTRUSION SYSTEM - FIRST FLOOR & BASEMENT |
| RVC_BE_B_700 | 1 | ISSUED FOR REVIEW | 07/26/24 | ACCESS CONTROL PANEL BUILD DETAILS - 01.BURG1.1 |



1111 PASQUINELLI RD. / WESTMONT, IL 60559
PHONE: 708.271.4700

SITE NAME & ADDRESS

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BUILDING E
3301 N. MULFORS RD.
ROCKFORD, IL 61114

REVISION RECORD

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DATE: JULY 25, 2024
SCALE: NONE
DRAWN: A. BOLANOS
CHECKED: A. BOLANOS
APPROVED: A. GAGE

PROJECT NAME:
RVC – BUILDING E
WIRELESS LOCKS, ACCESS CONTROL
& INTRUSION SYSTEM

SHEET TITLE:
TITLE SHEET &
TABLE OF CONTENTS

PROJECT NUMBER:
GA24G3142
SHEET NUMBER:
RVC_BE_B_001

ACCESS CONTROL SYSTEM DEVICE LEGEND:

- CR_NDE NDE SCHLAGE WIRELESS LOCK W/ BUILT-IN REQUEST TO EXIT, DOOR STATUS LOCK STATUS
- GWE GATEWAY
- SEC SECURITY SYSTEM CABINET
- D_E EXISTING DOOR CONTACT
- REX REQUEST-TO-EXIT MOTION SENSOR
- CR_P CARD READER, PROXIMITY, WALL-MOUNT
- ES ELECTRIC STRIKE LOCKING HARDWARE
- EL ELECTRIC MORTISE LOCKING HARDWARE W/ BUILT-IN REX
- CB ELECTRONIC CRASH BAR LOCKING HARDWARE

INTRUSION SYSTEM DEVICE LEGEND:

- KP INTRUSION KEY PAD
- MS_C CEILING-MOUNTED MOTION SENSOR
- MS_W WALL-MOUNTED MOTION SENSOR
- D_E EXISTING DOOR CONTACT
- D_AED AED CABINET DOOR CONTACT

POWER / NETWORK / MISC DEVICE LEGEND:

- BRG BURGLAR PANEL

WIRING SPECIFICATIONS & CONDUIT SIZING:

| # | WIRE TYPE |
|---|---|
| A | 18AWG / 2 CONDUCTOR, PLENUM |
| B | 18AWG / 4 CONDUCTOR, PLENUM |
| C | 18AWG / 5 CONDUCTOR, SHIELDED, PLENUM |
| D | 23AWG / 4 PAIR CAT-6, PLENUM |
| E | 22AWG / 1 PAIR AND AN 22AWG / 1 CONDUCTOR, SHIELDED, LOW-CAP, PLENUM (RS-485) |
| F | "NOT USED" |
| G | "NOT USED" |
| H | "NOT USED" |
| J | "NOT USED" |
| K | "NOT USED" |
| L | "NOT USED" |
| M | "NOT USED" |
| N | "NOT USED" |
| P | "NOT USED" |
| Q | "NOT USED" |
| R | "NOT USED" |

PERMISSIBLE CONDUIT FILL BASED ON OCCUPIED AREA (NEC RECOMMENDED 40% FILL FACTOR)

| CONDUIT SIZE (IN) | PERMISSIBLE FILL (SQ. IN.) |
|-------------------|----------------------------|
| 3/4" | 0.21 SQUARE IN. |
| 1" | 0.35 SQUARE IN. |
| 1 1/4" | 0.60 SQUARE IN. |
| 1 1/2" | 0.81 SQUARE IN. |
| 2" | 1.34 SQUARE IN. |
| 2 1/2" | 1.92 SQUARE IN. |
| 3" | 2.96 SQUARE IN. |
| 3 1/2" | 3.95 SQUARE IN. |
| 4" | 5.09 SQUARE IN. |

NOTE 1: TABLE DEVELOPED FOR STEEL OR ALUMINUM ALLOY CONDUIT ONLY.

NOTE 2: NEC PRESCRIBED 40% FILL FACTOR IS FOR (3) OR MORE CABLES. A SINGLE CABLE CAN OCCUPY 53% OR TWO CABLES ARE LIMITED TO 31% CONDUIT FILL.

GENERAL NOTES

- 1) ALL CONDUIT IS TO BE 3/4" WITH PULL STRING UNLESS OTHERWISE SPECIFIED ON DRAWING. ARROW DENOTES HOME RUN BACK TO SECURITY EQUIPMENT LOCATION AS NOTED.
- 2) ALL DEVICES ARE HOME RUN WIRED UNLESS OTHERWISE SPECIFIED.
- 3) VERIFY ALL SITE CONDITIONS AND REPORT ALL PROBLEMS TO SCHNEIDER ELECTRIC.
- 4) FOLLOW CONDUIT FILL REQUIREMENTS AS DOCUMENTED BELOW ON THE WIRING LEGEND AND PRESCRIBED CONDUIT FILL TABLES. CONDUIT SPECIFIED BY ELECTRICAL CONTRACTOR CANNOT EXCEED A 40% FILL UNDER ANY CIRCUMSTANCES.
- 5) ALL CONDUIT FOR SECURITY / CCTV SYSTEM SHALL ONLY CONTAIN SECURITY & CCTV SYSTEM CABLES. WIRE FROM OTHER TRADES IS NOT PERMITTED IN THE SECURITY / CCTV CONDUIT SYSTEM UNDER ANY CIRCUMSTANCES.
- 6) BURIAL RATED CABLE TO BE USED FOR ANY UNDERGROUND RUNS.
- 7) ALL DRAWINGS INDICATE CURRENT PROJECT SCOPE WITH DARKENED PRINT. GRAYED DEVICES & WIRING INDICATE WORK THAT WAS PREVIOUSLY COMPLETED BUT IS CURRENTLY PART OF THE FULL SYSTEM.
- 8) PLENUM RATED CABLE TO BE USED IN ALL PLENUM CEILING AREAS. CONDITIONS TO BE FIELD VERIFIED AND REPORTED BACK TO SCHNEIDER ELECTRIC IF DIFFERENT THAN SHOWN ON DRAWINGS.

SYMBOLS

- XX = FLOOR NUMBER OR "ST" FOR SITE
- A = BUILDING AREA OR QUADRANT
- B = SYSTEM TYPE (SEE SYSTEM TYPES/PANEL TYPES LEGEND)
- ?? = SEQUENTIAL NUMBER IDENTIFIER
- ZZZZ = PANEL/HEAD-END LOCATION NUMBER
- YY = CONDUIT DETAIL NUMBER
- B_??? = DRAWING NUMBER
- REVISION NUMBER IDENTIFIER
- KEY NOTE IDENTIFIER

SYSTEM TYPES

- A = ACCESS CONTROL FIELD LOCATION
- C = CAMERA SYSTEM FIELD LOCATION
- W = WIRELESS LOCKS
- B = BURG / INTRUSION DETECTION

PANEL TYPES

- ACC = ACCESS CONTROL PANEL
- CAM = CAMERA SYSTEM HEAD-END/PANEL
- WRLS = LOCK WIRELESS SYSTEM HEAD-END
- BURG = BURG / INTRUSION SYSTEM HEAD-END



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PHONE: 708.271.4700

SITE NAME & ADDRESS

ROCK VALLEY COLLEGE
BUILDING E
3301 N. MULFORS RD.
ROCKFORD, IL 61114

REVISION RECORD

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DATE: JULY 25, 2024
SCALE: NONE
DRAWN: A. BOLANOS
CHECKED: A. BOLANOS
APPROVED: F. MACIEL

PROJECT NAME:
RVC - BUILDING E
WIRELESS LOCKS, ACCESS CONTROL
& INTRUSION SYSTEM

SHEET TITLE:
SYMBOL LEGEND &
GENERAL NOTES

PROJECT NUMBER:
GA24G3142

SHEET NUMBER:
RVC_BE_G_100

GENERAL NOTES:

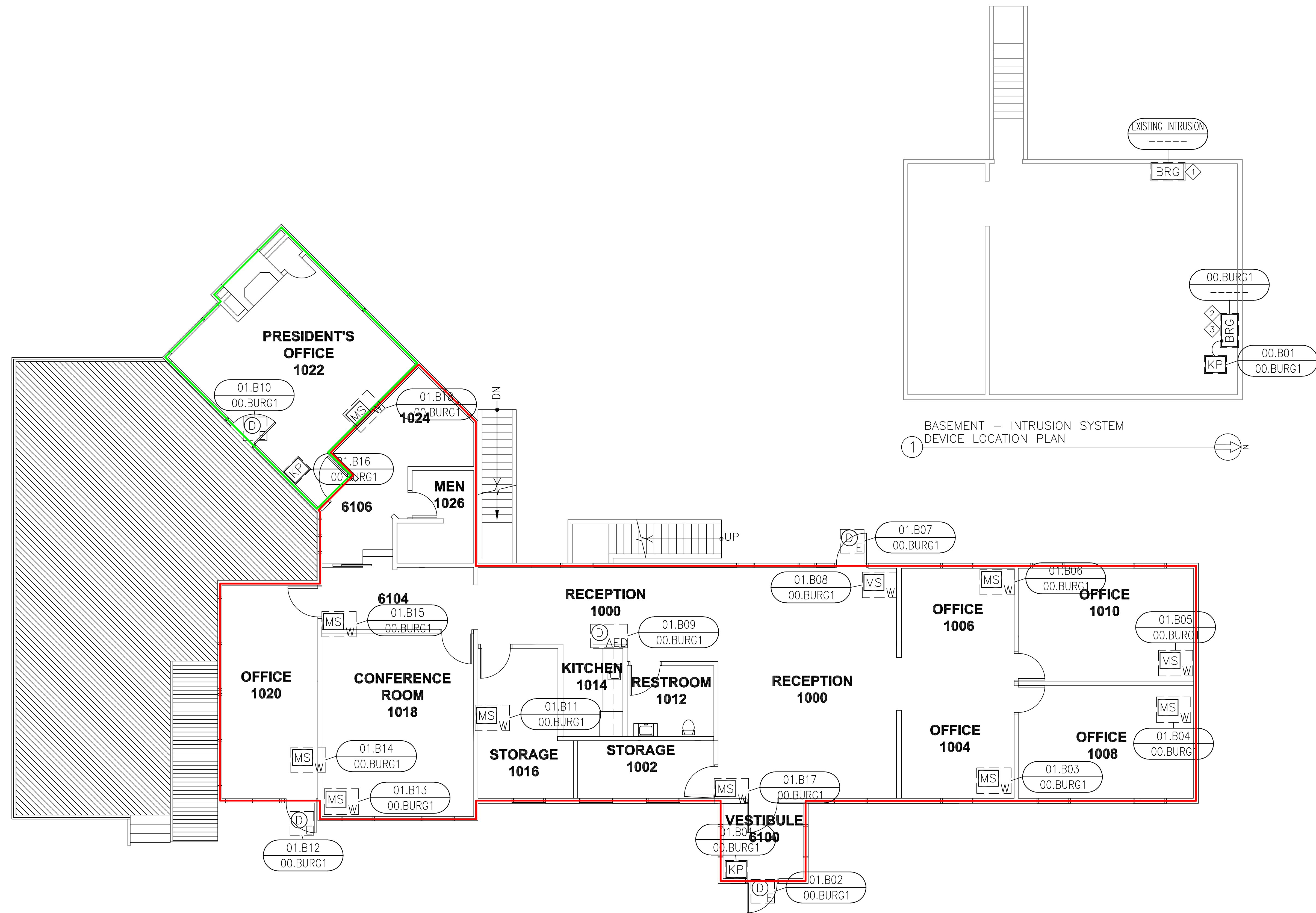
- UPGRADE EXISTING INTRUSION HEAD-END SYSTEM.
- INTRUSION CONTRACTOR TO REPLACE EXISTING SENSORS AND RESISTORS IF NEEDED. VERIFY FIELD RESISTOR TO BE 1K OHM.

KEY NOTES:

- ① EXISTING INTRUSION ENCLOSURE TO BE UTILIZED AS A SPLICING POINT FOR THE NEW INTRUSION SYSTEM.
- ② NEW INTRUSION PANEL. ELECTRICAL TO PROVIDE A NEW RACEWAY FROM THE EXISTING PANEL.
- ③ CUSTOMER TO PROVIDE AN IP DROP FOR THE ACCESS CONTROL COMMUNICATION. ELECTRICAL CONTRACTOR TO PULL CAT-6 CABLE FROM CUSTOMER NETWORK SWITCH.

BUILDING PARTITIONS:

- PARTITION 1
- PARTITION 2



① BASEMENT – INTRUSION SYSTEM DEVICE LOCATION PLAN

① FIRST FLOOR – INTRUSION SYSTEM DEVICE LOCATION PLAN

SITE NAME & ADDRESS

ROCK VALLEY COLLEGE
BUILDING E
3301 N. MULFORS RD.
ROCKFORD, IL 61114

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DATE: JULY 16, 2024
SCALE: NONE
DRAWN: A. BOLANOS
CHECKED: A. BOLANOS
APPROVED: A. GAGE

PROJECT NAME:

RVC – BUILDING E
WIRELESS LOCKS, ACCESS CONTROL
& INTRUSION SYSTEM

SHEET TITLE:

DEVICE LOCATIONS –
INTRUSION SYSTEM
FIRST FLOOR

PROJECT NUMBER:

GA24G3142

SHEET NUMBER:

RVC_BE_B_210

GENERAL NOTES:

THE CUSTOMER IS TO PROVIDE ONE NEW ETHERNET NETWORK CONNECTIONS FOR THE INTRUSION SYSTEM.
EXISTING INTRUSION CONNECTIONS TO BE SPLICE FROM EXISTING PANEL TO NEW PANEL.
NEW INTRUSION SYSTEM PANEL AND CONTROLLERS TO BE BOSCH G-SERIES CONTROLLERS.

KEY NOTES:

- 1 ELECTRICAL TO PROVIDE 4AMP RECEPTACLE FOR NEW INTRUSION PANEL (00.ACC1.1) TO POWER THE INTRUSION CONTROLLERS. UTILIZED EXISTING 120VAC. SEE DRAWING G_800
- 2 PROVIDE 12V Ah BATTERY BACK-UP BATTERIES FOR THE NEW INTRUSION PANEL.

SITE NAME & ADDRESS

ROCK VALLEY COLLEGE
BUILDING E
3301 N. MULFORS RD.
ROCKFORD, IL 61114

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DATE: JULY 24, 2024
SCALE: NONE
DRAWN: A. BOLANOS
CHECKED: A. BOLANOS
APPROVED: A. GAGE

PROJECT NAME:

RVC – BUILDING E
WIRELESS LOCKS, ACCESS CONTROL
& INTRUSION SYSTEM

SHEET TITLE:

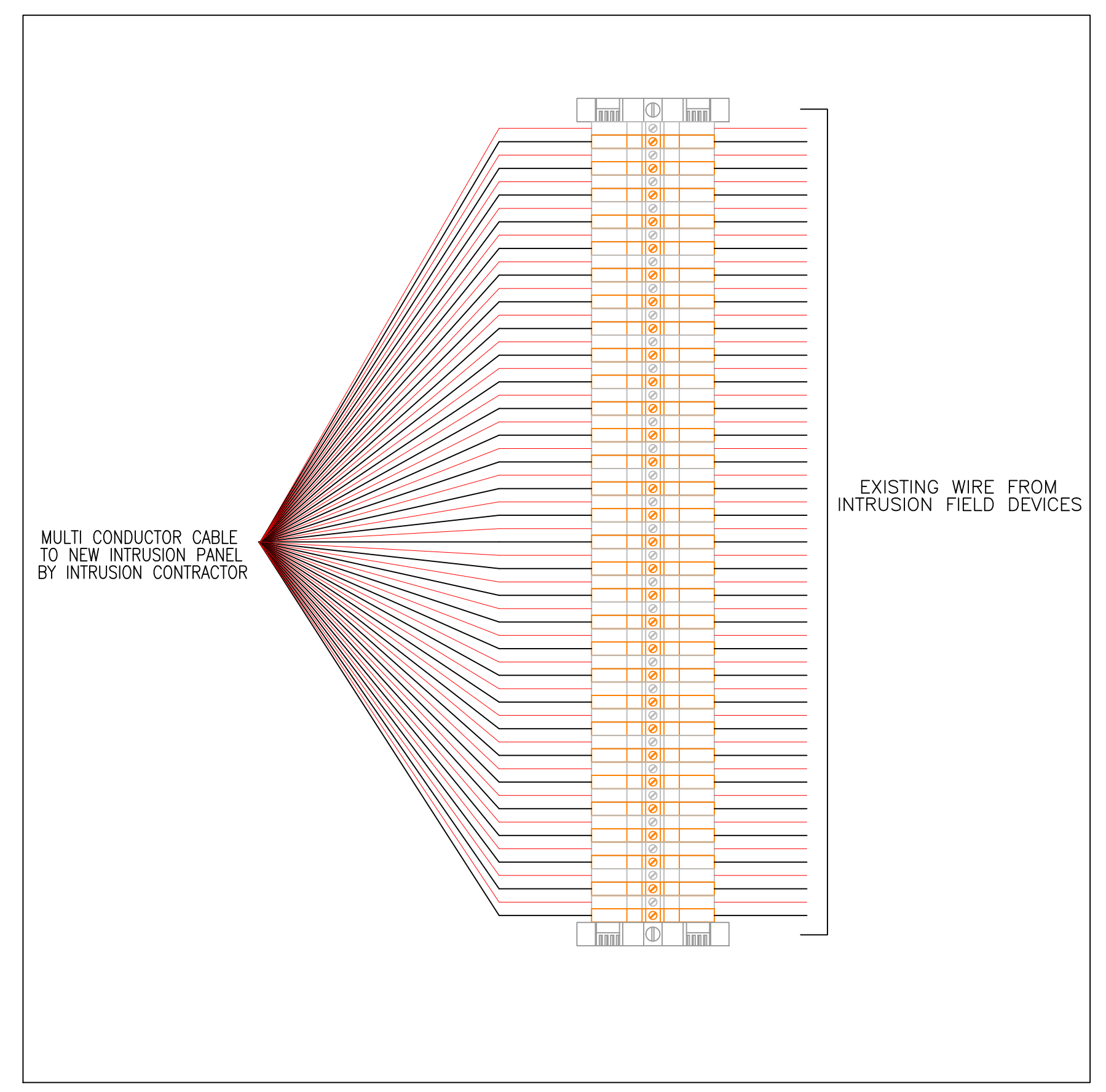
INTRUSION SYSTEM
PANEL BUILD
DETAILS – 00.BURG1.1

PROJECT NUMBER:

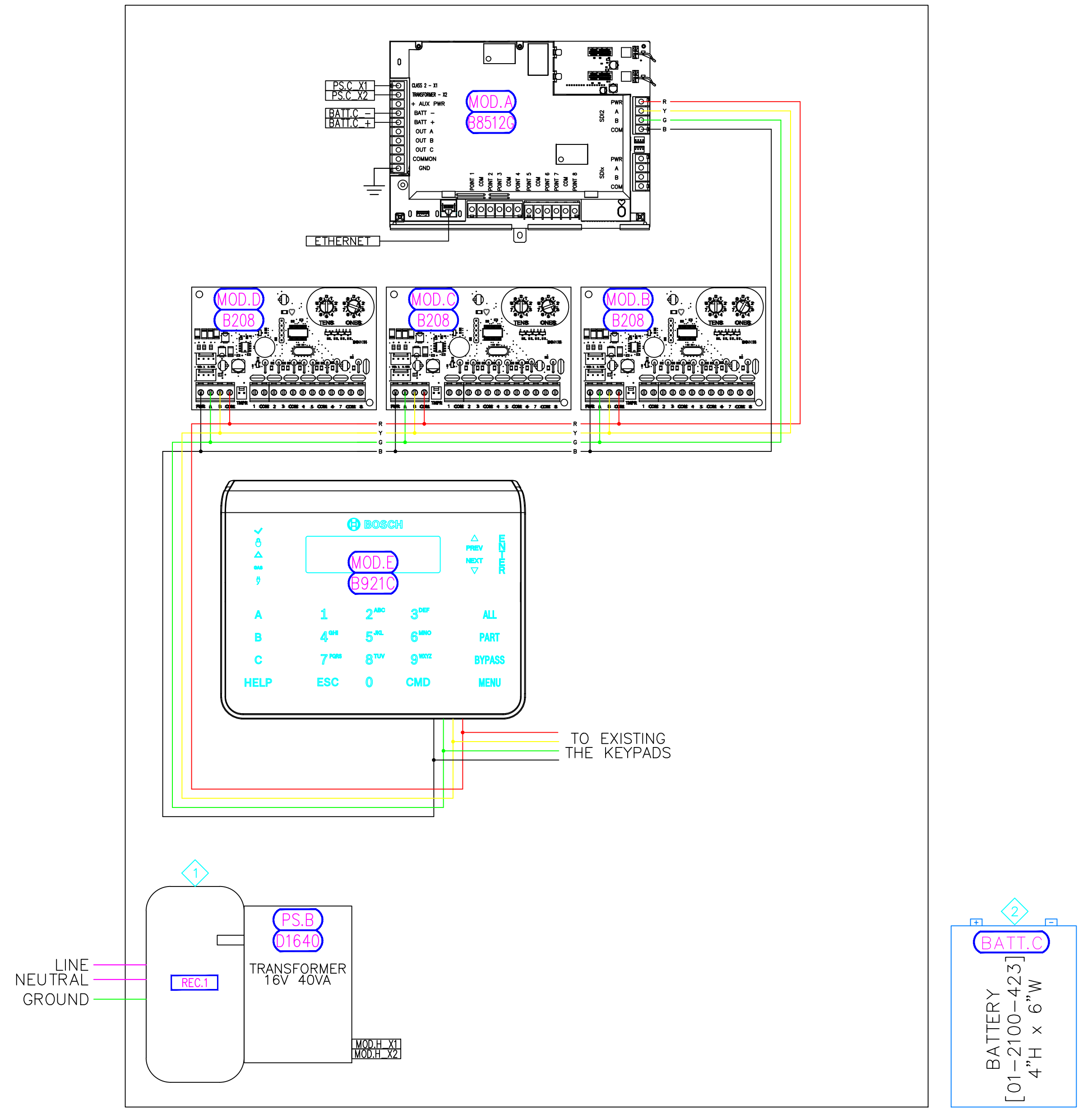
GA24G3142

SHEET NUMBER:

RVC_BE_B_700



EXISTING INTRUSION ENCLOSURE
BUILDING E – BASEMENT (NORTH WALL)



BOSCH B18 INTRUSION SYSTEM
22.5”H x 16.4”W x 4.6”D
00.BURG1
BUILDING E – BASEMENT (ABOVE NEW WIRELESS LOCK PANEL)

Points List

Notes: The information below, such as point count, keypads, and partition/zones, was taken from the existing workstation list. Verify point count and keypads during installation.

| Points List | | | | | | |
|-------------|---------------------|------------------|-----------------|----------------|--------------|-------|
| # | Floor plan location | Name | Point Type | Partition/Zone | Device Type | Notes |
| 1 | TBD | Recep Panic | 24 Hr Bell | | Panic Button | |
| 2 | 01.B12 | Back Dr West | Instant | | Door Contact | |
| 3 | 01.B02 | Front Dr East | Standard Delay | | Door Contact | |
| 4 | TBD | E VP Sec Panic | 24 Hr Bell | | Panic Button | |
| 5 | TBD | W VP Sec Panic | 24 Hr Bell | | Panic Button | |
| 6 | 01.B04 | E Lobby Mot | Instant | | Wall Motion | |
| 7 | 01.B05 | W Lobby Mot | Instant | | Wall Motion | |
| 8 | 01.B03 | E VP Sec Mot | Instant | | Wall Motion | |
| 9 | 01.B06 | W VP Sec Mot | Instant | | Wall Motion | |
| 10 | 01.B17 | E VP Off Mot | Instant | | Wall Motion | |
| 11 | 01.B08 | W VP Off Mot | Instant | | Wall Motion | |
| 12 | 00.BURG1 | Panel Tamper | 24 Hr Technical | | | |
| 13 | 01.B18 | President Motion | Interior | | Wall Motion | |
| 14 | 01.B10 | Pres Out DC | Standard Delay | | Door Contact | |
| 15 | TBD | Pres Panic | 24 Hr Bell | | Panic Button | |
| 16 | 01.B11 | Nancy Mot | Instant | | Wall Motion | |
| 17 | TBD | Nancy Panic | 24 Hr Bell | | Panic Button | |
| 18 | 01.B14 | Copy Room Mot | Instant | | Wall Motion | |
| 19 | 01.B15 | Hall Mot | Instant | | Wall Motion | |
| 20 | 01.B13 | Conf Rm Mot | Instant | | Wall Motion | |

| Keypads | | | | | |
|---------|---------------------|-------------|------------|----------------|--|
| # | Floor plan location | Name | Point Type | Partition/Zone | Notes |
| 1 | 01.B01 | Main Entry | Pad | | |
| 2 | 01.B16 | Pres Office | Pad | | |
| 3 | TBD | Panel | Pad | | New device added per Intrusion upgrade |

| Partitions / Zone | |
|-------------------|-----------------|
| # | Name |
| 1 | TBD by customer |
| 2 | TBD by customer |

Verify proper point naming and location before assigning the proper partition during Intrusion configuration.