

CAPE FEAR COMMUNITY COLLEGE

SCHWARTZ CENTER RENOVATIONS

FIRE ALARM SYSTEM
INSTALLATION & SHOP DRAWINGS

LEGEND / BILL OF MATERIALS

ITEM #	QTY	SYMBOL	MANUFACTURER	PART #	DESCRIPTION	NOTES COMMENTS
1	2		NOTIFIER	NBG-12LX	ADDRESSABLE PULL STATION	INSTALLS IN 4x4 ELECTRICAL BOX
2	4		NOTIFIER/SYSTEM SENSOR	SRL	STROBE (WALL MOUNTED)	INSTALLS IN 4x4 ELECTRICAL BOX. XX DENOTES CANDELA SETTING.
3	2		NOTIFIER/SYSTEM SENSOR	SCWK	STROBE (CEILING MOUNTED)	INSTALLS IN 4x4 ELECTRICAL WEATHERPROOF BOX ON TILE BRIDGE. XX DENOTES CANDELA SETTING.
4	4		NOTIFIER/SYSTEM SENSOR	SPCWL	SPEAKER (CEILING MOUNTED)	INSTALLS IN 4x4 ELECTRICAL BOX ON TILE BRIDGE. XW DENOTES WATTAGE TAP.
5	21		NOTIFIER/SYSTEM SENSOR	SPSCWL	SPEAKER/STROBE (CEILING MOUNTED)	INSTALLS IN 4x4 ELECTRICAL BOX ON TILE BRIDGE. XX DENOTES CANDELA SETTING. XW DENOTES WATTAGE TAP.
6	1		NOTIFIER/SYSTEM SENSOR	SFR-4824-MCH	SPEAKER ARRAY W/STROBE (CEILING MOUNTED)	INSTALLS IN 10x10x6 ENCLOSURE. XX DENOTES CANDELA SETTING. XW DENOTES WATTAGE TAP.
7	20		NOTIFIER	FSP-851	PHOTOELECTRIC SMOKE DETECTOR	INSTALLS IN B210LP STANDARD BASE OR B224BI ISOLATION BASE (ISO SUFIX) - ALL BASES TO 4x4 ELECTRICAL BOX
8	3		NOTIFIER	FRM-1	ADDRESSABLE RELAY MODULE	INSTALLS IN 4x4 ELECTRICAL BOX
9	1		NOTIFIER	FDRM-1	ADDRESSABLE MONITOR/RELAY MODULE	INSTALLS IN 4x4 ELECTRICAL BOX
10	1		NOTIFIER	NF32-640	FIRE ALARM CONTROL PANEL	SEE SHEET 004 FOR ADDITIONAL INFORMATION.
11	1		NOTIFIER	FDU-80	POINT AND ALPHANUMERIC ANNUNCIATOR	SUPPLIED WITH SDB-36ACX BOX SURFACE MOUNTED ENCLOSURE. SEE SHEET 004 FOR ADDITIONAL INFORMATION.
12	1		NOTIFIER	NFC-RM	REMOTE MICROPHONE	SEE SHEET 005 FOR ADDITIONAL INFORMATION.
13	1		NOTIFIER	NFC-RM	VOICE EVACUATION PANEL	SEE SHEET 005 FOR ADDITIONAL INFORMATION.
14	1		DTEK	DTK-120	120V SURGE SUPPRESSOR	INSTALLS IN A 4x4 ELECTRICAL BOX
15	-		GENERIC	J-BOX	4 X 4 ELECTRICAL JUNCTION BOX	QUANTITY TO BE DETERMINED IN FIELD. SUPPLIED BY ELECTRICAL CONTRACTOR.
16	-		GENERIC	-	END OF LINE RESISTOR	15k, 1 WATT FOR SPEAKER CIRCUIT. 4.7k, 1/2 WATT FOR NAC CIRCUIT.

GENERAL ELECTRICAL NOTES:

1. ALL WIRING AND CONDUIT SHALL BE INSTALLED IN ACCORDANCE WITH THE CURRENT REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE (NFPA 70), NATIONAL FIRE ALARM CODE (NFPA 72), STATE AND LOCAL BUILDING CODES, PROJECT SPECIFICATIONS AND THE MANUFACTURER'S RECOMMENDATIONS.
2. ALL WIRE RUNS BETWEEN PANELS AND/OR DEVICES SHALL BE MADE WITH A SINGLE LENGTH OF WIRE. SPLICES SHALL BE MADE AT TERMINAL CABINETS ONLY. SIZE CONDUIT APPROPRIATELY PER NEC 70. DO NOT EXCEED 40% FILL. MINIMUM CONDUIT SIZE IS 3/4". LARGER SIZES OR PARALLEL CONDUITS WILL BE NECESSARY FOR SOME RUNS. 4" X 4" BOXES SHOWN AS □ ON THE PLAN VIEW DRAWING(S) REPRESENT CONDUIT JUNCTION POINTS, NOT CABLE SPLICES.
3. WIRE TYPES:
 - SLC - #16 TWISTED PAIR - WEST PENN WIRE P/N D990, RED (+), BLACK (-) OR EQUAL
 - IDC - #16 STRANDED PAIR THHN/THWN, VIOLET (+), GREY (-) OR EQUAL
 - NAC - #14 STRANDED PAIR THHN/THWN, BLUE (+), BLACK (-) OR EQUAL
 - 485 - #18 TWISTED SHIELDED PAIR, WEST PENN P/N D975, RED (+), BLACK (-) OR EQUAL
 - 24DNC - #14 STRANDED PAIR THHN/THWN, YELLOW (+), BROWN (-), OR EQUAL
 - SPK - #16 TWISTED SHIELDED PAIR, WEST PENN P/N 294 OR EQUAL
 - EDB - #16 TWISTED SHIELDED PAIR, WEST PENN P/N 294 OR EQUAL
4. T-TAPPING IS NOT ALLOWED ON ANY CIRCUITS. ALL WIRING SHALL BE POINT TO POINT PER THE RISER DIAGRAM PROVIDED. MAINTAIN CLASS "A" LOOP ON SLC. DO NOT COMBINE INCOMING AND OUTGOING SEGMENTS IN THE SAME CONDUIT UNLESS INDICATED ON THE DRAWINGS.
5. SEE COMMENTS ON BILL OF MATERIALS FOR ADDITIONAL DEVICE MOUNTING DETAILS.
6. MANUAL STATIONS MUST BE MOUNTED 46" ABOVE FINISHED FLOOR TO CENTER AND WITHIN FIVE FEET OF THE DOOR.
7. AUDIO/VISUAL DEVICES SHALL BE INSTALLED BETWEEN 80"-96" ABOVE FINISHED FLOOR OR 6" BELOW FINISHED CEILING, WHICHEVER IS LOWER.
8. LOW VOLTAGE CIRCUITS MUST NOT BE COMBINED IN CONDUITS WITH HIGH VOLTAGE (120V, 240V, ETC.) AC POWER OR CONTROL CIRCUITS, SUCH AS FAN SHUTDOWN, EQUIPMENT SHUTDOWN, ETC.
9. ELECTRICAL EQUIPMENT/SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH GOOD COMMERCIAL PRACTICE. CARE SHALL BE TAKEN TO AVOID INCORRECT WIRING, CONNECTIONS, FAULTY FABRICATION AND/OR IMPROPER INSTALLATION. ALL CONDUIT SHALL BE RIGIDLY SECURED. CONDUIT BOXES, SUPPORTS AND HANGERS SHALL BE CONCEALED IN FINISHED AREAS AND MAY BE EXPOSED IN UNFINISHED AREAS.
10. MARK SYSTEMS, INC. SHALL BE CONSULTED FOR DESIGN REVIEW/APPROVAL OF ANY DEVIATIONS WITH THESE DRAWINGS.

SYSTEM INPUTS		SYSTEM OUTPUTS	
SMOKE DETECTORS		ACTIVATE AUDIBLE AND VISUAL FIRE ALARM EVACUATION THROUGHOUT BUILDING	
FULL STATIONS		ALARM CONDITION AT FACP	
FACP CIRCUIT FAULT (OPEN, GROUND, SHORT)		TROUBLE CONDITION AT FACP	
LOSS OF AC POWER		SHUT DOWN AIR HANDLING UNITS	
LOSS OF POWER (80 HOURS)		TRANSMIT ALARM SIGNAL TO SUPERVISING STATION	
BATTERY FAILURE		TRANSMIT TROUBLE SIGNAL TO SUPERVISING STATION	

FIRE ALARM EVENT MATRIX

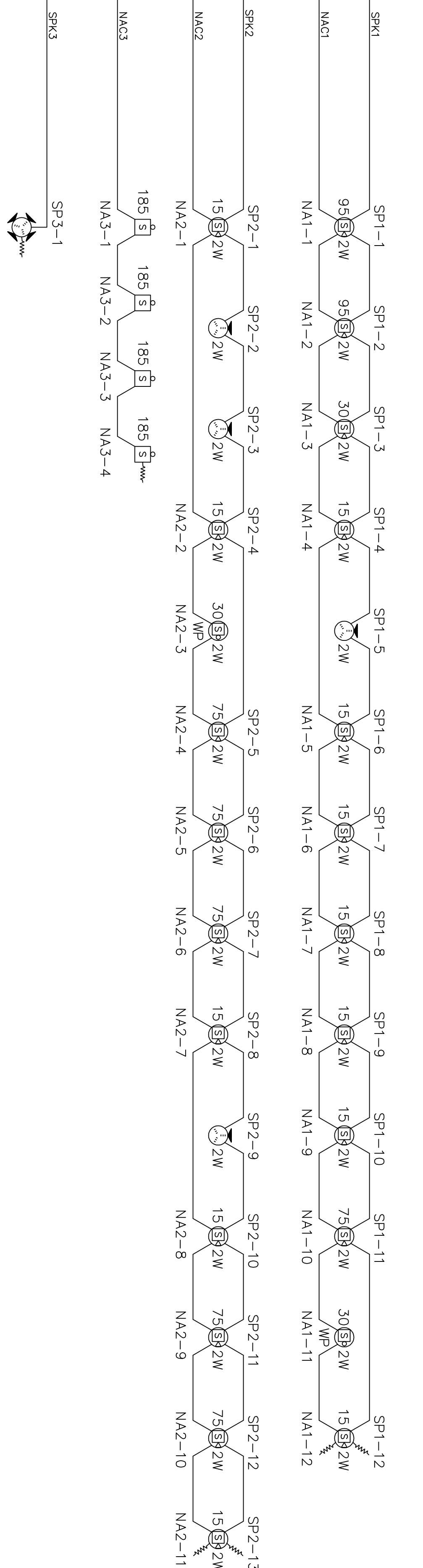
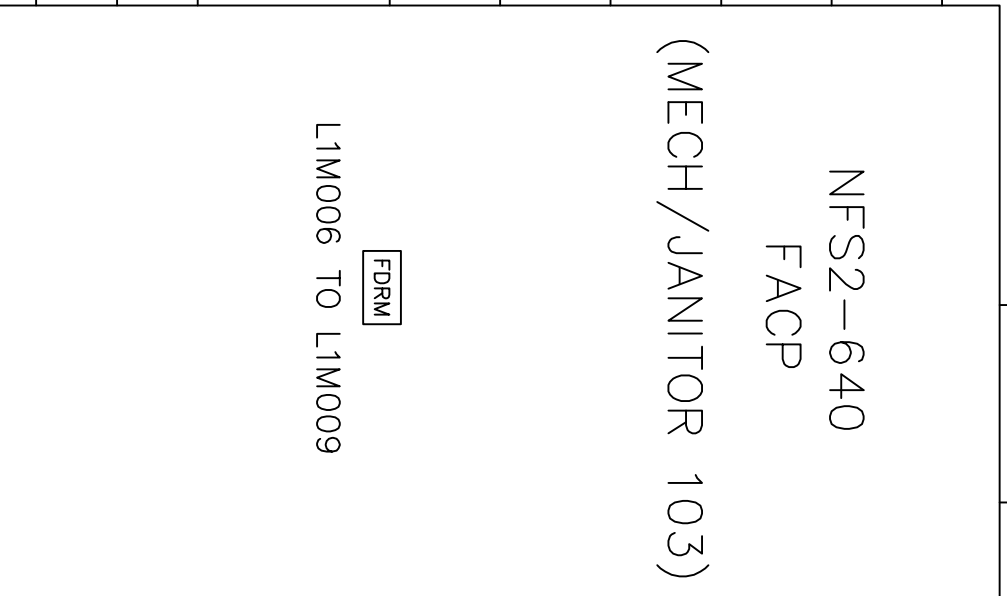
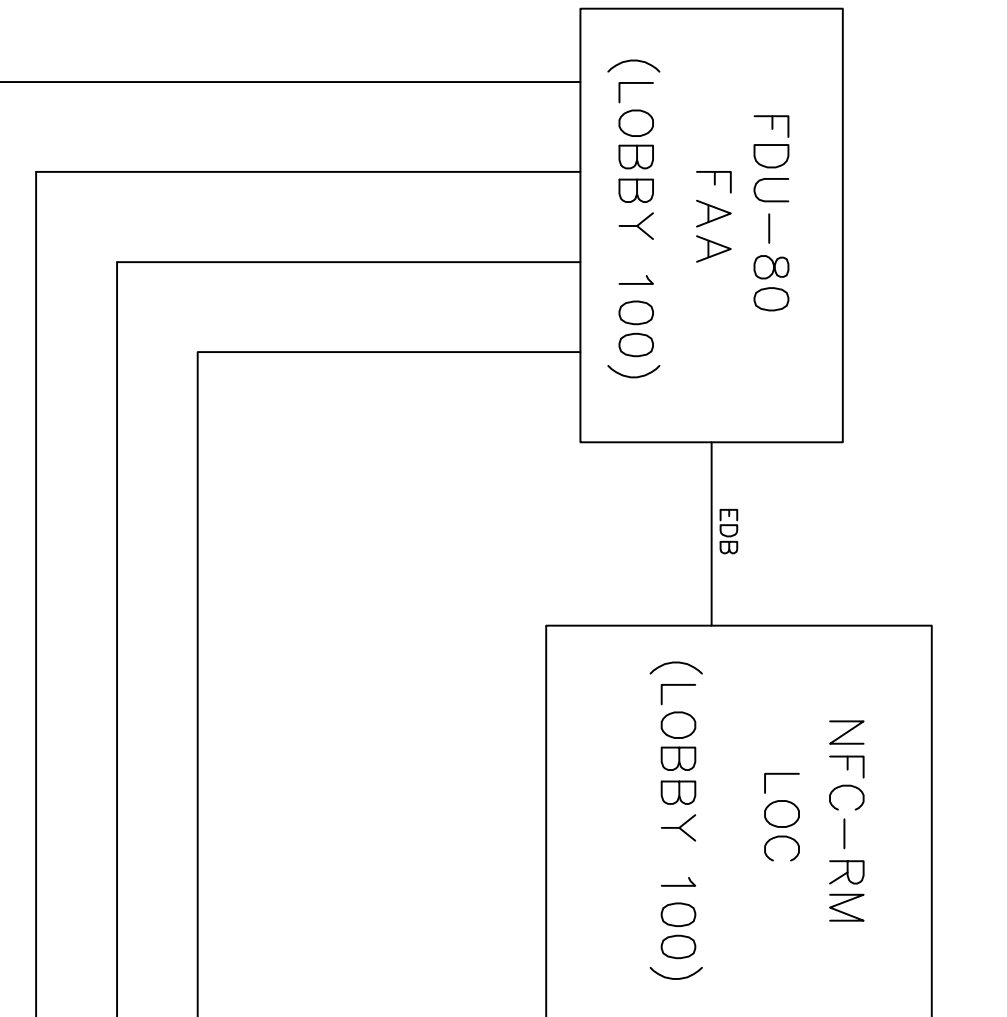
DRAWING NUMBER	DESCRIPTION
MS-4572-001	LEGEND/BILL OF MATERIAL, MATRIX AND GENERAL NOTES
MS-4572-002	FLOOR PLAN - FIRE ALARM
MS-4572-003	POINT TO POINT RISER DIAGRAM
MS-4572-004	FIRE ALARM CONTROL PANEL WIRING DIAGRAM
MS-4572-005	VOICE EVACUATION PANEL WIRING DIAGRAM
MS-4572-006	FIELD DEVICE WIRING DETAILS

DRAWING INDEX

1	CML	14DEC18	AS-BUILT	
0	CRH	14MAY18	RELEASED FOR SUBMITTAL/APPROVAL	
NO.	BY	DATE	REVISION	
CLIENT: 7.A. WOODS COMPANY				
6716 NETHERLANDS DRIVE WILMINGTON, NC 28405				
PROJECT: CAPE FEAR COMMUNITY COLLEGE - SCHWARTZ CENTER FIRE ALARM SYSTEM RENOVATIONS BILL OF MATERIAL, F.A. MATRIX, DRAWING INDEX AND NOTES				
MARK SYSTEMS, INCORPORATED 120 TURNER BLVD WEST CHESTER, PA 19380 TEL: 610-728-8100 FAX: 610-728-8585				
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DRAWN: CRH DATE: 11AUG18 SCALE: NONE				
APP'D: CRH	PO #:	18001E7284	DRAWING NO.:	MS-4572-001
SALES: CRH	PROJ #:	1801F4572	REV	1

NOTE: SEE PANEL WIRING DIAGRAMS ON SHEETS 004 AND 005 FOR WIRING CONNECTIONS BETWEEN PANELS.

PANEL 2MDP2 - 120VAC
CIRCUIT #23

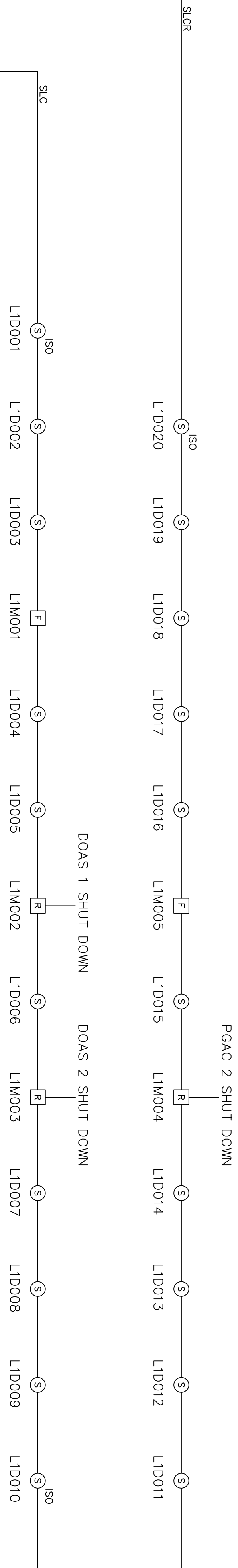


POINT TO POINT RISER DIAGRAM

NOT TO SCALE

DEVICE LEGEND

- ISO PHOTOELECTRIC SMOKE DETECTOR (ISO-DENOTES INCLUSION OF ISOLATOR BASE)
- F MANUAL PULL STATION
- XX CEILING STROBE (XX-DENOTES CANDELA SETTING)
- XX CEILING SPEAKER/STROBE (XX-DENOTES CADELA SETTING, XW-DENOTES WATTAGE TAP)
- XX CEILING SPEAKER (XW-DENOTES WATTAGE TAP)
- XX CEILING SPEAKER ARRAY W/ STROBE (XX-DENOTES CANDELA SETTING, XW-DENOTES WATTAGE TAP)
- XX WALL STROBE (XX-DENOTES CANDELA SETTING)
- R RELAY MODULE
- FSM MONITOR/RELAY MODULE
- END OF LINE RESISTOR (15K, 1 WATT FOR SPEAKER CKT., 4.7K, 1/2 WATT FOR NAC CKT.)
- SS 120VAC SURGE SUPPRESSOR



MARK SYSTEMS, INCORPORATED
120 TURNER BLVD.
WEST CHESTER, PA 19380
TEL: 610-728-8100
FAX: 610-728-8552

7.A. WOODS COMPANY
6716 NETHERLANDS DRIVE
WILMINGTON, NC 28405

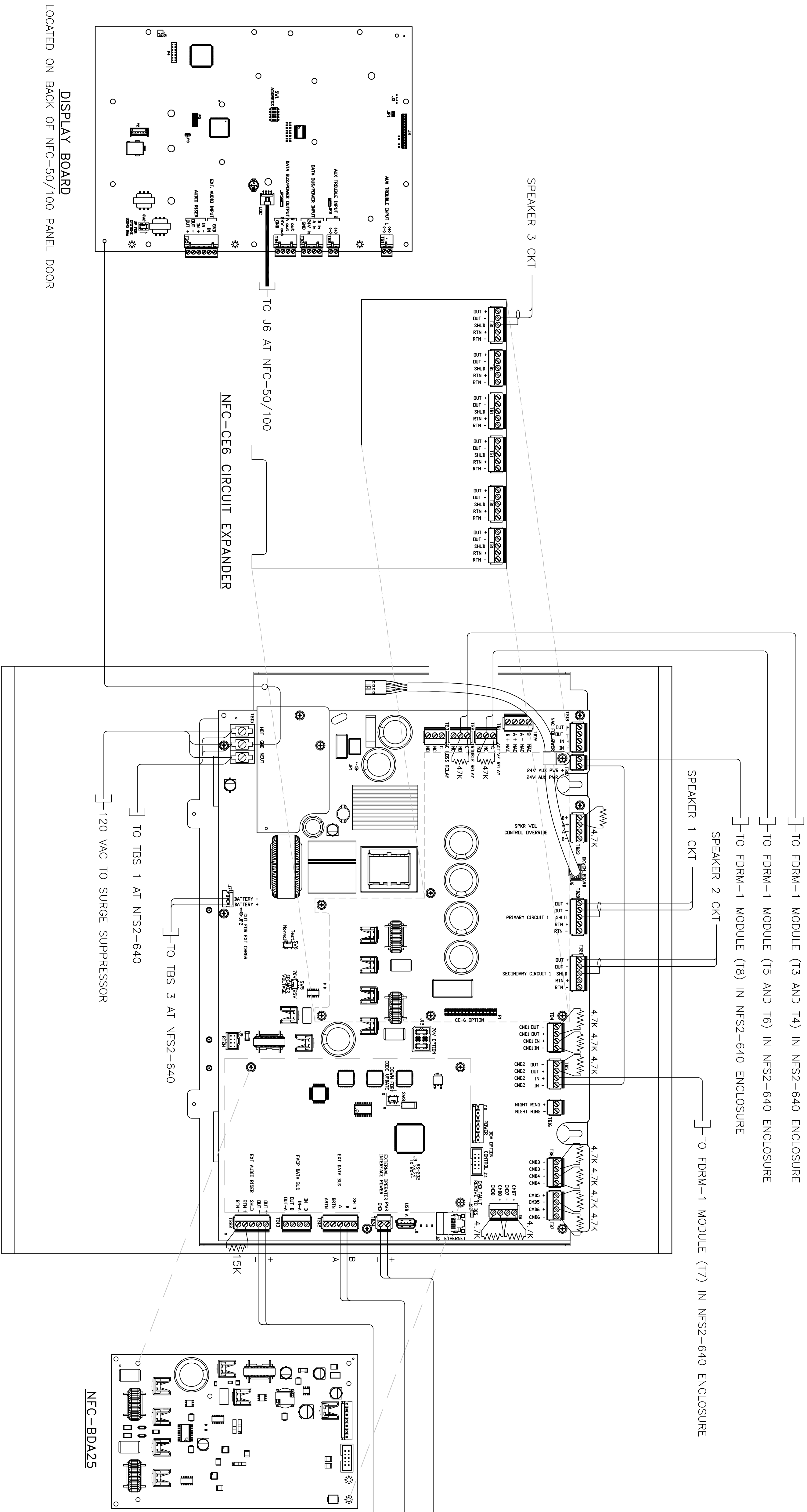
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CLIENT: 6716 NETHERLANDS DRIVE
POINT TO POINT RISER DIAGRAM

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APP'D: [Signature]
SALES: [Signature]

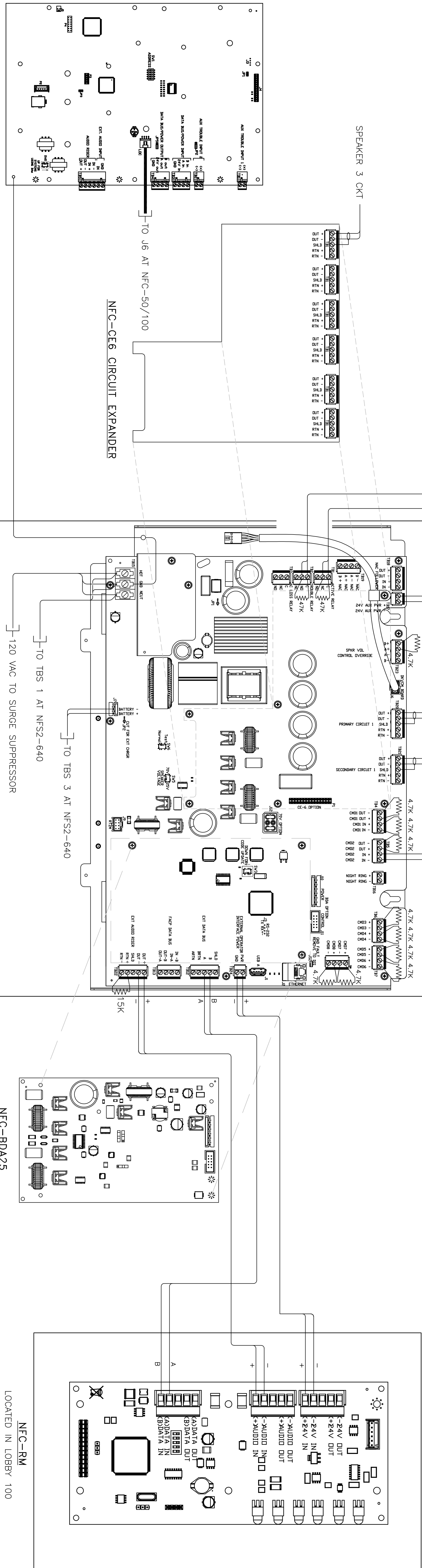
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DATE: 11/01/18
REVISION: [Signature]

1 14DEC18 AS-BUILT
0 14MAY18 RELEASED FOR SUBMITTAL/APPROVAL



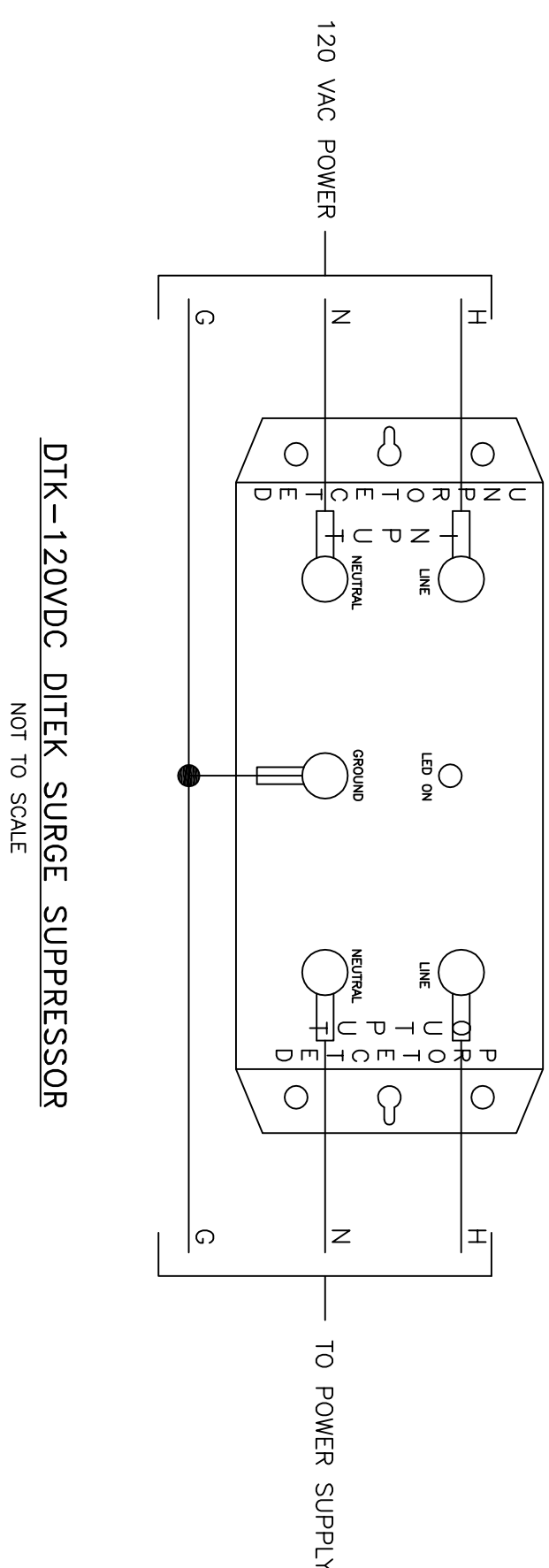
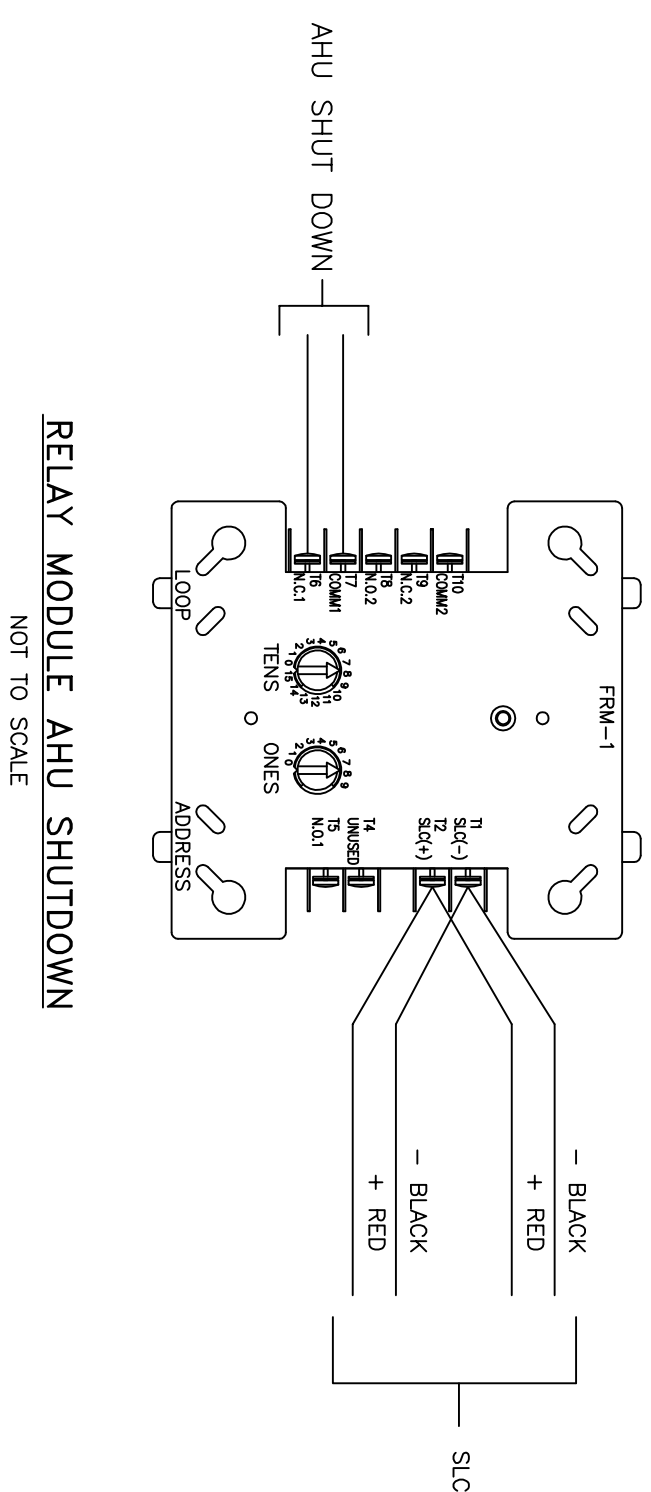
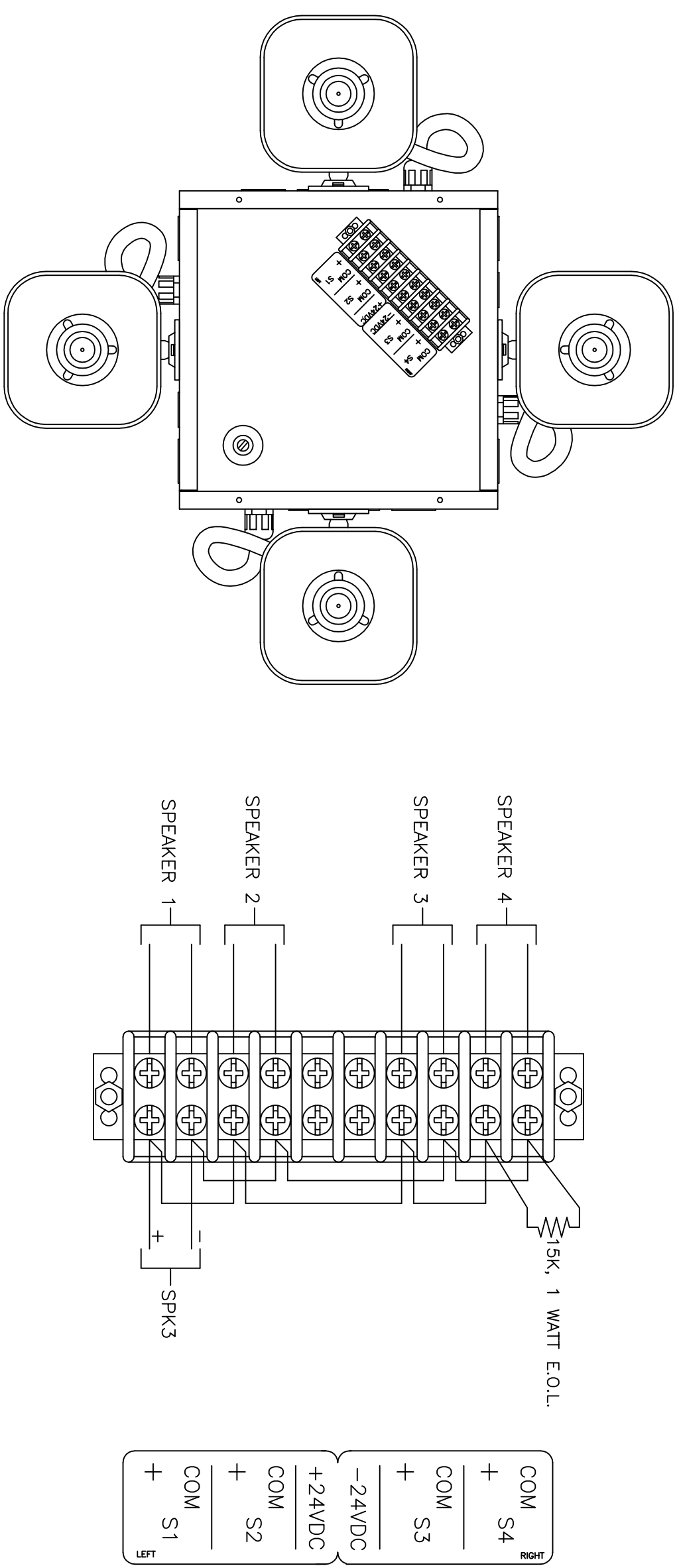
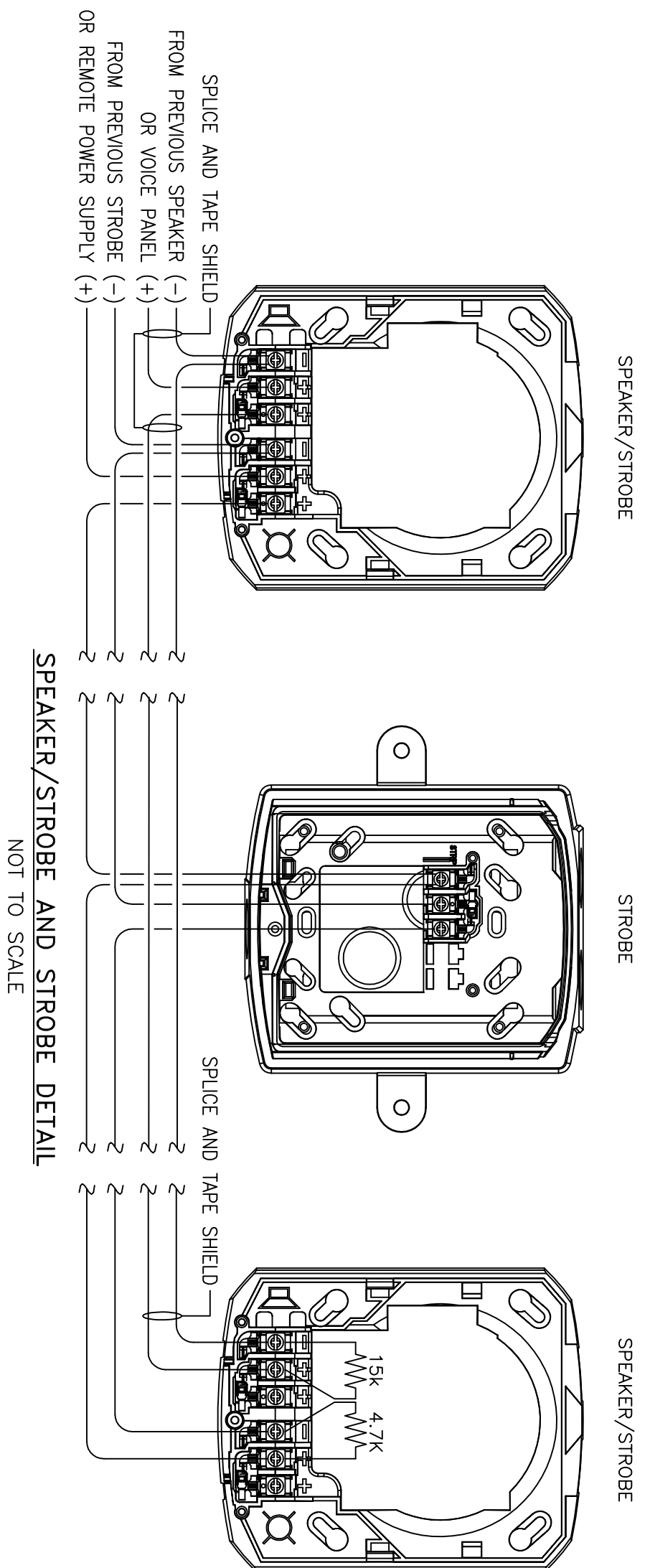
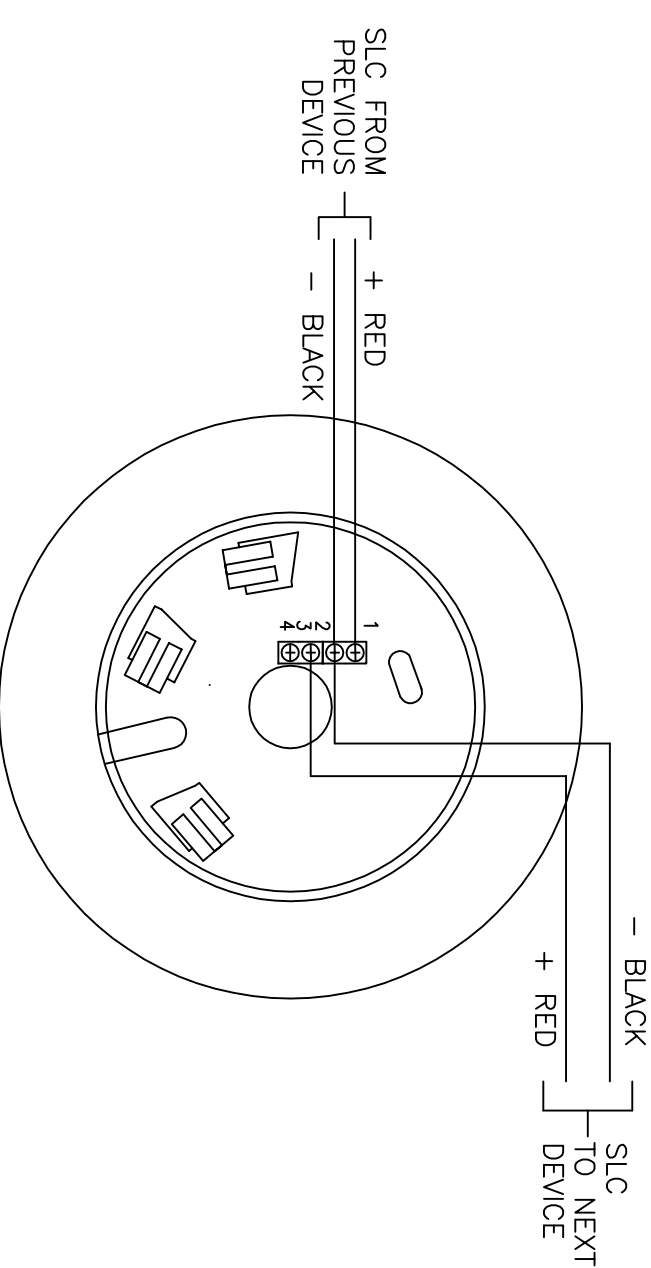
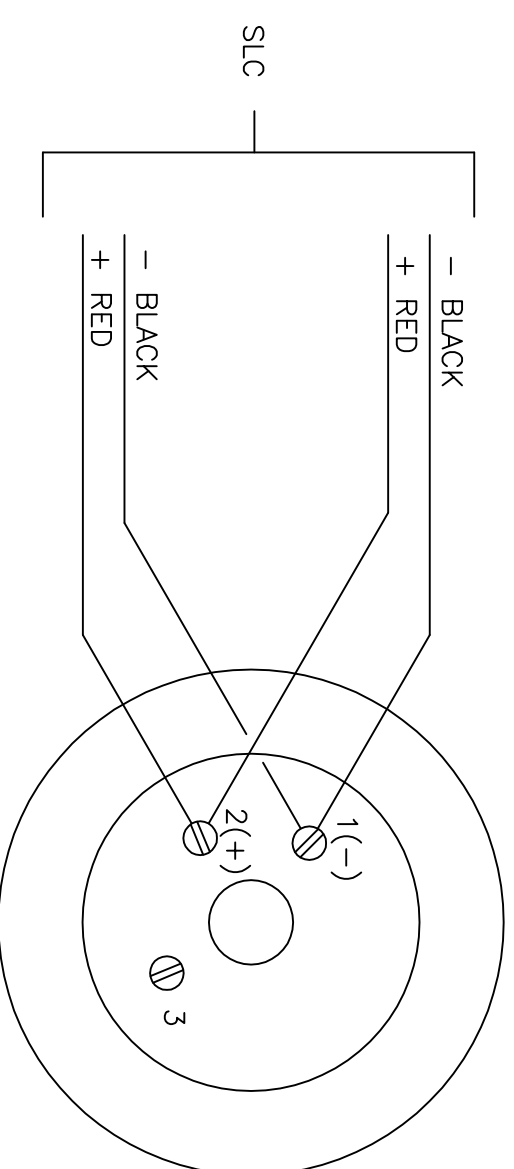
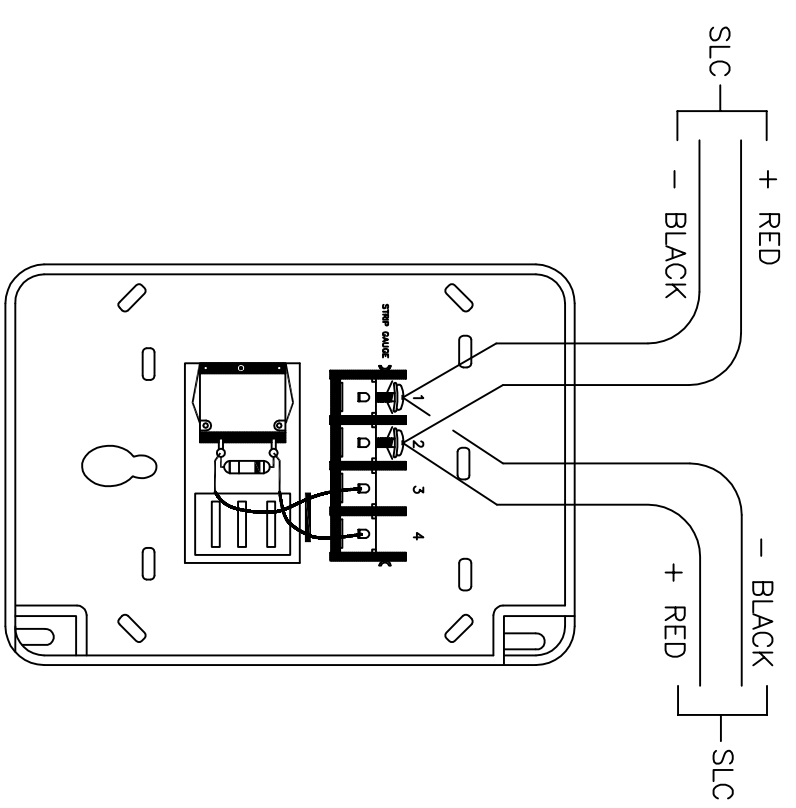
NFC-50/100 WIRING DIAGRAM
NO SCALE

DISPLAY BOARD
LOCATED ON BACK OF NFC-50/100 PANEL DOOR



NFC-RM
LOCATED IN LOBBY 100

1		CML	14DEC18	AS-BUILT
0		CH	14MAY18	RELEASED FOR SUBMITTAL/APPROVAL
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CLIENT:				
7.A. WOODS COMPANY				
6716 NETHERLANDS DRIVE WILMINGTON, NC 28405				
PROJECT:				
CAPE FEAR COMMUNITY COLLEGE – SCHWARTZ CENTER				
FIRE ALARM SYSTEM RENOVATIONS				
VOICE EVACUATION PANEL WIRING DIAGRAM				
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NICET CERTIFICATION CARETOWER HALL NICET #38865 LEVEL IV				
MARK SYSTEMS, INCORPORATED 320 TURNER BLVD WEST CHESTER, PA 19380 TEL: 610-728-8100 FAX: 610-728-8552				
DRAWN: CH				
DATE: 11MAY18				
SCALE: NONE				
SHEET 3 OF 6				
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1		CML		14DEC18		AS-BUILT	
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CLIENT:		BY		DATE		REVISION	
T.A. WOODS COMPANY 6716 NETHERLANDS DRIVE WILMINGTON, NC 28405							
PROJECT: CARE FARM COMMUNITY COLLEGE - SCHWARTZ CENTER FIRE ALARM SYSTEM RENOVATIONS ELECTRICAL DETAILS							
NICET CERTIFICATION CONSTRUCTION HILL NICET #08859 LEVEL IV							
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MARK SYSTEMS, INCORPORATED INTERNET FIRE PROTECTION 320 TURNER LANE WEST CHESTER, PA 19380 PA 610-701-8855 4512-4 TECHNOLOGY DRIVE WILMINGTON, NC 28405 FAV-910-728-1112							
APPROVED:		DATE:		SCALE:		SHEET	
CARRINGTON, INC.		14MAY18		NONE		OF 6	
PROJECT NO.:		PO #:		DRAWING NO.:		REV	
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