PERMIT APPLICATION
CITY OF AURORA

BULDING CODES DIVISION

Pre Approval sign off	
Zoning:	
Any Exterior work?	☐ Yes ☐ No
Water:	

15151 E Alameda Pkwy, Ste 2400 ~ Aurora, CO 80012 ~ 303 739-7420

Project Address:1501 S. Potomac Street Unit # Zip code:80012
Project Name/Subdivision:MCOA 2nd Floor C-Section Strobe Upgrade
Contractor:SimplexGrinnell Phone:303-355-0500
Contact Person: Richard Bockstahler
Email:rbockstahler@simplexgrinnell.com Fax:303-355-0615
Owner:Medical Center of Aurora
Owner address:1501 S. Potomac Street Valuation:$2,000.00
Email:

REQUIRED FOR PROJECTS USING AN ARCHITECT and/or ENGINEER

Architect or Engineer Name: email:
Phone #: Fax #:

DESCRIBE THE WORK YOU WILL BE DOING

Remove & Replace (2) existing Strobes from C-Section corridor and addition of Strobes to Operating Room #1 & #2.

THIS SECTION FOR NEW HOME CONSTRUCTION ONLY

Model #: Elevation: Foundation Type:
Basement Type: Unfinished: Finished: SF:
Number of Deck(s): Covered: Uncovered: Size of Deck (s):
Concrete Patio(s): Covered: Uncovered: Size of Patio Cover:

MECHANICAL

Heating type: BTU's: Qty: Gas range/oven/cook top: BTU's Qty
AC/Cooler/CFM/Ton: Fireplace: Misc:

PLUMBING

Shower #: Lavatory #: Bathtub #: Water Closet #:
Water heater type: BTU'S: # Misc.:

ELECTRICAL

Electrical Service AMP: Const Meter: Misc.:

◆◆◆◆ THIS SPACE FOR BUILDING CODES DIVISION OFFICE USE ONLY ◆◆◆◆

Project Valuation: 2000

REVIEWS		INSPECTIONS	
☐	Structural	☐	Structural
☐	Mechanical	☐	Mechanical
☐	Plumbing	☐	Plumbing
☐	Electrical	☐	Electrical
☐	Life Safety	☒	Life Safety

Parent Permit RSN: N/A
Parent Plan Location: N/A
Permit Type: CT
Sub Type: FX Alarm
Plans Examiner: JOKE
Verify Homeowner:

Sprinkler & alarm permits **must** be brought in as separate submittals. Valuation is NOT included in main permit.

Change of occupancy/use: ☐ Yes ☐ No

Plan Fee Due $ Intake Date: Permit # RSN: 890317
Permit #: 2014-838027-CT

Balance Due $ Plan Location: RSN: 890317
14-838027

BOARD OF APPEALS - Contractor's Appeals and Standards Board. Applicants have the right to have the board hear appeals of orders, decisions or determinations made by the building official relative to the application and interpretation of the building code. Any application for appeal to the board shall be based on a claim that the true intent of the code or the rules legally adopted there under have been incorrectly interpreted, the provisions of the building code do not fully apply or an equally good or better form of construction is proposed.

Signature: Print Name: RICHARD BOCKSTAHLER Date: 04/25/2014

MCOA - 2ND FL C-SECTION STROBE UPGRADE
FIRE ALARM SYSTEM

SITE

MCOA - 2ND FL C-SECTION STROBE UPGRADE
1501 S. POTOMAC STREET
AURORA, CO 80012

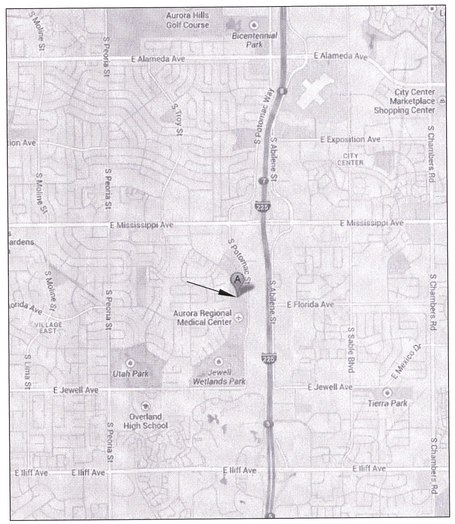
OWNER

THE MEDICAL CENTER OF AURORA
1501 S. POTOMAC STREET
AURORA, CO 80012

INSTALLER

MC2 ELECTRICAL CONTRACTORS
88 LIPAN STREET
DENVER, CO 80223

DRAWING INDEX	
DWG#	DESCRIPTION
FA-001	COVER SHEET
FA-002	GENERAL INFORMATION
FA-101	DEVICE PLACEMENT PLAN - PARTIAL 2ND FLOOR
FA-201	RISER DIAGRAM
FA-601	CALCULATIONS AND SCHEDULES
FA-701	WIRING TYPICALS



VICINITY MAP
N.T.S.

AURORA FIRE DEPARTMENT GENERAL NOTES

- FIRE ALARM SYSTEMS CANNOT BE COMBINED WITH BURGLAR ALARM SYSTEMS.
- THE INSTALLER IS REQUIRED TO COORDINATE WITH THE MECHANICAL CONTRACTOR TO DETERMINE INSTALLATION OF SMOKE DETECTORS OR SENSORS (i.e., NOT CLOSER THAN 3 FEET FROM ANY SUPPLY/RETURN DIFFUSER AND THAT ADDITIONAL DETECTION MAY BE REQUIRED DUE TO THE RELOCATION OR SPACING ADJUSTMENT OF DETECTORS, AS A RESULT).
- FIRE ALARM DEVICES MUST BE PLACED IN PROTECTED AREAS WITH AMBIENT TEMPERATURE RANGING FROM 32 DEGREES TO 120 DEGREES F.
- DO NOT PLACE SMOKE DETECTORS WITHIN 3 FEET OF AIR SUPPLY REGISTERS AND DIFFUSERS.
- FIRE ALARM SYSTEM SHALL BE MONITORED BY A CLASS 1 CENTRAL STATION.
- FIRE ALARM CONTROL PANEL WILL BE PLACED IN THE LOCATION SPECIFIED WITHIN THE PLAN SUBMITTAL UNLESS APPROVED BY THE LIFE SAFETY FIELD INSPECTOR.
- CITY OF AURORA BUILDING CODES DIVISION DOES NOT GRANT APPROVAL FOR ANY VIOLATIONS OF ADOPTED FIRE CODE. CODE VIOLATIONS UNCOVERED DURING FIELD INSPECTIONS MUST BE CORRECTED.
- PER THE 2009 IFC AND THE 2011 NEC THE INSTALLER MUST REQUEST A ROUGH WIRING INSPECTION IN THE FIRE ALARM SYSTEM PRIOR TO REQUESTING A FIRE ALARM FINAL INSPECTION.
- THE CONTRACTOR SHALL CONDUCT A "PRE-TEST" OF THE PROJECT AREA PRIOR TO SCHEDULING AN ACCEPTANCE TEST WITH THE BUILDING CODES DIVISION.
- REMOTE ALARM INDICATORS SHALL BE PROVIDED FOR ANY AUTOMATIC FIRE ALARM DETECTOR LOCATED IN A CONCEALED LOCATION WITH A NORMALLY LOCKED DOOR.
- AT THE TIME OF FINAL FIRE ALARM INSPECTION, THE SYSTEM MUST BE SUPERVISED/MONITORED BY A CLASS 1 CENTRAL MONITORING AGENCY.
- THE INSTALLING CONTRACTOR (OR DESIGNEE) MUST PROVIDE ALL NECESSARY TESTING EQUIPMENT AND PERFORM ALL TESTING REQUIRED BY THE LIFE SAFETY FIELD INSPECTOR.
- IN-DUCT SMOKE DETECTORS INSTALLED IN CONCEALED LOCATIONS OR, WHERE THE DETECTOR'S ALARM INDICATOR IS NOT READILY VISIBLE TO RESPONDING PERSONNEL SHALL BE PROVIDED WITH A REMOTE INDICATOR(S), REMOTE TEST STATION AND PLACARDING.
- ALL NEW OR EXISTING FIRE ALARM SYSTEMS MUST BE CONNECTED ANY EXTERIOR HORN AND STROBE APPLIANCE. IF THE BUILDING IS FIRE SPRINKLED, A GENERAL ALARM ACTIVATION AT THE FIRE ALARM CONTROL PANEL WILL ACTIVATE THE EXTERIOR HORN AND STROBE. SILENCING THE PANEL MUST ALLOW THE VISUAL DEVICE TO CONTINUE UNTIL THE PANEL IS RESET.
- FIRE ALARM SYSTEMS SHALL INCLUDE BOTH AUDIBLE AND VISUAL ALARMS. VISUAL ALARMS WILL BE REQUIRED IN ALL ACCESSIBLE PUBLIC AND COMMON-USE AREAS PER THE 2009 IFC AND THE 2003 ANSI A117.1 STANDARD.
- PROVIDE A PRIMARY AND SECONDARY POWER SUPPLY FOR THE FIRE ALARM SYSTEM PER THE 2009 IFC, SECTION 907.5 AND THE 2007 NFPA 72.
- FIELD INSPECTION CONSULTATION IS AVAILABLE UPON REQUEST. CALL 303-739-7420 TO REQUEST CONSULTATION.
- THE FIRE ALARM CONTRACTOR MUST COMPLETE THE NFPA72 "RECORD OF COMPLETION" PRIOR TO SCHEDULING THE AHJ ACCEPTANCE TEST.
- AUDIBLE ALARM SIGNALING DEVICES SHALL EXCEED THE PREVAILING SOUND LEVEL IN A ROOM OR SPACE BY 15 DBA. SOUND LEVELS FOR ALARM SIGNALS SHALL BE 120 DBA MAXIMUM. 2009 IFC SECTION 907.10.2.

FIRE DEPT./BLDG DEPT. PLAN REVIEW #:

AURORA BUILDING CODES DIVISION
15151 EAST ALAMEDA PARKWAY, 2ND FLOOR PERMIT CENTER
AURORA, COLORADO 80012
(303) 739-7420

NICET CERTIFICATION

TECHNICAL AREA 00303: LEVEL 3
CERTIFICATE #: 83242
VALID THROUGH: 10/01/14

STEVE SHARP — DATE 4-22-14

tyco SimplexGrinnell
Safer. Smarter. Tyco.™

PROJECT COORDINATOR
RICHARD BOCKSTAHLER
720-941-2201
RBOCKSTAHLER@SIMPLEXGRINNELL.COM

6240 SMITH ROAD
DENVER, CO 80216

PHONE: 303-355-0500
SERVICE: 303-355-0500
FAX: 303-355-0615

APPROVED
City of Aurora Building Division
JDW 4/25/14
2007 NFPA 72
Permit # 2014-8380077-CT
RDN 850317

tyco SimplexGrinnell
Safer. Smarter. Tyco.™
DISTRICT - 419
6240 SMITH ROAD
DENVER, CO 80216
SERVICE: 303-355-0500
PHONE: 303-355-0500
FAX: 303-355-0615

MCOA - 2ND FL C-SECTION STROBE UPGRADE

MCOA - 2ND FL C-SECTION STROBE UPGRADE
1501 S. POTOMAC STREET
AURORA, CO 80012

ISSUE LOG: MARK	DATE	CAD	CHK	DESCRIPTION

Revisions shown with △ symbol

DRAWN BY:	J. HABER
CHECKED BY:	S. SHARP
ISSUE DATE:	4/22/14
JOB #:	
PROJECT #:	419:977179506
SIMPLEXGRINNELL ©	2013
SYSTEM:	FIRE ALARM SYSTEM
SHEET:	COVER SHEET

FA-001

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LAST SAVED BY: JOHABER
LAST PRINTED: 4/22/2014 12:55:31 PM
24" x 36" - Arch D Size

GENERAL NOTES

1. THESE DRAWINGS DEPICT GENERAL LOCATIONS OF LIFE SAFETY EQUIPMENT & FIELD DEVICES. EXACT ROUTING OF CONDUITS TO BE DETERMINED IN THE FIELD BY THE INSTALLING CONTRACTOR TO SUIT CONDITIONS. ALL CHANGES SHALL BE CLEARLY INDICATED ON THE RECORD DRAWINGS.
2. SHOULD ANY CONDITIONS EXIST THAT DIFFER FROM WHAT IS INDICATED ON THESE DRAWINGS WHICH CAUSE MAJOR DEVIATIONS IN THE WORK SHOWN, THE CONTRACTOR SHALL CONTACT SIMPLEXGRINNELL IN A TIMELY MANNER SO AS NOT TO IMPAIR THE CONSTRUCTION SCHEDULE.
3. CONTRACTOR IS RESPONSIBLE FOR MAKING AND OBTAINING APPROVAL FOR ALL NECESSARY ADJUSTMENTS IN CIRCUITING AS REQUIRED TO ACCOMMODATE THE RELOCATION OF EQUIPMENT AND/OR DEVICES WHICH ARE AFFECTED BY ANY AUTHORIZED CHANGE. ALL CHANGES SHALL BE CLEARLY INDICATED ON THE RECORD DRAWINGS.
4. A STAMPED SET OF APPROVED FIRE ALARM DRAWINGS SHALL BE AT THE JOB SITE AND SHALL BE USED FOR INSTALLATION.
5. THE POWER CIRCUIT TO THE FACP AND TO THE FIRE ALARM POWER SUPPLIES SHALL BE ON A DEDICATED 120V, 20A BRANCH CIRCUIT BREAKER, AND SHALL HAVE A RED MARKING, LOCK-ON PROVISION AND SHALL BE IDENTIFIED AS "FIRE ALARM CIRCUIT CONTROL." THE LOCATION OF THE CIRCUIT DISCONNECT MEANS (CIRCUIT BREAKER) SHALL BE PERMANENTLY IDENTIFIED AT THE FIRE ALARM CONTROL UNIT.
6. UPDATE THE AS-BUILT DRAWING SET DAILY WITH JOB PROGRESS. RETURN THE AS-BUILT DRAWING SET TO SIMPLEXGRINNELL NO LATER THAN 7 DAYS AFTER FINAL TEST.
7. THE CONTRACTOR WILL MAINTAIN ALL AREAS OF THE BUILDING IN A NEAT AND WORKMAN LIKE MANNER.
8. DO NOT APPLY POWER EXCEPT IN THE PRESENCE OF A FACTORY TRAINED SIMPLEXGRINNELL TECHNICAL REPRESENTATIVE.
9. ANY SMOKE DETECTOR HEAD INSTALLED BEFORE THE BUILDING IS CLEANED AND ACCEPTED SHALL BE COVERED TO PROTECT FROM DUST. ANY FALSE ALARMS DUE TO DIRT CONTAMINATED HEADS SHALL BE THE RESPONSIBILITY OF THE FIRE ALARM INSTALLER.
10. THE FIRE ALARM INSTALLER WILL MAINTAIN THE FIRE RESISTANCE INTEGRITY OF ALL WALL, CEILING, AND ROOF ASSEMBLIES ANY TIME THAT WORK IS NOT ACTIVELY BEING PERFORMED.
11. INSTALLATION OF DEVICES SHALL BE IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. POWER LIMITED AND NON-POWER LIMITED FIELD WIRING MUST BE INSTALLED WITHIN THE FACP ENCLOSURE IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND NEC.
12. ALL WIRING SHALL BE INSTALLED ACCORDING TO NFPA 70 (NEC).
13. FIRE ALARM CIRCUITS SHALL BE IDENTIFIED IN ACCORDANCE WITH APPROPRIATE SECTION OF NEC 760. MARK ALL FIRE ALARM WIRES IN ACCORDANCE WITH NEC 760 SECTIONS FOR POWER LIMITED AND NON-POWER LIMITED WIRE.
14 FIRE ALARM CABLE INSTALLED IN DUCTS, PLENUM, AND OTHER SPACES USED FOR ENVIRONMENTAL AIR SHALL BE TYPE FPLP.
15. FIRE ALARM CABLE INSTALLED IN THE VERTICAL RUNS AND PENETRATE MORE THAN ONE FLOOR OR CABLES INSTALLED IN VERTICAL RUNS IN SHAFTS SHALL BE TYPE FPLR.
16. FIRE ALARM CABLE INSTALLED IN UNDERGROUND CONDUIT OR OTHER WET LOCATIONS SHALL BE UL LISTED FOR WET LOCATIONS.
17. FIRE ALARM CIRCUITS EXTENDING BEYOND ONE BUILDING AND RUN OUTDOOR SHALL BE INSTALLED IN ACCORDANCE WITH NFPA 70 ARTICLES 760, 770, 725 AND 800 WHERE APPLICABLE.
18. ALL WIRING, INCLUDING SHIELDS MUST BE DRY AND FREE OF SHORTS AND GROUNDS.
19. ALL SHIELDED WIRE MUST HAVE SHIELD CONTINUITY AT FULL LENGTH OF THE WIRE.
20. ONLY SYSTEM WIRING CAN BE RUN IN THE SAME CONDUIT.
21. 120VAC IS NOT PERMITTED IN THE SAME CONDUIT WITH LOW VOLTAGE WIRING.
22. MAINTAIN 40 PERCENT CONDUIT FILL RATIO AS PER NEC REQUIREMENTS.
23. EXISTING CONDUITS MAY BE USED BY THE INSTALLATION CONTRACTOR AS DEEMED NECESSARY, HOWEVER, ANY EXISTING CONDUIT WILL BE USED ONLY IF CONDUITS MEET CURRENT STANDARDS AND CODES. SIMPLEXGRINNELL MAKES NO STATEMENTS WRITTEN OR VERBAL AS TO THE CONDITION OF EXISTING CONDUITS.

FIRE ALARM APPLICABLE CODES & STANDARDS

INTERNATIONAL FIRE CODE (IFC), 2009 EDITION

NATIONAL ELECTRIC CODE (NFPA 70), 2011 EDITION

INTERNATIONAL BUILDING CODE (IBC), 2009 EDITION

NATIONAL FIRE ALARM CODE (NFPA 72), 2007 EDITION

JURISDICTIONS WITHIN THE STATE MAY HAVE AMENDMENTS TO THE STATE ADOPTED CODE.
CHECK WITH THE LOCAL JURISDICTION AUTHORITY FOR MORE DETAILS.

WIRE SCHEDULE

FIRE ALARM WIRE LIST (POWER LIMITED)

AC	120VAC WIRE – 3 CONDUCTOR 12 AWG SOLID CONDUIT ONLY: THHN (3) #12 AWG (BLACK/WHITE/GREEN)	
A	RUI/N2 COMMUNICATION RISER – 1 PAIR 18 AWG TWISTED OVERALL SHIELD NON-PLENUM RATED: FPLR ANIXTER SG1802S10-03 AREA=0.0186 SQ. INCH #18 AWG (RED/BLACK)	PLENUM RATED: FPLP ANIXTER SG1802S21-03 AREA=0.0177 SQ. INCH
D	DOOR HOLDER CIRCUIT – 2 CONDUCTOR 14 AWG SOLID NON-PLENUM RATED: FPLR ANIXTER SG1402N10-03 AREA=0.0340 SQ. INCH CONDUIT ONLY: THHN (2) #14 AWG (BLUE/GREY) AREA=0.0097 SQ. INCH (EACH)	PLENUM RATED: FPLP ANIXTER SG1402N21-03 AREA=0.0308 SQ. INCH
H	CHIME/SIGNAL CIRCUIT – 2 CONDUCTOR 14 AWG SOLID NON-PLENUM RATED: FPLR ANIXTER SG1402N10-03 AREA=0.0340 SQ. INCH CONDUIT ONLY: THHN (2) #14 AWG (ORANGE/BROWN) AREA=0.0097 SQ. INCH (EACH) ********** REFER TO SIGNAL CIRCUIT DISTANCE CHART **********	PLENUM RATED: FPLP ANIXTER SG1402N21-03 AREA=0.0308 SQ. INCH
L	REMOTE LED CIRCUIT – 2 CONDUCTOR 18 AWG SOLID NON-PLENUM RATED: FPLR ANIXTER SG1802N10-03 AREA=0.0177 SQ. INCH CONDUIT ONLY: TFFN (2) #18 AWG (RED/YELLOW)) AREA=0.0055 SQ. INCH (EACH)	PLENUM RATED: FPLP ANIXTER SG1802N21-03 AREA=0.0167 SQ. INCH
M	MAPNET/IDNET CIRCUIT – 1 PAIR 18 AWG TWISTED OVERALL SHIELD NON-PLENUM RATED: FPL ANIXTER SG1802S19-03 AREA=0.0320 SQ. INCH	PLENUM RATED: FPLP ANIXTER SG1802S21-03 AREA=0.0177 SQ. INCH
P	MAPNET/IDNET POWER CIRCUIT – 2 CONDUCTOR 14 AWG SOLID NON-PLENUM RATED: FPLR ANIXTER SG1402N10-03 AREA=0.0340 SQ. INCH CONDUIT ONLY: THHN (2) #14 AWG (RED/BLACK) AREA=0.0097 SQ. INCH (EACH)	PLENUM RATED: FPLP ANIXTER SG1402N21-03 AREA=0.0308 SQ. INCH
V	VISUAL/SIGNAL CIRCUIT – 2 CONDUCTOR 14 AWG SOLID NON-PLENUM RATED: FPLR ANIXTER SG1402N10-03 AREA=0.0340 SQ. INCH CONDUIT ONLY: THHN (2) #14 AWG (LT BLUE/TAN) AREA=0.0097 SQ. INCH (EACH) ********** REFER TO SIGNAL CIRCUIT DISTANCE CHART **********	PLENUM RATED: FPLP ANIXTER SG1402N21-03 AREA=0.0308 SQ. INCH
X	AUXILIARY CIRCUIT (RELAY) – 2 CONDUCTOR 14 AWG SOLID NON-PLENUM RATED: FPLR ANIXTER SG1402N10-03 AREA=0.0340 SQ. INCH CONDUIT ONLY: THHN (2) #14 AWG (YELLOW/BLUE) AREA=0.0097 SQ. INCH (EACH)	PLENUM RATED: FPLP ANIXTER SG1402N21-03 AREA=0.0308 SQ. INCH
Z	ZONE CIRCUIT – 2 CONDUCTOR 14 AWG SOLID NON-PLENUM RATED: FPLR ANIXTER SG1402N10-03 AREA=0.0340 SQ. INCH CONDUIT ONLY: THHN (2) #14 AWG (YELLOW/VIOLET) AREA=0.0097 SQ. INCH (EACH)	PLENUM RATED: FPLP ANIXTER SG1402N21-03 AREA=0.0308 SQ. INCH

CONDUIT SIZE	CONDUCTOR AREA	CONDUIT SIZE	CONDUCTOR AREA
1/2"	0.12 SQ INCH *	1-1/4"	0.60 SQ INCH *
3/4"	0.21 SQ INCH *	1-1/2"	0.82 SQ INCH *
1"	0.34 SQ INCH *	2"	1.34 SQ INCH *

* 40% FILL 2005 N.E.C.

CONTACT YOUR LOCAL SIMPLEXGRINNELL OFFICE FOR ANY CABLE SUBSTITUTIONS

SYSTEM DESCRIPTION / SCOPE OF WORK

OCCUPANCY TYPE:	I-2 INSTITUTIONAL GROUP
OCCUPANCY USE:	HOSPITAL
SQUARE FOOTAGE:	APPROX. 19,775 SQ FT. (TOTAL)
STORIES:	4 STORIES (1 IN SCOPE)
SPRINKLER PROTECTION:	FULLY SPRINKLED
INITIATING DEVICE CKT:	CLASS B, STYLE B (HARDWIRED)
NOTIFICATION APPLIANCE CKT:	CLASS B, STYLE Y (HARDWIRED)
SIGNALING LINE CKT:	CLASS B, STYLE 4 (ADDRESSABLE)
NETWORK:	CLASS A, STYLE 7 (ADDRESSABLE)
SUPV STATION TYPE:	CENTRAL STATION
AUDIBLE NOTIFICATION:	TEMPORAL
VISUAL NOTIFICATION:	PUBLIC

THIS IS AN ADDITION TO THE EXISTING FIRE ALARM SYSTEM AT THE MEDICAL CENTER OF AURORA SOUTH TOWER IN AURORA, COLORADO. SCOPE OF WORK TO TAKE PLACE IN THE C-SECTION/SCRUB AREA PASSAGE ON THE 2ND FL.

REMOVE AND COVER TWO EXISTING STROBE ONLY NOTIFICATION DEVICES IN THE SCRUB AREA PASSAGE. INSTALL TWO NEW WALL MOUNTED STROBE ONLY DEVICES IN THE SCRUB AREA PASSAGE. INSTALL A NEW CEILING MOUNT STROBE ONLY DEVICE IN BOTH C-SECTION #1 & #2 ROOMS, AND A NEW CEILING MOUNT STROBE ONLY IN SUB-STERILE AS SHOWN ON FLOORPLANS. EXTEND A NEW STROBE NOTIFICATION CIRCUIT FROM THE EXISTING 4100U TRANSPONDER LOCATED IN THE CLEAN UTILITY/STORAGE ROOM ON THE 2ND FLOOR (APPROX. 75 FEET AWAY) TO THE 5 NEW STROBE ONLY DEVICES. MAINTAIN CIRCUIT INTEGRITY, T-TAPPING IS NOT PERMITTED.

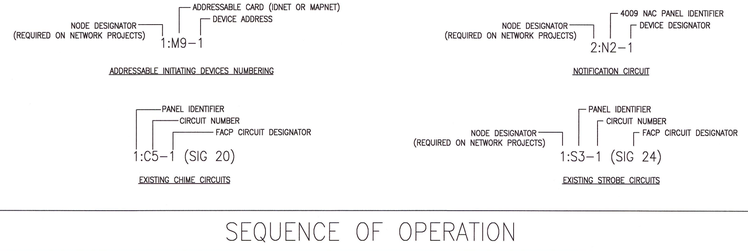
THERE WERE NO CHANGES TO THE SEQUENCE OF OPERATIONS AND EXISTING GRAPHIC MAPS.

THE EXISTING FIRE ALARM SYSTEM SHALL NOT BE DISCONNECTED OR TAKEN OUT OF SERVICE WITHOUT WRITTEN PERMISSION FROM THE OWNER. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE WITH THE OWNER THE TIMING OF ANY EXISTING FIRE ALARM SYSTEM DEMOLITION WORK.

ABBREVIATIONS LEGEND

AC = ABOVE CEILING
C = CEILING MOUNTED
E = EXISTING TO REMAIN
N = NEW DEVICE
RC = EXISTING TO REMOVE AND COVER
RD = EXISTING DEVICE TO BE RELOCATED
RL = RELOCATED DEVICE
RR = REMOVE EXISTING AND REPLACE W/NEW
WP = WEATHERPROOF
XP = EXPLOSION PROOF
AFF = ABOVE FINISHED FLOOR
AHJ = AUTHORITY HAVING JURISDICTION
ALM = ALARM
ANN = ANNUNCIATOR
BMS = BUILDING MANAGEMENT SYSTEM
CBC = CALIFORNIA BUILDING CODE
CD = (eg. 15CD) CANDELA
CSFM = CALIFORNIA STATE FIRE MARSHALL
DET = DETECTOR
DGP = DATA GATHERING PANEL
EOL = END OF LINE
EPO = EMERGENCY POWER OFF
FACP = FIRE ALARM CONTROL PANEL
FATC = FIRE ALARM TERMINAL CABINET
FBO = FURNISHED BY OTHERS
FCC = FIRE COMMAND CENTER
FAA = FIRE ALARM ANNUNCIATOR
FTR = FIRE ALARM TRANSPONDER
FSD = FIRE SMOKE DAMPER
HT = HEIGHT
HVAC = HEATING, VENTILATION, & AIR CONDITIONING
IMS = INFORMATION MANAGEMENT SYSTEM
MAX = MAXIMUM
MIN = MINIMUM
N/A = NOT APPLICABLE
NAC = NOTIFICATION APPLIANCE CIRCUIT EXTENDER
NDU = NETWORK DISPLAY UNIT
NEC = NATIONAL ELECTRICAL CODE
NFPA = NATIONAL FIRE PROTECTION ASSOCIATION
NIC = NOT IN CONTRACT
NPU = NETWORK PROCESSING UNIT
NTS = NOT TO SCALE
PAP = PRE-ACTION PANEL
SCC = STATUS COMMAND CENTER
SLC = SIGNALING LINE CIRCUIT
SMK = SMOKE
SUPV = SUPERVISORY
TAC = TRUEALERT ADDRESSABLE CONTROLLER
TRBL = TROUBLE
TS = TAMPER SWITCH
TYP = TYPICAL
UON = UNLESS OTHERWISE NOTED
VCC = VOICE COMMAND CENTER
VT = VALVE TAMPER
WF = WATER FLOW
W = (eg. 1/2W) WATT
W/ = WITH
W/O = WITH OUT

DEVICE ADDRESSING LEGEND



SEQUENCE OF OPERATION

CAUSE	EFFECT: ALARM AT FACP	ALARM AT ANNUNCIATOR	ALARM AT OFF SITE REPORTING	ACTIVATE AUDIBLES	ACTIVATE VISUALS	SPRINKLER RISER BELLS	TROUBLE AT FACP	TROUBLE AT ANNUNCIATOR	TROUBLE AT OFF SITE REPORTING	SUPERVISORY AT FACP	SUPERVISORY AT ANNUNCIATOR	SUPERVISORY AT OFF SITE REPORTING	FAN SHUT DOWN	DAMPER SHUT DOWN	RELEASE CORRIDOR FIRE DOORS	RELEASE ELEVATOR FIRE DOORS	ELEVATOR SHUT DOWN	MAIN FLOOR ELEVATOR RECALL	ALTERNATE FLOOR ELEVATOR RECALL	DEACTIVATE AUDIBLES	DEACTIVATE VISUALS	SYSTEM NORMAL	OUTSIDE HORN/STROBE	REMARKS
SMOKE DETECTOR	•	•	•	•	•								•	•	•							•		
MANUAL PULL STATION	•	•	•	•	•								•		•							•		
HEAT DETECTOR	•	•	•	•	•										•							•		
DUCT DETECTOR	•	•	•	•	•								•	•										
MAIN FLR. ELEV. LOBBY SMOKE DETECTOR	•	•	•	•	•								•	•	•		•		•			•		
ELEVATOR LOBBY SMOKE DETECTORS (EXC. MAIN FLR.)	•	•	•	•	•								•	•	•		•	•				•		
ELEVATOR MECH. ROOM SMOKE DETECTOR	•	•	•	•	•														•			•		
ELEVATOR SHAFT HEAT DETECTOR	•	•	•	•	•												•					•		
ELEVATOR MECH. ROOM HEAT DETECTOR	•	•	•	•	•												•					•		
WATERFLOW SWITCH	•	•	•	•	•	•							•									•		
TAMPER SWITCH							•	•	•															
POST INDICATOR VALVE SWITCH							•	•	•															
SYSTEM RESET																				•	•	•		
SIGNAL SILENCE																				•				
AC POWER FAILURE							•	•	•				•		•									
FIRE ALARM WIRING:																								
SIGNALING LINE CIRCUIT (SLC) – CLASS B/STYLE 4:																								
SINGLE OPEN							•	•	•															
SINGLE GROUND							•	•	•															
WIRE-TO-WIRE SHORT							•	•	•															
INITIATING DEVICE CIRCUIT (IDC) – CLASS B/STYLE B:																								
SINGLE OPEN							•	•	•															
SINGLE GROUND							•	•	•															
WIRE-TO-WIRE SHORT	•	•	•	•	•																			
NOTIFICATION APPLIANCE CIRCUIT (NAC) – CLASS B/STYLE Y:																								
SINGLE OPEN							•	•	•															
SINGLE GROUND							•	•	•															
WIRE-TO-WIRE SHORT							•	•	•															

NOTE: DOES NOT CHANGE FROM ORIGINAL SEQUENCE.

SYMBOL KEY

SYMBOL	DESCRIPTION	MODEL#	BACKBOX
FACP	FIRE ALARM CONTROL PANEL # 50AH BATTERY SET	SIMPLEX 4100-8010 SIMPLEX 2081-9296	EXISTING
NAC#	NAC EXTENDER PANEL # DESIGNATES THE NAC PANEL NUMBER # 10AH BATTERY SET	SIMPLEX 4009-9201 SIMPLEX 2081-9274	16-1/4"W x 13-1/2"H x 4-3/16"D
ANN#	SERIAL LCD ANNUNCIATOR	SIMPLEX 4603-9101	6 SINGLE GANG BOXES 3 1/2" DEEP
TPN#	FIRE ALARM TRANSPONDER PANEL # DESIGNATES THE TRANSPONDER PANEL NUMBER # 33AH BATTERY SET	SIMPLEX 4100-9600 SIMPLEX 2081-9271	SUPPLIED BY SIMPLEXGRINNELL (REFER TO MOUNTING DETAIL FOR SPECIFIC DIMENSIONS)
F	MANUAL PULL STATION STOPPER II W/HORN	SIMPLEX 4099-9003 STI-1130	SINGLE GANG BOX 2 1/2" DEEP
(2)P	SMOKE PHOTO SENSOR / BASE	SIMPLEX 4098-9714 SIMPLEX 4098-9792 BASE	4" OCTAGONAL BOX 1 1/2" DEEP
RTS (2)	DUCT SMOKE SENSOR W/PHOTOELECTRIC SENSOR HEAD, RELAY AND REMOTE TEST STATION W/ LED AND KEY SWITCH	SIMPLEX 4098-9751 SIMPLEX 4098-9714 SIMPLEX 2098-9808	MOUNT TO DUCTWORK SINGLE GANG BOX 2 1/2" DEEP
RTS (2)	DUCT SMOKE SENSOR W/ REMOTE TEST STATION AND ENCAPSULATED PAM SD RELAY MODULE	SIMPLEX 4098-9756 SIMPLEX 2098-9806 SIMPLEX 4098-9843	MOUNT TO DUCTWORK
FSD	FIRE SMOKE DAMPER	BY OTHERS	MONITOR AND CONTROL WITH RELAY IAM 4090-9118
DH	DOOR HOLDER	SIMPLEX 2088-9609	SINGLE GANG BOX 2" DEEP
DH EX	DOOR HOLDER	EXISTING	SINGLE GANG BOX 2" DEEP
#	CHIME/STROBE # =CANDELA RATING	WHEELOCK CH70-24MCW-FR(RED) WHEELOCK CH70-24MCW-FW(WHITE)	4" SQUARE BOX 1 1/2" DEEP W/ 1 1/2" EXTENSION RING
#	WALL MOUNT MULTI-CANDELA V/O WHITE # =CANDELA RATING	WHEELOCK RSS-24MCW-FR(RED) WHEELOCK RSS-24MCW-FW(WHITE)	4" SQUARE BOX 1 1/2" DEEP W/ 1 1/2" EXTENSION RING
	SMOKE PHOTO SENSOR / BASE	EXISTING	4" OCTAGONAL OUTLET BOX
T	THERMAL SENSOR IN TRUEALARM BASE	EXISTING	4" OCTAGONAL BOX WITH 2099-9813 TRIM
S	PHOTO SENSOR IN WITH SAMPLING TUBES	EXISTING	DIRECTLY TO DUCTWORK
	MANUAL PULL STATION		(2) 3x2x2-3/4 SWITCH BOXES
RTS	REMOTE TEST SWITCH	EXISTING	SINGLE GANG OUTLET BOX
	REMOTE LED ON PLATE	EXISTING	SINGLE GANG OUTLET BOX
	24VDC WALL MOUNTED DOOR HOLDERS	EXISTING	SINGLE GANG BOX
I	RELAY INDIVIDUAL ADDRESSABLE MODULE	SIMPLEX 4090-9002	SINGLE GANG OUTLET BOX
CZ	CONTROL ZAM	SIMPLEX 2190-9163	4-11/16" SQUARE, 2-1/8 DEEP BOX WITH 1-1/2" DEEP EXTENSION RING
SZ	SIGNAL ZAM	SIMPLEX 2190-9161	4-11/16" SQUARE, 2-1/8 DEEP BOX WITH 1-1/2" DEEP EXTENSION RING
	CHIME WITH 15 CANDELA STROBE UNIT	EXISTING	4" SQUARE BOX 1-1/2" DEEP
	15 CANDELA STROBE UNIT	SIMPLEX 4904-9137	SINGLE GANG BOX 1-1/2" DEEP
TS	TAMPER SWITCH	EXISTING	EXISTING
	TAMPER SWITCH	BY OTHERS	SINGLE GANG BOX 1-1/2" DEEP
FS	FLOWSWITCH	EXISTING	EXISTING
	FLOWSWITCH	BY OTHERS	IN BACKBOX OF LAST DEVICE
J	J-BOX	EXISTING	EXISTING
EOL	END-OF-LINE RESISTOR (EOL)	BY OTHERS	SEE CHART SHEET FA-604
EOLR	END-OF-LINE RESISTOR (EOLR)		
#	WALL MOUNT MULTI-CANDELA STROBE ONLY RED # =CANDELA RATING	SIMPLEX 4906-9101	4" SQUARE BOX 1 1/2" DEEP W/4905-9937 ADAPTER SKIRT WHEN SURFACE MOUNTED
#	CEILING MOUNT MULTI-CANDELA STROBE ONLY WHITE # =CANDELA RATING	SIMPLEX 4906-9104	HANDY BOX 1 1/2" DEEP

DRAWING NOTES:

THE INFORMATION & SYMBOLS SHOWN IN BOLD LINETYPE ARE NEW.
THE INFORMATION & SYMBOLS SHOWN IN LIGHT LINETYPE ARE EXISTING.

APPROVED
City of Aurora Building Division
By [illegible] Date 4/22/14
2007 NFPA 72
permit # 2014-838027-CF
RSN 850317

NICET CERTIFICATION

TECHNICAL AREA 00303: LEVEL 3
CERTIFICATE #: 83242
VALID THROUGH: 10/01/14

STEVE SHARP — DATE 4-22-14

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MCOA - 2ND FL C-SECTION STROBE UPGRADE

MCOA - 2ND FL C-SECTION STROBE UPGRADE
1501 S. POTOMAC STREET
AURORA, CO 80012

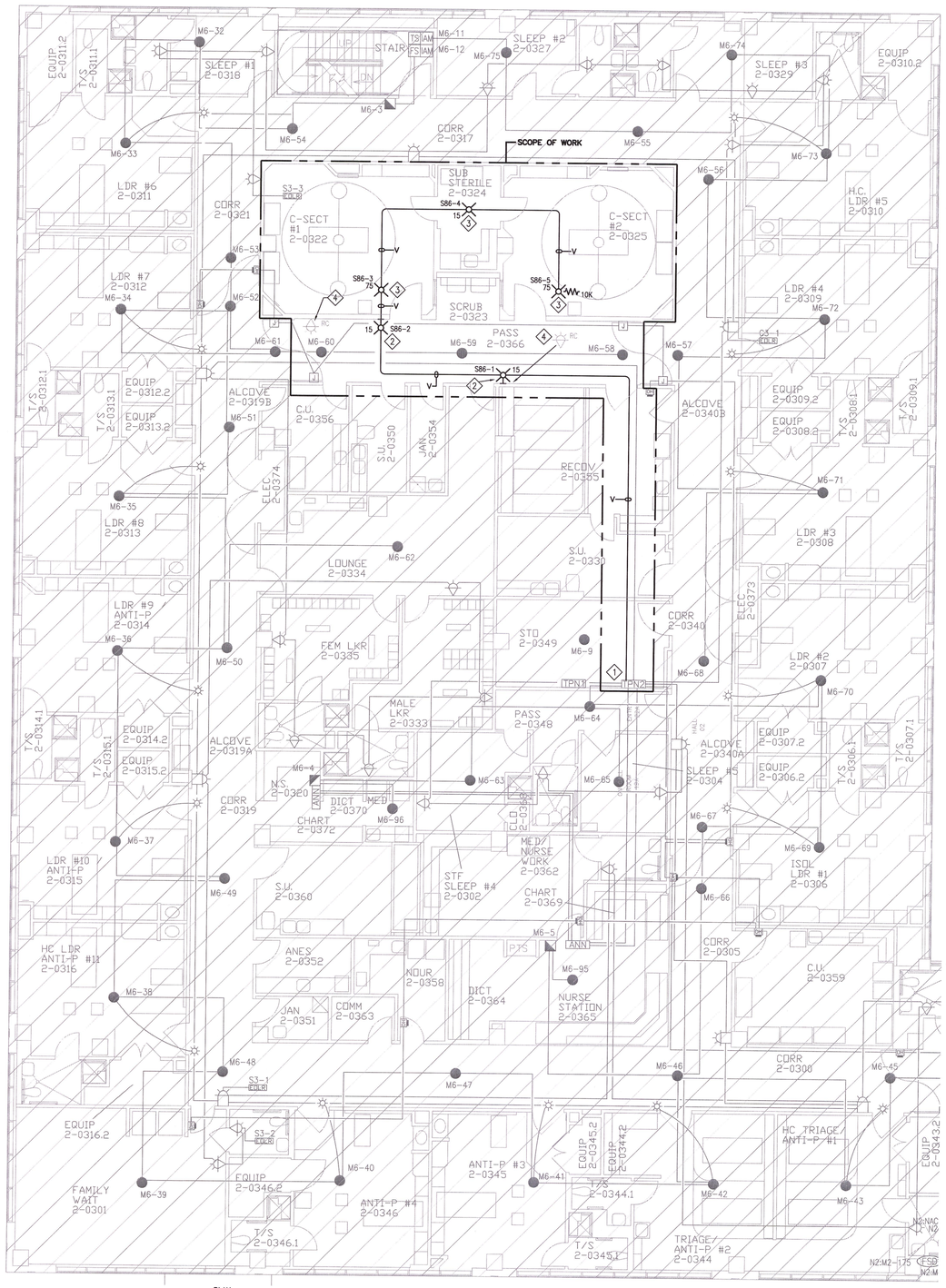
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Revisions shown with Δ symbol				

DRAWN BY: J. HABER
CHECKED BY: S. SHARP
ISSUE DATE: 4/22/14
JOB #:
PROJECT #: 419:977179506
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SYSTEM: FIRE ALARM SYSTEM
SHEET: GENERAL INFORMATION

FA-002

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PLAN NORTH

DEVICE PLACEMENT PLAN – PARTIAL 2ND FLOOR

SCALE: 1/8" = 1'-0"

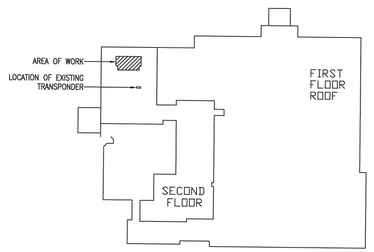
0 4 8 16 (IN FEET)

DRAWING NOTES:

1. THE INFORMATION OR SYMBOLS SHOWN IN BOLD LINETYPE ARE NEW.
2. THE INFORMATION OR SYMBOLS SHOWN IN LIGHT LINETYPE ARE EXISTING.
3. ALL CEILINGS IN AREA OF WORK ARE 10' OR LESS, FLAT SMOOTH CONSTRUCTION UNLESS OTHERWISE NOTED.

KEY NOTES:

1. EXTEND A NEW STROBE CIRCUIT FROM EXISTING TRANSPONDER IN 2ND FLOOR TOWER TO NEW STROBES IN C–SECTION/ SCRUB CORRIDOR AREA OF WORK AS SHOWN ON FLOORPLANS. MAINTAIN CIRCUIT INTEGRITY, T–TAPPING IS NOT PERMITTED.
2. INSTALL NEW WALL MOUNT STROBE. CONNECT TO NEW STROBE CIRCUIT FROM EXISTING TRANSPONDER. MAINTAIN CIRCUIT INTEGRITY, T–TAPPING IS NOT PERMITTED.
3. INSTALL NEW CEILING MOUNT STROBE. CONNECT TO NEW STROBE CIRCUIT FROM EXISTING TRANSPONDER. MAINTAIN CIRCUIT INTEGRITY, T–TAPPING IS NOT PERMITTED.
4. REMOVE AND COVER EXISTING/NON–SYNCING STROBE.



APPROVED
City of Aurora Building Division
DATE 4/29/14
2009 IBC/IFC
permit # 2014-838027-CF
PSO 890317

PLAN NORTH

KEYPLAN

SCALE: NTS

NICET CERTIFICATION

TECHNICAL AREA 00303: LEVEL 3

CERTIFICATE #: 83242

VALID THROUGH: 10/01/14

STEVE SHARP — DATE 4-22-14

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MCOA - 2ND FL C-SECTION STROBE UPGRADE

MCOA - 2ND FL C-SECTION STROBE UPGRADE
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AURORA, CO 80012

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ISSUE DATE:	4/22/14
JOB #:	
PROJECT #:	419:977179506

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SYSTEM: FIRE ALARM SYSTEM

SHEET: DEVICE PLACEMENT PLAN - PARTIAL 2ND FLOOR

FA-101

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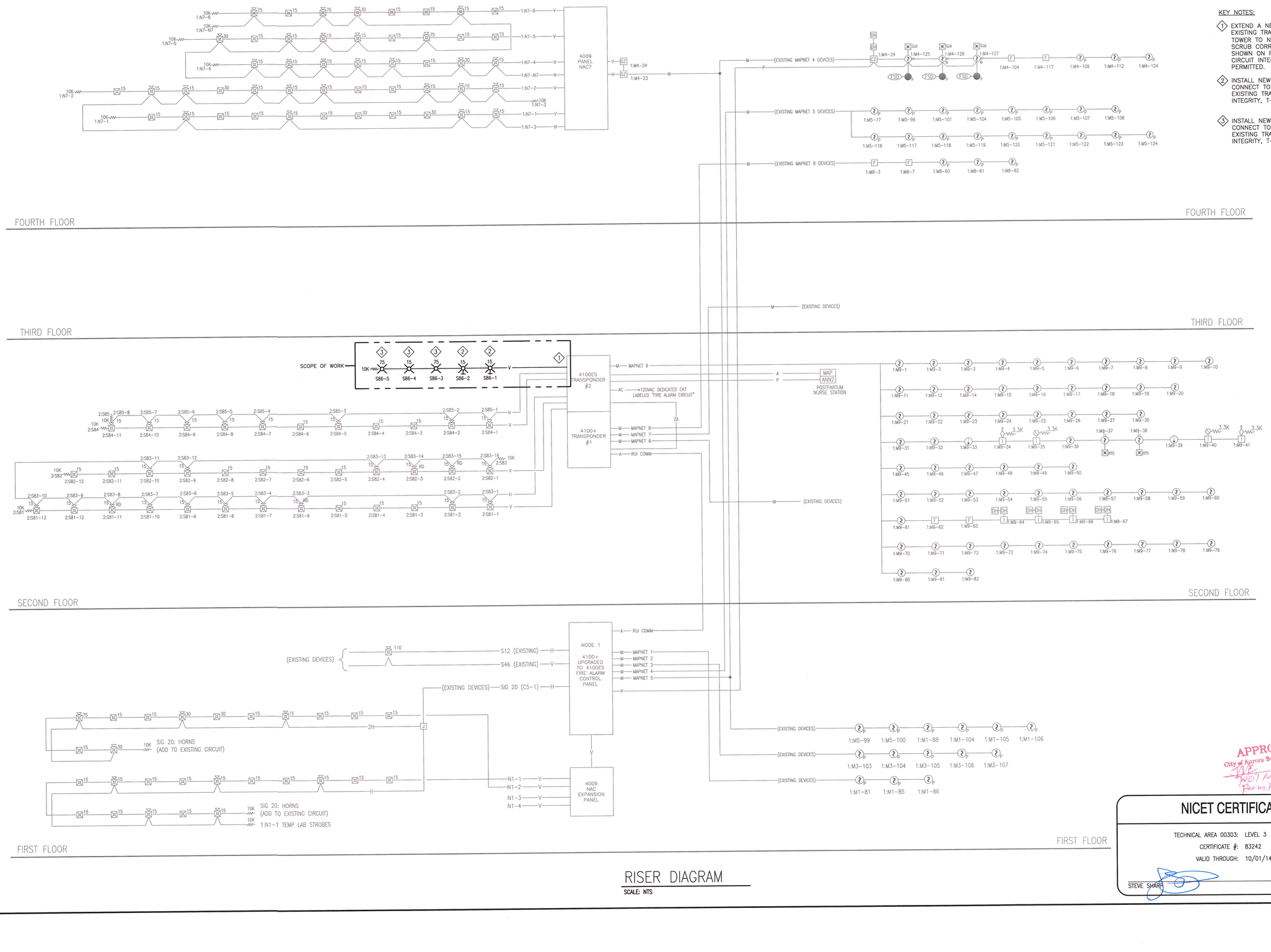
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DRAWING NOTES:

1. THE INFORMATION OR SYMBOLS SHOWN IN BOLD LINETYPE ARE NEW.
2. THE INFORMATION OR SYMBOLS SHOWN IN LIGHT LINETYPE ARE EXISTING.

KEY NOTES:

1. EXTEND A NEW STROBE CIRCUIT FROM EXISTING TRANSPONDER IN 2ND FLOOR TOWER TO NEW STROBES IN C-SECTION/ SCRUB CORRIDOR AREA OF WORK AS SHOWN ON FLOORPLANS. MAINTAIN CIRCUIT INTEGRITY, T-TAPPING IS NOT PERMITTED.
2. INSTALL NEW WALL MOUNT STROBE. CONNECT TO NEW STROBE CIRCUIT FROM EXISTING TRANSPONDER. MAINTAIN CIRCUIT INTEGRITY, T-TAPPING IS NOT PERMITTED.
3. INSTALL NEW CEILING MOUNT STROBE. CONNECT TO NEW STROBE CIRCUIT FROM EXISTING TRANSPONDER. MAINTAIN CIRCUIT INTEGRITY, T-TAPPING IS NOT PERMITTED.



RISER DIAGRAM

SCALE: NTS

APPROVED
City of Aurora Building Division
4-23-14
PWT WITH PS
Permit # 3014-03307-01

NICET CERTIFICATION

TECHNICAL AREA 00303: LEVEL 3
CERTIFICATE #: 83242
VALID THROUGH: 10/01/14

STEVE SHARP — 4-22-14 DATE

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MCOA - 2ND FL C-SECTION STROBE UPGRADE

MCOA - 2ND FL C-SECTION STROBE UPGRADE
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AURORA, CO 80012

ISSUE LOG:

MARK	DATE	CAD	CHK	DESCRIPTION

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ISSUE DATE:	4/22/14
JOB #:	
PROJECT #:	419:977179506
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SYSTEM:	FIRE ALARM SYSTEM
SHEET:	RISER DIAGRAM

FA-201

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MEDICAL CENTER OF AURORA – 2ND FLOOR POSTPARTUM NICU TRANSPONDER

Module	Qty	Description		Standby Current	Total Standby	Alarm Current	Total Alarm
Panel Equipment							
4100-9600	1	BASIC TRANSPONDER		0.087000	0.087000	0.087000	0.087000
4100-3107	1	IDNET+ MODULE, UP TO 250 POINTS	*	0.075000	0.075000	0.115000	0.115000
4100-0632	1	UTILITY BLOC, 16 TERMINALS		0.000000	0.000000	0.000000	0.000000
4100-5125	1	REMOTE POWER SUPPLY W/CHARGER – 120VAC		0.150000	0.150000	0.185000	0.185000
4100-2162	1	INDICATOR ONLY, 2 BAY SOLID DOOR		0.000000	0.000000	0.000000	0.000000
4100-5101	1	EXPANSION PWR SUPPLY (XPS) – 120VAC 60HZ		0.050000	0.050000	0.050000	0.050000
				Total Panel Stby	0.362000	Total Panel Alarm	0.437000
Peripheral Devices							
4098-9714	47	TRUEALARM PHOTO SMOKE SENSOR		0.000000	0.000000	0.000000	0.000000
4098-9733	2	TRUEALARM HEAT SENSOR		0.000000	0.000000	0.000000	0.000000
4098-9792	49	TRUEALARM SENSOR BASE	*	0.000000	0.000000	0.000000	0.000000
4098-9756	2	TRUEALARM DUCT SMOKE SENSOR W/ RELAY OUTPUT	*	0.003000	0.006000	0.015000	0.030000
2098-9806	2	REMOTE TEST STATION W/ LED AND KEY SWITCH		0.000000	0.000000	0.000000	0.000000
4099-9003	2	IDNET DOUBLE ACTION PULL STATION	*	0.000000	0.000000	0.000000	0.000000
4090-9001	4	IDNET SUPERVISED IAM	*	0.000000	0.000000	0.000000	0.000000
2190-9163	4	MAPNET UNSUPERVISED CONTROL ZAM	*	0.010000	0.040000	0.040000	0.160000
4603-9101	1	SERIAL LCD ANNUNCIATOR		0.030000	0.030000	0.170000	0.170000
CH70-CHIME	24	CHIME CIRCUIT DRAW		0.000000	0.000000	0.022000	0.528000
DSM-12/24-R	2	WHEELOCK DUAL SYNC MODULE		0.000000	0.000000	0.038000	0.076000
Mult-Candella Strobes (Select Candella Rating)							
CH70-24MCW-FW	24	MULTI CD CH STR, WM, WHT	15cd	0.000000	0.000000	0.060000	1.440000
RSS-24MCW-FW	11	RSS MULTI-CANDELA	15cd	0.000000	0.000000	0.060000	0.660000
4906-9101	**2**	**V/O M-C NON-ADDRESS, RED, WALL**	**15cd**	**0.000000**	**0.000000**	**0.060000**	**0.120000**
4906-9104	**1**	**V/O M-C NON-ADDRESS, WHT, CEIL**	**15cd**	**0.000000**	**0.000000**	**0.075000**	**0.075000**
4906-9104	**2**	**V/O M-C NON-ADDRESS, WHT, CEIL**	**75cd**	**0.000000**	**0.000000**	**0.233000**	**0.466000**
				Total Periph Stby	0.076	Total Periph Alarm	3.725
				Total Standby Amps	0.438	Total Alarm Amps	4.162

* Additional Current Draw Included Below With Device Addresses Used
1. 2-wire detector alarm current is included in the alarm current of the Initiating Device Circuit.

Battery Calculations			Standby Current		Alarm Current
Control Panel Card Power			0.362		0.437
Power For External Peripheral Devices			0.07600		3.72500
			0.438	<-- Totals -->	4.162
Additional Battery Capacity Required	20%		0.088		0.832
Standby Time ≈	24	Hrs	12.614	Standby Ah	
Alarm Time ≈	5	Mins.	0.416	Alarm Ah	
	Standby + Alarm =		13.031		
Battery Required:	2081-9275	18AH	15.393	Total Ah Required (see note below)	
Battery Supplied:	2081-9276	33AH			

Note: The total Ah required takes into account any physical and chemical properties of battery discharge rates, high alarm current draw of a battery after a long (standby) low current draw, and reflects the manufacturers discharge rates per their recommendations and UL standards.

TRANSPONDER #2 – 2ND FLOOR POSTPARTUM – NICU

NAC SCHEDULE / VOLTAGE DROP CALCULATION
12.5 % MAXIMUM VOLTAGE DROP FROM NOMINAL OPERATING VOLTAGE.
MIN. CIRCUIT OUTPUT VOLTAGE = 19 VOLTS (FOR CALCULATIONS) *

APPLIANCE / QUANTITIES / CURRENT DRAW @ 16 VOLTS

CIRCUIT	DESCRIPTION	POWER SUPPLY	V/O 4906-9101 15cd 0.060	CEIL V/O 4906-9104 15cd 0.075	CEIL V/O 4906-9104 75cd 0.233	V/O RSS-24MCW-FR 15cd 0.060	A/V CH70-24MCW-FR 15cd 0.060	A/O CH70-24-R CHIME 0.022	TOTAL CKT. LOAD (AMPS)	WIRE GAUGE (18, 16, 14, 12)	ESTIMATED CIRCUIT LENGTH	ACTUAL VOLTAGE DROP %	ACTUAL VOLTAGE DROP (VOLTS)	TOTAL CIRCUIT RESISTANCE	MAXIMUM ALLOWABLE CKT. LENGTH
									VOLTAGE DROP TOTALS						
2:S81	2ND FLOOR POSTPARDIUM NORTH (STROBE)	RPS1				3	10		0.780	14	440 ft.	8.07%	1.937	2.48 Ohms	681 ft.
2:S82	2ND FLOOR POSTPARDIUM SOUTH (STROBE)	RPS1				5	6		0.660	14	500 ft.	7.76%	1.863	2.82 Ohms	805 ft.
2:S83	2ND FLOOR POSTPARDIUM (CHIME)	RPS1						16	0.352	14	750 ft.	6.21%	1.490	4.23 Ohms	1510 ft.
2:S84	2ND FLOOR NICU (STROBE)	XPS1				3	8		0.660	14	550 ft.	8.54%	2.049	3.1 Ohms	805 ft.
2:S85	2ND FLOOR NICU (CHIME)	XPS1						8	0.176	14	550 ft.	2.28%	0.546	3.1 Ohms	3020 ft.
2:S86	2ND FLOOR C-SECTION/SCRUB PASS. (STROBE)	XPS1	2	1	2				0.661	14	200 ft.	3.11%	0.746	1.13 Ohms	804 ft.
			Appliance Summary						3.289	Total Load (AMPS) FIRE					
			2	1	2	11	24	24	0.000	Total Load (AMPS) ALERT					

METHOD USED TO CALCULATE VOLTAGE DROP:
[(CIRCUIT LENGTH IN FEET X 2) (AMPS) (OHMS / FT)]

Wire Resistance At
50 Degrees Celsius
122 Degrees Fahrenheit
Ohms / ft
10GA = 0.001112
12GA = 0.001774
14GA = 0.002822
16GA = 0.004495
18GA = 0.007143
WIRE RESISTANCE BASED ON TABLE 8 FROM NATIONAL ELECTRICAL CODE (UNCOATED SOLID COPPER WIRE)

NOTE:
LUMP SUM METHOD WAS USED TO CALCULATE ALLOWABLE VOLTAGE DROP. THIS METHOD ALLOWS FOR A SMALL MARGIN OF SAFETY, TAKING INTO CONSIDERATION THE ACTUAL INSTALLED CIRCUIT ROUTING MAY DIFFER FROM WHAT IS SHOWN ON THE SHOP DRAWINGS. IF THE ACTUAL CIRCUIT LENGTH IS GOING TO EXCEED THE MAXIMUM ALLOWABLE CIRCUIT LENGTH, CONTACT YOUR LOCAL SIMPLEXGRINNELL DISTRICT OFFICE.

* AS RECOMMENDED BY THE NFPA 72 HANDBOOK, VOLTAGE DROPS ARE CALCULATED USING A BATTERY VOLTAGE OF 20.4 VOLTS AND/OR LOW AC INPUT VOLTAGE AS DEFINED BY UL864. THIS TOOL ALSO FACTORS IN INTERNAL LOSSES INCURRED WITHIN THE CONTROL PANEL HARNESSING AND CIRCUITRY RESULTING IN A MINIMUM STARTING VOLTAGE OF 19 VOLTS AT THE CIRCUITS TERMINALS FOR THESE CALCULATIONS.

APPROVED
City of Aurora Building Division
4/25/14
permit # 2014-838071-CT
Rev 140317

NICET CERTIFICATION

TECHNICAL AREA 00303: LEVEL 3
CERTIFICATE #: 83242
VALID THROUGH: 10/01/14

STEVE SHARP — 4-22-14 DATE

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MCOA - 2ND FL C-SECTION STROBE UPGRADE

MCOA - 2ND FL C-SECTION STROBE UPGRADE
1501 S. POTOMAC STREET
AURORA, CO 80012

ISSUE LOG: MARK	DATE	CAD	CHK	DESCRIPTION
Revisions shown with Δ symbol				

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CHECKED BY:	S. SHARP
ISSUE DATE:	4/22/14
JOB #:	
PROJECT #:	419:977179506
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SYSTEM:
FIRE ALARM SYSTEM

SHEET:
CALCULATIONS AND SCHEDULES

FA-601

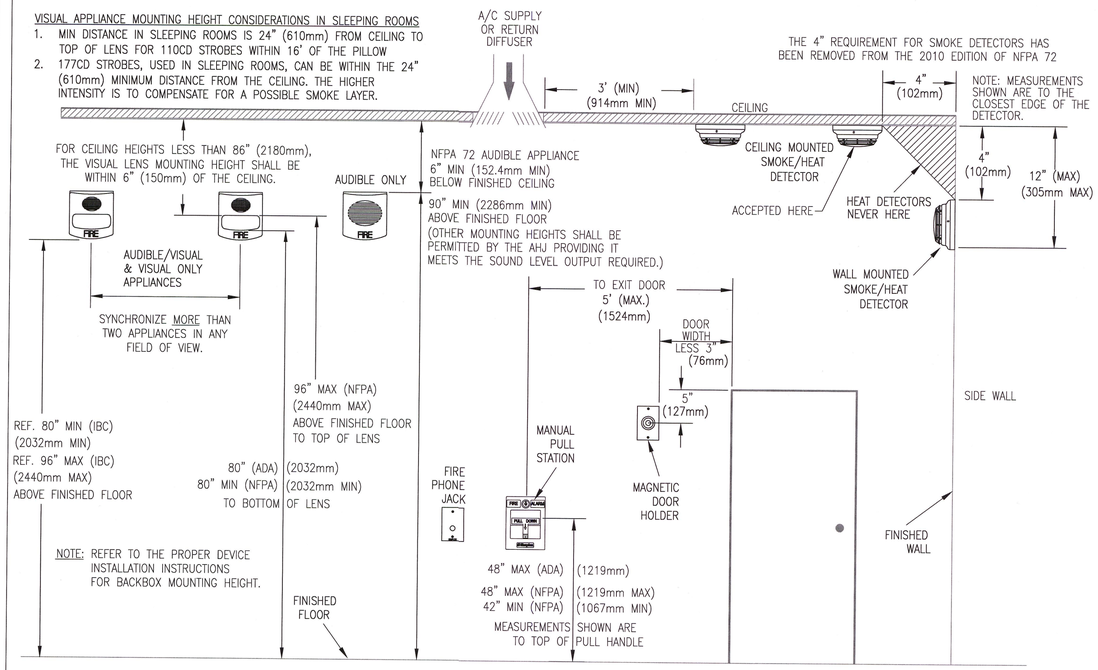
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DEVICE MOUNTING HEIGHT REFERENCE (PER NFPA 72)

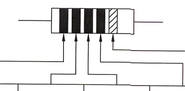
VISUAL APPLIANCE MOUNTING HEIGHT CONSIDERATIONS IN SLEEPING ROOMS

1. MIN DISTANCE IN SLEEPING ROOMS IS 24" (610mm) FROM CEILING TO TOP OF LENS FOR 110CD STROBES WITHIN 16' OF THE PILLOW
2. 177CD STROBES, USED IN SLEEPING ROOMS, CAN BE WITHIN THE 24" (610mm) MINIMUM DISTANCE FROM THE CEILING. THE HIGHER INTENSITY IS TO COMPENSATE FOR A POSSIBLE SMOKE LAYER.



NOTE: REFER TO THE PROPER DEVICE INSTALLATION INSTRUCTIONS FOR BACKBOX MOUNTING HEIGHT.

END-OF-LINE RESISTOR CODES



NOTE: REFER TO PANEL/MODULE AND DEVICE INSTALLATION INSTRUCTIONS FOR PROPER TERMINATIONS.

* USE WITH RETROFIT OR HIGH CURRENT MODULE

MODEL	REFERENCE NUMBER	OHMS	1ST BAND	2ND BAND	3RD BAND	4TH BAND	5TH BAND	WATTS	CIRCUIT TYPE	FIRE ALARM PANEL/MODULE
4081-9001	733-892	2.2K	RED	RED	RED	GOLD	N/A	1/2	ANNUNCIATOR (4300)	4004, 4010 (TROUBLE)
4081-9002	733-893	3.3K	ORANGE	ORANGE	RED	GOLD	N/A	1	N.O. INITIATING PULL, SMOKE, HEAT, WATERFLOW, TAMPER, ETC.	4004*, 4004R, 4005*, 4006, 4100, 4120, 4100U, ZAM'S
									24 PT. I/O SWITCH SUPV.	4605-7401, 4100 SERIES
4081-9003	733-896	4.7K	YELLOW	VIOLET	RED	GOLD	N/A	1/2	CURRENT LIMITED N.O. INITIATING	4090-9001 IDNET IAM (EOLR)
									NOTIFICATION (DACT)	2080-9024
4081-9004	733-886	6.8K	BLUE	GREY	RED	GOLD	N/A	1/2	N.O. INITIATING PULL, SMOKE, HEAT, WATERFLOW, TAMPER, ETC.	4004, 4005, 4090-9001 IDNET IAM 2190-9173 MAPNETII 2 PT I/O
										4-20MA ZAM (TROUBLE)
4081-9005	733-984	1.8K	BROWN	GREY	RED	GOLD	N/A	1/2	CURRENT LIMITED N.O. INITIATING (IN LINE)	4090-9001 IDNET IAM
4081-9006	733-890	560Ω	GREEN	BLUE	BROWN	GOLD	N/A	1	N.C. INITIATING (EOLR)	4005*, 4090-9001 IDNET IAM 4100, 4100U
4081-9007	733-891	1.2K	BROWN	RED	RED	GOLD	N/A	1	N.C. INITIATING (EOLR)	4005
4081-9008	733-894	10K	BROWN	BLACK	ORANGE	GOLD	N/A	1/2	NOTIFICATION	4004, 4005, 4006, 4008, 4009, 4010, 4100, 4100U
4081-9009	733-912	20Ω	RED	BLACK	BLACK	GOLD	N/A	1	TO MR-101 RELAY COIL	4005 8 POINT I/O
4081-9010	733-973	1K	BROWN	BLACK	RED	GOLD	N/A	1	N.C. INITIATING (ACROSS CONTACTS)	4005*, 4090-9001 IDNET IAM
									24 PT. I/O (ACROSS CONTACTS)	4605-7401, 4100 SERIES
									CURRENT LIMITED N.O. INITIATING (IN SERIES WITH CONTACT)	4090-9001 IDNET IAM
4081-9011	733-974	100Ω	BROWN	BLACK	BROWN	GOLD	N/A	1/2	ANNUNCIATOR (N2)	4006, 4008, 4010
4081-9012	733-985	22K	RED	RED	ORANGE	GOLD	N/A	1/2	SPEAKER CIRCUIT	4003
4081-9013	734-086	4.99K	YELLOW	WHITE	WHITE	BROWN	BROWN	1/2		
4081-9014	734-092	2.4K	RED	YELLOW	RED	GOLD	N/A	1/2	N.C. INITIATING (SECURITY MONITORING EOLR)	4090-9001 IDNET IAM
4081-9015	734-093	1.5K	BROWN	GREEN	RED	GOLD	N/A	1/2	CURRENT LIMITED N.O. INITIATING (SECURITY MONITORING EOLR)	4090-9001 IDNET IAM
4081-9016	734-149	150K	BROWN	GREEN	YELLOW	GOLD	N/A	1/2		
4081-9017	734-171	3.9K	ORANGE	WHITE	RED	GOLD	N/A	1		
4081-9018	734-168	10K	BROWN	BLACK	ORANGE	GOLD	N/A	1	70VRMS CONSTANT SUPV. NACS	4100-1260
	378-090	8.2K	GRAY	RED	RED	GOLD	N/A	1/2	SECURITY MONITORING (EOLR)	4100, 4100U
	378-046	5.6K	GREEN	BLUE	RED	GOLD	N/A	1/2	N.O. SECURITY MON. (SERIES)	4100, 4100U
	378-069	12K	BROWN	RED	ORANGE	GOLD	N/A	1/2	N.C. SECURITY MON. (SHUNT)	4100, 4100U

TrueAlert™ NON-ADDRESSABLE MULTI-CANDELA VISIBLE NOTIFICATION APPLIANCE (WALL MOUNT)

PRODUCT INFORMATION

FEATURES:

- UL LISTED TO STANDARD 1971
- ADA COMPATIBLE

SYNCHRONIZATION FLASH RATE MODE FOR USE WITH:

- SEPARATE STROBE SYNCHRONIZATION MODULES THAT ARE AVAILABLE FOR CLASS B OR CLASS A OPERATION
- SEPARATE SMARTSYNC CONTROL MODULES (SCMs) THAT PROVIDE CLASS B OR CLASS A OUTPUT FROM CONVENTIONAL NAC INPUTS

SPECIFICATIONS:

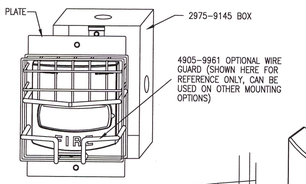
- HOUSING DIMENSIONS: 5-1/8" H X 5" W X 2-3/4" D (130mm X 127mm X 70mm)
- TEMPERATURE RANGE: 32°F TO 122°F (0 TO 50°C)
- HUMIDITY RANGE: 10% TO 93% NON-CONDENSING AT 100°F (38°C)
- TERMINAL BLOCKS FOR 18AWG TO 12AWG, TWO WIRES PER TERMINAL FOR IN/OUT WIRING.

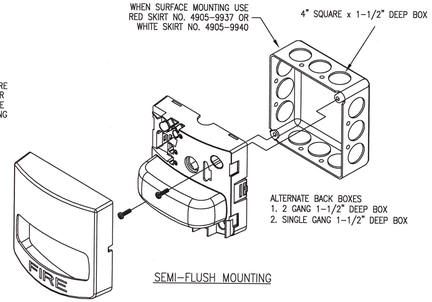
WIRING:

1. NOTIFICATION APPLIANCES ARE RATED PER INDIVIDUAL NAMEPLATE LABEL.
2. MAINTAIN CORRECT POLARITY ON TERMINAL CONNECTIONS. DO NOT LOOP WIRES UNDER TERMINALS.
3. ALL NAC WIRING CONNECTIONS ARE SUPERVISED AND POWER-LIMITED.
4. SEE INSTALLATION INSTRUCTIONS (579-548) FOR ADDITIONAL INFORMATION.

STROBE:

- RATED VOLTAGE RANGE: UL LISTED: 16 VDC TO 33 VDC PER UL 1971; ULC LISTED: 20 VDC TO 30 VDC PER ULC S526-M878
- FLASH RATE: 1Hz
- SYNCHRONIZED MODE NAC LOADING: MAXIMUM OF 35 SYNCHRONIZED STROBES PER NAC CIRCUIT.

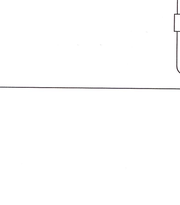


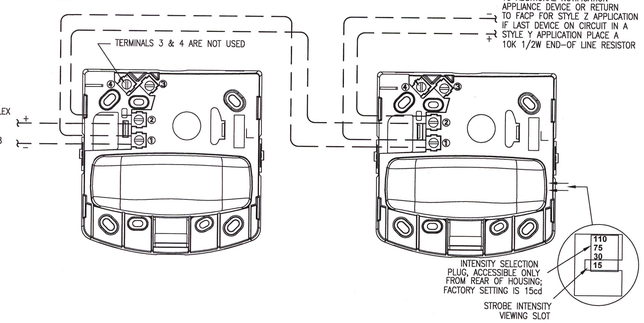


MODEL NUMBER	HOUSING COLOR	LETTERING COLOR	STROBE RATING	RMS CURRENT Ø 16 VDC	18 VDC	24 VDC
4906-9101	RED	WHITE	15cd	60 mA	53 mA	40 mA
			30cd	94 mA	84 mA	63 mA
			75cd	186 mA	165 mA	124 mA
			110cd	252 mA	224 mA	168 mA
4906-9103	WHITE	RED	15cd	60 mA	53 mA	40 mA
			30cd	94 mA	84 mA	63 mA
			75cd	186 mA	165 mA	124 mA
			110cd	252 mA	224 mA	168 mA

*CURRENT DRAWS REFLECT STROBE FLASHING

IMPORTANT!
WALL MOUNT INSTALLATION HEIGHT REFERENCE





TrueAlert™ NON-ADDRESSABLE MULTI-CANDELA VISIBLE NOTIFICATION APPLIANCE (CEILING MOUNT)

PRODUCT INFORMATION

FEATURES:

- UL LISTED TO STANDARD 1971
- ADA COMPATIBLE

SYNCHRONIZATION FLASH RATE MODE FOR USE WITH:

- SEPARATE STROBE SYNCHRONIZATION MODULES THAT ARE AVAILABLE FOR CLASS B OR CLASS A OPERATION
- SEPARATE SMARTSYNC CONTROL MODULES (SCMs) THAT PROVIDE CLASS B OR CLASS A OUTPUT FROM CONVENTIONAL NAC INPUTS

SPECIFICATIONS:

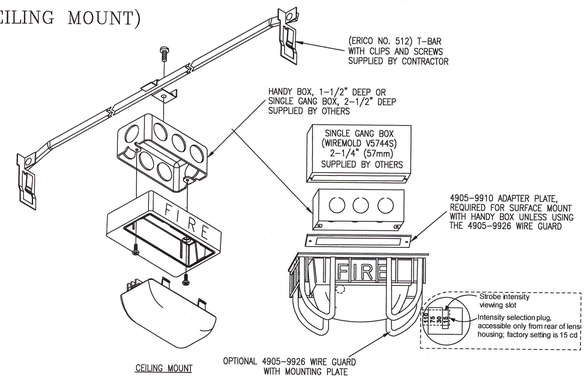
- HOUSING DIMENSIONS: 4-3/4" L X 2-5/16" W X 2-5/8" D (121mm X 75mm X 67mm)
- TEMPERATURE RANGE: 32°F TO 122°F (0 TO 50°C)
- HUMIDITY RANGE: 10% TO 93% NON-CONDENSING AT 100°F (38°C)
- TERMINAL BLOCKS FOR 18AWG TO 12AWG; TWO WIRES PER TERMINAL FOR IN/OUT WIRING.

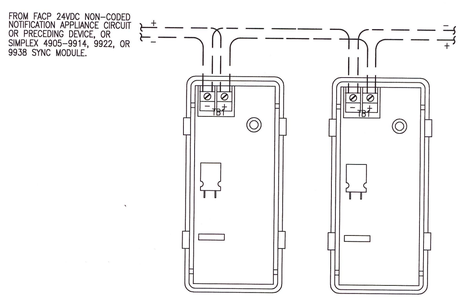
WIRING NOTES:

1. NOTIFICATION APPLIANCES ARE RATED PER INDIVIDUAL NAMEPLATE LABEL.
2. MAINTAIN CORRECT POLARITY ON TERMINAL CONNECTIONS. DO NOT LOOP WIRES UNDER TERMINALS.
3. ALL NAC WIRING CONNECTIONS ARE SUPERVISED AND POWER-LIMITED.
4. SEE INSTALLATION INSTRUCTIONS (579-548) FOR ADDITIONAL INFORMATION.

STROBE:

- RATED VOLTAGE RANGE: UL LISTED: 16 VDC TO 33 VDC PER UL 1971; ULC LISTED: 20 VDC TO 30 VDC PER ULC S526-M878
- FLASH RATE: 1Hz
- SYNCHRONIZED MODE NAC LOADING: MAXIMUM OF 35 SYNCHRONIZED STROBES PER NAC CIRCUIT.





*CURRENT DRAWS REFLECT STROBE FLASHING

MODEL NUMBER	HOUSING COLOR	LETTERING COLOR	STROBE RATING	RMS CURRENT Ø 16 VDC	18 VDC	24 VDC
4906-9102	RED	WHITE	15cd	75 mA	67 mA	50 mA
			30cd	125 mA	111 mA	83 mA
			75cd	233 mA	207 mA	155 mA
			110cd	316 mA	281 mA	211 mA
4906-9104	WHITE	RED	15cd	75 mA	67 mA	50 mA
			30cd	125 mA	111 mA	83 mA
			75cd	233 mA	207 mA	155 mA
			110cd	316 mA	281 mA	211 mA

APPROVED
City of Aurora Building Division
4/25/14
Permit # 2014-838077-CT
FSN 850317

NICET CERTIFICATION

TECHNICAL AREA 00303: LEVEL 3
CERTIFICATE #: 83242
VALID THROUGH: 10/01/14

STEVE SHARP — 4-22-14 DATE

tyco SimplexGrinnell
Safer. Smarter. Tyco.™
DISTRICT - 419
6240 SMITH ROAD
DENVER, CO 80216
SERVICE: 303-355-5000
PHONE: 303-355-6000
FAX: 303-355-6015

MCOA - 2ND FL C-SECTION STROBE UPGRADE

MCOA - 2ND FL C-SECTION STROBE UPGRADE
1501 S. POTOMAC STREET
AURORA, CO 80012

ISSUE LOG: MARK	DATE	CAD	CHK	DESCRIPTION
				Revisions shown with Δ symbol

DRAWN BY:	J. HABER
CHECKED BY:	S. SHARP
ISSUE DATE:	4/22/14
JOB #:	
PROJECT #:	419.977179506

SIMPLEXGRINNELL © 2013

SYSTEM: FIRE ALARM SYSTEM

SHEET: WIRING TYPICALS

FA-701

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RSN: ***890317***
Permit #: ***2014-838027-CT***

SIMPLEXGRINNELL
6240 Smith Road
Denver, Colorado 80216

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Tele: (303) 355-0500
Fax: (303) 355-0615

Fire Alarm
Product Data Submittal for:

Medical Center of Aurora
2nd Floor C-Section Strobe Upgrade
1501 S. Potomac Street
Aurora, CO 80012

Prepared for:

MC2 Electrical Contractors
88 Lipan Street
Denver, CO 80223

RSN: ***890317***
Permit #: ***2014-838027-CT***

tyco SimplexGrinnell
6240 Smith Road
Denver, Colorado 80401
Sales: (303) 355-0500
Service: (303) 355-0500
Fax: (303) 355-0615

PROJECT:	Medical Center of Aurora 2nd Floor C-Section Strobe Upgrade
PREPARED FOR:	*MC2 Electrical Contractors*

TYPE:	***DESCRIPTION:***
4906-9101	STROBE MC RED
4906-9104	STROBE MC WHITE CEILING

RSN: 890317
Permit #: 2014-838027-CT

Simplex TrueAlert® Multi-Candela Notification Appliances

*UL, ULC, CSFM Listed; FM Approved; MEA (NYC) Acceptance**

Visible Notification Appliances with Synchronized Flash; Non-Addressable, SmartSync™ Operation Compatible

Features

Visible only (V/O) 24 VDC notification appliances with high output xenon strobe, available for wall or ceiling mount:

- Intensity is selectable as 15, 30, 75, or 110 candela with visible selection jumper secured behind strobe housing
- Operation is compatible with ADA requirements (refer to important installation information on page 3)
- Polarized input allows connection to compatible reverse polarity, supervised notification appliance circuit (NAC)
- Regulated circuit design ensures consistent flash output and provides controlled inrush current
- Rugged, high impact, flame retardant thermoplastic housings are available in red or white with clear lens
- Listed to UL 1971 and ULC S526

Strobes provide synchronized flash for use with:

- 4006, 4008, 4010, and 4100U Series fire alarm control panels with NACs selected to provide strobe synchronization or SmartSync two-wire control**
- 4009 IDNet™ NAC Extenders
- Separate strobe Synchronization Modules that are available for Class B or Class A operation
- Separate SmartSync Control Modules (SCMs) that provide Class B or Class A output from conventional NAC inputs

Strobe housings provides flexible, easy, and convenient semi-flush or surface wall mounting:

- Rear of housing does not extend into box
- Wall mount strobes easily mount to single gang, double gang, or 4-inch square outlet box
- Ceiling mount strobes mount to single gang boxes

Wall mount strobe features:

- Wiring terminals are accessible from the front of the housing providing easy access for installation, inspection, and testing
- Covers are available separately to convert housing color

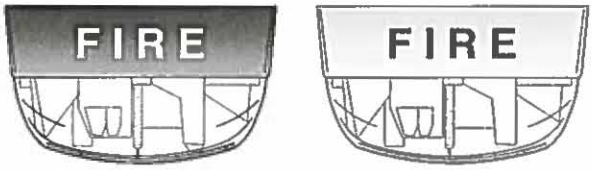
Optional adapters and wire guards:

- Wall mount strobe adapters are available to cover surface mounted electrical boxes and to adapt to Simplex® 2975-9145 boxes
- UL listed red wire guards are available for wall or ceiling mount strobes*

* Refer to page 2 for guard listing. This product has been approved by the California State Fire Marshal (CSFM) pursuant to Section 13144.1 of the California Health and Safety Code. See CSFM Listing 7125-0026:316 for allowable values and/or conditions concerning material presented in this document. It is subject to re-examination, revision, and possible cancellation. Refer to page 2 for listing status of wire guards. Additional listings may be applicable; contact your local Simplex product supplier for the latest status. Listings and approvals under Simplex Time Recorder Co. are the property of Tyco Safety Products Westminster.



Wall Mount Strobes



Ceiling Mount Strobes

Description

Multi-Candela TrueAlert synchronized strobes provide convenient installation to standard electrical boxes. The enclosure designs are both impact and vandal resistant and provide a convenient strobe intensity selection. Since each model can be selected for intensity output, on-site model inventory is minimized and changes encountered during construction can be easily accommodated.

Wall mount strobe housings are a one-piece assembly (including lens) that mounts to a single or double gang, or 4" square standard electrical box. The cover can be quickly removed (a tool is required) and covers are available separately for color conversion.

Ceiling mount strobes install using standard single gang electrical boxes. Color choice is determined by model number.

Strobe Intensity Selection

During installation, a selection plug at the back of the housing determines the desired strobe intensity. An attached flag with black letters on a highly visible yellow background allows the selected intensity to be seen at the side of the strobe lens.

Strobe Application Reference

Proper selection of visible notification is dependent on occupancy, location, local codes, and proper applications of: the *National Fire Alarm Code* (NFPA 72), ANSI A117.1; the appropriate model building code: BOCA, ICBO, or SBCCI; and the application guidelines of the Americans with Disabilities Act (ADA).

** Simplex multi-candela SmartSync two-wire horn/strobe appliance operation is protected under one or more of the following U.S. Patent Numbers: 5,559,492; 5,622,427; 5,865,527; 5,886,620; 6,281,789; 6,954,137; 7,005,971; and 7,006,003.

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Synchronized Strobes

Multiple Strobes. When multiple strobes and their reflections can be seen from one location, synchronized flashes reduce the probability of photo-sensitive reactions as well as the annoyance and possible distraction of random flashing. These multi-candela strobes are synchronized over a two-wire circuit when connected to compatible NACs, to compatible Synchronized Flash Modules, or to SmartSync Control Modules.

SmartSync Two-Wire Control

Some applications desire the audible notification appliances to be capable of being silenced before the alarm condition is reset (on-until-silenced) while the visible notification appliances are kept activated until the alarm condition is reset (on-until-reset). SmartSync operation mode provides this function using a single circuit (two-wire operation).

SmartSync Control Sources

SmartSync two-wire control is available from:

- 4006, 4008, 4100U, and 4010 Fire Alarm Control Panels (refer to individual product data sheets for more information)
- 4009 IDNet NAC Extenders (refer to data sheet S4009-0002)
- SmartSync Control Module (SCM) Model 4905-9938 (refer to data sheet S4905-0003)

Additional SmartSync compatible notification appliances include separate horns and combination horn/strobe notification appliances.

Product Selection

Multi-Candela Visible Notification Appliances (Strobes)

Model	Mounting	Housing Color	"FIRE" Lettering	Description
4906-9101	Wall	Red	White	Multi-candela strobe with intensity selectable as: 15, 30, 75, or 110 candela; synchronized flash rate; SmartSync two-wire control compatible
4906-9103		White	Red	
4906-9102	Ceiling	Red	White	
4906-9104		White	Red	

Wall Mount Strobe Adapters

Model	Description		Dimensions
4905-9937	Red	Surface Mount Adapter Skirt; use to cover 1-1/2" (38 mm) deep surface mounted boxes	5-3/8" H x 5-1/4" W x 1-5/8" D (136 mm x 133 mm x 41 mm) Total depth with strobe = 4-3/8" (111 mm)
4905-9940	White		
4905-9931	Red Adapter Plate for mounting to Simplex 2975-9145 box (typically for retrofit, may be mounted vertical or horizontal)		8-5/16" x 5-3/4" x 0.060" Thick (211 mm x 146 mm x 1.5 mm)
2975-9145	Red Mounting Box, requires Adapter Plate 4905-9931		7-7/8" x 5-1/8" x 2-3/4" D (200 mm x 130 mm x 70 mm)

Ceiling Mount Strobe Adapter

Model	Description	Dimensions
4905-9910	Surface Mount Adapter Plate; zinc plated; **required for mounting to handy box; not needed when using 4905-9926 guard**	4-7/8" x 3-1/8" x 0.060" D (124 mm x 79 mm x 1.5)

Synchronization Modules (refer to data sheet S4905-0003 for additional information)

Model	Description		Dimensions
4905-9914	Class B	Synchronized Flash Module; epoxy encapsulated with in/out 18 AWG (0.82 mm^2) wire leads, rated for 2 A NAC, requires 5 mA for power	1-3/8" x 2-7/16" x 13/16" (35 mm x 62 mm x 20 mm)
4905-9922	Class A		
4905-9938	SmartSync Control Module with Class B or Class A output; mounts in 4" (102 mm) square box		4" x 4-1/8" x 1-1/4" D (102 mm x 105 mm x 32 mm)

Replacement Covers and Guards

Model	Description		Dimensions
4905-9992	Red cover with white "FIRE" lettering	For Wall mount strobes	5-1/8" H x 5" W x 1-1/2" D (130 mm x 127 mm x 38 mm)
4905-9993	White cover with red "FIRE" lettering		
4905-9961*	Wall mount	Red wire guard with mounting plate, compatible with semi-flush or surface mounted boxes	6-1/16" H x 6-1/16" W x 3-1/8" D (154 mm x 154 mm x 79 mm)
4905-9926*	Ceiling mount		6-1/8" x 4-3/8" x 2-7/8" deep (156 mm x 111 mm x 73 mm)

* UL listed by Space Age Electronics Inc.

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Strobe Specifications

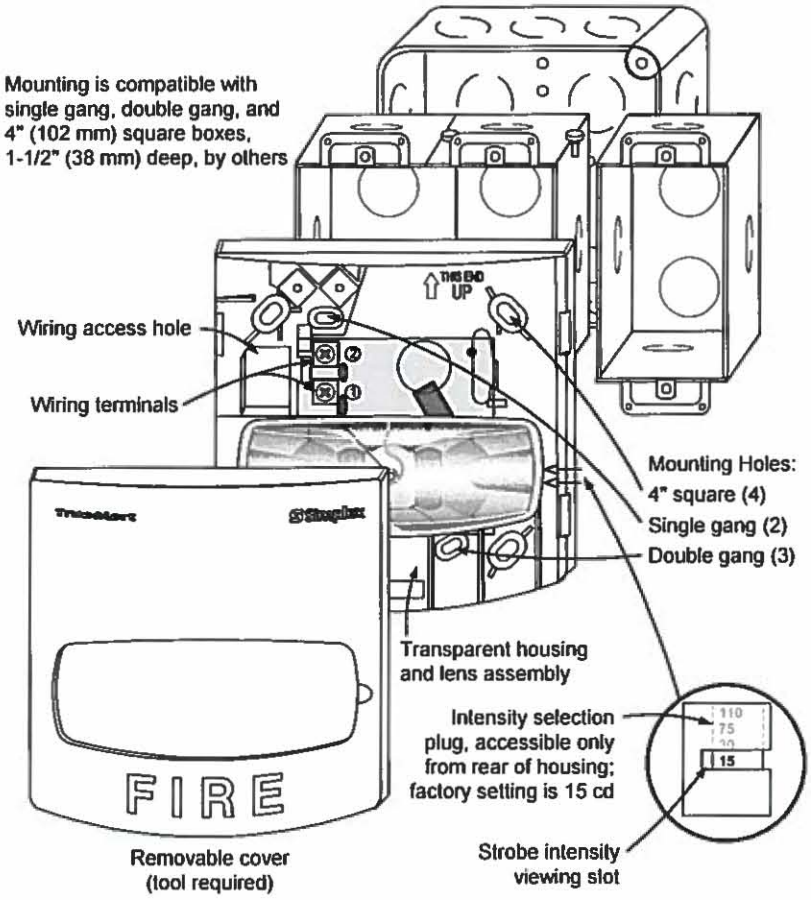
Wall Mount or Ceiling Mount, Common Specifications

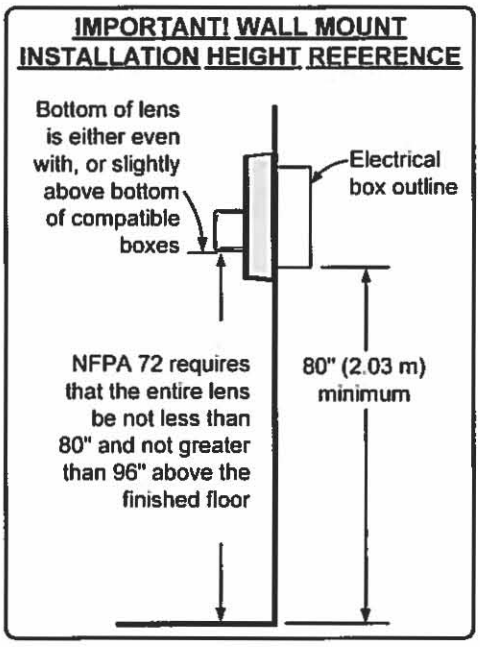
Rated Voltage Range			Regulated 24 VDC; see Note 1 below			
Flash Rate			1 Hz			
Synchronized NAC Loading			Up to 35 synchronized strobes maximum per NAC			
Temperature Range			32° to 122° F (0° to 50° C)			
Humidity Range			10% to 93%, non-condensing at 100° F (38° C)			
Connections			Terminal blocks for 18 AWG to 12 AWG (0.82 mm^2 to 3.31 mm^2); two wires per terminal for in/out wiring			
Wall Mount	Housing Dimensions (with lens)		5-1/8" H x 5" W x 2-3/4" D (130 mm x 127 mm x 70 mm)			
	Maximum RMS Current Rating per Strobe Setting (see Note 2 below)		**15 cd**	**30 cd**	**75 cd**	**110 cd**
			60 mA	**94 mA**	**186 mA**	**252 mA**
	Reference RMS Currents at other voltages	18 VDC	53 mA	84 mA	165 mA	224 mA
		24 VDC	40 mA	63 mA	124 mA	168 mA
Ceiling Mount	Housing Dimensions (with lens)		4-3/4" L x 2-5/16" W x 2-5/8" D (121 mm x 75 mm x 67 mm)			
	Maximum RMS Current Rating per Strobe Setting (see Note 2 below)		**15 cd**	**30 cd**	**75 cd**	**110 cd**
			75 mA	**125 mA**	**233 mA**	**316 mA**
	Reference RMS Currents at other voltages	18 VDC	67 mA	111 mA	207 mA	281 mA
		24 VDC	50 mA	83 mA	155 mA	211 mA

NOTES:

1. "Regulated 24 VDC" refers to the voltage range of 16 to 33 VDC per UL Standard 1971, *Signaling Devices for the Hearing Impaired*, changes effective May 1, 2004. This voltage range is the absolute operating range. Operation outside of this range may cause permanent damage to the strobe. Please note that 16 VDC is the lowest operating voltage that is allowed at the last appliance on the NAC under worst case conditions.
2. The maximum RMS current listed is the device nameplate rating. Strobe designs are constant wattage and the maximum RMS current rating occurs at the lowest allowable operating voltage. (RMS is root mean square and refers to the effective value of a varying current waveform.)

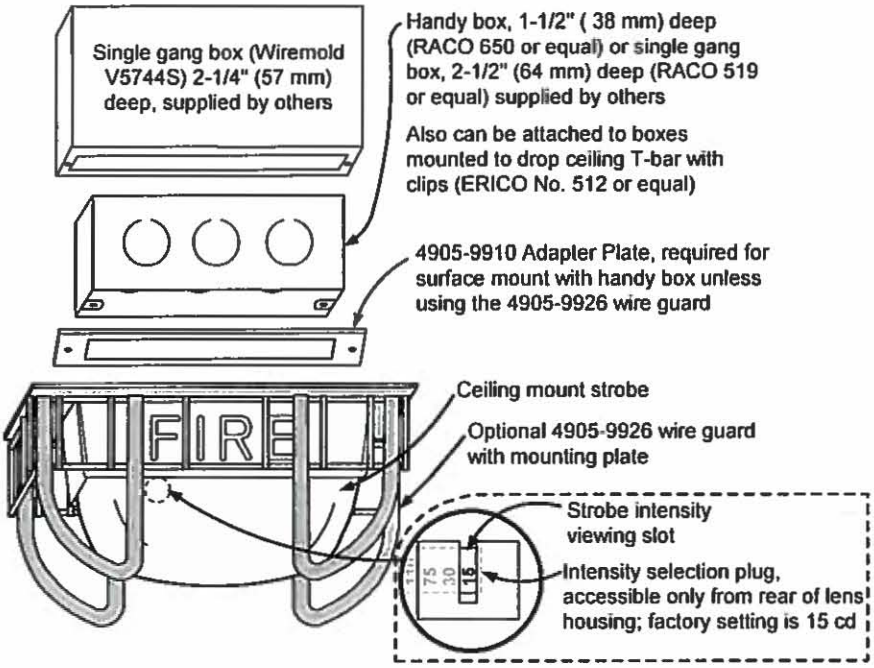
Installation Reference, Surface or Semi-Flush Wall Mounting



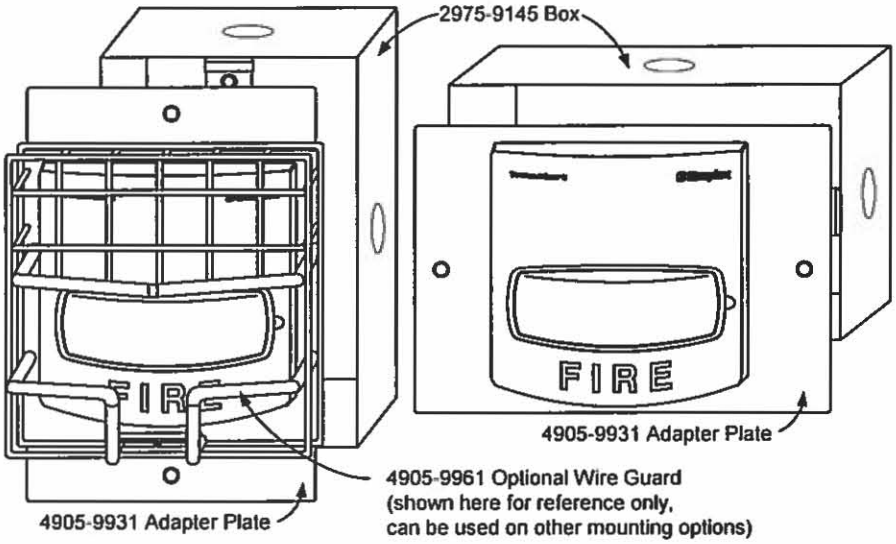


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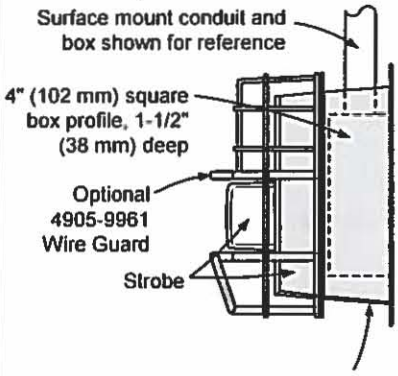
Ceiling Mount Strobe Installation Reference



Wall Mount Installation Reference; Adapter Plate, Guard, and Adapter Skirt



Surface Mounting Reference with Optional Adapter Skirt and Optional Wire Guard



Optional Surface Mount Adapter Skirt, 1-1/2" deep: 4905-9937, Red; 4905-9940, White (conduit knockouts are provided on all four sides)

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