

FIRE ALARM PLAN NOTES

120VAC (BY OTHERS)

ALLIANCE FIRE PROTECTION  
FIRE ALARM SYSTEM

DISCOVERY ANIMAL HOSPITAL

DRAWING INDEX

FA.100 COVER SHEET  
FA.101 FIRE ALARM FLOOR PLAN  
FA.600 PROJECT CALCULATIONS & LINE DIAGRAM

APPLICABLE CODES

NFPA 70 – NATIONAL ELECTRIC CODE (2017)  
NFPA 72 – NATIONAL FIRE ALARM & SIGNALING CODE (2016)  
NFPA 101 – LIFE SAFETY CODE (2018)  
INTERNATIONAL FIRE CODE – 2018  
INTERNATIONAL BUILDING CODE – 2018  
CONSTRUCTION: VB. OCCUPANCY: B. OCCUPANT LOAD: 43

SCOPE OF WORK:

AFP TO INSTALL A FIRE SPRINKLER MONITORING SYSTEM.  
DUCT DETECTORS INSTALLED BY OTHERS WILL BE MONITORED BY FIRE ALARM SYSTEM.  
SYSTEM MONITORED BY A REMOTE SUPERVISING STATION  
PER NFPA 72 26.5 (2016)

R1 – AHJ COMMENTS. ADD NOTIFICATION.

ABBREVIATIONS:

WP = WEATHER RESISTANT. ETR = EXISTING TO REMAIN.  
ROR = RATE OF RISE. RCP = REFLECTED CEILING PLAN.  
ER = EXISTING TO BE RELOCATED. SHOWN IN NEW LOCATION.  
NIC = NOT IN CONSTRUCTION. TI = TENANT IMPROVEMENT.

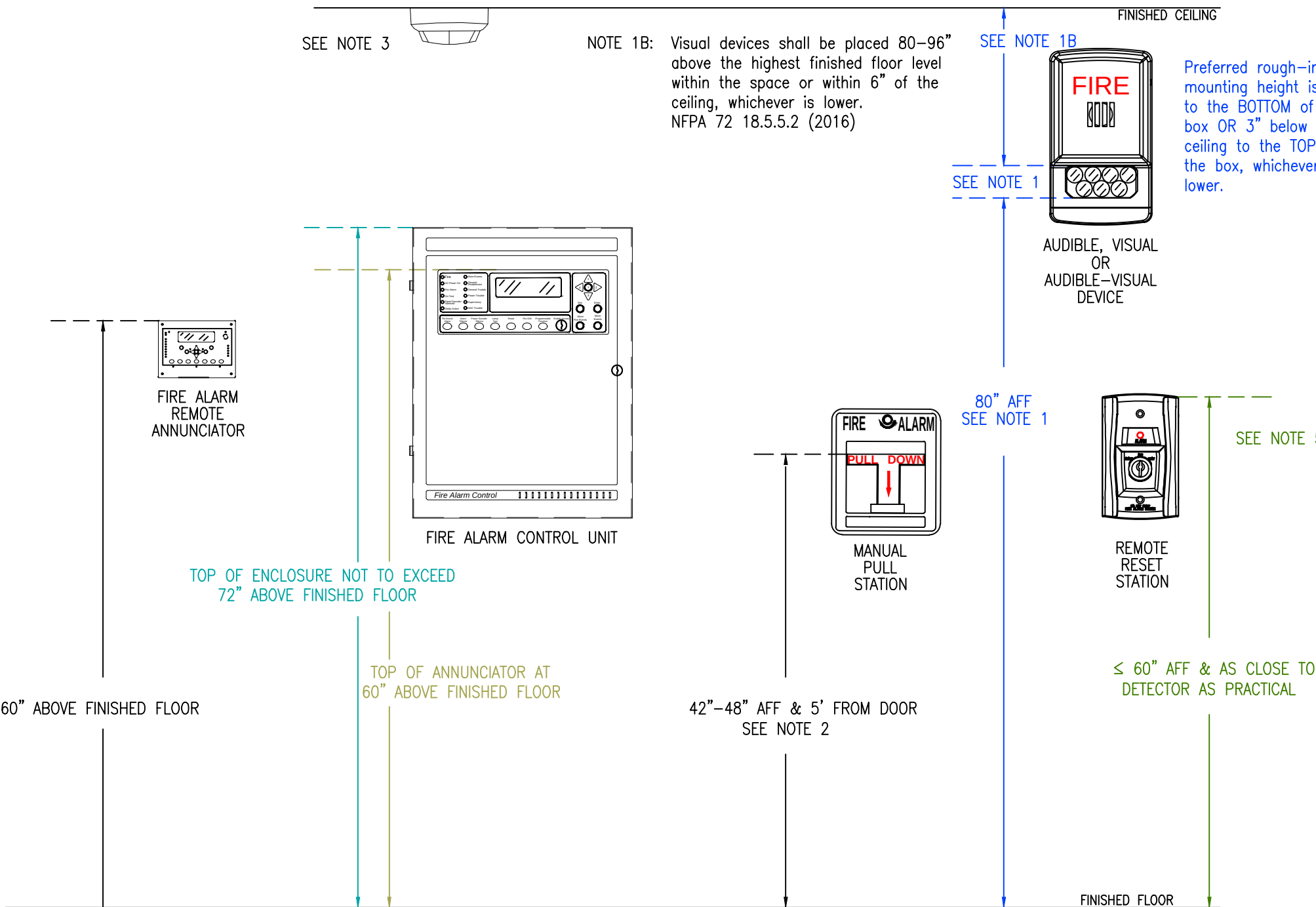
| FIRE ALARM SYMBOLS |                                                      |                                                                                                       |
|--------------------|------------------------------------------------------|-------------------------------------------------------------------------------------------------------|
| ICON               | DESCRIPTION                                          | MOUNTING REQUIREMENTS                                                                                 |
|                    | FIRE ALARM CONTROL UNIT                              | SURFACE MOUNTED ENCLOSURE PROVIDED, TOP 72" AFF; CONDUIT TO CEILING                                   |
|                    | FIRE ALARM REMOTE ANNUNCIATOR                        | 4" SQUARE, 1-1/2" STANDARD BOX, W/ SINGLE MUD RING; 60" AFF; CONDUIT TO CEILING                       |
|                    | CELLULAR COMMUNICATOR                                | SURFACE MOUNTED ENCLOSURE PROVIDED, TOP 72" AFF; CONDUIT TO FACU                                      |
|                    | REMOTE POWER SUPPLY PANEL                            | SURFACE MOUNTED ENCLOSURE PROVIDED, TOP 72" AFF; CONDUIT TO CEILING                                   |
|                    | PHOTO SMOKE DETECTOR                                 | 4" SQUARE, 1-1/2" STANDARD BOX W/ SINGLE MUD RING; NO HIGHER THAN 30" AFF                             |
|                    | THERMAL DETECTOR                                     | 4" SQUARE, 1-1/2" STANDARD BOX W/ SINGLE MUD RING; NO HIGHER THAN 30" AFF                             |
|                    | PHOTO SMOKE DUCT DETECTOR                            | INSTALL PER MANUFACTURER SPECIFICATIONS                                                               |
|                    | MANUAL PULL STATION                                  | 4" SQUARE, 1-1/2" STANDARD BOX W/ SINGLE MUD RING; 48" AFF & 5" FROM DOOR; CONDUIT TO CEILING         |
|                    | SINGLE MONITOR MODULE                                | 4" SQUARE, 2-1/8" DEEP BOX; CONDUIT TO CEILING                                                        |
|                    | DUAL MONITOR MODULE                                  | 4" SQUARE, 2-1/8" DEEP BOX; CONDUIT TO CEILING                                                        |
|                    | DUAL RELAY MODULE                                    | 4" SQUARE, 2-1/8" DEEP BOX; CONDUIT TO CEILING                                                        |
|                    | ALARM STROBE, CANDELA SHOWN                          | WALL MOUNTED, 80"-96" AFF OR (C) = CEILING MOUNTED; 4" SQUARE, 1-1/2" STANDARD BOX W/ SINGLE MUD RING |
|                    | ALARM H/S, CANDELA SHOWN                             | WALL MOUNTED, 80"-96" AFF OR (C) = CEILING MOUNTED; 4" SQUARE, 1-1/2" STANDARD BOX W/ SINGLE MUD RING |
|                    | END OF LINE RESISTOR PROVIDED BY CONTROL/DEVICE      | INSTALL AT THE LAST DEVICE OF THAT CIRCUIT                                                            |
|                    | SPRINKLER FLOW SWITCH BY OTHERS                      | HANDY BOX INSTALLED ON SWITCH; THEN INSTALL 1/2" FLEX CONDUIT TO 4" SQUARE, 2-1/8" DEEP BOX ON WALL   |
|                    | SPRINKLER TAMPER SWITCH BY OTHERS                    | HANDY BOX INSTALLED ON SWITCH; THEN INSTALL 1/2" FLEX CONDUIT TO 4" SQUARE, 2-1/8" DEEP BOX ON WALL   |
|                    | POST INDICATOR VALVE BY OTHERS                       | 1/2" WATER-TIGHT FLEX CONDUIT FROM SWITCH TO WEATHER-PROOF SINGLE GANG BOX ON U.G. CONDUIT            |
|                    | KITCHEN HOOD SUPPRESSION SYSTEM - BY OTHERS          | 4" SQUARE, 2-1/8" DEEP BOX; CONDUIT TO CEILING                                                        |
|                    | EXISTING ZAVOC MAGNETIC LOCK WITH SPST POWERED RELAY | DOOR FRAME MOUNTED, OPPOSITE OF DOOR SWING                                                            |
|                    | JUNCTION OF FIRE ALARM CABLES                        | 4" SQUARE, 2-1/8" DEEP BOX, BLANK COVER; CONDUIT TO CEILING                                           |

NOTE: NOT ALL SYMBOLS APPLY TO CURRENT PROJECT

| SEQUENCE OF OPERATION MATRIX |                                     |                 |                     |                                 |                        |                                    |                         |                               |  |
|------------------------------|-------------------------------------|-----------------|---------------------|---------------------------------|------------------------|------------------------------------|-------------------------|-------------------------------|--|
|                              | ALARM AT FACU                       | TRouble AT FACU | SUPERVISORY AT FACU | WALL MOUNTED REMOTE ANNUNCIATOR | MANUAL / RPTI SHUTDOWN | STATUS SENT TO OFF-SITE MONITORING | ELEVATOR PHASE 1 RECALL | ELEVATOR EQUIPMENT SHUNT TRIP |  |
| FIRE ALARM INPUTS            |                                     |                 |                     |                                 |                        |                                    |                         |                               |  |
| 1                            | MANUAL PULL STATION                 | X               |                     | X                               | X                      | X                                  |                         |                               |  |
| 2                            | WATER FLOW                          | X               |                     | X                               | X                      | X                                  |                         |                               |  |
| 3                            | SMOKE DETECTOR                      | X               |                     | X                               | X                      | X                                  |                         |                               |  |
| 4                            | HEAT DETECTOR                       | X               |                     | X                               | X                      | X                                  |                         |                               |  |
| 5                            | ELEVATOR LOBBY SMOKE(S)             | X               |                     | X                               | X                      | X                                  | X                       |                               |  |
| 6                            | ELEVATOR EQUIPMENT ROOM SMOKE       | X               |                     | X                               | X                      | X                                  | X                       |                               |  |
| 7                            | ELEVATOR EQUIPMENT ROOM HEAT        | X               |                     | X                               | X                      | X                                  | X                       | X                             |  |
| 8                            | ELEVATOR SHAFT HEAT                 | X               |                     | X                               | X                      | X                                  | X                       | X                             |  |
| 9                            | ELEVATOR SHAFT SMOKE                | X               |                     | X                               | X                      | X                                  | X                       | X                             |  |
| 10                           | KITCHEN HOOD / ANSUL                | X               |                     | X                               | X                      | X                                  |                         |                               |  |
| SUPERVISORY ALARM INPUTS     |                                     |                 |                     |                                 |                        |                                    |                         |                               |  |
| 1                            | DUCT DETECTOR                       |                 |                     | X                               |                        | X                                  | X                       |                               |  |
| 2                            | TAMPER SWITCH                       |                 |                     | X                               |                        | X                                  |                         |                               |  |
| 3                            | CARBON MONOXIDE DETECTOR            |                 |                     | X                               |                        | X                                  |                         |                               |  |
| TROUBLE CONDITIONS           |                                     |                 |                     |                                 |                        |                                    |                         |                               |  |
| 1                            | OPEN CIRCUIT                        |                 | X                   |                                 |                        |                                    | X                       |                               |  |
| 2                            | SHORT CIRCUIT                       |                 | X                   |                                 |                        |                                    | X                       |                               |  |
| 3                            | GROUND FAULT                        |                 | X                   |                                 |                        |                                    | X                       |                               |  |
| 4                            | BAD DEVICE, DIRTY DEVICE, NO ANSWER |                 | X                   |                                 |                        |                                    | X                       |                               |  |
| 5                            | LOW BATTERY                         |                 | X                   |                                 |                        |                                    | X                       |                               |  |
| 6                            | MAIN POWER FAIL                     |                 | X                   |                                 |                        |                                    | X                       |                               |  |

NOTE: NOT ALL CONDITIONS APPLY TO CURRENT PROJECT.

FUNCTIONAL MATRIX

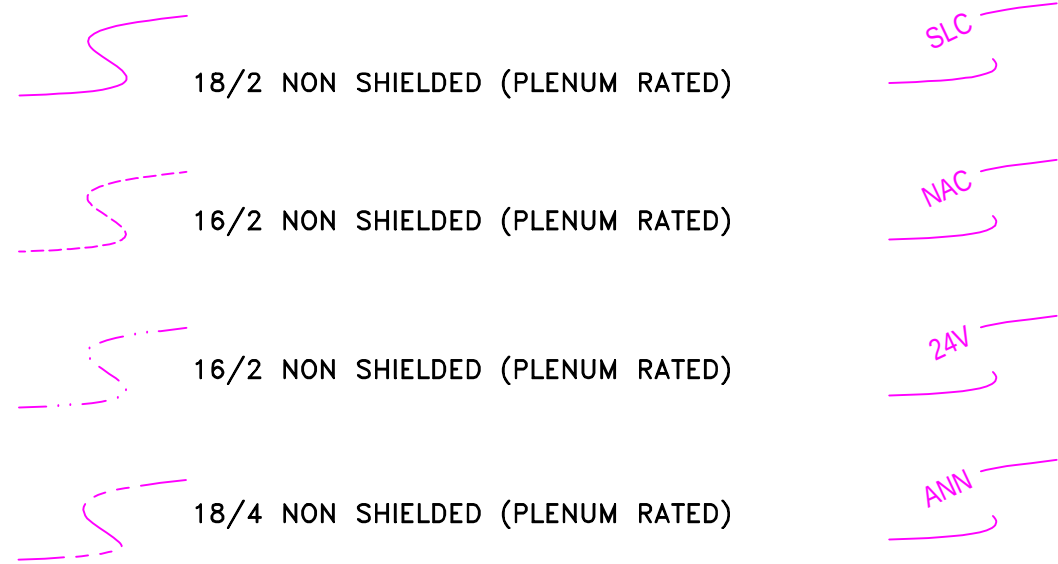


RECOMMENDED MOUNTING DETAIL  
NOT TO SCALE

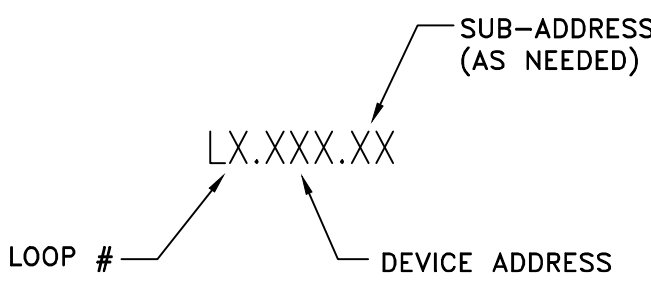
FIRE ALARM GENERAL NOTES

- WALL MOUNTED APPLIANCES SHALL BE MOUNTED SUCH THAT THE ENTIRE LENS IS NOT LESS 80" AND NOT GREATER THAN 96" ABOVE THE FINISHED FLOOR.  
NFPA 72 18.5.5.1 (2016)
- MANUAL FIRE ALARM BOXES SHALL BE LOCATED WITHIN 5' OF EXIT DOORWAY.  
NFPA 72 17.14.8.4 (2016)  
–THE OPERABLE PART OF A MANUALLY ACTUATED ALARM INITIATING DEVICE SHALL BE NOT LESS THAN 42" AND NOT MORE THAN 48" FROM THE FINISHED FLOOR.  
NFPA 72 17.14.5 (2016)
- IF THE INTENT IS TO INITIATE ACTION WHEN SMOKE/FIRE THREATENS A SPECIFIC OBJECT, THE DETECTOR SHALL BE PERMITTED TO BE INSTALLED IN CLOSE PROXIMITY TO THAT OBJECT.  
NFPA 72 17.4.8 (2016)  
A: IN HIGH–CEILING AREAS, DETECTION SHOULD BE PLACED ON THE WALL ABOVE AND WITHIN 60" OF THE PROTECTED ITEM.  
NFPA 72 A17.4.8 (2016)
- ALL WIRING IN OPEN CEILING TO BE RUN PARALLEL AND PERPENDICULAR TO BUILDING STRUCTURE.  
WIRING SHOULD BE CONCEALED FROM VIEW AS BEST POSSIBLE.
- WHERE DUCT SMOKE DETECTORS ARE NOT RESETTABLE FROM THE PROTECTED PREMISES FIRE ALARM SYSTEM, A LISTED ALARM/ SUPERVISORY INDICATOR WITH INTEGRAL RESET SWITCH SHALL BE PROVIDED IN AN ACCESSIBLE LOCATION.  
NFPA 72 23.8.5.4.6.4 (2016)

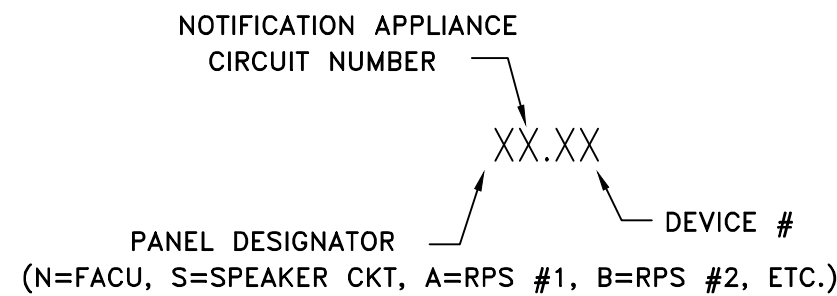
WIRING LEGEND



SIGNAL LINE CIRCUIT  
DEVICE ADDRESS KEY



NOTIFICATION DEVICE ADDRESS KEY



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written permission.

|                          |
|--------------------------|
| AHJ                      |
| LEE'S SUMMIT             |
| Designer NICET Level III |
| TROY KOEHN               |
| Scale                    |
| AS INDICATED             |
| Job Number               |
| 41859788                 |
| Date                     |
| 07/07/2025               |
| Description              |
| FIRE ALARM               |
| System Type              |
| VES / ELITE RS           |

|                    |
|--------------------|
| Revisions          |
| AHJ COMMENTS 08/25 |
|                    |
|                    |
|                    |
|                    |

|           |
|-----------|
| AHJ STAMP |
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|           |
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|                               |
|-------------------------------|
| Design Professional of Record |
| 09/08/2025                    |
|                               |
|                               |
|                               |
|                               |

**Alliance**  
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PH: 913-888-0647 FAX: 913-888-0618

|                           |            |                               |                        |            |
|---------------------------|------------|-------------------------------|------------------------|------------|
| DISCOVERY ANIMAL HOSPITAL | FIRE ALARM | 1901 NE TRAILS EDGE BOULEVARD | LEE'S SUMMIT, MO 64086 | COVER PAGE |
|---------------------------|------------|-------------------------------|------------------------|------------|

|              |
|--------------|
| Sheet Number |
| FA.100.R1    |



1



ALL CEILINGS ARE 9'-11" AFF UNLESS NOTED OTHERWISE

Sheet Number

FA.101.R1



BATTERY QTY: 2

| Project Name                       |  |  |  |  | Point to Point Method    |  |  | CIRCUIT MAX CURRENT      |  |  |
|------------------------------------|--|--|--|--|--------------------------|--|--|--------------------------|--|--|
| ANIMAL HOSPITAL                    |  |  |  |  | CIRCUIT IS WITHIN LIMITS |  |  | CIRCUIT IS WITHIN LIMITS |  |  |
| Date                               |  |  |  |  | Totals                   |  |  | Circuit limit (AMPS):    |  |  |
| 5-Sep-2025                         |  |  |  |  | Voltage                  |  |  | 2.600                    |  |  |
| Circuit Number                     |  |  |  |  | Current                  |  |  | Current:                 |  |  |
| N1                                 |  |  |  |  | Distance                 |  |  | Dropping:                |  |  |
| Area Covered                       |  |  |  |  | End of Line Voltage      |  |  | Total:                   |  |  |
| BUILDING                           |  |  |  |  | Percent Drop             |  |  | 6.80%                    |  |  |
| Nominal System Voltage             |  |  |  |  | Wire Gauge               |  |  |                          |  |  |
| Minimum Device Voltage             |  |  |  |  |                          |  |  |                          |  |  |
| Total Circuit Current              |  |  |  |  |                          |  |  |                          |  |  |
| 0.987                              |  |  |  |  |                          |  |  |                          |  |  |
| Distance from source to 1st device |  |  |  |  |                          |  |  |                          |  |  |
| 25                                 |  |  |  |  |                          |  |  |                          |  |  |
| Wire Gauge for balance of circuit  |  |  |  |  |                          |  |  |                          |  |  |
| 16                                 |  |  |  |  |                          |  |  |                          |  |  |
| 4.016                              |  |  |  |  |                          |  |  |                          |  |  |
| Enter current in amps              |  |  |  |  |                          |  |  |                          |  |  |
| 0.150 = 150 ma                     |  |  |  |  |                          |  |  |                          |  |  |
| Distance from previous device      |  |  |  |  |                          |  |  |                          |  |  |
| At Device                          |  |  |  |  |                          |  |  |                          |  |  |
| Voltage Drop from source           |  |  |  |  |                          |  |  |                          |  |  |
| Percent Drop                       |  |  |  |  |                          |  |  |                          |  |  |
| Device #                           |  |  |  |  |                          |  |  |                          |  |  |
| Current                            |  |  |  |  |                          |  |  |                          |  |  |
| N1.01                              |  |  |  |  |                          |  |  |                          |  |  |
| 0.046                              |  |  |  |  |                          |  |  |                          |  |  |
| 25                                 |  |  |  |  |                          |  |  |                          |  |  |
| N1.02                              |  |  |  |  |                          |  |  |                          |  |  |
| 0.077                              |  |  |  |  |                          |  |  |                          |  |  |
| 25                                 |  |  |  |  |                          |  |  |                          |  |  |
| N1.03                              |  |  |  |  |                          |  |  |                          |  |  |
| 0.022                              |  |  |  |  |                          |  |  |                          |  |  |
| 6                                  |  |  |  |  |                          |  |  |                          |  |  |
| N1.0                               |  |  |  |  |                          |  |  |                          |  |  |



NOT TO SCALE.  
RISER DIAGRAM IS CONCEPTUAL ONLY.  
EXACT WIRING ORDER TO BE FIELD  
VERIFIED, AND REFLECTED ON AS-BUILT.