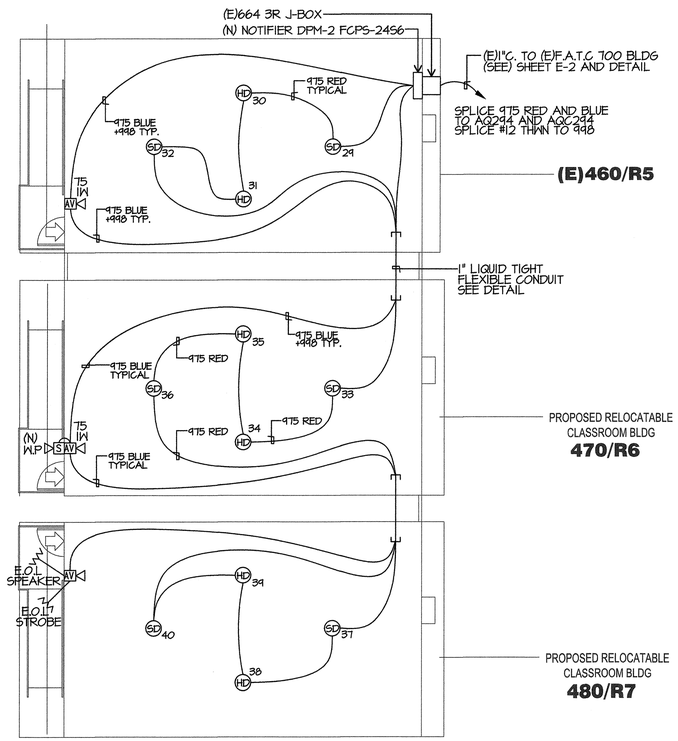
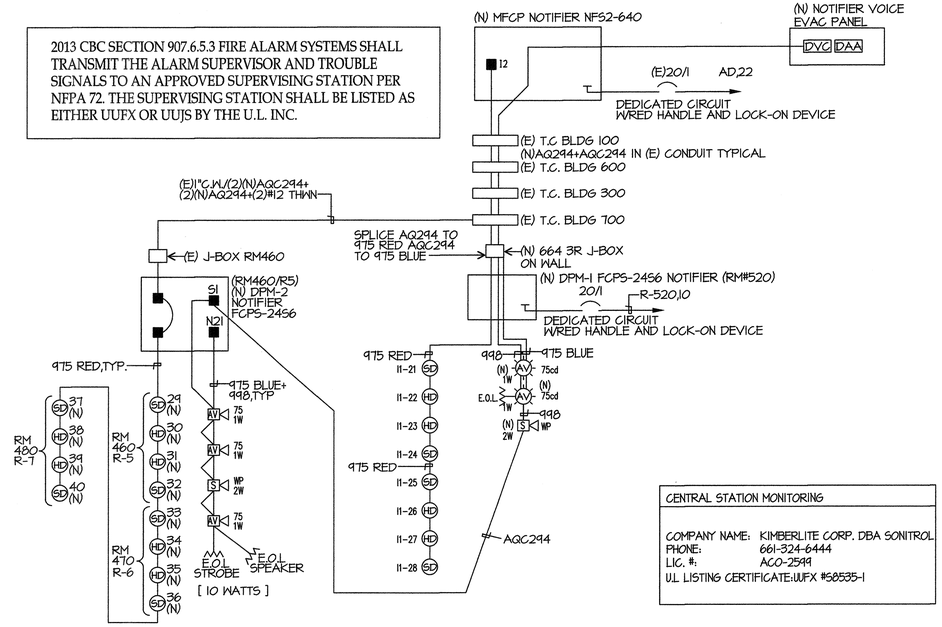



FIRE ALARM TYPICAL PORTABLE PLAN (B)

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

2013 CBC SECTION 907.6.5.3 FIRE ALARM SYSTEMS SHALL TRANSMIT THE ALARM SUPERVISOR AND TROUBLE SIGNALS TO AN APPROVED SUPERVISING STATION PER NFPA 72. THE SUPERVISING STATION SHALL BE LISTED AS EITHER UUFX OR UUJS BY THE U.L. INC.




CENTRAL STATION MONITORING

COMPANY NAME: KIMBERLITE CORP. DBA SONITROL
PHONE: 661-324-6444
LIC. #: ACO-2594
UL LISTING CERTIFICATE:UUFX #58535-1

FIRE ALARM RISER DIAGRAM (A)

SCALE: NONE

## VOLTAGE DROP CALCULATIONS

| CIRCUIT | 2x | LENGTH x | AMPS x | RESISTANCE x | = VOLTS | VOLTAGE DROP |
|---|---|---|---|---|---|---|
| N21 | 2 | 200 | 0.474 | 0.00205 | 0.389 | 1.62 % |

## FA SYMBOL LIST MATRIX

| SYMBOL | DEVICE | MFR & CAT N. | REMARKS | CSFM LISTING |
|---|---|---|---|---|
| SD | SMOKE DETECTOR | NOTIFIER FSP-851 | PROVIDE BASE B210 LP ON 4"SQ. DEEP BOX | 7272-0028:0206 |
| AV | SPEAKER/STROBE | NOTIFIER SPSR | PROVIDE 4"SQ. DEEP BOX | 7320-1653:201 |
| S WP | EXTERIOR SPEAKER | NOTIFIER SPRK | PROVIDE MWBB X46" | 7320-1653:201 |
| HD | HEAT DETECTOR (IN ATTIC SPACE) | NOTIFIER FST-851 | PROVIDE BASE B210 LP ON 4"SQ. DEEP BOX | 7270-0028:0196 |
| | (N)MAIN FIRE ALARM PANEL | NOTIFIER NFS2-640 | PROVIDE (2) DEDICATED PHONE LINES | 7165-0028:0243 |
| DPM | NAC POWER | NOTIFIER FCPS-2456 | | 7315-0028:0225 |
| DVC | DIGITAL VOICE COMMAND | NOTIFIER DVC-EM | SURFACE MOUNT | 7165-0028:0224 |
| DAA | DIGITAL AUDIO AMP | NOTIFIER DAA-5025 | PART OF DVC | 7165-0028:0224 |
| ⩘ | END OF LINE RESISTOR | | | |
| ——— | AQ244 CABLE | WEST PENN | | 7161-0859:0101 |
| ——— | AQC244 CABLE | WEST PENN | | 7161-0859:0101 |
| ——— | 975 CABLE | WEST PENN | | 7161-0859:0101 |

## FIRE ALARM SEQUENCE OF OPERATION

| RESPONSE \ INITIATION | AREA SMOKE DETECTOR | AREA THERMAL DETECTOR | FULL STATION | AC POWER FAILURE |
|---|---|---|---|---|
| ANNUNCIATE AT FIRE CONTROL ROOM ALARM AND TROUBLE | YES | YES | YES | YES (TROUBLE) |
| CENTRAL STATION MONITORING | YES | YES | YES | YES |
| ACTIVATE AUDIO VISUAL THROUGHOUT FLOOR OF ALARM | YES | YES | YES | YES |
| CENTRAL STATION MONITORING | YES | YES | YES | YES |
| ACTIVATE VOICE EVACUATION | YES | YES | YES | NO |

## DEVICE NUMBERING LEGEND

DEVICE ADDRESS:

I I-I SD
- DEVICE SYMBOL
- DEVICE REFERENCE NUMBER
- CIRCUIT NUMBER
- INITIATION

N I-I AV 75cd
- CANDELA SETTING
- DEVICE SYMBOL
- DEVICE REFERENCE NUMBER
- CIRCUIT NUMBER
- NOTIFICATION

**New FIRE ALARM BATTERY CALCULATION-DISTRIBUTED POWER MODULE FCPS-24**

| DPM-2 EQUIPMENT DESCRIPTION | | QUANTITY EXISTING | QUANTITY NEW | SUPERVISORY CURRENT (AMPERES) EACH | SUPERVISORY CURRENT (AMPERES) SUB-TOTAL | ALARM CURRENT (AMPERES) EACH | ALARM CURRENT (AMPERES) SUB-TOTAL |
|---|---|---|---|---|---|---|---|
| DISTRIBUTED POWER MODULE | | 0 | 1 | 0.065 | 0.065 | 0.145 | 0.145 |
| FCM-1 | | 0 | 1 | 0.0003 | 0.0003 | 0.0003 | 0.0003 |
| | | | | | | | |
| | | 0 | 0 | 0 | 0 | 0.062 | 0 |
| VISUALS | 15 cd | 0 | 0 | 0 | 0 | 0.066 | 0 |
| VISUALS | 15/75 cd | 0 | | 0 | 0 | 0.077 | 0 |
| VISUALS | 30 cd | 0 | 0 | 0 | 0 | 0.094 | 0 |
| VISUALS | 75 cd | 0 | 3 | 0 | 0 | 0.158 | 0.474 |
| VISUALS | 95 cd | 0 | 0 | 0 | 0 | 0.202 | 0 |
| | | 0 | 0 | 0 | 0 | 0 | 0 |
| | | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | 0 | | 0 |
| | | 0 | 0 | 0 | 0 | 0 | 0 |
| SUB TOTAL AMPERES | | | | 0.0653 AMPS | | 0.6193 AMPS | |
| | | | | x 24 HOURS | | X 0.25 HOURS | |
| SUB TOTAL AMPERE-HOURS | | | | 1.5672 | A.H. | 0.154825 | A.H. |
| | | | | | | | |
| TOTAL REQUIRED AMPERE-HOURS FOR DISTRIBUTED POWER MODULE | | | | | | 1.722025 | A.H. |
| BATTERY NON-LINEAR DISCHARGE CHARACTERISTIC FACTOR | | | | | | x 1.2 | |
| TOTAL MINIMUM AMPERE HOURS REQUIRED | | | | | | 2.06643 | A.H. |
| PROVIDED BATTERY CAPACITY | | | | | | 7.00 | A.H. |

**NEW VOICE PANEL BATTERY CALCULATION – DVC-EM**

| EQUIPMENT DESCRIPTION | | QUANTITY EXISTING | QUANTITY NEW | SUPERVISORY CURRENT (AMPERES) EACH | SUPERVISORY CURRENT (AMPERES) SUB-TOTAL | ALARM CURRENT (AMPERES) EACH | ALARM CURRENT (AMPERES) SUB-TOTAL |
|---|---|---|---|---|---|---|---|
| DVC | | 0 | 1 | 0.44 | 0.44 | 0.44 | 0.44 |
| DAA 5025 | | 0 | 1 | 0.35 | 0.35 | 1.9 | 1.9 |
| | | | | | 0 | | 0 |
| ¼ Watt Speaker | | 0 | 0 | 0 | 0 | 0.017 | 0 |
| 1 Watt Speaker | | 0 | 5 | 0 | 0 | 0.068 | 0.34 |
| 2 Watt Speaker | | 0 | 2 | | 0 | 0.132 | 0.264 |
| | | 0 | 0 | | 0 | 0 | 0 |
| VISUALS | 75 cd | 0 | 0 | | 0 | 0.158 | 0 |
| VISUALS | 30 cd | 0 | 0 | 0 | 0 | 0.094 | 0 |
| VISUALS | 15 cd | 0 | 0 | 0 | 0 | 0.066 | 0 |
| | | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | 0 | | 0 |
| | | 0 | 0 | 0 | 0 | 0 | 0 |
| SUB TOTAL AMPERES | | | | 0.79 AMPS | | 2.944 AMPS | |
| | | | | x 24 HOURS | | X 0.25 HOURS | |
| SUB TOTAL AMPERE-HOURS | | | | 18.96 | A.H. | 0.736 | A.H. |
| | | | | | | | |
| TOTAL REQUIRED AMPERE-HOURS FOR DISTRIBUTED POWER MODULE | | | | | | 19.696 | A.H. |
| BATTERY NON-LINEAR DISCHARGE CHARACTERISTIC FACTOR | | | | | | x 1.2 | |
| TOTAL MINIMUM AMPERE HOURS REQUIRED | | | | | | 23.6352 | A.H. |
| Existing BATTERY CAPACITY | | | | | | 55.00 | A.H. |

**(N) FIRE ALARM BATTERY CALCULATION NFS-640**

| EQUIPMENT DESCRIPTION | | QUANTITY EXISTING | QUANTITY NEW | SUPERVISORY CURRENT (AMPERES) EACH | SUPERVISORY CURRENT (AMPERES) SUB-TOTAL | ALARM CURRENT (AMPERES) EACH | ALARM CURRENT (AMPERES) SUB-TOTAL |
|---|---|---|---|---|---|---|---|
| FIRE ALARM PANEL | | 1 | 0 | 0.1 | 0.1 | 0.1 | 0.1 |
| DIGITAL ALARM COMMUNICATOR | | 1 | 0 | 0.02 | 0.02 | 0.02 | 0.02 |
| SUPERVISED OUTPUT MODULE | | | | 0.00022 | 0 | 0.0003 | 0 |
| | | | | 0 | 0 | 0 | 0 |
| SMOKE DETECTOR | | 9 | 6 | 0.00039 | 0.00585 | 0.00039 | 0.00585 |
| HEAT DETECTOR | | 7 | 6 | 0.00035 | 0.00455 | 0.00035 | 0.00455 |
| HORNS | | 8 | 0 | | 0 | 0.062 | 0.496 |
| AUDIBLE/VISUALS | 75 cd | 18 | 0 | | 0 | 0.121 | 2.178 |
| AUDIBLE/VISUALS | 15 cd | 21 | | | 0 | 0.052 | 1.092 |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| SUB TOTAL AMPERES | | | | 0.1304 AMPS | | 3.8964 AMPS | |
| | | | | x 24 HOURS | | x 0.25 HOURS | |
| SUB TOTAL AMPERE-HOURS | | | | 3.1296 | A.H. | 0.327298 | A.H. |
| | | | | | | | |
| TOTAL REQUIRED AMPERE-HOURS FOR DISTRIBUTED POWER MODULE | | | | | | 3.456898 | A.H. |
| BATTERY NON-LINEAR DISCHARGE CHARACTERISTIC FACTOR | | | | | | x 1.2 | |
| TOTAL MINIMUM AMPERE HOURS REQUIRED | | | | | | 4.148277 | A.H. |
| BATTERY AH SUPPLIED (NEW) | | | | | | 26.00 | A.H. |


PRIME CONSULTANT

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San Luis Obispo
4115 Broad Street, Suite B-6
San Luis Obispo, CA 93401
805.546.0433 fax:805.546.0504


SEAL

LICENSED ARCHITECT RICHARD W. IVEY No. C18079 REN. 10/17 STATE OF CALIFORNIA


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REVISIONS

| NO. | DATE | APPRD. | DESCRIPTION |
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CONSULTANT

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LIGHTING DESIGN
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FAX (661) 831-7813
email : mahoney@jmpe.net
www.jmpe.net
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AGENCY INFORMATION:

AGENCY TRACKING NO. 63321-212
FILE NO. 15-6

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DIV. OF THE STATE ARCHITECT
OFFICE OF REGULATION SERVICES
03-117283
AC FLS SS
DATE SEP 13 2016

BAKERSFIELD CITY SCHOOL DISTRICT

**CHIPMAN JR. HIGH RELOCATABLES R-6 & R-7**

2905 EISSLER ST
BAKERSFIELD, CA 93306

| | |
|---|---|
| OPSC or OSHPD PROJ. NO: | |
| PROJECT NO: | 16132.000 |
| DRAWN BY: | AC |
| CHK'D BY: | WR |
| ISSUE DATE: | 08/22/2016 |

SHEET TITLE

FIRE ALARM RISER CALCULATIONS

SHEET NUMBER

E-0.2

PLOT DATE: 5/10/2016 3:51:53 PM J:\16132_BC_ChipReloc2\5.9 Drawings\Branch\current\ATW-16132-site_Chipman 2relo.rvt