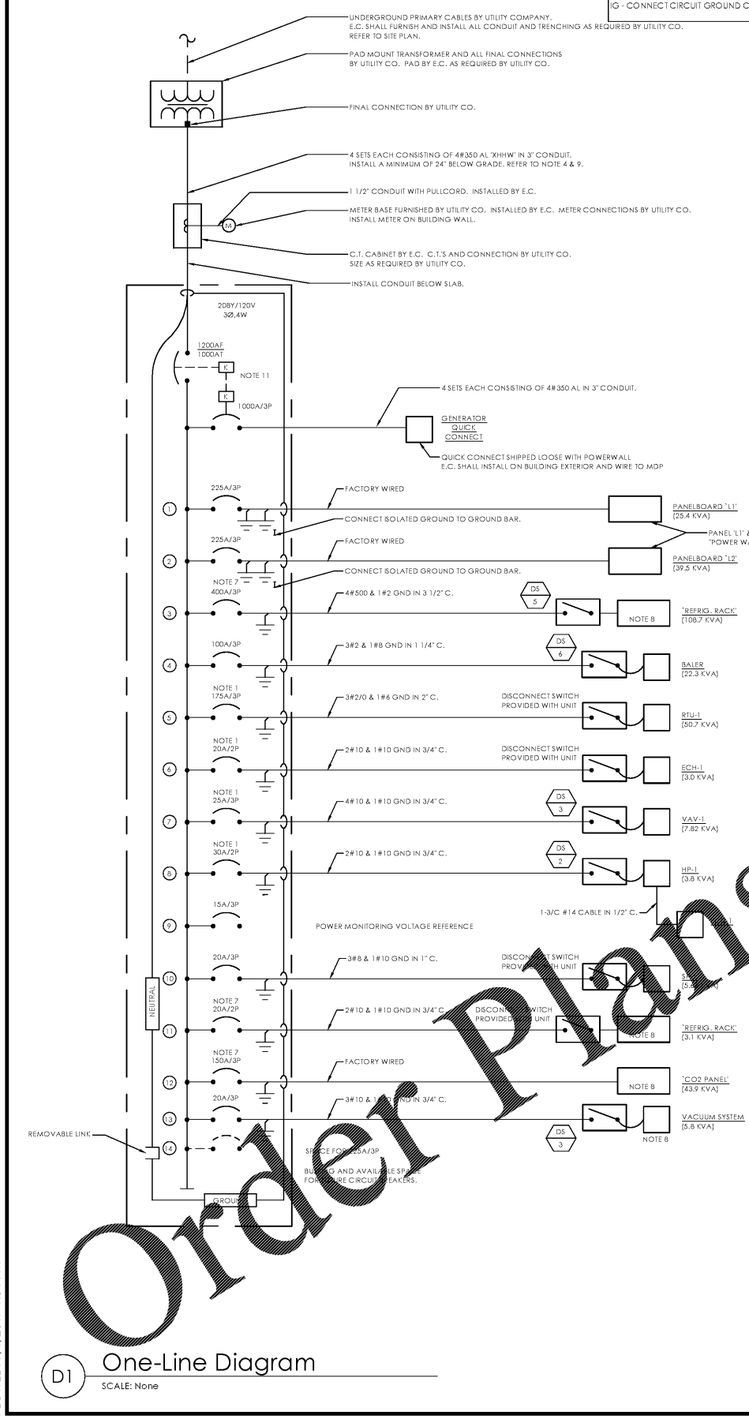
## ELECTRICAL LOAD SUMMARY

| LOAD DESCRIPTION | CONNECTED LOAD (KVA) | DEMAND FACTOR | DEMAND (KVA) | CODE SECTION |
|---|---|---|---|---|
| LIGHTING | 21.581 | 1.25 | 26.976 | N.E.C. 215.2 |
| RECEPTACLES | 30.289 | 10 + (50% REMAINING) | 20.145 | N.E.C. 220.44 |
| MOTOR | 99.216 | 1+(0.25*LARGEST MOTOR) | 104.791 | N.E.C. 330.24 |
| HEATING | 7.125 | 1 | 7.125 | N.E.C. 220.51 |
| REFRIGERATION | 160.673 | 1 | 160.673 | N.E.C. 440 |
| TOTAL LOAD (KVA) | 318.884 | | 319.710 | |
| AMPS | 885.13 | | 887.43 | |

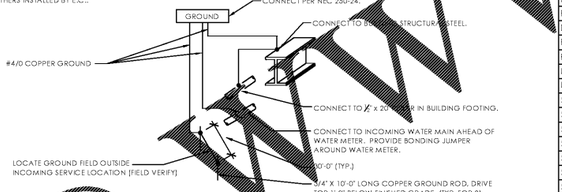
NOTES:
HL - FURNISH WITH HANDLE LOCK.
CC - ROUTE THROUGH CPC CONTACTOR ENCLOSURE. REFER TO DETAIL D1/E-102.
G - CONNECT CIRCUIT GROUND CONDUCTOR TO ISOLATED GORUND BUS.




D1 One-Line Diagram
SCALE: None

NOTES:

1. VERIFY CIRCUIT BREAKER SIZE WITH MANUFACTURER'S DATA RECOMMENDATIONS. BREAKER SHALL BE HACR RATED.
2. INDICATES DIRECT CONNECTION OF GROUND CONDUCTOR TO GROUND BUS. SUBSCRIPT 'I' INDICATES DIRECT CONNECTION OF ISOLATED GROUND CONDUCTOR TO ISOLATED GROUND BUS.
3. INDICATES O.Z. GEDNEY OR EQUAL GROUND BUSHING BONDED TO GROUND BUS WITH CONDUCTOR SIZED TO MAXIMUM FEEDER GROUND CAPACITY.
4. ALL SERVICE ENTRANCE CONDUITS SHALL BE INSTALLED IN ACCORDANCE WITH UTILITY COMPANY REQUIREMENTS, NEC REQUIREMENTS AND SPECIFICATIONS.
5. CONDUCTOR AND CONDUIT SIZES ON THE LINE AND LOAD SIDES OF ALL NON-FUSIBLE DISCONNECT SWITCHES SHALL BE IDENTICAL UNLESS NOTED OTHERWISE.
6. THE SHORT CIRCUIT RATING OF ALL SERVICE EQUIPMENT AND PANEL BOARDS SHALL BE NOT LESS THAN 42,000 AIC. BEFORE PURCHASING EQUIPMENT THE ELECTRICAL CONTRACTOR SHALL CONTACT THE POWER CO. AND OBTAIN IN WRITING THE MAXIMUM SHORT CIRCUIT CURRENT AVAILABLE AT THE POINT OF SERVICE. ALL EQUIPMENT SHALL BE RATED AND COORDINATED TO NO LESS THAN THIS VALUE.
7. VERIFY REFRIGERATION EQUIPMENT RATING WITH REFRIGERATION CONTRACTOR: MODIFY ASSOCIATED CIRCUIT BREAKER RATING AND EQUIPMENT BRANCH CIRCUIT AS REQUIRED.
8. ALL BRANCH WIRING TO BE FURNISHED AND INSTALLED BY REFRIGERATION INSTALLER. ELECTRICAL CONTRACTOR ONLY FURNISHES, INSTALLS, AND TERMINATES THE 400A FEEDER FROM DP-1 TO DISCONNECT SWITCH. CONNECTION FROM DISCONNECT SWITCH TO REFRIGERATION RACK BY REFRIGERATION INSTALLER.
9. SERVICE ENTRANCE FEEDER REQUIREMENTS SHOWN ARE MINIMUM REQUIREMENTS. E.C. SHALL FULLY COORDINATE SERVICE ENTRANCE ROUTING AND CONDUIT REQUIREMENTS WITH UTILITY COMPANY PRIOR TO BID.
10. E.C. SHALL COORDINATE AND APPLY FOR ALL SERVICE REQUESTS FROM UTILITY COMPANY AS EARLY AS POSSIBLE TO AVOID DELAYS IN OBTAINING SERVICE.
11. ELECTRICAL CONTRACTOR SHALL RECEIVE APPROVAL FROM UTILITY COMPANY FOR KIRK-KEY INTERLOCK SCHEME FOR GENERATOR CONNECTION. COORDINATE ALL REQUIREMENTS WITH UTILITY COMPANY AND ALDI REP.




@3 Service Entrance Grounding Detail
SCALE: None

## PANEL L1

EXCEL FILE: N:\62\40320\40 - Virginia Beach, VA (Thalia & VA Beach)\Docs\Calcs\MEP\Panel Schedules\[ALDI 40320-40 - Panel Schedules_v3_0_2 - Copy.xlsm]

LOCATION: BACK ROOM
MOUNTING: SURFACE
FRAME SIZE: 225
MAIN SIZE: 200 AMP MLO
FED FROM: PANEL DP
DISTRIBUTION: 208Y/120V
PHASE: 3
WIRE: 4
FAULT CURRENT RATING (KAIC): 42

| BRANCH CIRCUIT DESCRIPTION | KVA | WIRE SIZE | GND SIZE | CB | P | NOTE | CKT | A | B | C | CKT | CB | P | NOTE | WIRE SIZE | GND SIZE | KVA | BRANCH CIRCUIT DESCRIPTION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NIGHT LIGHTING | 0.994 | 10 | 10 | 20 | 1 | HL | 1 | • | | | 2 | 15 | 1 | | 12 | 12 | 0.100 | CPC I/O PANEL |
| SALES AREA LIGHTING (PRODUCE) | 1.716 | 10 | 10 | 20 | 1 | CC | 3 | | • | | 4 | 20 | 1 | | 12 | 12 | 0.729 | LIGHTS OFFICE, BREAKROOM, TOILET |
| SALES AREA LIGHTING (REAR AISLE) | 0.616 | 10 | 10 | 20 | 1 | CC | 5 | | | • | 6 | 20 | 1 | | 10 | 10 | 0.572 | LIGHTS BACKROOM |
| SALES AREA LIGHTING (AISLE 5) | 1.100 | 10 | 10 | 20 | 1 | CC | 7 | • | | | 8 | 20 | 1 | | | | | SPARE |
| SALES AREA LIGHTING (AISLE 4) | 0.924 | 10 | 10 | 20 | 1 | CC | 9 | | • | | 10 | 20 | 1 | CC | 10 | 10 | 0.420 | CANOPY TOWER SIGN |
| SALES AREA LIGHTING (AISLE 3) | 1.100 | 10 | 10 | 20 | 1 | CC | 11 | | | • | 12 | 20 | 1 | CC | 10 | 10 | 0.420 | CANOPY TOWER SIGN |
| SALES AREA LIGHTING (AISLE 2) | 0.924 | 10 | 10 | 20 | 1 | CC | 13 | • | | | 14 | 20 | 1 | CC | 10 | 10 | 0.432 | CANOPY FOODMART |
| SALES AREA LIGHTING (AISLE 1) | 1.544 | 10 | 10 | 20 | 1 | CC | 15 | | • | | 16 | 20 | 1 | CC | 8 | 8 | 0.528 | PYLON/MONUMENT SIGN |
| SALES AREA LIGHTING (FRONT AISLE) | 1.276 | 10 | 10 | 20 | 1 | CC | 17 | | | • | 18 | 20 | 1 | | 10 | 10 | 0.204 | EXTERIOR BUILDING LIGHTS |
| SALES AREA LIGHTING (CHECKOUT) | 1.056 | 10 | 10 | 20 | 1 | CC | 19 | • | | | 20 | 20 | 1 | CC | 10 | 10 | 0.258 | ENTRY AREA LIGHTS |
| SALES AREA ILLUMINATED SIGN BOXES | 0.720 | 10 | 10 | 20 | 1 | CC | 21 | | • | | 22 | 20 | 1 | CC | 10 | 10 | 0.527 | SALES AREA MDU LIGHTS |
| SALES AREA ILLUMINATED SIGN BOXES | 0.720 | 10 | 10 | 20 | 1 | CC | 23 | | | • | 24 | 20 | 1 | | 12 | 12 | 0.[illegible] | FREEZER/COOLER INTERIOR LIGHTS |
| SALES AREA ILLUMINATED SIGN BOXES | 0.540 | 10 | 10 | 20 | 1 | CC | 25 | • | | | 26 | 20 | 1 | CC | 12 | 12 | 0.224 | FREEZER LED DOOR LIGHTS |
| SALES AREA ILLUMINATED SIGN BOXES | 0.540 | 10 | 10 | 20 | 1 | CC | 27 | | • | | 28 | 20 | 1 | CC | 12 | 12 | [illegible] | COOLER LED DOOR LIGHTS |
| SALES AREA ILLUMINATED SIGN BOXES | 0.540 | 10 | 10 | 20 | 1 | CC | 29 | | | • | 30 | 20 | 1 | CC | [illegible] | | 0.[illegible] | SPOT MERCHANDISER LIGHTS |
| PARKING LOT LIGHTING "SAFETY LIGHTING" | 0.224 | 10 | 10 | 15 | 2 | CC | 31 | • | | | 32 | 20 | 1 | CC | [illegible] | | 1.4[illegible] | GONDOLA ACCENT LIGHT |
| | 0.224 | 10 | - | | - | CC | 33 | | • | | 34 | 20 | 1 | CC | [illegible] | 10 | 0.260 | GONDOLA ACCENT LIGHT |
| PARKING LOT LIGHTING | 0.336 | 10 | 10 | 15 | 2 | CC | 35 | | | • | 36 | 20 | 1 | CC | [illegible] | 10 | [illegible] | EXHAUST FAN (EF-2/EF-3) |
| | 0.336 | 10 | - | | - | CC | 37 | • | | | 38 | 20 | 1 | | | | | SPARE |
| SPARE | | | | 15 | 2 | | 39 | | • | | 40 | 20 | 1 | | | | | SPARE |
| | | | | | - | | 41 | | | • | 42 | 15 | 1 | | 12 | 12 | 0.100 | SIEMENS EMS LIGHTING CONTROL |

TOTAL CONN. LOAD: 25.389 KVA — PHASE A: 8.33 KVA
CONNECTED AMPS: 70.47 AMPS — PHASE B: 9.72 KVA
DEMAND AMPS: 85.[illegible] AMPS — PHASE C: [illegible] KVA

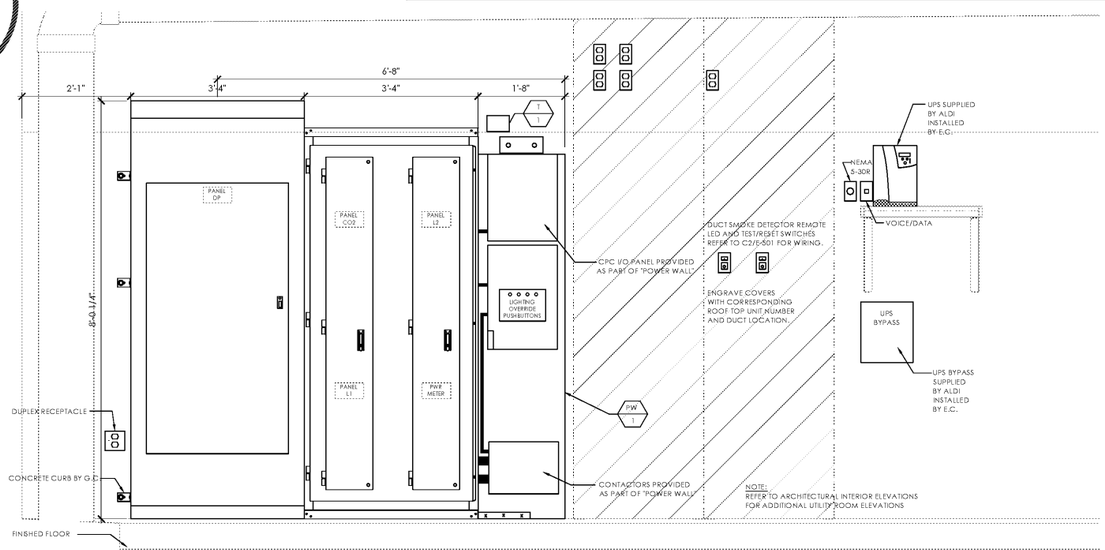
## PANEL L2

EXCEL FILE: N:\62\40320\40 - Virginia Beach, VA (Thalia & VA Beach)\Docs\Calcs\MEP\Panel Schedules\[ALDI 40320-40 - Panel Schedules_v3_0_2 - Copy.xlsm]

LOCATION: BACK ROOM
MOUNTING: SURFACE
FRAME SIZE: 225
MAIN SIZE: 200 AMP MLO
FED FROM: PANEL DP
DISTRIBUTION: 208Y/120V
PHASE: 3
WIRE: 4
FAULT CURRENT RATING (KAIC): 42

| BRANCH CIRCUIT DESCRIPTION | KVA | WIRE SIZE | GND SIZE | CB | P | NOTE | CKT | A | B | C | CKT | CB | P | NOTE | WIRE SIZE | GND SIZE | KVA | BRANCH CIRCUIT DESCRIPTION |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LIFT CHARGER | 1.000 | 10 | 10 | 20 | 1 | | 43 | • | | | 44 | 15 | 1 | | 12 | 12 | 0.100 | BUZZER & BELL TRANSFORMER |
| LIFT CHARGER | 1.000 | 10 | 10 | 20 | 1 | | 45 | | • | | 46 | 20 | 1 | | 10 | 10 | 0.900 | VESTIBULE GFI & SALES RECEPTACLE |
| LIFT CHARGER | 1.000 | 10 | 10 | 20 | 1 | | 47 | | | • | 48 | 20 | 1 | HL | 12 | 12 | 0.720 | SECURITY/PA SYSTEM RECEPTACLE |
| LIFT CHARGER | 1.000 | 10 | 10 | 20 | 1 | | 49 | • | | | 50 | 20 | 1 | | 12 | 12 | 0.900 | BREAKROOM GENERAL RECEPTACLE |
| LIFT CHARGER | 1.000 | 10 | 10 | 20 | 1 | | 51 | | • | | 52 | 20 | 1 | | 12 | 12 | 0.800 | BREAKROOM REFRIGERATOR |
| BREAKROOM, UTILITY AREA RECEPTACLES | 0.540 | 12 | 12 | 20 | 1 | | 53 | | | • | 54 | 20 | 1 | | 12 | 12 | 0.360 | BREAKROOM COUNTER GFI RECPTACLES |
| BACK RACK RECEPTACLE | 0.180 | 12 | 12 | 20 | 1 | | 55 | • | | | 56 | 20 | 1 | | 12 | 12 | 0.540 | BREAKROOM COUNTER GFI RECPTACLES |
| ROOF TOP UNIT RECEPTACLE & LIGHT | 0.370 | 12 | 12 | 15 | 1 | | 57 | | • | | 58 | 20 | 1 | | 12 | 12 | 0.720 | OFFICE COUNTER RECEPTACLES |
| EXTERIOR GFI | 0.180 | 10 | 10 | 20 | 1 | | 59 | | | • | 60 | 20 | 1 | | 12 | 12 | 1.440 | OFFICE COUNTER RECEPTACLES |
| FLOOR SCRUBBER CHARGER | 1.900 | 10 | 10 | 20 | 1 | | 61 | • | | | 62 | 25 | 1 | | 10 | 10 | 2.000 | ELECTRIC WATER HEATER (EWH-1) |
| DESTRAT FANS | 0.062 | 12 | 12 | 20 | 1 | | 63 | | • | | 64 | 20 | 1 | | 12 | 12 | 1.320 | DISHWASHER |
| FREEZER THRESHOLD HEATER | 0.805 | 12 | 12 | 20 | 1 | | 65 | | | • | 66 | 20 | 1 | | 10 | 10 | 0.600 | DOCK LOAD LEVELER |
| RTU SMOKE DETECTORS | 0.200 | 12 | 12 | 15 | 1 | HL | 67 | • | | | 68 | 20 | 1 | | 10 | 10 | 1.069 | UNIT HEATER (UH-1 & UH-2) |
| UPS-1 | 3.000 | 10 | 10 | 30 | 1 | IG | 69 | | • | | 70 | 20 | 1 | | 10 | 10 | 0.320 | IRRIGATION CONTROLLER |
| UPS-2 (FUTURE) | 3.000 | 10 | 10 | 30 | 1 | IG | 71 | | | • | 72 | 20 | 1 | | 10 | 10 | 0.600 | CHECKOUT CONVEYORS |
| SPARE | | | | | 1 | | 73 | • | | | 74 | 20 | 1 | | 10 | 10 | 0.600 | CHECKOUT CONVEYORS |
| SPOT MECHANDISER | 0.600 | 10 | 10 | 20 | 1 | | 75 | | • | | 76 | 20 | 1 | | 10 | 10 | 1.000 | DOMESTIC HOTBOX |
| SPOT MECHANDISER | 0.600 | 10 | 10 | 20 | 1 | | 77 | | | • | 78 | 20 | 1 | | 10 | 10 | 1.000 | FIRE PROTECTION HOT BOX |
| SPOT MECHANDISER | 0.600 | 10 | 10 | 20 | 1 | | 79 | • | | | 80 | 20 | 1 | | 12 | 12 | 0.696 | DISPOSAL |
| SPOT MECHANDISER | 0.600 | 10 | 10 | 20 | 1 | | 81 | | • | | 82 | 20 | 1 | | 10 | 10 | 1.000 | WOMENS ROOM HAND DRYER (HD-1) |
| SPOT MECHANDISER | 0.600 | 10 | 10 | 20 | 1 | | 83 | | | • | 84 | 20 | 1 | | 10 | 10 | 1.000 | MENS ROOM HAND DRYER (HD-1) |
| SPOT MECHANDISER | 0.600 | 10 | 10 | 20 | 1 | | 85 | • | | | 86 | 20 | 1 | | 10 | 10 | 0.600 | AUTO DOOR |
| SPOT MECHANDISER | 0.600 | 10 | 10 | 20 | 1 | | 87 | | • | | 88 | 20 | 1 | | 10 | 10 | 0.600 | AUTO DOOR |
| SPOT MECHANDISER | 0.600 | 10 | 10 | 20 | 1 | | 89 | | | • | 90 | 20 | 1 | | 10 | 10 | 0.600 | AUTO DOOR |

TOTAL CONN. LOAD: 39.522 KVA — PHASE A: 11.99 KVA
CONNECTED AMPS: 109.70 AMPS — PHASE B: 13.89 KVA
DEMAND AMPS: 85.80 AMPS — PHASE C: 13.65 KVA




B1 Utility Area Elevation
SCALE: N.T.S.

| Issued: | | Date: |
|---|---|---|
| A | Client Review Set | 04/07/17 |
| B | Permit Set | 04/07/17 |
| C | Bid Set | 09/05/17 |
| D | | |

| Revisions: | | Date: |
|---|---|---|
| 1 | | |
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| 3 | | |
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Virginia Beach, VA 23452
Willis Wayside
Project Name & Location:

One-Line Diagram, Schedules & Elevs.
Drawing Name:

| Prototype Rls. 02/08/17 | Project No. 40320-40 |
|---|---|
| Type: RHSD-V7 | |
| Scale: As Noted | Drawing No. E-401 |

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