





10624 WATTS  
1678 WATTS  
76 WATTS  
16 WATTS  
3960 WATTS  
180 WATTS  
10 WATTS  
% 16 WATTS  
23 WATTS  
16583 WATTS

| PANEL BOX A' 100 AMP<br>W/ 120 MAIN BREAKER |             |     |    |   |   |     |         |             |     |
|---|-------------|-----|----|---|---|-----|---------|-------------|-----|
| WIRE  | CIRCUIT     | AMP | A  | B | C | AMP | CIRCUIT | WIRE        |     |
| #12   | RECEPTACLES | 20  | 1  |   |   | 2   | 20      | RECEPTACLES | #12 |
| #12   | RECEPTACLES | 20  | 3  |   | ● | 4   | 20      | RECEPTACLES | #12 |
| #12   | RECEPTACLES | 20  | 5  |   | ● | 6   | 20      | RECEPTACLES | #12 |
| #12   | LIGHTS      | 20  | 7  |   | ● | 8   | 60      |             |     |
| -   | OPEN        | -   | 8  |   | ● | 10  | 2P      | HVAC UNIT   | #6  |
| -   | OPEN        | -   | 11 |   | ● | 12  | -       | OPEN        | -   |
| GROUND BAR                                  |             |     |    |   |   |     |         |             |     |
| NEUTRAL                                     |             |     |    |   |   |     |         |             |     |

| PANEL BOX 'B' LOAD CALCULATION                        |                    |
|---|--------------------|
| 01 4-TON AC W/10KW (HEATING CONTROLS)                 | 10624 WATTS        |
| 05 FOUR TUBE FLR. LIGHT AT 122 WATTS EACH X 125%      | 763 WATTS          |
| 04 TWO TUBE FLR. LIGHT AT 61 WATTS EACH X 125%        | 305 WATTS          |
| 02 U TUBE FLR. LIGHT AT 31 WATTS EACH X 125%          | 78 WATTS           |
| 01 FLUORESCENT PORCH LIGHT AT 13 WATTS EACH X 125%    | 16 WATTS           |
| 23 120v QUAD RECEPTACLES AT 360 WATTS EACH            | 8280 WATTS         |
| 05 GFI 120v RECEPTACLES AT 360 WATTS EACH             | 1800 WATTS         |
| 01 120v DUPLEX HEAT TAPE RECEP. AT 1400 WATTS         | 1400 WATTS         |
| 04 DEDICATED 120v RECEP. AT 1400 WATTS EACH           | 5600 WATTS         |
| 01 DEDICATED 120v RECEP. AT 840 WATTS (FRIDGE)        | 840 WATTS          |
| 01 120v WIRED J-BOX AT 1400 WATTS (FACP)              | 1400 WATTS         |
| 01 EXIT SIGN W/ BATTERY BACKUP AT 4 WATTS X 125%      | 5 WATTS            |
| 01 EMERGENCY LIGHT W/ BATT. BACKUP AT 13 WATTS X 125% | 16 WATTS           |
| 01 EMER/EXIT SIGN W/ BATT. BACKUP AT 18 WATTS X 125%  | 23 WATTS           |
| 03 80CFM EXHAUST FAN AT 156 WATTS EACH                | 156 WATTS          |
| 01 10-GALLON WATER HEATER AT 2500 WATTS               | 2500 WATTS         |
| <b>TOTAL LOADS:</b>                                   | <b>33806 WATTS</b> |

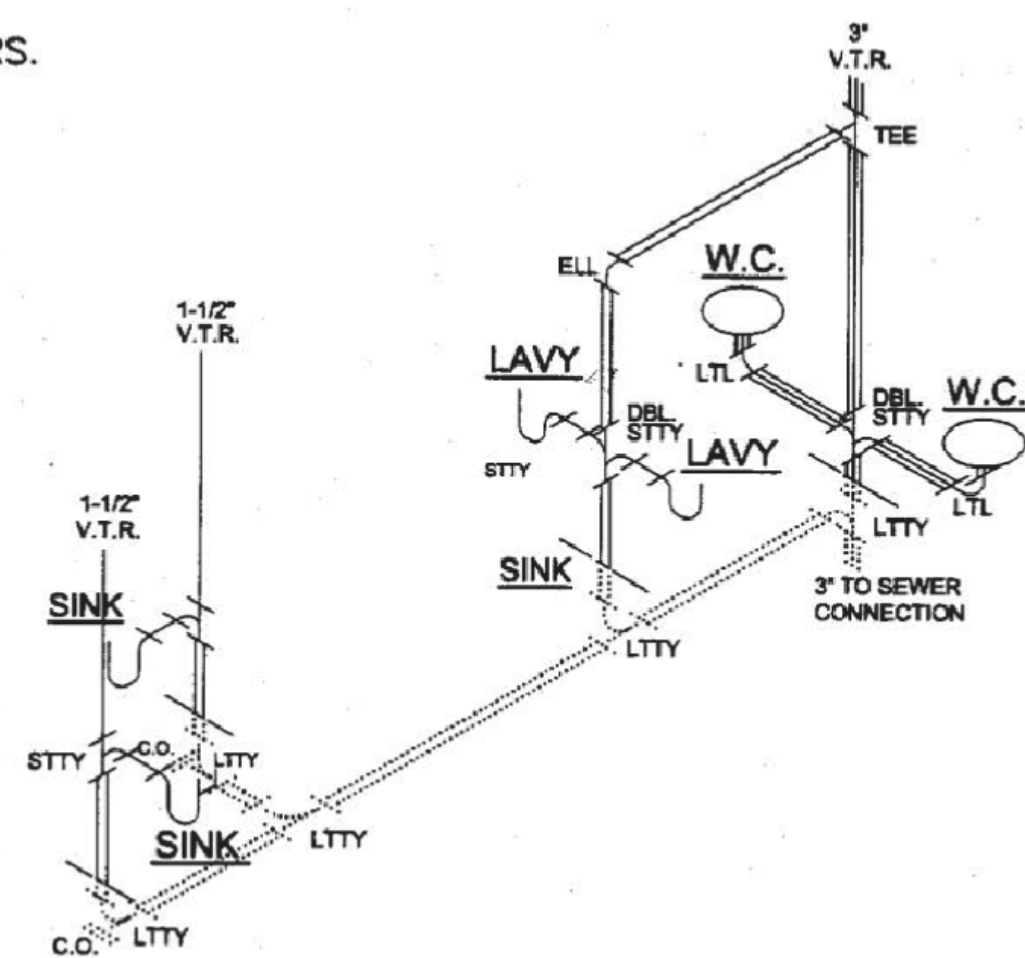
**TOTAL LOADS:**  
**33806 WATTS ÷ (208\*1.73) = 94 AMPS**

|     |          |    |       |           |                            |                               |   |
|-----|----------|----|-------|-----------|----------------------------|-------------------------------|---|
| LTR | REVISION | BY | DATE  | DRAWN BY: | PROJECT:                   | TITLE:                        | MARK STEELE, P.E.<br>5139 N. TOM MURRAY AVE.<br>GLENDALE, AZ. 85301 P# 602.385.2173   |
|     |          |    |       | M.L.S.    | VANGUARD MODULAR BUILDINGS | PANEL BOX & ELECTRICAL CALCS. |   |
|     |          |    | DATE: | 6/24/09   | SCALE:                     | DWG. NO.                      | SHEET   |
|     |          |    |       |           | N.T.S.                     | V3278-1                       | E-1.1   |
|     |          |    |       |           |                            |                               |  8332 EAST WALNUT<br>GARDLAND, TX 75046<br>P. 972.476.1728 F. 972.456.0040 |

| DWV PIPING LEGEND   |                 |
|---|-----------------|
|  | 1 1/2" DWV LINE |
|  | 2" DWV LINE     |
|  | 3" DWV LINE     |

PIPING 2" OR SMALLER SHALL BE SUPPORTED 4' O.C.  
HORIZONTALLY @ FLOOR, CEILING, & MID-STORY VERTICALLY  
PER TABLE 308.5 FOOT B OF THE 2006 IPC

MANIFOLD PROVIDED & INSTALLED ON-SITE BY OTHERS.



|     |          |    |       |           |        |          |                            |         |                  |  |
|-----|----------|----|-------|-----------|--------|----------|----------------------------|---------|------------------|--|
| LTR | REVISION | BY | DATE  | DRAWN BY: | M.L.S. | PROJECT: | VANGUARD MODULAR BUILDINGS | TITLE:  | PLUMBING - DRAIN | MARK STEEL, P.E.<br>5138 N. TOW MURRAY AVE.<br>GLENDALE, AZ 85301 P#6: 602-385-2173<br>852 EAST WALLEY<br>GARLAND, TX 75040<br>P. 817-271-7024 F. 817-271-8364 |
|     |          |    | DATE: | 6/24/09   | SCALE: | N.T.S.   | DWG. NO.                   | V3278-1 | SHEET            | P-1  |

**NOTES:**

- PER SECTION 504.5 OF THE 2006 IPC. WATER HEATERS SHALL HAVE A TEMP/PRESSURE RELIEF VALVE INSTALLED.
- PER SECTION 504.7.1 OF THE 2006 IPC. THE DRIP PAN SHALL BE DRAINED BY AN INDIRECT WASTE PIPE HAVING A MINIMUM DIAMETER OF 3/4".
- PER SECTION 504.7.2 OF THE 2006 IPC. THE DRIP PAN DRAIN SHALL EXTEND FULL-SIZE AND TERMINATE OVER A SUITABLY LOCATED INDIRECT WASTE RECEPTOR OR FLOOR DRAIN OR EXTEND TO THE EXTERIOR OF THE BUILDING AND TERMINATE NOT LESS THAN 6 INCHES AND NOT MORE THAN 24 INCHES ABOVE THE ADJACENT GROUND SURFACE.
- PER SECTION 606.2 OF THE 2006 IPC. A SHUT-OFF VALVE SHALL BE INSTALLED AT EACH FIXTURE & WATER HEATER.
- PIPING 1" OR SMALLER SHALL BE SUPPORTED 3' HORIZONTALLY @ FLOOR, CEILING, & MID-STORY VERTICALLY PER TABLE 308.5 FOOTNOTE B OF THE 2006 IPC.

**WATER LINE LEGEND**

|               |                 |
|---------------|-----------------|
| (Single line) | 1/2" WATER LINE |
| (Double line) | 3/4" WATER LINE |
| (Triple line) | 1" WATER LINE   |

[illegible]