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MARK DATE DESCRIPTION
MARK DATE DESCRIPTION

G-001
1. Module Diagram Explains Labeling Convention Used Throughout Drawing Set. Spatial Separation Reflects Modular Division of Components During Construction and Assembly.

Reference Keynotes

Sheet Keynotes

General Sheet Notes

1/8" = 1'-0"
1. Finished square footage calculations for this house were calculated in accordance with ANSI Z765-2003.

2. Finished square footage calculations for this house were made based on plan dimensions only and may vary from the finished square footage of the house as built.

3. All measurements are rounded to the nearest whole square footage in accordance with ANSI Z765-2003.

4. Total area calculated according to ANSI Z765-2003 is 813 square feet which demonstrates compliance with Rule 6-2 finished square footage.
DOOR SHALL NOT ACT AS A MEANS OF EGRESS PER COMPETITION RULES.
1. PLAN COMPLIES WITH OPTIONAL ACCESSIBILITY PATH TYPE B OPTIONAL. COMPLYING WITH REQUIREMENTS PROVIDED IN ICC A117.1-2003 SECTION 1004 AS ADAPTABLE FOR ACCESSIBLE ELEMENTS.

2. BOTH MILLWORK AND FURNITURE ARE SHOWN ON PLAN.

3. RAMP TO BE BUILT TO LONGER DIMENSION AND CUT TO FIT GRADE ON SITE. MAXIMUM SLOPE OF RAMP SHALL BE 1:21.

4. HOUSE TOUR PLANS PROVIDED FOR COMPETITION ONLY AND HAS NO IMPACT ON CONSTRUCTION REQUIREMENTS OR SEQUENCING.

5. GENERAL SHEET NOTES

REFERENCE KEYNOTES

SHEET KEYNOTES

ADA TOUR ROUTE COMPLIANCE PLAN

G-103
1. Scope of work to fall within the solar envelope. Maximum height of built structure is limited to 18'-0", maximum width is limited to 78'-0".

---

Reference Keynotes:

- 03 45 00 Precast Architectural Concrete
- 05 52 00 Metal Railings
- 26 31 00 Photovoltaic Collectors

Sheet Keynotes:

- 1/4" = 1'-0"
- NORTH SOLAR ENVELOPE
- EAST SOLAR ENVELOPE
1. Scope of work to fall within SOLAR ENVELOPE. Maximum height of built structure is limited to 18'-0". Maximum width is limited to 78'-0". Maximum depth is 60'-0".

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**Lot Number:**

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**Address:**

**Contact:**

**Consultants**

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**Sheet Notes:**

1/4" = 1'-0"

**Reference Keynotes**

**Sheet Keynotes**

**General Sheet Notes**

**Lot 112**

**UNCC Checker**

**01 02 03 04 05 08.22.13**

**AS-BUILT SUBMISSION**

**10.10.12 11.20.12 02.14.13 04.05.13**

**80% DOE SUBMISSION**

**80% DOE RE-SUBMISSION**

**100% DOE SUBMISSION**

**100% DOE RE-SUBMISSION**

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**CHARLOTTE, NC 28223**

**TEAM UNCC**

**G-202**

**Solar Envelope Compliance Elevations**

**South Solar Envelope**

**West Solar Envelope**

**1 G-202**

**2 G-202**
1. Hatch pattern indicates all containers, equipment, and fixtures that will contain liquid on site at any point during competition, in compliance with spill containment regulations.
2. All pressurized water systems shall have proper containment and shall be equipped with an overflow pan or valve and drain below unit.
3. In the event of a spill, team is to consult safety plan and contact event organizers.
4. See P-series sheets for a schedule of liquid containment devices.

GENERAL SHEET NOTES

REFERENCE KEYNOTES

SHEET KEYNOTES

LIQUID LOCATION AND CONTAINMENT PLAN

CAPILLARY TUBE SYSTEM

LIQUID LOCATION AND CONTAINMENT PLAN

CAPILLARY TUBE WATER SUPPLY TANK

ELECTRIC WATER HEATER

TWO-GALLON WATER TANK FOR GREYWATER CONTAINMENT

TWO-GALLON WATER TANK FOR FRESH WATER SUPPLY CONTAINMENT

LIQUID LOCATION AND CONTAINMENT PLAN

H-101
DECATHLETE WAY

LANDSCAPE PLAN

1. FOR PLANT TYPE SEE LANDSCAPE SCHEDULE ON L-602

2. ALL POTTED PLANTS TO BE FIXED IN RESPONSE TO COMPETITION RULES. ALL PLANTS TO FIT WITHIN PLYWOOD PLANTERS AND REMAIN 18" ABOVE GRADE.

1/4" = 1'-0"

FRESH WATER STORAGE TANK

GREY WATER STORAGE TANK

REFERENCES:

SHEET TITLE
LOT NUMBER:
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01 02 03 04 05 08.22.13
10.10.12 11.20.12 02.14.13 04.05.13
80% DOE SUBMISSION
80% DOE RE-SUBMISSION
100% DOE SUBMISSION
100% DOE RE-SUBMISSION

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L-101

LANDSCAPE AND PLANTING SITE PLAN

REFERENCE KEYNOTES

SHEET KEYNOTES

LANDSCAPE AND PLANTING SITE PLAN

MARK DATE DESCRIPTION
### Vertical Gardens

#### Bedrooms Panels (2 walls of 10 planters each)

<table>
<thead>
<tr>
<th>Mark</th>
<th>Latin Name</th>
<th>Common Name</th>
<th>Initial # of Plants</th>
<th># per Plant Box</th>
</tr>
</thead>
<tbody>
<tr>
<td>09b</td>
<td>Helianthus annuus</td>
<td>Common Yellow</td>
<td>70</td>
<td>10</td>
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<tr>
<td>10</td>
<td>Iberis amera</td>
<td>Herb Paris</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>11</td>
<td>Commelina communis</td>
<td>Red Spider</td>
<td>30</td>
<td>15</td>
</tr>
<tr>
<td>12</td>
<td>Iris</td>
<td>Purple Flag</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>13</td>
<td>Liriope muscari</td>
<td>Grass Lily</td>
<td>10</td>
<td>10</td>
</tr>
</tbody>
</table>

#### Kitchen Panels (adjacent)

<table>
<thead>
<tr>
<th>Mark</th>
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<th>Common Name</th>
<th>Initial # of Plants</th>
<th># per Plant Box</th>
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</thead>
<tbody>
<tr>
<td>01</td>
<td>Ipomoea alba</td>
<td>Morning Glory</td>
<td>20</td>
<td>20</td>
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<tr>
<td>02</td>
<td>Petunia</td>
<td>Petunia</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>03</td>
<td>Helianthus annuus</td>
<td>Common Yellow</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>04</td>
<td>Cleome</td>
<td>Spider Flower</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>05</td>
<td>Liriope muscari</td>
<td>Grass Lily</td>
<td>10</td>
<td>10</td>
</tr>
</tbody>
</table>

#### Living Room Panels

<table>
<thead>
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<td>06</td>
<td>Helianthus annuus</td>
<td>Common Yellow</td>
<td>30</td>
<td>10</td>
</tr>
<tr>
<td>07</td>
<td>Petunia</td>
<td>Petunia</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>08</td>
<td>Camelina sativa</td>
<td>Camelina</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>09</td>
<td>Liriope muscari</td>
<td>Grass Lily</td>
<td>10</td>
<td>10</td>
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</tbody>
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#### Planters Brackets

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<th>Common Name</th>
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<tbody>
<tr>
<td>10</td>
<td>Campanula lactiflora</td>
<td>Pepper Plant</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>11</td>
<td>Cleome</td>
<td>Spider Flower</td>
<td>10</td>
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**PLANTING SCHEDULES**

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<th>Plant Type</th>
<th>Location</th>
<th>Description</th>
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<tr>
<td>Helianthus annuus</td>
<td>Common Yellow</td>
<td>Garden 1</td>
<td>Flower Bed 1</td>
</tr>
<tr>
<td>Petunia</td>
<td>Petunia</td>
<td>Garden 2</td>
<td>Flower Bed 2</td>
</tr>
<tr>
<td>Camelina sativa</td>
<td>Camelina</td>
<td>Garden 3</td>
<td>Wall Planter</td>
</tr>
</tbody>
</table>

---

**REFERENCE KEYNOTES**

- Reference Keynotes: Used for specific plant requirements and placement.
- Reference Sheet: Includes additional information for specific plant care.

**SHEET KEYNOTES**

- Sheet Notes: Include general information about the planters and their placements.
- Sheet Diagram: Shows the overall layout of the planters and their positions within the space.

---

**GENERAL SHEET NOTES**

- Notes for General Observations: Include any comments or notes that are relevant to the overall design and functionality of the planters.
- Notes for General Maintenance: Include any recommendations for plant care and maintenance.

---

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- **LOT 112**

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1. ALL FOOTINGS ARE DESIGNED TO BEAR ON RESIDUAL SOIL OR COMPACTED SURFACES.

2. REINFORCING STEEL SHALL CONFORM TO ASTM A615 FOR ALL REINFORCEMENT. STEEL CONFORMING TO CAN/CSA-G40.20-M94 FOR REINFORCEMENT SHALL ALSO CONFORM TO THE REQUIREMENTS OF ASTM A615.

3. 3 1/2" STRUCTURAL WALL STUDS SHALL BE EQUAL TO SSMA DESIGNATION 350S162-33, SPACED AT 16" C/C U.O.N., WITH GROSS PROPERTIES EQUAL TO: A=0.289 IN2, Ix=0.302 IN4, Sx= 0.242 IN3, Iy= 0.111 IN4, Rx= 1.022 IN3, Ry=0.62 IN.

4. PROVIDE PREMOLDED EXPANSION-JOINT FILLER AT EDGES OF SLABS ON GRADE.

5. PROVIDE 1/2" DIA, X LENGTH REQUIRED THREADED STUDS FOR ATTACHMENT OF CONCRETE DECK.

6. CONNECTIONS NOT DETAILED ON THE PLANS SHALL BE DESIGNED AND DETAILED BY THE FABRICATOR.

7. ALL CONNECTION PLATES AND SHAPES SHALL BE ASTM A36, GALVANIZED. SHEAR PLATES AND BARS SHALL CONFORM TO ASTM A36, Fy=36 KSI.

8. ALL STRUCTURAL STEEL MEMBERS SHALL HAVE A MINIMUM OF 14 X 14.

9. 30 PSI VERTICAL LOAD SHALL BE APPLIED TO THE ROOF CORE AS A LOAD FOR MANUFACTURER’S ASSOCIATION (SSMA).

10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL DESIGN MIXES. THE GENERAL CONTRACTOR SHALL PROVIDE QUALITY ASSURANCE TESTING SHALL BE PROVIDED BY QUALIFIED TESTING LAB AS APPROVED AND SPECIFIED IN THE CONTRACT DOCUMENTS.

11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING REQUIREMENTS FOR PROGRESSIVE NEW CONSTRUCTION.

12. ALL LIGHT STRUCTURAL STEEL MEMBERS THAT SUPPORT THE ROOF CORE SHALL BE EQUALLY TO THE SSMA DESIGNATION 600S162-43, SPACED AT 16" C/C U.O.N., WITH GROSS PROPERTIES EQUAL TO: A=0.289 IN2, Ix=0.302 IN4, Sx= 0.242 IN3, Iy= 0.111 IN4, Rx= 1.022 IN3, Ry=0.62 IN.

13. PROVIDE 1/2" DIA, X LENGTH REQUIRED THREADED STUDS FOR ATTACHMENT OF STRUCTURAL STEEL.
REFERENCE KEYNOTES

SHEET KEYNOTES

GENERAL SHEET NOTES

TEMPORARY INSTALLATION FOUNDATION PLAN

S 2.0
PLAN NOTES:
1. DESIGNATED LIGHT GAUGE METAL FRAMING TOP OUTFRAME IS BY DESIGN/CONTRACTION OR AN APPROVED EQUAL, JOISTS SHALL HAVE A MINIMUM END BRACKETS AT 4 FT 15 CM SPACING, WALL BRACKETS AT 4 FT 15 CM SPACING, WALL BRACKETS AT 4 FT 15 CM SPACING, WALL BRACKETS AT 4 FT 15 CM SPACING, WALL BRACKETS AT 4 FT 15 CM SPACING, WALL BRACKETS AT 4 FT 15 CM SPACING, WALL BRACKETS AT 4 FT 15 CM SPACING, WALL BRACKETS AT 4 FT 15 CM SPACING, WALL BRACKETS AT 4 FT 15 CM SPACING, WALL BRACKETS AT 4 FT 15 CM SPACING, WALL BRACKETS AT 4 FT
2. FOR ALL SECTIONS, DRAWN 45 DEGREES, LINES OF ANGLE 45 DEGREES.
3. * INDICATES THIS VALUE TO BE PREVIOUSLY A RIN OF DRAWN TO BE COORDINATED WITHIN.
4. ** INDICATES ROOF CONNECTION AT TOP OF COLUMN AND BEAM.

SHEET TITLE: ROOF FRAMING PLAN

REFERENCE KEYNOTES

GENERAL SHEET NOTES

SHEET KEYNOTES

MARK DATE DESCRIPTION

05.22.13 80% DOE SUBMISSION

02.14.13 80% DOE RE-SUBMISSION

08.22.13 100% DOE SUBMISSION

04.05.13 100% DOE RE-SUBMISSION

S 2.2

8/22/2013 5:46:19 PM

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TYPICAL DETAIL
PREFAB DECK FRAMING PLAN

REFERENCE KEYNOTES

DECK FRAMING PLAN AND DETAILS
S 2.4
1. See structural plans and sections for slope of roof details.
2. Photovoltaic racks are moveable per user control.

REFERENCE KEYNOTES
- 05 12 00 Structural steel framing
- 07 50 00 Membrane roofing
- 26 31 00 Photovoltaic collectors

SHEET KEYNOTES

GENERAL SHEET NOTES
- 80% DOE submission
- 100% DOE submission
- AS-BUILT submission

SHEETS
- A-102
- ROOF PLAN

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- 8/22/2013 5:28:00 PM

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1. Maximum elevation difference between highest and lowest points in any direction shall be no greater than 18'.
2. Building elevations include all components of house envelope, deck railings, and other elements.

REFERENCE KEYNOTES:
- 03 45 00: Precast architectural concrete
- 05 16 00: Structural cabling
- 05 52 00: Metal railings
- 09 77 00: Special wall surfacing
- 26 31 00: Photovoltaic collectors

SHEET KEYNOTES:
1. All paneling to be LAMBO. Field verify dimensions before fabrication.

2. Paneling to be hung with Z-clips, maximum spacing to be 16" O.C. attached to studs.
1. All linear dimensions are relative to the top of the finish floor.
2. See finish schedule for wall treatment.

POD A/B NORTH

POD A/B SOUTH

REFERENCE KEYNOTES
08 44 00 CURTAIN WALL AND GLAZED ASSEMBLIES

SHEET KEYNOTES
1/2" = 1'-0"
**DOOR SCHEDULE**

<table>
<thead>
<tr>
<th>MARK</th>
<th>DR TYPE</th>
<th>SIZE</th>
<th>FRAME TYPE</th>
<th>COMMENTS</th>
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<tr>
<td>101A</td>
<td>D1</td>
<td>3'-0&quot; x 7'-0&quot;</td>
<td>ALUM/GL</td>
<td>ALUMINUM BY WINDOW SUPPLIER</td>
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<tr>
<td>102A</td>
<td>D3</td>
<td>6'-5&quot; x 7'-0&quot;</td>
<td>ALUM/GL</td>
<td>ALUMINUM BI-FOLD DOORS BY WINDOW SUPPLIER</td>
</tr>
<tr>
<td>102B</td>
<td>D3</td>
<td>6'-5&quot; x 7'-0&quot;</td>
<td>ALUM/GL</td>
<td>ALUMINUM BI-FOLD DOORS MATCH WOOD WALL PANELS ON BATH 103 SIDE, PAINT LAUNDRY 104 SIDE</td>
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<tr>
<td>105A</td>
<td>D5</td>
<td>3'-0&quot; x 7'-0&quot;</td>
<td>ALUM/GL</td>
<td>ALUMINUM BY WINDOW SUPPLIER</td>
</tr>
<tr>
<td>105C</td>
<td>D1</td>
<td>3'-0&quot; x 7'-0&quot;</td>
<td>ALUM/GL</td>
<td>ALUMINUM - SIM OP/OP HAND DOOR</td>
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<tr>
<td>106A</td>
<td>D6</td>
<td>3'-0&quot; x 7'-0&quot;</td>
<td>HM GALV</td>
<td>W/WD GALV. W/WD INSULATED, CLAD EXTERIOR WITH RAIN SCREEN WOOD PANELS</td>
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**WINDOW SCHEDULE**

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<td>4'-0&quot; x 7'-0&quot;</td>
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<td>CASMENT/STORM WINDOW</td>
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<tr>
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<td>4'-0&quot; x 7'-0&quot;</td>
<td>FAK</td>
<td>ALUM</td>
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<td>CASMENT/STORM WINDOW</td>
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**GENERAL SHEET NOTES**

**REFERENCE KEYNOTES**

**SHEET KEYNOTES**

**DOOR SCHEDULE**

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<td>ALUMINUM BI-FOLD DOORS MATCH WOOD WALL PANELS ON BATH 103 SIDE, PAINT LAUNDRY 104 SIDE</td>
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<tr>
<td>105C</td>
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<td>ALUMINUM - SIM OP/OP HAND DOOR</td>
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<td>3'-0&quot; x 7'-0&quot;</td>
<td>HM GALV</td>
<td>W/WD GALV. W/WD INSULATED, CLAD EXTERIOR WITH RAIN SCREEN WOOD PANELS</td>
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**WINDOW SCHEDULE**

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<td>CASMENT/STORM WINDOW</td>
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<td>CASMENT/STORM WINDOW</td>
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<td>FAK</td>
<td>ALUM</td>
<td>4X4</td>
<td>CASMENT/STORM WINDOW</td>
</tr>
</tbody>
</table>
1. ARCHITECTURAL NOTES
   A. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE APPLICABLE INTERNATIONAL RESIDENTIAL CODE AS WELL AS THE SOLAR DECATHLON RULES AND BUILDING CODE. THE DESIGN SHALL CONFORM WITH ALL APPLICABLE MUNICIPAL, STATE AND FEDERAL REGULATIONS HAVING JURISDICTION.
   B. DO NOT SCALE DRAWINGS. DIMENSIONS IN THE FIELD SHALL HAVE PRECEDENCE OVER SCALED DIMENSIONS.
   C. ALL TYPICAL DETAILS AND NOTES SHOWN ON DRAWINGS SHALL APPLY UNLESS NOTED OTHERWISE.
   D. WHERE DISCREPANCIES EXIST BETWEEN DRAWINGS AND CONSTRUCTION TRADE PRACTICES, CONSULT ARCHITECT BEFORE PROCEEDING WITH WORK.

2. DIMENSIONING
   A. UNLESS NOTED OTHERWISE, PARTITIONS ARE DIMENSIONED TO THE FACE OF THE STRUCTURE.
   B. DO NOT SCALE DRAWINGS. DIMENSIONS IN THE FIELD SHALL HAVE PRECEDENCE OVER SCALED DIMENSIONS.
   C. ALL TYPICAL DETAILS AND NOTES SHOWN ON DRAWINGS SHALL APPLY UNLESS NOTED OTHERWISE.
   D. WHERE DISCREPANCIES EXIST BETWEEN DRAWINGS AND CONSTRUCTION TRADE PRACTICES, CONSULT ARCHITECT BEFORE PROCEEDING WITH WORK.

3. FINISHES
   A. REFER TO PROJECT MANUAL FOR FINISH SPECIFICATIONS AND INSTALLATION REQUIREMENTS
   B. ALL GYPSUM BOARD SHALL COMPLY WITH LEVEL 4 FINISHES AS PER GA 214-90
   C. ALL PAINTED SURFACES TO RECEIVE ONE COAT OF PRIMER AND TWO COATS OF PAINT, AND SHALL BE Sanded TO A SMOOTH FINISH PER SPECIFICATIONS.
   D. ALL PANELED SURFACES SHALL BE FIELD VERIFIED AND MOUNTED IN PLACE PER PROJECT MANUAL SPECIFICATIONS.

GENERAL SHEET NOTES

REFERENCE KEYNOTES

SHEET KEYNOTES

LIGHT FIXTURE LEGEND
1. PLAN PORTRAYS ONE POSSIBLE FURNITURE CONFIGURATION. ADDITIONAL FURNITURE PLANS FOR OTHER ALTERNATIVES:

2. INTERIOR OF POD A WILL BE DISPLAYED IN THE LIVING ROOM SETTING WITH DOOR CLOSED AND FURNITURE INSIDE FOR TOUR.

3. DINING TABLE TO REMAIN RECESSED UNDER KITCHEN ISLAND FOR ALL PUBLIC TOURS.

4. SLIDING DOORS FOR POD C WILL REMAIN OPEN FOR PUBLIC TOURS.
FURNITURE PLAN EXTENDED A

1. Optional furniture configuration to be used for entertainment area.
1. Optional furniture configuration to be used for juried tours.
1. RCP reflects all ceiling mounted interior fixtures. Refer to E-101, E-102 for more information.
2. RCP locate smoke detectors only. For complete fire suppression systems refer to F-101.
<table>
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<tr>
<th>Room No.</th>
<th>Location</th>
<th>Finish</th>
<th>Ceiling</th>
<th>Height</th>
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<td>Thermally Modified Ash</td>
<td>Thermally Modified Ash</td>
<td>8'-10&quot;</td>
<td>Plaster to be painted with Sherwin Williams 5000000.00</td>
<td>Plaster</td>
<td></td>
<td></td>
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<tr>
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<td>Thermally Modified Ash</td>
<td>Thermally Modified Ash</td>
<td>8'-10&quot;</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>103</td>
<td>Bathroom</td>
<td>Ceramic Tile</td>
<td>Ceramic Tile</td>
<td>8'-0&quot;</td>
<td>Lamboo</td>
<td>Lamboo</td>
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<td>Laundry</td>
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<td>Ceramic Tile</td>
<td>8'-0&quot;</td>
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<td>Lamboo</td>
<td>Lamboo</td>
<td>Lamboo to be sealed with Earth Paint Nanotech Wood Sealer</td>
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<tr>
<td>105</td>
<td>Bedroom</td>
<td>Thermally Modified Ash</td>
<td>Thermally Modified Ash</td>
<td>8'-10&quot;</td>
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<td>10'-0&quot;</td>
<td>Open</td>
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</table>
1. PROVIDE A COMPLETE, ACCURATELY CALCULATED, AUTOMATIC SPRINKLER SYSTEM INCLUDING ALL LABOR, MATERIAL, EQUIPMENT AND SERVICES REQUIRED TO DELIVER AN UNITS COMPLIANCE. THIS PROJECT WILL BE CONSIDERED PROPERLY COMPLETED ONLY UPON SATISFACTORY COMPLETION OF THE REQUIREMENTS OF APPENDIX B. The PHANTOM REQUIRED TO BE COMPLETED AND ATTACHED TO THIS SHEET MUST BE SIGNED AND DATED BY THE CONTRACTOR AND ACCEPTED BY THE OWNER.

2. OBTAIN CURRENT WATER METER TEST INFORMATION BEFORE CONTINUING ANY SPRINKLER DROP DRAWINGS. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE WATER SUPPLY TEST LEAD FROM THE METER TO THE SPRINKLER SYSTEM AS REQUIRED BY THE LOCAL AUTHORITY HAVING JURISDICTION UNDER THE WATER SUPPLY TEST. USE TWO (2) METERS AS NEEDED TO ACCURATELY RECORD THE WATER SUPPLY TEST.

3. OBTAIN COMPUTER-IZED AND CONTRACTOR AND SUBCONTRACTOR AGREEMENTS IN conformance WITH THE REQUIREMENTS OF APPENDIX C. CONFORM TO ALL APPLICABLE CODES AND STANDARD AS OUTLINED IN NFPA 13 OR OTHER APPLICABLE CODES.

4. PROVIDE SHOP DRAWINGS INCLUDING BUT NOT LIMITED TO ALL ITEMS WHICH APPEAR AS OUTLINED IN NFPA 13 INCORPORATING ALL INFORMATION EXHIBITED IN THE CONTRACT DOCUMENTS. ALL SHOP DRAWINGS MUST BE SUBMITTED WITH MATERIALS, EQUIPMENT AND SERVICES.

5. PROVIDE BLUEPRINTS AND SHEET SET TO ACCURATELY RECORD THE WATER SUPPLY TEST. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE WATER SUPPLY TEST.

6. PREPARE THE AS-BUILT SUBMISSION SHEET IN ACCORDANCE WITH THE REQUIREMENTS OF APPENDIX D. PROVIDE ALL INFORMATION EXHIBITED IN THE CONTRACT DOCUMENTS. ALL AS-BUILT SUBMISSIONS MUST BE SUBMITTED WITH MATERIALS, EQUIPMENT AND SERVICES.

7. THE SPRINKLER CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE WATER SUPPLY TEST. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE WATER SUPPLY TEST.

8. VERIFY THE WATER SUPPLY BY TEST, USING TWO HYDRANTS AS CLOSE AS POSSIBLE TO THE POINT OF CONSTRUCTION.

9. PROVIDE SHOP DRAWINGS INCLUDING BUT NOT LIMITED TO ALL ITEMS WHICH APPEAR AS OUTLINED IN NFPA 13 OR OTHER APPLICABLE CODES.

10. PROVIDE SHOP DRAWINGS INCLUDING BUT NOT LIMITED TO ALL ITEMS WHICH APPEAR AS OUTLINED IN NFPA 13 OR OTHER APPLICABLE CODES.

11. PROVIDE SHOP DRAWINGS INCLUDING BUT NOT LIMITED TO ALL ITEMS WHICH APPEAR AS OUTLINED IN NFPA 13 OR OTHER APPLICABLE CODES.

12. PROVIDE SHOP DRAWINGS INCLUDING BUT NOT LIMITED TO ALL ITEMS WHICH APPEAR AS OUTLINED IN NFPA 13 OR OTHER APPLICABLE CODES.

13. PROVIDE SHOP DRAWINGS INCLUDING BUT NOT LIMITED TO ALL ITEMS WHICH APPEAR AS OUTLINED IN NFPA 13 OR OTHER APPLICABLE CODES.

14. PROVIDE SHOP DRAWINGS INCLUDING BUT NOT LIMITED TO ALL ITEMS WHICH APPEAR AS OUTLINED IN NFPA 13 OR OTHER APPLICABLE CODES.

15. PROVIDE SHOP DRAWINGS INCLUDING BUT NOT LIMITED TO ALL ITEMS WHICH APPEAR AS OUTLINED IN NFPA 13 OR OTHER APPLICABLE CODES.

16. PROVIDE SHOP DRAWINGS INCLUDING BUT NOT LIMITED TO ALL ITEMS WHICH APPEAR AS OUTLINED IN NFPA 13 OR OTHER APPLICABLE CODES.

17. PROVIDE SHOP DRAWINGS INCLUDING BUT NOT LIMITED TO ALL ITEMS WHICH APPEAR AS OUTLINED IN NFPA 13 OR OTHER APPLICABLE CODES.

18. PROVIDE SHOP DRAWINGS INCLUDING BUT NOT LIMITED TO ALL ITEMS WHICH APPEAR AS OUTLINED IN NFPA 13 OR OTHER APPLICABLE CODES.

19. PROVIDE SHOP DRAWINGS INCLUDING BUT NOT LIMITED TO ALL ITEMS WHICH APPEAR AS OUTLINED IN NFPA 13 OR OTHER APPLICABLE CODES.

20. PROVIDE SHOP DRAWINGS INCLUDING BUT NOT LIMITED TO ALL ITEMS WHICH APPEAR AS OUTLINED IN NFPA 13 OR OTHER APPLICABLE CODES.

21. PROVIDE SHOP DRAWINGS INCLUDING BUT NOT LIMITED TO ALL ITEMS WHICH APPEAR AS OUTLINED IN NFPA 13 OR OTHER APPLICABLE CODES.

22. PROVIDE SHOP DRAWINGS INCLUDING BUT NOT LIMITED TO ALL ITEMS WHICH APPEAR AS OUTLINED IN NFPA 13 OR OTHER APPLICABLE CODES.

23. PROVIDE SHOP DRAWINGS INCLUDING BUT NOT LIMITED TO ALL ITEMS WHICH APPEAR AS OUTLINED IN NFPA 13 OR OTHER APPLICABLE CODES.

24. PROVIDE SHOP DRAWINGS INCLUDING BUT NOT LIMITED TO ALL ITEMS WHICH APPEAR AS OUTLINED IN NFPA 13 OR OTHER APPLICABLE CODES.

25. PROVIDE SHOP DRAWINGS INCLUDING BUT NOT LIMITED TO ALL ITEMS WHICH APPEAR AS OUTLINED IN NFPA 13 OR OTHER APPLICABLE CODES.

26. PROVIDE SHOP DRAWINGS INCLUDING BUT NOT LIMITED TO ALL ITEMS WHICH APPEAR AS OUTLINED IN NFPA 13 OR OTHER APPLICABLE CODES.
1. Refer to F-001 for more information and general notes related to fire suppression.
1. THESE PLANS ARE INCOMPLETE AND MAY NOT SHOW VARIOUS DETAILS AND LOCATIONS FOR DRAINAGE, REFER TO THE ARCHITECTURAL PLANS.
2. COORDINATE ALL WORK WITH OTHER TRADES PRIOR TO INSTALLATION OF ANY WORK.
3. VERIFY THE LOCATION OF ALL EQUIPMENT SUPPLIED BY OTHERS.
4. PROVIDE A SEPARATE UNDERGROUND CONNECTING DRAINAGE HOLES.
5. PROVIDE EXIT SLIP SLEEVES IN ALL LOCATIONS MOUNTED IN THE WELD WALLS AND FLOORS TO MAKE ALL EXITS VISIBLE AND EASY TO FILL.
6. ALL UNDERGROUND WATER LINES SHALL BE INSTALLED BELOW THE FIRST FLOOR BUT NOT LESS THAN 3 FT. BELOW FINISHED GRADE TO FILL DRAIN.
7. ALL VENT LINES SHALL BE UP TO 60 INCHES HIGH THROUGH ROOF täglich THROUGH ROOF SHALL BE 10 FT MINIMUM FROM ANY OTHER LINES.
8. ALL WATER LINES SHALL HAVE A CLEAN-OUT AT THE BASE OF THE STAIR, COORDINATE LOCATION OF CLEAN-OUT WITH LEADER.
9. PROVIDE LOCATION VALUES AT ALL POINTS.
10. SEE ARCHITECTURAL DRAWINGS FOR MOUNTING HEIGHTS OF PLUMBING FIXTURES.
11. ALL WALL MOUNTED FIXTURES TO HAVE ISOLATION ON ANY EXPOSED PIPES.
12. COMPLETE AND FILL OUT ALL SANITARY WATER LINES AFTER SEWAGE IS CLEANED.
13. PROVIDE DRAINAGE RECEIVERS AT ALL EXPOSED CEILINGS AND WALL FILLINGS.
14. INSTALL INTERNAL BORING OF ALL UNDERGROUND WATER LINES ON-SITE CONDUIT FILLING, A MAXIMUM OF THE EXISTING FILLING THEREFORE TIGHTNESS SHALL BE PROVIDED UP A CONDUIT INSERTION.
15. ALL UNDERGROUND DRAINAGE SEWER OUTLET FIXTURES SHALL BE PROVIDED WITH A DRIP-TYPE WASTE PIPE THAT IS THE STEEL AT LEAST ON (6) INCHES BLOW GAP.
16. PROVIDE 12 INCH CLEARANCES AROUND AUTO-HYDRAULIC EQUIPMENT AND TUBING PUMPING PIPING.
17. PUMP SUPPORT SHALL BE FROM STRUCTURAL STEEL, SUPPORT FROM THE TANK, ROOF DECK OR WALL JOINING ANGLES IS PROMOTED.
18. ALL MEAL PIPING TO BE BONDED ACCORDING TO CUMBERWALL CODES.
19. PROVIDE HEAT TRACE TO PUMPS, TANKS AND PIPING NOT IN CONDITIONAL SPACES; HEAT TRACE TO BE IN WATER FILL.
FLOOR PLAN - WASTE AND VENT

GENERAL SHEET NOTES

REFER TO SHEET P001 FOR ALL GENERAL NOTES AND LEGEND.

SCALE: 1/4" = 1'-0"
GENERAL SHEET NOTES
REFER TO SHEET P001 FOR ALL GENERAL NOTES AND LEGEND.

WATER SUPPLY CORE PLAN

CONNECT DISHWASHER TO HW STOP AT P3

CW & HW PEX MANIFOLDS WITH INDIVIDUAL SHUTOFFS.

1"DCW PVC SUPPLY
BELOW FLOOR

MONA AZARBAYJANI
704.687.0119
MAZARBAY@UNCC.EDU
UNIVERSITY OF NORTH CAROLINA AT CHARLOTTE
9201 UNIVERSITY CITY BLVD
CHARLOTTE, NC 28223

TEAM UNCC
LOT 112
CHECKER

01 02 03 04
10.10.12 11.20.12 02.14.13 04.05.13
80% DOE SUBMISSION
80% DOE RE-SUBMISSION
100% DOE SUBMISSION
100% DOE RE-SUBMISSION

1/2" = 1'-0"
### CAPILLARY SCHEDULE

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<th>Nominal Outside Diameter (in.)</th>
<th>Minimum Wall Thickness (in.)</th>
<th>Maximum Wall Thickness (in.)</th>
<th>Weight (lb/ft)</th>
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**Bell End Pipes**

**PVC Pipe SCHEDULE - Schedule 40**

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**GENERAL SHEET NOTES**

Refer to Sheet P001 for all general notes and legends.
# PLUMBING MATERIAL SCHEDULE

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<td>10</td>
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</tr>
<tr>
<td>224300</td>
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<td>1</td>
<td>Watts</td>
<td>104091</td>
<td>1/2&quot;</td>
<td>Pressure</td>
<td>5</td>
<td>10</td>
<td>No</td>
<td>Website</td>
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<td>Watts</td>
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<td>Pressure</td>
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<td>Website</td>
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</table>

## GENERAL SHEET NOTES
- Refer to Sheet P001 for all general notes and legend.
- Mark date description.

### SCHEDULES
- 1/4" = 1'-0"
GENERAL SHEET NOTES

REFER TO SHEET P001 FOR ALL GENERAL NOTES AND LEGEND.

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UNIVERSITY OF NORTH CAROLINA AT CHARLOTTE
9201 UNIVERSITY CITY BLVD
CHARLOTTE, NC 28223

TEAM UNCC
LOT 112
UNCC
CHECKER

80% DOE SUBMISSION
80% DOE RE-SUBMISSION
100% DOE SUBMISSION
100% DOE RE-SUBMISSION

01
02
03
04
05
08.22.13
AS-BUILT SUBMISSION

CORE SUPPLY ISOMETRIC
M.C. SHALL CREATE A 20"X12"X6" DEEP SHEET METAL PLENUM BOX TO MOUNT AS-BUILT SUBMISSION DE-HUMIDIFICATION UNIT AND ERV ARE STACKED AND WALL MOUNTED. CLOSE GENERAL SHEET NOTES

KEYED MECHANICAL NOTES
1. SIZE
2. TYPE
3. ENERGY CODE DATA
4. RETURN REGISTER
5. CURVED BLADE SUPPLY REG

TO ARCHITECTURAL GRILLE. COORDINATE WITH G.C.

NAILOR 51CD-2B

TYPE
1. TWO WAY BLOW
2. ONLY, PER SMACNA DETAILS

CORRESPONDING SYSTEMS AND EQUIPMENT
METHOD OF COMPLIANCE
1. ALL DUCTWORK AND EQUIPMENT SHOWN DASHED IS EXISTING TO REMAIN.
2. PROVIDE RADIUS AT ELBOWS AT ALL CHANGES IN DIRECTION IN SUPPLY, RETURN AND EXHAUST DUCTWORK WHERE POSSIBLE. MINIMUM RADIUS AT CENTERLINE SHALL BE EQUAL TO 1.5 TIMES DUCT WIDTH, UNLESS OTHERWISE SHOWN. WHERE SQUARE ELBOWS ARE SHOWN PROVIDE ELBOWS WITH TURNING VANES. TURNING VANES SHALL BE AIRFOIL SHAPED AND MADE IN ACM, UNLESS SPECIFILY NOTED ON THE DRAWINGS.

3. PROVIDE MANUAL VOLUME DAMPER IN LOW PRESSURE BRANCH SUPPLY, RETURN OR EXHAUST DUCTS TO EACH GRILLE, DIFFUSER REGISTER, ETC. DAMPER SHALL BE AS OTHER LOCATIONS INDICATED ON PLAN.

4. BEFORE FABRICATING ANY SHEET METAL DUCTWORK, COORDINATE LOCATION AND SIZE WITH PLUMBING PIPING, ELECTRICAL CONDUITS, LIGHT FIXTURES, ETC. PLANS ARE SCHEMATIC AND ARE NOT SHOP DRAWINGS.

5. BEFORE ROUGHING-IN WALLS, THE MECHANICAL CONTRACTOR SHALL COORDINATE WITH THE GENERAL CONTRACTOR AND ARCHITECT, THE LOCATION OF ALL THERMOSTATS AND SWITCHES.

6. BEFORE SUBMITTING SHOP DRAWINGS, VERIFY VOLTAGES AVAILABLE FOR MECHANICAL DISCONNECT SWITCHES, (IF REQUIRED)

7. PROVIDE ESCUTCHEON PLATES WHERE DUCTS OR PIPES PENETRATE CEILINGS OR OTHER LOCATIONS INDICATED WITH ELABORATE SOUTH CHARLOTTE, COMPLETE, LIGHT FIXTURES, ETC. PLEASE ARE.

8. ALL DUCTS, PIPE, AND EQUIPMENT SHALL BE LATERALLY RESTRAINED TO COMPLY WITH N.C. STATES BUILDING CODE. CONFIRM THE REQUIREMENTS FOR SEISMIC BRACING OF SAME MATERIAL AS DUCT. PIPE ESCUTCHEONS SHALL BE CHROME-PLATED BRASS.

9. ALL ELECTRICAL EQUIPMENT SHALL BE U.L. LISTED.

10. ALL EQUIPMENT SHALL BE LABELED IN ACCORDANCE WITH THE N.C. MECHANICAL CODE. CONTRACTOR SHALL COORDINATE WITH THE GENERAL CONTRACTOR AND ARCHITECT, THE LOCATION OF ALL THERMOSTATS AND SWITCHES.

11. INSTALL ALL DUCTS THRU ALL 1-HOUR RATED PARTITIONS, (IF THEY EXIST), TO LEAVE A MINIMUM OF 2 INCHES ABOVE THE DUCTS SUCH THAT THE GENERAL CONTRACTOR CAN SEAL THE WALL ABOVE THE DUCTS.

12. ALL WORK SHALL BE DONE BY N.C. LICENSED CONTRACTORS, IN ACCORDANCE WITH THE N.C. STATE BUILDING CODE, ALL CHAPTERS.

13. MECH. CONTR. SHALL VISIT THE SITE PRIOR TO PROVIDING HIS BID. ALL SITE CONDITIONS AND DIMENSIONS SHALL BE VERIFIED. THE CONTRACT SHALL INCLUDE AIR BALANCING AND STARTUP OF A/C EQUIPMENT.

14. PROVIDE A ONE YEAR WARRANTY ON ALL EQUIPMENT AND WORK. WARRANTY SHALL BEGIN UPON THE ARCHITECT'S WRITTEN NOTICE OF ACCEPTANCE OF THE WORK. DOORS, ETC.) WITH THE ARCHITECT'S REFLECTED CEILING PLANS PRIOR TO BEGINNING CONSTRUCTION OF THE DUCTWORK.

DOORS, ETC.) WITH THE ARCHITECT'S REFLECTED CEILING PLANS PRIOR TO BEGINNING CONSTRUCTION OF THE DUCTWORK.
6" ∅

8" ∅

4" ∅

SD

MODEL AL 1022

MODEL AL 1014

30 M.C. SHALL PROVIDE DRYER VENT OUTLET BOX PROVIDING DRYER VENT ROUTING DOWN. COORDINATE MOUNTING WITH P.C. PROVIDED WASHER BOX TO BE MOUNTED IN SAME WALL.

31 M.C. SHALL CREATE A 20"X12"X6" DEEP SHEET METAL PLENUM BOX TO MOUNT TO ARCHITECTURAL GRILL. COORDINATE WITH G.C.

32 DE-HUMIDIFICATION UNIT AND ERV ARE STACKED AND WALL MOUNTED CLOSE TO MECHANICAL ROOM. M.C. SHALL COORDINATE WITH E.C., P.C. AND G.C.

1. SEE M-601 FOR HVAC SCHEDULES AND DETAILED INFORMATION.

80% DOE SUBMISSION

100% DOE SUBMISSION

05.08.2013 AS-BUILT SUBMISSION

10.10.12 80% DOE RE-SUBMISSION

11.20.12 100% DOE RE-SUBMISSION

02.14.13

04.05.13

M-101

FLOOR PLAN HVAC

GENERAL SHEET NOTES

1. SEE SHEET M-601 FOR SCHEDULES AND DETAILED INFORMATION.

REFERENCE KEYNOTES

SHEET KEYNOTES

00 M.C. SHALL PROVIDE FRAME SUPPORT AT VARIOUS LOCATIONS AT WALL TO BE MOUNTED ON CU. COORDINATE MOUNTING WITH P.C. PROVIDED WASHER BOX TO BE MOUNTED IN SAME WALL.

01 M.C. SHALL BE MOUNTED TO WALL AT FRAME SUPPORT LOCATION. COORDINATE MOUNTING WITH P.C. PROVIDED WASHER BOX TO BE MOUNTED IN SAME WALL.
M.C. SHALL PROVIDE COPPER B-LINE, DURA BLOK, DBSERIES. (TYPICAL OF ALL PIPE SUPPORTS)

M.C. SHALL PROVIDE COPPER B-LINE, DURA BLOK, DBSERIES. (TYPICAL OF ALL EQUIPMENT SUPPORTS)

M.C. SHALL PROVIDE ROOF CURB AND PENETRATION HOUSING AS DETAILED THIS SHEET. COORDINATE WITH ROOFING CONTRACTOR.

REFERENCE KEYNOTES

REFERENCE KEYNOTES

SHEET KEYNOTES

GENERAL SHEET NOTES

1. SEE SHEET FOR HVAC SCHEDULE AND DETAILED INFORMATION

FIN TUBE DETAILS

FIN TUBE DETAILS

ROOFTOP HEAT EXCHANGER

ROOFTOP HEAT EXCHANGER

8' 1/2" = 1'-0"

SIDE ELEVATION

FRONT ELEVATION

SIDE SECTION

SIDE ELEVATION

FRONT ELEVATION

SIDE SECTION

SIDE ELEVATION

FRONT ELEVATION

SIDE SECTION

SIDE ELEVATION

FRONT ELEVATION

SIDE SECTION
### Architectural Linear Slot Location

<table>
<thead>
<tr>
<th>Temperature</th>
<th>Size Type</th>
<th>CFM</th>
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<tbody>
<tr>
<td>Indoor Unit</td>
<td>0-100 CFM</td>
<td>8&quot; inlet, 2' linear length, (2) 1&quot; slot, 2-way throw</td>
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<tr>
<td></td>
<td>100-200 CFM</td>
<td>8&quot; inlet, 2' linear length, (2) 1.5&quot; slot, 2-way throw</td>
</tr>
<tr>
<td></td>
<td>200-300 CFM</td>
<td>10&quot; inlet, 2' linear length, (2) 2&quot; slot, 2-way throw</td>
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</table>

### Energy Efficiency Ratio (SEER)

- **Mark**: TRANE
- **Model/Size**: 4MXW8509A10N0BA
- **SEER**: 14.2
- **Energy Efficiency Ratio (EER)**: 22.0
- **Operating Weight (Pounds)**: 9600

### Electrical Data

- **Volts/Phase/Hz**: 240/1/60
- **Minimum Circuit Ampacity**: 10 A

### Notes:

1. Size refrigerant lines according to manufacturer's recommendations.
2. Provide all units with condensate pump.
3. Provide low ambient to 0°F control.
4. Provide with disconnect.

### Basis of Design

#### Supply Air CFM

<table>
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<th>Indoor Unit Power</th>
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<td>130 CFM</td>
<td>129 CFM</td>
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<tr>
<td>32 CFM</td>
<td>129 CFM</td>
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<tr>
<td>120/1/60</td>
<td>120/1/60</td>
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#### Heating Performance

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<th>Heating EAT °F</th>
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<tbody>
<tr>
<td>95</td>
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#### Cooling Rec. Efficiency %

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#### Electrical Data

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<td>25</td>
<td>250</td>
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<tr>
<td>1.5</td>
<td>1.5 - 1,2</td>
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</tbody>
</table>

### Notes:

1. Provide unit with disconnect.

### Dehumidifier Schedule

<table>
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<tr>
<td>65H</td>
<td>190 (CFM)</td>
</tr>
<tr>
<td>65</td>
<td>65 (IN.WC)</td>
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### Heating Rec. Efficiency %

<table>
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<th>Heating Rec. Efficiency %</th>
<th>Heating EAT °F</th>
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</thead>
<tbody>
<tr>
<td>1.0</td>
<td>1.3</td>
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</table>

### Notes:

1. Pump schedule

### Pump Schedule

<table>
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</tr>
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<tbody>
<tr>
<td>0.17</td>
<td>250</td>
</tr>
<tr>
<td>1.5 - 1,2</td>
<td>1.5 - 1,2</td>
</tr>
</tbody>
</table>

### Notes:

1. Provide with VFD.
2. Pump head based on system pressure drop.

### Sheet Title

- **Sheet Type**: Schedules
- **Sheet Number**: M-601

### Client

- **Website**: www.solardecathlon.gov
- **Name**: U.S. Department of Energy
- **Project**: Solar Decathlon

### Team

- **Name**: UNCC
- **Contact**: Mona Azarbajani
- **Phone**: 704.687.0119
- **Email**: mazarbajani@unc.edu
- **Address**: University of North Carolina at Charlotte
- **Location**: Charlotte, NC 28223
COMMUNICATION OUTLET, MOUNT AT 18" AFF TO THE DEVICE, UNO WITH 3/4" CUBE ABOVE ACCESSIBLE CEILING.

COMMUNICATIONS LEGEND:
- ALL MAY NOT APPLY
- X ACCESSIBLE CEILING
- X CENTER, UNO
- DB WALL MOUNTED SOUND SYSTEM SPEAKER, MOUNT HIGH ON WALL
- DBT BACKSPLASH TO THE CENTER, UNO
- OR 6" ABOVE BACKSPLASH TO THE CENTER, UNO
- F FOLLOWING:
- DB CEILING MOUNTED SINGLE FACE EXIT SIGN
- DBT TV MOUNTED 36" AFF TO CENTER OF DEVICE UNO
- MC SINGLE POLE TOGGLE DUAL SWITCH MOUNTED 36" AFF TO CENTER OF DEVICE UNO
- TVX ADDRESS:
- DBT MOUNT 46" AFF TO THE CENTER OF DEVICE UNO
- DBT FIRE ALARM PULL STATION, MOUNT 46" AFF TO THE CENTER OF DEVICE UNO
- DBT XFMR TRANSFORMER, LOCATED ABOVE CEILING
- DBT DOOR BELL TRANSFORMER, LOCATED ABOVE CEILING
- DBT 6. IT SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR FOR THE ADVANCED ORDERING OF LONG LEAD ITEMS SO AS NOT TO INTERFERE WITH THE PRODUCTION OF OTHER TRADES RESULTING IN ANY DOWN OR LAG TIME.
- DBT 7. CONTRACTOR SHALL GUARANTEE ALL MATERIALS AND WORKMANSHIP FREE FROM DEFECTS FOR A PERIOD OF NOT LESS THAN (1) YEAR FROM DATE OF ACCEPTANCE, WORST WORKING DAY.
- DBT 10. IT SHALL NOT BE THE INTENT OF THESE PLANS AND/OR SPECIFICATION TO SHOW EVERY MINOR DETAIL OF CONSTRUCTION. FURNISH AND INSTALL ALL ITEMS FOR A COMPLETE ELECTRICAL SYSTEM AND PROVIDE ALL REQUIREMENTS NECESSARY FOR EQUIPMENT TO BE PLACED IN PROPER WORKING ORDER.
- DBT 13. ALL EQUIPMENT, WIRING, DEVICES,, ETC., SHALL BE NEW AND AS SPECIFIED.
- DBT 15. FOR ELECTRIC POWER SYSTEM:
- A. COORDINATE POWER SERVICE WITH COMPETITION ORGANIZERS.
- B. AS COORDINATE POWER SERVICE WITH COMPETITION ORGANIZERS, PROVIDE ALL CONTROL WIRING FOR UNO AND COMPETITION ORGANIZERS.
- C. AS COORDINATE POWER SERVICE WITH COMPETITION ORGANIZERS, PROVIDE ALL CONTROL WIRING FOR UNO AND COMPETITION ORGANIZERS.
- D. PROVIDE ALL CONTROL WIRING FOR UNO AND COMPETITION ORGANIZERS.
- 16. ALL CONDUCTORS SHALL BE IN CONDUIT OR NON-METALLIC CABLE, INTERMEDIATE (IMC) OR RIGID GALVANIZED STEEL (RGS) EXCEPT THAT:
   a. POLYVINYL CHLORIDE (PVC) CONDUITS MAY BE USED IN CONCRETE SLABS, WALLS, AND UNDERGROUND PROVIDED ELBOWS AND RISERS ARE RGS:
   b. ELECTRICAL METALLIC TUBING (EMT) MAY BE USED IN CONCRETE SLABS, WALLS, AND UNDERGROUND PROVIDED ELBOWS AND RISERS ARE RGS:
   c. INOSISTH EMT MAY BE USED IN CONCRETE SLABS, WALLS, AND UNDERGROUND PROVIDED ELBOWS AND RISERS ARE RGS:
   d. INOSISTH EMT MAY BE USED IN CONCRETE SLABS, WALLS, AND UNDERGROUND PROVIDED ELBOWS AND RISERS ARE RGS:
   e. INOSISTH EMT MAY BE USED IN CONCRETE SLABS, WALLS, AND UNDERGROUND PROVIDED ELBOWS AND RISERS ARE RGS:
   f. INOSISTH EMT MAY BE USED IN CONCRETE SLABS, WALLS, AND UNDERGROUND PROVIDED ELBOWS AND RISERS ARE RGS:
   g. INOSISTH EMT MAY BE USED IN CONCRETE SLABS, WALLS, AND UNDERGROUND PROVIDED ELBOWS AND RISERS ARE RGS:
   h. INOSISTH EMT MAY BE USED IN CONCRETE SLABS, WALLS, AND UNDERGROUND PROVIDED ELBOWS AND RISERS ARE RGS:
   i. INOSISTH EMT MAY BE USED IN CONCRETE SLABS, WALLS, AND UNDERGROUND PROVIDED ELBOWS AND RISERS ARE RGS:
   j. INOSISTH EMT MAY BE USED IN CONCRETE SLABS, WALLS, AND UNDERGROUND PROVIDED ELBOWS AND RISERS ARE RGS:
   k. INOSISTH EMT MAY BE USED IN CONCRETE SLABS, WALLS, AND UNDERGROUND PROVIDED ELBOWS AND RISERS ARE RGS:
   l. INOSISTH EMT MAY BE USED IN CONCRETE SLABS, WALLS, AND UNDERGROUND PROVIDED ELBOWS AND RISERS ARE RGS:
   m. INOSISTH EMT MAY BE USED IN CONCRETE SLABS, WALLS, AND UNDERGROUND PROVIDED ELBOWS AND RISERS ARE RGS:
   n. INOSISTH EMT MAY BE USED IN CONCRETE SLABS, WALLS, AND UNDERGROUND PROVIDED ELBOWS AND RISERS ARE RGS:
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   y. INOSISTH EMT MAY BE USED IN CONCRETE SLABS, WALLS, AND UNDERGROUND PROVIDED ELBOWS AND RISERS ARE RGS:
   z. INOSISTH EMT MAY BE USED IN CONCRETE SLABS, WALLS, AND UNDERGROUND PROVIDED ELBOWS AND RISERS ARE RGS:
- 17. APPLY BITUMASTIC COATING TO ALL CONDUITS IN SLABS OR UNDERGROUND.
- 19. WIREWAYS SHALL BE SIZED AS REQUIRED, PER NEC, UNLESS OTHERWISE NOTED.
- 20. ALL ELECTRICAL EQUIPMENT SHALL BE RAINTIGHT WHERE EXPOSED TO THE WEATHER. ALL FLEX CONDUITS CONNECTED TO SUCH EQUIPMENT SHALL BE LIQUID-TIGHT.
- 21.OUTLET BOXES SHALL BE STEEL IN DRY LOCATIONS, CAST ALLOY WITH THREADED HUBS IN WET OR DAMP LOCATIONS AND SPECIAL ENCLOSURE FOR OTHER CLASSIFIED AREAS. PROPER PLASTER RINGS SHALL BE USED WITH OUTLET BOXES. ALL OUTLET BOXES SHALL BE SECURELY FASTENED. ALL DEVICES SHALL BE WHITE (DECORA TYPE) WITH STAINLESS STEEL PLATES (UNO).
- 28. ALL CONNECTIONS TO GROUND RODS & BUILDING STEEL SHALL BE MADE WITH UL APPROVED WELDED CONNECTIONS, UNLESS OTHERWISE NOTED.
- 29. PROVIDED MOUNTING BACKBOARDS FOR ELECTRICAL AND COMMUNICATION EQUIPMENT. BACKBOARDS SHALL BE OF TYPE "AC" PLYWOOD, PAINTED ON BOTH SIDES.
- 30. PROVIDE MOUNTING BACKBOARDS FOR ELECTRICAL AND COMMUNICATION EQUIPMENT. BACKBOARDS SHALL BE OF TYPE "AC" PLYWOOD, PAINTED ON BOTH SIDES. 1. PROVIDE MOUNTING BACKBOARDS FOR ELECTRICAL AND COMMUNICATION EQUIPMENT. BACKBOARDS SHALL BE OF TYPE "AC" PLYWOOD, PAINTED ON BOTH SIDES. 2. PROVIDE MOUNTING BACKBOARDS FOR ELECTRICAL AND COMMUNICATION EQUIPMENT. BACKBOARDS SHALL BE OF TYPE "AC" PLYWOOD, PAINTED ON BOTH SIDES. 3. PROVIDE MOUNTING BACKBOARDS FOR ELECTRICAL AND COMMUNICATION EQUIPMENT. BACKBOARDS SHALL BE OF TYPE "AC" PLYWOOD, PAINTED ON BOTH SIDES. 4. PROVIDE MOUNTING BACKBOARDS FOR ELECTRICAL AND COMMUNICATION EQUIPMENT. BACKBOARDS SHALL BE OF TYPE "AC" PLYWOOD, PAINTED ON BOTH SIDES.

U.S. DEPARTMENT OF ENERGY

E-001
1. DIMENSIONS FOR LUMINAIRE PLACEMENT ON I-106
2. VERIFY LOCATION OF LUMINAIRES WITH ARCHITECT PRIOR TO ROUGH-INS.
3. REFER TO PANEL SCHEMES FOR MORE INFORMATION ON E-601-603

DOWNLIGHT TO HIGHLIGHT GREEN WALL MOUNTED TO BEAM OF RIB STRUCTURE
UPLIGHT ALONG BASE TO HIGHLIGHT CORE WALL

TO LCP ZONE A
TO LCP ZONE B
TO LCP ZONE D
TO LCP ZONE E

REFERENCE KEYNOTES

GENERAL SHEET NOTES

SITE LIGHTING PLAN
1. REFER TO LINE DIAGRAMS FOR MORE INFORMATION ON EACH RACK AND JUNCTION BOXES TO BE MOUNTED TO MOVABLE PHOTOVOLTAIC RACK.

PHOTOVOLTAIC ARRAY PLAN
1. All receptacles shall be tamper proof.
2. Connect smoke detectors ahead of switches, etc.
3. All outlets to be mounted 18" A.F.F. unless otherwise specified.
4. All weatherproof outlets to be mounted 18" A.F.F. unless otherwise specified.
1. All receptacles shall be tamper proof.

REFERENCE KEYNOTES

SHEET KEYNOTES

15 Mount to steel, flush to minimize roof penetrations.
16 PV combiner disconnect switch.
17 Need to design PV-3 switch panel.
18 Secure NEMA 4X JB on roof for roof penetrations.
19 Use sturdy clamps, leave liquid-tight flex cable coiled for roof penetrations.
20 For insulated PV racks.
21 ATV-3 JB for connection to cable tray.
22 2" Weatherhead for PV connections to inverter.

GENERAL SHEET NOTES

- All receptacles shall be tamper proof.

MARK DATE DESCRIPTION

SCALE: 1/4" = 1'-0"
GRID INTERCONNECTION AT KITCHEN

IN MECHANICAL/ELECTRICAL CLOSET

ACCESS PANEL ABOVE JUNCTION BOX

6-ZONE LIGHTING CONTROL BOX IN KITCHEN

TOGGLE SWITCH ON WALL, SEE FLOOR PLAN

RECEPTACLE IN SIDE OF ISLAND (TYPE P2)

ROUTE IN SLEEVES TO JUNCTION BOX THROUGH WOOD BLOCKING BELOW FLOOR

JUNCTION BOX AT JOINT BETWEEN PODS UNDER PORCH, FLOOR OR UNDER REFRIGERATOR AS DIRECTED BY OWNER

SEE FLOOR PLANS FOR CIRCUIT DESTINATIONS

SEE FLOOR PLANS FOR CIRCUIT DESTINATIONS

IN MECHANICAL/ELECTRICAL CLOSET
PV ONE LINE DIAGRAM

3KW PV ARRAY - A
3KW PV ARRAY - B
3KW PV ARRAY - C

3KW PV ARRAY - A
3KW PV ARRAY - B
3KW PV ARRAY - C

INVERTER
INVERTER
INVERTER

12" = 1'-0"
150A, 2P
AIC 22000 A
120/240V, 1-PHASE, 3-WIRE, 225A MLOAIC 22kA

METER BASE
150A
120/240V SERVICE
GRADE

3#2/0, 1#4G IN 1 2"C.

WEATHERPROOF LB ON OUTSIDE OF BUILDING

3#1/0, 1#6G IN 2"C

3#2/0, 1#4G TO COMPETITION ORGANIZER UTILITY PANEL FOR SERVICE ENTRANCE GROUNDING

10.10.12
11.20.12
02.14.13
04.05.13

80% DOE SUBMISSION
100% DOE SUBMISSION

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9201 UNIVERSITY CITY BLVD
CHARLOTTE, NC 28223

TEAM UNCC
LOT 112
CHECKER

TEAM NAME:
ADDRESS:
CONTACT:
CONSULTANTS

08.22.13
AS-BUILT SUBMISSION
3#2/0, 1#4G IN 2"C
100% DOE RE-SUBMISSION
8/22/2013 5:33:14 PM

80% DOE RE-SUBMISSION

POWER RISER DIAGRAM

REFERENCE KEYNOTES
SHEET KEYNOTES
GENERAL SHEET NOTES
## Temperature Coefficient Calculations

Temperature data obtained from the National Climatic Data Center (www.ncdc.noaa.gov)

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
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<tbody>
<tr>
<td>Lowest Possible Ambient Temp. (Charlotte, NC)</td>
<td>-20.56°C</td>
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<tr>
<td>Highest Ambient Temp. (Irvine, CA)</td>
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<td>Temperature Correction Factor for Temp Applicable Temp Range (690-7 NEC)</td>
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<td>PV Module Max Operating Temp.</td>
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<tr>
<td>Temp. Coefficient of Voltage Sub-arrays 1, 2 and 3 (Applies to 12-BO-SCH C6-SI MR6 EU42117 Module)</td>
<td>-0.118 V/°C</td>
</tr>
<tr>
<td>Open Circuit Voltage</td>
<td>38 V</td>
</tr>
<tr>
<td>STC</td>
<td>25 °C</td>
</tr>
<tr>
<td>Lowest Amb. Temp.</td>
<td>-20.56 °C</td>
</tr>
<tr>
<td>Change in Temp.</td>
<td>45.56 °C</td>
</tr>
<tr>
<td>Highest Possible Value of String Voltage (VOC x 12 x Temp Correction Factor (1.13))</td>
<td>5.203 V</td>
</tr>
<tr>
<td>Temp. Coefficient of Current</td>
<td>2.77 mA/C</td>
</tr>
<tr>
<td>Short Circuit Current</td>
<td>8.92 A</td>
</tr>
<tr>
<td>STC</td>
<td>25 °C</td>
</tr>
<tr>
<td>Max. Ambient Temp.</td>
<td>43.9 °C</td>
</tr>
<tr>
<td>Change in Temp.</td>
<td>18.9 °C</td>
</tr>
<tr>
<td>Highest Possible Value of String Current (ISC x 1.56%)</td>
<td>13.9375 A</td>
</tr>
</tbody>
</table>

**General Sheet Notes**

**Reference Keynotes**

**Sheet Keynotes**
### General Sheet Notes

**Lots:**
- Lot 112
- UNCC

**Schedules:**
- 10.10.12
- 10.20.12
- 02.14.13
- 04.05.13

**Copyright:**
- None: project is public domain

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  - 9201 University City Blvd
  - Charlotte, NC 28223

**Team Name:**
- UNCC

**Lot Number:**
- E-605

## Reference Keynotes

**Sheet Keynotes:**
- ZONE 'A' - Porch Lights
- ZONE 'B' - Pendent Lights
- ZONE 'C' - Dining Room Wall Light
- ZONE 'D' - Bedroom Wall Light
- ZONE 'E' - Kitchen Lights
- ZONE 'A' - Site Lights - North
- ZONE 'B' - Headboard Lights
- ZONE 'C' - Green Wall Wash
- ZONE 'D' - Site Lights - South
- ZONE 'E' - Bedroom Lights

## Schedules

### Types of Schedules

- **Design Information Schedule**
  - Type
  - Location
  - Description

- **Interference Schedule**
  - Date
  - Description

- **Verification Schedule**
  - Date
  - Description

### Notes

- A. Load Centre Construction
- B. Copper Dvi/be
- C. Wire sizes are nominal. Increase for voltage drop.
- D. Provide anchors in addition for volume under the building.
- E. Circuit breaker for lighting controller.

### Sheet Notes

- **Date:**
  - 8/22/2013 5:33:51 PM

- **Schedules:**
  - E-605
  - SCHEDULES

- **Reference Keynotes:**
  - ZONE 'A' - Porch Lights
  - ZONE 'B' - Pendent Lights
  - ZONE 'C' - Dining Room Wall Light
  - ZONE 'D' - Bedroom Wall Light
  - ZONE 'E' - Kitchen Lights

- **Zone 'A' - Site Lights - North
  - Zone 'B' - Headboard Lights
  - Zone 'C' - Green Wall Wash
  - Zone 'D' - Site Lights - South
  - Zone 'E' - Bedroom Lights

- **Remote Control:**
  - P-1
  - 120V

- **Remote Control:**
  - P-1
  - 120V
ASSEMBLY AND DISASSEMBLY DIAGRAM

PUBLIC EXHIBIT DIAGRAM

NOTE: Selection will occur on Tuesday, February 14, 2012.
All times indicated are Mountain Standard Time.

SHEET KEYNOTES

10:01:15 PM Sunday, February 19, 2012
1. WATER DELIVERY TO BE RECEIVED THROUGH ACCESS HATCH TO FRESH WATER TANK, LOCATED AT THE SOUTHEAST AREA OF DECK.

2. ACCESS HATCH TO SUPPLY AND REMOVAL VALVES TO BE MINIMUM OF 12" X 12" SQUARE, WITH AT LEAST 8 FEET OF CLEARANCE ABOVE WHEN HATCH IS OPEN.

3. POTABLE WATER TANKS HAVE TOTAL CAPACITY OF 1500 GALLONS TOTAL.

4. GREYWATER TANKS HAVE TOTAL CAPACITY OF 1500 GALLONS TOTAL.

5. REMAINING WATER IN POTABLE TANKS TO BE PUMPED TO GREY WATER TANKS FOR REMOVAL.

6. WATER REMOVAL VALVE LOCATED ON GREY WATER TANK, ESTIMATED QUANTITY TO BE REMOVED: APPROXIMATELY 1500 GALLONS.