AFTER THE JOB IS IN PROGRESS, "CHANGE ORDERS" MUST BE APPROVED BY THE ARCHITECT IN WRITING PRIOR TO ALL MISCELLANEOUS WOOD BLOCKING, SILLS, PLYWOOD, ETC. TO BE FIRE RETARDANT TREATED.

CONTRACTOR SHALL BE RESPONSIBLE FOR BRACING PARTITION WALLS AS REQUIRED AND AT ALL DOOR OPENINGS.

INTERIOR ROOMS SHALL BE MECHANICALLY VENTILATED IN ACCORDANCE WITH STATE AND LOCAL BUILDING CODES.

ALL PARTITIONS ARE DIMENSIONED TO FACE OF WALL FINISH, UNLESS NOTED OTHERWISE.

IF CEILING DIFFUSERS, LIGHT FIXTURES OR OTHER ELEMENTS ON OR ABOVE THE CEILING CANNOT BE LOCATED AS REQUIRED BY FIRE MARSHALL AND LOCAL CODES.

ALL MATERIALS ARE TO BE STORED PROPERLY. GENERAL CONTRACTOR IS RESPONSIBLE FOR THE SAFEKEEPING OF MATERIALS.

THE GENERAL CONTRACTOR SHALL SUBSTITUTE MATERIALS, FINISHES, AND OR EQUIPMENT UPON WRITTEN SUBMITTAL NO SUBSTITUTIONS SHALL BE ALLOWED DURING THE CONSTRUCTION PROCESS UNLESS APPROVED BY THE ARCHITECT.

DIMENSIONS NOTED 'CLEAR' SHALL NOT BE ADJUSTED WITHOUT PRIOR APPROVAL BY THE ARCHITECT.

GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL AND DISPOSAL OF ALL CONSTRUCTION DEBRIS AND UPON SUBSTANTIAL COMPLETION OF WORK, CONTRACTOR SHALL PREPARE A PUNCH LIST AND NOTIFY ARCHITECT TO REACT.

GENERAL NOTES

SYMBOL LEGEND

<table>
<thead>
<tr>
<th>SYMBOL</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>CONSTRUCTION TYPE</td>
</tr>
<tr>
<td>B</td>
<td>ROOM TAG</td>
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<td>C</td>
<td>MENTION</td>
</tr>
<tr>
<td>D</td>
<td>EQUIPMENT TAG</td>
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<tr>
<td>E</td>
<td>FURNITURE/STRUCTURE TAG</td>
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<td>F</td>
<td>DRAWING</td>
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<tr>
<td>G</td>
<td>PATTERN ORIGIN</td>
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<tr>
<td>H</td>
<td>REVISION ID</td>
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<td>I</td>
<td>DETAIL</td>
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<td>J</td>
<td>DRAWING LOCATION</td>
</tr>
<tr>
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<td>COLUMN ID</td>
</tr>
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<td>M</td>
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</tr>
<tr>
<td>R</td>
<td>DETAIL TITLE</td>
</tr>
<tr>
<td>S</td>
<td>DETAIL DRAWING LOCATION</td>
</tr>
<tr>
<td>T</td>
<td>COLUMN DESIGNATION</td>
</tr>
</tbody>
</table>

GENERAL CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION OF SPECIAL, SUPPLIED ITEMS. CONTRACTOR SHALL PROVIDE ARCHITECT WITH A THOROUGH REPORT OF ALL SPECIAL EQUIPMENT UPON ACCEPTANCE.

THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR LAUNCHING CONTRACTED PLANS TO COMMENCE WORK.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR SELECTING AND INSTALLING THE FIRE PROTECTION SYSTEM.

ALL CONTRACTORS ARE RESPONSIBLE FOR LAYING OUT EQUIPMENT RUNS TO AVOID INTERFERENCE.

REVISION DATE DESCRIPTION

PROJECT NO. CHECKED NAME

DRAWING LOCATION

DRAWING INDEX

G-002
VISITORS IN REAR OF HOUSE WILL EXIT THROUGH MAIN ENTRY DOOR.

VISITORS IN COURTYARD WILL EXIT THROUGH THIS DOOR.

WINDOW #1
32 INCHES

WINDOW #2
32 INCHES

MAX. 49 OCCUPANTS

DOOR #1
36 INCHES

DOOR #2
36 INCHES

DOOR #3
36 INCHES

DOOR #4
36 INCHES

DOOR #5
33.5 INCHES

Primary Evacuation Path:
- Common Path of Travel
- Primary Egress Path
- Secondary Egress Path

Life Safety Notes:
Maryland Contest Space: 108' - 0" x 95' - 0"
Total Distance: 60' - 0" x 78' - 0"
Max. Occupancy: 49 Occupants

Life Safety Legend:
- Common Path of Travel
- Primary Egress Path
- Secondary Egress Path

University of Maryland, College Park
Solar Decathlon 2017 Submission

G-103
**ACCESSIBILITY NOTES**

1. The accessible route required shall comply with the site designed for accessibility.
2. The grades of all walking surfaces shall be no steeper than 1:20.
3. Handrails compliant with all ADA requirements shall be provided at the entry ramp.
4. Railing cables shall be installed so as to prevent the passage of a 4-inch diameter sphere within 4 inches of the guard rail.
5. Handrail height is to be within 34-38 inches above walking surface. Handrail diameter is to be within 1-1/2 to 2 inches, and mounted at least 1-1/2 inches away from main railing.

**EXHIBIT NOTES**

1. All exterior signs to be weather resistant.
2. Exterior signage to include general facts about water and/or energy conservation, usage, and other household facts.
3. Exterior doors to remain open for duration of public exhibit, weather permissible.

**TOUR PLAN LEGEND**

- Accessible Path Clearance
- Tour Path of Travel
- First Aid Kit Location
- Fire Extinguisher Location
- Tour Guide Location
- Door Barrier

**EXTERIOR SIGNAGE**

1. Welcome Sign
2. Architecture
3. Engineering
4. Construction
5. Construction Sequence
6. Cultural Connections
7. Regenerative Systems
8. Water System
9. Mechanical Systems
10. Wall Mock-Up
11. Interactive Station

**INTERIOR SIGNAGE**

- Living Area
- Attic
- Kitchen & Dining
- Bathroom
- Interactive Panel
- Bedroom
- Study
- Courtyard

**PUBLIC EXHIBIT LAYOUT AND TOUR PATH PLAN**

UNIVERSITY OF MARYLAND, COLLEGE PARK
SOLAR DECATHLON 2017 SUBMISSION

UNIVERSITY OF MARYLAND, COLLEGE PARK, MD 20742

G-104
<table>
<thead>
<tr>
<th>LATIN NAME</th>
<th>COMMON NAME</th>
<th>EDIBILITY</th>
<th>TYPE OF VEGETATION</th>
<th>SOIL DESCRIPTION</th>
<th>HEIGHT</th>
<th>SPREAD</th>
<th>WATER</th>
<th>WILDLIFE</th>
<th>BLOOM TIME</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allium brevistylum</td>
<td>Shortstyle onion</td>
<td>Yes</td>
<td>Herbaceous perennial</td>
<td>requires extra care and preparation in order to use for culinary purposes</td>
<td>1'-2'</td>
<td>1'-1.5'</td>
<td>medium to wet</td>
<td>hummingbirds, butterflies</td>
<td>April to May</td>
</tr>
<tr>
<td>Amorpha canescens Pursh</td>
<td>Lead plant flowers</td>
<td>Yes</td>
<td>Herbaceous perennial</td>
<td>used for braising</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arisaema triphyllum</td>
<td>Jack in the Pulpit</td>
<td>Yes</td>
<td>Herbaceous perennial</td>
<td>Entire plant is basically edible</td>
<td>4'</td>
<td></td>
<td>Wet medium to Dry</td>
<td></td>
<td>Jun to Aug</td>
</tr>
<tr>
<td>Asclepias speciosa</td>
<td>Showy milk weed</td>
<td>Yes</td>
<td>Herbaceous perennial</td>
<td>Tolerates wet soil, deer, medicinal properties, low maintenance</td>
<td>2'-4'</td>
<td>1'-2'</td>
<td>Medium to Wet</td>
<td>hummingbirds, Butterflies</td>
<td>July to Sept</td>
</tr>
<tr>
<td>Calochortus tunicusii</td>
<td>Mariposa lilly, sago lilly</td>
<td>Yes/N0</td>
<td>Herbaceous perennial</td>
<td>Tends to self seed tolerances drought</td>
<td>2'-4'</td>
<td>2'-3'</td>
<td>Dry to Medium</td>
<td>hummingbirds, Butterflies</td>
<td>July to September</td>
</tr>
<tr>
<td>Cedrus atlantica 'Glauc Pendula'</td>
<td>Fireweed</td>
<td>Yes</td>
<td>Herbaceous perennial</td>
<td>Easily grown in dry, sandy, gravelly, well-drained soils</td>
<td>5'-1'</td>
<td>1'-1.5'</td>
<td>Dry</td>
<td></td>
<td>June to July</td>
</tr>
<tr>
<td>Dryopteris erythrosa</td>
<td>Wood autumn fern</td>
<td>Yes</td>
<td>Herbaceous perennial</td>
<td>Prickly pear couls, edible fruits &amp; petals, easily propagated, good for winter</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Epilobium angustifolium</td>
<td>Fireweed</td>
<td>Yes</td>
<td>Herbaceous perennial</td>
<td>Protect from wind and frost</td>
<td>2'-5'</td>
<td>3'-6'</td>
<td>Medium</td>
<td>Birds, butterflies</td>
<td>April to May</td>
</tr>
<tr>
<td>Lobelia cardinalis</td>
<td>Cardinal Flower</td>
<td>Yes</td>
<td>Herbaceous perennial</td>
<td>Used for medicinal purposes only</td>
<td>2'-3'</td>
<td>1.5'-2'</td>
<td>Dry to wet</td>
<td>Birds, Butterflies</td>
<td>April</td>
</tr>
<tr>
<td>Mertensia ciliata</td>
<td>Ostrich Fern</td>
<td>Yes</td>
<td>Herbaceous perennial</td>
<td>Native to marshes, swamps</td>
<td>4'-6'</td>
<td>4'-6'</td>
<td>Wet</td>
<td>Birds</td>
<td>June to July</td>
</tr>
<tr>
<td>Monarda fistulosa</td>
<td>Amaranth, Red root pigweed</td>
<td>Yes</td>
<td>Herbaceous Perennial</td>
<td>Roots mixed with tepid water drunk for stomachache, root used to make soap</td>
<td>4'</td>
<td>3'-4'</td>
<td>Low</td>
<td>Nesting for small mammals, birds and reptiles</td>
<td>Jun to Aug</td>
</tr>
<tr>
<td>Opuntia phascolos</td>
<td>Wild bergmot</td>
<td>Yes</td>
<td>Herbaceous perennial</td>
<td></td>
<td></td>
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<tr>
<td>Opuntia compressa</td>
<td>Prickly pear</td>
<td>Yes</td>
<td>Herbaceous perennial</td>
<td></td>
<td></td>
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<tr>
<td>papaya</td>
<td>Quaking aspen</td>
<td>Yes</td>
<td>Tree</td>
<td></td>
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<tr>
<td>Prunus virginiana</td>
<td>Chokecherries</td>
<td>Yes</td>
<td>Tree</td>
<td>Medium moisture, well drained soil</td>
<td>20'-30'</td>
<td>15'-20'</td>
<td>Dry to Medium</td>
<td>Birds, butterflies</td>
<td>April to May</td>
</tr>
<tr>
<td>Ribes uva-crispa</td>
<td>Gooseberry</td>
<td>Yes</td>
<td>Fruit</td>
<td></td>
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<tr>
<td>Scutellaria incana</td>
<td>downy skullcap</td>
<td>No</td>
<td>Herbaceous perennial</td>
<td></td>
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<tr>
<td>Typha latifolia</td>
<td>Common Cattail</td>
<td>Yes</td>
<td>Herbaceous perennial</td>
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<td></td>
<td></td>
<td>Birds</td>
<td>June to July</td>
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<tr>
<td>Yucca glauca</td>
<td>Soapweed yucca</td>
<td>Yes</td>
<td>Perennial</td>
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<tr>
<td>Yucca gloriosa</td>
<td>Zucchini</td>
<td>Yes</td>
<td>Herbaceous perennial</td>
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<td>Eggplant</td>
<td>Alalfa</td>
<td>Yes</td>
<td>Herbaceous perennial</td>
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<tr>
<td>Beans</td>
<td>Bay</td>
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<td>Herbaceous</td>
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<tr>
<td>Buffalo berries</td>
<td>Garden/Green Wall</td>
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<td>Herbaceous</td>
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<td>Cilantro</td>
<td>Garden/Green Wall</td>
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<td>Cotton</td>
<td>Garden/Green Wall</td>
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<td>Herbaceous</td>
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<td>Garlic</td>
<td>Garden/Green Wall</td>
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<td>Herbaceous</td>
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<td>Grains</td>
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<td>Grapes</td>
<td>Garden/Green Wall</td>
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<td>Guayuley</td>
<td>Garden/Green Wall</td>
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<td>Juniper</td>
<td>Garden/Green Wall</td>
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<td>Melons</td>
<td>Garden/Green Wall</td>
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<td>Herbaceous</td>
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<td>Navajo robin's egg</td>
<td>Garden/Green Wall</td>
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<td>Herbaceous</td>
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<td>Onion</td>
<td>Garden/Green Wall</td>
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<tr>
<td>Peaches</td>
<td>Garden/Green Wall</td>
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<td>Herbaceous</td>
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<tr>
<td>Pueblo Chiles</td>
<td>Garden/Green Wall</td>
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<td>Herbaceous</td>
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<td>purslane</td>
<td>Garden/Green Wall</td>
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<tr>
<td>Seed crops</td>
<td>Garden/Green Wall</td>
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<td>Herbaceous</td>
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<tr>
<td>Spinach</td>
<td>Garden/Green Wall</td>
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<td>Squash</td>
<td>Garden/Green Wall</td>
<td>Yes</td>
<td>Herbaceous</td>
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<tr>
<td>Squash blossom</td>
<td>Garden/Green Wall</td>
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<td>Herbaceous</td>
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<tr>
<td>Strawberries</td>
<td>Garden/Green Wall</td>
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<td>Herbaceous</td>
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<tr>
<td>Sweet potatoes</td>
<td>Garden/Green Wall</td>
<td>Yes</td>
<td>Herbaceous</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>
GENERAL STRUCTURAL NOTES

1. THESE SPECIFICATIONS APPLY TO THE PROJECT SPECIFICATIONS. THESE SPECIFICATIONS SHALL NOT BE CONSIDERED PART OF THE CONTRACT.

2. NO WORK SHALL BE PERFORMED IN ACCORDANCE WITH THESE SPECIFICATIONS. ALL WORK MUST BE PERFORMED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND REQUIREMENTS.

3. THE CONTRACTOR IS RESPONSIBLE FOR THE LOCATION AND PROTECTION OF ALL VARIOUS UTILITIES AND CONSTRUCTION ACTIVITY.

4. THE CONSTRUCTION DRAWINGS AND SPECIFICATIONS ARE INTENDED TO SHOW THE GENERAL LOCATION AND THE REQUIREMENTS FOR THE WORK TO BE PERFORMED.

5. THE CONTRACTOR SHALL NOTIFY THE OWNER OF ANY ERRORS OR DEVIATIONS AND EXTEND THE NOTICE TO THE LOCAL AUTHORITY HAVING JURISDICTION.

6. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY ERRORS OR DEVIATIONS AND EXTEND THE NOTICE TO THE LOCAL AUTHORITY HAVING JURISDICTION.

7. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY ERRORS OR DEVIATIONS AND EXTEND THE NOTICE TO THE LOCAL AUTHORITY HAVING JURISDICTION.

8. ALL STRUCTURAL STEEL PLATES AND ANGLES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A36, WITH A MINIMUM YIELD STRENGTH OF 36 KSI.

9. ALL WELDING SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THE AWS D1.1 STRUCTURAL WELDING CODE – 2005 EDITION.

10. ALL STEEL FABRICATORS SHALL BE RESPONSIBLE FOR OBTAINING ALL FIELD DOCUMENTS AND CONNECTIVE MATERIALS.

FOOTNOTE

1. BUILDING CODE = 2015 INTERNATIONAL BUILDING CODE.

2. FLOOR LOAD:
   2.1 DEAD LOAD = 15 PSF
   2.2 LIVE LOAD = 30 PSF

3. SNOW LOAD:
   3.1 GROUND SNOW LOAD, PG = 35 PSF
   3.2 BUILDING CATEGORY = D

4. SITE CLASS: B

5. SOIL CLASS: D

6.1 BUILDING CATEGORY = II

6.2 EXPOSURE CATEGORY = C

7.1 SITE CLASS: B

7.2 SOIL CLASS: D

7.3 BUILDING CATEGORY = D

8.1 SITE CLASS: B

8.2 SOIL CLASS: D

9.1 SITE CLASS: B

9.2 SOIL CLASS: D

10. CONSTRUCTION PROCEDURES AND SAFETY REQUIREMENTS

1. PROVIDE ALL MEASURES NECESSARY TO PROTECT THE WORKMEN AND OTHER PERSONS FROM HAZARDS DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO, VARIOUS FORMS, SCAFFOLDING, PLANKING, SAFETY NETS, SUPPORT/BRACING FOR CONSTRUCTION ELEMENTS, SAFETY EQUIPMENT, AND TEMPORARY PRECAUTIONARY MEASURES.

2. ENGAGE PROPERLY QUALIFIED PERSONS TO DETERMINE WHERE AND HOW TO CONSTRUCT THE STRUCTURAL ELEMENTS IN PLACE DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO, VARIOUS FORMS, SCAFFOLDING, PLANKING, SAFETY NETS, SUPPORT/BRACING FOR CONSTRUCTION ELEMENTS, SAFETY EQUIPMENT, AND TEMPORARY PRECAUTIONARY MEASURES.

3. ENGAGE PROPERLY QUALIFIED PERSONS TO DETERMINE WHERE AND HOW TO CONSTRUCT THE STRUCTURAL ELEMENTS IN PLACE DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO, VARIOUS FORMS, SCAFFOLDING, PLANKING, SAFETY NETS, SUPPORT/BRACING FOR CONSTRUCTION ELEMENTS, SAFETY EQUIPMENT, AND TEMPORARY PRECAUTIONARY MEASURES.

4. SUPERVISE AND DIRECT THE WORK SO AS TO MAINTAIN SOLE RESPONSIBILITY FOR THE COMPLETION OF THE STRUCTURE, AND SIGNATURE OF A PROFESSIONAL STRUCTURAL ENGINEER REGISTERED IN THE STATE OF MARYLAND.
NOTES:
1. SOIL SCREWS SHOULD BE INSTALLED WITHIN 12 INCHES OF THE END OF FLOOR BEAM.
2. SOIL SCREWS MAY BE INSTALLED ON THE OUTSIDE OR INSIDE OF FLOOR BEAM.
3. ALL MSTA AND LSTA STRAPS ARE INSTALLED CENTERED ON THE FLOOR PLYWOOD.
4. SIP PANEL STRAPS ATTACH TO SPLINES OR WOOD STUDS AT EDGE OF OPENINGS.
2" x 6" STUD WALL 24"

3/4" PLYWOOD

(2) 2" x 8" RIM BEAM

12 9/16" THICK SIP

CAULK

HEX 3/4" x 4" w/ T-NUT

BG75 GASKET

(2) 2" x 8" MARRIAGE PLATE

3/4" THREADED ROD

BG34 GASKET

(4) 1 3/4" x 11 1/4" LVL BEAM

2" x 6" STUD WALL 24" OC

(2) 2" x 8" RIM BEAM

3/4" PLYWOOD

BG75 GASKET

(2) 2" x 8" MARRIAGE PLATE

3/4" THREADED ROD

BG34 GASKET

(4) 1 3/4" x 11 1/4" LVL BEAM

2" x 10" JOIST @ 16" O.C.

3/4" PLYWOOD

2" x 10" BLOCKING

ACCESS PANEL

4" x 4" WOOD BLOCKING

3/4" THREADED ROD w/ NUT

BG34 GASKET

(2) 2" x 12" 12 9/16" THICK SIP

BG34 GASKET

(4) 1 3/4" x 11 1/4" LVL RIM BEAM

3/4" THREADED ROD w/ NUT

BG34 GASKET

(2) 2" x 6" TOP PLATE

2" x 10" JOIST

PLYWOOD PIER

ACCESS PANEL

4" x 4" WOOD BLOCKING

3/4" THREADED ROD w/ NUT

BG34 GASKET

(2) 2" x 12" 12 9/16" THICK SIP

BG34 GASKET

3/4" THREADED ROD w/ NUT

BG34 GASKET

2" x 10" JOIST @ 16" O.C.

3/4" PLYWOOD

2" x 10" BLOCKING

ACCESS PANEL

4" x 4" WOOD BLOCKING

3/4" THREADED ROD w/ NUT

BG34 GASKET

(2) 2" x 6" TOP PLATE

2" x 10" JOIST

PLYWOOD PIER

ACCESS PANEL

4" x 4" WOOD BLOCKING

3/4" THREADED ROD w/ NUT

BG34 GASKET

(2) 2" x 6" TOP PLATE

2" x 10" JOIST

PLYWOOD PIER

ACCESS PANEL

4" x 4" WOOD BLOCKING

3/4" THREADED ROD w/ NUT

BG34 GASKET

(2) 2" x 6" TOP PLATE

2" x 10" JOIST

PLYWOOD PIER

ACCESS PANEL

4" x 4" WOOD BLOCKING

3/4" THREADED ROD w/ NUT

BG34 GASKET

(2) 2" x 6" TOP PLATE

2" x 10" JOIST

PLYWOOD PIER

ACCESS PANEL

4" x 4" WOOD BLOCKING

3/4" THREADED ROD w/ NUT

BG34 GASKET

(2) 2" x 6" TOP PLATE

2" x 10" JOIST

PLYWOOD PIER

ACCESS PANEL

4" x 4" WOOD BLOCKING
1/4" STEEL KNIFE PLATE

4" x 1/2" GLULAM BEAM

1/2" OSB

2" x 10" BLOCKING

2" x 6" JOIST @ 16" O.C.

2" x 6" INSULATED HEADER

1/2" OSB

1/4" WELDED KNIFE PLATE

1/4" WELDED KNIFE PLATE

1/2" OSB

3/4" PLYWOOD

1/2" OSB

1/4" WELDED KNIFE PLATE

1/2" OSB

2" x 4"}

6" x 9 1/4" GLULAM BEAM

1/2" OSB

2" x 6" JOIST @ 16" O.C.

1/2" OSB

2" x 4" STUD WALL 24" O.C.

3/4" PLYWOOD

1/2" OSB

1/2" OSB

1/2" OSB

1 3/4" x 11 1/4" LVL

3/4" PLYWOOD

1/4" WELDED KNIFE PLATE

1/4" WELDED KNIFE PLATE

1/2" OSB

3/4" PLYWOOD

(2) 1/2" x 4" HEX 3/4" w/ T-NUT

1/2" OSB

1/4" WELDED KNIFE PLATE

1/4" WELDED KNIFE PLATE

1/2" OSB

3/4" PLYWOOD

12 9/16" THICK SIP
1. SLEEPERS FOR PLANTERS, TYPICAL
2. THRESHOLD PLATE
3. SEE SPEC NO.093040 FOR PERMEABLE PAVERS FOR WALKING AND DRIVING
4. SLEEPERS FOR FILTERED WASTE TANK, TYPICAL
5. SLEEPERS FOR GREYWATER TANK, TYPICAL
6. ALL FOUNDATIONS MUST BE SUNK UNDER GRASS OR DIRT TO ENSURE A MINIMUM OF 20 INCHES OF SOIL ABOVE FOUNDATION AND SHALL COMPLY WITH RULE XXX FOUNDATION DETAILS
7. FOR FOOTING DETAIL REFER TO SPEC NO.500 SERIES
8. FOR ADJUSTABLE JACK REFER TO SPEC NO.109000
**General Notes**

- A. Transitions from tile to wood shall include an wooden transition strip.
- B. Floor drain to be centered to shower.
- C. Opposite walls shall be finished with.
- Part 1: Refer to Act for material schedule.

**Finish Floor Plan**

### Sheet Notes

- CO: 1. Countertop
- WD: 1. Wood
- TS: 1. Transition strip

### Finish Legend

- BF: 1. Bamboo flooring (see finish schedule)
- CT: 1. Ceramic tile
- GYP: 1. Gypsum board

### Finish Wall Types

<table>
<thead>
<tr>
<th>Type Mark</th>
<th>Mark</th>
<th>Width</th>
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<tbody>
<tr>
<td>1</td>
<td>1' - 0 3/16&quot;</td>
<td>Exterior - 8&quot; SIP w/ Wood Siding</td>
</tr>
<tr>
<td>2</td>
<td>0' - 10 3/8&quot;</td>
<td>Exterior - 8&quot; Stud - Corrugated/Shower</td>
</tr>
<tr>
<td>3</td>
<td>0' - 7&quot;</td>
<td>Exterior - 5.5&quot; Stud, 1.5&quot; Corrugated</td>
</tr>
<tr>
<td>4</td>
<td>0' - 9 7/8&quot;</td>
<td>Exterior - 8&quot; Stud - Corrugated</td>
</tr>
<tr>
<td>5</td>
<td>0' - 9 1/4&quot;</td>
<td>Exterior - 8&quot; Stud - Mech 2</td>
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<tr>
<td>6</td>
<td>0' - 11 7/8&quot;</td>
<td>Exterior - 8&quot; Stud - Wood w/ Furring</td>
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<tr>
<td>7</td>
<td>0' - 6 1/8&quot;</td>
<td>Interior - 5.5&quot; Stud, 5/8&quot; Gyp</td>
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<tr>
<td>8</td>
<td>0' - 8 3/4&quot;</td>
<td>Interior - 6&quot; Stud, (2) 5/8&quot; GWB w/ Furring</td>
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<td>9</td>
<td>0' - 6 1/8&quot;</td>
<td>Interior - 6&quot; Stud Wall</td>
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<td>0' - 9 7/8&quot;</td>
<td>Interior - 8&quot; Stud Wall w/ Furring</td>
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<td>11</td>
<td>0' - 6 5/8&quot;</td>
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<td>0' - 4 3/4&quot;</td>
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### Wall Schedule

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<tr>
<td>2</td>
<td>0' - 10 3/8&quot; Exterior - 8&quot; Stud - Corrugated/Shower</td>
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<td>0' - 7&quot; Exterior - 5.5&quot; Stud, 1.5&quot; Corrugated</td>
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<td>0' - 11 7/8&quot; Exterior - 8&quot; Stud - Wood w/ Furring</td>
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<td>0' - 6 1/8&quot; Interior - 5.5&quot; Stud, 5/8&quot; Gyp</td>
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<td>8</td>
<td>0' - 8 3/4&quot; Interior - 6&quot; Stud, (2) 5/8&quot; GWB w/ Furring</td>
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<td>0' - 6 1/8&quot; Interior - 6&quot; Stud Wall</td>
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<td>0' - 6 5/8&quot; Interior - 5.5&quot; Stud w/ Tile</td>
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<tr>
<td>12</td>
<td>0' - 4 3/4&quot; Interior - 3.5&quot; Stud, (2) 5/8&quot; Gyp</td>
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UNIVERSITY OF MARYLAND, COLLEGE PARK
SOLAR DECATHLON 2017 SUBMISSION

UNIVERSITY OF MARYLAND
COLLEGE PARK, MD 20742

reACT

1/2" = 1'-0"

COURTYARD A - LOOKING NORTH
1/2" = 1'-0"

COURTYARD B - LOOKING EAST
1/2" = 1'-0"

COURTYARD C - LOOKING SOUTH
1/2" = 1'-0"

COURTYARD D - LOOKING WEST
1/2" = 1'-0"

ENLARGED COURTYARD PLAN
1/2" = 1'-0"

A-460
1 1/2" = 1'-0"

1. CASEMENT/Egress Window Detail
2. Awning Detail
3. Casement Window Detail
4. Window Detail (Not Operable)
### DOOR SCHEDULE

<table>
<thead>
<tr>
<th>Type Mark</th>
<th>Location</th>
<th>Manufacturer</th>
<th>Model</th>
<th>Height</th>
<th>Width</th>
<th>Thickness</th>
<th>Finish</th>
<th>Frame Material</th>
<th>Operation</th>
<th>Count</th>
<th>Function</th>
<th>Fire Rating</th>
<th>Comments</th>
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<td>ANDERSEN</td>
<td>7' - 0&quot;</td>
<td>3' - 2&quot;</td>
<td>0' - 2&quot;</td>
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<td>1 Exterior</td>
<td>Exterior</td>
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<td>Kitchen</td>
<td>ANDERSEN</td>
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<td>0' - 2&quot;</td>
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<td>1 Exterior</td>
<td>Exterior</td>
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<td>3</td>
<td>Bathroom</td>
<td>ANDERSEN</td>
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<td>3' - 2&quot;</td>
<td>0' - 2&quot;</td>
<td>LEFT HAND</td>
<td>1 Interior</td>
<td>Interior</td>
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<td>1 Interior</td>
<td>Interior</td>
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<td>3' - 2&quot;</td>
<td>0' - 2&quot;</td>
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<td>6</td>
<td>Study/Courtyard</td>
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<td>7' - 0&quot;</td>
<td>6' - 8&quot;</td>
<td>0' - 2&quot;</td>
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<td>Living Room/Courtyard</td>
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<td>7' - 0&quot;</td>
<td>6' - 8&quot;</td>
<td>0' - 2&quot;</td>
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<td>Courtyard</td>
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<td>7' - 0&quot;</td>
<td>3' - 0&quot;</td>
<td>LEFT HAND</td>
<td>1 Exterior</td>
<td>Exterior</td>
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<td></td>
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<td>9</td>
<td>Mechanical Room</td>
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<td>6' - 8&quot;</td>
<td>5' - 4&quot;</td>
<td>0' - 2&quot;</td>
<td>1 Exterior</td>
<td>1 Hour</td>
<td>Interior</td>
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<tr>
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<td>Bathroom Deck A</td>
<td>ANDERSEN</td>
<td>6' - 8&quot;</td>
<td>3' - 2&quot;</td>
<td>0' - 2&quot;</td>
<td>1 Exterior</td>
<td>Exterior</td>
<td>Exterior</td>
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### WINDOW SCHEDULE

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<tr>
<th>Type Mark</th>
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<th>WINDOW TYPE</th>
<th>MANUFACTURER</th>
<th>MODEL</th>
<th>MATERIAL</th>
<th>ROUGH WIDTH</th>
<th>ROUGH HEIGHT</th>
<th>Sill Height</th>
<th>Head Height</th>
<th>Type</th>
<th>Comments</th>
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<tbody>
<tr>
<td>A</td>
<td>1</td>
<td>CASEMENT</td>
<td>ANDERSEN</td>
<td>2' - 8&quot;</td>
<td>3' - 8&quot;</td>
<td>3' - 4&quot;</td>
<td>8' - 6&quot;</td>
<td>ANDERSON E SERIES casement</td>
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<tr>
<td>B</td>
<td>6</td>
<td>CASEMENT</td>
<td>ANDERSEN</td>
<td>2' - 8&quot;</td>
<td>5' - 2&quot;</td>
<td>3' - 4&quot;</td>
<td>8' - 6&quot;</td>
<td>ANDERSON E SERIES AWNING &amp; CASEMENT</td>
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<td>C</td>
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<td>PUSH OUT AWNING</td>
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<td>1' - 6&quot;</td>
<td>7' - 0&quot;</td>
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<td>ANDERSON E SERIES AWNING</td>
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<td>D</td>
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<td>ANDERSON</td>
<td>0' - 0&quot;</td>
<td>7' - 0&quot;</td>
<td>anderson tall fixed casement</td>
<td>casement</td>
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<td>E</td>
<td>2</td>
<td>SUNTUBE VELUX</td>
<td>VELUX TGF</td>
<td>014</td>
<td>1' - 2 1/2&quot;</td>
<td>12' - 0&quot;</td>
<td>VELUX TGF 014</td>
<td>The VELUX TGF utilizes low profile flashing &amp; flexible tunnel construction</td>
<td>casement</td>
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<td>casement</td>
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<tr>
<td>F</td>
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<td>SKYLIGHT VELUX</td>
<td>VELUX</td>
<td>VSE</td>
<td>3' - 8 1/4&quot;</td>
<td>3' - 9 3/4&quot;</td>
<td>S06 Electric venting deck mounted skylight</td>
<td>casement</td>
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### COURTYARD WINDOW SCHEDULE

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<th>WINDOW TYPE</th>
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<th>MATERIAL</th>
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<th>ROUGH HEIGHT</th>
<th>SILL HEIGHT</th>
<th>HEAD HEIGHT</th>
<th>TYPE</th>
<th>COMMENTS</th>
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</thead>
</table>

---

**DOOR FRAME**

- Type A
- Type B
- Type C
- Type D

**WINDOW OPENINGS**

- Type A
- Type B
- Type C
- Type D
### Material Schedule

#### Interior Materials

**FLOORING**
- **MT-1**: BAMBOO FLOORING LAMBOO TECHNOLOGIES LAMBOO FLOORING SYSTEM CHERRY
- **T-1**: CERAMIC TILE MOSA TILES 24" x 24"
- **T-2**: CERAMIC TILE MOSA TILES 2" x 2" MOSAIC
- **T-3**: CERAMIC TILE MOSA TILES 3" x 8" SUBWAY TILE

**BASE**
- **B-1**
- **B-2**

**TRANSITIONS**
- **FT-1**

**WALLS**
- **CT-1**
- **DVP-1**
- **PNT-1**

**CEILINGS**
- **DVP-1**
- **PNT-1**

**CASEWORK**
- **C-1**: COUNTERTOP
- **C-2**: COUNTERTOP

**Exterior Materials**

**Roof**
- **CS-1**: STANDING SEAM PETERSEN PAC-CLAD TITE LOC PLUS PANEL SILVER

**Walls**
- **CS-1**: CORRUGATED STEEL PETERSEN PAC-CLAD 7.2 PANEL SILVER
- **EC-1**: BAMBOO CLADDING LAMBOO TECHNOLOGIES LAMBOO RAINSSCREEN SYSTEM MODERN BUFF

**Deck**
- **D-1**

#### Interior Finish Schedule

<table>
<thead>
<tr>
<th>ROOM NO.</th>
<th>ROOM NAME</th>
<th>FLOOR</th>
<th>BASE</th>
<th>NORTH WALL</th>
<th>EAST WALL</th>
<th>SOUTH WALL</th>
<th>WEST WALL</th>
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#### Exterior Material Schedule

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</table>
**Domestic Supply**

- **Charcoal Filter**
  - Spec No. 108200

- **Micron Filter Bag**
  - Spec No. 108200

- **Biosand Filter**
  - Spec No. 108200

- **UV Sterilizer**
  - Spec No. 108200

- **Screen**
  - Spec No. 108200

**Plumbing**

- **Black Water Tank**
  - Spec No. 222200

- **Grey Water Tank #1**
  - 150 Gal
  - Spec No. 222200

- **Grey Water Tank #2**
  - 100 Gal
  - Spec No. 222200

- **Grey Water Tank #3**
  - 150 Gal
  - Spec No. 222200

- **Potable Water Tank**
  - Spec No. 222200

- **ReACT Author**

- **Domestic Supply**

- **P-100**
PLUMBING PLAN DOMESTIC COLD WATER

PLUMBING PLAN DOMESTIC COLD WATER CALLOUT

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SOLAR DECATHLON 2017 SUBMISSION

DOMESTIC COLD

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SOLAR DECATHLON 2017 SUBMISSION

UNIVERSITY OF MARYLAND
COLLEGE PARK, MD 20742

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DOMESTIC SANITARY

PLUMBING PLAN SANITARY
PLUMBING PLAN SANITARY CALLOUT
MECHANICAL NOTES

SECTION R106.1.1
INFORMATION ON CONSTRUCTION DOCUMENTS

ON DOWN-FLOW UNITS AND ALL OTHER COILS THAT HAVE NO SECONDARY DRAIN OR PROVISIONS TO INSTALL A SECONDARY OR CONSTRUCTION DOCUMENTS SHALL BE DRAWN UPON SUITABLE MATERIAL. ELECTRONIC MEDIA DOCUMENTS ARE PERMITTED TO BE SUBMITTED WHEN APPROVED BY THE BUILDING OFFICIAL. CONSTRUCTION DOCUMENTS SHALL BE IN ACCORDANCE WITH SECTION R106.1.1. ELECTRONIC DOCUMENTATION SHALL NOT SUBSTITUTE FOR THE PHYSICAL DOCUMENTATION, BUT MAY SUPPLEMENT IT. ELECTRONIC DOCUMENTATION SHALL BE LEGIBLY IDENTIFIED AND STORED IN A MANNER SUCH THAT IT IS ACCESSIBLE TO THE REQUIRING PARTY.

SECTION R107.1
GENERAL

1. GENERAL OF APPLICATIONS SHALL CONFORM TO THE CONTENTS OF THEIR LISTING AND LABEL, AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS OR INSTALLATION INSTRUCTIONS TO THE APPLIANCE.

2. EACH COOLING OR EVAPORATOR COIL WHERE DAMAGE TO ANY BUILDING COMPONENTS WILL OCCUR AS A RESULT OF OVERFLOW FROM A PRIMARY DRAIN PAN, LOCATED AT A POINT HIGHER THAN THE PRIMARY DRAIN LINE CONNECTION AND BELOW THE OVERFLOW RIM OF SUCH PAN.

3. FACTORY SUPPLIED DRAIN PAN, LOCATED AT A POINT HIGHER THAN THE PRIMARY DRAIN LINE CONNECTION AND BELOW THE OVERFLOW RIM OF SUCH PAN.

4. MINIMUM THICKNESS OF METAL DUCT MATERIAL SHALL BE AS LISTED IN TABLE M1601.1.1(2). GALVANIZED STEEL SHALL CONFORM TO ASTM A 653. METALLIC DUCTS SHALL BE FABRICATED IN ACCORDANCE WITH SMACNA DUCT CONSTRUCTION STANDARDS METAL AND FLEXIBLE.

M1411.3.3 APPLIANCES, EQUIPMENT AND INSULATION IN PANS.

INSTALLATION INSTRUCTIONS. THE MANUFACTURER WHA, AND ACCORDING TO THE APPLIANCE's INSTRUCTION, THE APPLIANCE'S INSTALLATION INSTRUCTIONS, THE MANUFACTURER AND ALL OTHER COILS THAT HAVE NO SECONDARY DRAIN OR PROVISIONS TO INSTALL A SECONDARY OR CONSTRUCTION DOCUMENTS SHALL BE DRAWN UPON SUITABLE MATERIAL. ELECTRONIC MEDIA DOCUMENTS ARE PERMITTED TO BE SUBMITTED WHEN APPROVED BY THE BUILDING OFFICIAL. CONSTRUCTION DOCUMENTS SHALL BE IN ACCORDANCE WITH SECTION R106.1.1. ELECTRONIC DOCUMENTATION SHALL NOT SUBSTITUTE FOR THE PHYSICAL DOCUMENTATION, BUT MAY SUPPLEMENT IT. ELECTRONIC DOCUMENTATION SHALL BE LEGIBLY IDENTIFIED AND STORED IN A MANNER SUCH THAT IT IS ACCESSIBLE TO THE REQUIRING PARTY.

MECHANICAL NOTES
1. Mini Split Units
2. ERV
3. Refrig. line from mini split variable refrigerant flow system
4. Humidifier
5. Condenser unit (located in attic) note that no other equipment should be placed within 3' in front of fan.
6. Refrigerant line to be placed in attic space; reference E-600 for load calculations.
7. Heat pump (located in attic)

Heating System:
- Mini Split Units
- ERV
- Condenser Unit (in Attic)
- Heat Pump (in Attic)

Cooling System:
- Mini Split Units
- Condenser Unit (in Attic)

Duct:
- Fresh Air Supply
- Exhaust

Legend:
- A: Mini Split Units
- B: ERV
- C: Humidifier
- D: Condenser Unit
- E: Heat Pump
- HVAC Plan
- Attic Plan

Reference E-600 for load calculations.
<table>
<thead>
<tr>
<th>MARK</th>
<th>DESCRIPTION</th>
<th>MANUFACTURER</th>
<th>MODEL</th>
<th>ROOM NAME</th>
<th>COUNT</th>
<th>DESCRIPTION</th>
<th>WIDTH</th>
<th>HEIGHT</th>
<th>DEPTH</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>INDOOR MINI SPLIT UNITS</td>
<td>LG</td>
<td>LMN075HYT</td>
<td>BEDROOM/STUDY/LIVING/DINN</td>
<td>1</td>
<td>VRF MINI SPLIT WALL MOUNTED UNIT</td>
<td>37.4&quot;</td>
<td>32.27/&quot;</td>
<td>19.58/&quot;</td>
</tr>
<tr>
<td>B</td>
<td>CONDENSOR UNIT</td>
<td>LG</td>
<td>LUH25CVH</td>
<td>ATTIC</td>
<td>1</td>
<td>VRF MINI SPLIT CONDENSOR</td>
<td>37.4&quot;</td>
<td>32.8&quot;</td>
<td>15.7&quot;</td>
</tr>
<tr>
<td>C</td>
<td>HUMIDIFIER</td>
<td>HONEYWELL</td>
<td>HE 120</td>
<td>MECHANICAL ROOM</td>
<td>1</td>
<td>INSTALL WITHIN ERV TO ENABLE EASY DISTRIBUTION OF HUMIDITY TO ALL PARTS OF HOUSE</td>
<td>19.2&quot;</td>
<td>10.90&quot;</td>
<td>12.8&quot;</td>
</tr>
<tr>
<td>D</td>
<td>ERV</td>
<td>ZENEOHER</td>
<td>COMFOAir 200</td>
<td>MECHANICAL ROOM</td>
<td>1</td>
<td>ENERGY RECOVERY VENTILATOR INTEGRATED WITH HUMIDIFIER TO PROVIDE MOISTURE FOR THERMAL COMFORT</td>
<td>21.40&quot;</td>
<td>47.20&quot;</td>
<td>12.90&quot;</td>
</tr>
<tr>
<td></td>
<td>HEAT PUMP WATER HEATER - INDOOR UNIT</td>
<td>LG</td>
<td>HJ0351JE2</td>
<td>ATTIC</td>
<td>1</td>
<td>THIS WILL BE CONNECTED TO THE OUTDOOR UNIT FOR OPERATION AS HEAT PUMP. THE WATER IN THE HOT WATER TANK WILL BE HEATED BY THIS UNIT.</td>
<td>12.60&quot;</td>
<td>33.40&quot;</td>
<td>19.29&quot;</td>
</tr>
</tbody>
</table>

**HVAC Equipment Details**

1. For more information, refer to the product Data Book (PDF).
2. This drawing is made for CAD working of spec - in.
3. For Product Specification, Installation, Service, refer to the related manuals.

**Dimensions (W x H x D)**

- **mm**: 950 x 834 x 330
- **inch**: 37-1/3 x 32-27/32 x 13

**Dimensions (W x H x D)**

- **mm**: 1000 x 300 x 245
- **inch**: 39-3/8 x 11-11/32 x 9-11/32
1. Installation of electrical conductors, raceways, and devices shall conform to the 2014 National Electric Code and the 2017 Solar Decathlon Building Code. All electrical equipment shall carry an approved testing agency listing in accordance with IRC Section 140.11 and Section 110.2 of the NEC, or shall have been approved by the Solar Decathlon Organizer. Personnel shall provide a clear installation route for Organizer equipment to the Organizer utility panel. The equipment grounding electrode conductor from the main service equipment to the Organizer utility panel shall be a minimum size of 4 AWG copper and shall be bonded to the Organizer’s main Disconnect Switch.

2. Branch circuit conductors shall have an ampacity not less than the maximum load to be served. Conductors shall be sized to carry the maximum load to be served. Conductors shall be sized in compliance with NEC Table 310.15(B)(16). Minimum AC conductor size shall be #14 AWG. Minimum DC conductor size shall be #12 AWG. 2P branch circuit breakers and GFCI shall be provided at the main Disconnect Switch. Branch circuits shall have ground fault circuit interrupter protection for Organizer’s general purpose electrical use during the Solar Decathlon 2017 event. All equipment (branch circuit breaker and main Disconnect Switch), shall be a minimum size of 4 and copper and shall be bonded to the Organizer’s main Disconnect Switch.

4. The equipment grounding electrode conductor shall be the first conductor installed in the raceway for connecting an apparatus to the equipment ground. The equipment grounding electrode conductor shall be sized in accordance with NEC 210.8(A) numbers (1) through (10). The grounding electrode conductor shall be the first conductor to be connected and last to be disconnected during installation, or servicing of photovoltaic modules and inverters.

5. Branch circuit conductors shall be sized to carry an ampacity not less than the maximum load to be served. Conductors shall be sized to carry the maximum load to be served. Conductors shall be sized in compliance with NEC Table 310.15(B)(16). Minimum AC conductor size shall be #14 AWG. Minimum DC conductor size shall be #12 AWG.

6. Externally energized and stored devices above the first level floor shall be located for mechanical protection. Equipment fitted for all personnel access shall be protected with a protective barrier that cannot be opened for access to the energized or energized equipment. The protective barrier shall not create a tripping hazard.

7. Branch circuit conductors shall have an ampacity not less than the maximum load to be served. Conductors shall be sized to carry the maximum load to be served. Conductors shall be sized in compliance with NEC Table 310.15(B)(16). Minimum AC conductor size shall be #14 AWG. Minimum DC conductor size shall be #12 AWG.

9. All panelboards shall be provided with a factory-installed ground fault circuit interrupter that is protected by an automatic circuit breaker at the point of entry. Panelboards shall be provided with a protective barrier that cannot be opened for access to the energized or energized equipment. The protective barrier shall not create a tripping hazard.

10. Panelboards shall be provided with a factory-installed ground fault circuit interrupter that is protected by an automatic circuit breaker at the point of entry. Panelboards shall be provided with a protective barrier that cannot be opened for access to the energized or energized equipment. The protective barrier shall not create a tripping hazard.

11. Branch circuits shall have ground fault circuit interrupter protection. Branch circuit conductors shall be sized to carry the maximum load to be served. Conductors shall be sized to carry the maximum load to be served. Conductors shall be sized in compliance with NEC Table 310.15(B)(16). Minimum AC conductor size shall be #14 AWG. Minimum DC conductor size shall be #12 AWG.

12. Internal energized and stored devices shall be located for mechanical protection. Equipment fitted for personnel access shall be protected with a protective barrier that cannot be opened for access to the energized or energized equipment. The protective barrier shall not create a tripping hazard.

13. All exterior 125V branch circuit receptacles shall be listed as weather-resistant, ground fault protected, and equipped with "in-use" type weather protection.

14. All interior non-locking 125V branch circuit receptacles shall be tamper resistant per NEC 406.12.
ELECTRICAL POWER PLAN

GENERAL NOTES

1. PANEL BOARD (JUNCTION BOX), SPEC #262416
2. ENCLOSED SWITCHES AND CIRCUIT BREAKER, SPEC #262816

SELECTED PANELS

- NP 6
- NP 3
- CP 1
- NP 1
- NP 2
- NP 4
- NP 5
- NP 7
- NP 8
- NP 10
- NP 11
- NP 12
- NP 13
- NP 15

SELECTED PANEL MOUNTING

- UNDER CABINET

LEGEND

- ELECTRICAL POWER PLAN
- GENERAL NOTES
- SHEET NOTES
- ELECTRICAL POWER LEGEND

- NP - NORMAL PANEL
- CP - CRITICAL PANEL

- TV - TELEVISION OUTLET
- DATA OUTLET
- WALL MOUNTED DATA OUTLET
- TELEPHONE OUTLET
- ELECTRICAL DISTRIBUTION
- ELECTRICAL DISTRIBUTION - Callout 1

- 3/8" = 1'-0"1 ELECTRICAL DISTRIBUTION
- 1/2" = 1'-0"2 ELECTRICAL DISTRIBUTION - Callout 1

- 1 PANEL BOARD (JUNCTION BOX), SPEC #262416
- 2 ENCLOSED SWITCHES AND CIRCUIT BREAKER, SPEC #262816

- PANEL MOUNTED UNDER CABINET

- RANGE IS A 50 AMP 250 VOLT RECEPTACLE NEMA 14-50R. SHOWN AS NP 2,4, 6-3 NM WIRE TO RECEPTACLE FROM PANEL.


- 10-5 NM WIRE TO RECEPTACLE FROM PANEL.

- SOLAR EDGE AUTO TRANSFORMER, NP 28,30 MOUNTED UNDER INVERTER TRANSFORMER, NP 28,30 WALL MOUNTED UNDER INVERTER TRANSFORMER.

- PANEL BOARD (JUNCTION BOX), SPEC #262416
- ENCLOSED SWITCHES AND CIRCUIT BREAKER, SPEC #262816

- PANEL MOUNTED UNDER CABINET

- RANGE IS A 50 AMP 250 VOLT RECEPTACLE NEMA 14-50R. SHOWN AS NP 2,4.


- 10-5 NM WIRE TO RECEPTACLE FROM PANEL.

- ELECTRICAL POWER PLAN
- GENERAL NOTES
- SHEET NOTES
- ELECTRICAL POWER LEGEND

- NP - NORMAL PANEL
- CP - CRITICAL PANEL

- TV - TELEVISION OUTLET
- DATA OUTLET
- WALL MOUNTED DATA OUTLET
- TELEPHONE OUTLET
- ELECTRICAL DISTRIBUTION
- ELECTRICAL DISTRIBUTION - Callout 1

- 3/8" = 1'-0"1 ELECTRICAL DISTRIBUTION
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- 1 PANEL BOARD (JUNCTION BOX), SPEC #262416
- 2 ENCLOSED SWITCHES AND CIRCUIT BREAKER, SPEC #262816

- PANEL MOUNTED UNDER CABINET

- RANGE IS A 50 AMP 250 VOLT RECEPTACLE NEMA 14-50R. SHOWN AS NP 2,4, 6-3 NM WIRE TO RECEPTACLE FROM PANEL.


- 10-5 NM WIRE TO RECEPTACLE FROM PANEL.
1. PANEL BOARD (JUNCTION BOX), SPEC #262416
2. WATER PUMP, SPEC #222400
3. SPLIT SYSTEM AIR CONDITIONERS, SPEC #238126

MINI SPLIT SYSTEM
ERV
CONDENSER - HOT WATER HEATER, SPEC
CONDENSER - AIR, SPEC
DAMPER ALONG AIR DUCT, SPEC
HUMIDIFIER, SPEC
EXHAUST FAN, SPEC
NORMAL PANEL
CRITICAL PANEL
SMOKE DETECTOR

ELECTRIC HARD-WIRED EQUIPMENT

ATTIC PLAN

LOCATED IN ATTIC

SOLAR TUBE (TYP. OF 2)

VERSALIFT

SOLAR DRYER

VERSALIFT

HARD-WIRED EQUIPMENT PLAN

UNIVERSITY OF MARYLAND, COLLEGE PARK
SOLAR DECATHLON 2017 SUBMISSION

UNIVERSITY OF MARYLAND
COLLEGE PARK, MD 20742

E-102

HARD-WIRED EQUIPMENT PLAN GENERAL NOTES

HARD-WIRED EQUIPMENT PLAN SHEET NOTES

HARD-WIRED EQUIPMENT PLAN ABBREVIATIONS LEGEND

3/8" = 1'-0"
THE SYSTEM USED (P400 + STORAGE INVERTERS) HAS A BUILT IN CONTROL MECHANISM THAT MAINTAINS THE STRING VOLTAGE AT A CONSTANT MAXIMUM OF 350V AND THE PER MODULE VOLTAGE AT A MAXIMUM OF 60V. THIS NEGATES THE NEED FOR ANY SEPARATE CONCERNS OVER THE FLUCTUATION OF VOLTAGES WITH THE LOCATION TEMPERATE.
1. S5-E Seam Clamp for Standing Seam Metal Roof Panels.

UNIVERSITY OF MARYLAND, COLLEGE PARK
SOLAR DECATHLON 2017 SUBMISSION

PHOTOVOLTAIC MOUNTING DETAIL SHEET NOTES

1. Iron Ridge Rack Mounted unto S5-E Seam Clamp, PV Assembly System.
2. S5-E Seam Clamp for Standing Seam Metal Roof Panels.

PHOTOVOLTAIC MOUNTING DETAIL GENERAL NOTES

E-500

PHOTOVOLTAIC MOUNTING
DETAILS

E-500

PHOTOVOLTAIC MOUNTING
DETAIL SHEET NOTES

1. Iron Ridge Rack Mounted unto S5-E Seam Clamp, PV Assembly System.
2. S5-E Seam Clamp for Standing Seam Metal Roof Panels.

PHOTOVOLTAIC MOUNTING
DETAIL GENERAL NOTES

E-500

PHOTOVOLTAIC MOUNTING
DETAIL SHEET NOTES

1. Iron Ridge Rack Mounted unto S5-E Seam Clamp, PV Assembly System.
2. S5-E Seam Clamp for Standing Seam Metal Roof Panels.

PHOTOVOLTAIC MOUNTING
DETAIL GENERAL NOTES

E-500

PHOTOVOLTAIC MOUNTING
DETAIL SHEET NOTES

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PHOTOVOLTAIC MOUNTING
DETAIL GENERAL NOTES

E-500

PHOTOVOLTAIC MOUNTING
DETAIL SHEET NOTES

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2. S5-E Seam Clamp for Standing Seam Metal Roof Panels.

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DETAIL GENERAL NOTES

E-500

PHOTOVOLTAIC MOUNTING
DETAIL SHEET NOTES

1. Iron Ridge Rack Mounted unto S5-E Seam Clamp, PV Assembly System.
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PHOTOVOLTAIC MOUNTING
DETAIL GENERAL NOTES

E-500

PHOTOVOLTAIC MOUNTING
DETAIL SHEET NOTES

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PHOTOVOLTAIC MOUNTING
DETAIL GENERAL NOTES

E-500

PHOTOVOLTAIC MOUNTING
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PHOTOVOLTAIC MOUNTING
DETAIL GENERAL NOTES

E-500

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DETAIL GENERAL NOTES

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DETAIL GENERAL NOTES

E-500

PHOTOVOLTAIC MOUNTING
DETAIL SHEET NOTES

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DETAIL GENERAL NOTES

E-500

PHOTOVOLTAIC MOUNTING
DETAIL SHEET NOTES

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PHOTOVOLTAIC MOUNTING
DETAIL GENERAL NOTES

E-500

PHOTOVOLTAIC MOUNTING
DETAIL SHEET NOTES

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2. S5-E Seam Clamp for Standing Seam Metal Roof Panels.

PHOTOVOLTAIC MOUNTING
DETAIL GENERAL NOTES

E-500

PHOTOVOLTAIC MOUNTING
DETAIL SHEET NOTES

1. Iron Ridge Rack Mounted unto S5-E Seam Clamp, PV Assembly System.
2. S5-E Seam Clamp for Standing Seam Metal Roof Panels.
### LOAD SCHEDULES

<table>
<thead>
<tr>
<th>LOAD TYPE</th>
<th>LOAD VALUE (VA)</th>
<th>MULTIPLIER/Demand</th>
<th>TOTAL (STD METHODS)</th>
<th>OPTIONAL METHOD</th>
<th>NEC ref.</th>
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<tbody>
<tr>
<td>General Lighting</td>
<td>1166 sq ft x 3VA = 3498 VA</td>
<td></td>
<td>4770 VA</td>
<td></td>
<td>220.12</td>
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<tr>
<td>Small Appliance branch circuits</td>
<td>min. 2 x 1500VA = 3000VA</td>
<td></td>
<td>3000VA@ 100%</td>
<td>5000 VA</td>
<td>220.11</td>
</tr>
<tr>
<td>Laundry Circuit</td>
<td>1 circuit @ 1500 VA</td>
<td></td>
<td>1500 VA</td>
<td></td>
<td>220.11</td>
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<tr>
<td>Electric Dryer</td>
<td>1 Dryer @ max. 5000 VA, nameplate rating</td>
<td>5000VA@ 100%</td>
<td>5000 VA</td>
<td>Total of all appliances @ 100%</td>
<td>220.54</td>
</tr>
<tr>
<td>Hot water heater</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dishwasher</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ev charger</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>UV Lamp</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Electric Range</td>
<td>1 range @ 13300 VA</td>
<td>5000 VA + 5N80500G = 6400 VA</td>
<td>8400 VA</td>
<td>Total of all appliances @ 100%</td>
<td>220.53</td>
</tr>
<tr>
<td>Pump (SCALA)</td>
<td>550 VA</td>
<td>550 VA</td>
<td>550 VA</td>
<td></td>
<td>220.12</td>
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<tr>
<td>Pump (SCALA)</td>
<td>2400 VA</td>
<td>2400 VA</td>
<td>2400 VA</td>
<td></td>
<td>220.12</td>
</tr>
<tr>
<td>Mini-split condenser unit</td>
<td>max(2490 W for heating, 2310 W for cooling)</td>
<td>2490W</td>
<td>2490W</td>
<td>Total of all appliances @ 100%</td>
<td>220.12</td>
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<tr>
<td>Mini split Indoor units (ptL)</td>
<td>184 VA</td>
<td>184 VA</td>
<td>184 VA</td>
<td></td>
<td>220.12</td>
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<tr>
<td>BRV unit + Drum Humidifier</td>
<td>1436W-JVA</td>
<td>1436VA</td>
<td>1436VA</td>
<td></td>
<td>220.12</td>
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<tr>
<td>Highest motor load</td>
<td>2400/2400</td>
<td>2400/2400</td>
<td>2400/2400</td>
<td></td>
<td>220.12</td>
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<tr>
<td><strong>TOTAL</strong></td>
<td><strong>65,704 VA</strong></td>
<td><strong>65,704 VA</strong></td>
<td><strong>65,704 VA</strong></td>
<td><strong>65,704 VA</strong></td>
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</table>

#### Neutral Loads:

- **General Lighting**
- **Small Appliance branch circuit**
- **Laundry Circuit**
- **Hot water heater**
- **Dishwasher**
- **Ev charger**
- **UV Lamp**
- **Pump (SCALA)**
- **Pump (SCALA)**
- **Mini-split condenser unit**
- **Mini split Indoor units (ptL)**
- **BRV unit + Drum Humidifier**
- **Highest motor load**

#### Neutral Conductor Size:
- **4/0 AWG or 3 AWG cooper**

---

### LIGHTING FIXTURE SCHEDULE

<table>
<thead>
<tr>
<th>LETTER</th>
<th>DESCRIPTION</th>
<th>TYPE</th>
<th>COUNT</th>
<th>WATTAGE</th>
<th>MOUNTING</th>
<th>NOTES</th>
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<tbody>
<tr>
<td>A</td>
<td>TRACK LIGHTING DINING ROOM (2)</td>
<td>10</td>
<td>180W / (2)</td>
<td>180W / (2)</td>
<td>CEILING - 2&quot; SUSPENSION</td>
<td>FIXTURE: TECH LIGHTING BINCIBLN BLD/ MAULTE LED GU5.3 THERM LAMPS INCLUDING A JUNCTION BOX</td>
</tr>
<tr>
<td>B</td>
<td>TRACK LIGHTING LIVING ROOM (2)</td>
<td>10</td>
<td>180W / (2)</td>
<td>180W / (2)</td>
<td>CEILING - 2&quot; SUSPENSION</td>
<td>FIXTURE: TECH LIGHTING BINCIBLN BLD/ MAULTE LED GU5.3 THERM LAMPS INCLUDING A JUNCTION BOX</td>
</tr>
<tr>
<td>C</td>
<td>HALLWAY</td>
<td>1</td>
<td>20W</td>
<td>SPINE WALL</td>
<td>FIXTURE: TRACK RECEIVED LIGHTING LINE VOLTAGE LAMPS ADJUSTABLE FROM VERTICAL, PARALLEL LED LIGHT BULB</td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>HALLWAY</td>
<td>1</td>
<td>75W</td>
<td>CEILING</td>
<td>FIXTURE: TRACK RECEIVED LIGHTING LINE VOLTAGE LAMPS ADJUSTABLE FROM VERTICAL, PARALLEL LED LIGHT BULB</td>
<td></td>
</tr>
<tr>
<td>E</td>
<td>BATHROOM MOISTURE RESISTANT</td>
<td>1</td>
<td>6W</td>
<td>CEILING</td>
<td>FIXTURE: TECH LIGHTING LIGHTING BINCIBLN BLD/ MAULTE LED GU5.3 THERM LAMPS INCLUDING A JUNCTION BOX</td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>BATHROOM VANITY LIGHT</td>
<td>2</td>
<td>40W (2)</td>
<td>40W / (2)</td>
<td>INTERNAL WALL (SPINE)</td>
<td>FIXTURE: TECH LIGHTING LIGHTING BINCIBLN BLD/ MAULTE LED GU5.3 THERM LAMPS INCLUDING A JUNCTION BOX</td>
</tr>
<tr>
<td>G</td>
<td>EXHAUST FAN LIGHT</td>
<td>1</td>
<td>115W</td>
<td>CEILING</td>
<td>FIXTURE: TECH LIGHTING LIGHTING BINCIBLN BLD/ MAULTE LED GU5.3 THERM LAMPS INCLUDING A JUNCTION BOX</td>
<td></td>
</tr>
<tr>
<td>H</td>
<td>KITCHEN UNDERCABINET</td>
<td>3</td>
<td>20W (3)</td>
<td>20W / (3)</td>
<td>UNDER KITCHEN CABINETS</td>
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<tr>
<td>I</td>
<td>WARDROBE LIGHTS</td>
<td>2</td>
<td>15W / (2)</td>
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<tr>
<td>J</td>
<td>BEDROOM SCONCES</td>
<td>2</td>
<td>20W / (2)</td>
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</tr>
<tr>
<td>K</td>
<td>TRACK LIGHTING BEDROOM (1)</td>
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<td></td>
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<tr>
<td>L</td>
<td>WALL SCONCES COURTYARD</td>
<td>2</td>
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<tr>
<td>M</td>
<td>EXTERIOR LIGHTING</td>
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<tr>
<td>N</td>
<td>MECHANICAL ROOM LIGHTING</td>
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### Critical Panel Schedule

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### Normal Panel

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<td>AMP</td>
<td>POLE</td>
<td>CT</td>
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<td>LIVING ROOM/DINING RM LIGHT</td>
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</tbody>
</table>
1. ALL CONDUCTORS ARE COPPER.
2. THE SOLAREDGE OPTIMIZERS, INVERTER, AUTOTRANSFORMER AND BATTERY SHALL BE INSTALLED, WIRED, GROUNDED AND COMMISSIONED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
3. MAIN DISTRIBUTION PANEL (NP PANEL) GROUND, THE CRITICAL LOADS PANEL (CP PANEL) GROUND AND THE PV ARRAY EQUIPMENT GROUND SHALL BE BONDED TO THE PREMISES GROUND ROD USING A 6 AWG GEC AS A MINIMUM.
NOTES
1. ALL CONDUCTORS ARE COPPER.
2. THE SOLAREDGE OPTIMIZERS, INVERTER, AUTOTRANSFORMER AND BATTERY SHALL BE INSTALLED,
   WIRING, GROUNDED AND COMMISSIONED IN ACCORDANCE
   WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
3. MAIN DISTRIBUTION PANEL (NP PANEL) GROUND, THE
   CRITICAL LOADS PANEL (CP PANEL) GROUND AND THE PV
   ARRAY EQUIPMENT GROUND SHALL BE BONDED TO THE
   PREMISES GROUND ROD USING A 6 AWG GEC AS A MINIMUM.
TRANSPORT NOTES

DEPARTURE POINT: UNIVERSITY OF MARYLAND COLLEGE PARK, MD 20742

TOTAL DISTANCE: 1,658 MILES

ESTIMATED TRAVEL TIME:
- TRUCK: 25 HOURS
- RAIL: 14 HOURS

SITE LOCATION: RTD 61ST & PEÑA STATION
6045 N RICHFIELD ST.
DENVER, CO 80249

STATES WHICH MAY REQUIRE TRUCK TRANSPORTATION PERMITS:
1. MARYLAND
2. WEST VIRGINIA
3. PENNSYLVANIA
4. OHIO
5. INDIANA
6. ILLINOIS
7. MISSOURI
8. KANSAS
9. COLORADO
TRANSPORTATION ANALYSIS

**LOAD DIMENSIONS (LENGTH x WIDTH x HEIGHT)**
- SMALL TRUCK (SM): 16'-0" x 8'-6" x 9'-2"
- MEDIUM TRUCK (MD): 26'-0" x 8'-6" x 9'-2"
- LARGE TRUCK (LG): 48'-0" x 8'-6" x 12'
- SELECTED TRUCK (LG): 44'-4" x 8'-6" x 10'-0"
- RAILCAR: 65,000 ft³
- AIR: 200,000

**MAXIMUM LOAD CAPACITY (LB.)**
- SMALL TRUCK (SM): 7,000
- MEDIUM TRUCK (MD): 15,000
- LARGE TRUCK (LG): 80,000
- SELECTED TRUCK (LG): 80,000
- RAILCAR: 200,000
- AIR: 250,000

**FUEL PER DISTANCE TRAVELED**
- SMALL TRUCK (SM): 7.9mpg
- MEDIUM TRUCK (MD): 6.5mpg
- LARGE TRUCK (LG): 5.8mpg
- SELECTED TRUCK (LG): 5.8mpg
- RAILCAR: 476 ton-mpg
- AIR: 1.0mpg

**ESTIMATED CO₂ PRODUCED FROM COLLEGE PARK TO DENVER (TONS)**
- SMALL TRUCK (SM): 2.097
- MEDIUM TRUCK (MD): 2.549
- LARGE TRUCK (LG): 2.857
- SELECTED TRUCK (LG): 2.857
- RAILCAR: 0.313
- AIR: 10.356

AMOUNT OF VEHICLES REQUIRED FOR HOUSE TRANSPORTATION

<table>
<thead>
<tr>
<th>TYPE</th>
<th>SMALL TRUCK (SM)</th>
<th>MEDIUM TRUCK (MD)</th>
<th>LARGE TRUCK (LG)</th>
<th>SELECTED TRUCK (LG)</th>
<th>RAILCAR</th>
<th>AIR</th>
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<tbody>
<tr>
<td>TOTAL NUMBER OF VEHICLE TYPES</td>
<td>6</td>
<td>4</td>
<td>2</td>
<td>2</td>
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<tr>
<td>ESTIMATED CO₂ PRODUCED FROM COLLEGE PARK TO DENVER (TONS)</td>
<td>12.582</td>
<td>10.196</td>
<td>5.714</td>
<td>2.857</td>
<td>0.313</td>
<td>10.356</td>
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**TRUCK WEIGHT AND SIZE LIMITS**

<table>
<thead>
<tr>
<th>ROUTE</th>
<th>WIDTH</th>
<th>HEIGHT</th>
<th>SEMI-TRAILER</th>
<th>FULL TRAILER (EACH)</th>
<th>GVW (LB.)</th>
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<tr>
<td><strong>INTERSTATES / U.S. NUMBERED ROUTES</strong></td>
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<td></td>
<td><strong>48'-0&quot;</strong></td>
<td><strong>28'-0&quot;</strong></td>
<td>80,000</td>
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<tr>
<td><strong>MARYLAND</strong></td>
<td>8'-6&quot;</td>
<td>13'-6&quot;</td>
<td><strong>48'-0&quot;</strong></td>
<td><strong>28'-0&quot;</strong></td>
<td>80,000</td>
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<tr>
<td><strong>COLORADO</strong></td>
<td>6'-0&quot;</td>
<td>13'-0&quot;</td>
<td>57'-4&quot;</td>
<td>28'-6&quot;</td>
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**DIMENSIONS PER RAILCAR/TRUCK TRAILER**

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<tr>
<th>TRAILER</th>
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<th>WIDTH</th>
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<td><strong>TRUCK</strong></td>
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<td>8'-6&quot;</td>
<td>12'-0&quot;</td>
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<tr>
<td><strong>RAIL</strong></td>
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**OPTIMAL ROUTE OPTIONS**

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<tr>
<td>MILES</td>
<td>1,867</td>
<td>1,667</td>
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<tr>
<td>HOURS</td>
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**ESTIMATED CO₂ PRODUCED FROM COLLEGE PARK TO DENVER (TONS)**
- TRUCK: 2.857
- RAIL: 0.317

*Both options are still being considered.*
PHASING

1. TRAILER ONE CONTENTS: FOUNDATIONS, CORE MODULES, FLOOR PANELS, BUILDING SHEET METAL PANELS, DECKING, RAILINGS, SIPS, ROOF PANELS
2. TRAILER TWO CONTENTS: STRUCTURAL FRAME, PV PANELS, COURTYARD WALLS, COURTYARD ROOF, TRUSS', ADDITIONAL ROOF PANELS, TOOLS, FURNITURE, MECHANICAL EQUIPMENT, VEGETATION
3. CUSTOM TRUCK OUTFITTED AS TANDEM LOWBOY WITH 40' OF THE TRAILER ALLOWING CARGO HEIGHT UP TO 12' WITH 4' IN FRONT AND BACK ONLY ALLOWING 10' 4" WITH BUILT-IN CRANE AND ONE ADDITIONAL LOWBOY TRAILER, IN TOTAL NOT EXCEEDING 95' IN LENGTH
4. TRAILERS TO BE FLATBEDS TO MAXIMIZE DIMENSIONS FOR HOUSE COMPONENTS
5. CRANE EQUIPPED WITH 80' BOOM WITH BOOM CAPACITY OF 15 TONS. EXTENSION LENGTH 70' FROM EDGE OF EITHER SIDE OF EXTENDED OUTRIGGERS. CRANE'S WEIGHT AND WEIGHT OF THE OBJECTS PICKED UP ARE DISTRIBUTED TO THE OUTRIGGERS RESTING ON 6'-0" X 6'-0" REINFORCED CRIBBING.

PHASE ONE: DISASSEMBLE CONSTRUCTED HOUSE IN COLLEGE PARK
PHASE TWO: WEATHERPROOF AND PROTECT COMPONENTS FOR TRANSPORT
PHASE THREE: PACK COMPONENTS ONTO THEIR DESIGNATED TRAILER
PHASE FOUR: SECURE ITEMS FOR TRANSPORT
PHASE FIVE: ATTACH TRAILERS AND DEPART

TRUCK DETAILS

1. TRAILER ONE CONTENTS: FOUNDATIONS, CORE MODULES, FLOOR PANELS, BUILDING SHEET METAL PANELS, DECKING, RAILINGS, SIPS, ROOF PANELS
2. TRAILER TWO CONTENTS: STRUCTURAL FRAME, PV PANELS, COURTYARD WALLS, COURTYARD ROOF, TRUSS', ADDITIONAL ROOF PANELS, TOOLS, FURNITURE, MECHANICAL EQUIPMENT, VEGETATION
3. CUSTOM TRUCK OUTFITTED AS TANDEM LOWBOY WITH 40' OF THE TRAILER ALLOWING CARGO HEIGHT UP TO 12' WITH 4' IN FRONT AND BACK ONLY ALLOWING 10' 4" WITH BUILT-IN CRANE AND ONE ADDITIONAL LOWBOY TRAILER, IN TOTAL NOT EXCEEDING 95' IN LENGTH
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PROJECT NO.

UNIVERSITY OF MARYLAND, COLLEGE PARK
SOLAR DECATHLON 2017 SUBMISSION

O-103

CARRIER
LOADING
SEQUENCE

1/4" = 1'-0"1 TRUCK PLAN DETAIL
1/8" = 1'-0"2 TANDEM TRUCK PLAN
1/8" = 1'-0"3 TANDEM TRUCK PLAN
1/8" = 1'-0"4 TANDEM TRUCK PLAN

reACT
UNIVERSITY OF MARYLAND
COLLEGE PARK, MD 20742

Author
Checker

Revision Date Description
ARRIVAL NOTES

1. ARRIVAL IS BASED ON MOST RECENT SITE INFORMATION PROVIDED BY COMPETITION ORGANIZERS. ALL ADJUSTMENTS AND SITE CONDITIONS MUST BE DISCUSSED WITH THE PROFESSIONAL CREW BEFORE PROCEEDING.

2. TRAILER ONE CONTENTS: FOUNDATIONS, CORE MODULES, FLOOR PANELS, DECKING, RAILINGS, SIPS, ROOF PANELS

3. TRAILER TWO CONTENTS: STRUCTURAL FRAME, PV PANELS, COURTYARD WALLS, COURTYARD ROOF, TRUSSES, ADDITIONAL ROOF PANELS, TOOLS, FURNITURE, MECHANICAL EQUIPMENT, VEGETATION

CONSTRUCTION EQUIPMENT SCHEDULE

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<tr>
<td>HYDRAULIC JACKS</td>
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NOTES AND SPECS

1. CRANE EQUIPPED WITH 80' BOOM WITH BOOM CAPACITY OF 15 TONS. EXTENSION LENGTH 70' FROM EDGE OF EITHER SIDE OF EXTENDED OUTRIGGERS. CRANE’S WEIGHT AND WEIGHT OF THE OBJECTS PICKED ARE DISTRIBUTED TO THE OUTRIGGERS.

2. RUBBER TRACK LOADER GROUND CLEARANCE - 12", 6.4' IN HEIGHT, 10.7' IN LENGTH X 5' IN WIDTH, WEIGHING 6200 POUNDS DISPERSING WEIGHT VIA WIDE 15" RUBBER TRACKS RESULTING IN GROUND PRESSURE OF 3.5 PSI.

3. ACTUAL SITE CONDITIONS WILL DICTATE THE FINAL ELEVATIONS OF THE SUPPORT BEAMS, AS SPACE FOR THE TANKS UNDER THE MODULES AND ADEQUATE FLOW INTO THESE TANKS ARE IMPERATIVE. THUS, REMOVAL OF THE CARRIERS WHEELS MAY NOT BE NECESSARY AND CLEARANCE TO REMOVE THE CARRIERS MAY SIMPLY BE ACHIEVED BY DEFLATING THE TIRES SOMEWHAT. IN EITHER CASE, THE PROFESSIONAL CREW WILL BE ON-HAND TO DETERMINE, COORDINATE AND PERFORM THESE TASKS.

ARRIVAL PLAN

DECATHLETE

PHASE ONE:

1. TRAILERS 1 & 2 (SITING SOUTH OF SOLAR ENVELOPE, TRAILER TWO IS TEMPORARILY PARKED WEST OF THE HOUSE WITHIN THE MARYLAND TEAM SITE CONTEST AREA TO BE SATISFACTORY TO THE TRAILER CRANE). FOUNDATIONS ARE PLACED FOR THE HOUSE AND SCAFFOLDING IS US

PHASE TWO:

1. ASSEMBLE FLOOR PANELS AND CORE PANELS ON TOP OF FOUNDATIONS. PROFESSIONAL CREW DIRECTS CRANE WHICH ASSISTS IN MOVING HOUSE COMPONENTS.

PHASE THREE:

1. SIP PANELS ARE PUT INTO PLACE AND SECURED. CRANE ASSISTS WHERE NECESSARY.

PHASE FOUR:

1. ASSEMBLE COURTYARD STRUCTURE. INSTALL ALL DOORS AND WINDOWS. CRANE ASSISTS WHERE NECESSARY.

PHASE FIVE:

1. ROOF PANELS ARE LIFTED BY THE CRANE AND SECURED INTO PLACE. PV PANELS ARE INSTALLED ON FINISHED ROOF.

PHASE SIX:

1. INSTALL ALL DOORS AND WINDOWS. VEGETATIVE BEDS AND PLANTINGS ARE PUT IN PLACE AROUND THE HOUSE. ELECTRIC CAR CHARGING STATION INSTALLED. FURNITURE AND OTHER ACCESSORIES ARE TAKEN INTO THE HOUSE AND PUT INTO PLACE.
CONSTRUCTION EQUIPMENT SCHEDULE

DEPARTURE NOTES

1. SEQUENCING IS BASED ON MOST RECENT SITE INFORMATION PROVIDED BY COMPETITION ORGANIZERS. ALL SEQUENCING SUBJECT TO CHANGE PENDING FURTHER REGULATION ADJUSTMENTS AND SITE CONDITIONS.

2. TRAILER ONE CONTENTS:
   - FOUNDATIONS
   - CORE MODULES
   - FLOOR PANELS
   - DECKING
   - RAILINGS
   - SIPS
   - ROOF PANELS

3. TRAILER TWO CONTENTS:
   - STRUCTURAL FRAME
   - PV PANELS
   - COURTYARD WALLS
   - COURTYARD ROOF
   - TRUSSES
   - ADDITIONAL ROOF PANELS
   - TOOLS
   - FURNITURE
   - MECHANICAL EQUIPMENT
   - VEGETATION

NOTES AND SPECS

1. CRANE EQUIPPED WITH 80' BOOM WITH BOOM CAPACITY OF 15 TONS. EXTENSION LENGTH 70' FROM EDGE OF EITHER SIDE OF EXTENDED OUTRIGGERS. CRANE'S WEIGHT AND WEIGHT OF THE OBJECTS PICKED ARE DISTRIBUTED TO THE OUTRIGGERS.

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3. ACTUAL SITE CONDITIONS WILL DICTATE THE FINAL ELEVATIONS OF THE SUPPORT BEAMS AS SPACE FOR THE TANKS UNDER THE MODULES AND ADEQUATE FLOW INTO THESE TANKS ARE IMPERATIVE. THUS, REMOVAL OF THE CARRIERS WHEELS MAY NOT BE NECESSARY AND CLEARANCE TO REMOVE THE CARRIERS MAY SIMPLY BE ACHIEVED BY DEFLATING THE TIRES SOMEWHAT. IN EITHER CASE, THE PROFESSIONAL TEAM CREW WILL BE ON-HAND TO DETERMINE, COORDINATE AND PERFORM THESE TASKS.

MARYLAND

O-106

DEPARTURE SEQUENCE

PHASE ONE:

- DEPARTMENT: REACT
- UNIVERSITY: UNIVERSITY OF MARYLAND
- COLLEGE PARK
- MD 20742
- DEPARTURE PLAN
- SEQUENCE 1
- SCALE: 1/32" = 1'-0"
- NOT TO SCALE

PHASE TWO:

- DEPARTMENT: REACT
- UNIVERSITY: UNIVERSITY OF MARYLAND
- COLLEGE PARK
- MD 20742
- DEPARTURE PLAN
- SEQUENCE 2
- SCALE: 1/32" = 1'-0"
- NOT TO SCALE

PHASE THREE:

- DEPARTMENT: REACT
- UNIVERSITY: UNIVERSITY OF MARYLAND
- COLLEGE PARK
- MD 20742
- DEPARTURE PLAN
- SEQUENCE 3
- SCALE: 1/32" = 1'-0"
- NOT TO SCALE

PHASE FOUR:

- DEPARTMENT: REACT
- UNIVERSITY: UNIVERSITY OF MARYLAND
- COLLEGE PARK
- MD 20742
- DEPARTURE PLAN
- SEQUENCE 4
- SCALE: 1/32" = 1'-0"
- NOT TO SCALE

PHASE FIVE:

- DEPARTMENT: REACT
- UNIVERSITY: UNIVERSITY OF MARYLAND
- COLLEGE PARK
- MD 20742
- DEPARTURE PLAN
- SEQUENCE 5
- SCALE: 1/32" = 1'-0"
- NOT TO SCALE

PHASE SIX:

- DEPARTMENT: REACT
- UNIVERSITY: UNIVERSITY OF MARYLAND
- COLLEGE PARK
- MD 20742
- DEPARTURE PLAN
- SEQUENCE 6
- SCALE: 1/32" = 1'-0"
- NOT TO SCALE