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<tr>
<td>1-1</td>
<td>E-102 PV WIRING PLAN</td>
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<tr>
<td>1-2</td>
<td>E-103 LIGHTING PLAN</td>
</tr>
<tr>
<td>1-3</td>
<td>E-201 ELECTRICAL ELEVATIONS</td>
</tr>
<tr>
<td>1-4</td>
<td>E-401 SITE PLAN</td>
</tr>
<tr>
<td>1-5</td>
<td>E-601 ONE-LINE DIAGRAM</td>
</tr>
<tr>
<td>1-6</td>
<td>E-602 TRUCK LOADING DIAGRAM</td>
</tr>
<tr>
<td>2-1</td>
<td>A-204 ELEVATIONS</td>
</tr>
<tr>
<td>2-2</td>
<td>A-303 BUILDING SECTIONS</td>
</tr>
<tr>
<td>2-3</td>
<td>CONSULTANTS</td>
</tr>
<tr>
<td>2-4</td>
<td>LOT NUMBER: 6</td>
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<tr>
<td>2-5</td>
<td>G-002 GENERAL NOTES, SYMBOLS, AND ABBREVIATIONS</td>
</tr>
</tbody>
</table>
CODES

U.S. DEPARTMENT OF ENERGY SOLAR DECATHLON BUILDING CODE  UPDATED SEPTEMBER 24, 2014

2013 INTERNATIONAL RESIDENTIAL CODE OF THE INTERNATIONAL CODE COUNCIL
2014 NATIONAL ELECTRIC CODE OF THE NATIONAL FIRE PROTECTION AGENCY
AMERICANS WITH DISABILITIES ACT
ARCHITECTURAL BARRIERS ACT
2010 STANDARD FOR ACCESSIBLE DESIGN
THE DESIGN OF THIS HOUSE IS DRIVEN BY CLIMATE. IN-HOUSE IS INTELLIGENTLY DESIGNED TO RESPOND TO THE CONDITIONS OF THE CLIMATE, SUCH THAT THE MAJORITY OF ITS NEEDS FOR HEATING, COOLING AND LIGHTING ARE ADDRESSED ARCHITECTURALLY. THE SUPPLEMENTAL SYSTEMS NECESSARY FOR THE REMAINING SPACE CONDITIONING, LIGHTING, AND POWER NEEDS ARE PROVIDED BY THE MOST EFFICIENT AND EFFECTIVE SYSTEMS COMMERCIALLY AVAILABLE. THE PUBLIC AND PRIVATE WINGS ARE SERVICED BY AN ACTIVE CORE THAT CONTAINS THE HOME'S MECHANICAL, ELECTRICAL, PLUMBING, AND MONITORING SYSTEMS. THE PRIVATE WING INCLUDES A MASTER BEDROOM AND A FLEXIBLE LIBRARY/OFFICE/SECONDARY BEDROOM SPACE. THE PUBLIC WING INCORPORATES ENTERTAINMENT AND DINING SPACES WITH THOUGHTFUL LINKAGES TO THE EXTERIOR SPACES AND THE VIEWS BEYOND.

OUR MISSION IS TO BUILD A HOME THAT MEETS BOTH THE RESIDENTS' AS WELL AS SOCIETY'S NEED FOR ECOLOGICALLY RESPONSIVE HOUSING WHILE SIMULTANEOUSLY CREATING AN ENVIRONMENT THAT DELIGHTS THE RESIDENT BOTH EXPERIENTIALLY AND THERMALLY. AS A DESIGN PROJECT, THE HOUSE HAS ALSO PROVIDED AN OPPORTUNITY FOR STUDENTS AND FACULTY TO EXPLORE, COLLABORATE, AND INTRODUCE INNOVATIVE, APPROPRIATE TECHNOLOGIES THROUGH A HANDS-ON LEARNING OPPORTUNITY, SERVING AS AN OUTREACH OPPORTUNITY AMONGST STUDENTS AND FACULTY AT CAL POLY, THE SURROUNDING COMMUNITY, AND THE RENEWABLE ENERGY INDUSTRY.

THIS HOUSE IS A MANIFESTATION OF CAL POLY'S CORE DIRECTIVE, "LEARN BY DOING." BY DRAWING ON OUR SCHOOL'S UNIQUE CAPABILITY AS A POLYTECHNIC UNIVERSITY, OUR MULTIDISCIPLINARY TEAM ACCOMPLISHES ALL ASPECTS OF DESIGN AND BUILD "IN-HOUSE."

THE SOLAR CAL POLY TEAM HOPES TO PRESENT A NEW STANDARD OF "IN," BY CREATING A NOTION OF ECOLOGICAL LIVING THAT IS ENTICING AS WELL AS ACHIEVABLE. WE WOULD LIKE VISITORS TO SEE IN-HOUSE AS AN APPROACH TO LIVING WELL, WHILE STILL LIVING WITHIN OUR ECOLOGICAL MEANS.
<table>
<thead>
<tr>
<th>Compliant Item</th>
<th>Compliant Status</th>
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<tr>
<td>G.700</td>
<td>Meets the requirements</td>
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**SOLAR CAL POLY**

**Revision Description:**

- **Date:** AUGUST 17, 2015

**G-700**
### 2013 Low-Rise Residential Mandatory Measures Summary

#### 2013 Low-Rise Residential Mandatory Measures Summary

- **Project Name:** Residential Building
- **Location:** San Luis Obispo, CA
- **Date:** AUGUST 17, 2015

<table>
<thead>
<tr>
<th>Measure Number</th>
<th>Description</th>
<th>Target</th>
<th>Achieved</th>
<th>Action Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>M1.1</td>
<td>ENERGY USE</td>
<td>Single Family</td>
<td>Yes</td>
<td>Install low-flow fixtures</td>
</tr>
<tr>
<td>M1.2</td>
<td>ENERGY USE</td>
<td>Single Family</td>
<td>Yes</td>
<td>Increase efficiency of lighting fixtures</td>
</tr>
<tr>
<td>M1.3</td>
<td>ENERGY USE</td>
<td>Single Family</td>
<td>Yes</td>
<td>Upgrade HVAC system</td>
</tr>
<tr>
<td>M1.4</td>
<td>ENERGY USE</td>
<td>Single Family</td>
<td>Yes</td>
<td>Install solar panels</td>
</tr>
</tbody>
</table>

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- **Date:** AUGUST 17, 2015

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<th>Action Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>M2.1</td>
<td>WATER USE</td>
<td>Single Family</td>
<td>Yes</td>
<td>Install water-efficient appliances</td>
</tr>
<tr>
<td>M2.2</td>
<td>WATER USE</td>
<td>Single Family</td>
<td>Yes</td>
<td>Reduce water consumption</td>
</tr>
<tr>
<td>M2.3</td>
<td>WATER USE</td>
<td>Single Family</td>
<td>Yes</td>
<td>Implement water-conservation strategies</td>
</tr>
<tr>
<td>M2.4</td>
<td>WATER USE</td>
<td>Single Family</td>
<td>Yes</td>
<td>Install water meter</td>
</tr>
</tbody>
</table>

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- **Date:** AUGUST 17, 2015

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<th>Achieved</th>
<th>Action Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>M3.1</td>
<td>EFFICIENCY</td>
<td>Single Family</td>
<td>Yes</td>
<td>Install energy-efficient appliances</td>
</tr>
<tr>
<td>M3.2</td>
<td>EFFICIENCY</td>
<td>Single Family</td>
<td>Yes</td>
<td>Implement energy-saving practices</td>
</tr>
<tr>
<td>M3.3</td>
<td>EFFICIENCY</td>
<td>Single Family</td>
<td>Yes</td>
<td>Upgrade insulation</td>
</tr>
<tr>
<td>M3.4</td>
<td>EFFICIENCY</td>
<td>Single Family</td>
<td>Yes</td>
<td>Install smart thermostats</td>
</tr>
</tbody>
</table>

#### 2013 Low-Rise Residential Mandatory Measures Summary

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- **Date:** AUGUST 17, 2015

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<th>Target</th>
<th>Achieved</th>
<th>Action Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>M4.1</td>
<td>SUSTAINABILITY</td>
<td>Single Family</td>
<td>Yes</td>
<td>Use locally sourced materials</td>
</tr>
<tr>
<td>M4.2</td>
<td>SUSTAINABILITY</td>
<td>Single Family</td>
<td>Yes</td>
<td>Implement sustainable landscaping</td>
</tr>
<tr>
<td>M4.3</td>
<td>SUSTAINABILITY</td>
<td>Single Family</td>
<td>Yes</td>
<td>Use recycled or reclaimed materials</td>
</tr>
<tr>
<td>M4.4</td>
<td>SUSTAINABILITY</td>
<td>Single Family</td>
<td>Yes</td>
<td>Implement water-saving landscaping</td>
</tr>
</tbody>
</table>

#### 2013 Low-Rise Residential Mandatory Measures Summary

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- **Location:** San Luis Obispo, CA
- **Date:** AUGUST 17, 2015

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<thead>
<tr>
<th>Measure Number</th>
<th>Description</th>
<th>Target</th>
<th>Achieved</th>
<th>Action Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>M5.1</td>
<td>COMPLIANCE</td>
<td>Single Family</td>
<td>Yes</td>
<td>Meet all applicable codes and standards</td>
</tr>
<tr>
<td>M5.2</td>
<td>COMPLIANCE</td>
<td>Single Family</td>
<td>Yes</td>
<td>Conduct regular maintenance and inspections</td>
</tr>
<tr>
<td>M5.3</td>
<td>COMPLIANCE</td>
<td>Single Family</td>
<td>Yes</td>
<td>Implement emergency preparedness</td>
</tr>
<tr>
<td>M5.4</td>
<td>COMPLIANCE</td>
<td>Single Family</td>
<td>Yes</td>
<td>Provide accessible and understandable information</td>
</tr>
</tbody>
</table>

SITE UTILITY PLAN

1. CAR CHARGING OUTLET, 20V, 20A
2. 1/2"ABS TO EXTERIOR OUTLETS, TYP.
3. WETLANDS
4. DOMESTIC COLD WATER SUPPLY TANK, FOR COMPETITION ONLY
5. CONSTRUCTED WETLANDS
6. COLD WATER PRESSURE TANK
7. PUMP TO BLACKWATER TANK
8. BLACKWATER TANK, FOR COMPETITION ONLY
9. GRAVITY PUMP TO BLACKWATER TANK
10. D.O.E. PROVIDED UTILITY PANEL, FOR COMPETITION ONLY
11. AIR TO AIR HEAT PUMP
12. 1 1/2"ABS TO BLACKWATER TANK
13. WATER SUPPLY TANK, COLD WATER ONLY

CONSTRUCTED WETLANDS

WEATHERPROOF EXTERIOR OUTLETS, TYP.

WWW.SOLARDECATHLON.GOV

SOLAR CAL POLY
<table>
<thead>
<tr>
<th>NUMBER</th>
<th>PLANT TYPE</th>
<th>GENERAL FORM</th>
<th>General Plant Mod</th>
<th>General Plant Habit</th>
<th>PURCHASE SIZE</th>
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<tr>
<td>1</td>
<td>TEXTURAL PLANTS</td>
<td>GEN/SCAPE</td>
<td>30-60&quot;</td>
<td>30-60&quot;</td>
<td>5 GALLON</td>
</tr>
<tr>
<td>2</td>
<td>PLANTS WITH TIGHT HABIT</td>
<td>GEN/SCAPE</td>
<td>12-24&quot;</td>
<td>12-24&quot;</td>
<td>1 GALLON</td>
</tr>
<tr>
<td>3</td>
<td>LOW MOUNDING PLANTS</td>
<td>GEN/SCAPE</td>
<td>12-24&quot;</td>
<td>12-24&quot;</td>
<td>1 GALLON</td>
</tr>
<tr>
<td>4</td>
<td>PLANTS WITH DENSE TIGHT HABIT</td>
<td>ANT/LANDS</td>
<td>12-24&quot;</td>
<td>12-24&quot;</td>
<td>8 GALLON</td>
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<tr>
<td>5</td>
<td>EXCELLENT PLANT</td>
<td>GEN/SCAPE</td>
<td>12-24&quot;</td>
<td>18&quot;</td>
<td>1 GALLON</td>
</tr>
</tbody>
</table>
GENERAL

ALL MATERIALS, WORKMANSHIP, DESIGN AND CONSTRUCTION SHALL CONFORM TO THE DRAWING SPECIFICATIONS, THE CALIFORNIA BUILDING CODE (2013 EDITION) AND UNIVERSITY STANDARD.

CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS, MEMBER SIZES, AND THE UNIVERSITY REPRESENTATIVE FOR APPROVAL PRIOR TO CONSTRUCTION FOR INSPECTION AND TESTING OF THE UNIVERSITY.

STEEL

A. STRUCTURAL STEEL DESIGN, FABRICATION, AND INSTALLATION SHALL BE BASED ON THE FOLLOWING SPECIFICATIONS:

1. ROLLED SHAPE DESIGN:

<table>
<thead>
<tr>
<th>Type</th>
<th>ASTM Specification</th>
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</thead>
<tbody>
<tr>
<td>ASTM A 36</td>
<td>36 ksi</td>
</tr>
</tbody>
</table>

B. STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING:

1. ALL STEEL MILL DATES AND MILL FABRICATION IDENTIFICATION NUMBERS SHALL BE REFLECTED ON SHOP DRAWINGS.

WOOD

A. FRAME LUMBER SHALL BE KEU DIED OR M-C GRADE AND MEET OR EXCEED THE REQUIREMENTS OF THE FOLLOWING:

<table>
<thead>
<tr>
<th>Type</th>
<th>ASTM Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLASS I</td>
<td>8,000 psi</td>
</tr>
</tbody>
</table>

FOOTINGS

A. 100% PLANE AT 3 PERCUSSION ACTION TESTS WITHIN 3' OF PIPE FABRICATION OR CONSTRUCTION. CHANGES SHOWN ON SHOP DRAWINGS MAY SATISFY THIS REQUIREMENT.

STORAGE AND INSTALLATION OF MATERIALS

A. ALL MATERIALS, WORKMANSHIP, DESIGN AND CONSTRUCTION SHALL CONFORM TO THE FOLLOWING SPECIFICATIONS:

<table>
<thead>
<tr>
<th>Type</th>
<th>ASTM Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASTM A 36</td>
<td>36 ksi</td>
</tr>
</tbody>
</table>

PLUMBING

A. ALL EXTERIOR SURFACES WITH 8D NAILS @ 6" ON CENTER AND TO ALL INTERMEDIATE STUDS AND BACKING WITH SD NAILS UNLESS NOTED OTHERWISE ON PLAN.

WATER MAIN

A. ALL WATER MAIN DETAILS SHOWN ARE OF SIMILAR CHARACTER TO DETAILS SHOWN, SIMILAR DETAILS OF CONSTRUCTION SHALL BE USED, SUBJECT TO TECHNICAL AND STRUCTURAL OBSERVATION.

FOOTING STRAP FADDERS

A. ALL 2'X JOISTS SHALL BE CONNECTED TO FLUSH BEAMS WITH "LB" SERIES JOIST HANGERS. ALL DOUBLE-JOIST BEAMS SHALL BE CONNECTED TO FLUSH BEAMS WITH "HUS" SERIES JOIST HANGERS.

WALL SIZES AND STUD SIZE

A. WAYS AND WAYS OF ALL STUDS AND LAG BOLTS BEARING ON WOOD. INSTALLATION OF LAG BOLTS SHALL CONFORM TO THE NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION 2010 EDITION WITH CLASSES 316 W1620 BEAMS AND 2" X 6" STUCCO SHEATHING.

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<table>
<thead>
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<th>SYMBOLS</th>
<th>SHEET INDEX</th>
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<tr>
<td>⬛️ → ⬛️</td>
<td>S-001 GENERAL NOTES</td>
</tr>
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<td>⬛️ ⬛️</td>
<td>S-002 GENERAL NOTES</td>
</tr>
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<td>S-100 CHASED FASTENING PLAN</td>
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<td>S-101 FOUNDATION</td>
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<td>S-102 FIRST FLOOR FRAMING PLAN</td>
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<td>S-103A LOW ROOF FRAMING PLAN</td>
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<td>⬛️ ⬛️</td>
<td>S-103B HIGH ROOF FRAMING PLAN</td>
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<td>⬛️ ⬛️</td>
<td>S-531 WOOD DETAILS</td>
</tr>
<tr>
<td>⬛️ ⬛️</td>
<td>S-532 WOOD DETAILS</td>
</tr>
</tbody>
</table>

**GENERAL NOTES**

## SHEET TITLE

LOT NUMBER: 
DRAWN BY: 
CHECKED BY: 
COPYRIGHT: 

**U.S. DEPARTMENT OF ENERGY**
**SOLAR DECATHLON 2015**
WWW.SOLARDECATHLON.GOV

**TEAM NAME:**
**ADDRESS:**
**CONTACT:**
**CONSULTANTS:**

**NONE:** PROJECT IS PUBLIC DOMAIN
CHASSIS FRAMING PLAN

SEE SHEET NOTES ON S101

S-100
FIRST FLOOR & DECK FRAMING PLAN

FLOOR SHEATHING INSTALLED LONG DIMENSION PERPENDICULAR TO FLOOR FRAMING, 3/4" T&G CDX/OSB FASTENED w/ 0.170 dia. PNEUMATIC FASTENERS OR #12 S.D.S.T.S. 6" O.C. @ EDGES 12" O.C. FIELD. FASTENERS SHALL PENETRATE 1/4" MIN THROUGH BASE STEEL.

TYPICAL FLOOR FRAMING @ +1'-8"
TYPICAL DECK FRAMING 2x6 DECK JOISTS @ 24" O.C. w/ 2x6 FLAT DECKING

SEE SHEET S-11 FOR TYPICAL SIP DETAILS

SHED WALL SCHEDULE

<table>
<thead>
<tr>
<th>TYPE</th>
<th>SHEATHING/FRAMING</th>
<th>NAILING</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 1/2&quot; STRUCUTRAL SHEATHING w/ 2X STUD FRAMING</td>
<td>8d common @ 6&quot; o.c. w/ 12&quot; o.c. FIELD NAILING</td>
</tr>
<tr>
<td></td>
<td>6 1/2&quot; SIP w/ 4x8 DF#1 SPLINES</td>
<td>8d common @ 6&quot; o.c. @ SIP EDGES</td>
</tr>
</tbody>
</table>

SEE SHEET S-511 FOR TYPICAL SIP DETAILS
HIGH ROOF FRAMING NOTES:
- PLATE HEIGHT VERIFY WITH ARCHITECTURAL
- ALIGN BEAM WITH WALL ABUTTING
- AIR PT. BEAM WHERE APPLICABLE FOR PV ANCHOR
- ROOF PANELS NAILED W/ 8D COMMON NAILS, 2" O.C. EDGE NAILING; 12" O.C. FIELD NAILING
- USE LUSIP SIMPSON HANGER FOR 2X6 ROOF RAFTERS AT CENTER MODULE
- SEE DETAIL S-532 FOR CORE BREAK CONNECTION
- STRAP BREAKS IN TOP PLATE WITH CS16 x 36" UNO ON PLANS

SHEAR WALL SCHEDULE

<table>
<thead>
<tr>
<th>TYPE</th>
<th>SHEATHING/FRAMING</th>
<th>NAILING</th>
<th>POST</th>
<th>SILL PLATE</th>
<th>MOULDING/DOWING</th>
</tr>
</thead>
<tbody>
<tr>
<td>POST</td>
<td>1/2&quot; STRUCTURAL SHEATHING w/ 2x10 STUD FRAMING</td>
<td>8d common @ 6&quot; o.c. @ SIP EDGES/12&quot; O.C. SIPS</td>
<td>(6) 6&quot; x 6&quot; x 10&quot;</td>
<td>6 1/2&quot; SIP w/ 4x8 #1 SPLINES</td>
<td>HDU2 UNO</td>
</tr>
<tr>
<td>SILL PLATE</td>
<td>1/2&quot; STRUCTURAL SHEATHING w/ 2x10 STUD FRAMING</td>
<td>8d common @ 6&quot; o.c. @ SIP EDGES/12&quot; O.C. SIPS</td>
<td>(6) 6&quot; x 6&quot; x 10&quot;</td>
<td>6 1/2&quot; SIP w/ 4x8 #1 SPLINES</td>
<td>HDU2 UNO</td>
</tr>
<tr>
<td>MOULDING/DOWING</td>
<td>1/2&quot; STRUCTURAL SHEATHING w/ 2x10 STUD FRAMING</td>
<td>8d common @ 6&quot; o.c. @ SIP EDGES/12&quot; O.C. SIPS</td>
<td>(6) 6&quot; x 6&quot; x 10&quot;</td>
<td>6 1/2&quot; SIP w/ 4x8 #1 SPLINES</td>
<td>HDU2 UNO</td>
</tr>
</tbody>
</table>
**Floor Details**

1. **Typical Floor Support at Edge**
   - 8" SIP
   - 3x4 Nailer w/ 1/2" Ø threaded rod @ 24" O.C.
   - 3x6 stud wall, see shear wall sched.
   - MC10

2. **Adjacent Bearing Pads**
   - 8" SIP
   - 3/4" plywood 9 1/2" deep
   - 2x8 joist
   - MC10

3. **Floor Support Between SIP and Stud Wall**
   - 8" SIP
   - 3/4" plywood, see shear wall sched.
   - MC10

4. **Typical Floor Support at Bearing**
   - 8" SIP
   - 3x6 stud wall, see shear wall sched.
   - MC10

**Revision Schedule**

<table>
<thead>
<tr>
<th>Number</th>
<th>Description</th>
<th>Date</th>
</tr>
</thead>
</table>

**Sheet Title**

Lot Number: darn

Drawn By: x

Checked By: x

Copyright: x


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Team Name: Solar Cal Poly

Address: California Polytechnic State University
San Luis Obispo, CA 93407
SOLARCALPOLY@GMAIL.COM
WWW.CALPOLYSOLARDECATHLON.ORG

1 1/2" = 1'-0"
ENTRY COLUMN BASE SECTION

ENTRY COLUMN BASE PL DETAIL

NOTE: SEE DETAILS FOR ADDITIONAL INFORMATION

WOOD SCREEN SEE ARCH DRAWINGS

POST

PL 1/2

PL 3/8 x 28 x 1'-0"

HSS 3-1/2 x 3-1/2

1/4"

BASE PL 3/8 x 28 x 1'-0"
WITH (2) 1" Ø ANCHORS AND (4) 3/4" Ø BOLT HOLES

PL 3/8 x 28 x 1'-0"

HSS 3-1/2 x 3-1/2 x 3/8

POST

SEE PLAN
FASTEN SPLINES WITH 8d NAILS @ 6" O.C. OR EQUIVALENT EACH SIDE.

PREMIX SEALANT/ADHESIVE TYPICAL EACH SIDE.

4x8 SPLINE

1/2" OSB PER GEN. NOTES

#14 PBS PANEL SCREW @ 12" O.C.

SIMPSON MSTA 12 STRAP @ 4'-0" O.C. @ SIP JOINT. SEE DETAIL 5.
CORE WALL @ KITCHEN WINDOW

SIMPSON HDU2-2.5 HOLD DOWN
SIMPSON LSTA12 STRAP @ PANEL EDGES
SIMPSON HRS12 STRAP @ PANEL EDGES

TOP OF SILL
STONE OF CPING
24" RIM JOIST
CORE WALL
CORE BREAK
FIRST FLOOR

2x6 RIM JOIST
6x6 POST
6x6 POST, EA.
SIDE OF OPNG
6x4 POST, EA.
SIDE OF OPNG

TOP OF SILL

6" POST

6" POST, EA.

6" POST

6" POST, EA.
SIDE OF OPNG
C 3x6 P.T. NAILER PLANE TO MATCH REQUIRED THICK. EA. SIDE OF DECK

1 3/4" 2x6 FRAMED WALL BEYOND 2x6 DECKING @ 2x6 JOISTS, SEE DETAIL S-521

NOTE: SHEETROCK FINISH ON INSIDE, FACE ATTACH STRAPS & PLATES ON EXTERIOR FACE

1/2" PLYWOOD

4x6 POST SIMPSON HRS12 WITH (10)-10d NAILS

SIMPSON LTP4 WITH (12)-8d NAILS

@ 24" O.C. AND 8" FROM ENDS

SIMPSON STRAP HSR12 WITH (10)-10d NAILS

SIMPSON LSTA12 WITH (8)-10d @ PANEL EDGES

2x6 STUD, PLACE SHEATHING ON OUTSIDE FACE OF STUD WALL

MC10 1/8"O.D.

3/8" @ THREADED ROOST/4"@ HOLD-DOWN

2x6 STUD, PLACE SHEATHING ON OUTSIDE FACE OF STUD WALL

1/2" PLYWOOD

EDGE NAILING SEE SCHEDULE

NOTE: SHEETROCK FINISH ON INSIDE, FACE ATTACH STRAPS & PLATES ON EXTERIOR FACE

2x6 ROOF JOIST

SIMPSON A34 WITH (8)-8d x 1/2" NAILS

2x6 RIM JOIST EDGE NAILING SEE SCHEDULE

2x6 Double TSP PLATE

2x6 RIM JOIST OS @ 1/2" NAILS

SIMPSON LSTA12 WITH (8)-8d @ POST

SIMPSON HRS12 WITH (10)-10d @ POST

MC10 AND 7/8" FROM POSTS

(2) 2x6 POST CORE BREAK (+9'-8")

SIMPSON STRAP HSR12 WITH (10)-10d NAILS

SIMPSON LTP4 WITH (12)-8d NAILS

1/2" PLYWOOD

2x6 RIM JOIST OR BLOCKING 2x6 DOUBLE TOP PLATE

4x6 POST SIMPSON HRS12 WITH (10)-10d NAILS, TYP @ POST

SIMPSON LSTA12 WITH (8)-10d @ PANEL EDGES

3/8" @ THREADED ROOST/4"@ HOLD-DOWN

2x6 STUD, PLACE SHEATHING ON OUTSIDE FACE OF STUD WALL

MC10 1/8"O.D.

3/8" @ THREADED ROOST/4"@ HOLD-DOWN

2x6 STUD, PLACE SHEATHING ON OUTSIDE FACE OF STUD WALL

MC10 1/8"O.D.

3/8" @ THREADED ROOST/4"@ HOLD-DOWN

2x6 STUD, PLACE SHEATHING ON OUTSIDE FACE OF STUD WALL

MC10 1/8"O.D.

3/8" @ THREADED ROOST/4"@ HOLD-DOWN

2x6 STUD, PLACE SHEATHING ON OUTSIDE FACE OF STUD WALL

MC10 1/8"O.D.

3/8" @ THREADED ROOST/4"@ HOLD-DOWN

2x6 STUD, PLACE SHEATHING ON OUTSIDE FACE OF STUD WALL

MC10 1/8"O.D.

3/8" @ THREADED ROOST/4"@ HOLD-DOWN

2x6 STUD, PLACE SHEATHING ON OUTSIDE FACE OF STUD WALL

MC10 1/8"O.D.

3/8" @ THREADED ROOST/4"@ HOLD-DOWN

2x6 STUD, PLACE SHEATHING ON OUTSIDE FACE OF STUD WALL

MC10 1/8"O.D.

3/8" @ THREADED ROOST/4"@ HOLD-DOWN

2x6 STUD, PLACE SHEATHING ON OUTSIDE FACE OF STUD WALL

MC10 1/8"O.D.

3/8" @ THREADED ROOST/4"@ HOLD-DOWN

2x6 STUD, PLACE SHEATHING ON OUTSIDE FACE OF STUD WALL

MC10 1/8"O.D.

3/8" @ THREADED ROOST/4"@ HOLD-DOWN

2x6 STUD, PLACE SHEATHING ON OUTSIDE FACE OF STUD WALL

MC10 1/8"O.D.

3/8" @ THREADED ROOST/4"@ HOLD-DOWN

2x6 STUD, PLACE SHEATHING ON OUTSIDE FACE OF STUD WALL

MC10 1/8"O.D.

3/8" @ THREADED ROOST/4"@ HOLD-DOWN

2x6 STUD, PLACE SHEATHING ON OUTSIDE FACE OF STUD WALL

MC10 1/8"O.D.

3/8" @ THREADED ROOST/4"@ HOLD-DOWN

2x6 STUD, PLACE SHEATHING ON OUTSIDE FACE OF STUD WALL

MC10 1/8"O.D.
**Wood Details**

1. **ENTRY OVERHANG SECTION @ GRID-LINE B**
   - Align with jamb stud
   - 4x8, miter @ grid-line 4
   - Finish face @ +11'-2"
   - 2" TYP HSS 3-1/2x3-1/2 post with cap pl 3/8 x 3/8 x 0'-4" with 1/2 Ø x 3-1/2 lag bolt

2. **ENTRY OVERHANG SECTION @ GRID-LINES 6 AND 7**
   - 2x8 ledger @ 24" O.C.
   - 2x8 joists @ 24" O.C.
   - 2x6 wall stud
   - Finish face @ +11'-2"
   - 2x6 ledger @ 24" O.C.
   - 2x6 wall stud +/− 3'-3-1/2" verify

3. **ENTRY OVERHANG COLUMN CAP DETAILS**
   - 2 sides to cap fl
   - Fl. 1/4, TYP
   - HSS post below
   - Fl. 1/4, TYP
   - HSS 3-1/2x3-1/2 post w/ cap fl. 6"
1. PANEL/RAIL SUPPORT SECTION DETAIL @ LINE E

2. PANEL/RAIL SUPPORT SECTION DETAIL @ LINE D

3. PANEL/RAIL SUPPORT DETAIL

NOTE: FOR ADDITIONAL INFORMATION NOT NOTED, SEE DETAIL 1/521

1 1/2" = 1'-0"

SOLAR DECATHLON 2015
WWW.SOLARDECATHLON.GOV
PLANTER BOXES, TYP.
A-206
A-203
8'-6"
4'-0"
8'-8"
9'-0"
4'-2 3/4"
6"
6"
8'-3"
4'-3"
10"
8'-7 3/4"

FOUR (4) SLIDING SCREEN DOORS, EACH 4' WIDE
A-201
A-202
A-552

2x6 WOOD ENTRANCE DECK
PLANTER BOXES, TYP.

BIFACIAL ROOM ABOVE
WOOD RAIN SCREEN

SAN LUIS OBISPO, CA 93410

1/4" = 1'-0"

CONSTRUCTION WITHIN PLANTER BOXES

PLANTER BOXES
CONSTRUCTED WETLANDS
TOURS

SOLARCALPOLY@GMAIL.COM

ADDRESS:

LOT NUMBER:

Revision Schedule

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DOOR DETAILS

1. BEDROOM DOUBLE DOOR

2. MECHANICAL SLIDING DOOR
### Insulation Schedule

<table>
<thead>
<tr>
<th>NAME</th>
<th>TYPE</th>
<th>R-VALUE</th>
<th>R-VALUE PER INCH</th>
<th>TOTAL R-VALUE</th>
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<tbody>
<tr>
<td>Core Floor 7 1/2&quot; Joist</td>
<td>Open Cell Spray Foam 2 1/2&quot;</td>
<td>R-3.7</td>
<td>1.6</td>
<td>6.0</td>
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<tr>
<td>Core Floor Membrane/Joist</td>
<td>Closed Cell</td>
<td>R-6</td>
<td>1.6</td>
<td>6.0</td>
</tr>
<tr>
<td>Private Area/Hardwood Floors 1 5/8&quot;</td>
<td>Open Cell Spray Foam 2 1/2&quot;</td>
<td>R-3.7</td>
<td>1.6</td>
<td>5.8</td>
</tr>
<tr>
<td>Private Area/Hardwood Floors 1 5/8&quot;</td>
<td>Closed Cell</td>
<td>R-6</td>
<td>1.6</td>
<td>6.0</td>
</tr>
<tr>
<td>Private Area/Hardwood Floors 1 5/8&quot;</td>
<td>Fiberglas</td>
<td>R-33</td>
<td>1.6</td>
<td>53.8</td>
</tr>
<tr>
<td>Core Wall 6 1/2&quot; Stud Wall</td>
<td>Closed Cell Spray Foam 2 1/2&quot;</td>
<td>R-3.7</td>
<td>1.6</td>
<td>5.8</td>
</tr>
<tr>
<td>Core Wall 7 1/2&quot; Stud</td>
<td>Open Cell</td>
<td>R-6</td>
<td>1.6</td>
<td>6.0</td>
</tr>
<tr>
<td>Core Wall 7 1/2&quot; Stud</td>
<td>Closed Cell</td>
<td>R-6</td>
<td>1.6</td>
<td>6.0</td>
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### Plumbing Schedule

<table>
<thead>
<tr>
<th>NAME</th>
<th>MANUFACTURER</th>
<th>MODEL</th>
<th>LOCATION</th>
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<tbody>
<tr>
<td>P4</td>
<td>Stainless Steel</td>
<td>MRP00001</td>
<td>Kitchen</td>
</tr>
<tr>
<td>P10</td>
<td>Delta Faucet</td>
<td>7505CPC</td>
<td>Chrome</td>
</tr>
<tr>
<td>T14267-H2O</td>
<td>Kato 307</td>
<td>Bathroom</td>
<td></td>
</tr>
<tr>
<td>122</td>
<td>Swan</td>
<td>9159ARDST</td>
<td>Kitchen</td>
</tr>
</tbody>
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### Door Schedule

<table>
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<tr>
<th>MAIN</th>
<th>DB SIZE</th>
<th>MANUFACTURER</th>
<th>MODEL</th>
<th>FRAME TYPE</th>
<th>COLOR</th>
<th>HEAD</th>
<th>JAM</th>
<th>SILL</th>
<th>DESCRIPTION</th>
<th>DOOR</th>
<th>FRAME</th>
<th>COMPONENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>T14267-H2O</td>
<td>30&quot; x 84&quot;</td>
<td>Delta Faucet</td>
<td>7505CPC</td>
<td>Chrome</td>
<td>7&quot;</td>
<td>8&quot;</td>
<td>9&quot;</td>
<td>Bathroom</td>
<td></td>
<td></td>
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### Window Schedule

<table>
<thead>
<tr>
<th>MAIN</th>
<th>ROUGH OPENING</th>
<th>TYPE</th>
<th>MODEL</th>
<th>MATERIAL</th>
<th>FINISH</th>
<th>HEAD</th>
<th>JAM</th>
<th>SILL</th>
<th>HEAD HEIGHT</th>
<th>COMMENTS</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>30&quot; x 84&quot;</td>
<td>30&quot; x 84&quot;</td>
<td>Fiberglass</td>
<td>210005</td>
<td>3/4&quot;</td>
<td>7&quot;</td>
<td>8&quot;</td>
<td>9&quot;</td>
<td>60&quot;</td>
<td>Optional</td>
<td>Replacement</td>
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### Room Finish Schedule

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<th>ROOM NAME</th>
<th>DOOR</th>
<th>BASE</th>
<th>FLOOR</th>
<th>CEILING</th>
<th>DEPTH HEIGHT</th>
<th>COMMENTS</th>
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<tbody>
<tr>
<td>1</td>
<td>Bathroom 1</td>
<td>Paint</td>
<td>Paint</td>
<td>Paint</td>
<td>Paint</td>
<td>Paint</td>
<td>Paint</td>
</tr>
<tr>
<td>2</td>
<td>Kitchen 1</td>
<td>Paint</td>
<td>Paint</td>
<td>Paint</td>
<td>Paint</td>
<td>Paint</td>
<td>Paint</td>
</tr>
<tr>
<td>3</td>
<td>Bedroom 1</td>
<td>Paint</td>
<td>Paint</td>
<td>Paint</td>
<td>Paint</td>
<td>Paint</td>
<td>Paint</td>
</tr>
</tbody>
</table>
FIRST FLOOR ELECTRICAL FIRE ALARM

SOLAR CALPOLY

FIRE DETECTION AND ALARM

AUGUST 17, 2015

F-101
### GENERAL NOTES (Mechanical G & H)

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>3 in. x 20 ft. ABS Sch. 40 Plain-End Foamcore Pipe 6 Nibco 57737 3” straight ABS Mounting Bracket</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>2 in. x 2 ft. Plastic ABS Pipe 8 Nibco 1202 2” straight ABS 36</td>
</tr>
<tr>
<td>3</td>
<td>2</td>
<td>2 in. ABS DWV Hub x Hub x Hub Sanitary Tee 5 Nibco 02753H 2” x 2” x 2” sanitary tee</td>
</tr>
<tr>
<td>4</td>
<td>1</td>
<td>1 in. x 6 ft. Tubolit Self-Seal Foam Pipe Insulation 4 Armacell OES11838 1” PEX 13</td>
</tr>
</tbody>
</table>

### GENERAL NOTES (Mechanical Plumbing)

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>3 in. Inside diam. Steel Water Tank 200 gallon, galvanized</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>3 in. Inside diam. Steel Water Tank 200 gallon, galvanized</td>
</tr>
<tr>
<td>3</td>
<td>1</td>
<td>4” Inside diam. Steel Water Tank 200 gallon, galvanized</td>
</tr>
<tr>
<td>4</td>
<td>1</td>
<td>3 in. Outside diam. Steel Water Tank 200 gallon, galvanized</td>
</tr>
<tr>
<td>5</td>
<td>1</td>
<td>Cast Iron Pipe Fitting 2” x 1 1/2” x 1 1/2” Hub x Hub x Hub Sanitary Tee 5 Nibco 02753H 2” x 2” x 2” sanitary tee</td>
</tr>
<tr>
<td>6</td>
<td>1</td>
<td>3 in. ABS DWV Hub x Hub x Hub Sanitary Tee 5 Nibco 02753H 2” x 2” x 2” sanitary tee</td>
</tr>
<tr>
<td>7</td>
<td>1</td>
<td>Cast Iron Pipe Fitting 2” x 1 1/2” x 1 1/2” Hub x Hub x Hub Sanitary Tee 5 Nibco 02753H 2” x 2” x 2” sanitary tee</td>
</tr>
<tr>
<td>8</td>
<td>1</td>
<td>Cast Iron Pipe Fitting 2” x 1 1/2” x 1 1/2” Hub x Hub x Hub Sanitary Tee 5 Nibco 02753H 2” x 2” x 2” sanitary tee</td>
</tr>
</tbody>
</table>

### Notes
- All dimensions are in inches and feet.
- All materials listed are standard for their respective applications in mechanical systems.
- Consult project specifications for detailed installation instructions.
- Refer to general notes for additional requirements and precautions.

---

**Revision Details**
- **Number:** 38
- **Description:** 2 in. ABS DWV Hub x Hub x Hub Sanitary Tee 5 Nibco 02753H 2” x 2” x 2” sanitary tee
- **Date:** AUGUST 17, 2015

---

**SCHEDULES**
- **Project:** CALIFORNIA STATE UNIVERSITY, SAN LUIS OBISPO
- **Phase:** Solar Decathlon
- **Consultant:** ABBOTT & FROST & PETERSON, PC
- **Contractor:** CALIFORNIA POLYMER INC
- **Manager:** solar@calpoly.edu
- **Engineer:** philip@calpoly.edu
- **Architect:** philip@calpoly.edu
- **Supervisor:** solar@calpoly.edu

---

**Project:** CALIFORNIA STATE UNIVERSITY, SAN LUIS OBISPO
**Phase:** Solar Decathlon
**Consultant:** ABBOTT & FROST & PETERSON, PC
**Contractor:** CALIFORNIA POLYMER INC
**Manager:** solar@calpoly.edu
**Engineer:** philip@calpoly.edu
**Architect:** philip@calpoly.edu
**Supervisor:** solar@calpoly.edu

---

**Revision Schedule**
- **Number:** 4
- **Description:** 2 in. ABS DWV Hub x Hub x Hub Sanitary Tee 5 Nibco 02753H 2” x 2” x 2” sanitary tee
- **Date:** AUGUST 17, 2015
BLACK WATER: 1 1/2" ABS

GREY WATER: 1 1/2" ABS WASTE LINE INTERMEDIATE WASTE PUMP/TANK COMBOS

DOMESTIC WATER 1" COLD WATER PEX LINE TO

1" COLD WATER PEX LINE TO PEX hose CLAMPS TO SURFACE JOINTS
TOP OF PLANTER BOX 1 1/2" ABOVE DECK LEVEL

TOP OF PLANTER BOX 2" ABOVE DECK LEVEL

TOP OF PLANTER BOX 3 1/2" ABOVE DECK LEVEL

2" GUTTER LAYER

16" DRAIN LAYER

12" PEAT LAYER

CONSTRUCTED WETLANDS SECTION A-A

A

A

2" ABS PIPING ALLOWS WATER TO OVERFLOW INTO LOWER PLANTER BOXES. WATER LEVEL IN LOWER PLANTER BOXES IS LIMITED TO A MAXIMUM HEIGHT OF WETTING DECK LEVEL.

INLET AT INTENDED HEIGHT OF TOP BOX

OVERFLOW INTO LOWER PLANTER BOXES

A

A

1/2" PEAT LAYER UPPER PLANTER BOX TO PROVIDE ADDITIONAL WATER STORAGE.
DOMESTIC COLD WATER SITE PLAN

1/2" PEX CW SUPPLY BRANCH OFF

1/2" PEX CW SUPPLY BRANCH OFF

1/2" PEX CW SUPPLY OR CONNECTION TEE

SOLAR CAL POLY @ GMAIL.COM

LAVATORY. CAPPED DURING

AND 3/4" LINE UP TO STORAGE TANK

1/2" PEX CW SUPPLY BRANCH OFF

1/2" PEX CW SUPPLY UP TO FIRE SUPPRESSION SYSTEM

1/2" PEX CW SUPPLY UP TO KITCHEN SINK

SOLAR DECATHLON 2016

DOMESTIC COLD WATER SUPPLY

500 GALLON LOW PROFILE WATER SUPPLY TANK

PUBLIC DOMAIN

DRAWN BY:

DOMESTIC COLD WATER SUPPLY

SUBFLOOR 3/4" PEX CW SUPPLY LINE

UP TO KITCHEN SINK

1/2" PEX CW SUPPLY BRANCH OFF

UNIVERSITY

SOLAR WATER EXCHANGE SYSTEM

3/4" CW SUPPLY LINE CONNECT INTO STORAGE TANK
1. All ductwork is round.

6" return line from bedroom

14"x8" supply diffuser

Contact: SOLARCALPOLY@GMAIL.COM

Website: WWW.SOLARDECATHLON.GOV
ELECTRICAL SYMBOLS AND NOTES

1. ALL ELECTRICAL WORK PERFORMED UNDER THIS CONTRACT SHALL COMPLY WITH THE ENFORCED VERSION OF THE NATIONAL ELECTRIC CODE.

2. REFER TO ARCHITECTURAL AND MECHANICAL DRAWINGS, CEILING PLANS, ELEVATORS, AND DETAILS FOR LOCATION OF ALL CEILING ELEMENTS AND OTHER WALL MOUNTED DEVICES NOT INCLUDED IN ELECTRICAL DRAWINGS.

3. EXTERIOR RECEPTACLES SHALL BE A GFCI TYPE DEVICE IN A WEATHER PROOF COVER.

4. THE ELECTRICAL SYSTEM SHOWN ON THE DRAWINGS IS ONLY GRAPHICAL AND NECESSARY CIRCUITRY SHALL BE PROVIDED TO MAKE THE SYSTEM COMPLETE AND IN SAFE WORKING ORDER, AND SHALL BE COORDINATED WITH OTHER TRADES.

5. POWER RECEPTACLES WITHIN 6 FEET DISTANCE FROM ANY PLUMBING FIXTURE AND/OR SINK SHALL BE EQUipped WITH GFCI.

6. ELECTRICAL SYSTEM SHOWN ON THE DRAWINGS IS ONLY GRAPHICAL AND NECESSARY CIRCUITRY SHALL BE PROVIDED TO MAKE THE SYSTEM COMPLETE AND IN SAFE WORKING ORDER, AND SHALL BE COORDINATED WITH OTHER TRADES.

7. ALL STRUCTURAL ELEMENTS OF WALLS OR CEILINGS SHALL BE SURVEYED AND SEALED TO COMPLY WITH BUILDING CODE REQUIREMENTS.

8. SEE FIG. 103 FOR SMOKE DETECTOR AND FIRE ALARM PLAN.

9. PROPERLY MAINTAIN IN ACCORDANCE WITH NATIONAL ELECTRIC CODE.

10. THE BUILDING SHALL BE WIRING AS TO ALLOW FOR MODULAR CONSTRUCTION AND TRANSPORTATION. JUNCTION BOXES SHALL SERVE AS THE CONNECTION BETWEEN WIRING DISCONNECTED BETWEEN MODULES.

11. STRUCTURAL INTEGRATED PANELS IN CEILINGS AND WALLS WILL REQUIRE WIRE CHARMS AND WIRE WILL BE FED THROUGH THE FLOOR UP INTO THE WIRE CHAMPS.

12. MOUNTING HEIGHTS FOR RECEPTACLES SHALL BE 12" AFGH. MOUNTING HEIGHTS FOR SWITCHES SHALL BE 48" AFGH. UNLESS NOTED OTHERWISE.

13. PRIOR TO ROUGH-IN, CONTRACTOR SHALL VERIFY ALL MOUNTING HEIGHTS, FIXTURE LOCATIONS, APPLIANCE SPECIFICATIONS, EXACT LOCATION OF FIXTURES, SPLASHDOOR AND WINDOW TREATMENTS TYP/ WITH OWNER. ALL DEVICES SHALL BE PLACED TO AVOID CONFLICTS WITH SPLASHDOORS, WINDOW TREATMENTS.

14. COORDINATE AND INSTALL ALL ELECTRICAL DEVICES INSTALLED IN CABINETRY. ALL HOLES AND CHAMPS BY OTHERS.

15. ALL GENERAL BUILDING WIRING CONDUCTORS TO BE THIN THIN.

16. ALL CONDUCTORS REGARDLESS OF SIZE WILL BE ORDERED AND PREFORMED TO THE HOUSEHOLDерт HOMER. THE FOLLOWING COLOR CODE WILL BE ADDED TO. TO BE USED FOR PHASE A, RED/PHASE B, WHITE FOR NEUTRAL, BLUE OR PURPLE FOR SWITCH LIGHT/TRAVELLERS, GREEN FOR GROUND.

ELECTRICAL SYMBOLS AND NOTES

E-001 ELECTRICAL SYMBOLS AND NOTES
E-011 ELECTRICAL DISTRIBUTION PLAN
E-012 PV WIRING PLAN
E-013 LIGHTING PLAN
E-014 ELECTRICAL ELEVATIONS
E-001 SITE PLAN
E-001 ONE-LINE DIAGRAM
E-002 THREE-LINE DIAGRAM
E-003 SCHEDULES
E-004 ENERGY LOAD CALCULATIONS

GENERAL NOTES (ELECTRICAL)

1. ALL ELECTRICAL WORK PERFORMED UNDER THIS CONTRACT SHALL COMPLY WITH THE ENFORCED VERSION OF THE NATIONAL ELECTRIC CODE.

2. REFER TO ARCHITECTURAL AND MECHANICAL DRAWINGS, CEILING PLANTS, ELEVATORS, AND DETAILS FOR LOCATION OF ALL CEILING ELEMENTS AND OTHER WALL MOUNTED DEVICES NOT INCLUDED IN ELECTRICAL DRAWINGS.

3. EXTERIOR RECEPTACLES SHALL BE A GFCI TYPE DEVICE IN A WEATHER PROOF COVER.

4. THE ELECTRICAL SYSTEM SHOWN ON THE DRAWINGS IS ONLY GRAPHICAL AND NECESSARY CIRCUITRY SHALL BE PROVIDED TO MAKE THE SYSTEM COMPLETE AND IN SAFE WORKING ORDER, AND SHALL BE COORDINATED WITH OTHER TRADES.

5. POWER RECEPTACLES WITHIN 6 FEET DISTANCE FROM ANY PLUMBING FIXTURE AND/OR SINK SHALL BE EQUipped WITH GFCI.

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9. PROPERLY MAINTAIN IN ACCORDANCE WITH NATIONAL ELECTRIC CODE.

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14. COORDINATE AND INSTALL ALL ELECTRICAL DEVICES INSTALLED IN CABINETRY. ALL HOLES AND CHAMPS BY OTHERS.

15. ALL GENERAL BUILDING WIRING CONDUCTORS TO BE THIN THIN.

16. ALL CONDUCTORS REGARDLESS OF SIZE WILL BE ORDERED AND PREFORMED TO THE HOUSEHOLDерт HOMER. THE FOLLOWING COLOR CODE WILL BE ADDED TO. TO BE USED FOR PHASE A, RED/PHASE B, WHITE FOR NEUTRAL, BLUE OR PURPLE FOR SWITCH LIGHT/TRAVELLERS, GREEN FOR GROUND.
GENERAL SHEET NOTES (DISTRIBUTION PLAN):
ALL BRANCH CIRCUITS WITH RECEPTACLES RUNNING AT 120V, 15 A.
ALL BRANCH CIRCUITS WITH RECEPTACLES RUNNING AT 240V, 20 A.
OVERCURRENT PROTECTION IMPLEMENTED BY HAVING THE FIRST OUTLET IN THE BRANCH CIRCUIT BE AN AFCI RECEPTACLE (NEC 210.12A).
INSTALL ALL PV INVERTERS AS PER MANUFACTURER'S SPECIFICATIONS.
ALL JUNCTION BOXES FOR CONSTRUCTIVITY OF MODULES SHALL BE 14" X 8.25" X 12"
APPROXIMATELY 1.63" DEEP BY 4.5" HIGH BY 10.44" WIDE.
INVERTERS IN THE MECHANICAL ROOM ARE STACKED ON TOP OF EACH OTHER.

RECEPTACLES

<table>
<thead>
<tr>
<th>Receptacle Type</th>
<th>AFCI</th>
<th>GFCI</th>
<th>Grounding Resistance</th>
<th>Peak Load</th>
<th>Short Circuit Protection</th>
<th>Overload Protection</th>
<th>15° AFCI</th>
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AUGUST 17, 2015
E-101
GENERAL NOTES (PV WIRING)

1. SUNPOWER E20/435 SOLAR PANELS ARE LOCATED IN A CONFIGURATION OF 3 ROWS AND 1 COLUMN. 
2. SUNPREM MAXIMA-G3R 350W SOLAR PANELS ARE CANTILEVER MOUNTED IN A CONFIGURATION OF 2 STRINGS OF 7 PANELS.
3. BOTH THE CANOPY AND ROOFTOP INVERTERS ARE LOCATED IN MECHANICAL ROOM (SEE SHEET E-101).
4. SEE SHEET E-604 FOR LOAD CALCULATIONS OF PV SYSTEM.

STC CHARACTERISTICS

- PANEL EFFICIENCY: 20.7%
- PEAK POWER: 350 W
- RATED CURRENT: 9.1 A
- OPEN CIRCUIT VOLTAGE: 51.7 V
- PANEL EFFICIENCY (20% BACKSIDE IRRADIATION): 21.6%
- PEAK POWER (20% BACKSIDE IRRADIATION): 420 W

- 65.20" LONG
- 38.74" WIDE
- 0.87" THICK
GENERAL NOTES (LIGHTING PLAN)

1. EXTERIOR LIGHTING OUTLETS INCLUDED AS DICTATED BY NEC 210.7(A)(3)(b).

2. ALL LIGHTING FIXTURES WILL BE CONTROLLED BY THE MANUAL LUTRON PROGRAMMABLE REMOTE AND REMOTE-CONTROLLABLE (IN WIRELESS COMMUNICATION WITH LUTRON CONTROL SYSTEM).

3. ALL LIGHTING FIXTURES WITH WIRING NOT SHOWN SHALL BE POWERED BY INSTALLED WALL RECEPTACLES. FIXTURE TAGS CORRESPOND TO LUMINAIRE SCHEDULE ON SHEET E-603.
GENERAL NOTES (SITE PLAN)

1. ALL CABLE ROUTING SHALL AVOID TOUR ROUTES AND OTHER WALKWAYS.
2. UTILITY PANEL AND GRID INTERCONNECTION TO BE DETERMINED BY ORGANIZER.
3. AC AND DC DISCONNECTS ARE INTEGRATED INTO INVERTER ENCLOSURE.
ARRAY STRING #1
5 SUNPOWER E20 435W MODULES

ARRAY STRING #2
5 SUNPOWER E20 435W MODULES

ARRAY STRING #3
7 SUNPREME MAXIMA GXB 350W MODULES

ARRAY STRING #4
7 SUNPREME MAXIMA GXB 350W MODULES

10 AWG TYP. TYPE PV WIRE
10 AWG TYP. TYPE PV WIRE

WEATHERPROOF JUNCTION BOX

WEATHERPROOF JUNCTION BOX

10 AWG TYP. TYPE PV WIRE
10 AWG TYP. TYPE PV WIRE

6 AWG BARE COPPER CONDUCTOR

6 AWG BARE COPPER CONDUCTOR

(4) 10 AWG TYPE THHN-2 WIRE
(2) 10 AWG BARE COPPER CONDUCTOR IN 1" EMT CONDUIT

(3) 10 AWG TYPE THHN-2 WIRE
(2) 10 AWG BARE COPPER CONDUCTOR IN 1" EMT CONDUIT

NEUTRAL BUSBAR
GROUND BUSBAR

SMA SUNNY BOY 4000-TL-US
SMA SUNNY BOY 5000-TL-US

(1) 6 AWG COPPER BONDING JUMPER
GROUNDED ELECTRODE PROVIDED BY ORGANIZERS
### Panel Schedule

<table>
<thead>
<tr>
<th>Breaker Load</th>
<th>A (kVA)</th>
<th>B (kVA)</th>
<th>C (kVA)</th>
<th>Circuit</th>
<th>Comments</th>
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<tr>
<td>WATER HEATER</td>
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<td>1</td>
<td>1</td>
<td>DISHWASHER 1</td>
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<td>REFRIGERATOR</td>
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<td>37 PV INVERTER</td>
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<td>MICROWAVE OVEN</td>
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<td>38 PV INVERTER</td>
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### PV System Schedule

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<tr>
<th>Panel</th>
<th>Short Array Description</th>
<th>Panel Open Circuit Voltage (V)</th>
<th>String Open Circuit Voltage (V)</th>
<th>String Open Circuit Voltage (E)</th>
<th>Inverter</th>
<th>Max Inverter DC Input Voltage (V)</th>
<th>Max Inverter AC Output Current (A)</th>
<th>Comments</th>
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<tr>
<td>350W</td>
<td>350W, CANOPY</td>
<td>380.2</td>
<td>351.9</td>
<td>361.9</td>
<td>SMA SUNNY BOY 5000TL-US</td>
<td>500V DC</td>
<td>50A-2P</td>
<td>MEASURING STC RATING WITHOUT BACKSIDE IRRADIANCE.</td>
</tr>
</tbody>
</table>

**Revision Schedule**

- **Revision Number:**
- **Revision Description:**
- **Revision Date:**

**Schedules**

**Team Name:**
**Address:**
**Contact:**
**Consultants:**
**NONE:** PROJECT IS PUBLIC DOMAIN

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**Published By:**
**Date:**

**U.S. DEPARTMENT OF ENERGY**
**SOLAR DECATHLON 2015**
**WWW.SOLARDECATHLON.GOV**
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**INTERIOR LIGHTING**

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<tr>
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<th>DESCRIPTION</th>
<th>MANUFACTURER</th>
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<th>MODEL NUMBER</th>
<th>FINISH</th>
<th>LAMP</th>
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<tbody>
<tr>
<td>1 ALT</td>
<td>CATSILL SERIES® SOLID STATE (BSKULEX)</td>
<td>W. LIGHTING</td>
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<td>WHITE</td>
<td>LED SOURCE 9W X 1.5W 3000K</td>
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<td>2 ALT</td>
<td>EDGE LIGHT - DEPENDENT ON LIGHTING BUDGET</td>
<td>V. LIGHTING</td>
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<td>LED SOURCE 9W X 1.5W 3000K</td>
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<td>3 ALT</td>
<td>STELLETO 32&quot; LED PENDANT</td>
<td>CAPO LIGHTING</td>
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<td>200410002000</td>
<td>SATIN BLACK</td>
<td>LED 3000K, 2800K LEDS</td>
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<td>4 ALT</td>
<td>EDGE LIGHTING</td>
<td>V. LIGHTING</td>
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<td>5 ALT</td>
<td>CANOPY LIGHT</td>
<td>P. LIGHTING</td>
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<td>UNDER CABINET KITCHEN LIGHTING</td>
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<td>12 ALT</td>
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<td>LED 3000K, 2800K LEDS</td>
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**TOTAL**

- **INTERIOR LIGHTING**
- **EXTERIOR LIGHTING**

---

**LUMINAIRE SCHEDULE**

AUGUST 17, 2015
<table>
<thead>
<tr>
<th>LOAD DESCRIPTION</th>
<th>VOLTAGE (V)</th>
<th>RATE (W)</th>
<th>TOTAL (VA)</th>
<th>NOTES</th>
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<td>21041</td>
<td>92 A</td>
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<td>LIGHTING AND GENERAL USE</td>
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<td>COOKTOP</td>
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### TELECOMMUNICATIONS SCHEDULE

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<th>NO.</th>
<th>CAT #</th>
<th>ITEM DESCRIPTION</th>
<th>LOCATION</th>
<th>MANUFACTURER</th>
<th>VENDOR</th>
<th>CONNECTOR TYPE</th>
<th>MOUNTING HEIGHT</th>
<th>ENCLOSURE TYPE</th>
<th>FINISH</th>
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<td>1</td>
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<td>ASUS RT-AC66U WIRELESS ROUTER</td>
<td>MECHANICAL ROOM</td>
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<td>newegg.com</td>
<td>CAT 6E BRIC</td>
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<td>ALLEN-Bradley 1762-V5 DATA SWITCH</td>
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<td>monoprice.com</td>
<td>N/A</td>
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### CONTROL SCHEDULE

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<td>Humidity - temperature sensor</td>
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<td>sparkfun.com</td>
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<td>Keypad mega switch</td>
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<td>ARDISIO</td>
<td>sparkfun.com</td>
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WATER REMOVAL

NY City Tech

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WATER REMOVAL

NY City Tech

GENERAL SHEET NOTES

ALL VEHICLES ARRIVE FROM THE SOUTH THROUGH THE 20' STREET LANE
ALL VEHICLES DEPART TO THE NORTH THROUGH THE 20' STREET LANE.

1 U-HAUL TRUCK ARRIVES, LANDSCAPE ELEMENTS ARE LOADED ONTO TRUCK, U-HAUL DEPARTS

LANDSCAPE AND PV ARRAY ARE PACKED INTO U-HAUL TRUCK, U-HAUL TRUCK DEPARTS

SERVICE VEHICLE FOR PROFESSIONAL TO DISCONNECT ELECTRICAL

DAY 22

DAY 23

DAY 24

DAY 25

DAY 26

DAY 27

DAY 28

DAY 29

DAY 30
CONSTRUCTION EQUIPMENT

(2) FLAT BED TRAILERS
(2) REGULAR HEIGHT TRAILERS
(1) 120T CRANE
(1) U-HAUL TRUCK
(1) FORKLIFT