GENERAL NOTES:
1. THE FINISHED SQUARE FOOTAGE OF EACH LEVEL IS THE SUM OF FINISHED AREAS ON THAT LEVEL MEASURED AT FLOOR LEVEL TO THE EXTERIOR FINISHED SURFACE OF THE OUTSIDE WALLS. (ANSI Z765-2003).
2. AREA FOR THE NEST HOUSE IS MEASURED USING EXTERIOR WALLS.
SPACE ALLOCATION PLAN

ROOM LEGEND
- MECH
- PRIVATE
- PUBLIC

103 SF KITCHEN
101 57 SF BATH
105 67 SF MECH
M1

350 SF LIVING RM
100 117 SF MASTER BEDROOM
104 27 SF CLOSET
104A 95 SF BEDROOM 2
103 69 SF OFFICE

ROOM LEGEND
- MECH
- PRIVATE
- PUBLIC

ENTRY 100A
SECRETARY 100B

SPACE ALLOCATION PLAN

G-104
BEDROOM 2: 95 SF
BEDROOM 1: 116 SF
LIVING AND DINING ROOM: 346 SF
MASTER BEDROOM: 116 SF
OFFICE: 69 SF
KITCHEN: 103 SF
MECHANICAL ROOM: 64 SF
BATHROOM: 57 SF
OUTDOOR PATIO: 2' x 4'

MISSOURI S&T NEST HOME FLOOR PLAN

1/4" = 1'-0"
**GENERAL STRUCTURAL NOTES**

1. **PROFESSIONAL ENGINEER**: A professional engineer, licensed by the governing state in which the project is located, and hired by the contractor, shall design all shoring and sheeting and shall submit shop drawings and calculations for A/E approval as conforming to the project specifications, including the International Residential Code (IRC) 2012 as modified by the governing locality.

2. **FOUNDATION SYSTEM**: Is designed to bear on the paved surface having a minimum safe bearing capacity of 6000 psf. Foundation elements are designed to be completely removed after construction is complete. Soil checks shall be shown on a maximum of 10% of the foundation layout.

3. **PLYWOOD SHEATHING**: To floor beams. Leave 1/16" space at all plywood panel end joints and 1/8" space at all panel edge joints.

4. **WALL SHEATHING**: 1/2" thick, 32/16 span rating.

5. **ROOF SHEATHING**: 5/8" thick, 48/24 span rating.

6. **STRUCTURAL STEEL CONNECTIONS**: Shall be standard AISC framed beam connections for composite members. Provide connections based on 1.5 x reaction from AISC uniform load table. (U.N.O. on plans.)

7. **MOMENT CONNECTIONS**: Shall be type 1 (full rigidity), designed for the connected element's yield moment and bearing capacity.

8. **FIELD CONDITIONS**: Shall be noted otherwise. Do not alter field conditions without PRIOR APPROVAL.

**UNIT LOADS AND FACTORS**

<table>
<thead>
<tr>
<th>LOAD TYPE</th>
<th>LOAD CONCENTRATION</th>
<th>LOAD LOCATION</th>
<th>LOAD DIRECTION</th>
<th>LOAD</th>
<th>UNIT LOAD</th>
<th>UNIT FACTOR</th>
<th>UNIT LOAD X FACTOR</th>
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<td>TYP. FLOOR</td>
<td>50</td>
<td>EDGE LOAD</td>
<td>20&quot;</td>
<td>EDGE SPACING</td>
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<td>96 MW</td>
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<td>81.6 MW</td>
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FLOOR FRAMING PLAN

• STL. W6X15
• STL. 10" C-CHANNEL, SPACED @ 16" O.C.

GENERAL NOTES:
1. REFERENCE SHEET S-501 FOR CONNECTION DETAILS
2. KEY PLAN GROUPS 1-7 INDICATE FLOOR FRAMING SECTIONS. THESE ARE TO BE DISSASSEMBLED AT TIME OF SHIPMENT. SECTIONS ARE TO BE RECONNECTED BY WAY OF BACK TO BACK, BOLTED CHANNELS. REFER TO D1/S-501.

LEGEND
• INDICATES SCREW JACK SUPPORT BASE
• INDICATES POINT OF ORIGIN FOR DIMENSIONING
• CONTAINER LAYOUTS

MARK DATE DESCRIPTION
1 1/21/15 INITIAL RELEASE
2 2/03/15 DIMENSIONS
#8 SELF TAPPING SCREWS
5 1/2" STL. STUD
SIDING
SDS25112 SCREWS
EA. CORNER
1/4"  HEX BOLT GRADE 5
EA. CORNER
3/4" PLWOOD SUBFLOOR
5 1/2" STL. TRACK
2X16 TREATED LUMBER
ADJUSTABLE POST 7.5 TON MAX LOAD CAPACITY
BACK TO BACK 10" DEEP, 2.855" FLANGE, 0.105" STL. C-CHANNEL
1/4" STL. SCREWS EA. CORNER
ADJUSTABLE POST 7.5 TON MAX LOAD CAPACITY
1/4"  HEX BOLT GRADE 5 EA. CORNER
3/4" PLYWOOD SUBFLOOR
BACK TO BACK 10" DEEP, 2.855" FLANGE, 0.105" STL. C-CHANNEL
0' - 3 3/8"
0' - 2"
1/2" A325 BOLT HOT ROLLED W6X15
SHIPPING CONTAINER
GENERAL NOTES:
1. ALL DIMENSIONS SHOWN ARE TO CORRUGATED STL. CUTOUT, UNLESS OTHERWISE INDICATED
2. ALL STRUCTURAL STEEL IS TO BE SPOT WELDED TO THE CORRUGATED SIDING
3. R.O. DIMENSIONS (ROUGH OPENING) ALLOW FOR 1/4" GAP ALL SIDES @ FINISHED WINDOW WIDTH & HEIGHT
4. F.O. DIMENSIONS (FINISHED OPENING)

1 WELD CONTAINER DOORS SHUT; LEAVE EXTERIOR HANDLE; REMOVE INTERIOR LOCKING MECHANISM
2 REINFORCE WINDOW TYPE "A" CUT-OUTS W/ L4X3X1/2 STRUCTURAL STEEL; FRAME-IN WINDOW WITHIN STEEL USING WOOD 2X6
3 FRAME CUT-OUT W/ HSS3X3X3/8 STRUCTURAL STEEL FROM CONTAINER BOTTOM SIDE RAIL TO B.O. CEILING
4 CUT-OUTS FRAMED W/ L4X3X1/2 STRUCTURAL STEEL FROM CONTAINER BOTTOM SIDE RAIL TO T.O. CUT-OUT
5 CONTAINER CUT SECTION REINFORCED W/ HSS3X3X3/8 STRUCTURAL STEEL VERTICALLY BETWEEN BOTTOM & CONTAINER TOP SIDE RAILS; HORIZONTALLY BETWEEN CONTAINER BOTTOM & TOP SIDE RAILS
GENERAL NOTES:

1. CORRUGATED SIDING STL. L4X3X1/2

4. STEEL E-504

S-504 KEY NOTES

4' - 4 1/2" CUT-OUTS FRAMED W/ L4X3X1/2 STRUCTURAL STEEL FROM CONTAINER BOTTOM SIDE RAIL TO T.O. CUT-OUT

4 REINFORCE CUT-OUT OF TYPE "D" WINDOW USING STEEL L4X3X1/2; FRAME-IN MULLED WINDOW WITHIN STEEL USING WOOD 2X6

5 CONTAINER CUT SECTION REINFORCED W/ HSS3X3X3/8 STRUCTURAL STEEL VERTICALLY BETWEEN BOTTOM & CONTAINER TOP SIDE RAILS; HORIZONTALLY BETWEEN CONTAINER BOTTOM & TOP SIDE RAILS

7' - 9 3/8" CONTAINER DOOR REMOVED & REPLACED W/ WOOD 2X4 STUDS BOLTED TO CONTAINER FRAME; WINDOWS FRAMED WITHIN WOOD STUDS

EXISTING BOTTOM SIDE RAIL

EXISTING TOP SIDE RAIL (2X)

EXISTING BOTTOM END RAIL (2X) BOLTED ON INTERIOR

EXTERIOR FURRING STRIP

(2X) D 2X6

2 1/2" CARRIAGE BOLT @ 12" O.C.

HSS3X3X3/8
EAST STUD WALL ELEVATION

WEST STUD WALL ELEVATION

EXTERIOR E&W KEY PLAN
EXISTING TOP SIDE RAIL
EXISTING BOTTOM FLOOR
WOOD 2X4 BUILT UP SECTIONS
20 GA. STL. 5 1/2" TRACK SPOT WELDED TO CORRUGATED SIDING
EXISTING CORRUGATED ROOF
20 GA. 5 1/2" STL. JOISTS SPACED AT 2' O.C.
2x6 ROOF JOIST NOTCHED INTO 2X4 SECTIONS; REFER TO A2/S-506 FOR LAYOUT; 5.5" COTTON BATT (DENIM) INSULATION R-21
1x8 FASCIA BOARD
3/4" PLYWOOD
THERMOPLASTIC POLYLEFIN (TPO) SINGLE-PLY ROOFING MEMBRANE
2x4 BOARD
2X6 NAILER
1X8 FASCIA BOARD
2X4 BUILT UP SECTION
2x6 NAILER
3/8" STL. CARRIAGE BOLTS, 2' O.C.
3/8" STL. BOLTS, 2' O.C.
1":8' SLOPE
MGI-CMI FASTENER CONNECTING ROOF JOISTS TO BOX HEADER WITH #8 TAP SCREWS
20 GA. 5 1/2" STL. STUD WALL
8" DEEP, 3.825: FLANGE, 0.075: STL. C-CHANNEL
12" DEEP, 3.75" FLANGE, 0.075: STL. C-CHANNEL BOXED HEADER
#8 TAP SCREWS @ 24" O.C.
10" COTTON BATT (DENIM) INSULATION R-38
STANDING SEAM SHEET METAL ROOFING

1/2" = 1'-0"
1 1/2" = 1'-0"
1/2"
1 1/2"
1/2"
FLOOR PLAN

- Entry
- Office
- Living RM
- Master Bedroom
- Bedroom 2
- Closet
- Kitchen
- Bath
- Mech
- Secretary

SHEET TITLE
LOT NUMBER:
DRAWN BY:
CHECKED BY:
COPYRIGHT:
CLIENT
ADDRESS:
CONTACT:

U.S. DEPARTMENT OF ENERGY
SOLAR DECATHLON 2015
WWW.SOLARDECATHLON.ORG

TEAM NAME:
ADDRESS:
CONTACT:

MISSOURI S&T SOLAR HOUSE TEAM
1051 NORTH BISHOP AVENUE
ROLLA, MO 65401-11410

US DOE SOLAR DECATHLON 2015
MARY PULEO
SDELC@MST.EDU

8/17/2015 5:15:37 AM

A-101
STANDING SEAM SHEET METAL ROOFING
THERMOPLASTIC-POLYOLEFIN

REFER TO E-103 FOR DETAILS

THERMOPLASTIC-POLYOLEFIN

SOLAR THERMAL PANELS
GENERAL NOTES:

1. 4" EDGE PROTECTION WILL BE ATTACHED ALONG RAMPS.
2. HANDRAILS ARE TO EXTEND 12" INTO THE TOP AND BOTTOM LANDINGS.
WALL TYPE - W1

WALL TYPE - W2

WALL TYPE - W3

WALL TYPE - W4

WALL TYPE - W5

WALL TYPE - W6
WALL TYPE - W7

WALL TYPE - W8

WALL TYPE - W9
CONTAINER EXTERIOR CLADDING, TERMINATE SHORT OF EXISTING CORRUGATED MATERIAL TRANSITION; REFER TO C1/A-304 FOR INSTALLATION DETAILS.

(2X) 2X6 LUMBER, 12" WIDTHS @ 24" O.C.

EXISTING CONTAINER SIDE RAIL

CONTAINER FOUNDATION FRAMING

(4X) 1/2" A325 BOLT

96" Z CLIP BRACKET SET, ATTACHED PER MFG'S INSTRUCTIONS

1X8 PREFINISHED PVC BOARD

DISCARDED CORRUGATED MATERIAL PANEL, FIELD CUT TO CORRECT HEIGHT

1X2 PREFINISHED PVC BOARD

ALUMINUM CHANNEL?
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<th>Type</th>
<th>Count</th>
<th>Width</th>
<th>Height</th>
<th>Bil Height</th>
<th>Comments</th>
<th>Type</th>
<th>Mfg Model</th>
<th>Finish</th>
<th>Glazing</th>
<th>Egress</th>
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<tbody>
<tr>
<td>A</td>
<td>5</td>
<td>2' - 0&quot;</td>
<td>3' - 6&quot;</td>
<td>3' - 4&quot;</td>
<td>CASEMENT - ROTO CRANK</td>
<td>24&quot; x 42&quot;</td>
<td>QUAKER H600 SERIES</td>
<td>EXTRUDED ALUMINUM, DARK BRONZE</td>
<td>ENERGY MAX</td>
<td>LOW-E</td>
</tr>
<tr>
<td>B</td>
<td>3</td>
<td>2' - 4&quot;</td>
<td>4' - 0&quot;</td>
<td>3' - 0&quot;</td>
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<td>LOW-E</td>
</tr>
<tr>
<td>C</td>
<td>2</td>
<td>4' - 0&quot;</td>
<td>2' - 0&quot;</td>
<td>AWNING - ROTO CRANK</td>
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<td>NO</td>
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<td>3' - 0&quot;</td>
<td>4' - 0&quot;</td>
<td>3' - 0&quot;</td>
<td>AWNING - PUSH OUT</td>
<td>Mulled Window</td>
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<td>LOW-E</td>
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<td>E</td>
<td>1</td>
<td>3' - 6 1/2&quot;</td>
<td>3' - 2 3/4&quot;</td>
<td>PICTURE</td>
<td>48&quot; Diameter</td>
<td>QUAKER K300 SERIES</td>
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<td>G</td>
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<td>2' - 0&quot;</td>
<td>0' - 9 7/16&quot;</td>
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<td>102</td>
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<td>7'-0&quot;</td>
<td>SLIDING BARN</td>
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<tr>
<td>103</td>
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<td>7'-0&quot;</td>
<td>SLIDING BARN</td>
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<td>7'-0&quot;</td>
<td>SINGLE-FLUSH</td>
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DOOR TYPE "A"  
DOOR TYPE "B"  
DOOR TYPE "C"  
DOOR TYPE "D"  
DOOR TYPE "E"  
DOOR TYPE "F"
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<td>1</td>
<td>60W - 120V</td>
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<td>1'x4' (1 Lamp) - 120V</td>
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<td>Downlight - Under Cabinet</td>
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<td>120V 4FT</td>
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<tr>
<td>Vanity Wall Fixture</td>
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<td>Wall Downlight</td>
<td>2</td>
<td>12 W</td>
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<td>Ceiling Fan</td>
<td>3</td>
<td>100 watt Halogen</td>
<td>100 W</td>
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<td>Pendant - Small</td>
<td>3</td>
<td>12 W</td>
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<td>Downlight - Recessed Can</td>
<td>11</td>
<td>6&quot; LED - 120V</td>
<td>9 W</td>
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A2 - LIVING ROOM
MULTIPURPOSE FIRE SAFETY SYSTEM

The Uponor Residential Fire Safety System is a residential fire protection system installed in combination with the cold side of the domestic potable water system. Only licensed contractors trained by Uponor can install this system.

WHAT TO DO IF CHANGES ARE REQUIRED

If any features or obstructions require the addition or deletion of sprinkler heads, or significant relocation of sprinkler heads, contact the Uponor Design Department to determine if observed changes require a redesign (888.594.7726).

GENERAL NOTES

Sprinkler Head Demand:

- RC-RES-18: Flat Concealed Pendent Quick Response
  - K=4.9, 162°F, 7/16" Orifice, Maximum Spacing 18'x18'
  - Sprinkler head demand: 18 gpm @ 34.5 psi
- RC-RES-16: Flat Concealed Pendent Quick Response
  - K=4.9, 162°F, 7/16" Orifice, Maximum Spacing 16'x16'
  - Sprinkler head demand: 13 gpm @ 7.04 psi

MOST HYDRAULICALLY REMOTE HEADS

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<tr>
<th>HEAD #</th>
<th>GPM</th>
<th>PRESSURE REQUIRED AT STREET</th>
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<td>H.2</td>
<td>18</td>
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<td>34.53</td>
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<tr>
<td>2 HEAD</td>
<td>H.3 &amp; H.7</td>
<td>27.33</td>
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</table>

F-101 KEY NOTES

- LF Signal: SPRINKLER HEAD, NFR-RES Flat Concealed Pendent Quick Response
  - K=4.9, 162°F, 7/16" Orifice, Maximum Spacing 18'x18'
  - Sprinkler head demand: 18 gpm @ 13.5 psi
- LF Signal: SPRINKLER HEAD, NFR-RES Flat Concealed Pendent Quick Response
  - K=4.9, 162°F, 7/16" Orifice, Maximum Spacing 18'x18'
  - Sprinkler head demand: 13 gpm @ 7.04 psi
SMOKE DETECTOR PLAN

GENERAL NOTES

ACCORDING TO THE NATIONAL FIRE PROTECTION ASSOCIATION THERE SHOULD BE ONE SMOKE ALARM IN EVERY BEDROOM AND ONE OUTSIDE EVERY BEDROOM.
WELL CASING AND/OR TANK TO PROVIDE 270 GALS OF STORAGE. WELL PUMP TO PROVIDE MINIMUM 27.333 GPM @ 41.46 PSI AT MANIFOLD S.1

**PUMP:**
- PRESSURE REQUIRED: 27psi
- GPM REQUIRED: 45gpm

**1" FULL PORT BALL VALVE**

**ELEV:+10'**

**1" AquaPEX TO SYSTEM**

**6' OF 1" AquaPEX**

**270 GALLON STORAGE TANK**
PLUMBING PLAN

Pipe Color Fill Legend

- DOMESTIC COLD WATER
- DOMESTIC HOT WATER

GENERAL NOTES:
1. ALL PEX BEFORE MANIFOLDS ARE 3/4".
2. ALL PEX AFTER MANIFOLDS ARE 1/2".

PLUMBING PLAN

1/4" = 1'-0"
SANITARY PLUMBING

GENERAL NOTES:
1. STUB PIPE 3" BELOW FLOOR; SEE DETAIL A2 ON SHEET P-501
2. PIPE BELOW CONTAINER SHALL BE DETACHABLE FOR SHIPPING

A DRAIN FOR AHU CONDENSATE RAN TO FLOOR DRAIN; 3/8" PVC
B FLOOR DRAIN FOR AHU CONDESATE
 GREYWATER ONE LINE
4. AIR HANDLING UNIT
   Equipment shall be installed to manufacturer’s recommendations; provide 1" cleanable or disposable filters
   tempered outside air

   All duct in plenum shall be insulated with 1 1/2" FSK duct wrap

   Motor operated damper

2. DOMESTIC COLD WATER
   Wheel
   All PEX outside of wall shall be insulated; excluding greywater

   All low voltage conductors shall be 18 gage minimum

3. MIN DIA
   350
   Single
   Model
   2

5. ENERGY RECOVERY VENTILATION
   Fan schedule

6. PVC DRAIN PIPES BELOW CONTAINER SHALL BE SUPPORTED WITH PLUMBERS STRAP EVERY 4'; SEE DETAIL A1 ON SHEET P-501
   Sanitary sewer
   Along vertical runs, install supports at the base of each floor and mid-story guide.

   Expansion tank

   Install thermostats at 48" AFF

   All large equipment in mechanical room shall be fastened to wall for seismic; see detail A1 on M-501

   Greywater drain
   When installing tubing runs, thermal expansion calls for an extra 1/8" to 3/16" of longitudinal clearance per foot of run. Do not let tubing dip excessively between supports. Do not rigidly anchor PEX tubing with supports to allow tubing to expand and contract.

   Allow adequate clearance between PEX tubing and the structure. Backfills of buildings allow expansion due to thermal expansion.
   Refrigration line(s) per manufacturer’s recommendation; minimum of 3/8" ARAFLEX insulation

   Support PEX tubing with plastic or metal tubing supports designed for use with plastic tubing

   Bend within 6" of a ProPEX connection require a tube talon or bend support (for 3/8" and 1/2" upon AQUAPEX tubing)

   When installing tubing runs, thermal expansion calls for an extra 1/8" to 3/16" of longitudinal clearance per foot of run. Do not let tubing dip excessively between supports. Do not rigidly anchor PEX tubing with supports to allow tubing to expand and contract.
GENERAL NOTES:

1. REFER TO DETAIL A2 ON SHEET M-501 FOR FASTENING DUCT TO JOISTS

M-101 KEY NOTES

1. WINDOWS WILL BE REINFORCED WITH L3X3X3/8 AND FRAMED WITH WOOD 2X6

A. PENTRATES ROOF TO EXHAUST TO ATMOSPHERE

B. SUPPLYSIDE OF ERV TIES INTO RETURN DUCT

C. 10" X 8" SUPPLY DUCT
GENERAL NOTES:
1. REFER TO M-901 FOR SPECIFIC PIPE ROUTES
2. HEAT PUMP MUST BE MIN. OF 1' 6" FROM WALL

A2 REFRIGERATION PLAN
 GENERAL NOTES
1. SOLAR THERMAL PANEL MUST BE INSTALLED DIRECTLY OVER STORAGE TANK IN
   MECHANICAL ROOM
2. RACKS FOR SOLAR THERMAL PANELS WILL BE PROVIDED; SEE M5.01 FOR DETAIL
3. SOLAR THERMAL PANELS SHALL BE MOUNTED AT 32 DEGREES
4. PV PANEL MUST BE MOUNTED AT SAME ANGLE AS SOLAR THERMAL PANELS
MECHANICAL ROOM SECTION

MECHANICAL ROOM SECTION 2

MECHANICAL ROOM INTERIOR WALL PIPE ROUTES
DUCTWORK CUTOUT
M. BEDROOM CONTAINER

DUCTWORK CUTOUT
BEDROOM & OFFICE CONTAINER

DUCTWORK CUTOUT
KITCHEN & MECHANICAL CONTAINER

DUCTWORK CONTAINER
CUTOUT KEY PLAN

THE NEST HOME

M-302
SCHEMATIC FLOW DIAGRAM WITH CONTROL SET-POINTS

OA  OUTSIDE AIR
EXH A EXHAUST AIR
ERV  ENERGY RECOVERY VENTILATION
TOA  TEMPERED OUTSIDE AIR
AHU  AIR HANDLING UNIT
RA  RETURN AIR
HP  HEAT PUMP
HVAC  HEATING VENTILATION AND AIR CONDITIONING

SCHEMATIC FLOW LEGEND
0 1/2'
1'
2'
GENERAL NOTES:

1. 3/4" MIN. PEX (POTABLE RATED) MAY BE USED WHEN MIN. 18" AWAY FROM TANK AND MIN. 36" FROM HOT OUTLET OF COLLECTOR

2. USE 3/4" MIN. "SILBRADE" TUBING FOR COLLECTOR HOT OUTLET MANIFOLD

3. INSULATE ALL LINES, USE "VENTURECLAD" OR EQUAL WHERE EXPOSED TO SUN FOR U.V. PROTECTION

P1: DC POWERED PUMP (INTEGRATED CHECK VALVE)
ETK-1: EXPANSION TANK
5. **ALL RECEPTACLES AND SWITCHES WILL HAVE A MINIMUM RATING OF 20 AMPS AND WILL BE DEDICATED, NOT DAISY CHAINED TOGETHER.**

6. **GROUNDING AND BONDING SHALL MEET OR EXCEED THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE.**

7. **PVC CONDUIT SHALL BE A SCHEDULE 40 MINIMUM WEIGHT UNLESS OTHERWISE SPECIFIED.**

8. **INDOOR RACEWAY SHALL BE EMT, RIGID METAL CONDUIT, OR APPROVED SURFACE MOUNTING MATERIAL.**

9. **NEUTRAL CONDUCTORS WILL BE A MINIMUM OF FULL SIZE. DESIGNER WILL EVALUATE THE NEED FOR OVERSIZED NEUTRAL CONDUCTORS.**

10. **GROUNDING SYSTEMS SHOULD BE INSTALLED TO PROVIDE A RESISTANCE OF FIVE (5) OHMS OR LESS.**

11. **THE PREFERRED MOUNTING HEIGHTS, ABOVE FINISHED FLOOR, ARE 48" FOR SWITCHES, 54" FOR RECEPTACLES, 18" FOR WALL LAMPS, 24" FOR WET/DRY WALL LAMPS, 22" FOR를 이를 22.5mm 스위치, 24" FOR LIGHT OUTDOOR SCONCES, 30" FOR LIGHT OUTDOOR WALL LAMPS, 54" FOR WALL FIXTURES, AND 30" FOR DATA PORTS.**

12. **EMT ELBOWS FOR RIGID METAL CONDUIT, 3 INCHES AND LARGER, SHALL BE EITHER PLASTIC MOLDED OR STEEL.**

13. **BOLT-IN BREAKERS SHALL BE USED. PLUG-IN BREAKERS ARE NOT ALLOWED. SQUARE D I-200 A CIRCUIT BREAKER WITH INTERNAL INTERCHANGEABLE TRIPS.**

14. **TWO AND THREE POLE CIRCUIT BREAKERS SHALL HAVE AN INTERNAL COMMON TRIP AND INTERCHANGEABLE TRIPS.**

15. **MINIMUM CONDUCTOR SIZE IS #12 AWG.**

16. **SURE-LOCK CIRCUIT BREAKERS ARE TO BE USED IN LIEU OF GFI BREAKERS, UNLESS APPROVED BY THE PROJECT MANAGER.**

17. **GROUNDING ELECTRODE CONDUCTORS SHALL BE INSULATED STRANDED COPPER CABLE/CONDUCTOR.**

18. **ELECTRIC PANELS AND ELECTRICAL DEVICES SHALL BE INSTALLED ON UNISTRUCT IN ELECTRICAL ENCLOSURES.**

19. **GROUNDING CONDUCTOR SHOULD BE INSTALLED TO THE GROUNDING ELECTRODE TO PROVIDE A RESISTANCE OF FIVE (5) OHMS OR LESS.**

20. **GROUNDING ELECTRODE CONDUCTORS SHALL BE CONNECTED TO THE GROUND FAULT INTERRUPTING CAPABILITY BREAKERS, UNLESS APPROVED BY THE PROJECT MANAGER.**

21. **TWO AND THREE POLE CIRCUIT BREAKERS SHALL HAVE AN INTERNAL COMMON TRIP AND INTERCHANGEABLE TRIPS.**

22. **GROUNDING CONDUCTOR SHALL BE INSTALLED TO PROVIDE A RESISTANCE OF FIVE (5) OHMS OR LESS.**

23. **THE PREFERRED MOUNTING HEIGHTS, ABOVE FINISHED FLOOR, ARE 48" FOR SWITCHES, 54" FOR RECEPTACLES, 18" FOR WALL LAMPS, 24" FOR WET/DRY WALL LAMPS, 22" FOR LIGHT OUTDOOR SCONCES, 24" FOR LIGHT OUTDOOR WALL LAMPS, 54" FOR WALL FIXTURES, AND 30" FOR DATA PORTS.**

24. **SURE-LOCK CIRCUIT BREAKERS ARE TO BE USED IN LIEU OF GFI BREAKERS, UNLESS APPROVED BY THE PROJECT MANAGER.**

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27. **GROUNDING CONDUCTOR SHOULD BE INSTALLED TO THE GROUND FAULT INTERRUPTING CAPABILITY BREAKERS, UNLESS APPROVED BY THE PROJECT MANAGER.**

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31. **SURE-LOCK CIRCUIT BREAKERS ARE TO BE USED IN LIEU OF GFI BREAKERS, UNLESS APPROVED BY THE PROJECT MANAGER.**

32. **MINIMUM CONDUCTOR SIZE IS #12 AWG.**

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34. **GROUNDING CONDUCTOR SHOULD BE INSTALLED TO THE GROUND FAULT INTERRUPTING CAPABILITY BREAKERS, UNLESS APPROVED BY THE PROJECT MANAGER.**

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38. **SURE-LOCK CIRCUIT BREAKERS ARE TO BE USED IN LIEU OF GFI BREAKERS, UNLESS APPROVED BY THE PROJECT MANAGER.**

39. **MINIMUM CONDUCTOR SIZE IS #12 AWG.**

40. **SURE-LOCK CIRCUIT BREAKERS ARE TO BE USED IN LIEU OF GFI BREAKERS, UNLESS APPROVED BY THE PROJECT MANAGER.**

41. **GROUNDING CONDUCTOR SHOULD BE INSTALLED TO THE GROUND FAULT INTERRUPTING CAPABILITY BREAKERS, UNLESS APPROVED BY THE PROJECT MANAGER.**

42. **TWO AND THREE POLE CIRCUIT BREAKERS SHALL HAVE AN INTERNAL COMMON TRIP AND INTERCHANGEABLE TRIPS.**

43. **GROUNDING CONDUCTOR SHALL BE INSTALLED TO PROVIDE A RESISTANCE OF FIVE (5) OHMS OR LESS.**

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45. **SURE-LOCK CIRCUIT BREAKERS ARE TO BE USED IN LIEU OF GFI BREAKERS, UNLESS APPROVED BY THE PROJECT MANAGER.**

46. **MINIMUM CONDUCTOR SIZE IS #12 AWG.**
E-101 KEYNOTES

A. PROVIDE 2 GANG JUNCTION BOX ABOVE FINISH CEILING FOR RANGE HOOD.

B. RECEPTACLE FOR THE MICROWAVE SHALL BE RECESSED IN THE CASEWORK; SEE ARCHITECTURAL PLANS FOR EXACT LOCATION.

C. PROVIDE JUNCTION BOX FOR POWERING LEFT CONTAINER, AND FOR DISCONNECTING FOR SHIPPING.

D. PROVIDE JUNCTION BOX FOR POWERING MASTER BDRM. CONTAINER, AND FOR DISCONNECTING FOR SHIPPING.

E. ALL JUNCTION BOXES FOR RECEPTACLES SHALL BE 2 GANG BOX WITH MUD RING.

GENERAL NOTES:

1. PROVIDE AFCI CIRCUIT BREAKERS IN LP - 1A PER NEC 210.12(A)

2. AC DISCONNECT AND THE METER WILL BE ON THE OPPOSITE SIDE OF THE WALL OF THE LP - 1A AS SHOWN ON THE DRAWINGS.

3. REFER TO SHEET E-103 FOR PANELS POWER CONNECTION DETAILS.
LIGHTING SCHEDULE

<table>
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<tr>
<th>Type</th>
<th>Mark</th>
<th>Family</th>
<th>Location</th>
<th>Count</th>
<th>Type</th>
<th>Wattage</th>
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<td>1</td>
<td>60W - 120V</td>
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<tr>
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<td>1'x4' (1 Lamp) - 120V</td>
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<td>120V 4FT 8 WD Vanity_Wall_Fixture_3361</td>
<td>1 Vanity Wall Fixture 16 WE Wall_Downlight_1546</td>
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<tr>
<td>Ceiling Fan</td>
<td>3</td>
<td>100 watt Halogen</td>
<td>100 WH Pendant_-_Small_2911</td>
<td>3 Pendant</td>
<td>12 WL Downlight - Recessed Can</td>
<td>11 6&quot; LED - 120V</td>
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GENERAL NOTE:
1. ALL GROUNDING WIRING SHALL BE 10 AWG THHN GRN
2. STANDARD COPPER WIRE IS TO BE USED UNLESS SPECIFIED
### LIGHTING SCHEDULE

<table>
<thead>
<tr>
<th>Type</th>
<th>Mark</th>
<th>Family</th>
<th>Count</th>
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<td>60 W</td>
<td>120V</td>
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<tr>
<td>Ceiling Light</td>
<td>Linear Box</td>
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<td>Downlight</td>
<td>Recessed Can</td>
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<td>9 W</td>
<td>120V</td>
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### Schedules

#### Author Notes
- **Total Est. Demand Current**: 40 A
- **Total Conn. Current**: 40 A
- **Total Est. Demand**: 9600 VA
- **Total Conn. Load**: 9600 VA

#### Power Table

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<td>10 VA</td>
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</tbody>
</table>

#### Receptacle Spaces

- **Space 5**: 20 A, 1260 VA, 90 VA
- **Space 20**: 20 A, 180 VA, 20 A
- **Space 28**: 20 A, 90 VA, 900 VA
- **Space 26**: 20 A, 720 VA, 20 A
- **Space 24**: 20 A, 120 VA, 20 A
- **Space 22**: 20 A, 180 VA, 20 A
- **Space 18**: 20 A, 500 VA, 20 A
- **Space 16**: 20 A, 27 VA, 20 A

#### Circuit Details

- **Branch Panel**: LP-1A
- **Mains Type**: 120/240V
- **Mains Rating**: 225 A
- **Supply From**: Phases: 1
- **Enclosure**: MCB Rating: 100 A
- **Mounting**: Flashed
- **Volts**: 120V Delta
- **A.I.C. Rating**: 22000
- **Location**: Space 9

#### CKT Circuit Description

<table>
<thead>
<tr>
<th>Circuit Description</th>
<th>Trip</th>
<th>Poles</th>
<th>A</th>
<th>B</th>
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<td>Ceiling Light - Linear Box</td>
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<td>1</td>
<td>1</td>
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<tr>
<td>Downlight - Under Cabinet</td>
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#### Notes

- **Schedules**: E-602
STEP 1: POSITION THE CRANE IN THE NORTHWEST CORNER OF OUR SITE, EXTEND OUTRIGGERS SO THAT THE CRANE IS READY TO USE.

STEP 2: PLACE SCREW JACKS ON THE SITE, DRIVE FIRST DELIVERY TRUCK INTO UNLOADING ZONE.

STEP 3: UNLOAD 3 I-BEAM FRAMES AND PLACE THEM DIRECTLY ONTO THE SCREW JACKS, MOVE THE FIRST DELIVERY TRUCK AWAY FROM THE SITE.

STEP 4: DRIVE SECOND DELIVERY TRUCK INTO UNLOADING ZONE, UNLOAD MASTER BEDROOM CONTAINER AND ITS ROOF, C-CHANNEL FLOOR FRAMES AND DECKS FROM TRUCK.


STEP 6: DRIVE THE THIRD DELIVERY TRUCK INTO THE UNLOADING ZONE, UNLOAD KITCHEN/BATHROOM/MECH ROOM CONTAINER FROM TRUCK.

STEP 7: PLACE KITCHEN/BATHROOM/MECH ROOM CONTAINER ON I-BEAM FRAME, MOVE THE THIRD DELIVERY TRUCK FROM THE UNLOADING ZONE.

STEP 8: MOVE THE FOURTH DELIVERY TRUCK INTO THE UNLOADING ZONE, UNLOAD BEDROOM/OFFICE CONTAINER FROM TRUCK.

STEP 9: PLACE BEDROOM/OFFICE CONTAINER DIRECTLY ON THE I-BEAM FRAME, DRIVE THE FOURTH DELIVERY TRUCK OUT OF THE UNLOADING ZONE.

STEP 10: MOVE THE FIFTH DELIVERY TRUCK INTO THE UNLOADING ZONE.

STEP 11: UNLOAD THE MAIN ROOF SECTION FROM THE FIFTH DELIVERY TRUCK.

STEP 12: UNLOAD EXTERIOR WALLS FROM FIFTH DELIVERY TRUCK.

STEP 13: PLACE EXTERIOR WALLS ON HOUSE, MOVE THE FIFTH TRUCK OUT OF THE UNLOADING ZONE.

STEP 14: PLACE EACH SECTION OF THE MAIN ROOF ON THE HOUSE.

1" = 50'-0"
SECTION 1: MOVE THE CRANE INTO PLACE IN THE NORTHWEST CORNER OF OUR LOT, EXTEND OUTRIGGERS SO THE CRANE IS READY TO USE

SECTION 2: REMOVE THE MAIN ROOF SECTIONS AND PLACE THEM TO THE SIDE TO LOAD AT A LATER TIME

SECTION 3: REMOVE EXTERIOR WALLS AND PLACE THEM TO THE SIDE TO BE LOADED LATER

SECTION 4: MOVE THE FIRST DELIVERY TRUCK INTO THE LOADING ZONE AND LOAD THE MAIN ROOF SECTIONS AND THE EXTERIOR WALLS ONTO SAID TRUCK

SECTION 5: MOVE THE FIRST DELIVERY TRUCK OUT OF THE LOADING ZONE

SECTION 6: MOVE THE SECOND DELIVERY TRUCK INTO THE LOADING ZONE

SECTION 7: DETACH THE BEDROOM/OFFICE CONTAINER FROM THE I-BEAM FRAME AND LOAD IT ONTO THE SECOND DELIVERY TRUCK

SECTION 8: MOVE THE SECOND DELIVERY TRUCK FROM THE LOADING ZONE AND REPLACE IT WITH THE THIRD DELIVERY TRUCK

SECTION 9: LOAD THE KITCHEN CONTAINER ONTO THE THIRD DELIVERY TRUCK THEN MOVE THE THIRD DELIVERY TRUCK OUT OF THE LOADING ZONE

SECTION 10: MOVE THE FOURTH DELIVERY TRUCK INTO THE LOADING ZONE AND REMOVE THE FLOOR AND DECK C-CHANNELS FROM THEIR PLACE


SECTION 12: MOVE THE FIFTH DELIVERY TRUCK INTO THE LOADING ZONE

SECTION 13: LOAD THE I-BEAM FRAMES ONTO THE FIFTH DELIVERY TRUCK

SECTION 14: PICK UP THE SCREW JACKS AND MOVE THE FIFTH DELIVERY TRUCK OUT OF THE LOADING ZONE

N.T.S.