

EMPOWERHOUSE

Parsons The New School for Design
Milano The New School for Management and Urban Policy
Stevens Institute of Technology

in partnership with
Habitat for Humanity, Washington DC
Government of DC
and the Deanwood community

TEAM NAME

Parsons NS Stevens

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CLIENT
US Department of Energy
Solar Decathlon 2011
www.solardecathlon.gov



MARK	DATE	DESCRIPTION
1	NOV. 23, 2010	DESIGN DEVELOPMENT
2	MARCH 22, 2011	CONSTRUCTION DOCUMENTS
3	MAY 3, 2011	FINAL CONSTRUCTION DOCUMENTS
4	AUGUST 11, 2011	AS-BUILT CONSTRUCTION DOCUMENTS

LOT NUMBER

204

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SHEET TITLE

DRAWING LIST AND PROJECT INFORMATION

G-001

SYMBOLS

	KEY NOTE TAG		ELECTRICAL FIXTURE TAG
	SECTION HEAD		FLOOR TAG
	INTERIOR ELEVATION TAG		ROOM NAME
	CEILING TAG		ROOM TAG NUMBER
	CASEWORK TAG		CALLOUT HEAD
	DETAIL ITEM		REVISION TAG
	LIGHTING FIXTURE		WALL TAG
	DOOR TAG		STAIR TAG
	EQUIPMENT TAG		SPOT ELEVATION
			WINDOW TAG
			CENTERLINE

DRAWING LIST

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G-001 DRAWING LIST AND PROJECT INFORMATION	A-573 PV MODULE DETAILS
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G-101 SOLAR ENVELOPE COMPLIANCE	A-602 WALL TYPES
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G-211 PUBLIC EXHIBIT STRATEGY	F-102 FIRE PROTECTION PLAN - LOFT
G-901 EXTERIOR SHADING DIAGRAMS	F-901 FIRE PROTECTION ISOMETRIC
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L-101 LANDSCAPE PLAN & PLANT SCHEDULE	P-102 DOMESTIC DRAINAGE PLAN - FL 01
L-401 RAIN GARDEN WATER CAPTURE	P-103 PLUMBING PLAN - ROOF
L-402 WATER TANK HOUSING	P-601 PLUMBING SCHEDULES
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A-554 RAILING DETAILS	

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C1 RENDERED VIEW FROM STREET IN DEANWOOD, WASHINGTON D.C.
Not to Scale

MISSION

Empowerhouse is a community-based approach to building affordable, solar-powered housing that addresses all aspects of domestic life.

To accomplish this mission, we have assembled a multi-disciplinary team that is establishing strategic community partnerships, and developing technological innovations that will serve as a catalyst for developing affordable and energy-efficient housing on a broad scale. We are examining the policy implications of this effort in order to recommend viable solutions to lawmakers and to advocate for change.

TARGET CLIENT

Empowerhouse Collaborative has the unique opportunity to have the speculative client be the actual home-owner after the competition. Working with Habitat for Humanity of Washington, D.C. and D.C. Department of Housing and Community Development, The Parsons NS Stevens team has designed Empowerhouse for a family to inhabit in the Deanwood neighborhood of Ward 7 in DC. The family will be evaluated based on Habitat for Humanities three main criteria:

- * Need: The family to have experienced overcrowding, dangerous surroundings, environment, heating, electrical, plumbing, structural deficiencies and/or severe rent burden.
- * Ability to Pay: The family must satisfy minimum income requirements that may vary from project to project.
- * Willingness to Partner: The family must earn hours of "sweat equity" toward the construction of their home; attend homeowner education workshops; and, demonstrate a willingness to maintain the home and property after purchase.

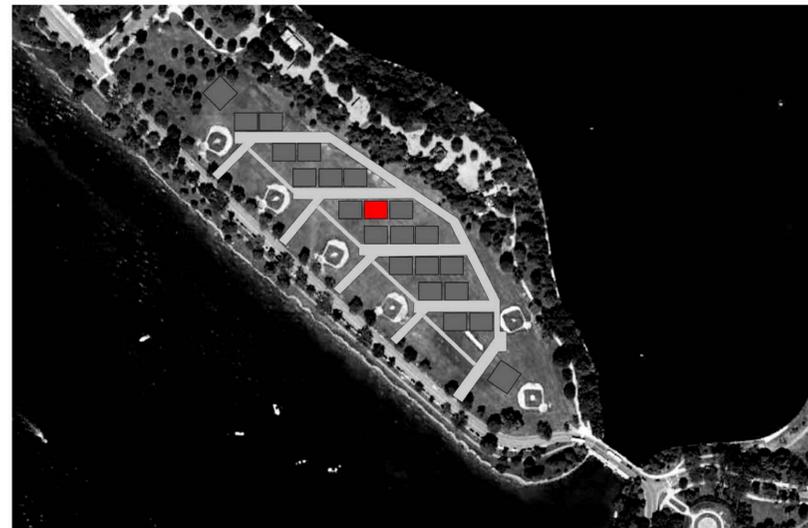
Working within the Habitat for Humanity selection criteria, Empowerhouse provides the family with a safe, comfortable, and self-sustaining new home.

Conversations with community stakeholders and residents have informed us of the aspects of the home they find most important. The front porch is a crucial extension of the home into the neighborhood. Additionally, a large kitchen for family cooking is an essential focal point for the home.

The final location of the home in Deanwood is on the south side of Gault Place with the north side of the house facing the street, and the south side facing Marvin Gaye Park. The lot, too narrow to accommodate more than a limited number of south facing windows, drove the investigation in creating a passive house. This site challenges led to an effort to bring light deep into the center of the home through a light loft above.

Empowerhouse will be constructed of prefabricated panels that minimize labor and overall construction costs. Habitat for Humanity of Washington, D.C. will likely utilize this method of construction in many of their projects in the future. While this specific home is designed for one family in Deanwood, the design model may be adaptable to other family types and sizes and sites across Washington, D.C.. This home will be the model for an easily replicable energy efficient house that will strengthen the Washington, D.C. neighborhood of Deanwood's existing efforts to create a more sustainable and resilient community. We aim to bring our knowledge of energy efficient building technologies to Habitat's model of providing "simple, decent housing."

Most importantly, Empowerhouse will provide the client with an ability to produce all of their own energy, reduce their drinking water use, and grow their own food. These benefits will not only save the client significant capital throughout the life of the home, but will empower the homeowner with the means for creating a sustainable life. The initial investment the homeowners will make to live in this house will be repaid within the first two years through the long term cost savings in energy bills, as well as provide the enjoyment of participating in an affordable and sustainable lifestyle.



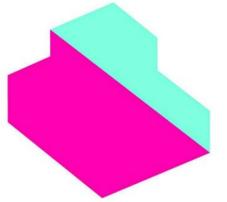
A1 COMPETITION SITE
Not to Scale



A3 COMPETITION & FINAL SITE IN WASHINGTON D.C.
Not to Scale



A5 FINAL SITE IN DEANWOOD, WASHINGTON, D.C.
Not to Scale



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SHEET TITLE

TARGET MARKET AND PROJECT LOCATION

G-002



ARCHITECTURAL NARRATIVE

Our architectural design stems from strategies which create a comfortable living environment focused on a whole-life approach while augmenting Habitat for Humanity's current building practices with high-performance energy efficient technologies.

Designed to be moved to a specific urban lot in the Deanwood Neighborhood of Ward 7 in Washington, D.C. after the Solar Decathlon Competition, Empowerhouse is elongated on the north/south axis with living spaces in the southern end of the home, and a front entrance facing the street on the north. With the site orientation driving the overall form, the home is divided longitudinally into three parts. A service "wet" module, containing the mechanical equipment, bathroom, and kitchen, anchors the house on the east, while the living "dry" module, containing the living area, office, light-loft, and bedroom, is open and airy. The west wall of the home, accentuated by the thick envelope required to meet passive house standards, wraps the house to become both floor, roof and porch as it extends beyond the front and rear of the house to embrace the neighborhood beyond.

The circulation through Empowerhouse is simple and direct. Upon entering the home on the north, you see straight through a central corridor to the rear entrance and backyard. This visual connection pulls the outdoors into the interior of the home. Once inside, the bedroom and bathroom flank the corridor. The home then opens up to a spacious living area, kitchen, office and light-loft above. At the rear, the house opens to a convenient and comfortable porch for outdoor dining.

Our lighting strategy combines natural daylight, highly-efficient and cost effective supplementary light sources, and occupancy and daylight sensors to ensure high-quality light for a variety of activities throughout the home. General lighting is provided by low-cost, high-efficiency linear fluorescents and LED light sources that reflect off of the vertical and horizontal surfaces of the house, using the architectural form as the luminaire. Focused activities are provided for with additional task lighting. These two systems are independent, however, complement each other to create a rich and varied living environment. To increase the amount of natural light in the living space, a light-loft pops up in the middle of the home. An office space is embedded in the stair that leads up to this experiential light-loft.

Highly-efficient active systems, together with naturally lit, open living spaces, create a compact, livable home, wrapped in a thick insulating envelope.

ENGINEERING NARRATIVE

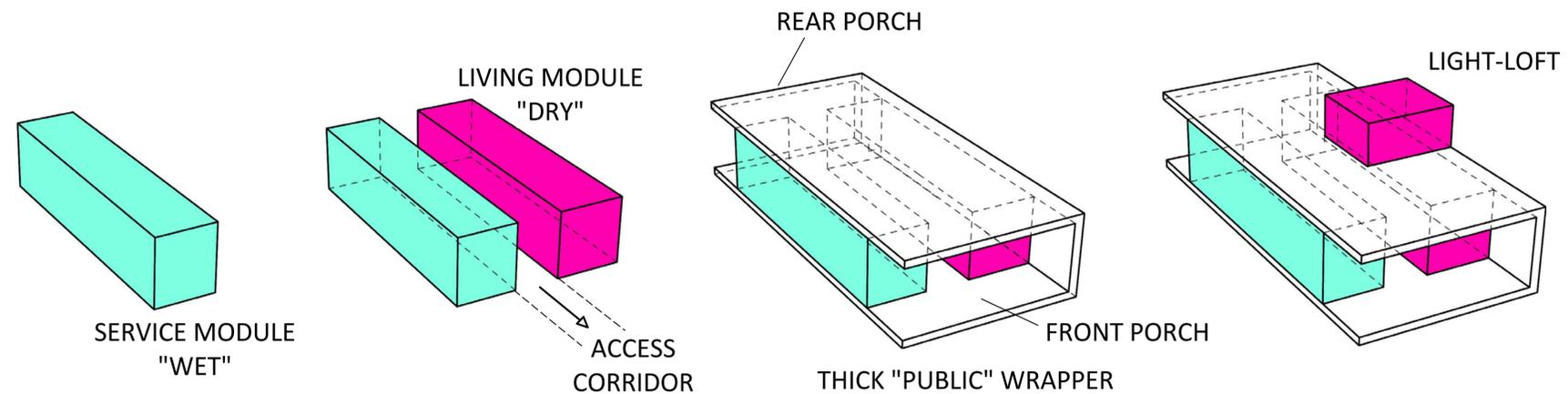
Energy efficiency is a primary design driver for Empowerhouse. Not only will optimal performance be important for success in the measured contests of the Solar Decathlon competition; it will be crucial for providing the Deanwood home-owners with a sustainable and affordable home. By minimizing the need for mechanical systems to heat and cool the home, the team was able to design a cost-effective photovoltaic array to help alleviate the end-user's energy costs in the future.

Empowerhouse has been engineered for peak heating and cooling periods in Washington, D.C.. To meet the efficiency goals the team has set, the house incorporates Passive House principles for energy usage and system design. Passive Houses are super-insulated, air-tight buildings. In the winter, they minimize a home's heating load by maximizing solar gains (through windows), and internal gains (from people, electronics, and appliances). Conversely, the home's cooling load is minimized through the use of strategic glazing orientation and shading devices. The airtight nature of passive houses provide the opportunity to save energy by recovering heat from exhaust air (by using a heat or energy recovery ventilator) before expelling the air outside. Additionally, the home's mechanical systems have been designed for reliability to help mitigate maintenance costs.

Lighting fixtures and controls are optimized for low-energy consumption. High-efficiency linear fluorescents and LED's are utilized for light sources. Additionally, Wireless switches, and occupancy and daylight sensors maximize efficiency.

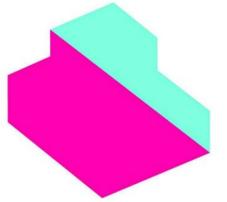
C1 RENDERED VIEW OF NORTH ELEVATION AT COMPETITION, WASHINGTON D.C.

Not to Scale



A2 CONCEPT DIAGRAM WITH NOTATIONS

Not to Scale



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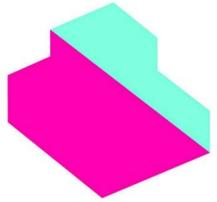
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SHEET TITLE

DESIGN INTENT

G-003



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BUILDING CODE ANALYSIS AND EGRESS PLANS

G-004

GENERAL BUILDING CODE NOTES:

- ALL WORK ON THE PROJECT WILL CONFORM TO ALL RELEVANT CODES AND BE PERFORMED BY LICENSED CONTRACTORS IN THE APPROPRIATE JURISDICTIONS REQUIRED BY LOCALE.
- THE WORK DESCRIBED IN THESE DRAWINGS SHALL COMPLY WITH THE INTERNATIONAL RESIDENTIAL CODE 2009.
- R303.1 ALL HABITABLE ROOMS SHALL HAVE AN AGGREGATE GLAZING AREA OF NOT LESS THAN 8 PERCENT OF THE FLOOR AREA OF SUCH ROOMS. NATURAL VENTILATION SHALL BE THROUGH WINDOWS, DOORS, LOUVERS OR OTHER APPROVED OPENINGS TO THE OUTDOOR AIR. SUCH OPENINGS SHALL BE PROVIDED WITH READY ACCESS OR SHALL OTHERWISE BE READILY CONTROLLABLE BY THE BUILDING OCCUPANTS.
- R304.3 BATHROOMS, WATER CLOSET COMPARTMENTS AND OTHER SIMILAR ROOMS SHALL BE PROVIDED WITH AGGREGATE GLAZING AREA IN WINDOWS OF NOT LESS THAN 3 SQUARE FEET (0.279 M2). ONE-HALF OF WHICH MUST BE OPENABLE. Exception: The glazed areas shall not be required where artificial light and a mechanical ventilation system are provided.
- R304.1 EVERY DWELLING UNIT SHALL HAVE AT LEAST ONE HABITABLE ROOM THAT SHALL HAVE NOT LESS THAN 120 SQUARE FEET (11 M2) OF GROSS FLOOR AREA.
- R304.2 OTHER HABITABLE ROOMS SHALL HAVE A FLOOR AREA OF NOT LESS THAN 70 SQUARE FEET (6.5 M2).
- R304.3 HABITABLE ROOMS SHALL NOT BE LESS THAN 7 FEET (2134 MM) IN ANY HORIZONTAL DIMENSION.
- R305.1 HABITABLE ROOMS SHALL HAVE A CEILING HEIGHT OF NOT LESS THAN 7 FEET 6 INCHES (2286 MM) AND HALLWAYS, CORRIDORS, BATHROOMS, TOILET ROOMS, AND LAUNDRY ROOMS SHALL HAVE A CEILING HEIGHT OF NOT LESS THAN 7 FEET (2134 MM). THE REQUIRED HEIGHT SHALL BE MEASURED FROM THE FINISH FLOOR TO THE LOWEST PROJECTION FROM THE CEILING.

- R310.1.1 ALL EMERGENCY ESCAPE AND RESCUE OPENINGS SHALL HAVE A MINIMUM NET CLEAR OPENING OF 5.7 SQUARE FEET (0.530 M2).
- R310.1.2 THE MINIMUM NET CLEAR OPENING HEIGHT OF AN EMERGENCY ESCAPE AND RESCUE OPENING SHALL BE 24 INCHES (610 MM).
- R310.1.3 THE MINIMUM NET CLEAR OPENING WIDTH OF AN EMERGENCY ESCAPE AND RESCUE OPENING SHALL BE 20 INCHES (508 MM).
- R311.3 THE MINIMUM WIDTH OF A HALLWAY SHALL BE NOT LESS THAN 3 FEET (914 MM).
- R703.1 EXTERIOR WALLS SHALL PROVIDE THE BUILDING WITH A WEATHER-RESISTANT EXTERIOR WALL ENVELOPE. THE EXTERIOR WALL ENVELOPE SHALL INCLUDE FLASHING AS DESCRIBED IN SECTION 703.8. THE EXTERIOR WALL ENVELOPE SHALL BE DESIGNED AND CONSTRUCTED IN SUCH A MANNER AS TO PREVENT THE ACCUMULATION OF WATER WITHIN THE WALL ASSEMBLY BY PROVIDING A WATER RESTRICTIVE BARRIER BEHIND THE EXTERIOR VENEER AS REQUIRED BY SECTION R703.2.

EGRESS NOTES:

- R311.4.1. NOT LESS THAN ONE EXIT DOOR CONFORMING TO THIS SECTION SHALL BE PROVIDED FOR EACH DWELLING UNIT. THE REQUIRED EXIT DOOR SHALL PROVIDE FOR DIRECT ACCESS FROM THE HABITABLE PORTIONS OF THE DWELLING TO THE EXTERIOR WITHOUT REQUIRING TRAVEL THROUGH A GARAGE. ACCESS TO HABITABLE LEVELS NOT HAVING AN EXIT IN ACCORDANCE WITH THIS SECTION SHALL BE BY A RAMP IN ACCORDANCE WITH SECTION R311.6 OR A STAIRWAY IN ACCORDANCE WITH SECTION R311.5.
- R311.4.2 THE REQUIRED EXIT DOOR SHALL BE A SIDE-HINGED DOOR NOT LESS THAN 3 FEET (914 MM) IN WIDTH AND 6 FEET 8 INCHES (2032 MM) IN HEIGHT. OTHER DOORS SHALL NOT BE REQUIRED TO COMPLY WITH THESE MINIMUM DIMENSIONS.

STAIR NOTES:

- R311.5.1 STAIRWAYS SHALL NOT BE LESS THAN 36 INCHES (914 MM) IN CLEAR WIDTH AT ALL POINTS ABOVE THE PERMITTED HANDRAIL HEIGHT AND BELOW THE REQUIRED HEADROOM HEIGHT. HANDRAILS SHALL NOT PROJECT MORE THAN 4.5 INCHES (114 MM) ON EITHER SIDE OF THE STAIRWAY AND THE MINIMUM CLEAR WIDTH OF THE STAIRWAY AT AND BELOW THE HANDRAIL HEIGHT, INCLUDING TREADS AND LANDINGS, SHALL NOT BE LESS THAN 31.5 INCHES (787 MM) WHERE A HANDRAIL IS INSTALLED ON ONE SIDE AND 27 INCHES (698 MM) WHERE HANDRAILS ARE PROVIDED ON BOTH SIDES.
- R311.5.3.1 THE MAXIMUM RISER HEIGHT SHALL BE 8 1/4 INCHES (210 MM).
- R311.5.3.2 THE MINIMUM TREAD DEPTH SHALL BE 9 INCHES (229 MM). THE TREAD DEPTH SHALL BE MEASURED HORIZONTALLY BETWEEN THE VERTICAL PLANES OF THE FOREMOST PROJECTION OF ADJACENT TREADS AND AT A RIGHT ANGLE TO THE TREAD'S LEADING EDGE.
- R311.5.6 HANDRAILS SHALL BE PROVIDED ON AT LEAST ONE SIDE OF EACH CONTINUOUS RUN OF TREADS OR FLIGHT WITH FOUR OR MORE RISERS.
- R311.5.6.1 HANDRAIL HEIGHT, MEASURED VERTICALLY FROM THE SLOPED PLANE ADJOINING THE TREAD NOSING, OR FINISH SURFACE OF RAMP SLOPE, SHALL BE NOT LESS THAN 34 INCHES (864 MM) AND NOT MORE THAN 38 INCHES (965 MM).
- R311.5.6.2 HANDRAILS FOR STAIRWAYS SHALL BE CONTINUOUS FOR THE FULL LENGTH OF THE FLIGHT, FROM A POINT DIRECTLY ABOVE THE TOP RISER OF THE FLIGHT TO A POINT DIRECTLY ABOVE THE LOWEST RISER OF THE FLIGHT. HANDRAILS ADJACENT

D3 GENERAL NOTES

Not To Scale

APPLICABLE CODES

2011 SOLAR DECATHLON BUILDING CODE V.1.1 2011 SOLAR DECATHLON RULES	2009 ICC INTERNATIONAL ENERGY CONSERVATION CODE 2009 DCMR 12 BUILDING CODE REGULATION DC LAW 8-26 DISTRICT OF COLUMBIA ENVIRONMENTAL POLICY ACT OF 1989
2009 IBC INTERNATIONAL BUILDING CODE 2009 IRC INTERNATIONAL RESIDENTIAL CODE 2009 ICC INTERNATIONAL FUEL GAS CODE 2009 ICC INTERNATIONAL MECHANICAL CODE 2009 NFPA INTERNATIONAL ELECTRICAL CODE 2009 ICC INTERNATIONAL FIRE PREVENTION CODE	DCMR 13 ELECTRICAL AND MECHANICAL

ACCESSIBILITY

SECTION 504 OF THE REHABILITATION ACT (PARTIAL FEDERAL FUNDING ASSISTANCE) WITH COMPLIANCE OF UNIFORM FEDERAL ACCESSIBILITY STANDARDS (U.F.A.S.)

REGULATION	LIMITATIONS	CONDITIONS PROPOSED
HEIGHT (MAX): FINISHED SQUARE FOOTAGE (PER ANSI Z765-2003)	18 FT. 600 S.F. MIN, 1000 S.F. MAX.	17 FT. 8 IN. 868 S.F. - FIRST FLOOR 81 S.F. - SECOND FLOOR/LOFT 949 S.F. TOTAL
LOT DIMENSIONS:	78 FT. X 60 FT. 4680 S.F.	78 FT. X 60 FT. 4680 S.F.
USE GROUP: CONSTRUCTION TYPE:	R-2 (SECTION 310 BC) V-B UNPROTECTED (TABLE 503)	
FIRE SUPPRESSION:	BUILDING TO BE FULLY SPRINKLERED WITH NFPA 150 SYSTEM (SECTION 403)	

FIRE RESTANT CONSTRUCTION	REQ'MENT OF IBC/IRC	PROVIDED	REFERENCE	REMARKS
FIRE SEPARATION DISTANCE REQ'MENTS <10 FT. (EXCLUDING PARTY WALLS)	1 HR	1 HR	2009 IRC - TABLE 302.1	
MAX AREA OF EXT. WALL OPENINGS F.S.D. > 5 FT.	UNLIMITED	121 S.F./1015 S.F. = 12%	2009 IRC - TABLE 302.1	
MEANS OF EGRESS	REQ'MENT OF IBC/IRC	PROVIDED	REFERENCE	REMARKS
# OF EXITS PER DWELLING UNIT	1	2	2009 IRC - SECTION R311	
# OF EXIT DOORS PER HABITABLE ROOM	1	1	2009 IRC - SECTION R311	
# OF EMERGENCY ESCAPE & RESCUE OPENINGS FROM SLEEPING ROOMS	1	1	2009 IRC - SECTION R310	5 S.F. OPENABLE AREA AT GRADE LEVEL
MIN. STAIR EGRESS WIDTH	36 IN.	36 IN.	2009 IRC - SECTION R311	
MIN. DOOR EGRESS WIDTH	32 IN.	36 IN.	2009 IRC - SECTION R311	
MIN. EXT. DOOR WIDTH	36 IN.	36 IN.	2009 IRC - SECTION R311	
MIN. CORRIDOR WIDTH	36 IN.	42 IN.	2009 IRC - SECTION R311	
COMMON PATH OF EGRESS TRAVEL	75 FT.	30 FT. MAX	2009 IBC - SECTION 1014	
EXIT ACCESS TRAVEL DISTANCE	200 FT.	158 FT. MAX	2009 IBC - SECTION 1015.1	

OCCUPANT LOAD:	GROSS FLOOR AREA:
DESIGN OCCUPANT LOAD PER TABLE 1004.1.1: ONE OCCUPANT PER 200 GROSS FLOOR AREA MIN.	FIRST FLOOR: 868 G.S.F. 4 OCCUPANTS SECOND FLOOR: 81 G.S.F. 1 OCCUPANTS TOTAL: 949 G.S.F. 4 OCCUPANTS

GENERAL SHEET NOTES

REFERENCE KEYNOTES

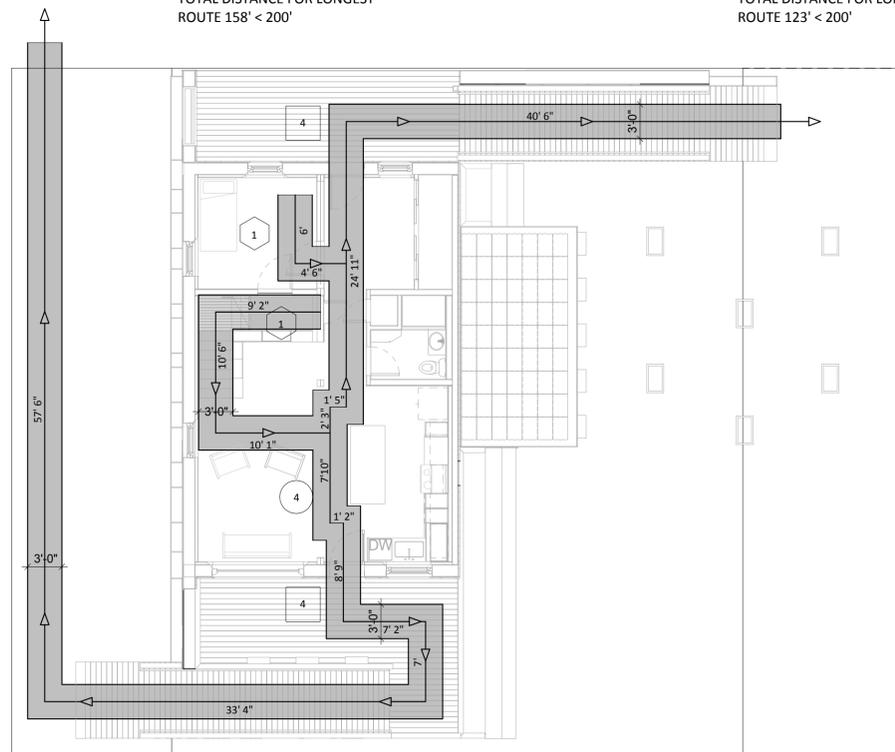
SHEET KEYNOTES

DRAWING KEY

- Direction of Egress Travel
- Occupant Load
- Combined Occupant Load
- Exiting Occupant Load
- Common Path of Travel
- Exit Access Travel Distance

TOTAL DISTANCE FOR LONGEST ROUTE 158' < 200'

TOTAL DISTANCE FOR LONGEST ROUTE 123' < 200'



A1 EGRESS PLAN

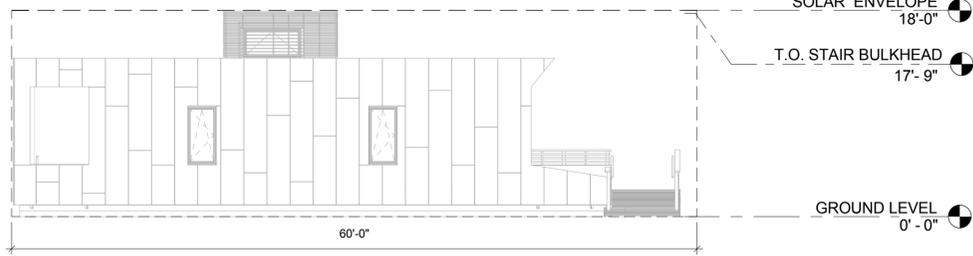
1/8" = 1'-0"

A4 CODE ANALYSIS

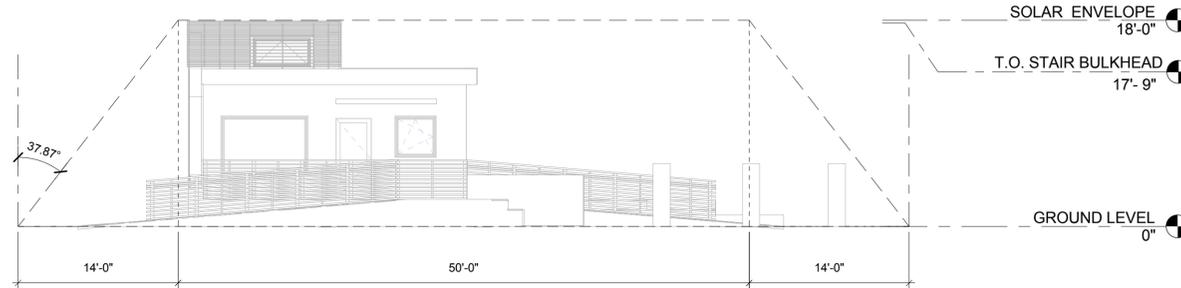
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E
D
C
B
A

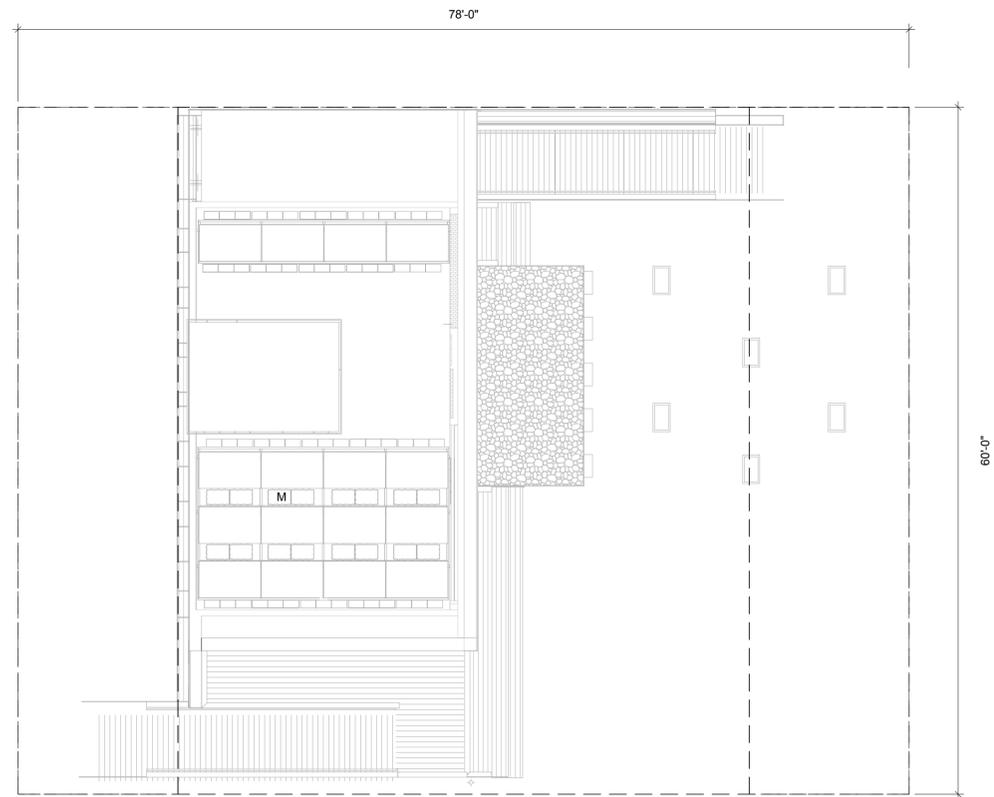
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D3 SOLAR ENVELOPE WEST ELEVATION
1/8" = 1'-0"



C3 SOLAR ENVELOPE SOUTH ELEVATION
1/8" = 1'-0"



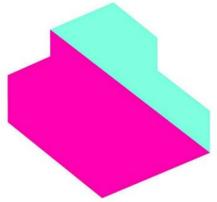
A3 SOLAR ENVELOPE FIRST FLOOR PLAN
1/8" = 1'-0"

GENERAL SHEET NOTES

REFERENCE KEYNOTES

SHEET KEYNOTES

DRAWING KEY



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SHEET TITLE

SOLAR ENVELOPE
COMPLIANCE

G-101

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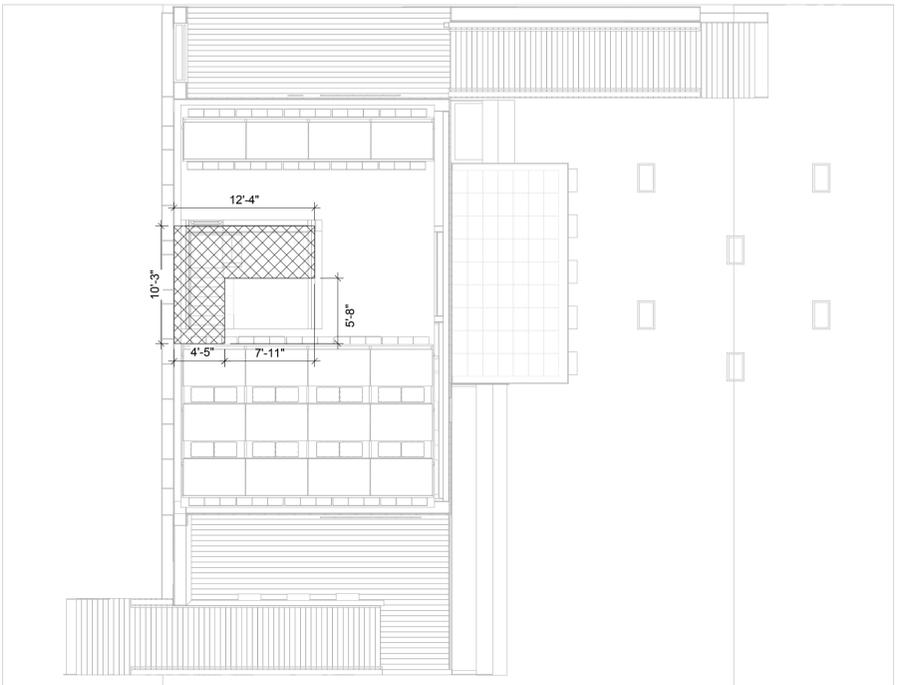
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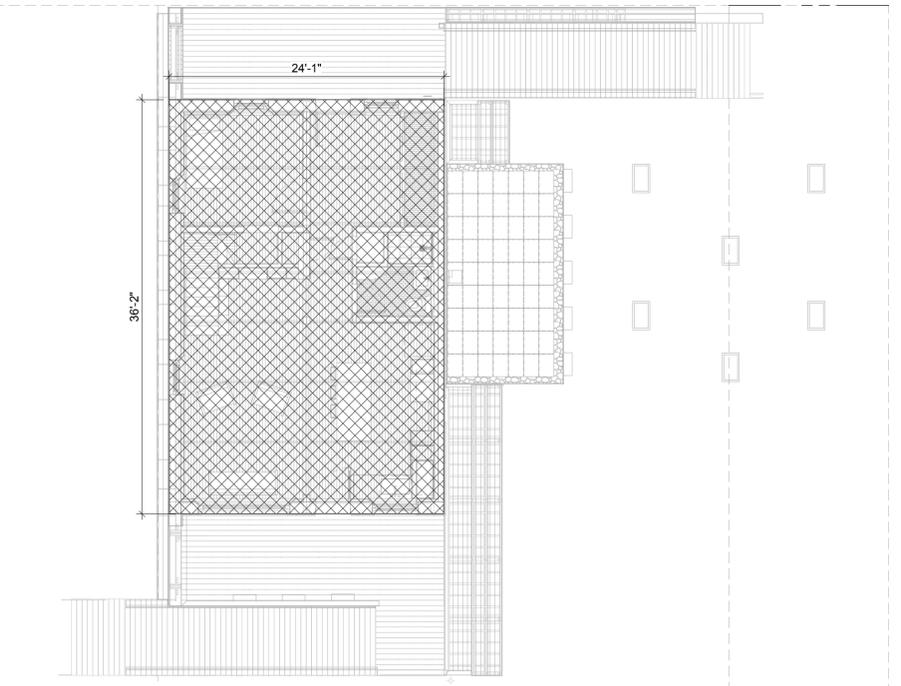
7

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E
D
C
B
A



C4 ANSI AREA SECOND FLOOR
1/8" = 1'-0"



A4 ANSI AREA FIRST FLOOR
1/8" = 1'-0"

- GENERAL SHEET NOTES
1. STAIR AREA = 82 S.F.
 2. FIRST FLOOR AREA = 868 S.F. (PER ANSI Z765-2003)
 3. TOTAL FLOOR AREA = 950.0 S.F. (INCLUDING BULKHEAD AND STAIR INHABITABLE SPACE)
 4. DURING CONTEST WEEK, FINISH SQUARE FOOTAGE WILL NOT INCREASE.
 5. FINISHED SQUARE FOOTAGE CALCULATIONS FOR THIS HOUSE WERE MADE BASED ON PLAN DIMENSIONS ONLY AND MAY VARY FROM THE FINISHED SQUARE FOOTAGE OF THE HOUSE AS BUILT.

REFERENCE KEYNOTES

SHEET KEYNOTES

DRAWING KEY



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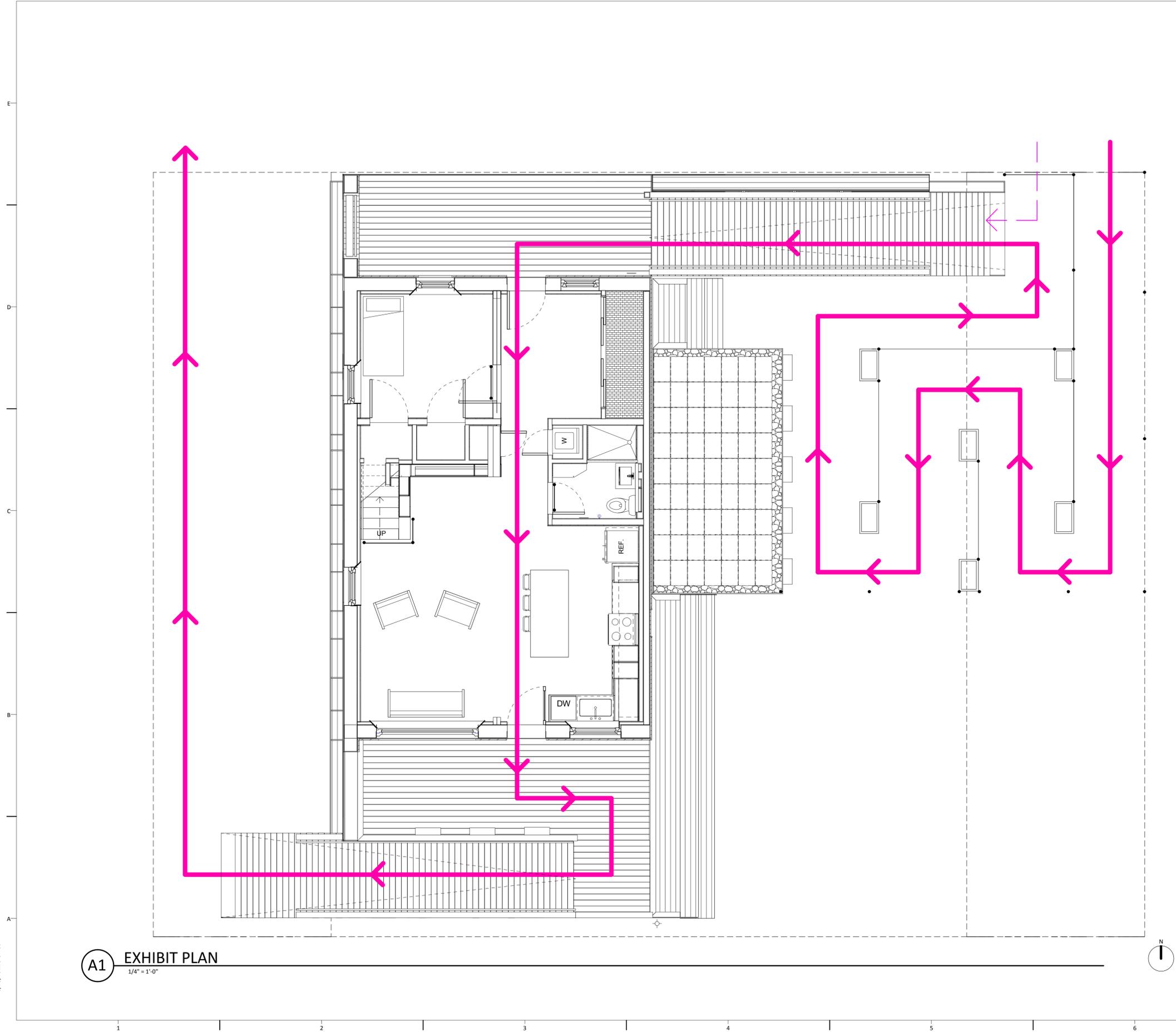
SHEET TITLE

ANSI AREA
CALCULATIONS

G-102

1 2 3 4 5 6 7

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- GENERAL SHEET NOTES
1. EXHIBIT SIGNAGE ON 6 FT. TALL TOTEMS. PRINTED FABRIC BANNERS ON THREE SIDES OF TOTEM
 2. SYSTEM OF SIGNAGE INCLUDES A VARIETY OF SCALES FOR WAY-FINDING AND INFORMATIONAL SIGNAGE
 3. EXHIBITION INCLUDES TWO VISITOR PATHS: A FULL EXHIBITION ROUTE AND AN EXPRESS LINE.
 4. THE FULL EXHIBITION IS ADA ACCESSIBLE

REFERENCE KEYNOTES

SHEET KEYNOTES

- DRAWING KEY
- FULL PUBLIC EXHIBIT PATH
 - EXPRESS ROUTE TO HOUSE
 - AREA TO BE CORDONED OFF DURING COMPETITION



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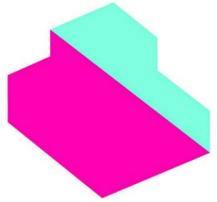
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SHEET TITLE

PUBLIC EXHIBIT PLAN

G-111

A1 EXHIBIT PLAN
 1/4" = 1'-0"



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SHEET TITLE

ADA TOUR ROUTE COMPLIANCE PLAN

G-121

GENERAL SHEET NOTES

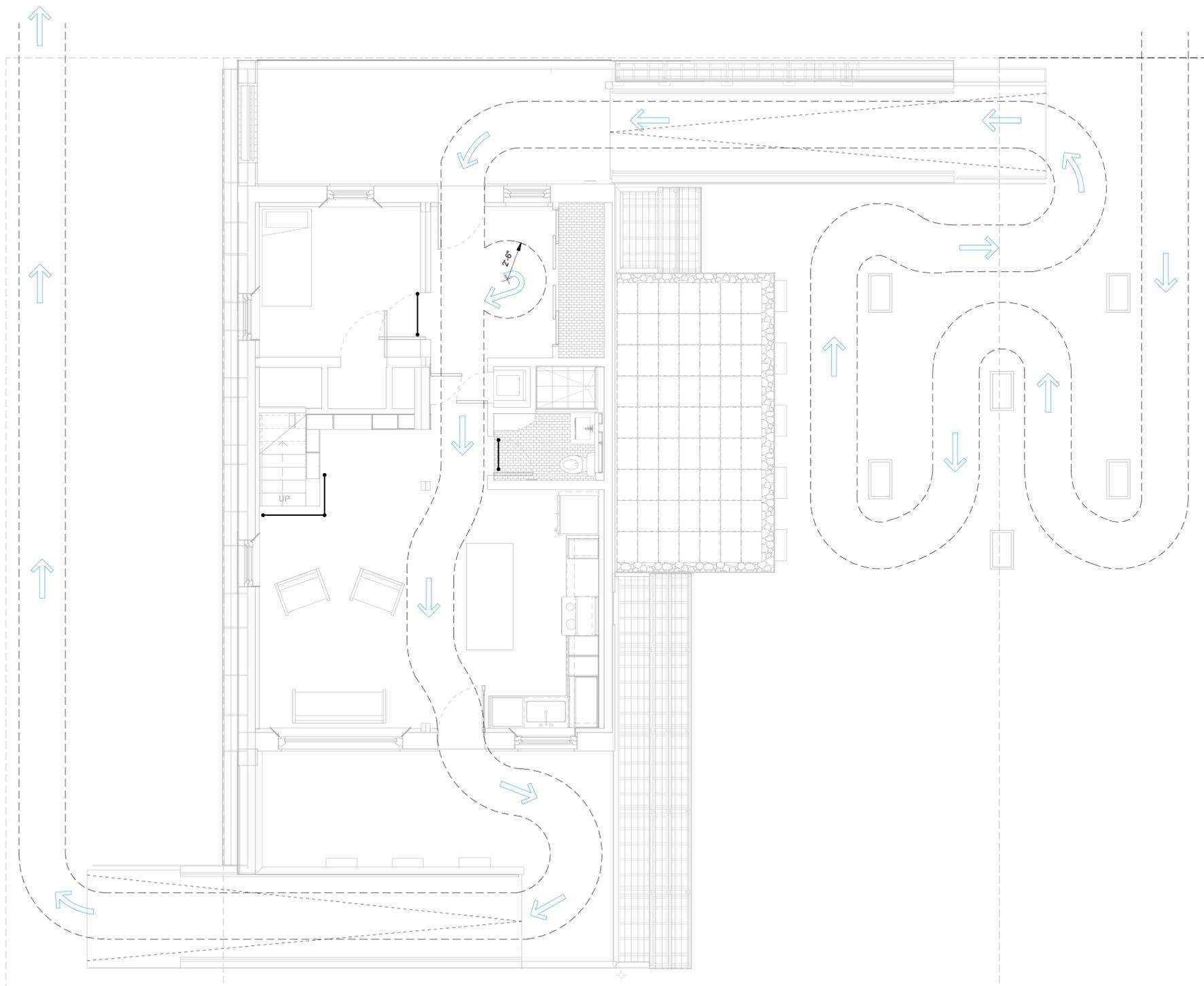
1. ALL CORRIDORS / PASSAGEWAYS MEET ANSI 117.1 ACCESSIBLE CODE. THE MINIMUM CLEAR WIDTH OF THE TOURING ROUTE SHALL BE 36 IN (@15MM) EXCEPT AT DOORS.
2. THRESHOLDS AT DOORWAYS SHALL NOT EXCEED 1/4 IN. RAISED THRESHOLDS AND FLOOR LEVEL CHANGES AT ACCESSIBLE DOORWAYS GREATER THAN 1/4 IN SHALL BE BEVELED WITH A SLOPE NO GREATER THAN 1:2.
3. THE MAXIMUM SLOPE OF ALL RAMPS SHALL BE 1:12
4. HANDRAILS PROVIDED ON ALL RAMPS AND STAIRS.
5. HANDRAILS SHALL NOT BE LESS THAN 34" AND NOT GREATER THAN 38" ABOVE FINISH SURFACE OF THE RAMP.
6. HANDRAIL GRIP SIZE SHALL COMPLY WITH R311.5.6.3 OF THE 2006 IRE.
7. VERTICAL CHANGES IN FLOOR SURFACES SHALL BE 1/2" MAXIMUM
8. MAXIMUM SPACING BETWEEN DECKING MEMBERS SHALL BE 1/2"
9. ALL SIGNAGE ON THE NATIONAL MALL SITE SHALL COMPLY WITH SECTION 4.30 ADAAG
10. ALL DOORS SHALL HAVE A MINIMUM CLEARANCE OF 32".
11. DOORS HAVE THE MANEUVERING CLEARANCE FOR 60" FRONT APPROACH
12. DURING THE COMPETITION THE STAIRCASE TO THE LOFT WILL BE CORDONED OFF TO INHIBIT PUBLIC ACCESS.

REFERENCE KEYNOTES

SHEET KEYNOTES

DRAWING KEY

—●— AREA TO BE CORDONED OFF DURING COMPETITION

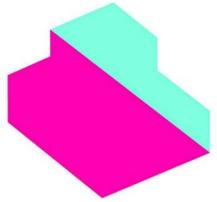


A1 ADA TOUR ROUTE COMPLIANCE

1/4" = 1'-0"



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SHEET TITLE

**INTERCONNECTION
PLAN & COMPETITION
INSTRUMENT
LOCATIONS**

G-122

GENERAL SHEET NOTES

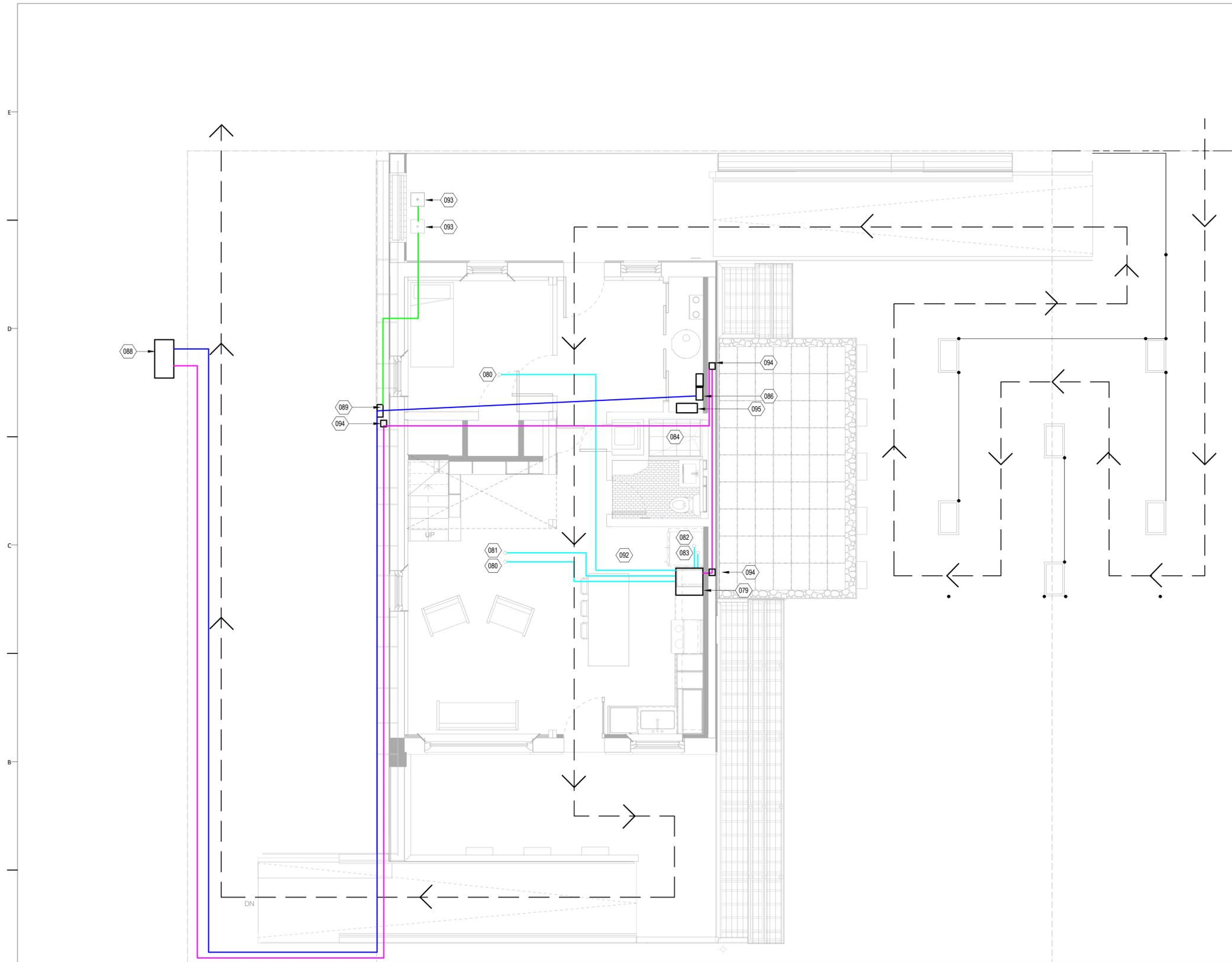
REFERENCE KEYNOTES

SHEET KEYNOTES

- 079 DATALOGGER ENCLOSURE UNDER CABINET
- 080 INDOOR TEMPERATURE SENSOR
- 081 RELATIVE HUMIDITY SENSOR
- 082 FREEZER TEMPERATURE SENSOR
- 083 REFRIGERATOR TEMPERATURE SENSOR
- 084 HOT WATER DRAW LOCATION
- 086 TEAM PANEL BOARD LOCATION
- 088 ORGANIZER UTILITY PANEL
- 089 TEAM METER HOUSING
- 092 ORGANIZER PROVIDED SENSOR WIRE
- 093 GROUNDING SYSTEM IN ACCORDANCE WITH SOLAR DECATHLON BUILDING CODE 6-9
- 094 DEDICATED 1" DIAMETER CONDUIT WITH PULL STRINGS FOR ORGANIZER PROVIDED TELECOM CABLE
- 095 TEAM INVERTER LOCATION

DRAWING KEY

- PUBLIC TOUR PATH
- AREA TO BE CORDONED OFF DURING COMPETITION
- TEAM POWER CABLES
- ORGANIZER ETHERNET AND POWER CABLES
- GROUNDING ELECTRODE CONDUCTOR



A1 INTERCONNECTION PLAN & COMPETITION INSTRUMENT LOCATIONS

1/4" = 1'-0"

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1

2

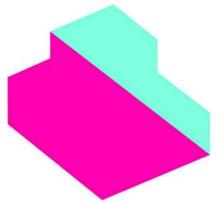
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SHEET TITLE

PUBLIC EXHIBIT
STRATEGY

G-211

GENERAL SHEET NOTES

REFERENCE KEYNOTES

SHEET KEYNOTES

DRAWING KEY

EXHIBIT STRATEGY

The exhibit is displayed as a series of banners hung on upturned cedar-clad planters. The planters are connected by twine, controlling the public line before people may enter the home. The exhibit is organized into 6 thematic planters, with two informational banners on each; and experienced sequentially 1-12. The themes of the exhibit are Empowerhouse, Community, Passive, Active, Elements, and Integration. Throughout the house, small tags call out specific components for their material, performative, or otherwise sustainable properties.

ELEMENTS

The form of Empowerhouse was designed for transportation and replicability, while the details were designed for ease of construction for volunteer labor. Habitat for Humanity of Washington D.C. and other chapters nationwide will benefit from this approach. Empowerhouse is a replicable model that will change the way affordable housing is built in America.

LIVING 'DRY' MODULE
The bedroom, light loft, and living room are aligned on the west side of the home in the Dry Module. These spaces feel open and airy with many windows providing light from the West.

SERVICE 'WET' MODULE
The mechanical room, bathroom and kitchen anchor the house in the east, in the Wet Module. Grouping these spaces allows a more compact mechanical system, and necessitates fewer connections to be made when bringing the two modules together.

CIRCULATION
The front and rear doors align between the two modules, drawing people through the home and connecting them to the backyard.

THICK ENVELOPE
The thick envelope that wraps the home is an easily constructible but unique system with engineered wood I-joints that are sandwiched between sheathing, creating a 1" cavity that is filled with blown in cellulose.

House assembly

PASSIVE

Incredible energy savings is the result of following the principles of Passive House. These include high levels of insulation, airtight construction, high-performance windows and doors, minimized thermal bridging, and windows and shading placed to control solar heat gain.

The thick, highly insulated envelope has a thermal resistance value of R-40.

A ballasted racking system for the solar panels sits on the roof weighted down by pavers minimizing thermal bridging by not penetrating the envelope.

All seams in the exterior walls, floor and roof were taped to minimize uncontrolled air infiltration.

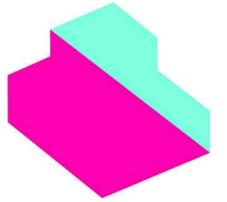
A continuous airtight barrier controls temperature and energy flows.

All windows are triple-paneled. Large high-gain windows on the south side allow the winter sun to warm the home.

PASSIVE HOUSE PRINCIPLES

- SUPER INSULATION**
The exterior envelope is super insulated and composed of 12" deep, engineered wood I-joints sandwiched between two layers of wood sheathing. The cavity is filled with dense pack cellulose insulation achieving an R-Value over 40.
- AIR TIGHT CONSTRUCTION**
Sheathing materials integrate air and moisture barriers. The use of a furled out interior wall to run service lines eliminates penetrations in this airtight envelope. The exterior sheathing has a low rate of moisture vapor diffusion allowing panels to dry out. Careful sealing of all seams with specialized tape helps maintain air tightness.
- OPTIMIZE PASSIVE SOLAR HEAT GAINS AND SHADING**
Large high-gain windows on the south side allow the winter sun to warm the home. Shading was optimized in order to allow maximum sunlight in the winter heating months and avoid overheating in the summer.
- MINIMIZE THERMAL BRIDGES**
Strict and careful attention to framing and construction details minimizes thermal bridges so as not to allow energy flows to enter the house uncontrolled, which could negate the effects of extra insulation.
- HIGH PERFORMANCE WINDOWS AND DOORS**
Windows are oriented and installed to take advantage of passive-solar heat gain. Our windows are air-tight, include thermal breaks, minimize air infiltration and exfiltration which results in a high R-value. Low-emissivity (low-e) coatings, microscopically thin, transparent layers of metal or metallic oxide deposited on the surface of the glass, further increase the R-value.

A3 EXAMPLE EXHIBIT BANNERS
Not to Scale



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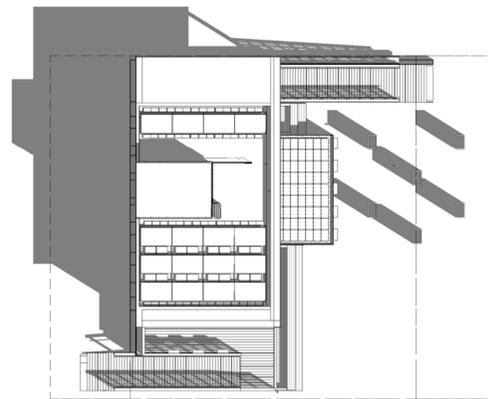
SHEET TITLE

EXTERIOR SHADING
DIAGRAMS

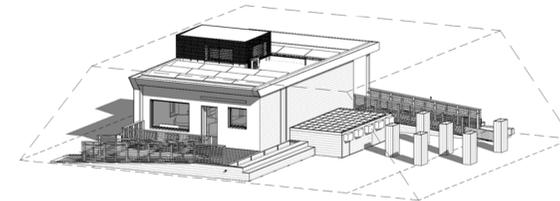
G-901



D1 NORTH SIDE ON SEPT 22 AT 9 AM



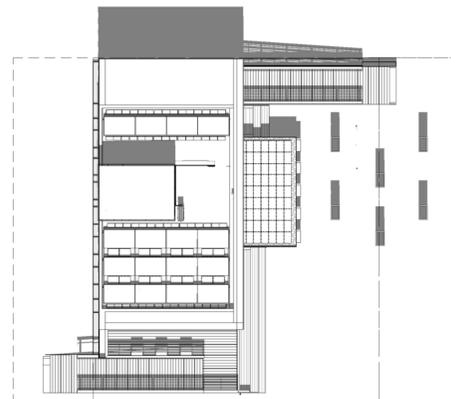
D3 SEPT 22 AT 9 AM



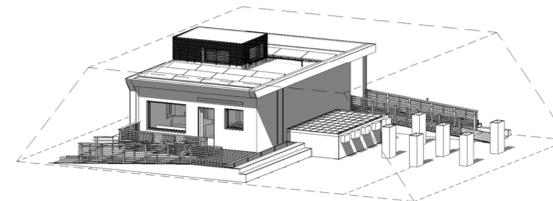
D5 SOUTH SIDE ON SEPT 22 AT 9 AM



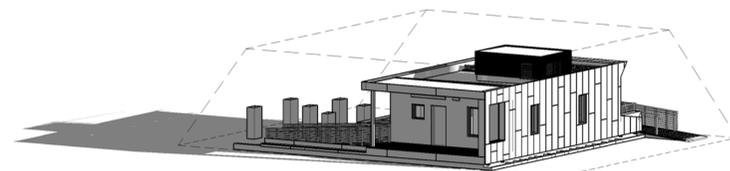
C1 NORTH SIDE ON SEPT 22 AT 12 PM



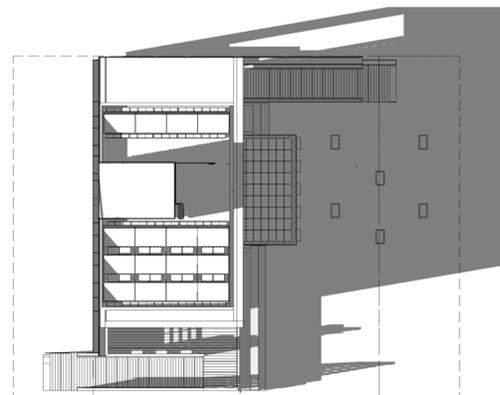
C3 SEPT 22 AT 12PM



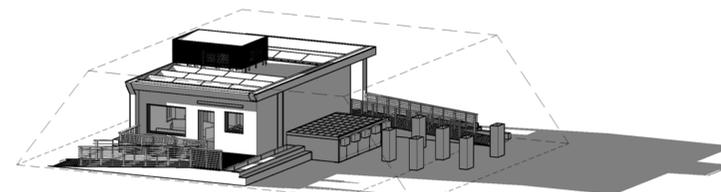
C5 SOUTH SIDE ON SEPT 22 AT 12 PM



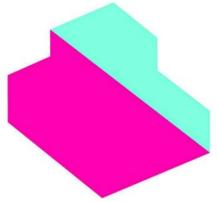
A1 NORTH SIDE ON SEPT 22 AT 5 PM



A3 SEPT 22 AT 5PM



A5 SOUTH SIDE ON SEPT 22 AT 5 PM



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4	AUGUST 11, 2011	AS-BUILT CONSTRUCTION DOCUMENTS

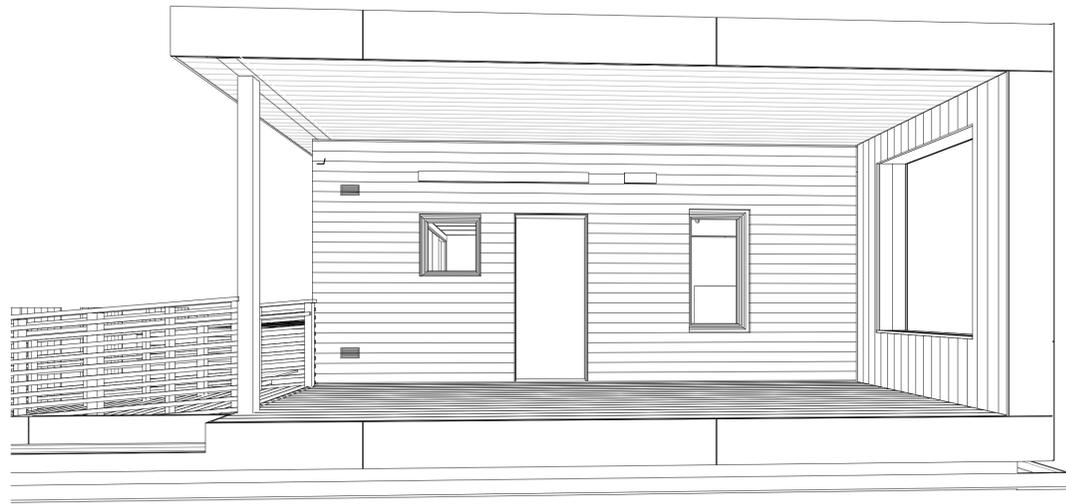
LOT NUMBER
204

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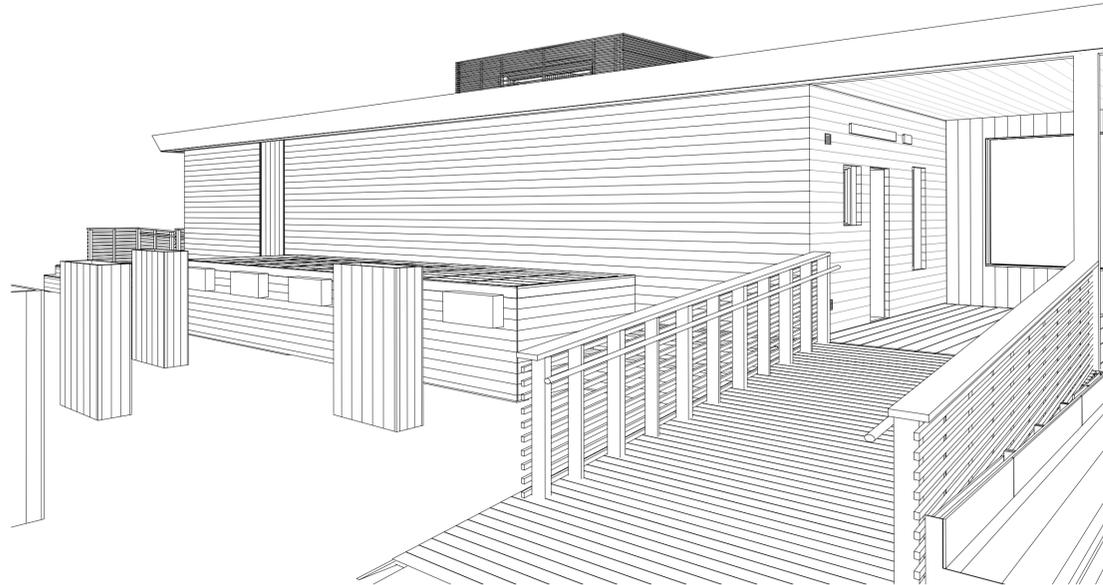
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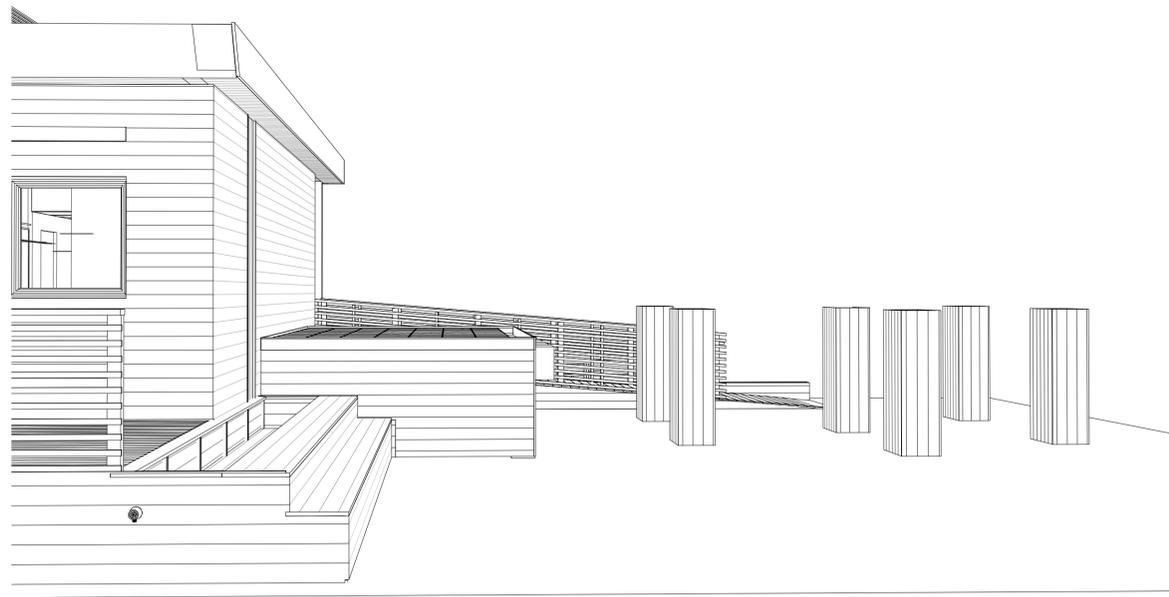
SHEET TITLE
EXHIBIT RENDERINGS



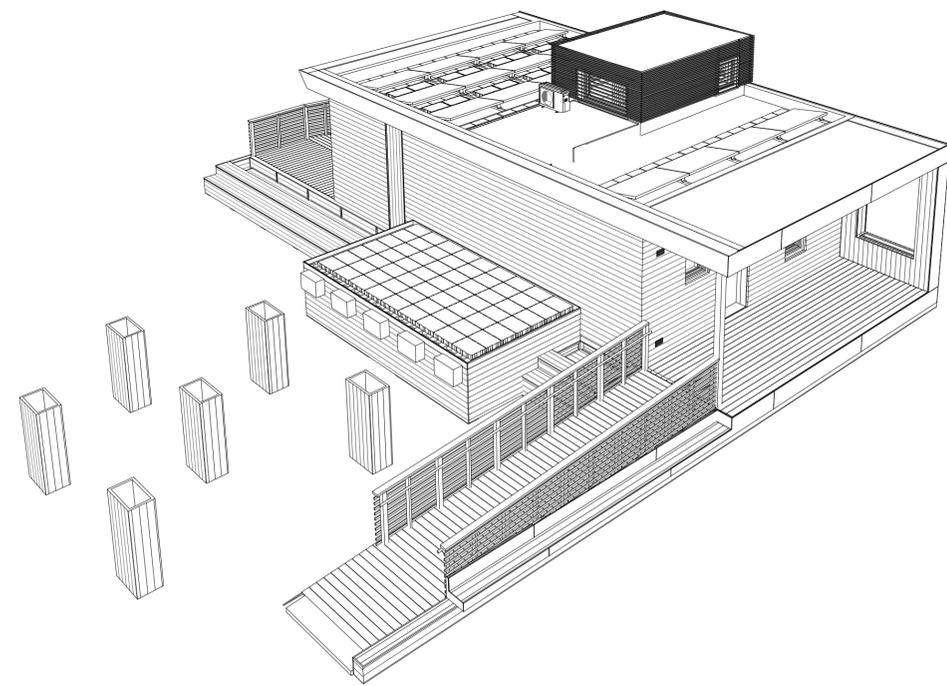
C1 EXTERIOR PERSPECTIVE IV



C4 EXHIBITION PERSPECTIVE II



A1 EXHIBITION PERSPECTIVE III



A4 EXHIBITION PERSPECTIVE I

G-902

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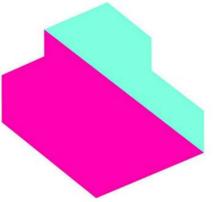
C1 RENDERED VIEW OF BEDROOM
Not to Scale



A1 RENDERED VIEW OF LIGHT LOFT AND STAIR
Not to Scale



A5 RENDERED VIEW OF OPEN LIVING SPACE
Not to Scale



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SHEET TITLE

INTERIOR RENDERINGS

G-903

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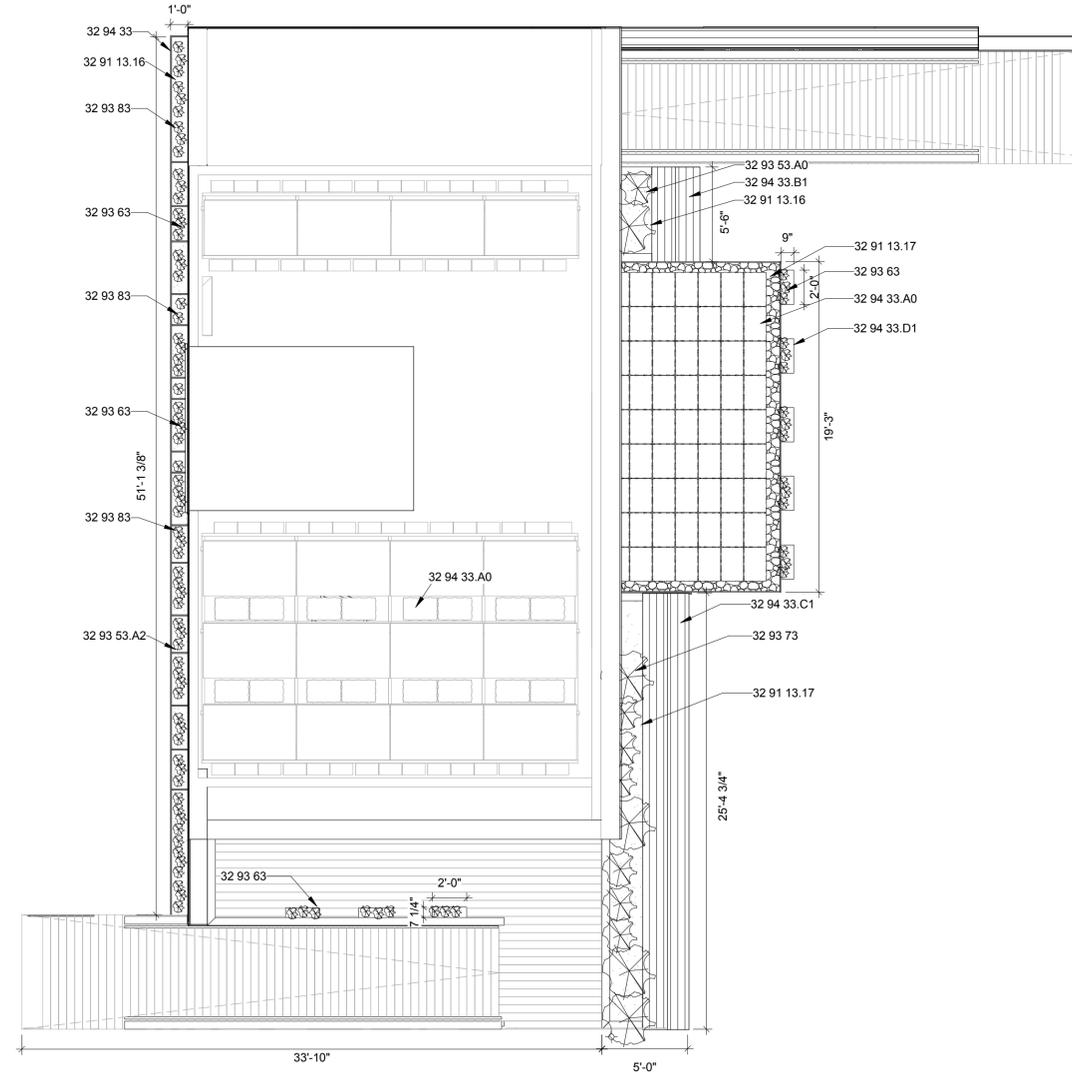


PLANTING SCHEDULE - EDIBLES

	Plant	Solar Need	Height	Space between plants	Yield	Harvest Time	Maintenance
1	Basil (sweet)	full sun	18"	10 - 12"	high	until frost	low
2	Beetroot	full sun	root plant	4"	.25 lb/sqft	april and june	moderate
3	Broccoli	full sun	48"	15"	.21 lb/sqft or 1 lb / plant	ongoing	moderate
4	Cabbage	full sun	12"	10 - 12"	.91 lb/sQft	midsummer, fall	moderate
5	Carrot	full sun	root plant	4"	.45 lb/sqft	July - October	low - moderate
6	Cauliflower	full sun	medium	10 - 12"	.41 lb/sqft or 2-3 lb/plant	midsummer	moderate
7	Chamomile	partial shade	20 - 30"	6"	high	spring and fall	low
8	Chives	full sun	12 - 18"	6 - 9"	high	midsummer	low
9	Collard greens	partial shade	16 - 36"	15"	1 lb/sqft	until freeze	moderate
10	Cucumber	full sun	vine	12"	.19 lb/sqft	until frost	low - moderate
11	Dill	full sun	24 - 36"	12 - 15"	high	June /July	low
12	Eggplant	full sun	24 - 48"	24 - 48"	.53 lb/sqft	midsummer to fall	moderate
13	Kale	partial shade	18 - 36"	12 - 36"	1.5 lb/sqft	until freeze	low - moderate
14	Lettuces	partial shade	6 - 24"	6 - 24"	.47 lb/sqft	until frost	low-moderate
15	Mint	full sun	12 - 18"	36 - 48"	high	until frost	low
16	Mustard greens	partial shade	6 - 24"	12 - 24"	.16 lb/sQft	until freeze	low
17	Oregano	full sun	12 - 18"	12 - 15"	high	until frost	low
18	Radish	partial shade	6 - 18"	1"	.28 lb/sQft	until frost	low - moderate
19	Rosemary	full sun	36 - 48"	18 - 24"	high	until frost	low
20	Sage	full sun	24 - 36"	24 - 36"	high	midsummer	low
21	Spinach	partial shade	6 - 12"	6 - 12"	.25 lb/sQft	spring and fall	moderate
22	Squash (summer)	full sun	vine	24 - 48"	.22 lb/sQft	midsummer	low - moderate
23	Swiss chard	partial shade	12 - 36"	6 - 24"	high	until frost	low - moderate
24	Thyme	full sun	12 - 18"	18 - 24"	high	midsummer	low

PLANTING SCHEDULE -NON -EDIBLES

	Plant	Solar Need	Height	Space between plants	Duration	Bloom	Maintenance
25	Moss Phlox	full sun	6"	18"	perennial	April, May	low
26	Cardinal Flower	partial shade	3'	15"	perennial	July, Aug, Sept	low
27	Butterfly Milkweed	full sun	3'	15"	perennial	July, Aug, Sept	low
28	Switch Grass	full sun	6'	24"	perennial	Aug, Sept, Oct	low
29	Little Bluestem	full sun	3'	24"	perennial	Aug, Sept, Oct	low
30	Blackeyed Susan	full sun	3'	18"	perennial	July, Aug, Sept	low
31	Virginia Bluebells	partial shade	2'	9"	perennial	April, May	low



A3 LANDSCAPE PLAN
3/16" = 1'-0"

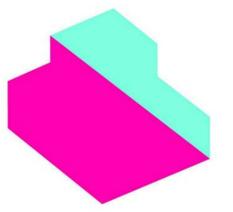
GENERAL SHEET NOTES

REFERENCE KEYNOTES

- 32 91 13.16 MULCHING
- 32 91 13.17 LANDSCAPING STONE
- 32 93 53.A0 LARGE VEGETABLES
- 32 93 53.A2 LEAFY VEGETABLES
- 32 93 63 HERBAL PLANTS
- 32 93 73 WATER TOLERANT PERENNIALS
- 32 93 83 ORNAMENTAL PERENNIALS
- 32 94 33 PLANTERS
- 32 94 33.A0 VEGETAL I.D. HYDROPACK SEDUM TRAYS
- 32 94 33.B1 VEGETABLE PLANTER WITH CEDAR BENCH SEATING
- 32 94 33.C1 RAINGARDEN PLANTER WITH CEDAR BENCH SEATING
- 32 94 33.D1 WOOLLY POCKET "WALLY" PLANTER

SHEET KEYNOTES

DRAWING KEY



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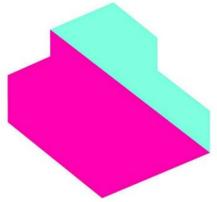
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SHEET TITLE

**LANDSCAPE PLAN &
PLANT SCHEDULE**

L-101



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SHEET TITLE

RAIN GARDEN WATER CAPTURE

L-401

GENERAL SHEET NOTES

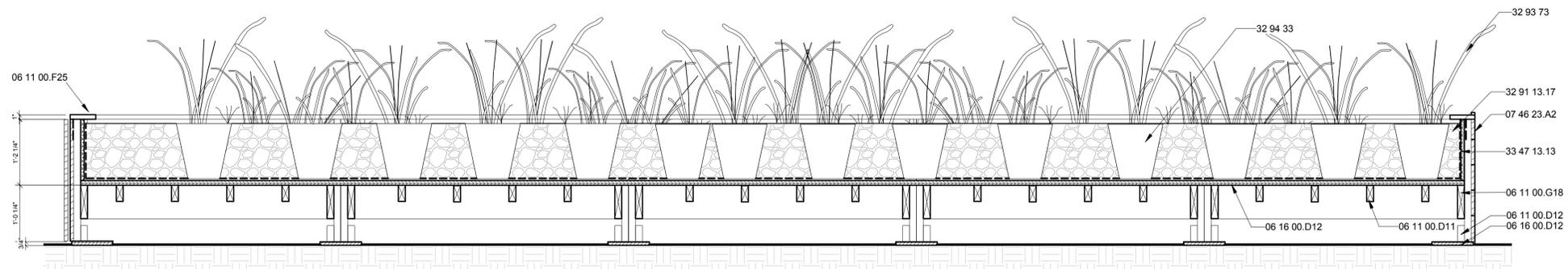
REFERENCE KEYNOTES

05 75 10	DECORATIVE COPPER RAIN CHAIN
06 11 00.D11	2x4 TIMBERSIL
06 11 00.D12	2x6 WESTERN RED CEDAR POST
06 11 00.F25	2x6 WESTERN RED CEDAR
06 11 00.G18	2x8 TIMBERSIL
06 15 33.A1	WESTERN RED CEDAR DECKING
06 16 00.D12	3/4" EXTERIOR GRADE PLYWOOD
06 43 00.E1	WOOD WALL MOUNTED HANDRAIL
07 46 23.A2	1 1/8" CEDAR SIDING
07 46 23.A3	3/4" CEDAR SHIPLAP SIDING
07 62 00	METAL FLASHING
07 62 00.H1	4" X 4" BOX GUTTER
22 14 16	RAINWATER LEADERS
22 40 10	EXTERIOR HOSE BIBB
32 91 13.17	LANDSCAPING STONE
32 93 63	HERBAL PLANTS
32 93 73	WATER TOLERANT PERENNIALS
32 94 33	PLANTERS
32 94 33.C1	RAINGARDEN PLANTER WITH CEDAR BENCH SEATING
32 94 33.D1	WOOLLY POCKET "WALLY" PLANTER
33 47 13.13	POND LINERS

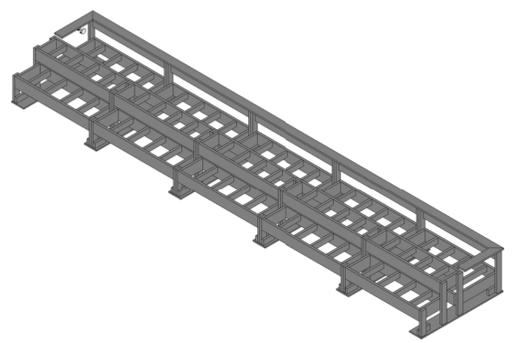
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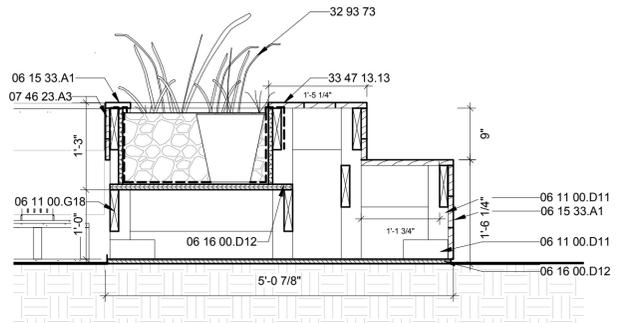
- WATER DIRECTION
- WATER PATH
- WATER RETENTION CATCHMENT AND BASIN
- GUTTER PATH



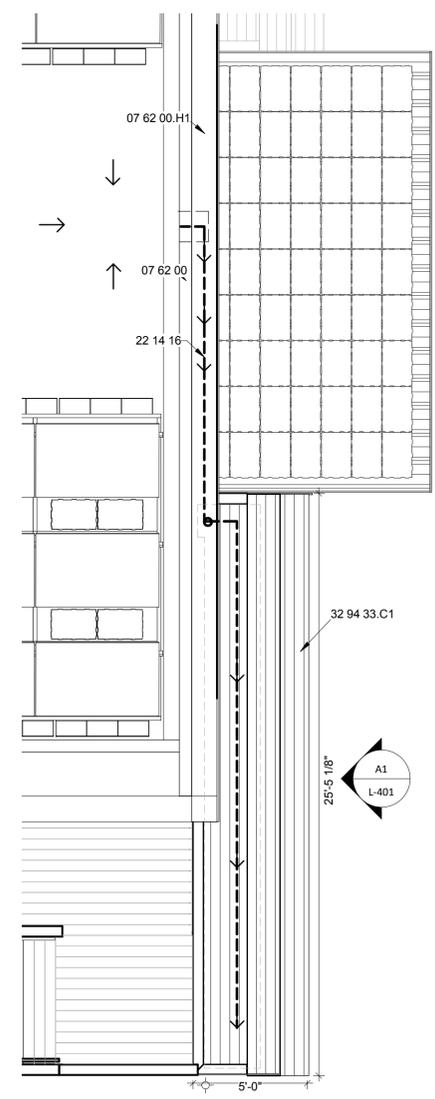
D5 LONG SECTION RAINGARDEN
3/4" = 1'-0"



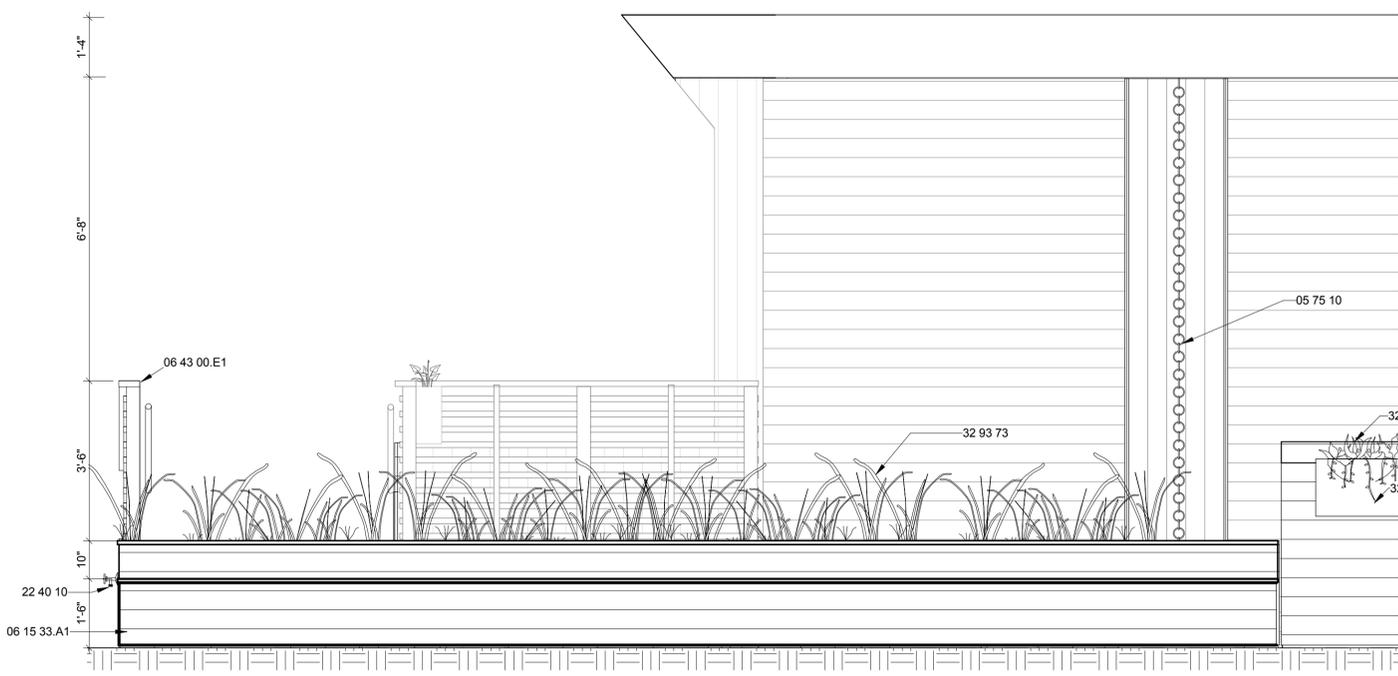
C1 RAINGARDEN STRUCTURE AXONOMETRIC



C3 SHORT SECTION RAINGARDEN
3/4" = 1'-0"

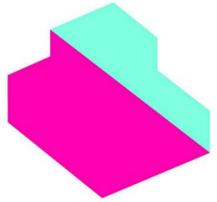


A5 RAIN WATER CATCHMENT PLAN
1/4" = 1'-0"



A1 RAIN GARDEN EAST ELEVATION
1/2" = 1'-0"

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SHEET TITLE

WATER TANK HOUSING

L-402

GENERAL SHEET NOTES

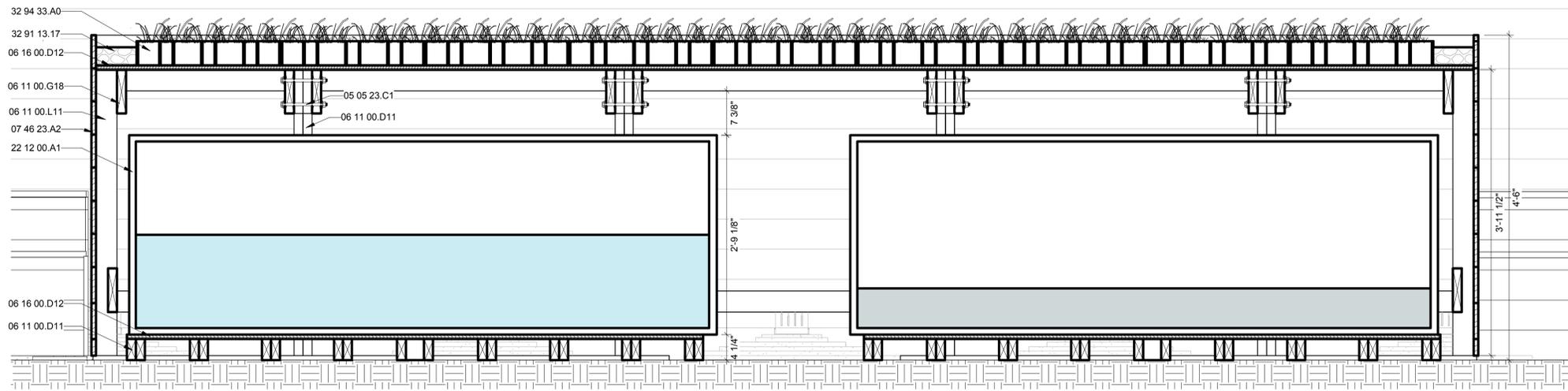
REFERENCE KEYNOTES

05 05 23.C1	1/2" A490 BOLT
05 56 11	CASTED METAL HANDLE
06 10 53.A1	48x96 TIMBERSIL AND 3/4" EXTERIOR PLYWOOD PALLET
06 11 00.A1	BLOCKING
06 11 00.D11	2x4 TIMBERSIL
06 11 00.G18	2x8 TIMBERSIL
06 11 00.L11	4x4 TIMBERSIL POST
06 16 00.D12	3/4" EXTERIOR GRADE PLYWOOD
06 16 00.D17	3/4" PAINTED PLYWOOD
07 46 23.A2	1 1/8" CEDAR SIDING
07 46 23.A3	3/4" CEDAR SHIPLAP SIDING
22 12 00.A1	POLYETHYLENE WATER STORAGE TANK
32 91 13.17	LANDSCAPING STONE
32 94 33.A0	VEGETAL I.D. HYDROPACK SEDUM TRAYS

SHEET KEYNOTES

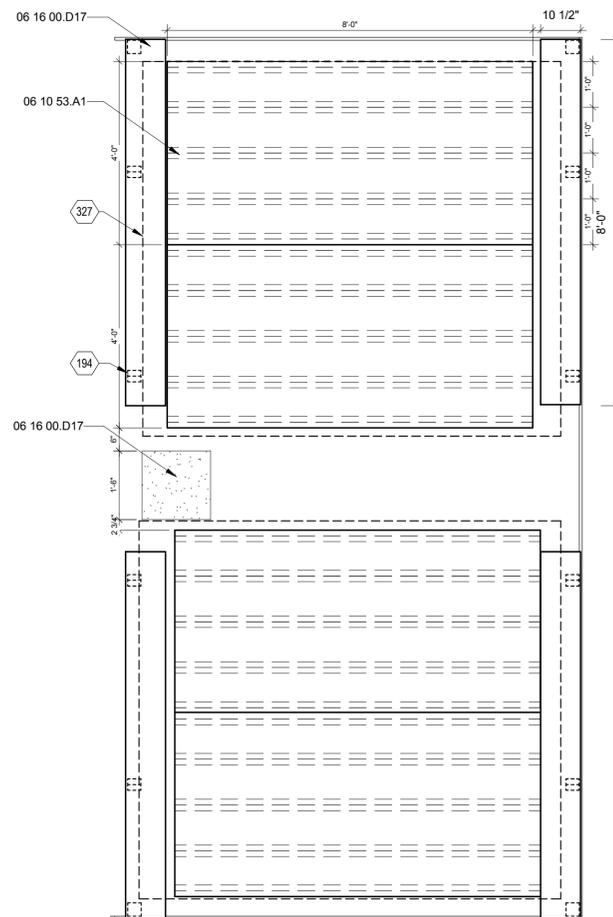
193	FOOTING BELOW
194	POST ABOVE
315	PIANO HINGE
326	HATCH ACCESS TO WATER TANK
	OPENING BELOW
327	WATER TANK ABOVE

DRAWING KEY



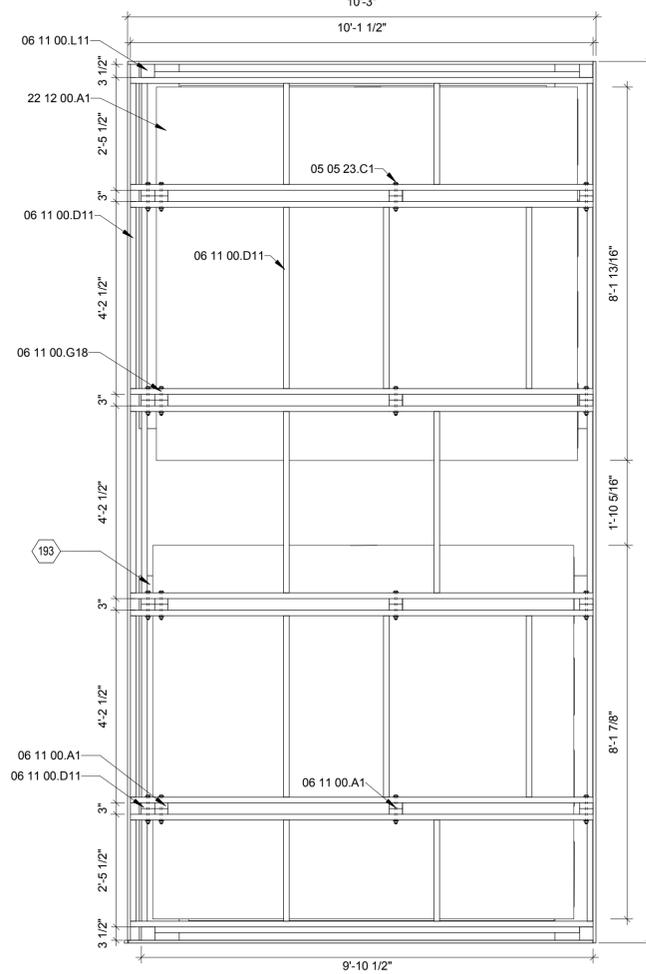
D1 WATER TANK HOUSING LONG SECTION

1" = 1'-0"



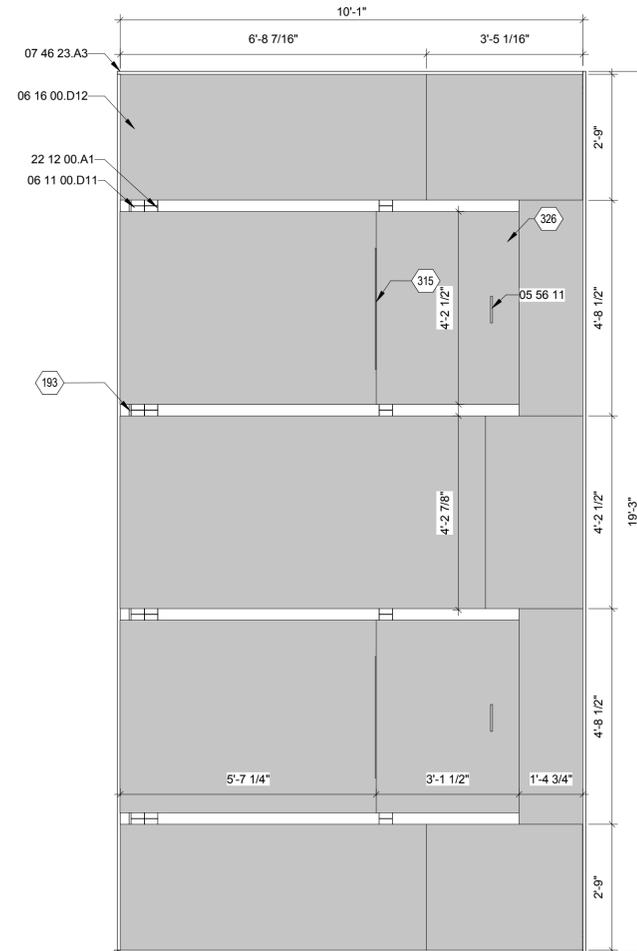
A1 WATER TANK HOUSING FOOTINGS

1/2" = 1'-0"



A3 TOP FRAMING OF WATER TANK HOUSING

1/2" = 1'-0"



A5 WATER TANK HOUSING ROOF

1/2" = 1'-0"

8/13/2011 9:39:57 AM

GENERAL NOTES:

- THE PROJECT SHALL CONFORM TO THE 2009 INTERNATIONAL BUILDING CODE, ALONG WITH THE DISTRICT OF COLUMBIA BUILDING CODE SUPPLEMENT 1999. ALL LOADS SHOWN ARE FACTORED.
- ALL STRUCTURAL WORK SHALL CONFORM TO THE PROJECT SPECIFICATIONS, ALL DRAWING NOTES, AND APPLICABLE REFERENCE STANDARDS. THE SCOPE OF WORK IS NOT SOLELY DEFINED BY THESE DOCUMENTS.
- TYPICAL DETAILS APPLY THROUGHOUT THE PROJECT, EVEN IF NOT SPECIFICALLY REFERENCED IN PLANS OR DETAILS. DETAILS OF CONSTRUCTION NOT FULLY SHOWN OR NOTED ON THE DRAWINGS NOR CALLED OUT IN THE SPECIFICATIONS SHALL BE OF THE SAME SIZE AND CHARACTER AS FOR SIMILAR CONDITIONS WHICH ARE SHOWN AND NOTED.
- DO NOT USE SCALED DIMENSIONS; USE ONLY WRITTEN DIMENSIONS. WHERE NO DIMENSION IS PROVIDED, CONSULT THE ARCHITECT FOR CLARIFICATIONS BEFORE PROCEEDING WORK.
- SEE ARCHITECTURAL DRAWINGS FOR SITE POSITIONING AND PROJECT DATUM REFERENCE (0'-0") SHOWN ON ARCHITECTURAL DRAWINGS.
- THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE CONDITIONS OF THE JOB SITE INCLUDING SAFETY OF PERSONS AND PROPERTY AND THE MEANS AND METHODS OF CONSTRUCTION.
- STRUCTURAL ELEMENTS SHALL BE CENTERED ABOUT GRIDLINES OR DIMENSION LINES, UNLESS OTHERWISE NOTED.
- ALL STRUCTURAL WORK SHALL BE COORDINATED WITH ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING, ETC. REQUIREMENTS. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS NOT SHOWN ON PLAN. DISCREPANCIES AND/OR INTERFACES SHALL BE REPORTED TO THE ARCHITECT IMMEDIATELY.
- CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ENGINEERED DESIGNS AND COORDINATION OF FINAL SUPPORT DETAILS OF NON-STRUCTURAL ITEMS IDENTIFIED IN CONTRACT DOCUMENTS INCLUDING; BUT NOT LIMITED TO:
 - MECHANICAL EQUIPMENT ATTACHMENTS
- DETAILS SHOWN IN STRUCTURAL DRAWINGS ARE INDICATIVE IN NATURE. CONTRACTOR TO DESIGN, COORDINATE, AND/OR PROVIDE ADDITIONAL FRAMING AS REQUIRED.
- OPENINGS SHALL NOT BE MADE IN ANY STRUCTURAL MEMBER UNLESS SPECIFICALLY SHOWN ON THE STRUCTURAL DRAWINGS OR APPROVED BY THE STRUCTURAL ENGINEER.
- DEFICIENT WORK AND WORK NOT IN CONFORMANCE WITH THE CONTRACT DOCUMENTS AS IDENTIFIED BY THE ARCHITECT OR INSPECTOR SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE. CONTRACTOR SHALL COMPENSATE OWNER FOR SERVICES ARISING FROM DEFICIENT WORK.
- THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ANY REQUIRED DEWATERING OF THE SITE DURING CONSTRUCTION.

DESIGN LOADS:

BUILDING LOADS

- STRUCTURAL DESIGN OF THIS BUILDING IS IN ACCORDANCE WITH THE 2009 INTERNATIONAL BUILDING CODE, ALONG WITH THE DISTRICT OF COLUMBIA BUILDING CODE SUPPLEMENT 1999 .
 - LIVE LOAD 40 PSF (FIRST FLOOR DESIGNED FOR 100 PSF ASSEMBLY LL)
 - DEAD LOAD

JOISTS/STUDS		
NI-90x	4.0	PLF
NI-40x	2.9	PLF
DECK	4	PSF
BLOCKING	1.5	PSF
MISC/MECH	5	PSF
 - INTERIOR PARTITIONS 10 PSF
 - WIND LOAD

BASIC WIND SPEED	120	MPH
IMPORTANCE FACTOR	1.0	
EXPOSURE	B	
 - SNOW LOAD

NO DRIFT REGIONS	20	PSF
DRIFT REGIONS	40	PSF
 - SEISMIC LOAD

SOIL PROFILE	D	FOR TEMPORARY PAD FOOTINGS AT TEMPORARY SITE LOCATION IN WASHINGTON, DC. NOTIFY ENGINEER OF ANY CHANGE TO SITE LOCATION.
SITE CLASS	II	
 - ROOF DEAD LOAD

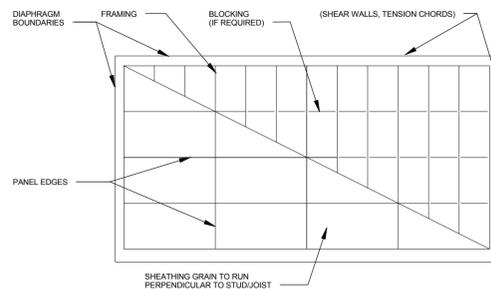
OPTIGREEN PANELS	15	PFS
ROOF PANELS	10	PSF
 - ROOF LIVE LOAD 20 PSF (SERVICE)

WOOD:

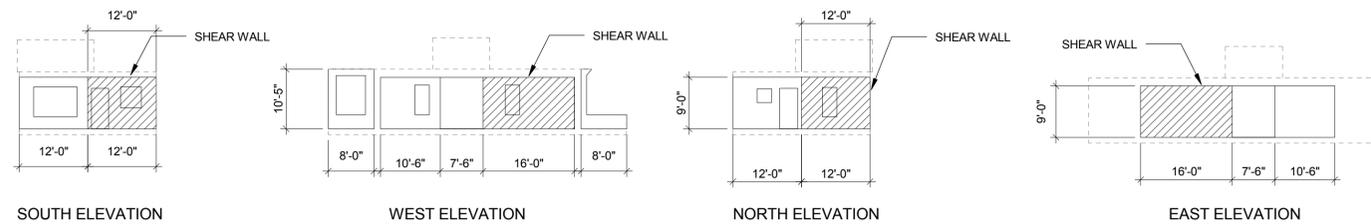
- ALL FRAMING LUMBER AND DETAILS OF WOOD CONSTRUCTION SHALL CONFORM TO THE "NATIONAL DESIGN SPECIFICATION FOR STRESS GRADE LUMBER AND ITS FASTENINGS" (INCLUDING SUPPLEMENTS).
- ALL ENGINEERED WOOD PRODUCTS ARE TO BE PROVIDED BY NORDIC ENGINEERED WOOD AND ARE TO MEET ALL SPECIFICATIONS OF "NORDIC ENGINEERED WOOD RESIDENTIAL CONSTRUCTION GUIDE" OR APPROVED EQUAL.
- LAMINATED LUMBER SECTION ARE OF GRADE 24F-1.9e LVL, PER NORDIC ENGINEERED WOOD, OR APPROVED EQUAL.
- REFER TO "NORDIC RESIDENTIAL CONSTRUCTION GUIDE" FOR ALL INFORMATION INCLUDING, BUT NOT LIMITED TO:
 - PENETRATION ALLOWANCES IN WOOD MEMBERS
 - BEARING REQUIREMENTS OF JOISTS
 - CONNECTION / BLOCKING DETAILS
- TYPICAL LUMBER SHALL BE OF THE FOLLOWING MINIMUM GRADE AND SHALL BE GRADE STAMPED BY A RECOGNIZED GRADING AGENCY, SHALL BE SURFACED DRY, AND SHALL BE USED AT A MAXIMUM OF 19% MOISTURE CONTENT.

SPECIES	SPRUCE-PINE-FUR
GRADE	2
MIN. Fb	875
MIN. Fc	1,150
MODULUS OF ELASTICITY, E	1,400,000 PSI
- PLYWOOD SHEATHING SHALL BE APA GRADE STAMPED FOR THE SPECIFIC SPAN, AND SHALL BE MADE WITH EXTERIOR GLUE, AND SHALL BE OF THE FOLLOWING THICKNESS:

FLOORS/ROOFS:	APA RATED SHEATHING EXPOSURE I
NON-SHEAR WALLS:	APA RATED SHEATHING EXTERIOR EXPOSURE I
SHEAR WALLS:	APA RATED STRUCTURAL SHEATHING GRADE I EXTERIOR EXPOSURE I
- ALL PLYWOOD SHEATHING SHALL BE GLUE AND NAILED TO FLOOR JOISTS USING APA APPROVED ELASTOMERIC CONSTRUCTION ADHESIVE AND CODE REQUIRED NAILING.
- DETAILS OF WOOD FRAMING SUCH AS NAILING, BLOCKING, BRIDGING, ETC. SHALL CONFORM TO THE 2009 INTERNATIONAL BUILDING CODE OR THE "NORDIC RESIDENTIAL CONSTRUCTION GUIDE" UNLESS GREATER REQUIREMENTS ARE SHOWN IN DETAILS.
- WHERE BEAMS ARE FLUSH FRAMED TO HEADER, USE APPROVED TYPE BEAM HANGER.
- NO BEAMS, EXCEPT AS SHOWN IN DETAILS, SHALL BE CUT OR NOTCHED WITHOUT APPROVAL.



PLYWOOD DIAPHRAGM NAILING SCHEDULE	
FLOORS/ROOFS	3/4" PLYWOOD SHEATHING, TOP AND BOTTOM OF JOISTS (1ST FLOOR) 1/2" PLYWOOD SHEATHING, TOP AND BOTTOM OF JOISTS (2ND FLOOR AND ROOF) 10D NAILS @ 6" O.C. AT ALL EDGES AND OVER ALL BEAM AND WALL LINES. 10D NAILS @ 6" O.C. AT INTERMEDIATE SUPPORTS. BLOCK ALL UNSUPPORTED EDGES.
SHEARWALLS EXTERIOR	1/2" PLYWOOD SHEATHING, GRADE I TWO SIDES OF WALL. SEE PLAN FOR LOCATION OF SHEARWALLS. 10D NAILS @ 6" O.C. AT ALL PANEL EDGES. 10D NAILS @ 6" O.C. AT INTERMEDIATE SUPPORTS. BLOCK ALL UNSUPPORTED EDGES. PROVIDE 2x4x12 GLEUED & NAILED AT EACH END OF SHEARWALLS WITH HOLD DOWN ANCHOR AT EACH END (TOP & BOTTOM). PROVIDE 1/2" DIA. ANCHOR BOLT AT 32" O.C. AT SILL PLATE.
NOTES: SUBSTITUTION OF STAPLES NOT ACCEPTABLE	



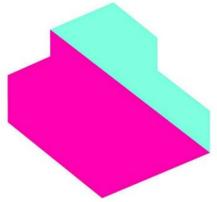
A3 ELEVATION SHEAR WALLS
1/16" = 1'-0"

GENERAL SHEET NOTES

REFERENCE KEYNOTES

SHEET KEYNOTES

DRAWING KEY



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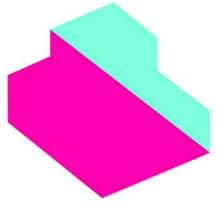
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SHEET TITLE

STRUCTURAL NOTES AND SYMBOLS

S-001



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SHEET TITLE

FOUNDATION PLAN

S-101

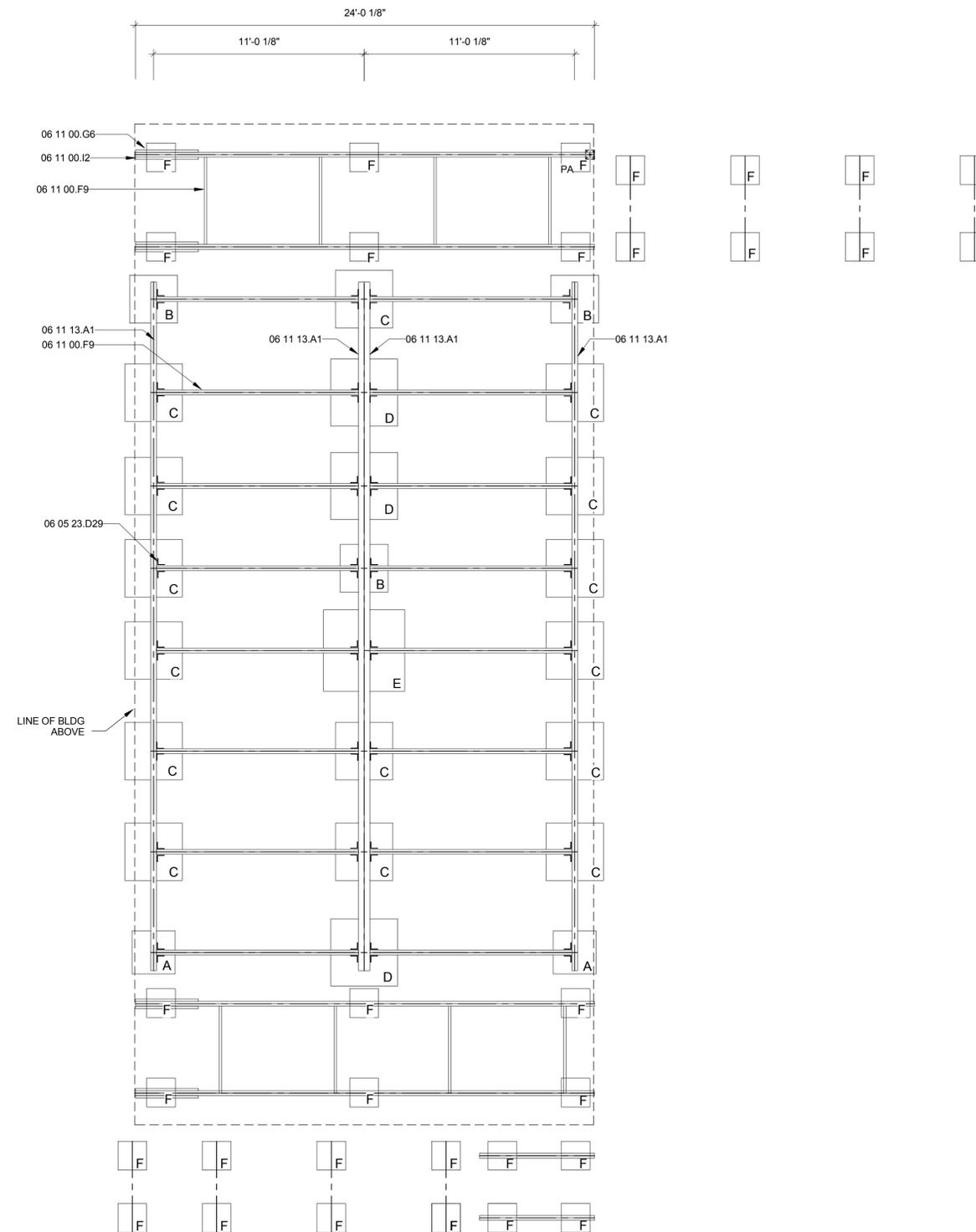
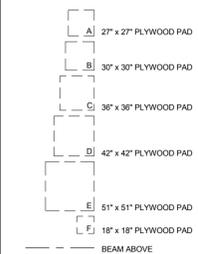
GENERAL SHEET NOTES

REFERENCE KEYNOTES

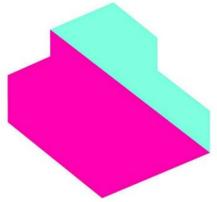
06 05 23.D29 LUS26-2 SIMPSON JOIST HANGER
06 11 00.F9 2X6 JOISTS
06 11 00.G6 2X8 TIMBERSIL JOIST
06 11 00.I2 2X12 PRESSURE TREATED LUMBER
06 11 13.A1 3 1/2 X 9 1/2 NORDIC GLULAM BEAM

SHEET KEYNOTES

DRAWING KEY



A1 FOUNDATION PLAN
1/4" = 1'-0"



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SHEET TITLE

FRAMING PLAN - FL 01

S-102

GENERAL SHEET NOTES

1. ALL DIMENSIONS TO EDGE OF FRAMING U.O.N.
2. SEE SHEETS A-101 A-102 FOR WALL TYPES TAGS AND REFERRING SHEETS A-601 AND A-602 FOR ALL WALL TYPE ASSEMBLY INFORMATION.

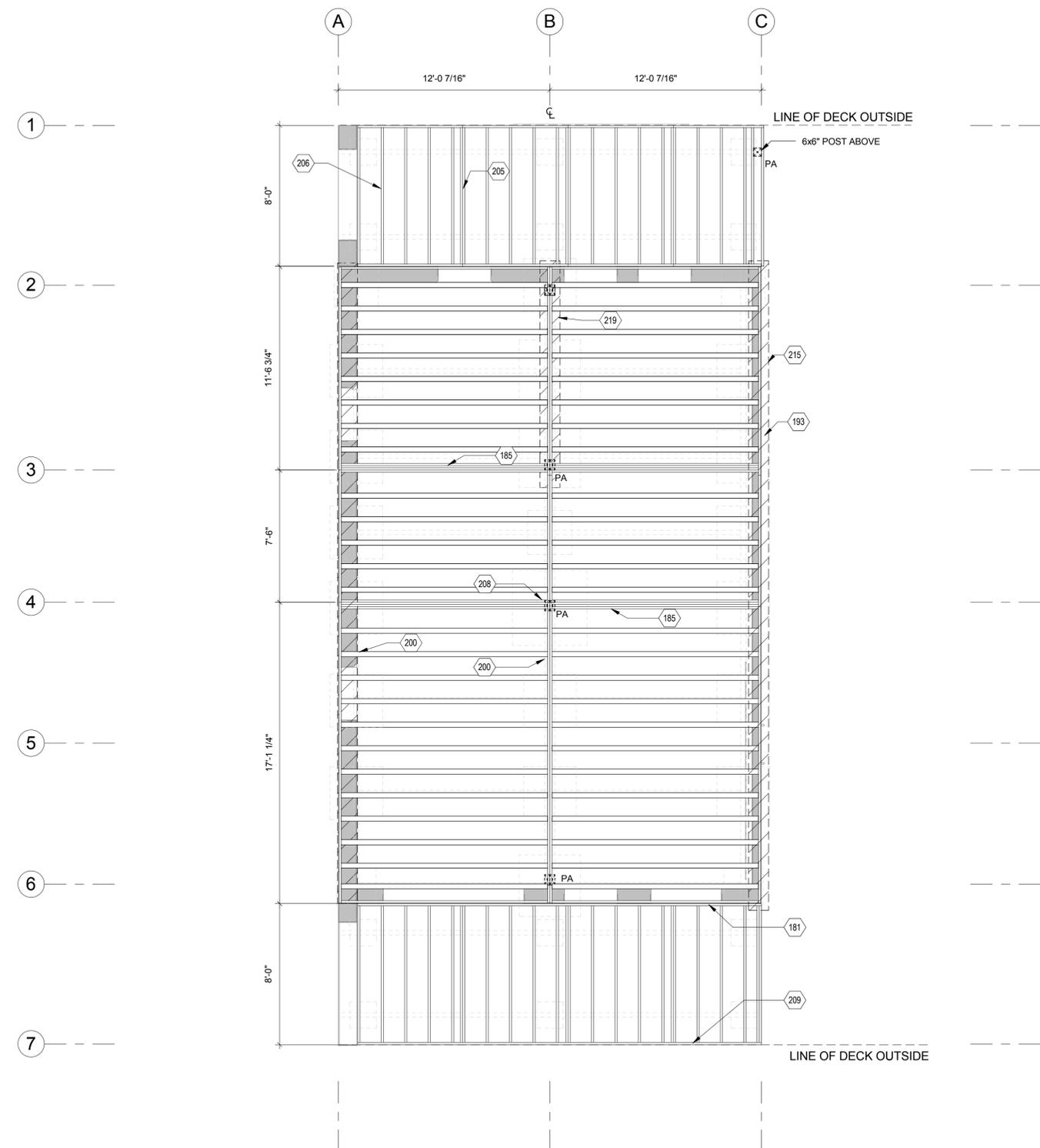
REFERENCE KEYNOTES

SHEET KEYNOTES

- 181 RIM JOIST 1 1/8 X 11 7/8"
- 185 1 1/8 x 11 7/8 LSL BEAM (4)
- 193 FOOTING BELOW
- 197 BEARING WALL ABOVE NI-40x @ 16" O.C.
- 200 BEAM BELOW
- 205 2X8 (2)
- 206 2X8 @ 16" O/C
- 208 SEE DETAIL A3 ON SHEET A-504
- 209 SEE SHEET S-401 FOR DECK FRAMING
- 215 BEARING WALL ABOVE 2X6 @ 16" O.C.
- 219 (2) BEARING WALLS ABOVE 2X4 @ 16" O.C.

DRAWING KEY

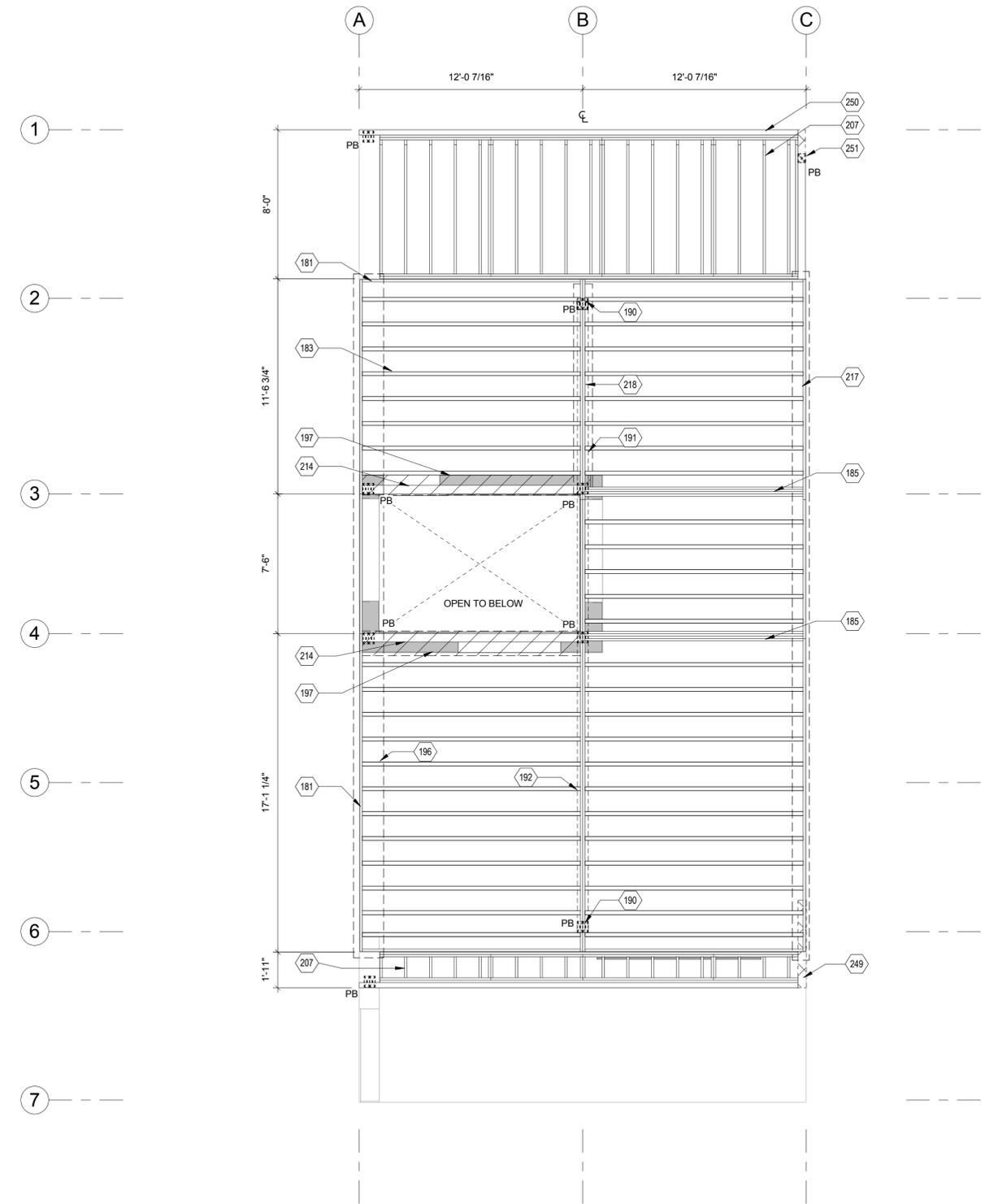
- POST ABOVE
- FOOTING PAD BELOW
- BEARING WALL ABOVE
- WALL ABOVE



A3 FIRST FLOOR STRUCTURAL PLAN
1/4" = 1'-0"

8/13/2011 9:41:16 AM

8/13/2011 9:41:18 AM



A3 ROOF STRUCTURAL PLAN
1/4" = 1'-0"

GENERAL SHEET NOTES

- 1. ALL DIMENSIONS TO EDGE OF FRAMING U.O.N.

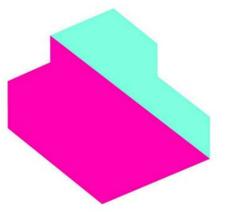
REFERENCE KEYNOTES

SHEET KEYNOTES

- 181 RIM JOIST 1 1/8 X 11 7/8"
- 183 NI-40x WOOD I-JOIST 2 1/2 X 11 7/8" @ 16" O/C
- 185 1 1/8 X 11 7/8 LSL BEAM (4)
- 190 3 1/2 X 7" LVL COLUMN BELOW (2)
- 191 3 1/2 X 9 1/2" NORDIC GLULAM BEAM (2)
- 192 3 1/2 X 14" NORDIC GLULAM BEAM (2)
- 196 BEARING WALL BELOW NI-40x @ 16" O.C.
- 197 BEARING WALL ABOVE NI-40x @ 16" O.C.
- 207 2X8 @ 16" O/C WITH SLOPPED FURRING FOR DRAINAGE
- 214 5 1/2 X 11 7/8" LVL
- 217 BEARING WALL BELOW 2X6 @ 16" O.C.
- 218 (2) BEARING WALLS BELOW 2X4 @ 16" O.C.
- 249 LAMINATED BEAM OF 2X12 (3) WITH 2 LAYERS OF 1/2" OSB
- 250 3 1/2 X 11 7/8 NORDIC GLULAM BEAM
- 251 6 X 6" POST BELOW

DRAWING KEY

- POST BELOW
- PB BEARING WALL BELOW
- BEARING WALL ABOVE
- WALL ABOVE
- CANTILEVER PORCH BEAM



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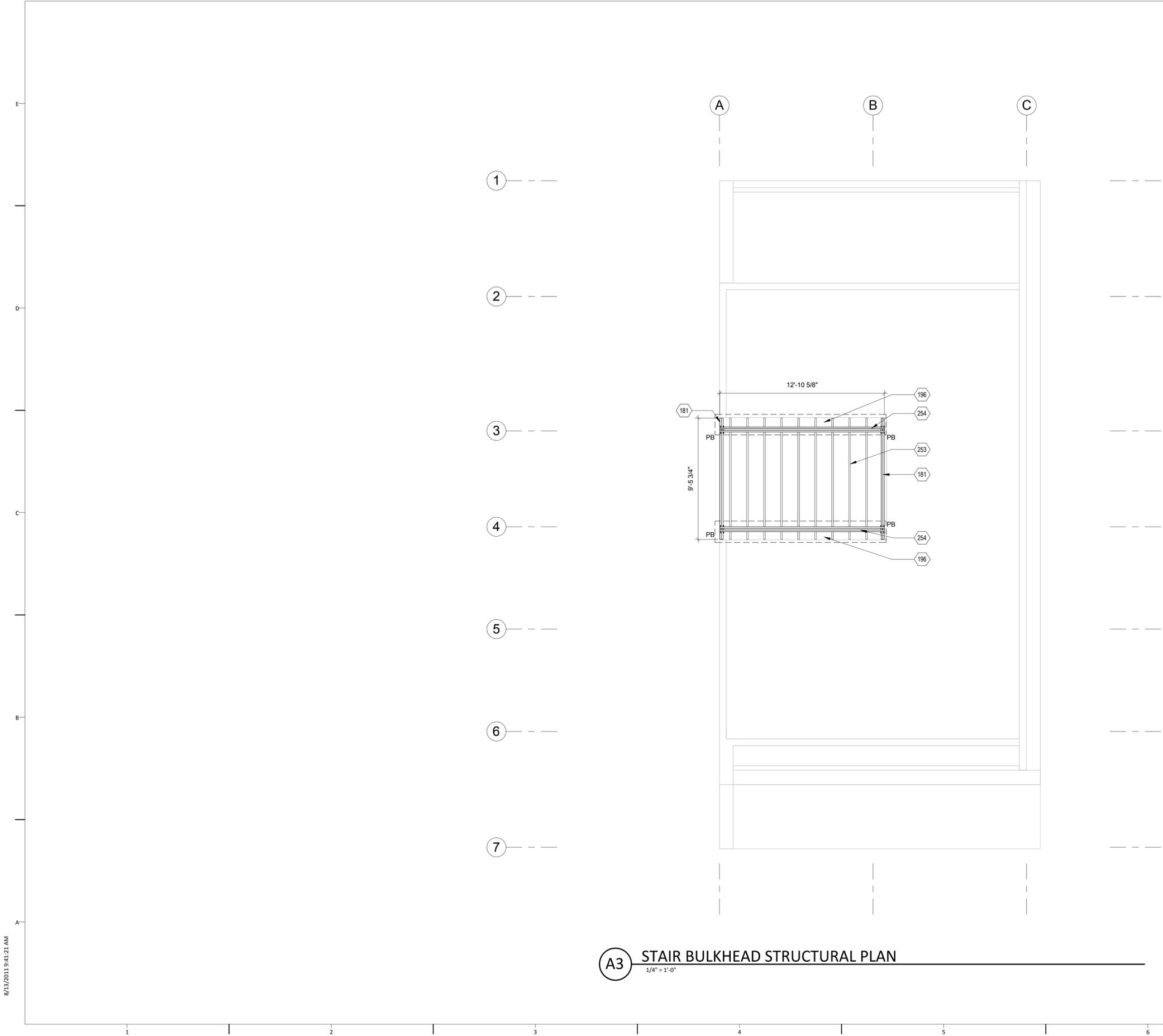
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FRAMING PLAN - ROOF

S-103

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A3 STAIR BULKHEAD STRUCTURAL PLAN
 1/4" = 1'-0"

GENERAL SHEET NOTES

1. ALL DIMENSIONS TO EDGE OF FRAMING U.O.N.

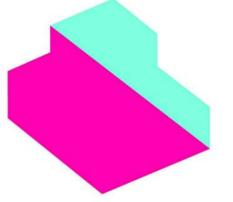
REFERENCE KEYNOTES

SHEET KEYNOTES

- 181 RIM JOIST 1 1/8 X 11 7/8"
- 196 BEARING WALL BELOW NI-40x @ 16" O.C.
- 253 TAPERED 2X12 JOIST @ 16" O.C.
- 254 2X12 (3) BEAM

DRAWING KEY

- POST BELOW
- BEARING WALL BELOW



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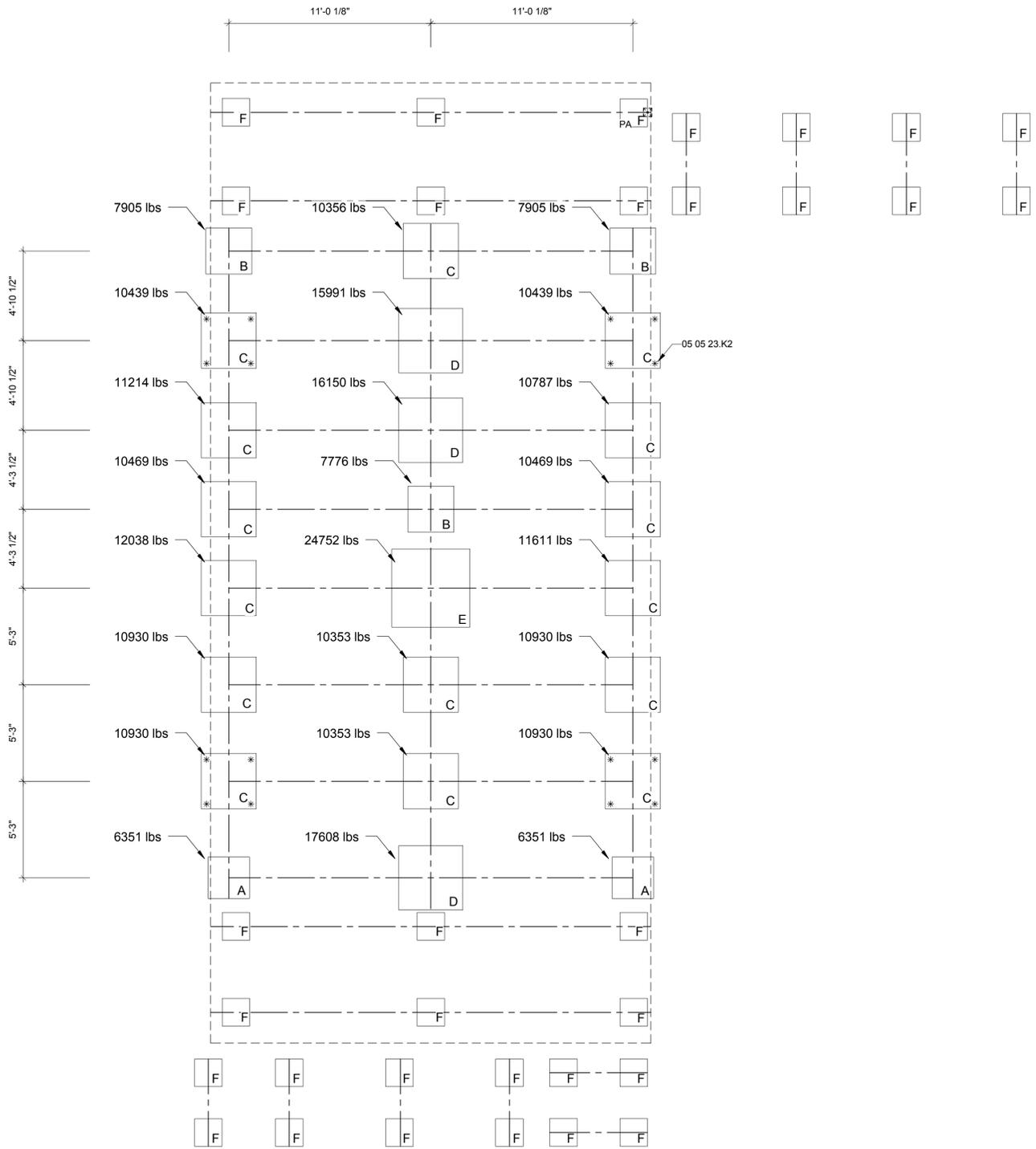
SHEET TITLE

FRAMING PLAN - STAIR BULKHEAD ROOF

S-104

8/13/2011 9:41:23 AM

A2 BEARING PRESSURE PLAN
1/4" = 1'-0"



GENERAL SHEET NOTES

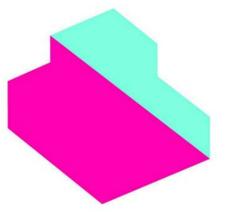
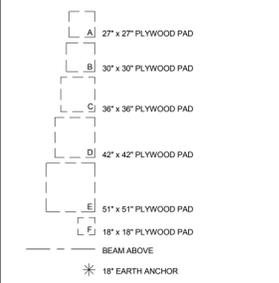
1. MAXIMUM HOUSE FOOTING LOADS 1500 PSF
2. MINIMUM HOUSE FOOTING LOADS 1000 PSF
3. MINIMUM DECK/RAMP FOOTING LOADS 250 PSF
3. TIE-DOWNS LIMITED TO 18 INCHES VERTICAL DEPTH

REFERENCE KEYNOTES

- 05 05 23.K2 18" EARTH ANCHOR

SHEET KEYNOTES

DRAWING KEY



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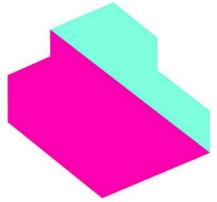
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BEARING PRESSURE PLAN

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SHEET TITLE

DECK FRAMING PLAN

S-401

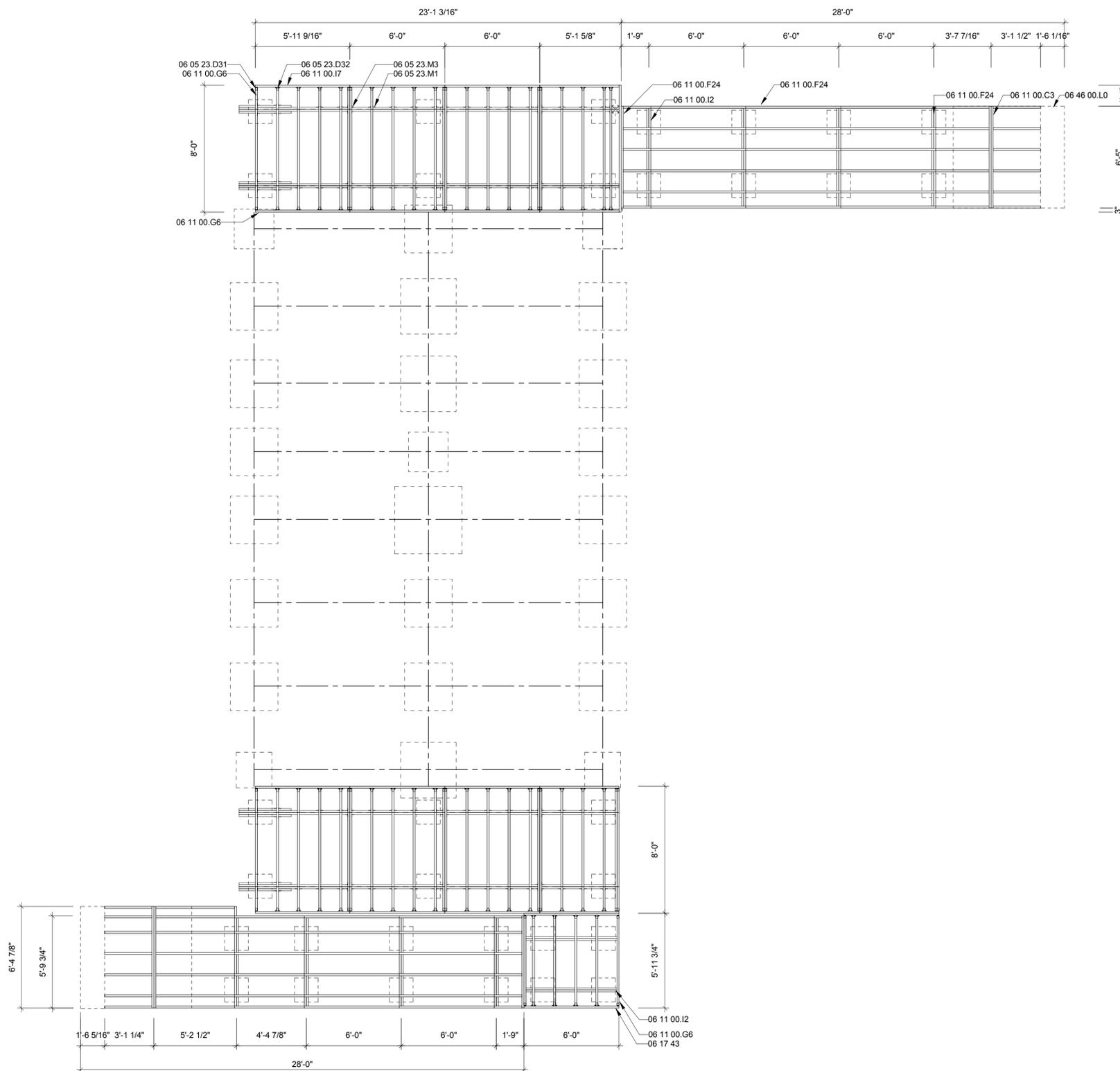
GENERAL SHEET NOTES

REFERENCE KEYNOTES

06 05 23.D31 LUC26Z SIMPSON JOIST HANGER
 06 05 23.D32 LUS28 SIMPSON JOIST HANGER
 06 05 23.M1 H1 SIMPSON HURRICANE TIE
 06 05 23.M3 H2.5A SIMPSON HURRICANE TIE
 06 11 00.C3 2X3 TIMBERSIL
 06 11 00.F24 2x6 TIMBERSIL
 06 11 00.G6 2X8 TIMBERSIL JOIST
 06 11 00.I2 2X12 PRESSURE TREATED LUMBER
 06 11 00.I7 2X12 TIMBERSIL
 06 17 43 RIM JOISTS
 06 46 00.L0 THRESHOLD

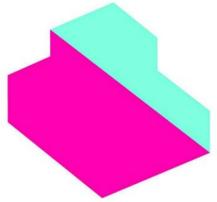
SHEET KEYNOTES

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A1 DECK FRAMING PLAN
 1/4" = 1'-0"

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SHEET TITLE

FOUNDATION DETAILS

S-501

GENERAL SHEET NOTES

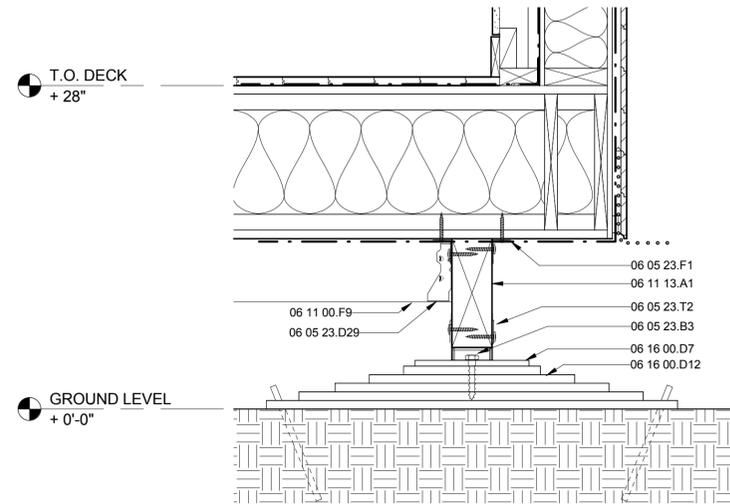
- PLYWOOD LAYERS OF ALL FOOTINGS TO BE SCREWED TOGETHER
- (4) 3/4" EARTH ANCHORS DRIVEN THROUGH FOUR EXTERIOR FOOTINGS, VERTICAL DEPTH TO NOT EXCEED 18".

REFERENCE KEYNOTES

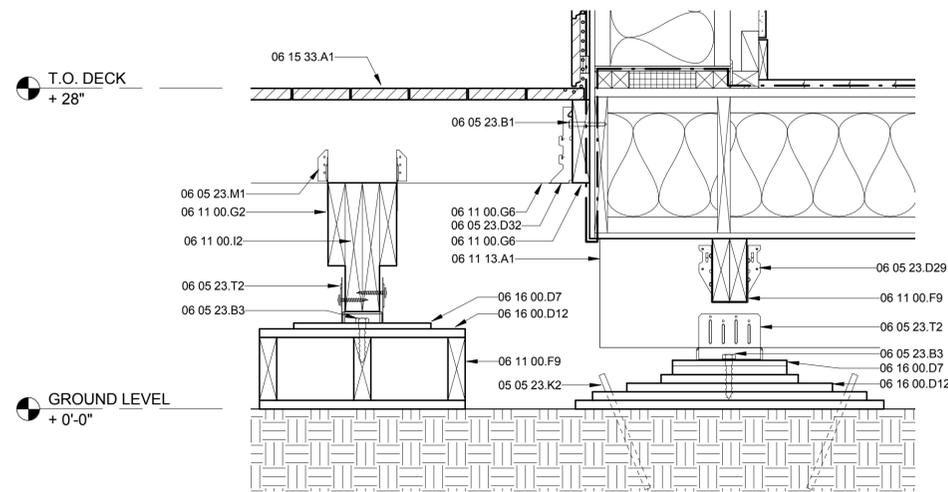
- | | |
|--------------|----------------------------------|
| 06 05 23.K2 | 18" EARTH ANCHOR |
| 06 05 23.B1 | 3/8" LAG SCREW |
| 06 05 23.B3 | 5/8" LAG SCREW |
| 06 05 23.D29 | LUS26-2 SIMPSON JOIST HANGER |
| 06 05 23.D32 | LUS28 SIMPSON JOIST HANGER |
| 06 05 23.F1 | A23 SIMPSON ANGLE |
| 06 05 23.M1 | H1 SIMPSON HURRICANE TIE |
| 06 05 23.T2 | ABE46 SIMPSON POST BASE |
| 06 11 00.F9 | 2X6 JOISTS |
| 06 11 00.G2 | 2X8 PRESSURE TREATED LUMBER |
| 06 11 00.G6 | 2X8 TIMBERSIL JOIST |
| 06 11 00.I2 | 2X12 PRESSURE TREATED LUMBER |
| 06 11 13.A1 | 3 1/2 X 9 1/2 NORDIC GLULAM BEAM |
| 06 15 33.A1 | WESTERN RED CEDAR DECKING |
| 06 16 00.D7 | 1/2" EXTERIOR GRADE PLYWOOD |
| 06 16 00.D12 | 3/4" EXTERIOR GRADE PLYWOOD |

SHEET KEYNOTES

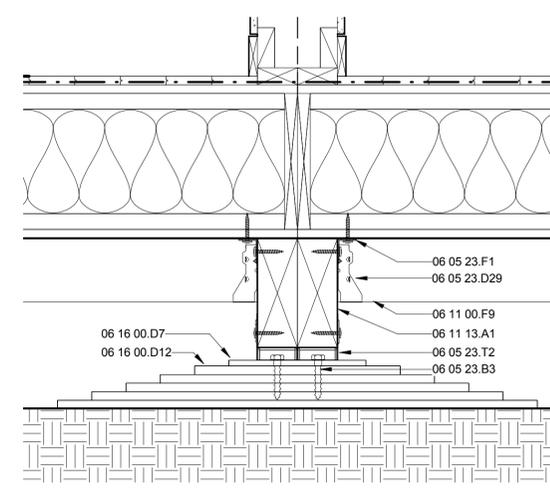
DRAWING KEY



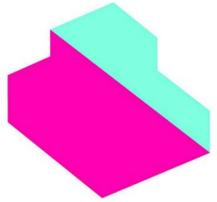
C5 EXT. WALL TO FOOTING DETAIL
1 1/2" = 1'-0"



A1 EXT. WALL TO FOOTINGS AT PORCH
1 1/2" = 1'-0"



A5 INTERIOR FOOTING DETAIL
1 1/2" = 1'-0"



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SHEET TITLE

STRUCTURAL DETAILS

S-502

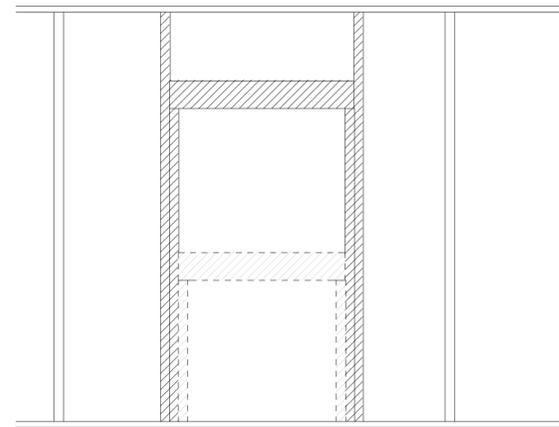
GENERAL SHEET NOTES

REFERENCE KEYNOTES

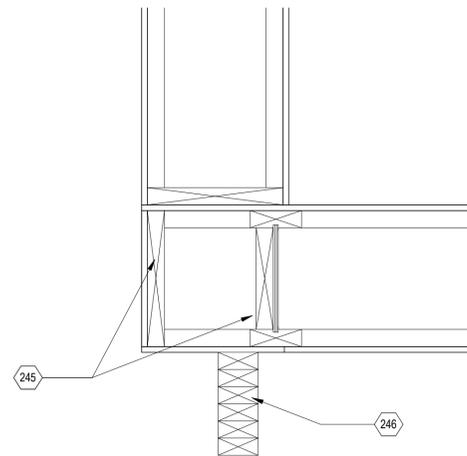
SHEET KEYNOTES

- 245 PROVIDE BLOCKING UNDER STUD FLANGES
- 246 NORDIC LAM
- 247 MAINTAIN MIN. JOIST SPACING
- 248 PROVIDE BLOCKING BETWEEN STUD FLANGES

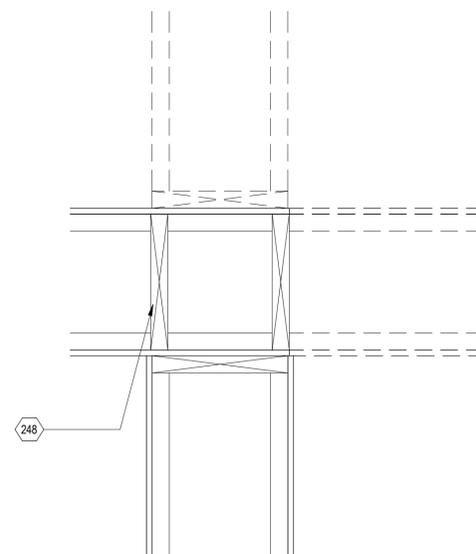
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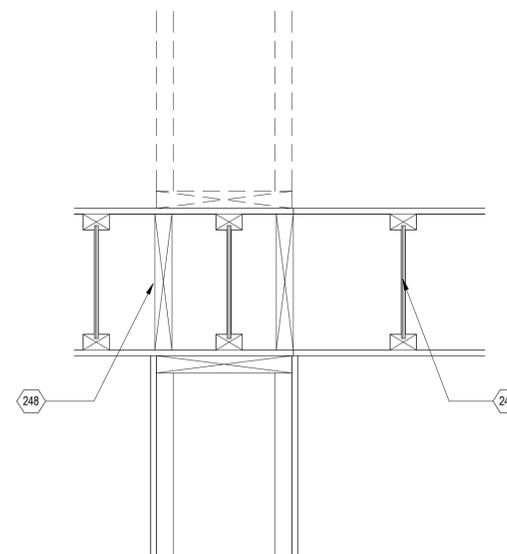
C2 TYP. WALL OPENING FRAMING LAYOUT
1/2" = 1'-0"



C4 WALL ABOVE LVL TYP. DETAIL
1 1/2" = 1'-0"

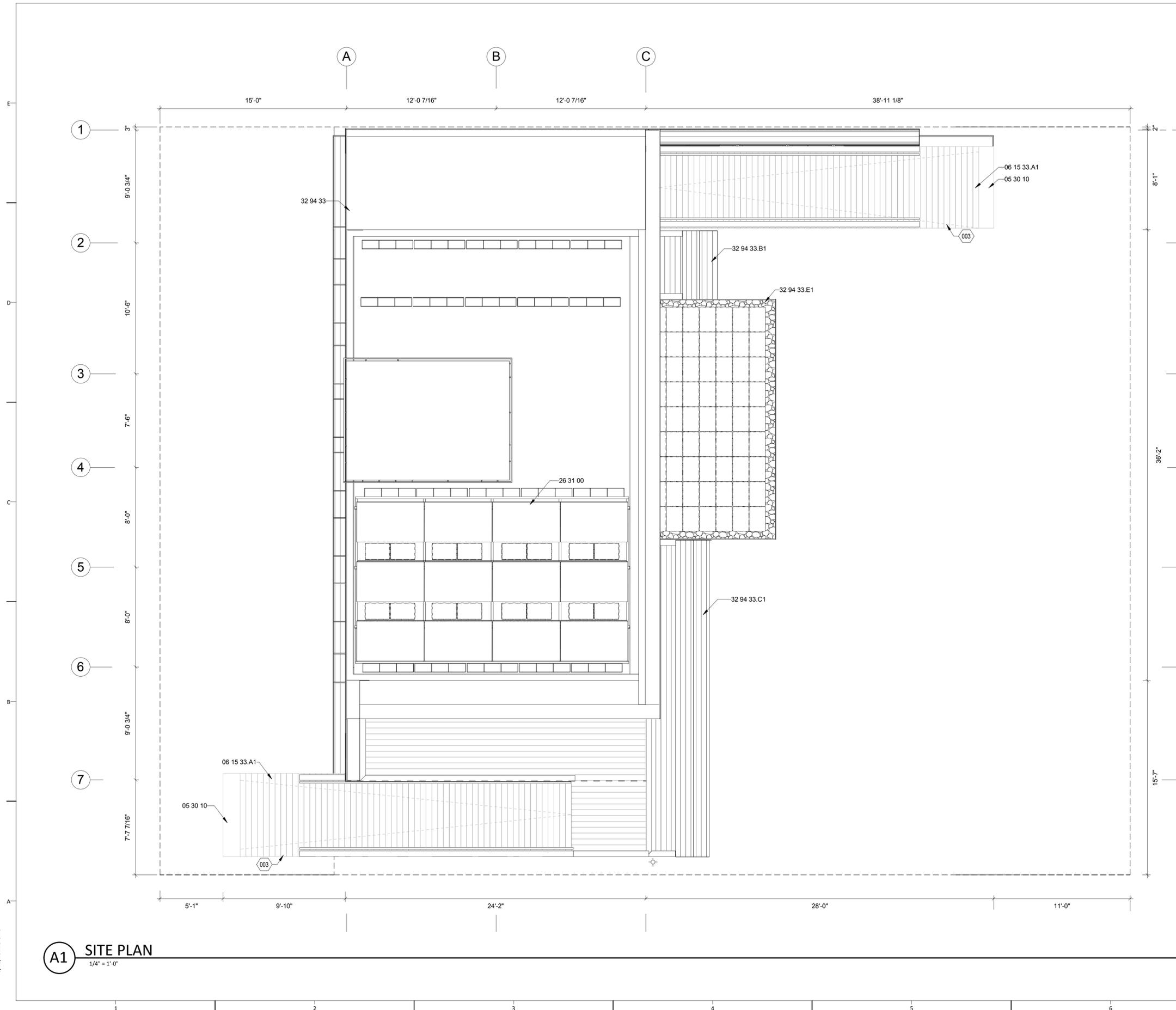


A2 JOIST PERP. TO WALL
1 1/2" = 1'-0"



A4 JOIST PARALLEL TO WALL
1 1/2" = 1'-0"

8/13/2011 9:32:57 AM



A1 SITE PLAN
1/4" = 1'-0"

GENERAL SHEET NOTES

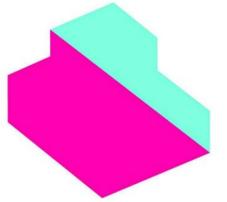
REFERENCE KEYNOTES

- 05 30 10 METAL RAMP EDGE
- 06 15 33.A1 WESTERN RED CEDAR DECKING
- 26 31 00 PHOTOVOLTAIC COLLECTORS
- 32 94 33 PLANTERS
- 32 94 33.B1 VEGETABLE PLANTER WITH CEDAR BENCH SEATING
- 32 94 33.C1 RAINGARDEN PLANTER WITH CEDAR BENCH SEATING
- 32 94 33.E1 VEGETATED WATER TANK HOUSING

SHEET KEYNOTES

- 003 RAMP SLOPE AT 1:12

DRAWING KEY



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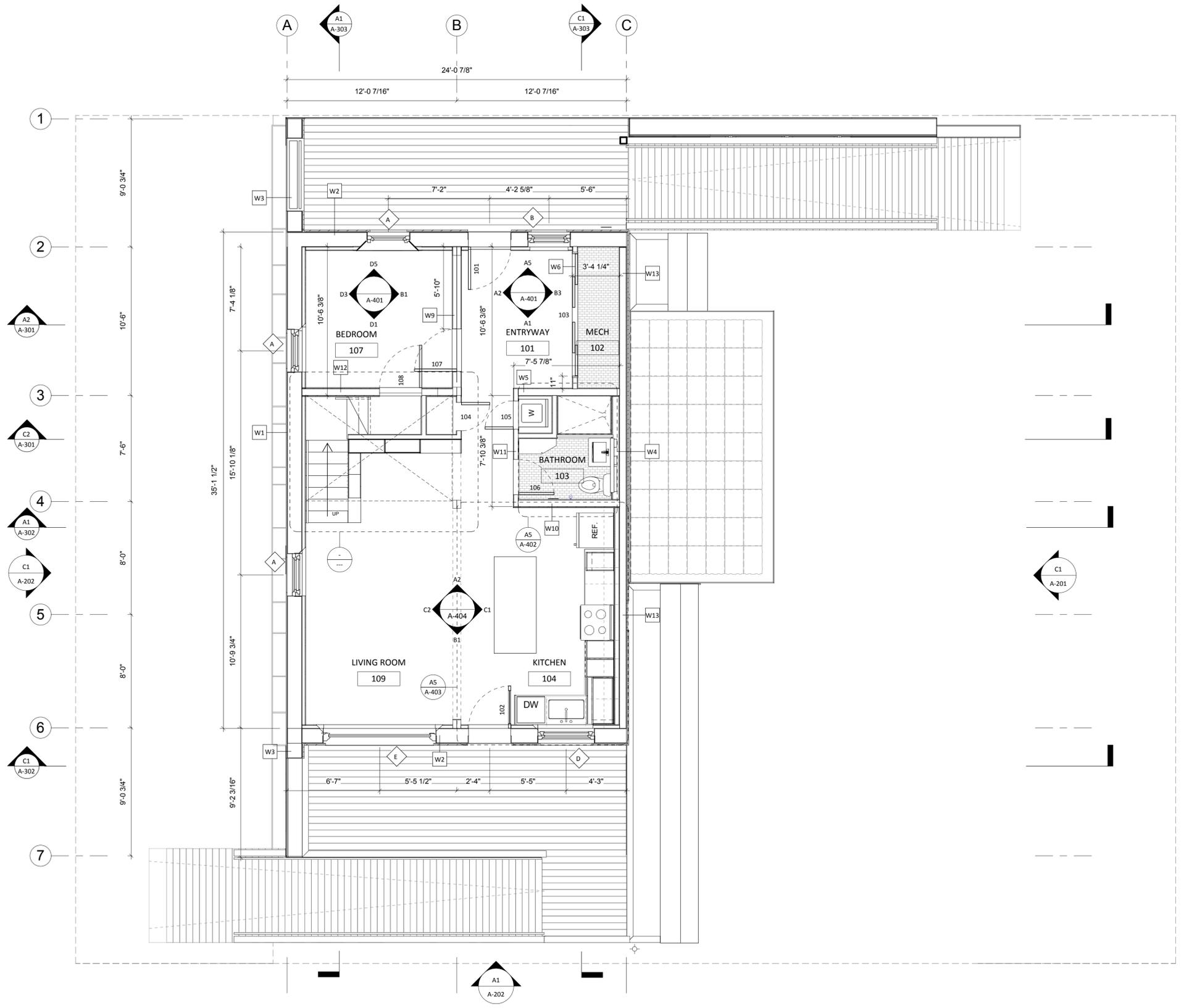
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SHEET TITLE

SITE PLAN

A-001

8/13/2011 9:33:01 AM



A1 FIRST FLOOR PLAN
1/4" = 1'-0"

GENERAL SHEET NOTES
STAIRS, BATHROOM AND BEDROOM WILL BE CORDONED OFF DURING EXHIBIT. THESE WILL NOT BE ACCESSIBLE BY ANY INDIVIDUAL DURING THE PUBLIC TOUR.

REFERENCE KEYNOTES

SHEET KEYNOTES

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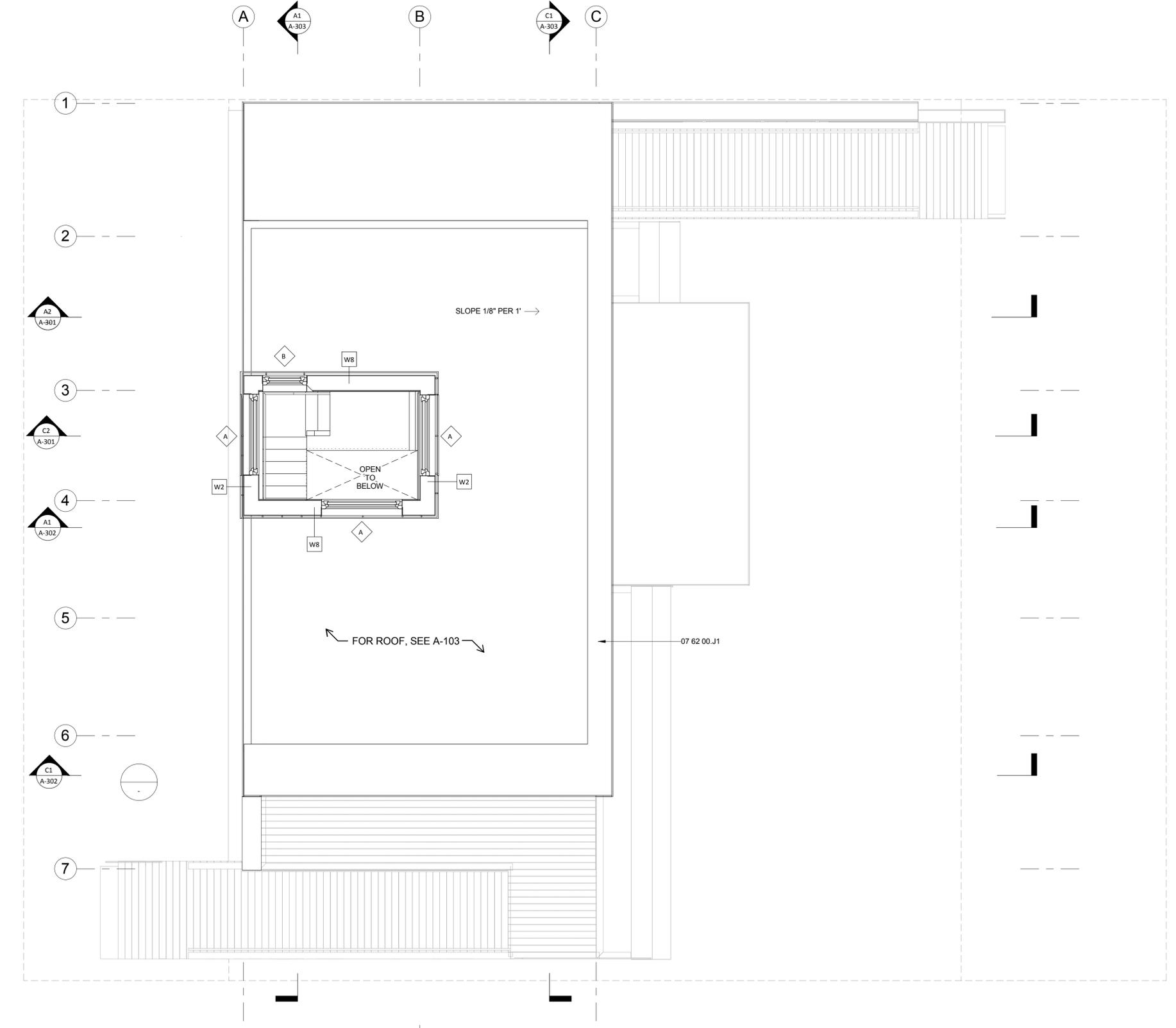
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SHEET TITLE

FIRST FLOOR PLAN

A-101

8/13/2011 9:33:06 AM



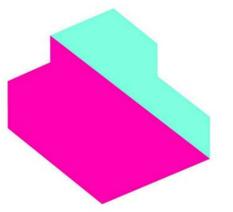
A1 LOFT PLAN
1/4" = 1'-0"

GENERAL SHEET NOTES

REFERENCE KEYNOTES
07 62 00.J1 PARAPET CAP FLASHING

SHEET KEYNOTES

DRAWING KEY



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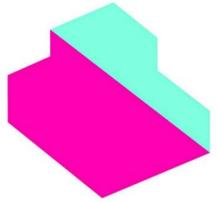
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SHEET TITLE

LOFT PLAN

A-102



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SHEET TITLE

ROOF PLAN

A-103

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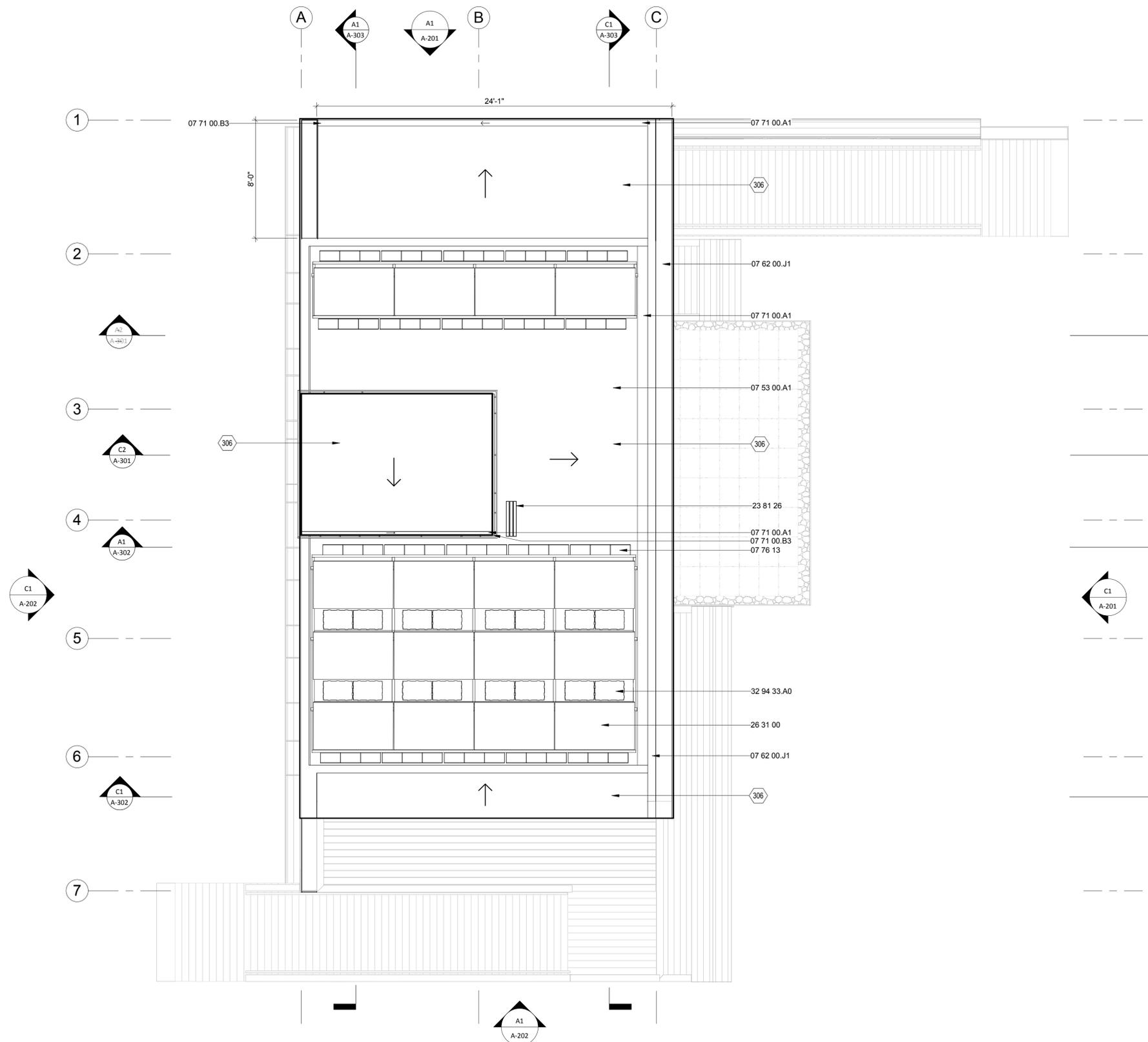
REFERENCE KEYNOTES

07 53 00.A1	SINGLE-PLY MEMBRANE ROOFING
07 62 00.J1	PARAPET CAP FLASHING
07 71 00.A1	GUTTER
07 71 00.B3	DOWNSPOUT
07 76 13	ROOF BALLAST PAVERS
23 81 26	SPLIT SYSTEM AIR CONDITIONERS
26 31 00	PHOTOVOLTAIC COLLECTORS
32 94 33.A0	VEGETAL I.D. HYDROPACK SEDUM TRAYS

SHEET KEYNOTES

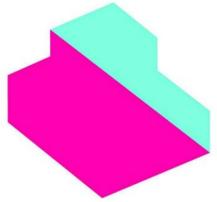
306 ROOF SLOPE 1/8" = 1'

DRAWING KEY



A1 ROOF PLAN
1/4" = 1'-0"

8/13/2011 9:33:10 AM



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SHEET TITLE

EXTERIOR ELEVATION

A-201

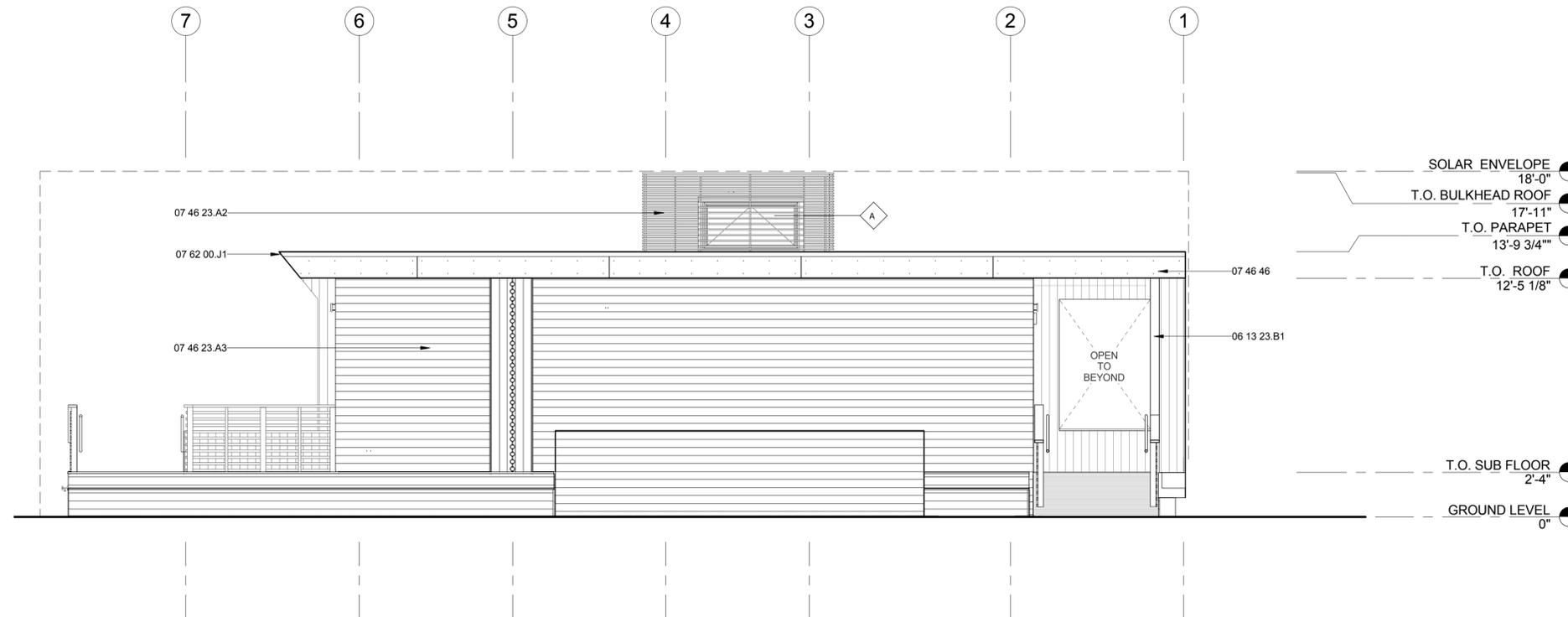
GENERAL SHEET NOTES

REFERENCE KEYNOTES

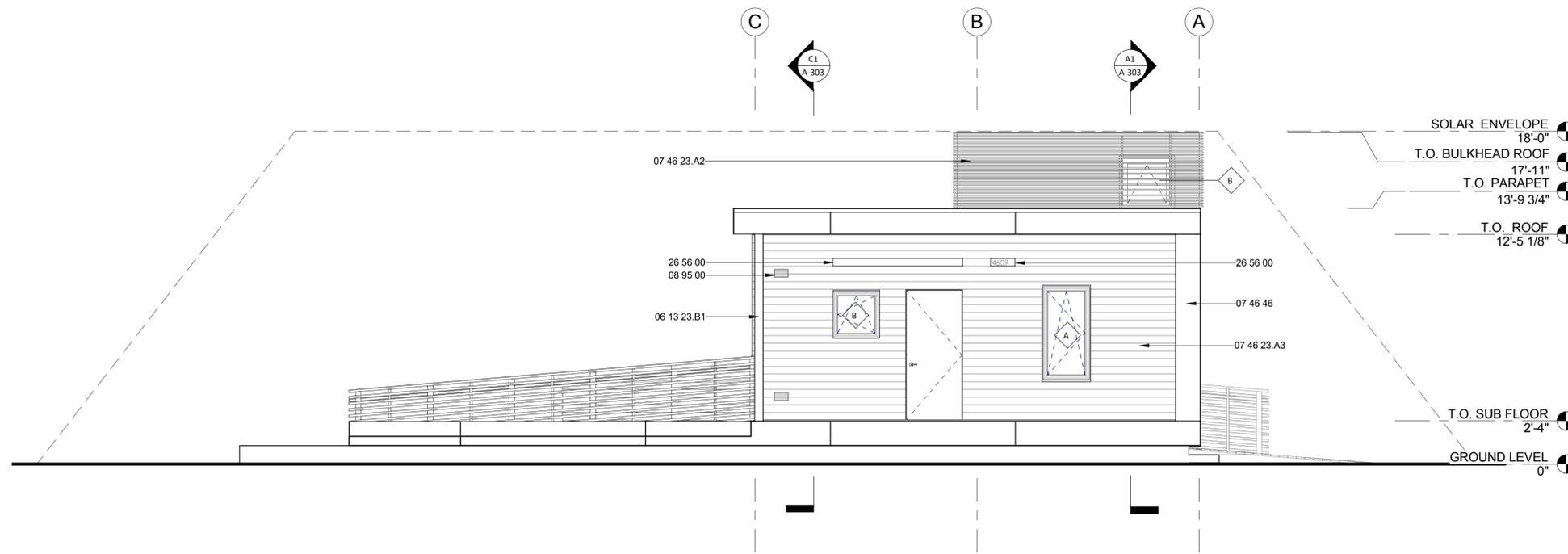
06 13 23.B1	6X6 HEAVY TIMBER
07 46 23.A2	1 1/8" CEDAR SIDING
07 46 23.A3	3/4" CEDAR SHIPLAP SIDING
07 46 46	CEMENT BOARD SIDING
07 62 00.J1	PARAPET CAP FLASHING
08 95 00	VENTS
26 56 00	EXTERIOR LIGHTING

SHEET KEYNOTES

DRAWING KEY

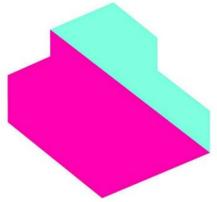


C1 EAST ELEVATION
1/4" = 1'-0"



A1 NORTH ELEVATION
1/4" = 1'-0"

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EXTERIOR ELEVATION

A-202

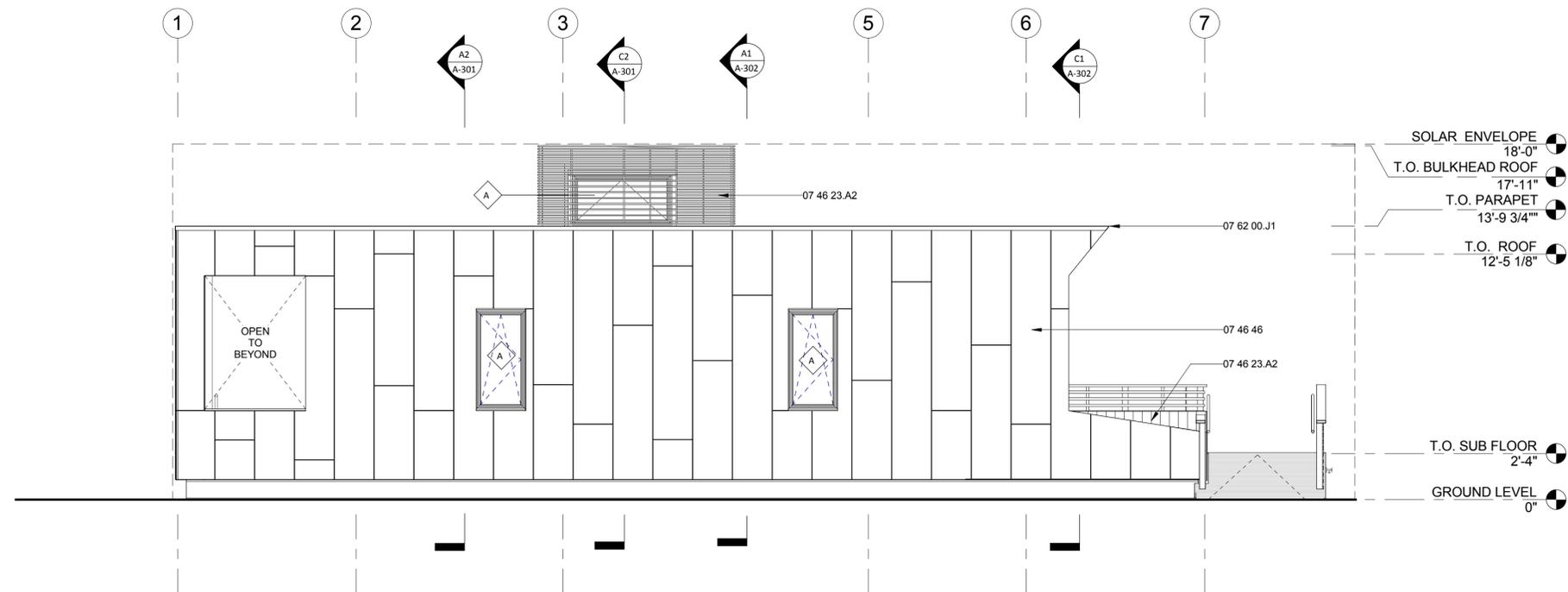
GENERAL SHEET NOTES

REFERENCE KEYNOTES

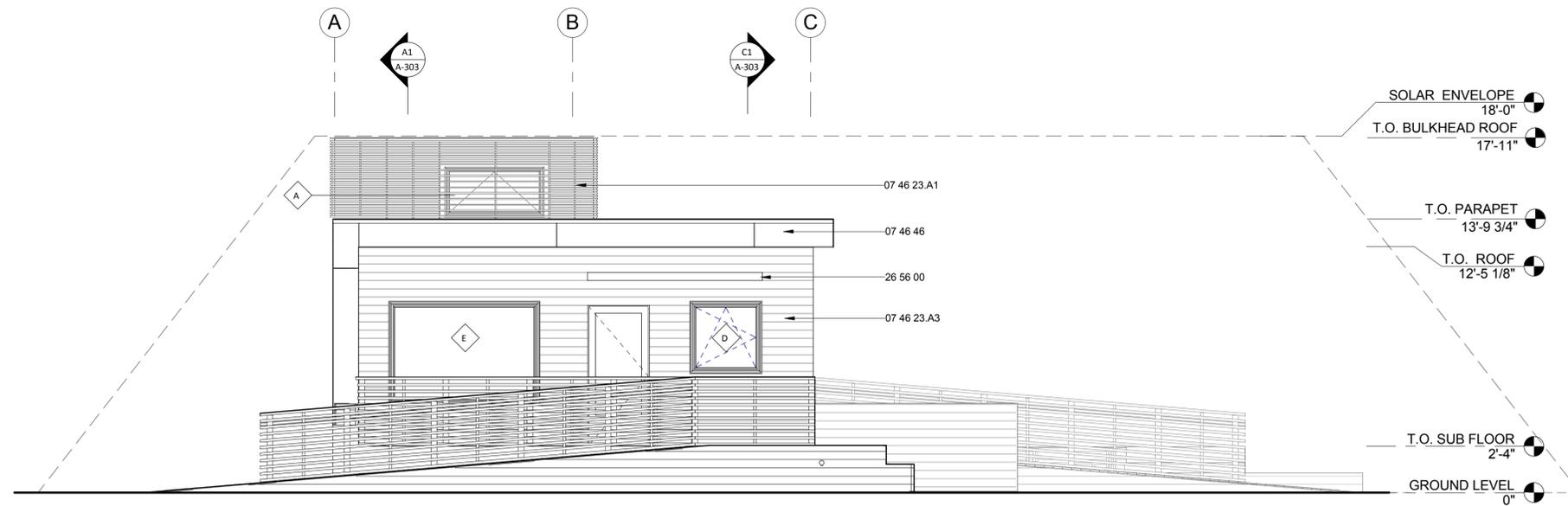
06 15 00	WOOD DECKING
07 46 23.A1	WESTERN RED CEDAR SIDING
07 46 23.A2	1 1/8" CEDAR SIDING
07 46 23.A3	3/4" CEDAR SHIPLAP SIDING
07 46 46	CEMENT BOARD SIDING
07 62 00.J1	PARAPET CAP FLASHING
26 56 00	EXTERIOR LIGHTING

SHEET KEYNOTES

DRAWING KEY

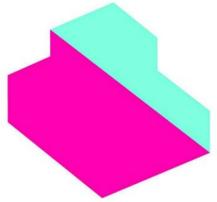


C1 WEST ELEVATION
1/4" = 1'-0"



A1 SOUTH ELEVATION
1/4" = 1'-0"

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BUILDING SECTIONS

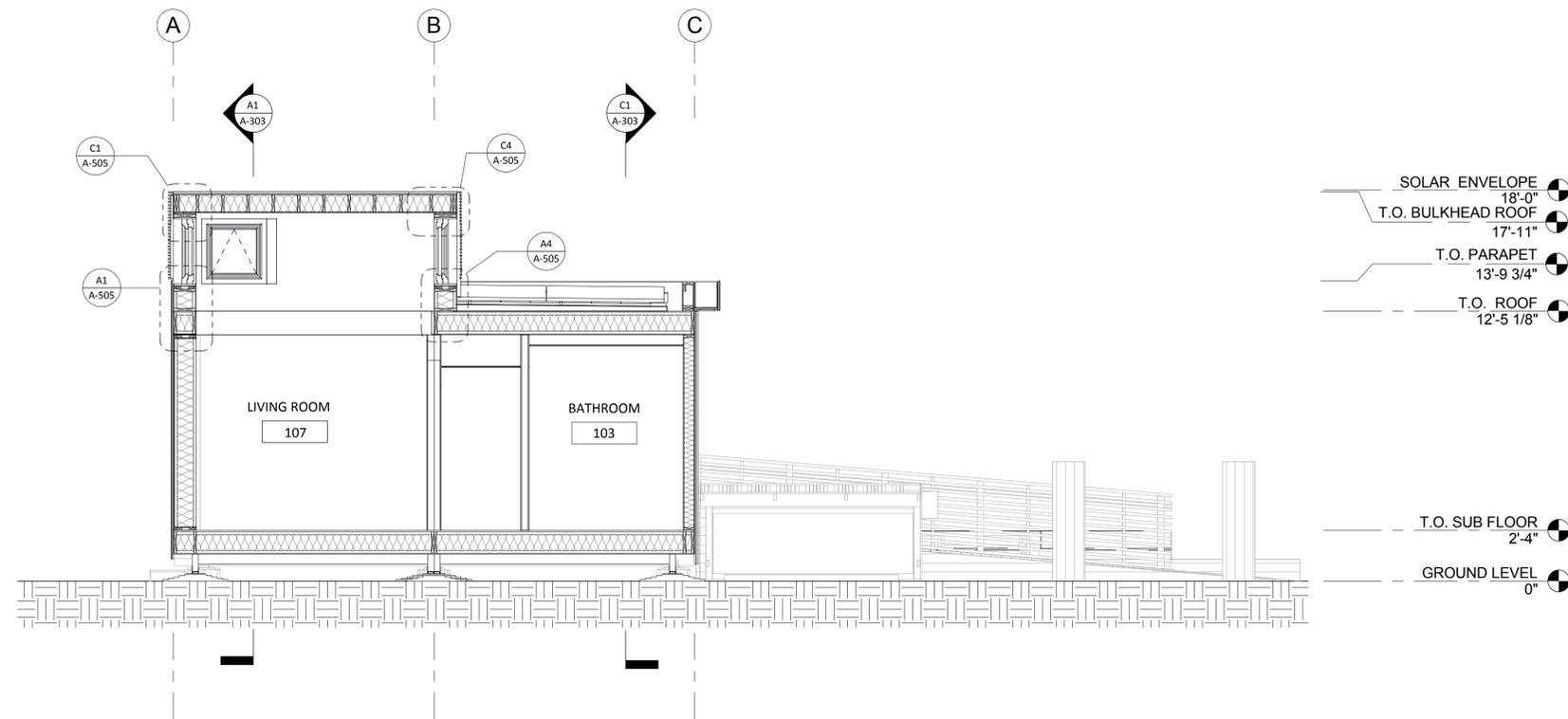
A-301

GENERAL SHEET NOTES

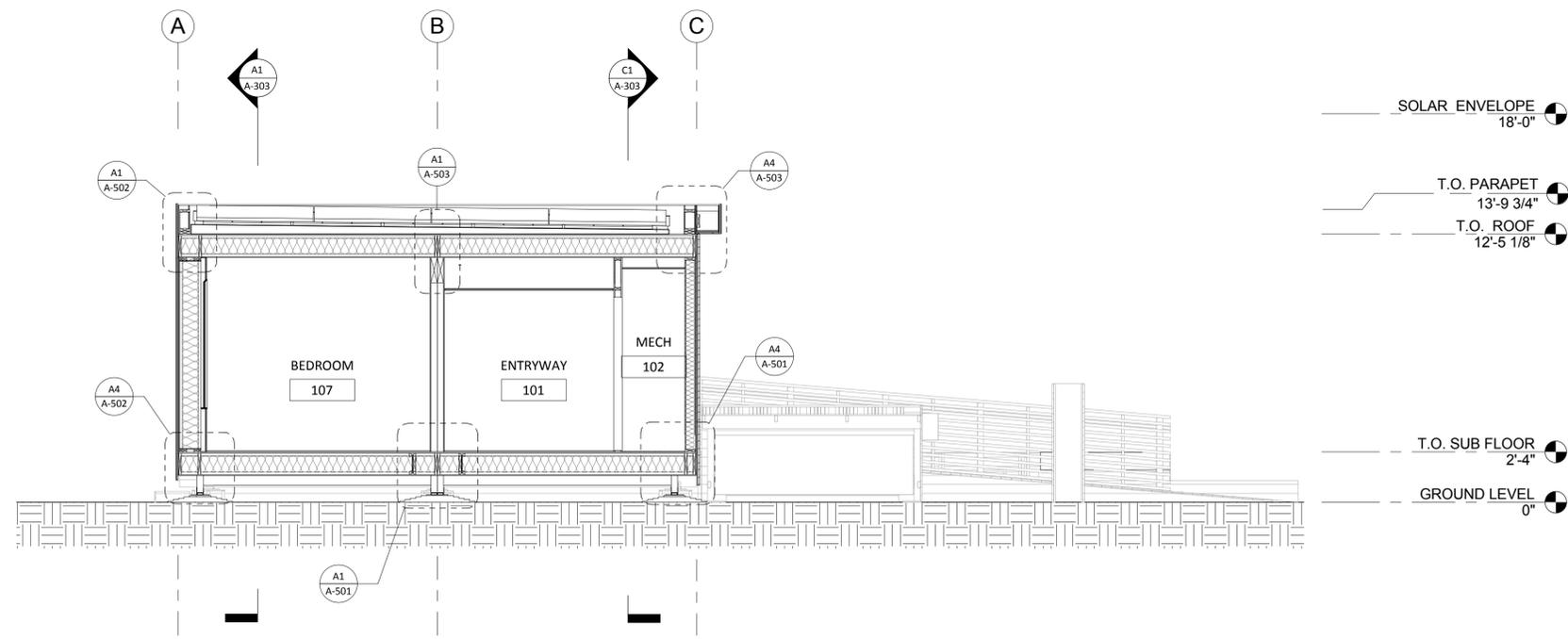
REFERENCE KEYNOTES

SHEET KEYNOTES

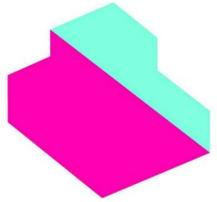
DRAWING KEY



C2 C-SECTION 301 B
1/4" = 1'-0"



A2 C-SECTION 301 A
1/4" = 1'-0"



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MARK	DATE	DESCRIPTION
1	NOV. 23, 2010	DESIGN DEVELOPMENT
2	MARCH 22, 2011	CONSTRUCTION DOCUMENTS
3	MAY 3, 2011	FINAL CONSTRUCTION DOCUMENTS
4	AUGUST 11, 2011	AS-BUILT CONSTRUCTION DOCUMENTS

LOT NUMBER

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SHEET TITLE

BUILDING SECTIONS

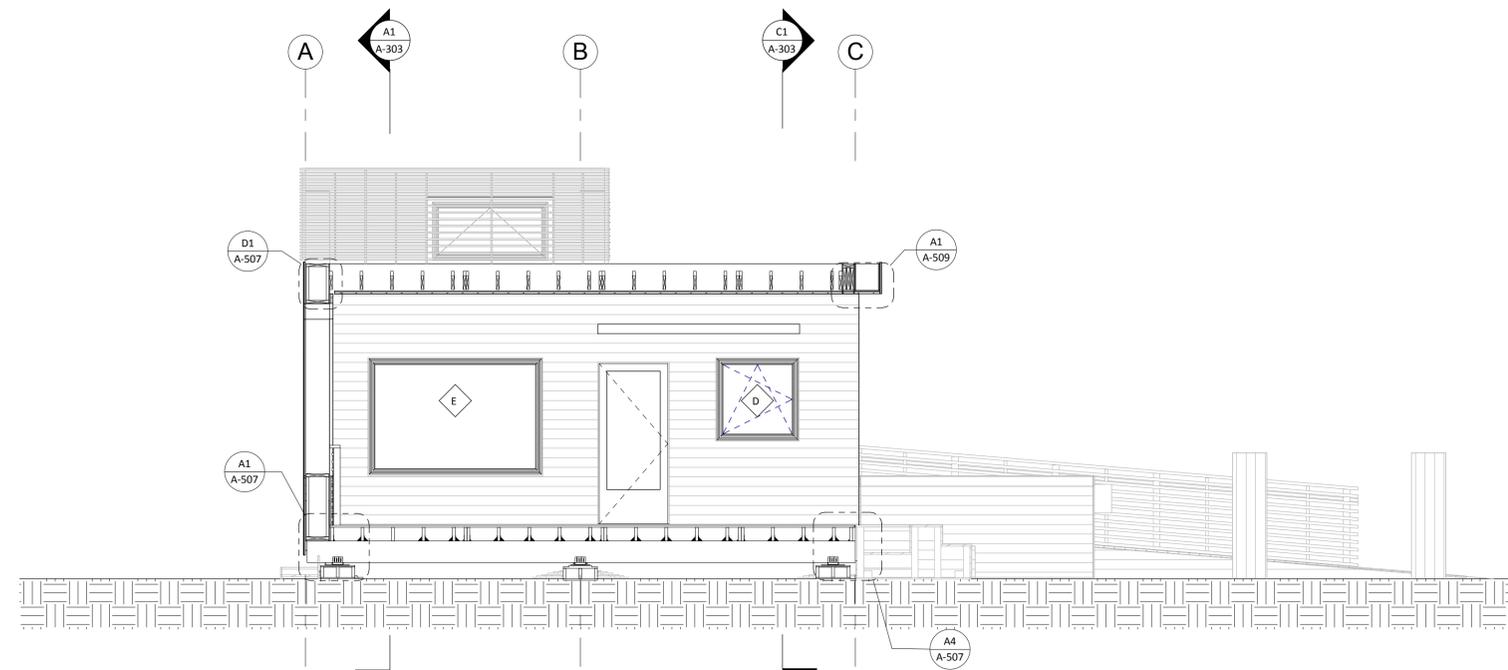
A-302

GENERAL SHEET NOTES

REFERENCE KEYNOTES

SHEET KEYNOTES

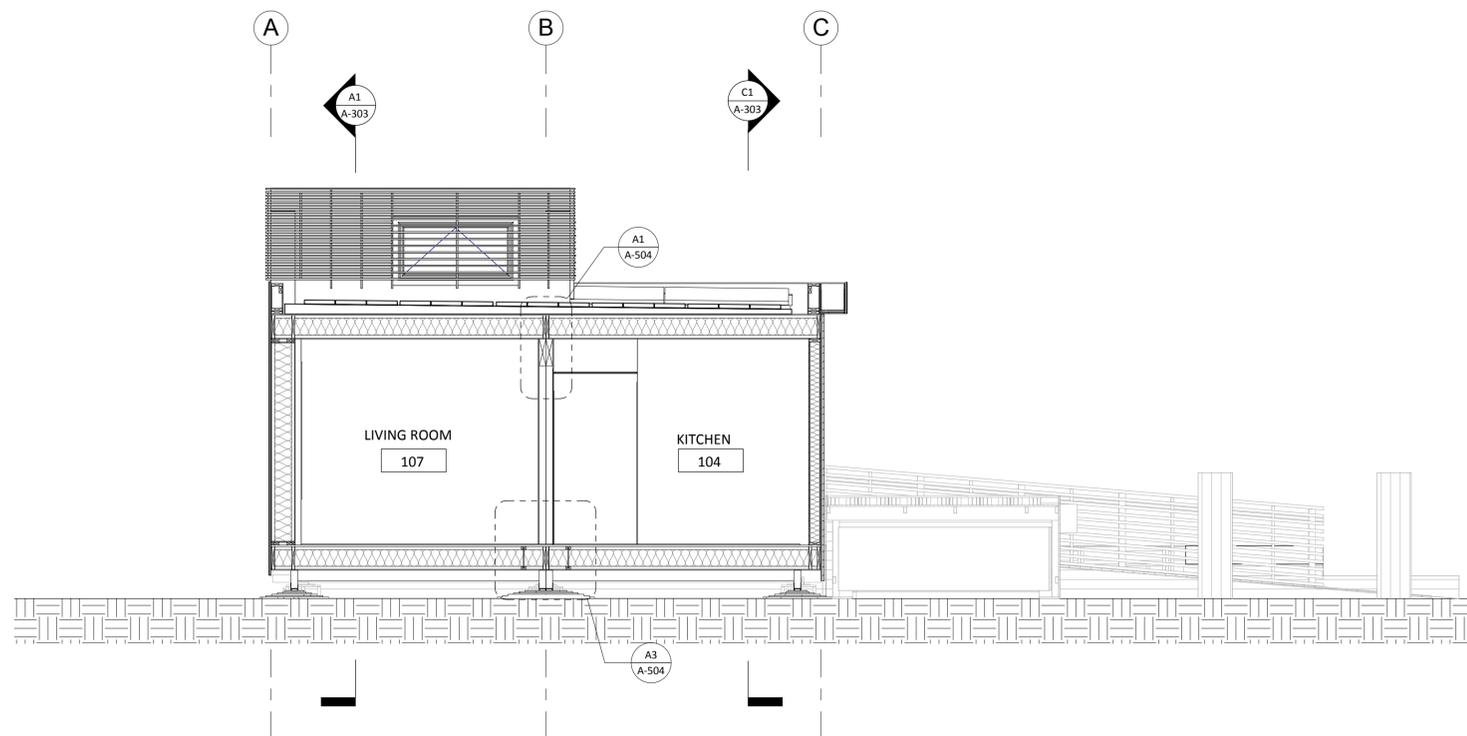
DRAWING KEY



- SOLAR ENVELOPE 18'-0"
- T.O. BULKHEAD ROOF 17'-11"
- T.O. PARAPET 13'-9 3/4"
- T.O. ROOF 12'-5 1/8"

- T.O. SUB FLOOR 2'-4"
- GROUND LEVEL 0"

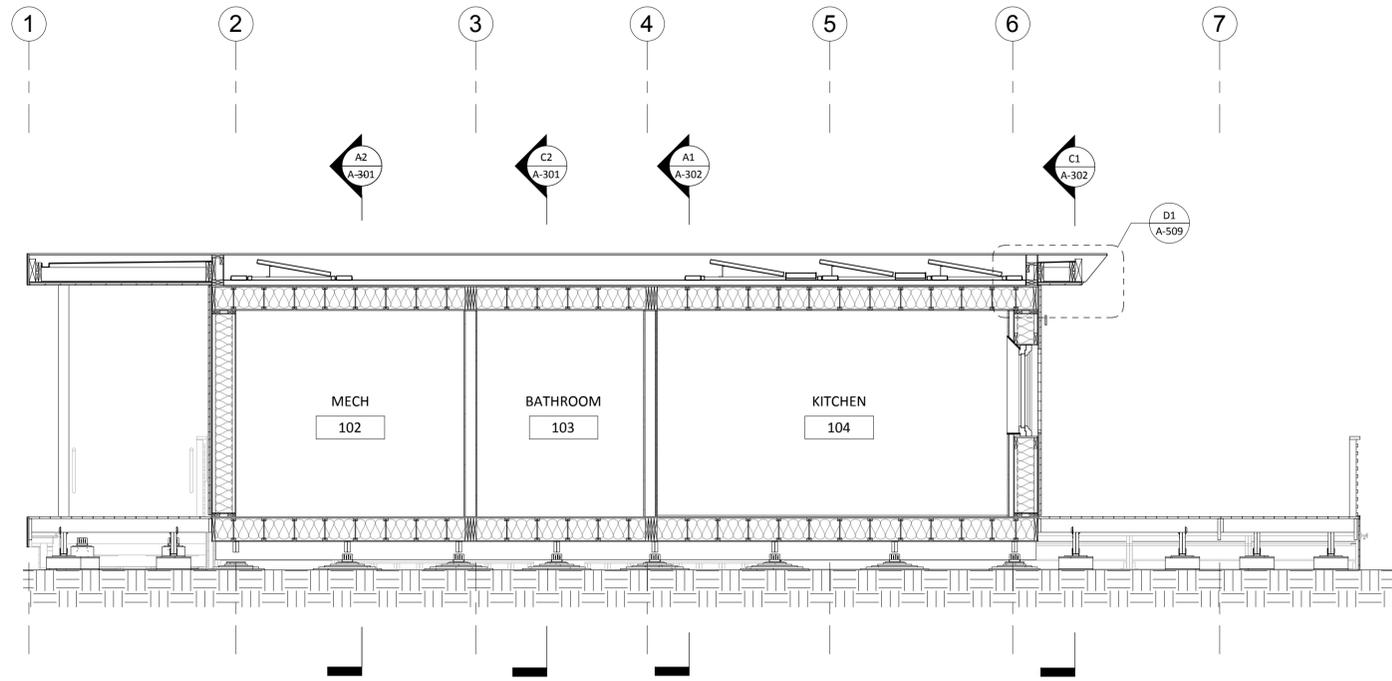
C1 C-SECTION 302 B
1/4" = 1'-0"



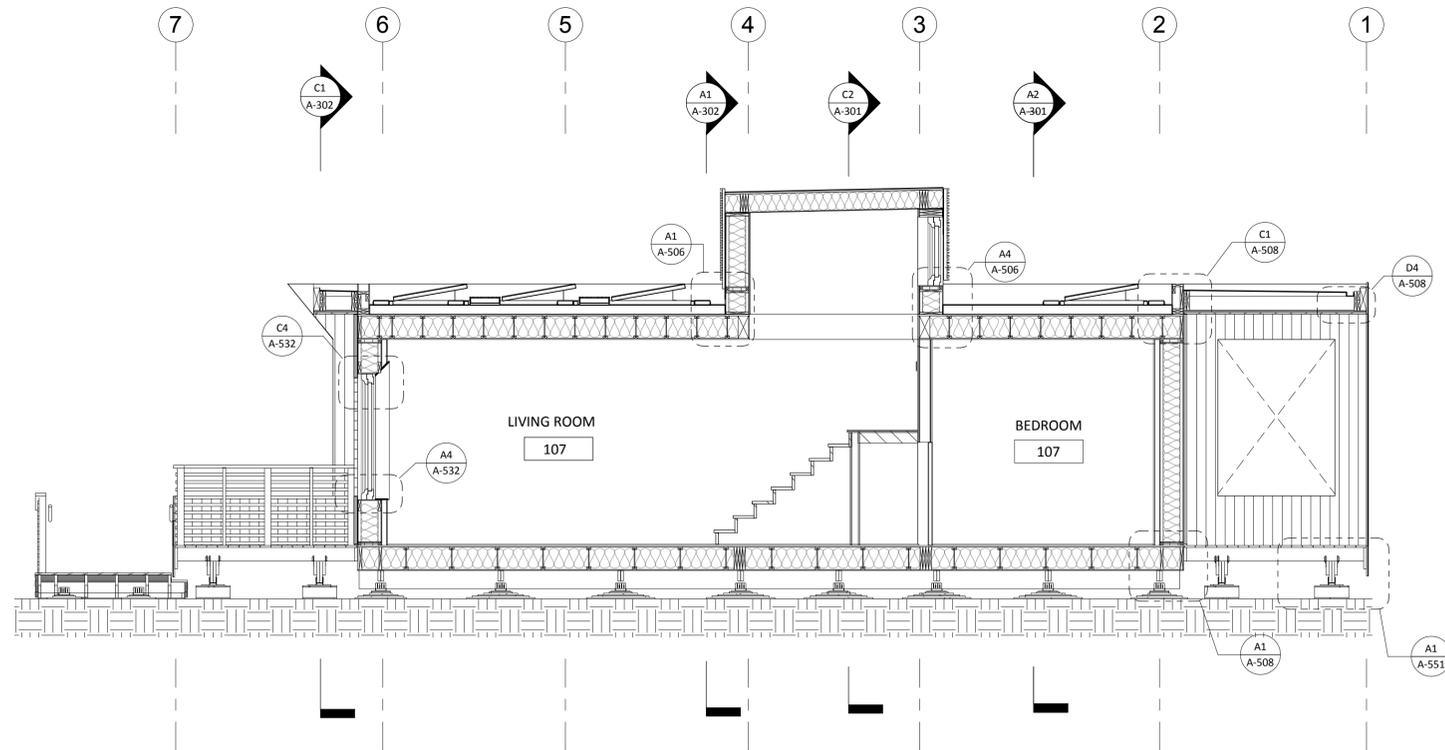
- SOLAR ENVELOPE 18'-0"
- T.O. BULKHEAD ROOF 17'-9"
- T.O. PARAPET 13'-9 3/4"
- T.O. ROOF 12'-5 1/8"

- T.O. SUB FLOOR 2'-4"
- GROUND LEVEL 0"

A1 C-SECTION 302 A
1/4" = 1'-0"



C1 L-SECTION 303 B
1/4" = 1'-0"



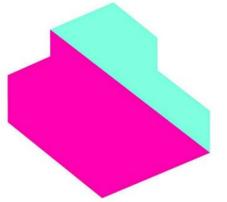
A1 L-SECTION 303 A
1/4" = 1'-0"

GENERAL SHEET NOTES

REFERENCE KEYNOTES

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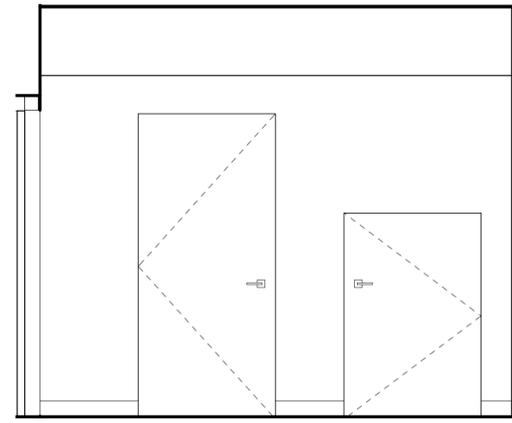
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SHEET TITLE

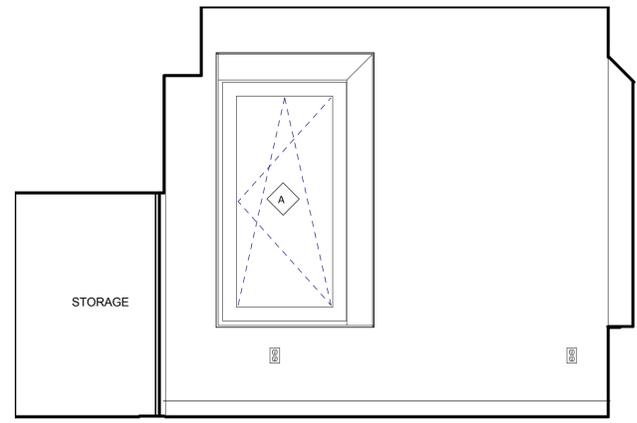
BUILDING SECTIONS

A-303

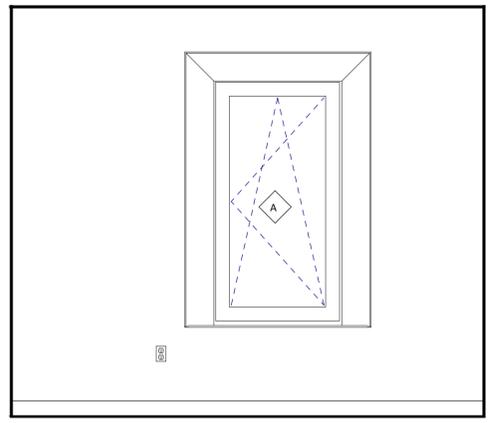
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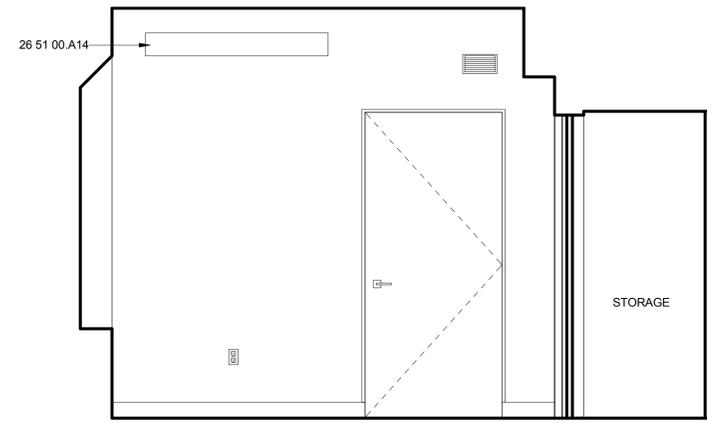
D1 BEDROOM SOUTH ELEVATION
1/2" = 1'-0"



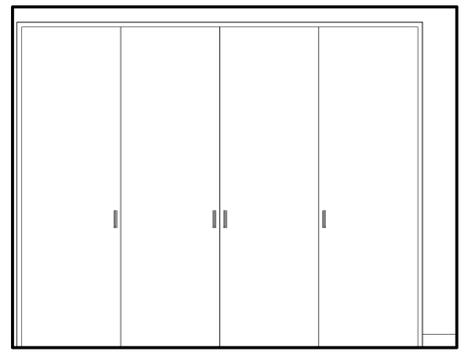
D3 BEDROOM WEST ELEVATION
1/2" = 1'-0"



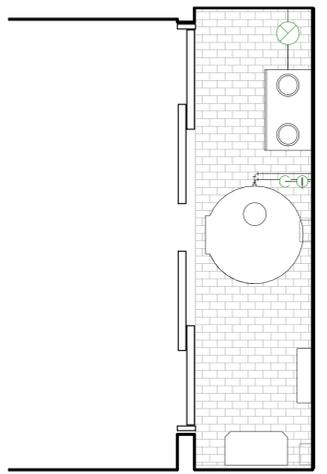
D5 BEDROOM NORTH ELEVATION
1/2" = 1'-0"



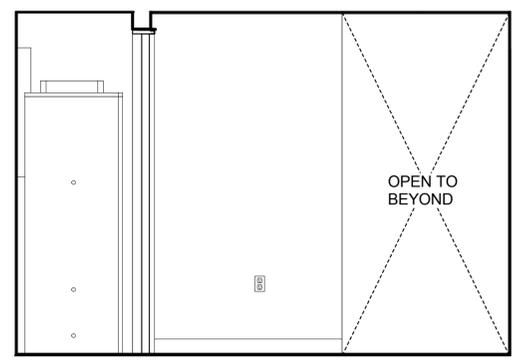
B1 BEDROOM EAST ELEVATION
1/2" = 1'-0"



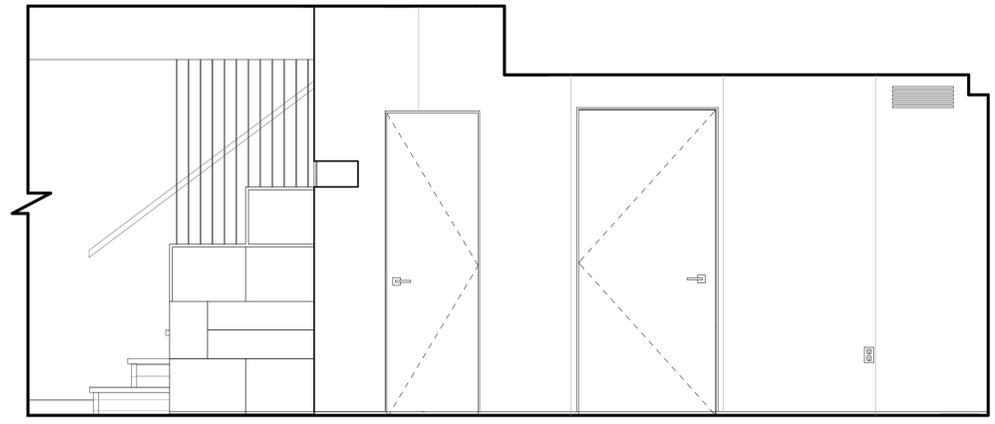
B3 MECHANICAL EAST ELEVATION
1/2" = 1'-0"



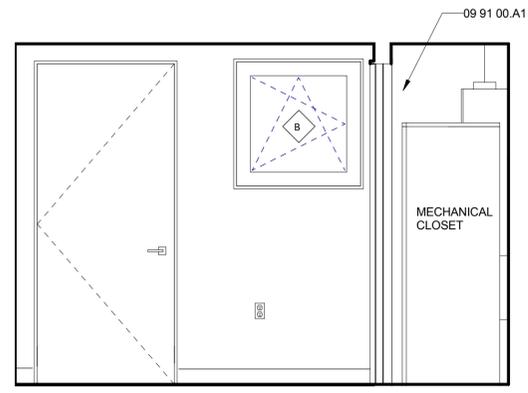
B5 MECHANICAL PLAN ENLARGED
1/2" = 1'-0"



A1 ENTRYWAY SOUTH ELEVATION
1/2" = 1'-0"



A2 ENTRYWAY WEST ELEVATION
1/2" = 1'-0"



A5 ENTRYWAY NORTH ELEVATION
1/2" = 1'-0"

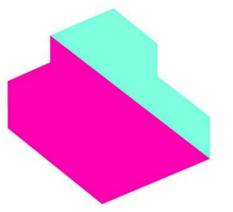
GENERAL SHEET NOTES

REFERENCE KEYNOTES

- 06 25 16 INTERIOR PLYWOOD
- 09 28 00 BACKING BOARDS AND UNDERLAYMENTS
- 09 91 00.A1 PAINT FINISH
- 26 05 33 RACEWAY AND BOXES FOR ELECTRICAL SYSTEMS
- 26 51 00.A14 WALL SURFACE MOUNTED FLUORESCENT FIXTURE

SHEET KEYNOTES

DRAWING KEY



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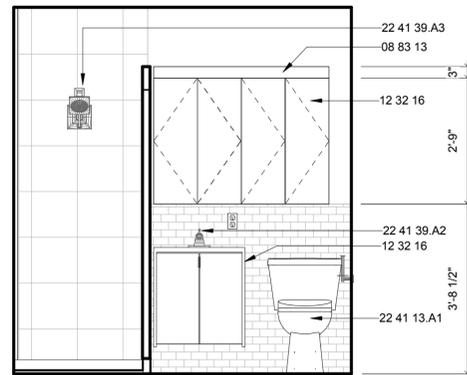
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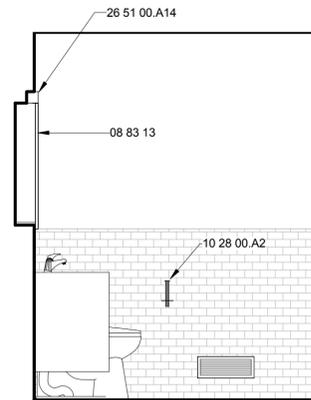
SHEET TITLE

BEDROOM AND ENTRY ELEVATIONS

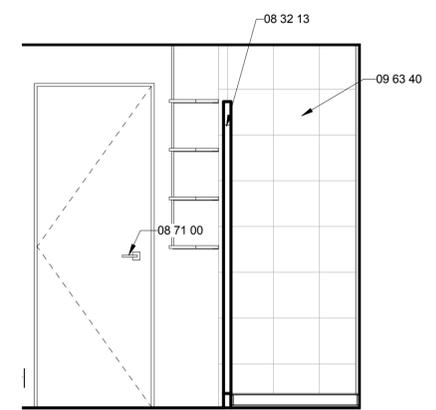
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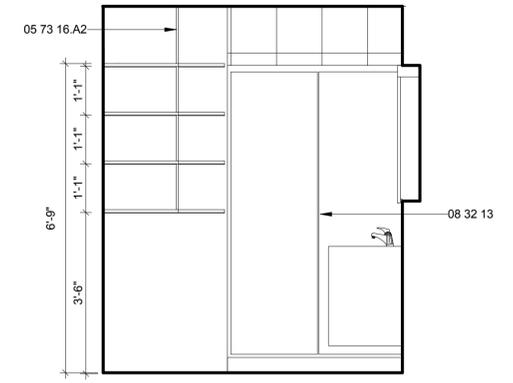
D1 BATHROOM EAST ELEVATION
1/2" = 1'-0"



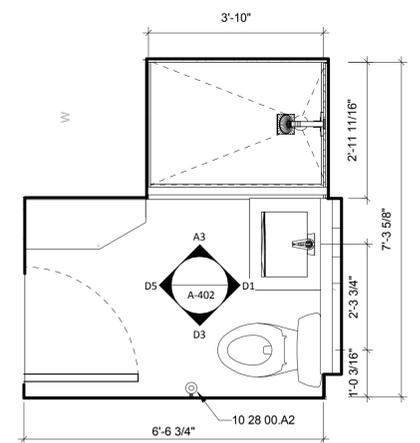
D3 BATHROOM SOUTH ELEVATION
1/2" = 1'-0"



D5 BATHROOM WEST ELEVATION
1/2" = 1'-0"



A3 BATHROOM NORTH ELEVATION
1/2" = 1'-0"



A5 BATHROOM PLAN
1/2" = 1'-0"

GENERAL SHEET NOTES

1. BATHROOM MEDICINE CABINET WITH 6" DEPTH RECESSED INTO WALL 3"
2. MEDICINE CABINET CARCASS COMPOSED OF WHITE MELAMINE TO MATCH KITCHEN CABINETRY.
3. ALL 4 DOORS OF MEDICINE CABINET FACED WITH REFLECTIVE GLAZING. THERE IS NO DOOR PULL HARDWARE.
4. BATHROOM SHELVING TO APPEAR FLOATING WITH NO FRAME ON EASTERN EDGE. DETAIL TO BE DISCUSSED WITH EMI.
5. BATHROOM SHELVING COMPOSED OF MAPLE VENEERED PUREBOND PROVIDED BY COLUMBIA FOREST PRODUCTS.

REFERENCE KEYNOTES

05 73 16.A1	5MM STEEL WIRE ROPE
05 73 16.A2	1/8" STEEL CABLE
08 32 13	TEMPERED SLIDING ALUMINUM-FRAMED GLASS DOORS
08 71 00	DOOR HARDWARE
08 83 13	MIRRORED GLASS GLAZING
09 28 00	BACKING BOARDS AND UNDERLAYMENTS
09 30 13	CERAMIC TILING
09 63 40	STONE FLOORING
10 28 00.A2	TOILET TISSUE DISPENSER
12 32 16	MANUFACTURED PLASTIC LAMINATE-CLAD CASEWORK
22 41 13.A1	WATER CLOSET
22 41 39.A2	LAVATORY FAUCET
22 41 39.A3	SHOWER FAUCET
26 51 00.A14	WALL SURFACE MOUNTED FLUORESCENT FIXTURE

SHEET KEYNOTES

DRAWING KEY



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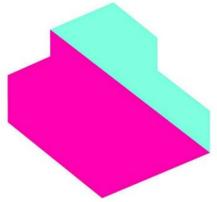
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BATH ENLARGED PLAN AND ELEVATIONS

A-402



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SHEET TITLE

INTERIOR WEST AND
NORTH ELEVATIONS

A-404

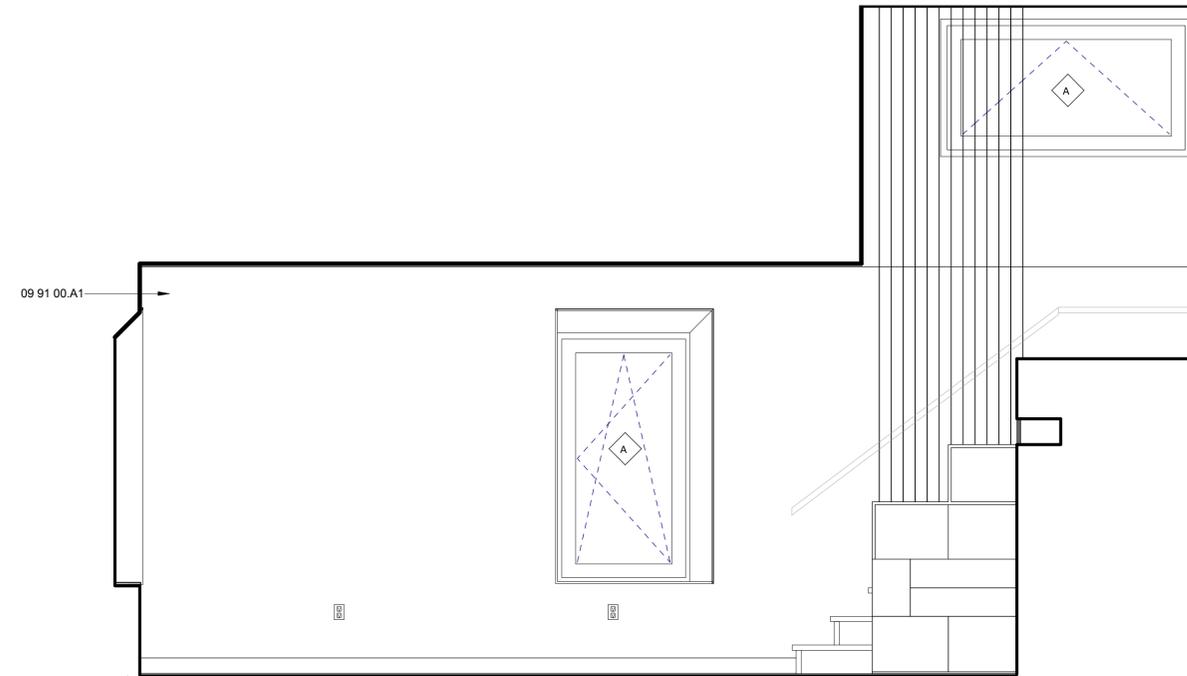
GENERAL SHEET NOTES

REFERENCE KEYNOTES

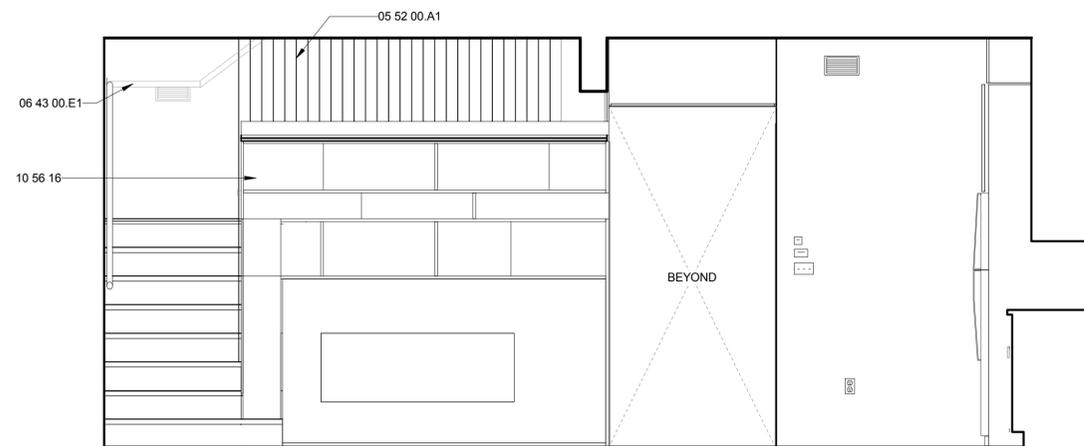
05 52 00.A1	STAINLESS STEEL 1/8" CABLE GUARDRAIL
06 43 00.E1	WOOD WALL MOUNTED HANDRAIL
09 91 00.A1	PAINT FINISH
10 56 16	FABRICATED WOOD STORAGE SHELVING

SHEET KEYNOTES

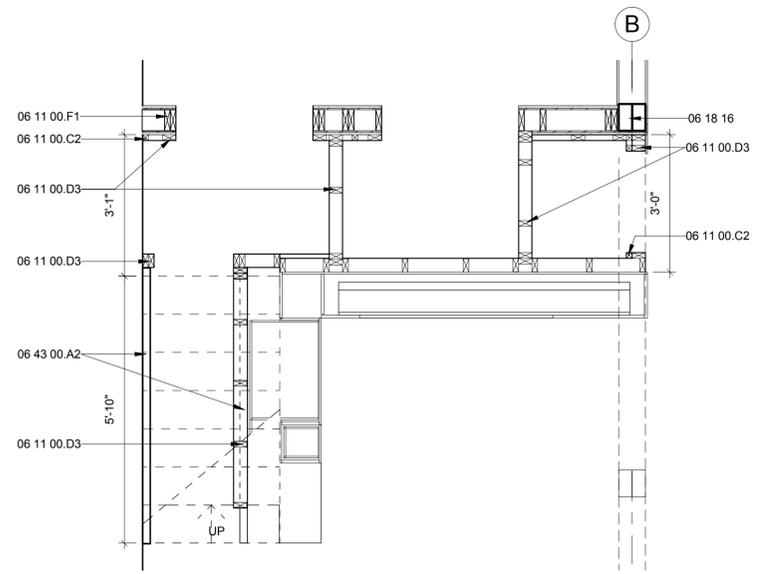
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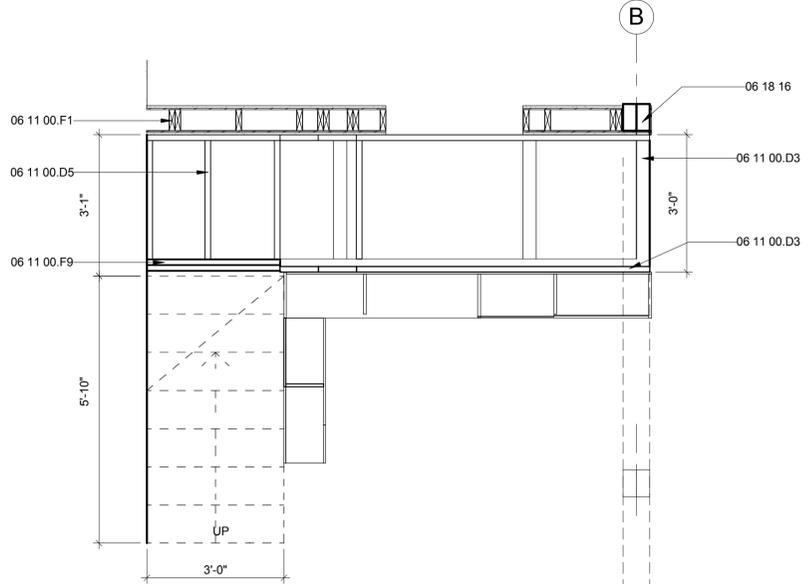
C2 INTERIOR WEST ELEVATION
1/2" = 1'-0"



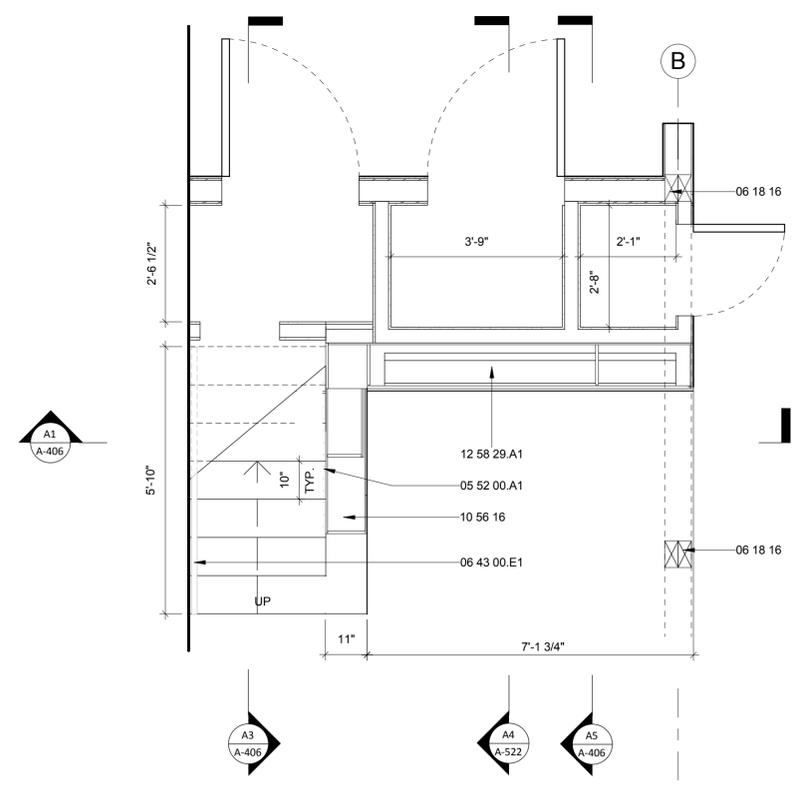
A2 INTERIOR NORTH ELEVATION
1/2" = 1'-0"



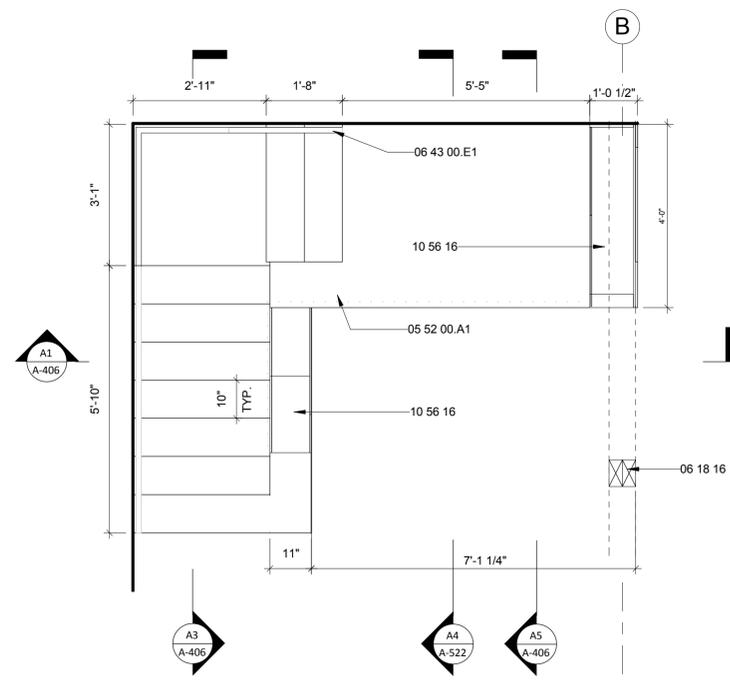
C1 STAIR FRAMING PLAN
1/2" = 1'-0"



C4 LOFT FRAMING PLAN
1/2" = 1'-0"



A1 ENLARGED STAIR PLAN
1/2" = 1'-0"



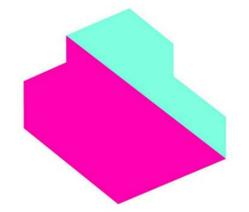
A4 ENLARGED LOFT PLAN
1/2" = 1'-0"

GENERAL SHEET NOTES
8 RISERS @ 7 1/2" = 5'-0"
7 TREADS @ 10"
1 LANDING
3 RISERS @ 7 1/2" = 1'-10 1/2"
2 TREADS @ 10"

- REFERENCE KEYNOTES
- 05 52 00.A1 STAINLESS STEEL 1/8" CABLE GUARDRAIL
 - 06 11 00.C2 2X2
 - 06 11 00.D3 2X4 FRAMING
 - 06 11 00.D5 2X4 FRAMING @ 16" O.C.
 - 06 11 00.F1 2X6
 - 06 11 00.F9 2X6 JOISTS
 - 06 18 16 GLUE-LAMINATED COLUMNS
 - 06 43 00.A2 2X12 STRINGER
 - 06 43 00.A4 (3) 3/4" PLYWOOD UPTURNED STRINGER
 - 06 43 00.E1 WOOD WALL MOUNTED HANDRAIL
 - 10 56 16 FABRICATED WOOD STORAGE SHELVING
 - 12 58 29.A1 TWIN MURPHY BED

SHEET KEYNOTES

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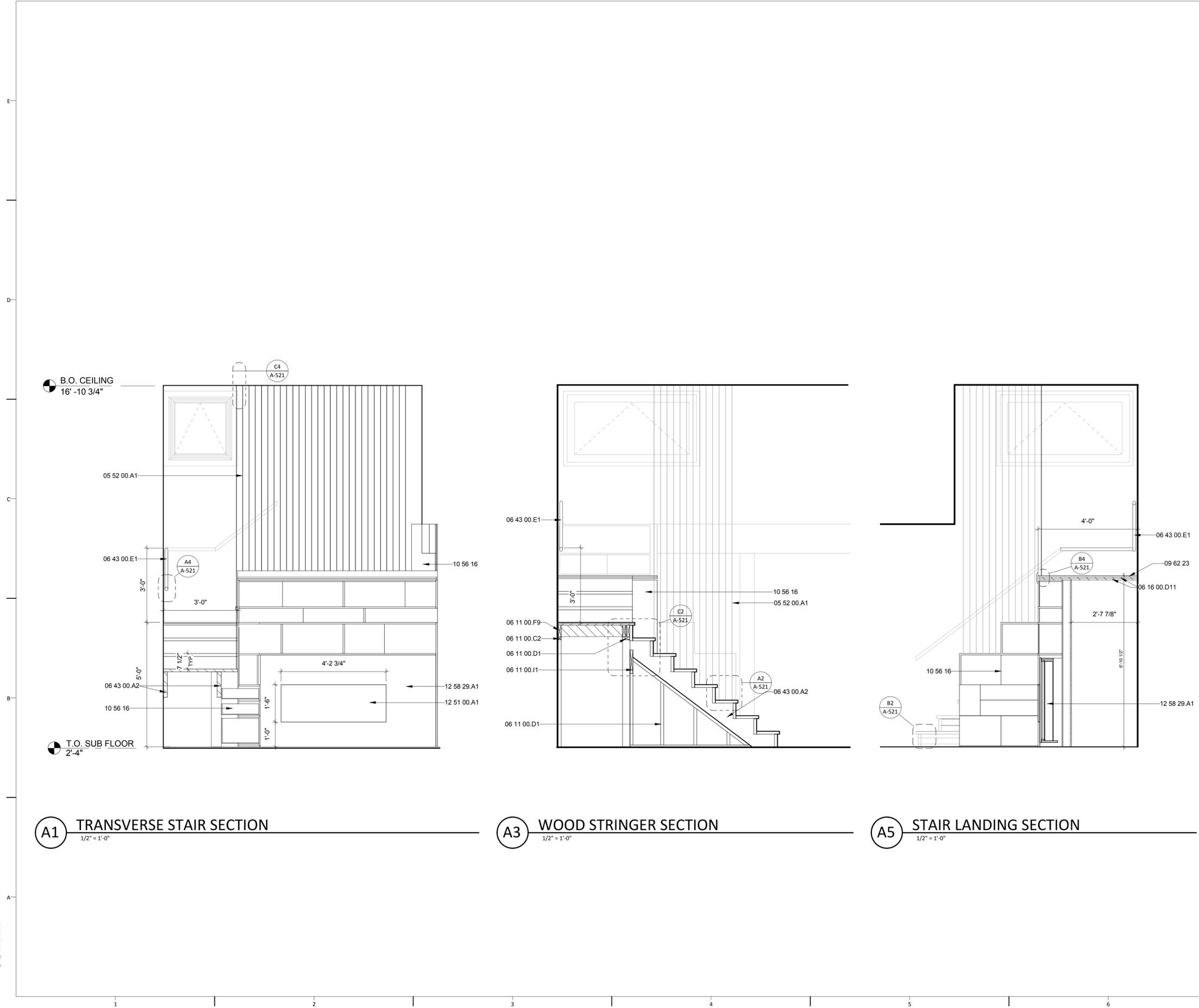
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SHEET TITLE

STAIR ENLARGED PLANS

A-405



GENERAL SHEET NOTES

8 RISERS @ 7 1/2" = 5'- 0"
7 TREADS @ 10"

1 LANDING

3 RISERS @ 7 1/2" = 1'-10 1/2"
2 TREADS @ 10"

REFERENCE KEYNOTES

05 52 00.A1	STAINLESS STEEL 1/8" CABLE GUARDRAIL
06 11 00.C2	2X2
06 11 00.D1	2X4
06 11 00.F9	2X6 JOISTS
06 11 00.I1	2X12
06 16 00.D11	3/4" PLYWOOD
06 43 00.A2	2X12 STRINGER
06 43 00.E1	WOOD WALL MOUNTED HANDRAIL
09 62 23	5/8" BAMBOO FLOORING
10 56 16	FABRICATED WOOD STORAGE SHELVING
12 51 00.A1	FOLD AWAY WOOD DESK
12 58 29.A1	TWIN MURPHY BED

SHEET KEYNOTES

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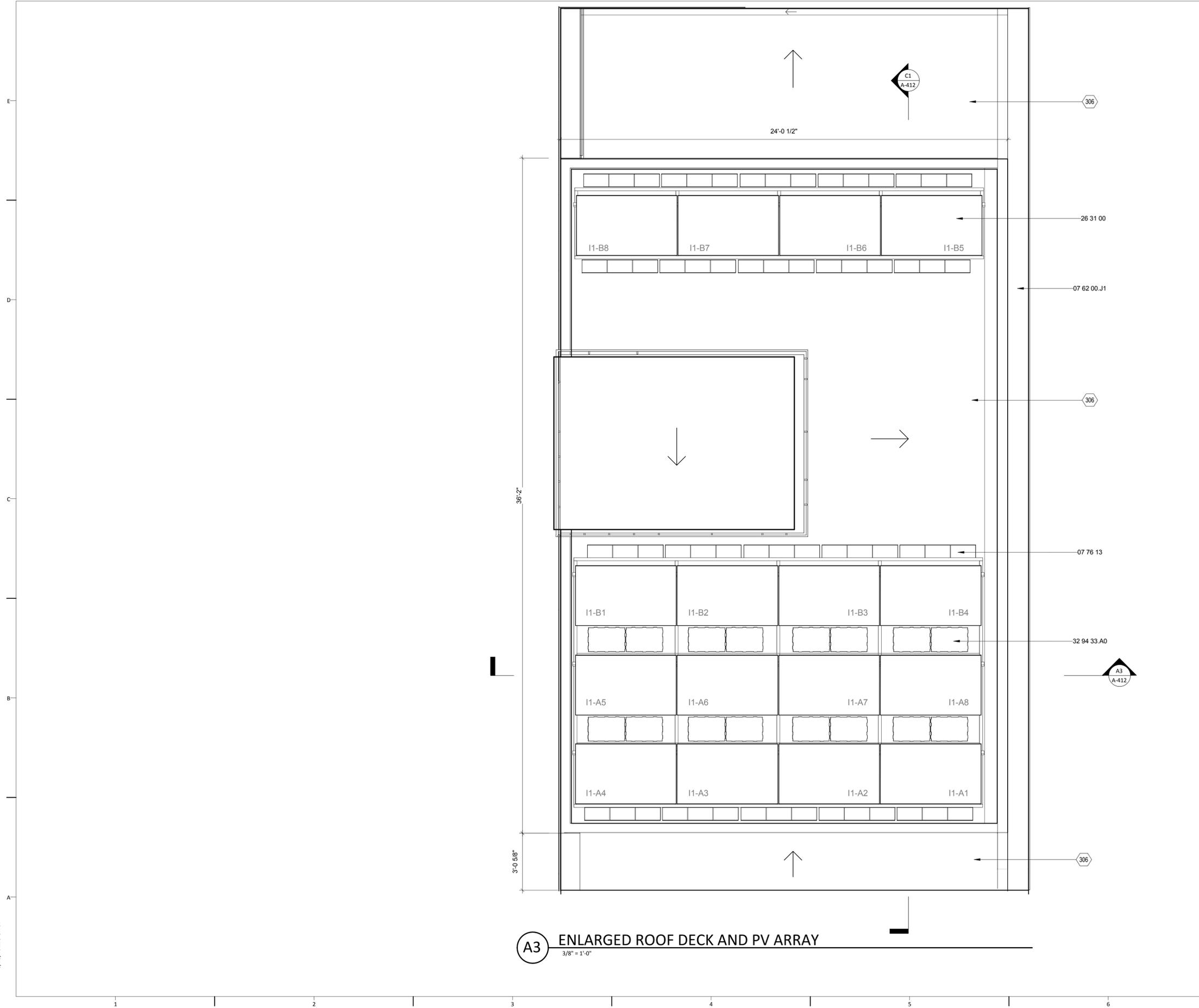
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STAIR SECTIONS

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A3 ENLARGED ROOF DECK AND PV ARRAY
3/8" = 1'-0"

GENERAL SHEET NOTES

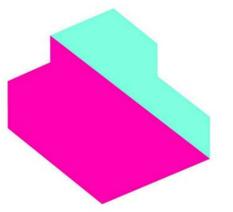
REFERENCE KEYNOTES

07 62 00.J1	PARAPET CAP FLASHING
07 76 13	ROOF BALLAST PAVERS
26 31 00	PHOTOVOLTAIC COLLECTORS
32 94 33.A0	VEGETAL I.D. HYDROPACK SEDUM TRAYS

SHEET KEYNOTES

306 ROOF SLOPE 1/8" = 1'

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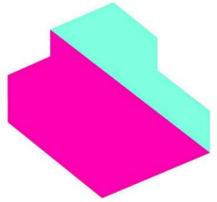
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SHEET TITLE
**ROOF DECK/PV ARRAY
ENLARGED PLAN**

A-411



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 PV SECTIONS

A-412

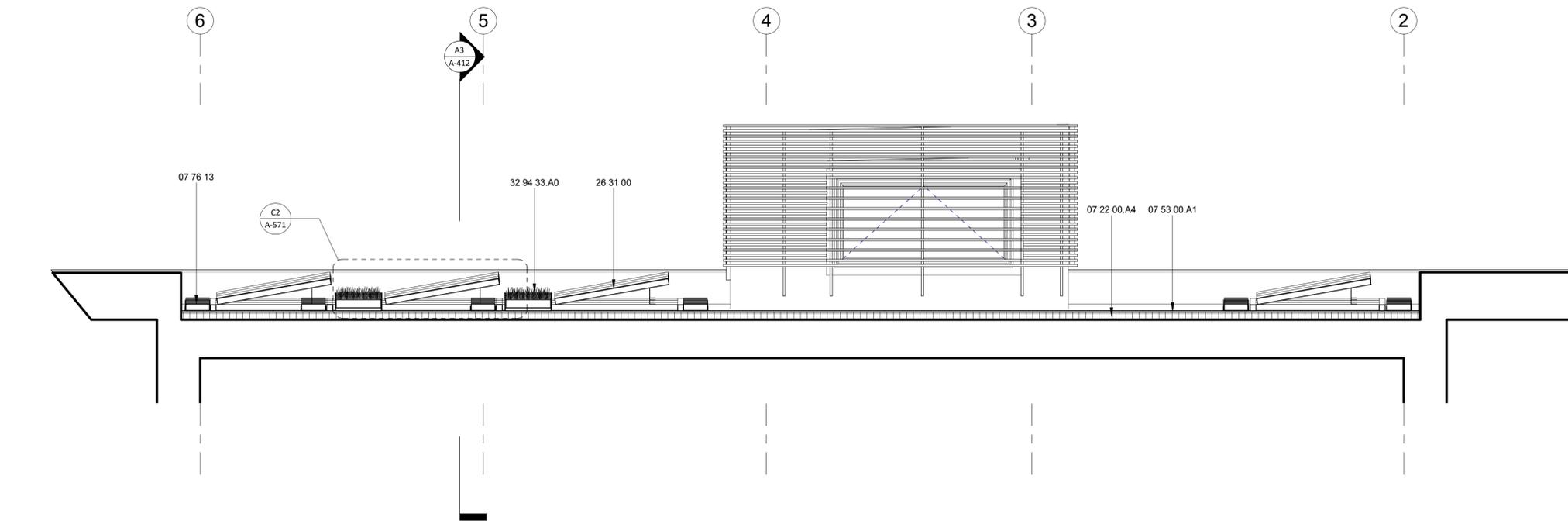
GENERAL SHEET NOTES

REFERENCE KEYNOTES

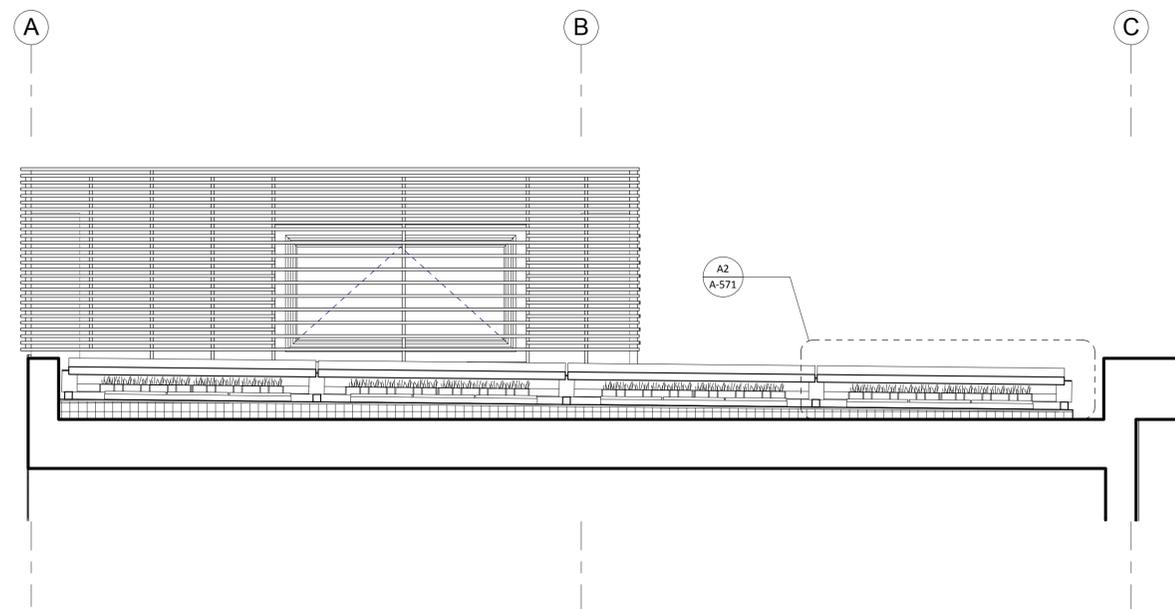
- 07 22 00.A4 TAPERED POLYISOCYANURATE INSULATION BOARD
- 07 53 00.A1 SINGLE-PLY MEMBRANE ROOFING
- 07 76 13 ROOF BALLAST PAVERS
- 26 31 00 PHOTOVOLTAIC COLLECTORS
- 32 94 33.A0 VEGETAL I.D. HYDROPACK SEDUM TRAYS

SHEET KEYNOTES

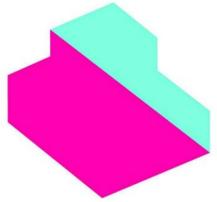
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C1 PV ARRAY NORTH - SOUTH SECTION
 1/2" = 1'-0"



A3 PV ARRAY EAST - WEST SECTION
 1/2" = 1'-0"



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**BUILDING ENVELOPE
DETAILS**

A-501

GENERAL SHEET NOTES

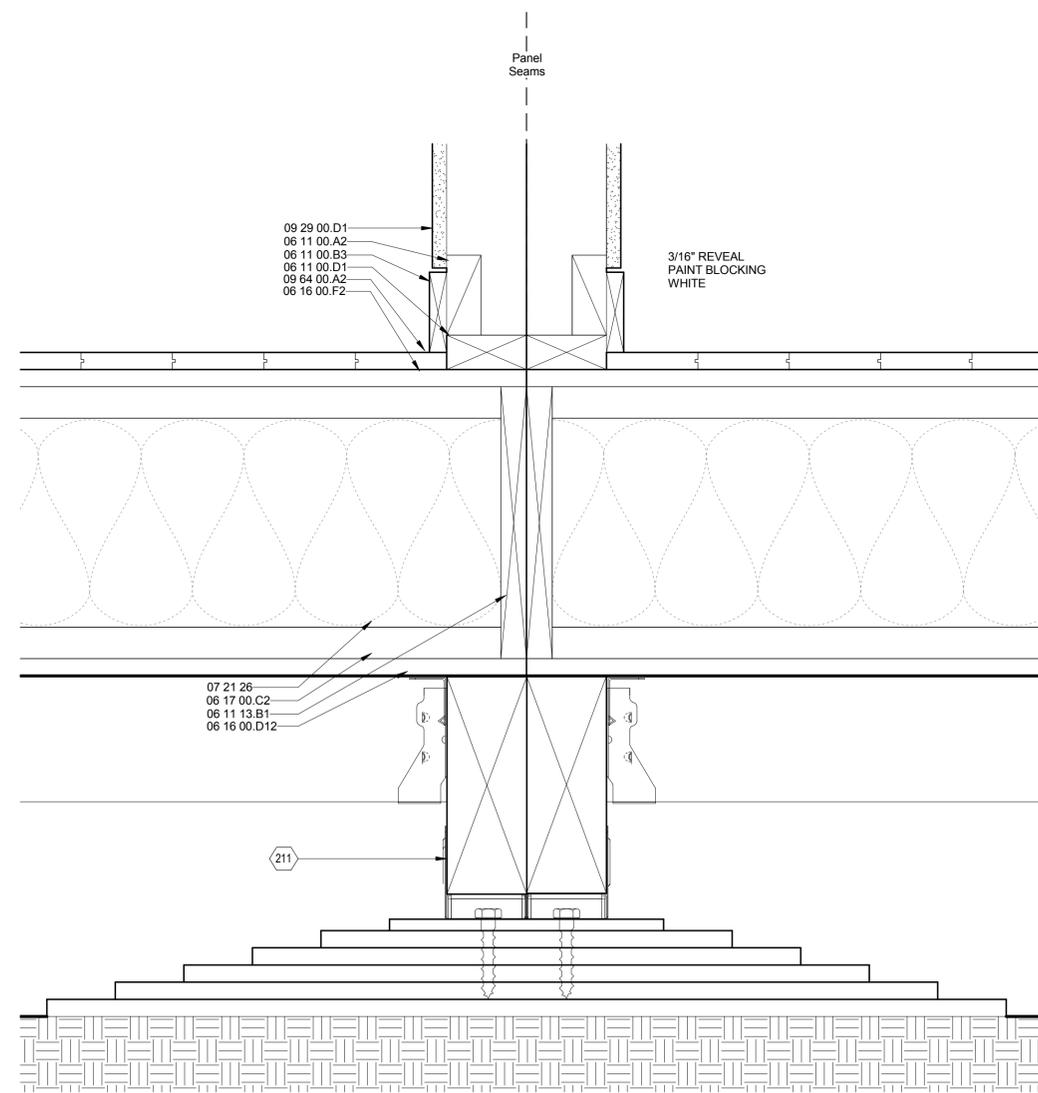
REFERENCE KEYNOTES

06 11 00.A2	WOOD BLOCKING AS REQUIRED
06 11 00.B3	1X3
06 11 00.C1	2X3
06 11 00.D1	2X4
06 11 00.D3	2X4 FRAMING
06 11 00.F9	2X6 JOISTS
06 11 13.B1	LSL NORDIC RIM BOARD 1 1/8 x 11 7/8"
06 16 00.D12	3/4" EXTERIOR GRADE PLYWOOD
06 16 00.F2	3/4" OSB
06 16 00.F3	7/16" OSB
06 16 53.F2	7/16" ZIP SYSTEM SHEATHING
06 17 00.C2	11 7/8" WOOD I JOIST
07 21 26	BLOWN-IN CELLULOSE INSULATION
07 46 23.A3	3/4" CEDAR SHIPLAP SIDING
09 29 00.D1	5/8" GYPSUM WALLBOARD
09 64 00.A2	1X4 WOOD FLOORING
10 81 16	INSECT CONTROL DEVICES

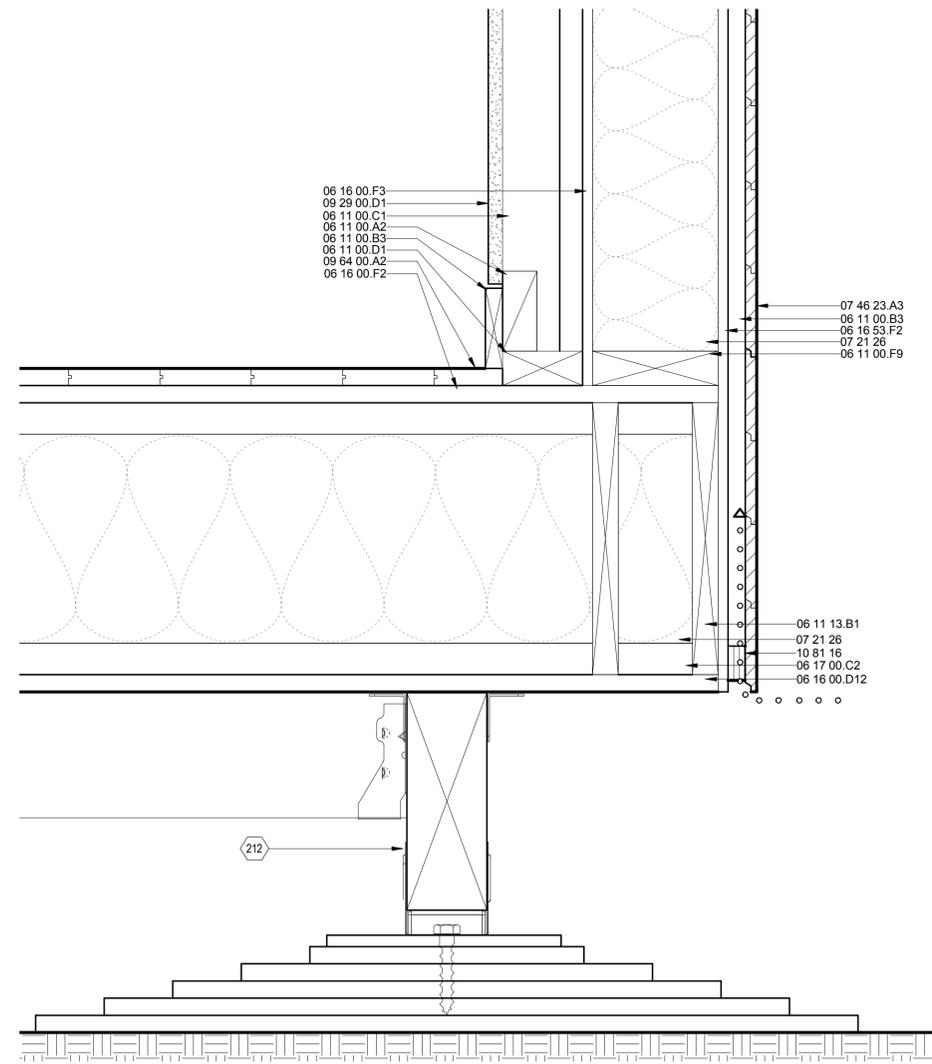
SHEET KEYNOTES

211	SEE FOUNDATION DETAIL A4 ON SHEET S-501
212	SEE FOUNDATION DETAIL C4 ON SHEET S-501

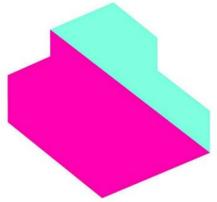
DRAWING KEY



A1 FLOOR PANEL CONNECTION TO FOOTING from C-SECTION 301 A
3" = 1'-0"



A4 EXT. WALL TO FLOOR AND FOOTING from C-SECTION 301 A
3" = 1'-0"



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**BUILDING ENVELOPE
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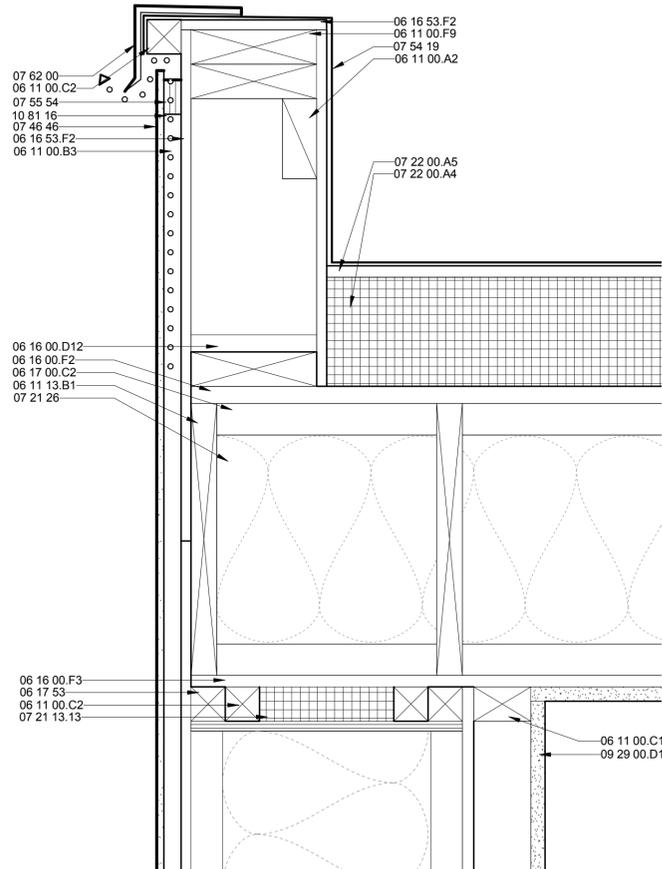
REFERENCE KEYNOTES

- 06 05 23.A11 16d NAIL
- 06 11 00.A2 WOOD BLOCKING AS REQUIRED
- 06 11 00.B3 1X3
- 06 11 00.C1 2X3
- 06 11 00.C2 2X2
- 06 11 00.D3 2X4 FRAMING
- 06 11 00.F9 2X6 JOISTS
- 06 11 13.B1 LSL NORDIC RIM BOARD 1 1/8 x 11 7/8"
- 06 16 00.D7 1/2" EXTERIOR GRADE PLYWOOD
- 06 16 00.D12 3/4" EXTERIOR GRADE PLYWOOD
- 06 16 00.F2 3/4" OSB
- 06 16 00.F3 7/16" OSB
- 06 16 53.F2 7/16" ZIP SYSTEM SHEATHING
- 06 17 00.C2 11 7/8" WOOD I JOIST
- 06 17 53 SHOP-FABRICATED WOOD TRUSSES
- 07 21 13.13 RIGID INSULATION
- 07 21 26 BLOWN-IN CELLULOSE INSULATION
- 07 22 00.A4 TAPERED POLYISOCYANURATE INSULATION BOARD
- 07 22 00.A5 1/2" HIGH DENSITY POLYISOCYANURATE INSULATION BOARD
- 07 27 00 AIR BARRIERS
- 07 46 46 CEMENT BOARD SIDING
- 07 54 19 POLYVINYL-CHLORIDE ROOFING
- 07 55 54 EPDM SHEET WATERPROOFING
- 07 62 00 METAL FLASHING
- 07 62 00.C4 8" ROOF EDGE
- 07 91 16 JOINT GASKETS
- 09 29 00.D1 5/8" GYPSUM WALLBOARD
- 09 64 00.A2 1X4 WOOD FLOORING
- 10 81 16 INSECT CONTROL DEVICES

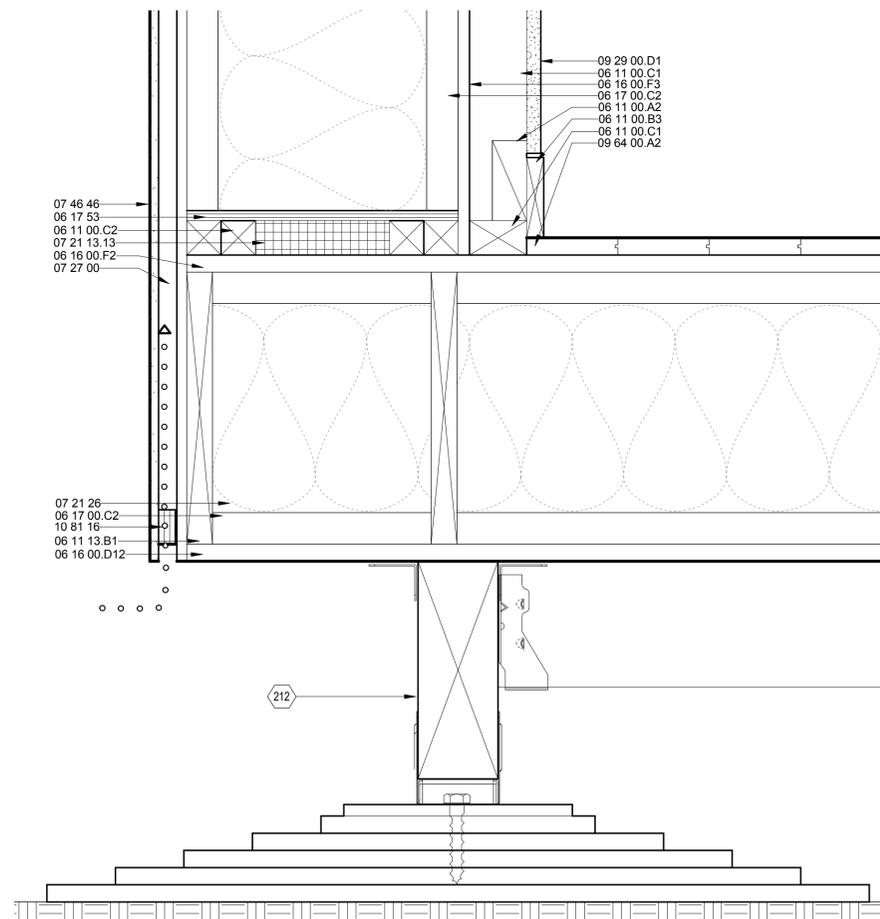
SHEET KEYNOTES

- 212 SEE FOUNDATION DETAIL C4 ON SHEET S-501

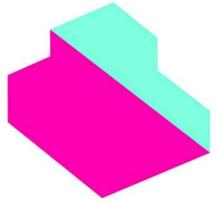
DRAWING KEY



A1 PARAPET TO ROOF AND WALL from C-SECTION 301 A
3" = 1'-0"



A4 EXT. WALL TO FOOTING from C-SECTION 301 A
3" = 1'-0"



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SHEET TITLE

BUILDING ENVELOPE DETAILS

A-503

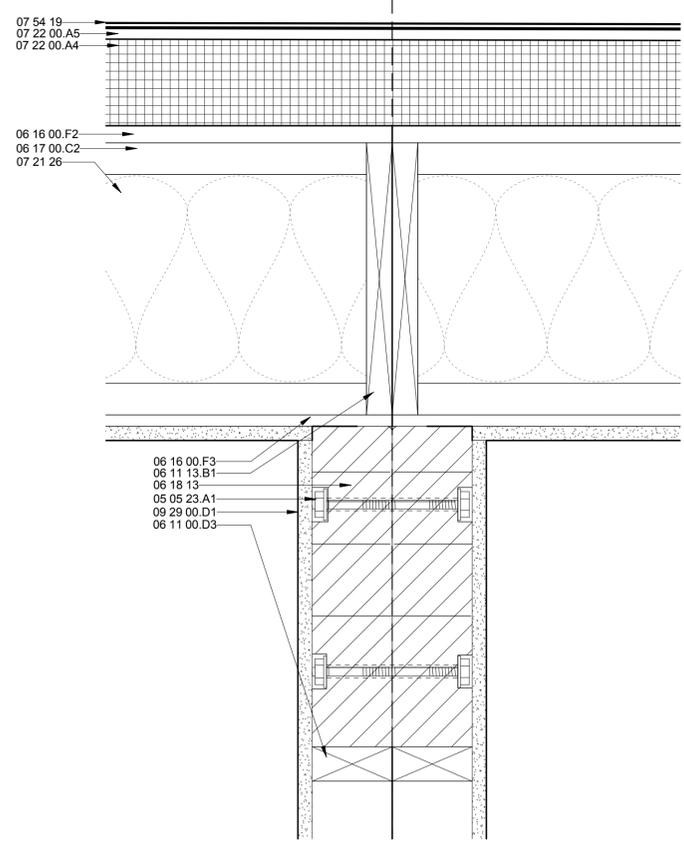
GENERAL SHEET NOTES

REFERENCE KEYNOTES

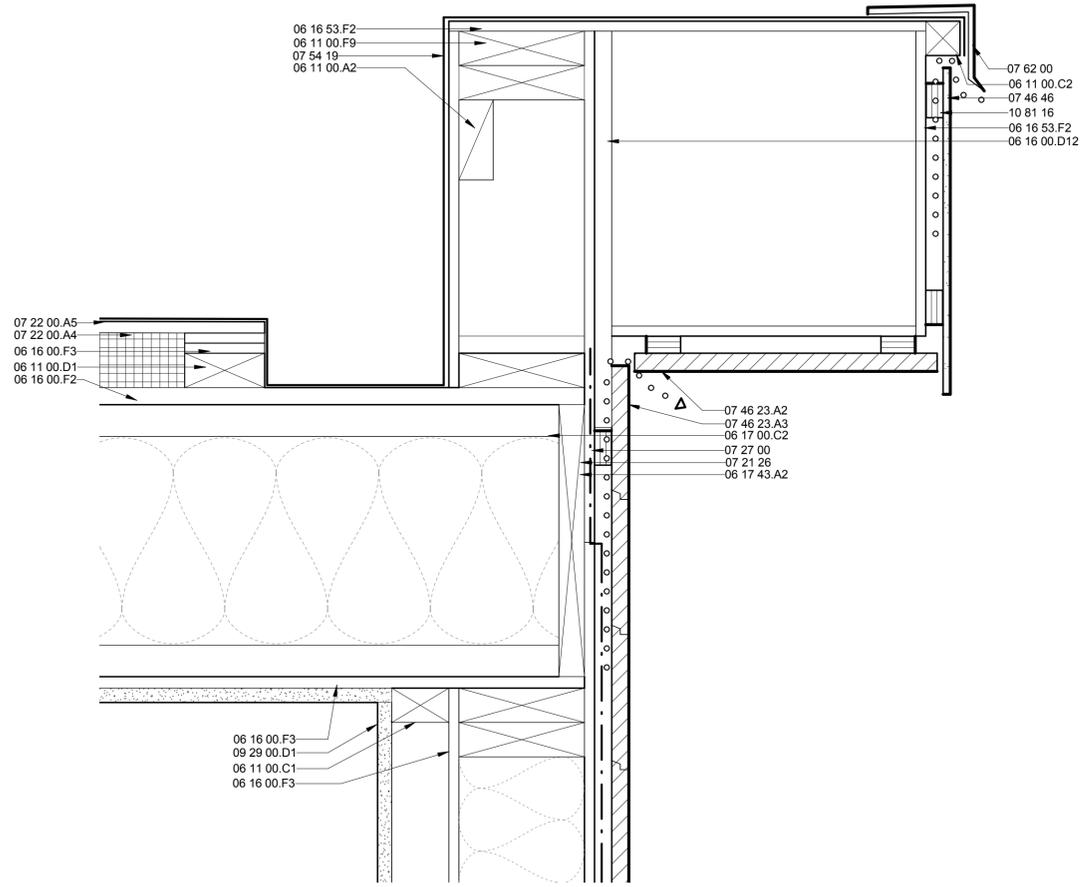
- 05 05 23.A1 1/2" A307 BOLT
- 05 05 23.I6 13/16" STEEL PLATE
- 06 05 23.B1 3/8" LAG SCREW
- 06 05 23.C9 L30
- 06 11 00.A2 WOOD BLOCKING AS REQUIRED
- 06 11 00.C1 2X3
- 06 11 00.C2 2X2
- 06 11 00.D1 2X4
- 06 11 00.D3 2X4 FRAMING
- 06 11 00.F9 2X6 JOISTS
- 06 11 13.B1 LSL NORDIC RIM BOARD 1 1/8 x 11 7/8"
- 06 16 00.C5 3/4" PARTICLEBOARD
- 06 16 00.D7 1/2" EXTERIOR GRADE PLYWOOD
- 06 16 00.D12 3/4" EXTERIOR GRADE PLYWOOD
- 06 16 00.F2 3/4" OSB
- 06 16 00.F3 7/16" OSB
- 06 16 53.F2 7/16" ZIP SYSTEM SHEATHING
- 06 17 00.C2 11 7/8" WOOD JOIST
- 06 17 43.A2 2 1/2 x 11 7/8" RIM JOIST
- 06 18 13 GLUE-LAMINATED BEAMS
- 07 21 26 BLOWN-IN CELLULOSE INSULATION
- 07 22 00.A4 TAPERED POLYISOCYANURATE INSULATION BOARD
- 07 22 00.A5 1/2" HIGH DENSITY POLYISOCYANURATE INSULATION BOARD
- 07 27 00 AIR BARRIERS
- 07 46 23.A2 1 1/8" CEDAR SIDING
- 07 46 23.A3 3/4" CEDAR SHIPLAP SIDING
- 07 46 46 CEMENT BOARD SIDING
- 07 54 19 POLYVINYL-CHLORIDE ROOFING
- 07 62 00 METAL FLASHING
- 09 29 00.D1 5/8" GYPSUM WALLBOARD
- 10 81 16 INSECT CONTROL DEVICES

SHEET KEYNOTES

DRAWING KEY



A1 ROOF TO BEAM from C-SECTION 301 A
3" = 1'-0"



A4 EXT. WALL TO PARAPET WITH EXTENSION from C-SECTION 301 A
3" = 1'-0"

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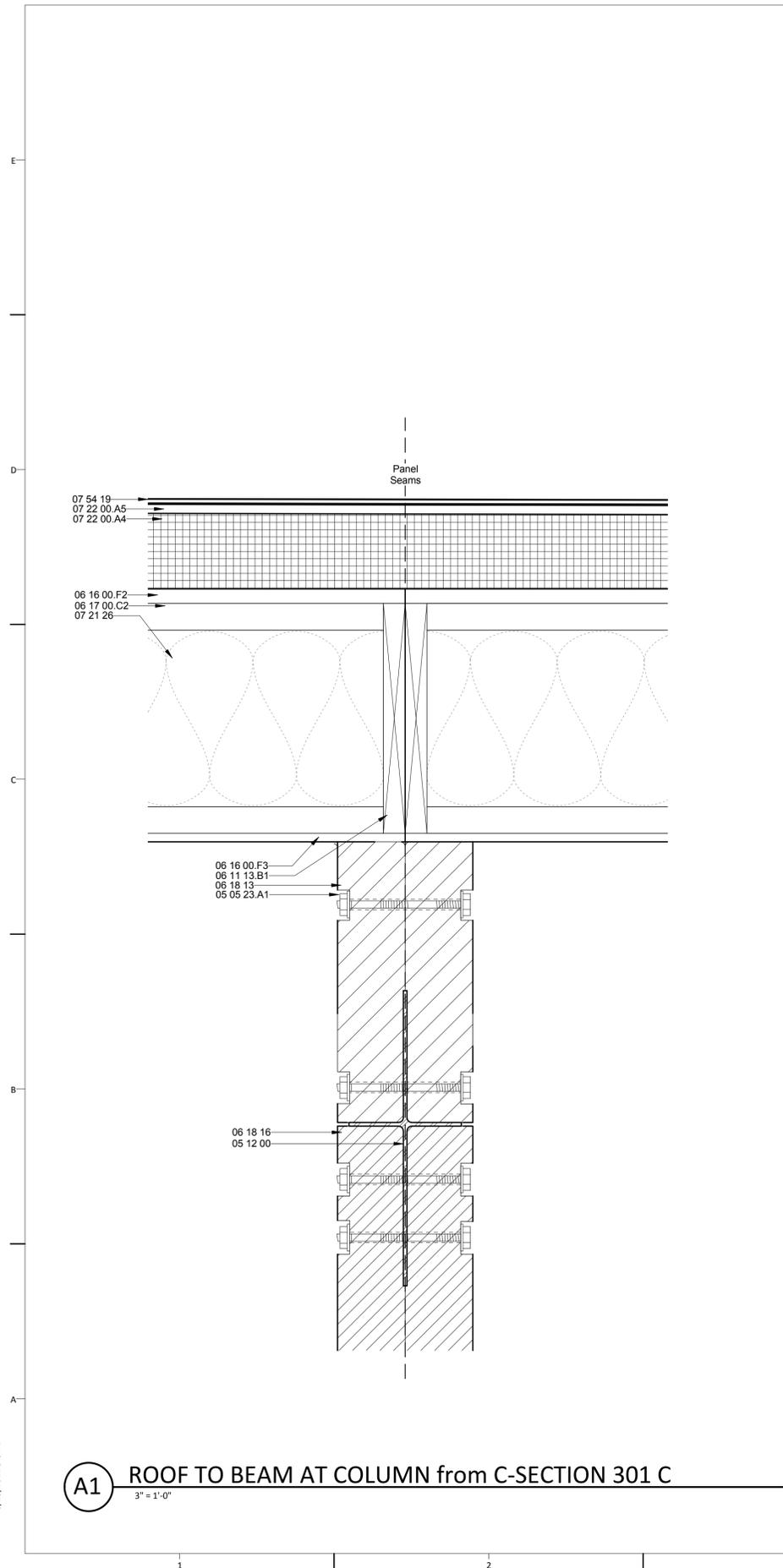
REFERENCE KEYNOTES

- 05 05 23.A1 1/2" A307 BOLT
- 05 12 00 STRUCTURAL STEEL FRAMING
- 06 05 23.B1 3/8" LAG SCREW
- 06 11 00.A2 WOOD BLOCKING AS REQUIRED
- 06 11 13.B1 LSL NORDIC RIM BOARD 1 1/8 x 11 7/8"
- 06 16 00.F2 3/4" OSB
- 06 16 00.F3 7/16" OSB
- 06 16 13 ADVANTECH FLOORING
- 06 16 53.F2 7/16" ZIP SYSTEM SHEATHING
- 06 17 00.C2 11 7/8" WOOD JOIST
- 06 18 13 GLUE-LAMINATED BEAMS
- 06 18 16 GLUE-LAMINATED COLUMNS
- 07 21 26 BLOWN-IN CELLULOSE INSULATION
- 07 22 00.A4 TAPERED POLYISOCYANURATE INSULATION BOARD
- 07 22 00.A5 1/2" HIGH DENSITY POLYISOCYANURATE INSULATION BOARD
- 07 54 19 POLYVINYL-CHLORIDE ROOFING
- 09 64 00.A2 1X4 WOOD FLOORING

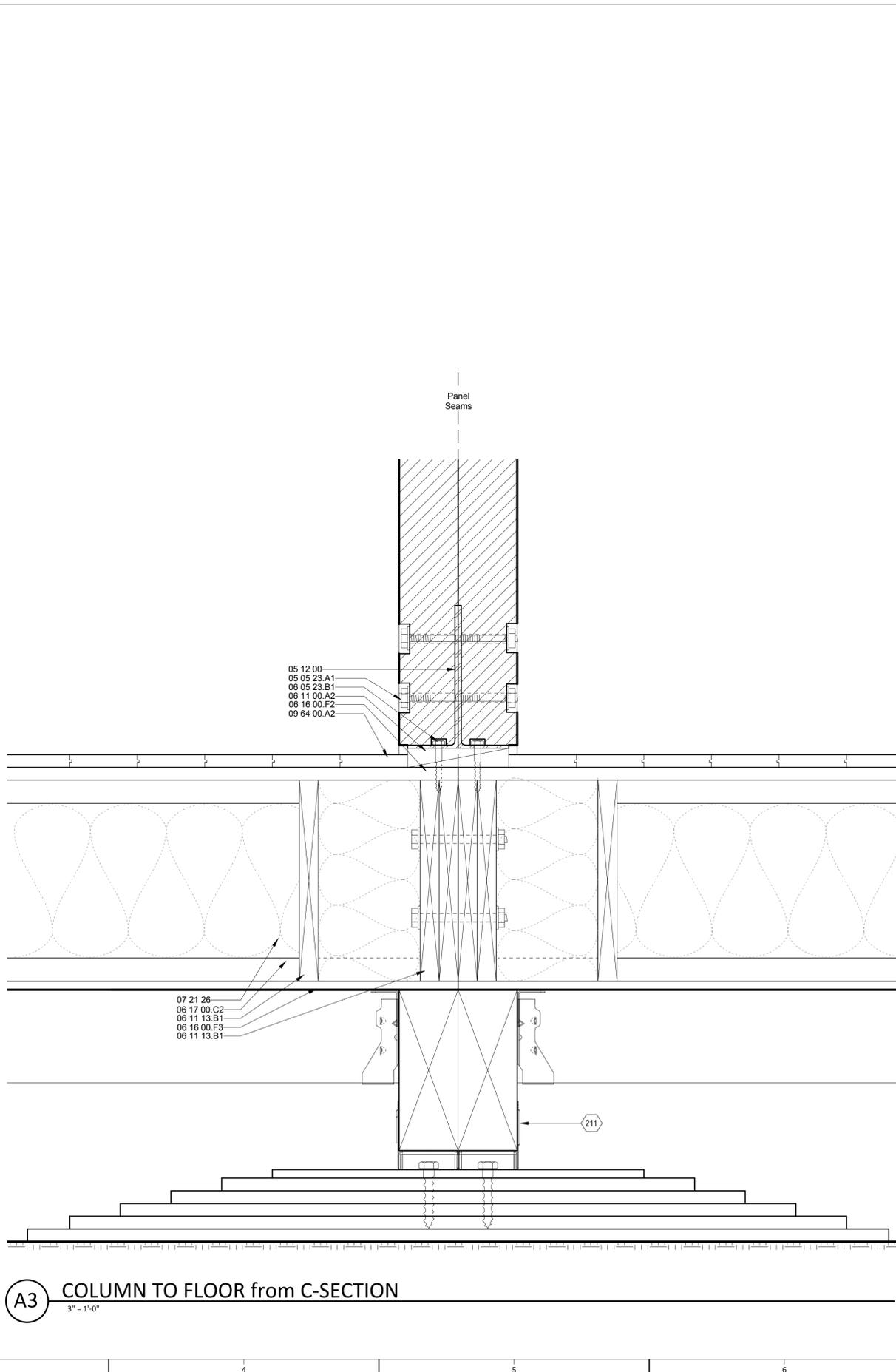
SHEET KEYNOTES

- 211 SEE FOUNDATION DETAIL A4 ON SHEET S-501

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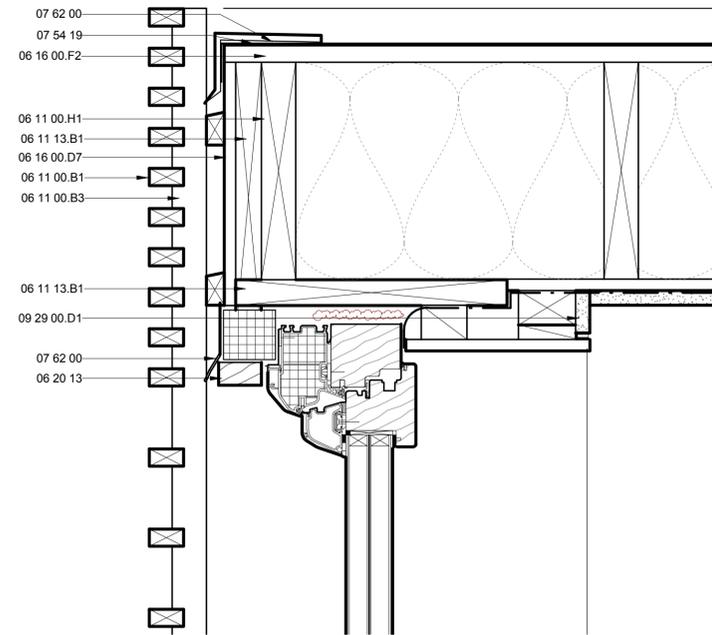


A1 ROOF TO BEAM AT COLUMN from C-SECTION 301 C
3" = 1'-0"

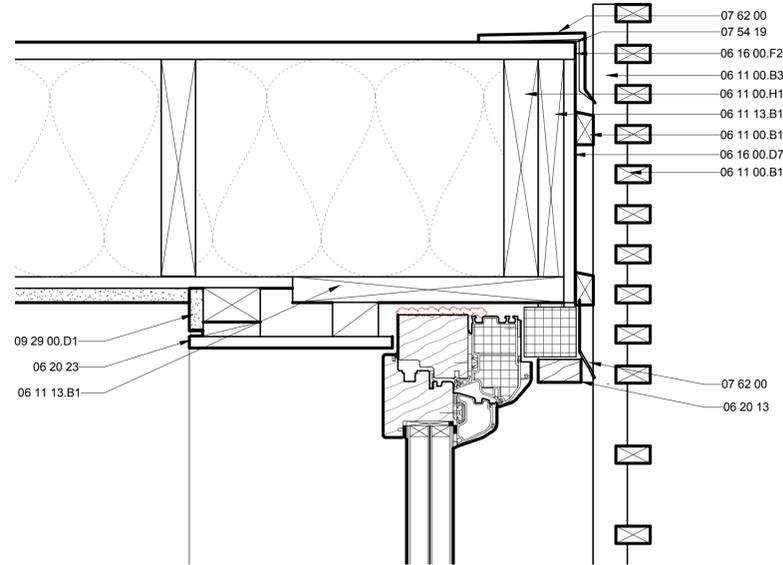


A3 COLUMN TO FLOOR from C-SECTION
3" = 1'-0"

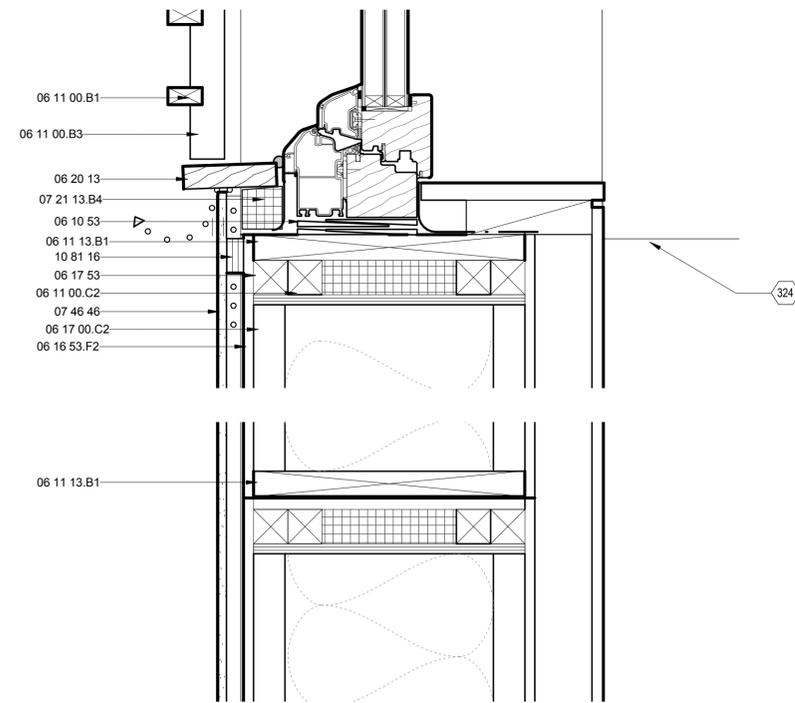
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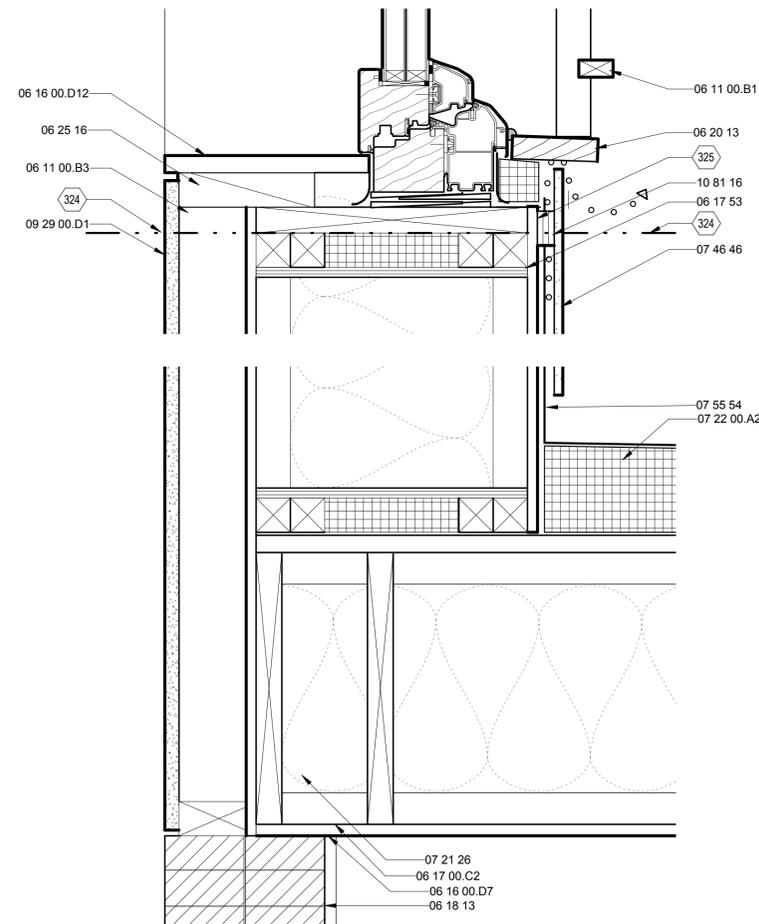
C1 STAIR BULKHEAD TO EXT. WALL from C-SECTION 301 B
3" = 1'-0"



C4 STAIR BULKHEAD TO ROOF/CENTER BEAM from C-SECTION 301B
3" = 1'-0"



A1 STAIR BULKHEAD WALL TO WALL from C-SECTION 301 B
3" = 1'-0"



A4 ROOF PANEL TO PERISCOPE WALL from C-SECTION 301 B
3" = 1'-0"

GENERAL SHEET NOTES

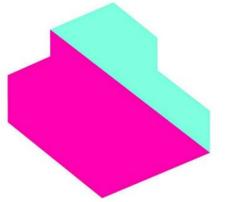
REFERENCE KEYNOTES

- 06 10 53 MISCELLANEOUS ROUGH CARPENTRY
- 06 11 00.B1 1 X 2 FURRING STRIPS
- 06 11 00.B3 1X3
- 06 11 00.C2 2X2
- 06 11 00.H1 2X10
- 06 11 13.B1 LSL NORDIC RIM BOARD 1 1/8 x 11 7/8"
- 06 16 00.D7 1/2" EXTERIOR GRADE PLYWOOD
- 06 16 00.D12 3/4" EXTERIOR GRADE PLYWOOD
- 06 16 00.F2 3/4" OSB
- 06 16 53.F2 7/16" ZIP SYSTEM SHEATHING
- 06 17 00.C2 11 7/8" WOOD JOIST
- 06 17 53 SHOP-FABRICATED WOOD TRUSSES
- 06 18 13 GLUE-LAMINATED BEAMS
- 06 20 13 EXTERIOR FINISH CARPENTRY
- 06 20 23 INTERIOR FINISH CARPENTRY
- 06 25 16 INTERIOR PLYWOOD
- 07 21 13.B4 2" RIGID INSULATION
- 07 21 26 BLOWN-IN CELLULOSE INSULATION
- 07 22 00.A2 TAPERED RIGID INSULATION
- 07 46 46 CEMENT BOARD SIDING
- 07 54 19 POLYVINYL-CHLORIDE ROOFING
- 07 55 54 EPDM SHEET WATERPROOFING
- 07 62 00 METAL FLASHING
- 09 29 00.D1 5/8" GYPSUM WALLBOARD
- 10 81 16 INSECT CONTROL DEVICES

SHEET KEYNOTES

- 324 LINE OF DETACHMENT OF STAIR BULKHEAD FROM LOWER LEVEL
- 325 SCREW SHEATHING OF PLINTH WALL ABOVE FIRST FLOOR ROOF INTO STAIR BULKHEAD FRAMING; REMOVE SCREWS TO DETACH

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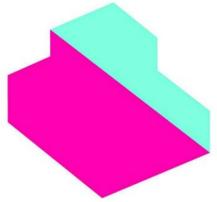
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MARK	DATE	DESCRIPTION
1	NOV. 23, 2010	DESIGN DEVELOPMENT
2	MARCH 22, 2011	CONSTRUCTION DOCUMENTS
3	MAY 3, 2011	FINAL CONSTRUCTION DOCUMENTS
4	AUGUST 11, 2011	AS-BUILT CONSTRUCTION DOCUMENTS

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SHEET TITLE

**BUILDING ENVELOPE
DETAILS**

A-506

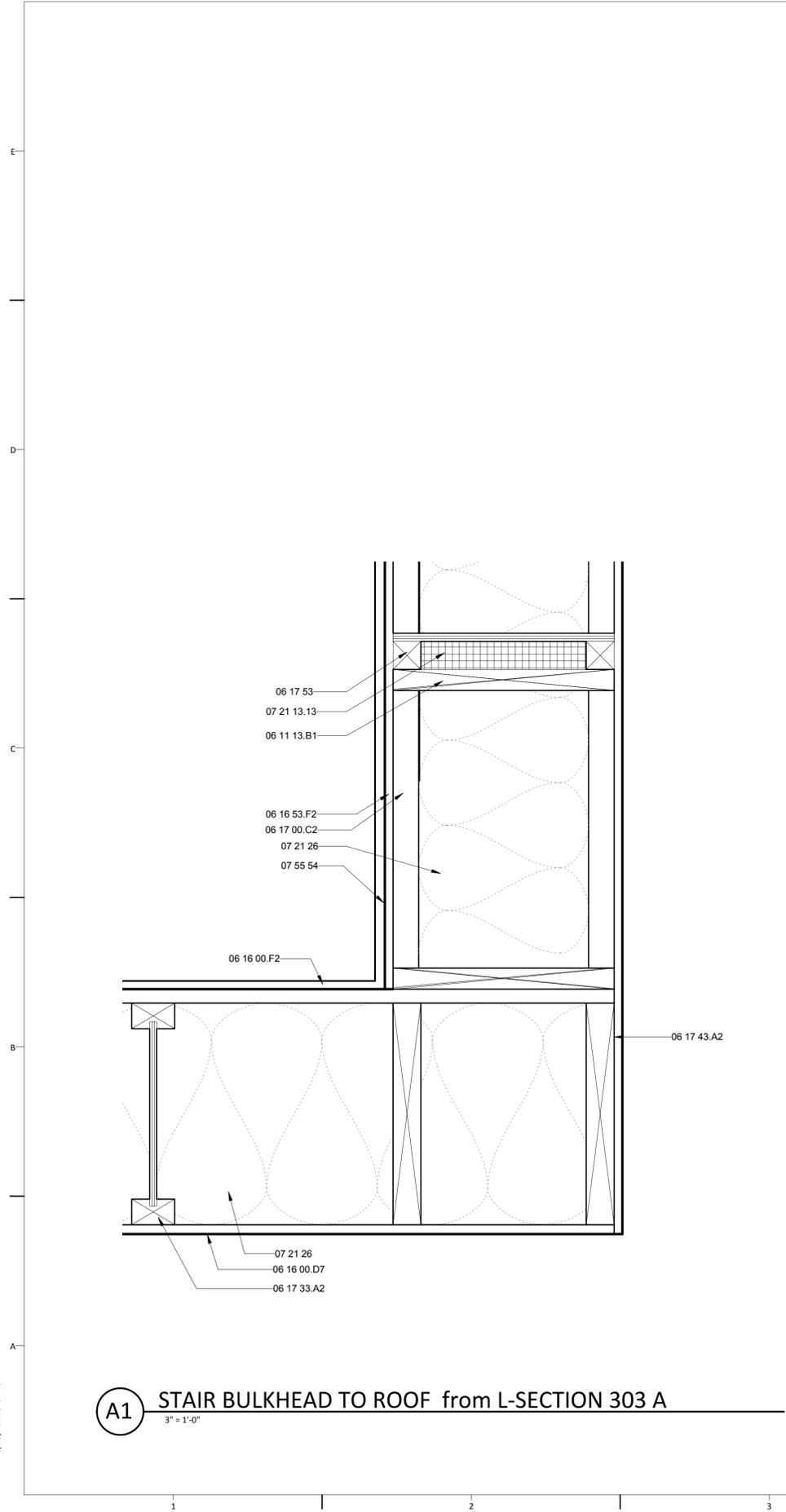
GENERAL SHEET NOTES

REFERENCE KEYNOTES

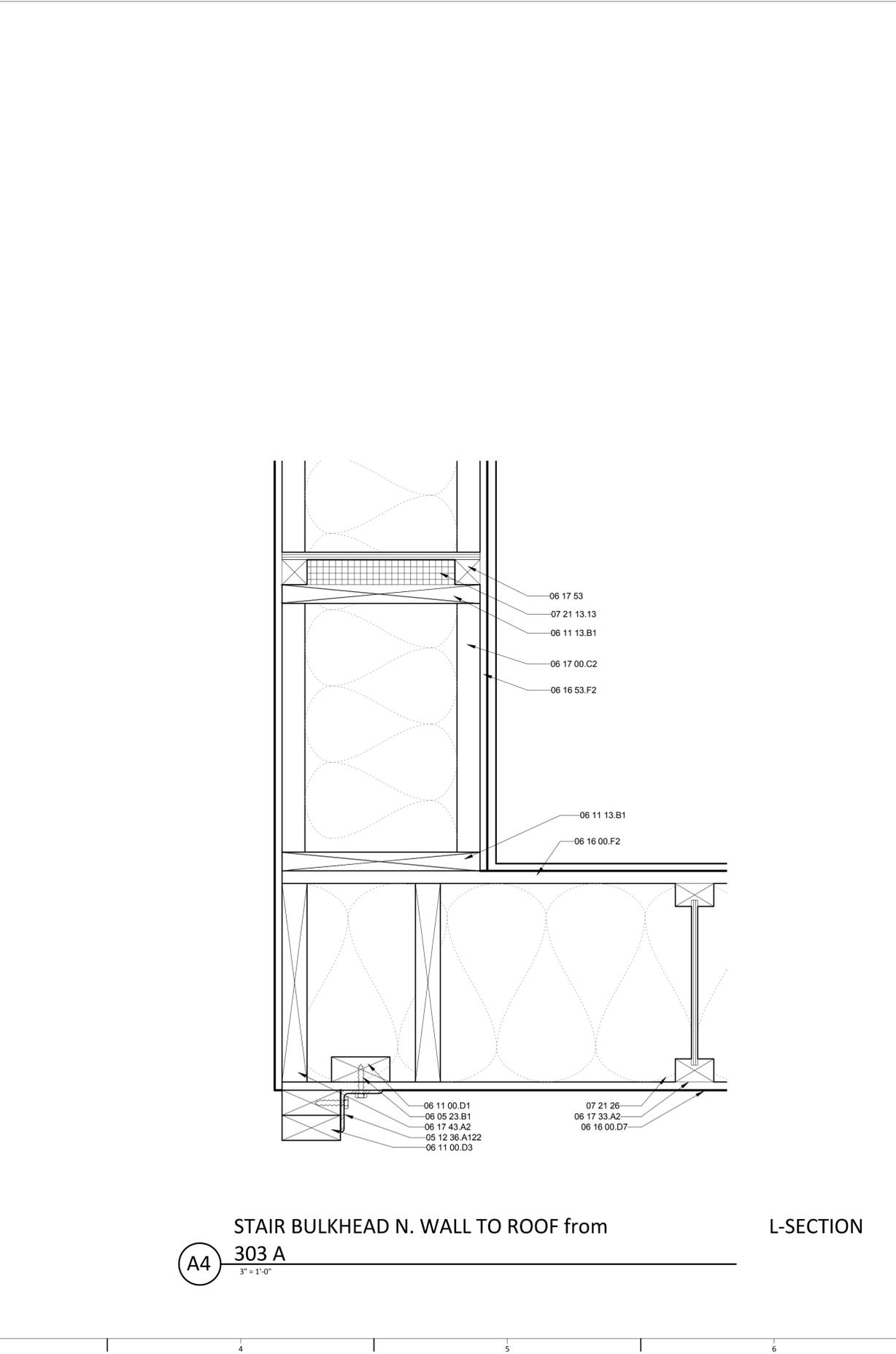
- 05 12 36.A122 L2.5X2.5X0.1875
- 06 05 23.B1 3/8" LAG SCREW
- 06 11 00.D1 2X4
- 06 11 00.D3 2X4 FRAMING
- 06 11 13.B1 LSL NORDIC RIM BOARD 1 1/8 x 11 7/8"
- 06 16 00.D7 1/2" EXTERIOR GRADE PLYWOOD
- 06 16 00.F2 3/4" OSB
- 06 16 53.F2 7/16" ZIP SYSTEM SHEATHING
- 06 17 00.C2 11 7/8" WOOD I JOIST
- 06 17 33.A2 11 7/8" WOOD I-BEAM
- 06 17 43.A2 2 1/2 X 11 7/8" RIM JOIST
- 06 17 53 SHOP-FABRICATED WOOD TRUSSES
- 07 21 13.13 RIGID INSULATION
- 07 21 26 BLOWN-IN CELLULOSE INSULATION
- 07 55 54 EPDM SHEET WATERPROOFING
- 07 91 16 JOINT GASKETS

SHEET KEYNOTES

DRAWING KEY

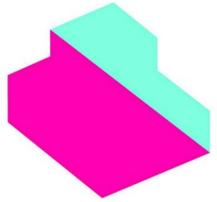


A1 STAIR BULKHEAD TO ROOF from L-SECTION 303 A
3" = 1'-0"



A4 STAIR BULKHEAD N. WALL TO ROOF from 303 A
3" = 1'-0"

8/13/2011 9:34:23 AM



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PORCH DETAILS

A-507

GENERAL SHEET NOTES

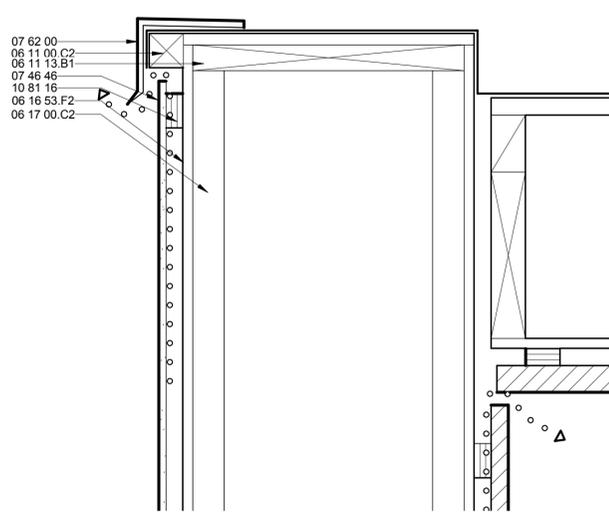
REFERENCE KEYNOTES

- 05 05 23.A1 1/2" A307 BOLT
- 05 12 00 STRUCTURAL STEEL FRAMING
- 06 05 23.N22 LPC6Z SIMPSON POST CAP
- 06 11 00.A2 WOOD BLOCKING AS REQUIRED
- 06 11 00.B3 1X3
- 06 11 00.C2 2X2
- 06 11 00.F1 2X6
- 06 11 00.G1 2X8
- 06 11 00.G6 2X8 TIMBERSIL JOIST
- 06 11 00.I2 2X12 PRESSURE TREATED LUMBER
- 06 11 00.M1 6X6
- 06 11 13.B1 LSL NORDIC RIM BOARD 1 1/8 x 11 7/8"
- 06 15 33 WOOD DECKING
- 06 15 33.A1 WESTERN RED CEDAR DECKING
- 06 16 00.D7 1/2" EXTERIOR GRADE PLYWOOD
- 06 16 00.D12 3/4" EXTERIOR GRADE PLYWOOD
- 06 16 00.F2 3/4" OSB
- 06 16 53.F2 7/16" ZIP SYSTEM SHEATHING
- 06 17 00.C2 11 7/8" WOOD JOIST
- 07 46 23.A2 1 1/8" CEDAR SIDING
- 07 46 46 CEMENT BOARD SIDING
- 07 54 19 POLYVINYL-CHLORIDE ROOFING
- 07 62 00 METAL FLASHING
- 10 81 16 INSECT CONTROL DEVICES

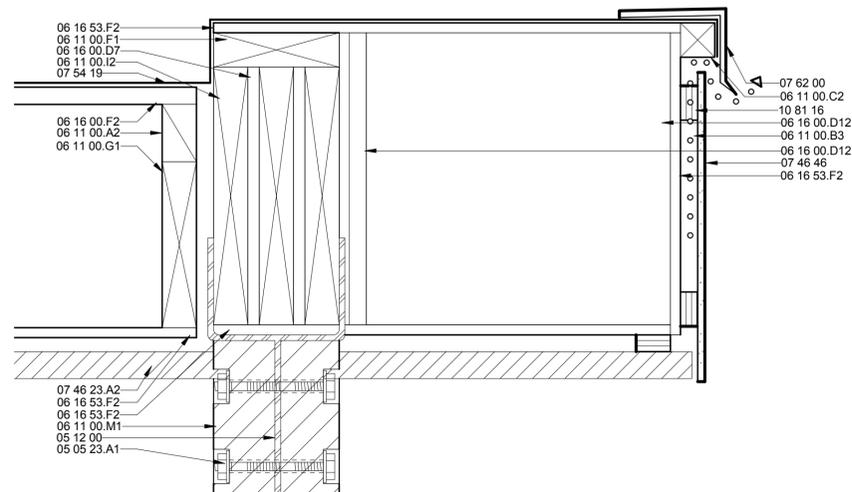
SHEET KEYNOTES

210 SEE FOUNDATION DETAIL A1 ON SHEET S-501

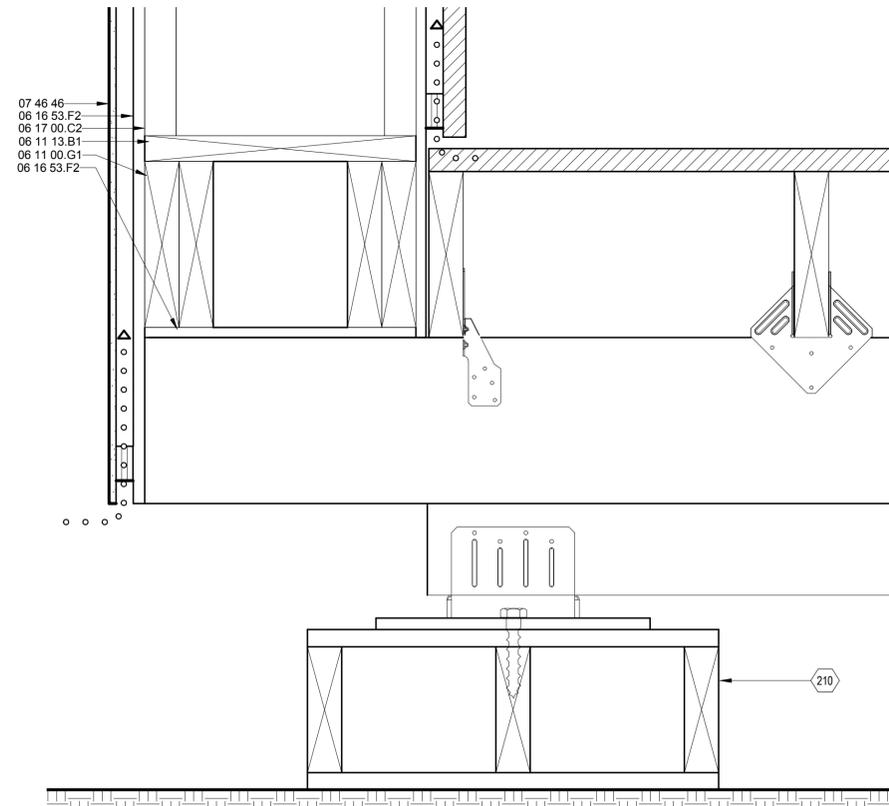
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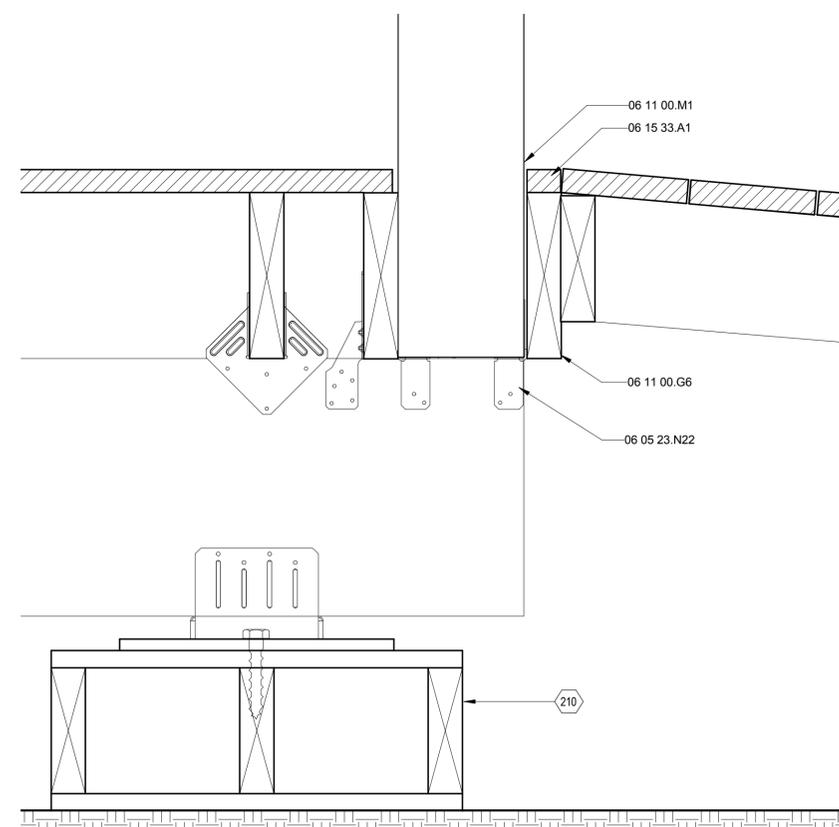
D1 PORCH ROOF TO PORCH WALL from C-SECTION 302 B
3" = 1'-0"



D4 NORTH PORCH ROOF AT ROOF EXTENSION AT POST
3" = 1'-0"

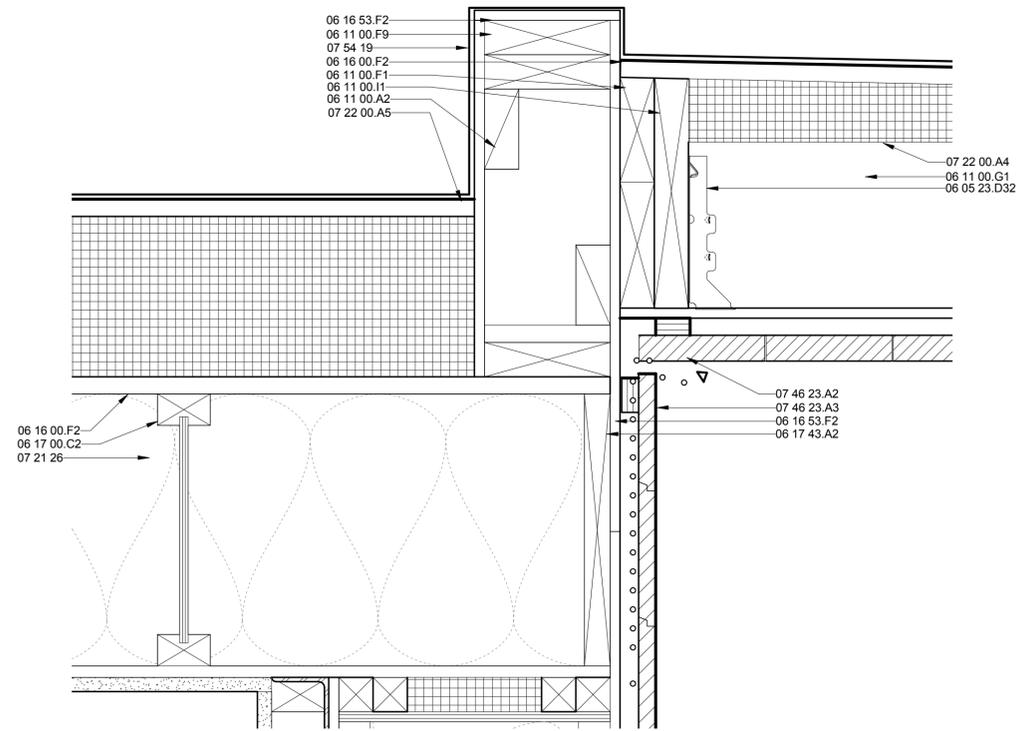


A1 PORCH WALL TO DECK AT EXT. FOOTING from C-SECTION 302 B
3" = 1'-0"

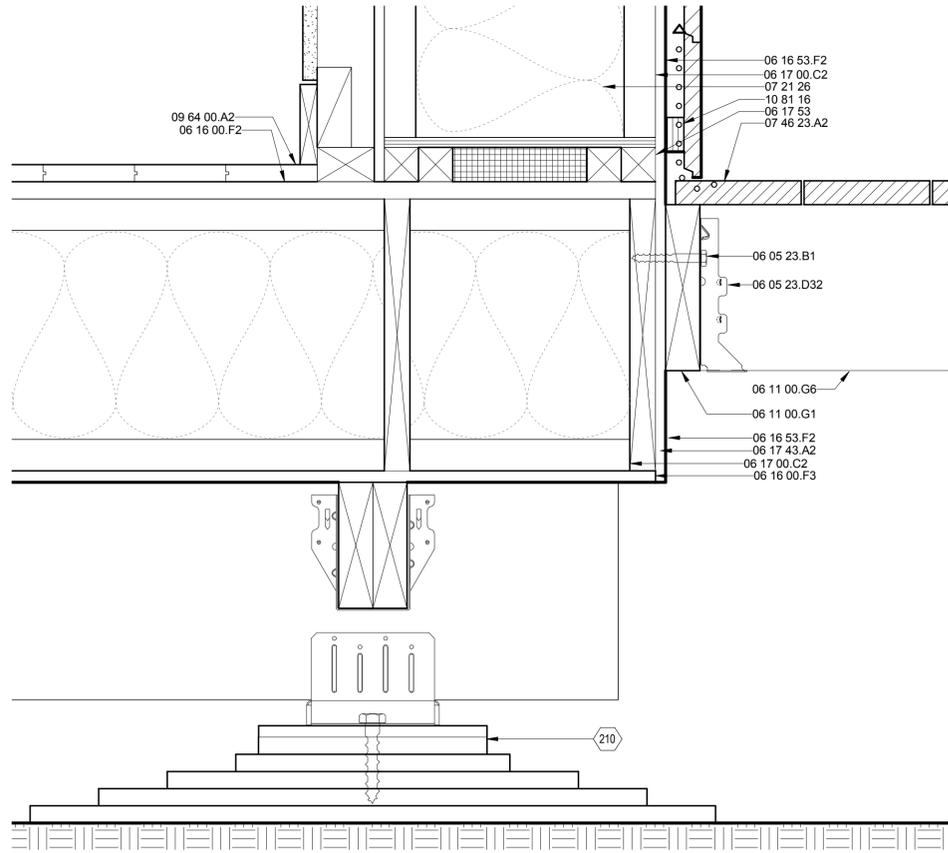


A4 NORTH PORCH TO FOOTING AT POST
3" = 1'-0"

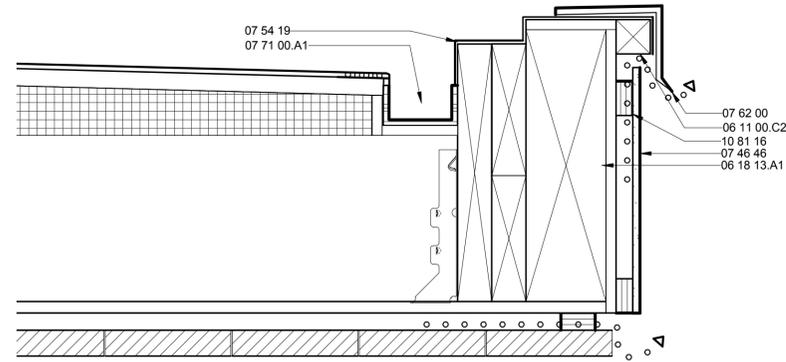
8/13/2011 9:34:27 AM



C1 PORCH ROOF TO EXT. WALL from C-SECTION 303 A
3" = 1'-0"



A1 TYP EXT. WALL TO FOOTING AT DECK from L-SECTION 303 A
3" = 1'-0"



D4 NORTH PORCH ROOF from C-SECTION 303 A
3" = 1'-0"

GENERAL SHEET NOTES

REFERENCE KEYNOTES

- 06 05 23.B1 3/8" LAG SCREW
- 06 05 23.D32 LUS28 SIMPSON JOIST HANGER
- 06 11 00.A2 WOOD BLOCKING AS REQUIRED
- 06 11 00.B3 1X3
- 06 11 00.C2 2X2
- 06 11 00.F1 2X6
- 06 11 00.F9 2X6 JOISTS
- 06 11 00.G1 2X8
- 06 11 00.G6 2X8 TIMBERSIL JOIST
- 06 11 00.I1 2X12
- 06 16 00.F2 3/4" OSB
- 06 16 00.F3 7/16" OSB
- 06 16 53.F2 7/16" ZIP SYSTEM SHEATHING
- 06 17 00.C2 1 1/2 X 11 7/8" WOOD JOIST
- 06 17 43.A2 2 1/2 X 11 7/8" RIM JOIST
- 06 17 53 SHOP-FABRICATED WOOD TRUSSES
- 06 18 13.A1 12" X 3.125" GLB
- 07 21 26 BLOWN-IN CELLULOSE INSULATION
- 07 22 00.A4 TAPERED POLYISOCYANURATE INSULATION BOARD
- 07 22 00.A5 1/2" HIGH DENSITY POLYISOCYANURATE INSULATION BOARD
- 07 46 23.A2 1 1/8" CEDAR SIDING
- 07 46 23.A3 3/4" CEDAR SHIPLAP SIDING
- 07 46 46 CEMENT BOARD SIDING
- 07 54 19 POLYVINYL-CHLORIDE ROOFING
- 07 62 00 METAL FLASHING
- 07 71 00.A1 GUTTER
- 09 64 00.A2 1X4 WOOD FLOORING
- 10 81 16 INSECT CONTROL DEVICES

SHEET KEYNOTES

- 210 SEE FOUNDATION DETAIL A1 ON SHEET S-501

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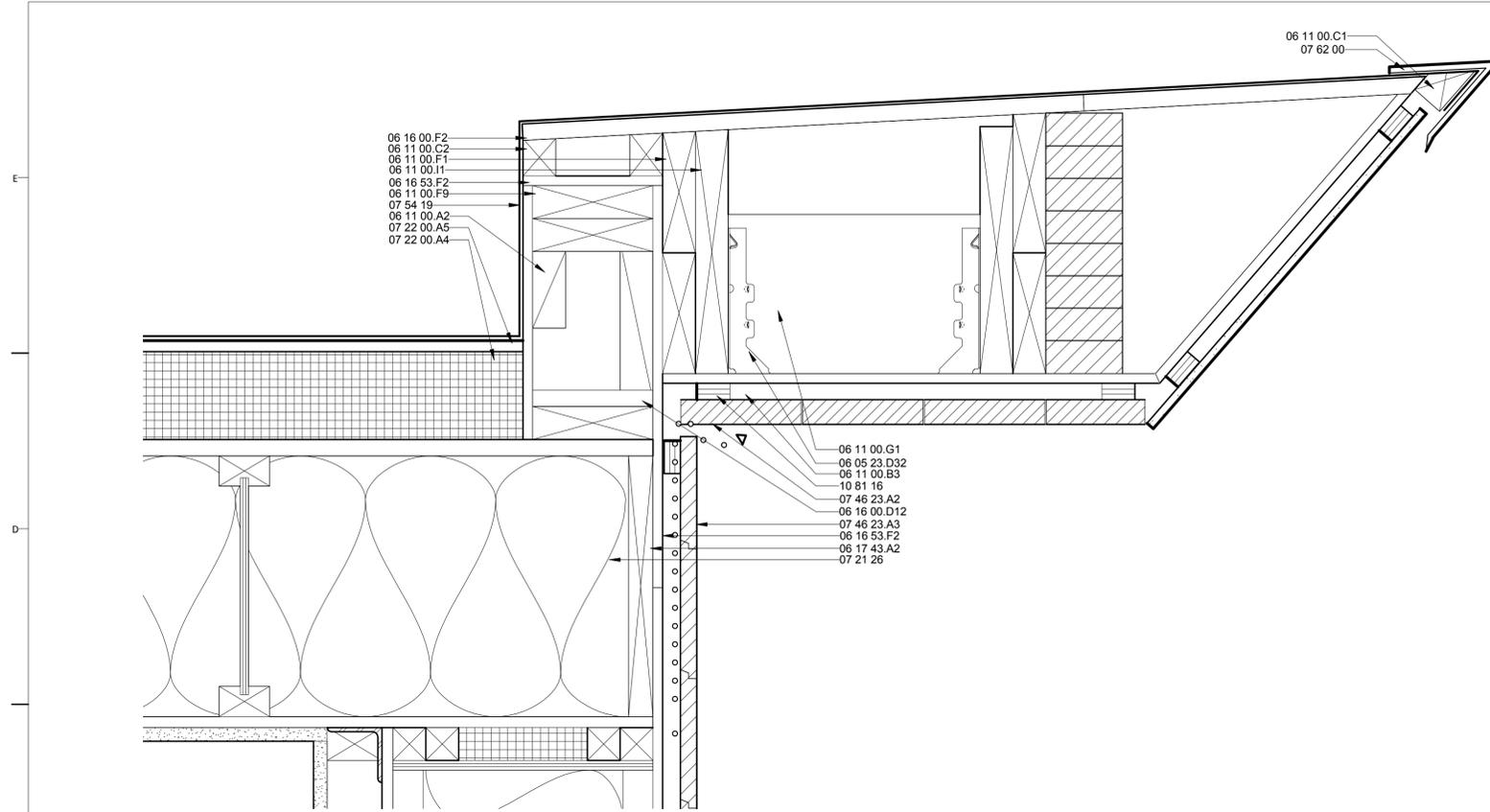
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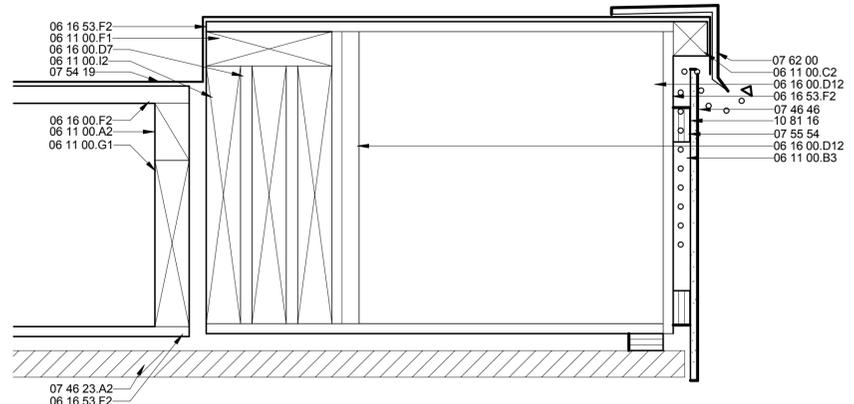
PORCH DETAILS

A-508

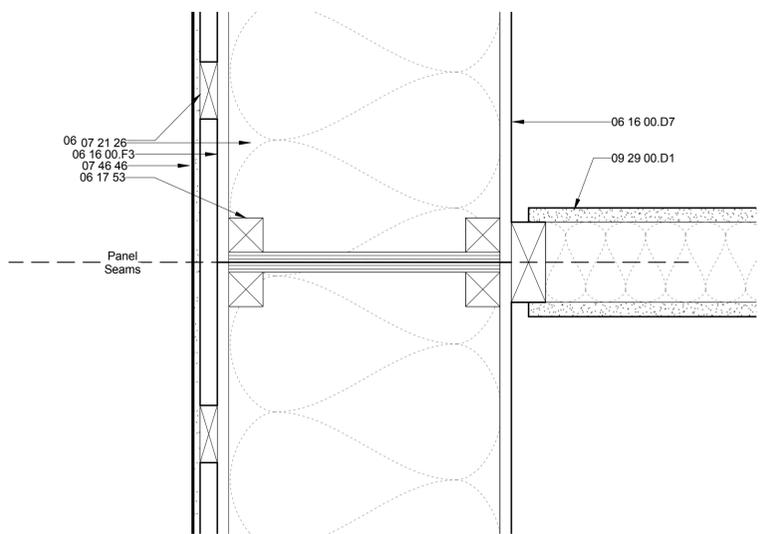
8/13/2011 9:34:30 AM



D1 SOUTH PORCH ROOF from L-SECTION 303 B
3" = 1'-0"



A1 SOUTH PORCH ROOF AT ROOF EXTENSION from C-SECTION 302B
3" = 1'-0"



A4 TYP WALL PANEL TO PANEL CONNECTION (PLAN VIEW)
3" = 1'-0"

GENERAL SHEET NOTES

REFERENCE KEYNOTES

- 06 05 23.D32 LUS28 SIMPSON JOIST HANGER
- 06 11 00.A2 WOOD BLOCKING AS REQUIRED
- 06 11 00.B1 1 X 2 FURRING STRIPS
- 06 11 00.B3 1X3
- 06 11 00.C1 2X3
- 06 11 00.C2 2X2
- 06 11 00.F1 2X6
- 06 11 00.F9 2X6 JOISTS
- 06 11 00.G1 2X8
- 06 11 00.I1 2X12
- 06 11 00.I2 2X12 PRESSURE TREATED LUMBER
- 06 16 00.D7 1/2" EXTERIOR GRADE PLYWOOD
- 06 16 00.D12 3/4" EXTERIOR GRADE PLYWOOD
- 06 16 00.F2 3/4" OSB
- 06 16 00.F3 7/16" OSB
- 06 16 53.F2 7/16" ZIP SYSTEM SHEATHING
- 06 17 43.A2 2 1/2 X 11 7/8" RIM JOIST
- 06 17 53 SHOP-FABRICATED WOOD TRUSSES
- 07 21 26 BLOWN-IN CELLULOSE INSULATION
- 07 22 00.A4 TAPERED POLYISOCYANURATE INSULATION BOARD
- 07 22 00.A5 1/2" HIGH DENSITY POLYISOCYANURATE INSULATION BOARD
- 07 46 23.A2 1 1/8" CEDAR SIDING
- 07 46 23.A3 3/4" CEDAR SHIPLAP SIDING
- 07 46 46 CEMENT BOARD SIDING
- 07 54 19 POLYVINYL-CHLORIDE ROOFING
- 07 55 54 EPDM SHEET WATERPROOFING
- 07 62 00 METAL FLASHING
- 09 29 00.D1 5/8" GYPSUM WALLBOARD
- 10 81 16 INSECT CONTROL DEVICES

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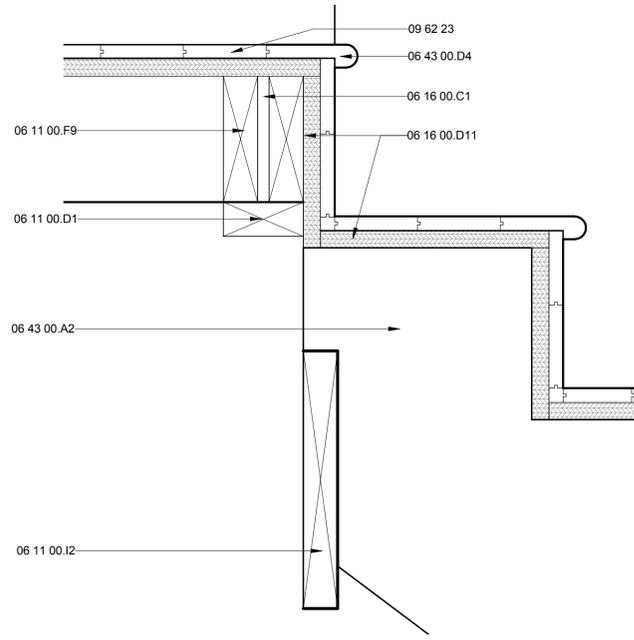
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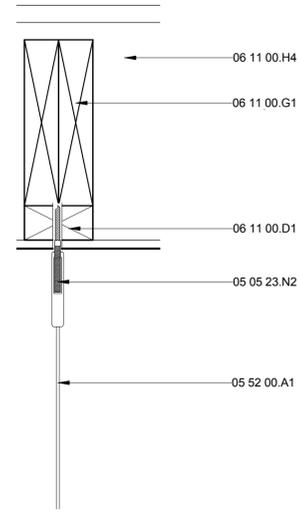
PORCH DETAILS

A-509

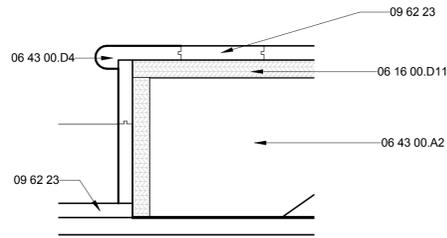
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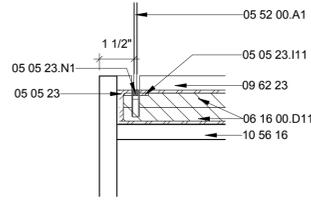
C2 RISER TO LANDING DETAIL
3" = 1'-0"



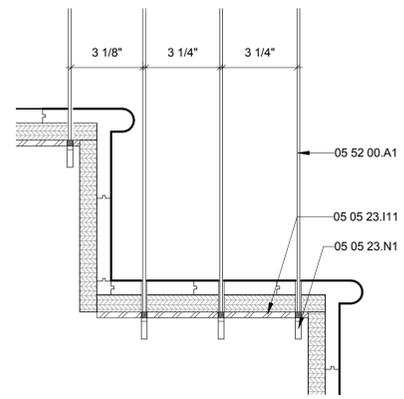
C4 CABLE TO CIELING CONNECTION
3" = 1'-0"



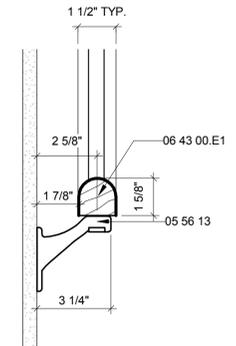
B2 STAIR RISER TO FLOOR DETAIL
3" = 1'-0"



B4 CABLE TO CASEWORK CONNECTION
3" = 1'-0"



A2 CABLE TO STAIR TREAD CONNECTION
3" = 1'-0"



A4 HANDRAIL TO WALL DETAIL
3" = 1'-0"

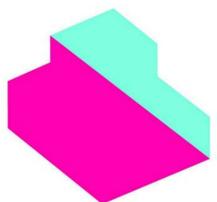
GENERAL SHEET NOTES

REFERENCE KEYNOTES

05 05 23	METAL FASTENINGS
05 05 23.I11	1/8" x 1" STEEL BAR STOCK
05 05 23.N1	S4 SWAGING STUD
05 05 23.N2	HANGER BOLT TENSIONER
05 52 00.A1	STAINLESS STEEL 1/8" CABLE GUARDRAIL
05 56 13	METAL WALL MOUNT HANDRAIL BRACKET
06 11 00.D1	2X4
06 11 00.F9	2X6 JOISTS
06 11 00.G1	2X8
06 11 00.H4	2X10 JOISTS @ 16" O.C.
06 11 00.I2	2X12 PRESSURE TREATED LUMBER
06 16 00.C1	1/4" PARTICLEBOARD
06 16 00.D11	3/4" PLYWOOD
06 43 00.A2	2X12 STRINGER
06 43 00.D4	1" BAMBOO STAIR NOSING
06 43 00.E1	WOOD WALL MOUNTED HANDRAIL
09 62 23	5/8" BAMBOO FLOORING
10 56 16	FABRICATED WOOD STORAGE SHELVING

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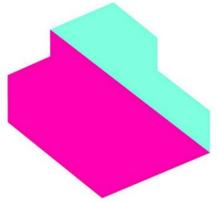


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**INTERIOR DETAILS -
UNDER STAIR
CASEWORK**

A-522

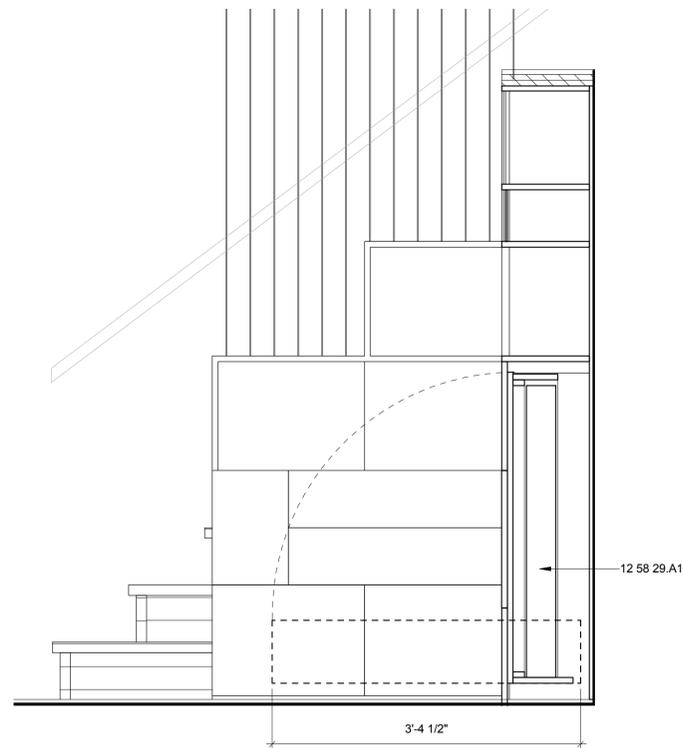
GENERAL SHEET NOTES

REFERENCE KEYNOTES

12 51 00.A1 FOLD AWAY WOOD DESK
12 58 29.A1 TWIN MURPHY BED

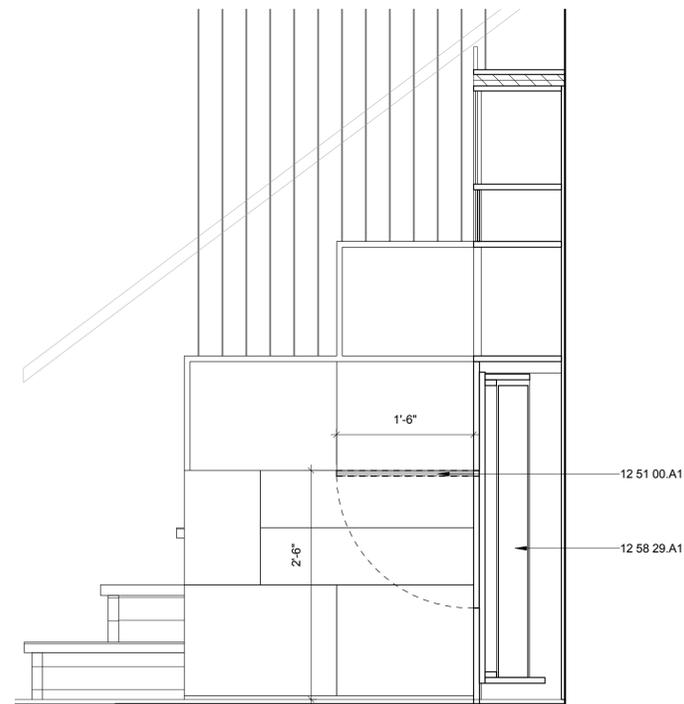
SHEET KEYNOTES

DRAWING KEY



A2 CASEWORK SECTION W/ MURPHY BED

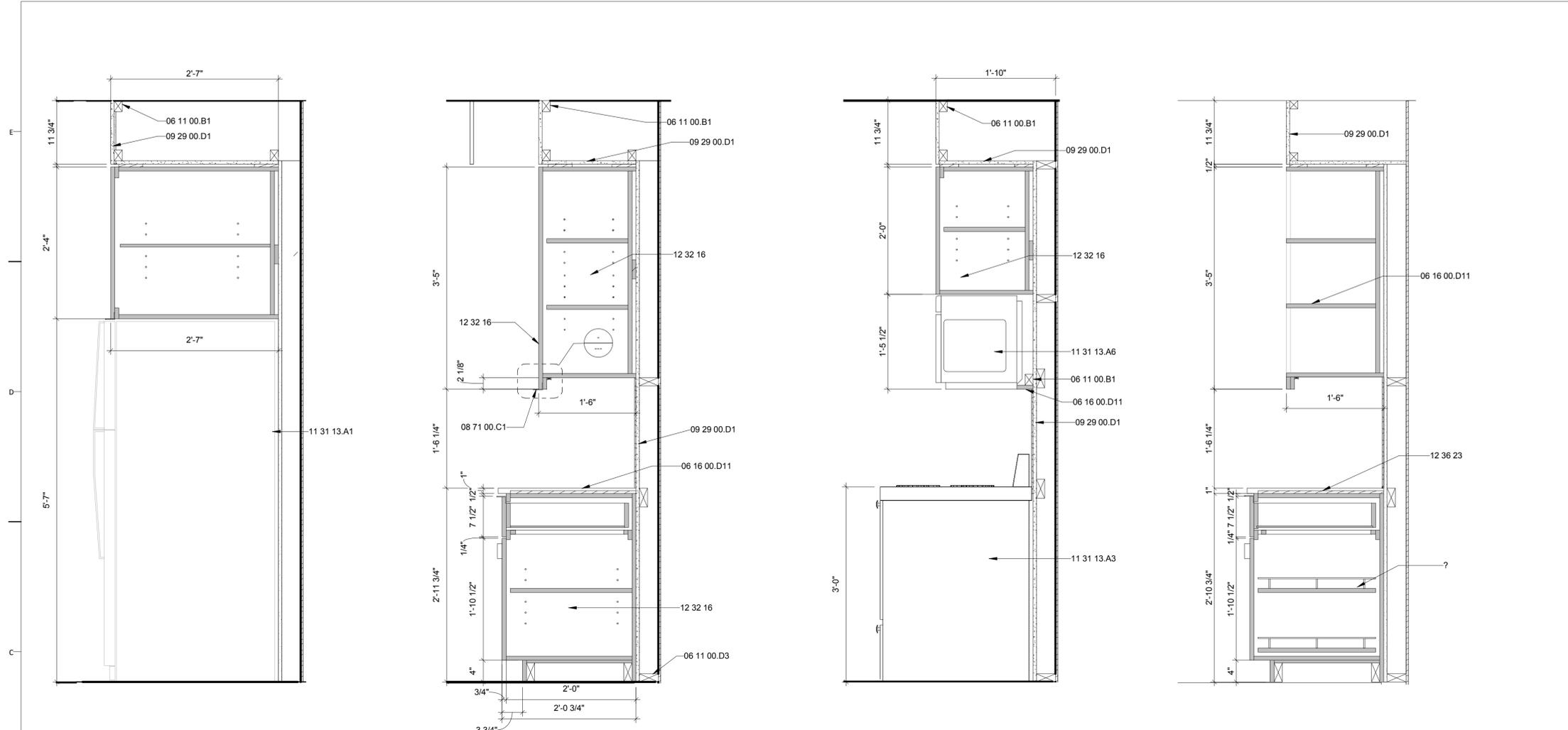
1" = 1'-0"



A4 CASEWORK SECTION W/ FOLDING DESK

1" = 1'-0"

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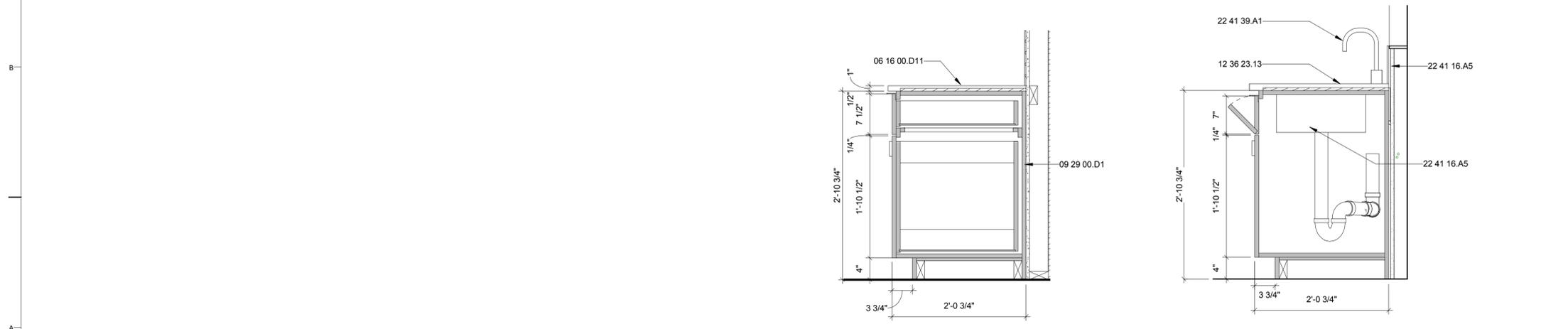


C1 REFRIGERATOR CABINET
1" = 1'-0"

C2 LOWER & UPPER TYP. CABINET
1" = 1'-0"

C3 STOVE + MICROWAVE
1" = 1'-0"

C4 KITCHEN SHELVING & LAZY SUSAN
1" = 1'-0"



A4 TRASH RECEPTACLE
1" = 1'-0"

A5 UNDER SINK
1" = 1'-0"

GENERAL SHEET NOTES

REFERENCE KEYNOTES

- 06 11 00.B1 1 X 2 FURRING STRIPS
- 06 11 00.D3 2X4 FRAMING
- 06 16 00.D11 3/4" PLYWOOD
- 08 71 00.C1 DOOR PULL BY HAFELE
- 09 29 00.D1 5/8" GYPSUM WALLBOARD
- 11 31 13.A1 REFRIGERATOR
- 11 31 13.A3 RANGE
- 11 31 13.A6 MICROWAVE OVEN
- 12 32 13 MANUFACTURED WOOD-VENEER-FACED CASEWORK
- 12 32 16 MANUFACTURED PLASTIC LAMINATE-CLAD CASEWORK
- 12 36 23 PLASTIC COUNTERTOPS
- 12 36 23.13 PLASTIC-LAMINATE-CLAD COUNTERTOPS
- 12 36 23.A1 DURATE COMPOSITE COUNTERTOP
- 22 41 16.A5 UNDER COUNTER SINK
- 22 41 39.A1 KITCHEN FAUCET
- 26 51 00.A12 SURFACE MOUNTED STAGGERED STRIP LIGHT
- 26 51 00.D1 UNDER CABINET LED

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1	NOV. 23, 2010	DESIGN DEVELOPMENT
2	MARCH 22, 2011	CONSTRUCTION DOCUMENTS
3	MAY 3, 2011	FINAL CONSTRUCTION DOCUMENTS
4	AUGUST 11, 2011	AS-BUILT CONSTRUCTION DOCUMENTS

LOT NUMBER

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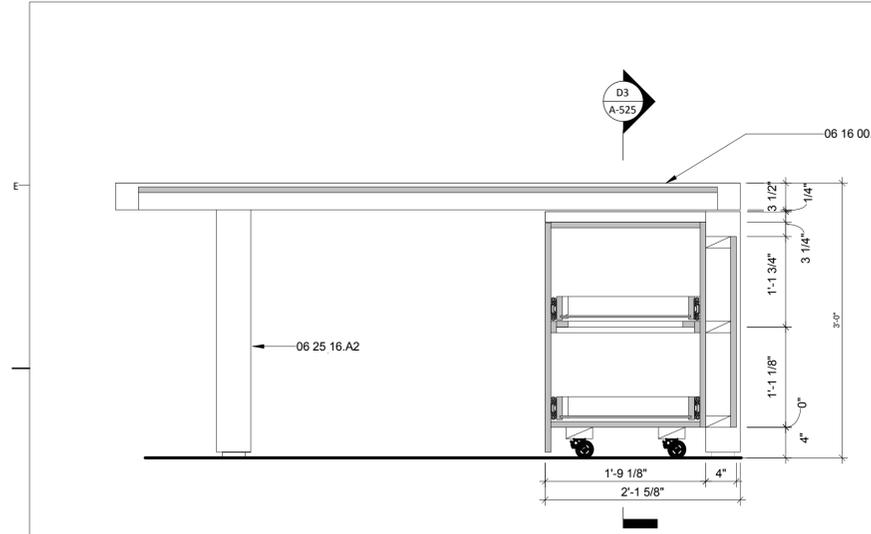
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SHEET TITLE

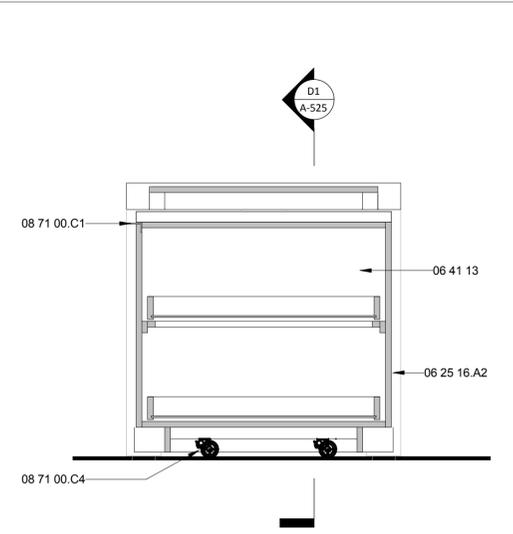
KITCHEN CASEWORK SECTIONS

A-524

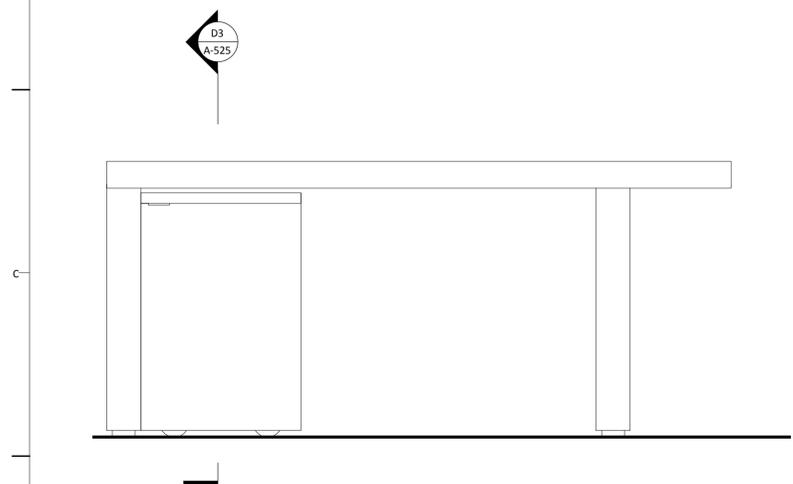
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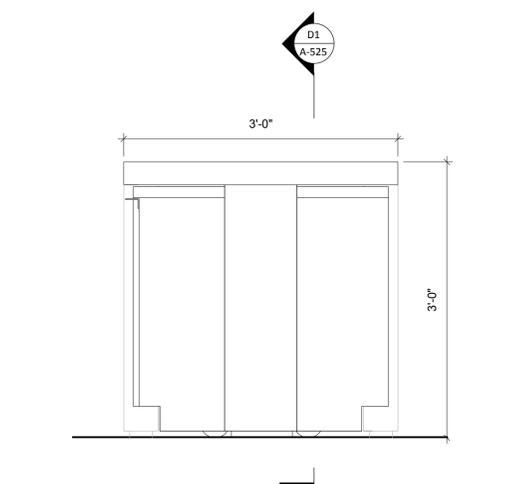
D1 KITCHEN ISLAND LONGITUDINAL SECTION
1" = 1'-0"



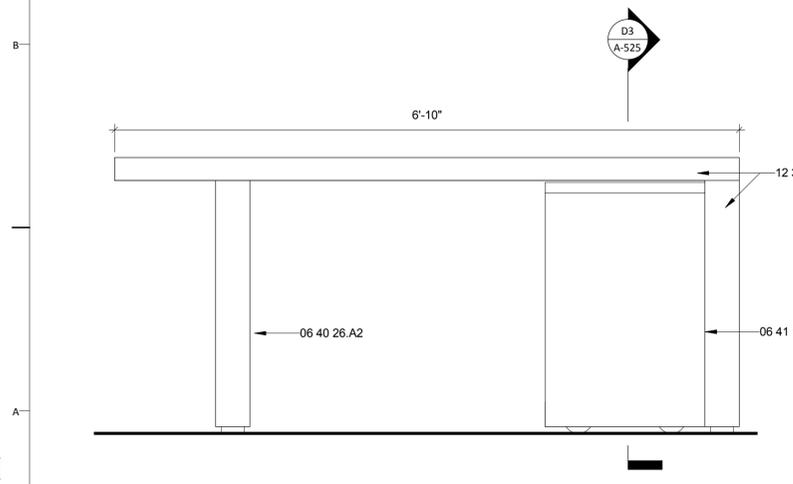
D3 KITCHEN ISLAND CROSS SECTION
1" = 1'-0"



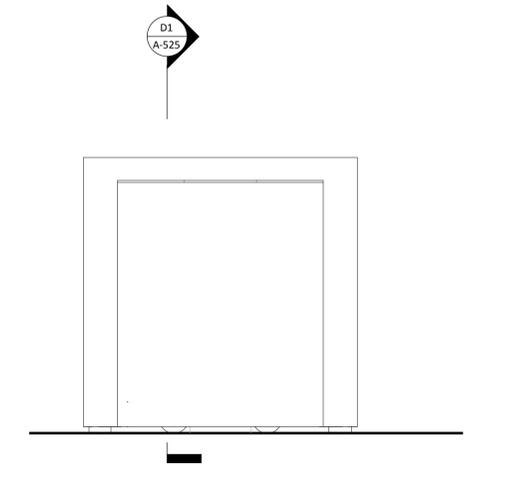
B1 KITCHEN ISLAND EAST ELEVATION
1" = 1'-0"



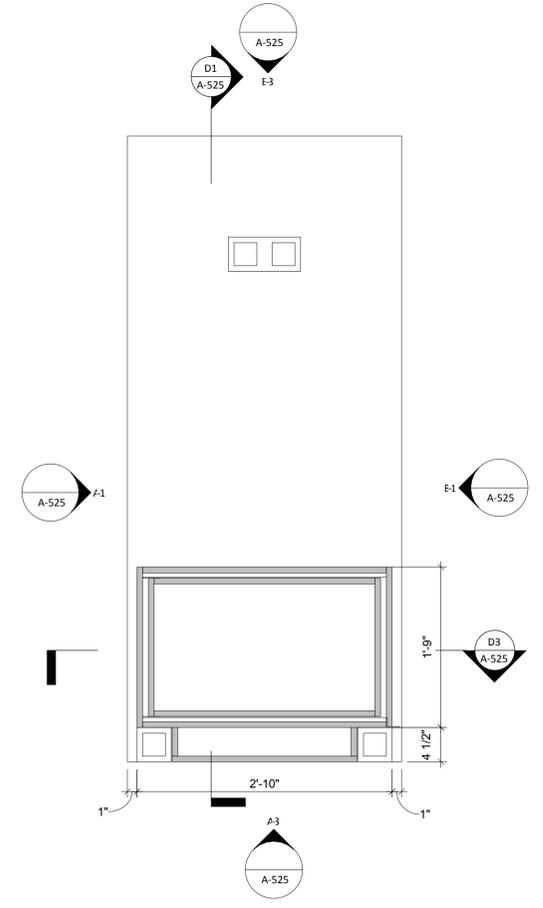
B3 KITCHEN ISLAND NORTH ELEVATION
1" = 1'-0"



A1 KITCHEN ISLAND WEST ELEVATION
1" = 1'-0"



A3 KITCHEN ISLAND SOUTH ELEVATION
1" = 1'-0"



A5 KITCHEN ISLAND
1" = 1'-0"

GENERAL SHEET NOTES

REFERENCE KEYNOTES

06 16 00.D11	3/4" PLYWOOD
06 25 16.A2	3/4" MAPLE VENEER PUREBOND PLYWOOD
06 40 26.A2	WOOD LAMINATE
06 41 13	WOOD-VENEER-FACED ARCHITECTURAL CABINETS
08 71 00.C1	DOOR PULL BY HAFELE
08 71 00.C4	RUBBER CASTER
12 36 23.A3	STARON COUNTERTOP

SHEET KEYNOTES

DRAWING KEY



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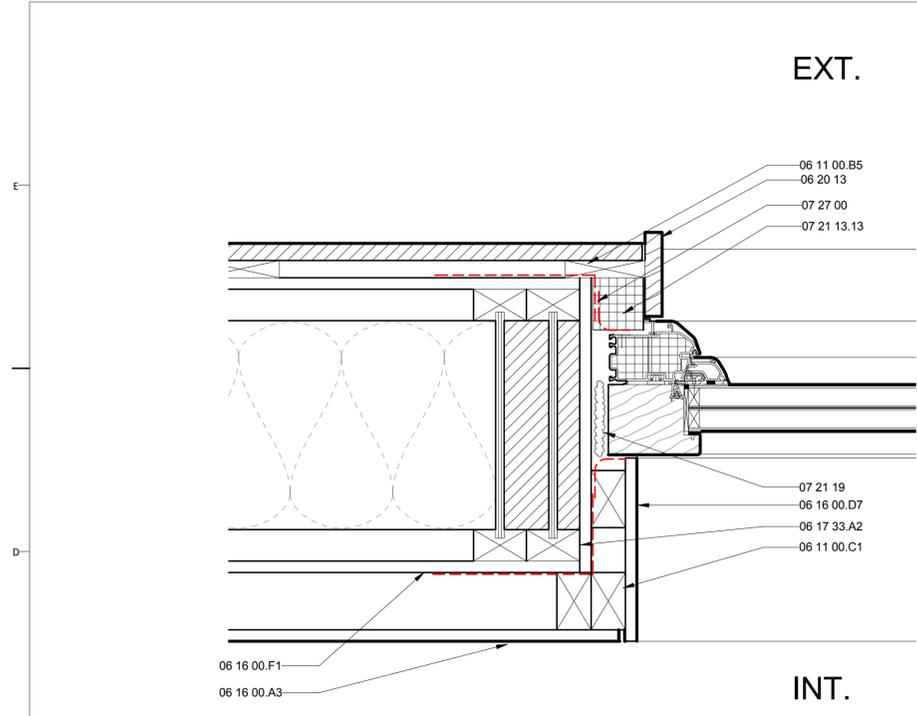
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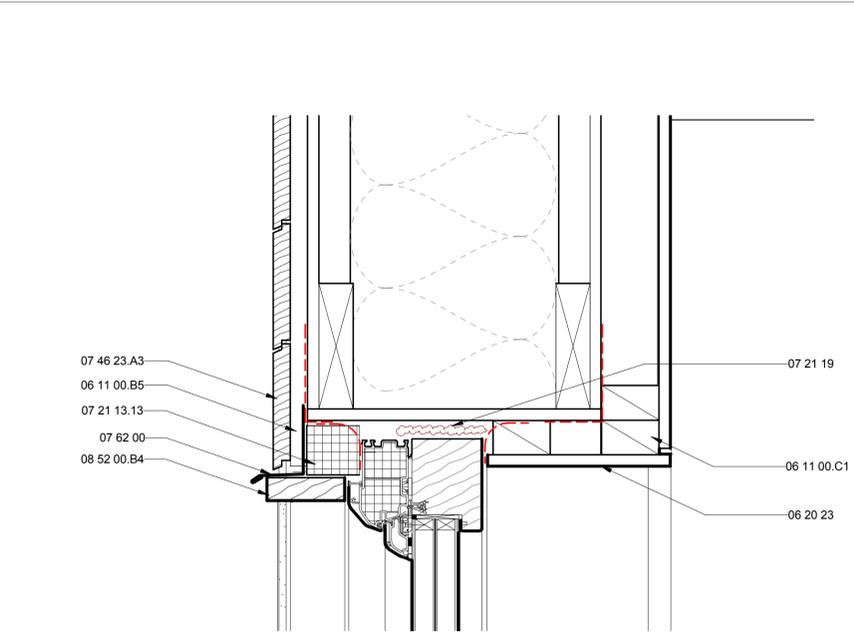
**KITCHEN ISLAND
DETAILS**

A-525

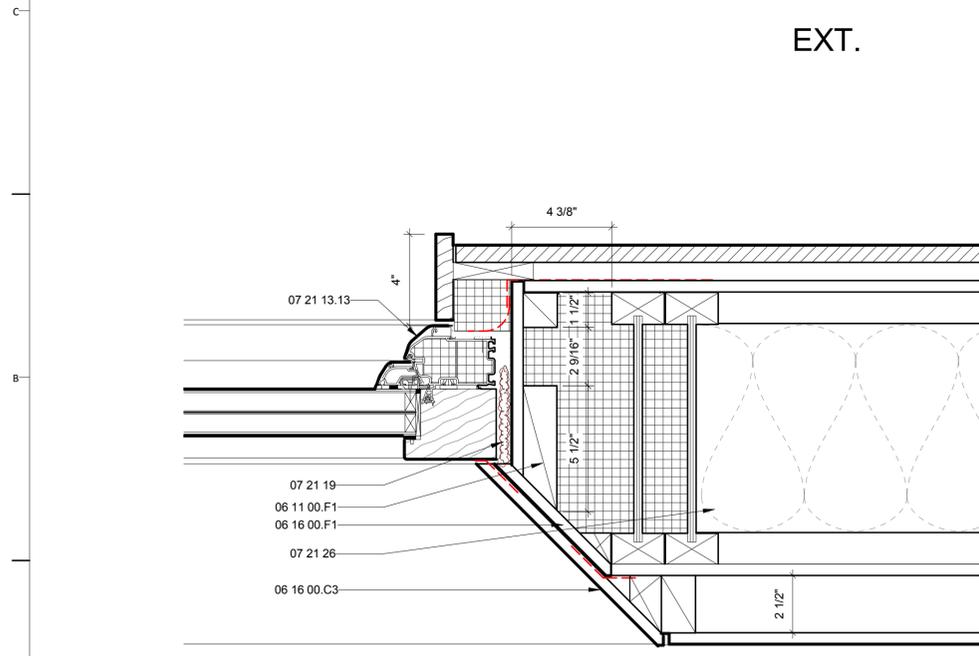
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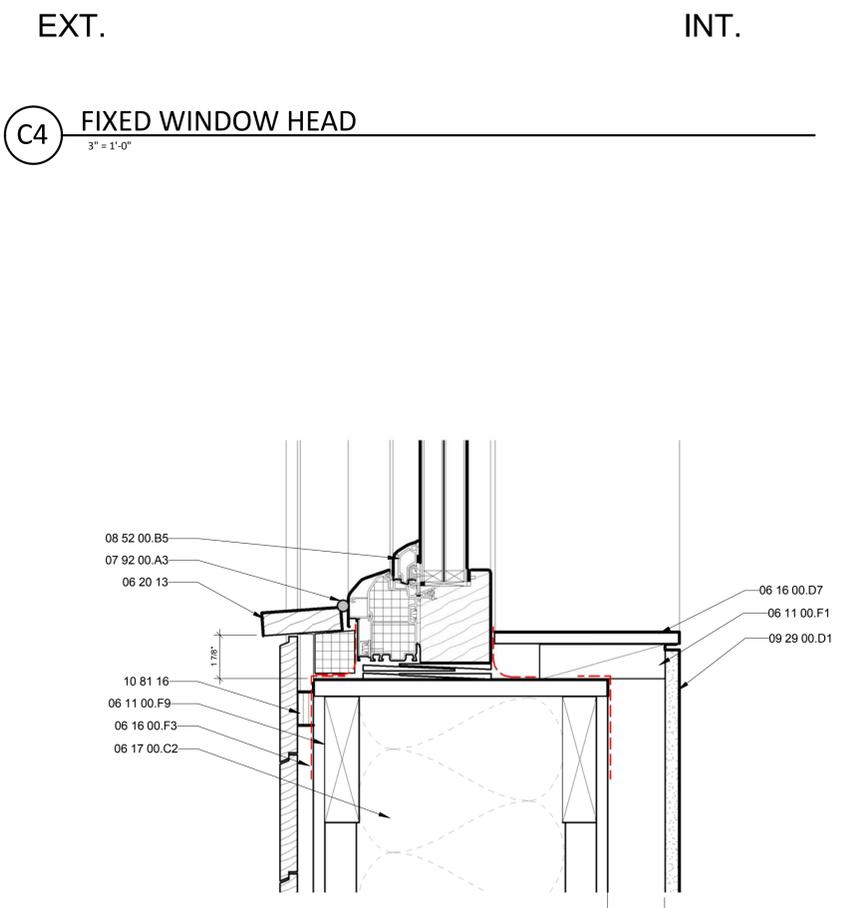
C1 FIXED WINDOW JAMB
3" = 1'-0"



C4 FIXED WINDOW HEAD
3" = 1'-0"



A1 FIXED WINDOW JAMB DETAIL WITH SPLAY
3" = 1'-0"



A4 FIXED WINDOW SILL
3" = 1'-0"

GENERAL SHEET NOTES

REFERENCE KEYNOTES

06 11 00.B5	1X4
06 11 00.C1	2X3
06 11 00.F1	2X6
06 11 00.F9	2X6 JOISTS
06 16 00.A3	1/2" GYPSUM SHEATHING
06 16 00.C3	1/2" PARTICLEBOARD
06 16 00.D7	1/2" EXTERIOR GRADE PLYWOOD
06 16 00.F1	1/2" OSB
06 16 00.F3	7/16" OSB
06 17 00.C2	11 7/8" WOOD JOIST
06 17 33.A2	11 7/8" WOOD I-BEAM
06 20 13	EXTERIOR FINISH CARPENTRY
06 20 23	INTERIOR FINISH CARPENTRY
07 13 26	SELF-ADHERING SHEET WATERPROOFING
07 21 13.13	RIGID INSULATION
07 21 19	FOAMED-IN PLACE INSULATION
07 27 00	AIR BARRIERS
07 46 23.A3	3/4" CEDAR SHIPLAP SIDING
07 62 00	METAL FLASHING
07 92 00.A3	SILICONE CAULKING
08 52 00.B4	CLAD WOOD PROJECTING WINDOW HEAD - DOUBLE GLAZED
08 52 00.B5	CLAD WOOD PROJECTING WINDOW SILL - DOUBLE GLAZED
09 29 00.D1	5/8" GYPSUM WALLBOARD
10 81 16	INSECT CONTROL DEVICES

SHEET KEYNOTES

DRAWING KEY



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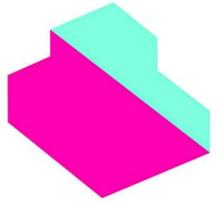
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WINDOW DETAILS

A-531

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WINDOW DETAILS

A-532

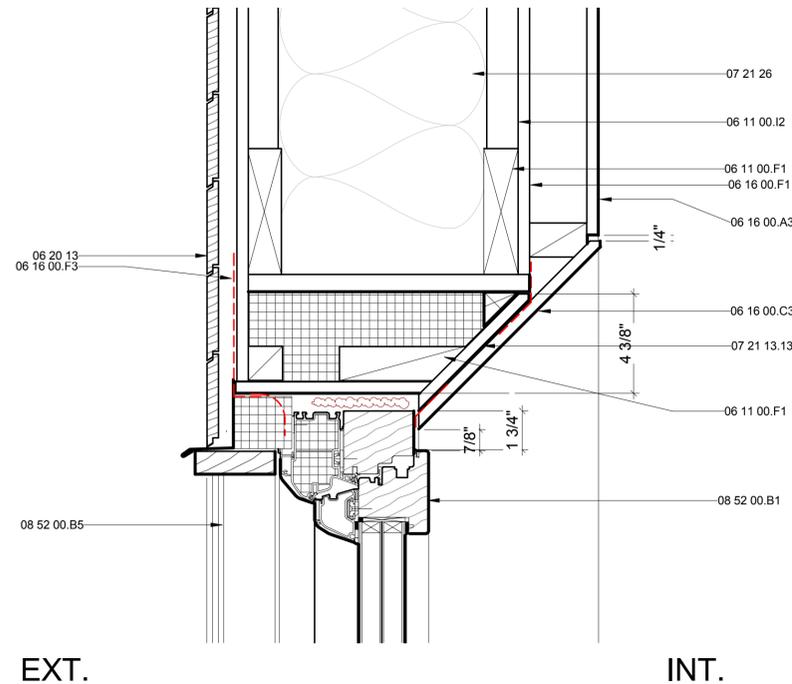
GENERAL SHEET NOTES

REFERENCE KEYNOTES

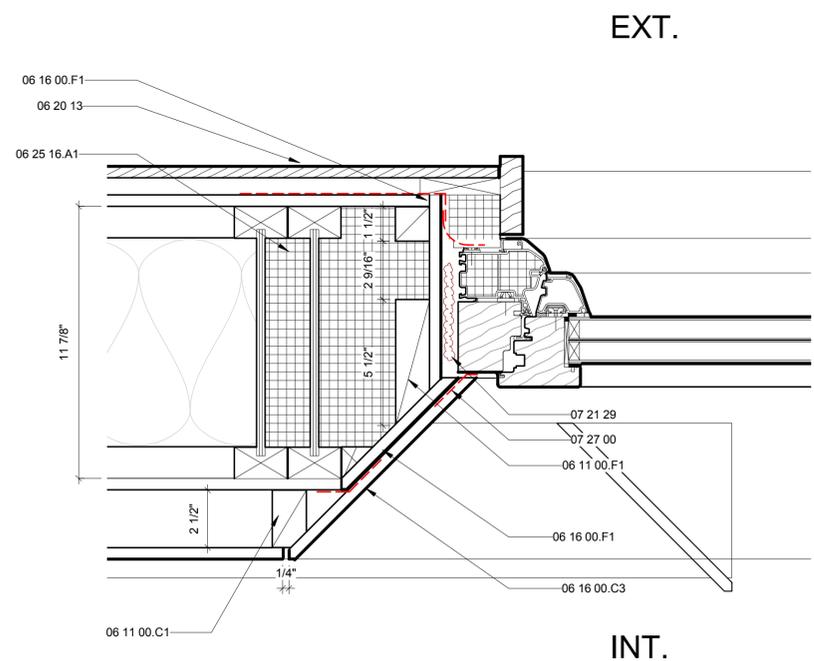
06 10 53	MISCELLANEOUS ROUGH CARPENTRY
06 11 00.C1	2X3
06 11 00.F1	2X6
06 11 00.F9	2X6 JOISTS
06 11 00.I2	2X12 PRESSURE TREATED LUMBER
06 16 00.A3	1/2" GYPSUM SHEATHING
06 16 00.C3	1/2" PARTICLEBOARD
06 16 00.D7	1/2" EXTERIOR GRADE PLYWOOD
06 16 00.F1	1/2" OSB
06 16 00.F3	7/16" OSB
06 17 00.C2	11 7/8" WOOD JOIST
06 20 13	EXTERIOR FINISH CARPENTRY
06 25 16.A1	PAINTED PLYWOOD PANEL
07 13 26	SELF-ADHERING SHEET WATERPROOFING
07 21 13.13	RIGID INSULATION
07 21 26	BLOWN-IN CELLULOSE INSULATION
07 21 29	SPRAYED INSULATION
07 27 00	AIR BARRIERS
07 27 13	MODIFIED BITUMINOUS SHEET AIR BARRIERS
08 52 00.B1	CLAD WOOD PROJECTING WINDOW HEAD - DOUBLE GLAZED
08 52 00.B4	CLAD WOOD PROJECTING WINDOW HEAD - DOUBLE GLAZED
08 52 00.B5	CLAD WOOD PROJECTING WINDOW SILL - DOUBLE GLAZED

SHEET KEYNOTES

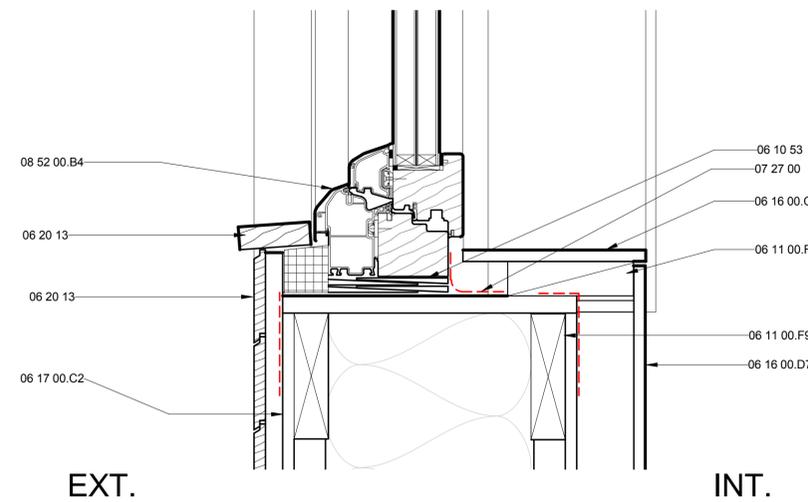
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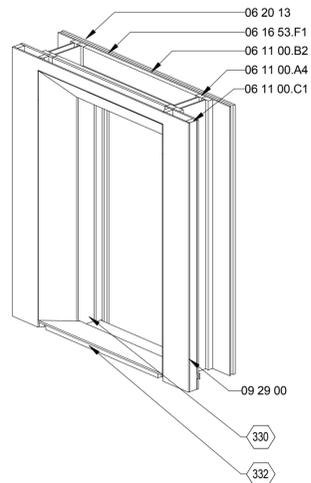
C4 OPERABLE WINDOW HEAD WITH SPLAY
3" = 1'-0"



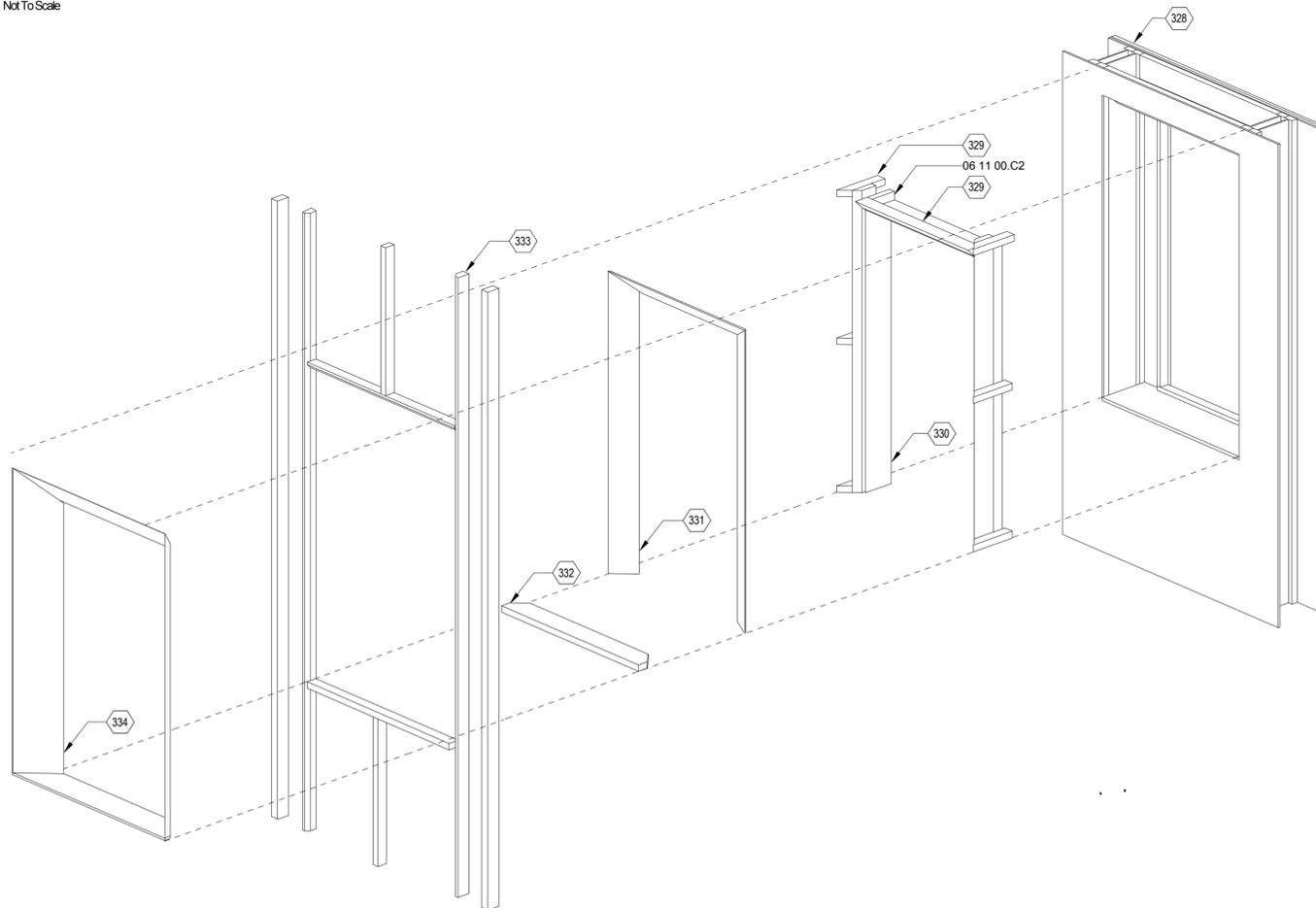
A1 OPERABLE WINDOW JAMB WITH SPLAY
3" = 1'-0"



A4 OPERABLE WINDOW SILL DETAIL
3" = 1'-0"



D2 COMPLETE WINDOW ASSEMBLY
Not To Scale



A2 WINDOW SPLAY EXPLODED AXON
Not To Scale

GENERAL SHEET NOTES

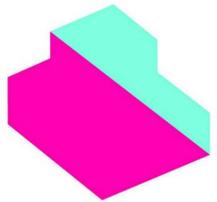
REFERENCE KEYNOTES

- 06 11 00.A4 EXISTING JOISTS
- 06 11 00.B2 1 X FURRING STRIPS @ 16" O.C.
- 06 11 00.C1 2X3
- 06 11 00.C2 2X2
- 06 16 53.F1 ZIPSYSTEM SHEATHING
- 06 20 13 EXTERIOR FINISH CARPENTRY
- 09 29 00 GYPSUM BOARD

SHEET KEYNOTES

- 328 WALL ASSEMBLY
- 329 2 X 3 BLOCKING CUT AT A 45 DEGREE ANGLE IN ONE SIDE
- 330 OSB BOX CUT A 45 DEGREE ANGLE ON ONE SIDE
- 331 OSB BOX CUT A 45 DEGREE ANGLE ON BOTH SIDE
- 332 2X6 CUT AT A 45 DEGREE ANGLE ON BOTH ENDS
- 333 2X3 STUD, CORNER CUT AT A 45 DEGREE ANGLE TOWARD SPLAY
- 334 SHEET ROCK SPLAY CUT A 45 DEGREE

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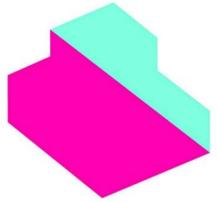
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SHEET TITLE
WINDOW
AXONOMETRIC VIEW

A-533



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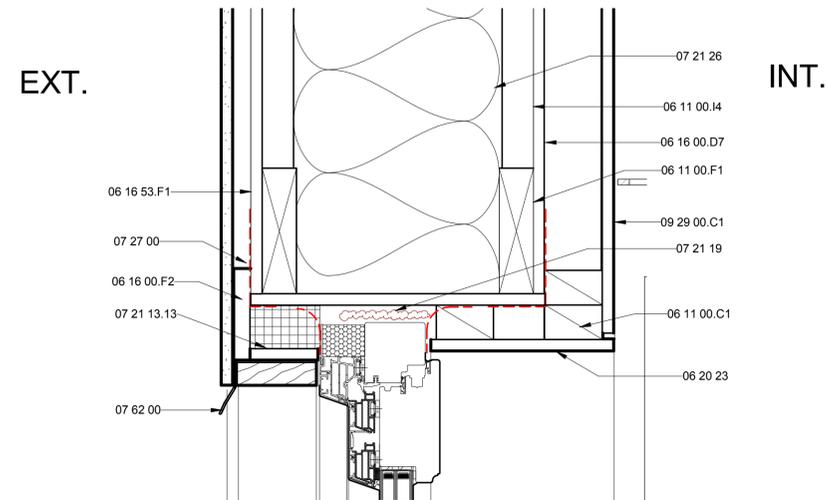
GENERAL SHEET NOTES

REFERENCE KEYNOTES

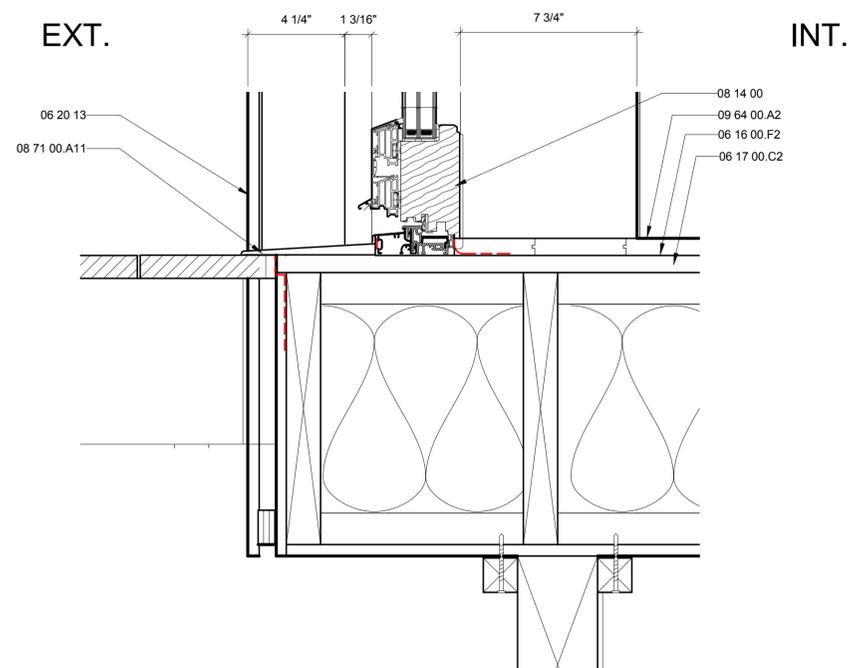
06 11 00.B3	1X3
06 11 00.C1	2X3
06 11 00.F1	2X6
06 11 00.I4	2X12 JOISTS @ 12" O.C.
06 16 00.D7	1/2" EXTERIOR GRADE PLYWOOD
06 16 00.D11	3/4" PLYWOOD
06 16 00.F2	3/4" OSB
06 16 53.F1	ZIPSYSTEM SHEATHING
06 17 00.C2	11 7/8" WOOD I JOIST
06 20 13	EXTERIOR FINISH CARPENTRY
06 20 23	INTERIOR FINISH CARPENTRY
07 21 13.13	RIGID INSULATION
07 21 19	FOAMED-IN PLACE INSULATION
07 21 26	BLOWN-IN CELLULOSE INSULATION
07 27 00	AIR BARRIERS
07 62 00	METAL FLASHING
08 14 00	WOOD DOORS
08 71 00.A11	INTERLOCKING THRESHOLD
09 29 00.C1	1/2" GYPSUM WALLBOARD
09 64 00.A2	1X4 WOOD FLOORING

SHEET KEYNOTES

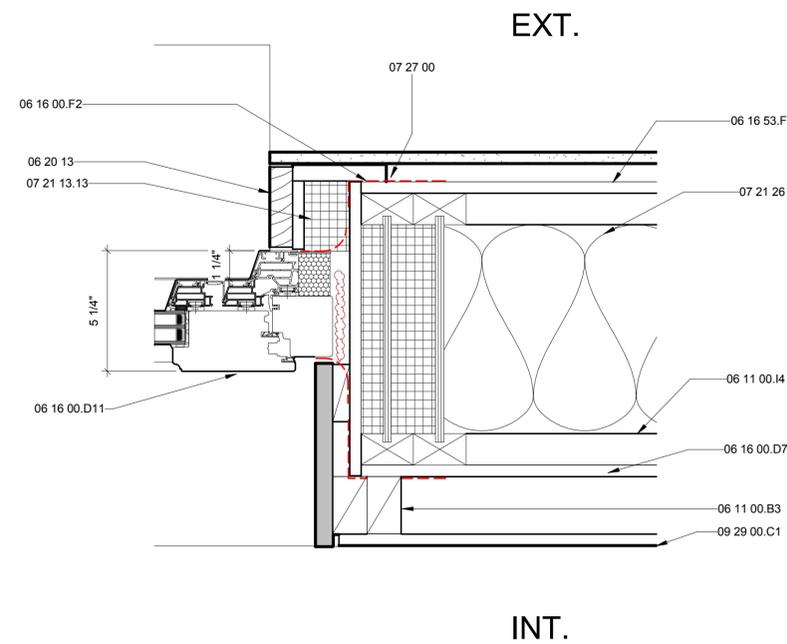
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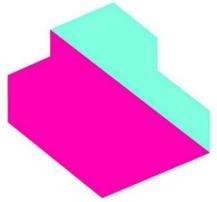
C1 DOOR HEAD DETAIL
3" = 1'-0"



A1 DOOR SILL DETAIL
3" = 1'-0"



B4 DOOR JAMB DETAIL
3" = 1'-0"



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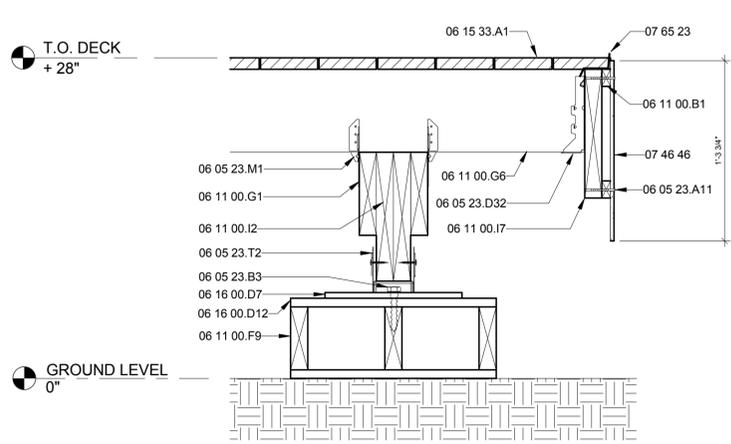
GENERAL SHEET NOTES

REFERENCE KEYNOTES

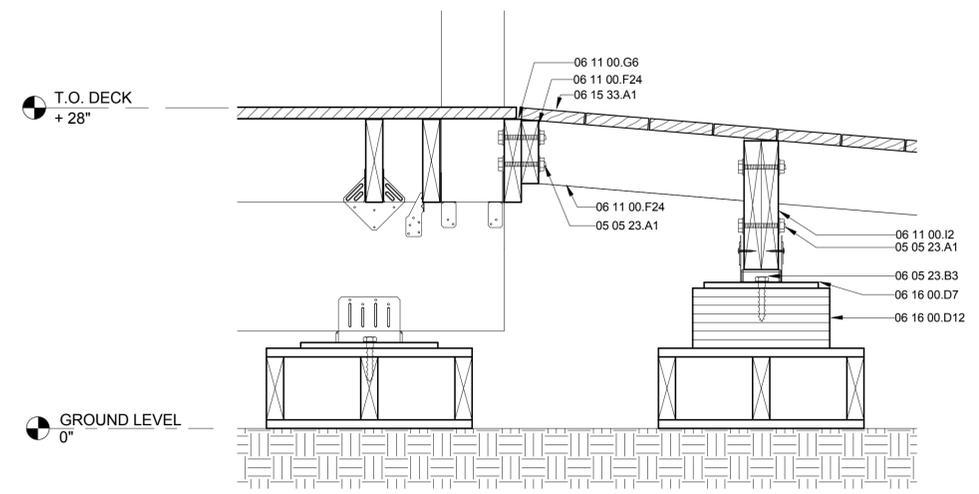
- 05 05 23.A1 1/2" A307 BOLT
- 06 05 23.A11 16d NAIL
- 06 05 23.B3 5/8" LAG SCREW
- 06 05 23.D32 LUS28 SIMPSON JOIST HANGER
- 06 05 23.M1 H1 SIMPSON HURRICANE TIE
- 06 05 23.T2 AB46 SIMPSON POST BASE
- 06 11 00.B1 1 X 2 FURRING STRIPS
- 06 11 00.F9 2X6 JOISTS
- 06 11 00.F24 2x6 TIMBERSIL
- 06 11 00.G1 2X8
- 06 11 00.G6 2X8 TIMBERSIL JOIST
- 06 11 00.I2 2X12 PRESSURE TREATED LUMBER
- 06 11 00.I7 2X12 TIMBERSIL
- 06 15 33.A1 WESTERN RED CEDAR DECKING
- 06 16 00.D7 1/2" EXTERIOR GRADE PLYWOOD
- 06 16 00.D12 3/4" EXTERIOR GRADE PLYWOOD
- 07 46 46 CEMENT BOARD SIDING
- 07 65 23 RUBBER SHEET FLASHING

SHEET KEYNOTES

DRAWING KEY

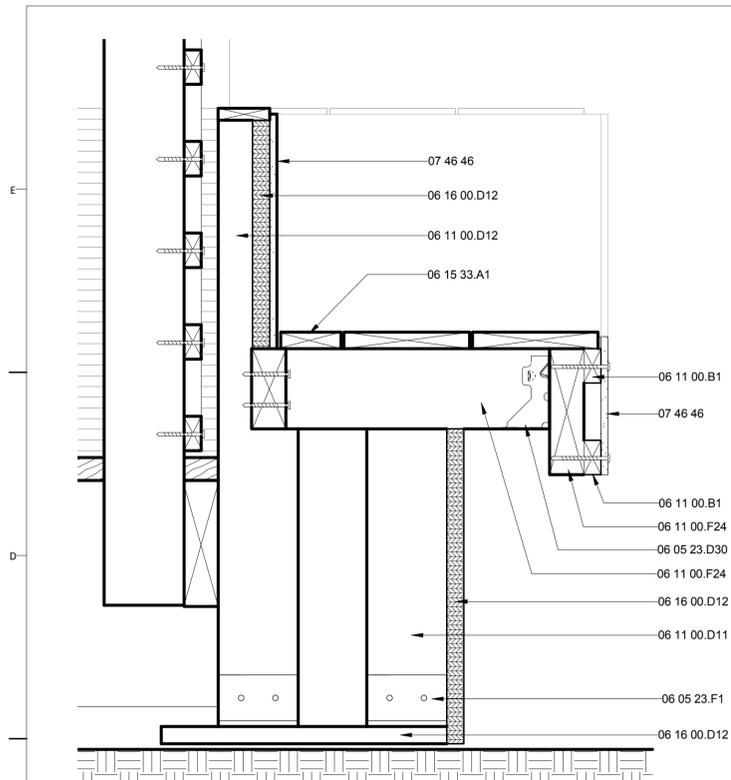


A1 EXTERIOR DECK EDGE DETAIL
1 1/2" = 1'-0"

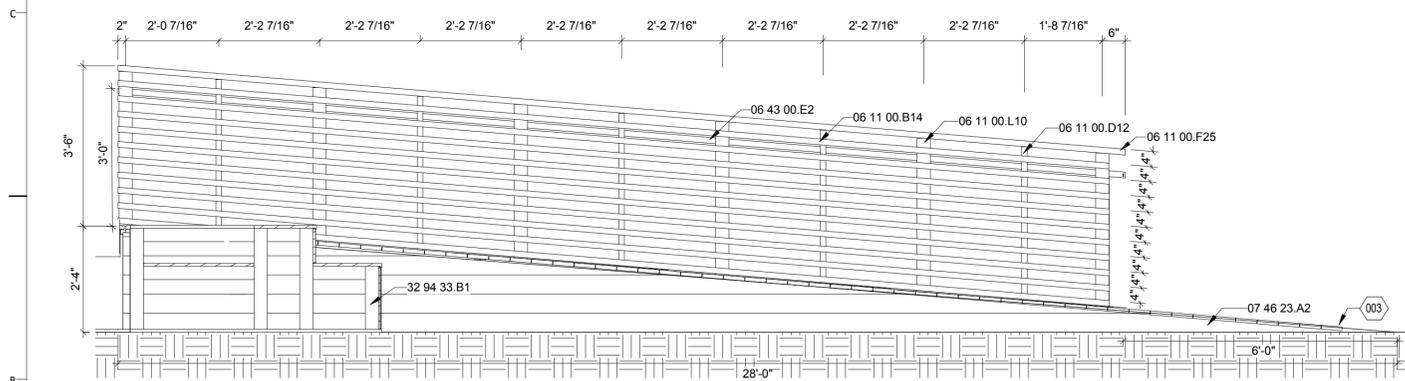


A4 EXTERIOR DECK TO RAMP CONNECTION
1 1/2" = 1'-0"

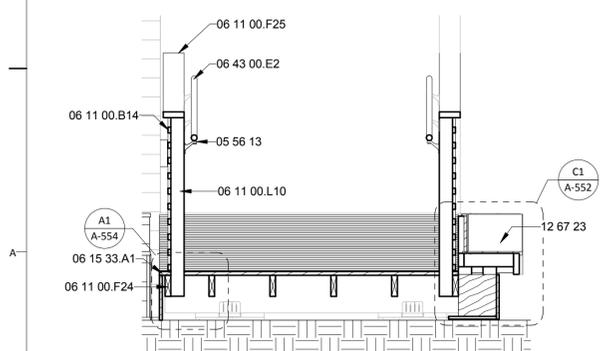
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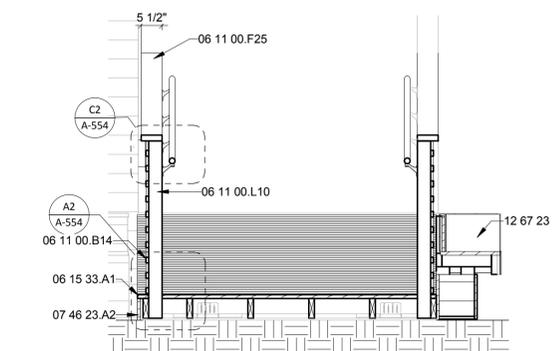
C1 RAMP BENCH SECTION
3" = 1'-0"



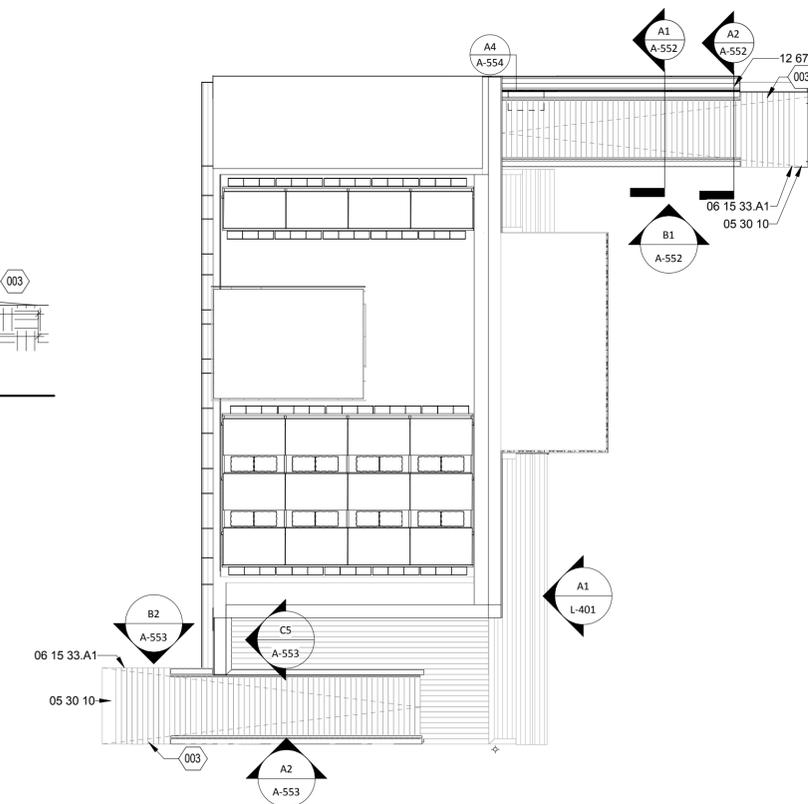
B1 NORTH RAMP RAILING ELEVATION
1/2" = 1'-0"



A1 TYP. 2x4 POST TO RAMP SECTION
1/2" = 1'-0"



A2 TYP. 4x4 POST TO RAMP SECTION
1/2" = 1'-0"



A4 RAILING PLAN
1/8" = 1'-0"

GENERAL SHEET NOTES

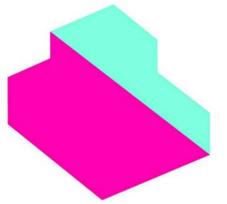
REFERENCE KEYNOTES

05 30 10	METAL RAMP EDGE
05 56 13	METAL WALL MOUNT HANDRAIL BRACKET
06 05 23.D30	LUS26 SIMPSON JOIST HANGER
06 05 23.F1	A23 SIMPSON ANGLE
06 11 00.B1	1 X 2 FURRING STRIPS
06 11 00.B14	1 X 2 WESTERN RED CEDAR
06 11 00.D11	2x4 TIMBERSIL
06 11 00.D12	2x4 WESTERN RED CEDAR POST
06 11 00.F24	2x6 TIMBERSIL
06 11 00.F25	2x6 WESTERN RED CEDAR
06 11 00.L10	4x4 WESTERN RED CEDAR POST
06 15 33.A1	WESTERN RED CEDAR DECKING
06 16 00.D12	3/4" EXTERIOR GRADE PLYWOOD
06 43 00.E2	WOOD POST MOUNTED HANDRAIL
07 46 23.A2	1 1/8" CEDAR SIDING
07 46 46	CEMENT BOARD SIDING
12 67 23	BENCHES
32 94 33.B1	VEGETABLE PLANTER WITH CEDAR BENCH SEATING

SHEET KEYNOTES

003 RAMP SLOPE AT 1: 12

DRAWING KEY



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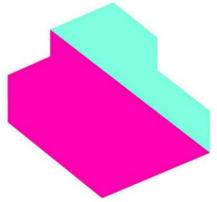
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NORTH RAILING DETAILS

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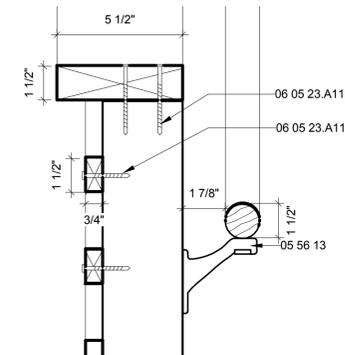
REFERENCE KEYNOTES

05 56 13	METAL WALL MOUNT HANDRAIL BRACKET
06 05 23.A11	16d NAIL
06 05 23.B8	6 1/4" THRULOK DECK FASTENER
06 05 23.B9	8" THRULOK DECK FASTENER
06 11 00.A1	BLOCKING
06 11 00.B14	1 x 2 WESTERN RED CEDAR
06 11 00.D12	2x4 WESTERN RED CEDAR POST
06 11 00.F24	2x6 TIMBERSIL
06 11 00.L10	4x4 WESTERN RED CEDAR POST
06 15 33.A1	WESTERN RED CEDAR DECKING
07 46 23.A2	1 1/8" CEDAR SIDING

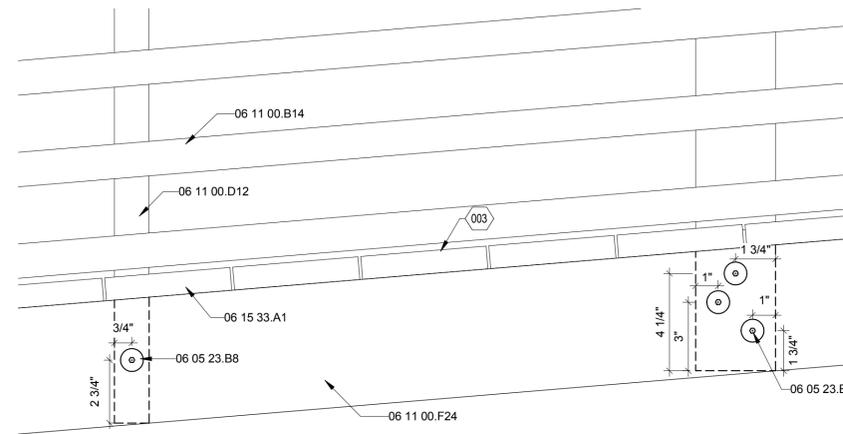
SHEET KEYNOTES

003 RAMP SLOPE AT 1:12

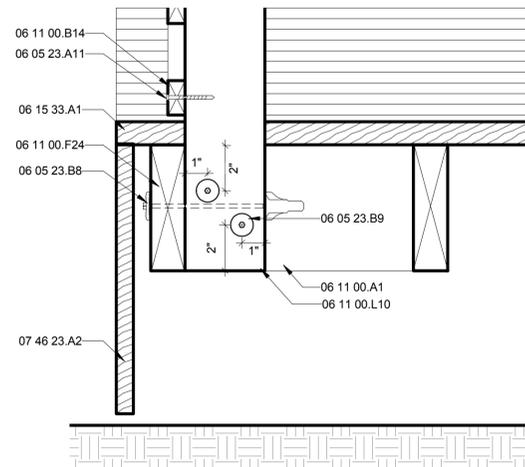
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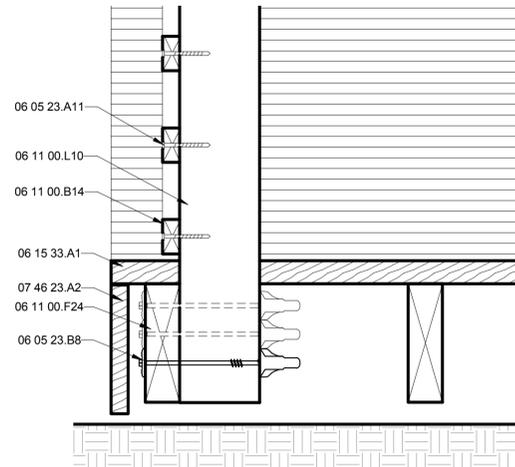
C2 TYP. HANDRAIL CONNECTION
3" = 1'-0"



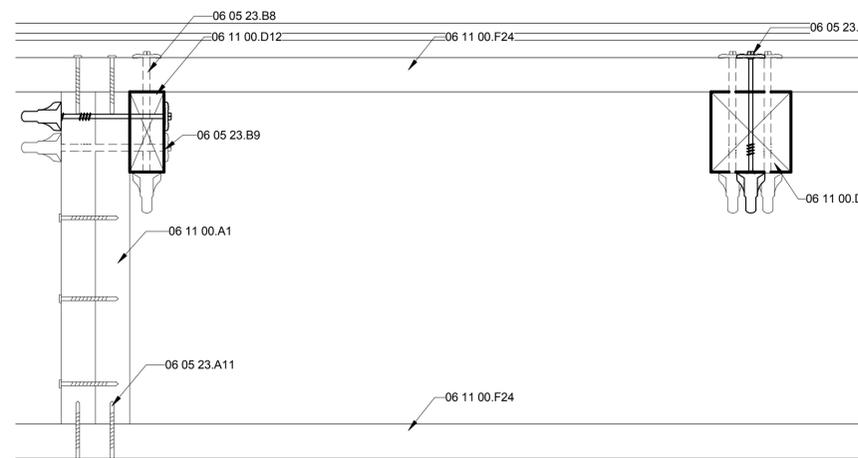
C4 TYP. POST CONNECTIONS, ELEVATION
3" = 1'-0"



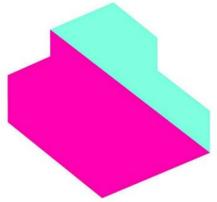
A1 2x4 POST CONNECTION, SECTION
3" = 1'-0"



A2 4x4 POST CONNECTION, SECTION
3" = 1'-0"



A4 TYP. POST CONNECTION, PLAN
3" = 1'-0"



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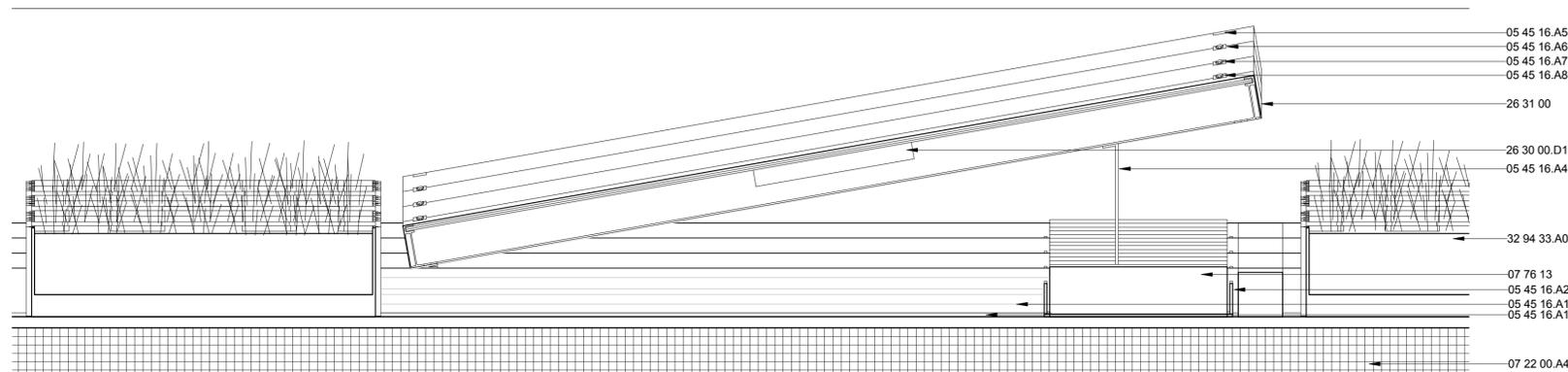
GENERAL SHEET NOTES

REFERENCE KEYNOTES

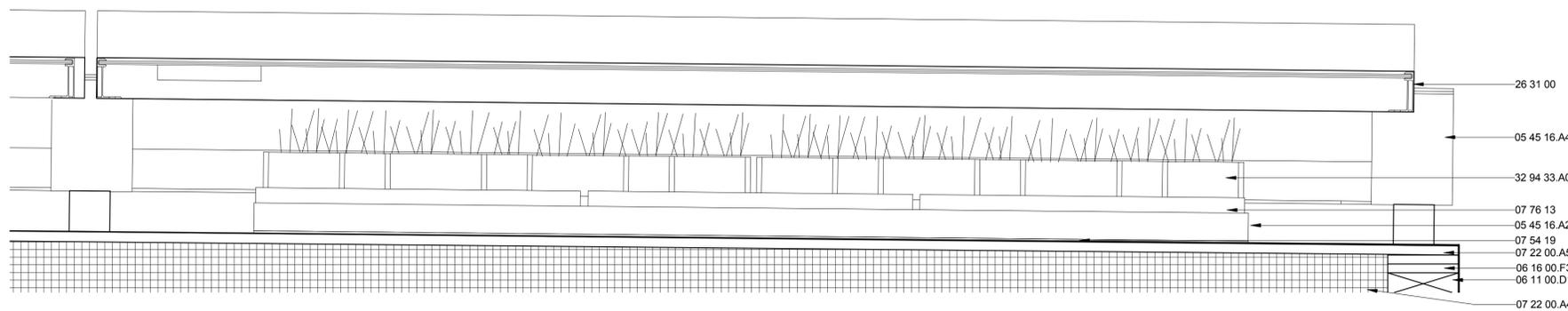
- 05 45 16.A1 POWER BEAM
- 05 45 16.A2 BALLAST PAN
- 05 45 16.A4 BACK TILT BRACKET
- 05 45 16.A5 END CLAMP
- 05 45 16.A6 MID CLAMP
- 05 45 16.A7 5/16" BOLT
- 05 45 16.A8 LOCK WASHER
- 05 45 16.A11 EPDM RUBBER GASKET
- 06 11 00.D1 2X4
- 06 16 00.F3 7/16" OSB
- 07 22 00.A4 TAPERED POLYISOCYANURATE INSULATION BOARD
- 07 22 00.A5 1/2" HIGH DENSITY POLYISOCYANURATE INSULATION BOARD
- 07 54 19 POLYVINYL-CHLORIDE ROOFING
- 07 76 13 ROOF BALLAST PAVERS
- 26 30 00.D1 JUNCTION BOX
- 26 31 00 PHOTOVOLTAIC COLLECTORS
- 32 94 33.A0 VEGETAL I.D. HYDROPACK SEDUM TRAYS

SHEET KEYNOTES

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C2 PV RACKING SHORT SECTION
 3" = 1'-0"



A2 PV RACKING LONG SECTION
 3" = 1'-0"

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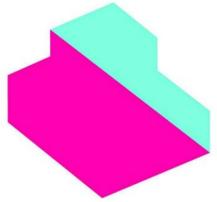
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PV RACKING DETAIL

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PV MODULE DETAILS

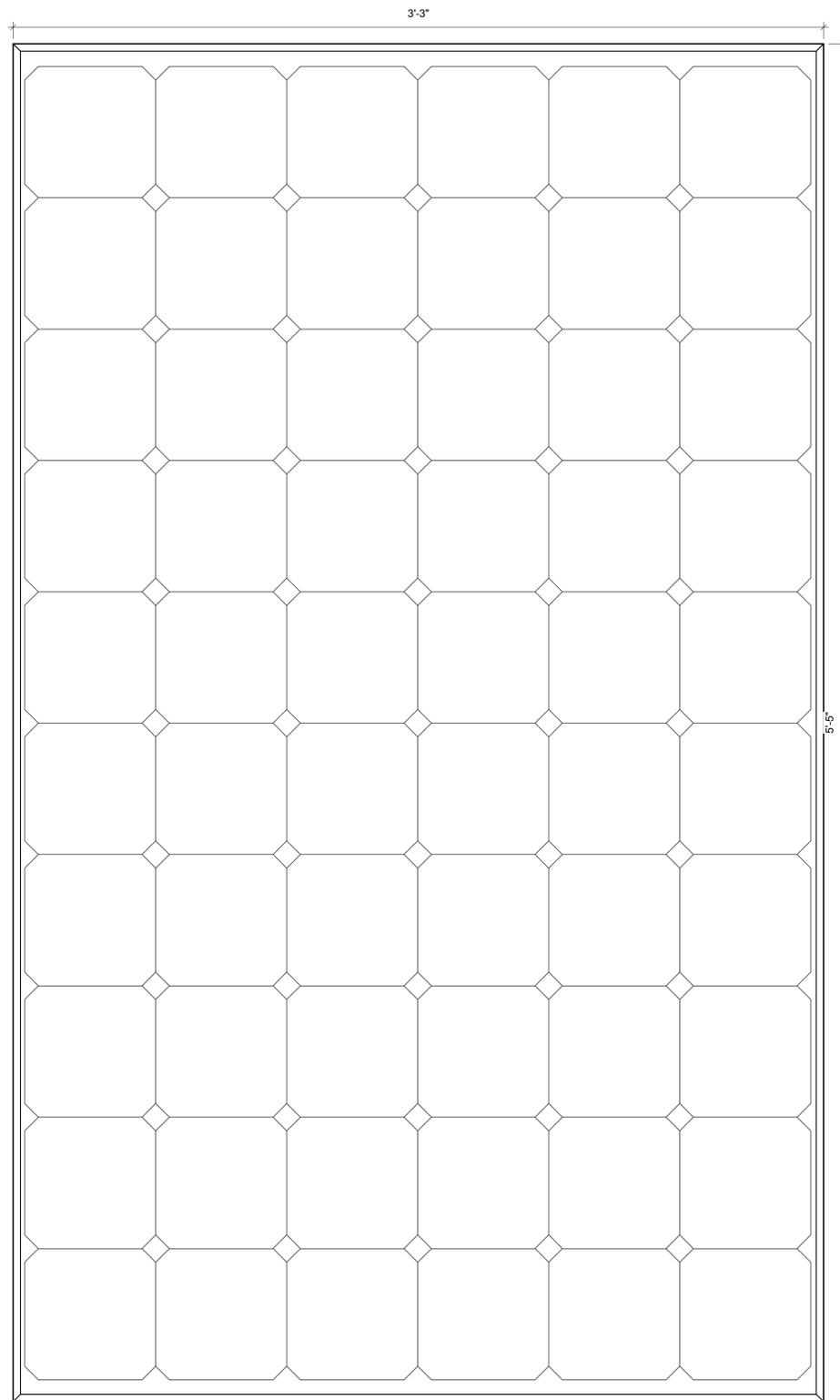
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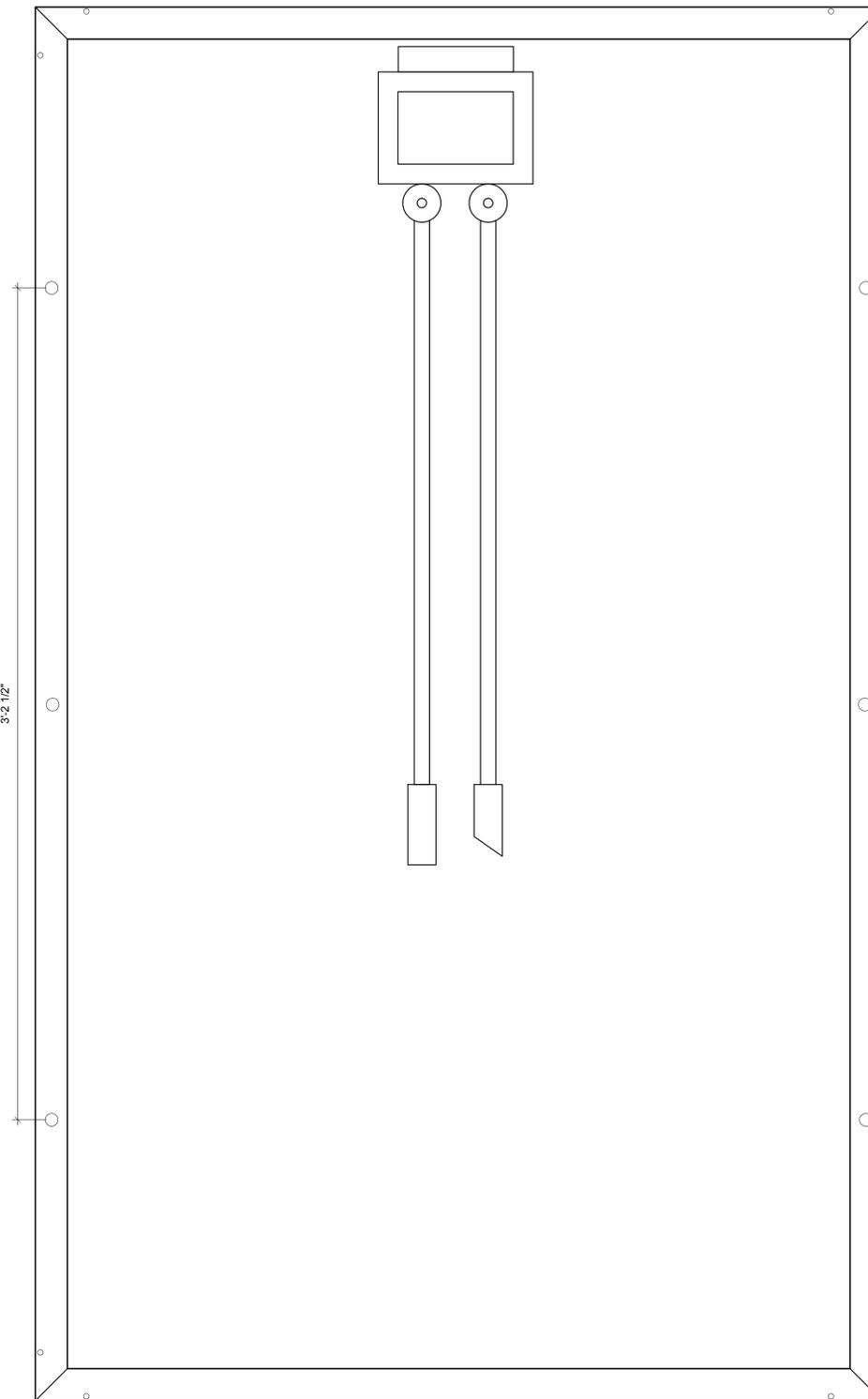
REFERENCE KEYNOTES

SHEET KEYNOTES

DRAWING KEY

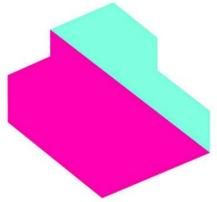


A1 PLAN YING LI 265 PANEL FRONT
3" = 1'-0"



A4 PLAN YING LI 265 PANEL BACK
3" = 1'-0"

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SHEET TITLE
 GREEN MODULE
 DETAILS

A-574

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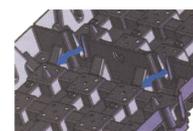
REFERENCE KEYNOTES

32 94 33.A1	VEGETATED MAT
32 94 33.A2	GROWING MEDIA
32 94 33.A3	FILTER FABRIC
32 94 33.A4	RECYCLED HDPE TRAY

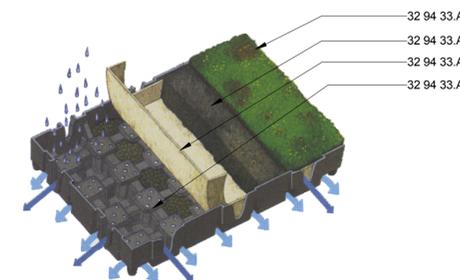
SHEET KEYNOTES

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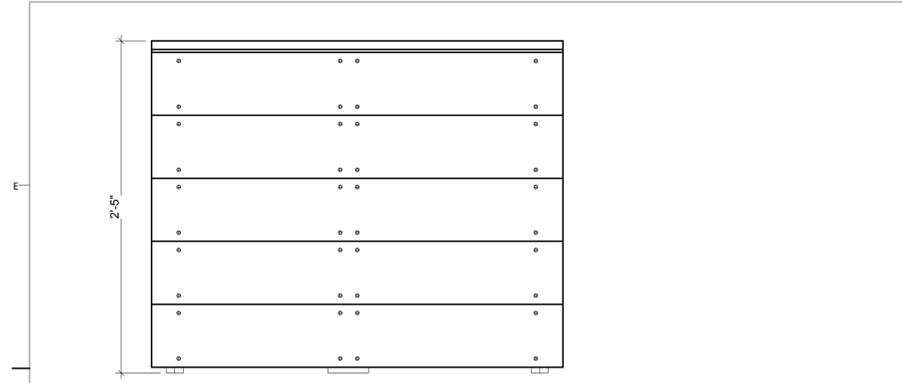
GREEN ROOF MODULES					
NAME	LOCATION	QUANTITY	DIMENSIONS	WEIGHT	
				DRY	SATURATED
VEGETAL I.D. HYDROPACK	ROOF	16	16" x 24" x 3.6"	11.5 lbs/sq ft	17.4 lbs/sq ft
	WATER TANK HOUSING	63			



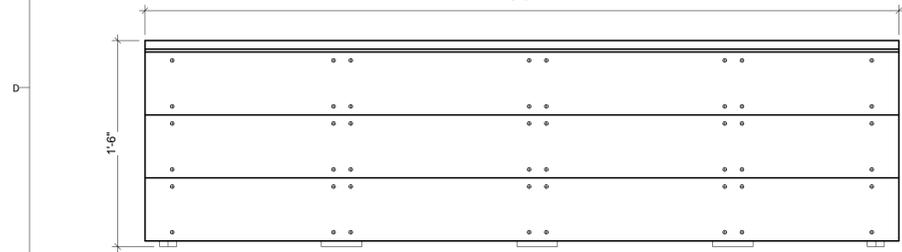
A3 HYDROPACK TYPICAL CONNECTION
 NOT TO SCALE



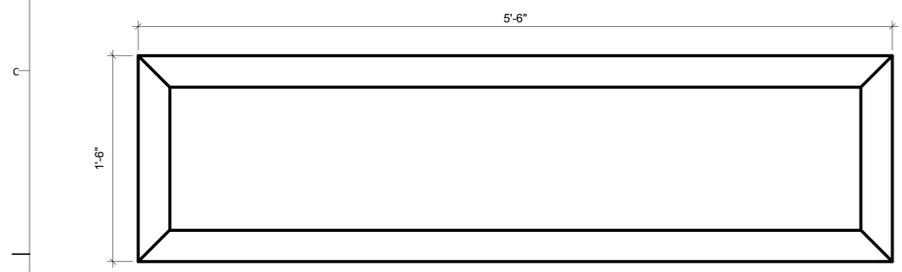
A5 HYDROPACK TRAY
 NOT TO SCALE



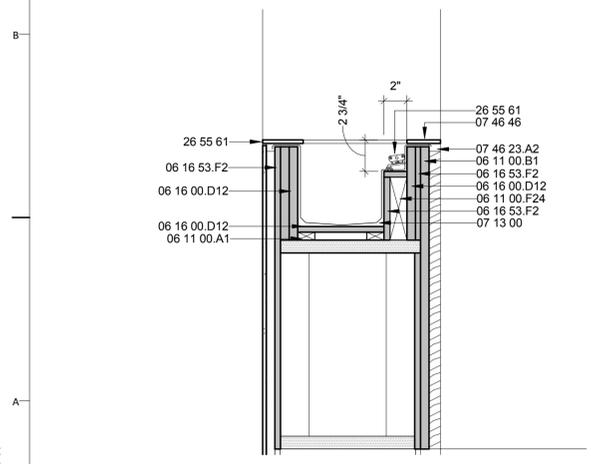
D1 BACK ELEVATION - RECT. 29"
1 1/2" = 1'-0"



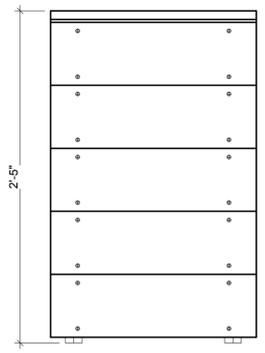
C1 BACK ELEVATION - RECT. 18"
1 1/2" = 1'-0"



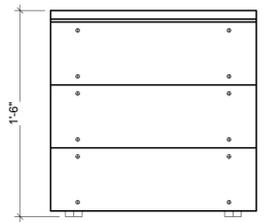
B1 RECTANGULAR PLANTER PLAN
1 1/2" = 1'-0"



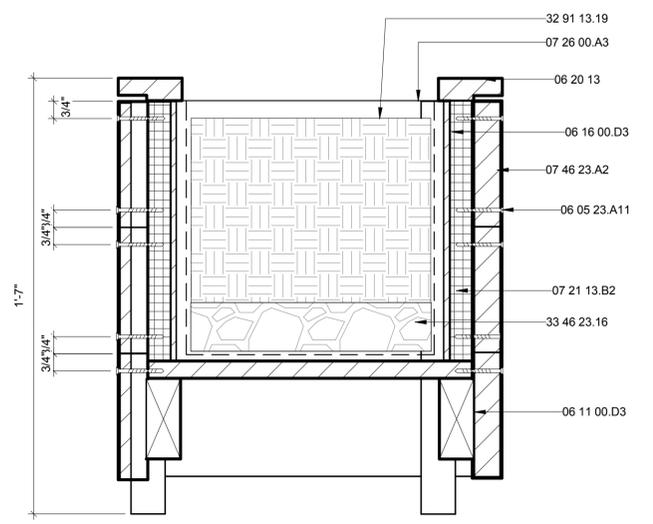
A1 NORTH PORCH PLANTER SECTION DETAIL
1 1/2" = 1'-0"



D3 SIDE ELEVATION - RECT & SQ. 29"
1 1/2" = 1'-0"



C3 SIDE ELEVATION - RECT. & SQ. 18"
1 1/2" = 1'-0"



A5 TYPICAL PLANTER SECTION
3" = 1'-0"

GENERAL SHEET NOTES

REFERENCE KEYNOTES

- 06 05 23.A11 16d NAIL
- 06 11 00.A1 BLOCKING
- 06 11 00.B1 1 X 2 FURRING STRIPS
- 06 11 00.D3 2X4 FRAMING
- 06 11 00.F24 2x6 TIMBERSIL
- 06 16 00.D3 1/4" PLYWOOD
- 06 16 00.D12 3/4" EXTERIOR GRADE PLYWOOD
- 06 16 53.F2 7/16" ZIP SYSTEM SHEATHING
- 06 20 13 EXTERIOR FINISH CARPENTRY
- 07 13 00 SHEET WATERPROOFING
- 07 21 13.B2 1" RIGID INSULATION
- 07 26 00.A3 6 MIL POLYETHYLENE
- 07 46 23.A2 1 1/8" CEDAR SIDING
- 07 46 46 CEMENT BOARD SIDING
- 26 55 61 THEATRICAL LIGHTING
- 32 91 13.19 PLANTING SOIL MIXING
- 33 46 23.16 GRAVEL DRAINAGE LAYERS

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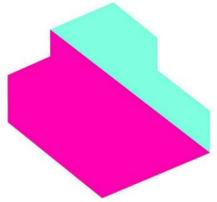
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PLANTER DETAILS

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WALL TYPES AND FINISH SCHEDULE

A-601

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06 11 00.B3	1X3
06 11 00.B5	1X4
06 11 00.C1	2X3
06 11 00.D1	2X4
06 11 00.F9	2X6 JOISTS
06 16 00.F3	7/16" OSB
06 16 53.F2	7/16" ZIP SYSTEM SHEATHING
06 17 33.A2	1 1/2" WOOD I-BEAM
07 21 26	BLOWN-IN CELLULOSE INSULATION
07 46 23	WOOD SIDING
07 46 23.A3	3/4" CEDAR SHIPLAP SIDING
07 46 46	CEMENT BOARD SIDING
09 28 13	CEMENTITIOUS BACKING BOARDS
09 29 00.D1	5/8" GYPSUM WALLBOARD
09 30 13.A2	CERAMIC TILE

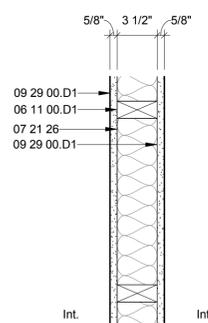
SHEET KEYNOTES

DRAWING KEY

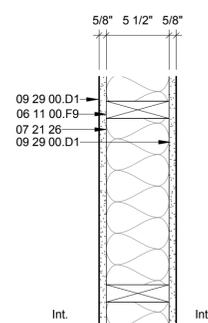
WALL TYPE SCHEDULE						
WALL TYPE	NAME	FINISH MATERIAL		INSULATED THICKNESS	R-VALUE/ INCH	R-VALUE
		EXTERIOR	INTERIOR			
W1	EXT. WALL W/ CEMENTITIOUS SHEATHING	CEMENTITIOUS SHEATHING	GYPSUM	11 7/8"	3.7	43.9
W2	EXT. WALL W/ WOOD SIDING	HORIZONTAL 1 X 6 WOOD SIDING	GYPSUM	11 7/8"	3.7	43.9
W3	EXT. PORCH WALL	CEMENTITIOUS SHEATHING	NA	NA	NA	NA
W4	EXT. 2X6 WALL W/ INT. TILE FINISH	HORIZONTAL 1X6 WOOD SIDING	TILE	5.5"	3.7	20.4
W5	2X6 INT. PARTITION WALL	NA	GYPSUM	5.5"	3.2	17.6
W6	2X4 INT. PARTITION WALL	NA	GYPSUM	3.5"	3.2	11.2
W7	PARAPET	CEMENTITIOUS SHEATHING/ EPDM	NA	NA	NA	NA
W8	EXT. WALL STAIR BULKHEAD	ACRYLIC WATER REPELLENT TREATED OSB	PLYWOOD	9.5"	3.7	35.2
W9	INT. DOUBLE 2X4 WALL	NA	GYPSUM	6"	3.2	19.2
W10	INT. 2X6 WALL	NA	GYPSUM/TILE	5.5"	3.2	17.6
W11	INT. 2X4 WALL	NA	GYPSUM/TILE	3.5"	3.2	11.2
W12	INT. 2X6 SHEER WALL	NA	GYPSUM	5.5"	3.2	17.6
W13	EXT. 2X6 WALL	HORIZONTAL 1X6 WOOD SIDING	GYPSUM	5.5"	3.7	20.4

ROOM FINISH SCHEDULE						
ROOM NO	ROOM NAME	FLOOR	BASE	FINISH		
				WALL	CEILING	
101	ENTRYWAY	BAMBOO	PAINTED PINE	PAINTED GYPSUM BOARD	PAINTED GYPSUM BOARD	
102	MECH	TILE	PAINTED PINE	PAINTED GYPSUM BOARD	PAINTED GYPSUM BOARD	
103	BATHROOM	TILE	PAINTED PINE	PAINTED GYPSUM BOARD	PAINTED GYPSUM BOARD	
104	KITCHEN	BAMBOO	PAINTED PINE	PAINTED GYPSUM BOARD	PAINTED GYPSUM BOARD	
105	LIVING ROOM	BAMBOO	PAINTED PINE	PAINTED GYPSUM BOARD	PAINTED GYPSUM BOARD	
107	BEDROOM	BAMBOO	PAINTED PINE	PAINTED GYPSUM BOARD	PAINTED GYPSUM BOARD	
108	LIVING ROOM	BAMBOO	PAINTED PINE	PAINTED GYPSUM BOARD	PAINTED GYPSUM BOARD	
109	LIVING ROOM	BAMBOO	PAINTED PINE	PAINTED GYPSUM BOARD	PAINTED GYPSUM BOARD	
110	ENTRYWAY	BAMBOO	PAINTED PINE	PAINTED GYPSUM BOARD	PAINTED GYPSUM BOARD	
111	ENTRYWAY	BAMBOO	PAINTED PINE	PAINTED GYPSUM BOARD	PAINTED GYPSUM BOARD	
201	LOFT	BAMBOO	PAINTED PINE	PAINTED GYPSUM BOARD	PAINTED GYPSUM BOARD	

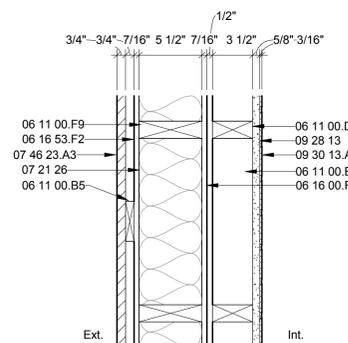
FIRE-RATED FINISH SCHEDULE			
COMPONENT	ASTM E-84 FLAME SPREAD	SOURCE	CLASS
5/8" SHEETROCK FIRECODE CORE GYPSUM	15	INTERTEK	A
3/4" PUREBOND PLYWOOD	114	HPVA	C



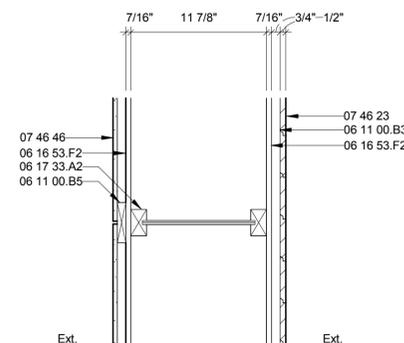
B1 W6: INT. 2 X 4 PARTITION WALL
1 1/2" = 1'-0"



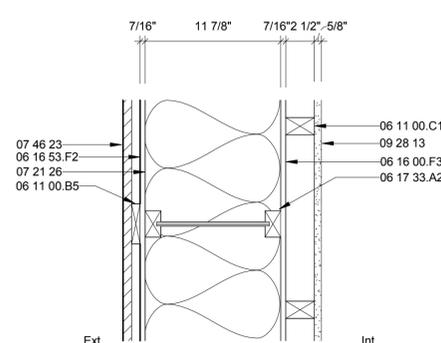
B3 W5: INT. 2 X 6 PARTITION WALL
1 1/2" = 1'-0"



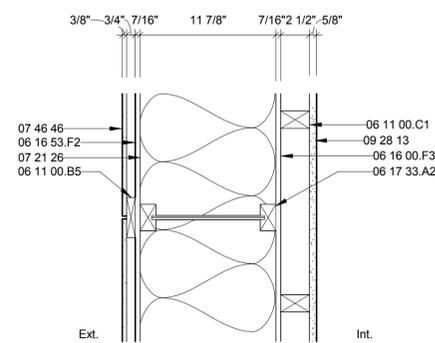
B4 W4 EXT. 2 X 6 WALLW/ INT. TILE FINISH
1 1/2" = 1'-0"



A1 W3: EXT. PORCH WALL
1 1/2" = 1'-0"

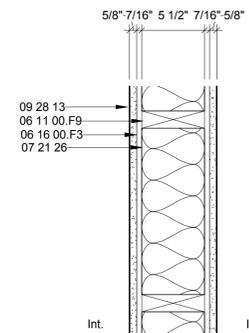


A3 W2: EXT. WALL W/ WOOD SIDING
1 1/2" = 1'-0"

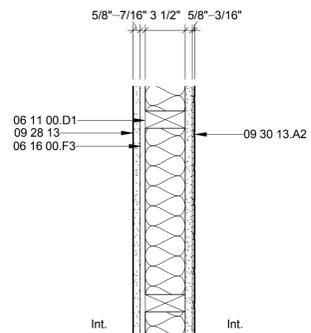


A4 W1: EXT. WALL W/ CEMENTITIOUS SHEATHING
1 1/2" = 1'-0"

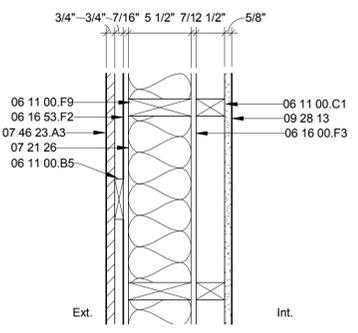
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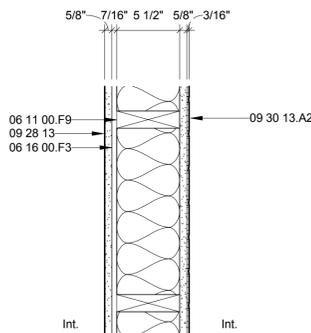
B1 W12 : INT. 2 X 6 SHEER WALL
1 1/2" = 1'-0"



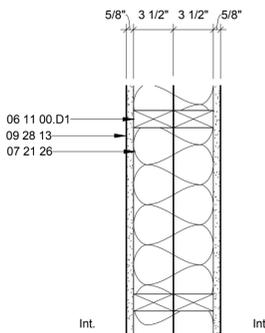
B3 W11 : INT. 2 X 4 WALL W/ TILE
1 1/2" = 1'-0"



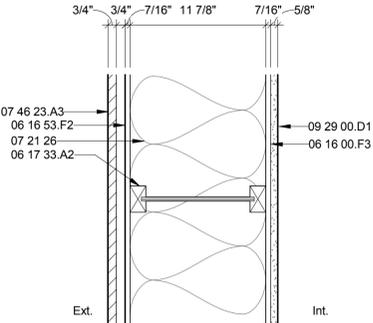
D5 W13: EXT. 2 X 6 WALL
1 1/2" = 1'-0"



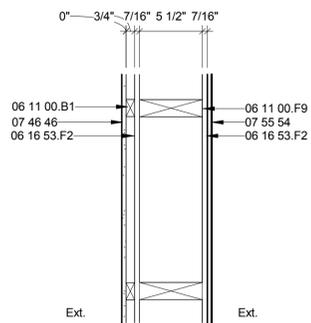
B5 W10 : INT 2 X 6 WALL
1 1/2" = 1'-0"



A1 W9 : INT. DOUBLE 2 X 4 WALL
1 1/2" = 1'-0"



A3 W8: EXT. N&S WALL STAIR BULKHEAD
1 1/2" = 1'-0"



A5 W7: PARAPET
1 1/2" = 1'-0"

GENERAL SHEET NOTES

REFERENCE KEYNOTES

- 06 11 00.B1 1 X 2 FURRING STRIPS
- 06 11 00.B5 1X4
- 06 11 00.C1 2X3
- 06 11 00.D1 2X4
- 06 11 00.F9 2X6 JOISTS
- 06 16 00.F3 7/16" OSB
- 06 16 53.F2 7/16" ZIP SYSTEM SHEATHING
- 06 17 33.A2 1 1/2" WOOD I-BEAM
- 07 21 26 BLOWN-IN CELLULOSE INSULATION
- 07 46 23.A3 3/4" CEDAR SHIPLAP SIDING
- 07 46 46 CEMENT BOARD SIDING
- 07 55 54 EPDM SHEET WATERPROOFING
- 09 28 13 CEMENTITIOUS BACKING BOARDS
- 09 29 00.D1 5/8" GYPSUM WALLBOARD
- 09 30 13.A2 CERAMIC TILE

SHEET KEYNOTES

DRAWING KEY



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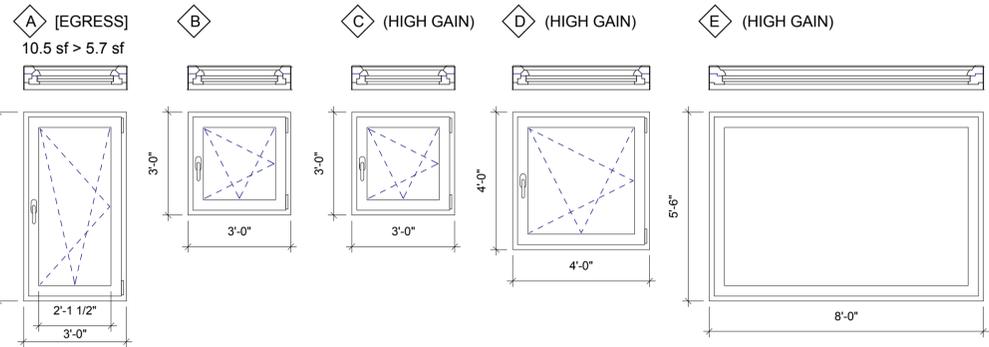
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SHEET TITLE

WALL TYPES

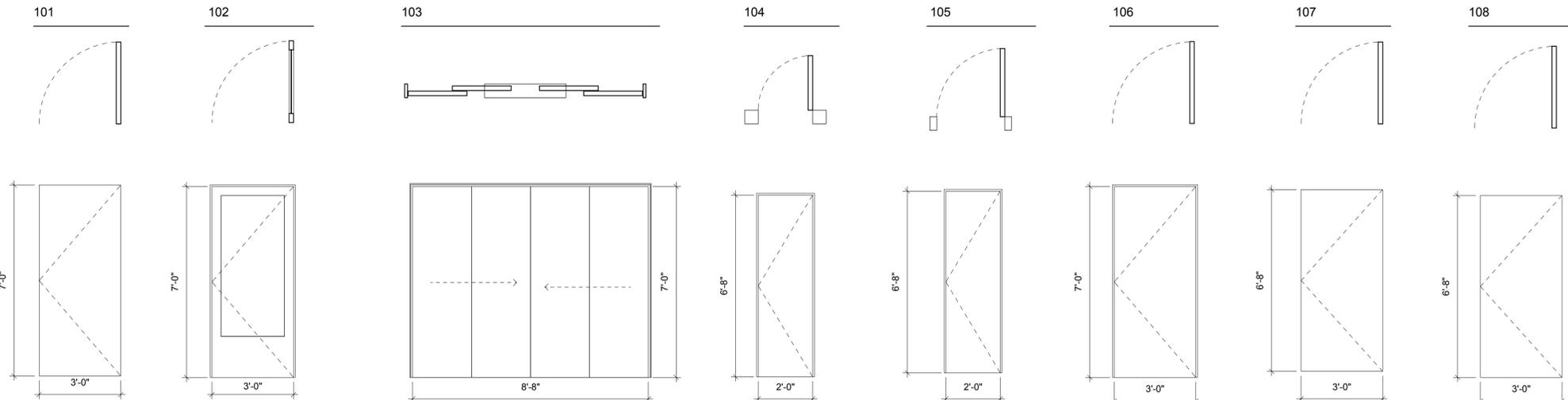
A-602

Mark	Window Type	WINDOW SIZE		TYPE	Frame Material	Head Height	Sill Height	Frame U-Value	Glass U-Value	Count	Operation	Tempered
		WIDTH	HEIGHT									
37	B	3'-0"	3'-0"	+SD Intus Doleta Wood Casement Window-1	Wood/Aluminum	3'-6 5/8"	6 5/8"	0.128	0.88	1		
W1	B	3'-0"	3'-0"	+SD Intus Doleta Wood Casement Window-1	Wood/Aluminum	7'-3"	4'-3"	0.128	0.88	1		Tempered
W2	A	3'-0"	5'-6"	+SD Intus Doleta Wood Casement Window-1	Wood/Aluminum	7'-6"	2'-0"	0.128	0.88	1	Egress	
W3	A	3'-0"	5'-6"	+SD Intus Doleta Wood Casement Window-1	Wood/Aluminum	7'-6"	2'-0"	0.128	0.88	1	Egress	
W4	A	3'-0"	5'-6"	+SD Intus Doleta Wood Casement Window-1	Wood/Aluminum	7'-6"	2'-0"	0.128	0.88	1	Egress	Tempered
W5	E	8'-0"	5'-6"	+SD Intus Doleta Wood Fixed Window	Wood/Aluminum	7'-6"	2'-0"	0.128	0.106	1		Tempered
W6	D	4'-0"	4'-0"	+SD Intus Doleta Wood Casement Window-1	Wood/Aluminum	7'-6"	3'-6"	0.128	0.106	1		
W7	A	5'-6"	3'-0"	+SD Intus Doleta Wood Casement Window-1	Wood/Aluminum	6'-8 7/8"	3'-8 7/8"	0.128	0.88	1		
W8	A	5'-6"	3'-0"	+SD Intus Doleta Wood Casement Window-1	Wood/Aluminum	3'-6 5/8"	6 5/8"	0.128	0.88	1		
W9	A	5'-6"	3'-0"	+SD Intus Doleta Wood Casement Window-1	Wood/Aluminum	6'-8 7/8"	3'-8 7/8"	0.128	0.88	1		



C1 WINDOWS
3/8" = 1'-0"

Mark	Type Name	Height	Width	FINISH		Function	Count	Tempered
				FRAME	Function			
101	Single Flush	7'-0"	3'-0"	Aluminum	Exterior	1		Tempered
102	Single Flush	7'-0"	3'-0"	Aluminum/Wood	Exterior	1		Tempered
103	Two Panel Sliding	7'-0"	8'-8"	Wood	Interior	1		
105	Single Flush	6'-8"	2'-0"	Wood	Interior	1		
106	Single Flush	7'-0"	2'-6"	Solid Wood	Interior	1		
107	Single Flush	6'-8"	3'-0"	Solid Wood	Interior	1		
108	Single Flush	6'-8"	3'-0"	Solid Wood	Interior	1		



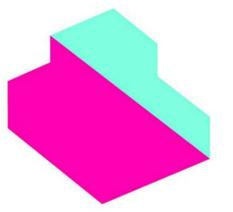
A1 DOORS
3/8" = 1'-0"

GENERAL SHEET NOTES

REFERENCE KEYNOTES

SHEET KEYNOTES

DRAWING KEY



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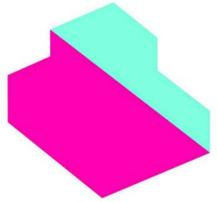
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SHEET TITLE

WINDOW AND DOOR SCHEDULE

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SHEET TITLE

REFLECTED CEILING
 PLAN

A-801

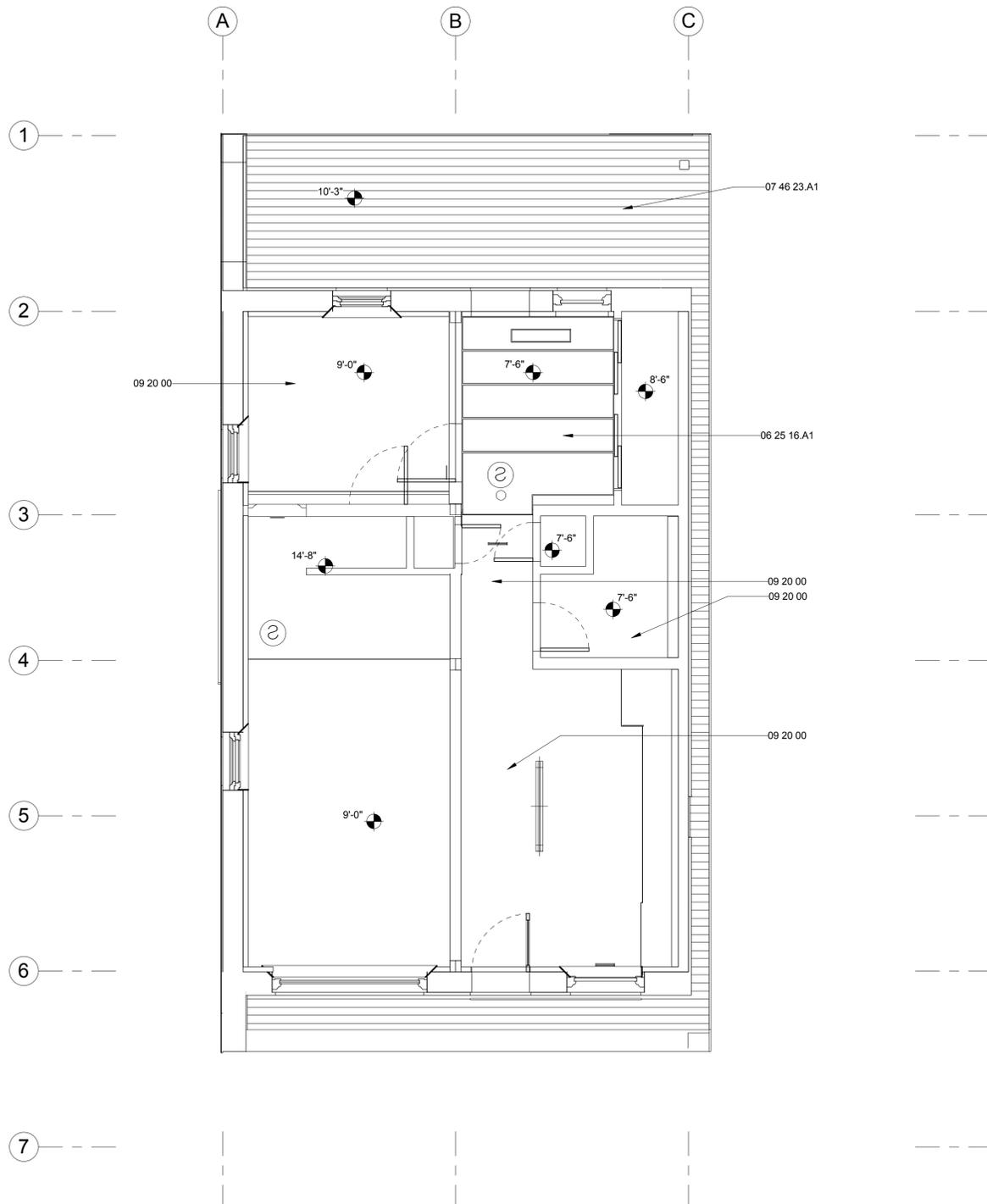
GENERAL SHEET NOTES

REFERENCE KEYNOTES

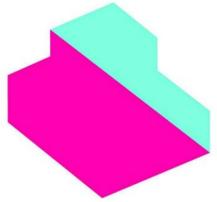
06 25 16.A1	PAINTED PLYWOOD PANEL
07 46 23.A1	WESTERN RED CEDAR SIDING
09 20 00	PLASTER AND GYPSUM BOARD

SHEET KEYNOTES

DRAWING KEY



A2 GROUND LEVEL REFLECTED CEILING PLAN
 1/4" = 1'-0"



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SHEET TITLE

FIRE PROTECTION NOTES

F-001

GENERAL SHEET NOTES

REFERENCE KEYNOTES

21 13 13 WET-PIPE SPRINKLER SYSTEMS

SHEET KEYNOTES

DRAWING KEY

GENERAL NOTES:

ACCORDING TO R313.1 OF IRC 2009, THE HOUSE SHALL HAVE AN AUTOMATIC FIRE SUPPRESSION SYSTEM DESIGNED AND INSTALLED ACCORDING TO P2904.

P2904.1 GENERAL. WHERE INSTALLED, RESIDENTIAL FIRE SPRINKLER SYSTEMS, OR PORTIONS THEREOF, SHALL BE IN ACCORDANCE WITH NFPA 13D OR SECTION P2904, WHICH SHALL BE CONSIDERED EQUIVALENT TO NFPA 13D. SECTION P2904 SHALL APPLY TO STAND-ALONE AND MULTIPURPOSE WET-PIPE SPRINKLER SYSTEMS THAT DO NOT INCLUDE THE USE OF ANTIFREEZE. A MULTIPURPOSE FIRE SPRINKLER SYSTEM SHALL SUPPLY DOMESTIC WATER TO BOTH FIRE SPRINKLERS AND PLUMBING FIXTURES. A STAND-ALONE SPRINKLER SYSTEM SHALL BE SEPARATE AND INDEPENDENT FROM THE WATER DISTRIBUTION SYSTEM. A BACKFLOW PREVENTER SHALL NOT BE REQUIRED TO SEPARATE A STAND-ALONE SPRINKLER SYSTEM FROM THE WATER DISTRIBUTION SYSTEM.

P2904.1.1 REQUIRED SPRINKLER LOCATIONS. SPRINKLERS SHALL BE INSTALLED TO PROTECT ALL AREAS OF A DWELLING UNIT.

EXCEPTIONS:

- CLOTHES CLOSETS, LINEN CLOSETS AND PANTRIES NOT EXCEEDING 24 SQUARE FEET (2.2 M2) IN AREA, WITH THE FLOOR SMALLEST DIMENSION NOT GREATER THAN 3 FEET (915 MM) AND HAVING WALL AND CEILING SURFACES OF GYPSUM BOARD.
- BATHROOMS NOT MORE THAN 55 SQUARE FEET (5.1 M2) IN AREA.

P2904.3 SPRINKLER PIPING SYSTEM. SPRINKLER PIPING SHALL BE SUPPORTED IN ACCORDANCE WITH THE REQUIREMENTS FOR COLD WATER DISTRIBUTION PIPING. SPRINKLER PIPING SHALL COMPLY WITH ALL REQUIREMENTS FOR COLD WATER DISTRIBUTION PIPING. FOR MULTIPURPOSE PIPING SYSTEMS, THE SPRINKLER PIPING SHALL CONNECT TO AND BE A PART OF THE COLD WATER DISTRIBUTION PIPING SYSTEM.

P2904.2.4 SPRINKLER COVERAGE AREAS WERE BASED ON MANUFACTURERS INSTALLATION INSTRUCTIONS.

P2904.5 THE DEDICATED FIRE SUPPRESSION WATER SUPPLY (260GAL), HAS SUFFICIENT CAPACITY TO PROVIDE THE REQUIRED DESIGN FLOW RATE FOR 10 MINUTES.

P2904.6 FIRE SUPPRESSION WATER DISTRIBUTION PIPES WERE SIZED BY DETERMINING THE AVAILABLE PRESSURE TO OFFSET FRICTION LOSS IN PIPING AND IDENTIFYING A PIPING MATERIAL, DIAMETER AND LENGTH USING THE EQUATION IN SECTION P2904.6.2.1 AND THE PROCEDURE IN SECTION P2904.6.2 OF THE 2009 IRC

FIRE SUPPRESSION WATER DISTRIBUTION PIPING IS 1" CPVC UNLESS OTHERWISE NOTED.

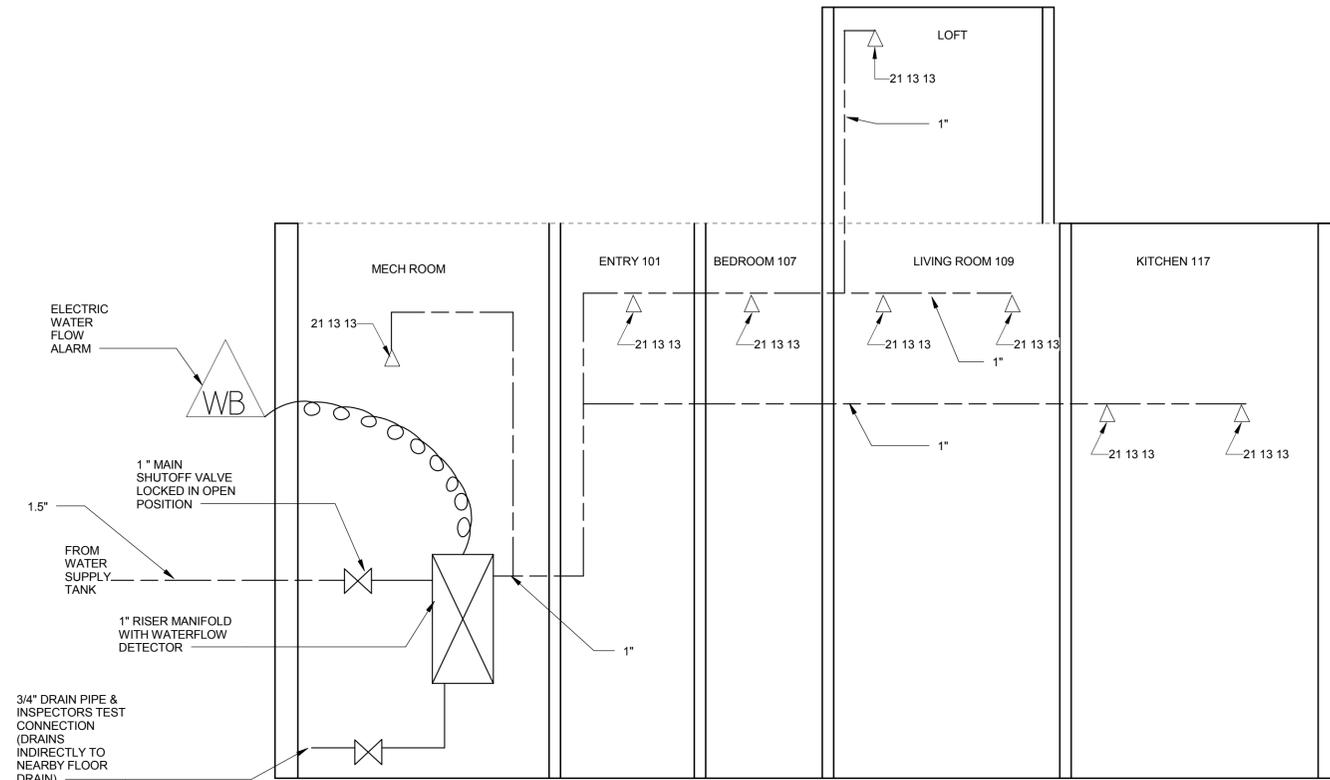
SMOKE DETECTIONS AND NOTIFICATION SYSTEMS SHALL BE DESIGNED AND INSTALLED IN ACCORDANCE TO R314.1, R314.3 & R314.4 OF THE IRC 2009.

R314.3 SMOKE ALARMS WILL BE TIED TOGETHER SO THAT WHEN ONE ALARM IS TRIGGERED ALL ALARMS WITHIN THE BUILDING WILL GO OFF.

R314.4 SMOKE ALARMS WILL BE POWERED PRIMARILY FROM THE BUILDING WIRING WITH BATTERIES AS BACKUPS.

R314.3 SMOKE ALARMS WILL BE TIED TOGETHER SO THAT WHEN ONE ALARM IS TRIGGERED ALL ALARMS WITHIN THE BUILDING WILL GO OFF.

FIRE EXTINGUISHERS HAVE A MINIMUM RATING OF 2A-10BC



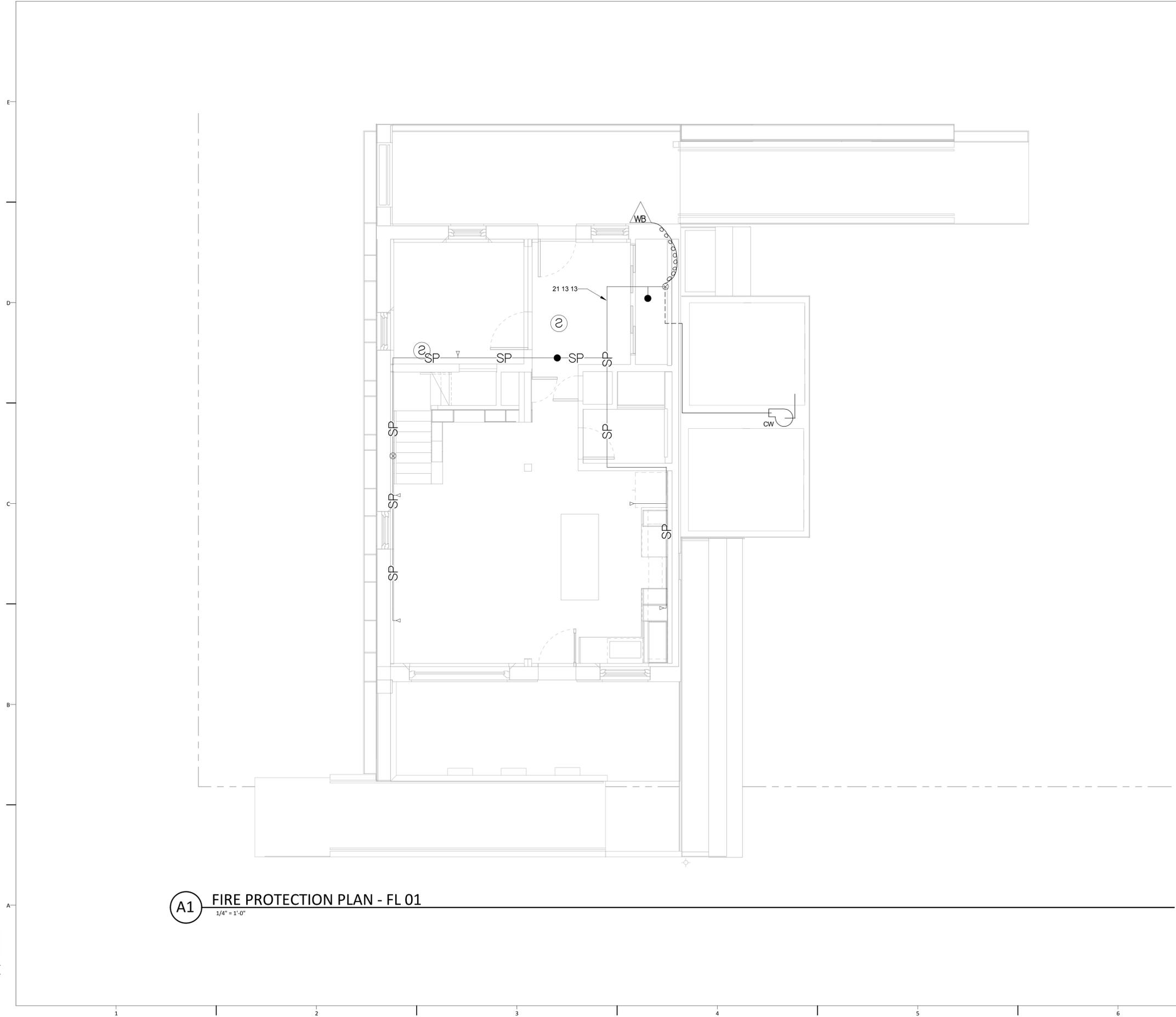
B1 FIRE SUPPRESSION RISER

Not To Scale

FIRE DETECTION/SUPPRESSION SCHEDULE						
DESCRIPTION	MANUFACTURER	SIZE	TYPE	MODEL	MASTER FORMAT #L	REMARKS
WALL MOUNTED FIRE SPRINKLER	TYCO		FLUSH HORIZONTAL SIDEWALL SPRINKLER	TFP425	21 13 13	K = 4.2, 1/2" ORIFICE, 162 DEG F RATING
CEILING MOUNTED FIRE SPRINKLER	TYCO		FLAT PLATE CONCEALED PENDANT	TFP443	21 13 13	K = 4.9, 1/2" ORIFICE, 160 DEG F RATING
WATER FLOW ALARM GONG	SIMPLEX		ELECTRONIC HORN, FREE-RUN	4901-9820		
RISER MANIFOLD	TYCO		1" FOR NFPA 13D/13R RESIDENTIAL SYSTEMS	DN25	21 13 13	

A1 FIRE SUPPRESSION LEGEND

Not To Scale



- GENERAL SHEET NOTES
1. SMOKE ALARMS WILL BE POWERED PRIMARILY FROM THE BUILDING WIRING WITH BATTERIES AS BACKUPS.
 2. SMOKE ALARMS WILL BE TIED TOGETHER SO THAT WHEN ONE ALARM IS TRIGGERED ALL ALARMS WITHIN THE BUILDING WILL GO OFF.
 3. FIRE EXTINGUISHERS HAVE A MINIMUM RATING OF 2A-10BC
 4. FIRE SUPPRESSION WATER DISTRIBUTION PIPES WERE SIZED BY DETERMINING THE AVAILABLE PRESSURE TO OFFSET FRICTION LOSS IN PIPING AND IDENTIFYING A PIPING MATERIAL, DIAMETER AND LENGTH USING THE EQUATION IN SECTION P2904.6.2.1 AND THE PROCEDURE IN SECTION P2904.6.2 OF THE 2009 IRC
 5. FIRE SUPPRESSION SYSTEM WILL BE SUPPLIED FROM THE SAME PUMP AS THE MAIN DOMESTIC WATER SUPPLY.

REFERENCE KEYNOTES

21 13 13 WET-PIPE SPRINKLER SYSTEMS

SHEET KEYNOTES

- DRAWING KEY
- COLD WATER PUMP
 - FIRE SPRINKLER - HORIZONTAL MOUNT
 - FIRE SPRINKLER - CEILING MOUNT
 - FIRE SPRINKLER RISER
 - FIRE SPRINKLER LINE
 - SMOKE DETECTOR
 - WATER FLOW ALARM



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2	MARCH 22, 2011	CONSTRUCTION DOCUMENTS
3	MAY 3, 2011	FINAL CONSTRUCTION DOCUMENTS
4	AUGUST 11, 2011	AS-BUILT CONSTRUCTION DOCUMENTS

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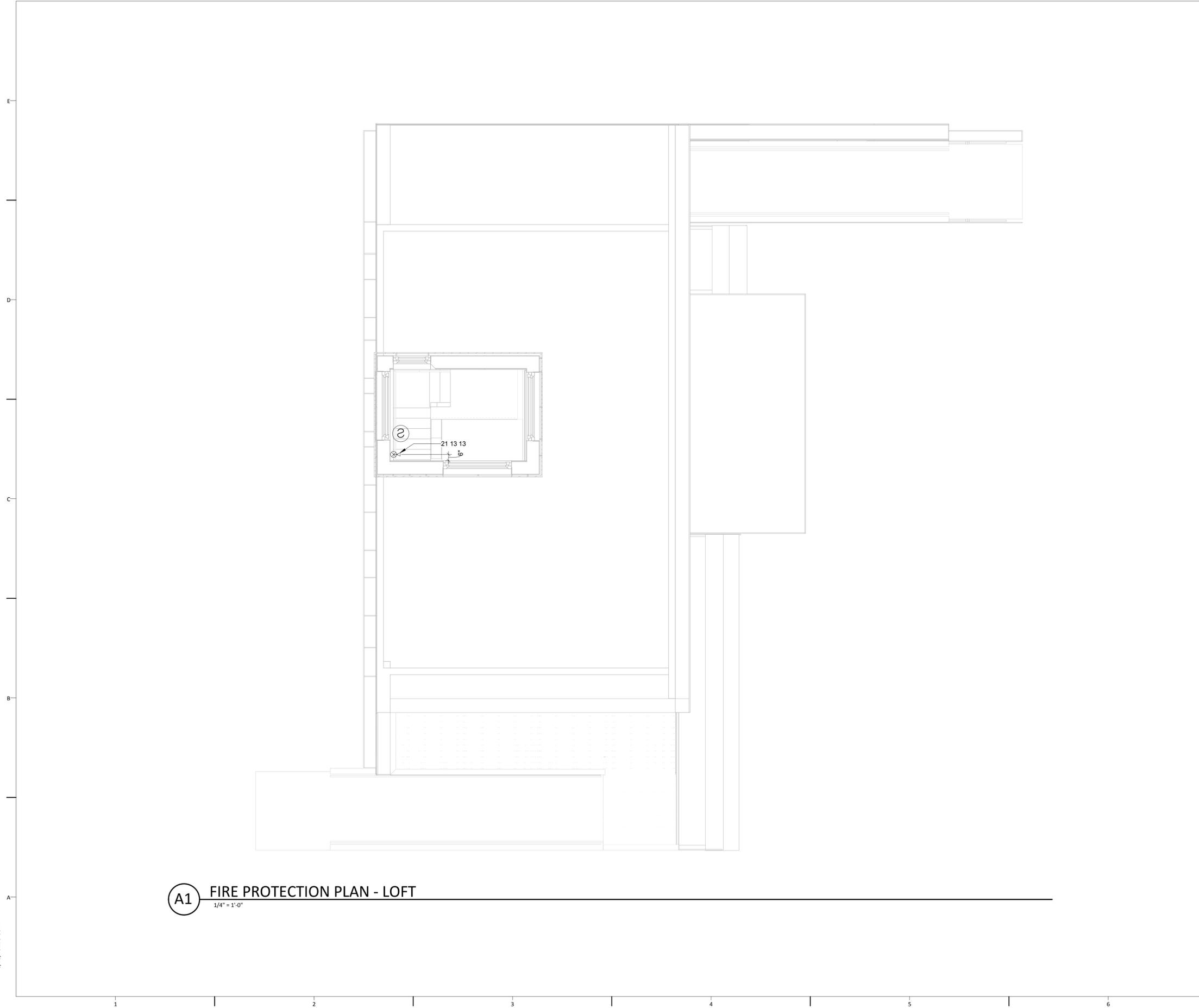
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SHEET TITLE

**FIRE PROTECTION PLAN
 - FL 01**

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GENERAL SHEET NOTES

REFERENCE KEYNOTES
 21 13 13 WET-PIPE SPRINKLER SYSTEMS

SHEET KEYNOTES

DRAWING KEY

- COLD WATER PUMP
- FIRE SPRINKLER - HORIZONTAL MOUNT
- FIRE SPRINKLER - CEILING MOUNT
- FIRE SPRINKLER RISER
- FIRE SPRINKLER LINE
- SMOKE DETECTOR
- WATER FLOW ALARM



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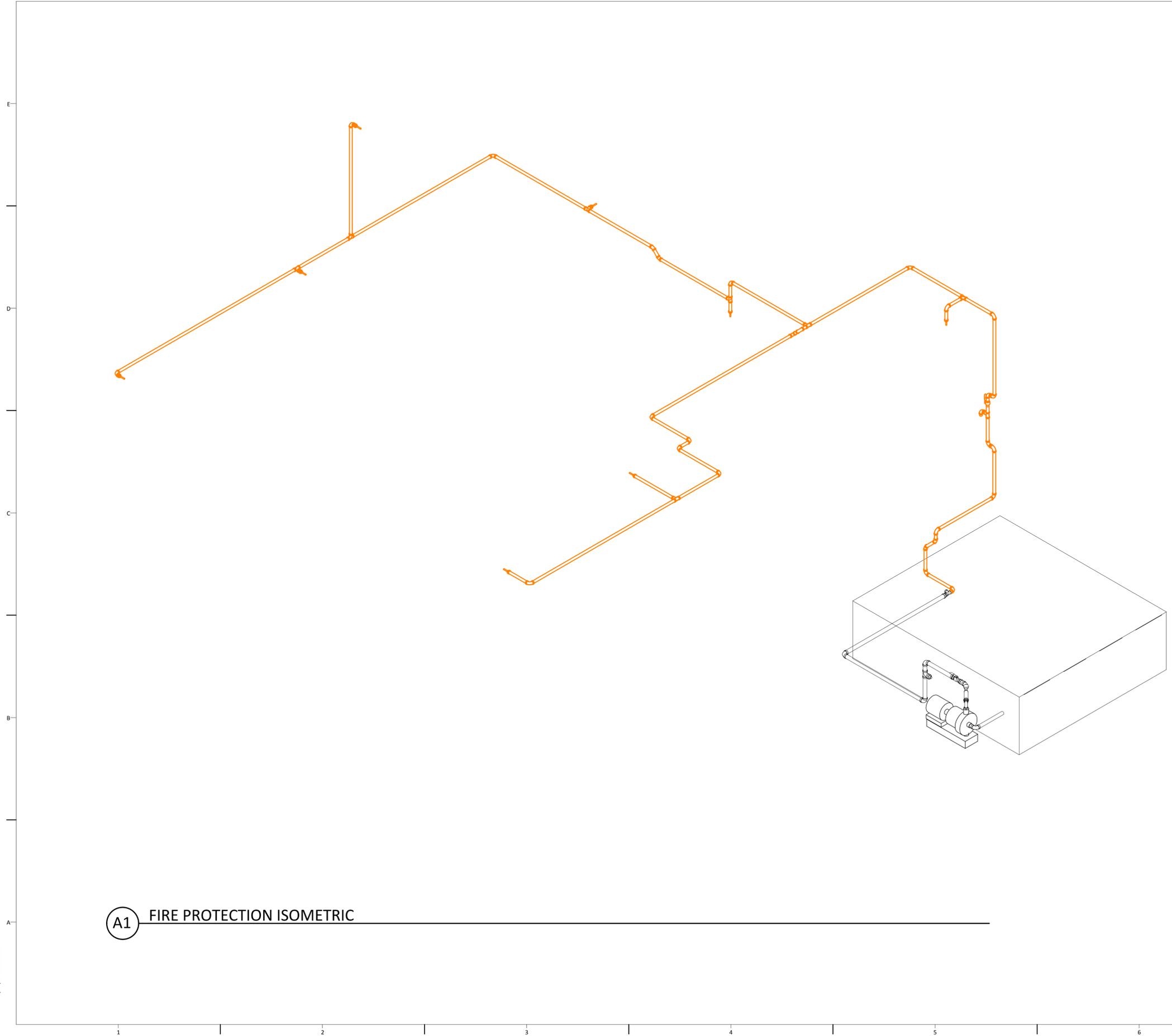
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**FIRE PROTECTION PLAN
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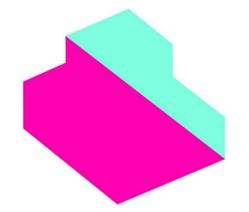
A1 FIRE PROTECTION ISOMETRIC

GENERAL SHEET NOTES

REFERENCE KEYNOTES

SHEET KEYNOTES

DRAWING KEY



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GENERAL NOTES

PLUMBING CONTRACTOR SHALL CO-ORDINATE ALL PLUMBING WORK WITH APPROVED PLANS AND OTHER TRADES

EXPANSION LOOPS AND RISER CLAMPS SHALL BE PROVIDED FOR EXPANSION OF ALL WATER PIPING

ALL CONNECTIONS TO EQUIPMENT OF DISSIMILAR MATERIALS SHALL BE MADE WITH A DIALECTRIC CONNECTION

AN ACCESS DOOR SHALL BE PROVIDED FOR ANY VALVE OR CONTROL DEVICE CONCEALED IN WALLS OR CEILINGS

THE PLUMBING CONTRACTOR IS RESPONSIBLE FOR THE LOCATION OF DRAIN PIPES AT THE CENTERLINE OF ALL FIXTURES

WATER SUPPLY SYSTEM

P2903.8 GRIDDED AND PARALLEL WATER DISTRIBUTION SYSTEM MANIFOLDS. HOT WATER AND COLD WATER MANIFOLDS WILL BE INSTALLED WITH PARALLEL-CONNECTED INDIVIDUAL DISTRIBUTION LINES TO EACH FIXTURE OR FIXTURE FITTINGS AND BE DESIGNED IN ACCORDANCE WITH SECTIONS P2903.8.1 THROUGH P2903.8.6.

P2903.8.1 SIZING OF MANIFOLDS. MANIFOLD WAS SIZED AS 1.25" IN ACCORDANCE WITH TABLE P2903.8.1. TOTAL GALLONS PER MINUTE IS THE DEMAND FOR ALL OUTLETS.

P2903.8.2 MINIMUM SIZE. 3/8 INCH INDIVIDUAL DISTRIBUTION LINES WILL BE USED AS THE DEVELOPED LENGTH OF THE LINES ARE LESS THAN 60 FEET AND THE AVAILABLE PRESSURE AT THE METER IS GREATER THAN 40 POUNDS PER SQUARE INCH. THE WATER HEATER IS FED FROM THE END OF A COLD WATER MANIFOLD BY A 1 INCH PIPE, THE MANIFOLD IS 1.25 INCHES ONE SIZE LARGER THAN THE WATER HEATER FEED.

P2903.8.4 SUPPORT AND PROTECTION. PLASTIC PIPING BUNDLES SHALL BE SECURED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS AND SUPPORTED IN ACCORDANCE WITH SECTION P2605.

P2903.8.5 VALVING. FIXTURE VALVES WILL BE LOCATED AT THE MANIFOLD AND WILL BE LABELED INDICATING THE FIXTURE SERVED.

P2903.9.1 SERVICE VALVE. AN ACCESSIBLE MAIN SHUTOFF VALVE SHALL BE PROVIDED IN THE MECHANICAL ROOM NEAR THE ENTRANCE OF THE WATER SERVICE. THE WATER SERVICE SHALL BE VALVED AT THE CURB OR PROPERTY LINE IN ACCORDANCE WITH LOCAL REQUIREMENTS.

P2903.9.2 WATER HEATER VALVE. A READILY ACCESSIBLE FULL-OPEN VALVE SHALL BE INSTALLED IN THE COLD-WATER SUPPLY PIPE TO EACH WATER HEATER AT OR NEAR THE WATER HEATER.

SANITARY DRAINAGE

P3002.1 PIPING WITHIN BUILDINGS. DRAIN, WASTE AND VENT (DWV) PIPING IN BUILDINGS SHALL BE AS SHOWN IN TABLES P3002.1 AND P3002.1. ALLOWANCE SHALL BE MADE FOR THE THERMAL EXPANSION AND CONTRACTION OF PLASTIC PIPING.

P3002.2 BUILDING SEWER. BUILDING SEWER PIPING SHALL BE AS SHOWN IN TABLE P3002.2. FORCED MAIN SEWER PIPING SHALL CONFORM TO THE STANDARDS FOR PVC PLASTIC PIPE LISTED IN TABLE P3002.2.

P3004.1 DWV SYSTEM LOAD. THE LOAD ON DWV-SYSTEM PIPING SHALL BE COMPUTED IN TERMS OF DRAINAGE FIXTURE UNIT (D.F.U.) VALUES IN ACCORDANCE WITH TABLE P3004.1.

P3005.1.1 HORIZONTAL TO VERTICAL (MULTIPLE CONNECTION FITTINGS). DOUBLE FITTINGS SUCH AS DOUBLE SANITARY TEES AND TEE-WYES OR APPROVED MULTIPLE CONNECTION FITTINGS AND BACK-TO-BACK FIXTURE ARRANGEMENTS THAT CONNECT TWO OR MORE BRANCHES AT THE SAME LEVEL SHALL BE PERMITTED AS LONG AS DIRECTLY OPPOSING CONNECTIONS ARE THE SAME SIZE AND THE DISCHARGE INTO DIRECTLY OPPOSING CONNECTIONS IS FROM SIMILAR FIXTURE TYPES OR FIXTURE GROUPS. DOUBLE SANITARY TEE PATTERNS SHALL NOT RECEIVE THE DISCHARGE OF BACK-TO-BACK WATER CLOSETS AND FIXTURES OR APPLIANCES WITH PUMPING ACTION DISCHARGE.

P3005.2 DRAINAGE PIPE CLEANOUTS. DRAINAGE PIPE CLEANOUTS SHALL COMPLY WITH SECTIONS P3005.2.1 THROUGH P3005.2.11 .

P3005.2.5 ACCESSIBILITY. CLEANOUTS SHALL BE ACCESSIBLE. MINIMUM CLEARANCE IN FRONT OF CLEANOUTS SHALL BE 18 INCHES (457 MM) ON 3-INCH (76 MM) AND LARGER PIPES, AND 12 INCHES (305 MM) ON SMALLER PIPES. CONCEALED CLEANOUTS SHALL BE PROVIDED WITH ACCESS OF SUFFICIENT SIZE TO PERMIT REMOVAL OF THE CLEANOUT PLUG AND RODDING OF THE SYSTEM. CLEAN OUT PLUGS SHALL NOT BE CONCEALED BY PERMANENT FINISHING MATERIAL.

P3005.2.6 BASE OF STACKS. A CLEANOUT SHALL BE PROVIDED AT THE BASE OF EACH WASTE OR SOIL STACK.

P3005.2.8 DIRECTION OF FLOW. CLEANOUTS SHALL BE INSTALLED SO THAT THE CLEANOUT OPENS TO ALLOW CLEANING IN THE DIRECTION OF THE FLOW OF THE DRAINAGE LINE.

P3005.2.9 CLEANOUT SIZE. CLEANOUTS SHALL BE THE SAME NOMINAL SIZE AS THE PIPE THEY SERVE UP TO 4 INCHES (102 MM) . FOR PIPES LARGER THAN 4 INCHES (102 MM) NOMINAL SIZE, THE MINIMUM SIZE OF THE CLEANOUT SHALL BE 4 INCHES (102 MM).

EXCEPTIONS:
1. "P" TRAP CONNECTIONS WITH SLIP JOINTS OR GROUND JOINT CONNECTIONS, OR STACK CLEANOUTS THAT ARE NOT MORE THAN ONE PIPE DIAMETER SMALLER THAN THE DRAIN SERVED, SHALL BE PERMITTED.

P3005.2.10 CLEANOUT EQUIVALENT. A FIXTURE TRAP OR A FIXTURE WITH INTEGRAL TRAP, READILY REMOVABLE WITHOUT DISTURBING CONCEALED PIPING SHALL BE ACCEPTABLE AS A CLEANOUT EQUIVALENT.

P3005.3 HORIZONTAL DRAINAGE PIPING SLOPE. HORIZONTAL DRAINAGE PIPING SHALL BE INSTALLED IN UNIFORM ALIGNMENT AT UNIFORM SLOPES NOT LESS THAN 1/4 UNIT VERTICAL IN 12 UNITS HORIZONTAL (2-PERCENT SLOPE) FOR 21/ 2-INCH (64 MM) DIAMETER AND LESS, AND NOT LESS THAN 1/8 UNIT VERTICAL IN 12 UNITS HORIZONTAL (1-PERCENT SLOPE) FOR DIAMETERS OF 3 INCHES (76 MM) OR MORE.

P3005.4 DRAIN PIPE SIZING. DRAIN PIPES SHALL BE SIZED ACCORDING TO DRAINAGE FIXTURE UNIT (D.F.U .) LOADS. THE SIZE OF THE DRAINAGE PIPING SHALL NOT BE REDUCED IN SIZE IN THE DIRECTION OF FLOW.

VENTING

P3105.1 DISTANCE OF TRAP FROM VENT. EACH FIXTURE TRAP SHALL HAVE A PROTECTING VENT LOCATED SO THAT THE SLOPE AND THE DEVELOPED LENGTH IN THE FIXTURE DRAIN FROM THE TRAP WEIR TO THE VENT FITTING ARE WITHIN THE REQUIREMENTS SET FORTH IN TABLE P3105.1. EXCEPTION: THE DEVELOPED LENGTH OF THE FIXTURE DRAIN FROM THE TRAP WEIR TO THE VENT FITTING FOR SELF-SIPHONING FIXTURES, SUCH AS WATER CLOSETS, SHALL NOT BE LIMITED.

P3106.1 INDIVIDUAL VENT PERMITTED. EACH TRAP AND TRAPPED FIXTURE IS PERMITTED TO BE PROVIDED WITH AN INDIVIDUAL VENT. THE INDIVIDUAL VENT SHALL CONNECT TO THE FIXTURE DRAIN OF THE TRAP OR TRAPPED FIXTURE BEING VENTED.

P3107.1 INDIVIDUAL VENT AS COMMON VENT. AN INDIVIDUAL VENT IS PERMITTED TO VENT TWO TRAPS OR TRAPPED FIXTURES AS A COMMON VENT. THE TRAPS OR TRAPPED FIXTURES BEING COMMON VENTED SHALL BE LOCATED ON THE SAME FLOOR LEVEL.

P3107.2 CONNECTION AT THE SAME LEVEL. WHERE THE FIXTURE DRAINS BEING COMMON VENTED CONNECT AT THE SAME LEVEL, THE VENT CONNECTION SHALL BE AT THE INTERCONNECTION OF THE FIXTURE DRAINS OR DOWNSTREAM OF THE INTERCONNECTION.

P3107.3 CONNECTION AT DIFFERENT LEVELS. WHERE THE FIXTURE DRAINS CONNECT AT DIFFERENT LEVELS, THE VENT SHALL CONNECT AS A VERTICAL EXTENSION OF THE VERTICAL DRAIN. THE VERTICAL DRAIN PIPE CONNECTING THE TWO FIXTURE DRAINS SHALL BE CONSIDERED THE VENT FOR THE LOWER FIXTURE DRAIN, AND SHALL BE SIZED IN ACCORDANCE WITH TABLE P31 07.3. THE UPPER FIXTURE SHALL NOT BE A WATER CLOSET.

P3109.1 WASTE STACK VENT PERMITTED. A WASTE STACK SHALL BE CONSIDERED A VENT FOR ALL OF THE FIXTURES DISCHARGING TO THE STACK WHERE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF THIS SECTION.

P3109.2 STACK INSTALLATION. THE WASTE STACK SHALL BE VERTICAL, AND BOTH HORIZONTAL AND VERTICAL OFFSETS SHALL BE PROHIBITED BETWEEN THE LOWEST FIXTURE DRAIN CONNECTION AND THE HIGHEST FIXTURE DRAIN CONNECTION TO THE STACK. EVERY FIXTURE DRAIN SHALL CONNECT SEPARATELY TO THE WASTE STACK. THE STACK SHALL NOT RECEIVE THE DISCHARGE OF WATER CLOSETS OR URINALS.

P3109.3 STACK VENT. A STACK VENT SHALL BE INSTALLED FOR THE WASTE STACK. THE SIZE OF THE STACK VENT SHALL BE NOT LESS THAN THE SIZE OF THE WASTE STACK. OFFSETS SHALL BE PERMITTED IN THE STACK VENT AND SHALL BE LOCATED AT LEAST 6 INCHES (152 MM) ABOVE THE FLOOD LEVEL OF THE HIGHEST FIXTURE, AND SHALL BE IN ACCORDANCE WITH SECTION P3104.5. THE STACK VENT SHALL BE PERMITTED TO CONNECT WITH OTHER STACK VENTS AND VENT STACKS IN ACCORDANCE WITH SECTION P3113.3.

P3109.4 WASTE STACK SIZE. THE WASTE STACK SHALL BE SIZED BASED ON THE TOTAL DISCHARGE TO THE STACK AND THE DISCHARGE WITHIN A BRANCH INTERVAL IN ACCORDANCE WITH TABLE P3109.4. THE WASTE STACK SHALL BE THE SAME SIZE THROUGHOUT THE LENGTH OF THE WASTE STACK.

P3114.3 WHERE PERMITTED. INDIVIDUAL VENTS, BRANCH VENTS, CIRCUIT VENTS AND STACK VENTS SHALL BE PERMITTED TO TERMINATE WITH A CONNECTION TO AN AIR ADMITTANCE VALVE. INDIVIDUAL AND BRANCH TYPE AIR ADMITTANCE VALVES SHALL VENT ONLY FIXTURES THAT ARE ON THE SAME FLOOR LEVEL AND CONNECT TO A HORIZONTAL BRANCH DRAIN.

P3114.7 VENT REQUIRED. WITHIN EACH PLUMBING SYSTEM, A MINIMUM OF ONE STACK VENT OR A VENT STACK SHALL EXTEND OUTDOORS TO THE OPEN AIR.

GENERAL SHEET NOTES

REFERENCE KEYNOTES

SHEET KEYNOTES

DRAWING KEY



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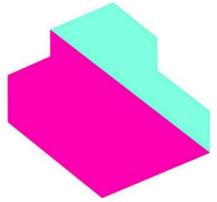
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PLUMBING NOTES

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DOMESTIC SUPPLY PLAN

- FL 01

P-101

GENERAL SHEET NOTES

1. SEE PROJECT MANUAL FOR WATER BUDGET.
2. ALL SUPPLY LINES TO BE 3/8" PEX TUBING.
3. PEX MANIFOLD INCLUDES SHUTOFF VALVES TO EACH SUPPLY LINE.
4. THE SUPPLY TANK HAS A 28" OPENING ON TOP AND A 12" CLEARANCE ON TOP FOR THE DELIVERY OF 1000 GAL OF WATER.
5. GREY WATER SHALL NOT BE USED THROUGHOUT THE COMPETITION.
6. WATER TANKS HAVE A 28" OPENING AND A 12" CLEARANCE ON TOP FOR REMOVAL OF GREY WATER AT THE END OF THE COMPETITION.

REFERENCE KEYNOTES

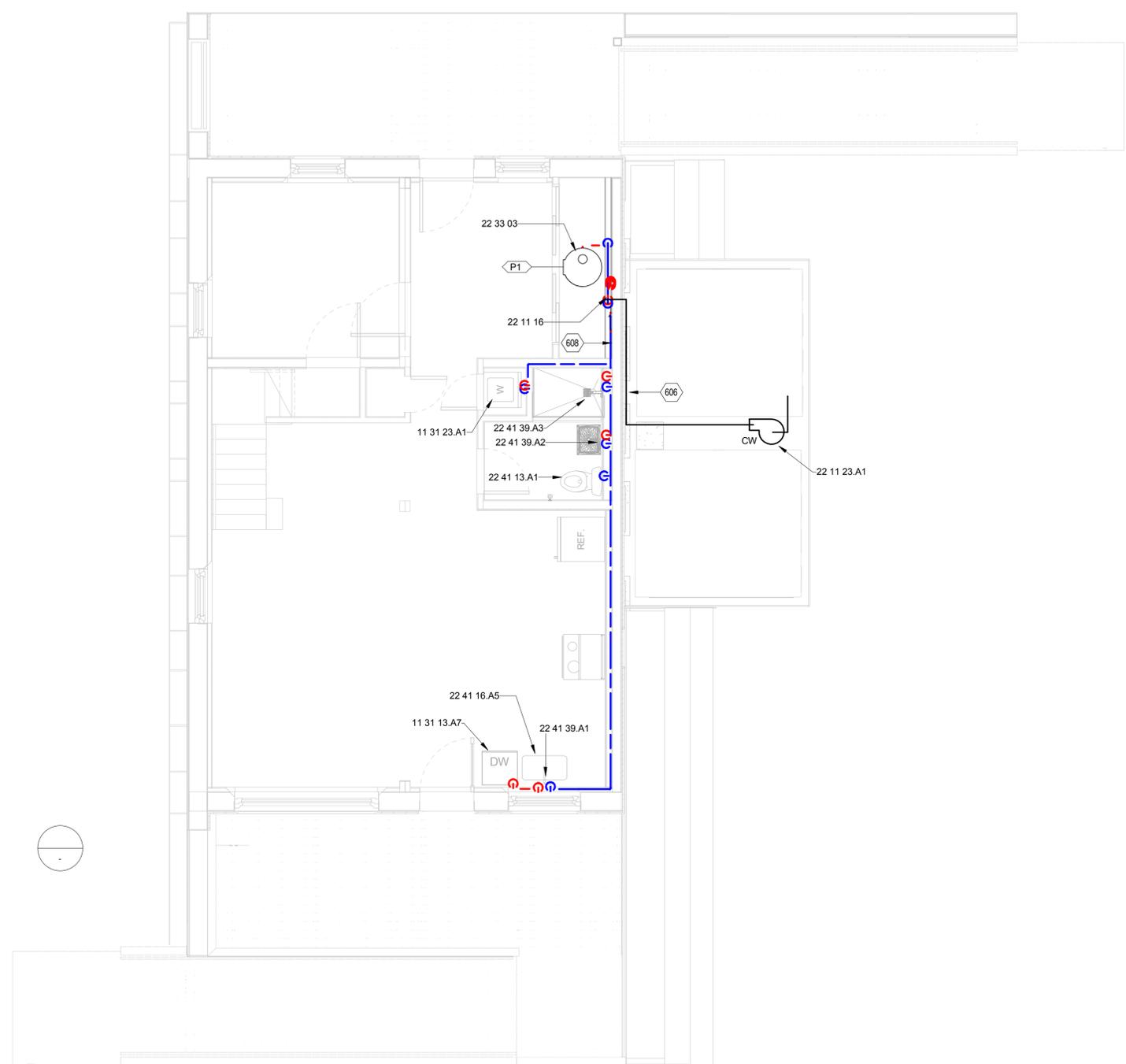
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|-------------|-----------------------------|
| 11 31 13.A7 | DISHWASHER |
| 11 31 23.A1 | CLOTHES WASHER |
| 22 11 16 | DOMESTIC WATER PIPING |
| 22 11 23.A1 | WELL PUMP |
| 22 33 03 | HEAT PUMP HOT WATER HEATERS |
| 22 41 13.A1 | WATER CLOSET |
| 22 41 16.A5 | UNDER COUNTER SINK |
| 22 41 39.A1 | KITCHEN FAUCET |
| 22 41 39.A2 | LAVATORY FAUCET |
| 22 41 39.A3 | SHOWER FAUCET |

SHEET KEYNOTES

- | | |
|-----|-----------------------------------|
| 606 | 1-1/2" PVC MAIN WATER SUPPLY LINE |
| 608 | 3/8" PEX WATER SUPPLY LINES |

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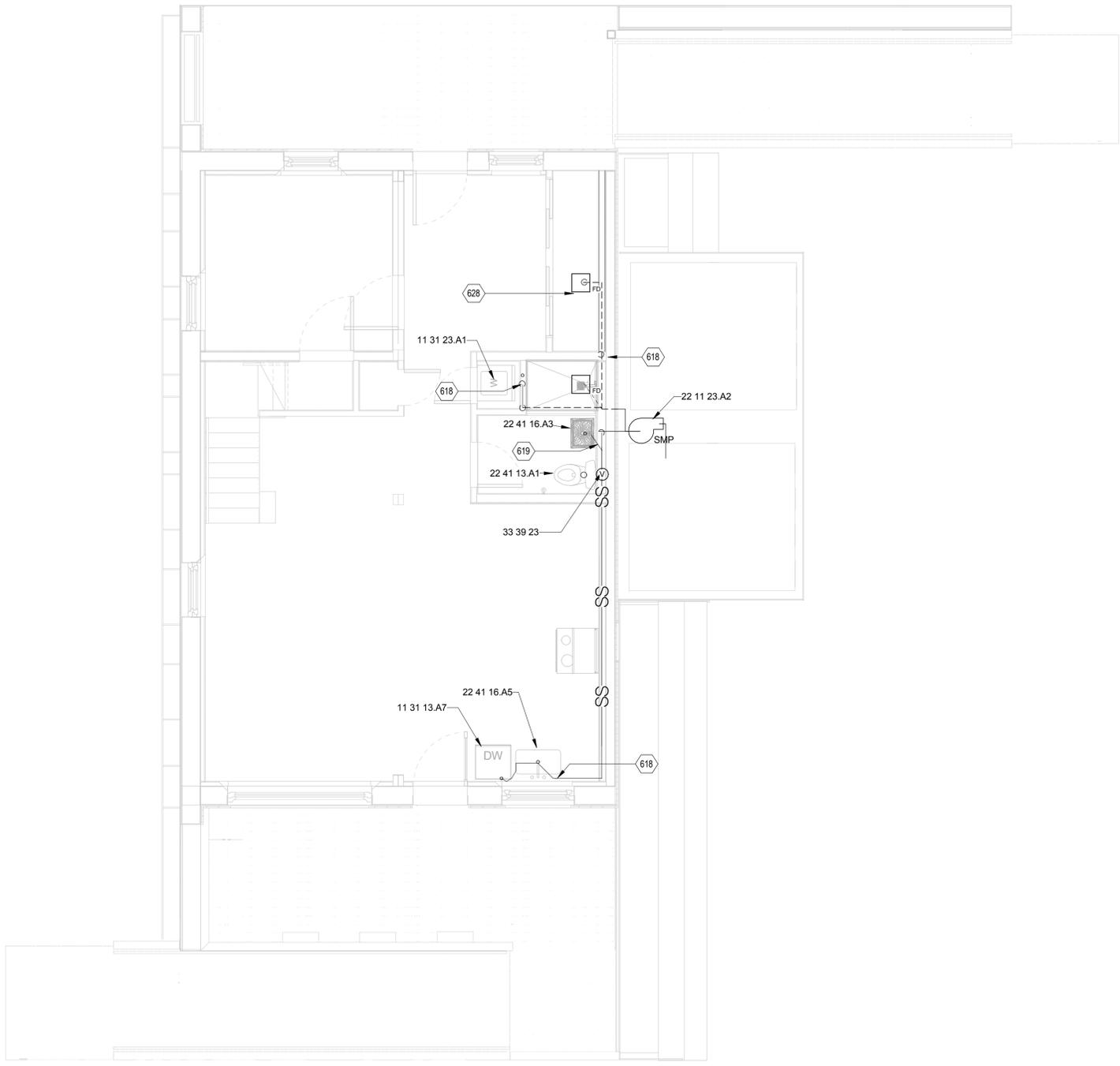
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|--|----------------------------|
| | COLD WATER PUMP |
| | SUMP PUMP |
| | WATER LINE - SUPPLY |
| | WATER LINE - COLD |
| | WATER LINE - HOT |
| | SANITARY SOIL LINE - ABOVE |
| | SANITARY SOIL LINE - BELOW |
| | FLOOR DRAIN |
| | STACK VENT |



A1 DOMESTIC SUPPLY PLAN - FL 01
1/4" = 1'-0"

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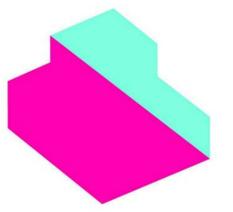
A1 DOMESTIC DRAINAGE PLAN - FL 01
1/4" = 1'-0"

- GENERAL SHEET NOTES
1. SEE PROJECT MANUAL FOR WATER BUDGET
 2. GREY WATER TANK HAS A 24" OPENING AND A 12" CLEARANCE ON TOP FOR REMOVAL OF GREY WATER AT THE END OF THE S.D. COMPETITION
 3. GREY WATER SHALL NOT BE USED THROUGHOUT THE S.D. COMPETITION.
 4. TOILET SHALL BE CAPPED OFF FOR THE S.D. COMPETITION

- REFERENCE KEYNOTES
- 11 31 13.A7 DISHWASHER
 - 11 31 23.A1 CLOTHES WASHER
 - 22 11 23.A2 SUMP PUMP
 - 22 41 13.A1 WATER CLOSET
 - 22 41 16.A3 LAVATORY
 - 22 41 16.A5 UNDER COUNTER SINK
 - 33 39 23 SANITARY UTILITY SEWERAGE CLEANOUTS

- SHEET KEYNOTES
- 618 2" AAV
 - 619 1-1/2" AAV
 - 628 FLOOR DRAIN

- DRAWING KEY
- COLD WATER PUMP
 - SUMP PUMP
 - WATER LINE - SUPPLY
 - WATER LINE - COLD
 - WATER LINE - HOT
 - SANITARY SOIL LINE - ABOVE
 - SANITARY SOIL LINE - BELOW
 - FLOOR DRAIN
 - STACK VENT



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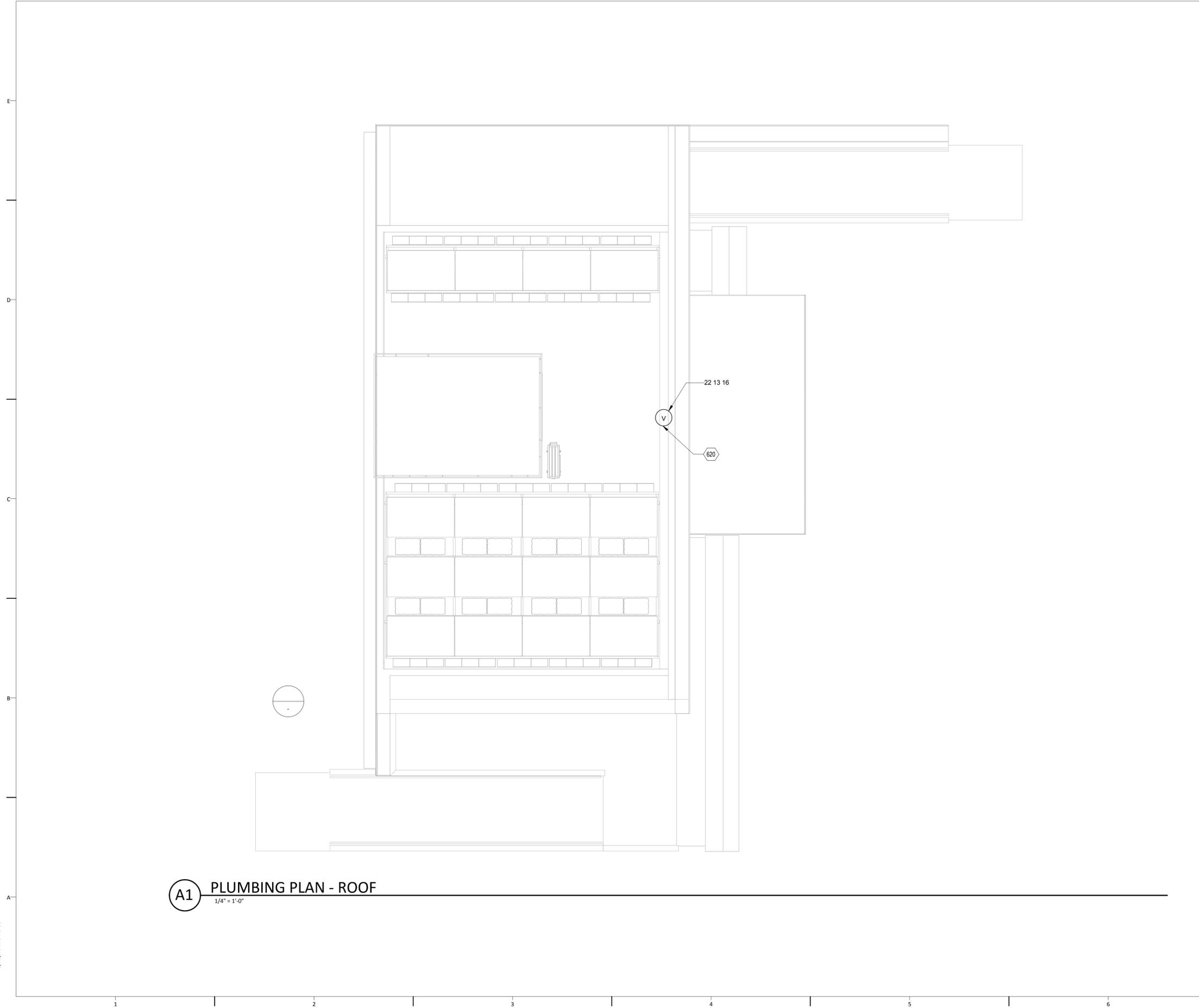
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DOMESTIC DRAINAGE PLAN - FL 01

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A1 PLUMBING PLAN - ROOF
1/4" = 1'-0"

GENERAL SHEET NOTES

REFERENCE KEYNOTES

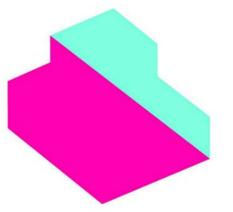
22 13 16 SANITARY WASTE AND VENT PIPING

SHEET KEYNOTES

620 3" PVC VENT TO TERMINATES 6" ABOVE ROOF

DRAWING KEY

-  COLD WATER PUMP
-  SUMP PUMP
-  WATER LINE - SUPPLY
-  WATER LINE - COLD
-  WATER LINE - HOT
-  SANITARY SOIL LINE - ABOVE
-  SANITARY SOIL LINE - BELOW
-  FLOOR DRAIN
-  STACK VENT



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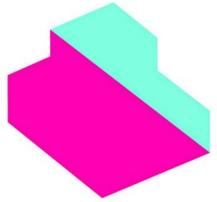
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PLUMBING PLAN - ROOF

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PLUMBING SCHEDULES

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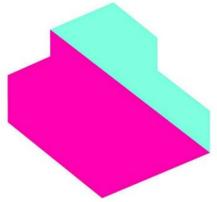
GENERAL SHEET NOTES

REFERENCE KEYNOTES

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PLUMBING FIXTURE SCHEDULE														
MARK	DESCRIPTION	COUNT	MANUFACTURER	MODEL	MASTER FORMAT #	SUPPLY FITTING	SUPPLY PIPE	DRAIN	TRAP	CONNECTION				COMMENTS
										CW	HW	WASTE	VENT	
4		1												
5	Water Closet	1	Sterling	402024	22.41.13.A1					Yes	No	Yes	Yes	
6		1												
9		1												
11		1												
12	Lavatory Faucet	1	Kohler	K-15182-P	22.41.39.A2					Yes	Yes			
14		1												
15	Shower Base	1	Sterling	72121100-0	22.41.23					No	No			
18	Kitchen Sink	1	Sterling	14707-3-NA	22.41.16.A5					Yes	Yes	Yes	Yes	



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PLUMBING RISER DIAGRAMS

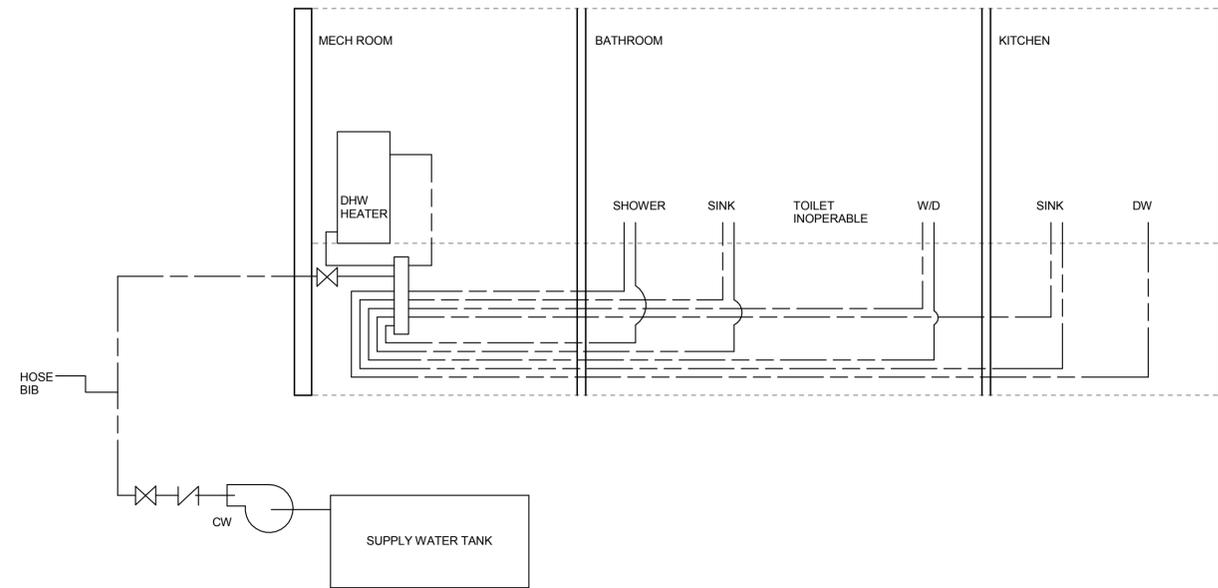
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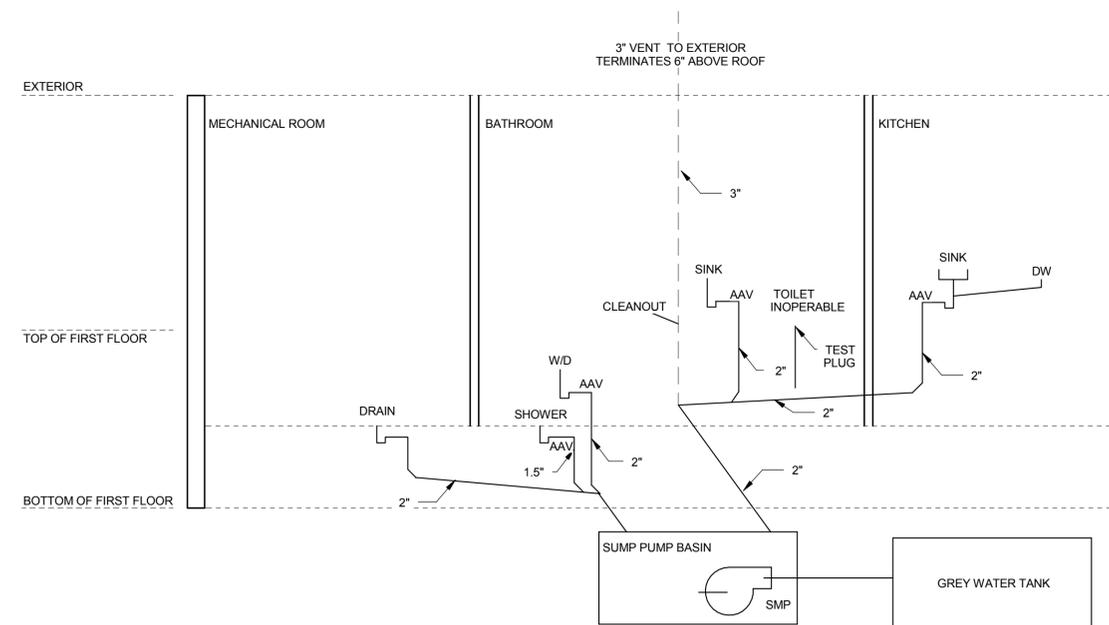
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C3 PLUMBING SUPPLY DIAGRAM

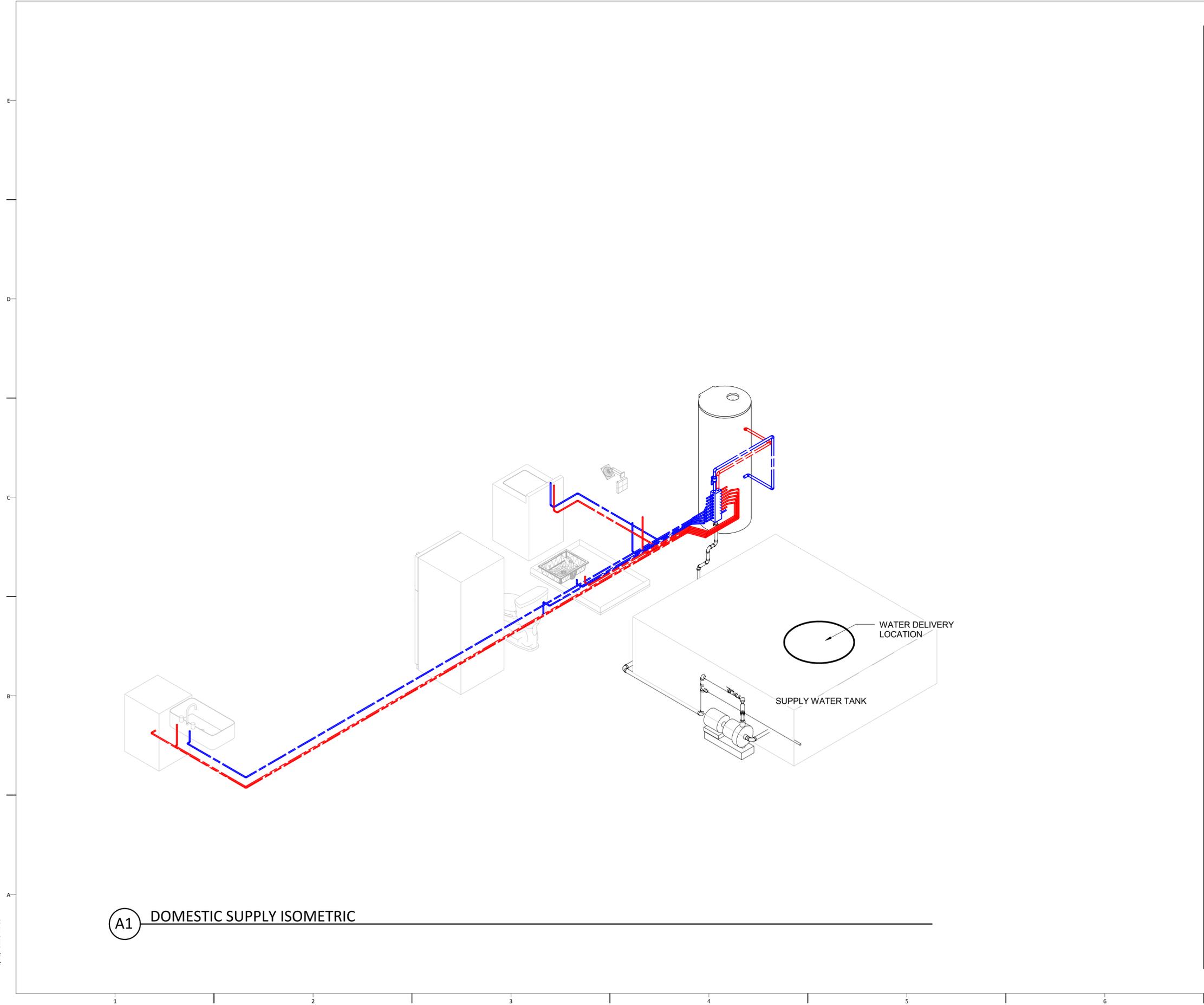
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A3 PLUMBING SEWAGE DIAGRAM

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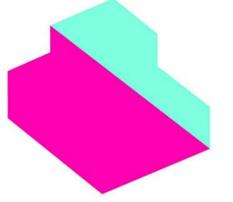
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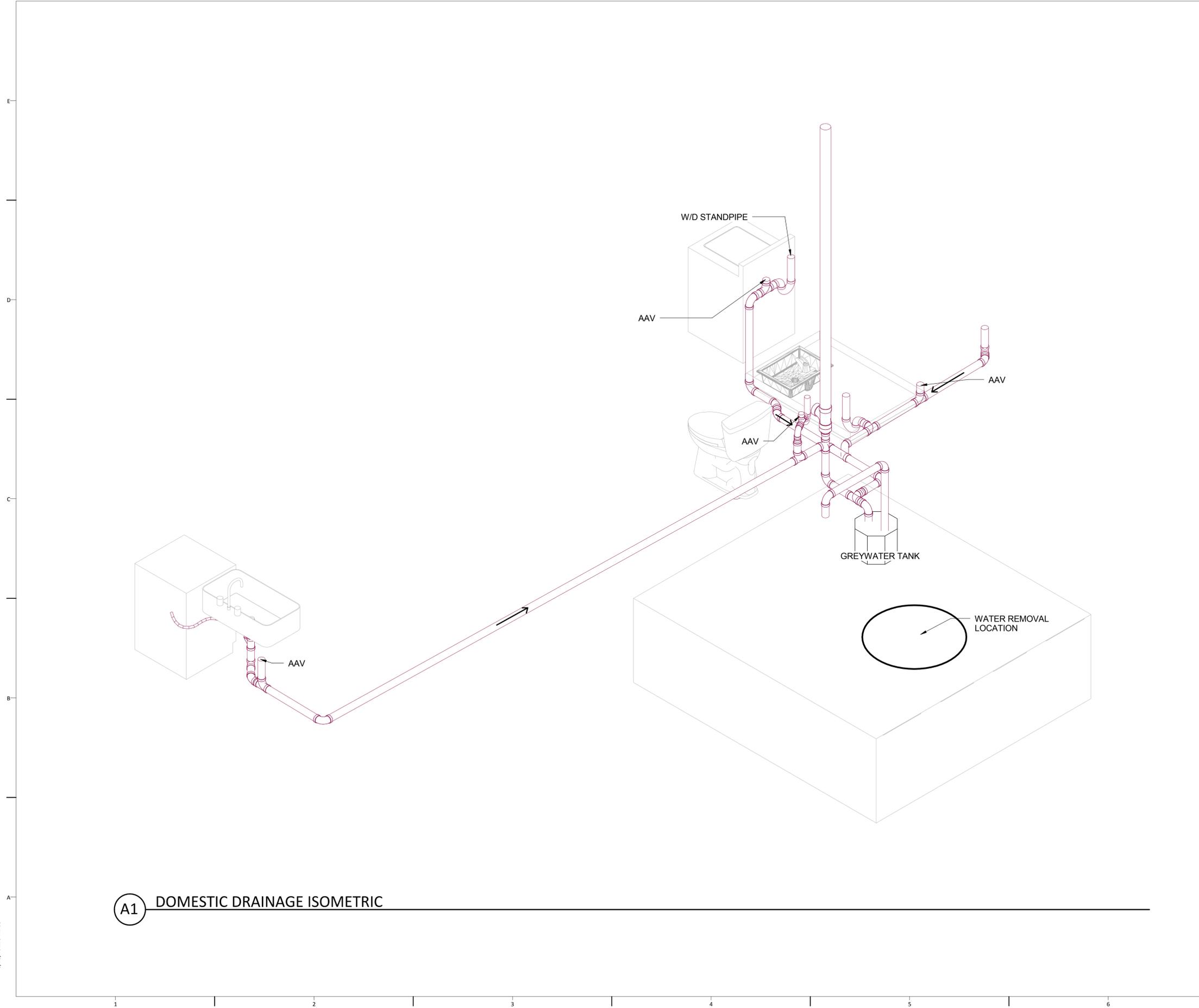
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MECHANICAL NOTES

1. SECTION M1306
CLEARANCES FROM COMBUSTIBLE CONSTRUCTION

M1306.1 APPLIANCE CLEARANCE. APPLIANCES SHALL BE INSTALLED WITH THE CLEARANCES FROM UNPROTECTED COMBUSTIBLE MATERIALS AS INDICATED ON THE APPLIANCE LABEL AND IN THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.

2. SECTION M1307
APPLIANCE INSTALLATION

2a. M1307.1 GENERAL. INSTALLATION OF APPLIANCES SHALL CONFORM TO THE CONDITIONS OF THEIR LISTING AND LABEL AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.

THE MANUFACTURER'S OPERATING AND INSTALLATION INSTRUCTIONS SHALL REMAIN ATTACHED TO THE APPLIANCE.

MECHANICAL ROOM FLOOR IS WATER RESISTANT

2b. M1307.2 ANCHORAGE OF APPLIANCES. APPLIANCES DESIGNED TO BE FIXED IN POSITION SHALL BE FASTENED OR ANCHORED IN AN APPROVED MANNER.

M1307.6 PLUMBING CONNECTIONS. POTABLE WATER AND DRAINAGE SYSTEM CONNECTIONS TO EQUIPMENT AND APPLIANCES REGULATED BY THIS CODE SHALL BE IN ACCORDANCE WITH CHAPTERS 29 AND 30.

THIS CODE SHALL BE IN ACCORDANCE WITH CHAPTERS 29 AND 30.

3. SECTION M1308
MECHANICAL SYSTEMS INSTALLATION

M1308.1 DRILLING AND NOTCHING. WOOD-FRAMED STRUCTURAL MEMBERS SHALL BE DRILLED, NOTCHED OR ALTERED IN ACCORDANCE WITH THE PROVISIONS OF SECTIONS R502.8, R602.6, R602.6.1 AND R802.7.

HOLES IN LOAD-BEARING MEMBERS OF COLD-FORMED STEEL LIGHT-FRAME CONSTRUCTION SHALL BE PERMITTED ONLY IN ACCORDANCE WITH SECTIONS R505.2.5, R603.2.5 AND R804.2.5. IN ACCORDANCE WITH THE PROVISIONS OF SECTIONS R505.3.5, R603.3.4 AND R804.3.4, CUTTING AND NOTCHING OF FLANGES AND LIPS OF LOAD-BEARING MEMBERS OF COLD-FORMED STEEL LIGHT FRAME CONSTRUCTION SHALL NOT BE PERMITTED.

STRUCTURAL INSULATED PANELS (SIPS) SHALL BE DRILLED AND NOTCHED OR ALTERED IN ACCORDANCE WITH THE PROVISIONS OF SECTION R612.9. INSTRUCTIONS.

4. SECTION M1401
GENERAL

4a. M1401.1 INSTALLATION. HEATING AND COOLING EQUIPMENT AND APPLIANCES SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS AND THE REQUIREMENTS OF THIS CODE.

4b. M1401.2 ACCESS. HEATING AND COOLING EQUIPMENT SHALL BE LOCATED WITH RESPECT TO BUILDING CONSTRUCTION AND OTHER EQUIPMENT TO PERMIT MAINTENANCE, SERVICING AND REPLACEMENT. CLEARANCES SHALL BE MAINTAINED TO PERMIT CLEANING OF HEATING AND COOLING SURFACES; REPLACEMENT OF FILTERS, BLOWERS, MOTORS, CONTROLS AND VENT CONNECTIONS; LUBRICATION OF MOVING PARTS; AND ADJUSTMENTS.

4c. M1401.4 EXTERIOR INSTALLATIONS. EQUIPMENT INSTALLED OUTDOORS SHALL BE LISTED AND LABELED FOR OUTDOOR INSTALLATION. SUPPORTS AND FOUNDATIONS SHALL PREVENT EXCESSIVE VIBRATION, SETTLEMENT OR MOVEMENT OF THE EQUIPMENT. SUPPORTS AND FOUNDATIONS SHALL BE LEVEL AND CONFORM TO THE MANUFACTURER'S INSTALLATION

4d. M1401.5 FLOOD HAZARD. IN AREAS PRONE TO FLOODING AS ESTABLISHED BY TABLE R301.2(1), HEATING AND COOLING EQUIPMENT AND APPLIANCES SHALL BE LOCATED OR INSTALLED IN ACCORDANCE WITH SECTION R322.1.6.

5. SECTION M1403
HEAT PUMP EQUIPMENT

5a. M1403.1 HEAT PUMPS. THE MINIMUM UNOBSTRUCTED TOTAL AREA OF THE OUTSIDE AND RETURN AIR DUCTS OR OPENINGS TO A HEAT PUMP SHALL BE NOT LESS THAN 6 SQUARE INCHES PER 1,000 BTU/H (13 208MM2/KW) OUTPUT RATING OR AS INDICATED BY THE CONDITIONS OF THE LISTING OF THE HEAT PUMP. ELECTRIC HEAT PUMPS SHALL CONFORM TO UL 1995.

5b. M1403.2 FOUNDATIONS AND SUPPORTS. SUPPORTS AND FOUNDATIONS FOR THE OUTDOOR UNIT OF A HEAT PUMP SHALL BE RAISED AT LEAST 3 INCHES (76 MM) ABOVE THE GROUND TO PERMIT FREE DRAINAGE OF DEFROST WATER, AND SHALL CONFORM TO THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.

6. SECTION M1411
HEATING AND COOLING EQUIPMENT

6a. M1411.1 APPROVED REFRIGERANTS. REFRIGERANTS USED IN DIRECT REFRIGERATING SYSTEMS SHALL CONFORM TO THE APPLICABLE PROVISIONS OF ANSIASHRAE 34.

6b. M1411.3 CONDENSATE DISPOSAL. CONDENSATE FROM ALL COOLING COILS OR EVAPORATORS SHALL BE CONVEYED FROM THE DRAIN PAN OUTLET TO AN APPROVED PLACE OF DISPOSAL. SUCH PIPING SHALL MAINTAIN A MINIMUM HORIZONTAL SLOPE IN THE DIRECTION OF DISCHARGE OF NOT LESS THAN 1/8 UNIT VERTICAL IN 12 UNITS HORIZONTAL (I-PERCENT SLOPE). CONDENSATE SHALL NOT DISCHARGE INTO A STREET, ALLEY OR OTHER AREAS WHERE IT WOULD CAUSE A NUISANCE.

6c. M1411.3.1 AUXILIARY AND SECONDARY DRAIN SYSTEMS. IN ADDITION TO THE REQUIREMENTS OF SECTION M1411.3, A SECONDARY DRAIN OR AUXILIARY DRAIN PAN SHALL BE REQUIRED FOR EACH COOLING OR EVAPORATOR COIL WHERE DAMAGE TO ANY BUILDING COMPONENTS WILL OCCUR AS A RESULT OF OVERFLOW FROM THE EQUIPMENT DRAIN PAN OR STOPPAGE IN THE CONDENSATE DRAIN PIPING. SUCH PIPING SHALL MAINTAIN A MINIMUM HORIZONTAL SLOPE IN THE DIRECTION OF DISCHARGE OF NOT LESS THAN 1/8 UNIT VERTICAL IN 12 UNITS HORIZONTAL (I-PERCENT SLOPE). DRAIN PIPING SHALL BE A MINIMUM OF 3/4-INCH (19 MM) NOMINAL PIPE SIZE. ONE OF THE FOLLOWING METHODS SHALL BE USED:

1. AN AUXILIARY DRAIN PAN WITH A SEPARATE DRAIN SHALL BE INSTALLED UNDER THE COILS ON WHICH CONDENSATION WILL OCCUR. THE AUXILIARY PAN DRAIN SHALL DISCHARGE TO A CONSPICUOUS POINT OF DISPOSAL TO ALERT OCCUPANTS IN THE EVENT OF A STOPPAGE OF THE PRIMARY DRAIN. THE PAN SHALL HAVE A MINIMUM DEPTH OF 1.5 INCHES (38 MM), SHALL NOT BE LESS THAN 3 INCHES (76 MM) LARGER THAN THE UNIT OR THE COIL DIMENSIONS IN WIDTH AND LENGTH AND SHALL BE CONSTRUCTED OF CORROSION-RESISTANT MATERIAL. GALVANIZED SHEET STEEL PANS SHALL HAVE A MINIMUM THICKNESS OF NOT LESS THAN 0.0236-INCH (0.6010 MM) (NO. 24 GAGE). NONMETALLIC PANS SHALL HAVE A MINIMUM THICKNESS OF NOT LESS THAN 0.0625 INCH (1.6 MM) .

2. A SEPARATE OVERFLOW DRAIN LINE SHALL BE CONNECTED TO THE DRAIN PAN INSTALLED WITH THE EQUIPMENT. THIS OVERFLOW DRAIN SHALL DISCHARGE TO A CONSPICUOUS POINT OF DISPOSAL TO ALERT OCCUPANTS IN THE EVENT OF A STOPPAGE OF THE PRIMARY DRAIN. THE OVERFLOW DRAIN LINE SHALL CONNECT TO THE DRAIN PAN AT A HIGHER LEVEL THAN THE PRIMARY DRAIN CONNECTION.

3. AN AUXILIARY DRAIN PAN WITHOUT A SEPARATE DRAIN LINE SHALL BE INSTALLED UNDER THE COILS ON WHICH CONDENSATION WILL OCCUR. THIS PAN SHALL BE EQUIPPED WITH A WATER LEVEL DETECTION DEVICE CONFORMING TO UL 508 THAT WILL SHUT OFF THE EQUIPMENT SERVED PRIOR TO OVERFLOW OF THE PAN. THE PAN SHALL BE EQUIPPED WITH A FITTING TO ALLOW FOR DRAINAGE. THE AUXILIARY DRAIN PAN SHALL BE CONSTRUCTED IN ACCORDANCE WITH ITEM 1 OF THIS SECTION.

4. A WATER LEVEL DETECTION DEVICE CONFORMING TO UL 508 SHALL BE INSTALLED THAT WILL SHUT OFF THE EQUIPMENT SERVED IN THE EVENT THAT THE PRIMARY DRAIN IS BLOCKED. THE DEVICE SHALL BE INSTALLED IN THE PRIMARY DRAIN LINE, THE OVERFLOW DRAIN LINE OR THE EQUIPMENT-SUPPLIED DRAIN PAN, LOCATED AT A POINT HIGHER THAN THE PRIMARY DRAIN LINE CONNECTION AND BELOW THE OVERFLOW RIM OF SUCH PAN.

6d. M1411.3.2 DRAIN PIPE MATERIALS AND SIZES. COMPONENTS OF THE CONDENSATE DISPOSAL SYSTEM SHALL BE CAST IRON, GALVANIZED STEEL, COPPER, POLYBUTYLENE, POLYETHYLENE, ABS, CPVC OR PVC PIPE OR TUBING. ALL COMPONENTS SHALL BE SELECTED FOR THE PRESSURE AND TEMPERATURE RATING OF THE INSTALLATION. JOINTS AND CONNECTIONS SHALL BE MADE IN ACCORDANCE WITH THE MATERIALS SPECIFIED IN CHAPTER 30. CONDENSATE WASTE AND DRAIN LINE SIZE SHALL BE NOT LESS THAN 3/4-INCH (19 MM) INTERNAL DIAMETER AND SHALL NOT DECREASE IN SIZE FROM THE DRAIN PAN CONNECTION TO THE PLACE OF CONDENSATE DISPOSAL. WHERE THE DRAIN PIPES FROM MORE THAN ONE UNIT ARE MANIFOLDED TOGETHER FOR CONDENSATE DRAINAGE, THE PIPE OR TUBING SHALL BE SIZED IN ACCORDANCE WITH AN APPROVED METHOD.

6e. M1411.4 AUXILIARY DRAIN PAN. CATEGORY IV CONDENSING APPLIANCES SHALL HAVE AN AUXILIARY DRAIN PAN WHERE DAMAGE TO ANY BUILDING COMPONENT WILL OCCUR AS A RESULT OF STOPPAGE IN THE CONDENSATE DRAINAGE SYSTEM. THESE PANS SHALL BE INSTALLED IN ACCORDANCE WITH THE APPLICABLE PROVISIONS OF SECTION M1411.3.

6f. M1411.5 INSULATION OF REFRIGERANT PIPING. PIPING AND FITTINGS FOR REFRIGERANT VAPOR (SUCTION) LINES SHALL BE INSULATED WITH INSULATION HAVING A THERMAL RESISTIVITY OF AT LEAST R-4 AND HAVING EXTERNAL SURFACE PERMEANCE NOT EXCEEDING 0.05 PERM [2.87NG/(S · M² · PA)] WHEN TESTED IN ACCORDANCE WITH ASTM E 96.

7. CHAPTER 15
EXHAUST SYSTEMS

M1501.1 OUTDOOR DISCHARGE. THE AIR REMOVED BY EVERY MECHANICAL EXHAUST SYSTEM SHALL BE DISCHARGED TO THE OUTDOORS. AIR SHALL NOT BE EXHAUSTED INTO AN ATTIC, SOFFIT, RIDGE VENT OR CRAWL SPACE.

8. SECTION M1506
EXHAUST DUCTS

M1506.1 DUCTS. WHERE EXHAUST DUCT CONSTRUCTION IS NOT SPECIFIED IN THIS CHAPTER, CONSTRUCTION SHALL COMPLY WITH CHAPTER 16.

9. SECTION M1507
MECHANICAL VENTILATION

9a. M1507.1 GENERAL. WHERE TOILET ROOMS AND BATHROOMS ARE MECHANICALLY VENTILATED, THE VENTILATION EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THIS SECTION.

9b. M1507.3 VENTILATION RATE. VENTILATION SYSTEMS SHALL BE DESIGNED TO HAVE THE CAPACITY TO EXHAUST THE MINIMUM AIR FLOW RATE DETERMINED IN ACCORDANCE WITH TABLE M1507.3.

9c. TABLE M1507.3
MINIMUM REQUIRED EXHAUST RATES FOR ONE- AND TWO-FAMILY DWELLINGS AREA TO BE VENTILATED VENTILATION RATES

KITCHENS
100 CFM INTERMITTENT OR
25 CFM CONTINUOUS
MECHANICAL EXHAUST CAPACITY OF
BATHROOMS-TOILET ROOMS 50 CFM INTERMITTENT OR 20 CFM CONTINUOUS
FOR SI: 1 CUBIC FOOT PER MINUTE = 0.4719 LIS.

10. CHAPTER 16
DUCT SYSTEMS

10a. M1601.1 DUCT DESIGN. DUCT SYSTEMS SERVING HEATING, COOLING AND VENTILATION EQUIPMENT SHALL BE FABRICATED IN ACCORDANCE WITH THE PROVISIONS OF THIS SECTION AND ACCA MANUAL D OR OTHER APPROVED METHODS.

10b. M1601.1.1 ABOVE-GROUND DUCT SYSTEMS. ABOVE-GROUND DUCT SYSTEMS SHALL CONFORM TO THE FOLLOWING:
1. EQUIPMENT CONNECTED TO DUCT SYSTEMS SHALL BE DESIGNED TO LIMIT DISCHARGE AIR TEMPERATURE TO A MAXIMUM OF 250°F (121°C) .
2. FACTORY-MADE AIR DUCTS SHALL BE CONSTRUCTED OF CLASS 0 OR CLASS 1 MATERIALS AS DESIGNATED IN TABLE M1601.1.1 (1).

3. FIBROUS DUCT CONSTRUCTION SHALL CONFORM TO THE SMACNA FIBROUS GLASS DUCT CONSTRUCTION STANDARDS OR NAIMA FIBROUS GLASS DUCT CONSTRUCTION STANDARDS.

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.

5. USE OF GYPSUM PRODUCTS TO CONSTRUCT RETURN AIR DUCTS OR PLENUMS IS PERMITTED, PROVIDED THAT THE AIR TEMPERATURE DOES NOT EXCEED 125°F (52°C) AND EXPOSED SURFACES ARE NOT SUBJECT TO CONDENSATION.

6. DUCT SYSTEMS SHALL BE CONSTRUCTED OF MATERIALS HAVING A FLAME SPREAD INDEX NOT GREATER THAN 200.

7. STUD WALL CAVITIES AND THE SPACES BETWEEN SOLID FLOOR JOISTS TO BE USED AS AIR PLENUMS SHALL COMPLY WITH THE FOLLOWING CONDITIONS:
7.1. THESE CAVITIES OR SPACES SHALL NOT BE USED AS A PLENUM FOR SUPPLY AIR.

7.2. THESE CAVITIES OR SPACES SHALL NOT BE PART OF A REQUIRED FIRE-RESISTANCE-RATED ASSEMBLY.

7.3. STUD WALL CAVITIES SHALL NOT CONVEY AIR FROM MORE THAN ONE FLOOR LEVEL.

7.4. STUD WALL CAVITIES AND JOIST-SPACE PLENUMS SHALL BE ISOLATED FROM ADJACENT CONCEALED SPACES BY TIGHT-FITTING FIRE BLOCKING IN ACCORDANCE WITH SECTION R602.8

10c. M1601.2 FACTORY-MADE DUCTS. FACTORY-MADE AIR DUCTS OR DUCT MATERIAL SHALL BE APPROVED FOR THE USE INTENDED, AND SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. EACH PORTION OF A FACTORY-MADE AIR DUCT SYSTEM SHALL BEAR A LISTING AND LABEL INDICATING COMPLIANCE WITH UL 181 AND UL 181A OR UL 181B.

10d. M1601.2.1 VIBRATION ISOLATORS. VIBRATION ISOLATORS INSTALLED BETWEEN MECHANICAL EQUIPMENT AND METAL DUCTS SHALL BE FABRICATED FROM APPROVED MATERIALS AND SHALL NOT EXCEED 10 INCHES (254 MM) IN LENGTH.

10e. M1601.3 DUCT INSULATION MATERIALS. DUCT INSULATION MATERIALS SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:
1. DUCT COVERINGS AND LININGS, INCLUDING ADHESIVES WHERE USED, SHALL HAVE A FLAME SPREAD INDEX NOT HIGHER THAN 25, AND A SMOKE-DEVELOPED INDEX NOT OVER 50 WHEN TESTED IN ACCORDANCE WITH ASTM E 84 OR UL 723, USING THE SPECIMEN PREPARATION AND MOUNTING PROCEDURES OF ASTM E 2231.

10f. M1601.4 INSTALLATION. DUCT INSTALLATION SHALL COMPLY WITH SECTIONS M1601.4.1 THROUGH M1601.4.7.

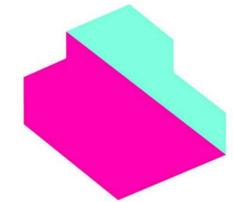
10g. M1601.4.1 JOINTS AND SEAMS. JOINTS OF DUCT SYSTEMS SHALL BE MADE SUBSTANTIALLY AIRTIGHT BY MEANS OF TAPES, MASTICS, LIQUID SEALANTS, GASKETING OR OTHER APPROVED CLOSURE SYSTEMS. CLOSURE SYSTEMS USED WITH RIGID FIBROUS GLASS DUCTS SHALL COMPLY WITH UL181A AND SHALL BE MARKED 181A-P FOR PRESSURE-SENSITIVE TAPE, 181A-M FOR MASTIC OR 181 A-H FOR HEAT-SENSITIVE TAPE. CLOSURE SYSTEMS USED WITH FLEXIBLE AIR DUCTS AND FLEXIBLE AIR CONNECTORS SHALL COMPLY WITH UL 181B AND SHALL BE MARKED 181B-FX FOR PRESSURE-SENSITIVE TAPE OR 181B-M FOR MASTIC. DUCT CONNECTIONS TO FLANGES OF AIR DISTRIBUTION SYSTEM EQUIPMENT OR SHEET METAL FITTINGS SHALL BE MECHANICALLY FASTENED. MECHANICAL FASTENERS FOR USE WITH FLEXIBLE NONMETALLIC AIR DUCTS SHALL COMPLY WITH UL 181B AND SHALL BE MARKED 181B-C. CRIMP JOINTS FOR ROUND METAL DUCTS SHALL HAVE A CONTACT LAP OF AT LEAST 1 1/2 INCHES (38 MM) AND SHALL BE MECHANICALLY FASTENED BY MEANS OF AT LEAST THREE SHEET-METAL SCREWS OR RIVETS EQUALLY SPACED AROUND THE JOINT. CLOSURE SYSTEMS USED TO SEAL METAL DUCTWORK SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.

GENERAL SHEET NOTES

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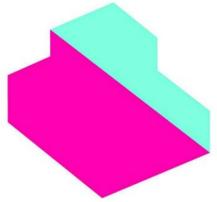
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MECHANICAL NOTES

M-001



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MECHANICAL PLAN - FL 01

M-101

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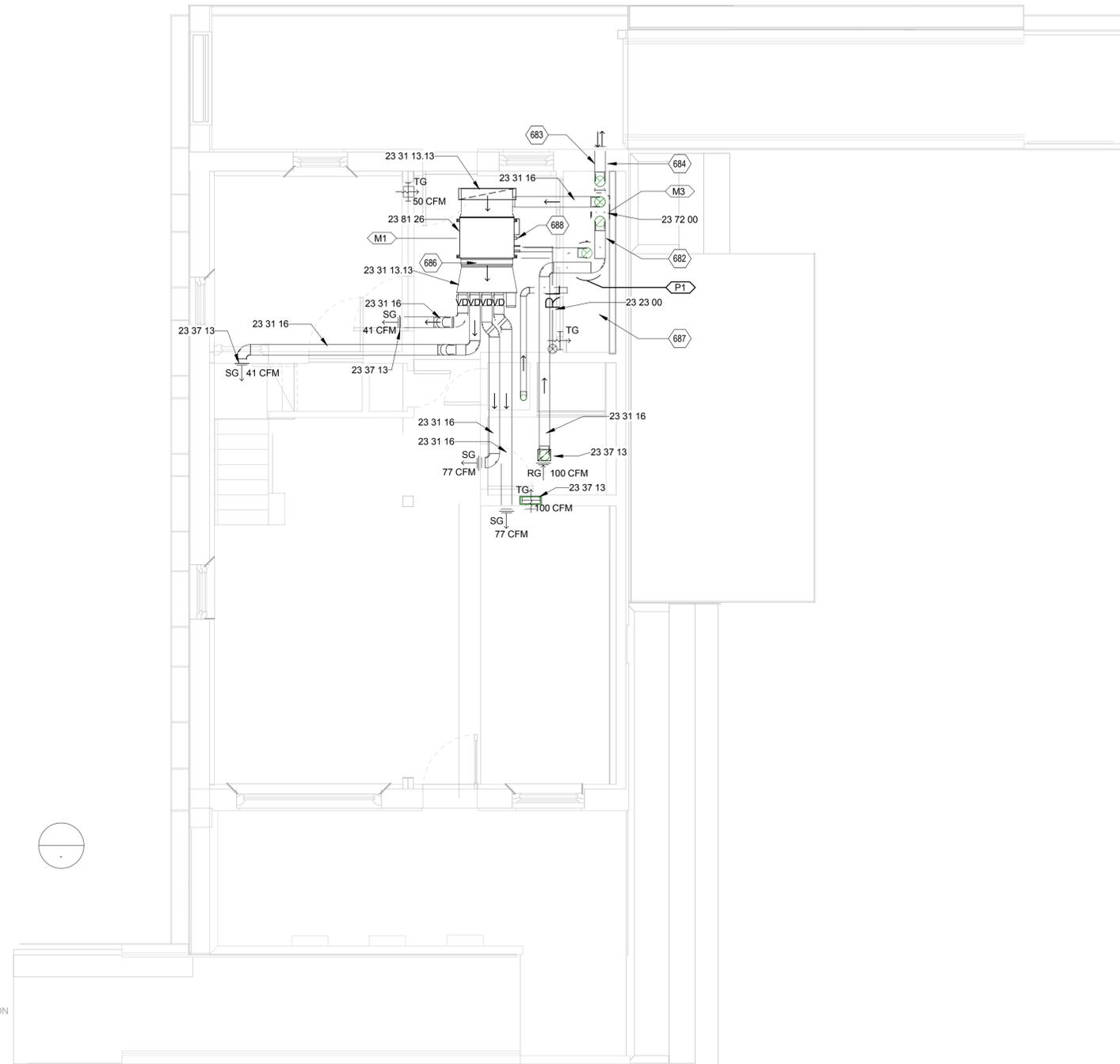
- 23 23 00 REFRIGERANT PIPING
- 23 31 13.13 RECTANGULAR METAL DUCTS
- 23 31 16 NONMETAL DUCTS
- 23 37 13 DIFFUSERS, REGISTERS AND GRILLES
- 23 72 00 AIR-TO-AIR ENERGY RECOVERY EQUIPMENT
- 23 81 26 SPLIT SYSTEM AIR CONDITIONERS

SHEET KEYNOTES

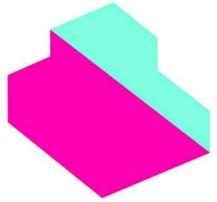
- 682 VENTILATOR RETURN DUCT
- 683 VENTILATOR OUTDOOR INTAKE DUCT
- 684 VENTILATOR OUTDOOR EXHAUST DUCT
- 686 CANVAS COLLAR MOUNTED TO MINI SPLIT FOR MECHANICAL ROOM DETAILS REFER TO SHEET A-401
- 687 CONDENSATE LINE TO DRAIN VIA GRAVITY TO FLOOR DRAIN IN MECHANICAL ROOM

DRAWING KEY

- SG SUPPLY GRILLE
- RG RETURN GRILLE
- TG TRANSFER GRILLE
- RL REFRIGERANT LINE
- FLOW DIRECTION
- Return VENT CEILING
- VD MANUAL VOLUME DAMPER



A1 MECHANICAL PLAN - FL 01
1/4" = 1'-0"



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SHEET TITLE

MECHANICAL PLAN - ROOF

M-102

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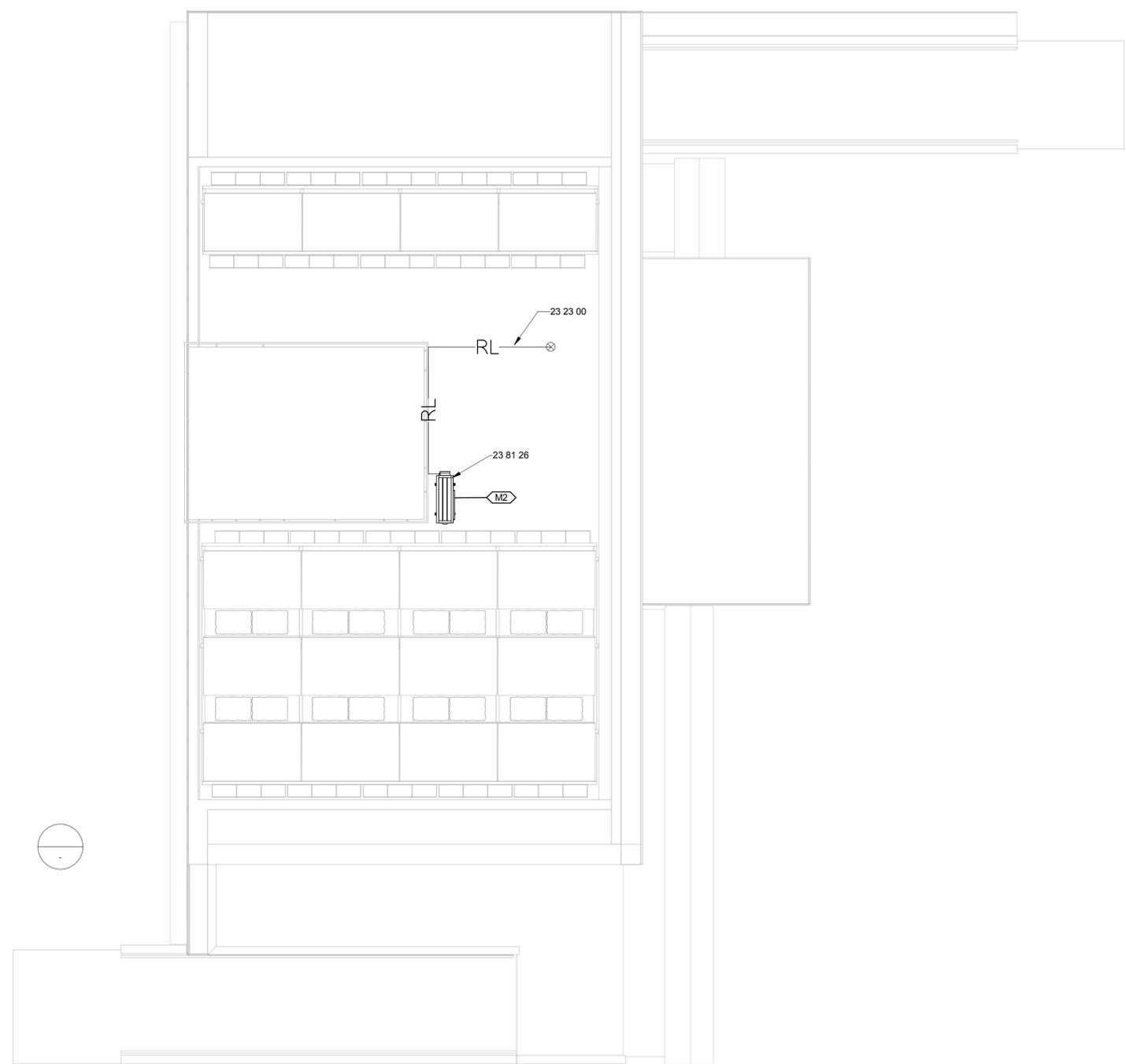
REFERENCE KEYNOTES

23 23 00	REFRIGERANT PIPING
23 81 26	SPLIT SYSTEM AIR CONDITIONERS

SHEET KEYNOTES

DRAWING KEY

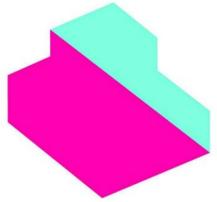
	SUPPLY GRILLE
	RETURN GRILLE
	TRANSFER GRILLE
	REFRIGERANT LINE
	FLOW DIRECTION
	RETURN VENT CEILING
	MANUAL VOLUME DAMPER



A1 MECHANICAL PLAN - ROOF
1/4" = 1'-0"

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**MECHANICAL
EQUIPMENT SCHEDULES**

M-601

GENERAL SHEET NOTES

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Mini Split Heat Pump Schedule

Manufacturer	Model		Master Format #	Capacity (Btu/hr)		Efficiency		Indoor Unit Dimensions (in)			Max Power Input (W)		Voltage (VAC)	Phase	Frequency (Hz)	Notes
	Indoor	Outdoor		Heating	Cooling	SEER	HSPF	Height	Length	Width	Heating	Cooling				
Mitsubishi	SEZ-KD12NA	SUZ-KA12NA	23 81 26	11500	13600	16	10	8	27.5	39	1140	920	240	Single	60	Control shall be provided via manufacturer wired controller

Energy Recovery Ventilator Schedule

Manufacturer	Model	Master Format #	Heat Recovery Efficiency	External Pressure (Pa)	Air Flow (CFM)	Unit Dimensions (in)				Max Power Input (W)	Voltage (VAC)	Phase	Frequency (Hz)	Notes
						Height	Width	Depth	Clear Width					
Zehnder	ComfoAir 200	23 72 00	0.92	50- 150	41- 150	47.24	21.06	12.40	48.40	143	240	Single	60	Ducts protrude from top and bottom of unit Primary control shall be provided via manufacturer wired controller Secondary control to be provided via BAS

Heat Pump Water Heater Schedule

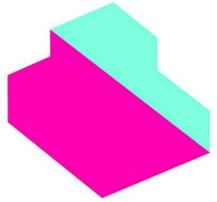
Manufacturer	Model	Master Format #	Unit Dimensions (in)				Capacity (gal)	FHR (gal)	Energy Factor	Oper Pressure (psi)	Power Consumption (W)	Req Current (A)	Voltage (VAC)	Phase	Frequency (Hz)
			Height	Clear Height	Length	Width									
AirGenerate	ATI66	22 33 30.16	69.3	83.3	25.6	25.6	66	75	2.40	20-125	4000	30	240	Single	60

Grill and Register Schedule

Component	Manufacturer	Model	Master Format #	Qty	Unit Dimensions (in)				Nozzle Velocity (ft/min)	Notes
					Height	Depth	Width/Diameter	Nozzle Area (Sq. Ft)		
Supply Grill	Seiho	JRA	23 37 13	2	-	0'-1 31/32"	0'-6"	0.047	1745	Living Room and Kitchen
Supply Grill	Seiho	PK Spot Diffuser		1	-	0'-1 31/32"	0'-6"	0.047	915	Bed rooms
Return Grill				1	0'-8"	0'-1"	3'-4"			
Transfer Grill				3						

MECHANICAL EQUIPMENT SCHEDULE

Mark	DESCRIPTION	MANUFACTURER	MODEL	QTY	MASTER FORMAT #	CAPACITY
11				1		
12				1		
13				1		
14				1		
M1	Mini-Split Heat Pump Air Handling Unit	Mitsubishi Electric	SEZ-KD12NA	1	23 81 26	
M2	Mini-Split Heat Pump Air Handling Unit	Mitsubishi Electric	SUZ-KA12NA	1	23 81 26	
M3	ERV	Zehnder	ComfoAir 200 L	1	23 72 00	
P1	Heat Pump Water Heater	AirGenerate	ATI66	1	22 33 03	
P2	Shallow Well Pump	Grundfos	JPF7-A	1	22 11 23 A1	
P3	Residential Sump Pump	Liberty Pumps	Model 404	1	22 11 23 A2	



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MECHANICAL RISER DIAGRAMS

M-901

GENERAL SHEET NOTES

REFERENCE KEYNOTES

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DRAWING KEY

- SUPPLY LINE
- - - RETURN/EXHAUST LINE
- RL REFRIGERANT LINE
- > FLOW DIRECTION
- TG TRANSFER GRILLE

EXTERIOR

SECOND FLOOR

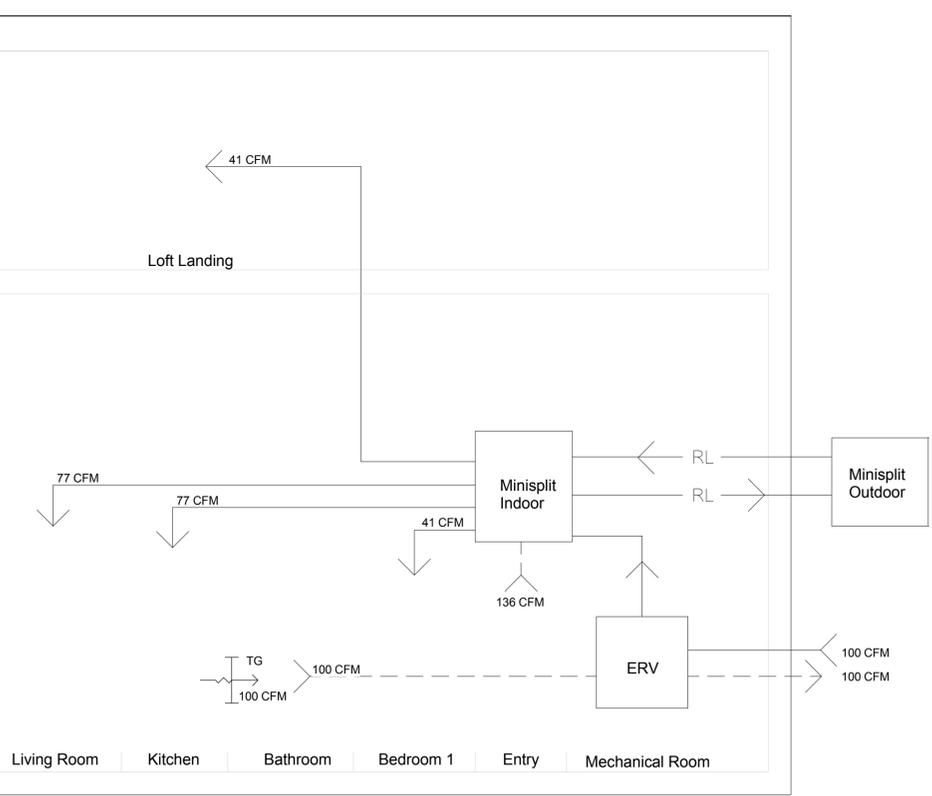
FIRST FLOOR

A3 MECHANICAL RISER DIAGRAM
1/2" = 1'-0"

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E
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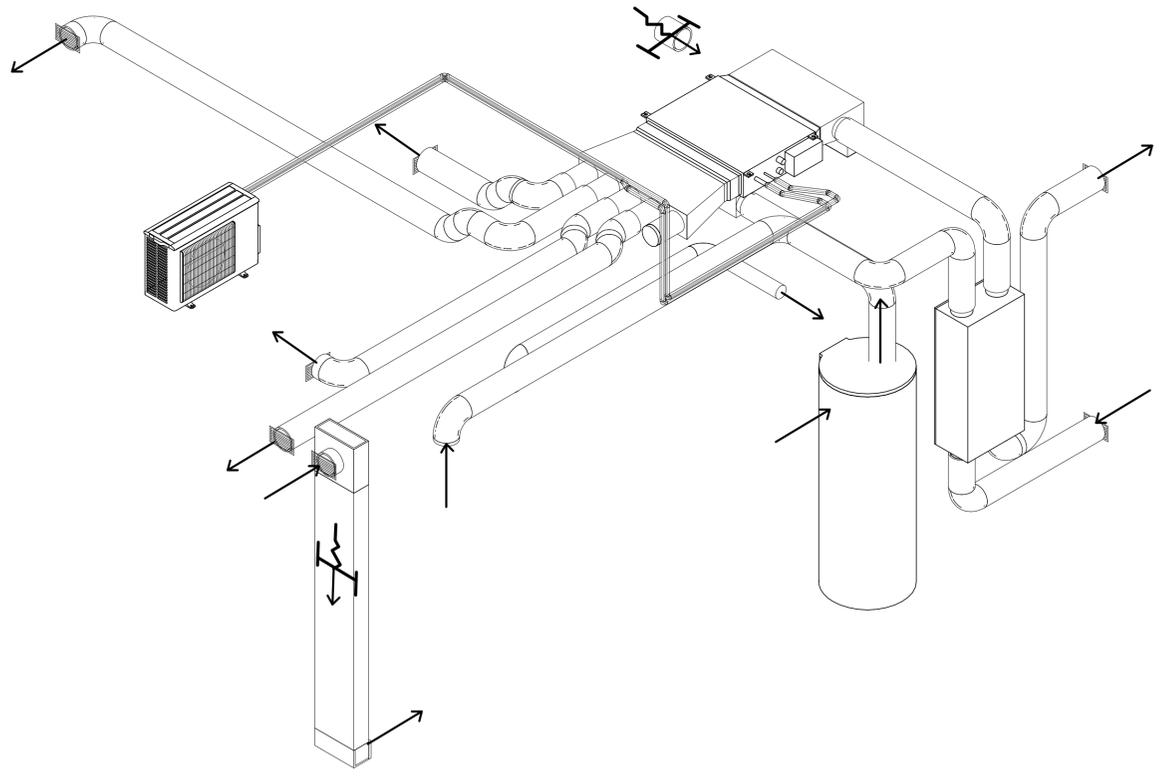
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A1 MECHANICAL ISOMETRIC

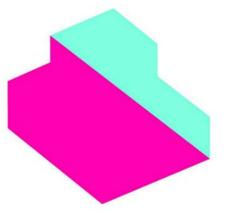


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MECHANICAL ISOMETRIC

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- 1 INSTALLATION OF ELECTRICAL WIRES, RACEWAYS, AND DEVICES SHALL CONFORM TO THE 2008 NATIONAL ELECTRIC CODE, 2009 INTERNATIONAL RESIDENTIAL CODE OF THE INTERNATIONAL CODE COUNCIL WITH SPECIFIC PROVISIONS AMENDED AND AUGMENTED BY THE 2009 INTERNATIONAL BUILDING CODE AND THE 2011 SOLAR DECATHLON BUILDING CODE.
- 2 ALL JUNCTION BOXES SHALL BE PROPERLY SIZED ACCORDING TO NEC 314.16.
- 3 MINIMUM WIRE SIZE SHALL BE #14 AWG.
- 4 PROVIDE IDENTIFICATION OF ALL BRANCH CIRCUITS ON A TYPEWRITTEN DIRECTORY CARD IN THE PANEL DOOR.
- 5 EXTERIOR RACEWAYS AND WIRING DEVICES BELOW THE FIRST LEVEL FLOOR SHALL BE SELECTED FOR MECHANICAL PROTECTION. EXTERIOR FITTINGS FOR RACEWAYS SHALL BE COMPRESSION TYPE AND LIQUITIGHT.
- 6 EXCEPT WHERE OTHERWISE INDICATED WIRE SHALL BE COPPER WITH 600 VOLT INSULATION. USE TYPE "NM" CABLE WHERE ALLOWED BY CODE.
- 7 MAXIMUM LOAD FOR ALL BRANCH CIRCUITS IS 80%.
- 8 FOR MECHANICAL EQUIPMENT DETAIL REFER TO MECHANICAL DRAWINGS AND EQUIPMENT SPECIFICATIONS IN THE PROJECT MANUAL.
- 9 ALL PANEL BOARDS SHALL BE PROVIDED WITH A FACTORY INSTALLED GROUND BUS FOR CONNECTING TO GROUND THE GREEN OR BARE GROUNDS WIRE IN ALL CIRCUITS.
- 10 CONDUCTORS SPECIFIED IN THE ELECTRICAL PLAN SHALL COMPLY WITH NEC TABLE 310.16 AND 310.17.
- 11 RACEWAYS BETWEEN PULL BOXES SHALL NOT CONTAIN MORE THAN THE EQUIVALENT OF FOUR QUARTER BENDS (360 DEGREES TOTAL).
- 12 ALL EXTERIOR RECEPTACLES SHALL BE WEATHER-RESISTANT, GROUND FAULT PROTECTED, AND EQUIPPED WITH "IN-USE" TYPE WEATHER PROTECTION.
- 13 ALL RECEPTACLES SHALL BE TAMPER-RESISTANT TYPE.
- 14 THE EQUIPMENT GROUNDING ELECTRODE CONDUCTOR SHALL BE THE FIRST TO BE CONNECTED AND LAST TO BE DISCONNECTED DURING INSTALLATION, DE-INSTALLATION, OR SERVICING OF PHOTOVOLTAIC MODULES AND INVERTERS.

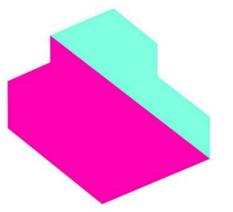
A4 GENERAL ELECTRICAL NOTES
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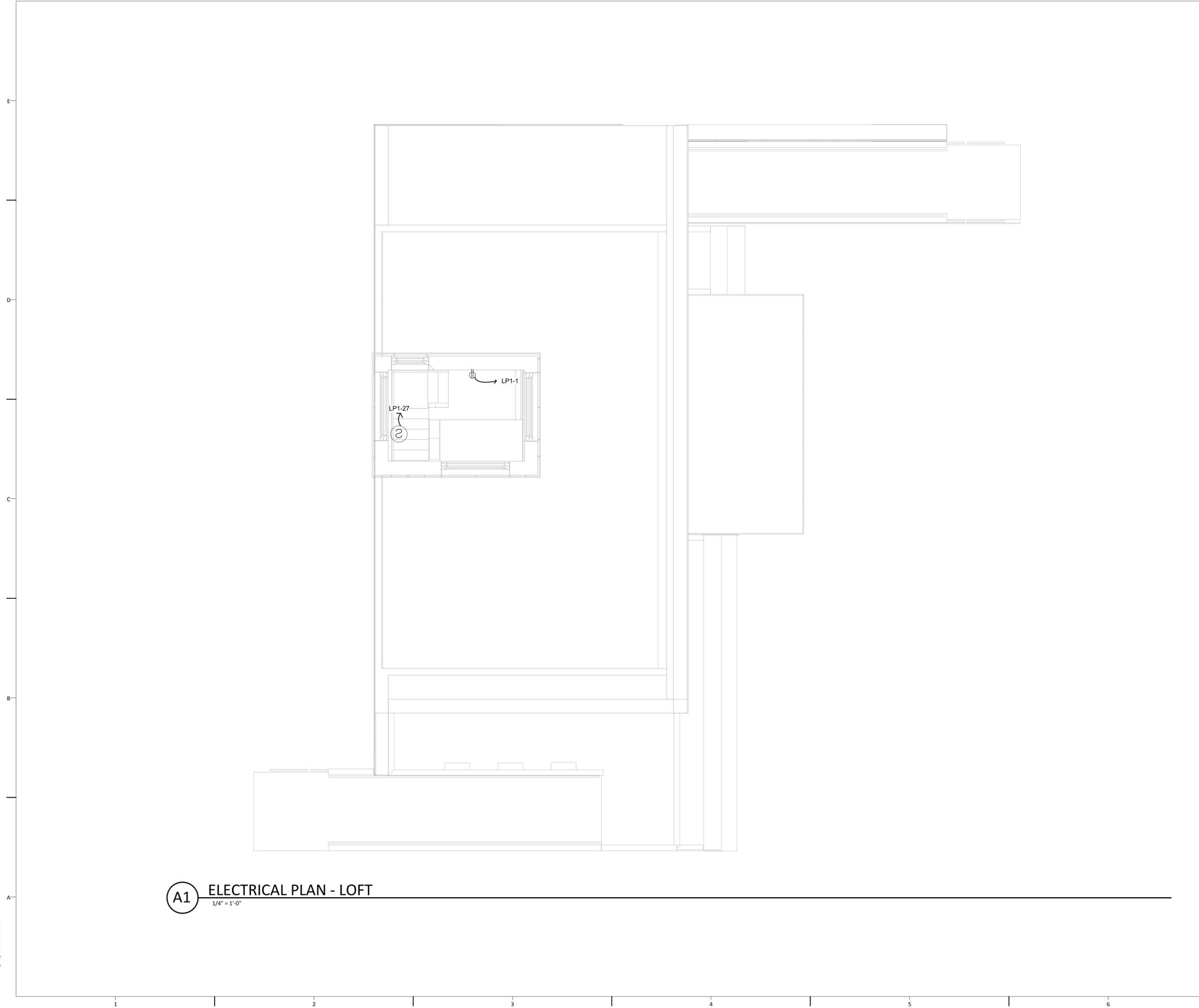
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ELECTRICAL NOTES

E-001

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A1 ELECTRICAL PLAN - LOFT
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GENERAL SHEET NOTES

REFERENCE KEYNOTES

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- ⊕ 120V DUPLEX OUTLET
- ⊕ 120V DEDICATED DUPLEX OUTLET
- ⊕ GFCI 120V GFCI DUPLEX OUTLET
- ⊕ 240V SINGLE OUTLET
- ⊕ SMOKE DETECTOR



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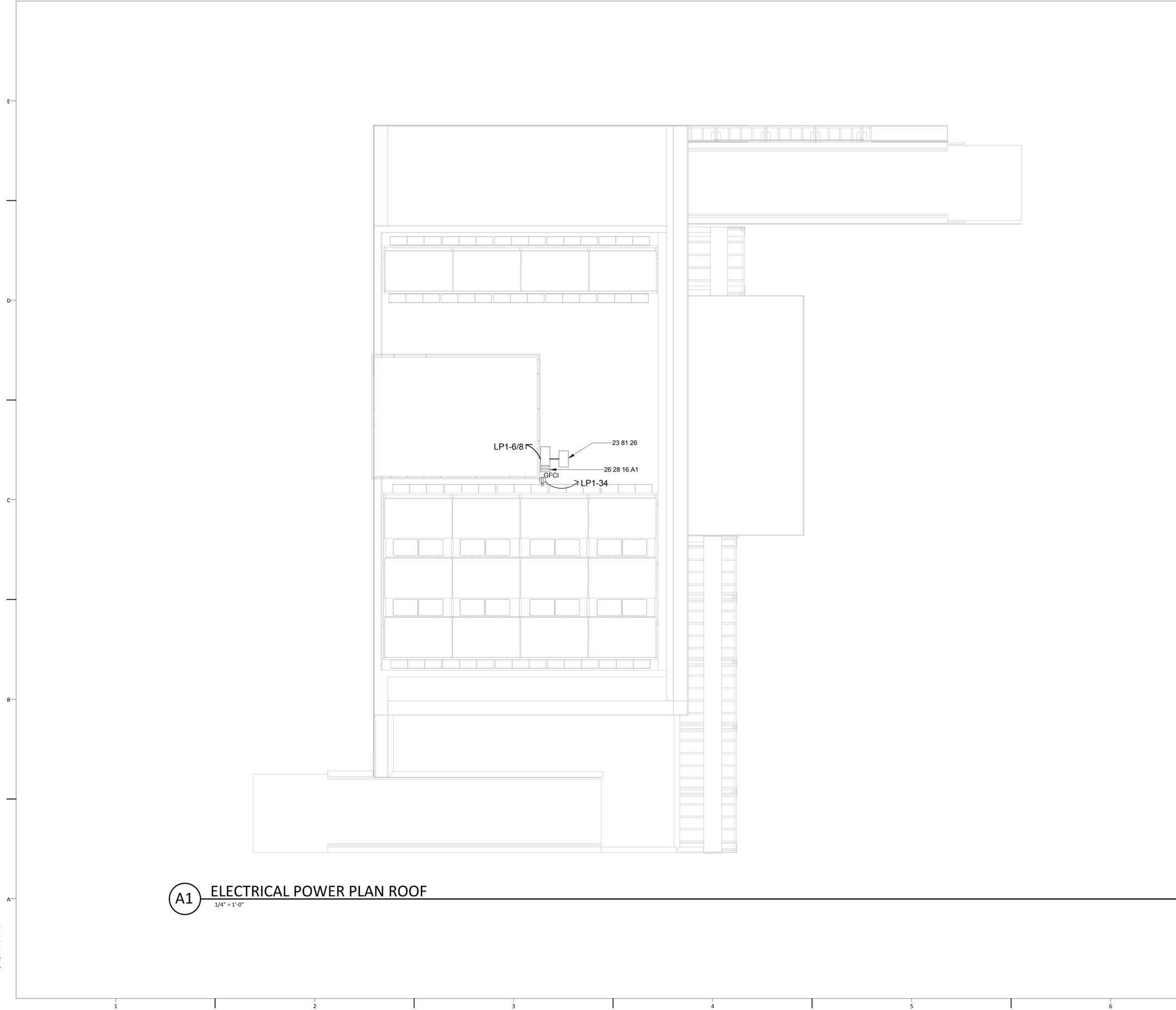
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ELECTRICAL PLAN - LOFT

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A1 ELECTRICAL POWER PLAN ROOF
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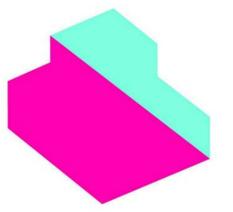
REFERENCE KEYNOTES

- 23 81 26 SPLIT SYSTEM AIR CONDITIONERS
- 26 28 16.A1 AC DISCONNECT SWITCH

SHEET KEYNOTES

DRAWING KEY

- 120V DUPLEX OUTLET
- 120V DEDICATED DUPLEX OUTLET
- 120V GFCI DUPLEX OUTLET
- 240V SINGLE OUTLET
- SMOKE DETECTOR
- WATER PUMP



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4	AUGUST 11, 2011	AS-BUILT CONSTRUCTION DOCUMENTS

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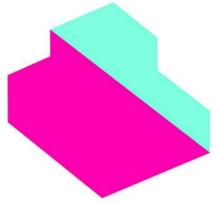
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SHEET TITLE

ELECTRICAL PLAN ROOF

E-103

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SHEET TITLE

LIGHTING PLAN - FL 01

E-111

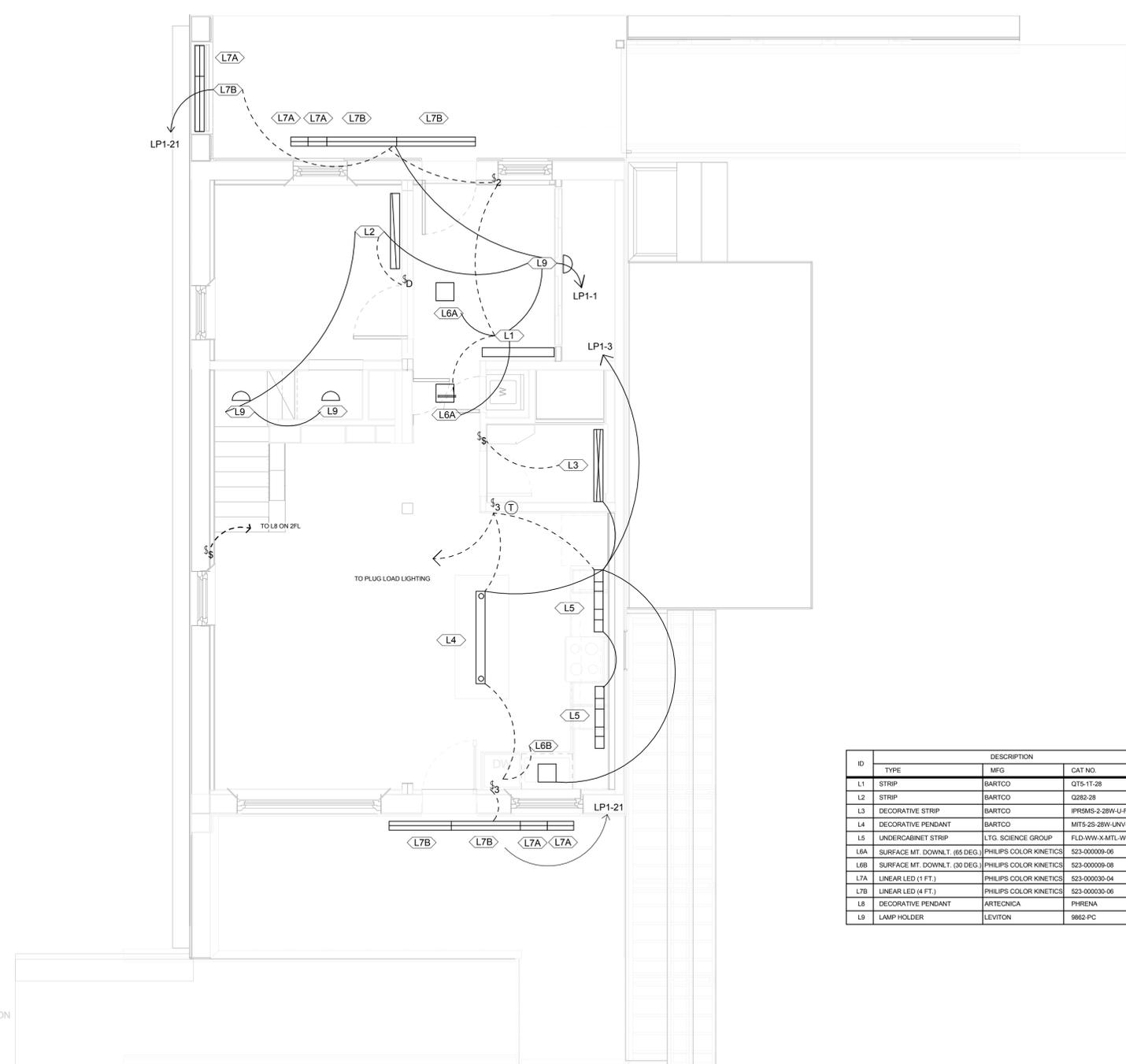
GENERAL SHEET NOTES

REFERENCE KEYNOTES

SHEET KEYNOTES

DRAWING KEY

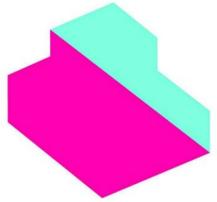
- Ⓢ SINGLE GANG SWITCH
- Ⓢ₂ DOUBLE GANG SWITCH
- Ⓢ₃ TRIPLE GANG SWITCH
- Ⓢ_D DIMMER SWITCH
- ① LIGHTING FIXTURE
- Ⓢ T THERMOSTAT
- WIRE CONNECTION
- - WIRELESS CONNECTION



ID	DESCRIPTION			LAMP		
	TYPE	MFG	CAT. NO.	QTY.	WATTS	TYPE
L1	STRIP	BARTCO	QT5-1T-28	1	28	T5 FLUORESCENT
L2	STRIP	BARTCO	Q282-28	1	28	T5 FLUORESCENT
L3	DECORATIVE STRIP	BARTCO	IPR5MS-2-28W-U-F-SM-SL	1	28	T5 FLUORESCENT
L4	DECORATIVE PENDANT	BARTCO	MITS-2S-28W-UNV-RS	1	28	T5 FLUORESCENT
L5	UNDERCABINET STRIP	LTG. SCIENCE GROUP	FLD-WW-X-MTL-W06-PDF-NLT	2	7/FT	LED
L6A	SURFACE MT. DOWNLT. (65 DEG.)	PHILIPS COLOR KINETICS	523-000009-06	2	15	LED
L6B	SURFACE MT. DOWNLT. (30 DEG.)	PHILIPS COLOR KINETICS	523-000009-08	1	15	LED
L7A	LINEAR LED (1 FT.)	PHILIPS COLOR KINETICS	523-000030-04	5	14/FT	LED
L7B	LINEAR LED (4 FT.)	PHILIPS COLOR KINETICS	523-000030-06	5	14/FT	LED
L8	DECORATIVE PENDANT	ARTECNICA	PHRENA	1	20	CFL
L9	LAMP HOLDER	LEVITON	9862-PC	3	13	CFL

A1 LIGHTING PLAN FIRST FLOOR
1/4" = 1'-0"

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SHEET TITLE

LIGHTING PLAN - LOFT

E-112

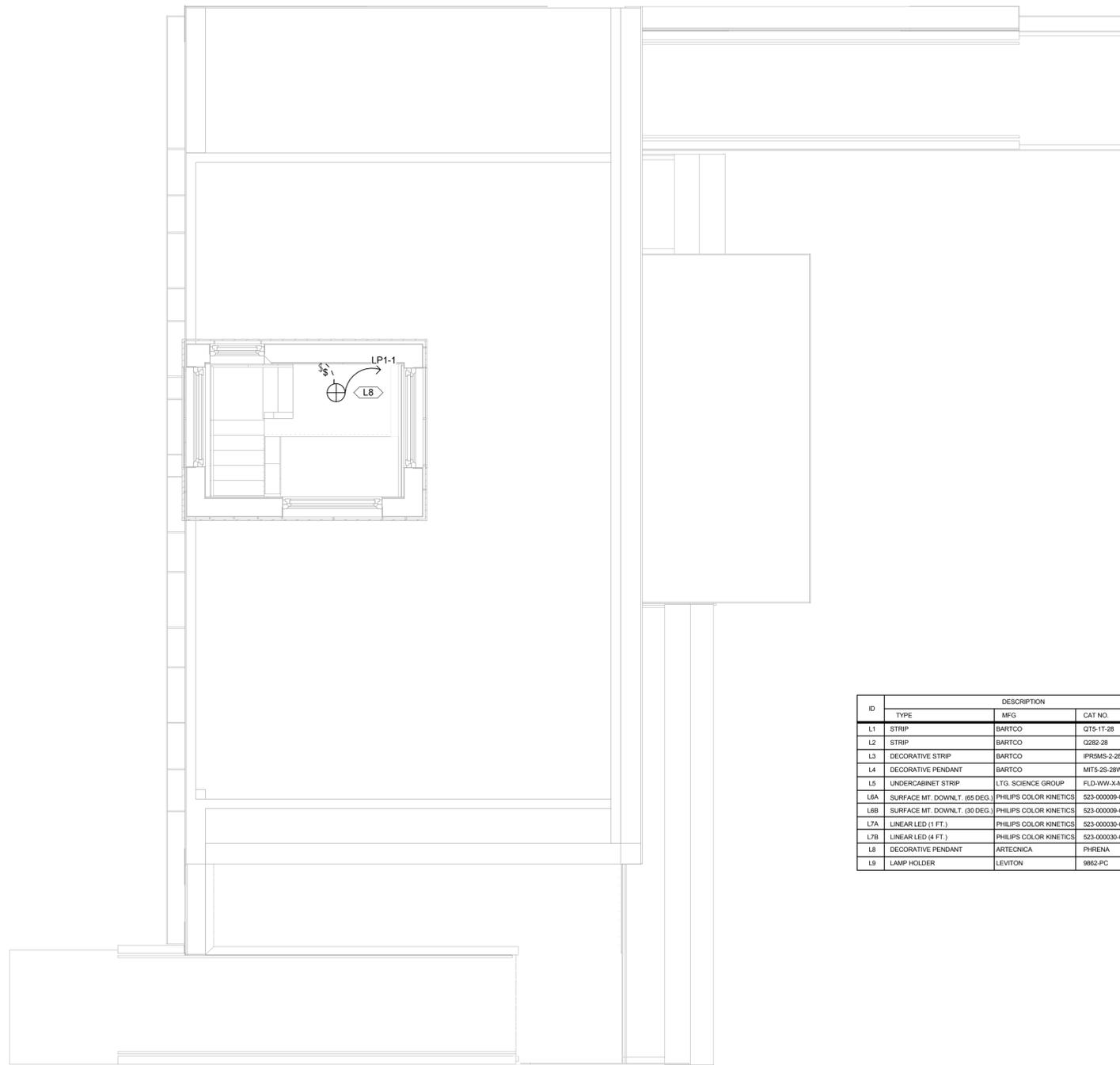
GENERAL SHEET NOTES

REFERENCE KEYNOTES

SHEET KEYNOTES

DRAWING KEY

- SINGLE GANG SWITCH
- DOUBLE GANG SWITCH
- TRIPLE GANG SWITCH
- DIMMER SWITCH
- LIGHTING FIXTURE
- THERMOSTAT
- WIRED CONNECTION
- WIRELESS CONNECTION

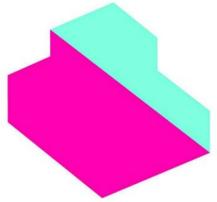


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	TYPE	MFG	CAT NO.	QTY.	WATTS	TYPE
L1	STRIP	BARTCO	QTS-1T-28	1	28	T5 FLUORESCENT
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L4	DECORATIVE PENDANT	BARTCO	MITS-2S-28W-UNV-RS	1	28	T5 FLUORESCENT
L5	UNDERCABINET STRIP	LTG. SCIENCE GROUP	FLD-WW-X-MTL-W06-PDF-NTL	2	7/FT	LED
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L6B	SURFACE MT. DOWNLT. (30 DEG.)	PHILIPS COLOR KINETICS	S23-000009-08	1	15	LED
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L7B	LINEAR LED (4 FT.)	PHILIPS COLOR KINETICS	S23-000030-06	5	14/FT	LED
L8	DECORATIVE PENDANT	ARTECNICA	PHRENA	1	20	CFL
L9	LAMP HOLDER	LEVITON	9862-PC	3	13	CFL

A1 LIGHTING PLAN - LOFT

1/4" = 1'-0"

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SHEET TITLE

ENLARGED ELECTRICAL
ROOF PLAN

E-401

GENERAL SHEET NOTES

ALL PV SYSTEMS WILL BE DESIGNED AND INSTALLED IN FULL COMPLIANCE WITH THE 2008 NATIONAL ELECTRICAL CODE (NEC) AND THE 2011 SD RULES AND SD BUILDING CODE.

PV MODULES, SOURCE-CIRCUIT COMBINERS, AND UTILITY-INTERACTIVE INVERTERS MUST BE SAFETY CERTIFIED (LISTED) TO THE APPROPRIATE UNDERWRITERS LABORATORIES (UL) STANDARD (UL 1741 FOR INVERTERS AND COMBINERS, UL 1703 FOR PV MODULES) AND MUST BE TESTED AND CERTIFIED BY ONE OF THE FOLLOWING US NATIONALLY RECOGNIZED TESTING LABORATORIES (NRTL): UL, CSA, ETL, OR TUV NORTH AMERICA. THE EUROPEAN CE DESIGNATION AND TESTS BY LABORATORIES IN OTHER COUNTRIES ARE NOT ACCEPTABLE. (690.4)

DC CIRCUITS FROM THE PV MODULES TO THE DC PV DISCONNECT MUST BE IN METAL CONDUITS (RACEWAYS) WHERE INSIDE THE STRUCTURE. (NEC 690.31 (E)).

ALL PV STRINGS ARE TO USE MANUFACTURER PROVIDED CABLE BETWEEN MODULES.

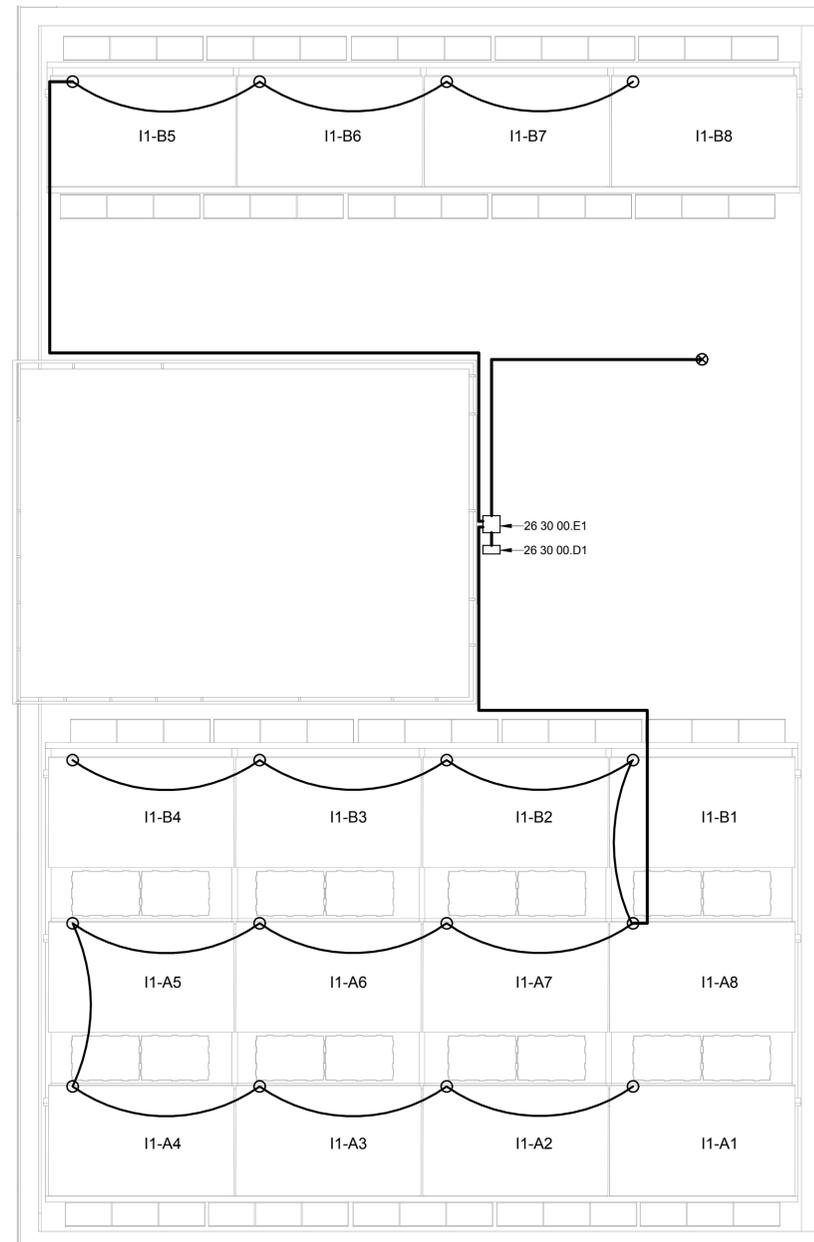
THE DC GROUNDING ELECTRODE CONDUCTOR SHALL BE BONDED TO AC GROUNDING ELECTRODE CONDUCTOR AT THE GROUNDING ELECTRODE SYSTEM LOCATION.

REFERENCE KEYNOTES

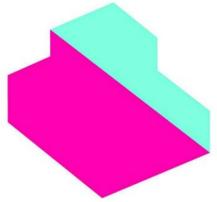
26 30 00.D1 JUNCTION BOX
26 30 00.E1 DC DISCONNECT

SHEET KEYNOTES

DRAWING KEY



A1 ENLARGED ELECTRICAL POWER PLAN ROOF
3/8" = 1'-0"



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ELECTRICAL SCHEDULES

E-601

GENERAL SHEET NOTES

REFERENCE KEYNOTES

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ELECTRICAL PANEL SCHEDULE

Panel Name	Voltage	Mfg/Type	MCB Amps
MB1	240V	Square D - QOM250VH	150
Mount	Enclosure	Location	
Surface	Outdoor	West Facade	

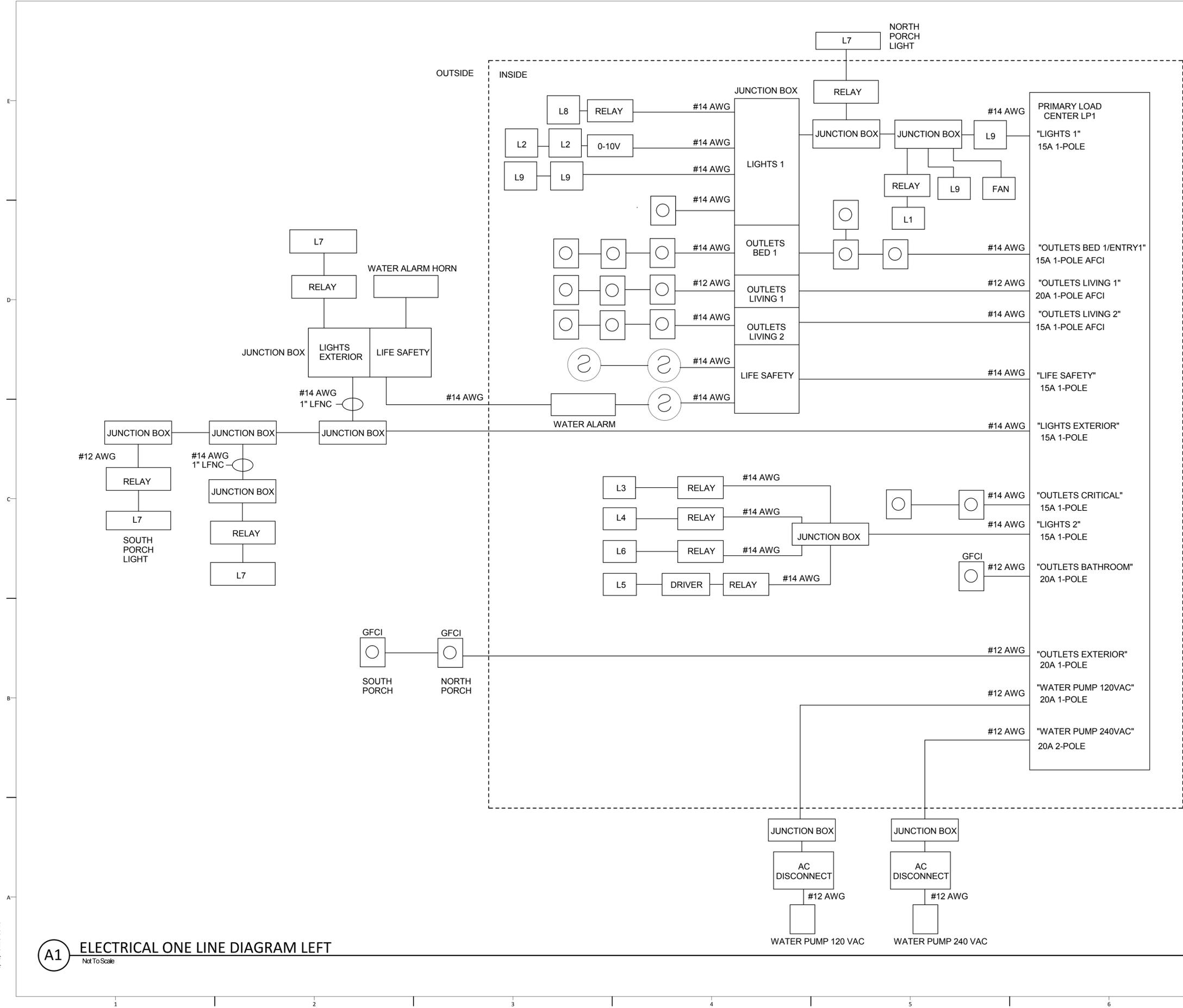
Panel Name	Voltage	Phase	Wires	Mfg/Type	Bus Amps	MCB Amps		
LP1	120/240V	1	3	Square D - QO140M200	200	150		
Mount	Enclosure	Location						
Surface	Indoor	Mech Closet						
Load (VA)	CKT #	Circuit Designation	CB	Pole	CB	Circuit Designation	CKT #	Load (VA)
247	1	Lights 1 (North) AFCI	15	A	30 2P	PV Inverter DO NOT MOVE	2	
130	3	Lights 2 (South) AFCI	15	B	-	-	4	
540	5	Outlets Living1 AV AFCI	20	A	15 2P	Minisplit Heat Pump	6	1425
540	7	Outlets Living2 AFCI	15	B	-	-	8	
1080	9	Outlets Bed 1/Entry AFCI	15	A	15 2P	Energy Recovery Ventilator	10	178
360	11	Outlets Exterior AFCI	20	B	-	-	12	
1500	13	Outlets Kitchen 1	20	A	30 2P	Clothes Dryer	14	5000
1500	15	Outlets Kitchen 2	20	B	-	-	16	
1500	17	Outlets Bath1	20	A	20 2P	Clothes Washer	18	2880
1000	19	Microwave	20	B	-	-	20	
210	21	Lights Outdoor AFCI	15	A	20	Dishwasher	22	1400
360	23	Outlets Crit Mech Closet/Kitch	15	B	20 2P	Water Pump 2	24	2880
-	25	Space	-	A	-	-	26	
720	27	Life Safety	15	B	15	Refrigerator	28	40
-	29	Space	-	A	50 2P	Electric Range	30	8000
864	31	Water Pump 1	20	B	-	-	32	
-	33	Space	-	A	-	Space	34	
-	35	Space	-	B	20	Outlets Roof/Hall AFCI	36	360
-	37	Space	-	A	30 2P	Hot Water Heater	38	5000
-	39	Space	-	B	-	-	40	

MAX kVA = 37.717

SERVICE FEEDER CALCULATIONS

General	VA	ga.	First 10kVA at 100%	10000
Lights 1 (North) AFCI	247	14	Remainder VA at 40%	11087
Lights 2 (South) AFCI	130	14	General Total (VA)	21087
Outlets Living1 AV AFCI	540	12		
Outlets Living2 AFCI	540	14		
Outlets Bed 1/Entry AFCI	1080	14	HVAC	
Outlets Exterior AFCI	360	12	MiniSplit	1425
Outlets Kitchen 1	1500	12	ERV	179
Outlets Kitchen 2	1500	12	Total HVAC (VA)	1541
Outlets Bath1	1500	12		
Lights Outdoor AFCI	210	14		
Outlets Crit Mech Closet/Kitch	360	14	LP1 Total (VA)	22628
Life Safety	720	14	Amps(22628VA/240V)	94.3
Hot Water Heater	5000	10		
Minisplit Heat Pump	1425	12		
Energy Recovery Ventilator	178	12	Load Balance	
Clothes Dryer	5000	10	Load A (VA)	19160
Clothes Washer	2880	12	Load B (VA)	18557
Dishwasher	1400	12		
Water Pump 1	864	12		
Water Pump 2	2880	12		
Refrigerator	40	14		
Microwave	1000	12		
Electric Range	8000	6		
PV Inverter		10		
Total	37717 VA			

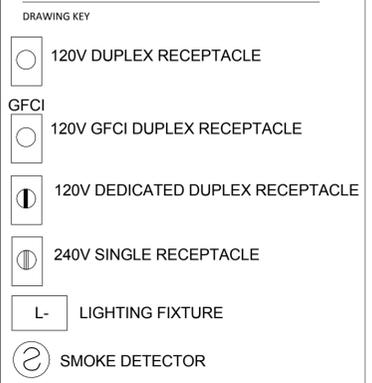
Lights 1 (North) AFCI: (3 X 13W X 0.8) + 15 + (28 X 0.8) + (28 X 0.8) + (10W/FT X 14 Ft) + (20 X 0.8) = 247 VA
 Lights 2 (South) AFCI: (28 X 0.8) + (28 X 0.8) + (10W/FT X 7 Ft) + 15W = 130 VA
 Outlets Living1 AV AFCI: 3 X 180 VA = 540 VA
 Outlets Living2 AFCI: 3 X 180 VA = 540 VA
 Outlets Bed 1 AFCI: 6 X 180 VA = 1080 VA
 Outlets Exterior AFCI: 2 X 180 VA = 360 VA
 Outlets Kitchen 1: 1500 VA as per NEC 220.52(a)
 Outlets Kitchen 2: 1500 VA as per NEC 220.52(a)
 Outlets Bath1: 1500 VA as per NEC 220.52(a)
 Lights Outdoor AFCI: 14 W/ft at 15 ft = 210 VA
 Outlets Crit Mech Closet/Kitch: 2 X 180 VA = 360 VA
 Life Safety: 4 X 180 VA = 720 VA
 Hot Water Heater: 4000 VA (NP) X 125% = 5000 VA
 Minisplit Heat Pump: 1140 VA (NP) X 125% = 1425 VA
 Energy Recovery Ventilator: 143 VA (NP) X 125% = 178 VA
 Clothes Dryer: 2800 VA (NP) X 125% = 3500 VA as per NEC 220.54
 Clothes Washer: 2880 VA (NP) = 2880 VA
 Dishwasher: 1400 VA (NP) = 1400 VA
 Water Pump 1: 1/3 Horsepower = 864 VA as per NEC 430.238
 Water Pump 2: 2 Horsepower = 2880 VA as per NEC 430.238
 Refrigerator: 343kWh per year / (365*24)hours = 40 VA
 Microwave: 1000 VA (NP) = 1000 VA
 Electric Range: 1 Range < 12kW = 8000 VA as per NEC 220.55



GENERAL SHEET NOTES
 BRANCH CIRCUIT CABLE IS NONMETALLIC SHEATHED TYPE UNLESS OTHERWISE STATED IN DRAWING

REFERENCE KEYNOTES

SHEET KEYNOTES



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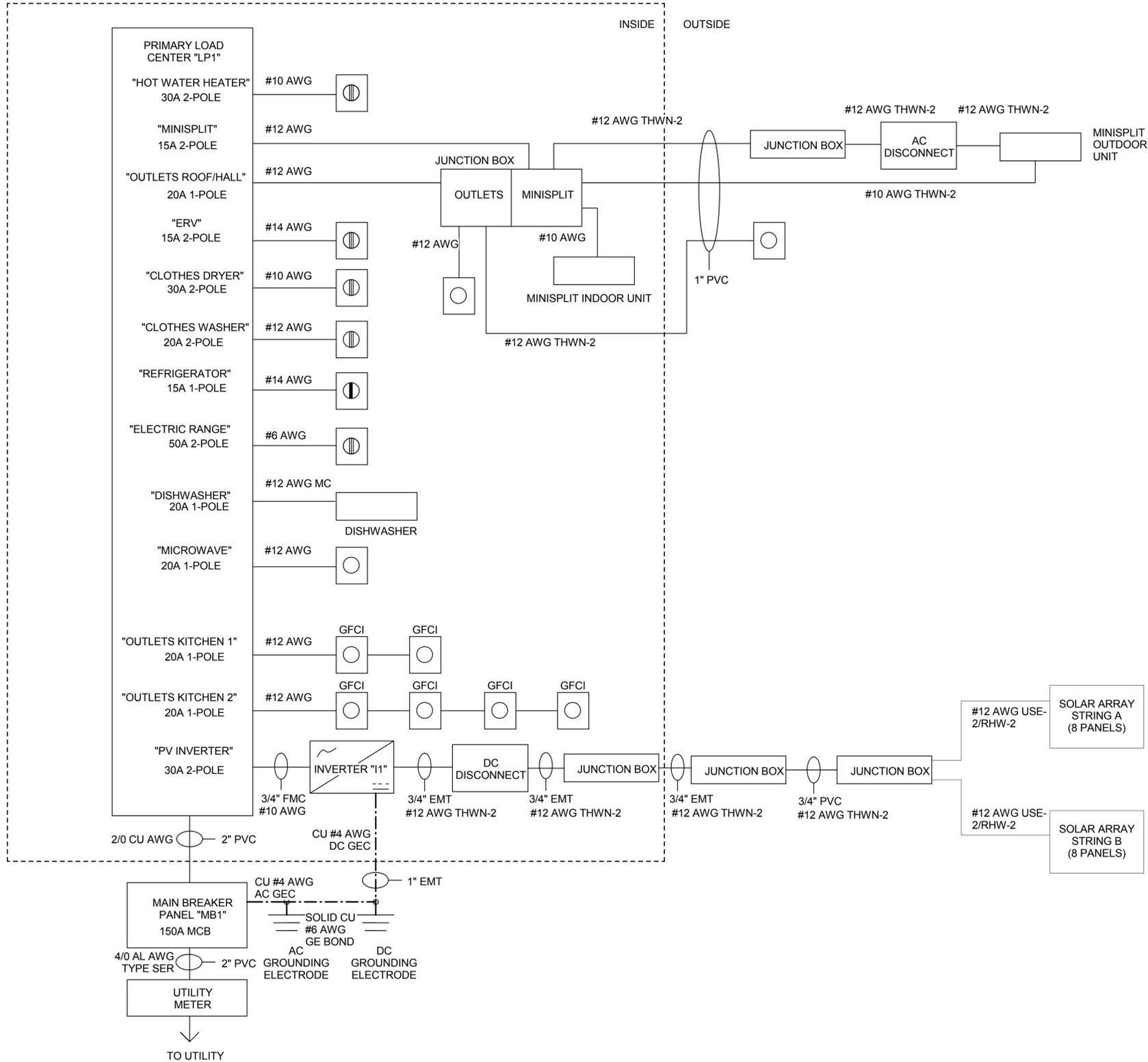
SHEET TITLE
**ELECTRICAL ONE LINE
 DIAGRAM LEFT**

E-901

A1 ELECTRICAL ONE LINE DIAGRAM LEFT
 Not To Scale

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8/13/2011 9:35:14 AM



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SHEET KEYNOTES

- DRAWING KEY
- 120V DUPLEX RECEPTACLE
 - 120V GFCI DUPLEX RECEPTACLE
 - 120V DEDICATED DUPLEX RECEPTACLE
 - 240V SINGLE RECEPTACLE
 - LIGHTING FIXTURE
 - SMOKE DETECTOR



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 DIAGRAM RIGHT**

E-902

A1 ELECTRICAL ONE-LINE DIAGRAM RIGHT

ELECTRICAL EQUIPMENT	
PHOTOVOLTAIC MODULE: YINGLI PANDA SERIES YL260C-30b Voc = 38.6V Vmp = 30.8V Isc = 8.91A Imp = 8.46A TEMPERATURE COEFFICIENT FOR Voc = -0.33 %/C TEMPERATURE COEFFICIENT FOR Vmp = -0.45 %/C	
INVERTER: FRONIUS IG 5100 MAX DC POWER = 6300W MAX DC VOLTAGE = 500V Vstart = 170V MPP VOLTAGE RANGE = 150V-450V MAX DC INPUT CURRENT = 33.2A	
DC DISCONNECT: SCHNEIDER ELECTRIC SQUARE D HU361 2 POLE UNFUSED OPERATION AS DC DISCONNECTION MEANS MAX Isc PER POLE = 20A SELF-CERTIFIED BY MANUFACTURER FOR 600Vdc SYSTEM OPERATION	
MAIN LOAD PANEL "LP1": SCHNEIDER ELECTRIC SQUARE D QO140L200G BUS RATING = 200A INVERTER CIRCUIT BREAKER IN MAIN LOAD PANEL IS ADJACENT TO INVERTER AND FUNCTIONS AS AC DISCONNECTION MEANS	
MAIN BREAKER ENCLOSURE "MB1": MAIN CIRCUIT BREAKER: SCHNEIDER ELECTRIC SQUARE D QOM2150VH AMPERE RATING = 150A MCB OPERATES IN MAIN BREAKER PANEL "MB1"	

VOLTAGE CALCULATIONS	
Voc @ COLDEST EXPECTED OPERATING TEMP: LOW AMBIENT TEMPERATURE = 2°C TEMP COEFFICIENT = (-0.33%/C * 38.6V)/100 = -0.127V/C Voc_string = # PANELS*(Voc + (TEMP DIFFERENTIAL*TEMP COEFFICIENT)) Voc_string = 8*(38.6+(2-25)*(-0.127)) = 8*(38.6+2.93) = 332.2V < 500V ARRAY WILL NOT EXCEED INVERTER MAX DC VOLTAGE AT RECORD LOW TEMPERATURE	
Voc @ OPERATING TEMPERATURE OF 60°C-75°C ANALYSIS OF WORST CASE OPERATING TEMP DUE TO POOR AIR CIRCULATION Voc_string = 8*(38.6+(60-25)*(-0.127)) = 8*(38.6-4.45) = 273.2V > 170V Voc_string = 8*(38.6+(75-25)*(-0.127)) = 8*(38.6-6.35) = 258.0V > 170V ARRAY WILL OPERATE ABOVE Vstart AT EXTREME HIGH AMBIENT TEMPERATURES	
Vmp @ HIGHEST EXPECTED OPERATING TEMP: HIGH AMBIENT TEMPERATURE = 40°C TEMP COEFFICIENT = (-0.45 %/C*30.8V)/100 = -0.139V/C Vmp_string = # PANELS*(Vmp + (TEMP DIFFERENTIAL*TEMP COEFFICIENT)) Vmp_string = 8*(30.8+(40-25)*(-0.139)) = 8*(30.8-2.08) = 229.8V > 150V	
Vmp @ OPERATING TEMPERATURE OF 60°C-75°C ANALYSIS OF WORST CASE OPERATING TEMP DUE TO POOR AIR CIRCULATION Vmp_string = 8*(30.8+(60-25)*(-0.139)) = 8*(30.8-4.87) = 207.4V > 150V Vmp_string = 8*(30.8+(75-25)*(-0.139)) = 8*(30.8-6.95) = 190.8V > 150V ARRAY WILL OPERATE WITHIN MPPT VOLTAGE RANGE OF INVERTER	

DC CALCULATIONS	
STRING SHORT CIRCUIT CURRENT: Isc_string = 8.91A 125% CONTINUOUS CURRENT CALCULATION: 1.25 x 8.91A = 11.2A per 690.8(A)(1) 80% OPERATION CALCULATION: 1.25 x 11.2A = 14A per 215.2(A)	
ARRAY SHORT CIRCUIT CURRENT: Isc_array = 8.91A per string x (2) strings = 17.9A 125% CONTINUOUS CURRENT CALCULATION: 1.25 x 17.9A = 22.4A per 690.8(A)(1) 80% OPERATION CALCULATION: 1.25 x 22.4A = 28A per 215.2(A)	
CONDUIT SELECTION - ARRAY STRINGS TO EXTERIOR JUNCTION BOX: FREE AIR PORTIONS AT 61°C-70°C: 90°C CONDUCTOR DERATE AT 0.58 (NEC 310.16) Any temperature and conduit fill adjustments notwithstanding, the conductor ampacity must be equal to or greater than 1.56 Isc = 1.56 x 8.91A = 14A. Required 30°C-rated conductor ampacity is 1.25 Isc / 0.58 = 1.25 x 8.91A / 0.58 = 19A. USE-2 90°C 12 AWG IN FREE AIR = 40A @ 30°C (NEC 310.16) USE-2 12 AWG conductor operating at 61°C-70°C ambient temperatures allow for 40A x 0.58 = 23A. Continuous current calculation check. 1.25 Isc = 1.25 x 8.91A = 12A. 23A > 12A, therefore 12 AWG USE-2/RHW-2 conductor is OK for this free-air condition.	
CONDUIT PORTIONS AT 61°C-70°C: 90°C CONDUCTOR DERATE AT 0.58 (NEC 310.16) Any temperature and conduit fill adjustments notwithstanding, the conductor ampacity must be equal to or greater than 1.56 Isc = 1.56 x 8.91A = 14A. Per table 310.15(B)(2)(c), temperature adder for circular raceway above roof 1/2" to 3 1/2" is 22°C. Assuming record high ambient temperature of 41°C, ambient temperature in raceway above roof surface could reach 63°C. Required 30°C-rated conductor ampacity is 1.25 Isc / 0.58 = 1.25 x 8.91A / 0.58 = 19A. USE-2 90°C 12 AWG IN CONDUIT = 30A @ 30°C (NEC 310.16) USE-2 12 AWG conductor operating at 61°C-70°C ambient temperatures allow for 30A x 0.58 = 17A. Continuous current calculation check. 1.25 Isc = 1.25 x 8.91A = 12A. 17A > 12A, therefore 12 AWG USE-2/RHW-2 conductor is OK for this conduit condition.	

DC CALCULATIONS (CONTINUED)	
CONDUCTOR SELECTION - EXTERIOR JUNCTION BOX TO CONDUIT BODY: CONDUIT AT 61°C-70°C: 90°C CONDUCTOR DERATE AT 0.58 (NEC 310.16) Any temperature and conduit fill adjustments notwithstanding, the conductor ampacity must be equal to or greater than 1.56 Isc = 1.56 x 8.91A = 14A. Per table 310.15(B)(2)(c), temperature adder for circular raceway above roof 1/2" to 3 1/2" is 22°C. Assuming record high ambient temperature of 41°C, ambient temperature in raceway above roof surface could reach 63°C. Selected conduit is 1/2" EMT. Conduit to contain four 12 AWG USE-2/RHW-2 conductors and one 6 AWG DC grounding electrode conductor. Per table 310.15(B)(2)(a), adjustment factor for 4-6 current-carrying conductors is 0.8. Required 30°C-rated conductor ampacity is 1.25 Isc / 0.65 / 0.8 = 1.25 x 8.91A / 0.58 / 0.8 = 24A. USE-2 90°C 12 AWG IN CONDUIT = 30A @ 30°C (NEC 310.16) USE-2 12 AWG conductor operating at 61°C-70°C ambient temperatures with conduit fill allows for 30A x 0.58 x 0.8 = 14A. Continuous current calculation check. 1.25 Isc = 1.25 x 8.91A = 12A. 14A > 12A, therefore 12 AWG USE-2/RHW-2 conductor is OK for this conduit condition.	
CONDUCTOR SELECTION - CONDUIT BODY TO INTERIOR JUNCTION BOX TODC DISCONNECT TO INVERTER: CONDUIT PORTIONS AT 41°C-45°C: 90°C CONDUCTOR DERATE AT 0.87 (NEC 310.16) Any temperature and conduit fill adjustments notwithstanding, the conductor ampacity must be equal to or greater than 1.56 Isc = 1.56 x 8.91A = 14A. Per table 310.15(B)(2)(c), at ambient temperature of 41°C-45°C, conductor derate factor is 0.87. USE-2 90°C 12 AWG IN CONDUIT = 30A @ 30°C (NEC 310.16) Selected conduit is 1/2" EMT. Conduit to contain four 12 AWG USE-2/RHW-2 conductors and one 6 AWG DC grounding electrode conductor. Per table 310.15(B)(2)(a), adjustment factor for 4-6 current-carrying conductors is 0.8. Required 30°C-rated conductor ampacity is 1.25 Isc / 0.87 / 0.8 = 1.25 x 8.91A / 0.87 / 0.8 = 21A. USE-2 12 AWG conductor operating at 61°C-70°C ambient temperatures with conduit fill allows for 30A x 0.87 x 0.8 = 21A. Continuous current calculation check. 1.25 Isc = 1.25 x 8.91A = 12A. 14A > 12A, therefore 12 AWG USE-2/RHW-2 conductor is OK for this conduit condition.	

AC CALCULATIONS	
INVERTER OUTPUT CURRENT: 5100 / 240Vac = 21.3A AMPACITY REQUIREMENT: 1.25 x 21.3A = 27A CIRCUIT BREAKER SELECTED FOR INVERTER: 30A 2P	
CONDUCTOR SELECTION - INVERTER TO LOAD PANEL: 10 AWG THWN-2 90°C selected. Selected conduit is 1/2" EMT. Ambient temperature in the mechanical room is assumed to be 40°C. Per table 310.16, THWN-2 90°C 10 AWG in raceway = 55A @ 30°C. Per table 310.16, at ambient temp of 36°C-40°C, 90°C conductor derate factor is 0.91. THWN-2 10 AWG conductor operating at 36°C-40°C ambient temperatures allow for 50A x 0.91 = 46A. Continuous current calculation check. 1.25 x 21.3A = 27A. 46A > 27A, therefore 10 AWG THWN-2 conductor is OK for this conduit condition.	
Inverter "I1" backfeeds into main load panel "LP1" through a 30A circuit breaker. Panel "LP1" has a 200A bus rating, has bottom-fed service lugs, and is supplied by a 150A main breaker in remote breaker panel "MB1" at point of utility service entry.	
The current supplied by the PV system is limited by the 30A backed breaker, and the current supplied by the utility is limited by the 150A main circuit breaker in panel "MB1". Panel "LP1" bus rating is 200A. NEC 690.64(B)(2) imposes a maximum backfeed limitation on panel "LP1" of 1.2 x 200A - 150A = 90A. 90A > 30A backfeed from PV system.	

GROUNDING CALCULATIONS	
DC ARRAY GROUNDING CONDUCTOR DC EQUIPMENT GROUNDING PER NEC 690.43 1.56 Isc = 22.4A PER NEC TABLE 250.122 SELECTED CONDUCTOR: #6 AWG	
AC EQUIPMENT GROUNDING PER NEC 690.43 80% OPERATION CURRENT = 27A PER NEC TABLE 250.122 SELECTED CONDUCTOR: #6 AWG	
DC AND AC GROUNDING ELECTRODE CONDUCTORS PER NEC 250.66 LARGEST UNGROUNDED SERVICE-ENTRANCE CONDUCTOR = 4/0 AWG AL PER NEC TABLE 250.66 SELECTED CONDUCTOR: #4 AWG CU	

GENERAL SHEET NOTES

ALL PV SYSTEMS WILL BE DESIGNED AND INSTALLED IN FULL COMPLIANCE WITH THE 2008 NATIONAL ELECTRICAL CODE (NEC) AND THE 2011 SD RULES AND SD BUILDING CODE.

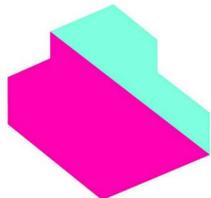
PV MODULES, SOURCE-CIRCUIT COMBINERS, AND UTILITY - INTERACTIVE INVERTERS MUST BE SAFETY CERTIFIED (LISTED) TO THE APPROPRIATE UNDERWRITES LABORATORIES (UL) STANDARD (UL 1741 FOR INVERTERS AND COMBINERS, UL 1703 FOR PV MODULES) AND MUST BE TESTED AND CERTIFIED BY ONE OF THE FOLLOWING US NATIONALLY RECOGNIZED TESTING LABORATORIES (NRTL): UL, CSA, ETL, OR TUV NORTH AMERICA. THE EUROPEAN CE DESIGNATION AND TESTS BY LABORATORIES IN OTHER COUNTRIES ARE NOT ACCEPTABLE. (690.4)

DC CIRCUITS FROM THE PV MODULES TO THE DC PV DISCONNECT MUST BE IN METAL CONDUITS (RACEWAYS) WHERE INSIDE THE STRUCTURE. (NEC 690.31 (E)).

ALL PV STRINGS ARE TO USE MANUFACTURER PROVIDED CABLE BETWEEN MODULES.

REFERENCE KEYNOTES	
26 05 26	GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS
26 27 13	ELECTRICITY METERING
26 27 16.A1	REMOTE MCB IN HOUSING
26 27 16.A2	MAIN PANELBOARD FOR HOUSE
26 30 00.D1	JUNCTION BOX
26 30 00.E1	DC DISCONNECT
26 31 00	PHOTOVOLTAIC COLLECTORS
48 19 16	ELECTRICAL POWER GENERATION INVERTERS

SHEET KEYNOTES	
763	GROUNDING SYSTEM AS PER SD BUILDING CODE 6-9



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MARK	DATE	DESCRIPTION
1	NOV. 23, 2010	DESIGN DEVELOPMENT
2	MARCH 22, 2011	CONSTRUCTION DOCUMENTS
3	MAY 3, 2011	FINAL CONSTRUCTION DOCUMENTS
4	AUGUST 11, 2011	AS-BUILT CONSTRUCTION DOCUMENTS

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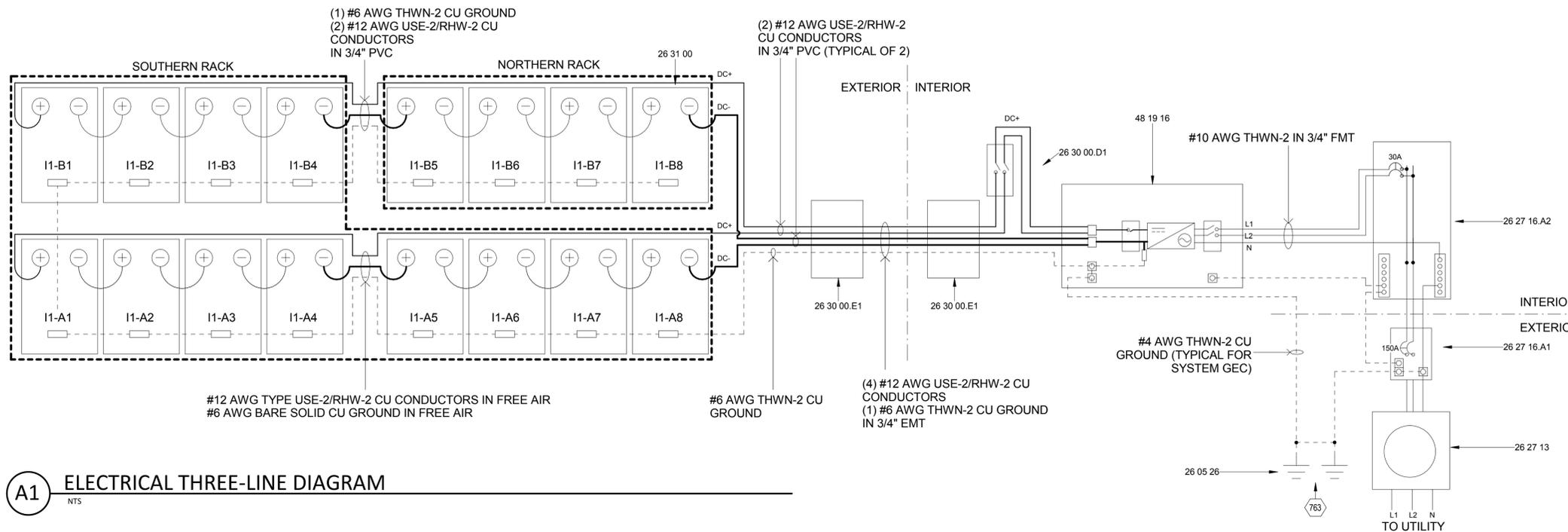
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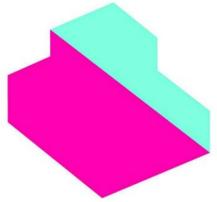
SHEET TITLE

ELECTRICAL THREE-LINE DIAGRAM

E-903



A1 ELECTRICAL THREE-LINE DIAGRAM



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MODULE LOGIC AND DIMENSION

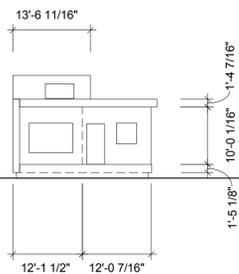
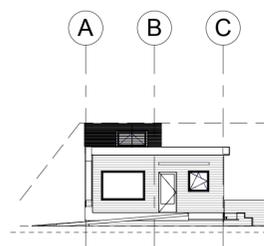
O-101

GENERAL SHEET NOTES

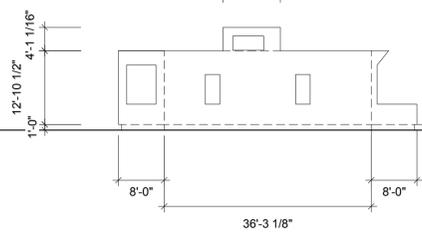
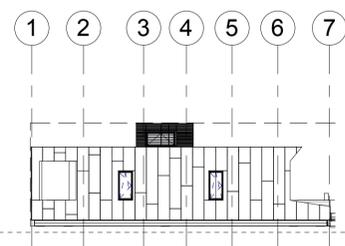
REFERENCE KEYNOTES

SHEET KEYNOTES

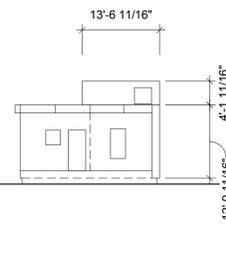
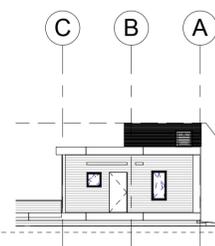
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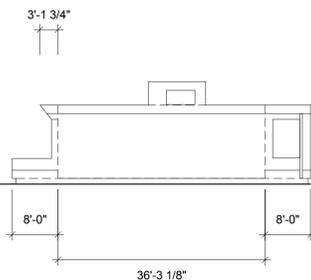
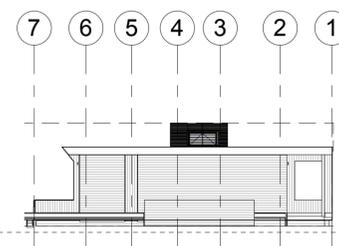
C1 SOUTH ELEVATION
1/16" = 1'-0"



C2 WEST ELEVATION
1/16" = 1'-0"



C4 NORTH ELEVATION
1/16" = 1'-0"



C5 EAST ELEVATION
1/16" = 1'-0"

MODULE I.D. AND BUILDING ELEMENT SPECIFICATIONS

2 PRIMARY MODULES: EAST AND WEST

MODULE DIMENSIONS: 36' L X 12' W X 12' 11" H
ESTIMATED MODULE WEIGHT: 62,000 lbs
TOTAL HOUSE WEIGHT: approx. 120,000LBS

SECONDARY BUILDING UNITS:

NORTH PORCH DECK: 24' X 8' X 10"
NORTH PORCH WEST WALL: 8' L X 12' 10" H X 12" D
NORTH PORCH COLUMN: 6' X 6' X 10"
NORTH PORCH BEAM: 3 1/2" X 11 7/8" X 24"
4 X NORTH PORCH ROOF UNITS: 6' X 8' X 10"

NORTH RAMP: 28' L X 6' W

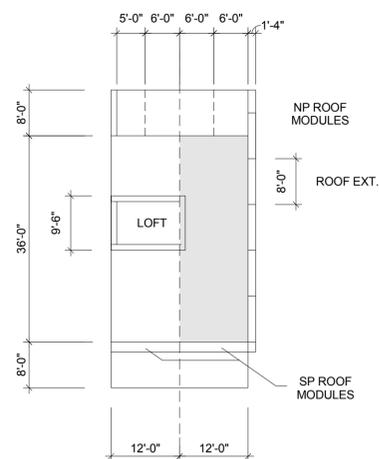
SOUTH PORCH DECK: 24' X 8' X 10"
SOUTH PORCH WEST WALL: 8' L X 12' 10" H X 12" D
SOUTH PORCH BEAM: 3 1/2" X 11 7/8" X 24"
2 X SOUTH PORCH ROOF UNITS: 12' X 1' X 10"

SOUTH RAMP: 34' L X 6' W

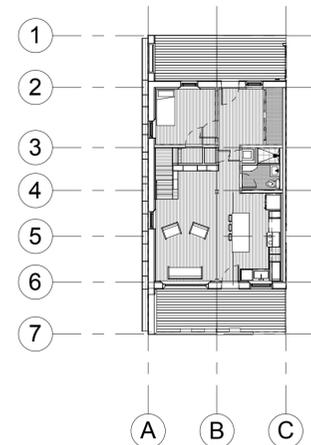
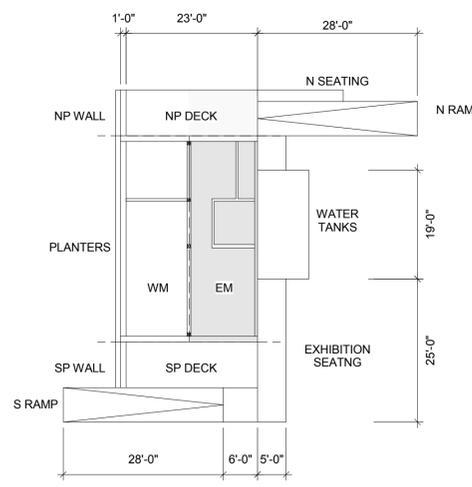
5 X MODULAR EXHIBITION SEATING: 5' L X 5' W X 4' 6" H
1 X NORTH PORCH SEATING: 15' L X 2' D

4 X WATER TANK HOUSING UNITS: 2 at 10' L x 2' 9" W x 4' 6" H
2 at 10' L x 4' 8" W x 4' 6" H

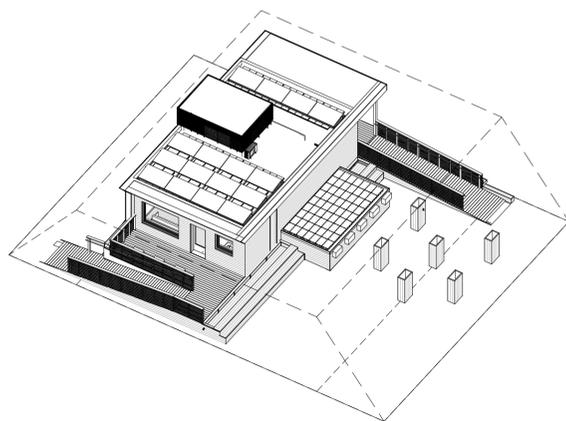
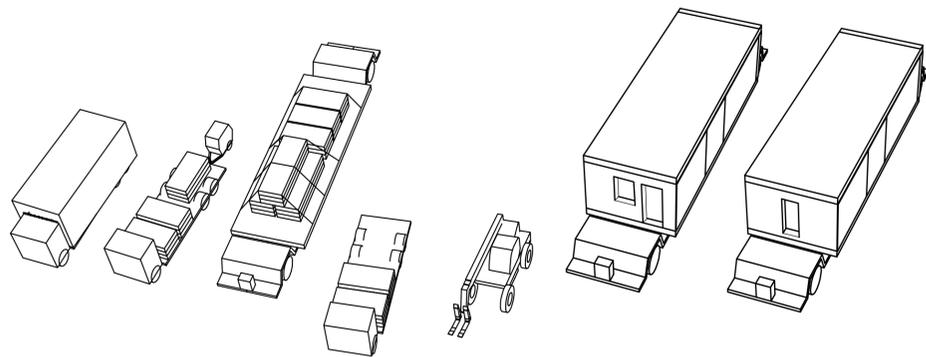
1 PALLET SOLAR PANELS: 7' L X 4' W X 3' H



A2 MODULE LOGIC AND EXHIBITION ELEMENTS
1/16" = 1'-0"



A1 MODULE I.D. AND DIMENSION
Not To Scale



EQUIPMENT TO BE USED DURING SITE OPERATIONS		
TRUCKS/ TRAILERS/ HEAVY MOVING		
QUANTITY	TYPE	DESCRIPTION
3	TRAILER	53' SINGLE DROP TRAILER. TANDEM AXLE, AIR RIDE, ALL STEEL WHEELS.
3	LARGE TRUCK	KENWORTH TRUCK. 59,200 LBS. WHEEL BASE 202", REAR END RATION - 3.91, TIRE SIZE - 11R24.
1	MOVERS TOOL TRUCK	20' 1 TONNE TOOL TRUCK
1	MOVERS ESCORT TRUCK	20' 1 TONNE ESCORT TRUCK
1	TELEHANDLER	LULL MODEL 944E-42, 9,000 LBS RATED CAPACITY, 42' MAXIMUM LIFT HEIGHT, 28,350 LBS OPERATING WEIGHT.
4	GENERATOR	HONDA GENERATOR EU6500ISA - SUPER QUIET: 60 dB(A), 6500 watts, 120/240V
1	UNIFIED HYDRAULIC JACKING SYSTEM	HYDRAULIC TOE JACKS - BU 20,000. 10 TONNE. ENERPAC PUMP SYSTEM
1	SITE OP'S TOOL TRUCK	20' BOX TRUCK
GENERAL CONSTRUCTION		
QUANTITY	TYPE	DESCRIPTION
2	SCAFFOLD	PRO JAX UTILITY SCAFFOLD SINGLE UNIT WITH GUARD RAIL. 1000 LBS RATED CAPACITY.
2	FLOODLIGHTS	BULL DOG WORK LIGHT. TWINN 500 WATT BULBS.

TRANSPORTATION NOTES
DEPARTURE POINT : HOBOKEN, NJ DESTINATION : WASHINGTON, DC
DISTANCE: 211 MILES
PRIMARY TRANSPORTATION UNITS:
TRUCK AND TRAILER CARRYING A 35' X 12' X 11' PREFABRICATED MOULE REPRESENTING ONE HALF OF EMPOWERHOUSE. THIS MODULE WILL CONTAIN ALL MEP EQUIPMENT AND SERVICE RUNS.
TRUCK AND TRAILER CARRYING THE 21 ELEMETS THAT COMPRISE THE PANELIZED PORTION OF EMPOWERHOUSE IN ADDITION TO ALL SITE AND COMPETITION SPECIFIC OBJECTS (ie WATER TANKS, PLANTING, DECKING).
HEAVY LIFTING:
A LULL EXTENDED BOOM FORKLIFT WILL BE USED IN VARIOUS CAPACITITES ON SITE DURING ASSEMBLY, BUT WILL FOCUS OF ASSEMBLY OF THE PANELIZED PROTION OF EMOPERHOUSE. AT NO POINT SHALL WE EXCEED 75% LIFTING CAPACITY AS ALL BUILDING ELEMENTS ARE DESIGNED TO FALL UNDER THIS LIMIT.
STRUCTURAL CONSIDERATION FOR MODULE TRANSPORT:
ALL INTERNAL PARTITIONS ARE SHEATHED IN 1/2 PLY TO PROVIDE SHEAR SUPPORT DURING THE TRIP FROM HOBOKEN. THE 'OPEN' EAST SIDE OF THE MODEULE SHALL HAVE A TEMPORARY 2X4 WALL IN PLACE FOR THE TRIP FROM HOBOKEN. THIS WALL WILL BE REMOVED ONCE ASSEMBLY BEGINS IN WASHINGTON.

GENERAL SHEET NOTES

REFERENCE KEYNOTES

SHEET KEYNOTES

DRAWING KEY



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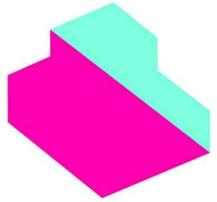
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**TRANSPORTATION PLAN
AND CONSTRUCTION
EQUIPMENT**

O-102



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1	NOV. 23, 2010	DESIGN DEVELOPMENT
2	MARCH 22, 2011	CONSTRUCTION DOCUMENTS
3	MAY 3, 2011	FINAL CONSTRUCTION DOCUMENTS
4	AUGUST 11, 2011	AS-BUILT CONSTRUCTION DOCUMENTS

LOT NUMBER

204

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SHEET TITLE

ARRIVAL AND ASSEMBLY SEQUENCE

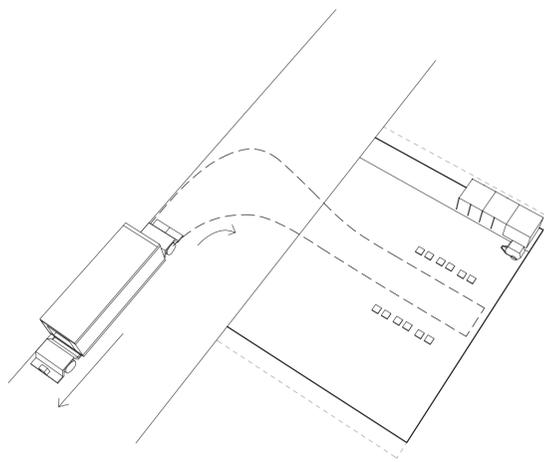
O-301

GENERAL SHEET NOTES

REFERENCE KEYNOTES

SHEET KEYNOTES

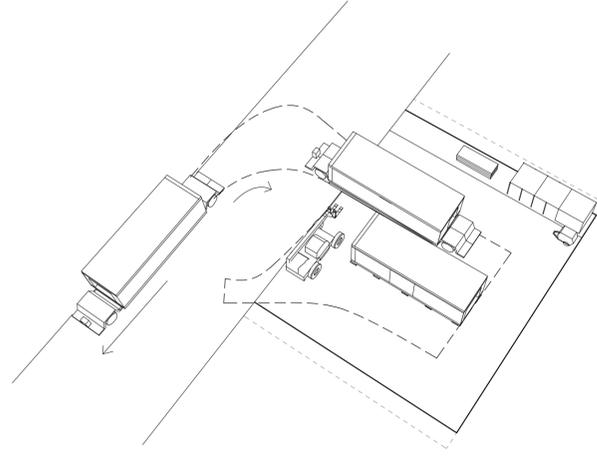
DRAWING KEY



1.

PHASE ONE : SITE PREPARATION

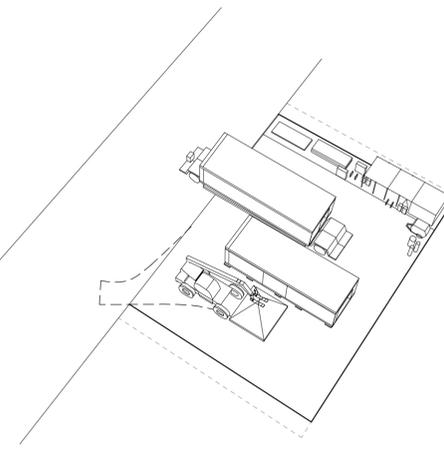
1. DELIVERY OF TOOL TRUCK.
2. PREP GROUNDS FOR FIRST MODULE TRUCK ARRIVAL.
3. PREP FOUNDATION PLACEMENT.
4. GENERATOR DELIVERY.
5. MODULE JACKED UP, TRAILER DRIVES AWAY, MODULE JACKED DOWN ONTO WAITING FOUNDATION PADS.



2.

PHASE TWO : MODULE 1 LIFT AND DROP

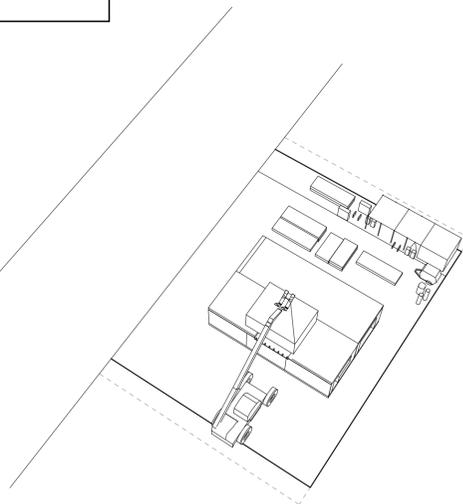
1. TRUCK IS IN POSITION ON SITE.
2. MODULE JACKED UP, TRAILER DRIVES AWAY, MODULE JACKED DOWN ONTO WAITING FOUNDATION PADS.



3.

PHASE THREE : MODULE 2 LIFT AND DROP

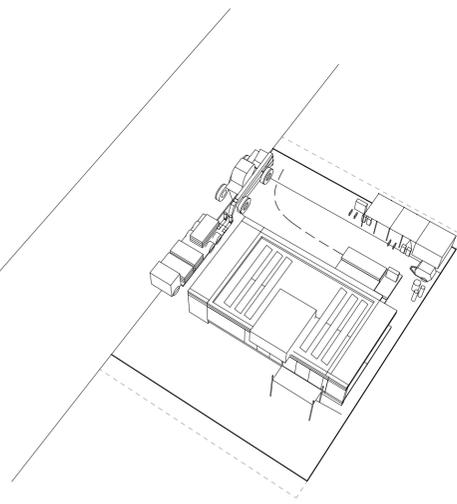
1. SECOND MODULE IS BACKED ONTO SITE.
2. JACKS RAISE MODULE FOR TRUCK TO PULL OUT.
3. MODULE DROPPED ONTO WAITING FOUNDATIONS.



4.

PHASE FOUR : ROOF ELEMENTS

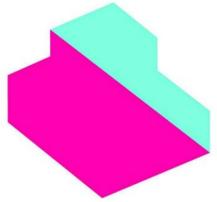
1. FLATBED TRUCK PULLS IN ALLOWING TELEHANDLER TO BEGIN UNLOADING LARGE DECK AND WALL SECTIONS.
2. LULL LIFTS THE MAJOR ROOF ELEMENTS, LOFT, PARAPET UNITS AND PV SUPPORTS.
3. WITH EAST SIDE OF LOT NOW CLEAR, WORK BEGINS ASSEMBLING THE DECKING AREA AND PLANTING.



5.

PHASE FIVE : EXTERIOR AND INTERIOR

1. TELEHANDLER ASSISTS WITH HEAVIER DECK AND PLANTING ELEMENTS AS WELL AS WATER TANKS.
2. EXTERIOR SCAFFOLDS EMPLOYED TO CLAD WEST FACADE.
3. INTERIOR FINISHING AND APPLIANCES INSTALLED AND TESTED FOR USE.



EMPOWERHOUSE

Parsons The New School for Design
Milano The New School for Management and Urban Policy
Stevens Institute of Technology

in partnership with
Habitat for Humanity, Washington DC
Government of DC
and the Deanwood community

TEAM NAME

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Solar Decathlon 2011
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SHEET TITLE

WATER DELIVERY

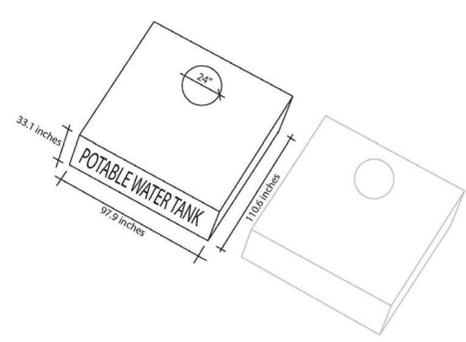
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GENERAL SHEET NOTES

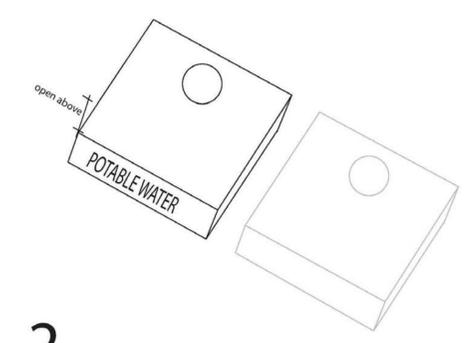
REFERENCE KEYNOTES

SHEET KEYNOTES

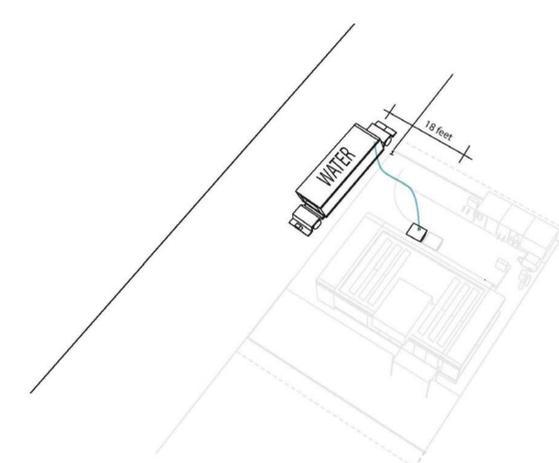
DRAWING KEY



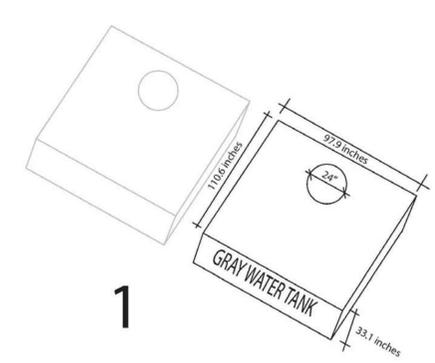
1 Capacity of tank is 1000 gallons
Fill hole diameter is 24"



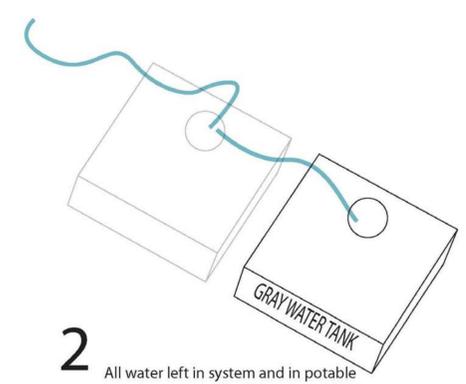
2 Access to fill hole is under removable planter



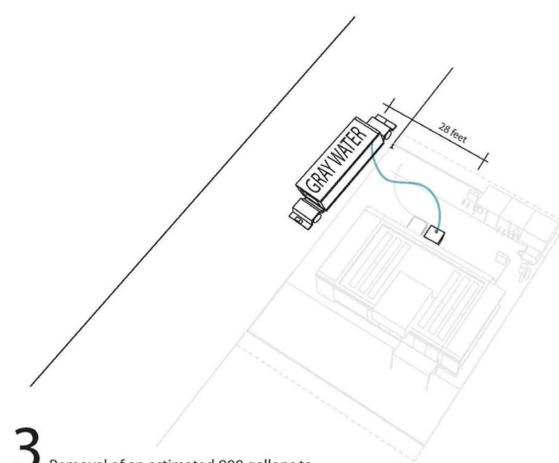
3 Fill location is on the East side of the home, 1000 gallons requested at fill.



1



2 All water left in system and in potable water storage tank will be pumped into the gray water tank for removal.



3 Removal of an estimated 900 gallons to be pumped from the gray water tank.

WATER DELIVERY

WATER REMOVAL

A1 WATER DELIVERY DIAGRAMS

Not to Scale

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