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SOLAR DECATHLON 2013 | TEAM LAS VEGAS | UNIVERSITY OF NEVADA LAS VEGAS

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SUBMISSIONS
100% CONSTRUCTION DOCUMENTATION 02.14.2013

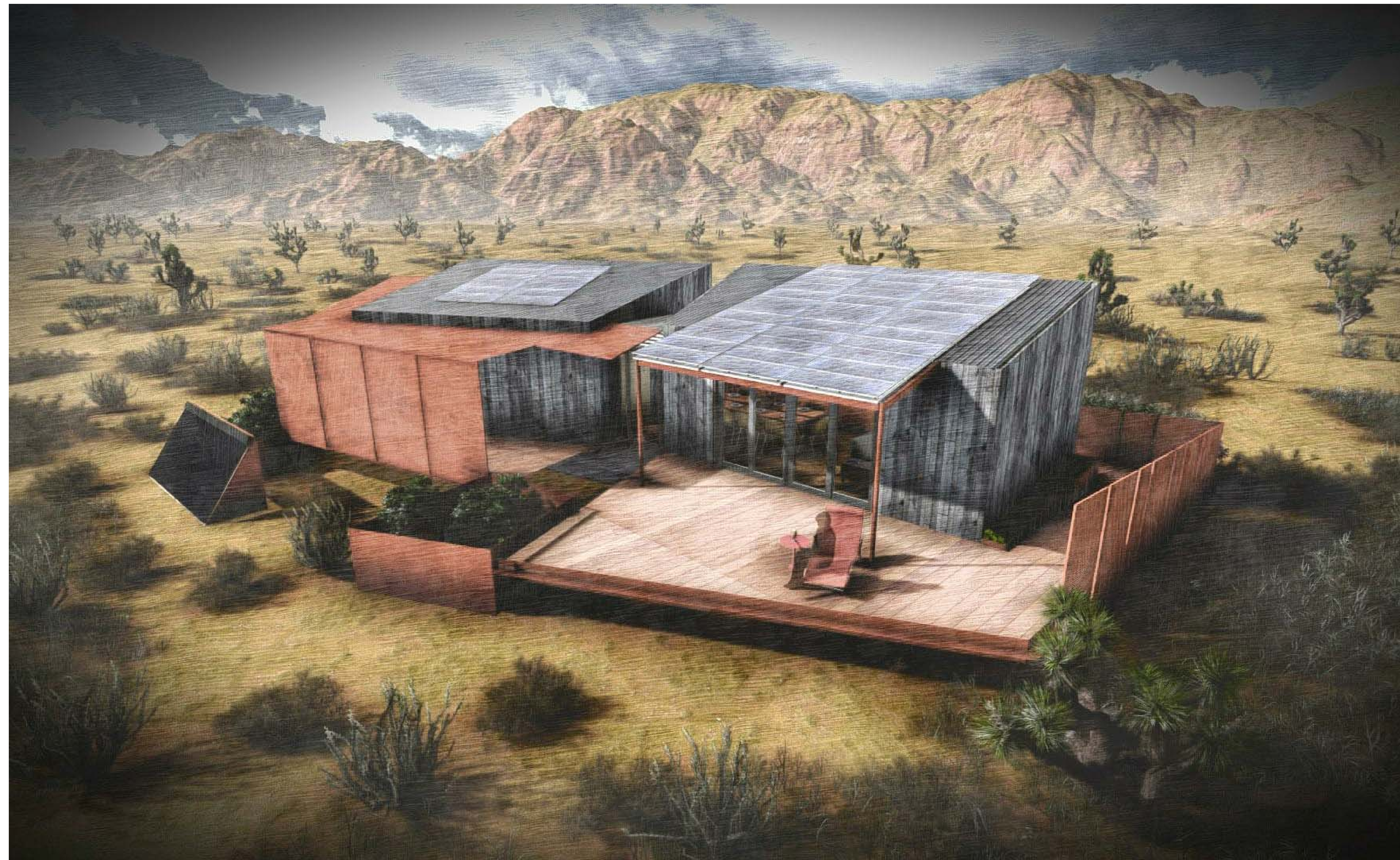
REVISIONS

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COVER

G-001



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SHEET INDEX

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GENERAL NOTES,
SYMBOLS AND
ABBREVIATIONS

G-003

SYMBOLS

	AREA TAG
	CALL OUT TAG
	CENTER LINE
	DOOR TAG
	ELEVATION TAG
	EXTERIOR ELEVATION TAG
	GRAPHIC SCALE
	INTERIOR ELEVATION TAG
	NORTH SYMBOL
	REVISION TAG
	ROOM TAG
	SECTION TAG
	SHEET KEYNOTE TAG
	SPOT ELEVATION TAG
	STRUCTURAL GRID TAG
	VIEW TITLE
	WALL TAG
	WINDOW TAG

ABBREVIATIONS

A	AREA	MAT	MATERIAL
A/C	AIR CONDITIONING	MAX	MAXIMUM
ADA	AMERICANS WITH DISABILITIES ACT	MEP	MECHANICAL, ELECTRICAL, PLUMBING
AH	AIR HANDLER (INDOOR UNIT)	MI	MICROINVERTER
ALUM	ALUMINUM	NO	NUMBER
B.O.	BOTTOM OF	OPP	OPPOSITE
BRD	BOARD	PE	PLUMBING EQUIPMENT
BS	BUTTON STATION	PFAS	PERSONAL FALL ARREST SYSTEM
CAB	CABINET	PLBG	PLUMBING
CL	CENTER LINE	PLWD	PLYWOOD
CSWK	CASEWORK	PM	PEX MANIFOLD
CW	COLD WATER	PSF	POUNDS PER SQUARE FOOT
DR	DOOR	PV	PHOTOVOLTAIC
DS	DOWNSPOUT	R/A	RETURN AIR
DT	DESICCANT TANK	RCP	REFLECTED CEILING PLAN
DW	DISHWASHER	RD	ROOF DRAIN
EQ	EQUAL	REF	REFRIGERATOR
ERV	ENERGY RECOVERY VENTILATOR	RET	RETURN
EXT	EXTERIOR	RM	ROOM
FIN	FINISH	S/A	SUPPLY AIR
FL	FLOOR	SF	SQUARE FEET
FRZ	FREEZER	SH	HUMIDITY SENSOR
FSW	FLOW SWITCH	SHAC	SMART HOUSE ADAPTIVE CONTROL
FTG	FOOTING	SHT	SHEET
GALV	GALVANIZED	SHWR	SHOWER
GEN	GENERAL	SIM	SIMILAR
GFCI	GROUND FAULT CIRCUIT INTERRUPTER	SYS	SYSTEM
GWB	GYPSUM WALL BOARD	THK	THICK
GYP	GYPSUM	T.O.	TOP OF
H	HEIGHT	TPO	THERMOPLASTIC POLYOLEFIN
HP	HEAT PUMP	TV	TELEVISION
HVAC	HEATING, VENTILATION, AIR CONDITIONING	UM	UTILITY METER
HX	HEAT EXCHANGER	V	VALVE
HXEST	HEAT EXCHANGER FOR EXCESS SOLAR THERMAL	VSF	VARIABLE SPEED FAN CONTROL INPUT
HW	HOT WATER	VIF	VERIFY IN FIELD
IN	INCHES	W	WIDTH
INSUL	INSULATION	W/	WITH
INT	INTERIOR	WC	TOILET
JB	JUNCTION BOX	WDW	WINDOW
L	LENGTH	WH	WATER HEATER
		WT	WATER TANK

GENERAL SHEET NOTES

1. AS PER ANSI Z765-2003, 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.



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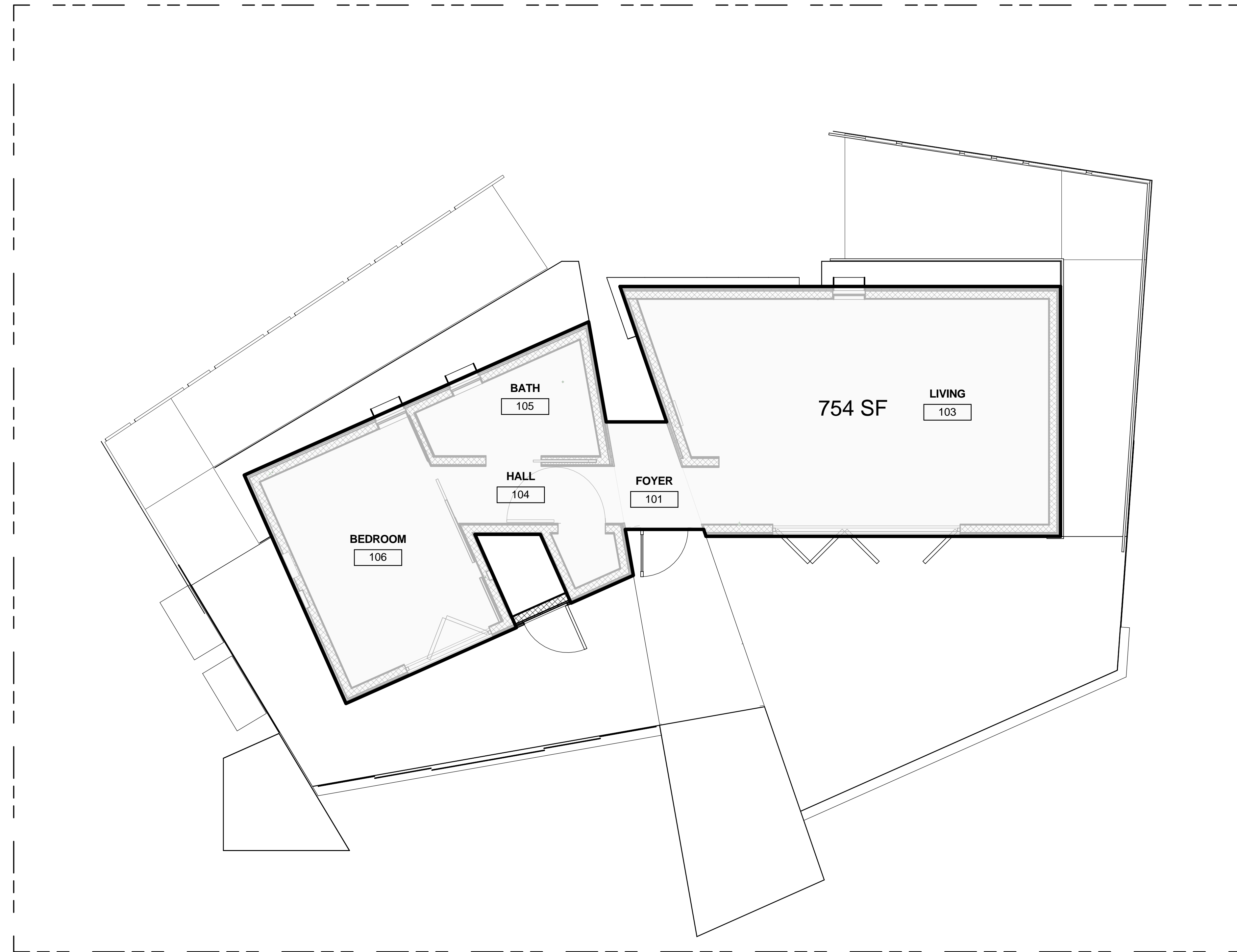
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FINISHED SQUARE
FOOTAGE
COMPLIANCE PLAN




G-101

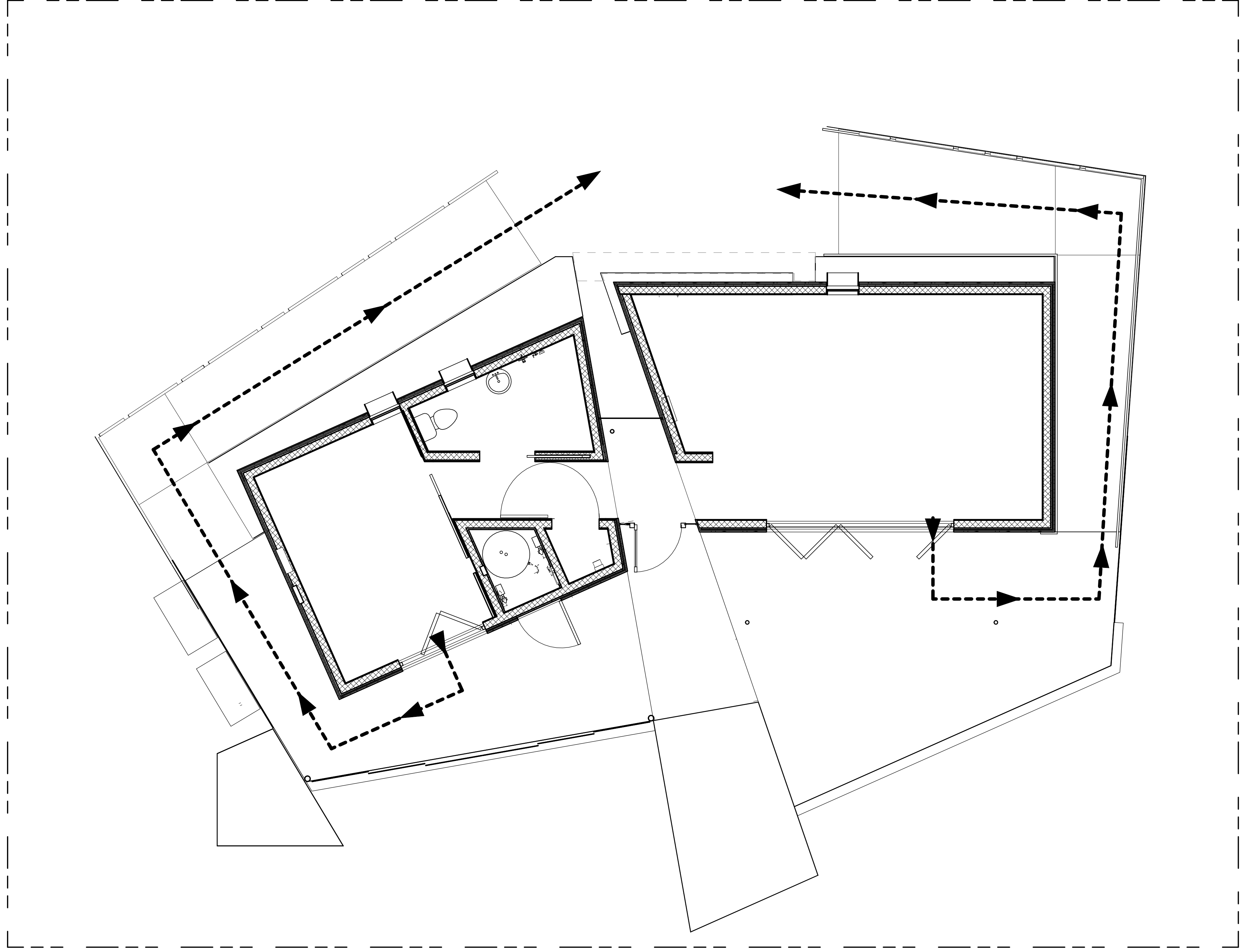


1 FINISHED SQUARE FOOTAGE COMPLIANCE PLAN
1/4" = 1'-0"

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EGRESS LEGEND

-  MOVEMENT DIRECTION
-  PRIMARY MOVEMENT PATH
-  FIRE EXTINGUISHER



1 EGRESS PLAN
1/4" = 1'-0"

EGRESS PLAN

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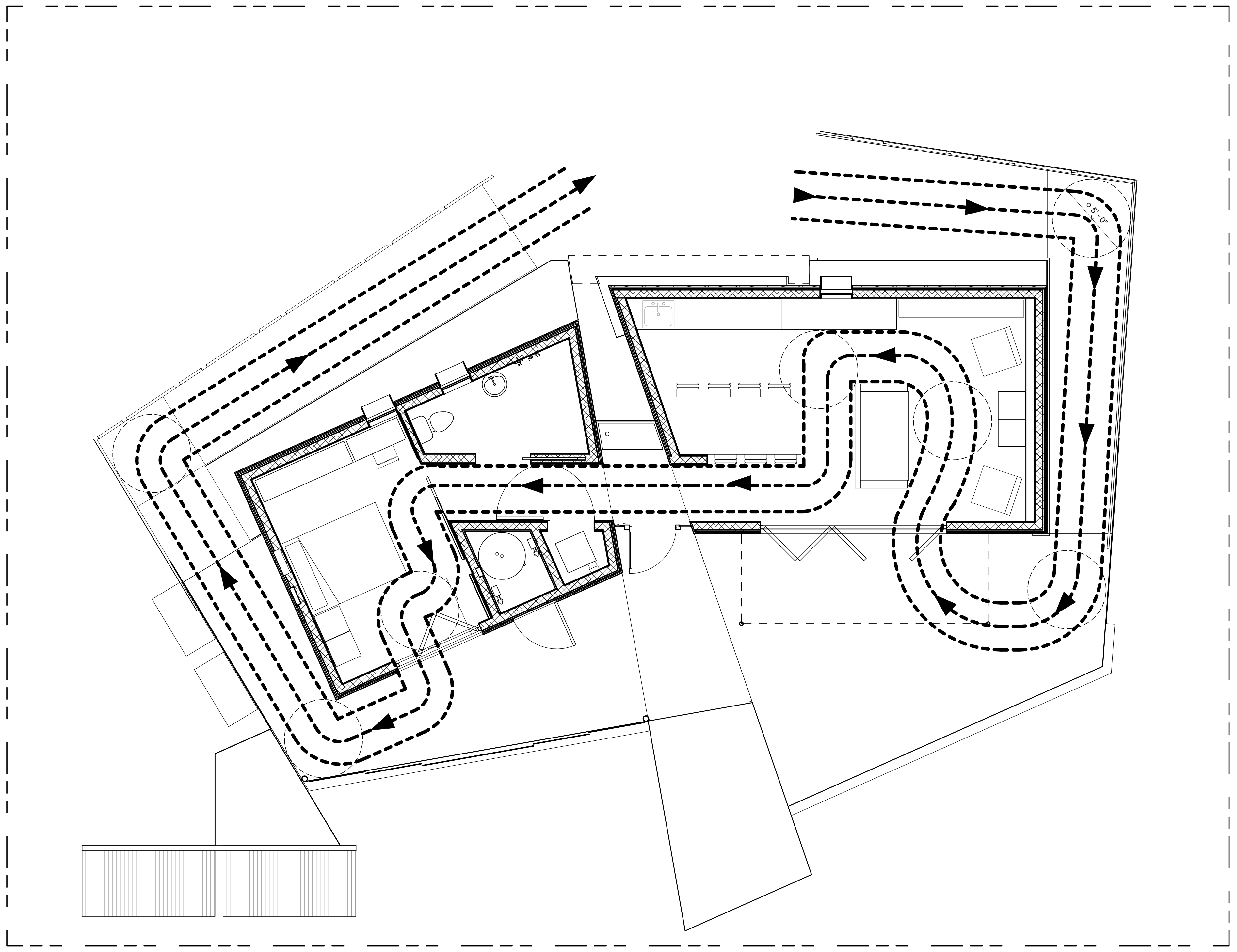
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ADA TOUR ROUTE COMPLIANCE PLAN

G-103



1 ADA TOUR ROUTE COMPLIANCE PLAN
1/4" = 1'-0"

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GENERAL SHEET NOTES

1. SOLID FILL PATTERN INDICATES ALL CONTAINERS, EQUIPMENT, AND FIXTURES THAT WILL CONTAIN LIQUID ON SITE AT ANY POINT DURING COMPETITION
2. ALL PRESSURIZED WATER SYSTEMS SHALL HAVE PROPER CONTAINMENT AND SHALL BE EQUIPPED WITH AN OVERFLOW PAN OR VALVE AND DRAIN BELOW UNIT
3. IN THE EVENT OF A SPILL, TEAM TO CONSULT SAFETY PLAN AND CONTACT EVENT ORGANIZERS
4. FOR A SCHEDULE OF LIQUID CONTAINMENT DEVICES AND FIXTURES REFER TO P-SERIES.
5. BLACK WATER TANK WILL NOT BE USED FOR ANY VEGETATION OR ALTERNATE USE AND WILL BE REMOVED AT THE END OF THE EVENT.



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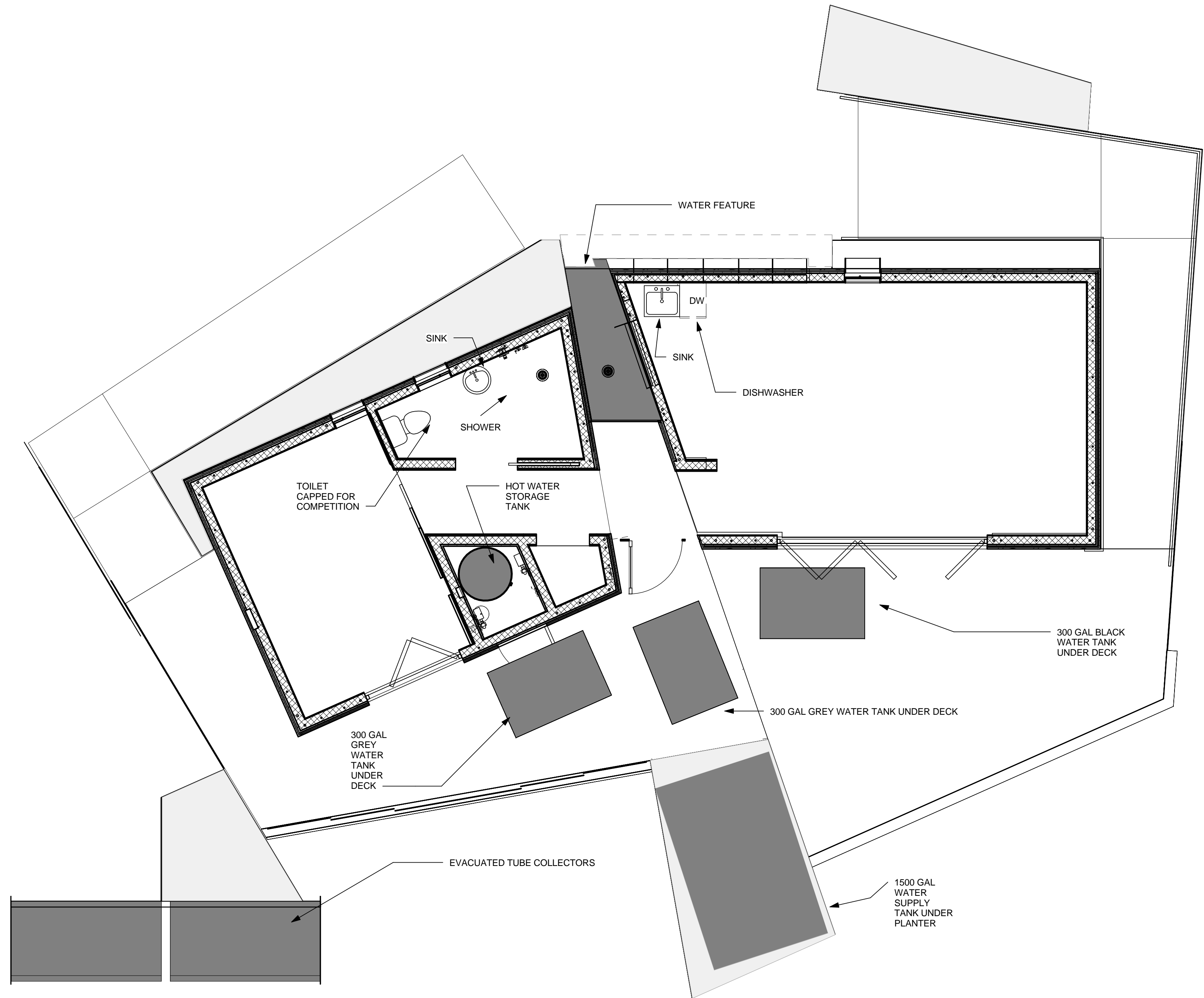
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LIQUID LOCATION AND SPILL CONTAINMENT PLAN

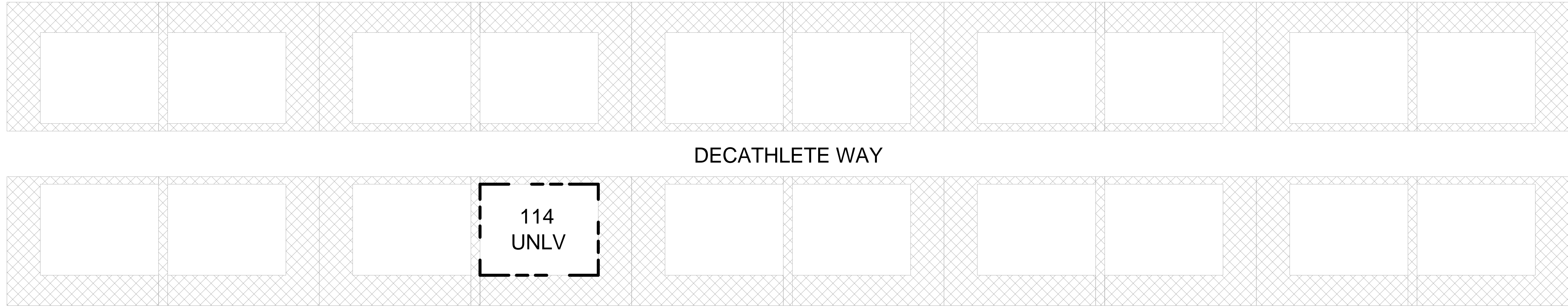
H-101



1 LIQUID LOCATION AND SPILL CONTAINMENT PLAN
1/4" = 1'-0"



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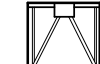
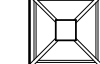
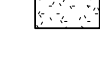
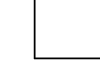
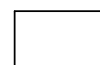
DECATHLETE WAY

114
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1 SITE LOCATION PLAN
1" = 40'-0"

GENERAL SHEET NOTES

- FOUNDATION LEGEND
-  EDGE JACK
 -  CENTER JACK
 -  CINDER BLOCK FOOTING
 -  16"X16" ABS 1 3/4" SUPPORT PAD
 -  12"X24" ABS 1 3/4" SUPPORT PAD



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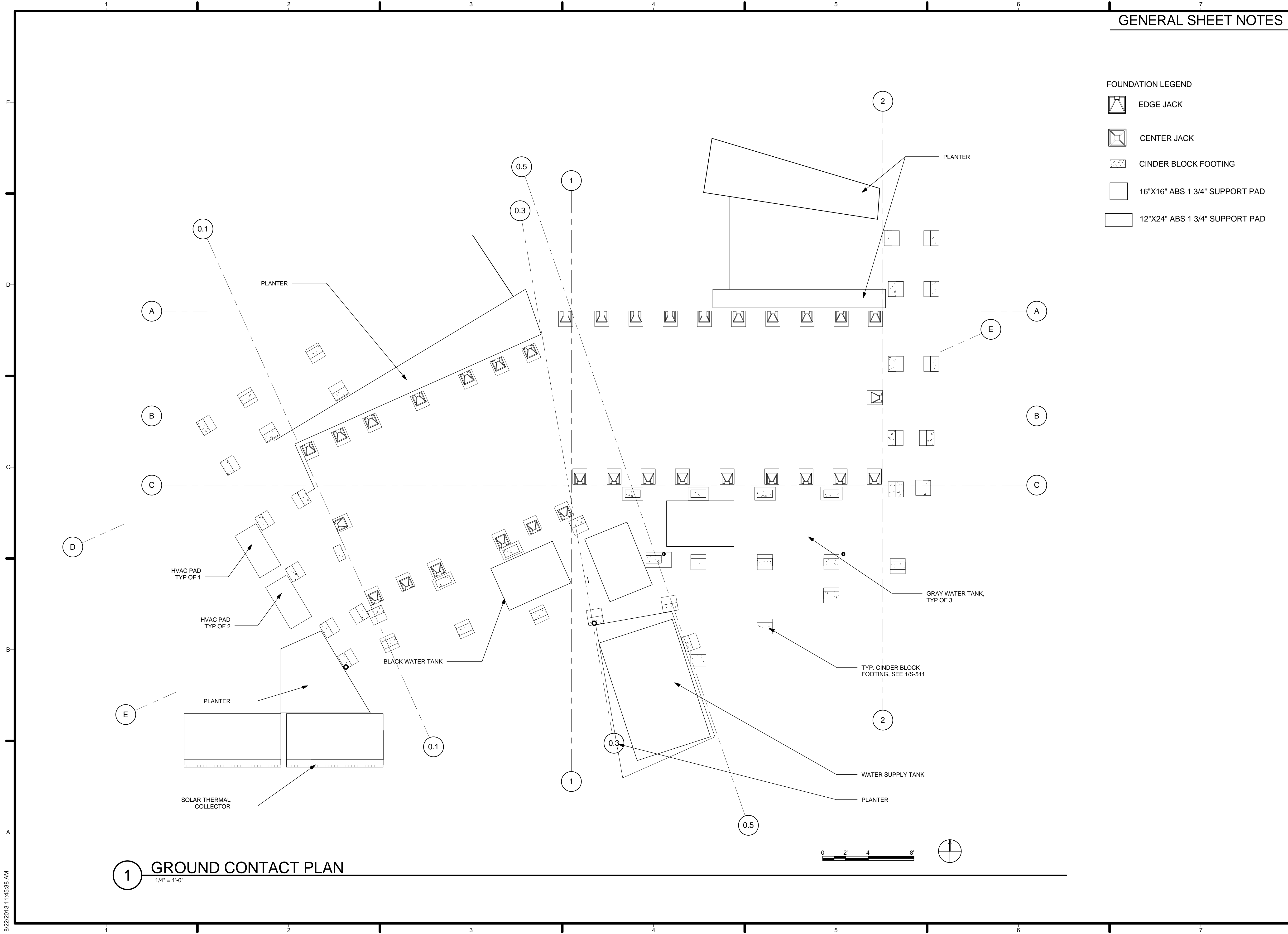
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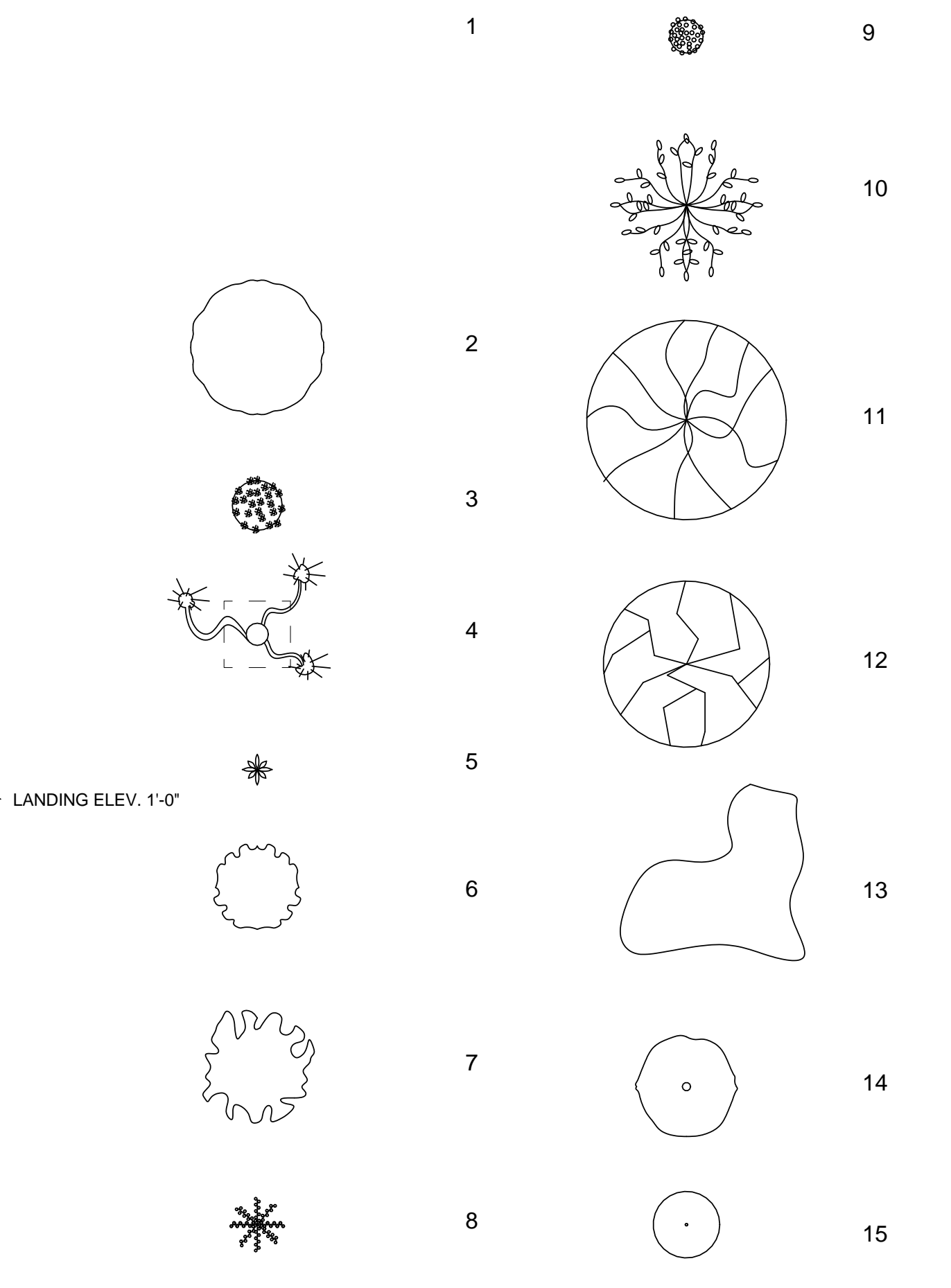
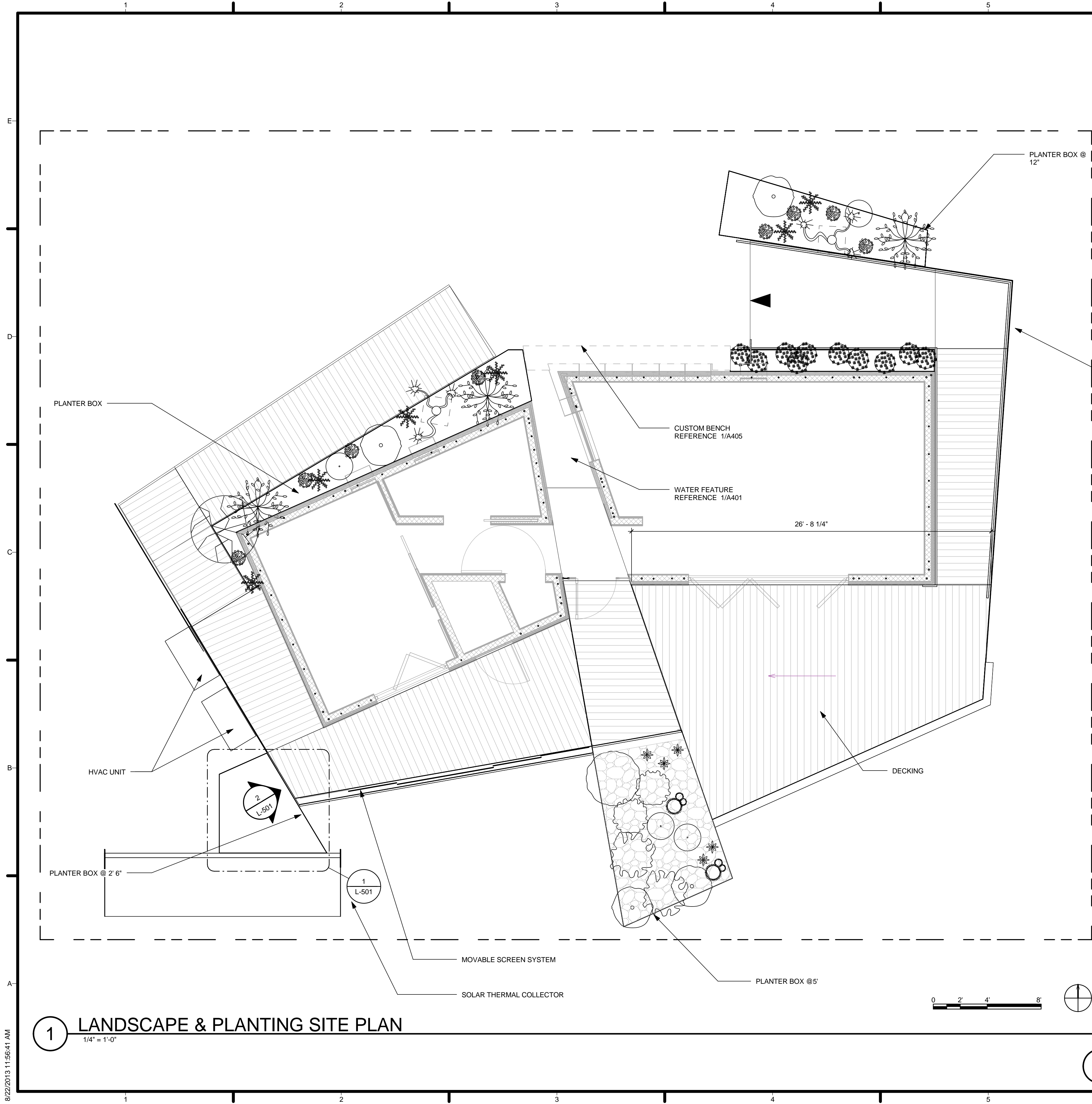
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GROUND CONTACT PLAN

C-102



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2 PLANT ACCENTS
1/4" = 1'-0"

#	LATIN NAME	COMMON NAME	TYPE	DIA.	POT SIZE
1	ACACIA GREGGII	CAT'S CLAWS ACACIA	TREE	12'	24" BOX
2	LARREA TRIDENTATA	CREOSOTE BUSH	SHRUB	4'	5 GAL
3	BAILEYA MULTIRADIATA	DESERT MARIGOLD	ANNUAL HERB	1.5'	1.5 GAL
4	YUCCA BREVIFOLIA	JOSHUA TREE	TREE	5'-10'	24" BOX
5	AGAVE UTAHENSIS	UTAH AGAVE	SUBSHRUB	1'	1 GAL
6	ENCELIA FARINOSA	BRITTLE BUSH	SHRUB	2'-3'	1 GAL
7	EPHEDRA VIRIDIS	MORMON TEA	SHRUB	1'-5'	1 GAL
8	PENSTEMON EATONII	FIRECRACKER PENSTEMON	PERENNIAL HERB	1'	1 GAL
9	OENOTHERA DELTOIDES	WHITE DUNE PRIMROSE	SUBSHRUB	1'	1 GAL
10	GUARA COCCINEA	SCARLET GUARA	SHRUB	4'	5 GAL
11	RHAMNUS CALIFORNICA	COFFEEBERRY	SHRUB	6'	5 GAL
12	PURSHIA MEXICANA	CLIFFROSE	SHRUB	5'	5 GAL
13	VITEX ARIZONICA	CANYON GRAPE	SHRUB	12'	10 GAL
14	FALLUGIA PARADOXA	APACHE PLUME	SHRUB	3'-4'	5 GAL
15	SALVIA DORRII	PURPLE SAGE	SHRUB	2'	5 GAL
16	FEROCACTUS ACANTHODES	COMPASS BARREL CACTUS	CACTUS	1	1 GAL

3 SCHEDULE - PLANTS
12" = 1'-0"

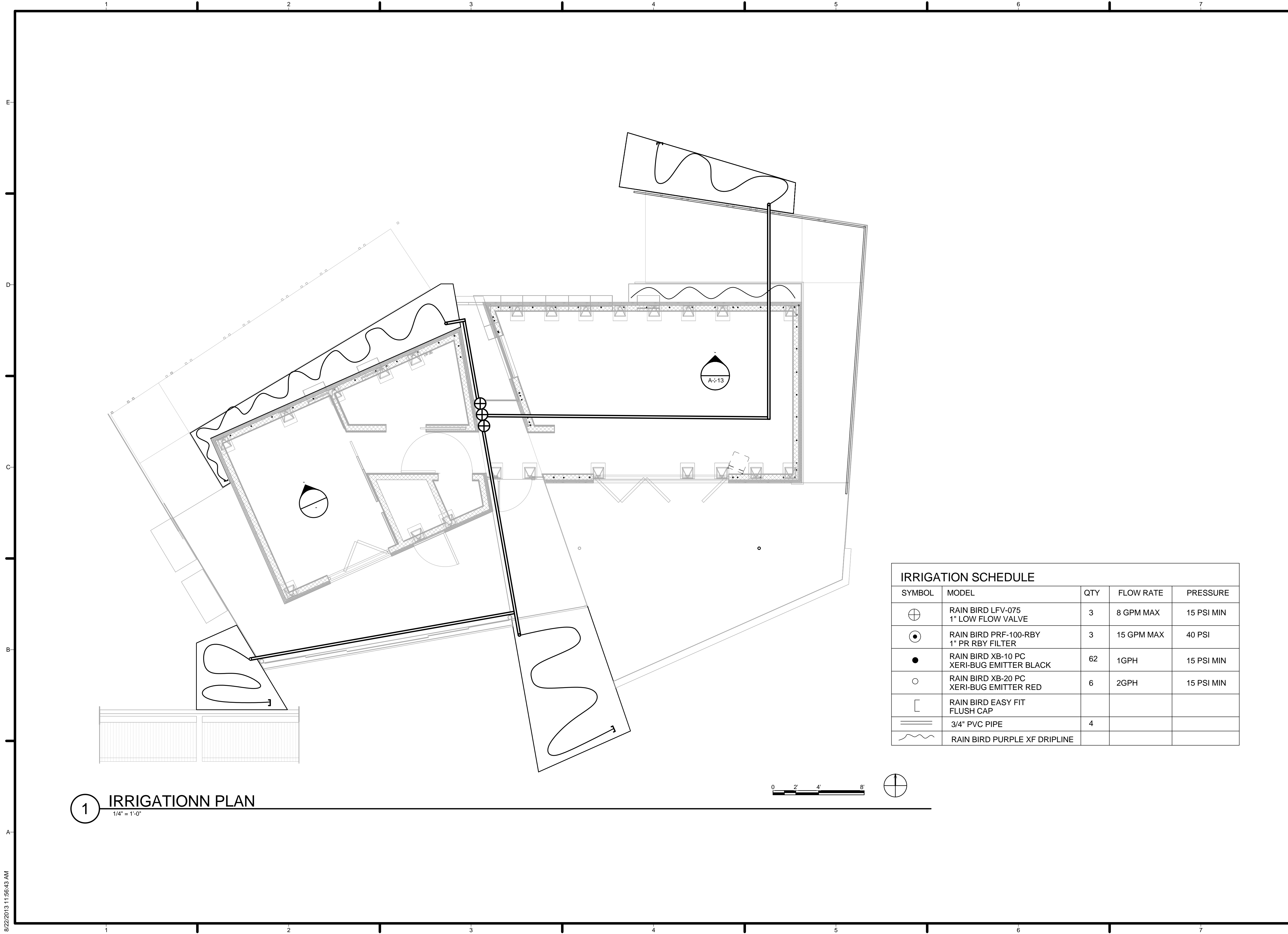
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LANDSCAPE AND PLANTING SITE PLAN

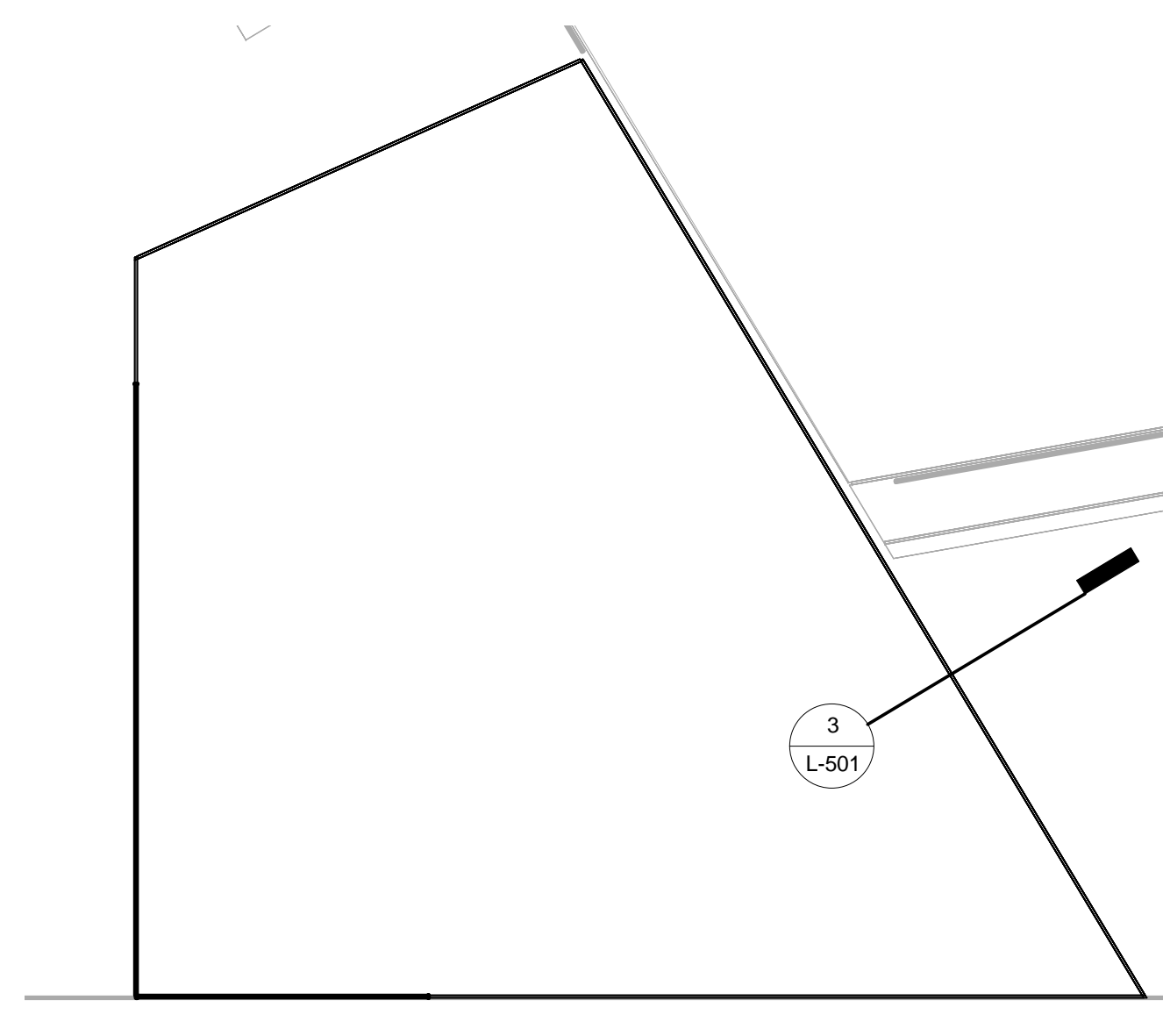
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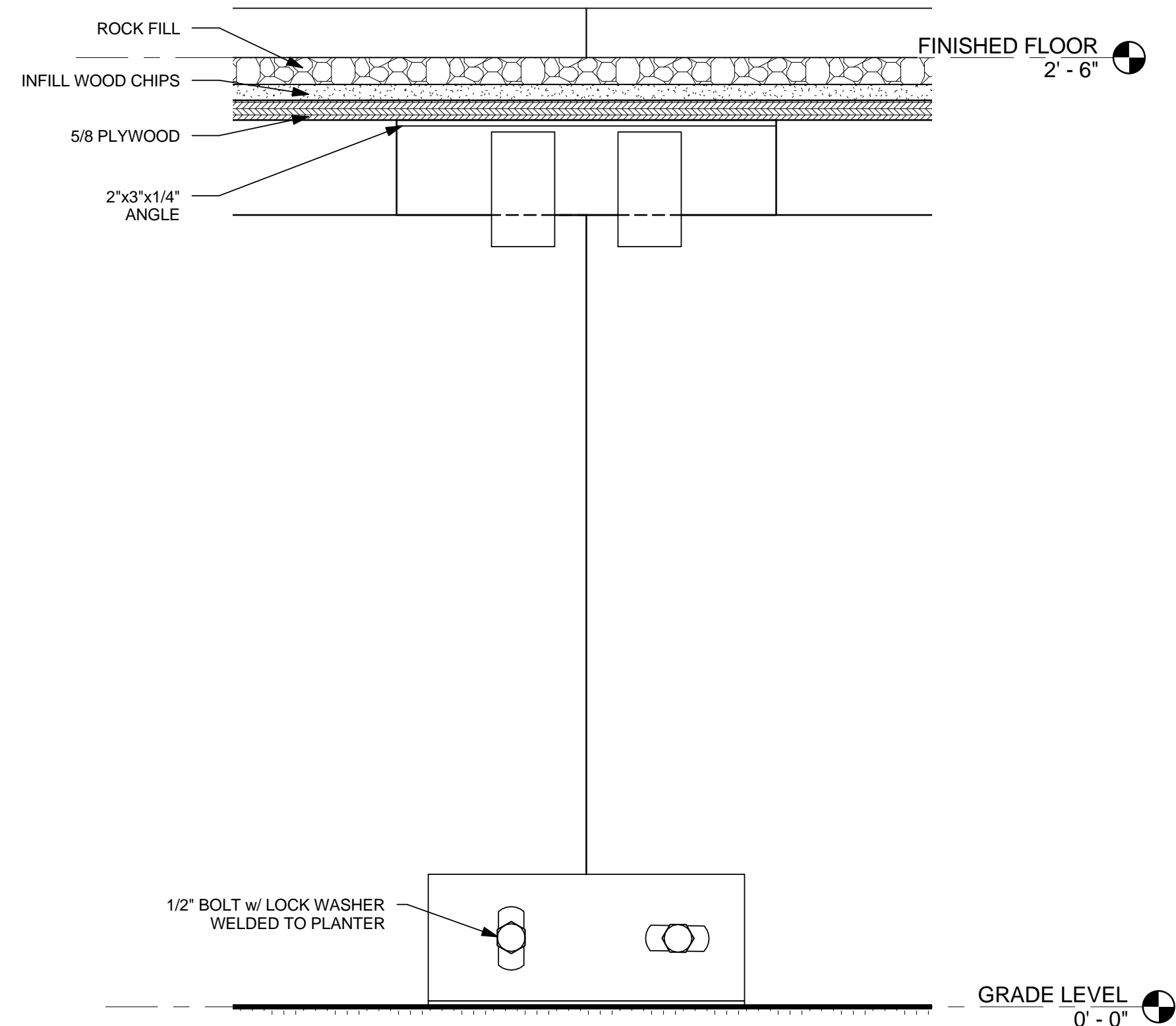
IRRIGATION SCHEDULE				
SYMBOL	MODEL	QTY	FLOW RATE	PRESSURE
⊕	RAIN BIRD LFV-075 1" LOW FLOW VALVE	3	8 GPM MAX	15 PSI MIN
⊙	RAIN BIRD PRF-100-RBY 1" PR RBY FILTER	3	15 GPM MAX	40 PSI
●	RAIN BIRD XB-10 PC XERI-BUG EMITTER BLACK	62	1GPH	15 PSI MIN
○	RAIN BIRD XB-20 PC XERI-BUG EMITTER RED	6	2GPH	15 PSI MIN
⌈	RAIN BIRD EASY FIT FLUSH CAP			
—	3/4" PVC PIPE	4		
~	RAIN BIRD PURPLE XF DRIPLINE			

1 IRRIGATIONN PLAN
 1/4" = 1'-0"

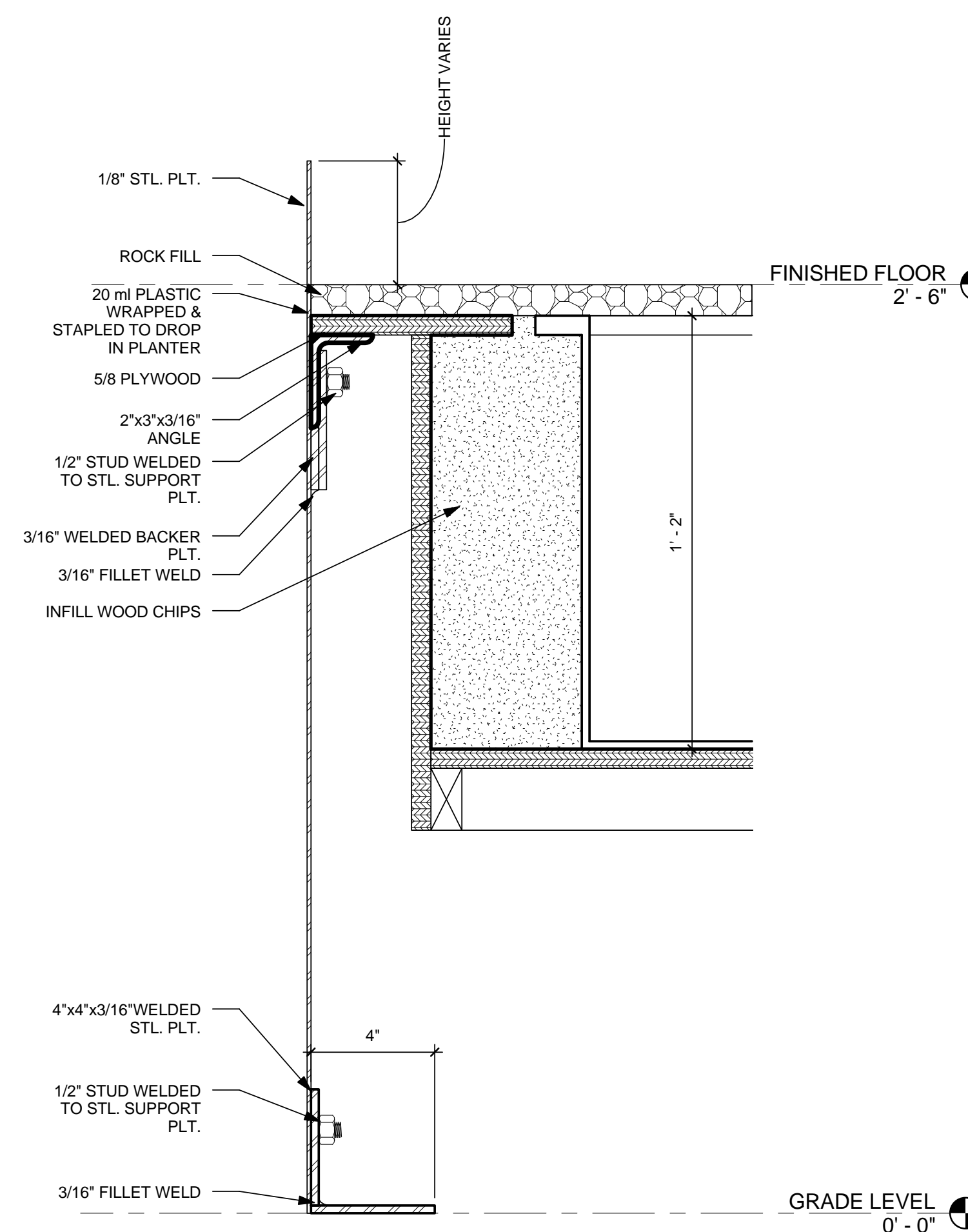
IRRIGATION PLAN



1 PLANTER BOX PLAN
3/4" = 1'-0"



2 TYP. INTERIOR ELEV. OF PLANTER
3" = 1'-0"



3 TYP. PLANTER SECTION DETAIL
3" = 1'-0"

SPECIAL CONDITIONS, REQUIREMENTS AND NOTES TO OWNER, DEVELOPER AND CONTRACTORS

CONTRACTOR, BUILDER AND SUBCONTRACTORS INVOLVED IN ANY FORM OF CONSTRUCTION USING THESE DOCUMENTS SHALL INFORM THE OWNER AND DEVELOPER IN WRITING PRIOR TO CONSTRUCTION OF THE FOLLOWING RESPONSIBILITIES, PERFORMANCE CRITERIA AND LIMITATIONS AND RISKS ASSOCIATED WITH CONSTRUCTION. IF THE OWNER, DEVELOPER OR CONTRACTOR IS NOT ABLE TO ACCEPT RESPONSIBILITIES OR PERFORMANCE CRITERIA AND LIMITATIONS, NOTIFY OUR OFFICE PRIOR TO START OF CONSTRUCTION. IT SHALL BE EXPRESSLY UNDERSTOOD THAT THE ENGINEER IS NOT RESPONSIBLE OR LIABLE FOR THE LACK OF PERFORMANCE OF MATERIALS, SYSTEMS OR DESIGNS NOT BEING LIMITED TO ITEMS OUTLINED BELOW. CONTRACTORS AND SUBCONTRACTORS SHALL THOROUGHLY REVIEW ALL CONDITIONS AND RESPONSIBILITIES STATED IN THESE NOTES, GENERAL STRUCTURAL NOTES, PLANS, SECTIONS AND DETAILS AND SHALL NOTIFY THE ENGINEER AND OWNER IN WRITING PRIOR TO CONSTRUCTION OF ANY CONDITIONS OR RESPONSIBILITIES WHICH ARE NOT ACCEPTABLE OR NOT UNDERSTOOD.

1. DUE TO MOISTURE VARIATIONS AS A RESULT OF AMBIENT CONDITIONS AND MATERIAL CONDITIONS AT TIME OF CONSTRUCTION, WOOD MEMBERS ARE SUSCEPTIBLE TO VOLUME AND SHAPE CHANGES AND DIMENSIONAL VARIATIONS. SPANNING MEMBERS MAY ALSO DEFLECT VERTICALLY OR LATEROALLY. SHEATHING, DRYWALL OR ARCHITECTURAL SURFACES SUPPORTED BY WOOD MEMBERS MAY DISTORT, CRACK AND BULGE DUE TO THESE FACTORS.
2. PLAIN CONCRETE, REINFORCED CONCRETE, POST-TENSIONED CONCRETE, OR CONCRETE MASONRY DEVELOP CRACKS. THE CRACKS ARE DUE TO INHERENT SHRINKAGE, CREEP AND RESTRAINING EFFECTS. CRACKS ARE NORMALLY COSMETIC AND THE SYSTEM MAINTAINS SERVICEABILITY AND STRENGTH REQUIREMENTS. JOINTS MAY BE INDICATED TO CONTROL CRACKING, BUT ARE NOT MEANT TO ELIMINATE ALL CRACKING, AS THIS IS NOT PRACTICAL. THE CONTRACTOR SHALL USE ALL STANDARD MEANS TO INSURE PROPER PROTECTION AND CURING OF CEMENTITIOUS MATERIALS TO REDUCE CRACKING, SURFACE SPALLING OR EXTREME CRACKING MAY BE CAUSED BY POOR MATERIAL OR PLACEMENT. CONTACT OUR OFFICE FOR POSSIBLE REPAIR REQUIREMENTS.
3. BUILDING SUPPORTS (FOUNDATIONS) HAVE BEEN DESIGNED USING THE RECOMMENDATIONS IN THE SOLAR DECATHLON 2013 RULES. SETTLEMENT MAY CAUSE DISTORTION AND DISTRESS TO THE SUPPORTED STRUCTURE.
4. PLYWOOD OR APA RATED SHEATHING (OSB) AS NOTED ON DRAWINGS OR NOTES MAY BE A MINIMUM AS REQUIRED FOR STRUCTURAL LOADS. CONTRACTOR, DEVELOPER AND/OR OWNER SHALL BE RESPONSIBLE FOR SPECIFYING ALTERNATE THICKNESS OR SPAN RATING REQUIREMENTS TO SATISFY ROOFING WARRANTIES, NOISE RESTRICTIONS OR SUPPLEMENTAL DEFLECTION CRITERIA. CONTACT ENGINEER FOR INCREASED NAILING REQUIREMENTS FOR ALTERNATE SHEATHING.
5. VARIATION IN DIMENSIONS MAY OCCUR AS A RESULT OF THERMAL INFLUENCES, NATURAL DEFLECTIONS AND/OR CAMBERS OF MEMBERS. AS A RESULT, QUANTITIES MAY VARY AND ARCHITECTURAL FINISHES MAY BE AT RISK OF COSMETIC VARIATION OR DAMAGE.
6. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR VARIATIONS TO PLANS BETWEEN BID PROCESS AND FINALIZED APPROVED DOCUMENTS RELEASED FOR CONSTRUCTION. ADDITIONS AND ALTERATIONS MAY BE MADE BETWEEN RELEASE OF BID DOCUMENTS AND FINALIZED CONSTRUCTION DOCUMENTS.
7. DESIGNS HAVE BEEN COMPLETED USING THE CODE STATED IN THE BASIS FOR DESIGN. WHERE MORE THAN ONE REFERENCE IS LISTED BELOW, THE REFERENCE THAT CORRESPONDS TO THE CODE STATED IN THE BASIS OF DESIGN SHALL BE USED. OTHER SPECIALIZED CODES OR DIRECTIVES (IMU, OSHA, ASHRAE, ETC.) ARE NOT USED IN THE PREPARATION OF THESE DOCUMENTS AND ARE NOT REFERENCED.
8. THESE DRAWINGS HAVE BEEN PREPARED USING STANDARDS OF PROFESSIONAL CARE AND COMPLETENESS NORMALLY EXERCISED UNDER SIMILAR CIRCUMSTANCES BY REPUTABLE STRUCTURAL ENGINEERS IN THIS OR SIMILAR LOCALITIES. THEY NECESSARILY ASSUME THAT THE WORK DEPICTED WILL BE PERFORMED BY AN EXPERIENCED CONTRACTOR, SUBCONTRACTOR AND/OR WORKPERSONS WHO HAVE A WORKING KNOWLEDGE OF THE APPLICABLE CODE STANDARDS AND REQUIREMENTS AND OF INDUSTRY ACCEPTED STANDARD GOOD PRACTICE. AS NOT EVERY CONDITION OR ELEMENT IS (OR CAN BE) EXPLICITLY SHOWN ON THESE DRAWINGS, IT IS UNDERSTOOD THAT THE CONTRACTOR WILL USE INDUSTRY ACCEPTED STANDARD GOOD PRACTICE FOR ALL WORK NOT EXPLICITLY SHOWN.
9. THESE DRAWINGS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DESIGN AND PROVIDE ADEQUATE SHORING, BRACING, FORMWORK, ETC. AS REQUIRED FOR THE PROTECTION OF LIFE AND PROPERTY DURING CONSTRUCTION. CONSTRUCTION MATERIALS SHALL BE UNIFORMLY SPREAD OUT SUCH THAT DESIGN LIVE LOAD PER SQUARE FOOT AS STATED HEREIN IS NOT EXCEEDED. VISITS TO THE SITE BY THE STRUCTURAL ENGINEER SHALL NOT INCLUDE INSPECTION OF THE ABOVE ITEMS.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL DIMENSIONS, CONDITIONS AND ELEVATIONS WITH ARCHITECTURAL DRAWINGS PRIOR TO START OF CONSTRUCTION. THE CONTRACTOR SHALL INFORM THE ARCHITECT IN WRITING OF ANY DISCREPANCIES OR OMISSIONS NOTED ON THE DRAWINGS. ANY SUCH DISCREPANCY, OMISSION, OR VARIATION NOT REPORTED BEFORE START OF CONSTRUCTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
12. WHERE REFERENCE IS MADE TO VARIOUS TEST STANDARDS FOR MATERIALS, SUCH STANDARDS SHALL BE THE LATEST EDITION AND/OR ADDENDA.
13. OPTIONS ARE FOR CONTRACTOR'S CONVENIENCE. IF AN OPTION IS USED, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL NECESSARY CHANGES AND SHALL COORDINATE ALL DETAILS.
14. TYPICAL DETAILS AND NOTES SHALL APPLY, THOUGH NOT NECESSARILY INDICATED AT A SPECIFIC LOCATION ON PLANS. WHERE NO DETAILS ARE SHOWN, CONSTRUCTION SHALL CONFORM TO SIMILAR WORK ON THE PROJECT. DETAILS MAY SHOW ONLY ONE SIDE OF CONNECTION OR MAY OMIT INFORMATION FOR CLARITY. WHERE DISCREPANCIES OCCUR IN THESE DRAWINGS, NOTES AND DETAILS ON DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL STRUCTURAL NOTES AND TYPICAL DETAILS.
15. ALL OPENINGS ARE NOT SHOWN ON THESE DRAWINGS. ESTABLISH AND VERIFY ALL OPENINGS AND INSERTS FOR ARCHITECTURAL, MECHANICAL, PLUMBING AND ELECTRICAL WITH APPROPRIATE TRADES, DRAWINGS AND SUBCONTRACTORS PRIOR TO CONSTRUCTION. OPENINGS MAY REQUIRE ADDITIONAL REINFORCING OR SUPPORTS AS SHOWN ON TYPICAL DETAILS. IF TYPICAL DETAILS FOR ALL CONDITIONS ARE NOT INCLUDED HEREIN, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REQUEST IN WRITING ADDITIONAL INFORMATION.
16. ALL INSPECTIONS REQUIRED BY THE BUILDING CODES, LOCAL BUILDING OFFICIALS, OR BY THESE PLANS SHALL BE PROVIDED BY AN INDEPENDENT INSPECTION COMPANY OR, THE BUILDING DEPARTMENT. INSPECTION REQUIREMENTS STATED HEREIN ARE PARTIAL. COMPLETE INSPECTION REQUIREMENTS SHALL BE AS DIRECTED BY THE LOCAL BUILDING DEPARTMENT. SITE VISITS BY THE ENGINEER DO NOT CONSTITUTE AN INSPECTION, UNLESS SPECIFICALLY CONTRACTED FOR.
17. SHOP DRAWINGS SHALL BE SUBMITTED FOR ALL STRUCTURAL ITEMS. SHOP DRAWINGS ARE REVIEWED ONLY FOR GENERAL COMPLIANCE WITH THE STRUCTURAL DRAWINGS. REVIEW DOES NOT INDICATE THAT THE SHOP DRAWINGS ARE CORRECT OR COMPLETE. RESPONSIBILITY FOR CORRECTNESS SHALL REST WITH THE CONTRACTOR. ANY CHANGES, SUBSTITUTIONS, OR DEVIATIONS FROM CONTRACT DRAWINGS SHALL BE CLOUDED. ANY OF THE AFOREMENTIONED SHALL NOT BE CONSIDERED APPROVED AFTER ENGINEER'S REVIEW UNLESS SPECIFICALLY NOTED ACCORDINGLY. THE SHOP DRAWINGS DO NOT SUPERSEDE OR REPLACE THE ORIGINAL CONTRACT DRAWINGS. ANY ENGINEERING PROVIDED BY OTHERS AND SUBMITTED FOR REVIEW SHALL BEAR THE SEAL OF AN APPROPRIATELY REGISTERED ENGINEER. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR THE ADEQUACY OF ENGINEERING DESIGNS PERFORMED BY OTHERS. ALLOW FIVE WORKING DAYS FOR THE ENGINEER'S REVIEW. ONE COPY OF EACH SUBMITTAL WILL BE RETAINED FOR THE ENGINEER'S RECORDS.

BASIS FOR DESIGN

1. BUILDING CODE: 2012 INTERNATIONAL BUILDING CODE (IBC) FOR STRUCTURAL ONLY. FOR ALL OTHER DISCIPLINES THE BASIS OF DESIGN IS 2012 INTERNATIONAL RESIDENTIAL CODE (IRC).
 2. ROOF LOADS: LIVE LOAD (PSF) = 20
DEAD LOAD (PSF) = 14 TOTAL; 12.2 SUPERIMPOSED ON PREFAB WOOD JOISTS
SNOW LOAD = N/A
 3. FLOOR LOADS: LIVE LOAD (PSF) = 50 TYPICAL FLOOR
100 EXTERIOR DECK & RAMPS
DEAD LOAD (PSF) = 21 TOTAL
13 SUPERIMPOSED ON CHASSIS Z PURLIN JOISTS
- *DEAD LOAD ASSUMES ONLY LIGHTWEIGHT FLOOR COVERINGS. NO HEAVY FLOOR COVERINGS, SUCH AS STONE OR HEAVY TILE SHALL BE USED WITHOUT PRIOR WRITTEN APPROVAL FROM THE STRUCTURAL ENGINEER OF RECORD.
4. WIND LOAD: 90 MPH, 3-SECOND GUST WIND SPEED
75 MPH, FASTEST-MILE WIND SPEED
WIND IMPORTANCE FACTOR, I=1.0
EXPOSURE CATEGORY C
INTERNAL PRESSURE COEFFICIENT, C_{pi}=+/-0.18
COMPONENT & CLADDING DESIGN PRESSURE = 18 PSF
 5. SEISMIC DESIGN DATA:
OCCUPANCY CATEGORY II
MAPPED SPECTRAL RESPONSE ACCELERATIONS: S_a=1.514, S₁=0.559
SPECTRAL RESPONSE COEFFICIENTS: S_{ds}=1.0093, S_{d1}=0.559
SITE CLASS: D
SEISMIC DESIGN CATEGORY = D
BASIC SEISMIC FORCE-RESISTING SYSTEM
LIGHT-FRAME WALLS WITH SHEAR PANELS (PLYWOOD PANELS), R=6.5
DESIGN BASE SHEAR = 0.1552R + W
ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE PROCEDURE
SEISMIC RESPONSE COEFFICIENT: C_s=0.15528
 6. FLOOD LOAD: N/A
 7. SPECIAL LOADS: N/A
 8. MASONRY DESIGN: ALLOWABLE STRESS DESIGN (ASD) [CMU DECK PIERS ONLY]

FOUNDATION NOTES

1. GEOTECHNICAL REPORT: PER 2012 IBC AND SOLAR DECATHLON 2013 RULES.
3. ALLOWABLE FOOTING BEARING: 6000 PSF FOOTINGS SUPPORTED BY ASPHALT.
4. TIE DOWN ANCHOR CAPACITY: PULLOUT DESIGN CAPACITY: 1250 LBS
SHEAR DESIGN CAPACITY: 1500 LBS

MASONRY (CONCRETE BLOCK)

1. COMPRESSIVE STRENGTH OF CONCRETE MASONRY CONSTRUCTION (CMU) SHALL BE AS FOLLOWS (PSI). MASONRY STRENGTH NOT SPECIFICALLY NOTED ON PLAN SHALL BE (F'_m) 1500 PSI.
MASONRY STRENGTH(F'_m DESIGN) BLOCK STRENGTH MORTAR STRENGTH GROUT STRENGTH
1500 1900 1800 2000
2. CONCRETE BLOCK SHALL BE HOLLOW LOAD-BEARING CONCRETE MASONRY UNITS CONFORMING TO IBC STANDARD 2103.1, ASTM C90, TYPE III-L.
3. MORTAR MIX SHALL CONFORM TO REQUIREMENTS OF IBC SECTION 2103.12, ASTM C270, TYPE M OR S. TYPE M MORTAR SHALL BE USED WHERE MASONRY IS IN CONTACT WITH SOIL.
4. GROUT SHALL CONFORM TO REQUIREMENTS OF IBC SECTION 2103.12, ASTM C476. USE SUFFICIENT WATER FOR GROUT TO FLOW INTO ALL JOINTS OF THE MASONRY WITHOUT SEGREGATION. ALL CELLS IN CONCRETE BLOCKS CONTAINING REINFORCING SHALL BE FILLED SOLID WITH GROUT.

STRUCTURAL STEEL

1. STRUCTURAL STEEL MEMBERS SHALL CONFORM WITH THE FOLLOWING STANDARDS AND MATERIAL PROPERTIES UNLESS NOTED OTHERWISE:
SHAPE STANDARD F_y
ROLLED WIDE FLANGE SECTIONS: ASTM A992 50 KSI
OTHER STANDARD STEEL SHAPES AND ROLLED SECTIONS: ASTM A36 36 KSI
BARS AND PLATES: ASTM A36 36 KSI
PIPS: ASTM A53 TYPE E OR S, GRADE B 35 KSI
TUBES & HSS: ASTM A500 GRADE B 46 KSI
BOLTS AT CHASSIS STEEL CONNECTIONS: ASTM A325 OR A490 ---
BOLTS AT CANOPY AND RAILING STEEL CONNECTIONS: ASTM A307, A325, OR A490
2. ALL BOLTS SHALL BE INSTALLED AS BEARING-TYPE CONNECTIONS WITH THREADS EXCLUDED FROM SHEAR PLANE (TYPE "N" CONNECTION), UNLESS NOTED OTHERWISE. HIGH-STRENGTH BOLTS SHALL BE TIGHTENED USING ANY AISC APPROVED METHOD. BOLTS IN SHEAR/BEARING CONNECTIONS ARE TO BE TIGHTENED ACCORDING TO THE FOLLOWING:
BOLT TYPE TIGHTENING
A307 SNIUG TIGHT
A325N/A490N SNIUG TIGHT
A325K/A490K SNIUG TIGHT
A325SC/A490SC FULL PRETENSIONING
3. ALL THREADED ROD, THREADED STUDS, FOUNDATION ANCHOR BOLTS, AND ALL BOLTED CONNECTIONS INVOLVING WOOD MEMBERS SHALL BE ASTM A307 UNLESS NOTED OTHERWISE. ALL EXPANSION OR EPOXY BOLTS SHALL HAVE CURRENT ICC RATING FOR MATERIAL INTO WHICH INSTALLATION OCCURS. HEADED STUDS SHALL CONFORM TO ALL REQUIREMENTS OF THE LATEST EDITION OF THE "RECOMMENDED PRACTICES FOR STUD WELDING" AND THE "STRUCTURAL WELDING CODE" PUBLISHED BY AMERICAN WELDING SOCIETY (AWS). ALL BOLTS, ANCHOR BOLTS, EXPANSION BOLTS, ETC. SHALL BE INSTALLED WITH STEEL WASHERS AT FACE OF WOOD.
4. ALL STRUCTURAL AND MISCELLANEOUS STEEL SHALL BE FABRICATED AND ERRECTED IN ACCORDANCE WITH AISC SPECIFICATIONS FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS, LATEST EDITION.
5. WELDING SHALL BE PERFORMED BY WELDERS HOLDING VALID CERTIFICATES AND HAVING CURRENT EXPERIENCE IN THE TYPE OF WELD SHOWN ON THE DRAWINGS. ALL WELDING SHALL USE E70 SERIES LOW HYDROGEN ELECTRODES UNLESS NOTED OTHERWISE. ALL WELDS INVOLVING REINFORCING BARS SHALL USE E60 SERIES ELECTRODES. ALL WELDING SHALL CONFORM TO THE LATEST AMERICAN WELDING SOCIETY (AWS) STANDARDS, WELDS ON DRAWINGS ARE SHOWN AS SHOP WELDS. CONTRACTOR MAY SHOP WELD OR FIELD WELD AT HIS DISCRETION. ALL FULL PENETRATION WELDS SHALL BE TESTED AND CERTIFIED BY AN INDEPENDENT TESTING LABORATORY.
6. GROUT BENEATH COLUMN BASES OR BEARING PLATES SHALL BE 5,000 PSI (MIN) NON-SHRINK FLOWABLE GROUT OR DRYPACK. INSTALL GROUT UNDER BEARING PLATES BEFORE FRAMING MEMBER IS INSTALLED. AT COLUMNS, INSTALL GROUT UNDER BASE PLATES AFTER COLUMN HAS BEEN PLUMBED BUT PRIOR TO FLOOR OR ROOF INSTALLATION. GROUT DEPTH SHALL BE SUFFICIENT TO ALLOW GROUT OR DRYPACK TO BE PLACED BENEATH PLATE WITHOUT VOIDS.
7. PAINT CHASSIS ON ALL EXPOSED SURFACES TO DRY FILM THICKNESS OF 1.5 MILS.

WOOD

1. SAW FRAMING LUMBER SHALL COMPLY WITH THE LATEST EDITION OF THE GRADING RULES OF THE WESTERN WOOD PRODUCTS ASSOCIATION OR THE WEST COAST LUMBER INSPECTION BUREAU. ALL SAW LUMBER SHALL BE STAMPED WITH THE GRADE MARK OF AN APPROVED LUMBER GRADING AGENCY. SAWN LUMBER SHALL HAVE THE FOLLOWING MINIMUM GRADE (UNLESS NOTED OTHERWISE):
2x6 STUDS UP TO 10'-0"
2x6 STUDS OVER 10'-0"
2x4 TOP OR BOTTOM PLATES
2x4 OR 2x6 BLOCKING
LVL REDLUM 2.0E
LVL REDLAM 2.0E
LVL REDLAM 2.0E
DOUGLAS FIR STANDARD, STUD, NO.2
2x8, 2x10, 2x12 (ALL APPLICATIONS)
4x4 (ALL APPLICATIONS)
4x6, 4x8, 4x10, 4x12 (ALL APPLICATIONS)
6x6, 6x8, 6x10, 6x12 (ALL APPLICATIONS)
LVL REDLAM 2.0E OR TIMBERSIL GLASS WOOD
TIMBERSIL GLASS WOOD
TIMBERSIL GLASS WOOD
TIMBERSIL GLASS WOOD
 2. HEADERS AND BEAMS SHALL BE LVL REDLAM 2.0E.
 3. LAMINATED VENEER LUMBER (MICROLAM) SHALL BE WESTERN SPECIES MANUFACTURED IN ACCORDANCE WITH REDBUILT CORPORATION MANUFACTURING STANDARDS AS REFERENCED IN ICC REPORT NO. ESR-2993, OR APPROVED EQUAL, AND SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES: E = 2,000,000 PSI, F_b = 2900 PSI, F_c (PERPENDICULAR) = 750 PSI, F_c (PARALLEL) = 2635 PSI, F_v = 285 PSI. WHEN MULTIPLE MICROLAMS ARE GROUPED TOGETHER, FASTEN WITH 2 ROWS OF 16d COMMON NAILS AT 12" OC. USE 3 ROWS OF 16d COMMON NAILS AT 12" OC FOR DEPTHS 14" OR GREATER. 16" AND 18" DEEP BEAMS ARE TO BE USED IN MULTIPLE MEMBER UNITS ONLY. SEE MANUFACTURER'S RECOMMENDATION WHEN GROUPING 4 MEMBERS TOGETHER OR GROUPING MEMBERS WIDER THAN 1-3/4".
 4. ALL PLYWOOD SHALL BE C-D OR C-C SHEATHING CONFORMING TO USDFP PS-1 AND PS-2. PLYWOOD SHALL HAVE EXTERIOR GLUE, LAY UP PLYWOOD WITH FACE GRAIN PERPENDICULAR TO SUPPORTS. PROVIDE BLOCKING AT PANEL EDGES WHERE INDICATED ON PLANS. ALL PLYWOOD SHALL CONFORM TO THE FOLLOWING NOMINAL THICKNESS, SPAN RATING AND NAILING PATTERN UNLESS NOTED OTHERWISE:
THICKNESS: SPAN RATING: EDGE NAILING: FIELD NAILING:
3/8" 24/0 8d AT 6" OC 8d AT 12" OC
7/16" 24/16 8d AT 6" OC 8d AT 12" OC
15/32" (1/2") 32/16 8d AT 6" OC 8d AT 12" OC
3/4" (23/32") 48/24 10d AT 6" OC 10d AT 16" OC
60/48 10d AT 6" OC 10d AT 6" OC
1-1/8" 60/48 10d AT 6" OC 10d AT 6" OC
- UNLESS NOTED OTHERWISE ON PLAN (SEE PLAN), ROOF SHEATHING SHALL BE 15/32" MIN AND FLOOR SHEATHING SHALL BE 3/4" MINIMUM, UNLESS NOTED OTHERWISE.
5. DIMENSIONS OF NAILS SHALL CONFORM WITH THE FOLLOWING TABLE:
NAIL SIZE SHANK DIA: LENGTH
16d COMMON .162" 3-1/2"
16d SINKER .148" 3-1/4"
16d BOX .135" 3-1/2"
P-NAIL .131" 3-1/4"
10d COMMON .148" 3"
8d COMMON .131" 2-1/2"
- NAILS ONLY NOTED AS 16d MAY BE COMMON, SINKER OR P-NAIL UNLESS NOTED SPECIFICALLY AS COMMON, SINKER OR P-NAIL. NAILS NOTED ON PLANS OR NOTES AS 10d OR 8d SHALL BE COMMON ONLY. ALL NAILING NOT NOTED SHALL BE ACCORDING TO IBC TABLE 2304.9.1.

6. SOLE PLATES RESTING ON CONCRETE OR MASONRY SHALL BE TREATED DOUGLAS FIR. ANCHOR BOLTS AT SOLE PLATES SHALL BE 1/2" DIA W/ AUTOMATIC WELD TO CHASSIS FRAME AS SPECIFIED. REFER TO PLAN FOR BOLT SPACING. HOLDOWN BOLTS SHALL NOT BE CONSIDERED AS ANCHOR BOLTS.
7. DO NOT NOTCH, SLOPE CUT, OR DRILL JOISTS, BEAMS OR LOAD-BEARING STUDS WITHOUT PRIOR APPROVAL OF THE STRUCTURAL ENGINEER THROUGH THE ARCHITECT UNLESS SPECIFIC DETAILS ARE PROVIDED. DOUBLE UP FLOOR JOISTS AND BLOCKING UNDER WALLS THAT RUN PARALLEL TO THE JOISTS. PROVIDE 2" (NOMINAL) SOLID BLOCKING BETWEEN JOISTS AT SUPPORTS.
8. JOIST HANGERS AND OTHER MISCELLANEOUS FRAMING ANCHORS SHALL BE AS MANUFACTURED BY SIMPSON STRONG-TIE COMPANY WITH CURRENT ICC APPROVAL. ATTACH FRAMING ANCHORS TO WOOD PER MANUFACTURER'S RECOMMENDATIONS. USE MAXIMUM NUMBER AND SIZE OF FASTENER WHERE NOT SPECIFICALLY NOTED. USE OF ALTERNATE HARDWARE MANUFACTURER REQUIRES WRITTEN APPROVAL OF THE ENGINEER. VERIFY LOCATION OF HOLDOWNS, POST BASES, ETC. WITH FRAMING TO ENSURE PROPER AND ACCURATE INSTALLATION.
9. ALL BOLTS SHALL BE INSTALLED IN HOLES BORED WITH A BIT 1/16 INCH LARGER THAN THE DIAMETER OF THE BOLT. BOLTS AND NUTS SEATING ON WOOD SHALL HAVE CUT STEEL WASHERS UNDER HEADS AND NUTS. LONG THREADS TO PREVENT LOOSENING. LAG SCREWS SHALL BE INSTALLED IN PRE-DRILLED HOLES BY TURNING WITH A WRENCH.
10. ALL HOLDOWN ANCHORS ARE TO BE AUTOMATIC WELD TO CHASSIS FRAME. REFER TO PLAN FOR LOCATION AND DIAMETER.
11. PREFABRICATED WOOD I JOISTS SHALL BE DESIGNED TO SUPPORT THEIR SELF-WEIGHT, PLUS LIVE LOAD AND SUPERIMPOSED DEAD LOADS, INCLUDING, BUT NOT LIMITED TO, WALLS EITHER PARALLEL OR PERPENDICULAR TO THE SPAN, ALL MECHANICAL AND OTHER EQUIPMENT, AND SHALL BE DESIGNED TO RESIST ALL DRAG FORCES, SHEAR WALL UPLIFT AND DOWNWARD LOADS, AND OTHER SPECIAL LOADS NOTED ON STRUCTURAL, MECHANICAL, PLUMBING, OR ARCHITECTURAL DRAWINGS OR CALCULATIONS. BRIDGING SIZE AND SPACING SHALL BE AS DESIGNATED BY TRUSS MANUFACTURER UNLESS NOTED OTHERWISE. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS, ERECTION DRAWINGS AND DESIGN CALCULATIONS SEALED BY A REGISTERED ENGINEER. SHOP DRAWINGS SHALL SHOW ANY SPECIAL DETAILS REQUIRED AT BEARING POINTS. ALL CONNECTORS SHALL HAVE CURRENT ICC APPROVAL. THE MANUFACTURER SHALL DESIGN CONNECTION OF TRUSS REQUIRING PREFABRICATED HARDWARE HANGER OR OTHER.
12. PREFABRICATED PLYWOOD WEB I-JOIST/PURLINS (RED-HS OR RED-HS TRUSS JOIST REDBUILT OR EQUAL) SHALL BE DESIGNED, FABRICATED AND ERRECTED IN ACCORDANCE WITH THE LATEST EDITION OF ICC REPORT ESR-2994. CONNECTIONS AND BEARING MATERIAL SHALL BE DESIGNED AND FURNISHED BY JOIST FABRICATOR. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS WITH DESIGN CALCULATIONS SEALED BY AN APPROPRIATELY REGISTERED ENGINEER FOR REVIEW PRIOR TO MANUFACTURE. ADDITIONAL MEMBERS SHALL BE SUPPLIED AS REQUIRED TO SUPPORT MECHANICAL EQUIPMENT.
13. WHERE BRIDGING INTERFERES WITH MECHANICAL OR OTHER INSTALLATIONS, REMOVE BRIDGING AFTER DECK IS IN PLACE AND REPLACE WITH ADDITIONAL MANUFACTURER SUPPLIED HORIZONTAL STRUT BRACING AT TOP AND BOTTOM CHORDS.
14. DRAWINGS AND DETAILS DO NOT NECESSARILY INDICATE NONSTRUCTURAL BLOCKING, BRACING, DRYWALL BACKING, ETC. ALL SUCH ITEMS SHALL BE ADEQUATELY SECURED TO FRAMING.

COLD FORMED STEEL FRAMING

1. ALL COLD FORMED STEEL FRAMING SHALL BE FABRICATED AND ERRECTED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND IN ACCORDANCE WITH THE LATEST EDITION OF "SPECIFICATIONS FOR THE DESIGN OF COLD FORMED STEEL STRUCTURAL MEMBERS" BY THE AMERICAN IRON AND STEEL INSTITUTE.
2. STEEL FOR 12 GAGE JOISTS SHALL HAVE A MINIMUM YIELD STRENGTH OF 50 KSI.
3. STEEL SHALL BE GALVANIZED OR THOROUGHLY COATED WITH RUST INHIBITIVE PAINT AT ALL LOCATIONS.
4. ALL WELDS OF GALVANIZED STEEL SHALL BE TOUCHED UP WITH ZINC-RICH PAINT. ALL WELDS OF CARBON SHEET SHALL BE TOUCHED UP WITH PAINT.
5. ALL WELDS SHALL BE PERFORMED BY WELDERS EXPERIENCED IN LIGHT GAGE STRUCTURAL STEEL FRAMING WORK.
6. JOISTS SHALL HAVE CONTINUOUS SUPPORT OF THE COMPRESSION FLANGE. JOISTS SHALL HAVE EITHER CONTINUOUS SUPPORT OF THE TENSION FLANGE OR BRACING AT 8 FT ON CENTER CONSISTING OF A CONTINUOUS STRAP STARTING AND ENDING AT BLOCKING AT 10 FT ON CENTER MAXIMUM. ATTACH THE STRAP TO EVERY JOIST.

INSPECTION NOTES

1. IN ADDITION TO THE STANDARD INSPECTIONS BY THE BUILDING OFFICIAL REQUIRED PER IBC CHAPTER 17, THE OWNER SHALL EMPLOY ONE OR MORE SPECIAL INSPECTORS WHO SHALL PROVIDE INSPECTIONS DURING CONSTRUCTION FOR THE TYPES OF WORK LISTED IN THIS SECTION.
2. THE SPECIAL INSPECTOR SHALL BE A QUALIFIED PERSON WHO SHALL DEMONSTRATE COMPETENCE, TO THE SATISFACTION OF THE BUILDING OFFICIAL, FOR INSPECTION OF THE PARTICULAR TYPE OF CONSTRUCTION OR OPERATION REQUIRING SPECIAL INSPECTION.
3. THE SPECIAL INSPECTOR SHALL INSPECT THE WORK ASSIGNED FOR CONFORMANCE WITH THE APPROVED CONTRACT DRAWINGS AND SPECIFICATIONS. SPECIAL INSPECTOR SHALL FURNISH INSPECTION REPORTS TO THE BUILDING OFFICIAL, THE ENGINEER OF RECORD, AND OTHER DESIGNATED PERSONS. ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION. THEN, IF UNCORRECTED, TO THE ENGINEER AND THE BUILDING OFFICIAL. THE SPECIAL INSPECTOR SHALL SUBMIT A FINAL SIGNED REPORT STATING WHETHER THE WORK REQUIRING SPECIAL INSPECTION WAS, TO THE BEST OF THE INSPECTOR'S KNOWLEDGE, IN CONFORMANCE WITH THE APPROVED PLANS AND SPECIFICATIONS AND THE APPLICABLE CODE PROVISIONS.
4. INSPECTORS SHALL INSPECT FROM AN APPROVED SET OF CONTRACT DRAWINGS. SHOP DRAWINGS SHALL NOT BE USED IN LIEU OF THE APPROVED CONTRACT DRAWINGS FOR INSPECTION PURPOSES.
5. TYPES OF WORK TO BE INSPECTED BY THE SPECIAL INSPECTOR ARE AS FOLLOWS:
a) DURING THE WELDING OF ANY STRUCTURAL MEMBER OR CONNECTION, EXCEPT WELDING DONE IN AN APPROVED FABRICATOR'S SHOP PER IBC SECTION 1704.2.2. EXCEPTION: SPECIAL INSPECTOR NEED NOT BE CONTINUOUSLY PRESENT DURING WELDING OF SINGLE PASS FILLET WELDS NOT LARGER THAN 5/16 INCH OR FLOOR AND ROOF DECK WELDING, PROVIDED THE MATERIALS AND QUALIFICATIONS OF WELDING PROCEDURES AND WELDERS ARE VERIFIED PRIOR TO THE START OF WORK, AND PERIODIC INSPECTIONS ARE MADE OF WORK IN PROGRESS.
b) PERIODICALLY IN ACCORDANCE WITH IBC TABLE 1704.5.1 DURING THE PREPARATION AND TAKING OF ANY REQUIRED PRISM OR TEST SPECIMENS, PLACING OF ALL MASONRY UNITS, PLACEMENT OF REINFORCEMENT, INSPECTION OF GROUT SPACE IMMEDIATELY PRIOR TO CLOSING OF CLEANOUTS, AND DURING ALL GROUTING OPERATIONS.
c) PERIODIC INSPECTIONS FOR SCREW ATTACHMENT, BOLTING, ANCHORING AND OTHER FASTENING OF COMPONENTS OF THE LATERAL-FORCE-RESISTING SYSTEM, INCLUDING STRUTS, DRAGS, BRACES, HOLDOWNS, SHEARWALLS AND DIAPHRAGMS.
6. CERTIFICATE OF APPROVAL REGARDING MATERIALS AND INSPECTION OF PREFABRICATED ITEMS SHALL BE PROVIDED IN ACCORDANCE WITH IBC SECTION 1703 THE QUALITY ASSURANCE PROGRAM.



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**SUBMISSIONS
100% CONSTRUCTION DOCUMENTATION 02.14.2013**

REVISIONS

REV	DATE	DESCRIPTION
1	30 MAY 2013	NTA REVIEW COMMENTS
2	21 MARCH 2013	NREL REVIEW COMMENTS

**DATE: August 22, 2013
LOT NUMBER: 114
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**STRUCTURAL
GENERAL NOTES**

S-001

GENERAL SHEET NOTES



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




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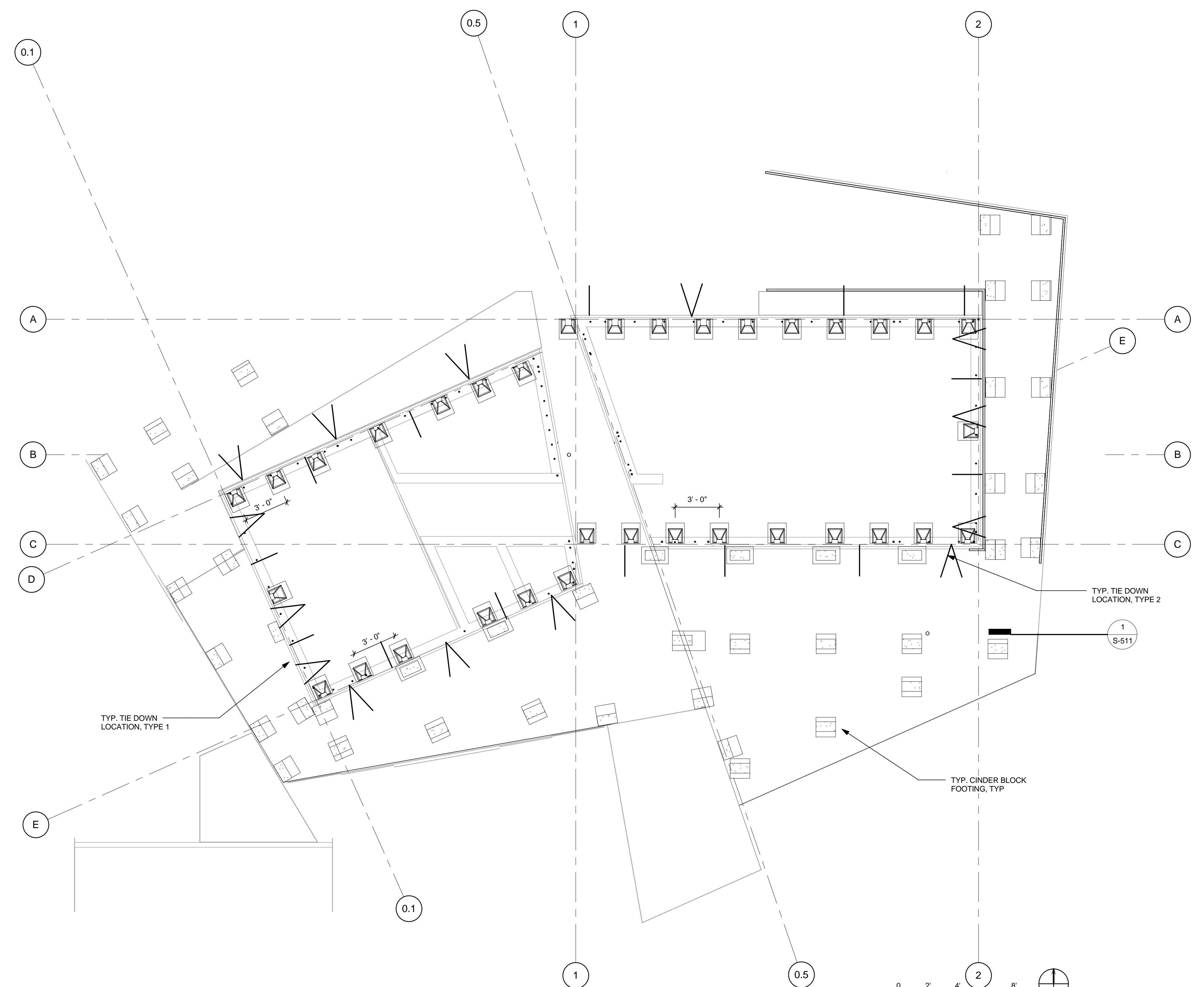
REVISIONS

REV	DATE	DESCRIPTION
1	21 MARCH 2013	NREL REVIEW COMMENTS

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FOUNDATION LEGEND

-  EDGE JACK
-  1) TIE DOWN 36 DEGREES PER DETAIL 3/S-511, ALL DIMENSION ON PLANS SHALL BE TO CENTERLINE OF BOLT THROUGH CHASSIS
-  2) TIE DOWN 30 DEGREES PER DETAIL 3/S-511, ALL DIMENSION ON PLANS SHALL BE TO CENTERLINE OF BOLT THROUGH CHASSIS
-  CINDER BLOCK FOOTING
-  16"X16" ABS 1 3/4" SUPPORT PAD
-  12"X24" ABS 1 3/4" SUPPORT PAD



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

FOUNDATION PLAN

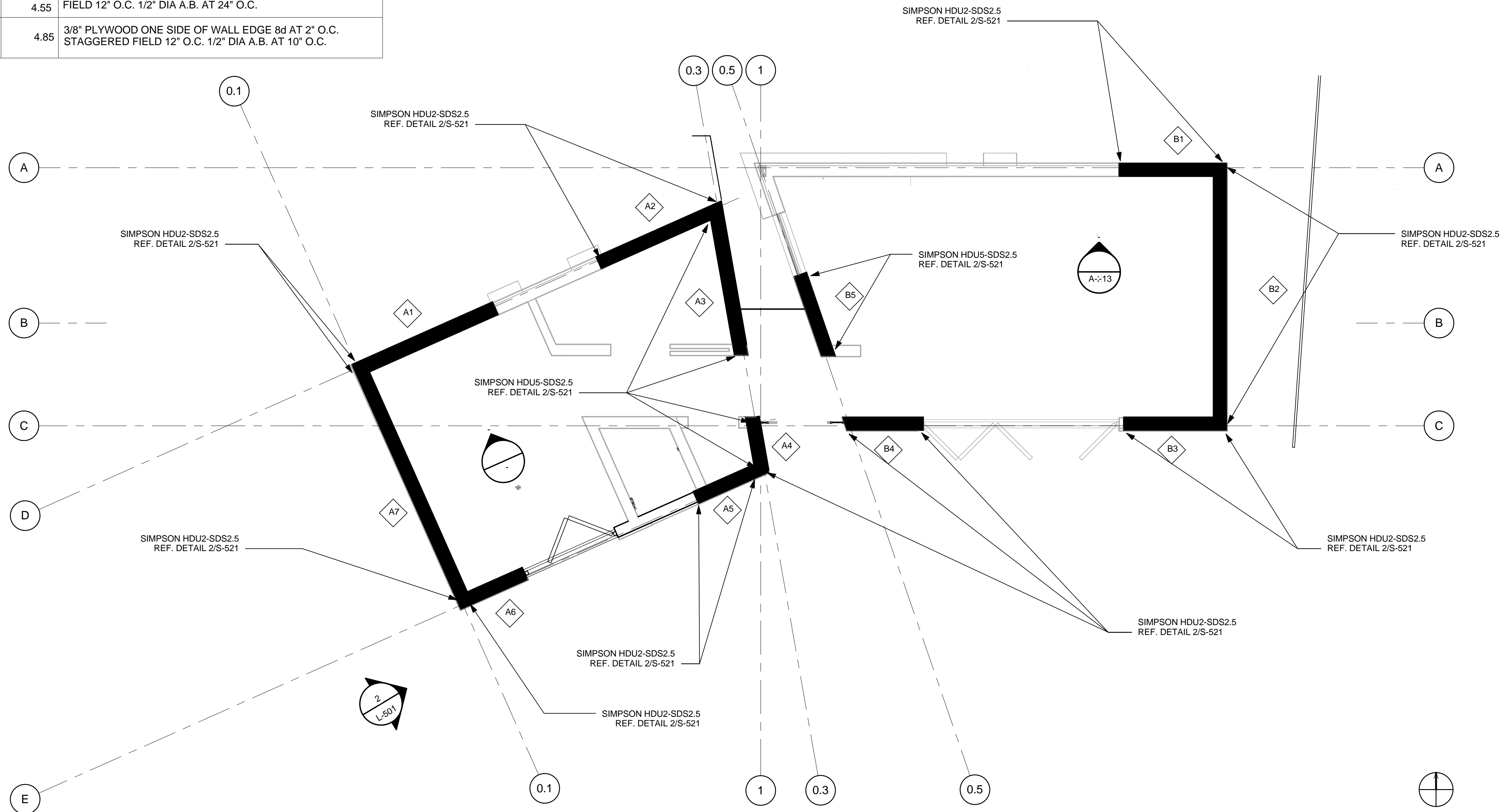
S-101

8/22/2013 12:14:02 PM

SHEAR WALL SCHEDULE

- NOTES
1. ALL PANEL EDGES SHALL BE BACKED WITH 2-INCH NOMINAL OR WIDER FRAMING U.N.O.
 2. 16d NAILS SHALL BE COMMON OR GALVANIZED BOX. 8d AND 10d NAILS SHALL BE COMMON NAILS
 3. 1/4" X 2" X 4" PLATE WASHERS REQUIRED BETWEEN SHEAR WALL BOTTOM PLATE AND EACH ANCHOR BOLT NUT

MODULE A				
NAME		HEIGHT FT	LENGTH FT	SHEAR WALL DETAIL
A1	NORTH WALL 1	12	9.57	3/8" PLYWOOD ONE SIDE OF WALL EDGE 8d AT 6" O.C.
A2	NORTH WALL 2	12	8.45	FIELD 12" O.C. 1/2" DIA A.B. AT 24" O.C.
A3	EAST WALL 1	10.5	10.85	3/8" PLYWOOD ONE SIDE OF WALL EDGE 8d AT 3" O.C.
A4	EAST WALL 2	10.5	3.27	FIELD 12" O.C. 1/2" DIA A.B. AT 12" O.C.
A5	SOUTH WALL 1	9	4.57	3/8" PLYWOOD ONE SIDE OF WALL EDGE 8d AT 6" O.C.
A6	SOUTH WALL 2	9	4.54	FIELD 12" O.C. 1/2" DIA A.B. AT 24" O.C.
A7	WEST WALL	10.5	15.86	3/8" PLYWOOD ONE SIDE OF WALL EDGE 8d AT 6" O.C.
				FIELD 12" O.C. 1/2" DIA A.B. AT 24" O.C.
MODULE B				
NAME		HEIGHT FT	LENGTH FT	SHEAR WALL DETAIL
B1	NORTH WALL	12	6.39	3/8" PLYWOOD ONE SIDE OF WALL EDGE 8d AT 6" O.C.
B2	EAST WALL	10.5	15.83	3/8" PLYWOOD ONE SIDE OF WALL EDGE 8d AT 6" O.C.
B3	SOUTH WALL 1	9	6.125	3/8" PLYWOOD ONE SIDE OF WALL EDGE 8d AT 6" O.C.
B4	SOUTH WALL 2	9	4.55	FIELD 12" O.C. 1/2" DIA A.B. AT 24" O.C.
B5	WEST WALL	10.5	4.85	3/8" PLYWOOD ONE SIDE OF WALL EDGE 8d AT 2" O.C.
				STAGGERED FIELD 12" O.C. 1/2" DIA A.B. AT 10" O.C.



1 LATERAL SYSTEM PLAN
1/4" = 1'-0"



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LATERAL SYSTEM PLAN

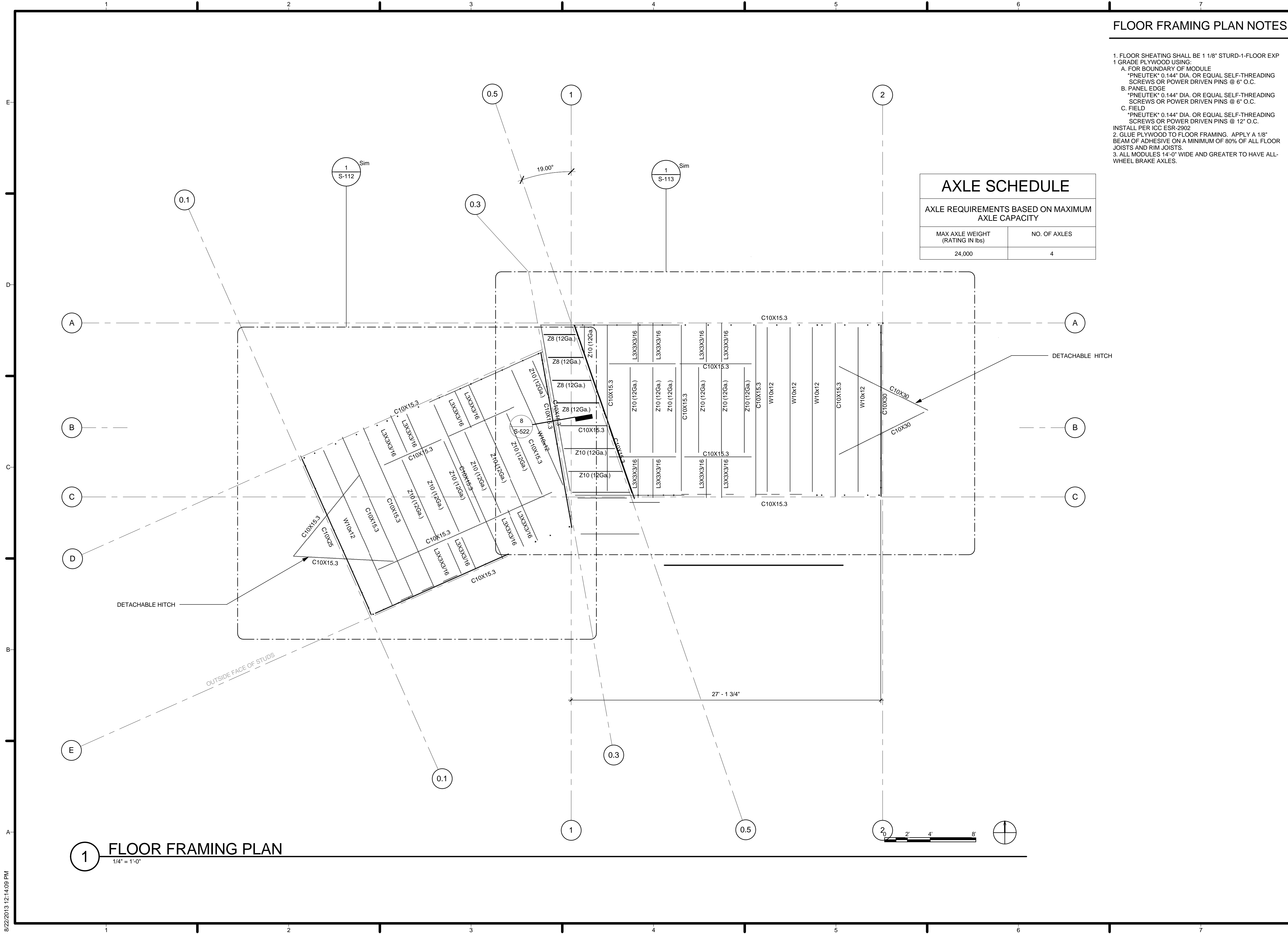
S-102

8/22/2013 12:14:04 PM

FLOOR FRAMING PLAN NOTES

1. FLOOR SHEATING SHALL BE 1 1/8" STURD-1-FLOOR EXP 1 GRADE PLYWOOD USING:
 - A. FOR BOUNDARY OF MODULE
 - *PNEUTEK® 0.144" DIA. OR EQUAL SELF-THREADING SCREWS OR POWER DRIVEN PINS @ 6" O.C.
 - B. PANEL EDGE
 - *PNEUTEK® 0.144" DIA. OR EQUAL SELF-THREADING SCREWS OR POWER DRIVEN PINS @ 6" O.C.
 - C. FIELD
 - *PNEUTEK® 0.144" DIA. OR EQUAL SELF-THREADING SCREWS OR POWER DRIVEN PINS @ 12" O.C.
2. GLUE PLYWOOD TO FLOOR FRAMING. APPLY A 1/8" BEAM OF ADHESIVE ON A MINIMUM OF 80% OF ALL FLOOR JOISTS AND RIM JOISTS.
3. ALL MODULES 14'-0" WIDE AND GREATER TO HAVE ALL-WHEEL BRAKE AXLES.

AXLE SCHEDULE	
AXLE REQUIREMENTS BASED ON MAXIMUM AXLE CAPACITY	
MAX AXLE WEIGHT (RATING IN lbs)	NO. OF AXLES
24,000	4



1 FLOOR FRAMING PLAN
1/4" = 1'-0"



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CHASSIS FRAMING PLAN

S-111

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NOTE TO FABRICATOR

1. VERIFY DIMENSIONS ON DETAIL 4/S-522 FOR COORDINATION WITH AXELS.
2. VERIFY AND COORDINATE THE HITCH BEAM ANGLES WITH THE HITCH.



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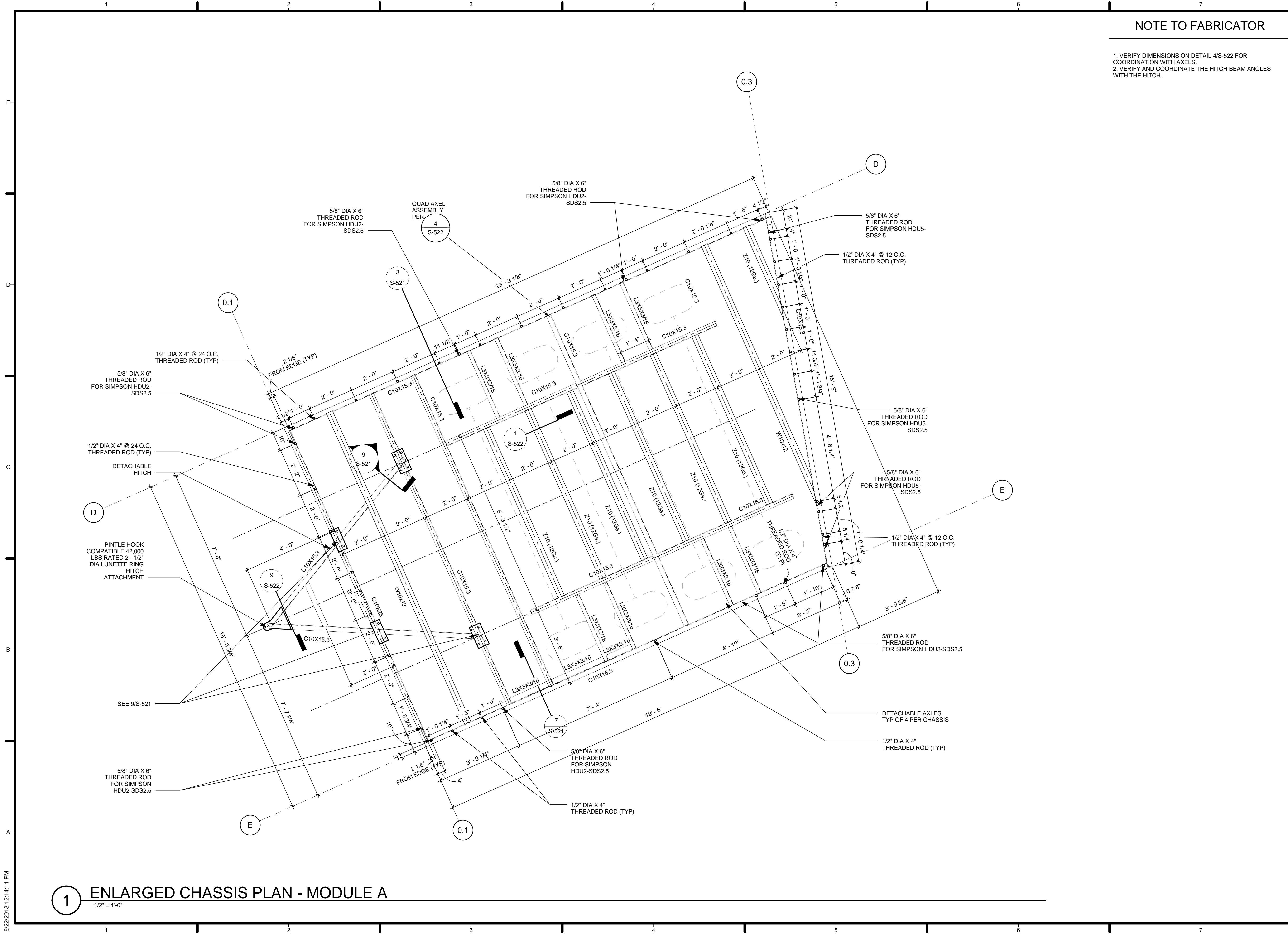
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ENLARGED CHASSIS
PLAN - MODULE A

S-112



NOTE TO FABRICATOR

1. VERIFY DIMENSIONS ON DETAIL 4/S-522 FOR COORDINATION WITH AXELS.
2. VERIFY AND COORDINATE THE HITCH BEAM ANGLES WITH THE HITCH.

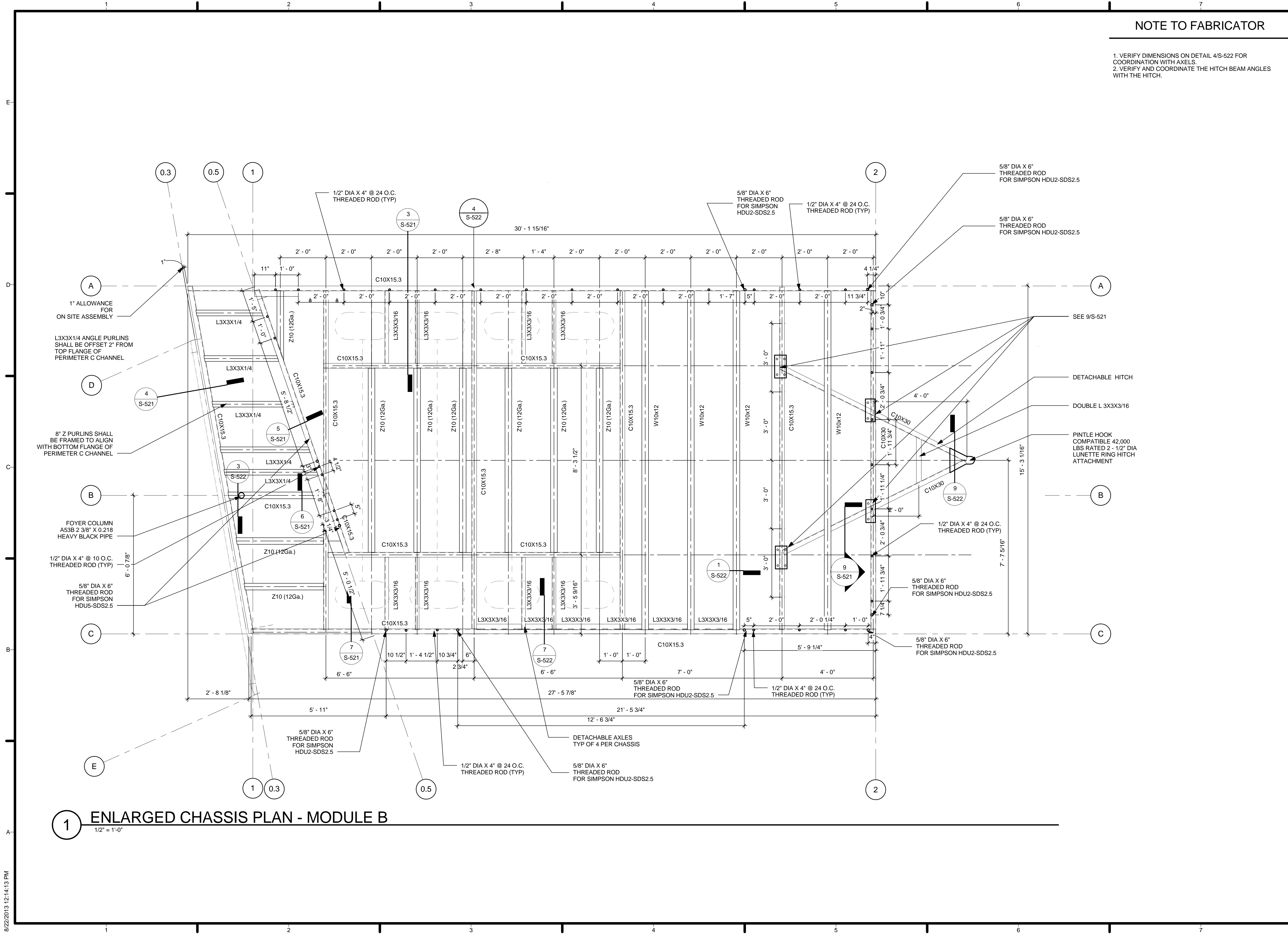
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ENLARGED CHASSIS PLAN - MODULE B

S-113



1 ENLARGED CHASSIS PLAN - MODULE B

1/2" = 1'-0"

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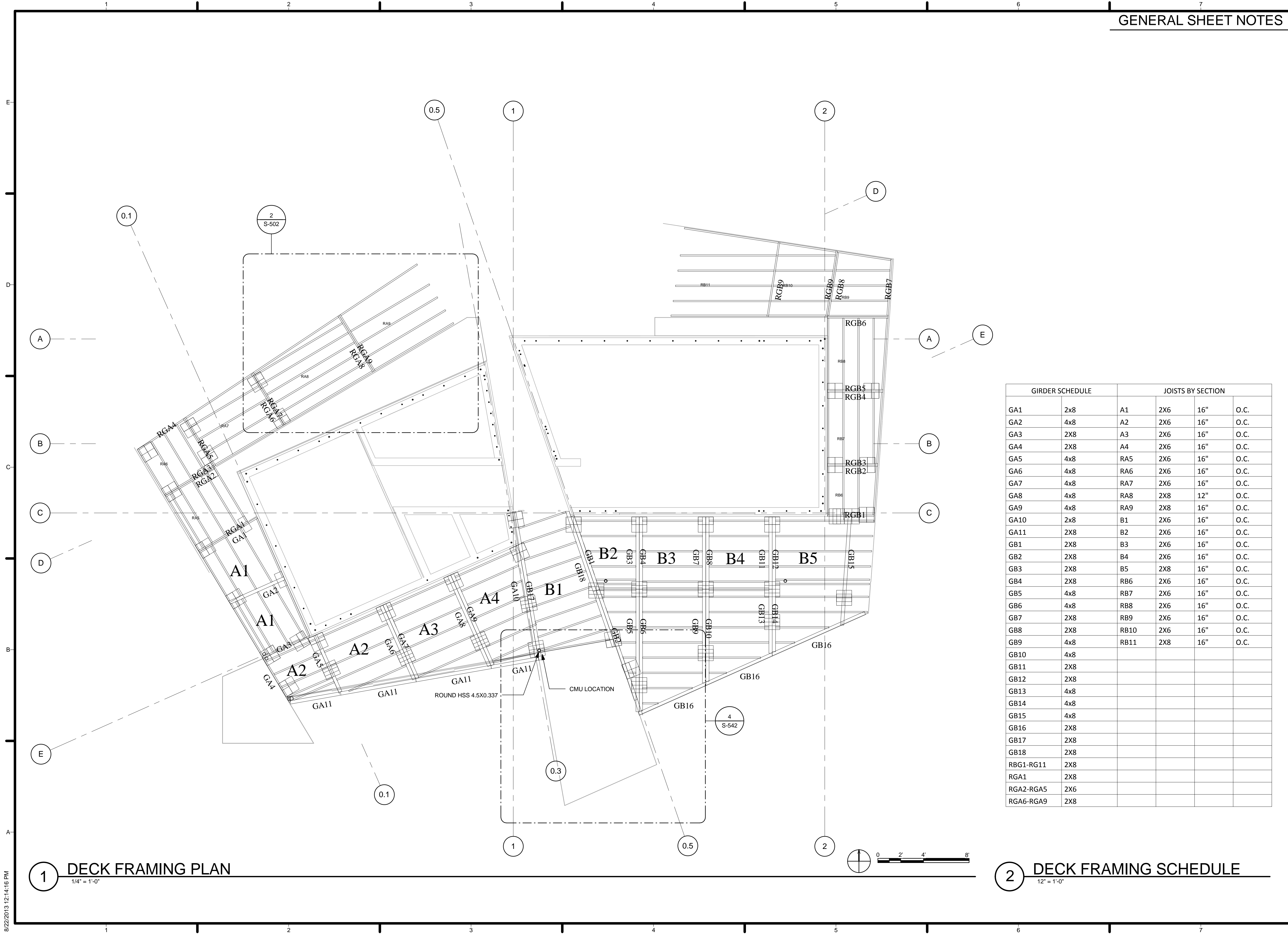
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DECK FRAMING PLAN

S-114



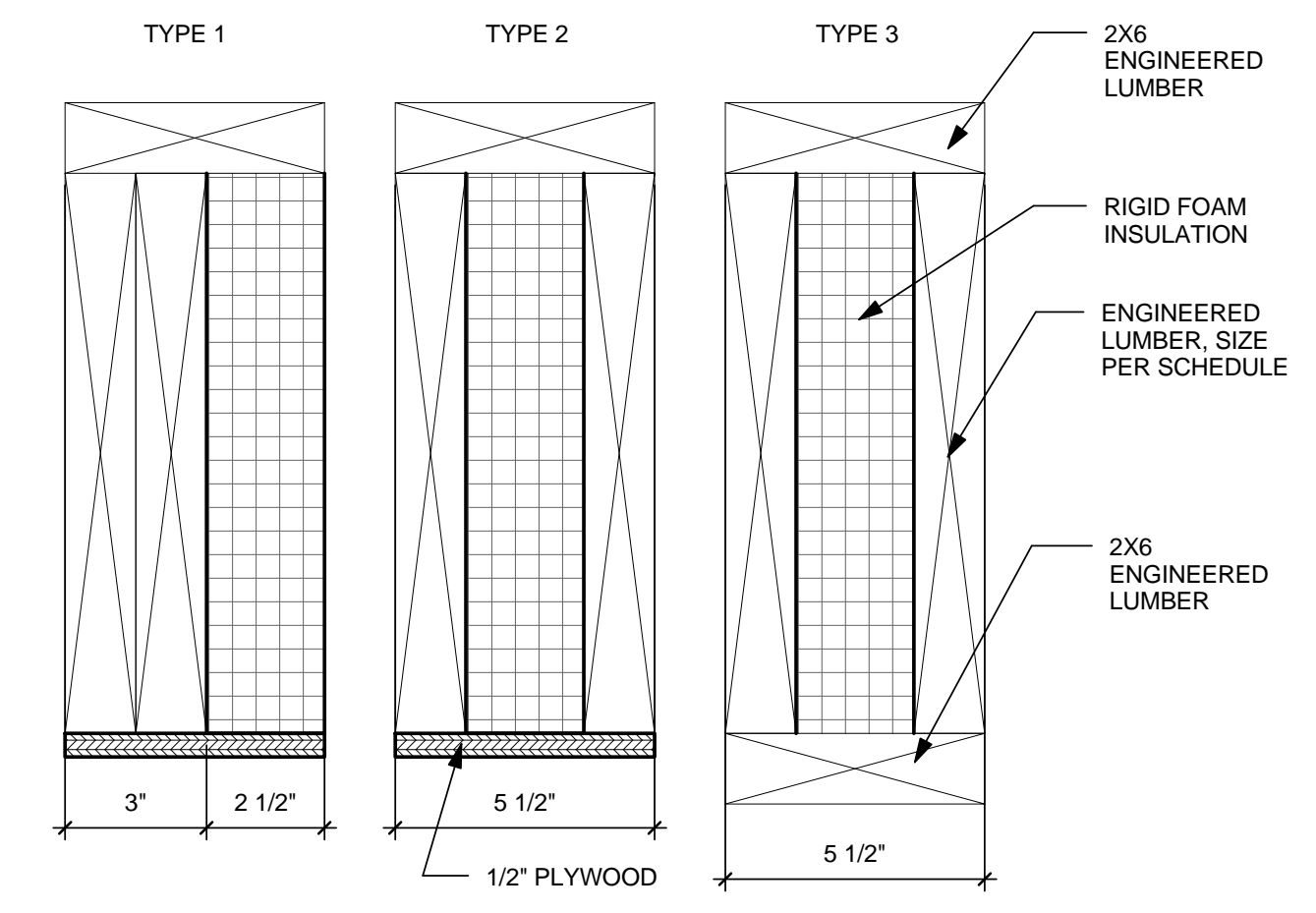
GIRDER SCHEDULE		JOISTS BY SECTION			
GA1	2x8	A1	2X6	16"	O.C.
GA2	4x8	A2	2X6	16"	O.C.
GA3	2X8	A3	2X6	16"	O.C.
GA4	2X8	A4	2X6	16"	O.C.
GA5	4x8	RA5	2X6	16"	O.C.
GA6	4x8	RA6	2X6	16"	O.C.
GA7	4x8	RA7	2X6	16"	O.C.
GA8	4x8	RA8	2X8	12"	O.C.
GA9	4x8	RA9	2X8	16"	O.C.
GA10	2x8	B1	2X6	16"	O.C.
GA11	2X8	B2	2X6	16"	O.C.
GB1	2X8	B3	2X6	16"	O.C.
GB2	2X8	B4	2X6	16"	O.C.
GB3	2X8	B5	2X8	16"	O.C.
GB4	2X8	RB6	2X6	16"	O.C.
GB5	4x8	RB7	2X6	16"	O.C.
GB6	4x8	RB8	2X6	16"	O.C.
GB7	2X8	RB9	2X6	16"	O.C.
GB8	2X8	RB10	2X6	16"	O.C.
GB9	4x8	RB11	2X8	16"	O.C.
GB10	4x8				
GB11	2X8				
GB12	2X8				
GB13	4x8				
GB14	4x8				
GB15	4x8				
GB16	2X8				
GB17	2X8				
GB18	2X8				
RBG1-RG11	2X8				
RGA1	2X8				
RGA2-RGA5	2X6				
RGA6-RGA9	2X8				

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

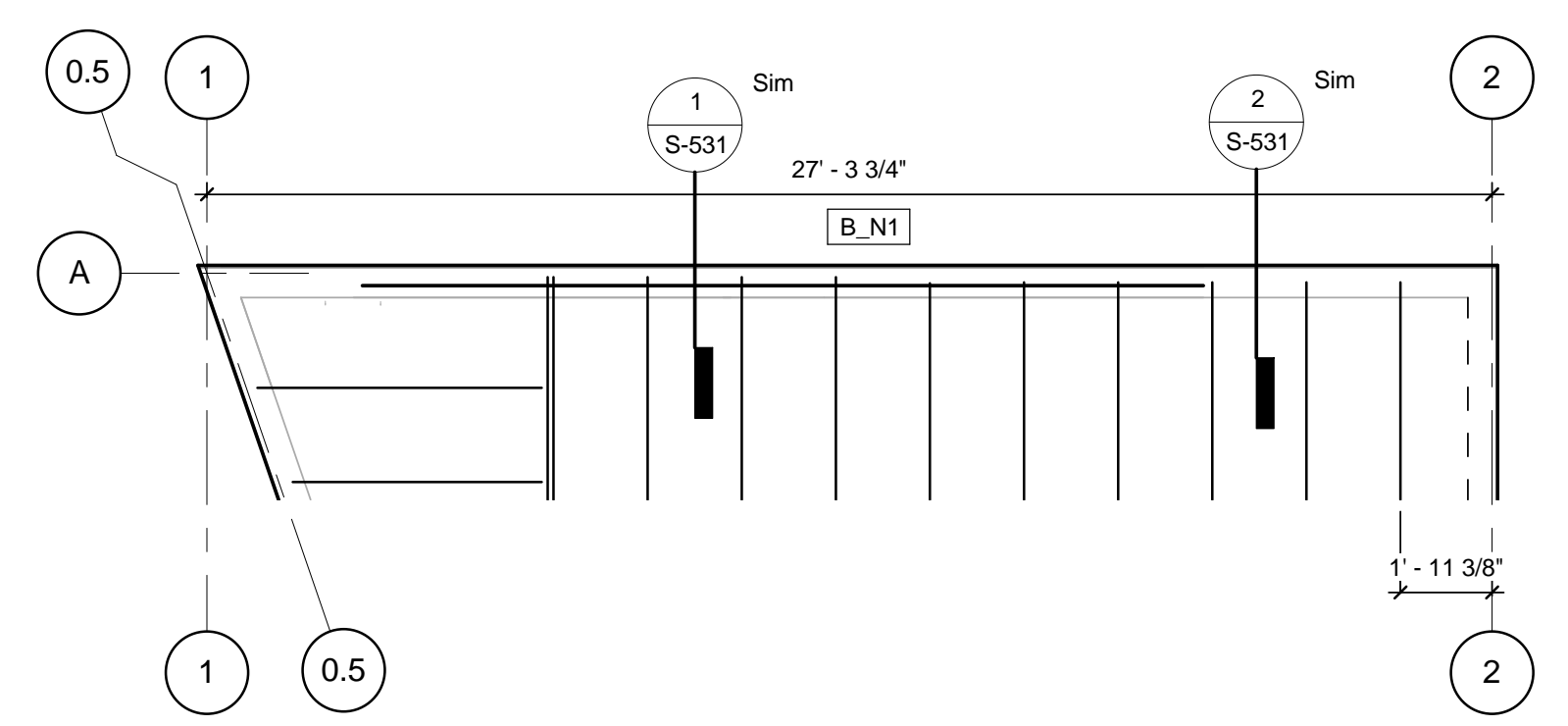
2 DECK FRAMING SCHEDULE
12" = 1'-0"

8/22/2013 12:14:16 PM

NAME	LENGTH (FT)	WIDTH (IN)	DEPTH (IN)	# OF PLATES	HEADER TYPE
B-N1	18.00	3.5	11.875	1	I
B-N2	11.38	1.5	7.25	2	DETAIL 6/S-501
B-S1	11.88	1.5	9.25	2	I
B-W1	6.38	1.5	7.25	2	DETAIL 6/S-501
B-W2	4.04	1.5	5.5	2	II
A-N1	2.00	1.5	5.5	2	II
A-N2	2.00	1.5	5.5	2	III
A-S1	5.88	1.5	5.5	2	II
A-S2	3.00	1.5	5.5	2	II
A-E1	4.20	1.5	5.5	2	II
A-E2	2.00	1.5	5.5	2	II
BR1	4.50	1.5	9.25	2	I
BR2	6.50	1.5	9.25	1	II
BR3	6.00	1.5	9.25	2	I



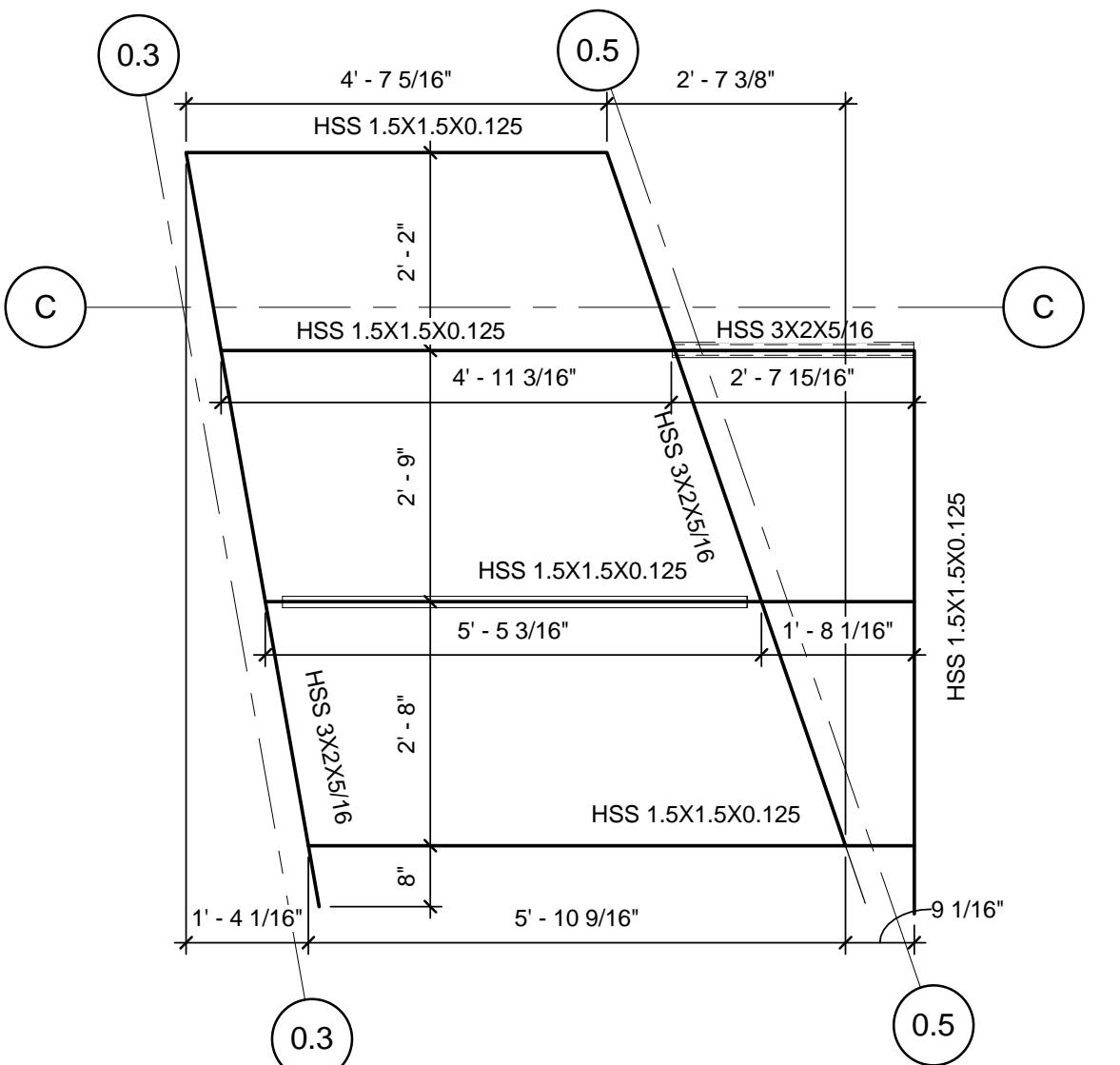
3 TYPICAL HEADER DETAILS
3" = 1'-0"



2 ROOF FRAMING PLAN - CLERESTORY
1/4" = 1'-0"

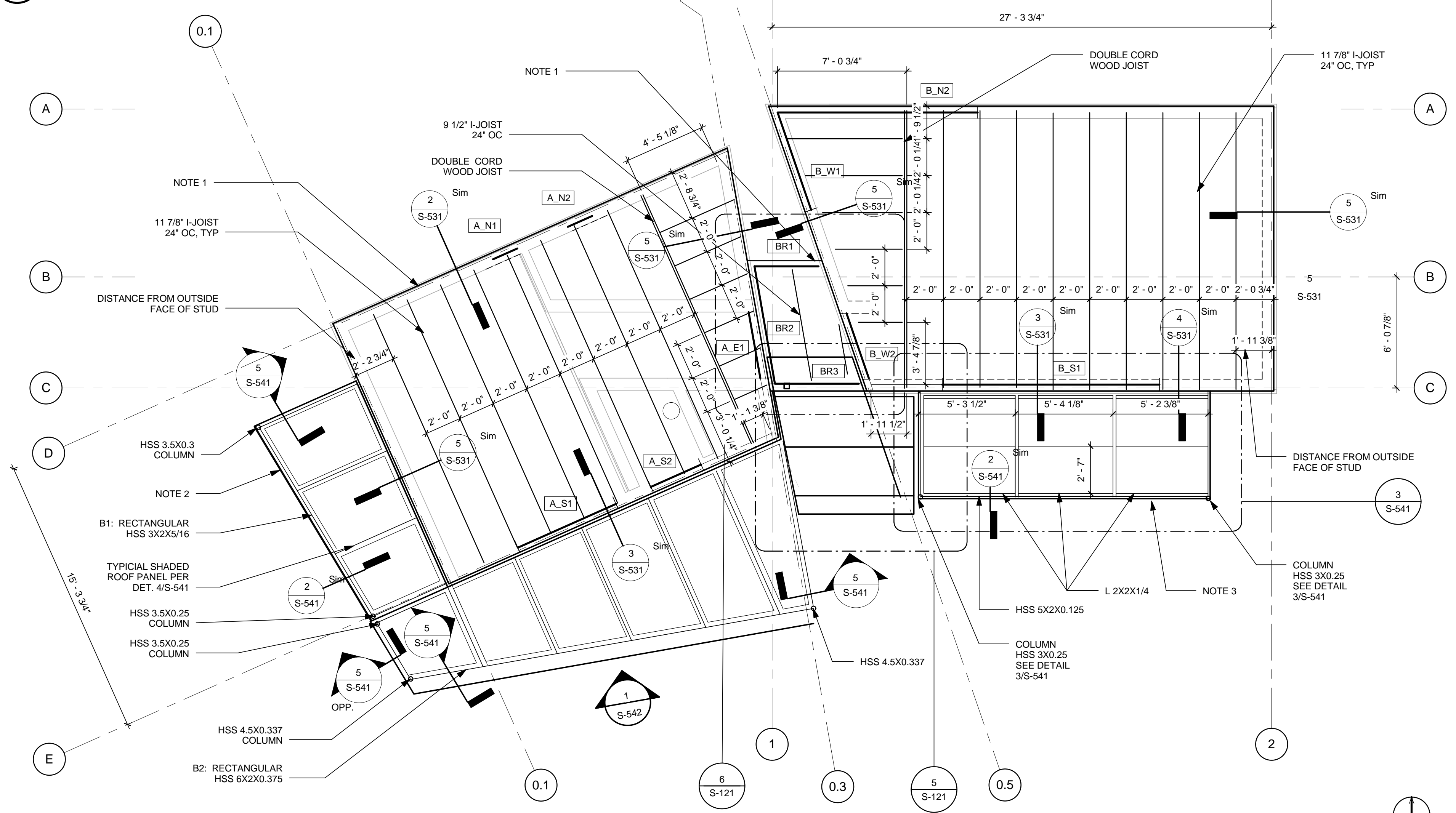
ROOF FRAMING PLAN NOTES

1. ROOF SHEATHING SHALL BE 1/2" PLYWOOD (15/32") UNLESS NOTED OTHERWISE. 8D AT 6" OC ON EDGE NAILING AND 8D AT 12" OC FIELD NAILING.
2. 16 GA. PERFORATED STEEL SCREENS.
3. PV PANELS OVERHANG.
4. ALL HSS FRAMING SHALL BE RECTANGULAR HSS 3X2X5/16 UNLESS OTHERWISE NOTED.

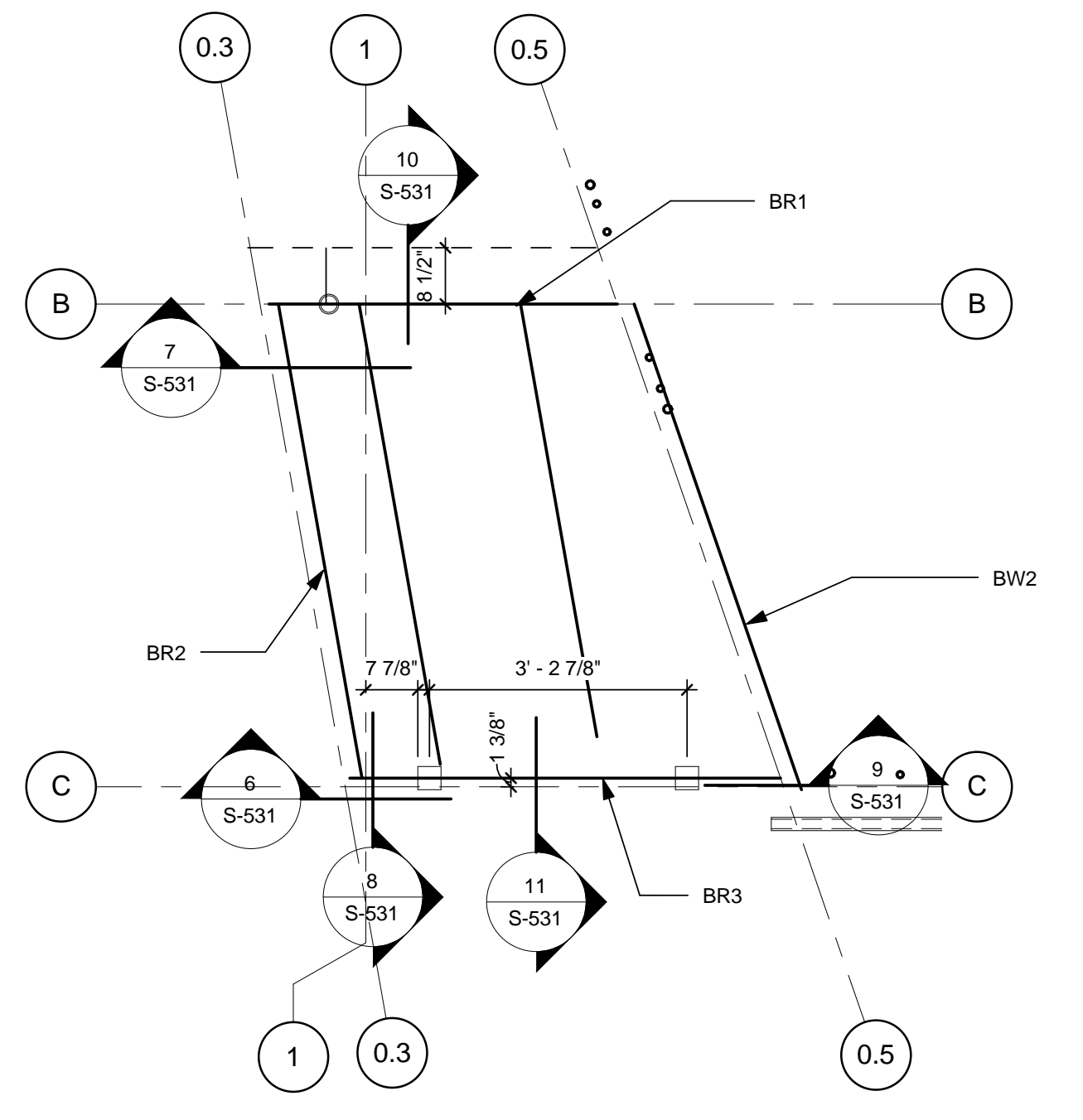


5 ENTRY OVERHEAD FRAMING PLAN
1/2" = 1'-0"

4 SCHEDULE - HEADER
12" = 1'-0"



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



6 BRIDGE ROOF FRAMING PLAN
1/2" = 1'-0"



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ROOF FRAMING PLAN

S-121

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GENERAL SHEET NOTES

1. REFER TO 4/S-121 FOR ALL HEADER SIZES.
2. ALL HEADERS TO BE INSTALLED USING SIMPSON HUCQ HANGERS UNLESS NOTED OTHERWISE



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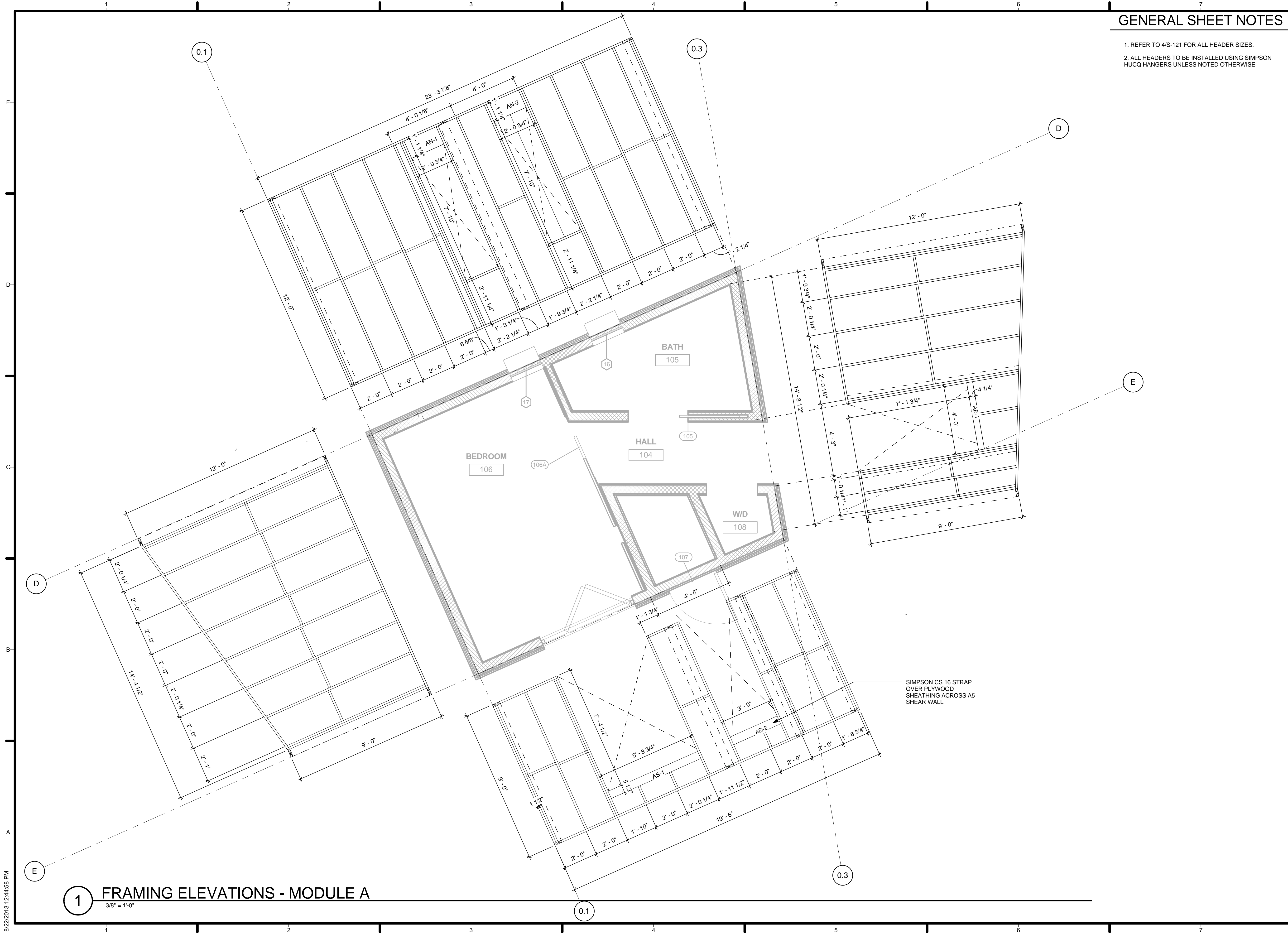
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FRAMING
ELEVATIONS -
MODULE A

S-201



1 FRAMING ELEVATIONS - MODULE A
3/8" = 1'-0"

8/22/2013 12:44:58 PM

GENERAL SHEET NOTES

1. ALL STEEL FINNS ARE CENTERED TO STUDS UNLESS OTHERWISE NOTED.
2. ALL STEEL FINNS PLAN DETAILS REFER TO 8/S501 UNLESS OTHERWISE NOTED. REFER TO 5/S-501 FOR CLERESTORY FINNS AND 6/S-501 FOR KITCHEN GLAZING FINNS.
3. REFER TO 4/S-121 FOR ALL HEADER SIZES.
4. ALL HEADERS TO BE INSTALLED USING SIMPSON HUCQ HANGERS UNLESS NOTED OTHERWISE



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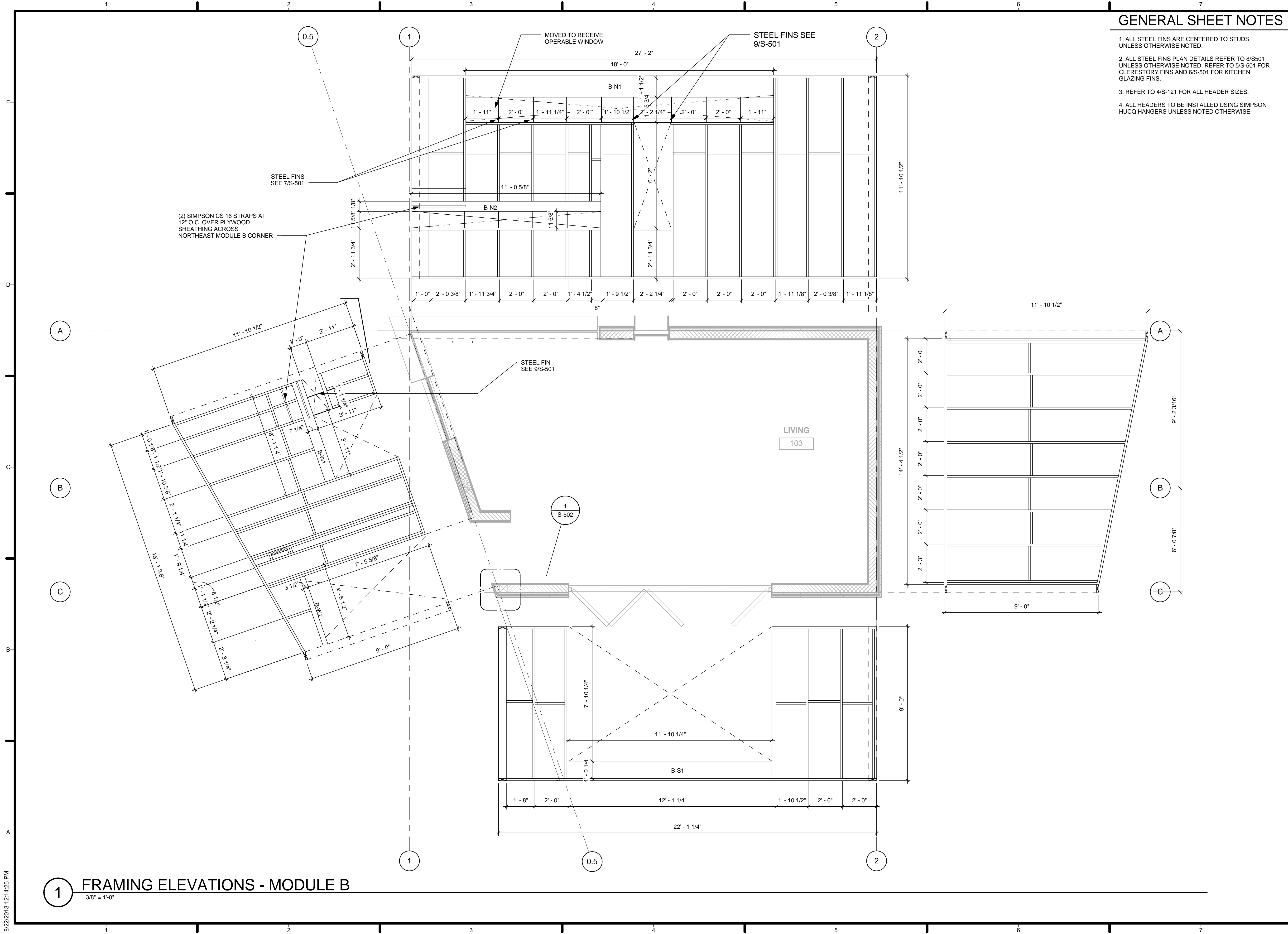
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FRAMING ELEVATIONS - MODULE B

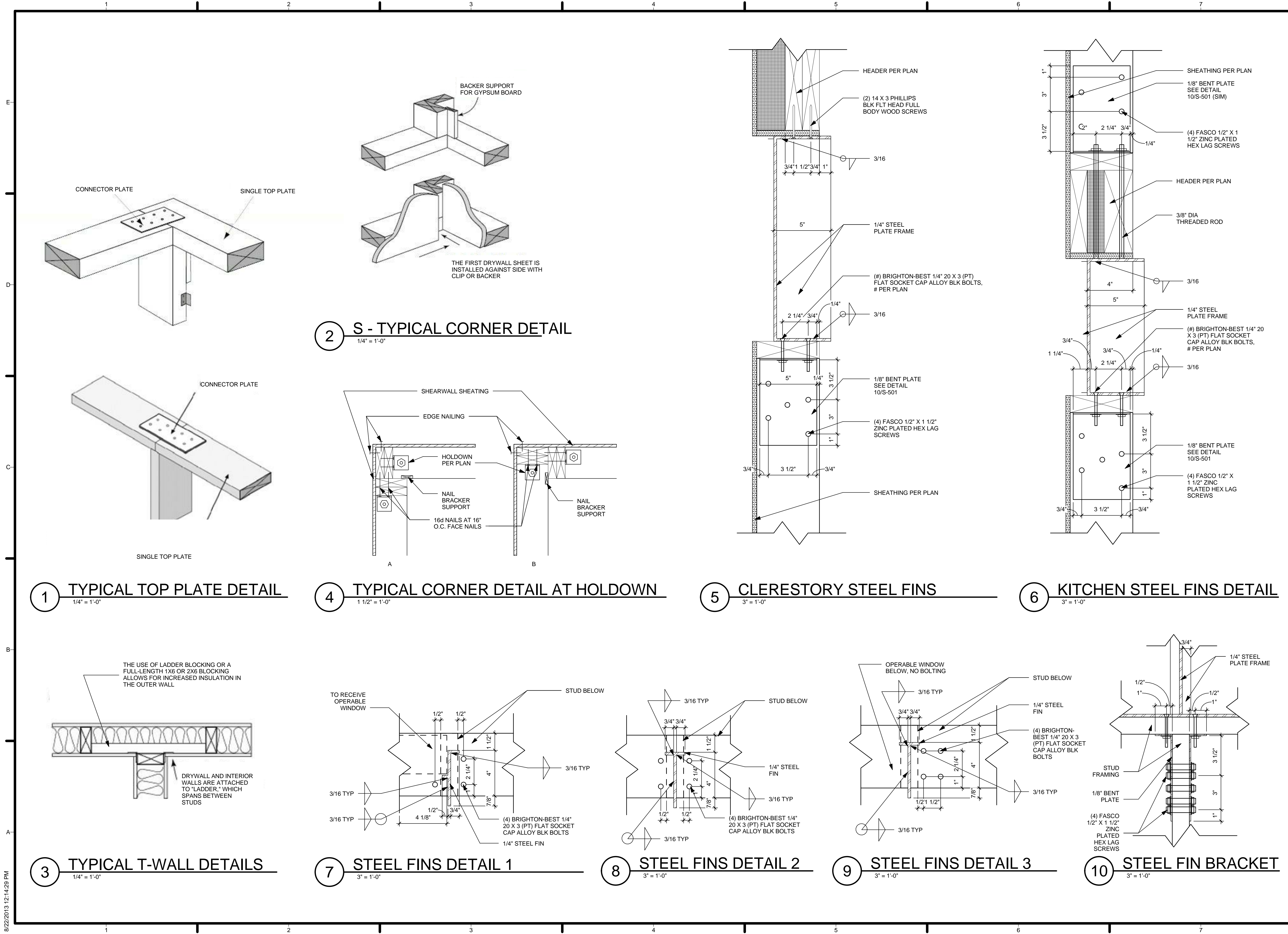
S-202



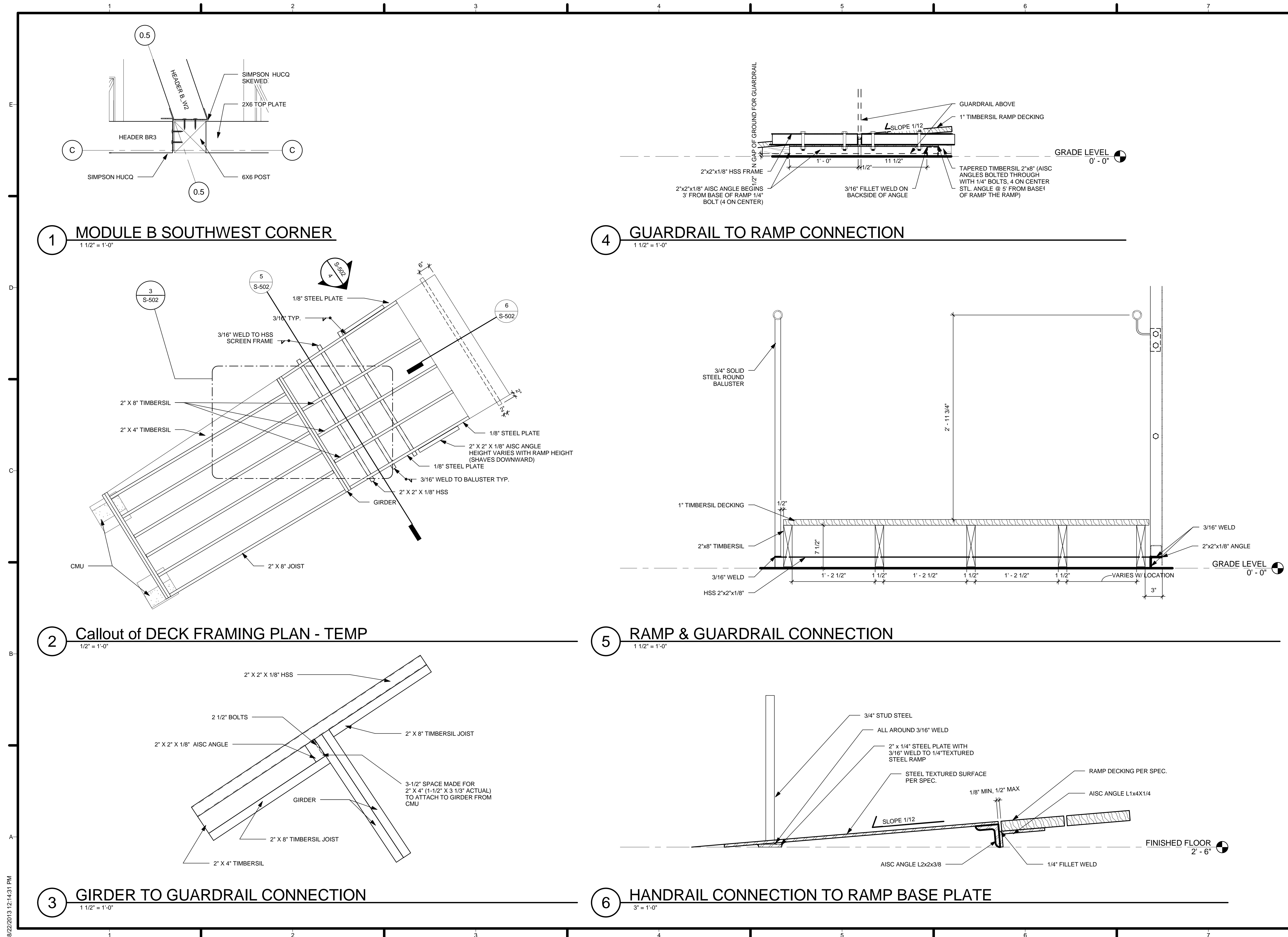
1 FRAMING ELEVATIONS - MODULE B

3/8" = 1'-0"

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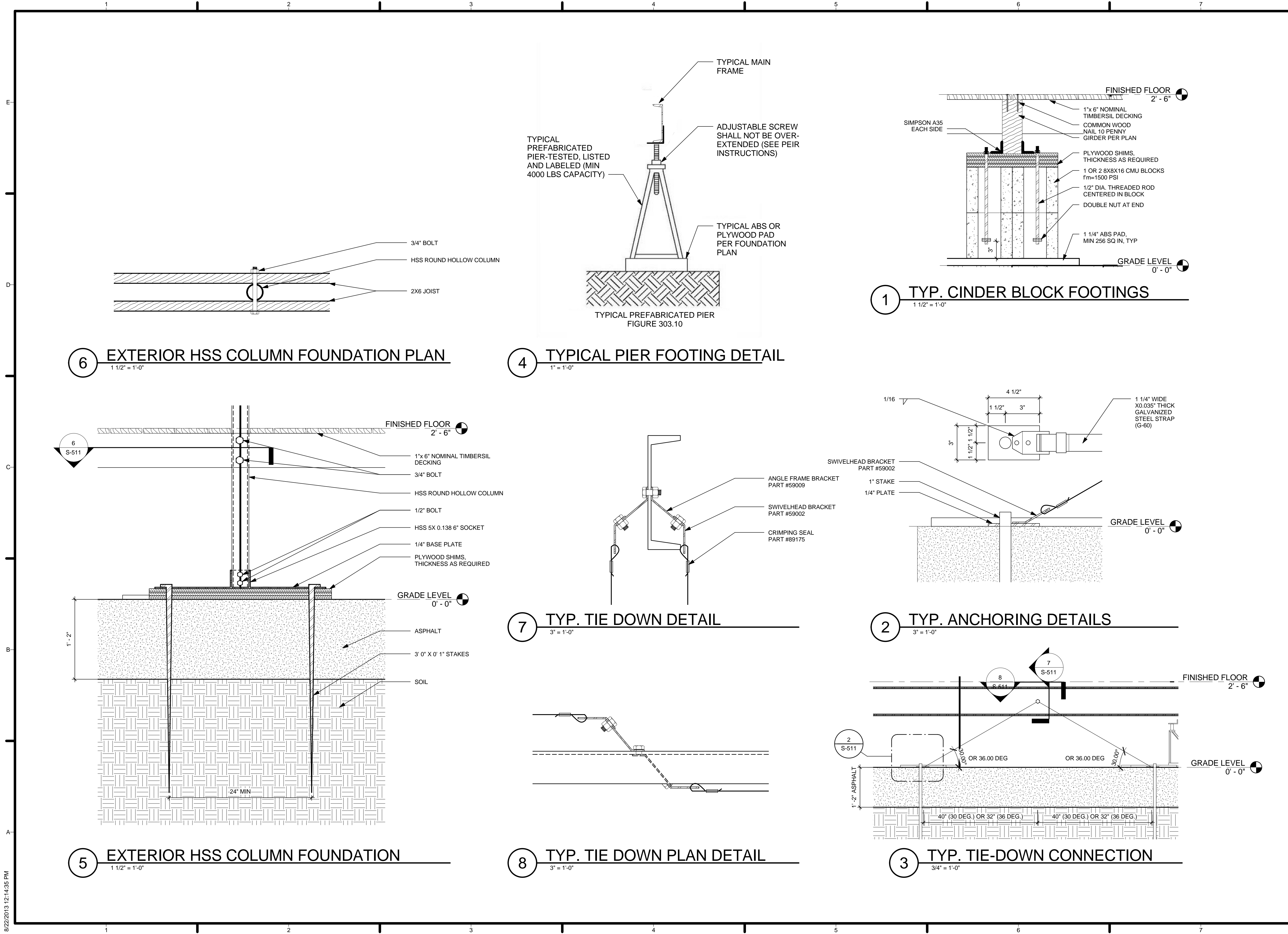
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FOUNDATION
DETAILS

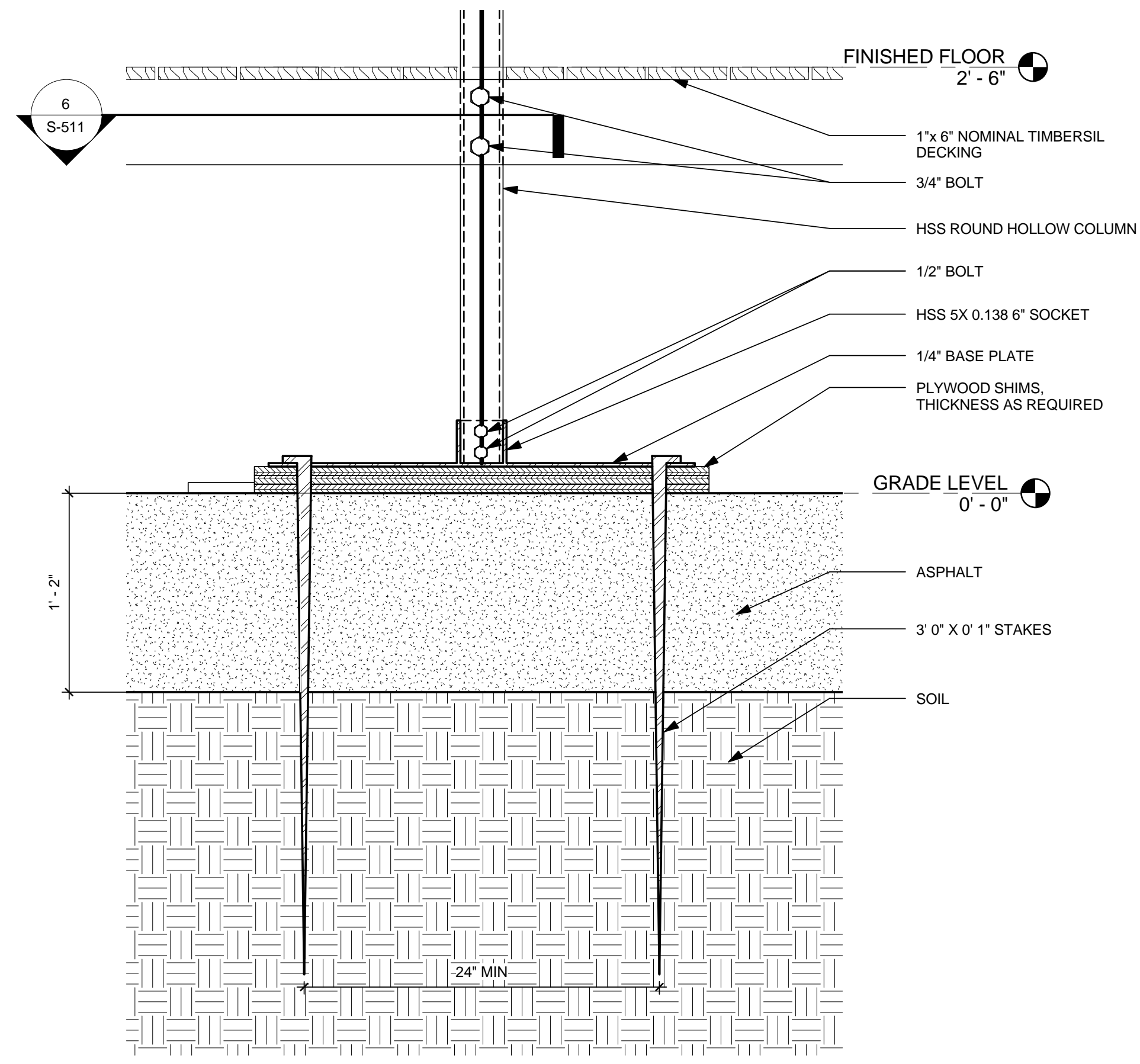
S-511



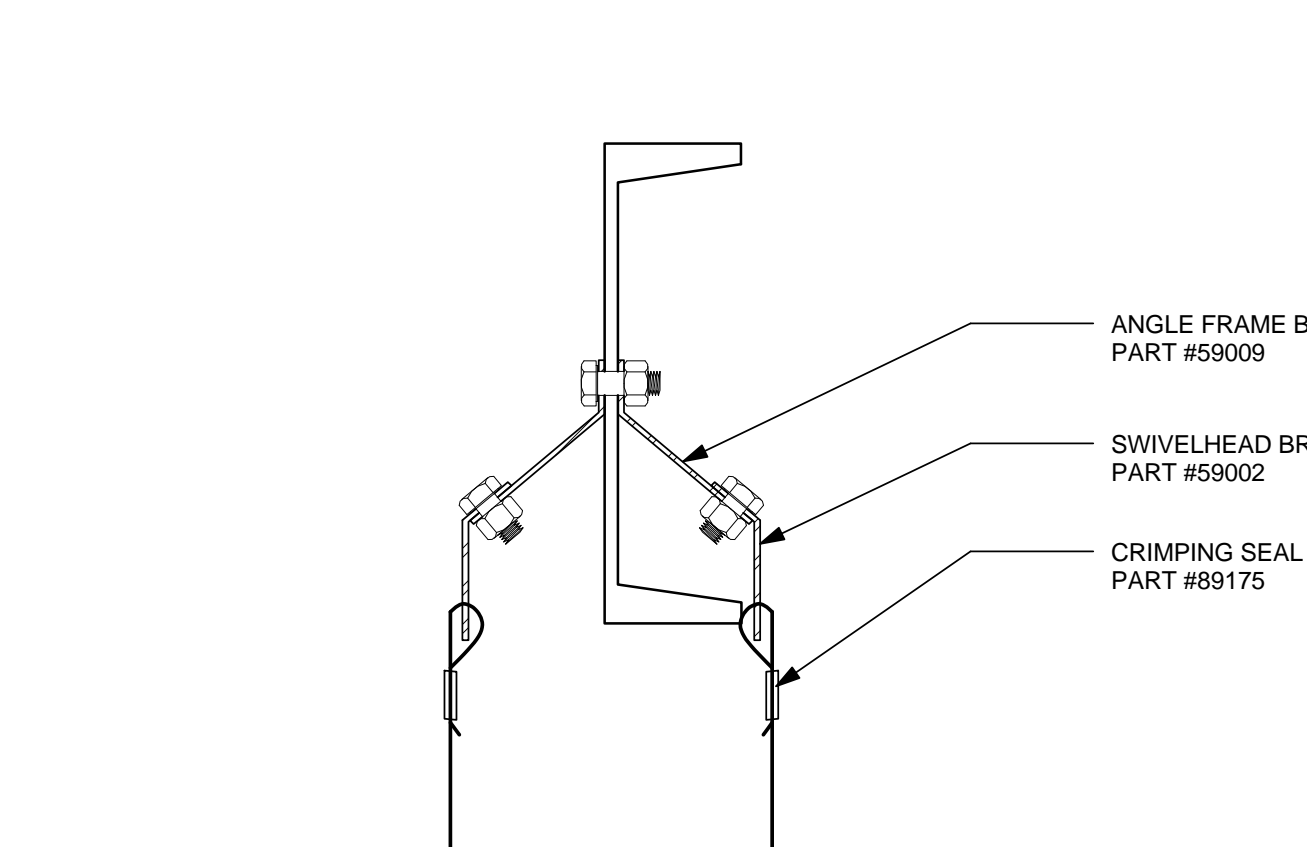
6 EXTERIOR HSS COLUMN FOUNDATION PLAN
1 1/2" = 1'-0"

4 TYPICAL PIER FOOTING DETAIL
1" = 1'-0"

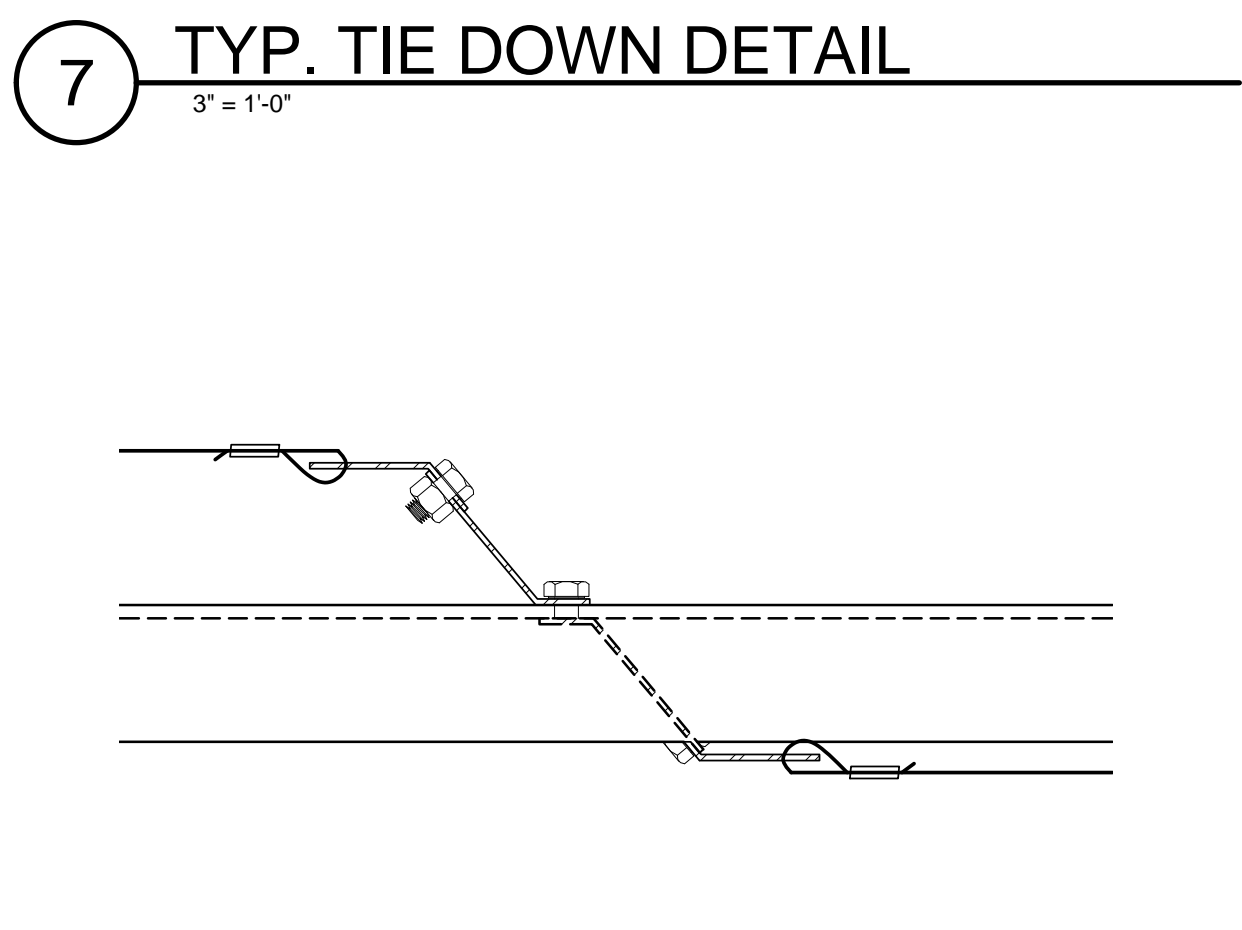
1 TYP. CINDER BLOCK FOOTINGS
1 1/2" = 1'-0"



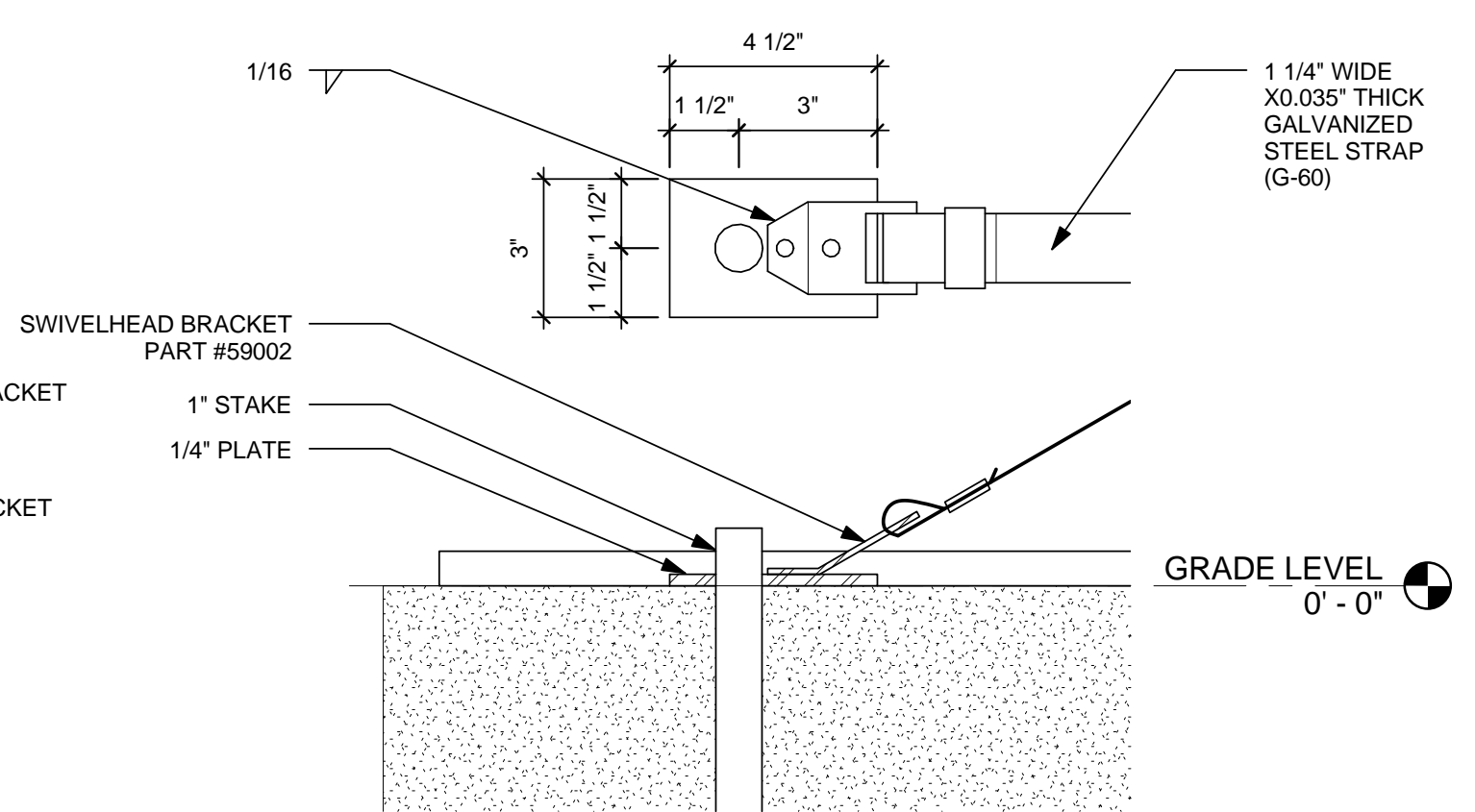
5 EXTERIOR HSS COLUMN FOUNDATION
1 1/2" = 1'-0"



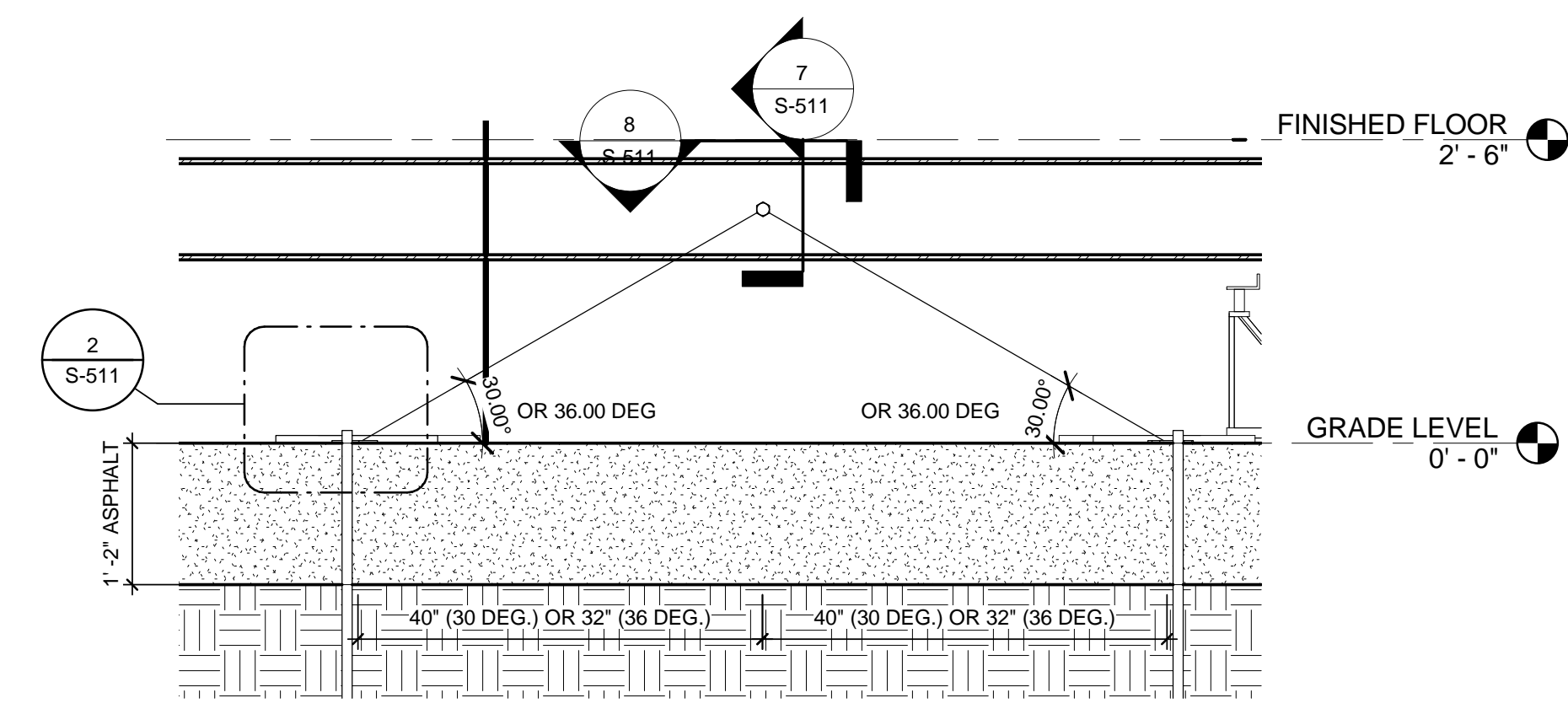
7 TYP. TIE DOWN DETAIL
3" = 1'-0"



8 TYP. TIE DOWN PLAN DETAIL
3" = 1'-0"

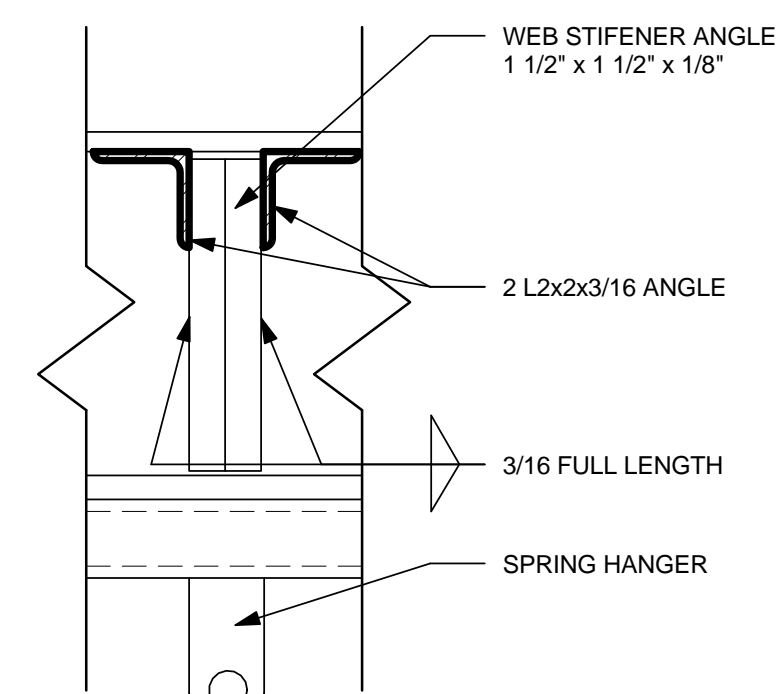


2 TYP. ANCHORING DETAILS
3" = 1'-0"

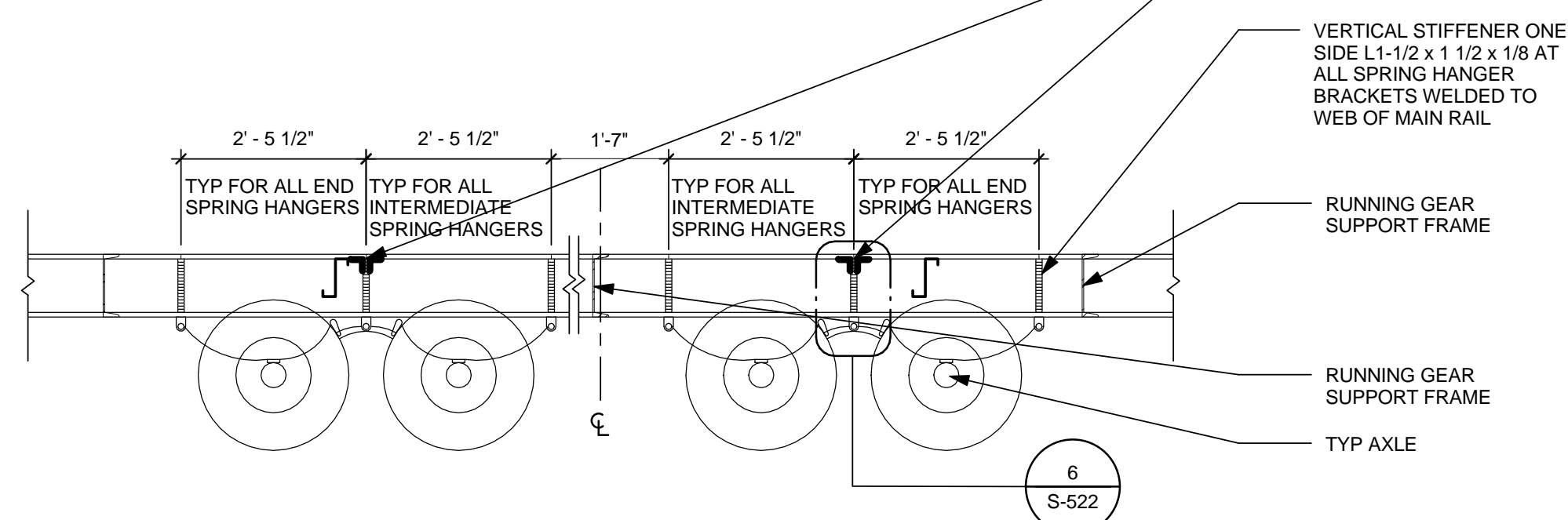
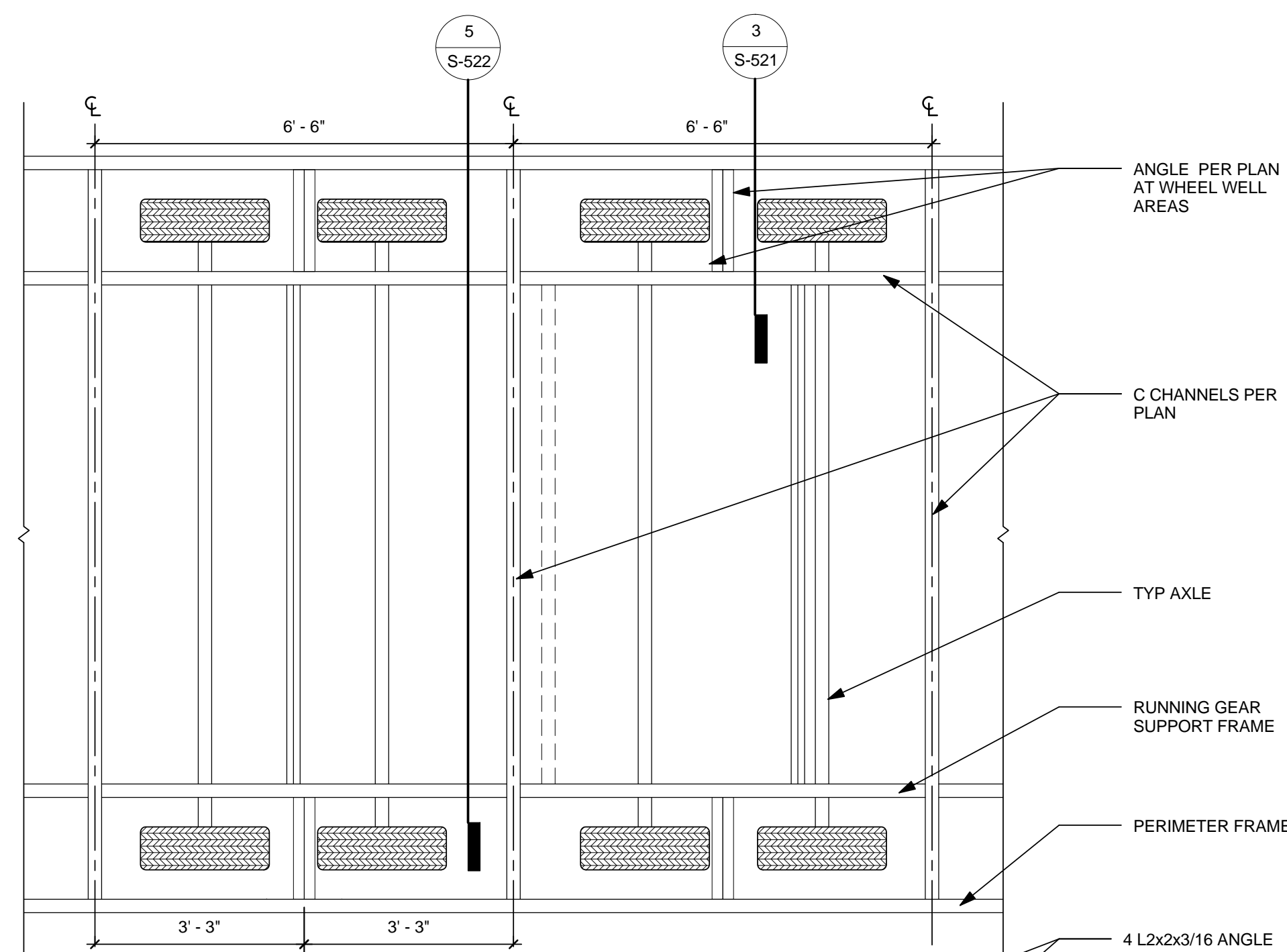


3 TYP. TIE-DOWN CONNECTION
3/4" = 1'-0"

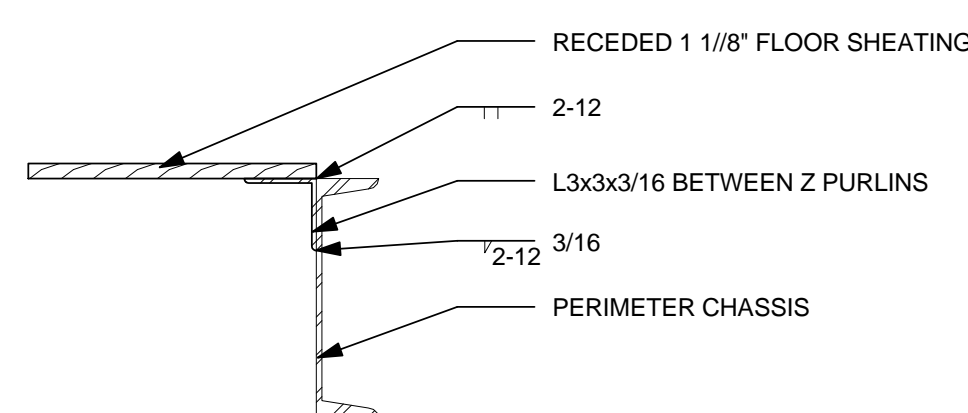
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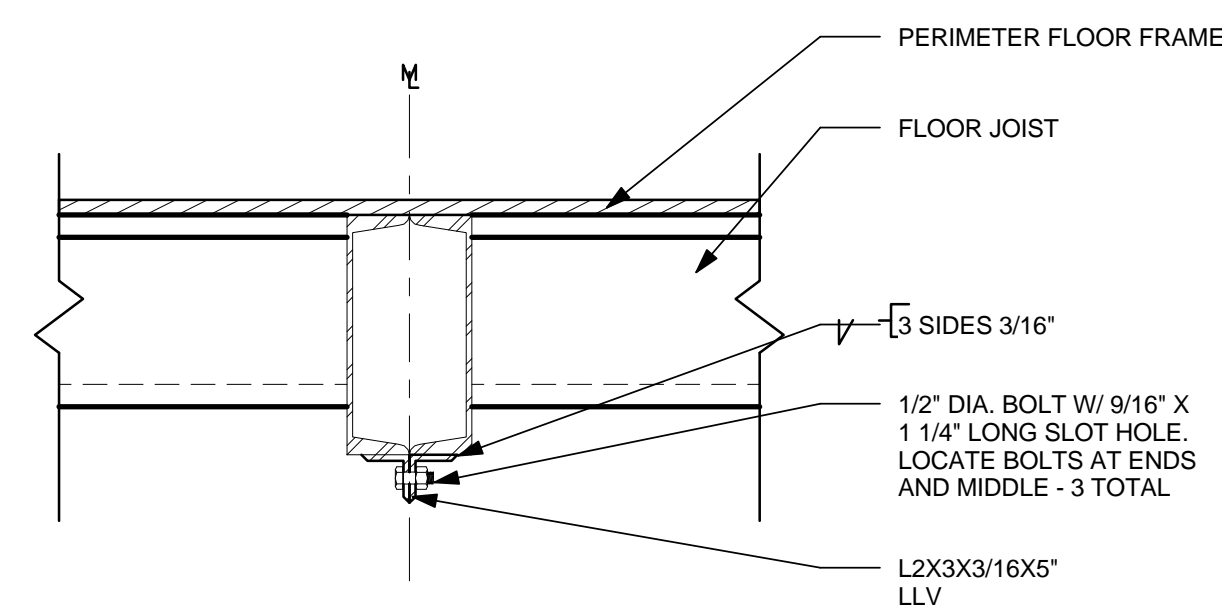
6 SPRING HANGER & STIFFENER DETAIL
3" = 1'-0"



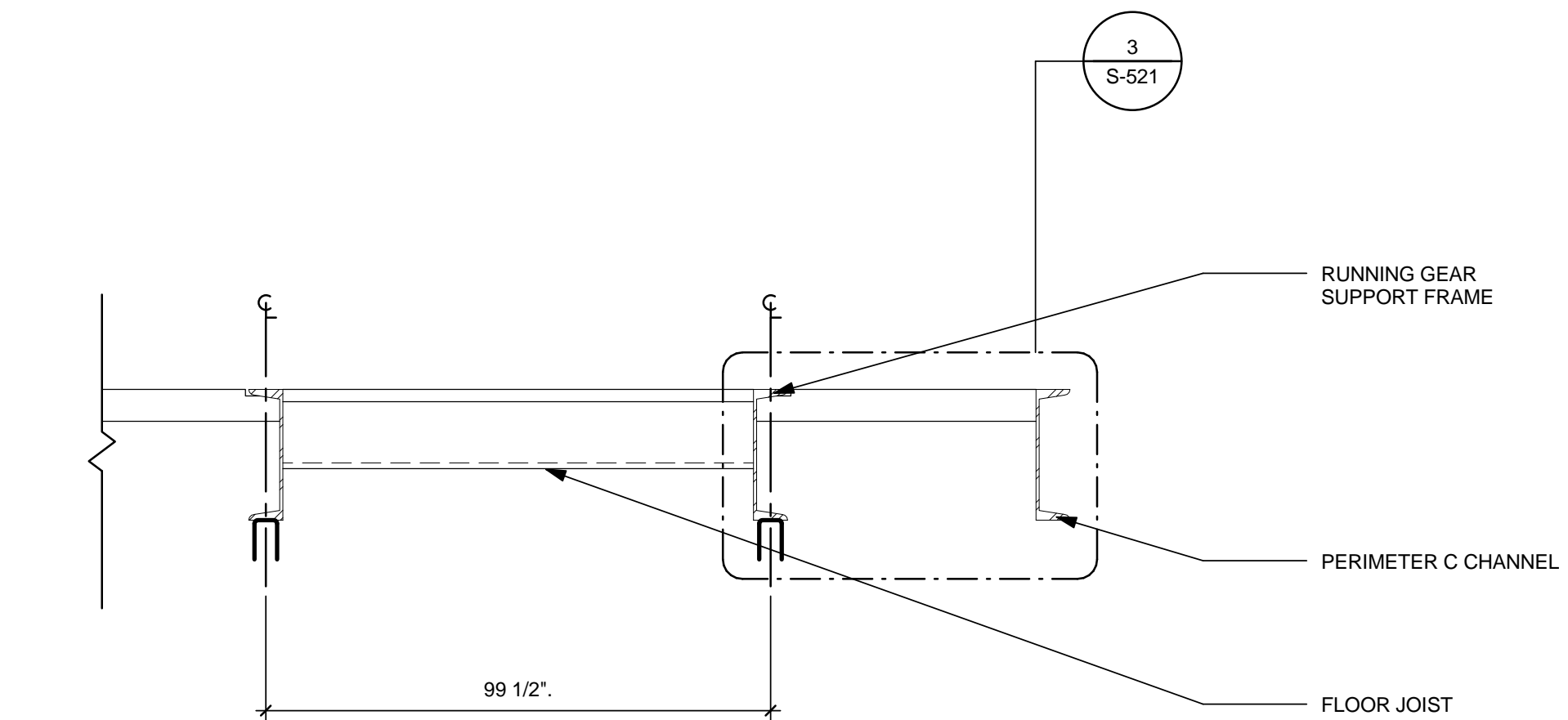
4 QUAD AXLE ASSEMBLY
1/2" = 1'-0"



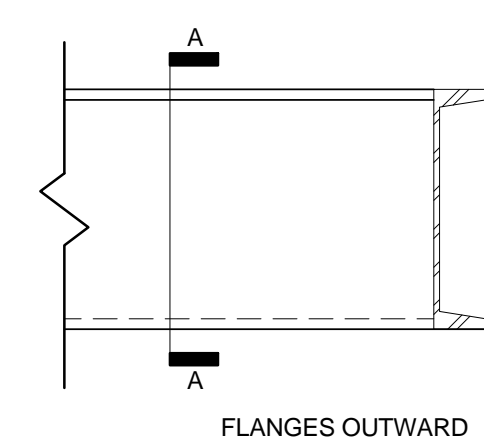
7 TYP SHEATHING FOR DOOR OPENING
1 1/2" = 1'-0"



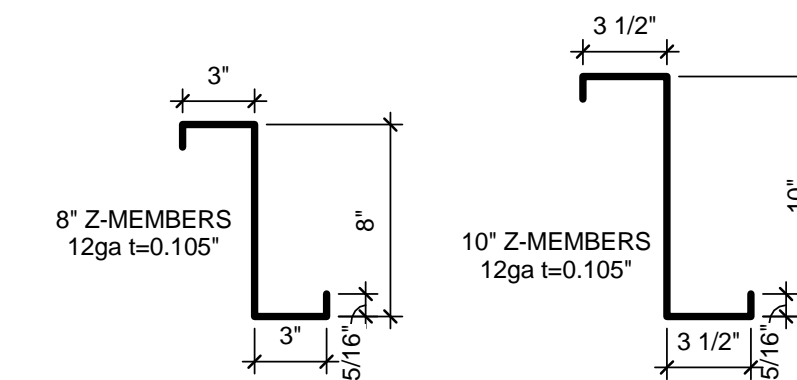
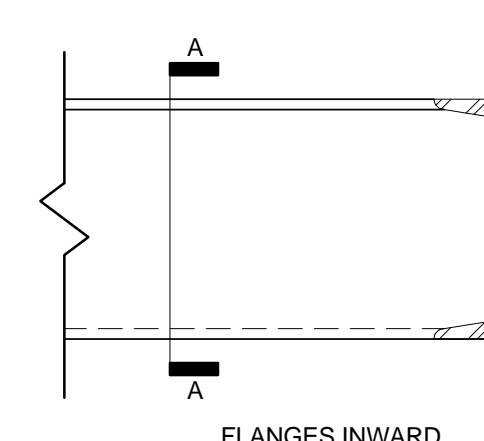
8 ALT. MATING CONNECTION DETAIL
1 1/2" = 1'-0"



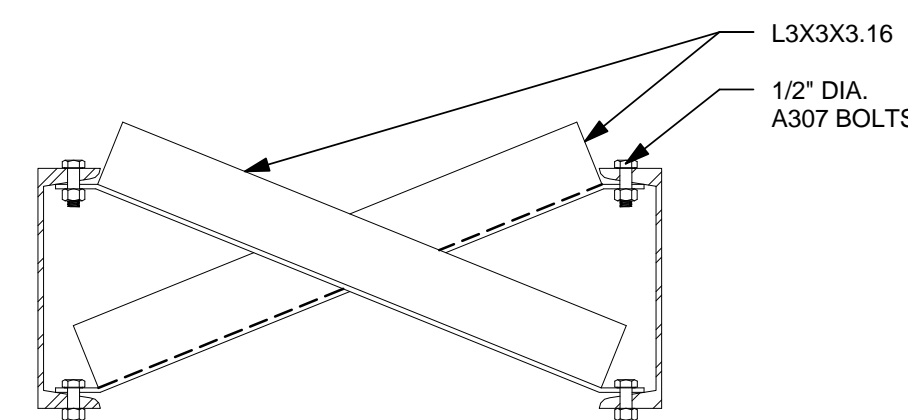
5 SECTION @ CENTER AND WHEEL WELL
1" = 1'-0"



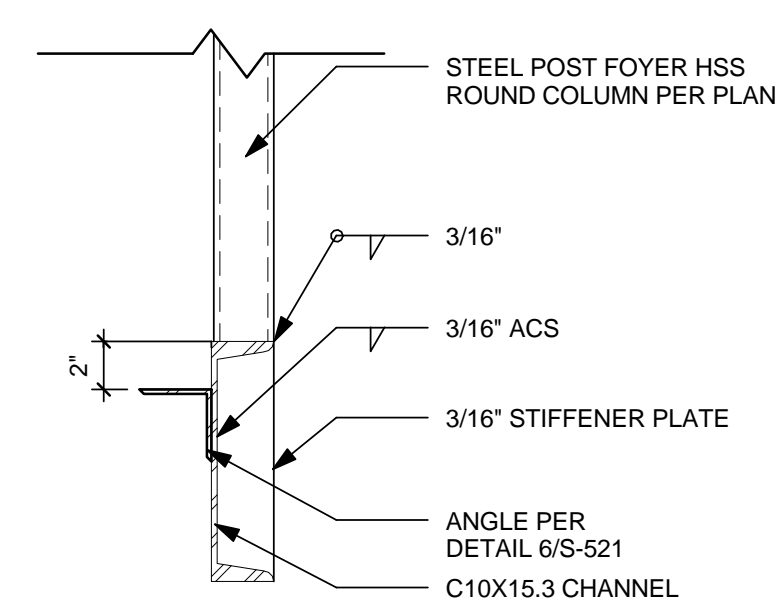
1 Z-MEMBER TO CHANNEL
1 1/2" = 1'-0"



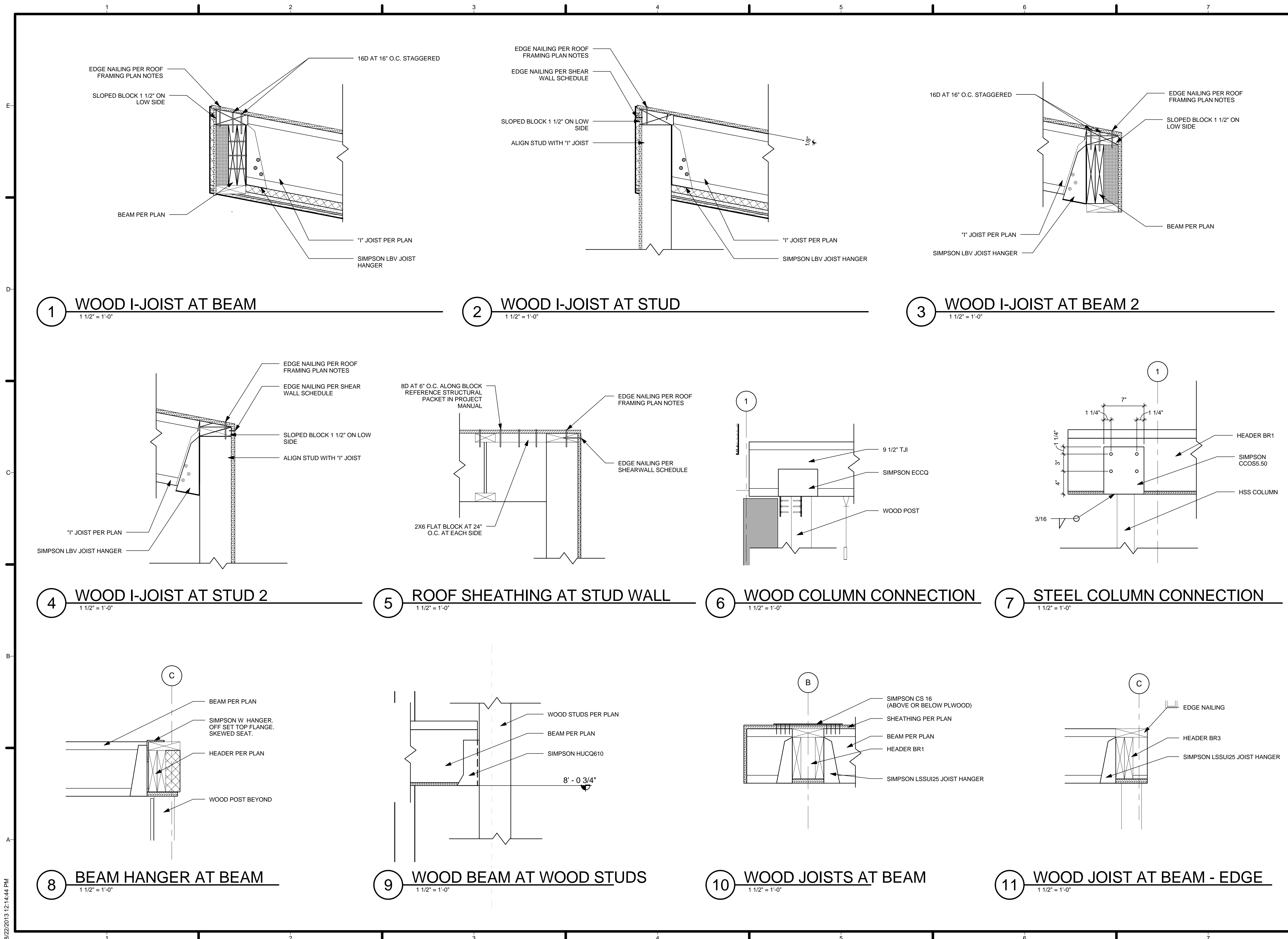
2 TYP Z-MEMBER SIZES
1 1/2" = 1'-0"



9 CROSS BRACE AT HITCH
1 1/2" = 1'-0"

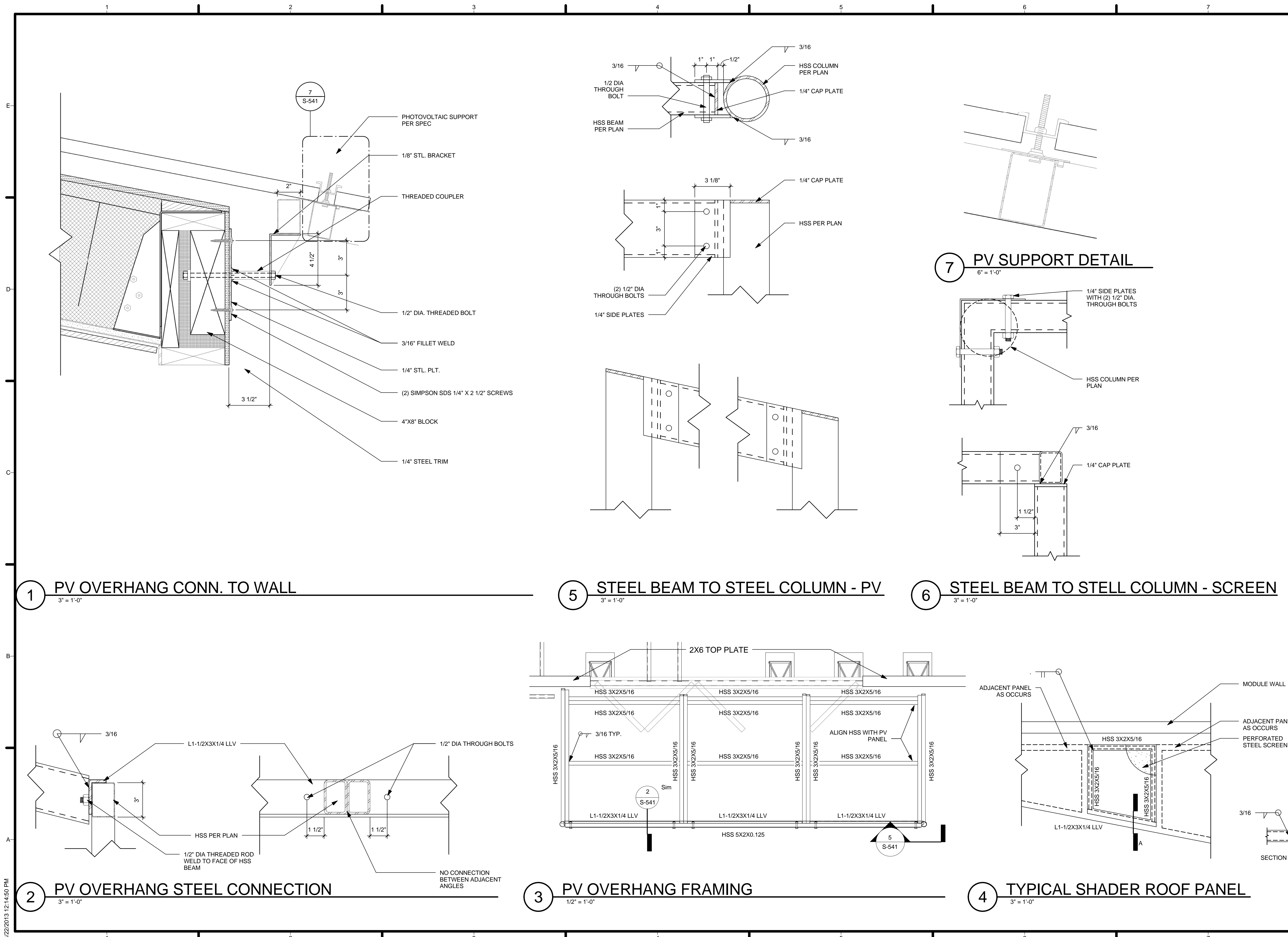


3 INTERIOR STEEL COLUMN TO PERIMETER
1 1/2" = 1'-0"



REVISIONS

REV	DATE	DESCRIPTION
1	21 MARCH 2013	NREL REVIEW COMMENTS



1 PV OVERHANG CONN. TO WALL
3" = 1'-0"

5 STEEL BEAM TO STEEL COLUMN - PV
3" = 1'-0"

6 STEEL BEAM TO STEEL COLUMN - SCREEN
3" = 1'-0"

2 PV OVERHANG STEEL CONNECTION
3" = 1'-0"

3 PV OVERHANG FRAMING
1/2" = 1'-0"

4 TYPICAL SHADER ROOF PANEL
3" = 1'-0"

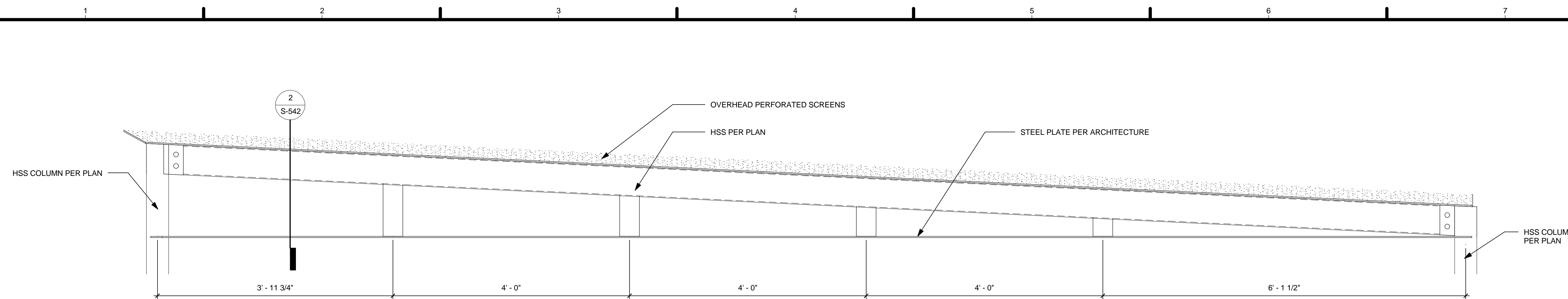
STEEL DETAILS

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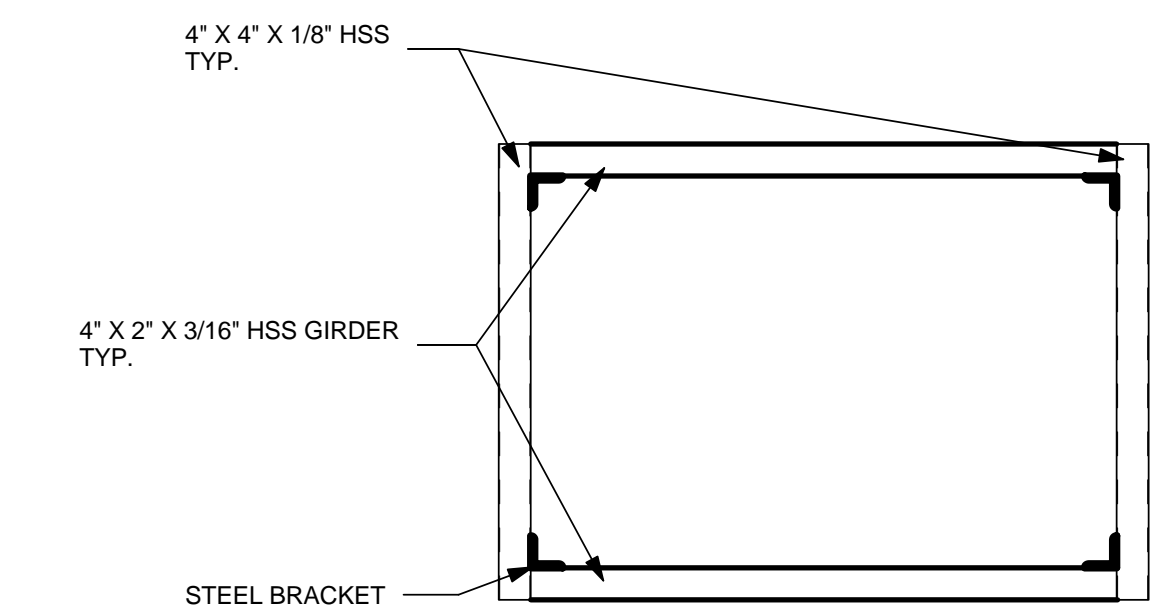
S-541

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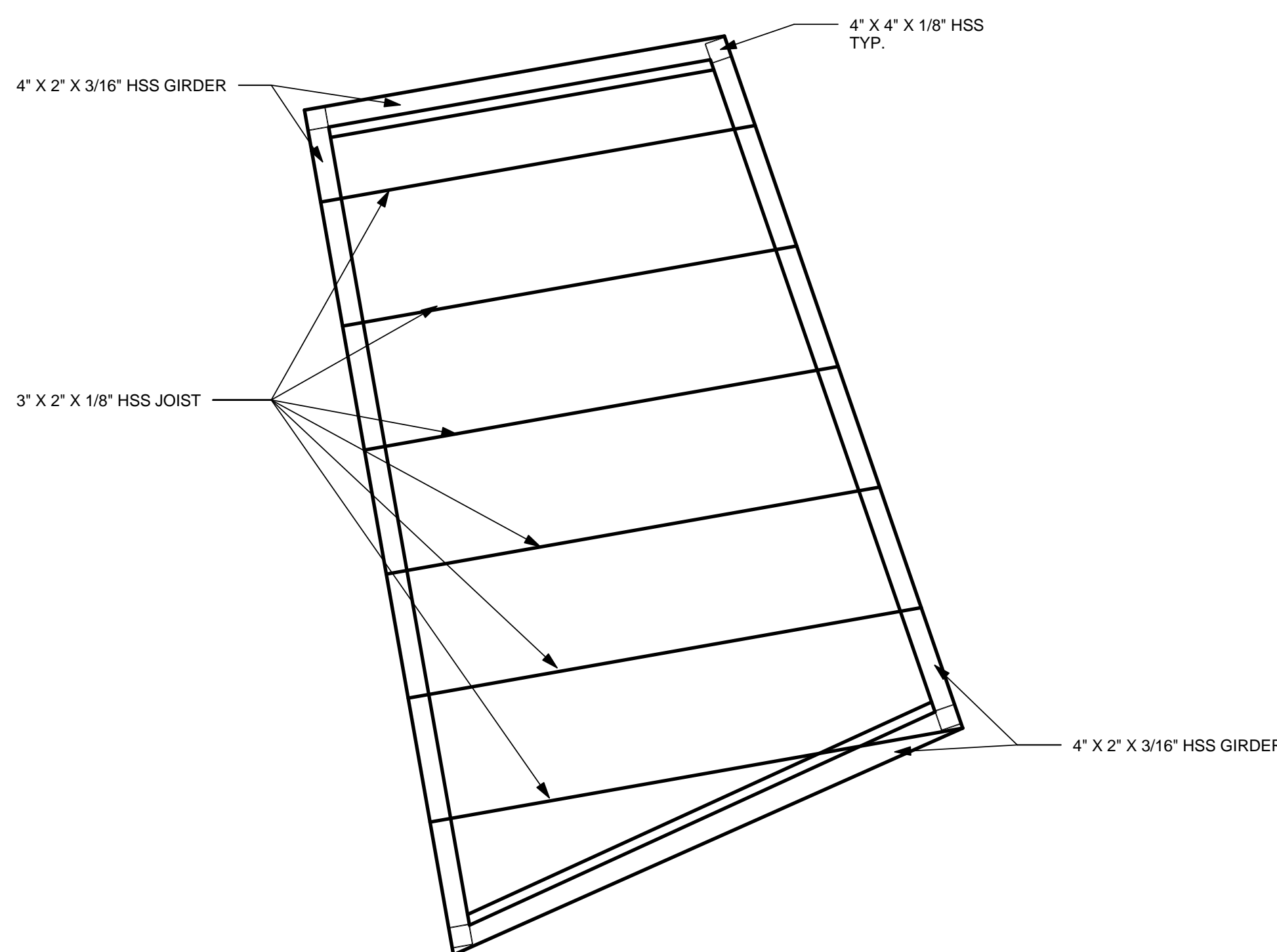
1 SLIDING SCREEN FRAMING
1" = 1'-0"



2 SLIDING SCREEN TOP TRACK
3" = 1'-0"



4 PLANTER FRAMING PLAN
1/2" = 1'-0"



3 PLANTER FRAMING ELEVATIONS
1/2" = 1'-0"

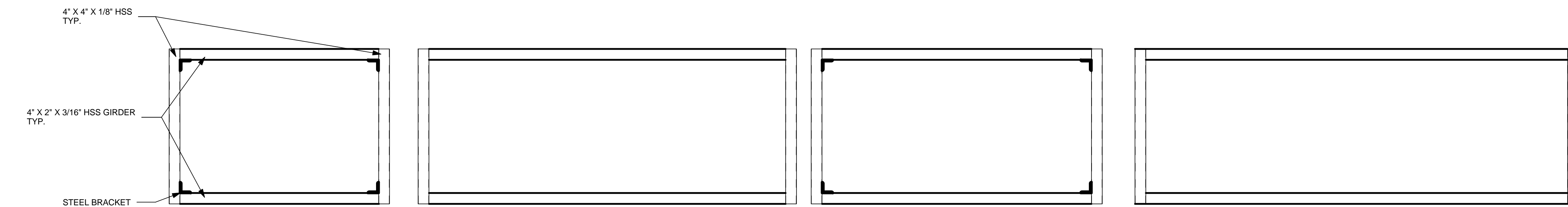


TABLE 2304.9.1 FASTENING SCHEDULE		
CONNECTION	FASTENING	LOCATION
1. JOIST TO SILL OR GIRDER	3 - 8d COMMON (2 1/2" x 0.131")	TOENAIL
2. TOP PLATE TO STUD	2 - 16d COMMON (3 1/2" x 0.162")	END NAIL
3. STUD TO SOLE PLATE	4 - 8d COMMON (2 1/2" x 0.131") 2 - 16d COMMON (3 1/2" x 0.162")	TOENAIL END NAIL
4. DOUBLE STUDS	16d (3 1/2" x 0.135") AT 24" O.C.	FACE NAIL
5. DOUBLE TOP PLATES	16d (3 1/2" x 0.135") AT 16" O.C. 8 - 16d COMMON (3 1/2" x 0.162")	TYPICAL FACE NAIL LAPS SPLICE
6. BLOCKING BETWEEN JOISTS OR RAFTERS TO TOP PLATE	3 - 8d COMMON (2 1/2" x 0.131")	TOENAIL
7. RIM JOIST TO TOP PLATE	8d (2 1/2" x 0.131") AT 6" O.C.	TOENAIL
8. TOP PLATES, LAPS AND INTERSECTIONS	2 - 16d COMMON (3 1/2" x 0.162")	FACE NAIL
9. CONTINUOUS HEADER, TWO PIECES	16d COMMON (3 1/2" x 0.162")	16" O.C. ALONG EDGE
10. CEILING JOISTS TO PLATE	3 - 8d COMMON (2 1/2" x 0.131")	TOENAIL
11. CONTINUOUS HEADER TO STUD	4 - 8d COMMON (2 1/2" x 0.131")	TOENAIL
12. CEILING JOISTS, LAPS OVER PARTITIONS (SEE SECTION 2308.10.1, TABLE 2308.10.1)	3 - 16d COMMON (3 1/2" x 0.162") MINIMUM, TABLE 2308.10.4.1	FACE NAIL
13. CEILING JOISTS TO PARALLEL RAFTERS (SEE SECTION 2308.10.4.1, TABLE 2308.10.4.1)	3 - 16d COMMON (3 1/2" x 0.162") MINIMUM, TABLE 2308.10.4.1	FACE NAIL
14. RAFTER TO PLATE (SEE SECTION 2308.10.1, TABLE 2308.10.1)	3 - 8d COMMON (2 1/2" x 0.131")	TOENAIL
15. 1" DIAGONAL BRACE TO EACH STUD AND PLATE	2 - 8d COMMON (2 1/2" x 0.131")	FACE NAIL
16. 1" x 8" SHEATHING TO EACH BEARING	3 - 8d COMMON (2 1/2" x 0.131")	FACE NAIL
17. WIDER THAN 1" x 8" SHEATHING TO EACH BEARING	3 - 8d COMMON (2 1/2" x 0.131")	FACE NAIL
18. BUILT-UP CORNER STUDS	16d COMMON (3 1/2" x 0.162")	24" O.C.
19. BUILT-UP GIRDER AND BEAMS	20d COMMON (4" x 0.192") 32" O.C. 2 - 20d COMMON (4" x 0.192")	FACE NAIL AT TOP AND BOTTOM STAGGERED ON OPPOSITE SIDES FACE NAIL AT ENDS AND AT EACH SPLICE
20. 2" PLANKS	16d COMMON (3 1/2" x 0.162")	AT EACH BEARING
21. COLLAR TIE TO RAFTER	3 - 10d COMMON (3" x 0.148")	FACE NAIL
22. JACK RAFTER TO HIP	3 - 10d COMMON (3" x 0.148) 2 - 16d COMMON (3 1/2" x 0.162")	TOENAIL FACE NAIL
23. ROOF RAFTER TO 2-BY RIDGE BEAM	2 - 16d COMMON (3 1/2" x 0.162") 2 - 16d COMMON (3 1/2" x 0.162")	TOENAIL FACE NAIL
24. JOIST TO BAND JOIST	3 - 16d COMMON (3 1/2" x 0.162")	FACE NAIL
25. LEDGER STRIP	3 - 16d COMMON (3 1/2" x 0.162")	FACE NAIL
26. INTERIOR PANELING	1/4" 4dj 3/8" 6dk	

FOR SI: 1 INCH = 25.4 MM

a. COMMON OR BOX NAILS ARE PERMITTED TO BE USED EXCEPT WHERE OTHERWISE STATED.

b. NAILS SPACED AT 6 INCHES ON CENTER AT EDGES, 12 INCHES AT INTERMEDIATE SUPPORTS EXCEPT 6 INCHES AT SUPPORTS WHERE SPANS ARE 48 INCHES OR MORE. FOR NAILING OF WOOD STRUCTURAL PANEL AND PARTICLEBOARD DIAPHRAGMS AND SHEAR WALLS, REFER TO SECTION 2305. NAILS FOR WALL SHEATHING ARE PERMITTED TO BE COMMON, BOX OR CASING.

c. COMMON OR DEFORMED SHANK (6d - 2" x 0.113"; 8d - 2 1/2" x 0.131"; 10d - 3" x 0.148").

d. COMMON (6d - 2" x 0.113"; 8d - 2 1/2" x 0.131"; 10d - 3" x 0.148").

e. DEFORMED SHANK (6d - 2" x 0.113"; 8d - 2 1/2" x 0.131"; 10d - 3" x 0.148").

f. CORROSION-RESISTANT SIDING (6d - 1 7/8" x 0.106"; 8d - 2 3/8" x 0.128") OR CASING (6d - 2" x 0.099"; 8d - 2 1/2" x 0.113") NAIL.

g. FASTENERS SPACED 3 INCHES ON CENTER AT EXTERIOR EDGES AND 6 INCHES ON CENTER AT INTERMEDIATE SUPPORTS, WHEN USED AS STRUCTURAL SHEATHING. SPACING SHALL BE 6 INCHES ON CENTER ON THE EDGES AND 12 INCHES ON CENTER AT INTERMEDIATE SUPPORTS FOR NONSTRUCTURAL APPLICATION.

h. CORROSION-RESISTANT ROOFING NAILS WITH 7/16-INCH-DIAMETER HEAD AND 1 1/2-INCH LENGTH FOR 1/2-INCH SHEATHING AND 1 3/4-INCH LENGTH FOR 25/32-INCH SHEATHING.

i. CORROSION-RESISTANT STAPLES WITH NORMAL 7/16-INCH CROWN AND 1 1/8-INCH LENGTH FOR 1/2-INCH SHEATHING AND 1 1/2-INCH LENGTH FOR 25/32-INCH SHEATHING. PANEL SUPPORTS AT 16 INCHES (20 INCHES IF STRENGTH AXIS IN THE LONG DIRECTION OF THE PANEL, UNLESS OTHERWISE MARKED).

j. PANEL SUPPORTS AT 24 INCHES. CASING OR FINISH NAILS SPACED 6 INCHES ON PANEL EDGES, 12 INCHES AT INTERMEDIATE SUPPORTS.

k. FOR ROOF SHEATHING APPLICATIONS, 8d NAILS (2 1/2" x 0.113") ARE THE MINIMUM REQUIRED FOR WOOD STRUCTURAL PANELS.

1 FASTENER SCHEDULE
12" = 1'-0"

GENERAL SHEET NOTES

1. ALL DIMENSIONS TO FACE OF STUDS OR CENTER OF COLUMNS, UNLESS OTHERWISE NOTED.
2. F.F. AT 2'-6" ABOVE FINISHED GRADE.
3. PROPERTY LINE PER SD ORGANIZER.
4. REFER TO S-201, S-202 FOR DETAIL FRAMING AND ROUGH OPENING DIMENSIONS.
5. REFER TO A-601 FOR FIXTURES & APPLIANCES SCHEDULES.

- ROOM LEGEND**
- 101 FOYER
29 SQ.FT. - NOT HABITABLE
 - 102 KITCHEN AREA
107 SQ.FT. - IRC R303.1, R304.1
GLAZING - 35% OF FLOOR AREA
VENTILATION 14% OF FLOOR AREA
 - 103 LIVING / DINING
232 SQ.FT. - IRC R303.1, R304.1-3
GLAZING - 38% OF FLOOR AREA
VENTILATION 42% OF FLOOR AREA
 - 104 HALL
40 SQ.FT. - NOT HABITABLE
 - 105 BATH
55 SQ.FT. - IRC R303.1, R304.1-3
 - 106 BEDROOM
149 SQ.FT. - IRC R303.1, R304.1-3
GLAZING - 30% OF FLOOR AREA
VENTILATION 36% OF FLOOR AREA
 - 107 MECHANICAL ROOM
19 SQ.FT. - NOT HABITABLE
 - 108 LAUNDRY ROOM
11 SQ.FT. - NOT HABITABLE

- IRC 2012 PART III**
- R304.1 MINIMUM AREA. EVERY DWELLING UNIT SHALL HAVE AT LEAST ONE HABITABLE ROOM THAT SHALL HAVE NOT LESS THAN 120 SQUARE FEET OF GROSS FLOOR AREA.
- R304.2 OTHER ROOMS. OTHER HABITABLE ROOMS SHALL HAVE A FLOOR AREA OF NOT LESS THAN 70 SQUARE FEET.
EXCEPTION: KITCHENS.
- R304.3 MINIMUM DIMENSIONS. HABITABLE ROOMS SHALL NOT BE LESS THAN 7 FEET IN ANY HORIZONTAL DIMENSION.
EXCEPTION: KITCHENS.



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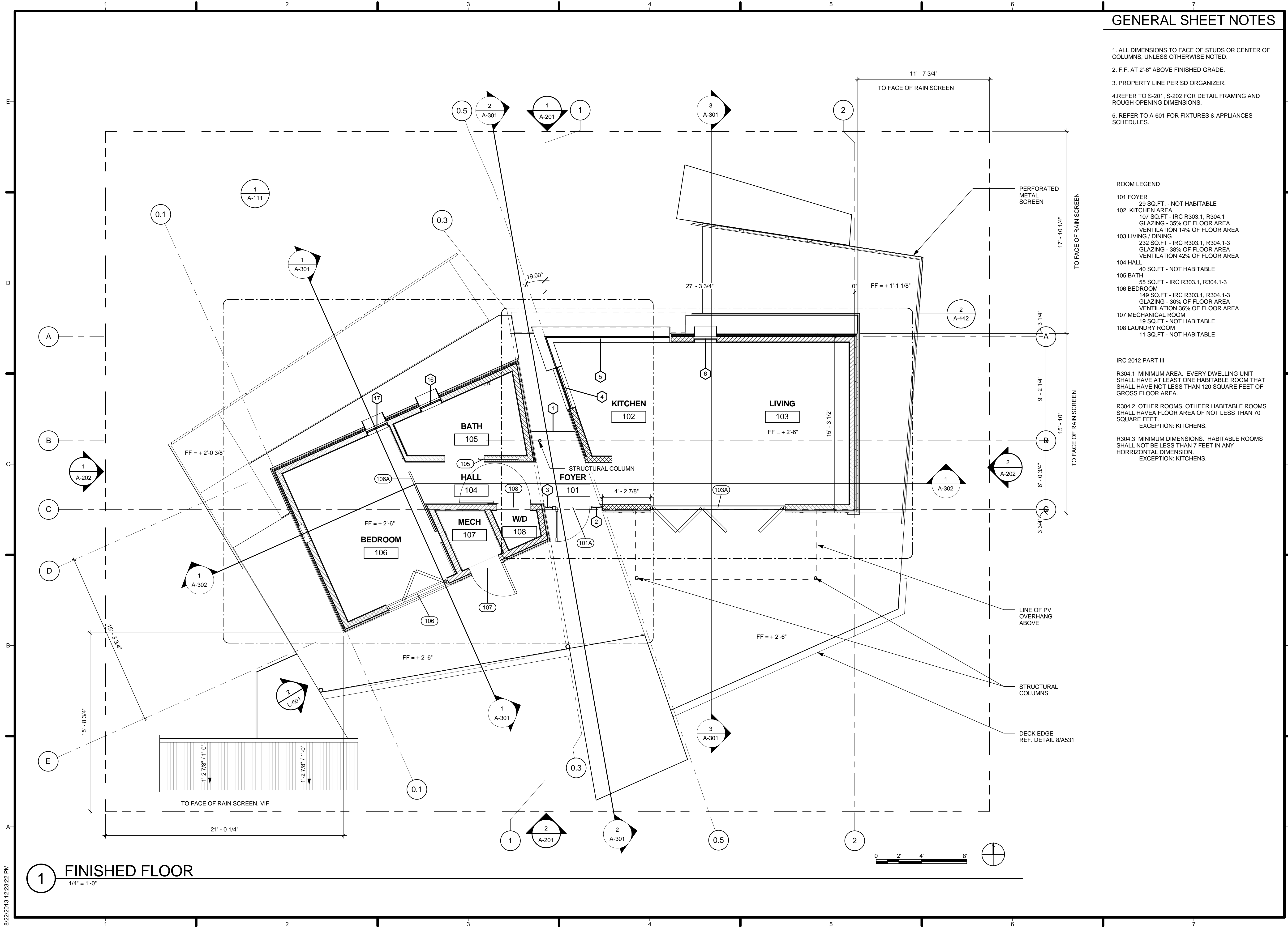
REVISIONS

REV	DATE	DESCRIPTION
3	Date 3	AS-BUILT
2	30 MAY 2013	NTA REVIEW COMMENTS
1	21 MARCH 2013	NREL REVIEW COMMENTS

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FIRST FLOOR PLAN

A-101



1 FINISHED FLOOR
1/4" = 1'-0"



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GENERAL SHEET NOTES

1. ALL DIMENSIONS TO FACE OF STUDS OR CENTER OF COLUMNS, UNLESS OTHERWISE NOTED.
2. F.F. AT 2'-6" ABOVE FINISHED GRADE.
3. PROPERTY LINE PER SD ORGANIZER.
4. REFER TO S-201, S-202 FOR DETAIL FRAMING AND ROUGH OPENING DIMENSIONS.
5. REFER TO A-601 FOR FIXTURES & APPLIANCES SCHEDULES.



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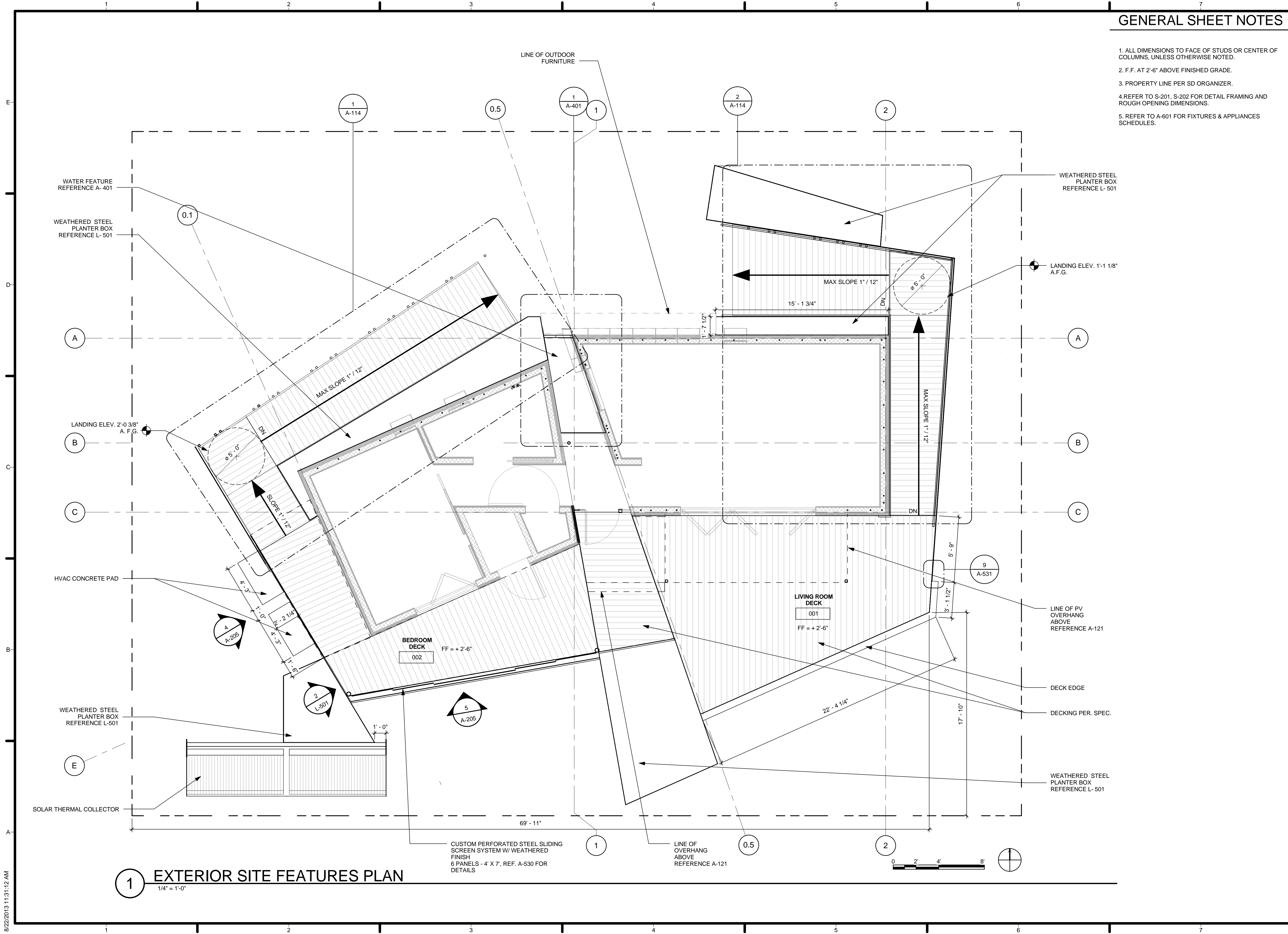
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EXTERIOR SITE FEATURES PLAN

A-102



1 EXTERIOR SITE FEATURES PLAN
1/4" = 1'-0"

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GENERAL SHEET NOTES

1. ALL DIMENSIONS TO FACE OF STUDS OR CENTER OF COLUMNS, UNLESS OTHERWISE NOTED.
2. F.F. AT 2'-6" ABOVE FINISHED GRADE.
3. PROPERTY LINE PER SD ORGANIZER.
4. REFER TO S-201, S-202 FOR DETAIL FRAMING AND ROUGH OPENING DIMENSIONS.
5. REFER TO #/A-601 FOR FIXTURES & APPLIANCES SCHEDULES.



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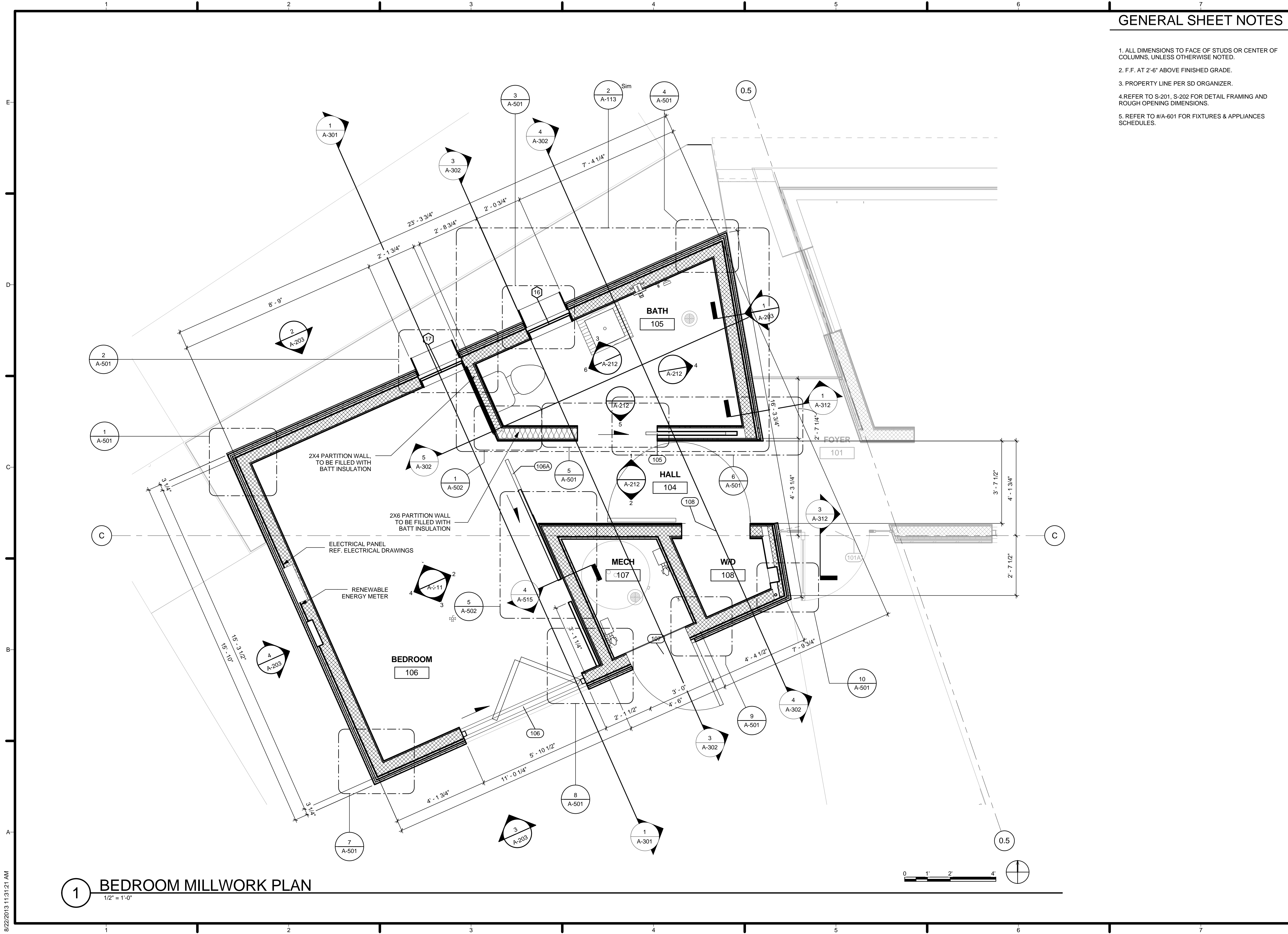
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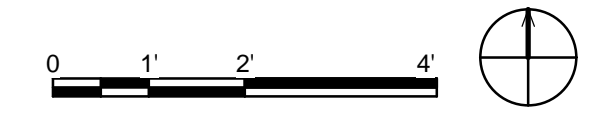
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ENLARGED FLOOR PLAN - MODULE A

A-111



1 BEDROOM MILLWORK PLAN
1/2" = 1'-0"



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GENERAL SHEET NOTES

1. ALL DIMENSIONS TO FACE OF STUDS OR CENTER OF COLUMNS, UNLESS OTHERWISE NOTED.
2. F.F. AT 2'-6" ABOVE FINISHED GRADE.
3. PROPERTY LINE PER SD ORGANIZER.
4. REFER TO S-201, S-202 FOR DETAIL FRAMING AND ROUGH OPENING DIMENSIONS.
5. REFER TO A-601 FOR FIXTURES & APPLIANCES SCHEDULES.

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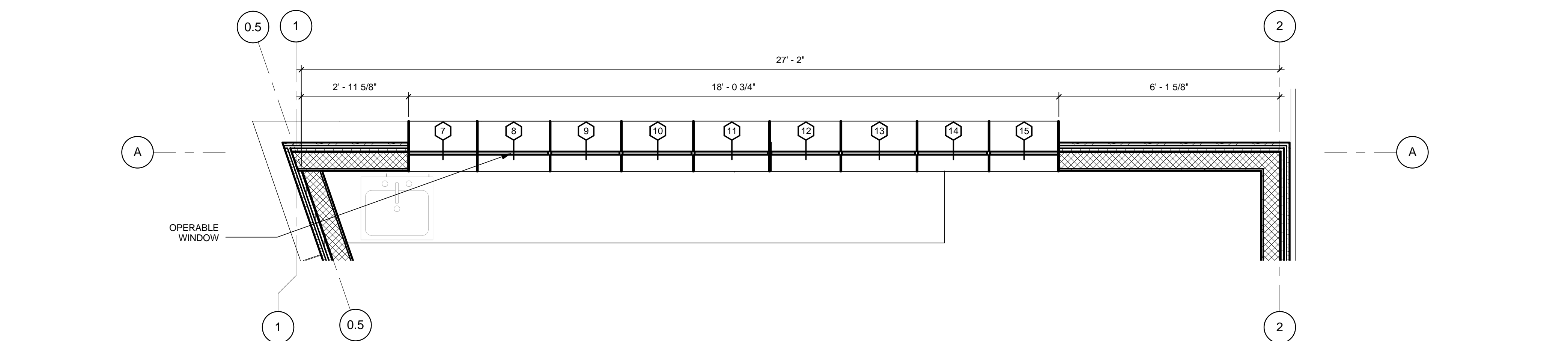
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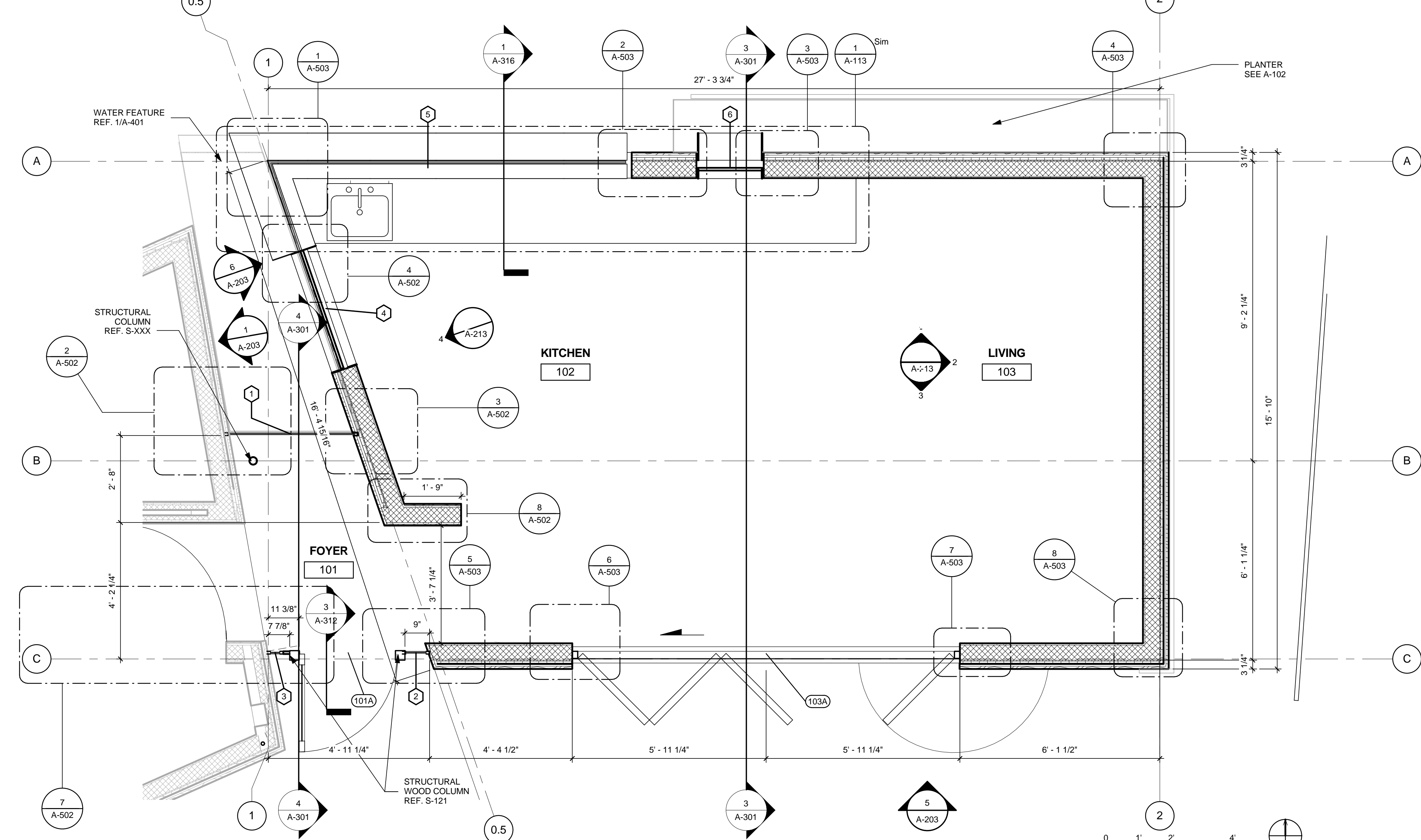
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ENLARGED FLOOR PLAN - MODULE B

A-112



1 ENLARGED CLERESTORY PLAN - MODULE B
 1/2" = 1'-0"



2 ENLARGED FLOOR PLAN - MODULE B
 1/2" = 1'-0"

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GENERAL SHEET NOTES

1. ALL DIMENSIONS TO FACE OF STUDS OR CENTER OF COLUMNS, UNLESS OTHERWISE NOTED.
2. F.F. AT 2'-6" ABOVE FINISHED GRADE.
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4. REFER TO S-201, S-202 FOR DETAIL FRAMING AND ROUGH OPENING DIMENSIONS.
5. REFER TO A-601 FOR FIXTURES & APPLIANCES SCHEDULES.

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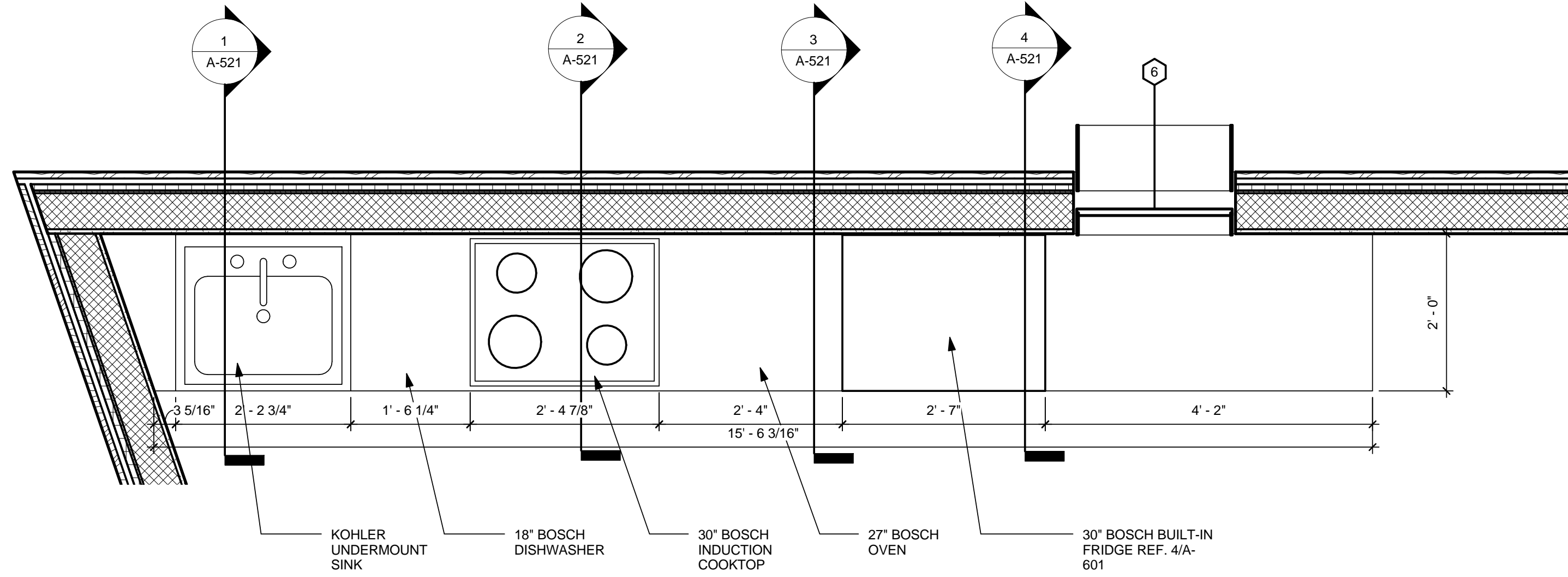
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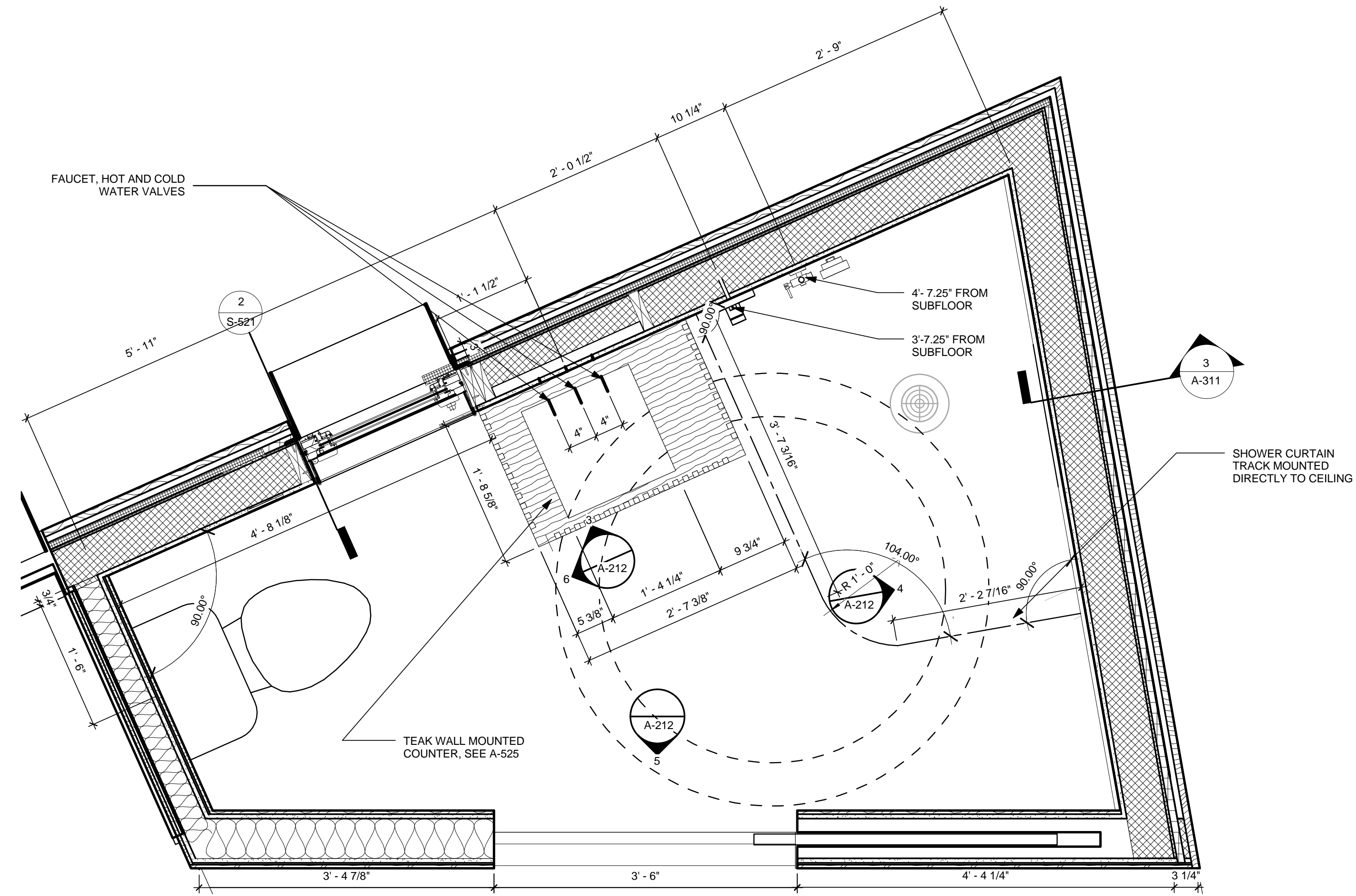
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ENLARGED INT
MILLWORK PLANS

A-113



1 INT PLAN DTL KITCHEN MILL
3/4" = 1'-0"



2 BATHROOM 105 ENLARGED PLAN
1" = 1'-0"

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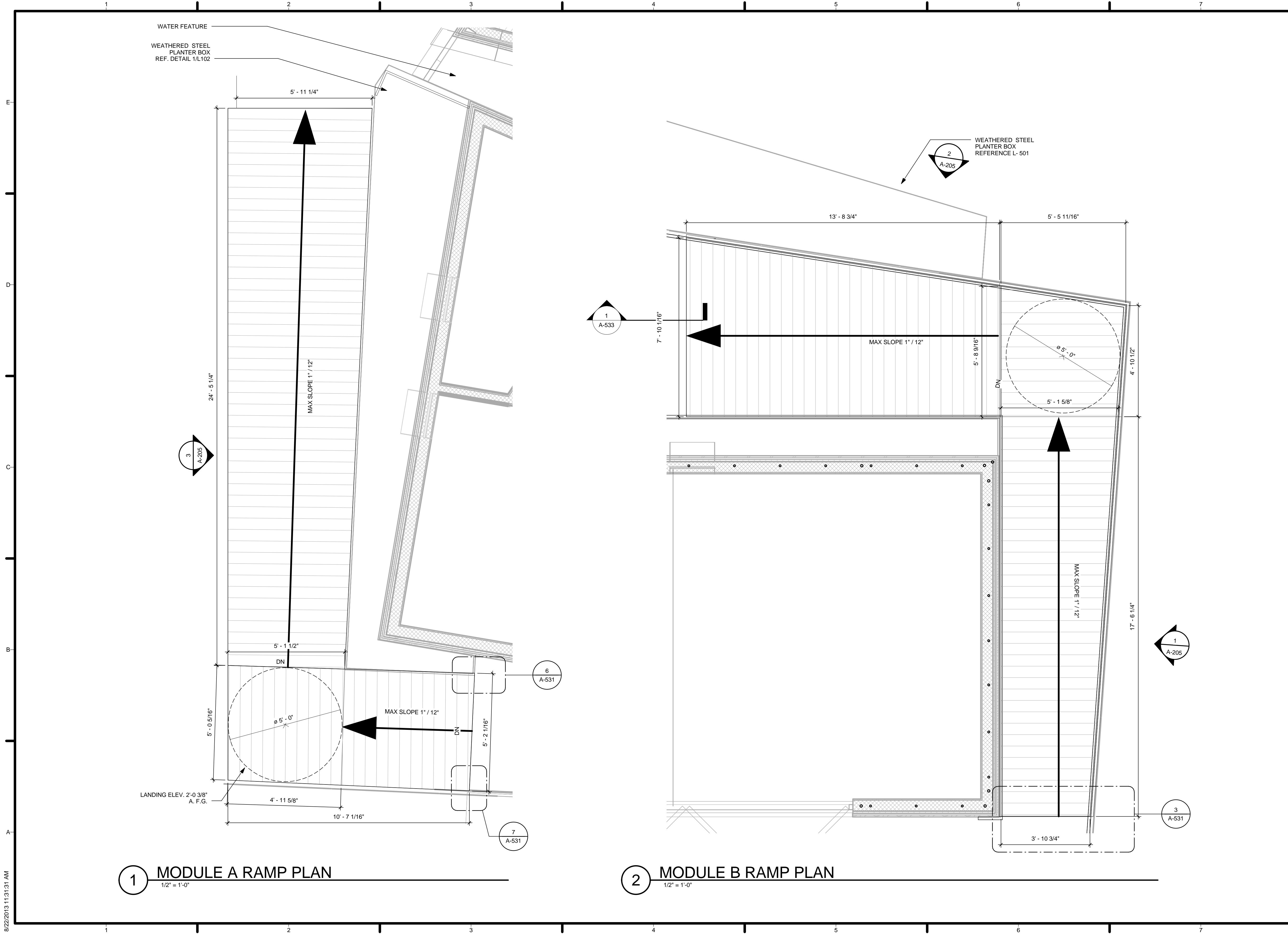
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ENLARGED RAMP PLANS

A-114



1 MODULE A RAMP PLAN
1/2" = 1'-0"

2 MODULE B RAMP PLAN
1/2" = 1'-0"

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GENERAL SHEET NOTES

1. GUTTERS AT THE EDGE OF ROOFS DIRECTS RUNOFF TO THE LOW SLOPE METAL ROOF. IT THEN TRANSFERS THE WATER INTO THE WATER FEATURE OR THE COOLTOWER, BOTH CONNECTED WITH GRAY WATER IRRIGATION SYSTEM.
2. PHOTOVOLTAIC ARRAY SHALL FOLLOW THE SLOPE OF THE ROOF.



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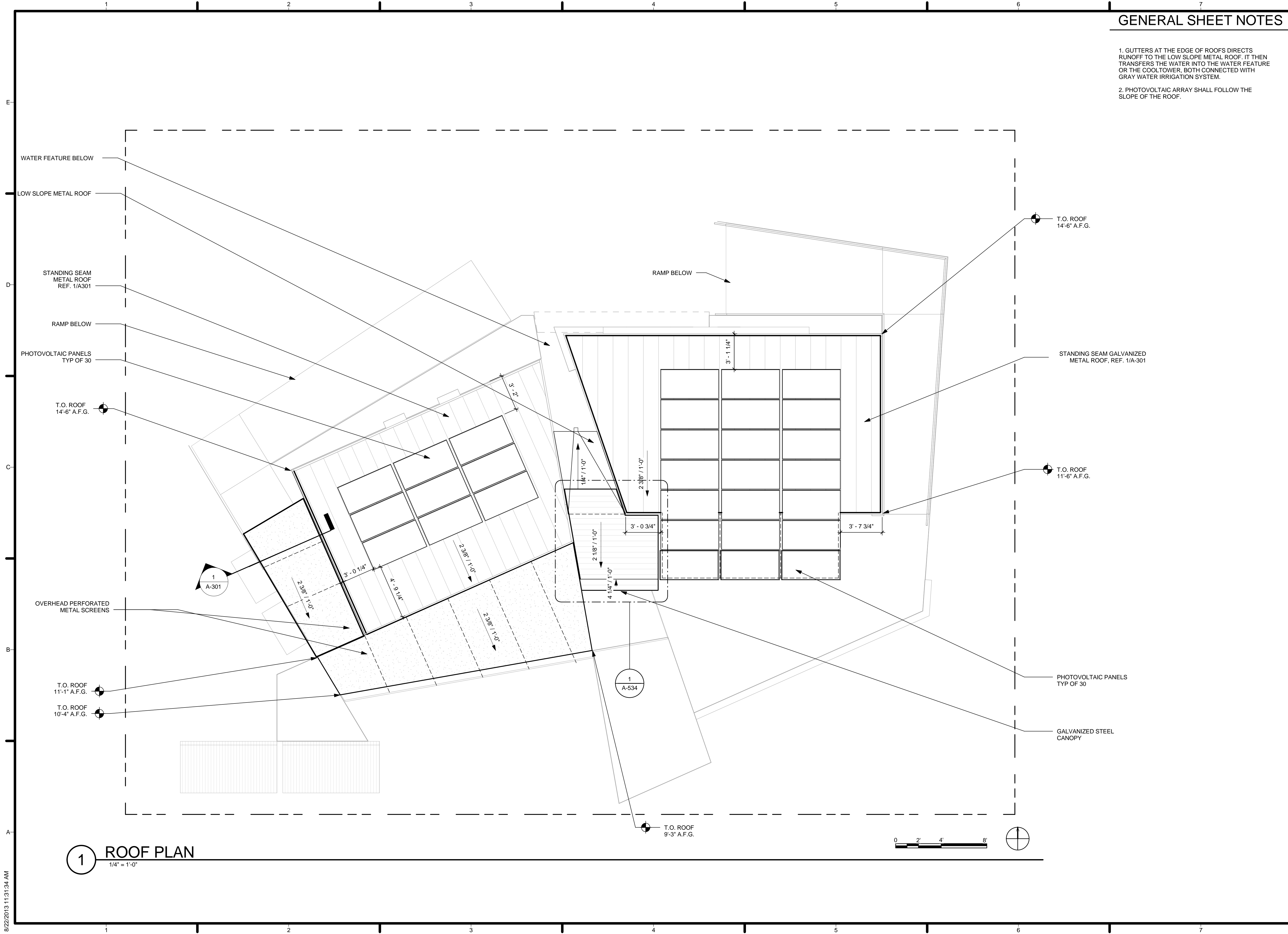
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ROOF PLAN

A-121



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














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GENERAL SHEET NOTES

1. RCP TO REFLECT CEILING MOUNTED LIGHT FIXTURES ONLY. FOR COMPLETE LIGHTING PLAN REFER TO E-103
2. RCP TO LOCATE SMOKE DETECTORS AND SPRINKLER HEADS ONLY. FOR COMPLETE FIRE PROTECTION PLAN REFER TO F-101

RCP LEGEND

-  GYPSUM BOARD CEILING
-  PERFORATED METAL
-  FINISHED WOOD PANEL
-  RECESSED LED LIGHT
-  IN CEILING SPRINKLER HEAD
-  SMOKE DETECTOR
-  SMOKE DETECTOR WALL MOUNTED
-  CEILING FAN
-  SCONCE
-  LED RGB
-  DECK DOWN LIGHT



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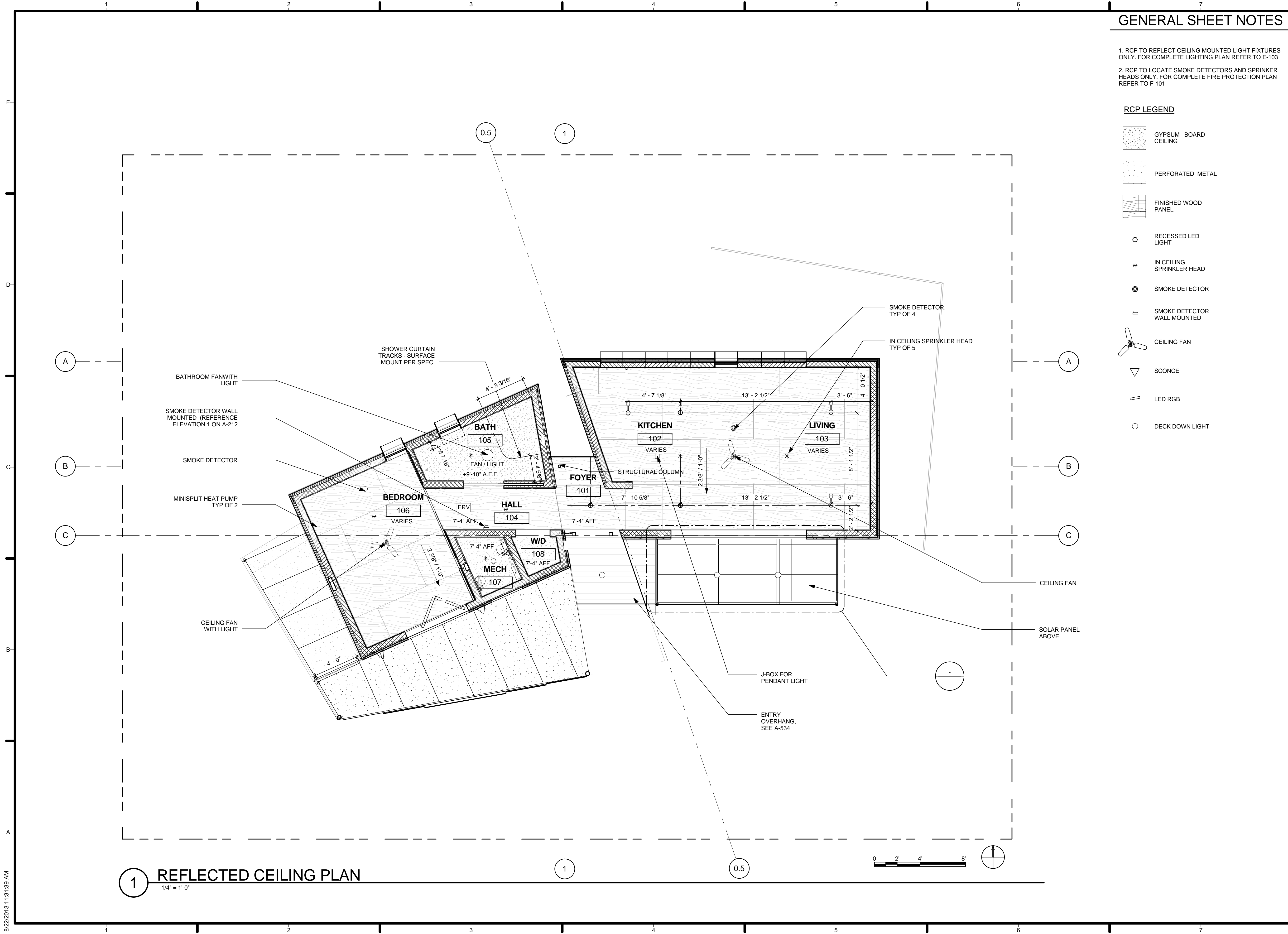
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REFLECTED CEILING PLAN

A-131



1 REFLECTED CEILING PLAN
1/4" = 1'-0"

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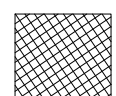
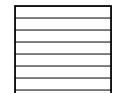
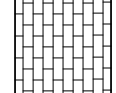

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INTERIOR FINISH & FURNISHINGS PLAN

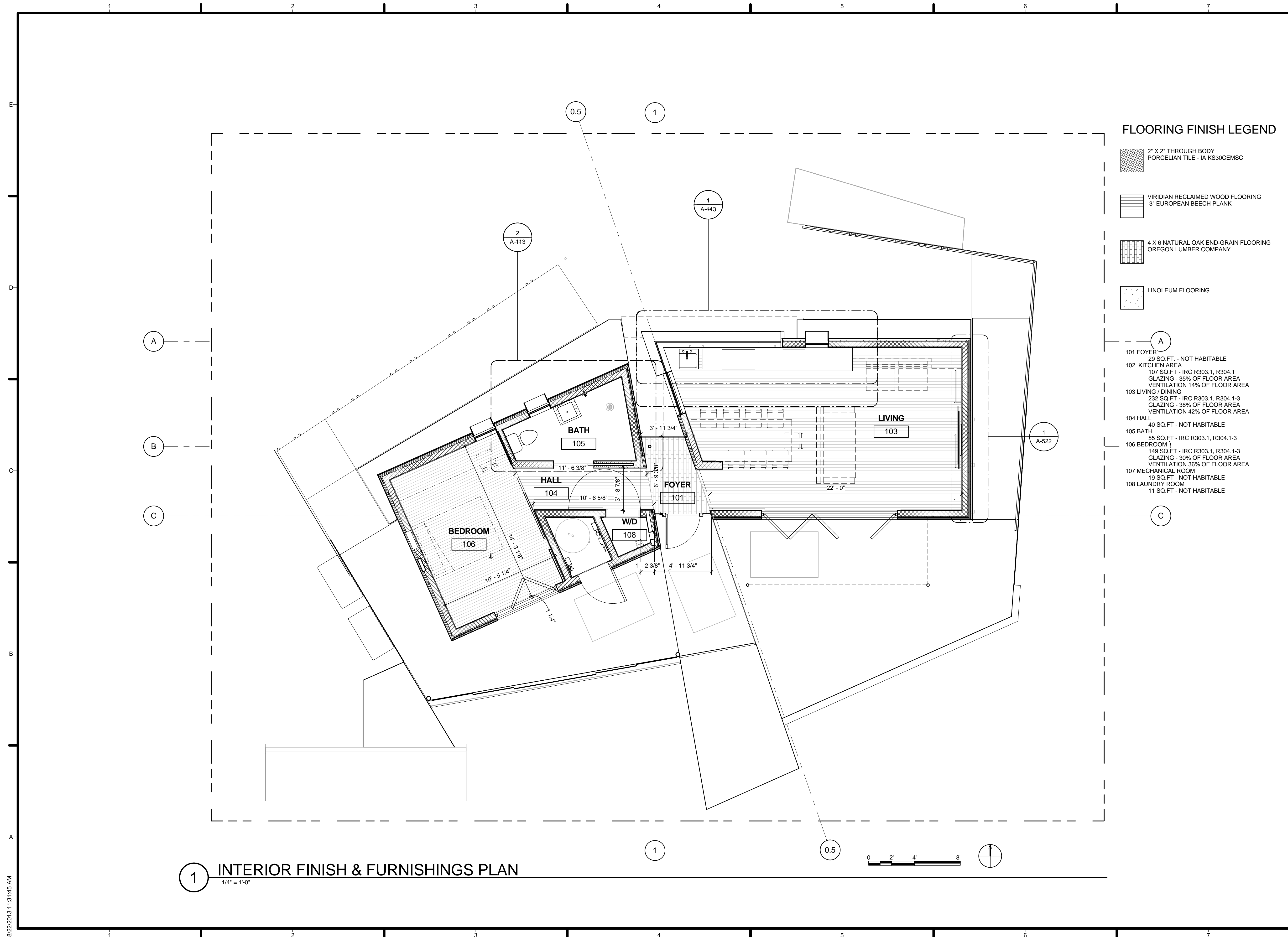
A-141

FLOORING FINISH LEGEND

-  2' X 2' THROUGH BODY PORCELAIN TILE - IA KS30CEMSC
-  VIRIDIAN RECLAIMED WOOD FLOORING 3' EUROPEAN BEECH PLANK
-  4 X 6 NATURAL OAK END-GRAIN FLOORING OREGON LUMBER COMPANY
-  LINOLEUM FLOORING

- A**
- 101 FOYER
29 SQ. FT. - NOT HABITABLE
- 102 KITCHEN AREA
107 SQ. FT. - IRC R303.1, R304.1
GLAZING - 35% OF FLOOR AREA
VENTILATION 14% OF FLOOR AREA
- 103 LIVING / DINING
232 SQ. FT. - IRC R303.1, R304.1-3
GLAZING - 38% OF FLOOR AREA
VENTILATION 42% OF FLOOR AREA
- 104 HALL
40 SQ. FT. - NOT HABITABLE
- 105 BATH
55 SQ. FT. - IRC R303.1, R304.1-3
- 106 BEDROOM
149 SQ. FT. - IRC R303.1, R304.1-3
GLAZING - 30% OF FLOOR AREA
VENTILATION 36% OF FLOOR AREA
- 107 MECHANICAL ROOM
19 SQ. FT. - NOT HABITABLE
- 108 LAUNDRY ROOM
11 SQ. FT. - NOT HABITABLE
- C**

1 INTERIOR FINISH & FURNISHINGS PLAN
1/4" = 1'-0"



8/22/2013 11:31:45 AM

GENERAL SHEET NOTES

1. REFER TO PROJECT MANUAL SPECS FOR MATERIAL SELECTION.
2. SLOPE OF ROOF IS SHOWN AS APPROXIMATE. REFER TO STRUCTURAL DRAWINGS FOR EXACT ANGLES.
3. FINISHED FLOOR SHALL BE EQUAL TO OR UNDER 2'-6" ABOVE FINISHED GRADE.
4. "CUSTOM" PERFORATED PANELS SHALL BE DIGITALLY FABRICATED PER ARCHITECT'S DRAWINGS.



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CONSULTANTS
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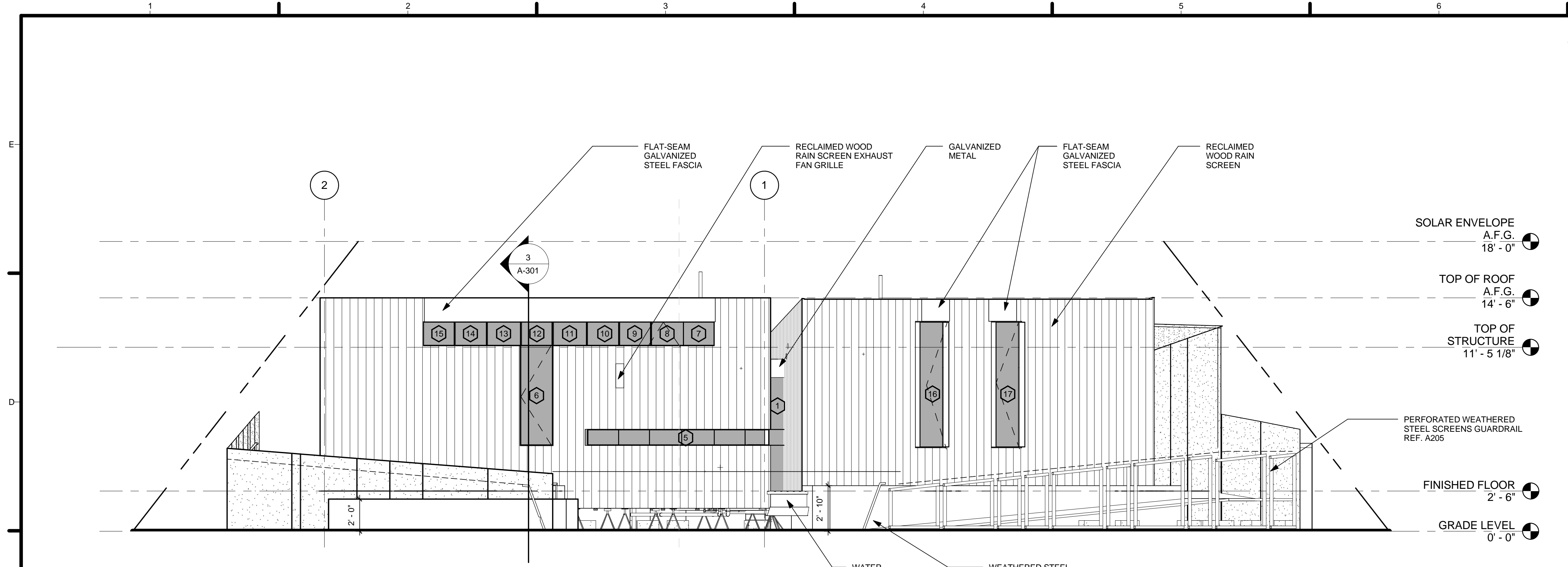
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REV	DATE	DESCRIPTION
1	21 MARCH 2013	NREL REVIEW COMMENTS

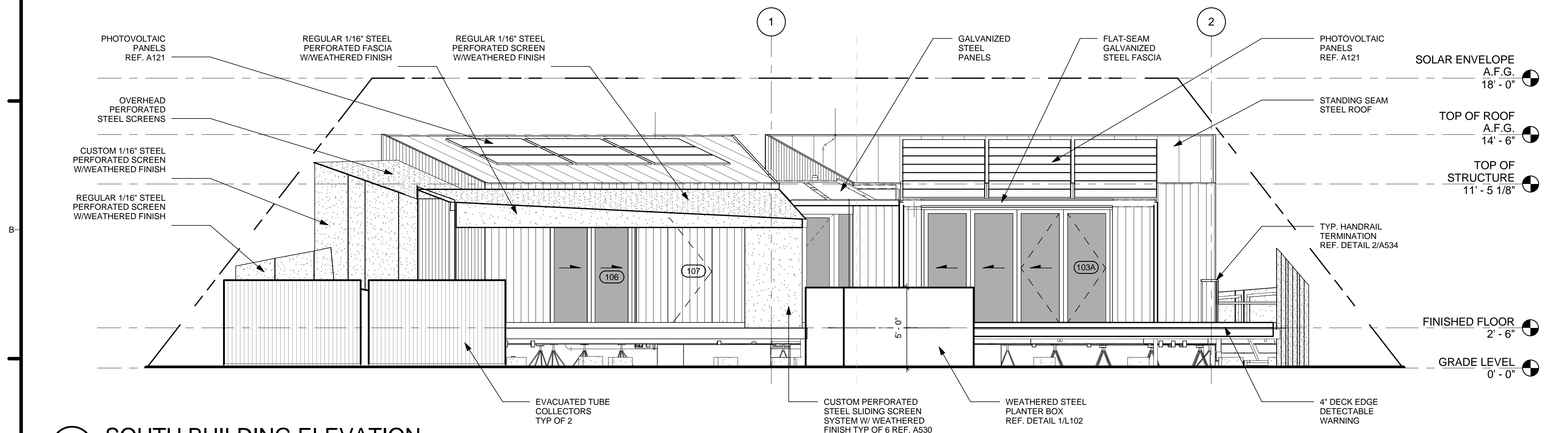
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BUILDING ELEVATIONS

A-201



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



2 SOUTH BUILDING ELEVATION
1/4" = 1'-0"

8/22/2013 11:31:50 AM

GENERAL SHEET NOTES

1. REFER TO PROJECT MANUAL SPECS FOR MATERIAL SELECTION.
2. SLOPE OF ROOF IS SHOWN AS APPROXIMATE, REFER TO STRUCTURAL DRAWINGS FOR EXACT ANGLES.
3. FINISHED FLOOR SHALL BE EQUAL TO OR UNDER 2'-6" ABOVE FINISHED GRADE.
4. "CUSTOM" PERFORATED, PANELS SHALL BE DIGITALLY FABRICATED PER ARCHITECT'S DRAWINGS.



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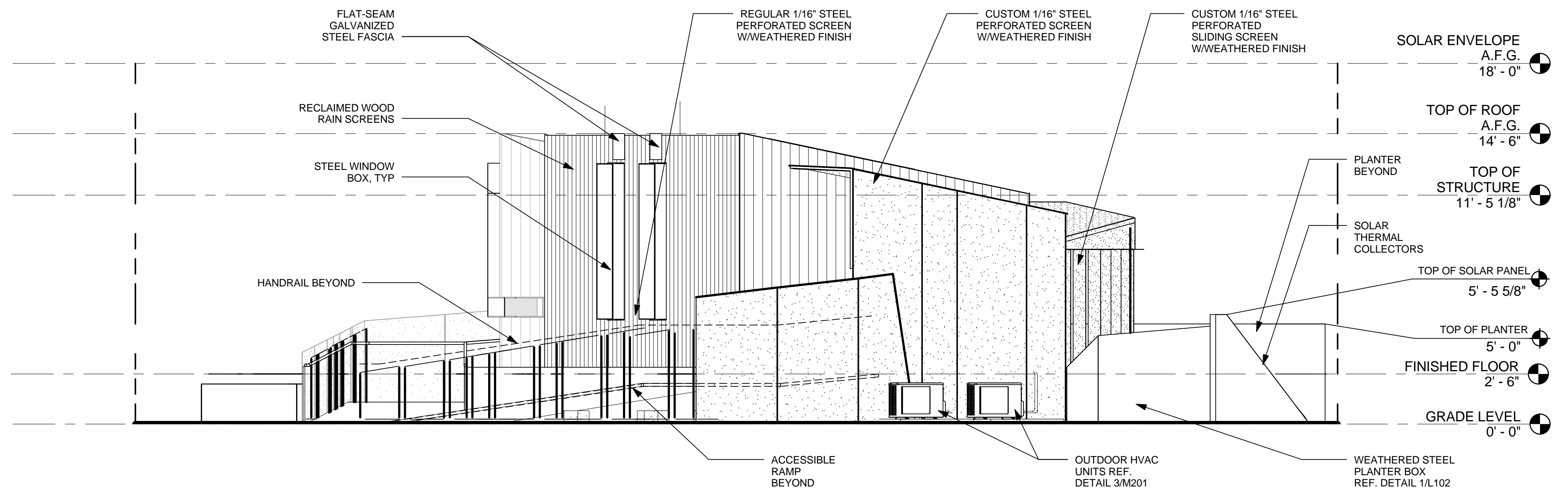
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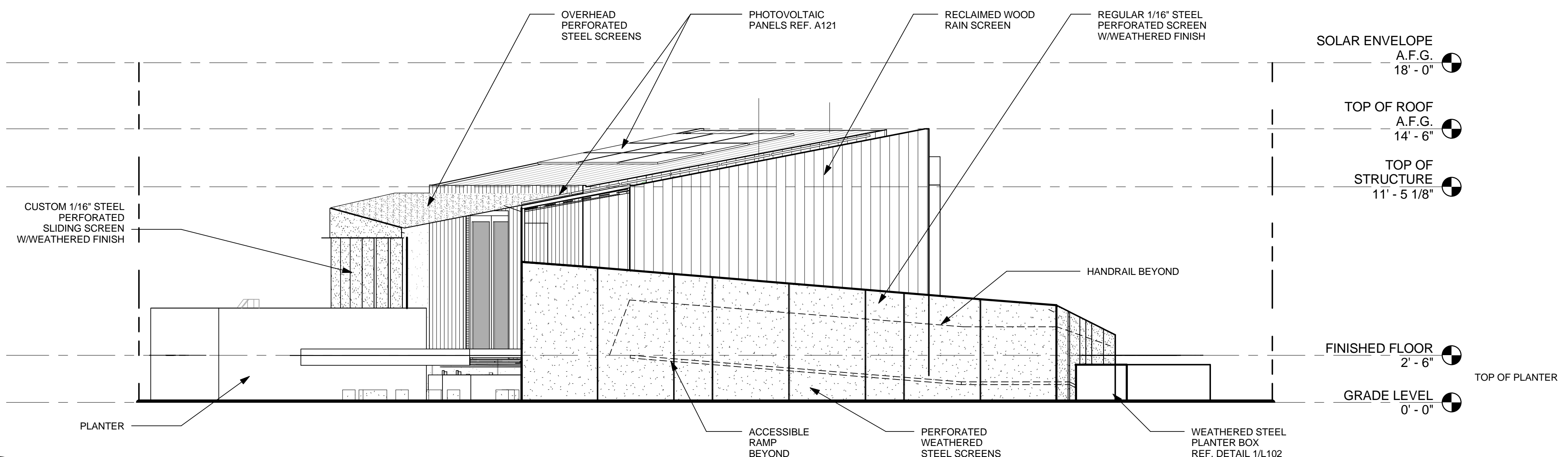
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BUILDING ELEVATIONS

A-202



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



2 EAST BUILDING ELEVATION
1/4" = 1'-0"

8/22/2013 11:31:55 AM

GENERAL SHEET NOTES

1. REFER TO PROJECT MANUAL SPECS FOR MATERIAL SELECTION.
2. SLOPE OF ROOF IS SHOWN AS APPROXIMATE. REFER TO STRUCTURAL DRAWINGS FOR EXACT ANGLES.
3. FINISHED FLOOR SHALL BE EQUAL TO OR UNDER 2'-6" ABOVE FINISHED GRADE.
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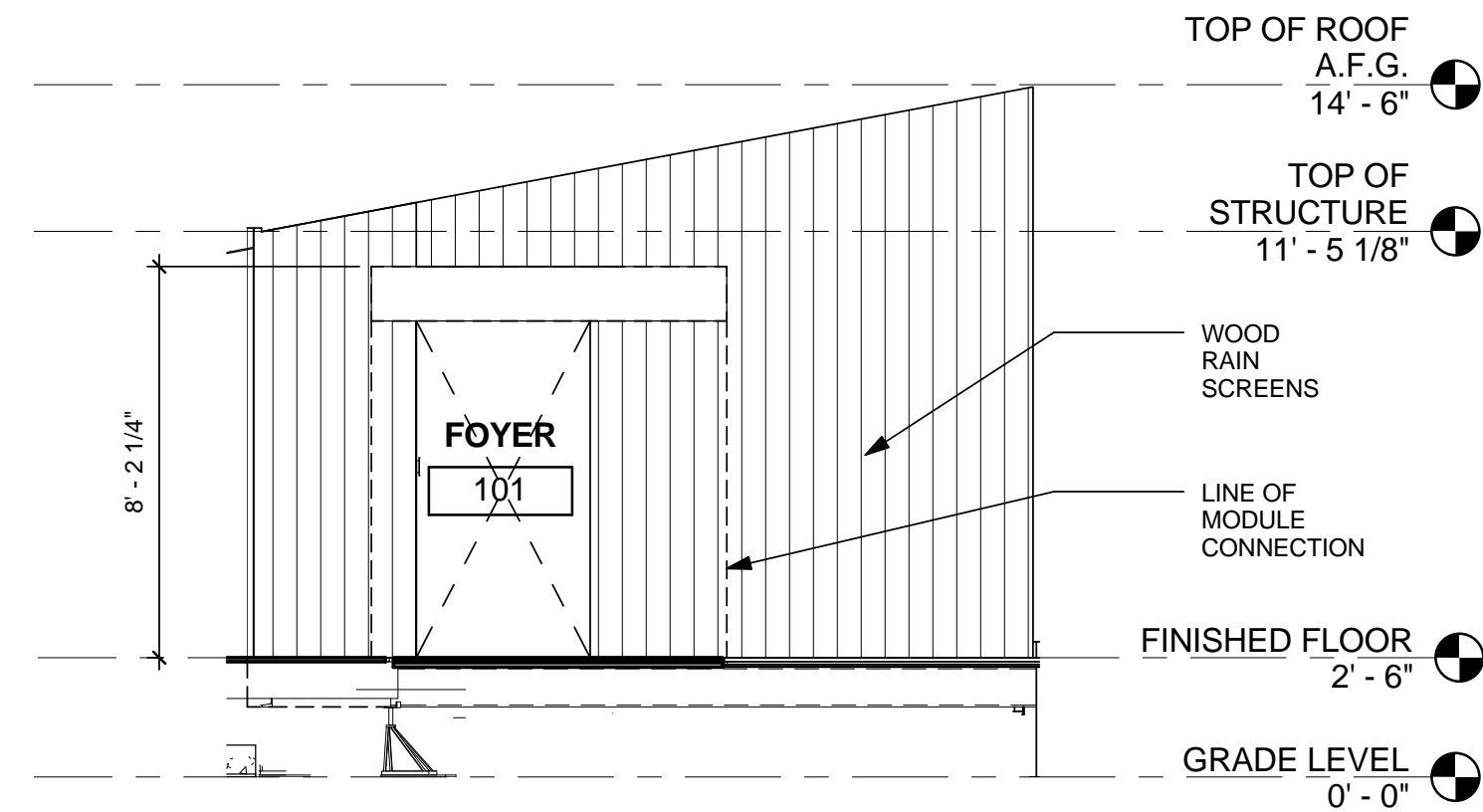
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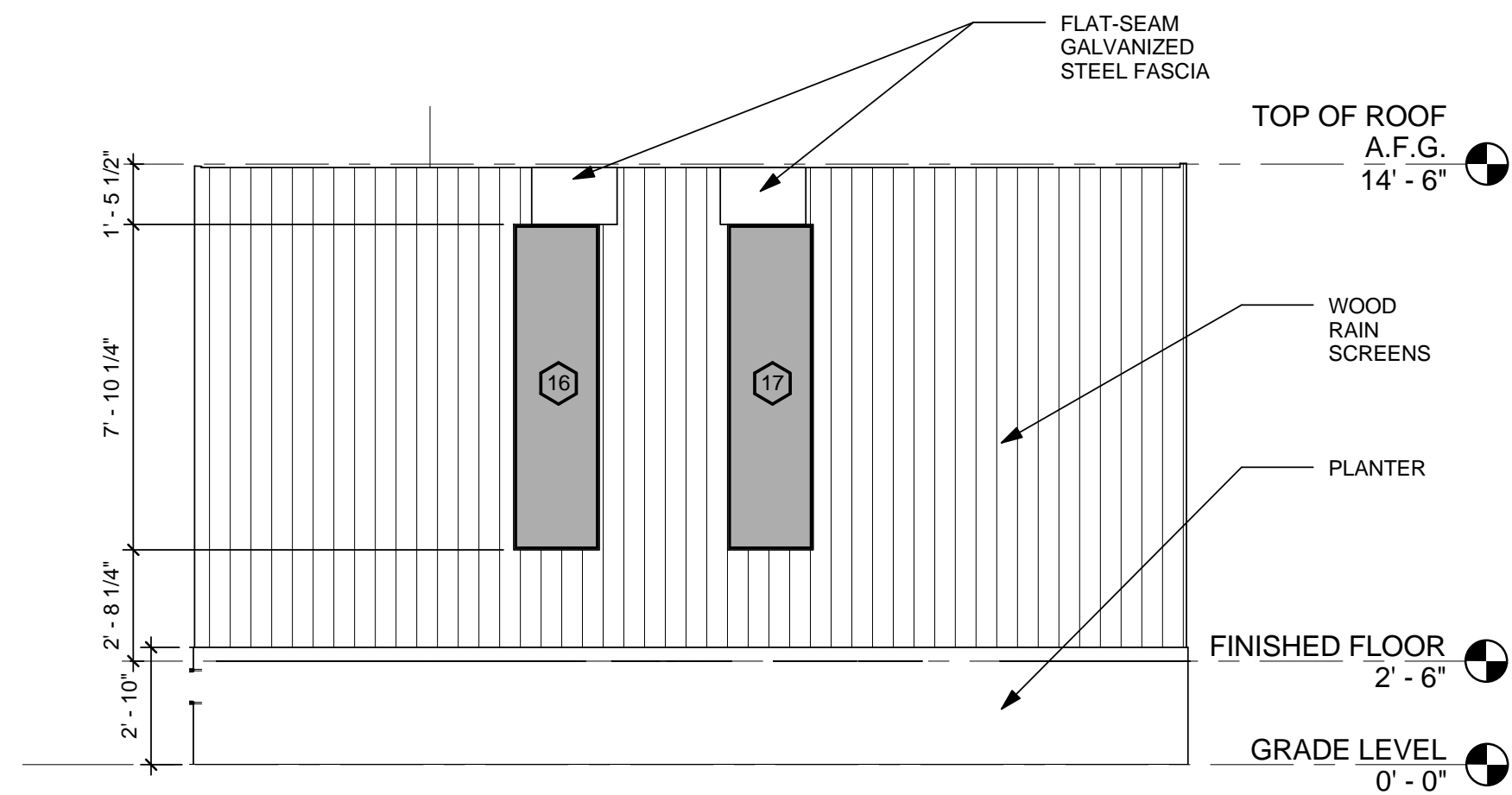
MODULE ELEVATIONS

A-203



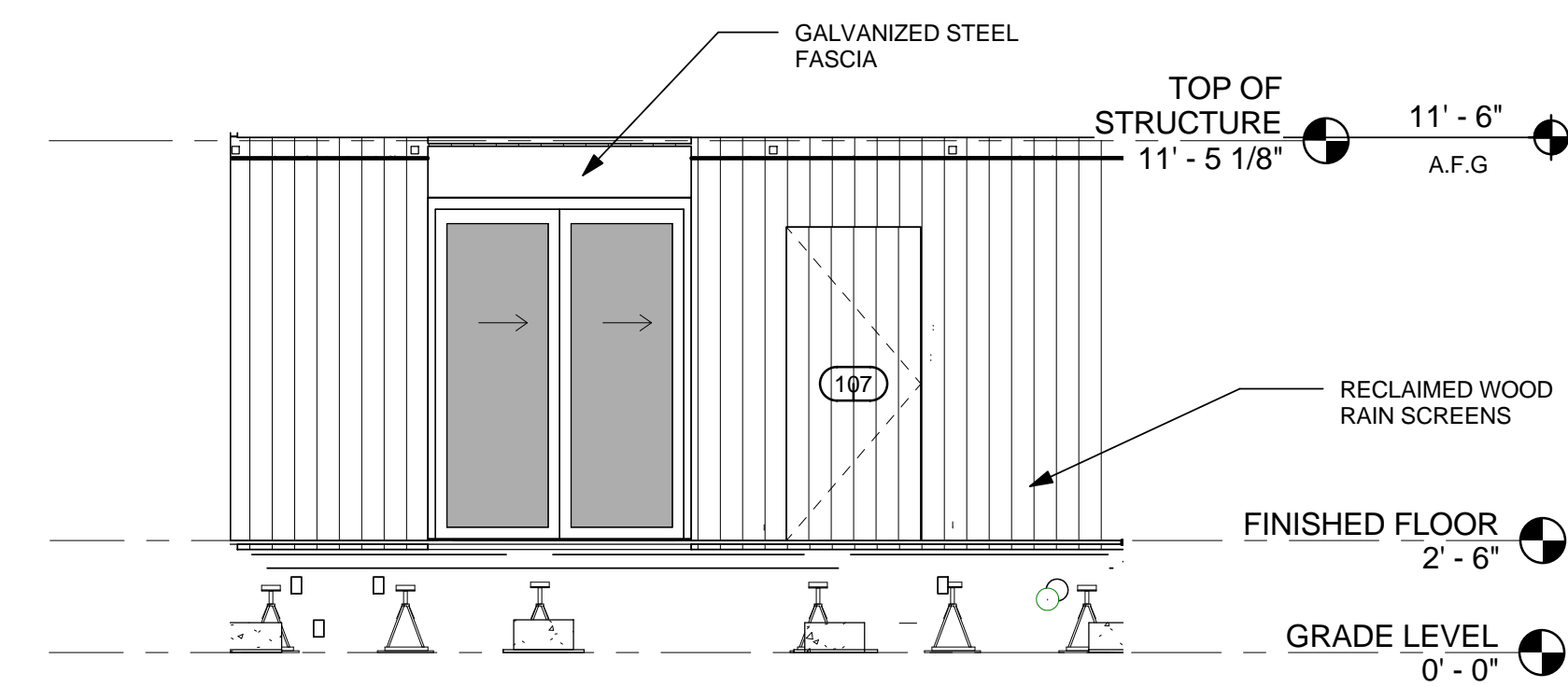
1 MODULE A NE ELEVATION

1/4" = 1'-0"



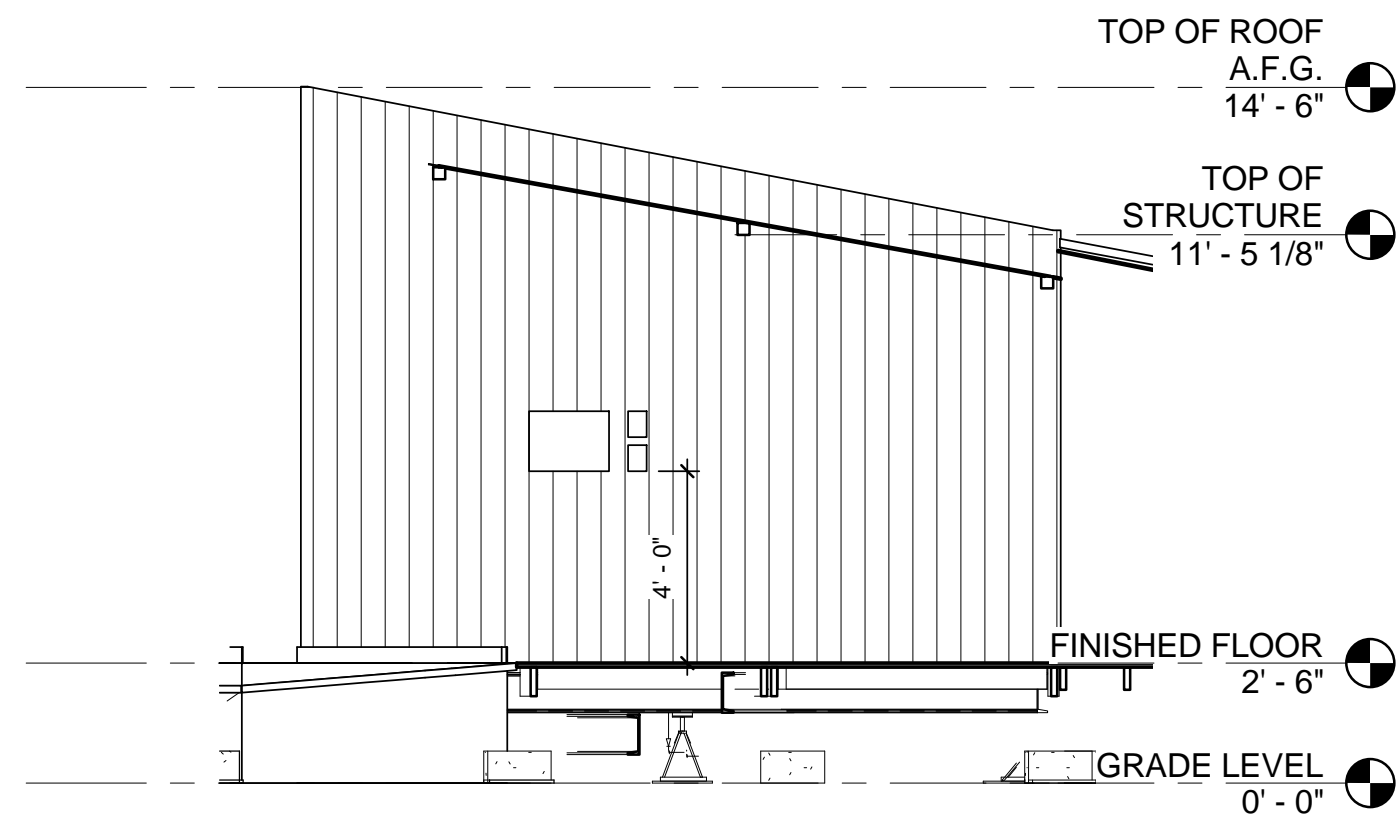
2 MODULE A NW ELEVATION

1/4" = 1'-0"



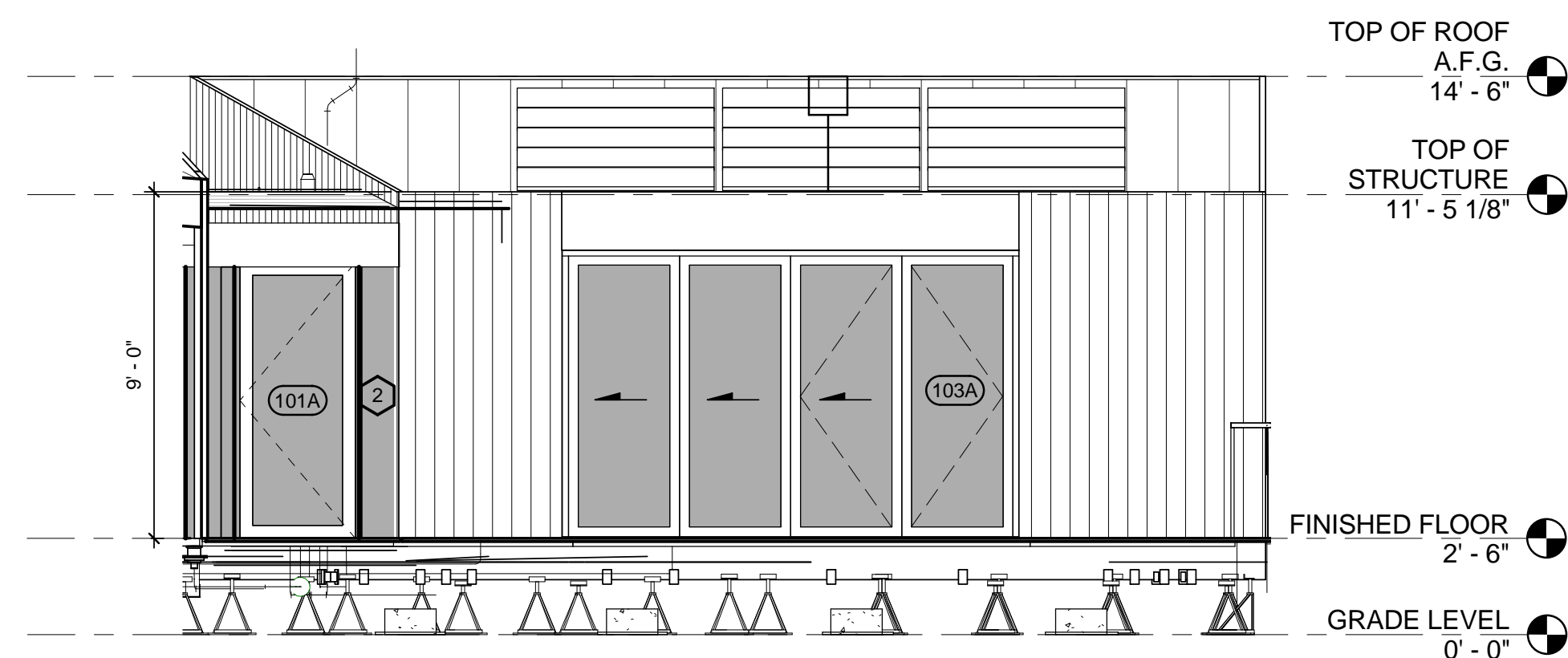
3 MODULE A SE ELEVATION

1/4" = 1'-0"



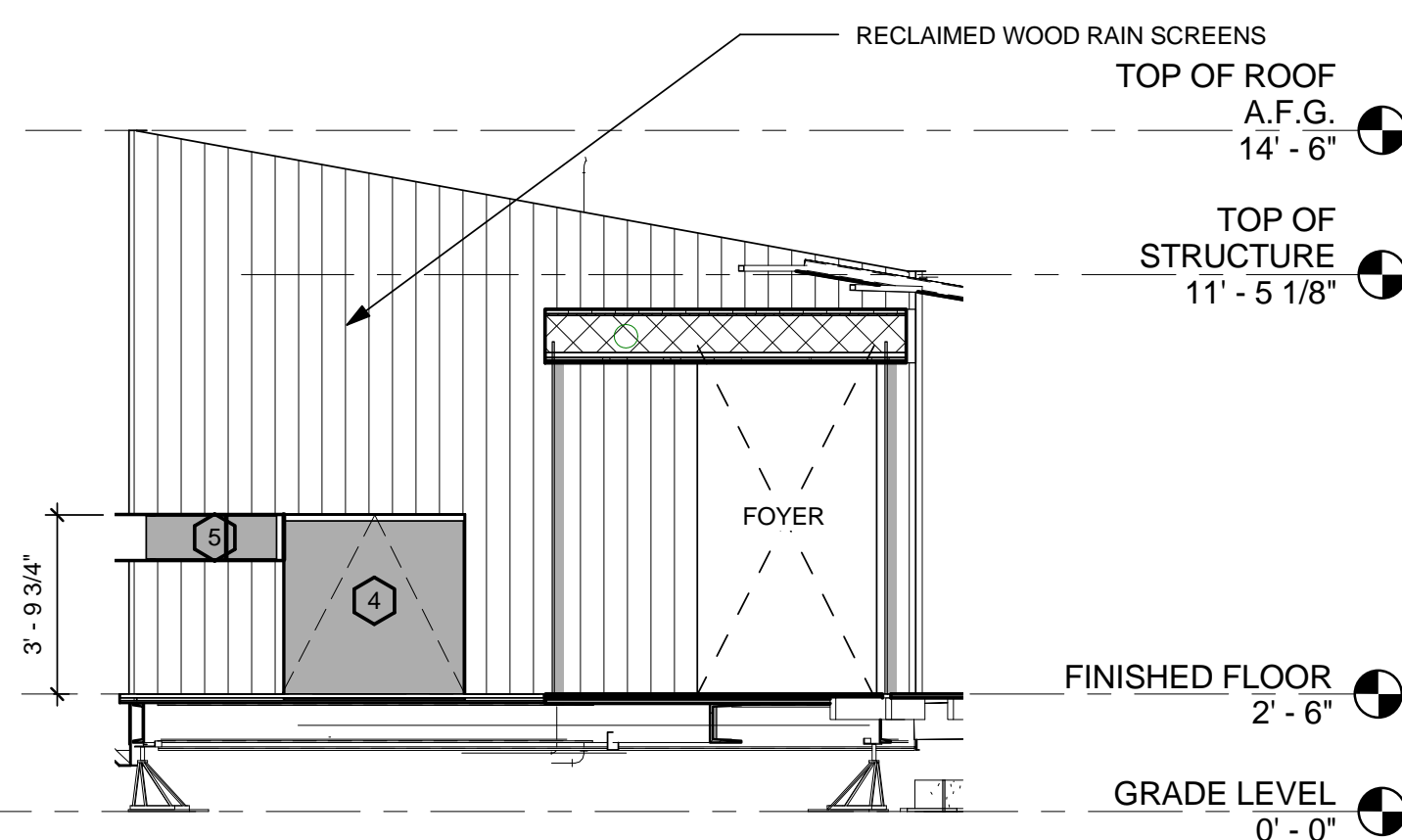
4 MODULE A SW ELEVATION

1/4" = 1'-0"



5 MODULE B SOUTH ELEVATION

1/4" = 1'-0"



6 MODULE B WEST ELEVATION

1/4" = 1'-0"

GENERAL SHEET NOTES

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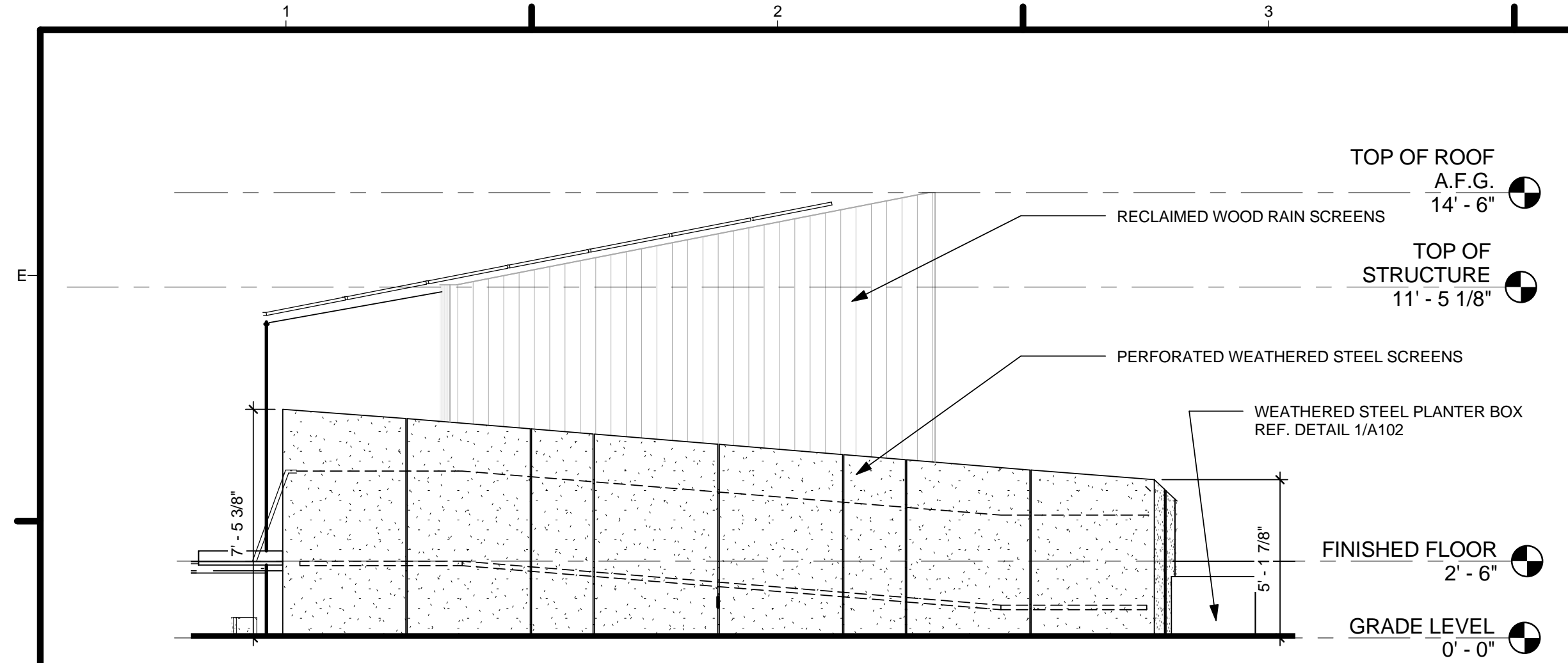
REVISIONS

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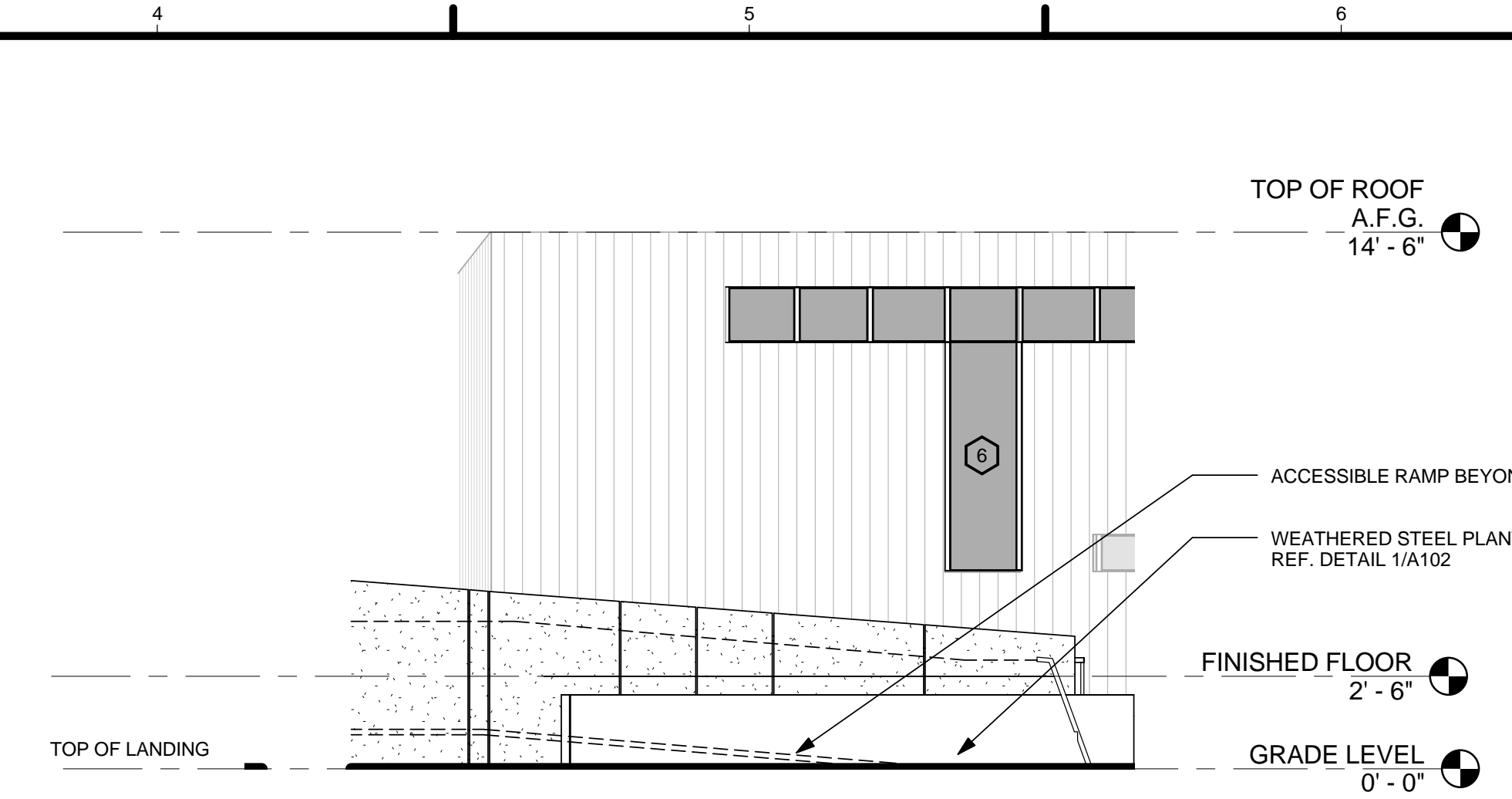
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RAMP ELEVATIONS

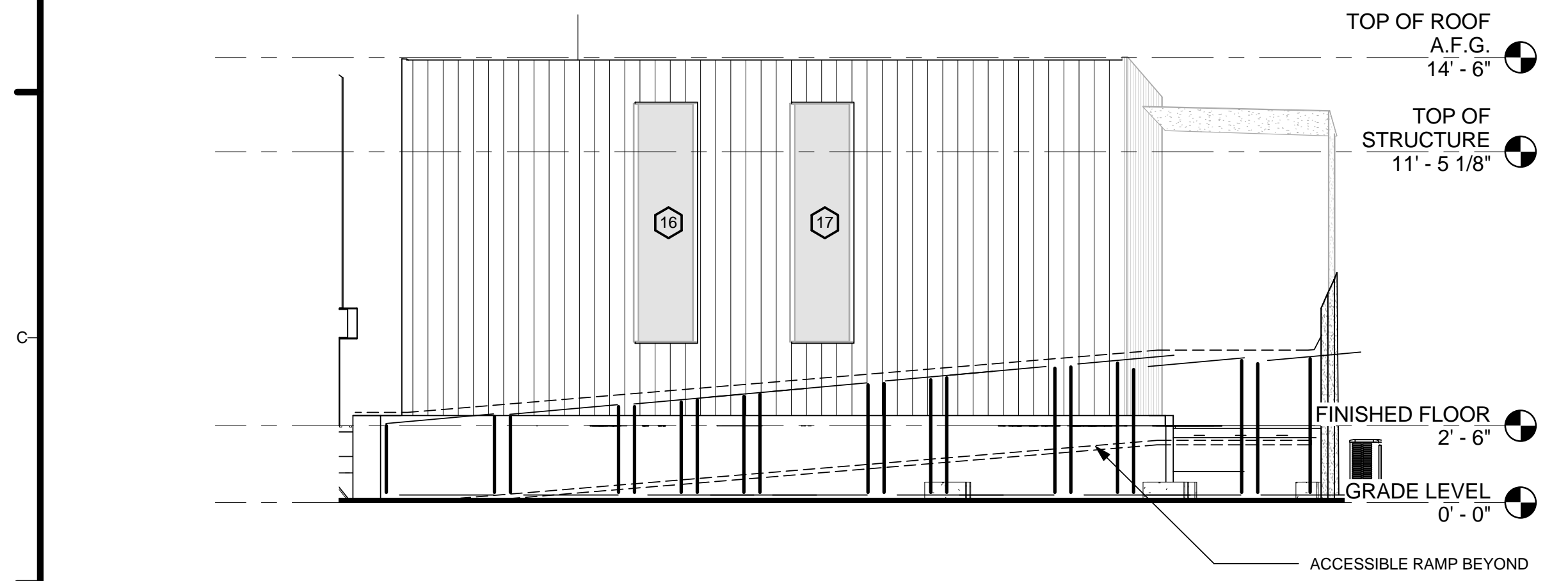
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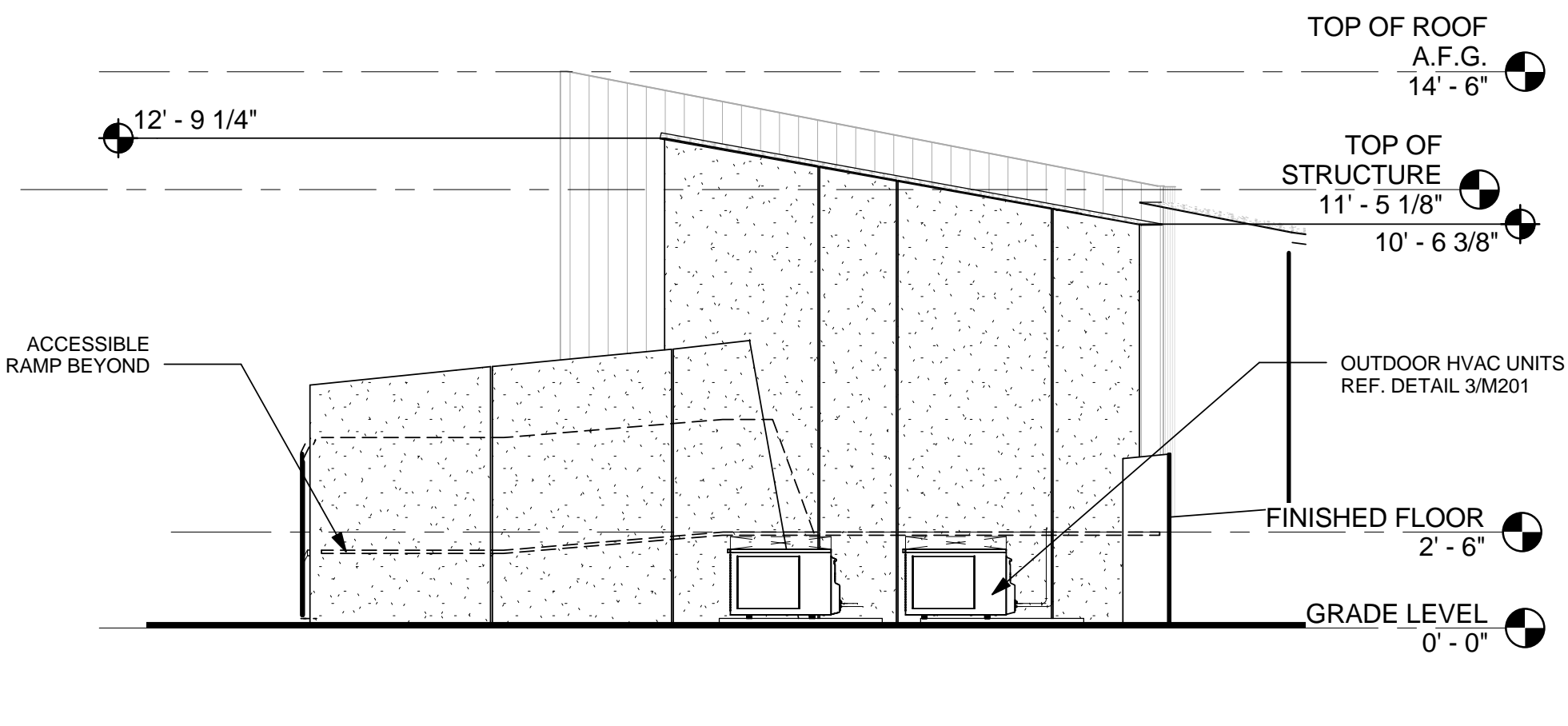
1 RAMP GUARDRAIL - EAST ELEVATION
1/4" = 1'-0"



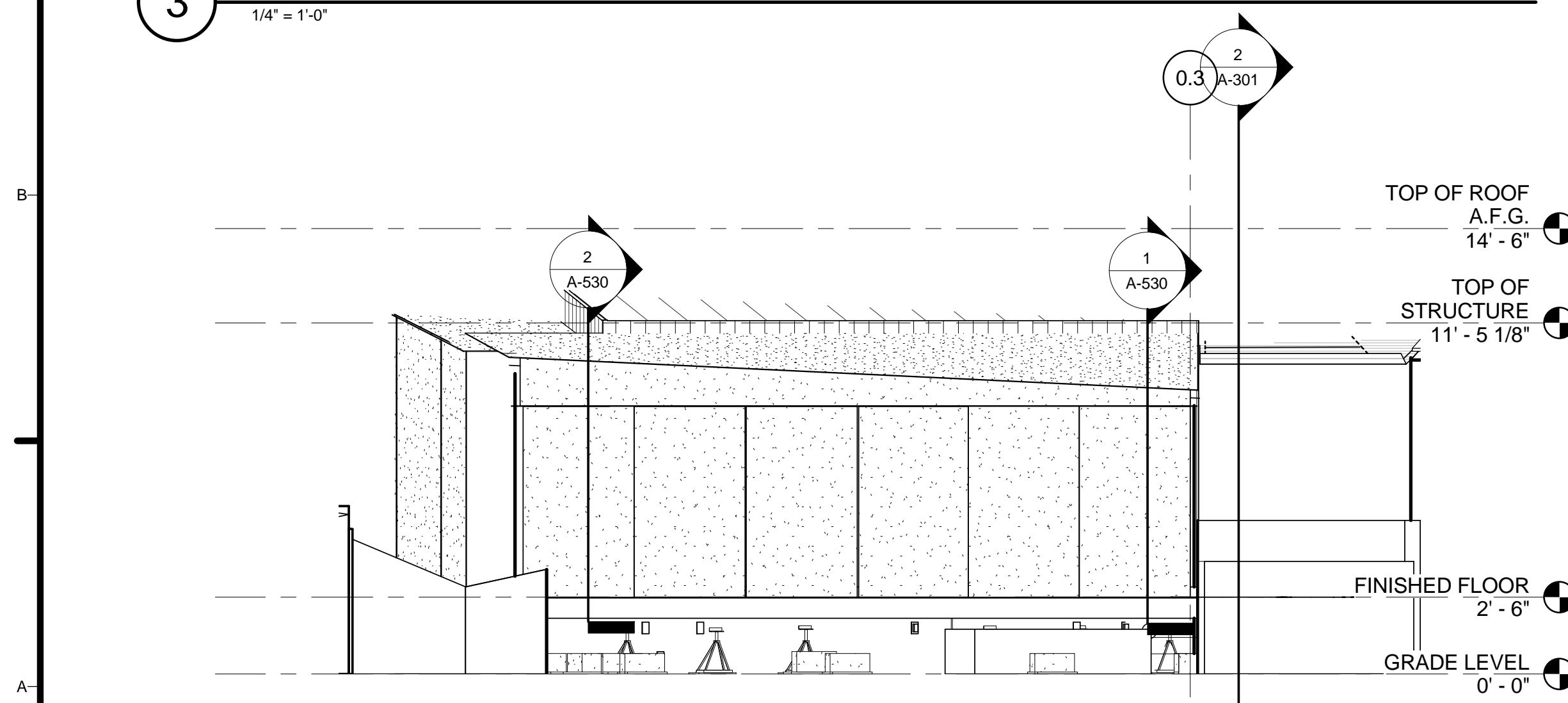
2 RAMP GUARDRAIL - NE ELEV
1/4" = 1'-0"



3 RAMP GUARDRAIL - NW ELEV
1/4" = 1'-0"



4 RAMP SCREEN - W ELEV
1/4" = 1'-0"



5 SLIDING SCREENS ELEVATION
1/4" = 1'-0"

8/22/2013 11:32:03 AM

GENERAL SHEET NOTES

1. REFER TO 3/A601 & SPECIFICATIONS FOR FINISH MATERIAL SELECTION.
2. SLOPE OF ROOF IS SHOWN AS APPROXIMATE, REFER TO STRUCTURAL DRAWINGS FOR EXACT ANGLES.
3. ALL SWITCHES SHALL BE MOUNTED 42" AFF TO THE CENTER OF SWITCH UNLESS OTHERWISE NOTED.
4. ALL RECEPTACLES AND DATA BOXES SHALL BE MOUNTED 18" AFF TO THE CENTER OF RECEPTACLES UNLESS OTHERWISE NOTED.

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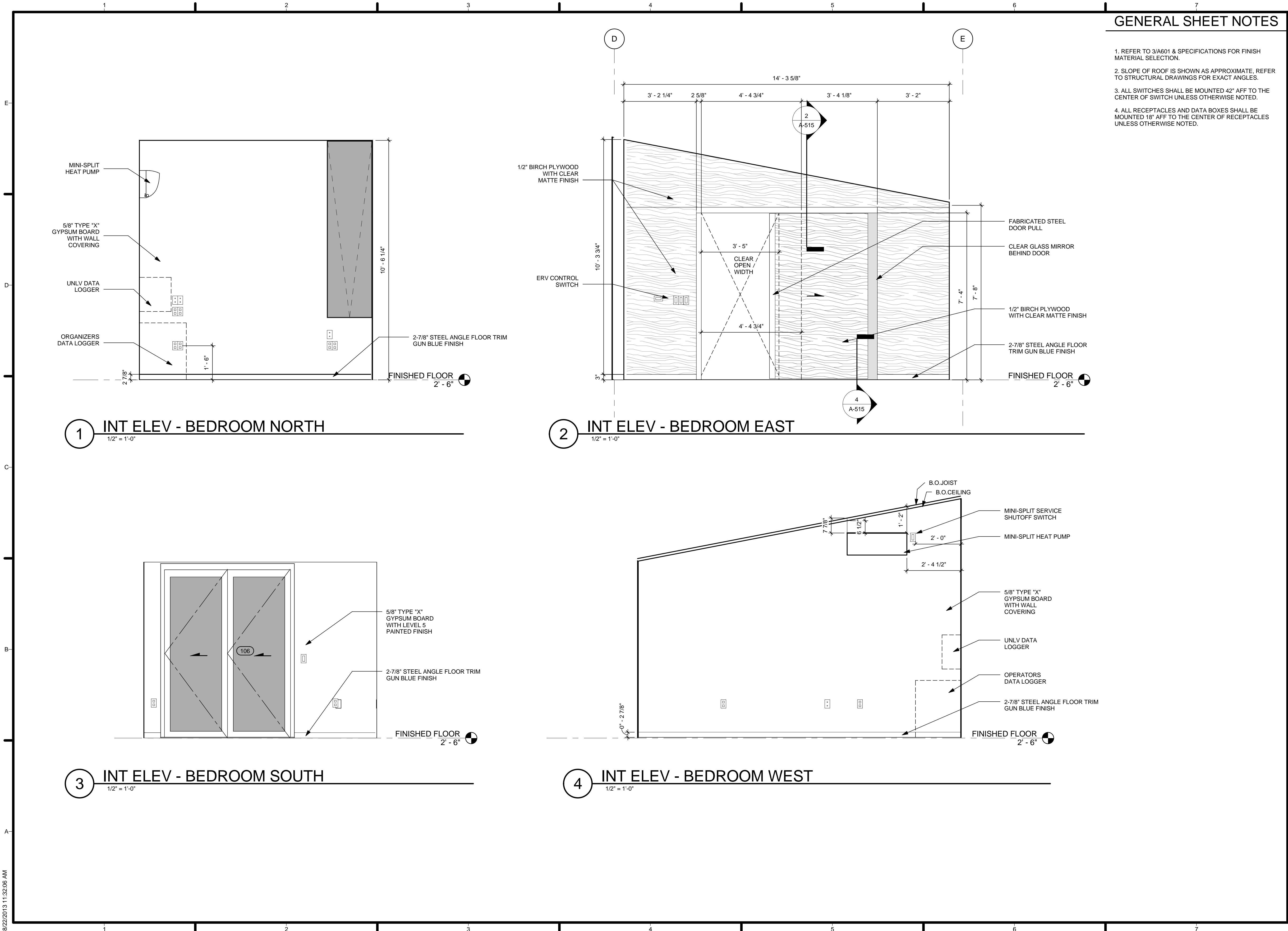
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3	Date 3	AS-BUILT
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INTERIOR
ELEVATIONS -
MODULE A

A-211



8/22/2013 11:32:06 AM

GENERAL SHEET NOTES

1. REFER TO 3/A601 & SPECIFICATIONS FOR FINISH MATERIAL SELECTION.
2. SLOPE OF ROOF IS SHOWN AS APPROXIMATE. REFER TO STRUCTURAL DRAWINGS FOR EXACT ANGLES.
3. ALL SWITCHES SHALL BE MOUNTED 42" AFF TO THE CENTER OF SWITCH UNLESS OTHERWISE NOTED.
4. ALL RECEPTACLES AND DATA BOXES SHALL BE MOUNTED 18" AFF TO THE CENTER OF RECEPTACLES UNLESS OTHERWISE NOTED.

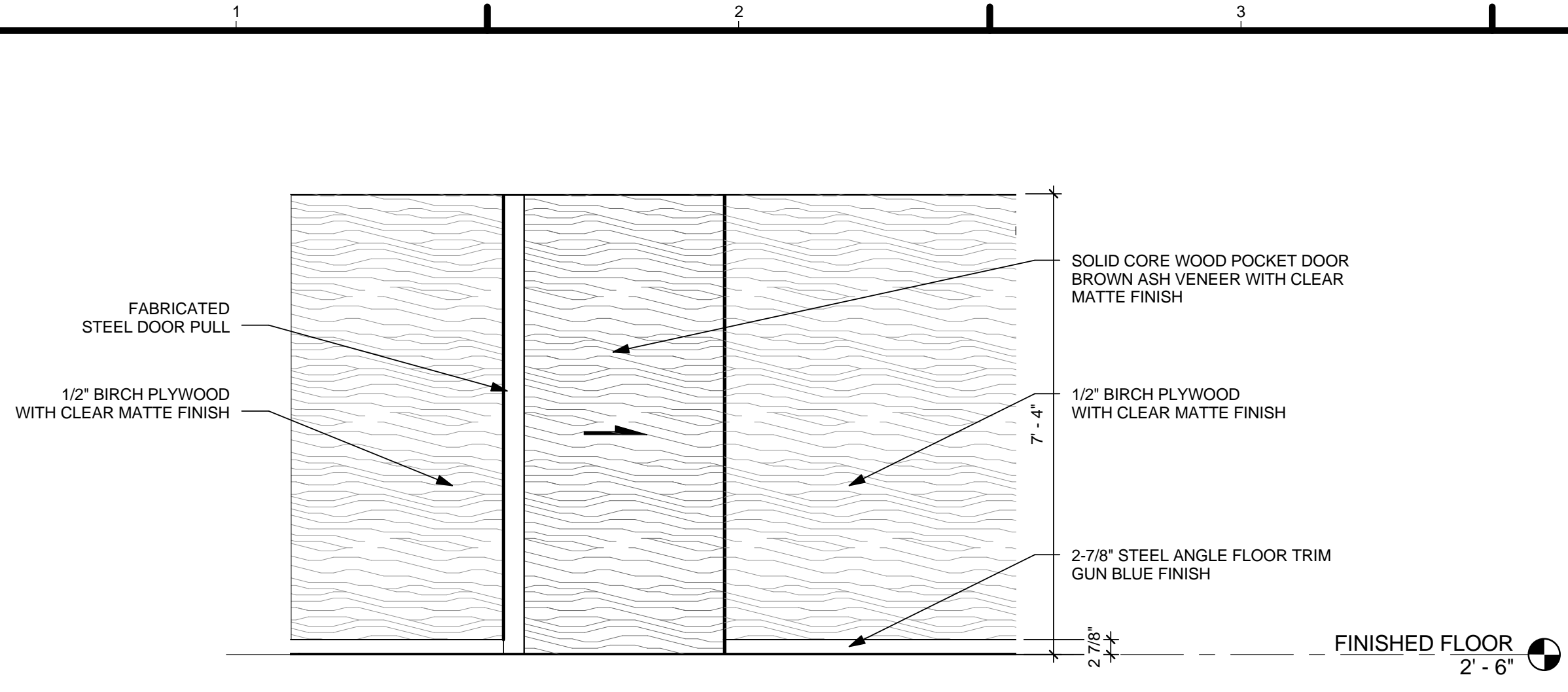
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1	21 MARCH 2013	NREL REVIEW COMMENTS

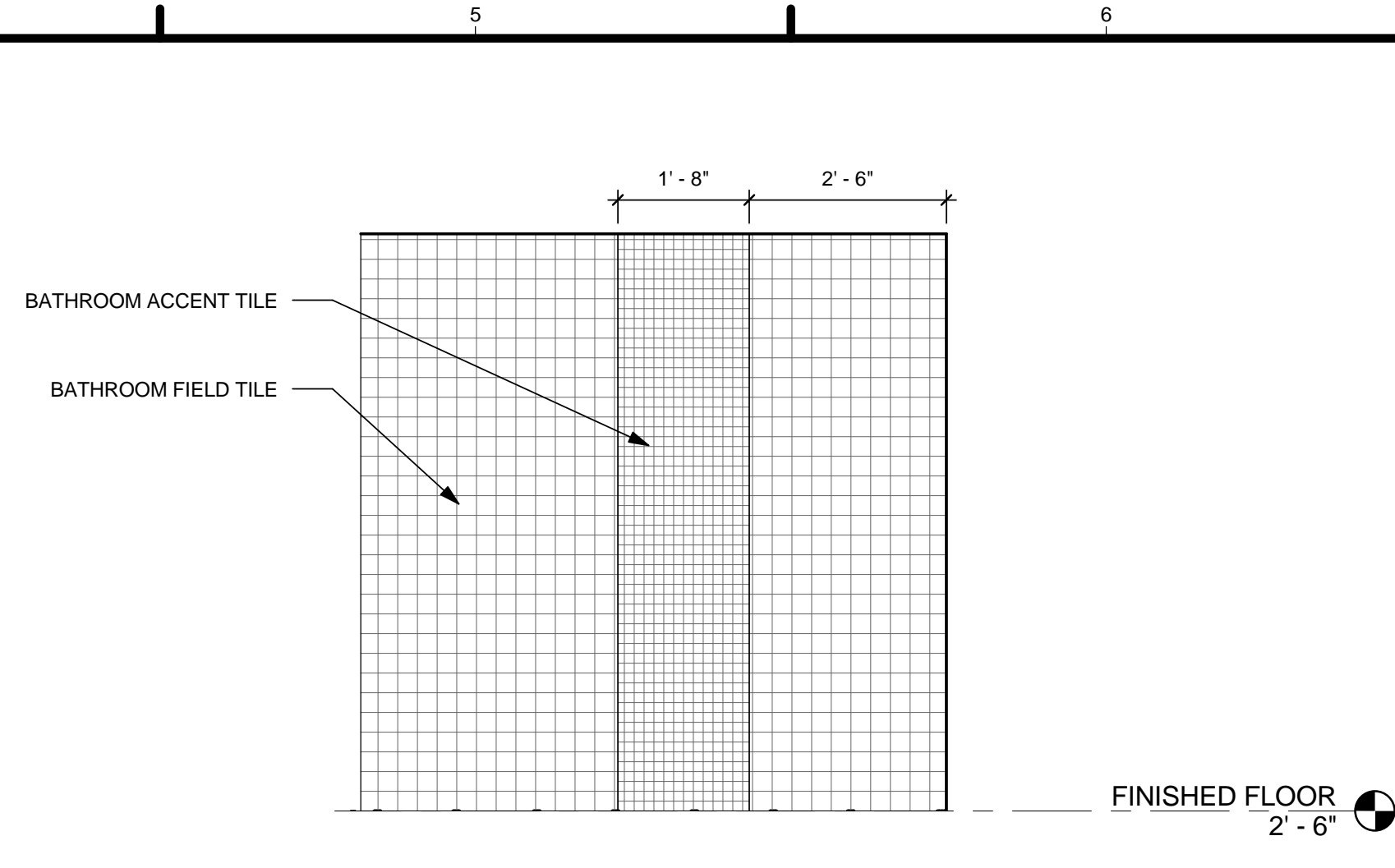
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INTERIOR ELEVATIONS - MODULE A

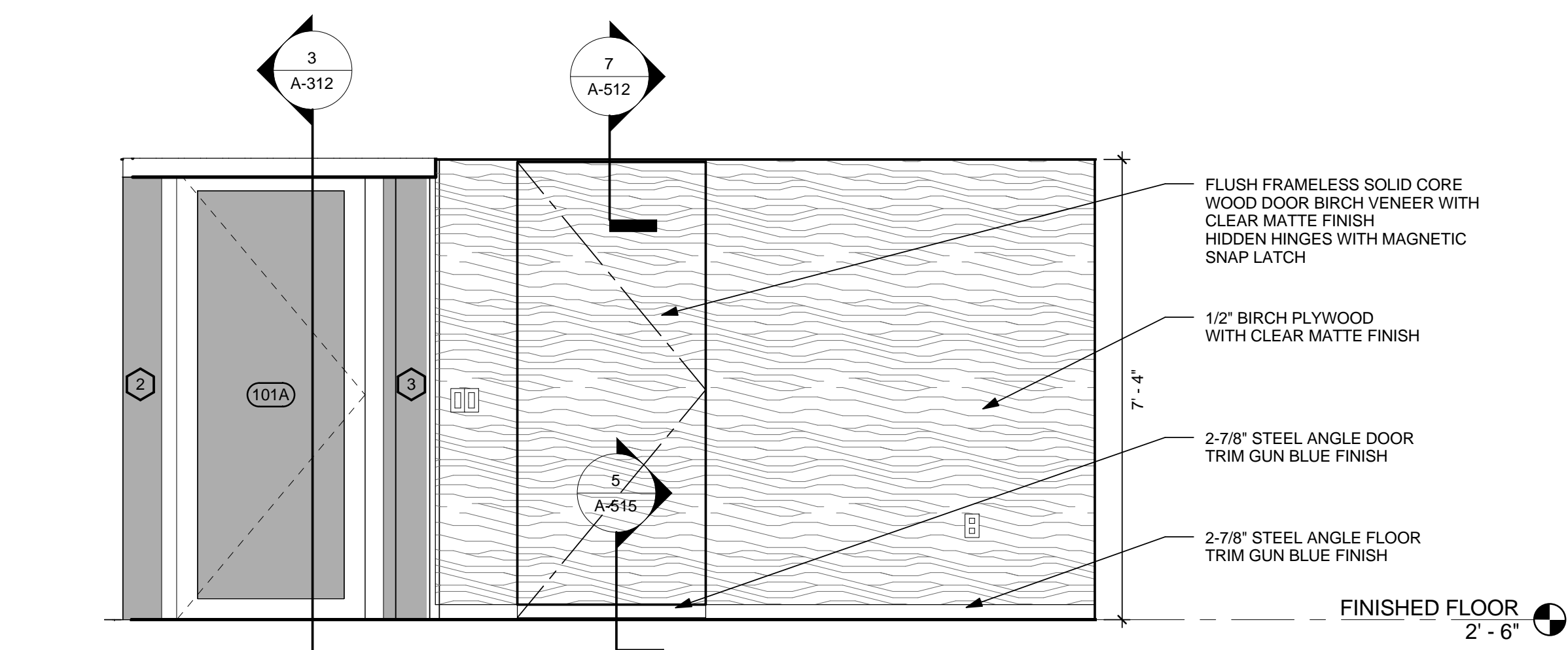
A-212



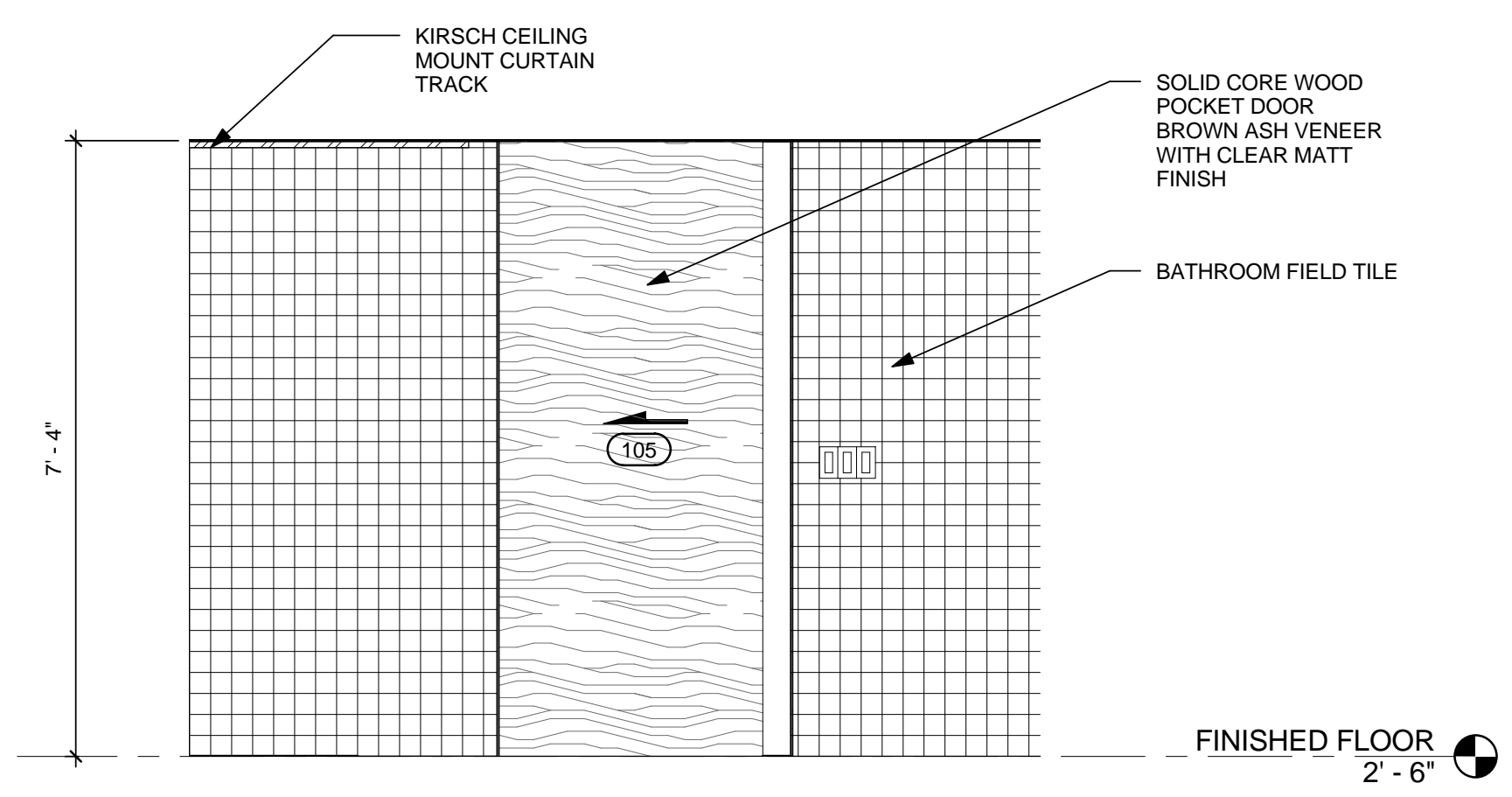
1 INT ELEV - HALLWAY NORTH
1/2" = 1'-0"



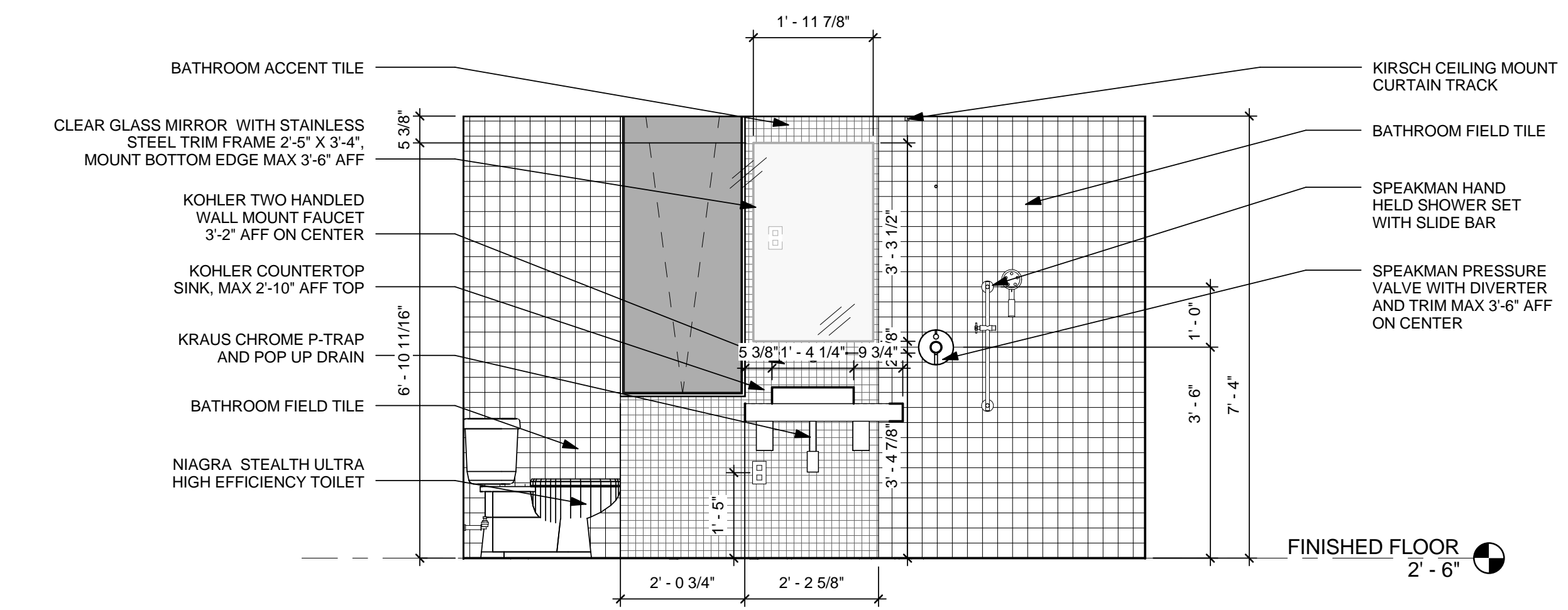
4 INT ELEV - BATHROOM EAST
1/2" = 1'-0"



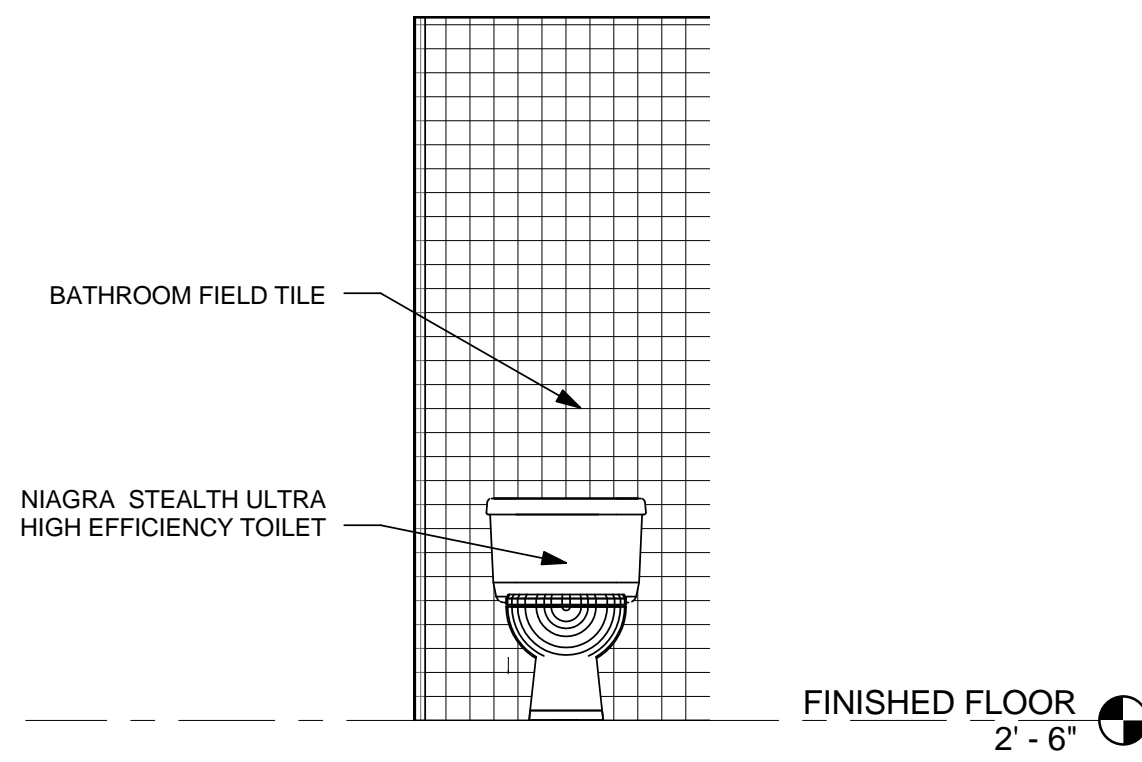
2 INT ELEV - HALLWAY SOUTH
1/2" = 1'-0"



5 INT ELEV - BATHROOM SOUTH
1/2" = 1'-0"



3 INT ELEV - BATHROOM NORTH
1/2" = 1'-0"



6 INT ELEV - BATHROOM WEST
1/2" = 1'-0"

8/22/2013 11:32:10 AM

GENERAL SHEET NOTES

1. REFER TO PROJECT MANUAL SPECS FOR MATERIAL SELECTION.
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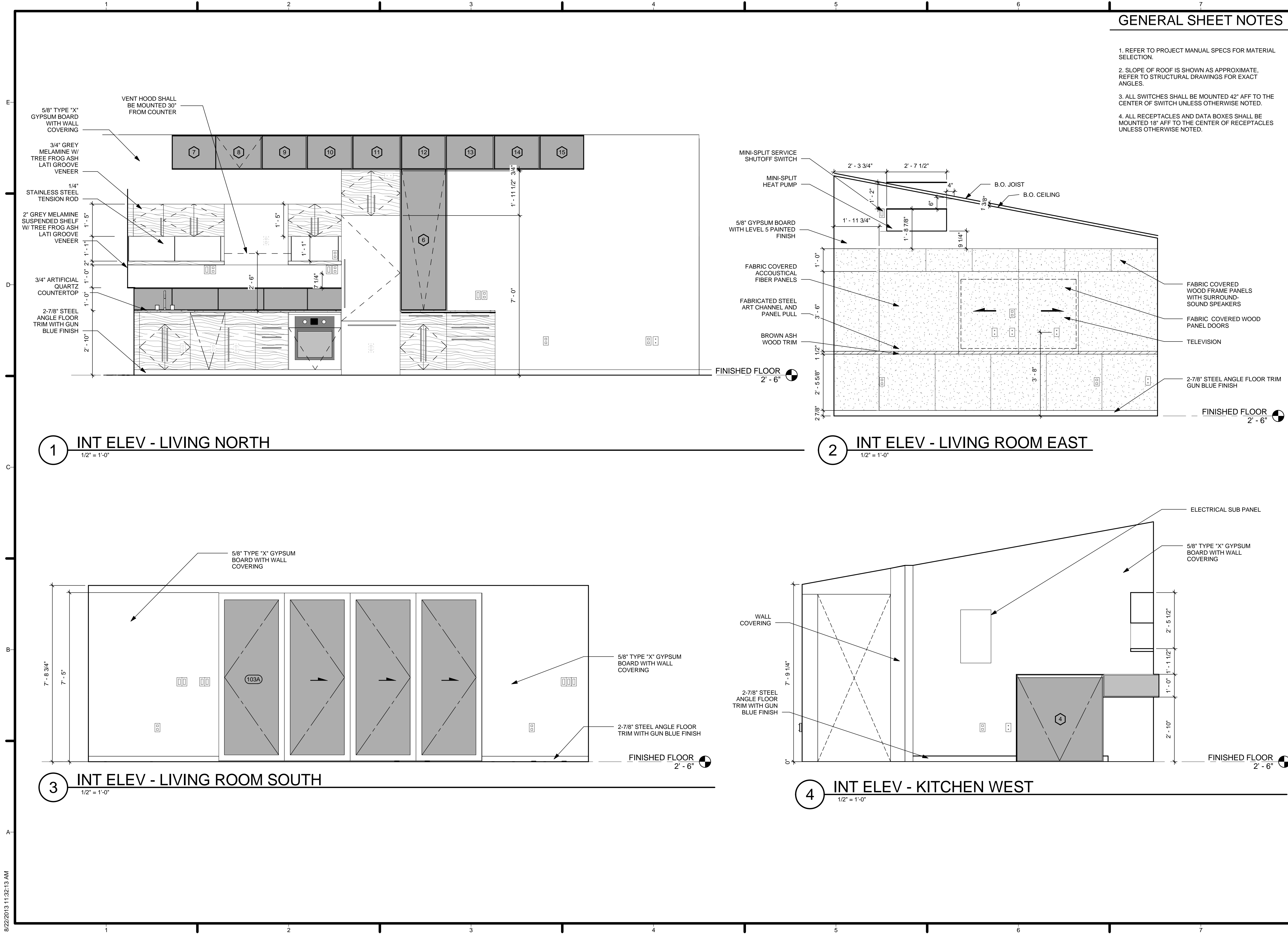
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REV	DATE	DESCRIPTION
3	Date 3	AS-BUILT
2	30 MAY 2013	NTA REVIEW COMMENTS
1	21 MARCH 2013	NREL REVIEW COMMENTS

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INTERIOR ELEVATIONS - MODULE B

A-213



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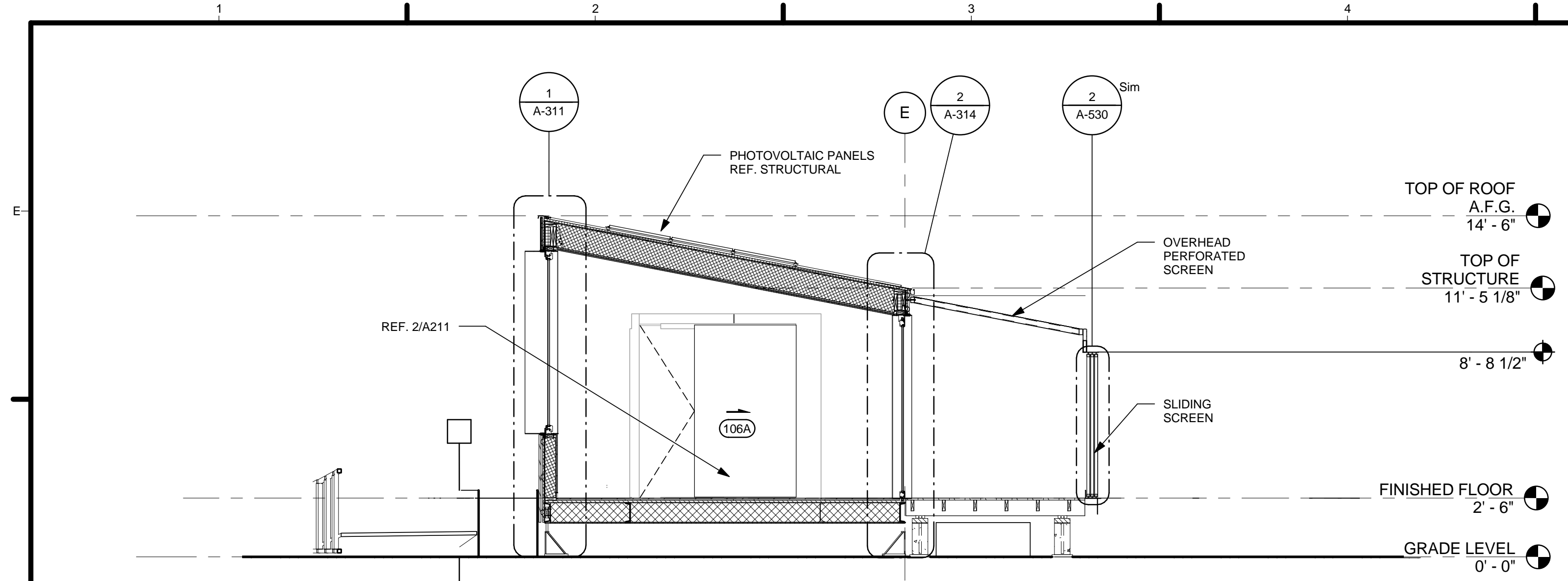
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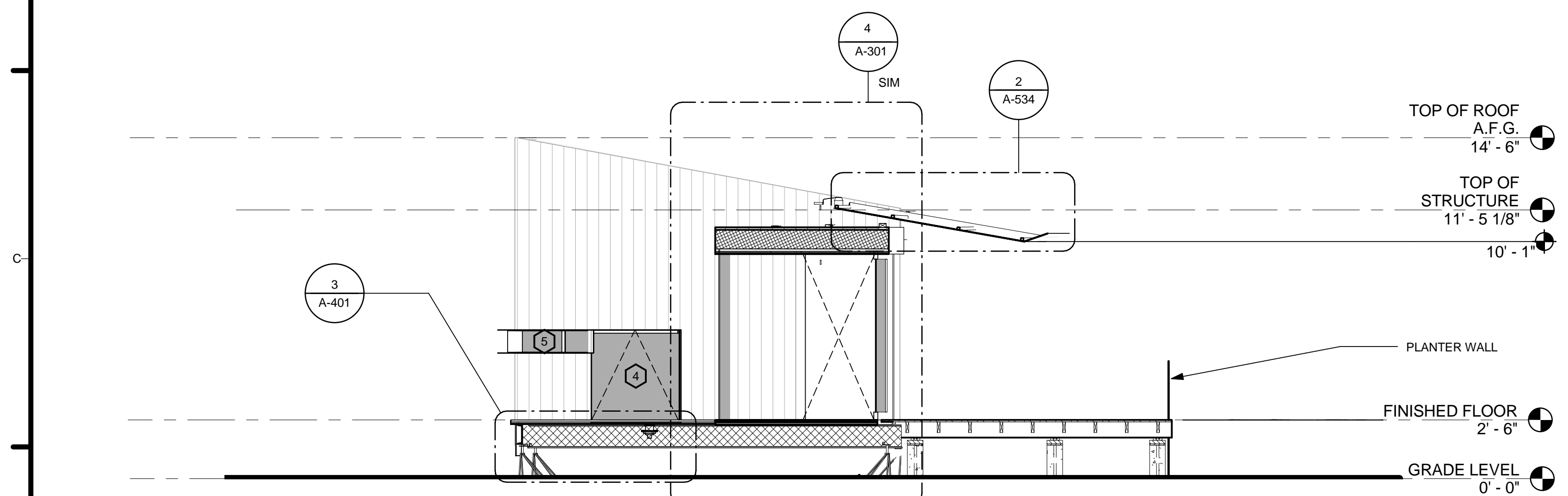
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BUILDING SECTIONS

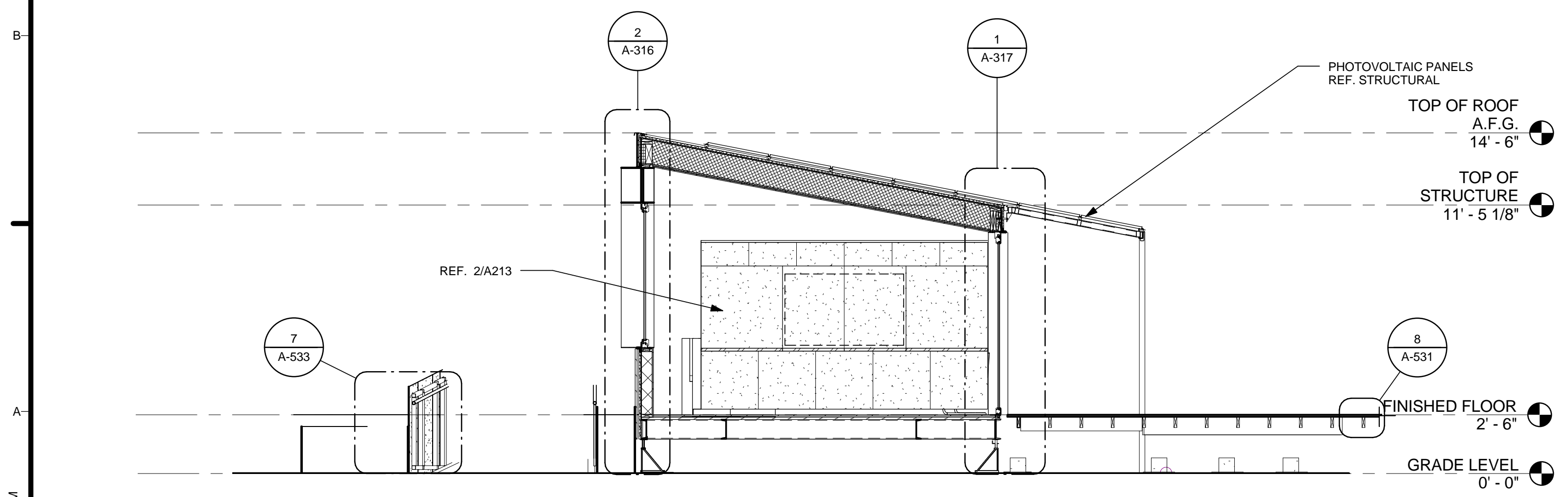
A-301



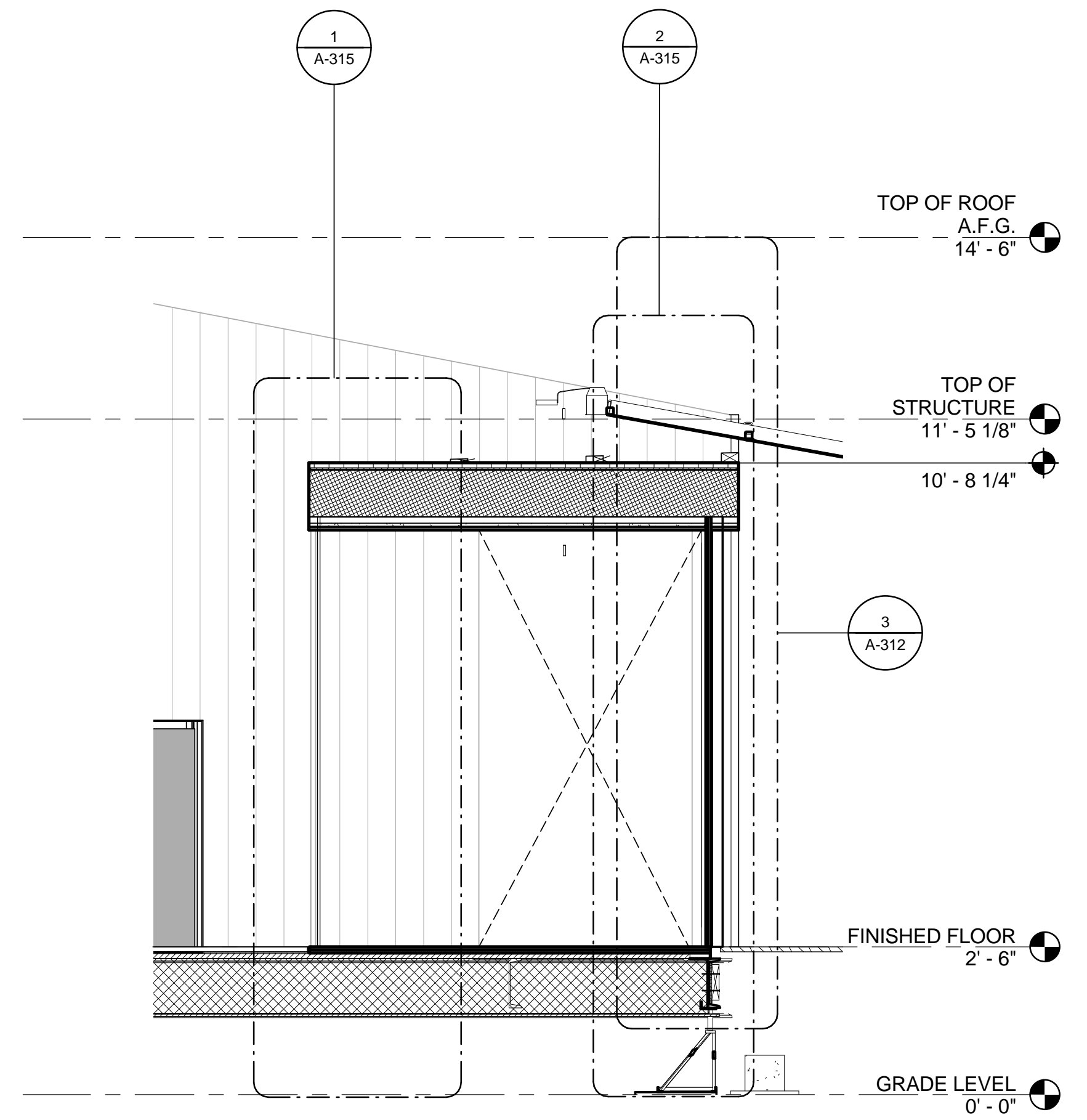
1 BUILDING SECTION THROUGH MODULE A
1/4" = 1'-0"



2 BUILDING SECTION THROUGH BRIDGE
1/4" = 1'-0"



3 BUILDING SECTION THROUGH MODULE B
1/4" = 1'-0"



4 MODULE B SECTION AT FOYER
1/2" = 1'-0"

8/22/2013 11:32:17 AM

GENERAL SHEET NOTES

1. REFER TO PROJECT MANUAL FOR MATERIAL SELECTION.
2. SLOPE OF ROOF IS SHOWN AS APPROXIMATE. REFER TO STRUCTURAL DRAWINGS FOR EXACT SLOPE.



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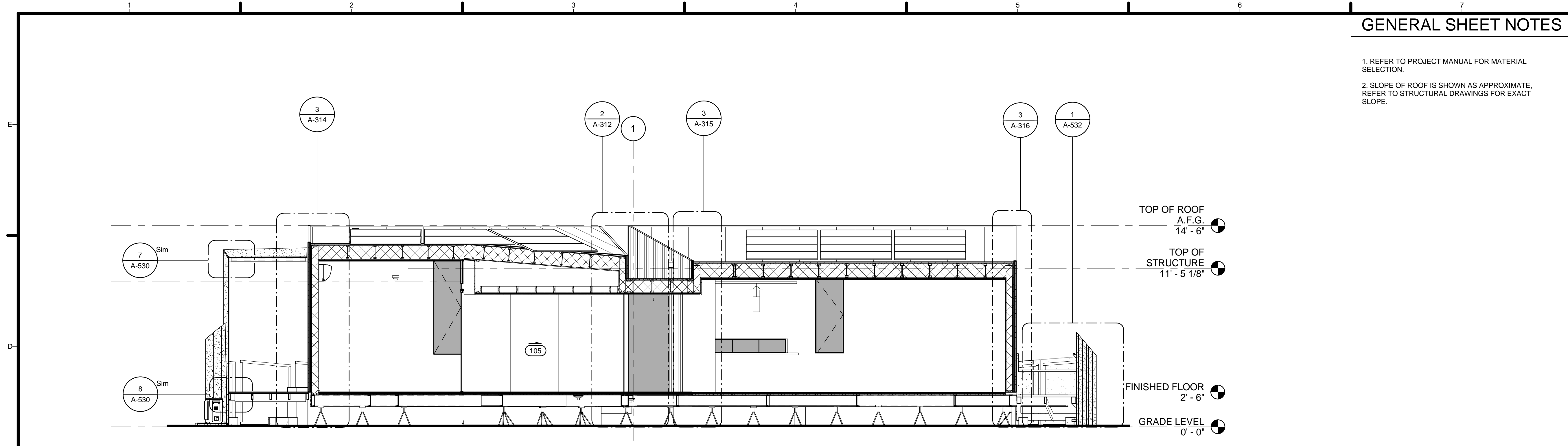
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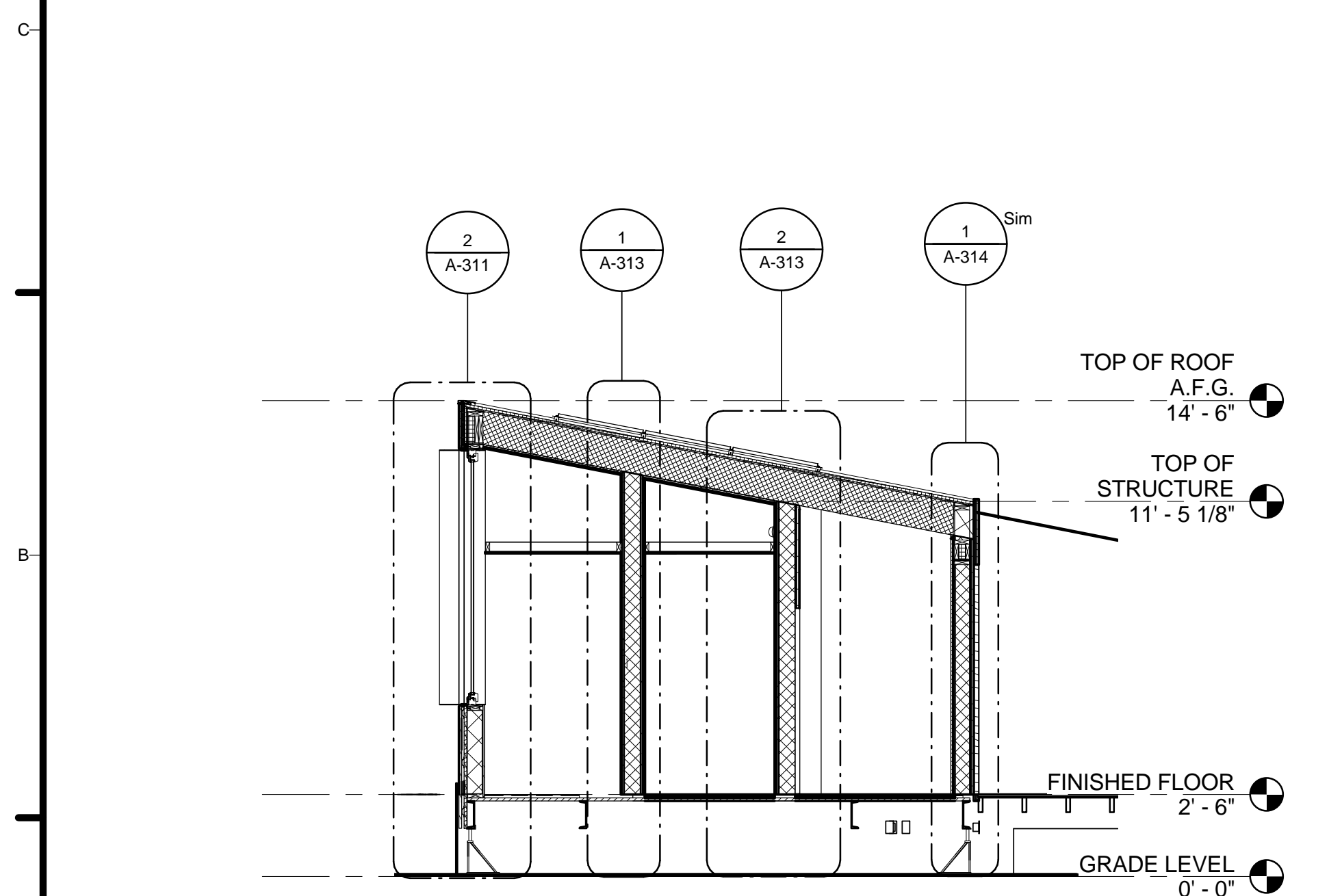
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BUILDING SECTIONS

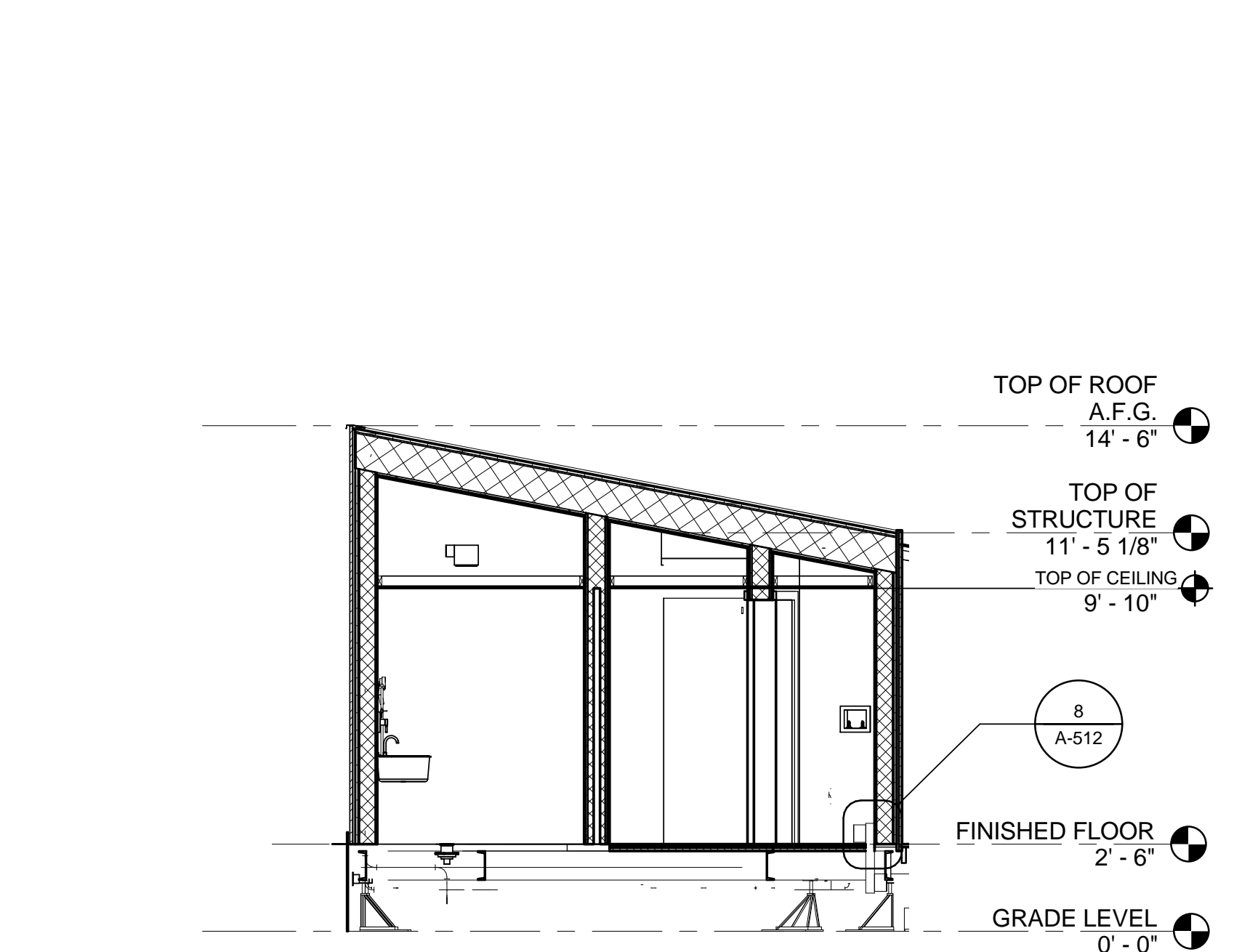
A-302



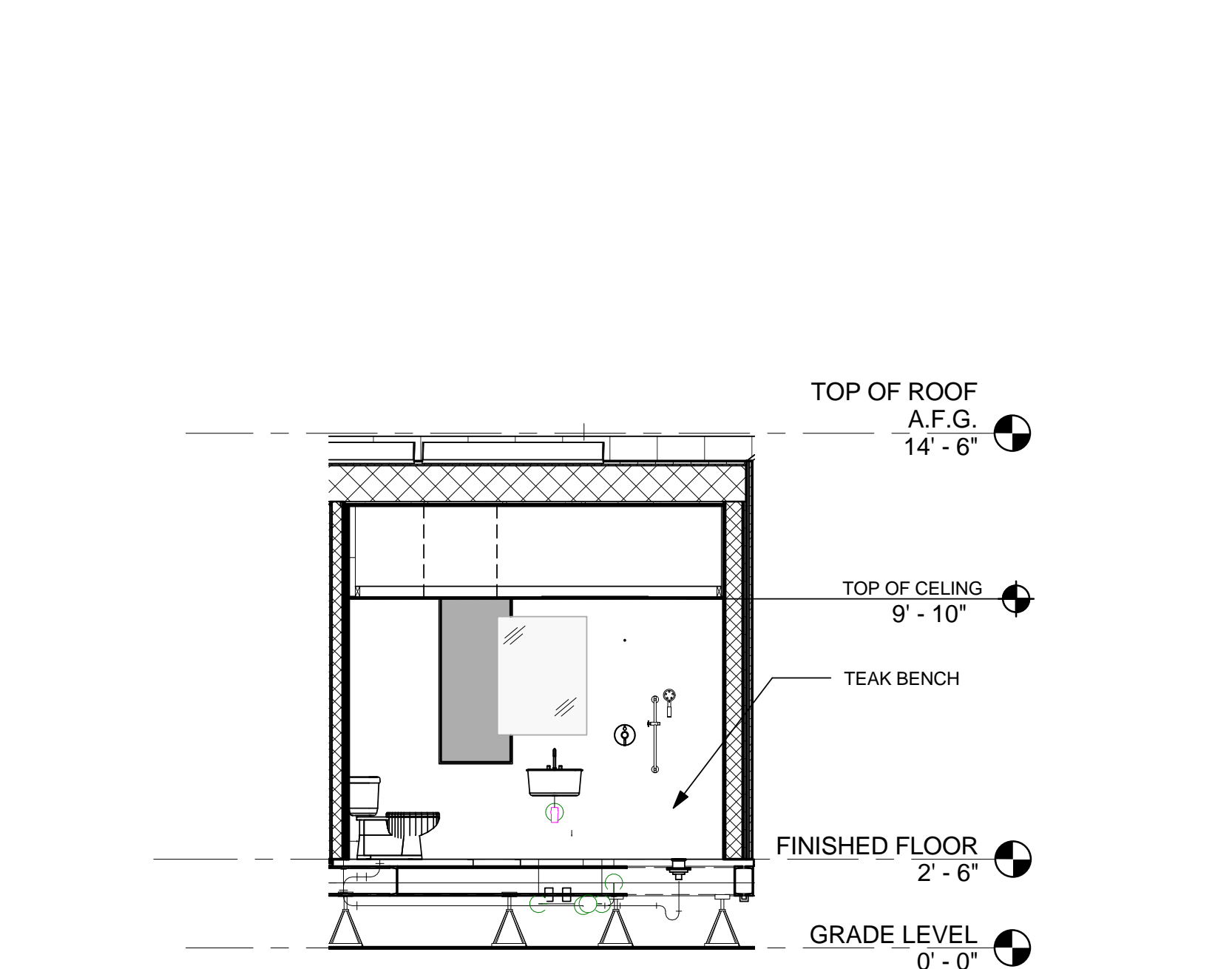
1 LONGITUDINAL BUILDING SECTION
1/4" = 1'-0"



3 MODULE A THROUGH MECHANICAL ROOM
1/4" = 1'-0"



4 MODULE A THROUGH LAUNDRY ROOM
1/4" = 1'-0"



5 MODULE A THROUGH BATHROOM
1/4" = 1'-0"

8/22/2013 11:32:22 AM

GENERAL SHEET NOTES

1. REFER TO PROJECT MANUAL SPECS FOR MATERIAL SELECTION.
2. SPRAY FOAM INSULATION TO BE INSTALLED IN CEILINGS, WALLS, AND FLOORS AS FOLLOWS: SPRAY 1" CLOSED CELL FOAM DIRECTLY ON STRUCTURAL SHEATHING. FILL THE REST OF THE FRAMING CAVITY WITH OPEN CELL FOAM AND TRIM OFF ANY EXCESS. APPLY SPRAY ON IGNITION BARRIER AT THE BOTTOM OF CHASSIS/FLOOR CAVILTY SPRAY FOAM INSULATION.



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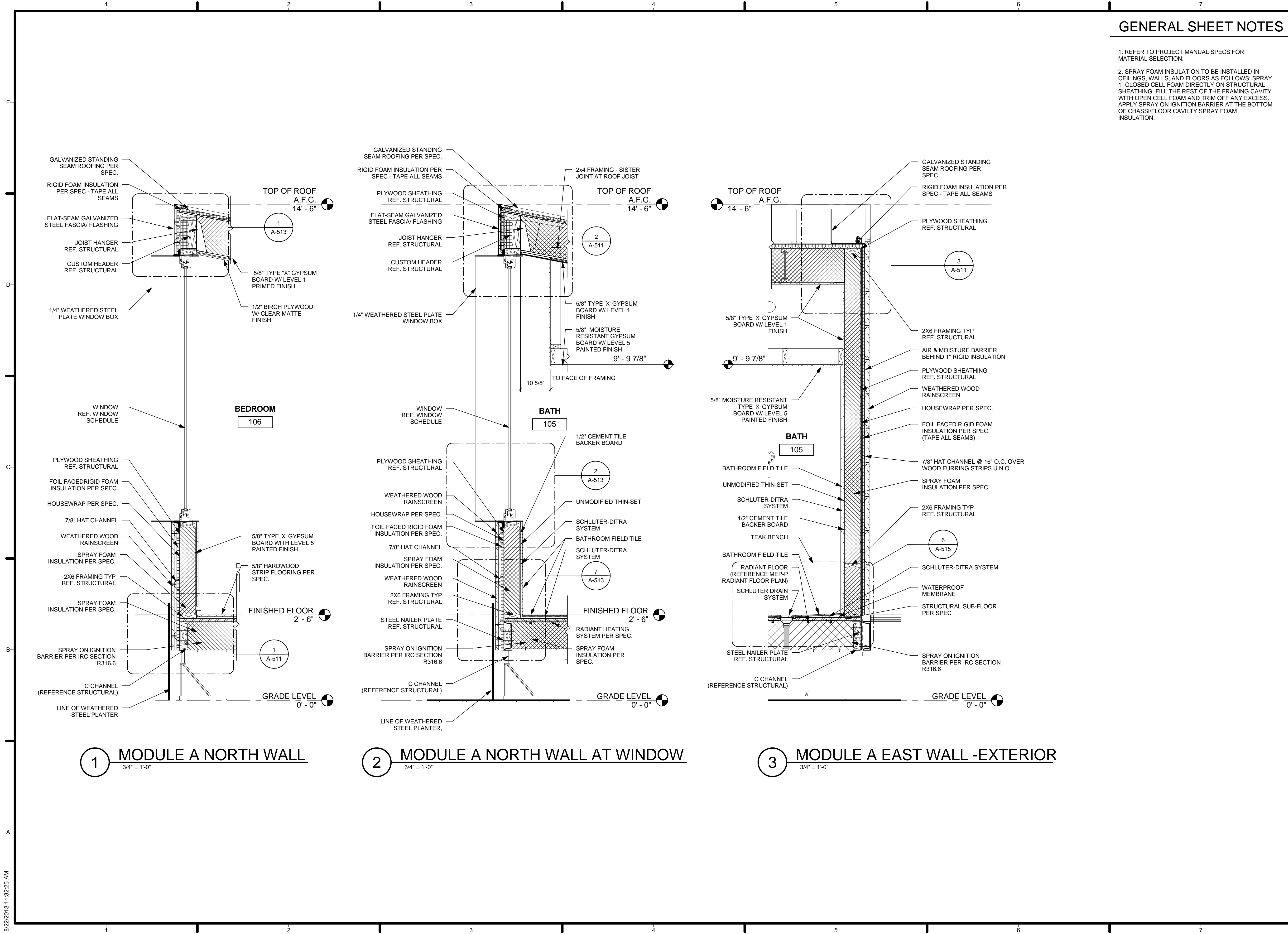
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DD COMMENTS 11.20.2012

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WALL SECTIONS

A-311



1 MODULE A NORTH WALL
3/4" = 1'-0"

2 MODULE A NORTH WALL AT WINDOW
3/4" = 1'-0"

3 MODULE A EAST WALL - EXTERIOR
3/4" = 1'-0"

8/22/2013 11:32:25 AM

GENERAL SHEET NOTES

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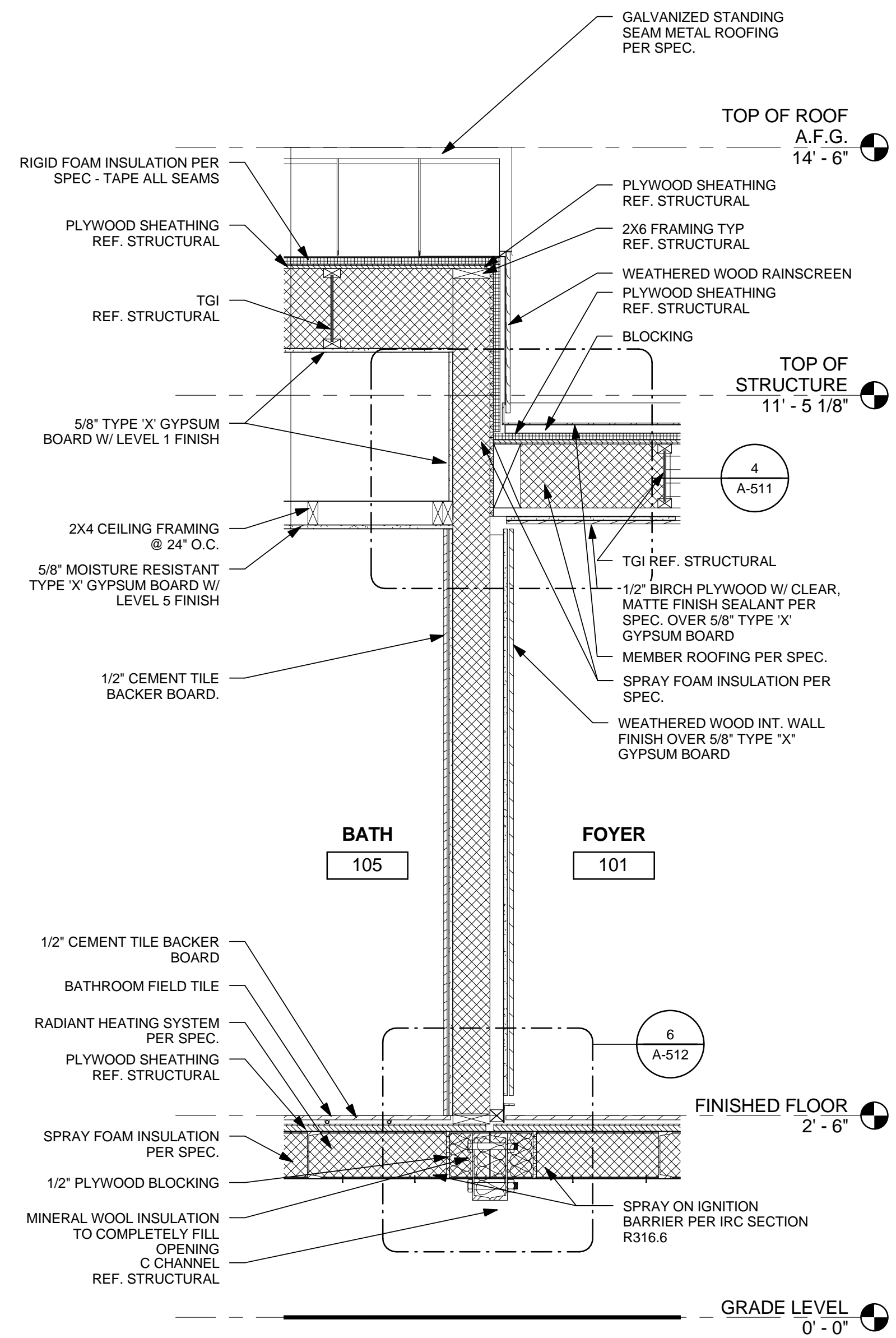
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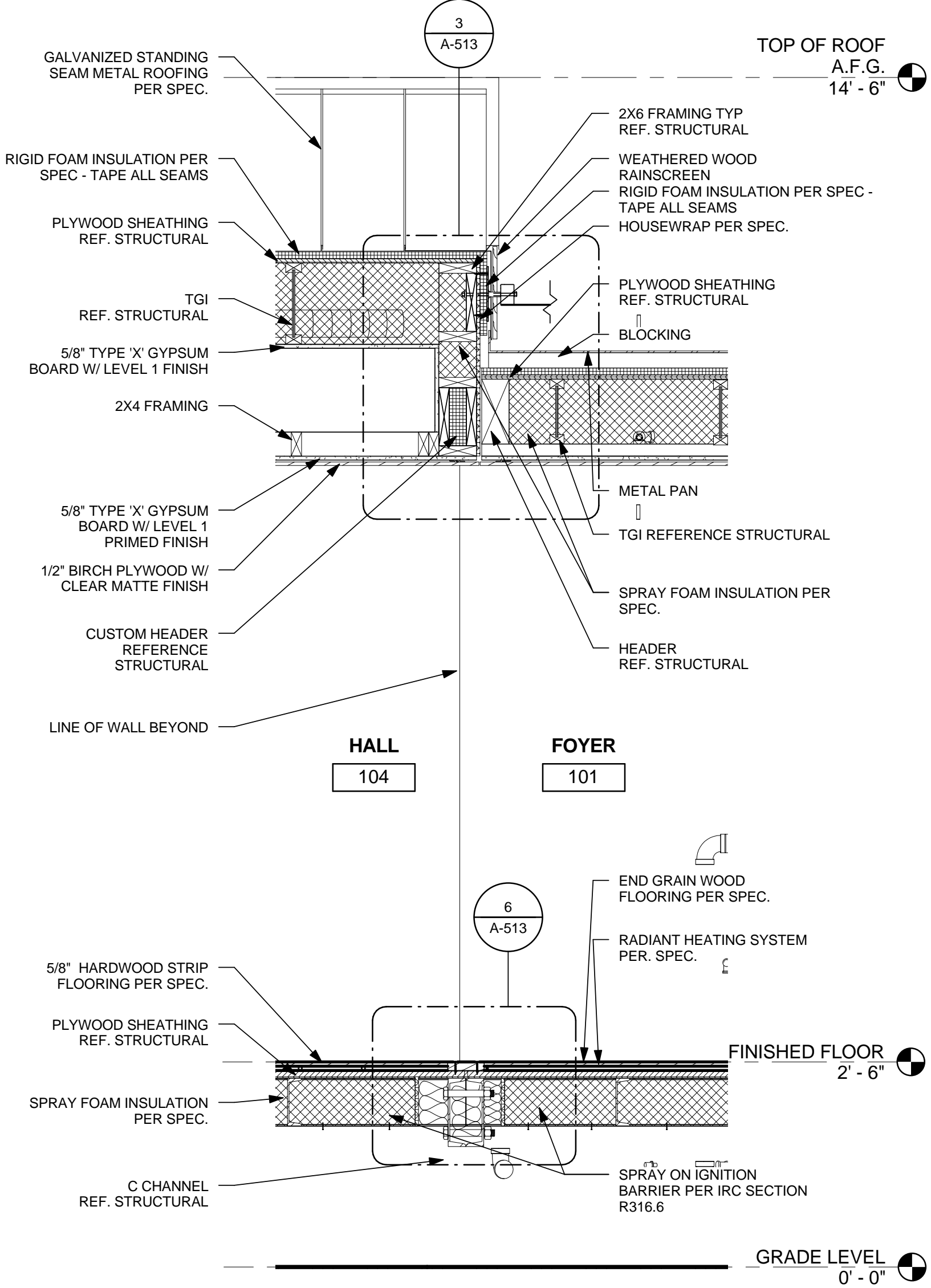
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WALL SECTIONS

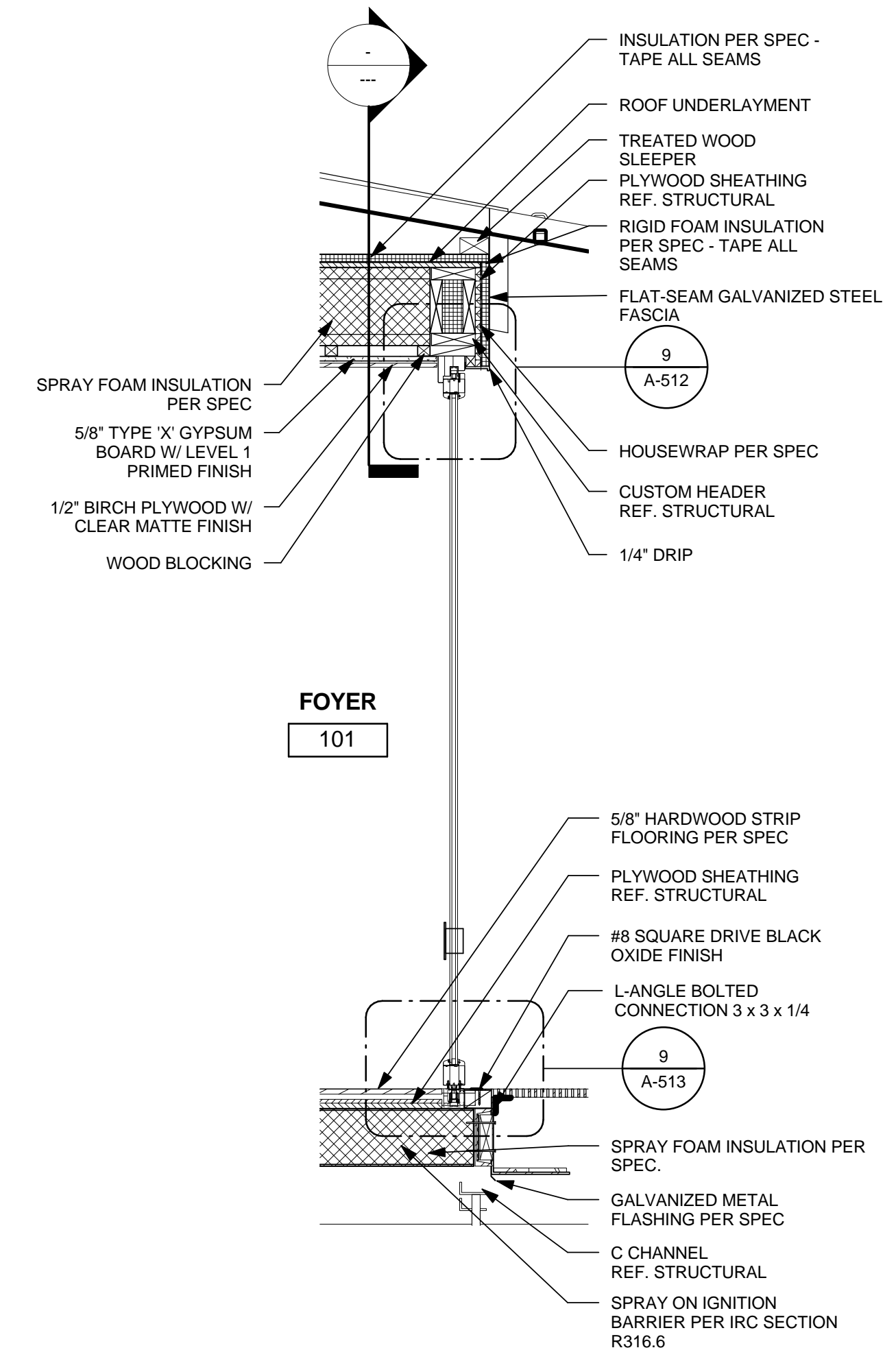
A-312



1 MODULE A EAST WALL - INTERIOR
3/4" = 1'-0"



2 MODULE A-B CORRIDOR CONNECTION
3/4" = 1'-0"



3 MODULE B - FOYER ENTRANCE DOOR
3/4" = 1'-0"

8/22/2013 11:32:29 AM

GENERAL SHEET NOTES

1. REFER TO PROJECT MANUAL SPECS FOR MATERIAL SELECTION.
2. SPRAY FOAM INSULATION TO BE INSTALLED IN CEILINGS, WALLS, AND FLOORS AS FOLLOWS: SPRAY 1" CLOSED CELL FOAM DIRECTLY ON STRUCTURAL SHEATHING. FILL THE REST OF THE FRAMING CAVITY WITH OPEN CELL FOAM AND TRIM OFF ANY EXCESS. APPLY SPRAY ON IGNITION BARRIER AT THE BOTTOM OF CHASSIS/FLOOR CAVITY SPRAY FOAM INSULATION.

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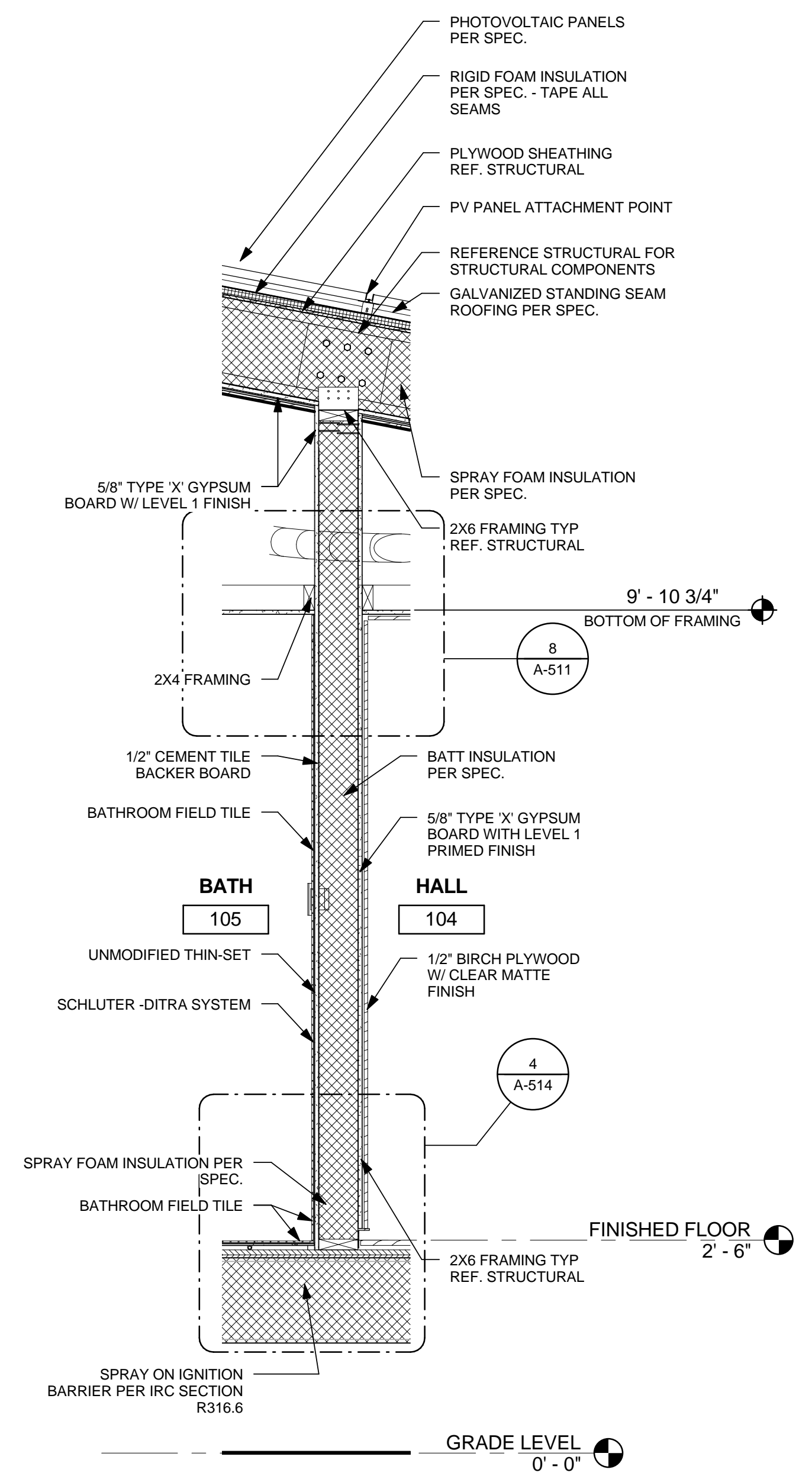
CONSULTANTS
KIRSTEN NALLEY, PE, SE

SUBMISSIONS
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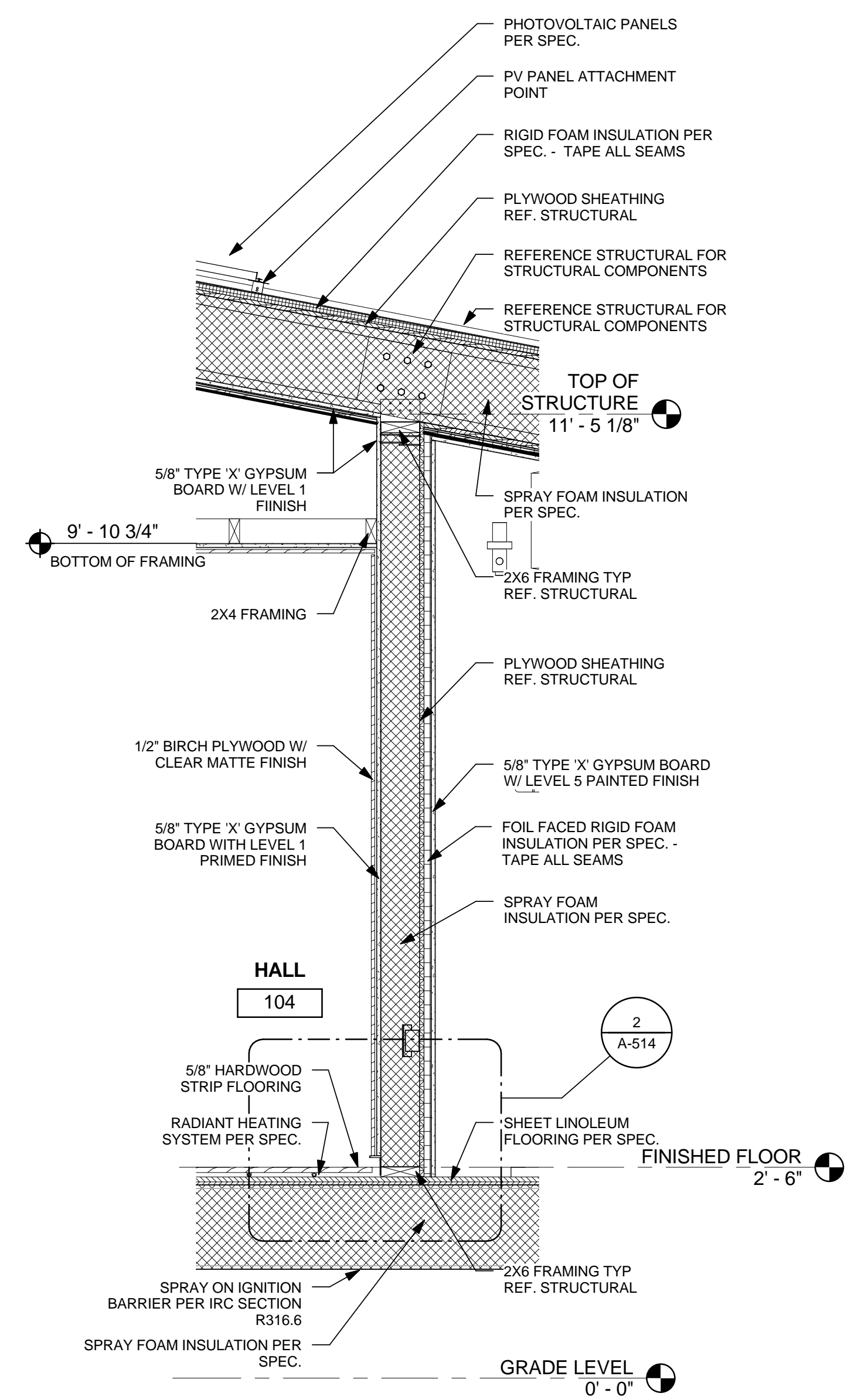
REVISIONS

REV	DATE	DESCRIPTION
2	30 MAY 2013	NTA REVIEW COMMENTS
1	21 MARCH 2013	NREL REVIEW COMMENTS

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1 MODULE A INTERIOR WALL AT HALLWAY
3/4" = 1'-0"



2 MODULE A WALL AT MECHANICAL ROOM
3/4" = 1'-0"

WALL SECTIONS

A-313

8/22/2013 11:32:32 AM

GENERAL SHEET NOTES

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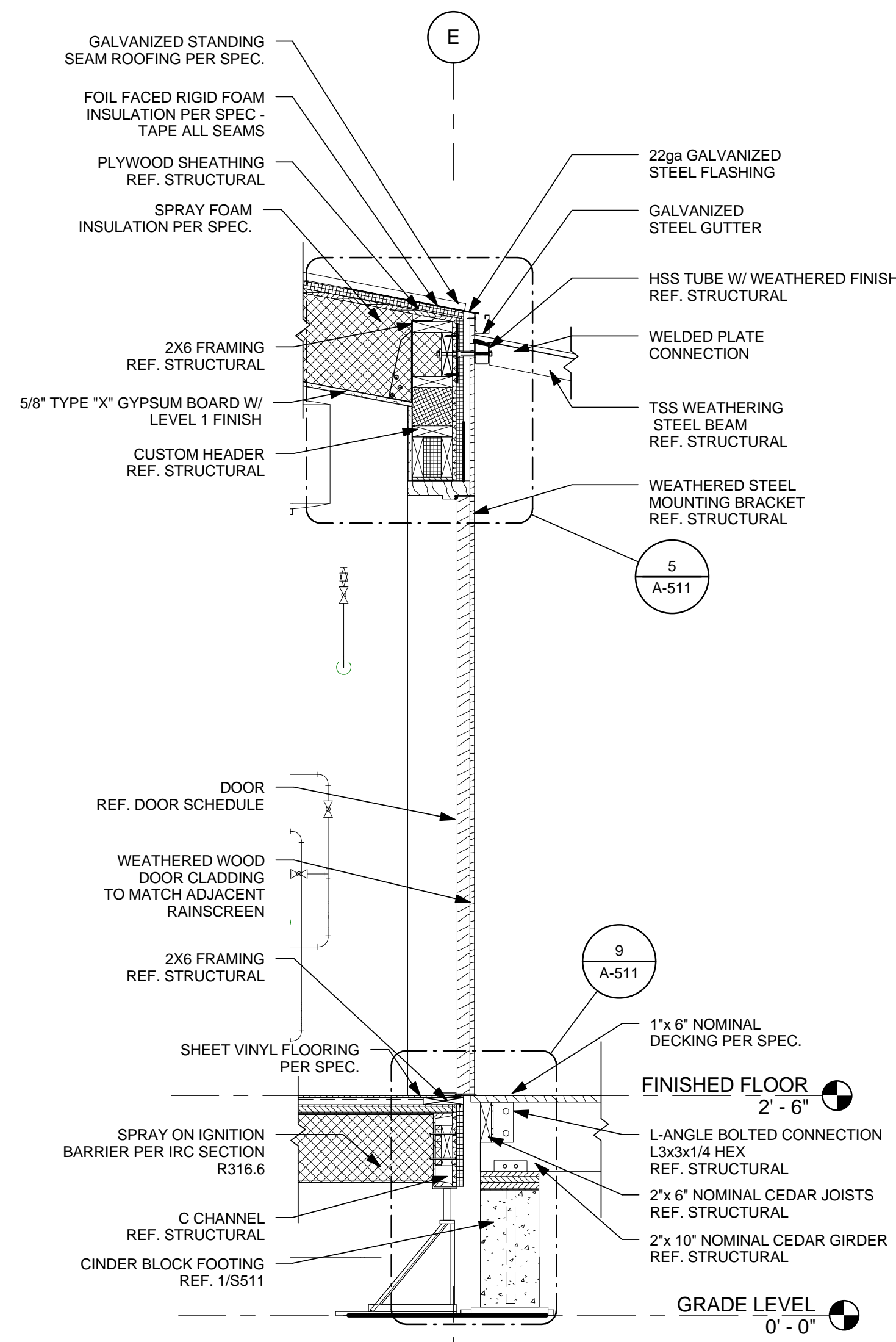
REVISIONS

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1	21 MARCH 2013	NREL REVIEW COMMENTS

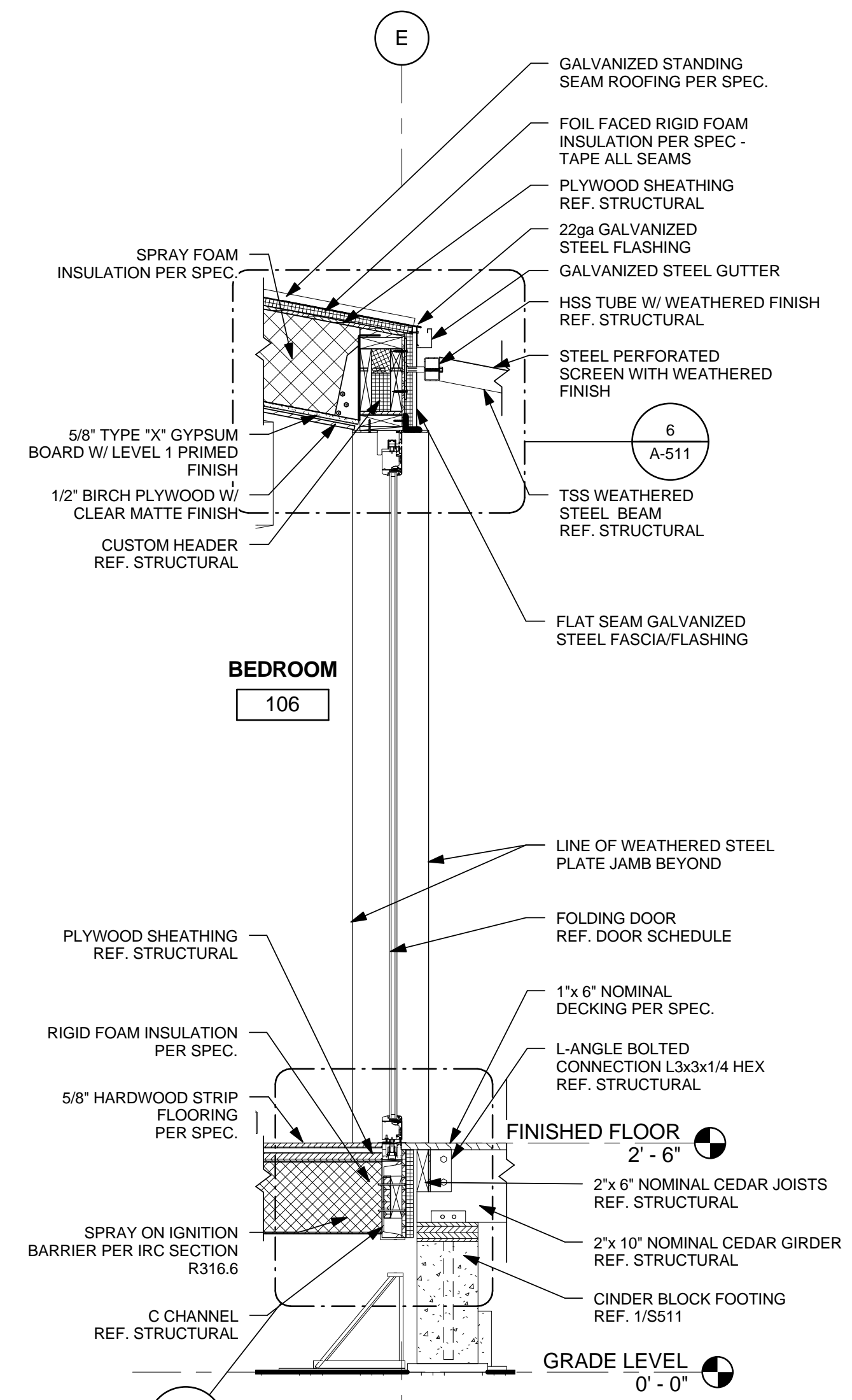
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WALL SECTIONS

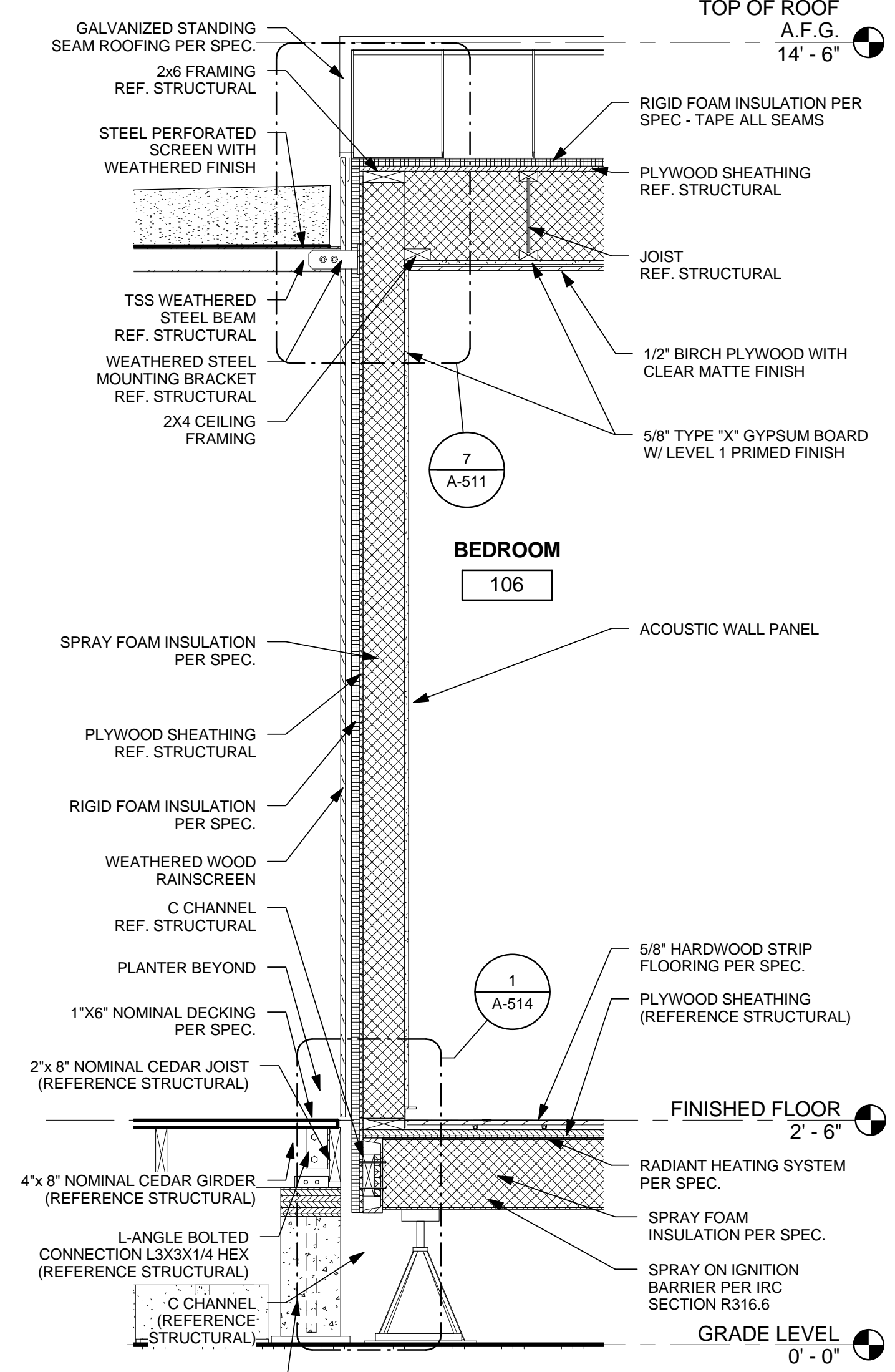
A-314



1 MODULE A MECHANICAL DOOR
3/4" = 1'-0"



2 MODULE A SLIDING DOOR
3/4" = 1'-0"



3 MODULE A WEST WALL
3/4" = 1'-0"

8/22/2013 11:32:36 AM

GENERAL SHEET NOTES

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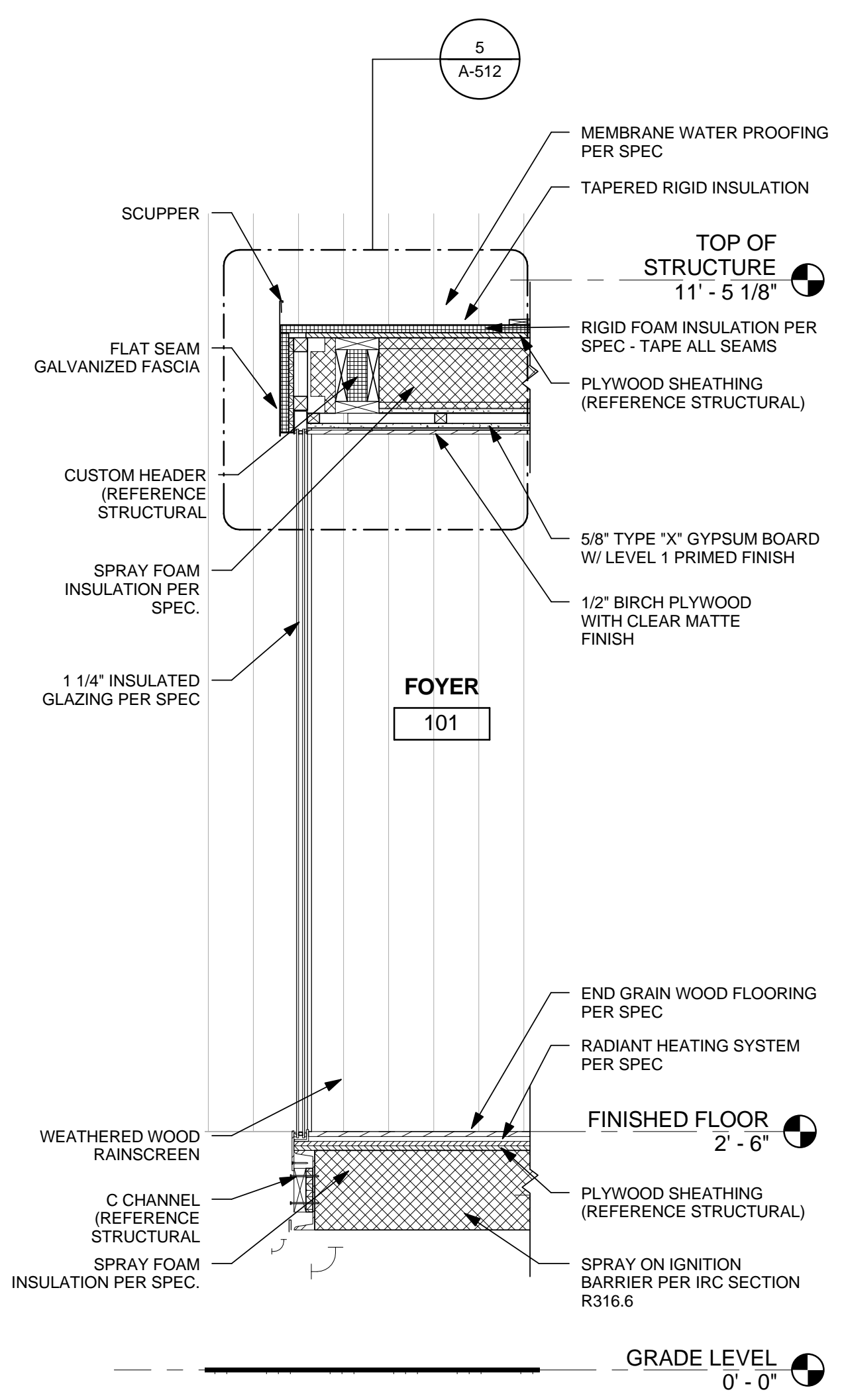
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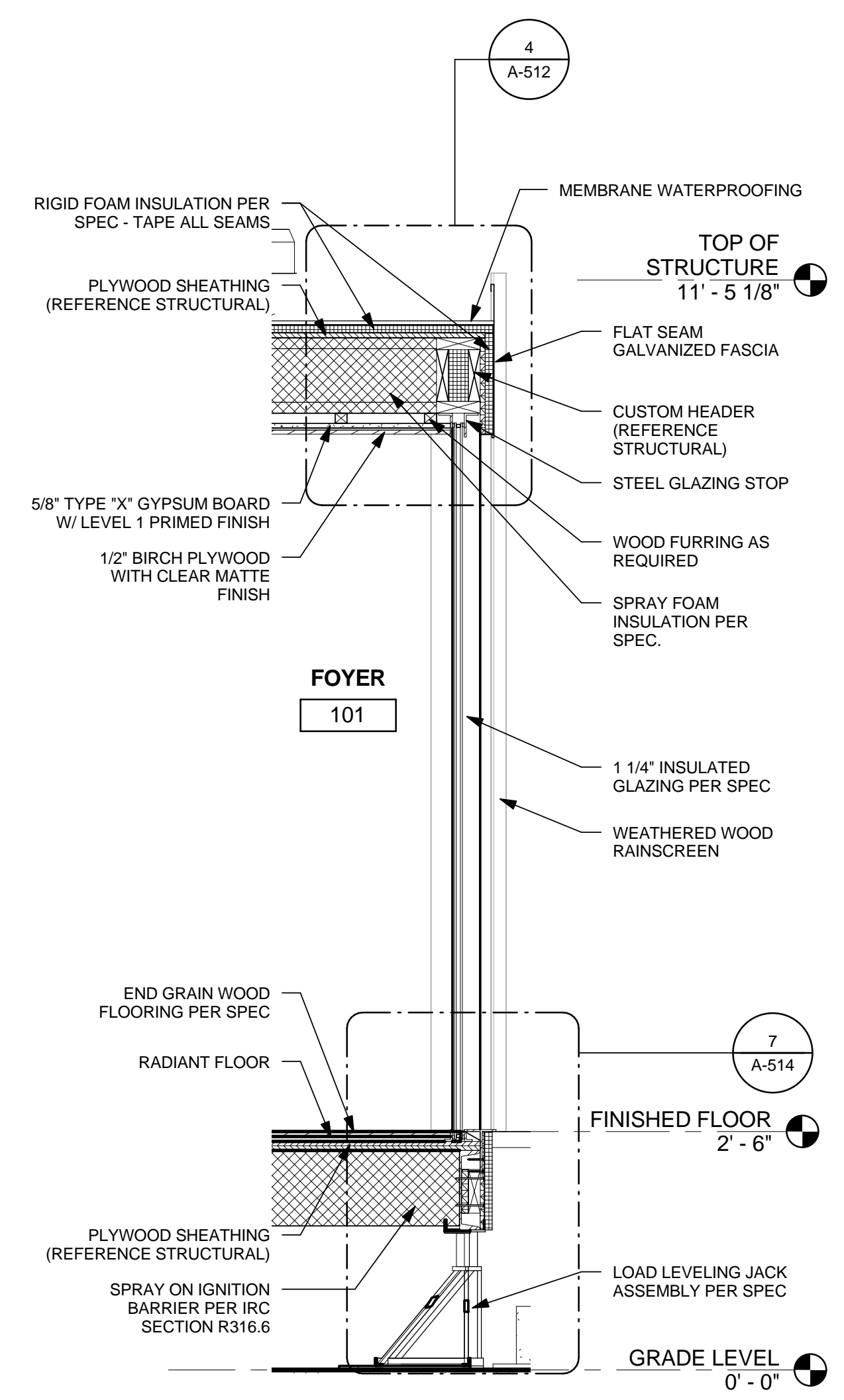
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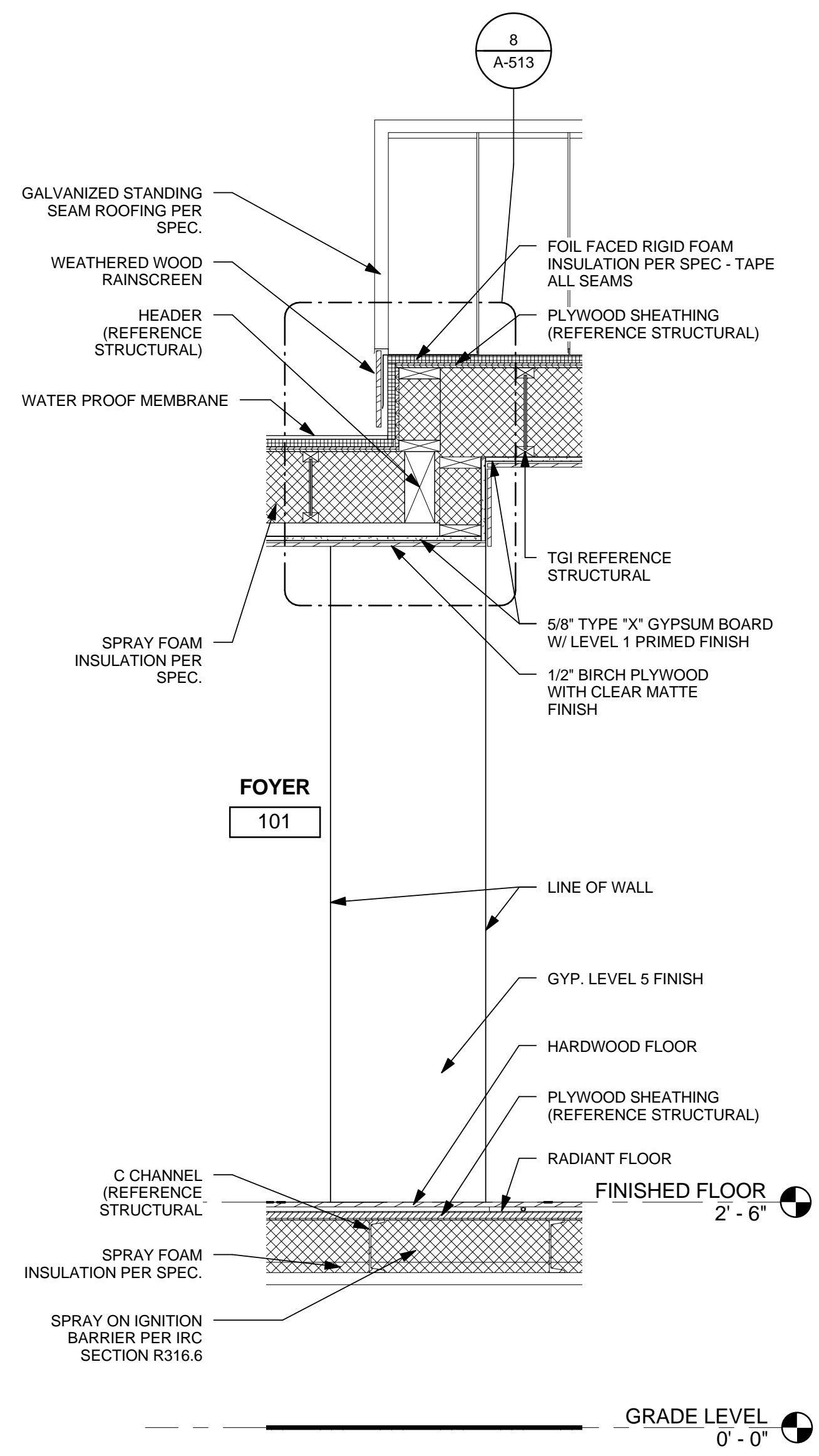
A-315



1 MODULE B FOYER NORTH WALL
3/4" = 1'-0"



2 MODULE B FOYER SOUTH WALL
3/4" = 1'-0"



3 MODULE B ENTRY CONNECTION
3/4" = 1'-0"

8/22/2013 11:32:39 AM

GENERAL SHEET NOTES

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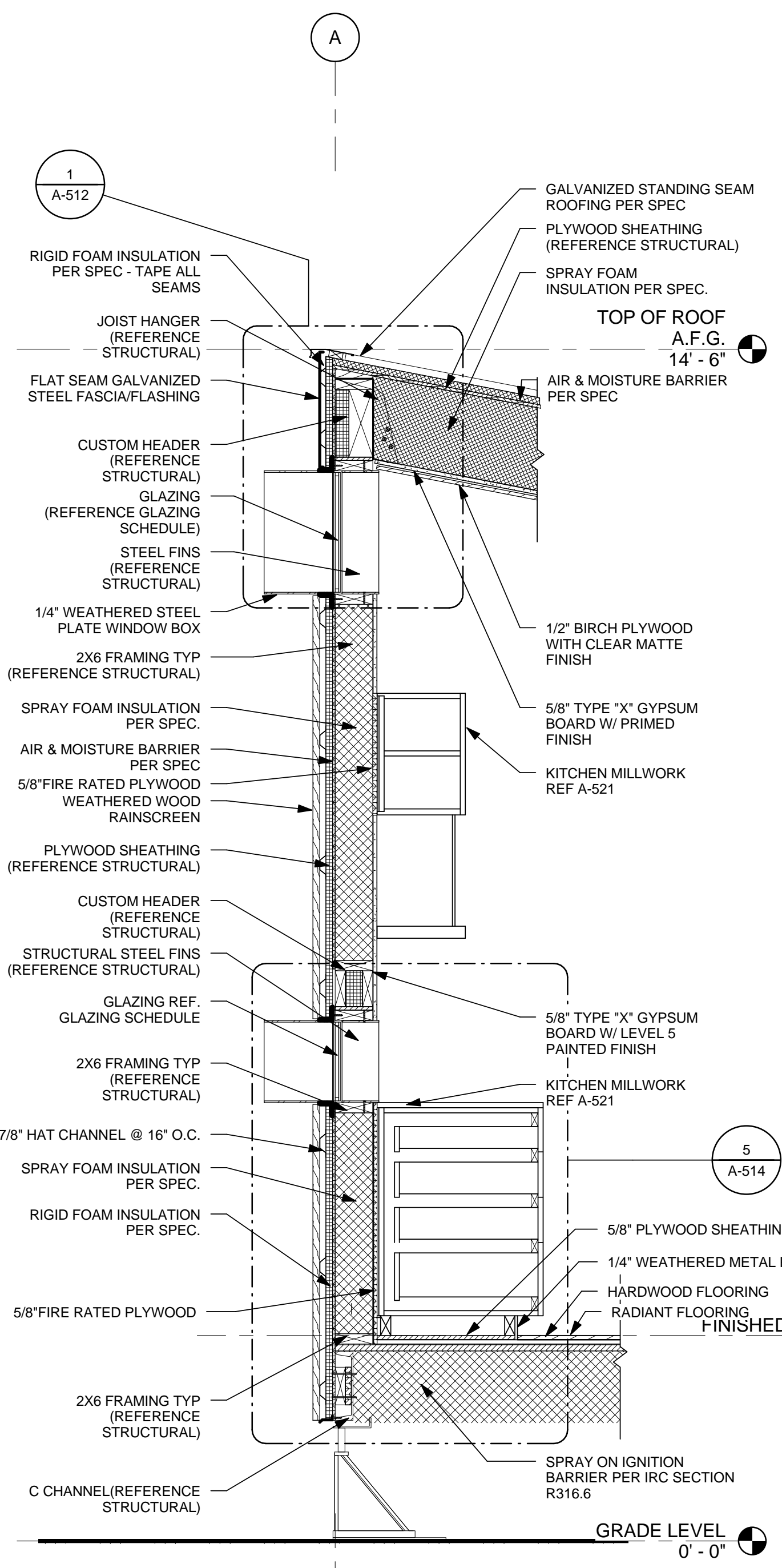
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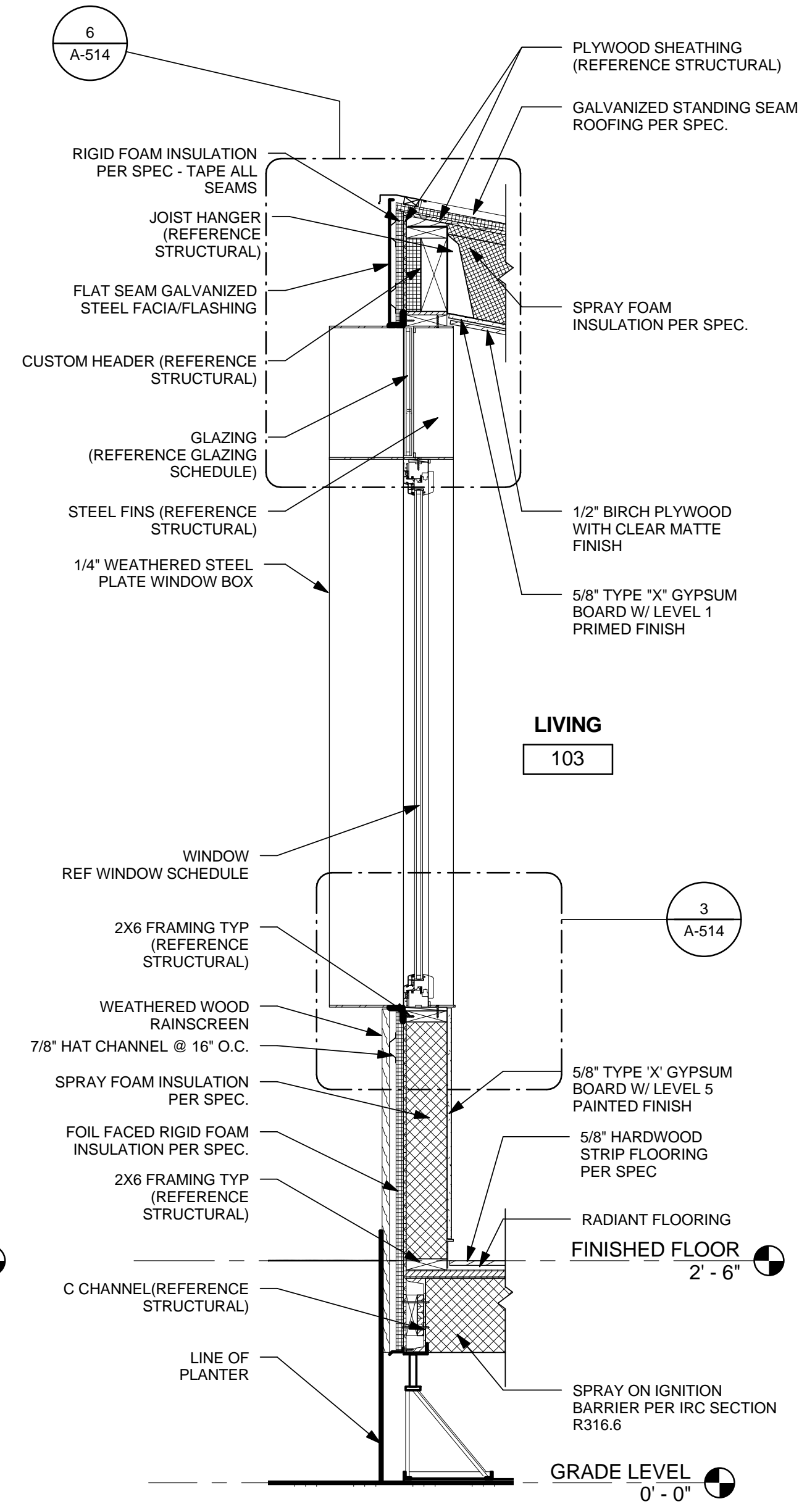
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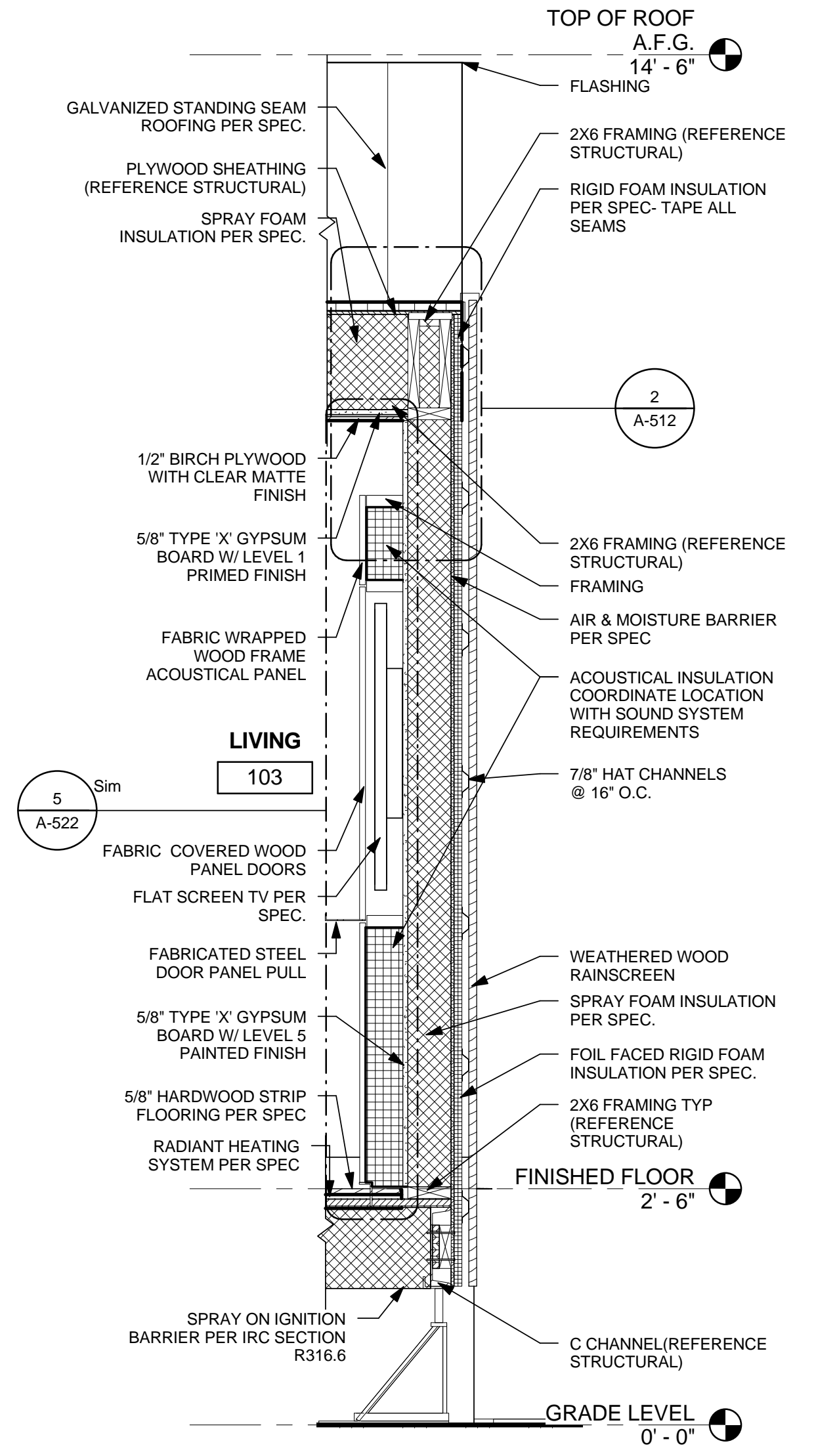
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1 MODULE B KITCHEN NORTH WALL
3/4" = 1'-0"



2 MODULE B NORTH AT VIEW WINDOW
3/4" = 1'-0"



3 MODULE B EAST WALL
3/4" = 1'-0"

WALL SECTIONS

A-316

8/22/2013 11:32:42 AM

GENERAL SHEET NOTES

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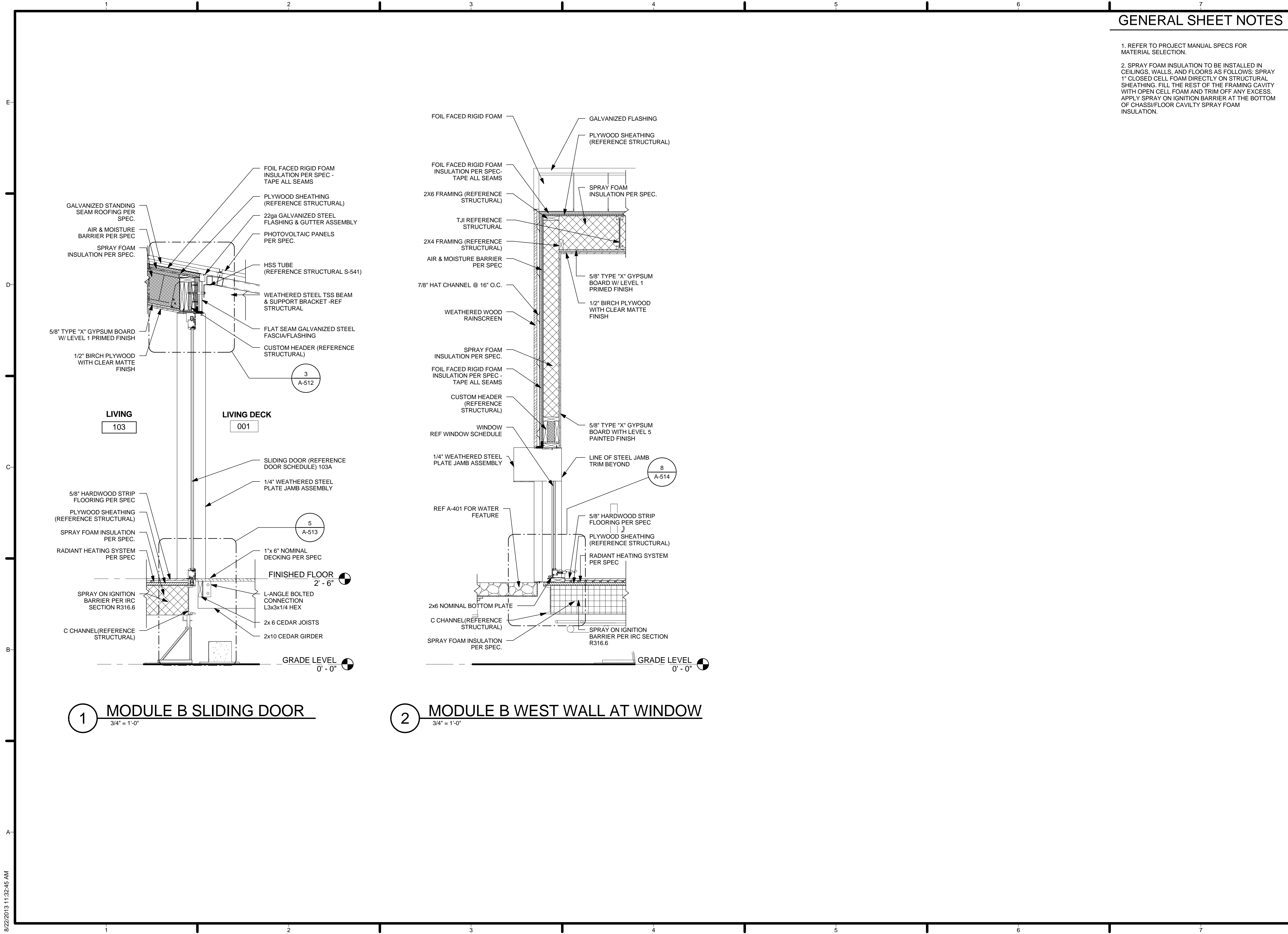
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WALL SECTIONS

A-317



1 MODULE B SLIDING DOOR
3/4" = 1'-0"

2 MODULE B WEST WALL AT WINDOW
3/4" = 1'-0"

8/22/2013 11:32:45 AM

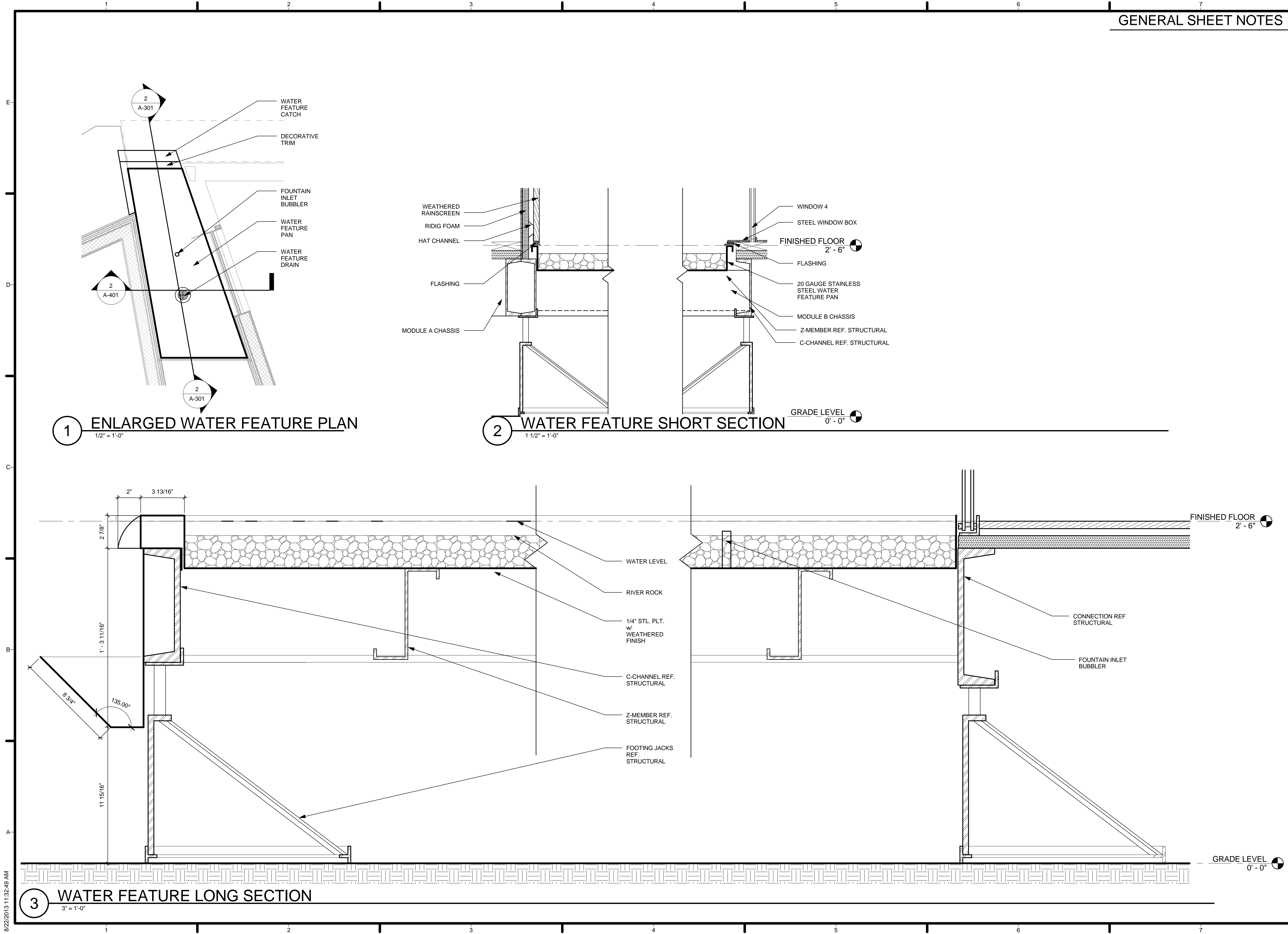
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WATER FEATURE

A-401



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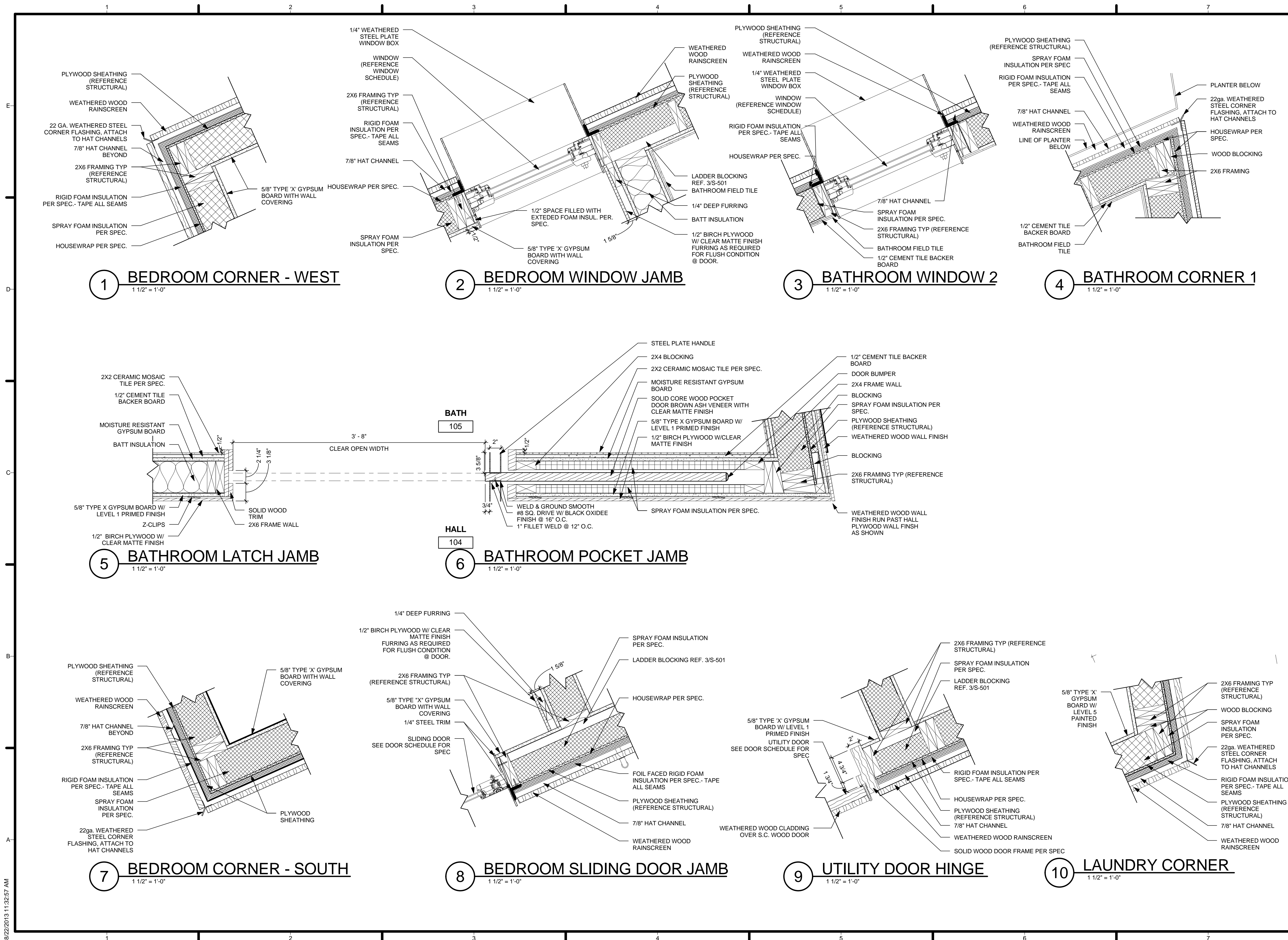
REVISIONS

REV	DATE	DESCRIPTION
3	Date 3	AS-BUILT
2	30 MAY 2013	NTA REVIEW COMMENTS
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PLAN DETAILS

A-501



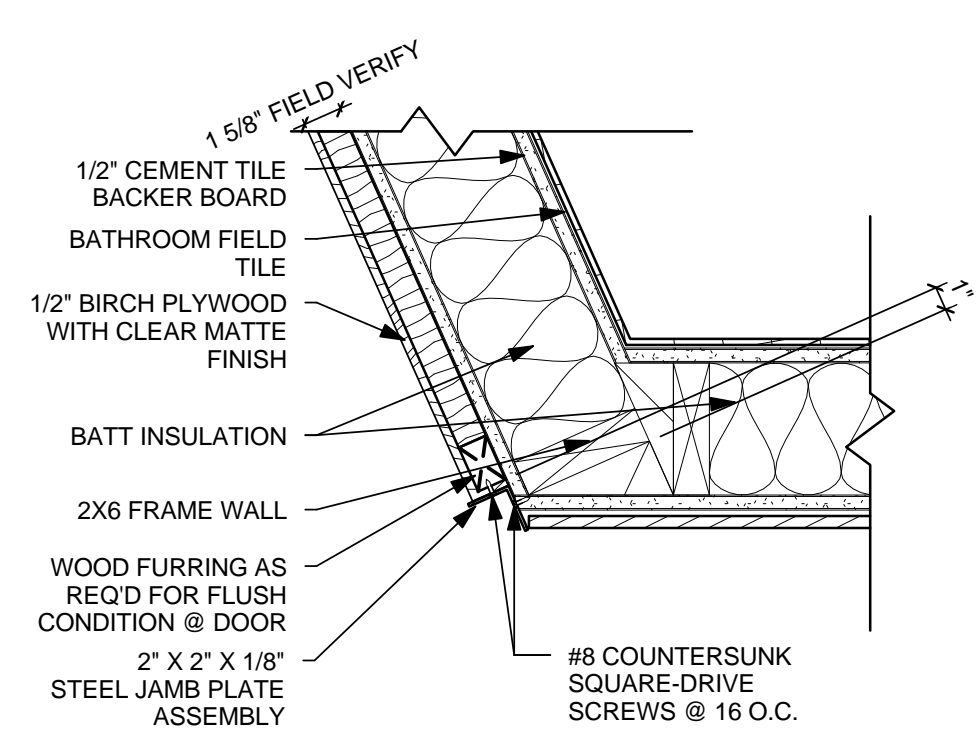
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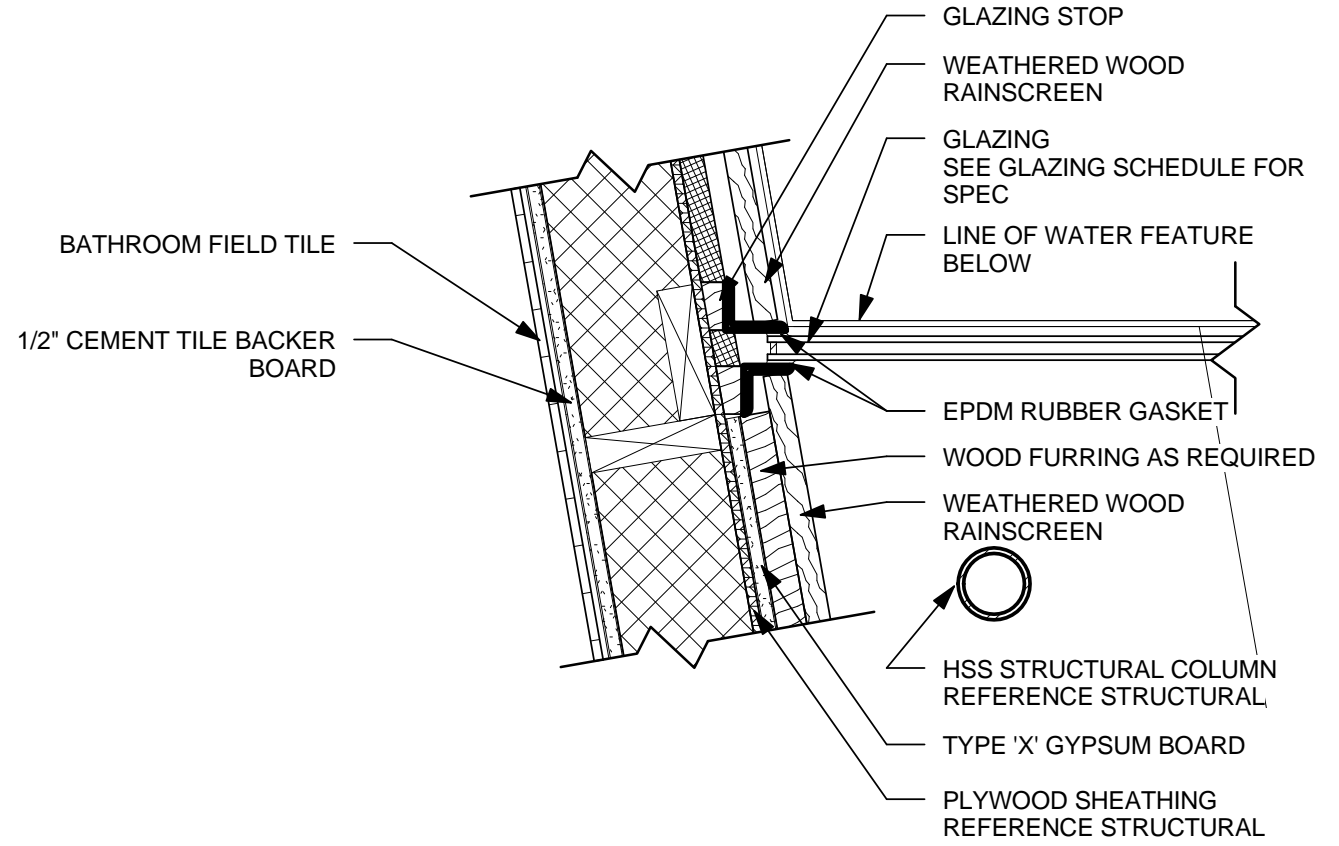
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PLAN DETAILS

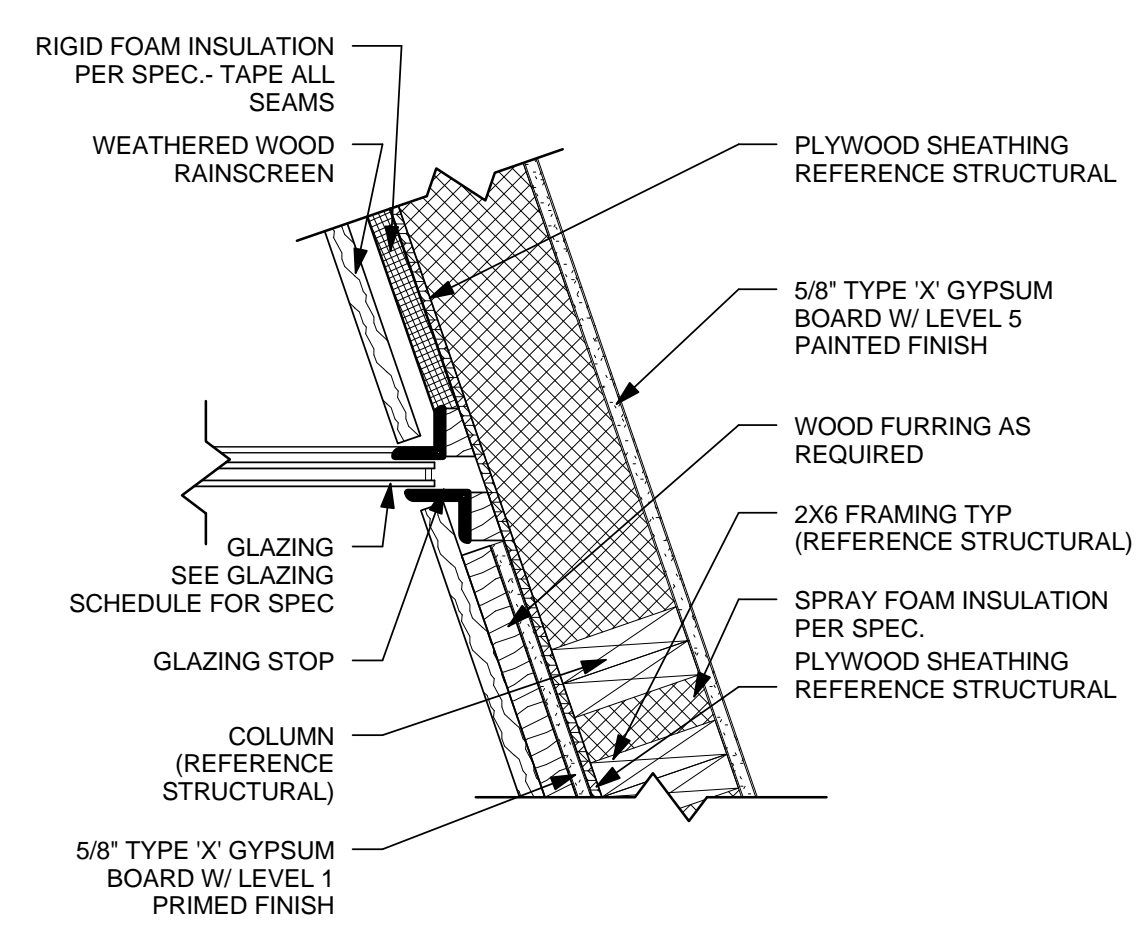
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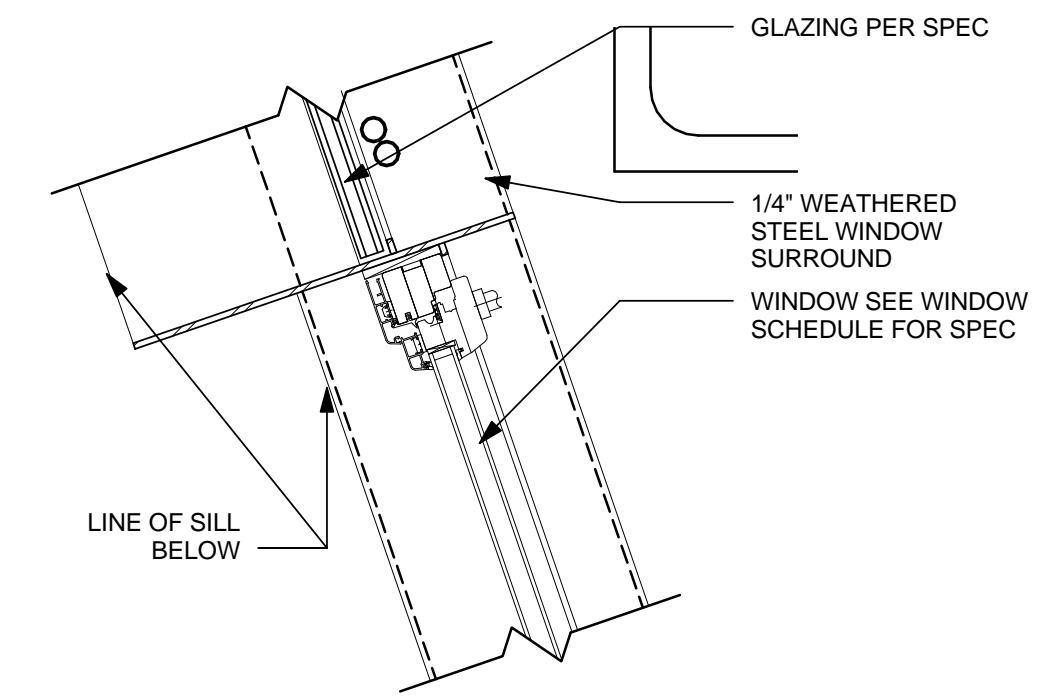
1 BEDROOM DOOR CORNER 1
1 1/2" = 1'-0"



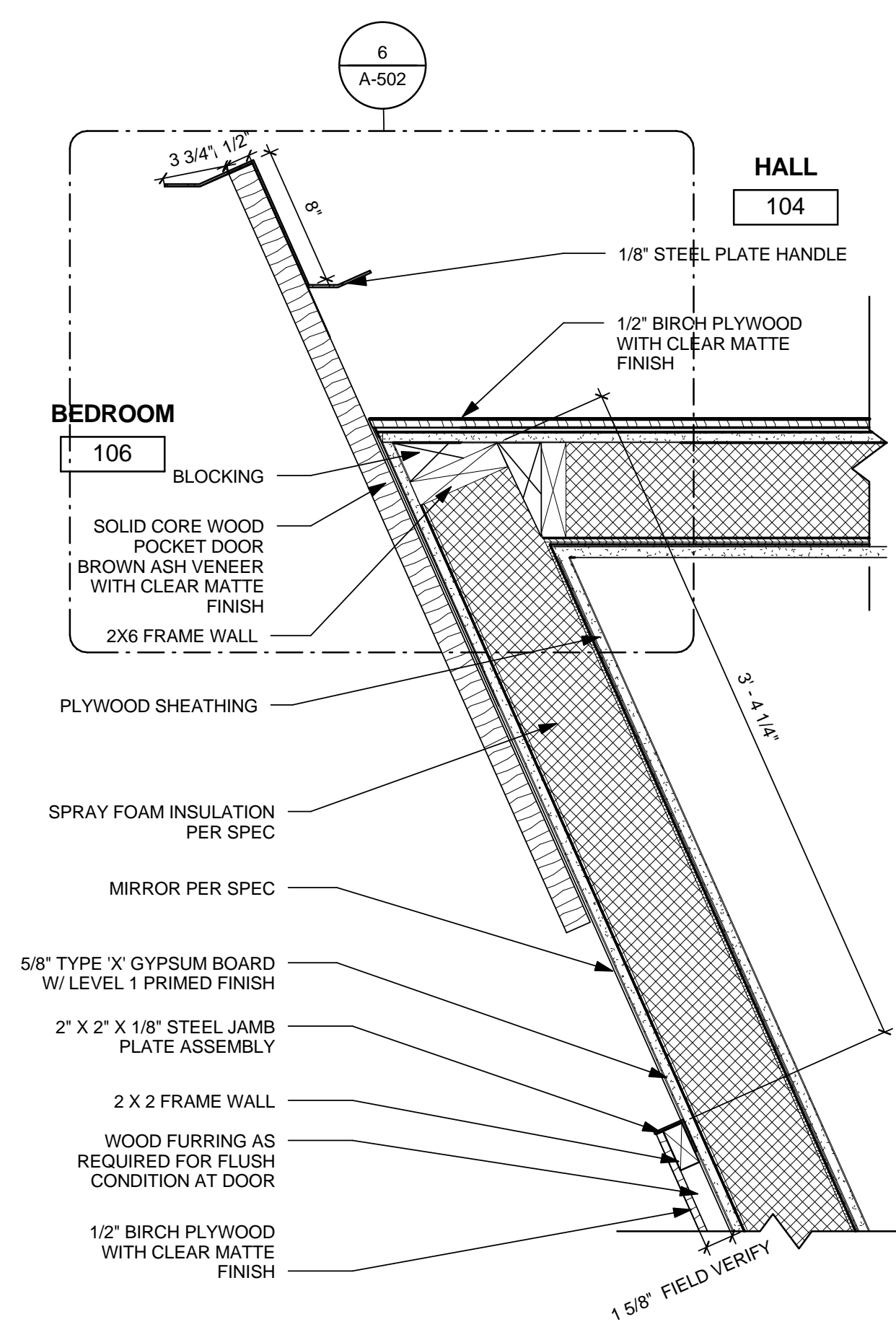
2 FOYER GLAZING
1 1/2" = 1'-0"



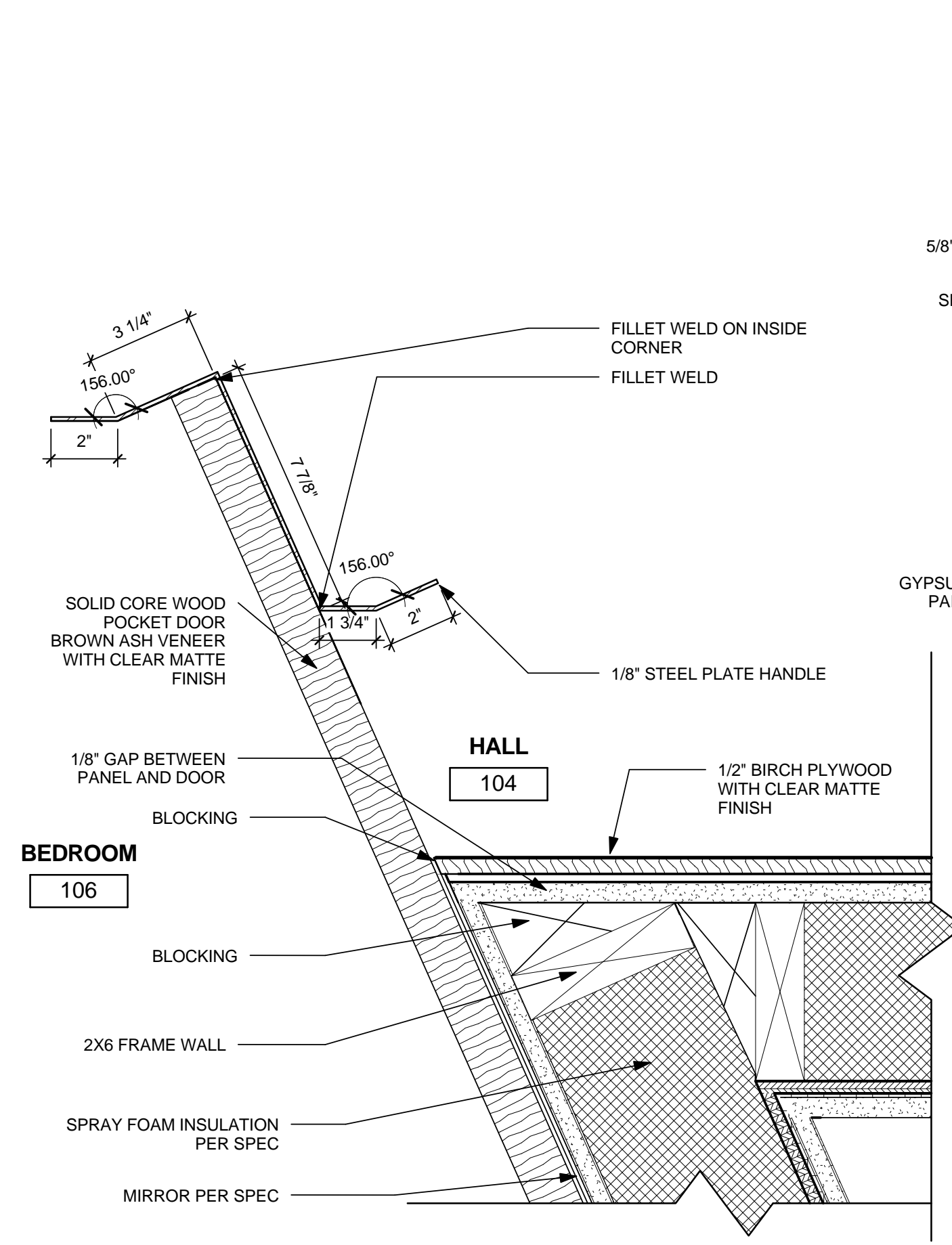
3 FOYER GLAZING 2
1 1/2" = 1'-0"



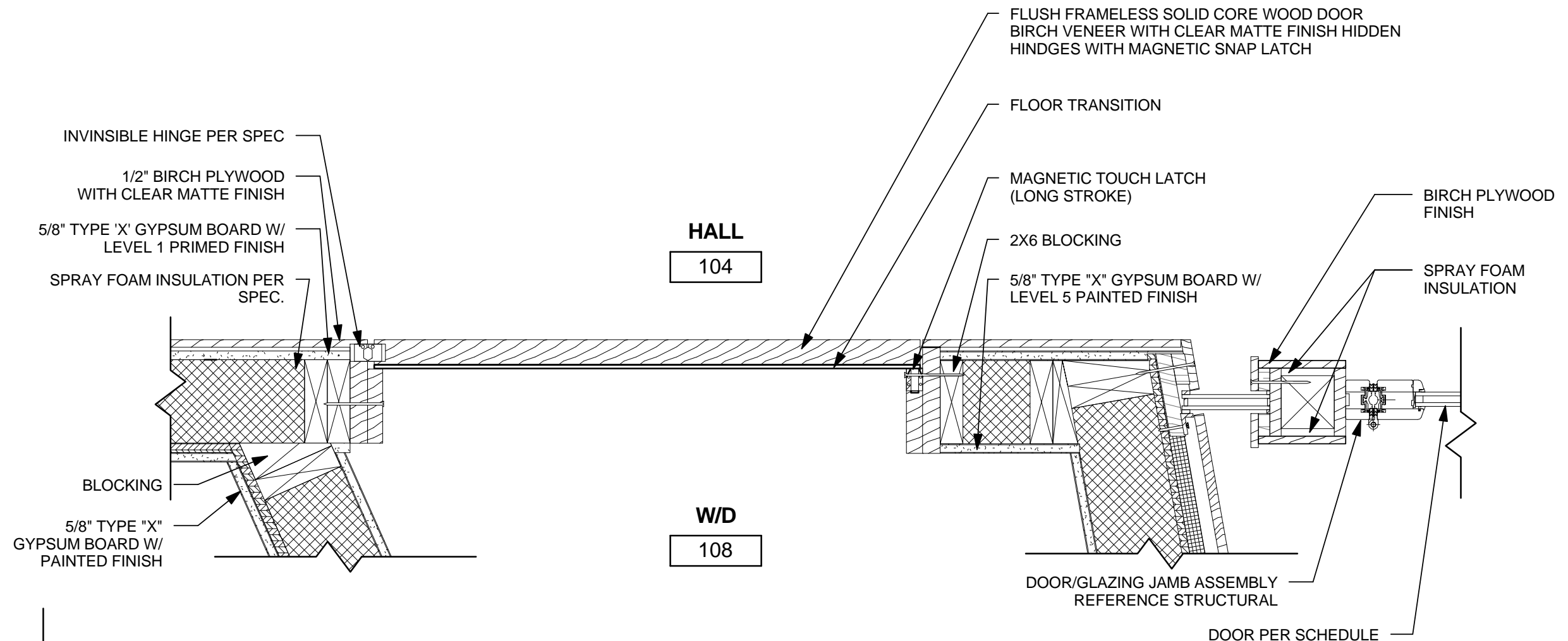
4 WINDOW 37 JAMB @ GLAZING
1 1/2" = 1'-0"



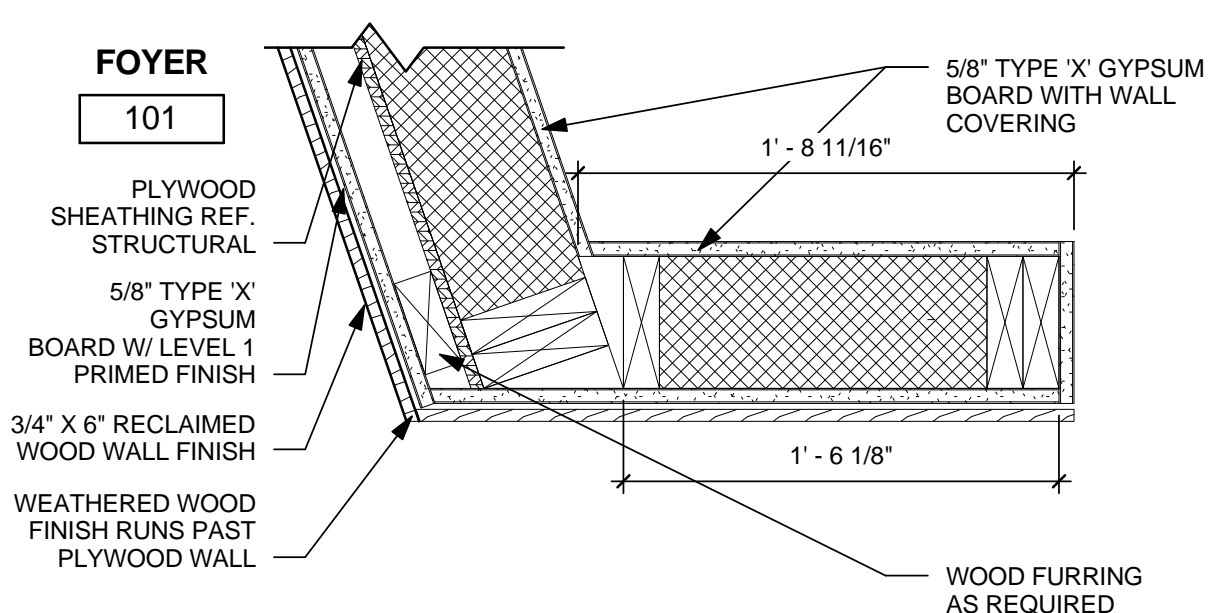
5 BEDROOM DOOR CORNER 2
1 1/2" = 1'-0"



6 BEDROOM DOOR CORNER DETAIL
3" = 1'-0"



7 LAUNDRY DOOR & FRONT DOOR JAMB
1 1/2" = 1'-0"



8 ENTRY KITCHEN CORNER
1 1/2" = 1'-0"

8/22/2013 11:33:03 AM

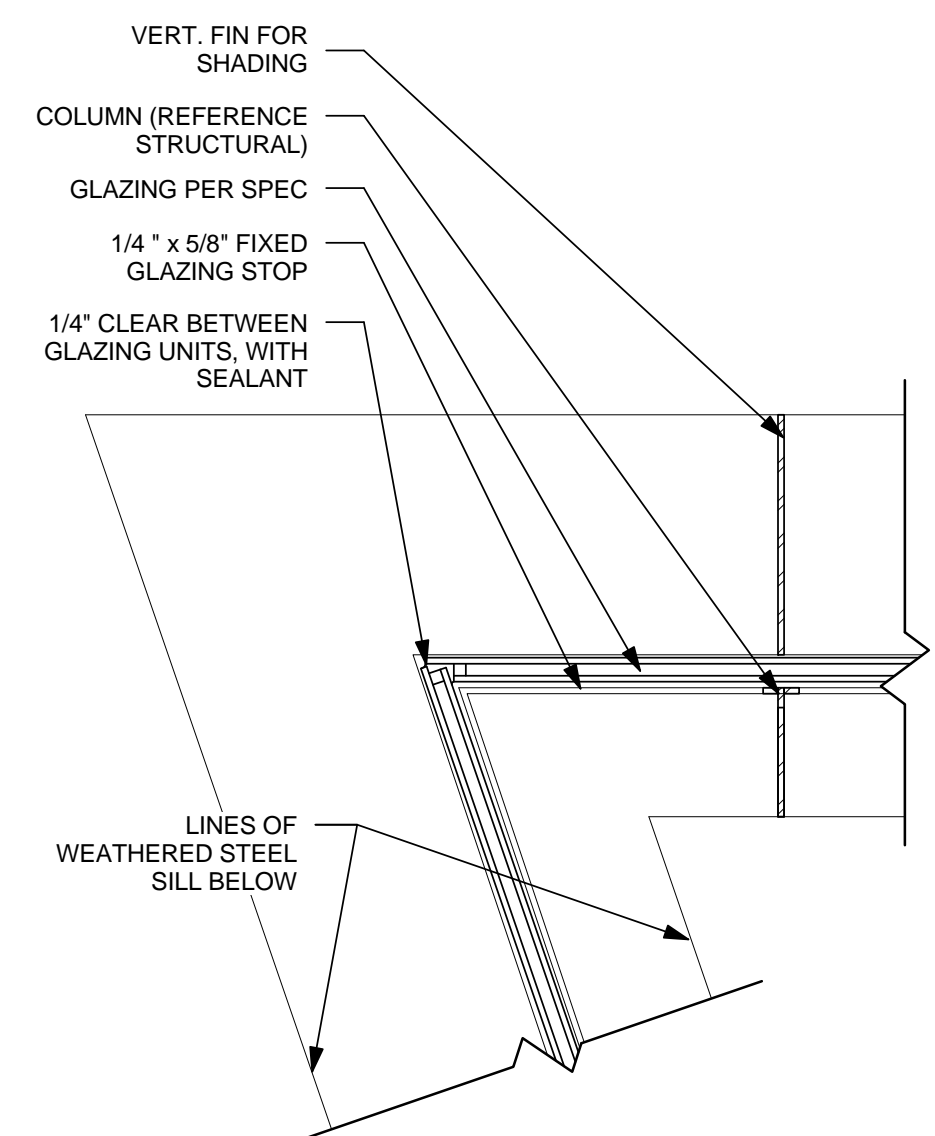
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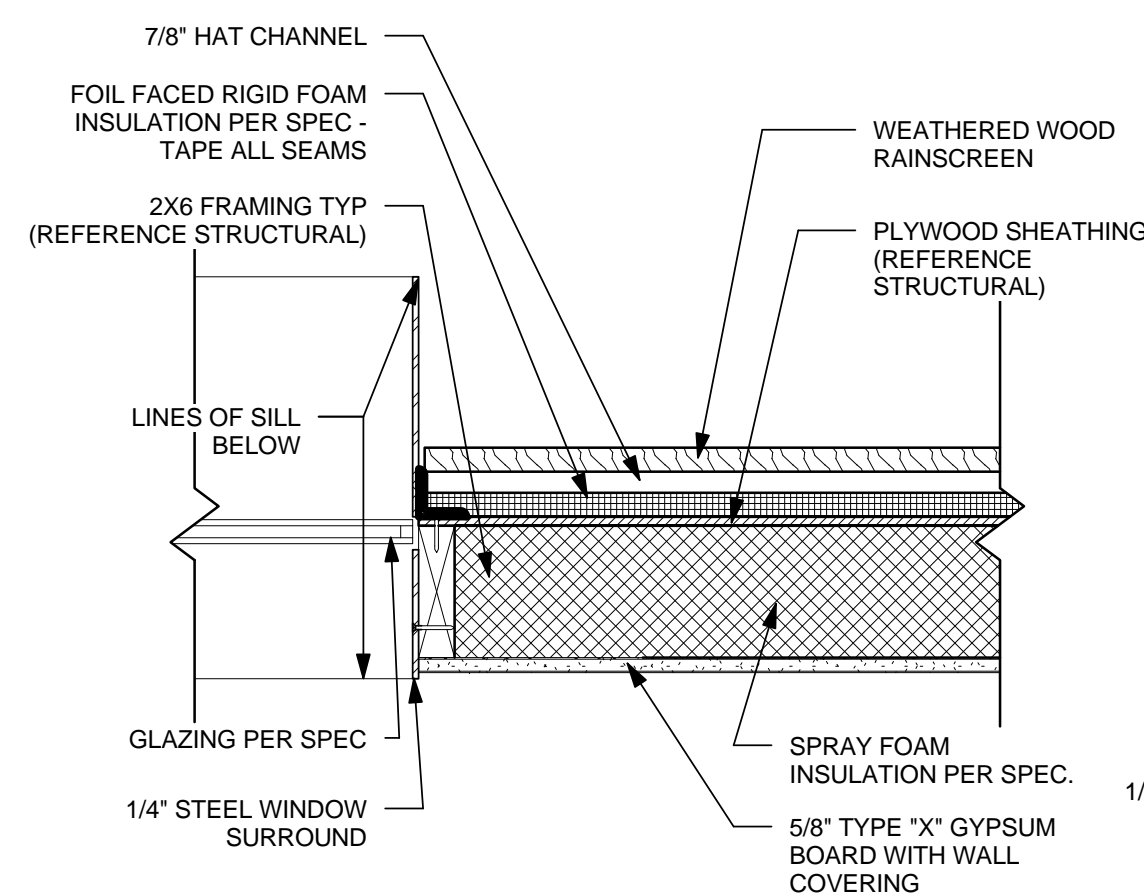
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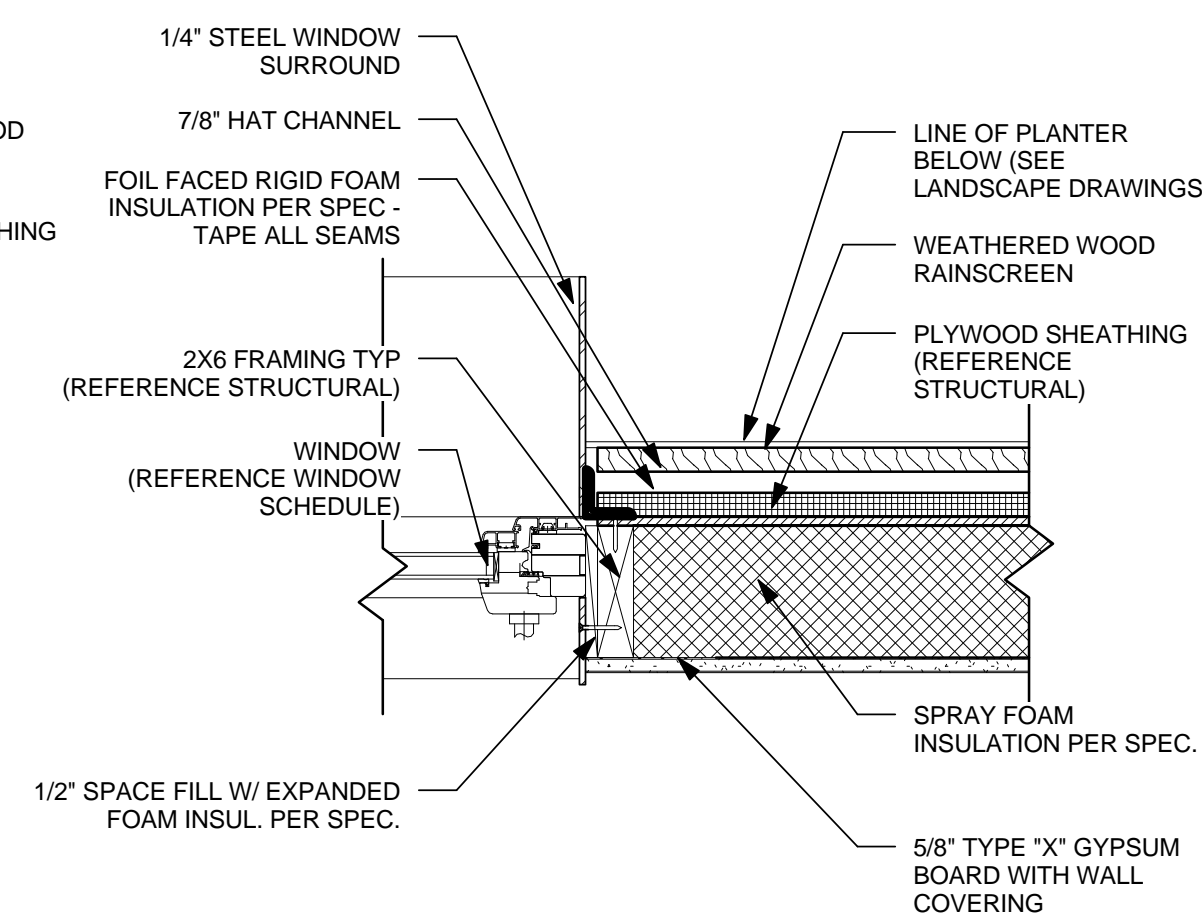
A-503



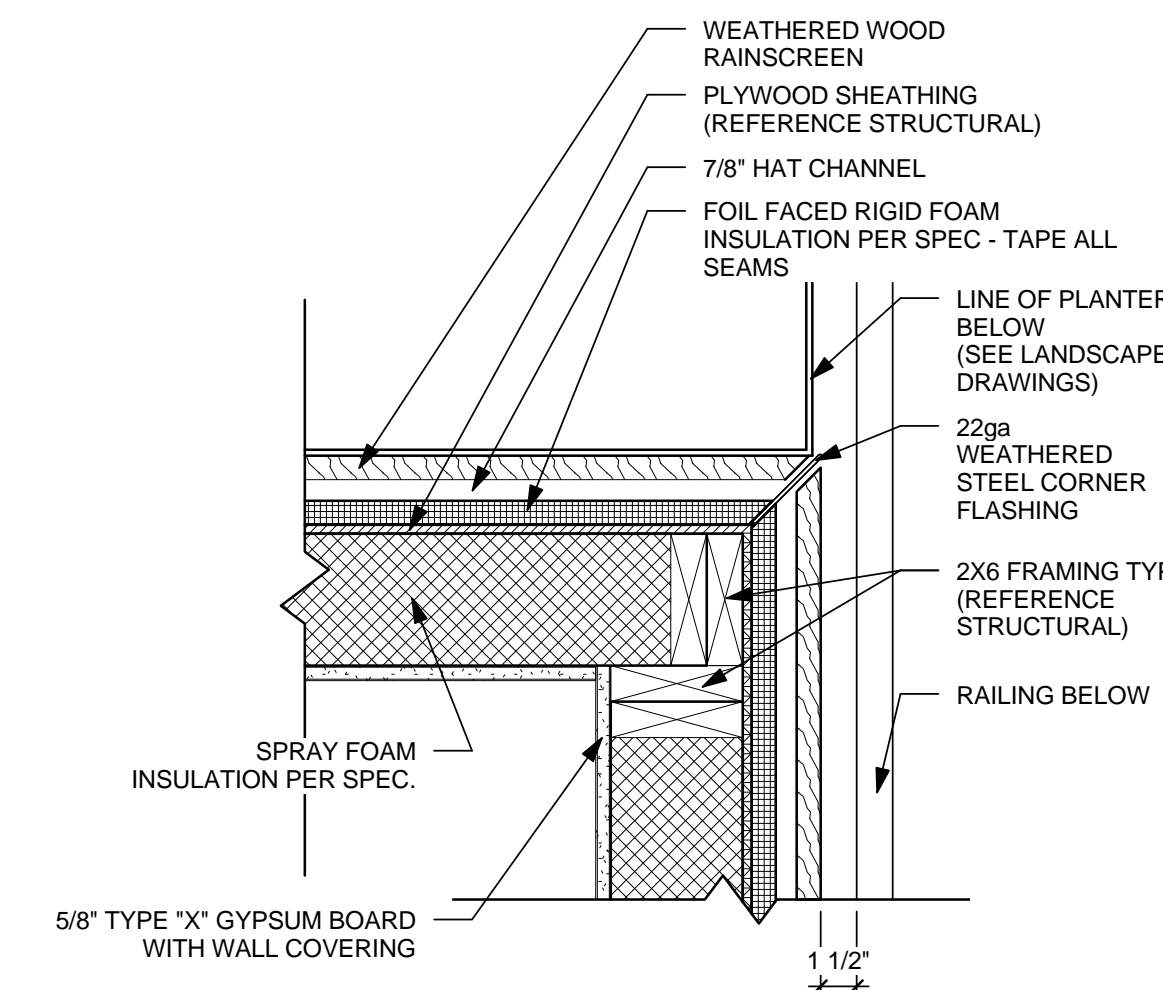
1 NW KITCHEN CORNER
1 1/2" = 1'-0"



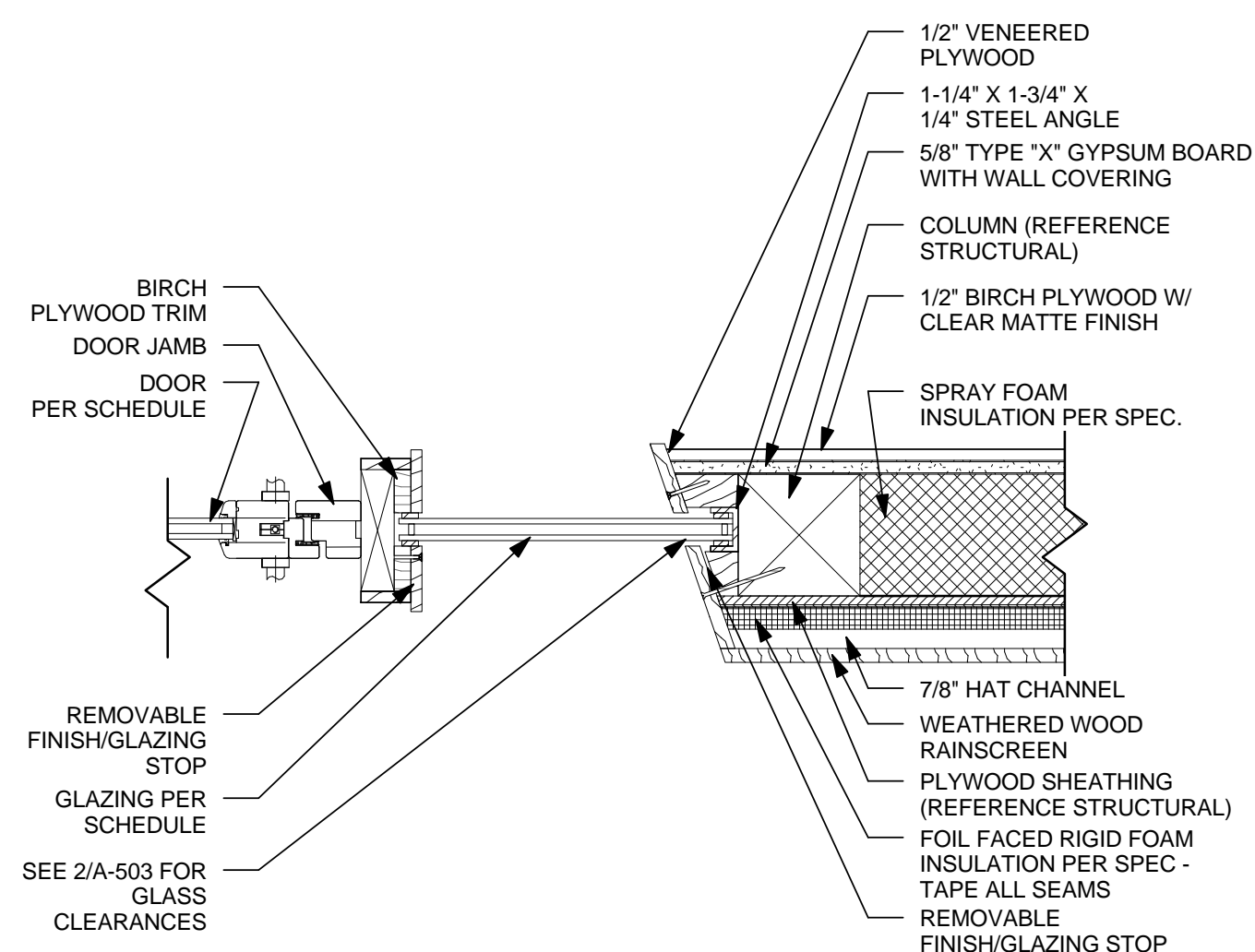
2 KITCHEN GLAZING JAMB
1 1/2" = 1'-0"



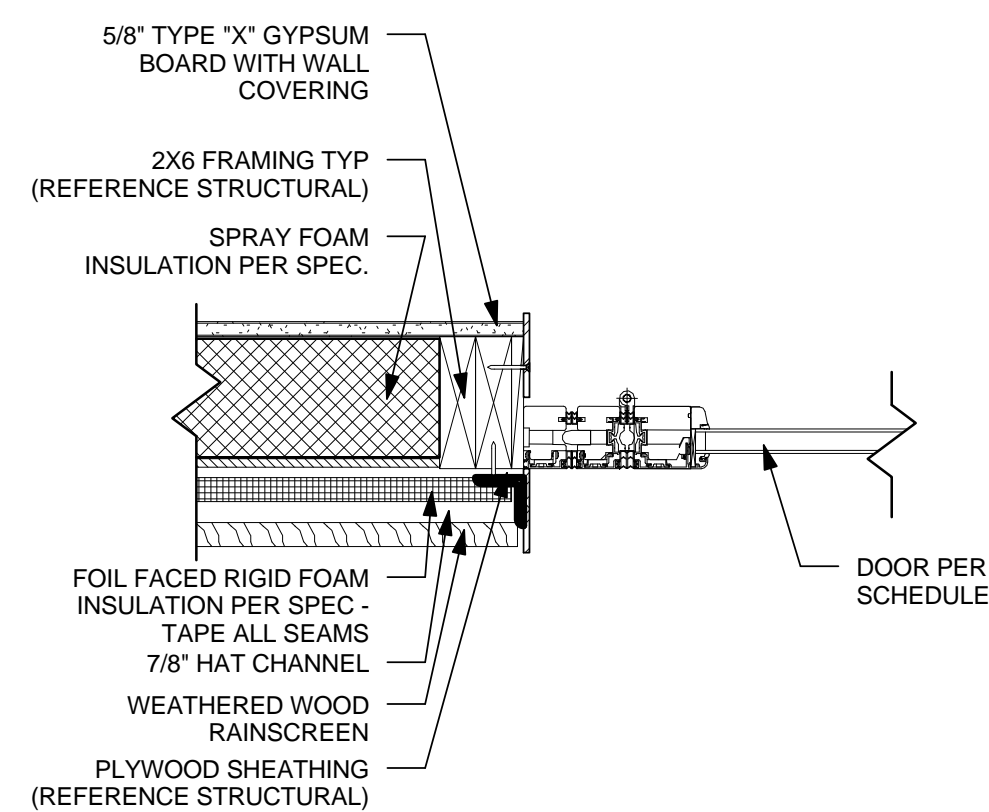
3 LIVING ROOM WINDOW JAMB
1 1/2" = 1'-0"



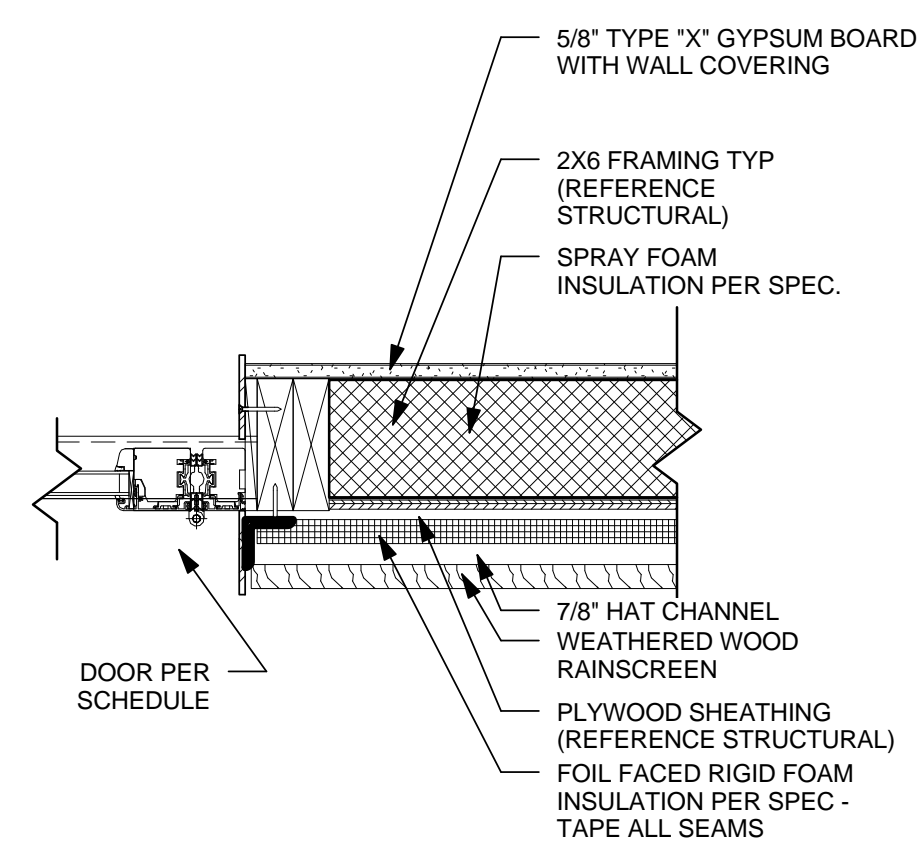
4 LIVING ROOM N.E. CORNER
1 1/2" = 1'-0"



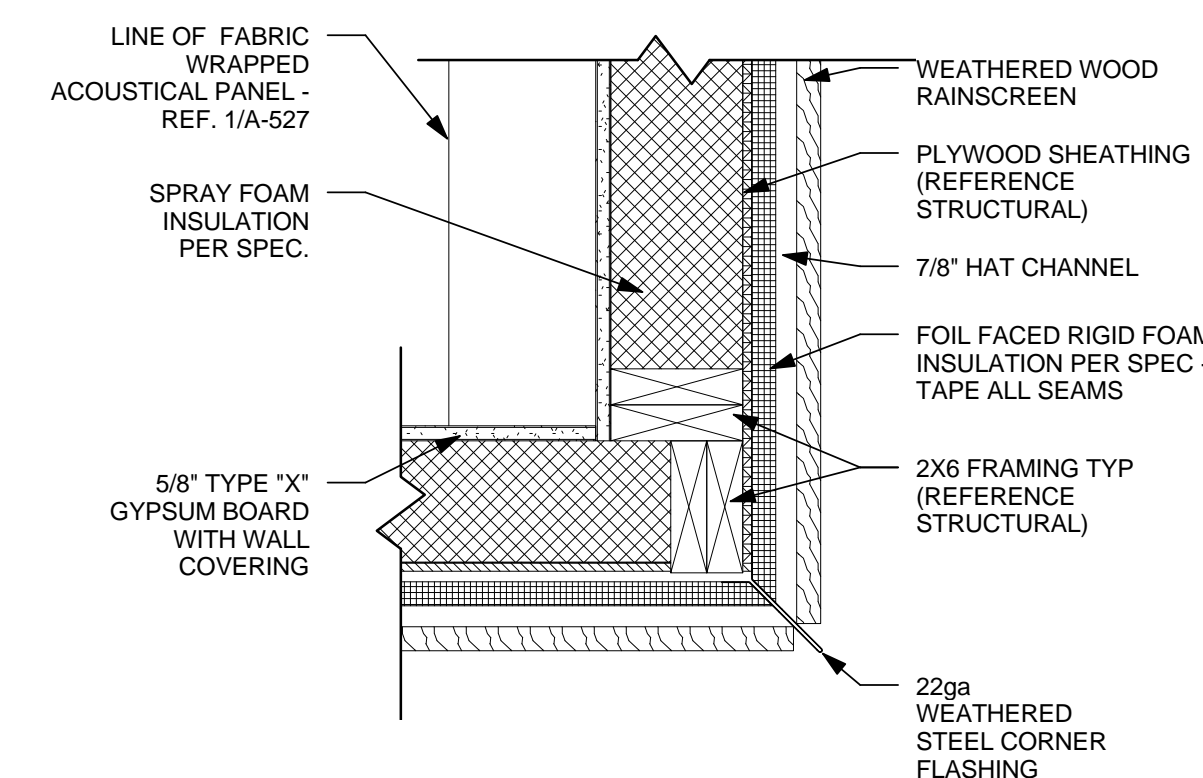
5 FRONT DOOR
1 1/2" = 1'-0"



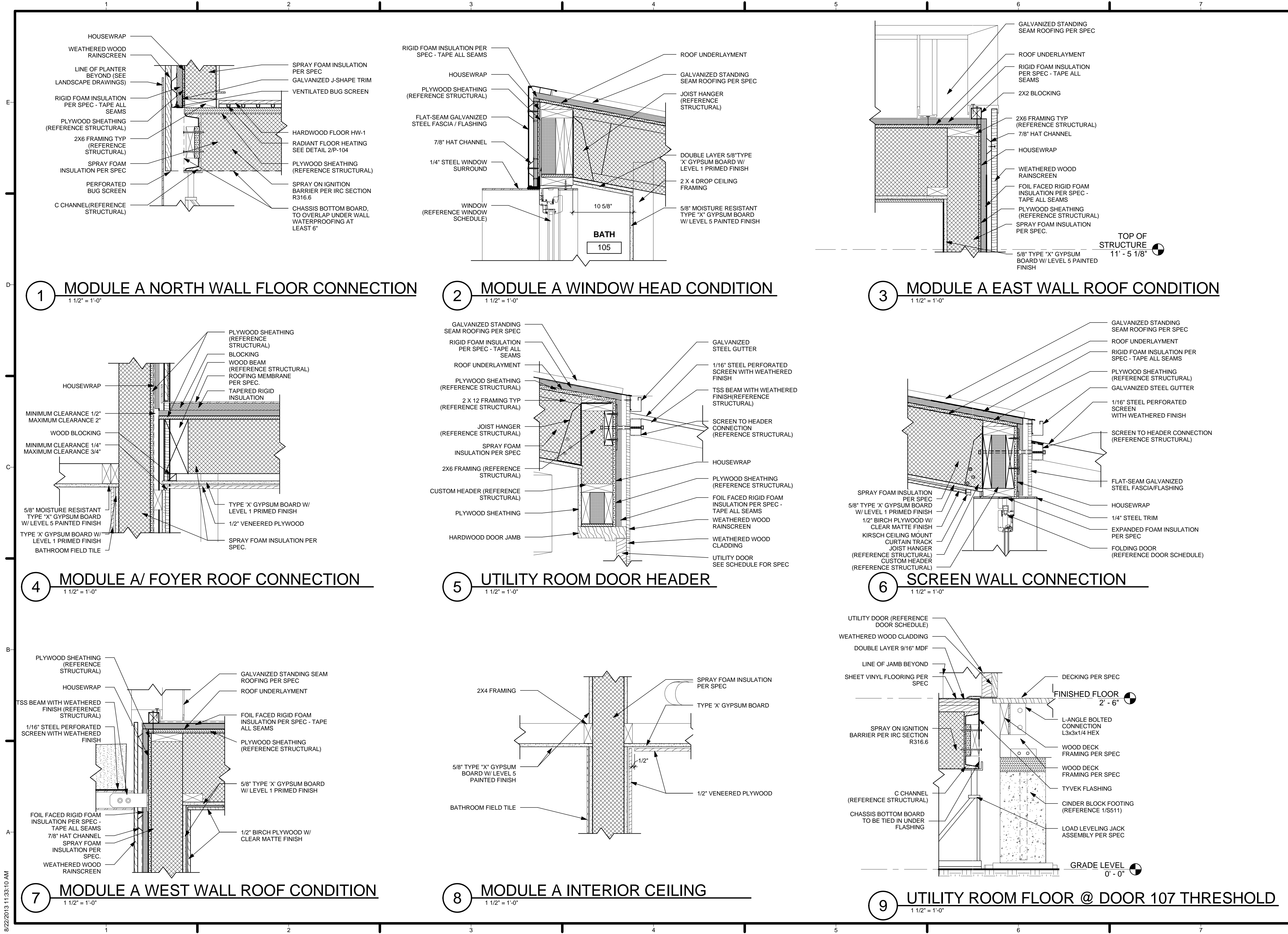
6 SLIDING DOOR JAMB 1
1 1/2" = 1'-0"



7 SLIDING DOOR JAMB 2
1 1/2" = 1'-0"



8 LIVING ROOM S.E. CORNER
1 1/2" = 1'-0"



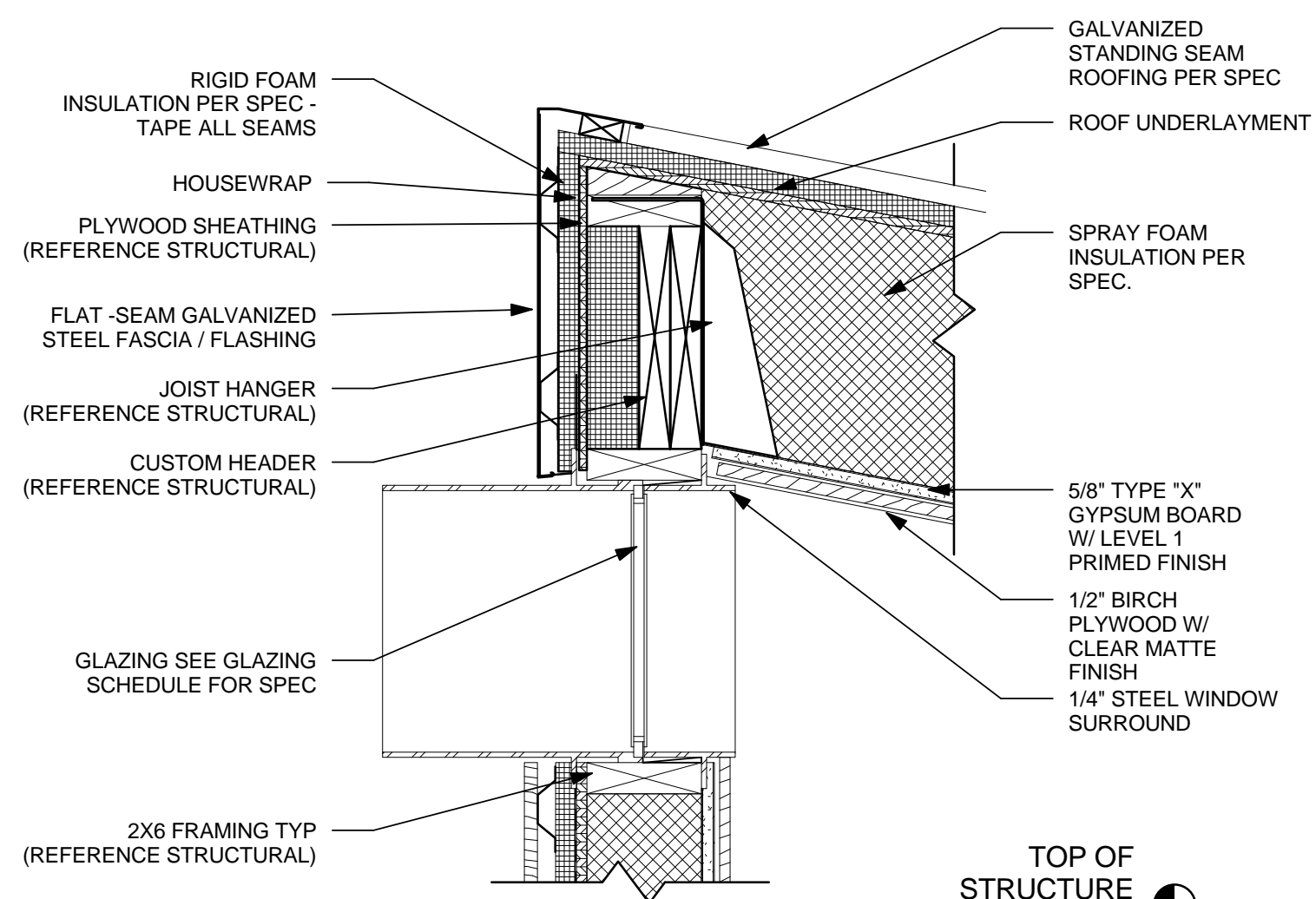
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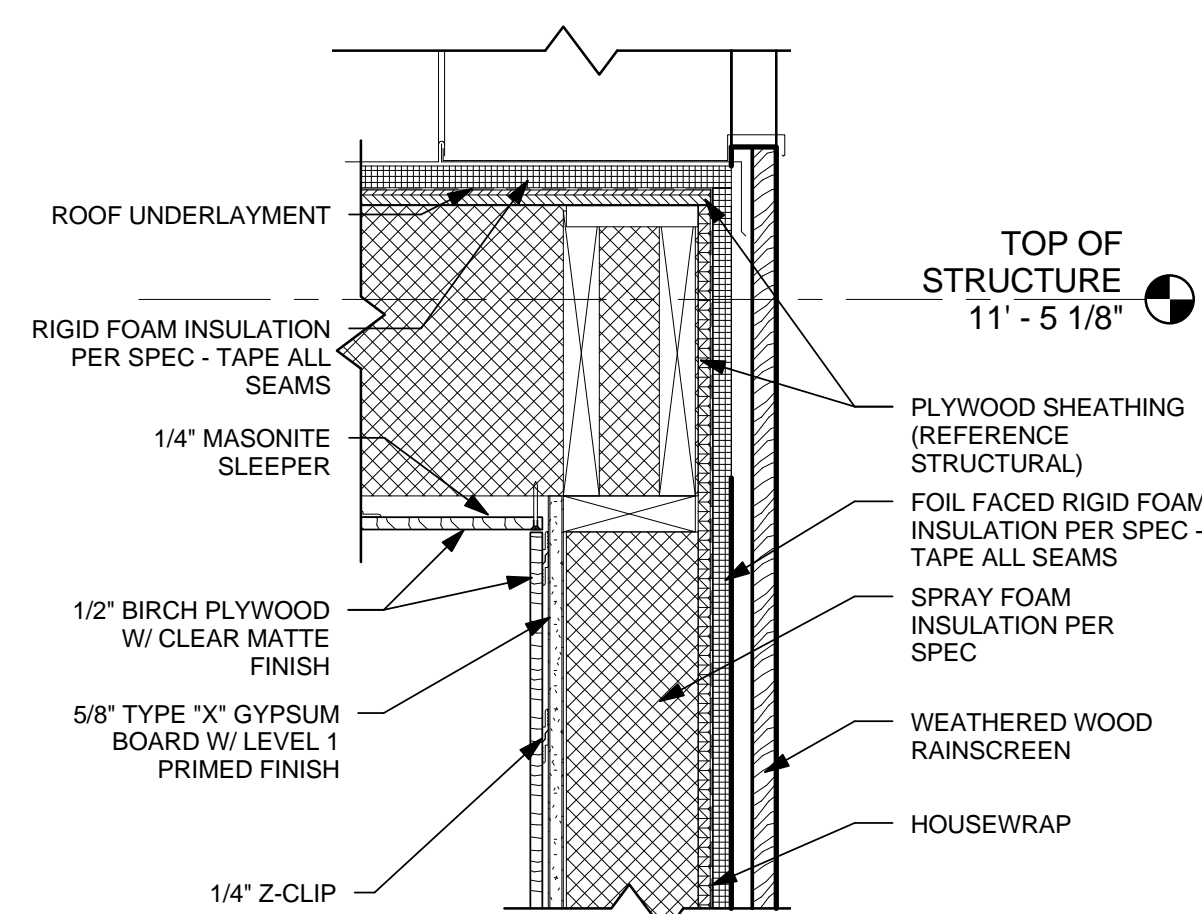
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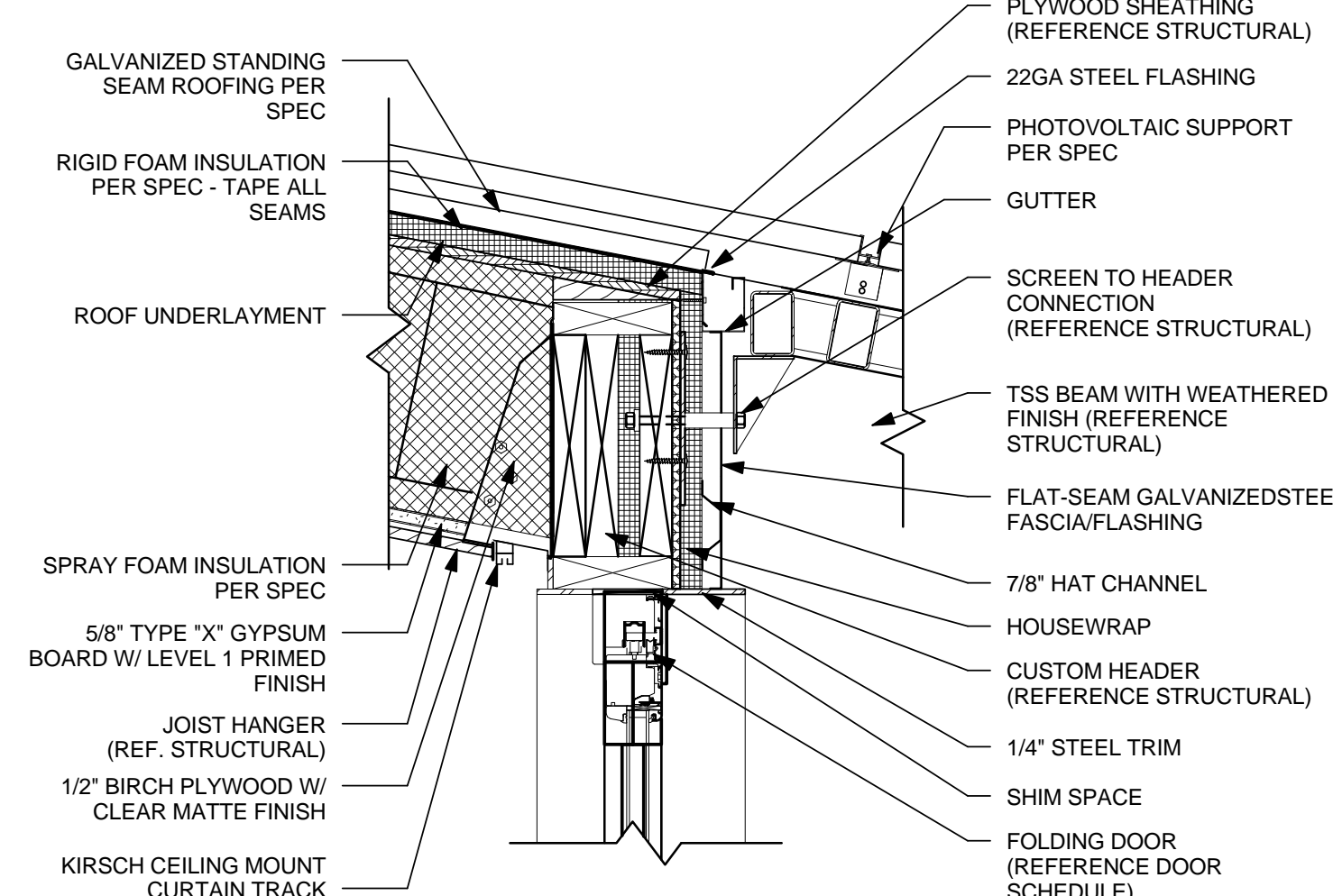
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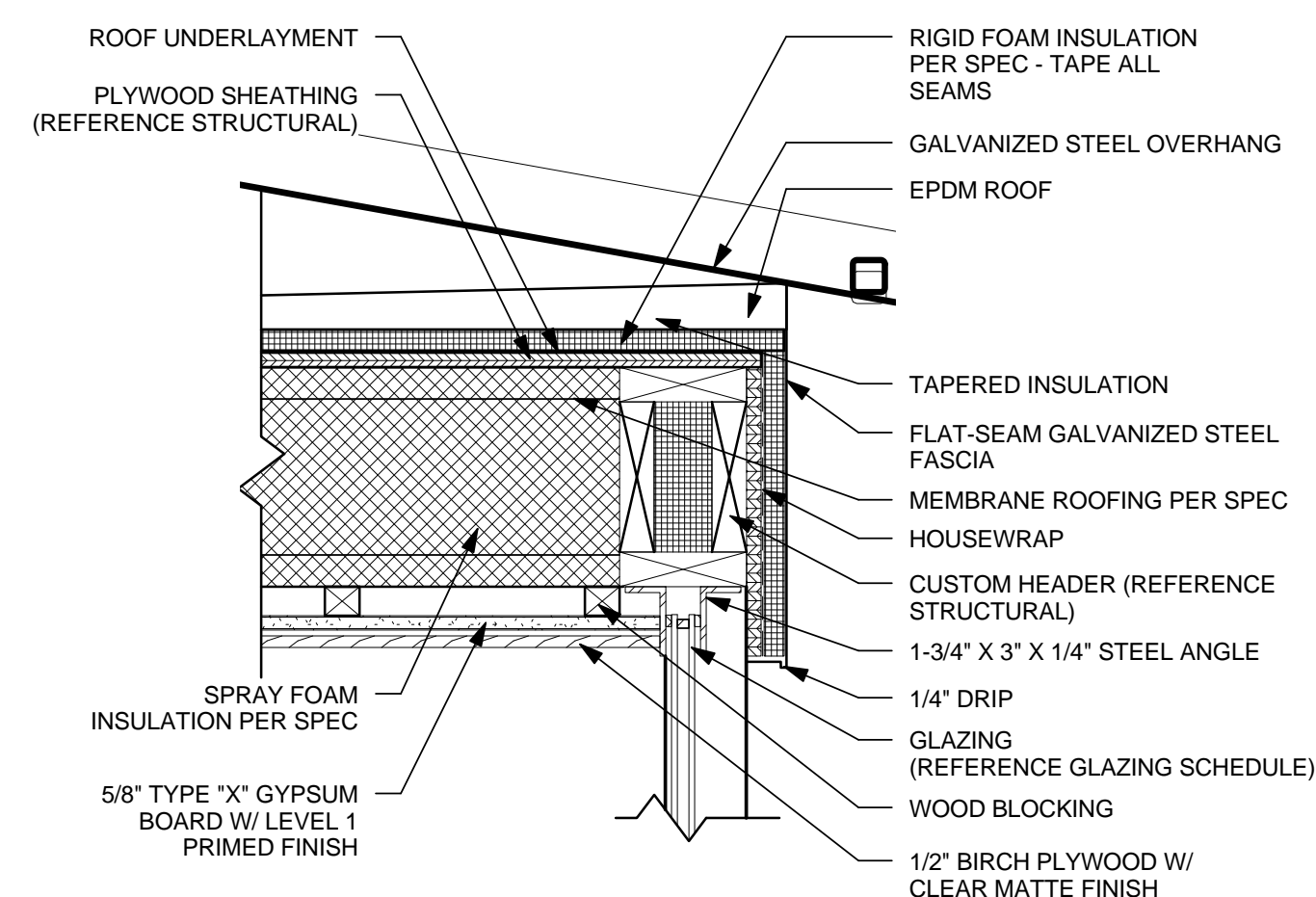
1 MODULE A CLERESTORY
1 1/2" = 1'-0"



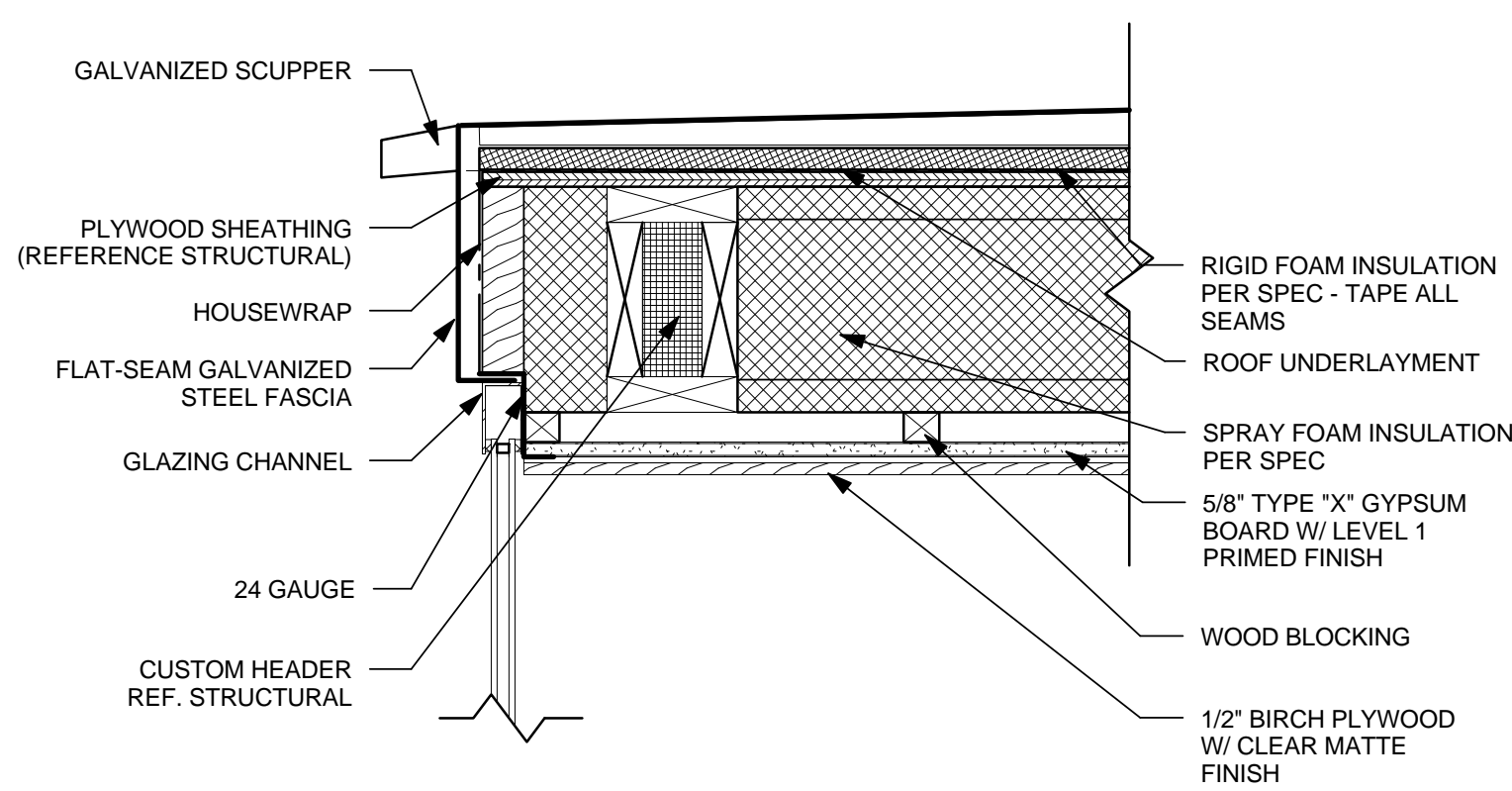
2 LIVING ROOM ROOF/WALL
1 1/2" = 1'-0"



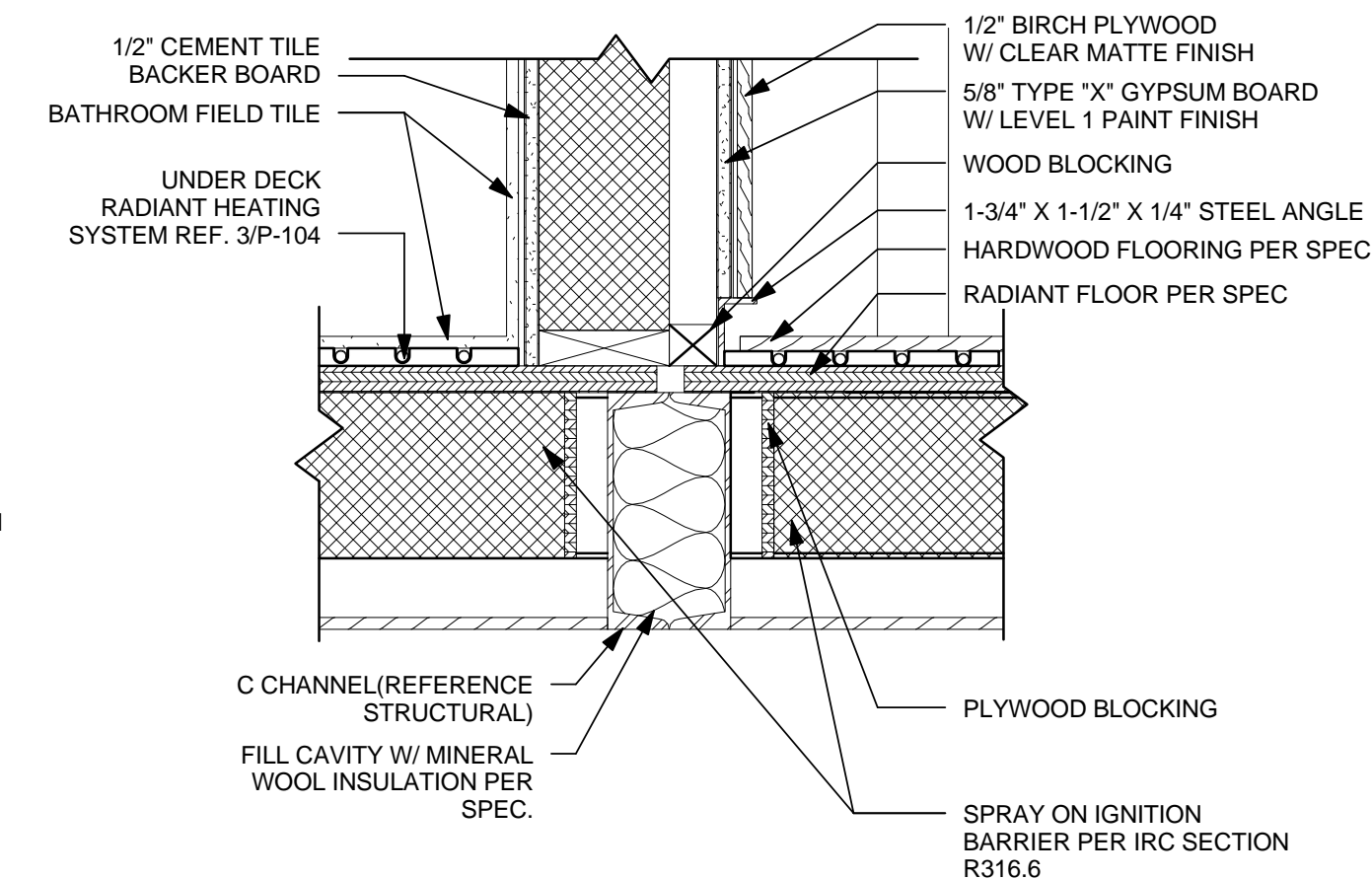
3 DOOR 103A HEADER
1 1/2" = 1'-0"



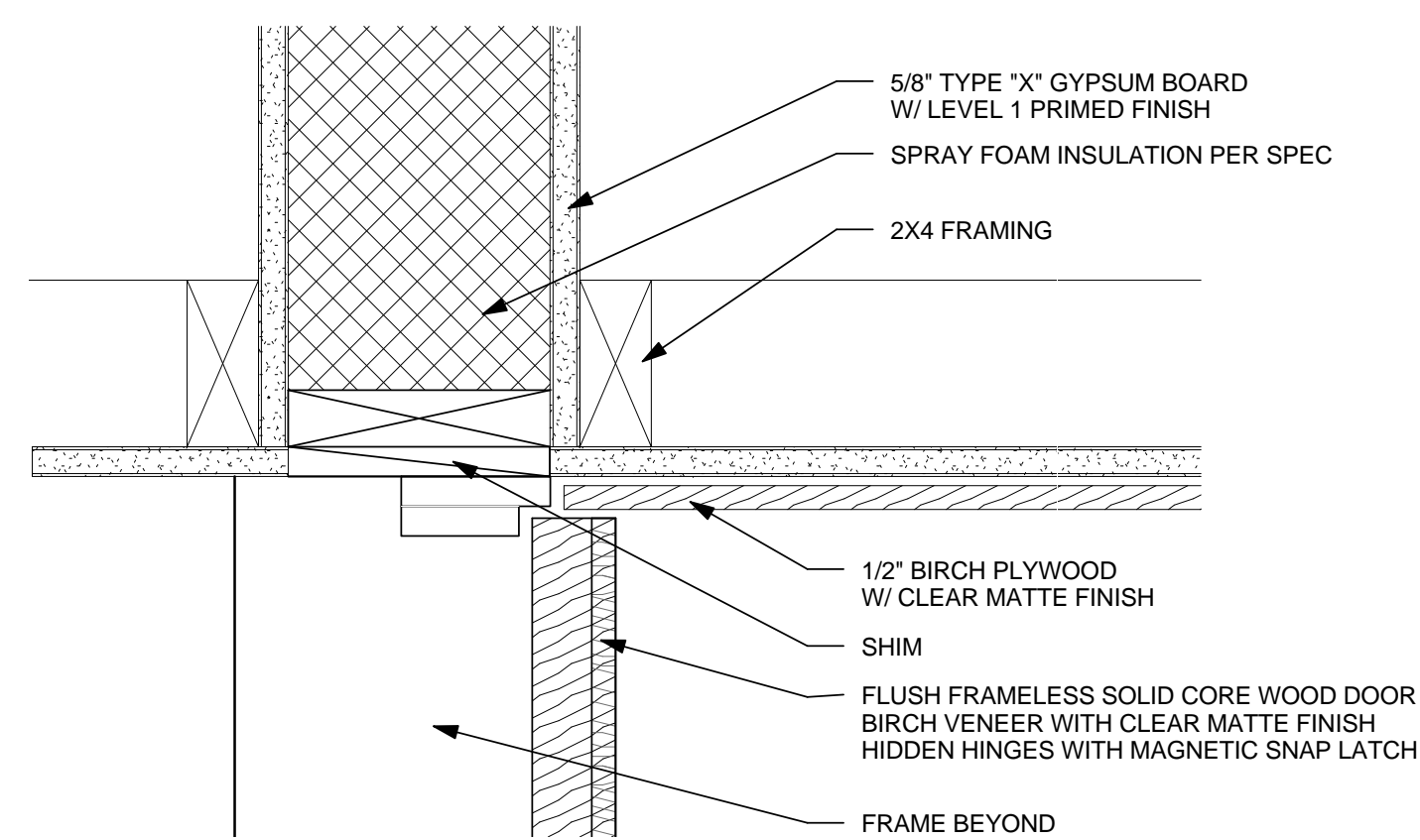
4 RAKE AT FOYER SOUTH MODULE A
1 1/2" = 1'-0"



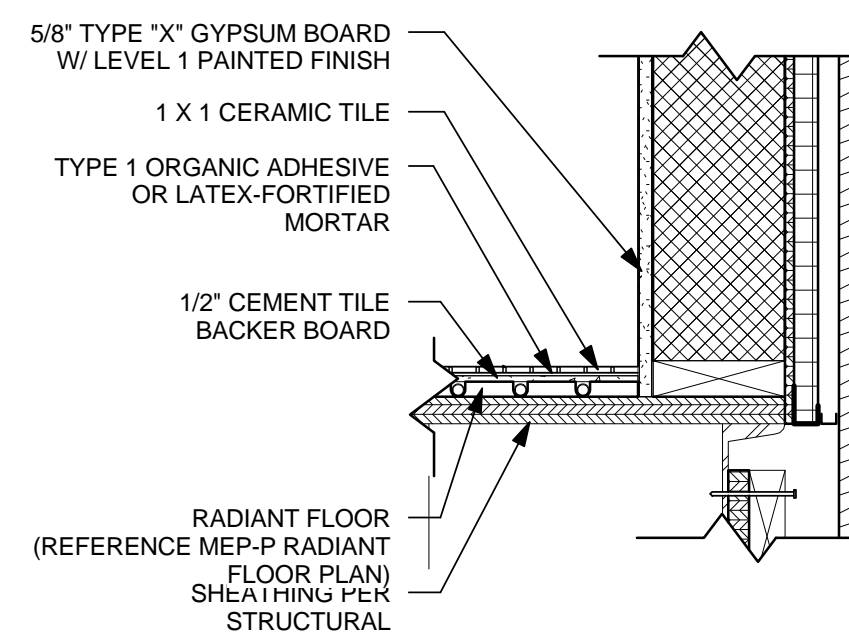
5 RAKE @ FOYER SOUTH MODULE B
1 1/2" = 1'-0"



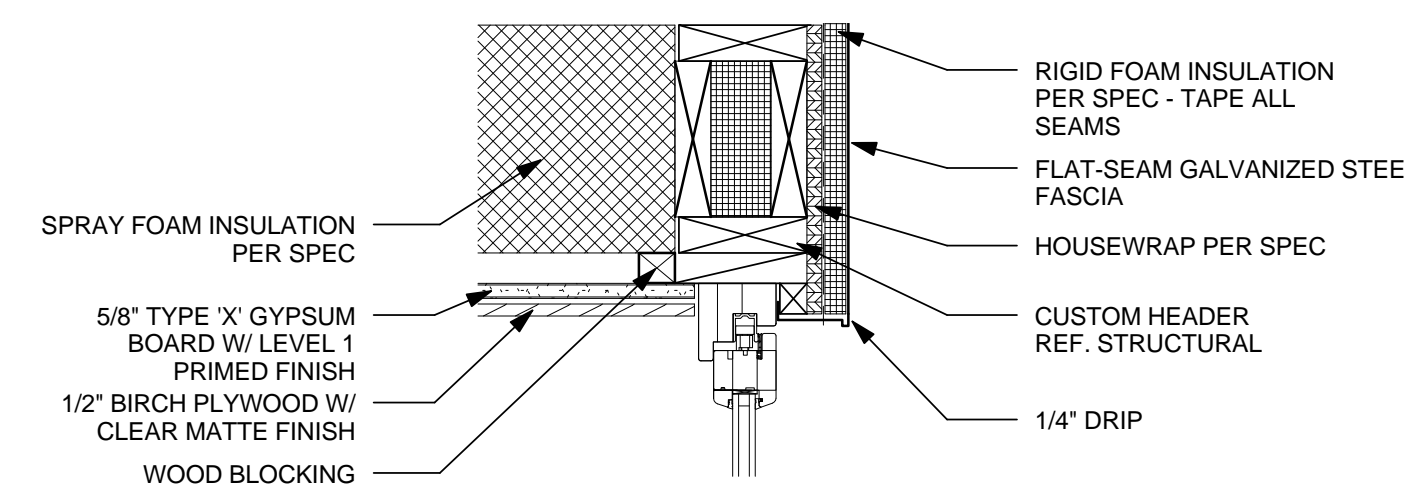
6 MODULE A AND FOYER FLOOR CONNECTION
1 1/2" = 1'-0"



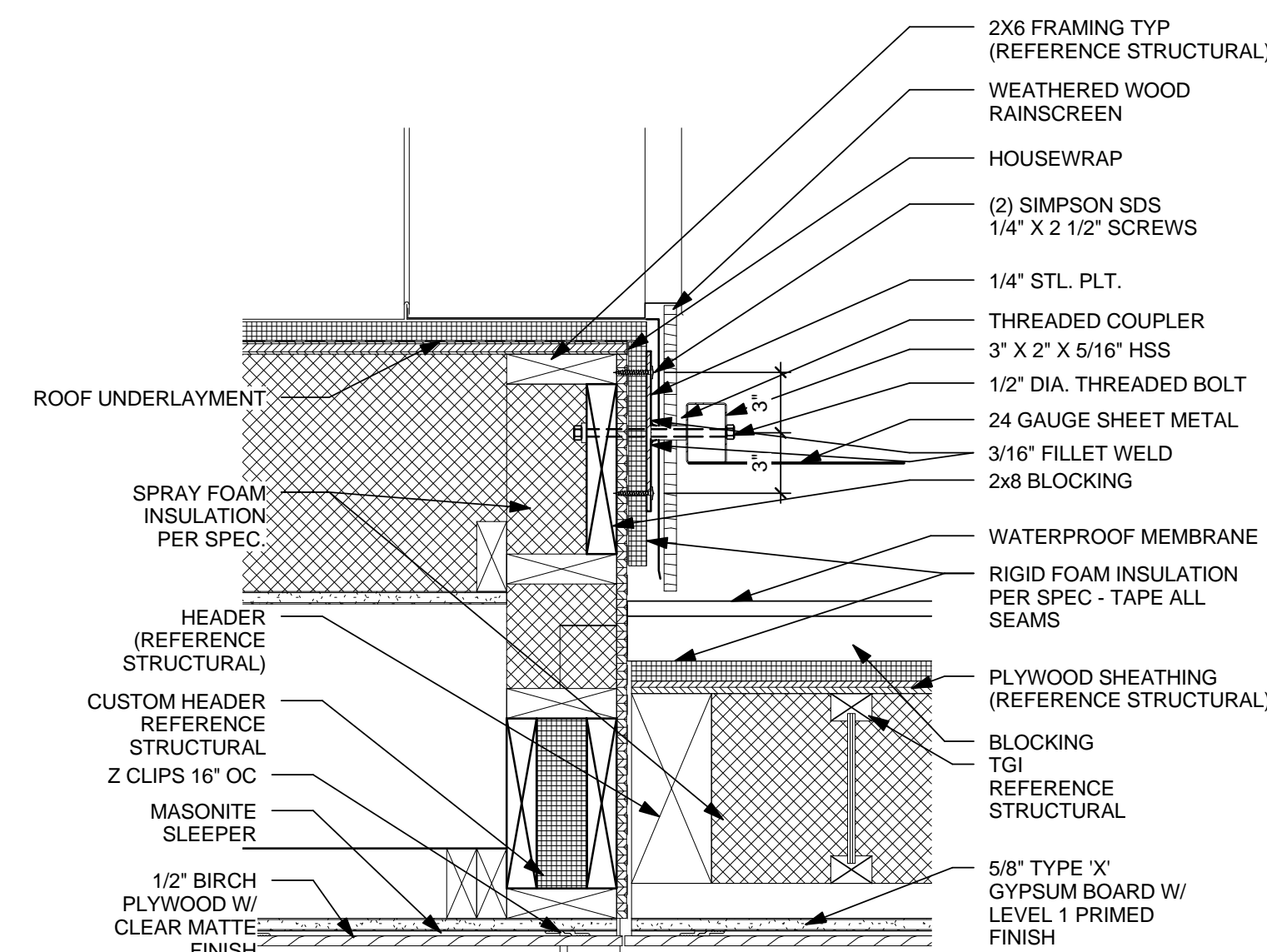
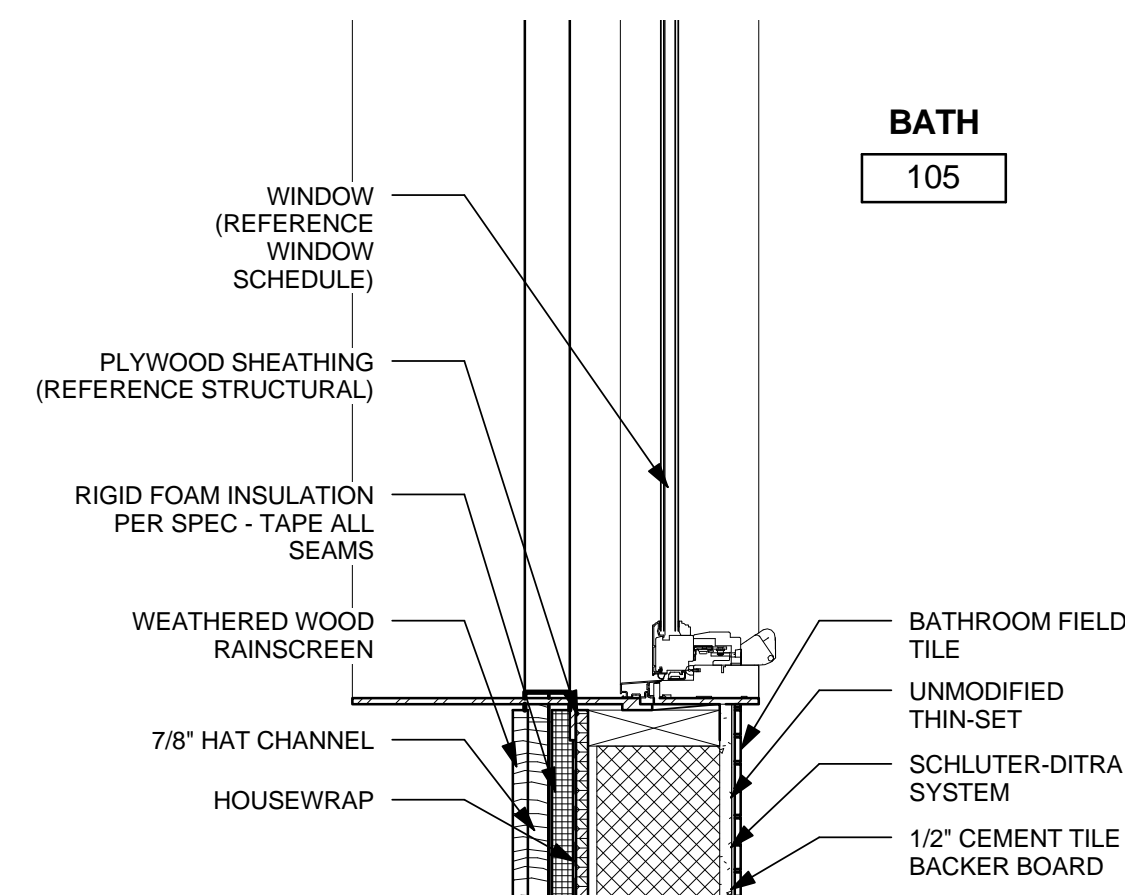
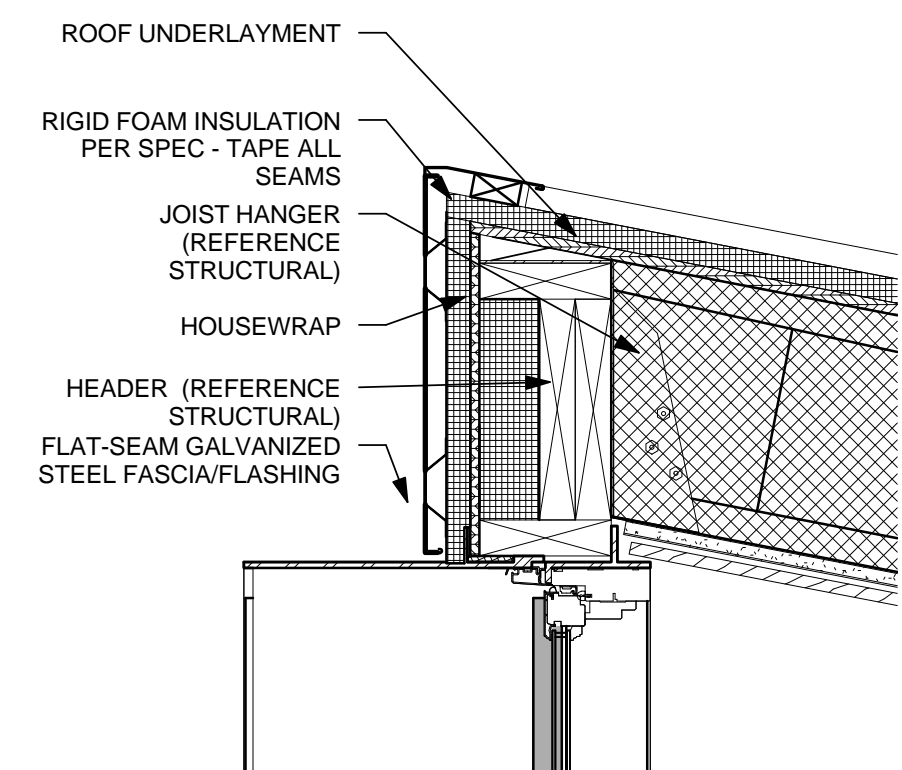
7 LAUNDRY DOOR HEADER
3" = 1'-0"



8 LAUNDRY FLOOR/WALL
1 1/2" = 1'-0"



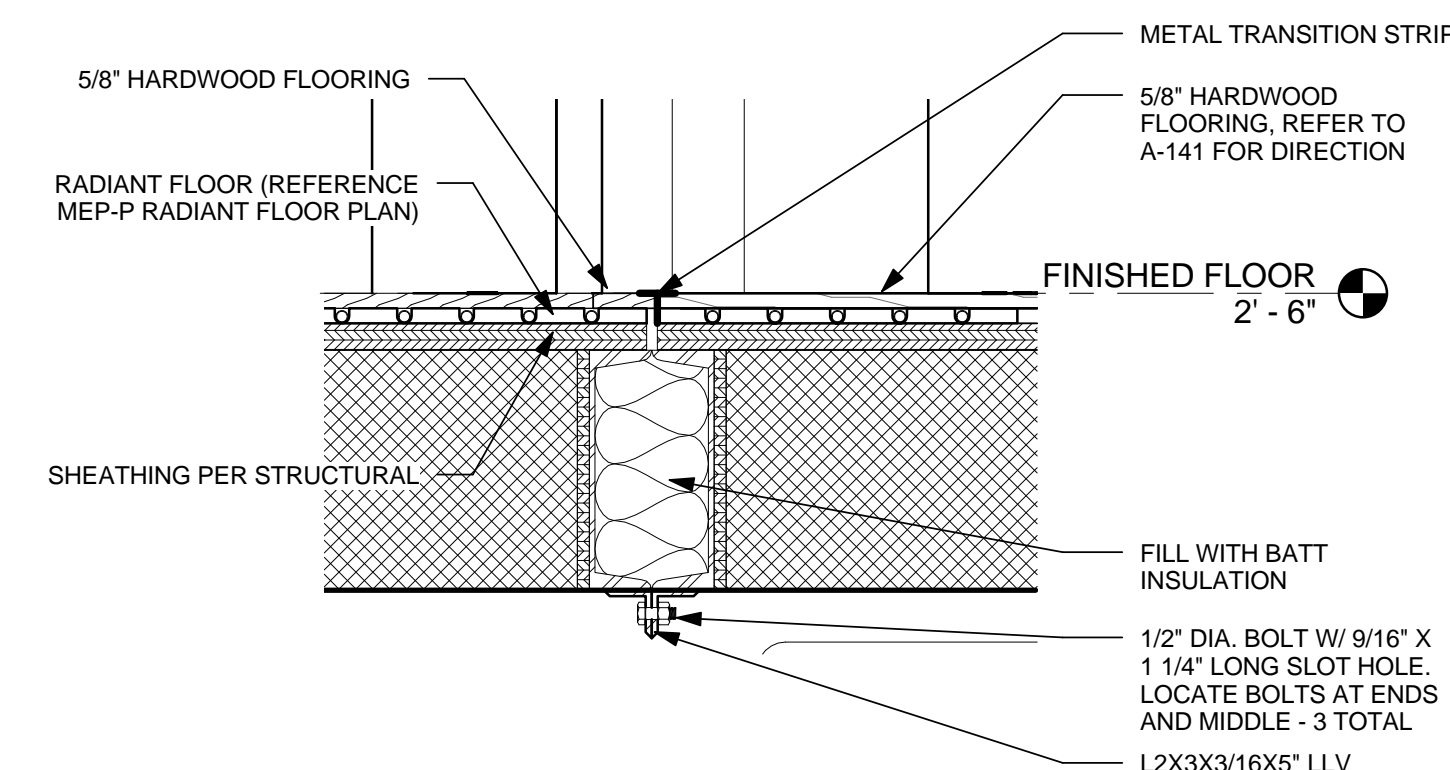
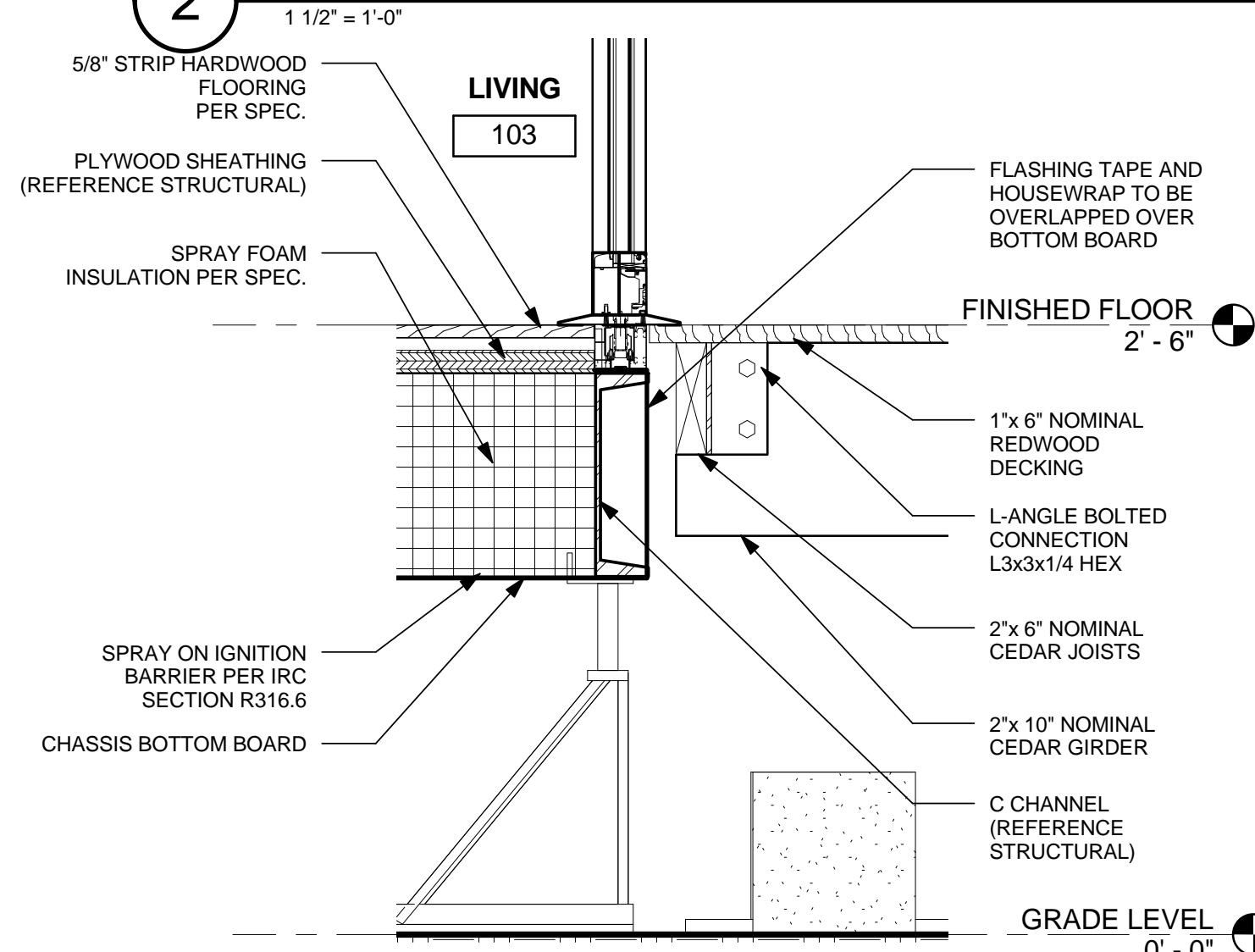
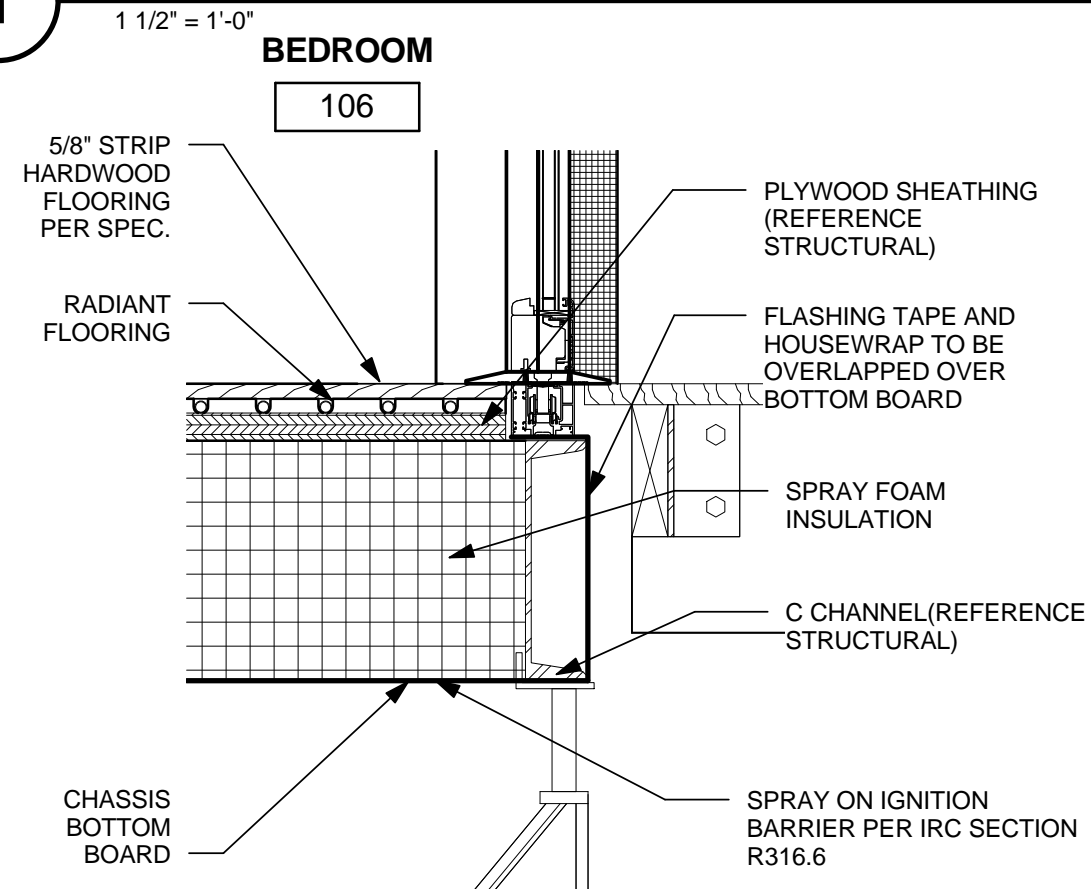
9 FOYER DOOR DETAIL AT HEADER
1 1/2" = 1'-0"



1 MODULE A NORTH ROOF CONDITION

2 MODULE A NORTH WALL WINDOW SILL

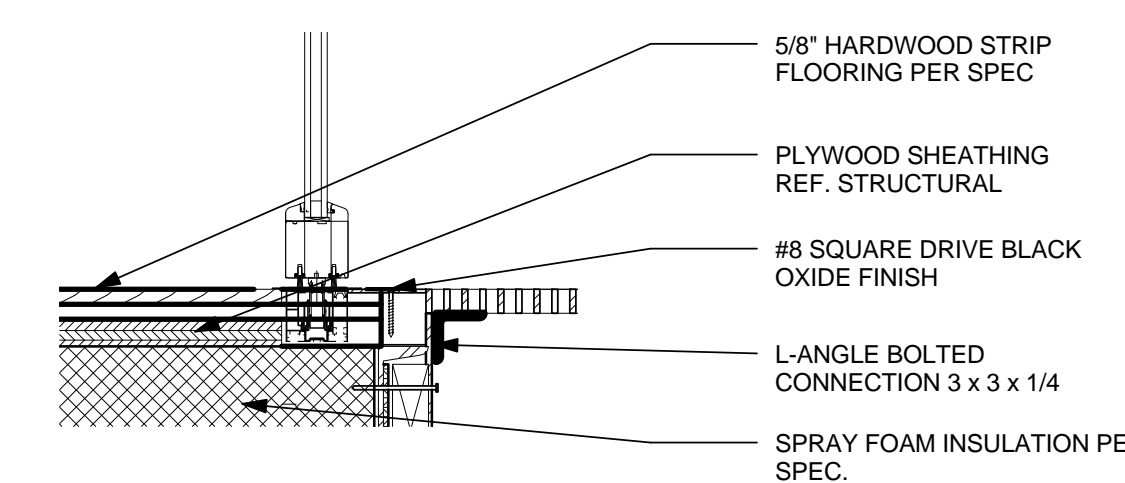
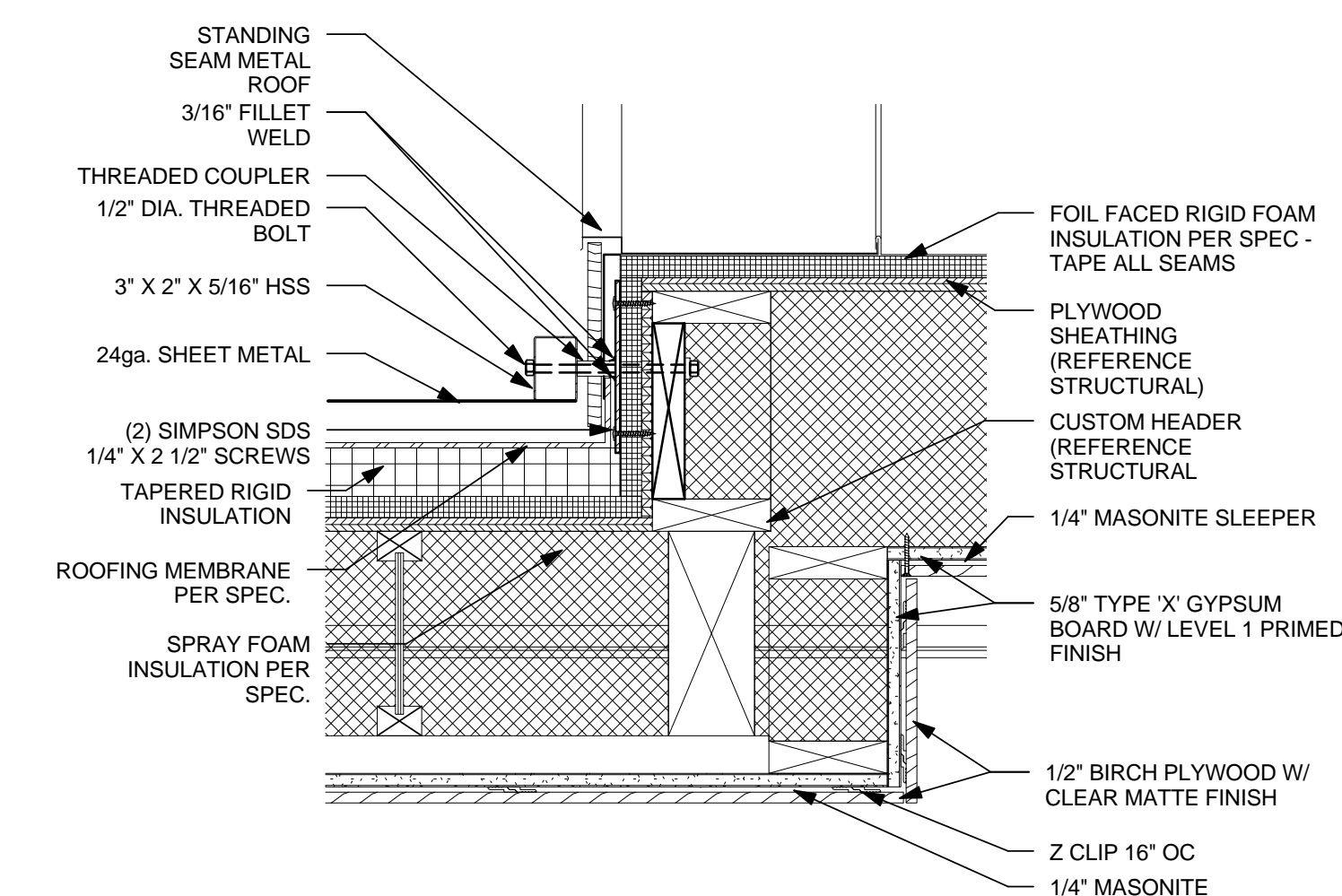
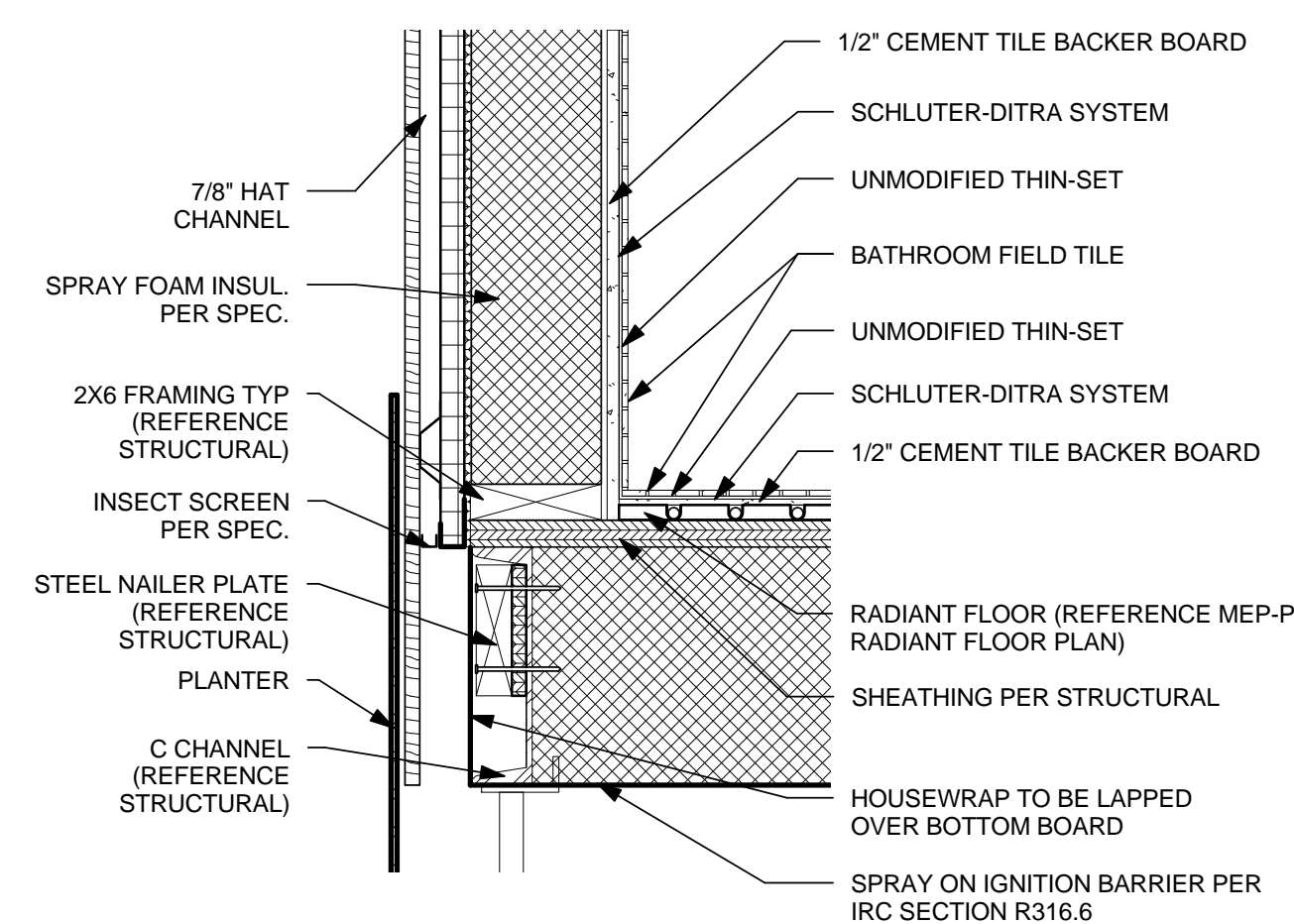
3 MODULE A-B CORRIDOR CEILING



4 BEDROOM DECK CONNECTION @ DOOR 106B

5 PUBLIC DECK CONNECTION @ DOOR 103A

6 MODULE A-B CORRIDOR FLOOR



7 BATHROOM FLOOR/WALL

8 MODULE B FOYER CONNECTION

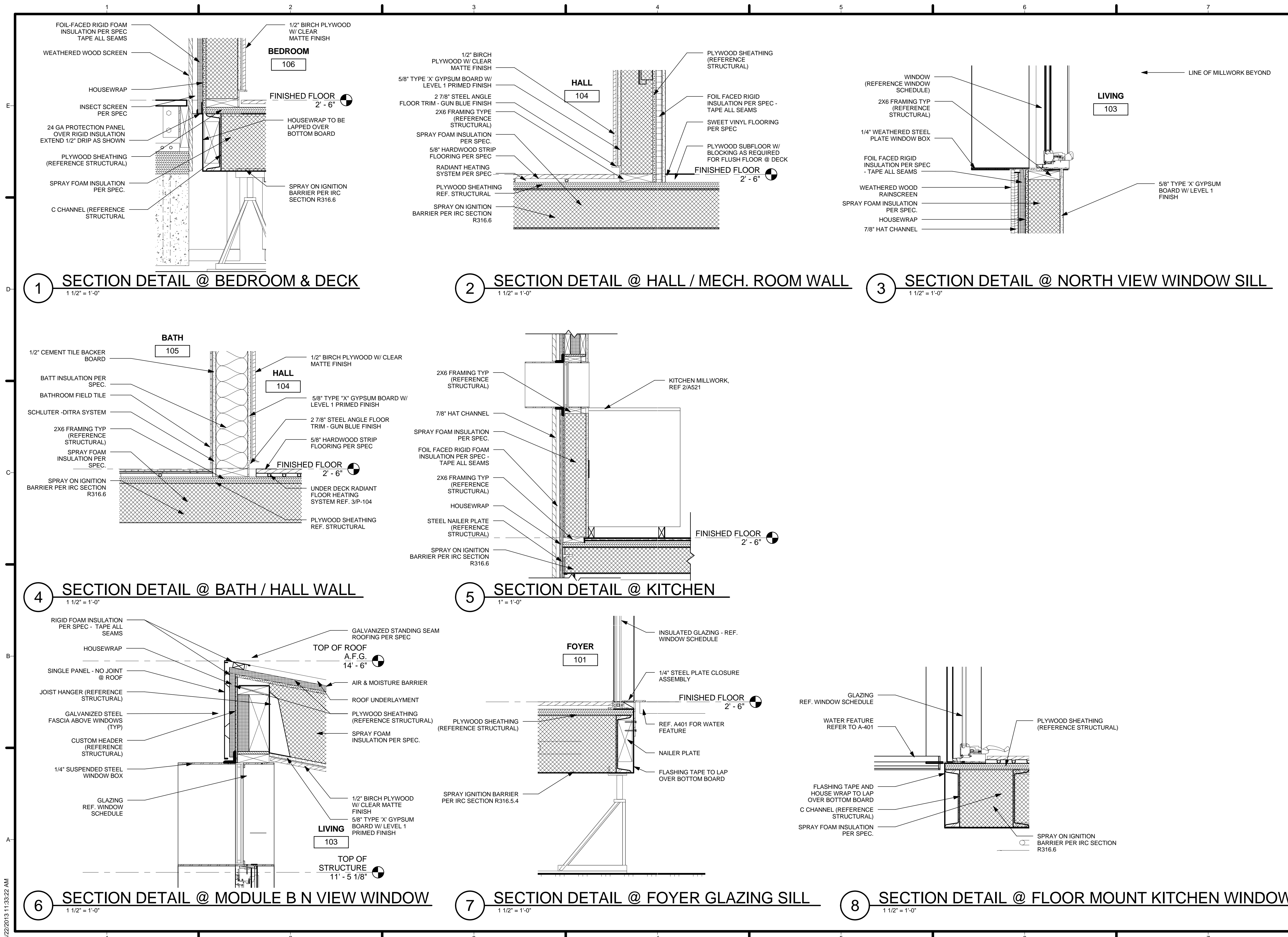
9 Callout of MODULE B - FOYER ENTRANCE DOOR

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SECTION DETAILS



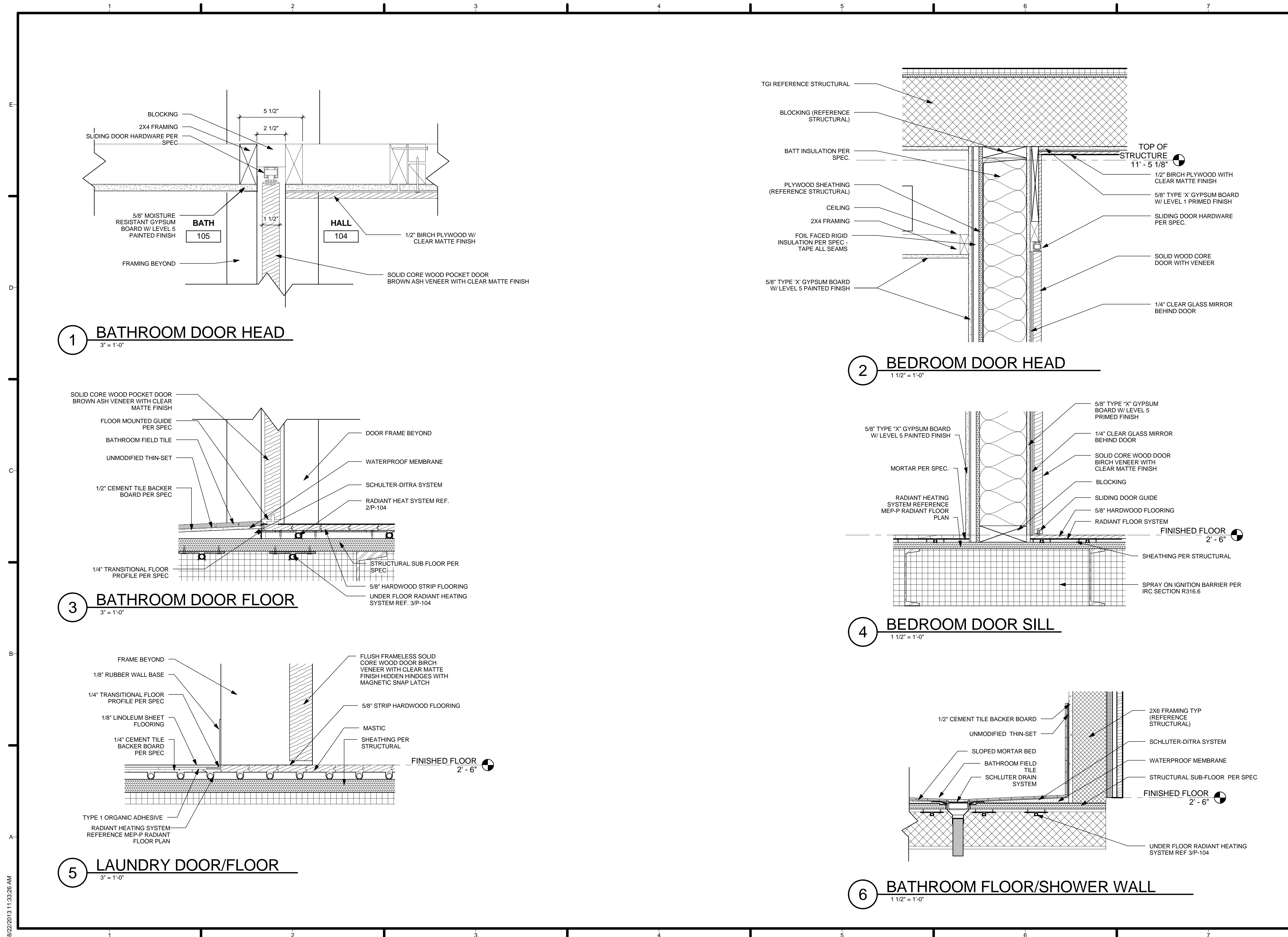
8/22/2013 11:33:22 AM

REVISIONS

REV	DATE	DESCRIPTION
2	30 MAY 2013	NTA REVIEW COMMENTS
1	21 MARCH 2013	NREL REVIEW COMMENTS

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GENERAL SHEET NOTES

1. ALL DIMENSIONS UNLESS OTHERWISE NOTED ARE MEASURED FROM OUTSIDE FACE OF WALL FINISH.
2. ALL VERTICAL DIMENSIONS ARE MEASURED FROM FINISH FLOOR ELEVATION.



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CONSULTANTS
KIRSTEN NALLEY, PE, SE

SUBMISSIONS
100% CONSTRUCTION DOCUMENTATION 02.14.2013

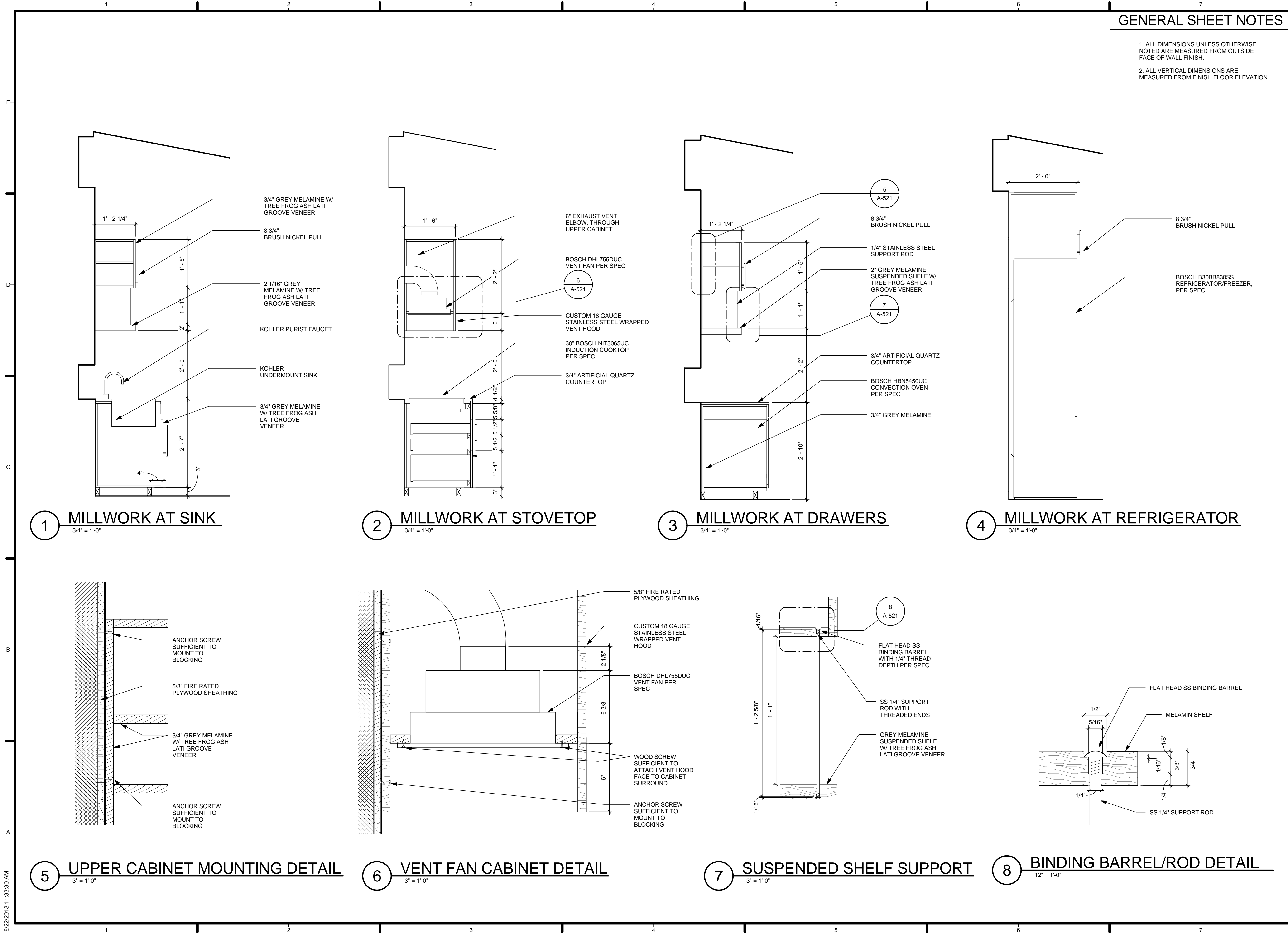
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MILLWORK DETAILS - KITCHEN

A-521



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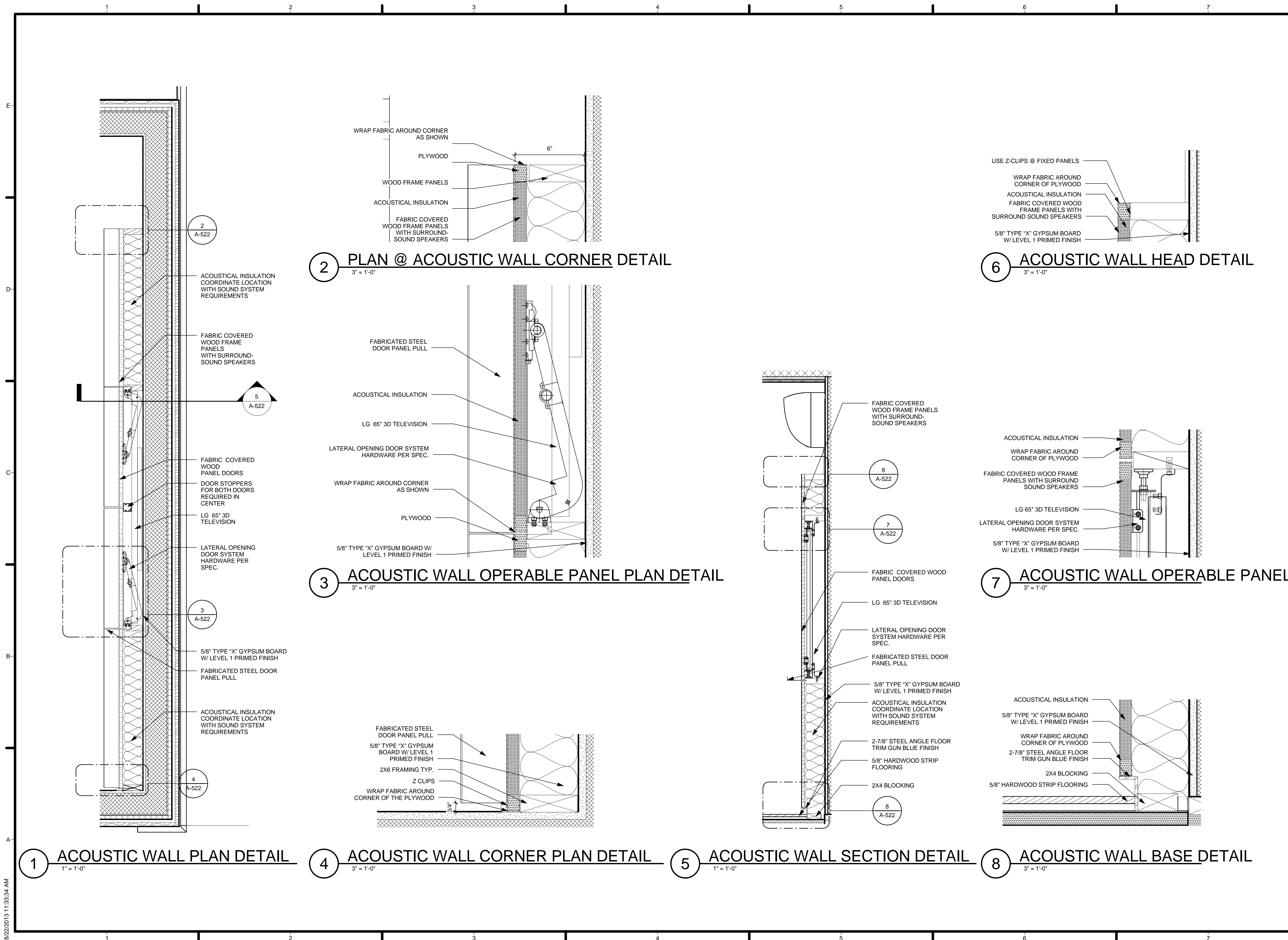
REVISIONS

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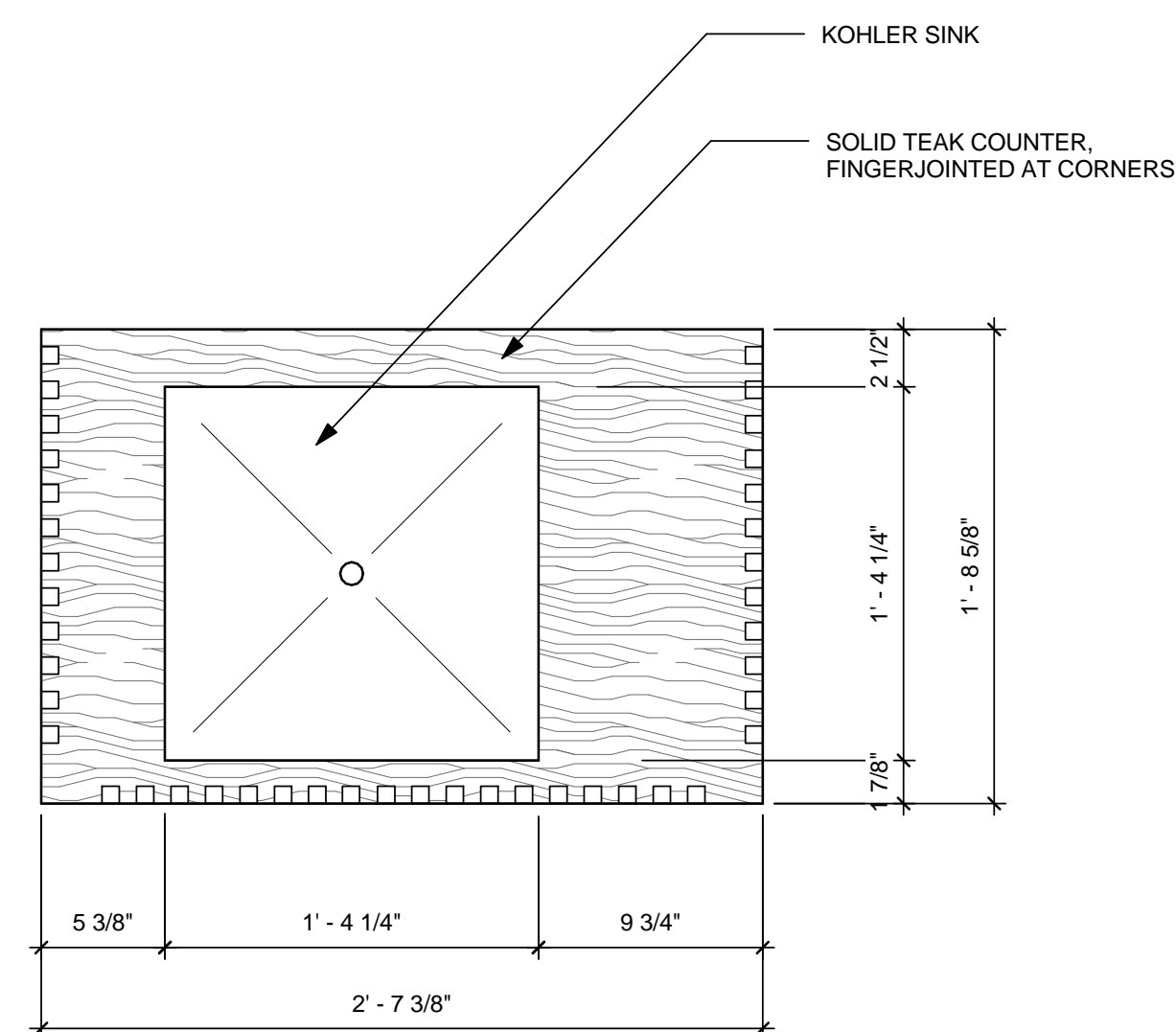
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MILLWORK DETAILS -
LIVINGROOM

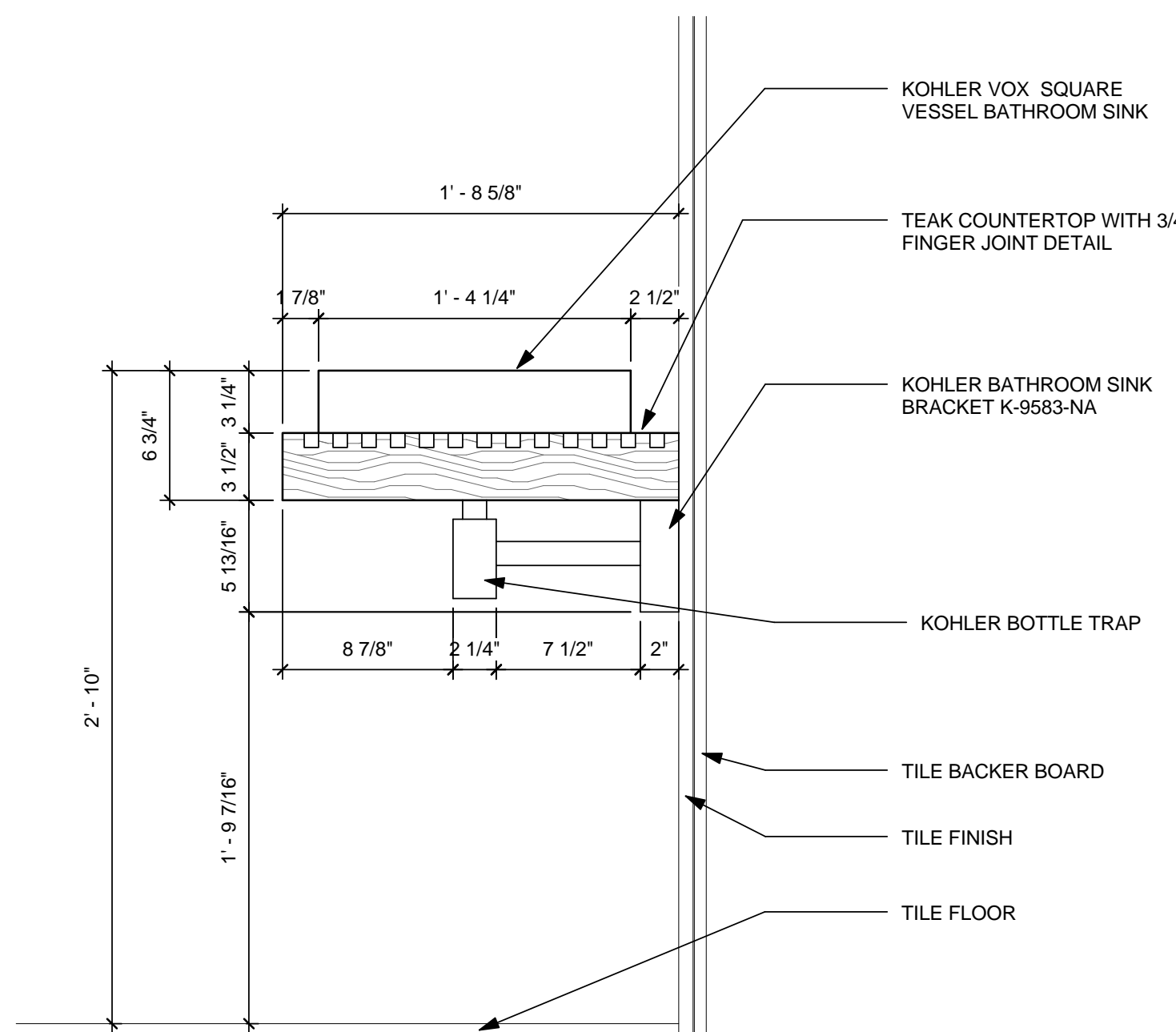
A-522



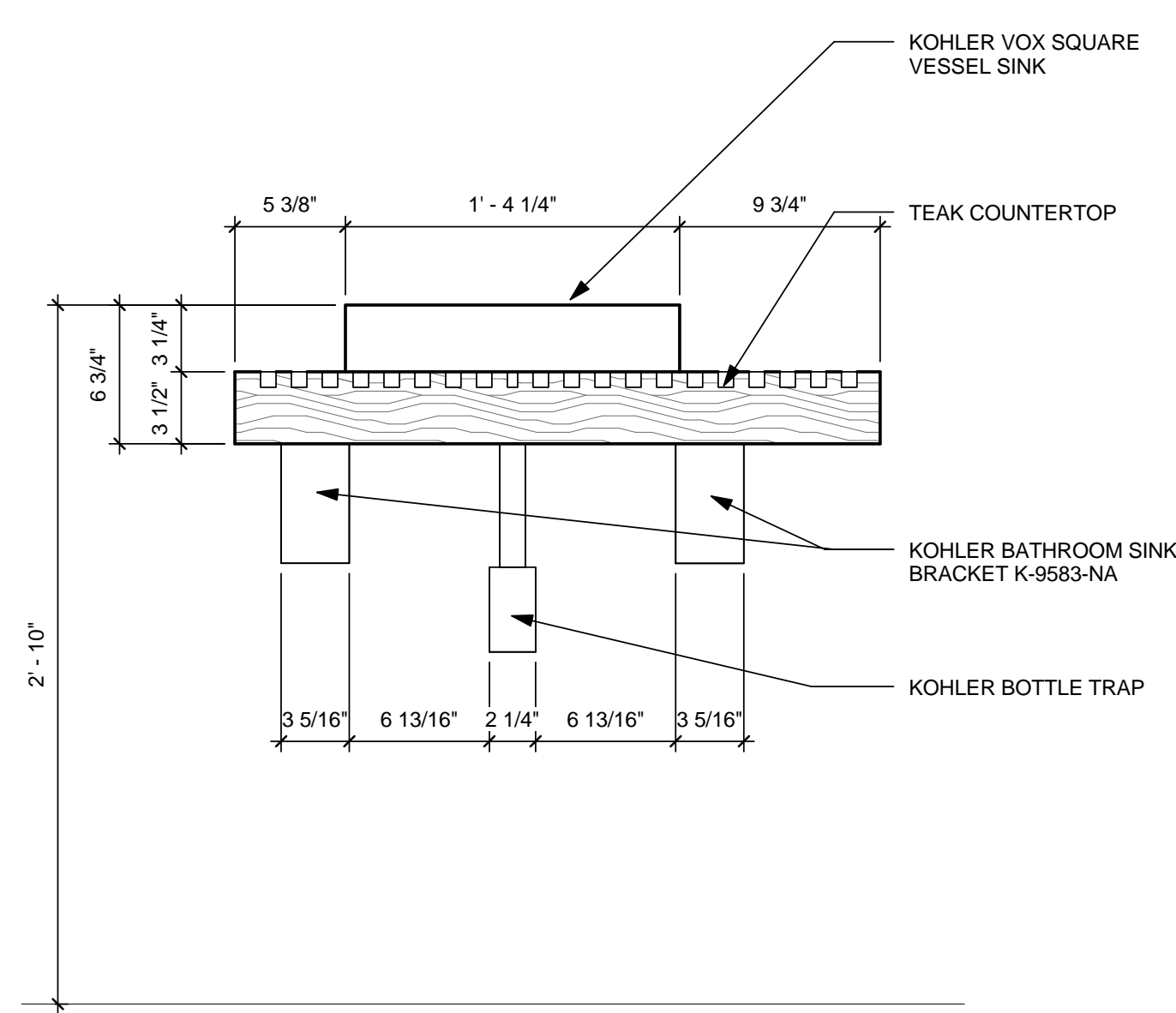
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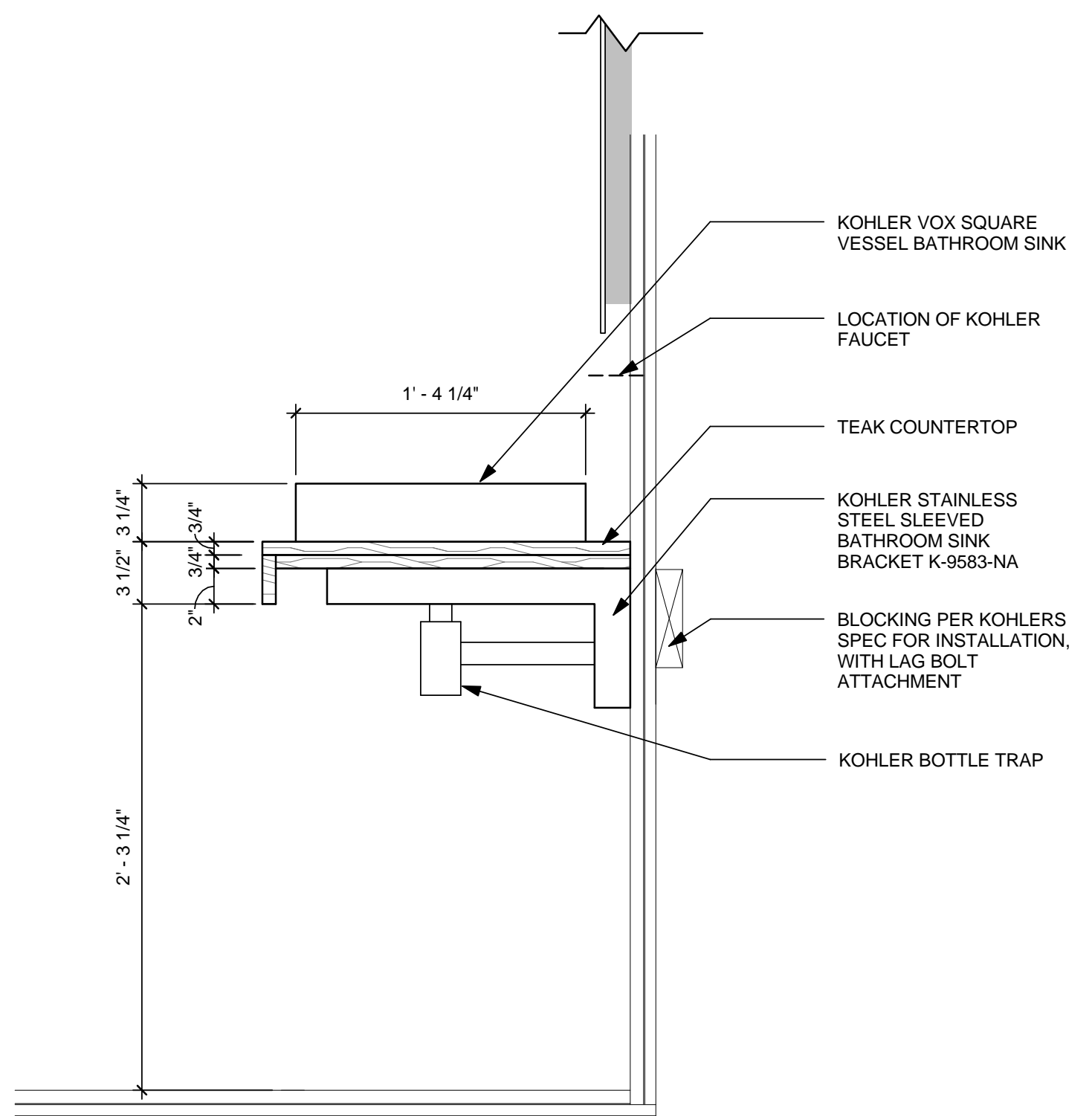
1 BATH COUNTER - PLAN
1 1/2" = 1'-0"



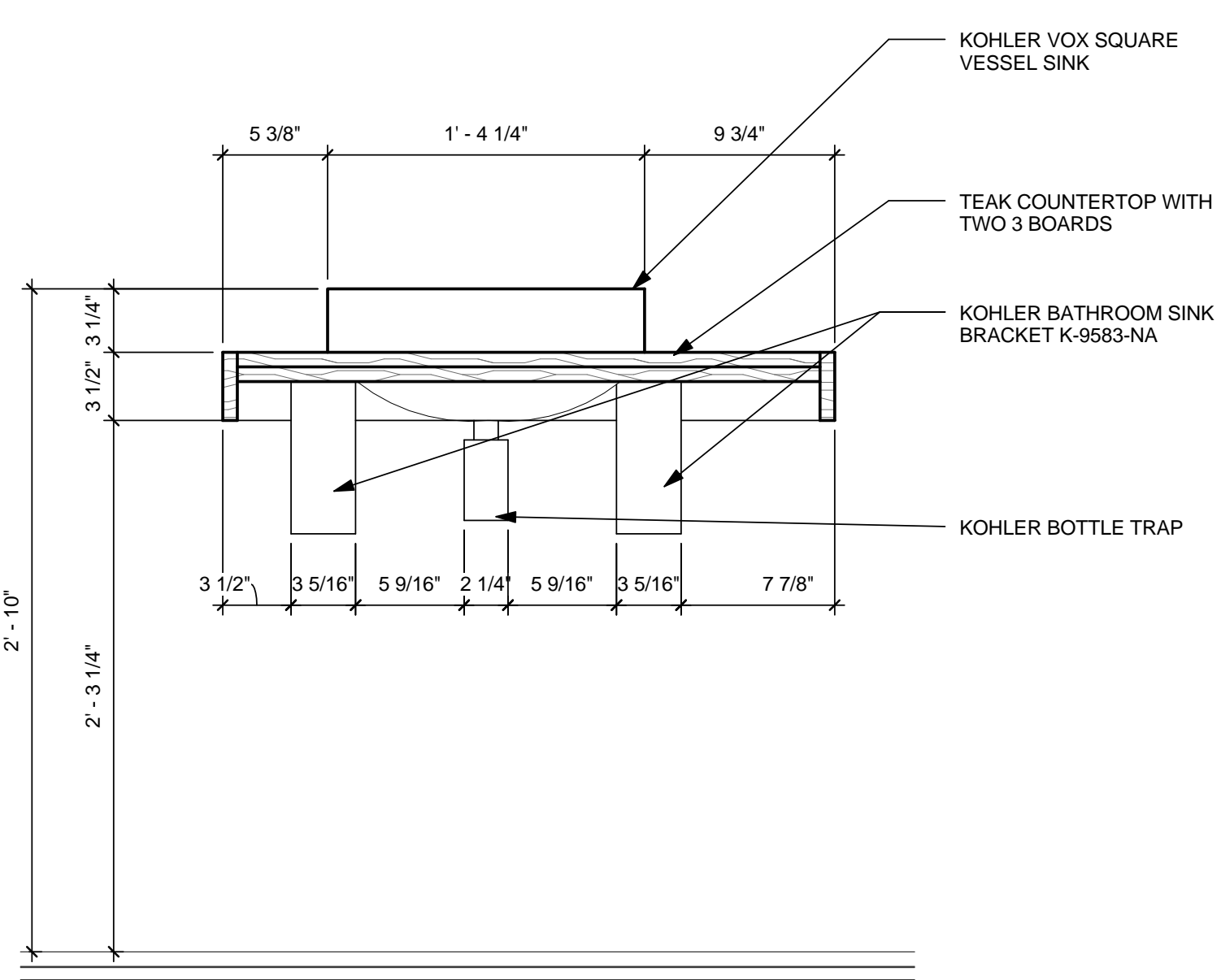
2 BATH COUNTER- EAST ELEVATION
1 1/2" = 1'-0"



3 BATH COUNTER- SOUTH ELEVATION
1 1/2" = 1'-0"



4 BATH COUNTER- EAST SECTION
1 1/2" = 1'-0"



5 BATH COUNTER- SOUTH SECTION
1 1/2" = 1'-0"

GENERAL SHEET NOTES

1. ALL DIMENSIONS UNLESS OTHERWISE NOTED ARE MEASURED FROM OUTSIDE FACE OF STUDS.
2. ALL VERTICAL DIMENSIONS ARE MEASURED FROM GRADE ELEVATION 0'-0"



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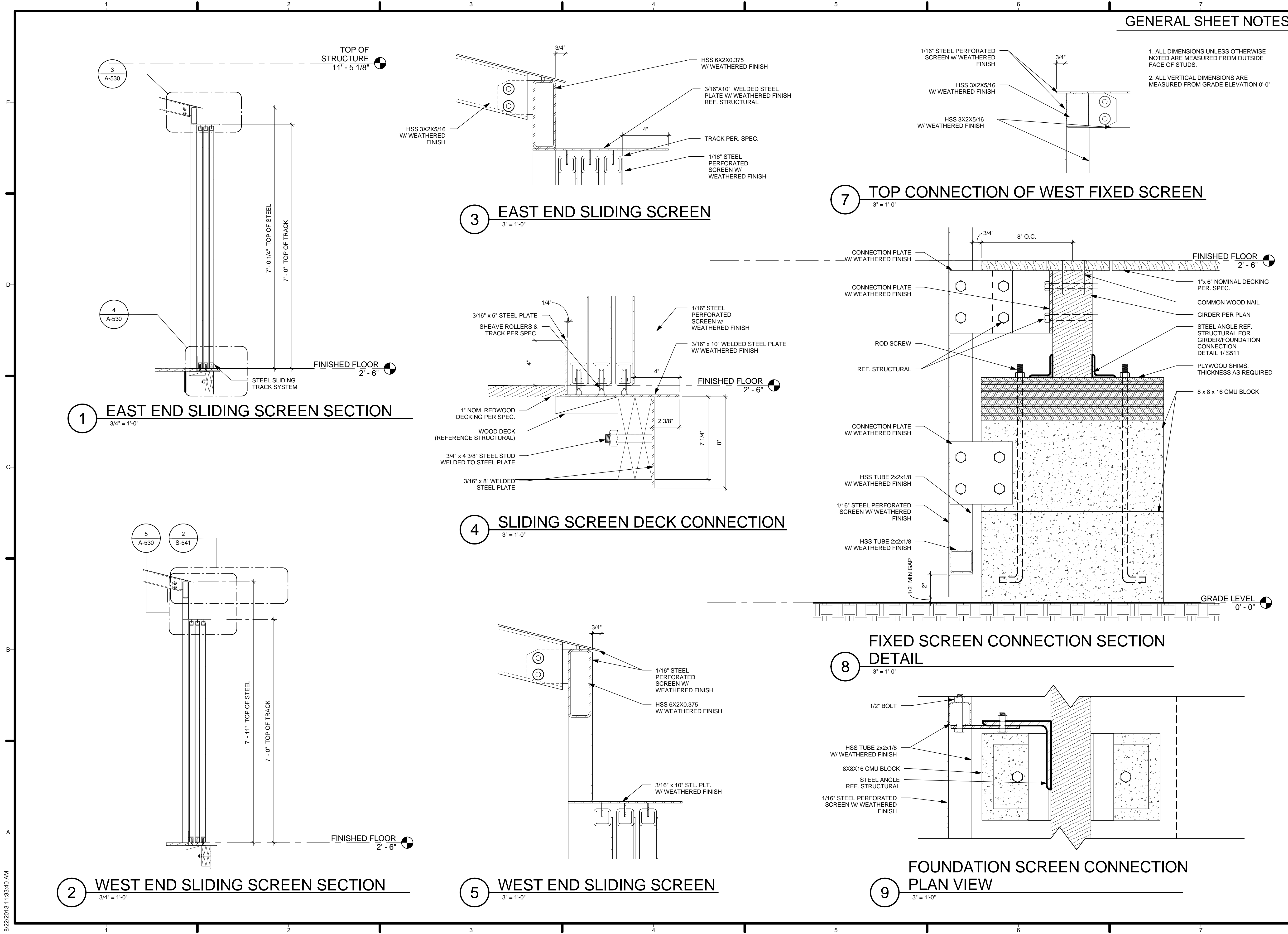
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EXTERIOR SCREEN DETAILS

A-530



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GENERAL SHEET NOTES

1. ALL DIMENSIONS UNLESS OTHERWISE NOTED ARE MEASURED FROM OUTSIDE FACE OF STUDS.
2. ALL VERTICAL DIMENSIONS ARE MEASURED FROM GRADE ELEVATION 0'-0"
- 3.



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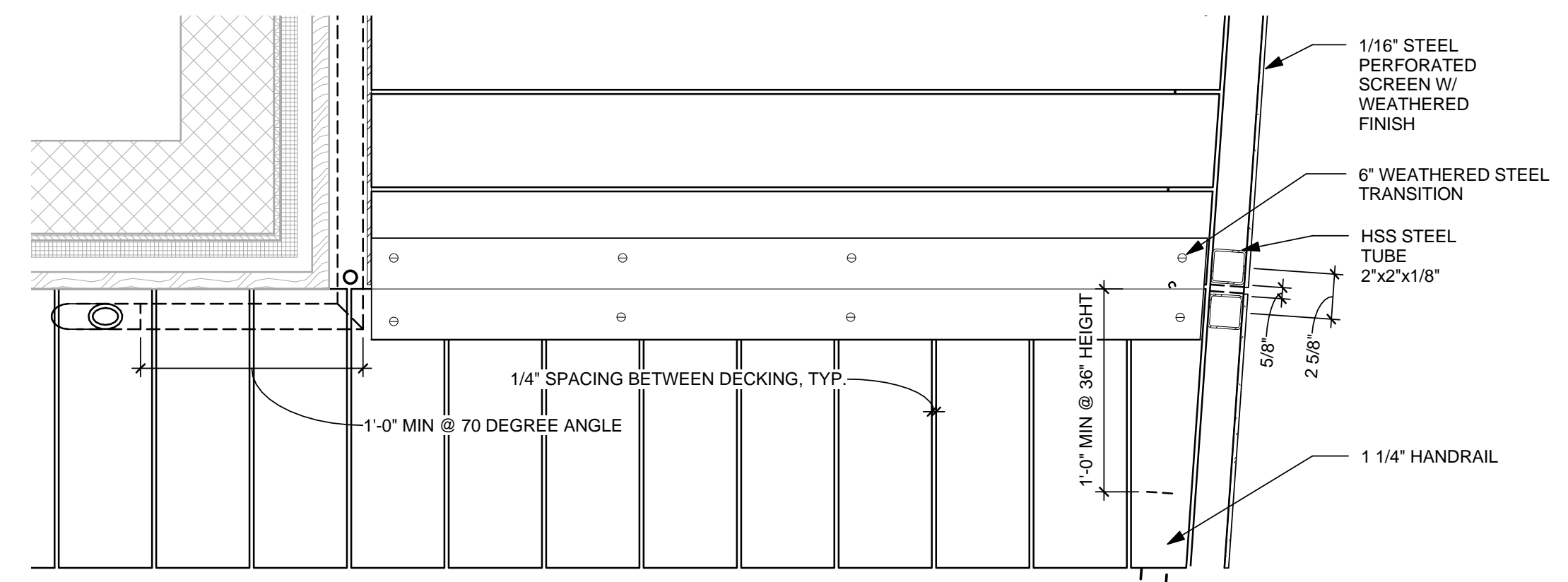
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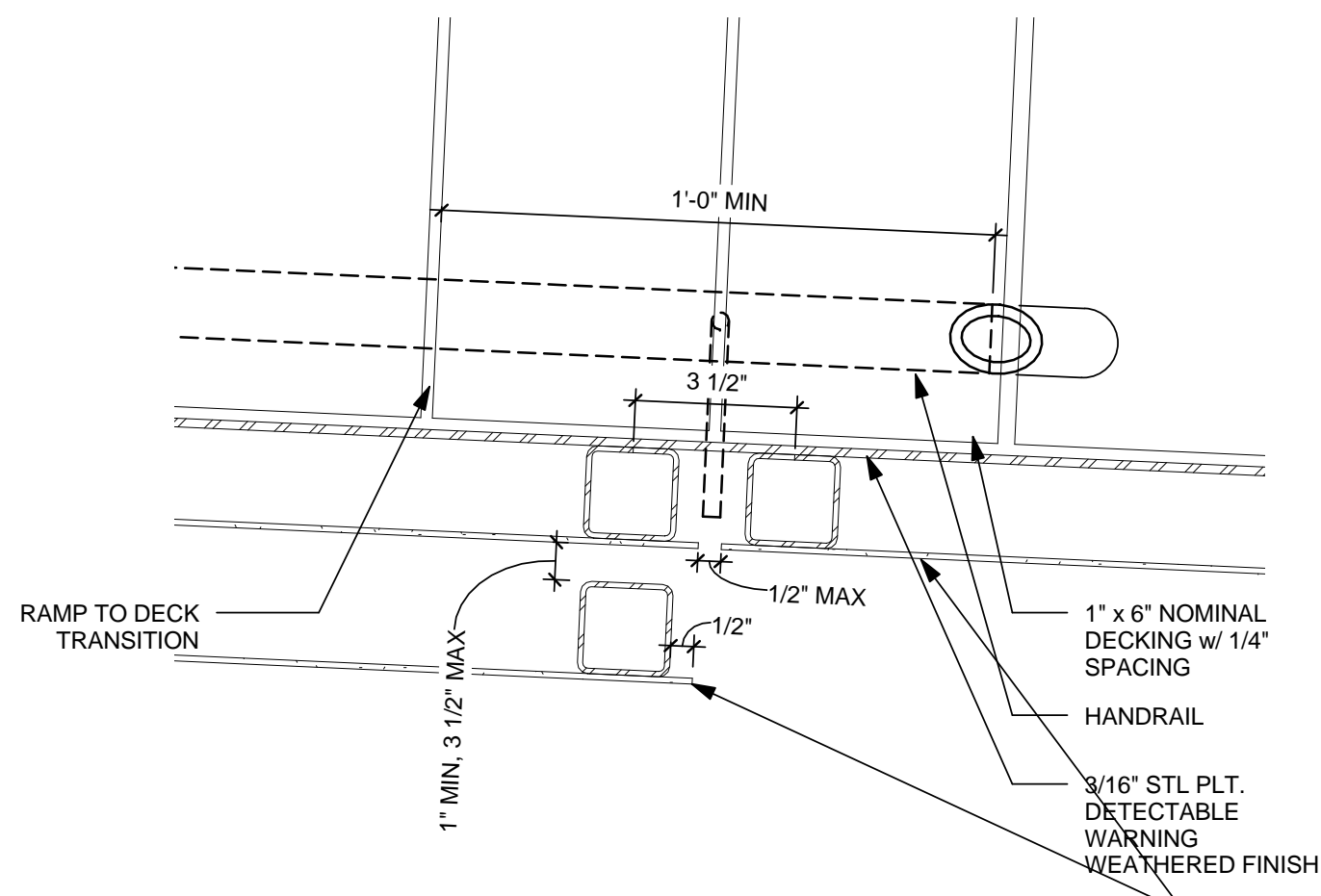
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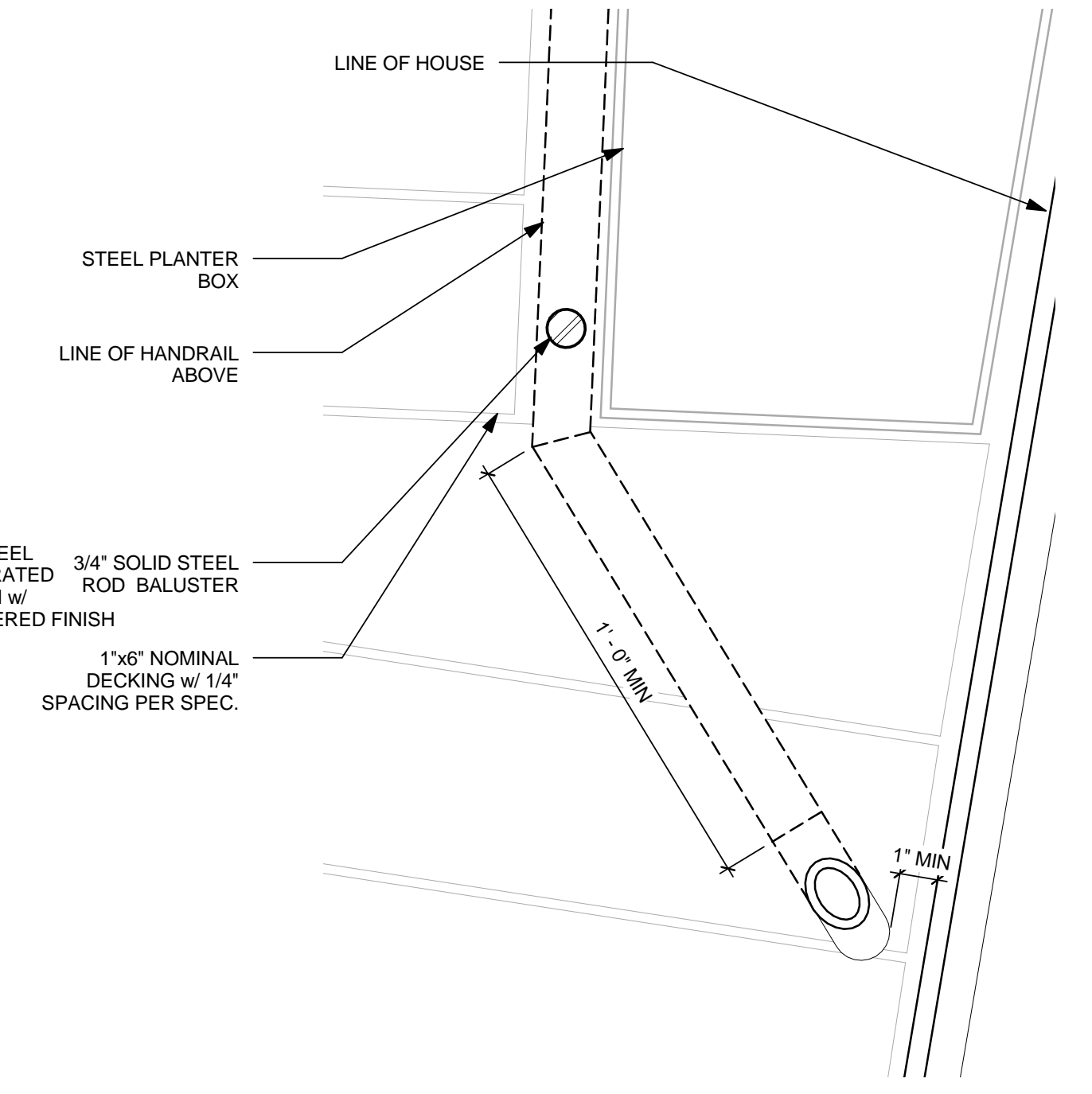
REV	DATE	DESCRIPTION
1	21 MARCH 2013	NREL REVIEW COMMENTS



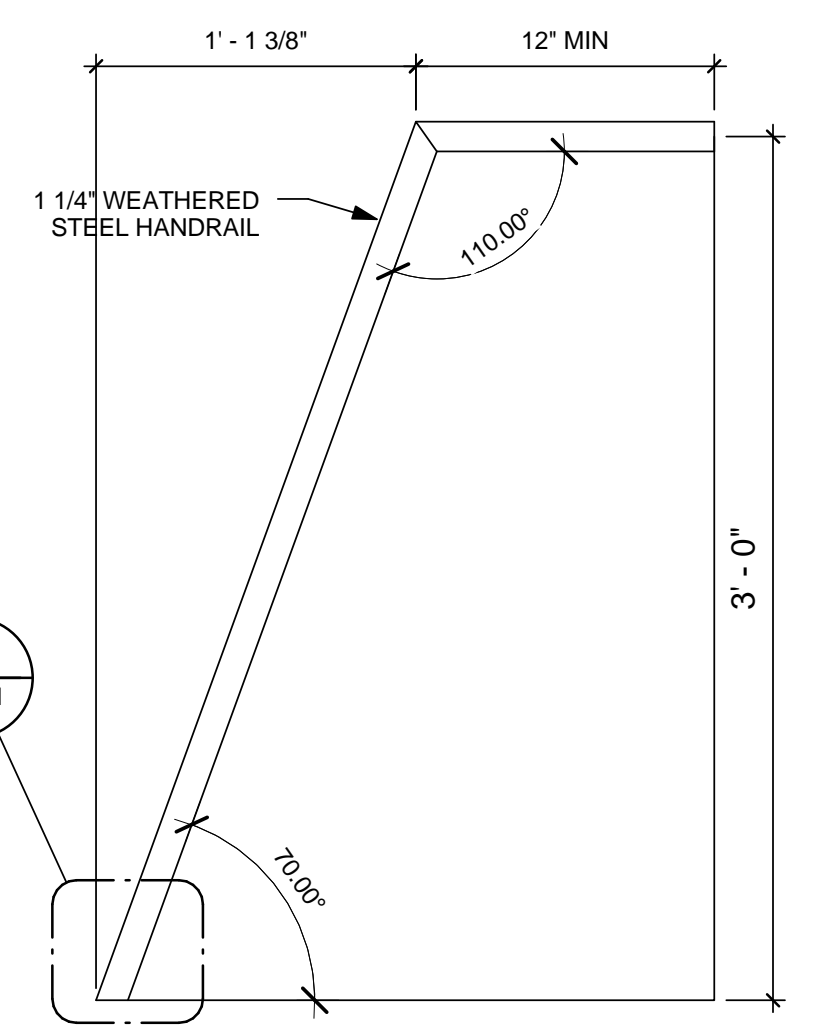
3 HANDRAIL RAMP DECK CONNECTION
1 1/2" = 1'-0"



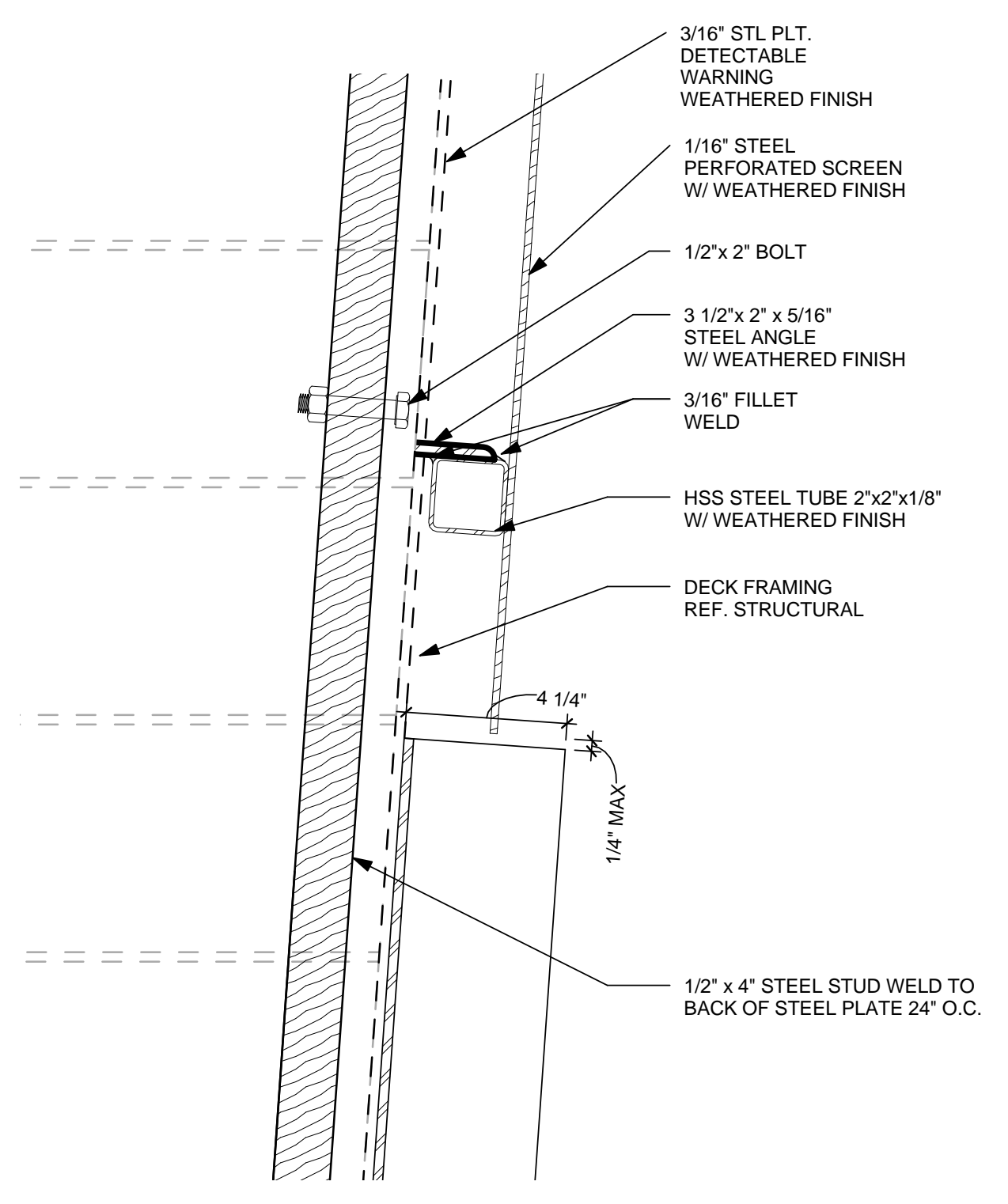
7 HANDRAIL SCREEN CONNECTION
3" = 1'-0"



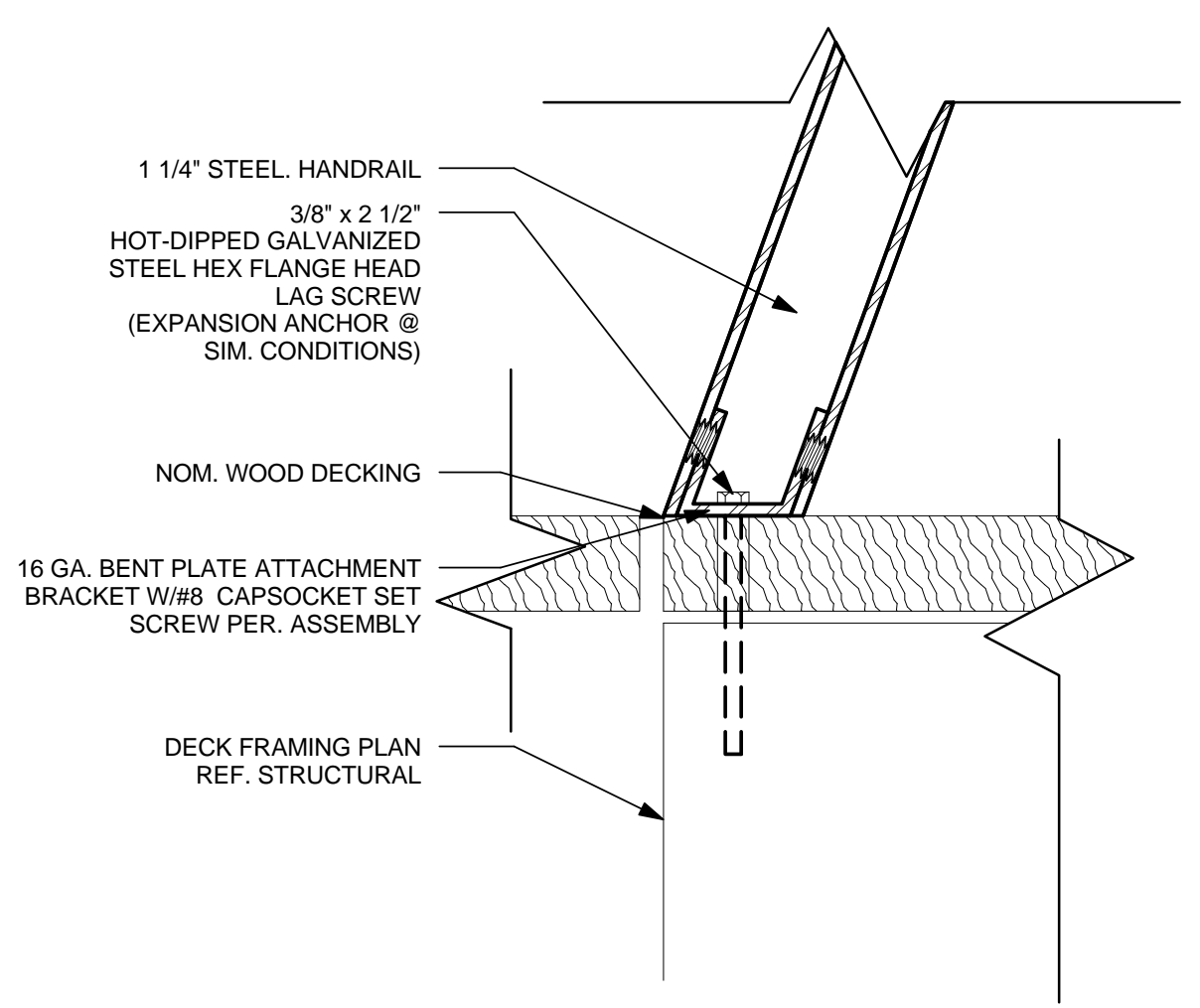
6 HANDRAIL DECK CONNECTION
3" = 1'-0"



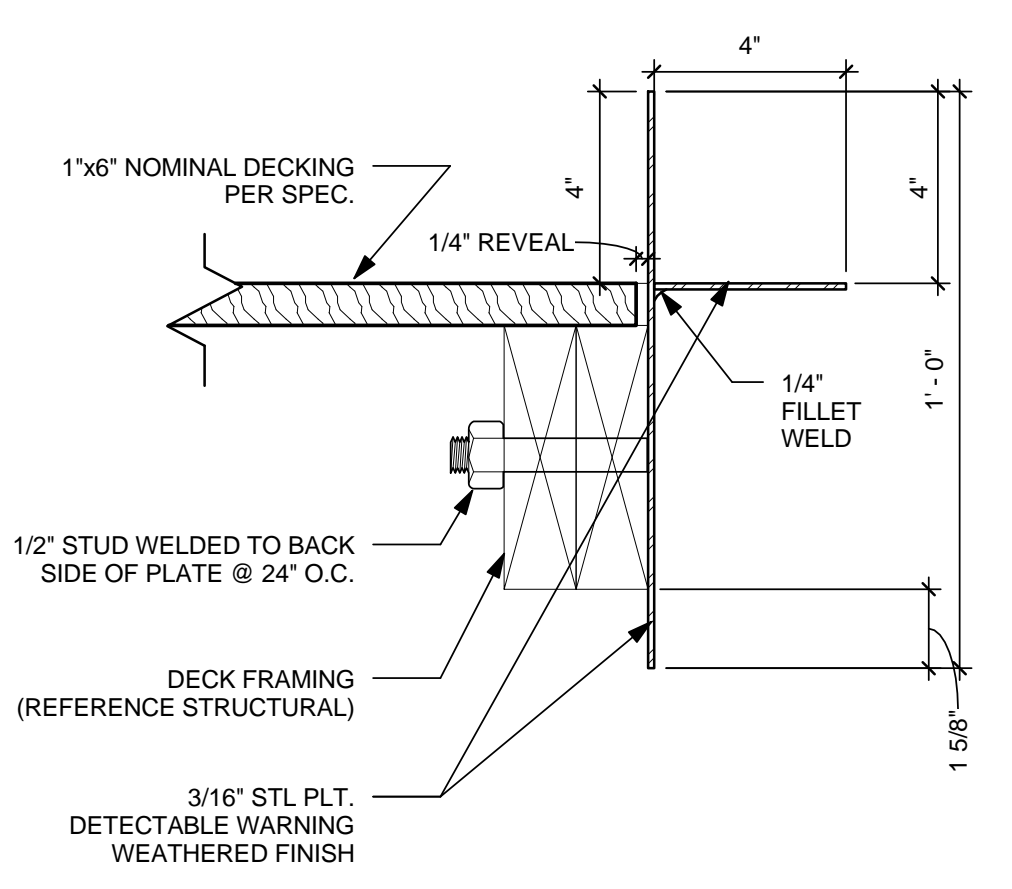
4 TYP. HANDRAIL TERMINATION
1 1/2" = 1'-0"



9 GUARDRAIL DECK EDGE DETAIL
3" = 1'-0"



5 TYP. HANDRAIL TERMINATION DETAIL
6" = 1'-0"



8 SECTION DETAIL @ PUBLIC DECK EDGE
3" = 1'-0"

DECK DETAILS

A-531

8/22/2013 11:33:43 AM

GENERAL SHEET NOTES

1. ALL DIMENSIONS UNLESS OTHERWISE NOTED ARE MEASURED FROM OUTSIDE FACE OF STUDS.
2. ALL VERTICAL DIMENSIONS ARE MEASURED FROM GRADE ELEVATION 0'-0"



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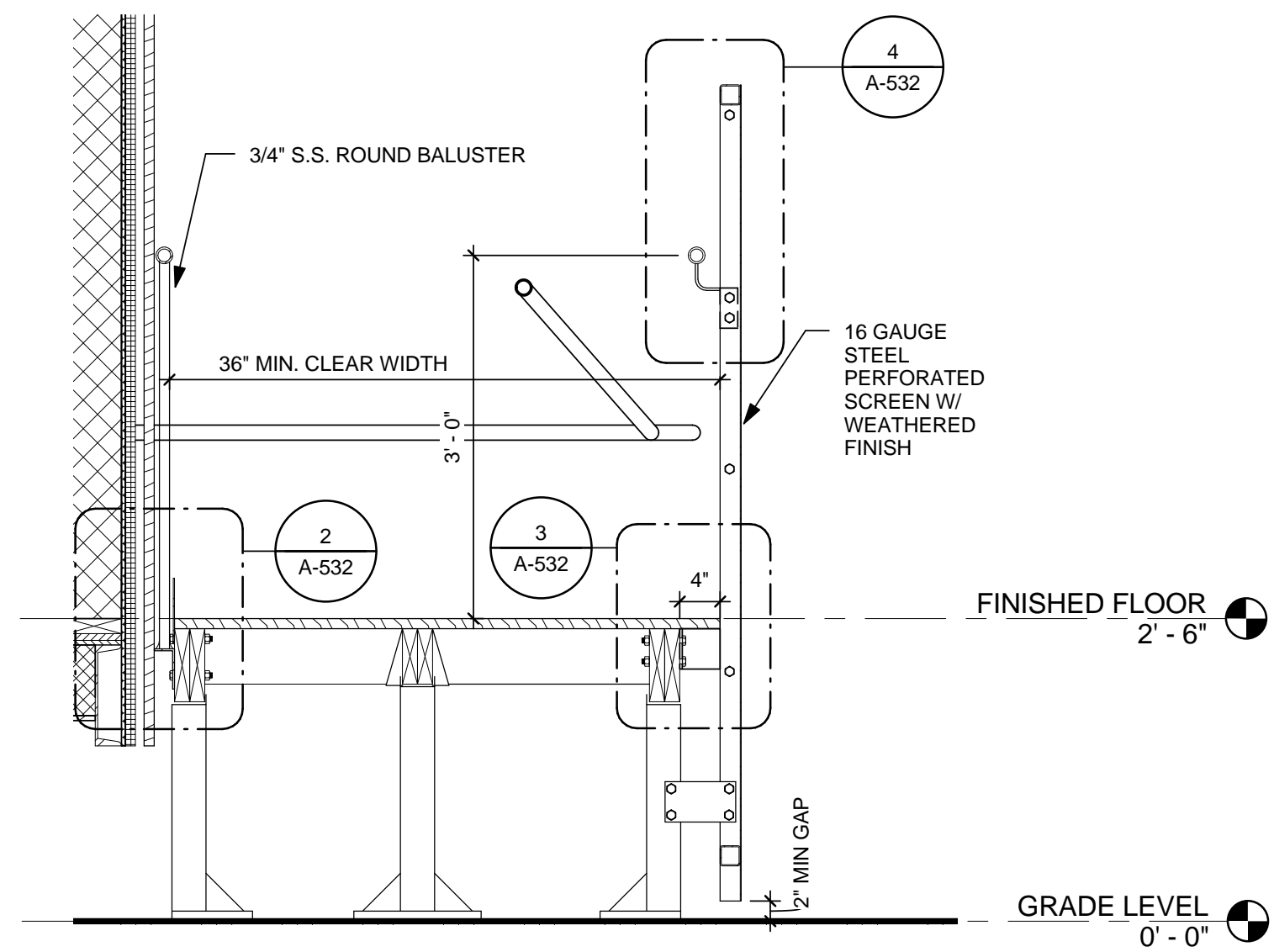
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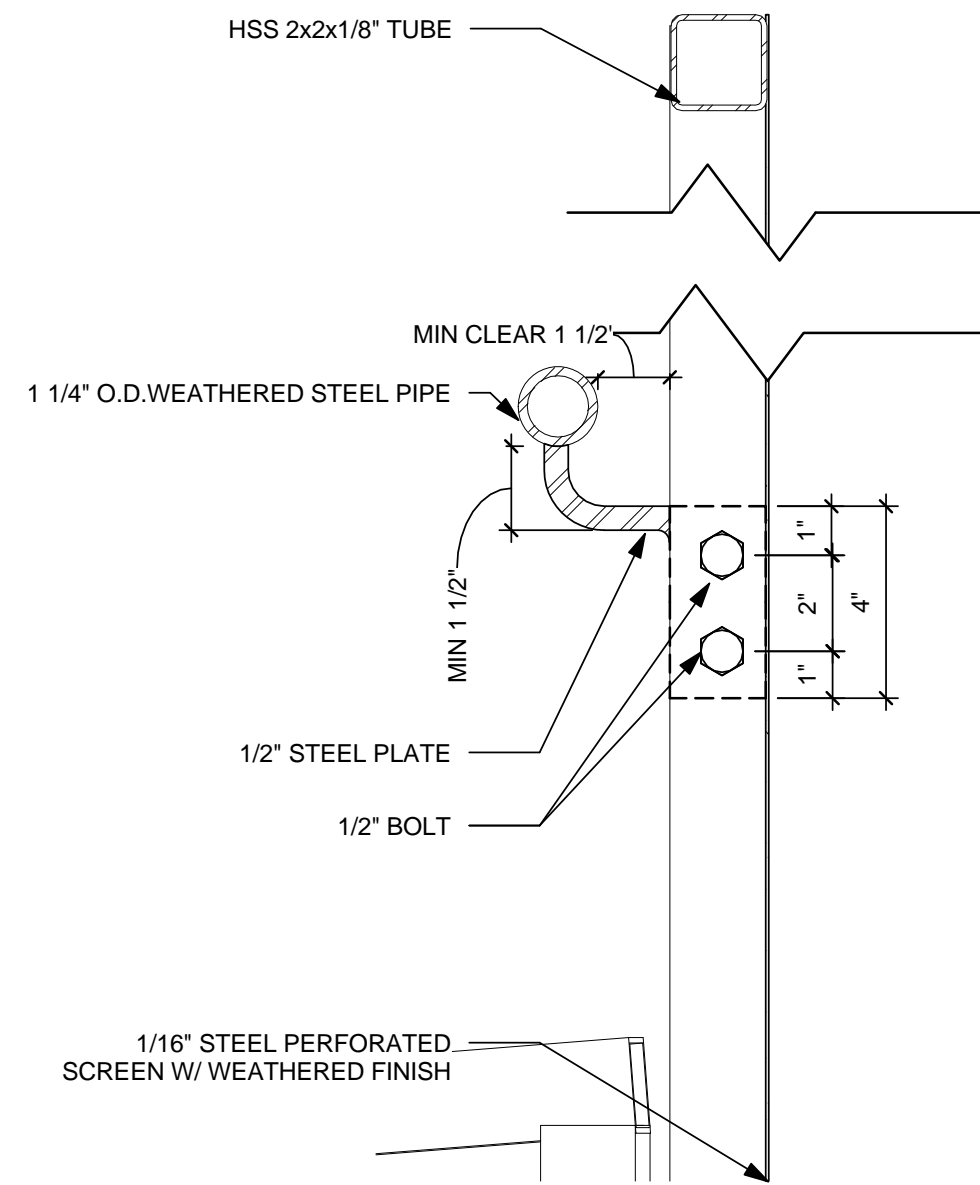
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RAMP DETAILS

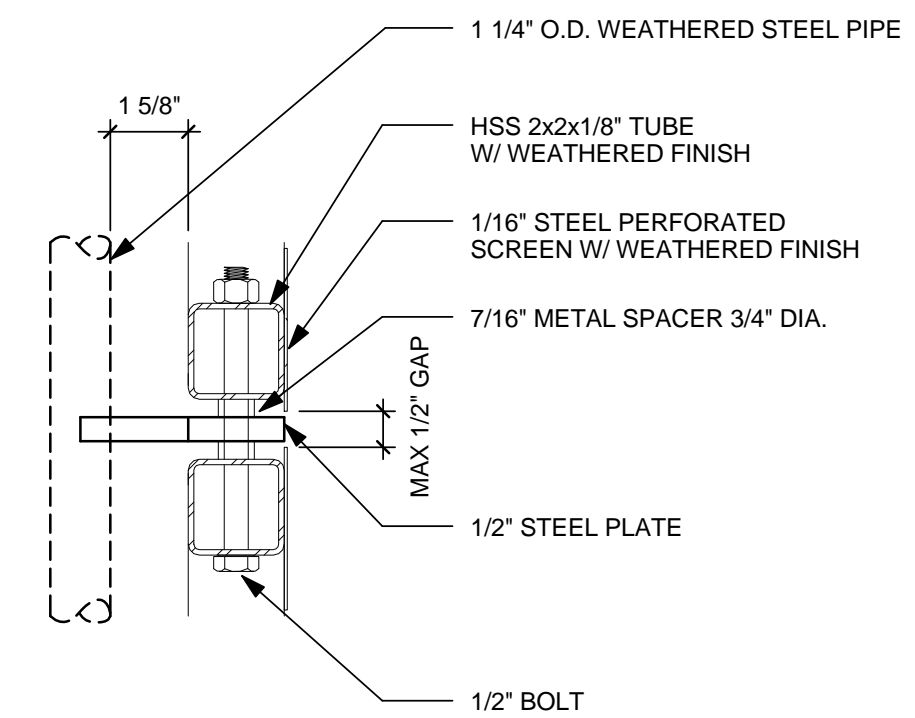
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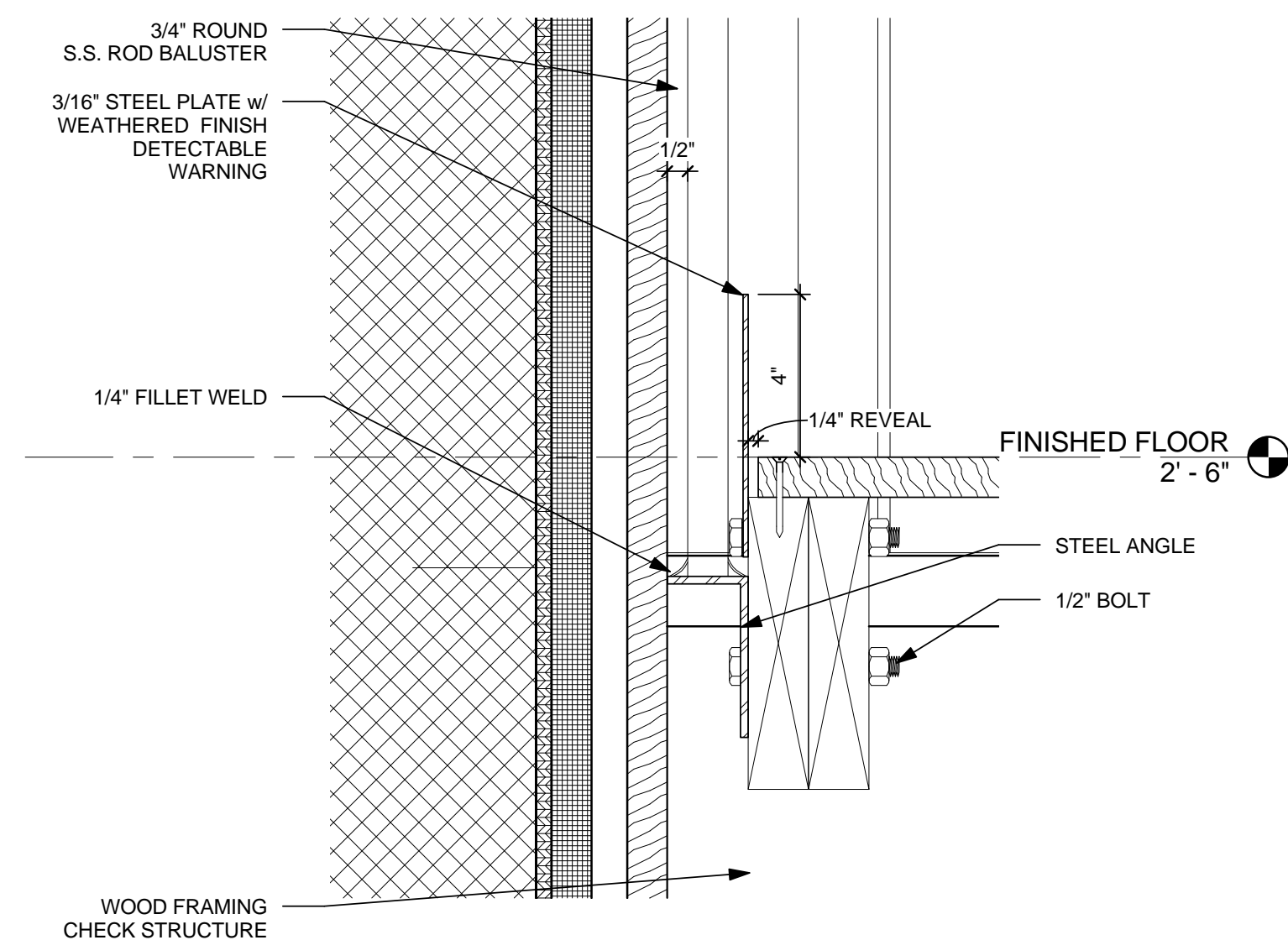
1 SECTION DETAIL @ RAMP
3/4" = 1'-0"



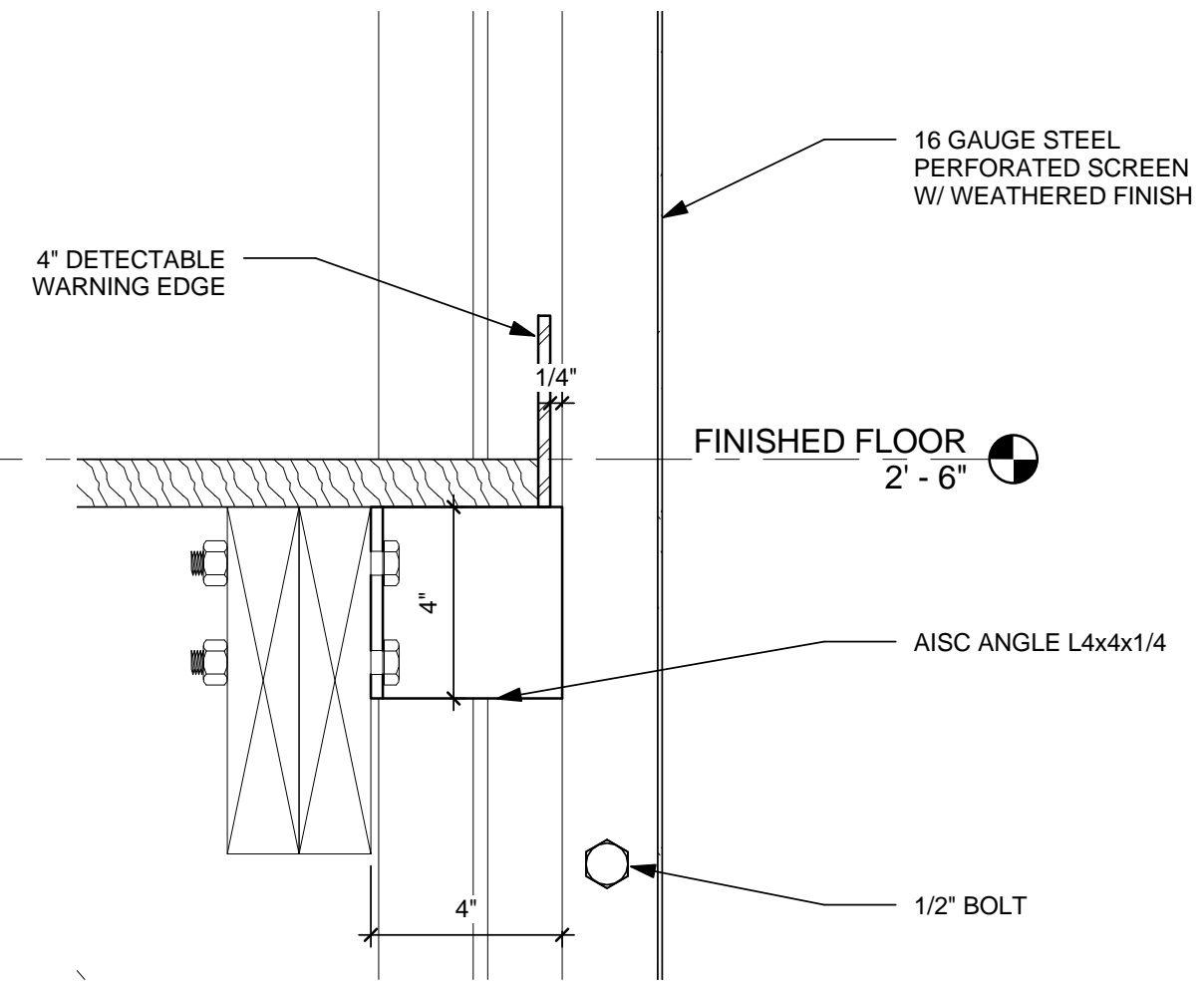
4 HANDRAIL DETAILS
3" = 1'-0"



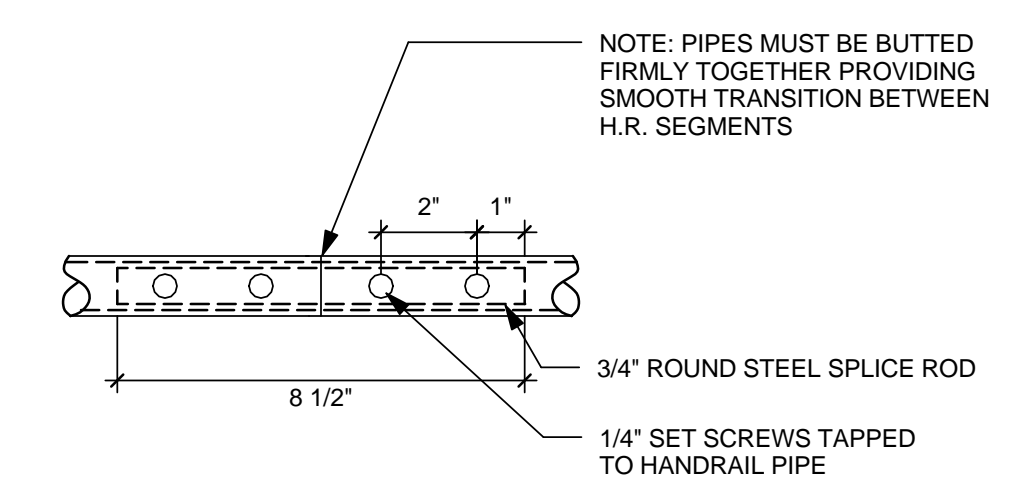
5 HANDRAIL PLAN DETAIL
3" = 1'-0"



2 RAMP HANDRAIL CONNECTION
3" = 1'-0"



3 RAMP GUARDRAIL CONNECTION
3" = 1'-0"



6 UNDERSIDE OF H.R. SPLICE JOINT
3" = 1'-0"

8/22/2013 11:33:46 AM

GENERAL SHEET NOTES

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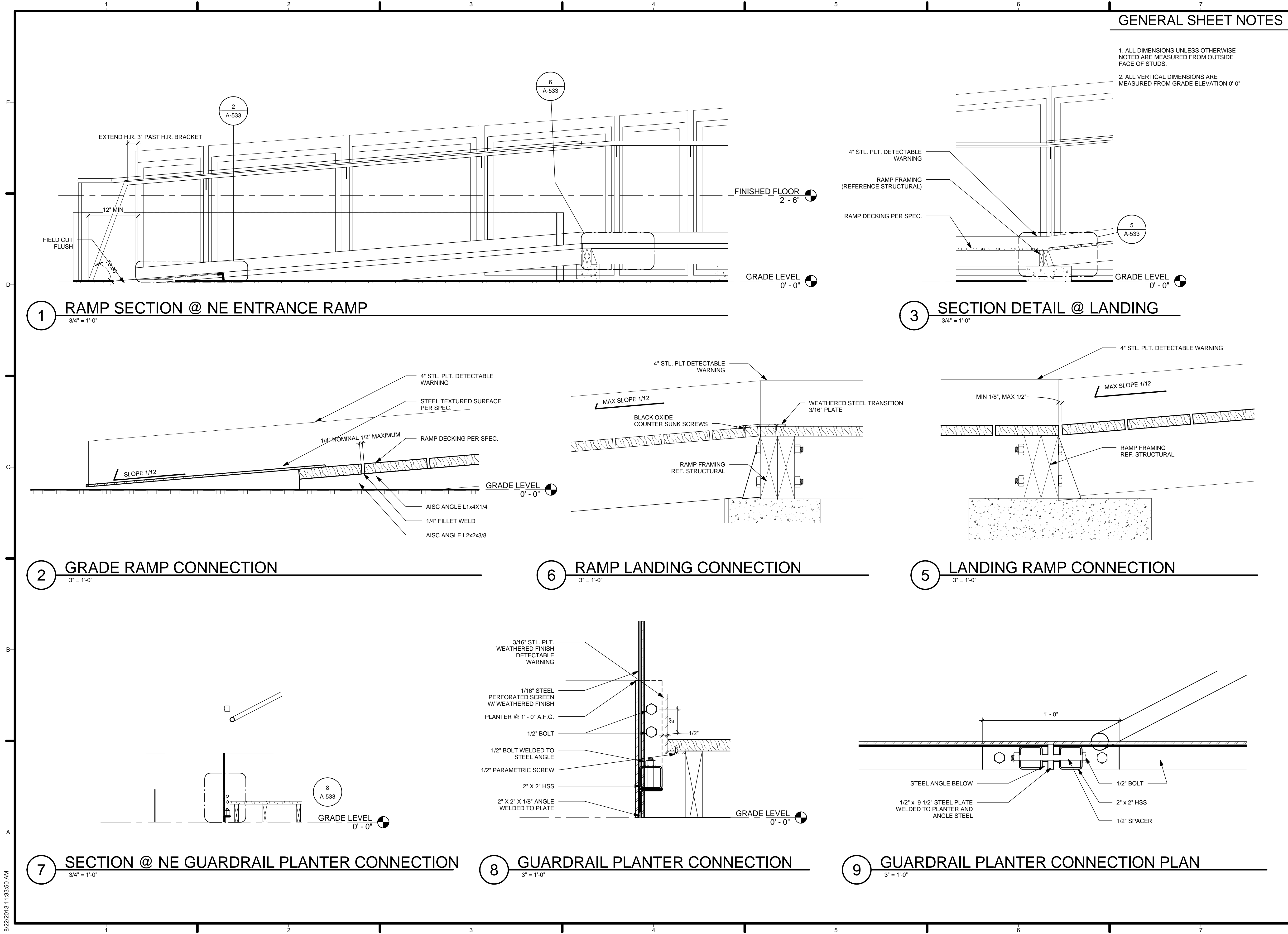
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RAMP DETAILS

A-533



1 RAMP SECTION @ NE ENTRANCE RAMP
3/4" = 1'-0"

3 SECTION DETAIL @ LANDING
3/4" = 1'-0"

2 GRADE RAMP CONNECTION
3" = 1'-0"

6 RAMP LANDING CONNECTION
3" = 1'-0"

5 LANDING RAMP CONNECTION
3" = 1'-0"

7 SECTION @ NE GUARDRAIL PLANTER CONNECTION
3/4" = 1'-0"

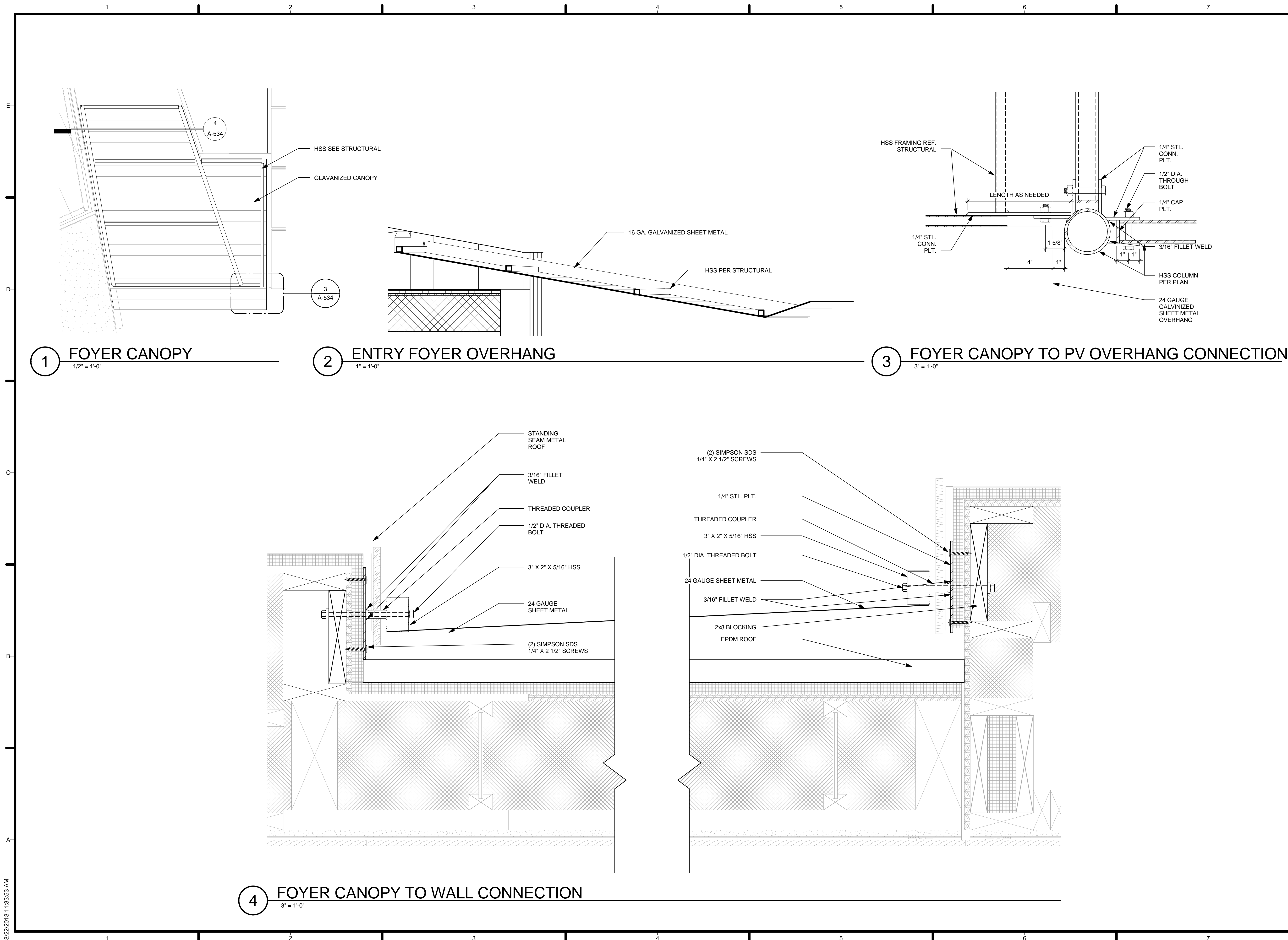
8 GUARDRAIL PLANTER CONNECTION
3" = 1'-0"

9 GUARDRAIL PLANTER CONNECTION PLAN
3" = 1'-0"

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FOYER CANOPY
DETAIL

A-534



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ARCHITECTURAL
SCHEDULES

A-601

MARK	MANUFACTURER	MODEL	FRAME TYPE	DETAILS			FINISH		Operation
				HEAD	JAMB	THRESHOLD	DOOR	FRAME	
101A	NANAWALL	WD66	ALUMINUM		Det. 5/501, Det. 6/502	Det. 5/513	CLEAN ANODIZED	CLEAR ANODIZE	SWING DOOR
103A	NANAWALL	WA67	ALUMINUM	Det. 3/512	Det. 6,7/503	Det. 4/513	CLEAN ANODIZED	CLEAR ANODIZE	FOLDING & SWING DOOR
105	HAFELE	ALU40	WOOD	Det. 1/515	Det. 5,6/501	Det. 3/515	BROWN ASH VENEER	(HIDDEN)	POCKET DOOR
106	NANAWALL	WA67							FOLDING DOOR
106A	SUGATSUNE	KS-85	WOOD	Det. 2/515	Det. 1,5/502	Det. 4/515	BIRCH PLYWOOD		SLIDING DOOR
107			WOOD	Det. 5/511	Det. 10/501	Det. 9/511	WEATHERED WOOD	(HIDDEN)	SWING DOOR
108	SUGATSUNE		WOOD	Det. 8/512	Det. 6/502	N/A	BROWN ASH VENEER	(HIDDEN)	SWING DOOR

DOOR 101A SHALL COMPLY WITH IRC R311.2 EGRESS DOOR. SHALL BE SIDE HINGED WITH A MINIMUM CLEAR WIDTH OF 32 INCHES BETWEEN FACE OF THE DOOR AND THE STOP WITH THE DOOR OPEN 90 DEGREES. THE MINIMUM CLEAR HEIGHT OF THE DOOR OPENING SHALL NOT BE LESS THAN 78 INCHES MEASURED FROM THE TOP OF THE THRESHOLD TO THE BOTTOM OF THE STOP.

MARK	ROUGH OPENING CONSTRUCTION	ROUGH OPENING WIDTH	ROUGH OPENING HEIGHT	HEAD HEIGHT	SILL HEIGHT	OPERATION	#	MANUFACTURER	MODEL	MATERIAL	FINISH	GLAZING
												THICKNESS
1	GLAZING TYPE II	4' - 1"	7' - 6"	7' - 6"	0' - 0"	FIXED	1					PER SPEC.
2	GLAZING TYPE II	0' - 10"	7' - 6"	7' - 6"	0' - 0"	FIXED	1					PER SPEC.
3	GLAZING TYPE II	0' - 6"	7' - 6"	7' - 6"	0' - 0"	FIXED	1					PER SPEC.
4	WINDOW TYPE II	3' - 10 1/2"	3' - 11 1/4"	3' - 10"	-0' - 1 1/4"	TILT ONLY	1	NANAWALL	WA68TT	ALUMINUM	CLEAR ANODIZED	PER SPEC.
5	GLAZING TYPE I	11' - 1 27/32"	1' - 0"	3' - 10"	2' - 10"	FIXED	1					PER SPEC.
6	WINDOW TYPE I	2' - 0 3/4"	6' - 2 1/2"	9' - 0 1/4"	2' - 9 3/4"	TILT/TURN	1	NANAWALL	WA68TT	ALUMINUM	CLEAR ANODIZED	PER SPEC.
7	GLAZING TYPE I	1' - 11 1/8"	1' - 6"	10' - 6 1/4"	9' - 0 1/4"	FIXED	1					PER SPEC.
8	WINDOW TYPE I	2' - 0 1/2"	1' - 6"	10' - 6 1/4"	9' - 0 1/4"	TILT ONLY	1	NANAWALL	WA68TT	ALUMINUM	CLEAR ANODIZED	PER SPEC.
9	GLAZING TYPE I	1' - 11 3/4"	1' - 6"	10' - 6 1/4"	9' - 0 1/4"	FIXED	1					PER SPEC.
10	GLAZING TYPE I	2' - 0"	1' - 6"	10' - 6 1/4"	9' - 0 1/4"	FIXED	1					PER SPEC.
11	GLAZING TYPE I	2' - 1 3/8"	1' - 6"	10' - 6 1/4"	9' - 0 1/4"	FIXED	1					PER SPEC.
12	GLAZING TYPE I	1' - 11 1/2"	1' - 6"	10' - 6 1/4"	9' - 0 1/4"	FIXED	1					PER SPEC.
13	GLAZING TYPE I	2' - 1 3/8"	1' - 6"	10' - 6 1/4"	9' - 0 1/4"	FIXED	1					PER SPEC.
14	GLAZING TYPE I	2' - 0"	1' - 6"	10' - 6 1/4"	9' - 0 1/4"	FIXED	1					PER SPEC.
15	GLAZING TYPE I	1' - 11 1/8"	1' - 6"	10' - 6 1/4"	9' - 0 1/4"	FIXED	1					PER SPEC.
16	WINDOW TYPE I	2' - 0 3/4"	7' - 10 1/4"	10' - 6 1/2"	2' - 8 1/4"	TILT/TURN	1	NANAWALL	WA68TT	ALUMINUM	CLEAR ANODIZED	PER SPEC.
17	WINDOW TYPE I	2' - 0 3/4"	7' - 10 1/4"	10' - 6 1/2"	2' - 8 1/4"	TILT/TURN	1	NANAWALL	WA68TT	ALUMINUM	CLEAR ANODIZED	PER SPEC.

GLAZING TYPE PER IRC 2012 PART III R308.4.3 GLAZING IN WINDOWS AND TABLE R308.3.3(1) MINIMUM CATEGORY CLASSIFICATION OF GLAZING USING CPSC 16 CFR 1201

ROOM NO	ROOM NAME	FINISHES				2012 IRC R303.1 COMPLIANCE COMMENTS
		FLOOR	BASE	WALL	CEILING	
001	LIVING ROOM DECK	TIMBERSIL DECKING	N/A	N/A	N/A	OUTDOOR SPACE
002	BEDROOM DECK	TIMBERSIL DECKING	N/A	N/A	N/A	OUTDOOR SPACE
101	FOYER	JAKARTA LIGHT SORT (VIRIDIAN RECLAIMED WOOD FLOORING)	2-7/8" STEEL ANGLE FLOOR TRIM GUN BLUE FINISH	1/2" BIRCH PLYWOOD WITH CLEAR MATTE FINISH	1/2" BIRCH PLYWOOD WITH CLEAR MATTE FINISH	29 SQ.FT. - NOT HABITABLE
102	KITCHEN	JAKARTA LIGHT SORT (VIRIDIAN RECLAIMED WOOD FLOORING)	2-7/8" STEEL ANGLE FLOOR TRIM	VINYL WALL COVERING - CIRQA: G11-057	1/2" BIRCH PLYWOOD WITH CLEAR MATTE FINISH	107 SQ. FT. - IRC R 303
103	LIVING	JAKARTA LIGHT SORT (VIRIDIAN RECLAIMED WOOD FLOORING)	2-7/8" STEEL ANGLE FLOOR TRIM GUN BLUE FINISH	VINYL WALL COVERING - CIRQA: G11-057	1/2" BIRCH PLYWOOD WITH CLEAR MATTE FINISH	232 SQ.FT - IRC R303.1, R304.1-3 GLAZING MIN - 19 SQ.FT. PROVIDED - 87.5 SQ.FT. 38% OF FLOOR AREA VENTILATION MIN - 10 SQ.FT. PROVIDED - 97 SQ.FT. 42% OF FLOOR AREA
104	HALL	JAKARTA LIGHT SORT (VIRIDIAN RECLAIMED WOOD FLOORING)	2-7/8" STEEL ANGLE FLOOR TRIM GUN BLUE FINISH	1/2" BIRCH PLYWOOD WITH CLEAR MATTE FINISH	1/2" BIRCH PLYWOOD WITH CLEAR MATTE FINISH	40 SQ.FT - NOT HABITABLE
105	BATH	2" X 2" THROUGH BODY PORCELAIN TILE (IA KS30CEMSC)	N/A	2" X 2" THROUGH BODY PORCELAIN TILE (IA KS30CEMSC)	GYPSUM BOARD CEILING WITH SEMI GLOSS PAINTED FINISH	55 SQ.FT - IRC R303.1, R304.1-3 GLAZING MIN - 5 SQ.FT. PROVIDED - 9 SQ.FT. 16% OF FLOOR AREA VENTILATION MIN - 3 SQ.FT. PROVIDED - 9 SQ.FT. 16% OF FLOOR AREA
106	BEDROOM	JAKARTA LIGHT SORT (VIRIDIAN RECLAIMED WOOD FLOORING)	2-7/8" STEEL ANGLE FLOOR TRIM GUN BLUE FINISH	(EAST WALL=1/2" BIRCH PLYWOOD WITH CLEAR MATTE FINISH) (N,S,W WALLS= VINYL WALL COVERING - TRI-KES SYMPHONY SELECT IV - SSP319)	1/2" BIRCH PLYWOOD WITH CLEAR MATTE FINISH	149 SQ.FT - IRC R303.1, R304.1-3 GLAZING MIN - 12 SQ.FT. PROVIDED - 44 SQ.FT. 30% OF FLOOR AREA VENTILATION MIN - 6 SQ.FT. PROVIDED - 54 SQ.FT. 36% OF FLOOR AREA
107	MECH	LINOLEUM FLOORING	RUBBER BASE	GYPSUM BOARD WITH LEVEL 5 PAINTED FINISH - SHERWIN WILLIAMS WATERBASED EPOXY PAINT - WHITE	GYPSUM BOARD CEILING WITH SEMI GLOSS PAINTED FINISH	19 SQ. FT. - NOT HABITABLE
108	W/D	LINOLEUM FLOORING	RUBBER BASE	GYPSUM BOARD WITH LEVEL 5 PAINTED FINISH - SEMIGLOSS WHITE	GYPSUM BOARD CEILING WITH SEMI GLOSS PAINTED FINISH	11 SQ.FT - NOT HABITABLE

IRC 2012 PART III

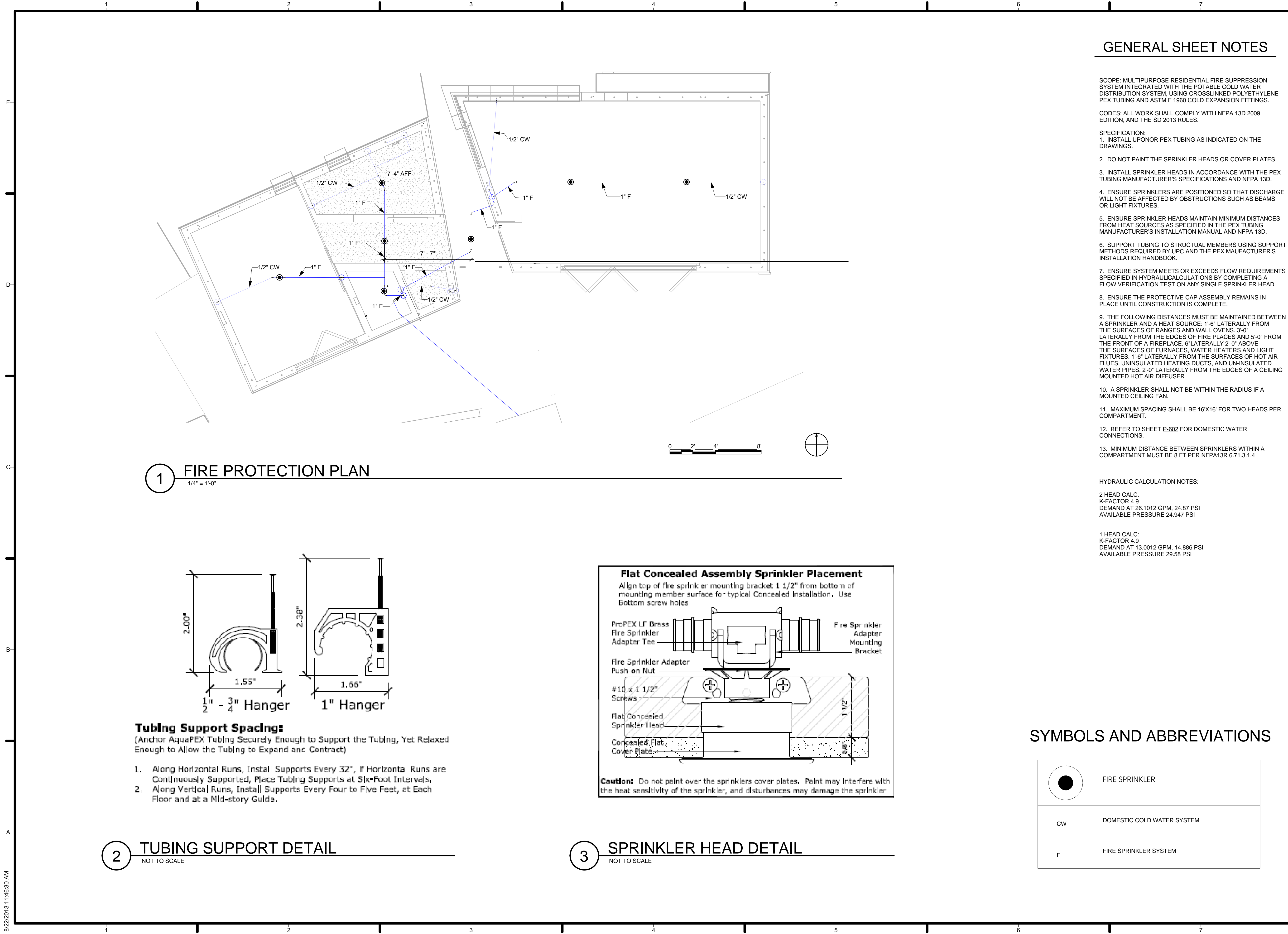
R303.1 ALL HABITABLE ROOMS SHALL HAVE AN AGGREGATE GLAZING AREA OF NOT LESS THAN 8 PERCENT OF THE FLOOR AREA OF SUCH ROOMS. NATURAL VENTILATION SHALL BE THROUGH WINDOWS, DOORS, LOUVERS OR OTHER APPROVED OPENINGS TO THE OUTDOOR AIR. SUCH OPENINGS SHALL BE PROVIDED WITH READY ACCESS OR SHALL OTHERWISE BE READILY CONTROLLABLE BY THE BUILDING OCCUPANTS. THE MINIMUM OPERABLE AREA TO THE OUTDOORS SHALL BE 4 PERCENT OF THE FLOOR AREA BEING VENTILATED.

R304.1 MINIMUM AREA. EVERY DWELLING UNIT SHALL HAVE AT LEAST ONE HABITABLE ROOM THAT SHALL HAVE NOT LESS THAN 120 SQUARE FEET OF GROSS FLOOR AREA.

R304.2 OTHER ROOMS. OTHER HABITABLE ROOMS SHALL HAVE A FLOOR AREA OF NOT LESS THAN 70 SQUARE FEET. EXCEPTION: KITCHENS.

R304.3 MINIMUM DIMENSIONS. HABITABLE ROOMS SHALL NOT BE LESS THAN 7 FEET IN ANY HORIZONTAL DIMENSION. EXCEPTION: KITCHENS.

HABITABLE SPACE. A SPACE IN A BUILDING FOR LIVING, SLEEPING, EATING OR COOKING. BATHROOMS, TOILET ROOMS, CLOSETS, HALLS, STORAGE OR UTILITY SPACES AND SIMILAR AREAS ARE NOT CONSIDERED HABITABLE SPACES.



GENERAL SHEET NOTES

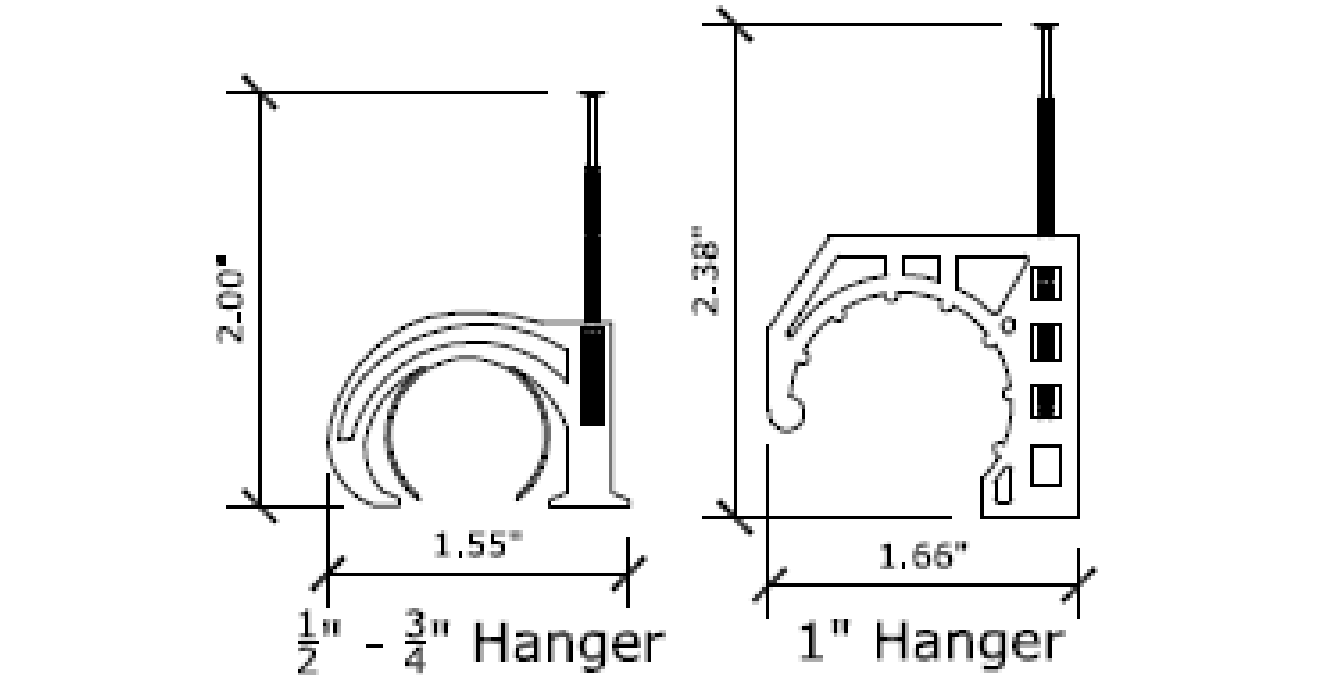
- SCOPE: MULTIPURPOSE RESIDENTIAL FIRE SUPPRESSION SYSTEM INTEGRATED WITH THE POTABLE COLD WATER DISTRIBUTION SYSTEM, USING CROSSLINKED POLYETHYLENE PEX TUBING AND ASTM F 1960 COLD EXPANSION FITTINGS.
- CODES: ALL WORK SHALL COMPLY WITH NFPA 13D 2009 EDITION, AND THE SD 2013 RULES.
- SPECIFICATION:
1. INSTALL UPONOR PEX TUBING AS INDICATED ON THE DRAWINGS.
 2. DO NOT PAINT THE SPRINKLER HEADS OR COVER PLATES.
 3. INSTALL SPRINKLER HEADS IN ACCORDANCE WITH THE PEX TUBING MANUFACTURER'S SPECIFICATIONS AND NFPA 13D.
 4. ENSURE SPRINKLERS ARE POSITIONED SO THAT DISCHARGE WILL NOT BE AFFECTED BY OBSTRUCTIONS SUCH AS BEAMS OR LIGHT FIXTURES.
 5. ENSURE SPRINKLER HEADS MAINTAIN MINIMUM DISTANCES FROM HEAT SOURCES AS SPECIFIED IN THE PEX TUBING MANUFACTURER'S INSTALLATION MANUAL AND NFPA 13D.
 6. SUPPORT TUBING TO STRUCTURAL MEMBERS USING SUPPORT METHODS REQUIRED BY UPC AND THE PEX MAUFACTURER'S INSTALLATION HANDBOOK.
 7. ENSURE SYSTEM MEETS OR EXCEEDS FLOW REQUIREMENTS SPECIFIED IN HYDRAULIC CALCULATIONS BY COMPLETING A FLOW VERIFICATION TEST ON ANY SINGLE SPRINKLER HEAD.
 8. ENSURE THE PROTECTIVE CAP ASSEMBLY REMAINS IN PLACE UNTIL CONSTRUCTION IS COMPLETE.
 9. THE FOLLOWING DISTANCES MUST BE MAINTAINED BETWEEN A SPRINKLER AND A HEAT SOURCE: 1'-6" LATERALLY FROM THE SURFACES OF RANGES AND WALL OVENS, 3'-0" LATERALLY FROM THE EDGES OF FIRE PLACES AND 5'-0" FROM THE FRONT OF A FIREPLACE, 6" LATERALLY 2'-0" ABOVE THE SURFACES OF FURNACES, WATER HEATERS AND LIGHT FIXTURES, 1'-6" LATERALLY FROM THE SURFACES OF HOT AIR FLUES, UNINSULATED HEATING DUCTS, AND UN-INSULATED WATER PIPES, 2'-0" LATERALLY FROM THE EDGES OF A CEILING MOUNTED HOT AIR DIFFUSER.
 10. A SPRINKLER SHALL NOT BE WITHIN THE RADIUS IF A MOUNTED CEILING FAN.
 11. MAXIMUM SPACING SHALL BE 16'X16' FOR TWO HEADS PER COMPARTMENT.
 12. REFER TO SHEET P-602 FOR DOMESTIC WATER CONNECTIONS.
 13. MINIMUM DISTANCE BETWEEN SPRINKLERS WITHIN A COMPARTMENT MUST BE 8 FT PER NFPA13R 6.7.1.3.1.4

HYDRAULIC CALCULATION NOTES:

2 HEAD CALC:
 K-FACTOR 4.9
 DEMAND AT 26.1012 GPM, 24.87 PSI
 AVAILABLE PRESSURE 24.947 PSI

1 HEAD CALC:
 K-FACTOR 4.9
 DEMAND AT 13.0012 GPM, 14.886 PSI
 AVAILABLE PRESSURE 29.58 PSI

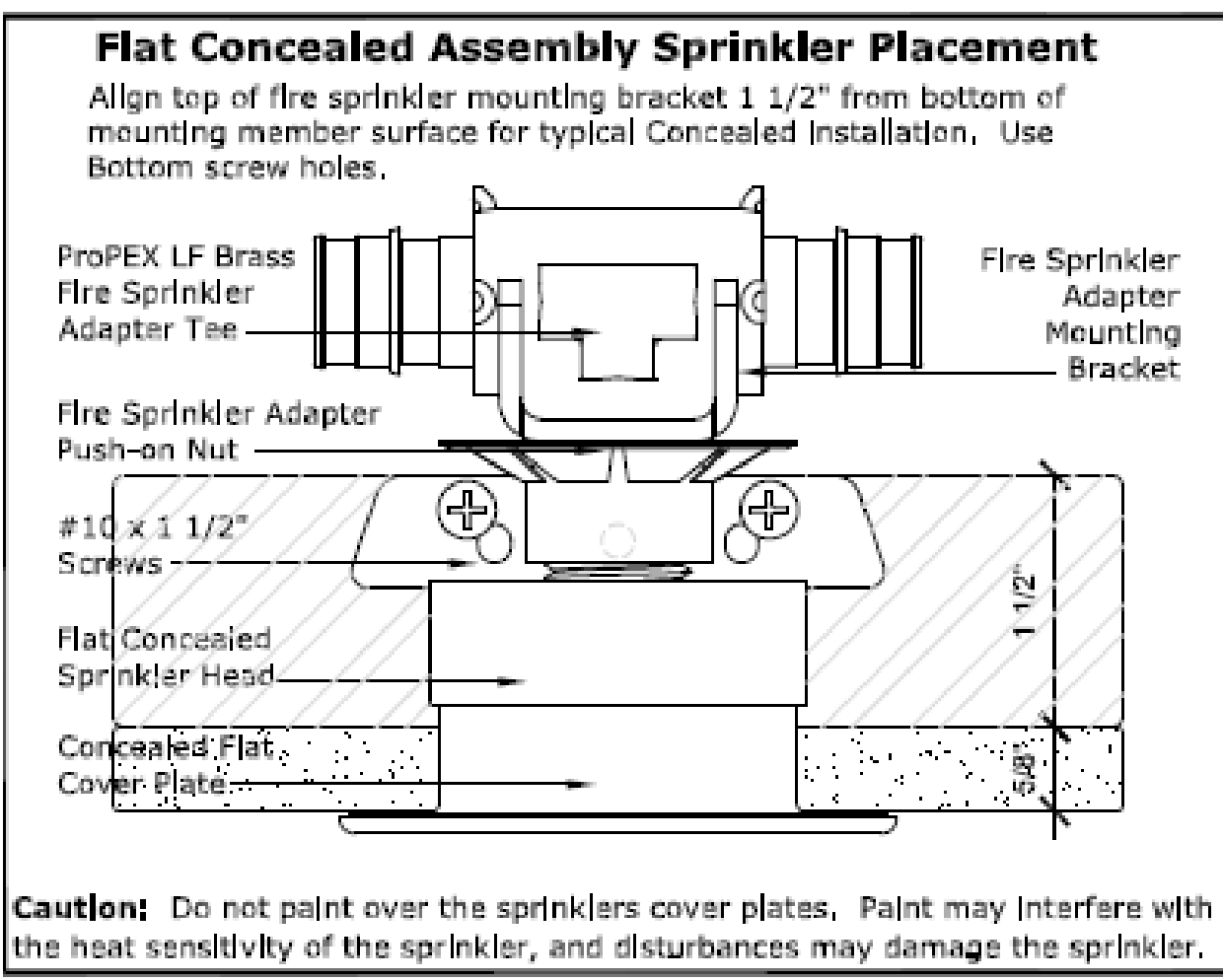
1 FIRE PROTECTION PLAN
 1/4" = 1'-0"



Tubing Support Spacing
 (Anchor AquaPEX Tubing Securely Enough to Support the Tubing, Yet Relaxed Enough to Allow the Tubing to Expand and Contract)

1. Along Horizontal Runs, Install Supports Every 32", If Horizontal Runs are Continuously Supported, Place Tubing Supports at Six-Foot Intervals,
2. Along Vertical Runs, Install Supports Every Four to Five Feet, at Each Floor and at a Mid-story Guide.

2 TUBING SUPPORT DETAIL
 NOT TO SCALE



Caution: Do not paint over the sprinklers cover plates. Paint may interfere with the heat sensitivity of the sprinkler, and disturbances may damage the sprinkler.

3 SPRINKLER HEAD DETAIL
 NOT TO SCALE

SYMBOLS AND ABBREVIATIONS

	FIRE SPRINKLER
CW	DOMESTIC COLD WATER SYSTEM
F	FIRE SPRINKLER SYSTEM



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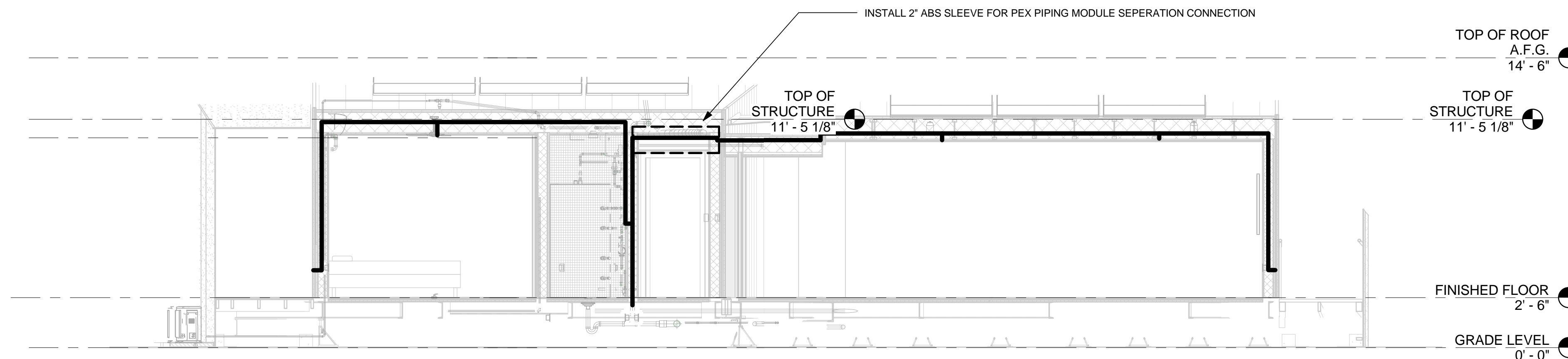
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FIRE PROTECTION PLAN

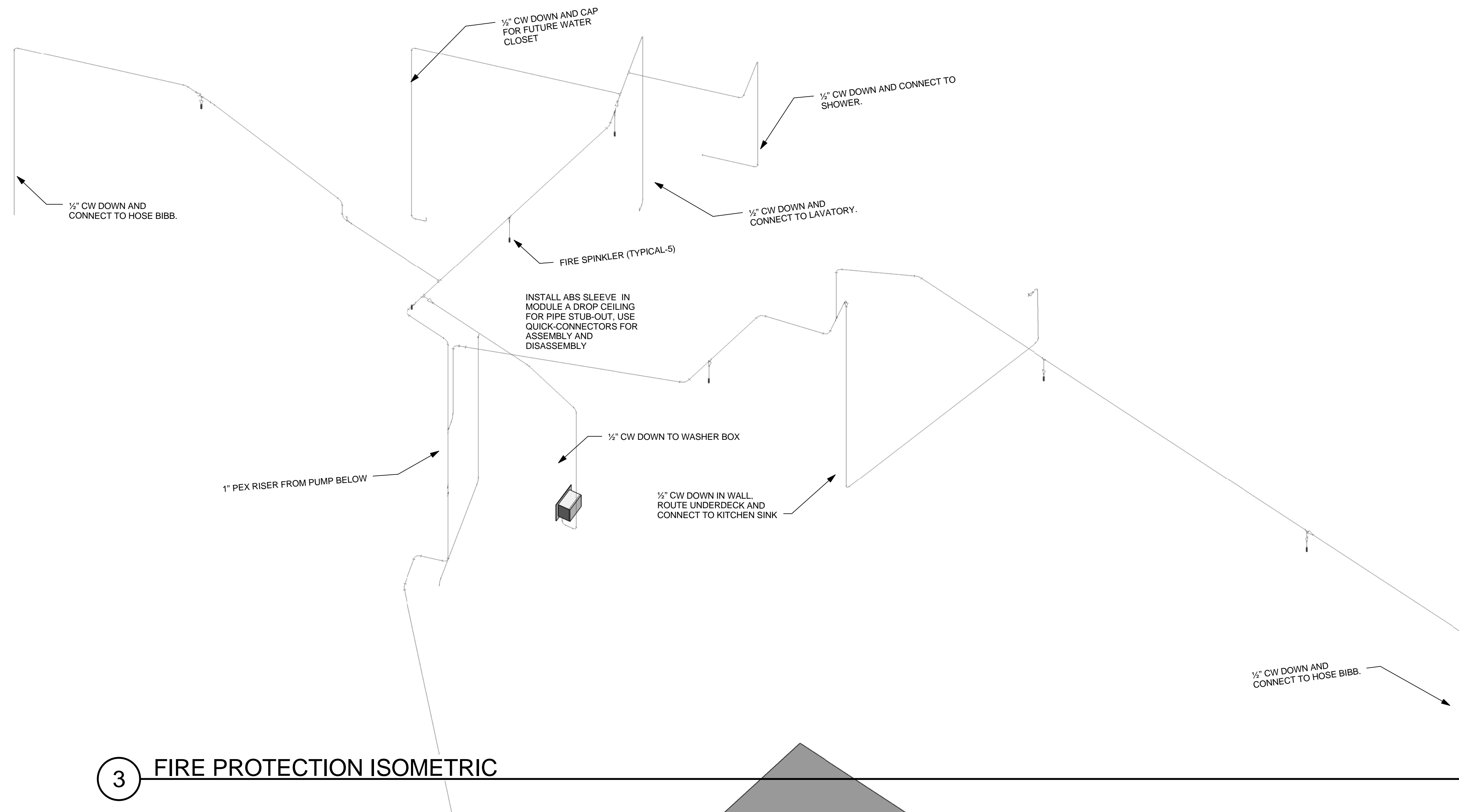
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1 FIRE PROTECTION SECTION
1/4" = 1'-0"



3 FIRE PROTECTION ISOMETRIC

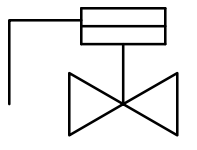
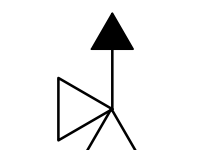
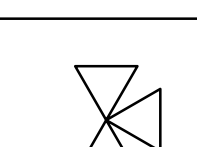
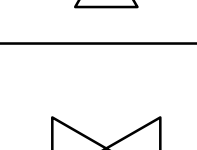
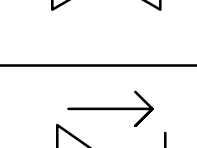
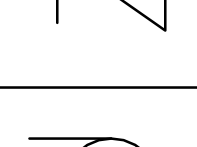
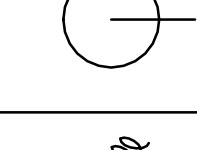
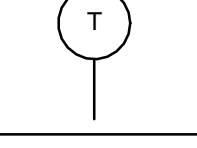
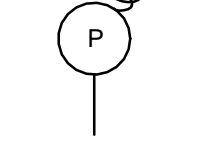
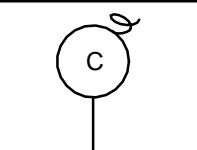
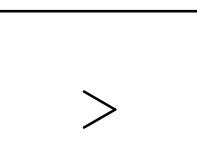
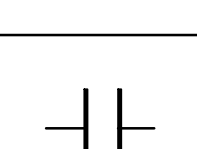
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PLUMBING NOTES

P-001

PLUMBING SYMBOLS AND ABBREVIATIONS

	PRESSURE REGULATOR
	P&T VALVE
	3-WAY MIXING VALVE
	ISOLATION VALVE
	CHECK VALVE
	PUMP
	TEMPERATURE GAUGE
	PRESSURE GAUGE
	CONTROLLER
	DIRECTION ARROW
	UNIONS/ADAPTERS
	FLOW METER

ABBREVIATIONS	DESCRIPTION
KS	KITCHEN SINK
LAV	LAVATORY
WC	WATER CLOSET
EWH	ELECTRIC TANKLESS WATER HEATER
HWST	HOT WATER STORAGE TANK
MFD	MECHANICAL ROOM FLOOR DRAIN
SFD	SHOWER DRAIN
DW	DISHWASHER

	PIPING SCHEDULE		
	ABS SCH. 40	UPONOR AQUAPEX 1/2"	UPONOR AQUAPEX 1"
DOMESTIC WATER		•	
SANITARY DRAINAGE	•		
SANITARY VENT	•		
FIRE PROTECTION			•

PUMP SCHEDULE						
MARK	SERVICE	MANUFACTURER	MODEL	INTAKE SIZE	DISCHARGE SIZE	DESIGN FLOW RATE
P-1	BOOSTER	GROUNDFOSS	22BMQE 05B-120	1 1/4" NPT	1" NPT	VARIABLE SPEED
P-2	WATER FEATURE	LITTLE GIANT	3-MD-SC	3/4" FNPT	1/2" MNPT	11GPM
P-3	SOLAR THERMAL	TACO	003-B4	3/4" SWT	3/4" SWT	1.3GPM
P-4	RADIANT LOOP	TACO	003-B4	3/4" SWT	3/4" SWT	1.2GPM

SOLAR HYDRONIC EQUIPMENT SCHEDULE					
MARKER	DESCRIPTION	COUNT	UNIT	MANUFACTURER	MODEL
ETC	EVACUATED TUBE COLLECTOR	2	no.	SOLARUS	SL30
SF	SOLARFLEX PIPING	1	coil	CALEFFI	NA3540-15
HWST	HOT WATER STORAGE TANK	1	no.	BOSCH	BUDERUS SM100
ET	EXPANSION TANK	2	no.	BOSCH	259012
AAV	AUTOMATIC AIR VENT	1	no.	BOSCH	63015362
SOV	SHUTOFF VALVE FOR AAV	1	no.	BOSCH	85103282

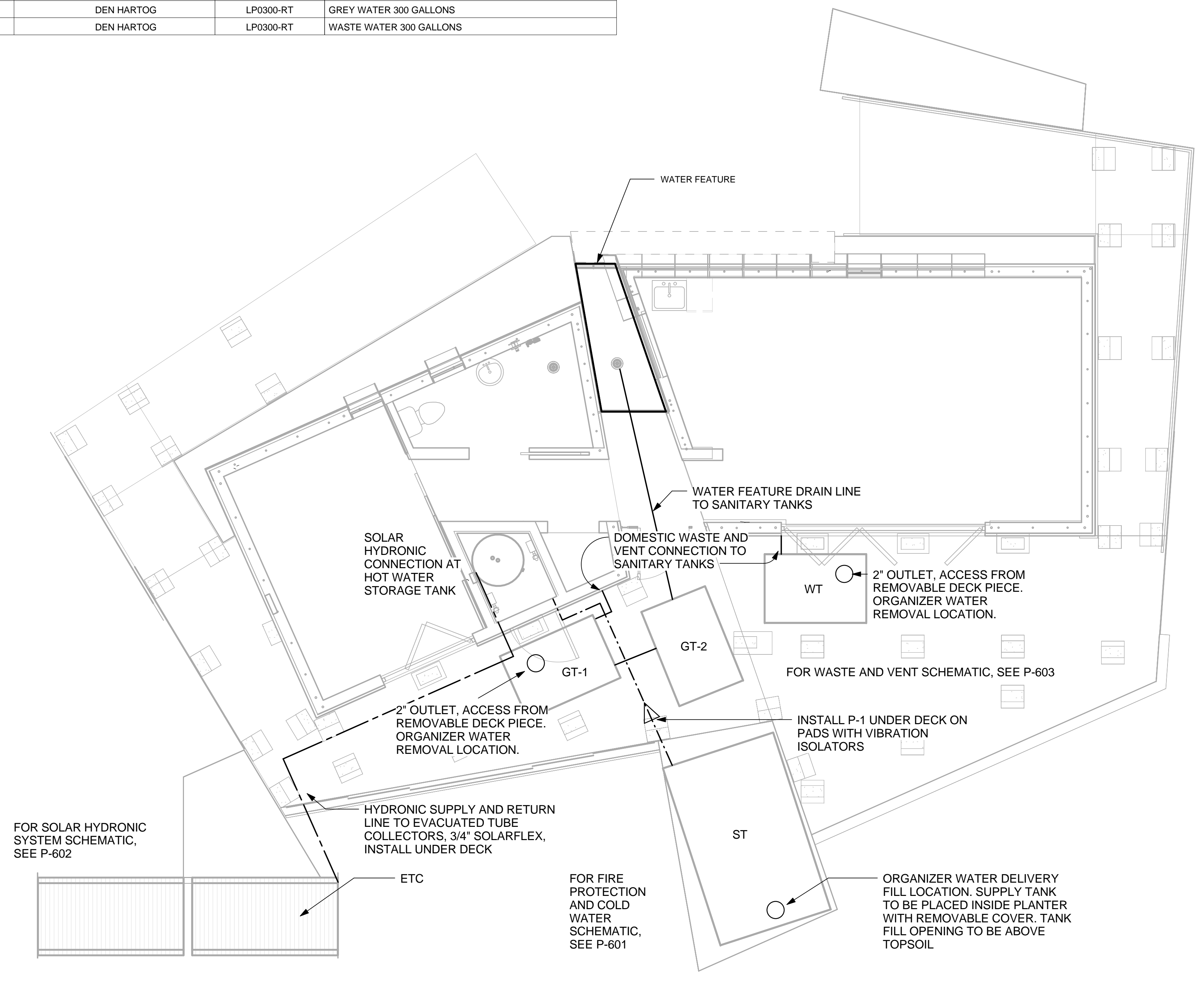
VALVE SCHEDULE						
MARKER	DESCRIPTION	# IN SOLAR LOOP	# IN RADIANT LOOP	# IN DOMESTIC HOT WATER LOOP	# IN DOMESTIC COLD SYSTEM	SPECIFICATION
P&T-1	PRESSURE AND TEMPERATURE RELIEF VALVES	1	1	1 (INTEGRATED IN HWST)	0	3/4", BRASS
BV-1	ISOLATION VALVES	4	2	2	0	3/4", BRASS
BV-2	ISOLATION VALVES	0	0	0	2	1", BRASS
CV-1	CHECK VALVES	2	2	1	1	3/4", BRASS
CV-2	CHECK VALVES	0	0	0	0	1", BRASS
FDV-1	FILL/DRAIN VALVES	2	2	0	0	3/4", HOSE BIBB
FDV-2	FILL/DRAIN VALVES	0	0	0	0	1", HOSE BIBB
FDV-3	FILL/DRAIN VALVES	0	0	0	0	1/2", HOSE BIBB
MV-1	3 WAY TEMPERING VALVES	1	1	1	0	1", BRASS

PLUMBING FIXTURE SCHEDULE							
MARK	DESCRIPTION	MANUFACTURER	MODEL	DRAIN (Y/N)	TRAP (Y/N)	SUPPLY CONNECTION (SIZE)	WASTE CONNECTION (SIZE)
LAV	LAVATORY	KOHLER	K-2314-0	Y	Y	-	2"
MV-LAV	LAVATORY MIXING VALVE	KOHLER	K-410-K-NA	N	N	1/2" NTP	-
F-LAV	LAVATORY FAUCET	KOHLER	K-T945-4-CP	N	N	-	-
T-LAV	KITCHEN SINK BOTTLE TRAP	KOHLER	K-9033-CP	Y	-	-	-
KS	KITCHEN SINK	KOHLER	K-3822-3-NA	Y	Y	-	2"
F-KS	KITCHEN FAUCET	KOHLER	K-7547-4-CP	N	N	3/8" NTP	-
SH	SHOWER NOZZLE	KOHLER	K-9059-CP	N	N	-	-
MV-SH	SHOWER MIXING VALVE	KOHLER	K-304-KS-NA	N	N	1/2" NTP	-
LND	LAUNDRY OUTLET BOX	UPONOR	LF5930500	Y	Y	1/2" NTP	2"
WC	WATER CLOSET	KOHLER	K-3564-0	Y	N	3/8" NTP	3"
D-MR	MECHANICAL ROOM DRAIN	KURDI	KD2/ABS/E	Y	Y	-	2"
D-SH	SHOWER DRAIN	KURDI	KD2/ABS/E	Y	Y	-	2"
D-WF	WATER FEATURE DRAIN	CRYSTAL FOUNTAIN	DOA200	Y	N	-	2"

WATER SCHEDULE		
DESCRIPTION	QUANTITY	TOTAL FIXTURE UNITS
KITCHEN SINK	1	1.4
LAVATORY	1	0.7
WASHING MACHINE	1	1.4
DISHWASHER	1	1.4
HOSE BIB	2	5
SHOWER	1	1.4
WATER CLOSET	1	2.2
GRAND TOTAL		12

WASTE SCHEDULE		
DESCRIPTION	QUANTITY	FIXTURE UNITS
KITCHEN SINK	1	2
LAVATORY	1	1
WASHING MACHINE	1	2
SHOWER	1	2
WATER CLOSET	1	3
DISHWASHER	1	2
TOTAL		12

TANK SCHEDULE			
MARK	MANUFACTURER	MODEL	SPECIFICATION
ST	NORWESTCO	41392	SUPPLY WATER 1500 GALLONS
GT-1	DEN HARTOG	LP0300-RT	GREY WATER 300 GALLONS
GT-2	DEN HARTOG	LP0300-RT	GREY WATER 300 GALLONS
WT	DEN HARTOG	LP0300-RT	WASTE WATER 300 GALLONS



GENERAL SHEET NOTES

- ALL PORTABLE TANKS, PUMPS, AND VALVES INTENDED TO MIMIC PUBLIC UTILITY WATER SUPPLY AND SEWAGE ARE TEMPORARY FOR COMPETITION PURPOSE ONLY.
- SUPPLY TANKS MUST ALLOW FOR WATER DELIVERY ACCESS. DURING COMPETITION, MUST ALLOW FOR A 12" SPACE ABOVE WATER INLET.
- SUPPLY AND WASTE LINES FROM TANKS TO HOUSE ARE TEMPORARY.
- FOR WATER DELIVERY, ORGANIZER'S TRUCK IS TO PARK BY FRONT PLANTER. 4 STUDENTS SHALL MANUALLY MOVE SUPPLY HOSE FROM DELIVERY TRUCK TO DESERTSOL WATER SUPPLY TANK LOCATED UNDERNEATH PLANTER. TANK OPENING IS 16" IN DIAMETER.
- FOR WATER REMOVAL, ORGANIZER'S TRUCK IS TO PARK BY FRONT PLANTER. 6 STUDENTS SHALL OPEN THE REMOVABLE PANEL FROM DECK AND MANUALLY MOVE HOSE FROM TRUCK TO CONNECT TO THE GREY WATER TANK CONNECTION AND WASTE TANK CONNECTION. GREY WATER TANKS SHALL BE EMPTIED FIRST AND THEN THE BLACK WATER TANKS.
- MOUNT MAIN SUPPLY AND FIRE SUPPRESSION PUMP ON STAND AND PROVIDE HOUSING.
- SEAL PENETRATION THROUGH WALL AND/OR DECK WITH SPRAY FOAM.
- THE DRAWINGS AND DETAILS SHALL BE TAKEN AS A DIAGRAMMATIC MEANS OF PROVIDING PIPING. THEY DO NOT SHOW EVERY FITTING AND OFFSET NOR EVERY STRUCTURAL, ELECTRICAL, PIPING OR DUCTWORK. DIFFICULTY THAT MAY BE ENCOUNTERED DURING THE INSTALLATION OF THE WORK. THE CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE AND PROVIDE ANY MODIFICATIONS TO THE WORK INCLUDING BUT NOT LIMITED TO DUCTWORK, PIPING, ELECTRICAL, PLUMBING, FIRE PROTECTION, STRUCTURAL FRAMES, CASEWORK ETC.



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



PLUMBING SITE PLAN

P-101

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GENERAL SHEET NOTES

1. CONTRACTOR SHALL FOLLOW 2012 IRC AND OTHER APPLICABLE BUILDING CODES.
2. CONTRACTOR SHALL FOLLOW EQUIPMENT MANUFACTURER'S INSTRUCTIONS FOR HANDLING AND INSTALLATION.
3. CONTRACTOR SHALL COORDINATE AND PERFORM NECESSARY MODIFICATIONS TO PROVIDE A COMPLETE INSTALLATION. MODIFICATIONS INCLUDE BUT ARE NOT LIMITED TO STRUCTURAL, ELECTRICAL, ARCHITECTURAL, PLUMBING, PIPING AND DUCTWORK.
4. ALL PEX LINES SHALL BE RAN THROUGH TJI FLOOR AND/OR ROOF PRIOR TO FINAL SEALING OF FLOOR AND/OR ROOF SYSTEM.
5. INSTALL BALL SHUTOFF VALVES AT EVERY DEVICE WATER CONNECTION.
6. INSTALL WATER HAMMER ARRESTOR ACCORDING TO MANUFACTURER SPECIFICATIONS AT WASHER/DRYER AND DISHWASHER.
7. VALVE AT SHOWER SHALL BE A PRESSURE BALANCE MIXING VALVE WITH A HIGH LIMIT STOP IN ACCORDANCE WITH ASSE 1016. THE HIGH LIMIT STOP MUST LIMIT WATER TO A TEMPERATURE OF 120 DEGREES F.



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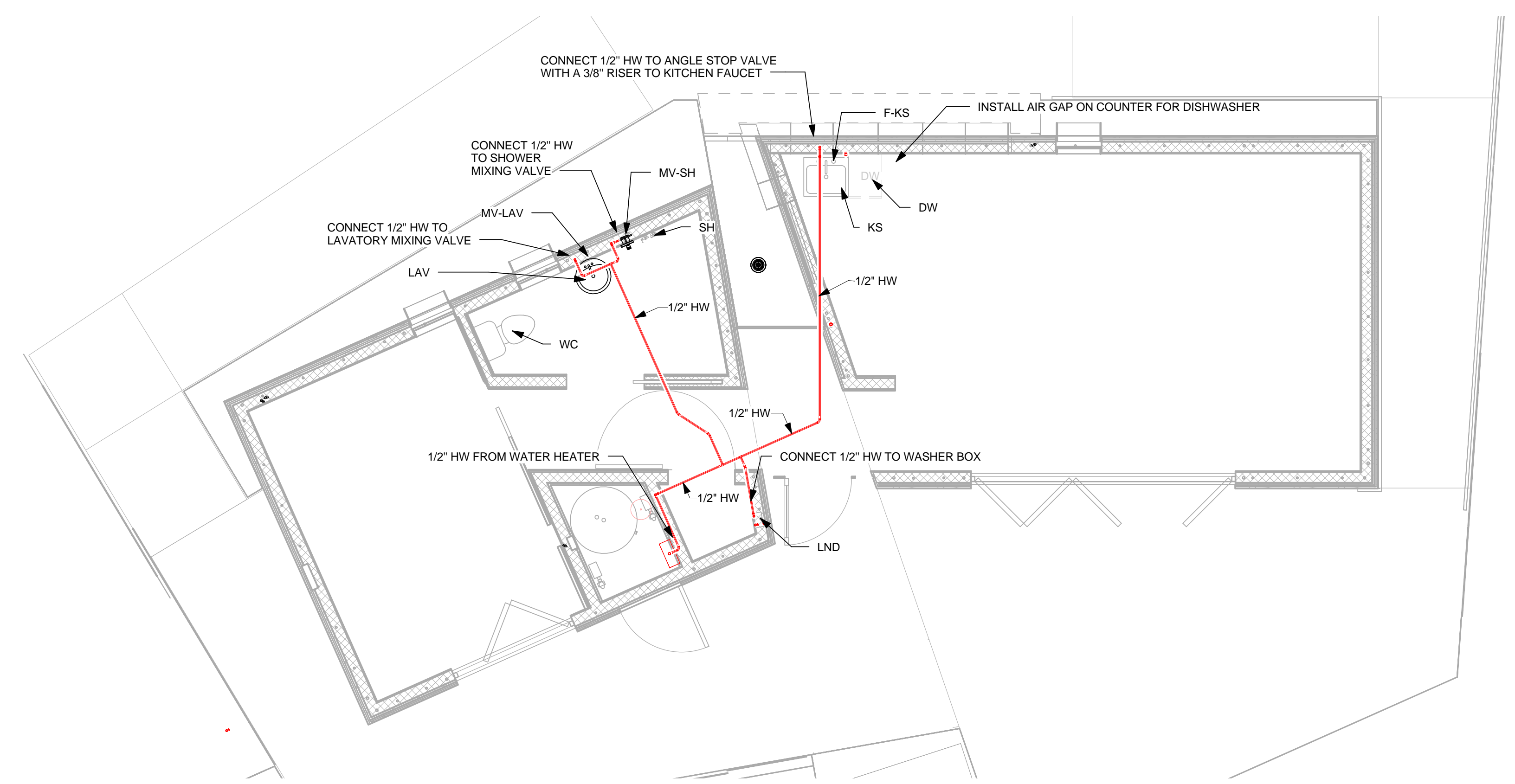
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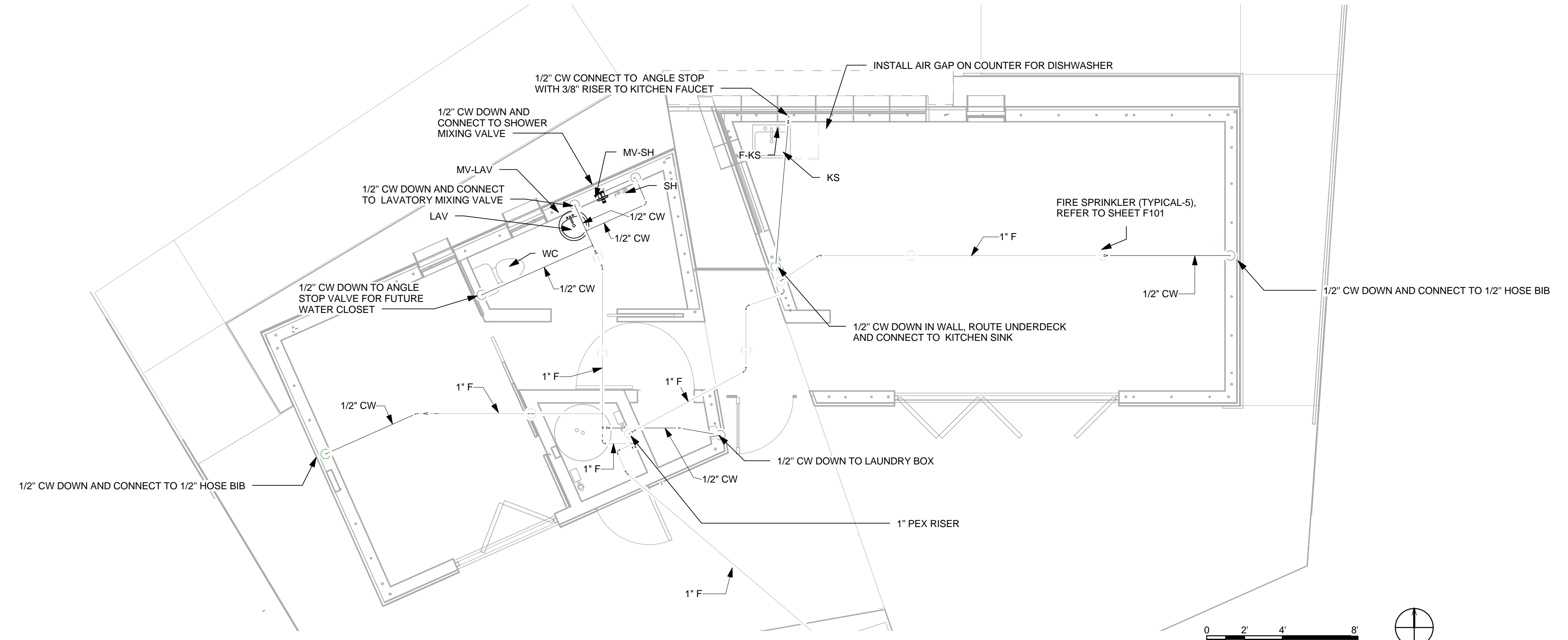
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DOMESTIC WATER SUPPLY PLAN

P-102



1 DOMESTIC HOT WATER
1/4" = 1'-0"



2 DOMESTIC COLD WATER
1/4" = 1'-0"



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GENERAL SHEET NOTES

1. PROVIDE A BASE CLEANOUT AT THE LOWEST LEVEL OF ALL SANITARY AND WASTE STACKS.
2. ALL VENT THRU ROOF PENETRATIONS SHALL BE ROUTED TO TERMINATE AT THE LEAST VISIBLE LOCATION FROM THE ENTRY VIEW TO THE PROPERTY.
3. WATER CLOSET SHALL NOT BE USED DURING COMPETITION. WATER CLOSET SHALL BE ATTACHED TO A 3 INCH ABS WATER CLOSET FLANGE WITH A CAPPED END.
4. VENT PIPES MUST EXTEND ATLEAST 6" ABOVE ROOF



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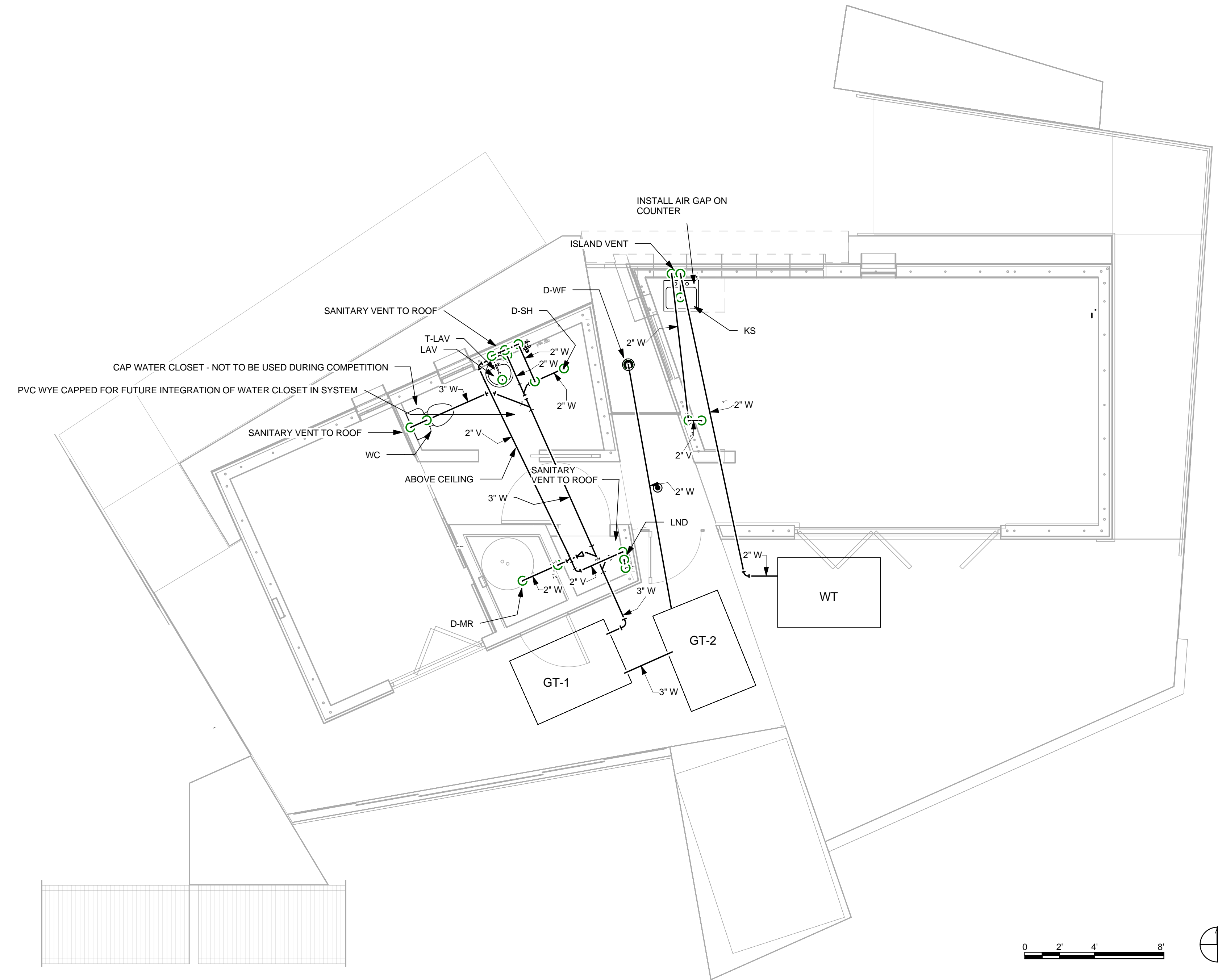
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WASTE & VENT PLAN

P-103



1 WASTE AND VENT PLAN
1/4" = 1'-0"

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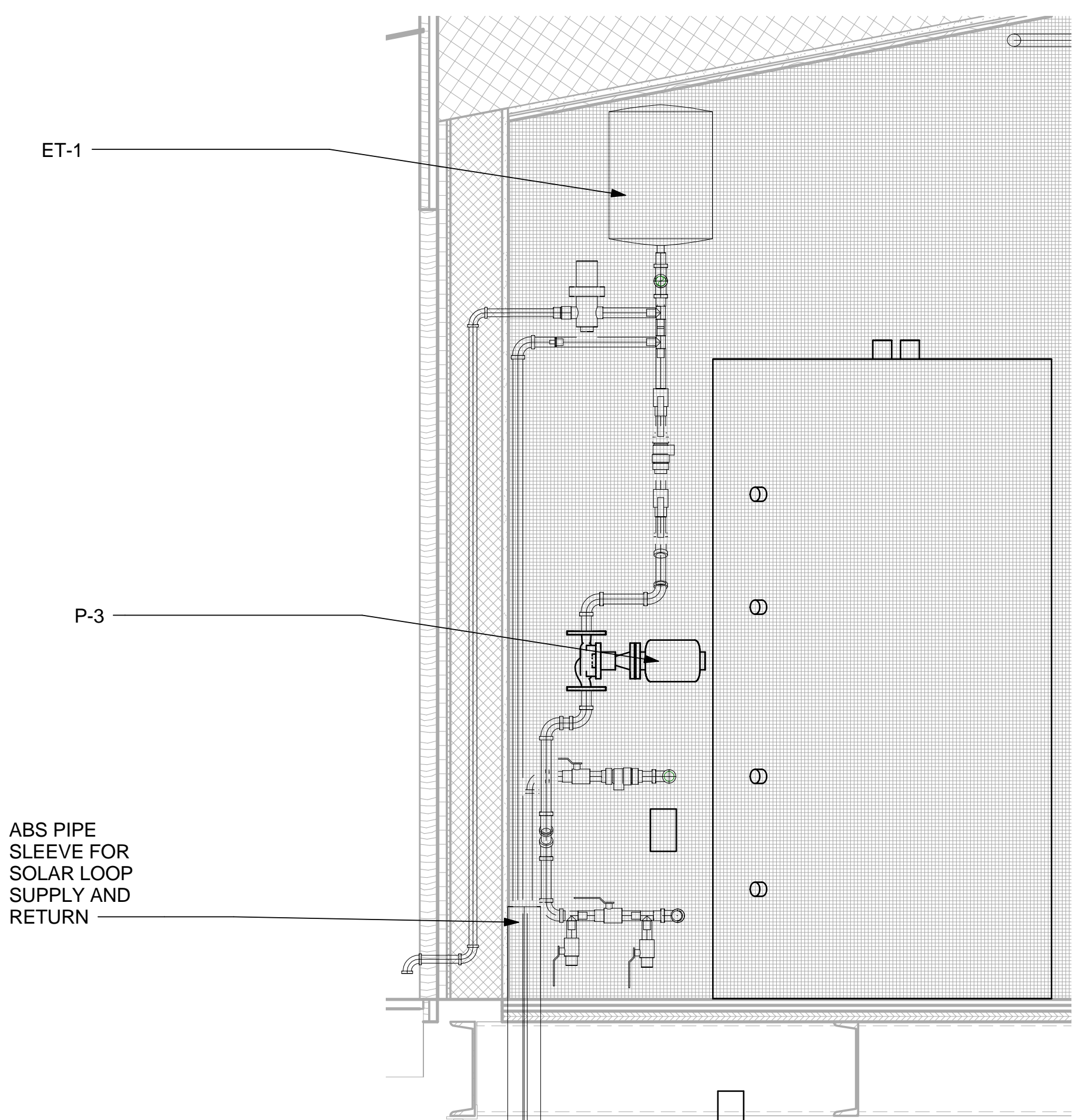
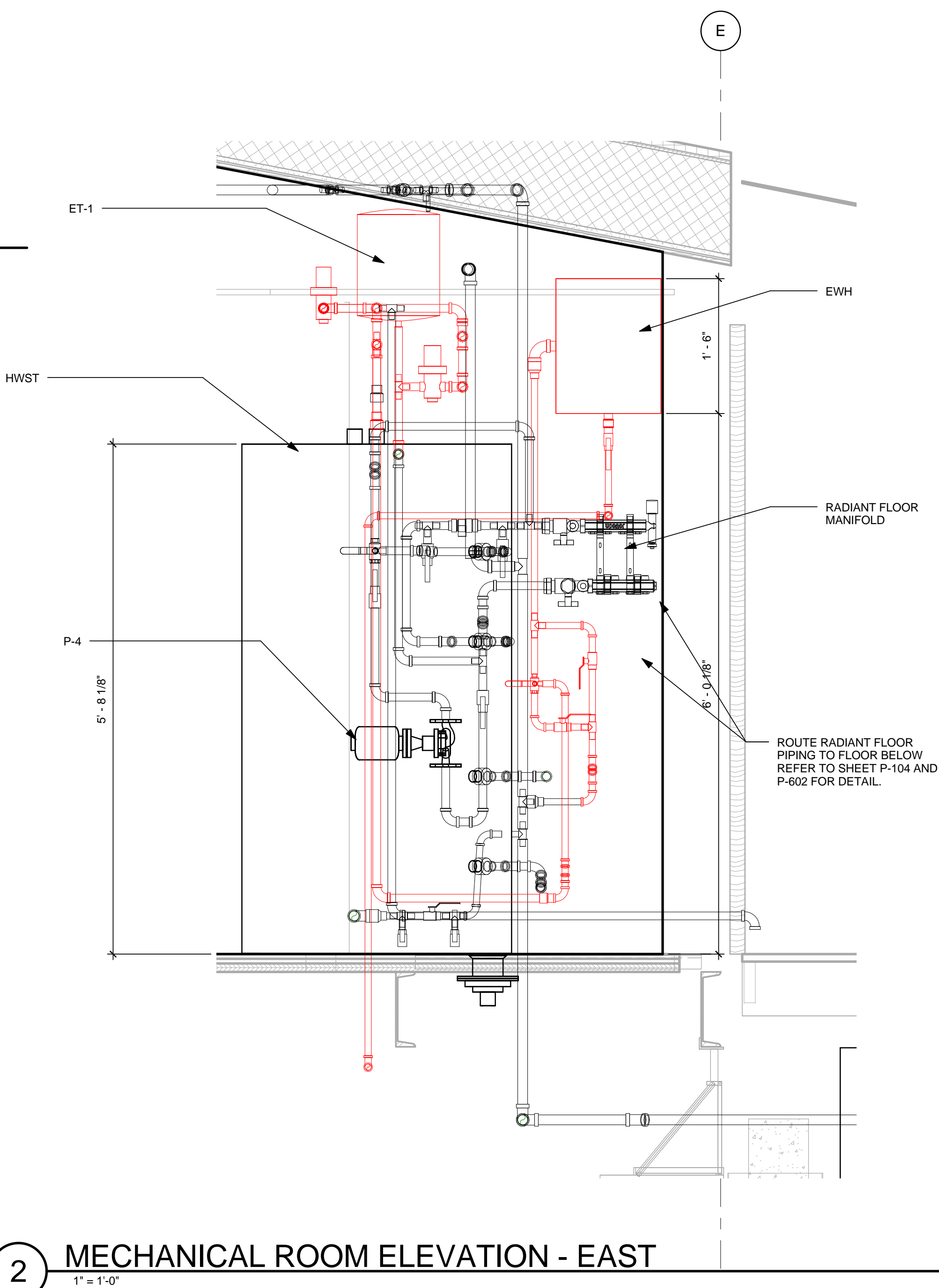
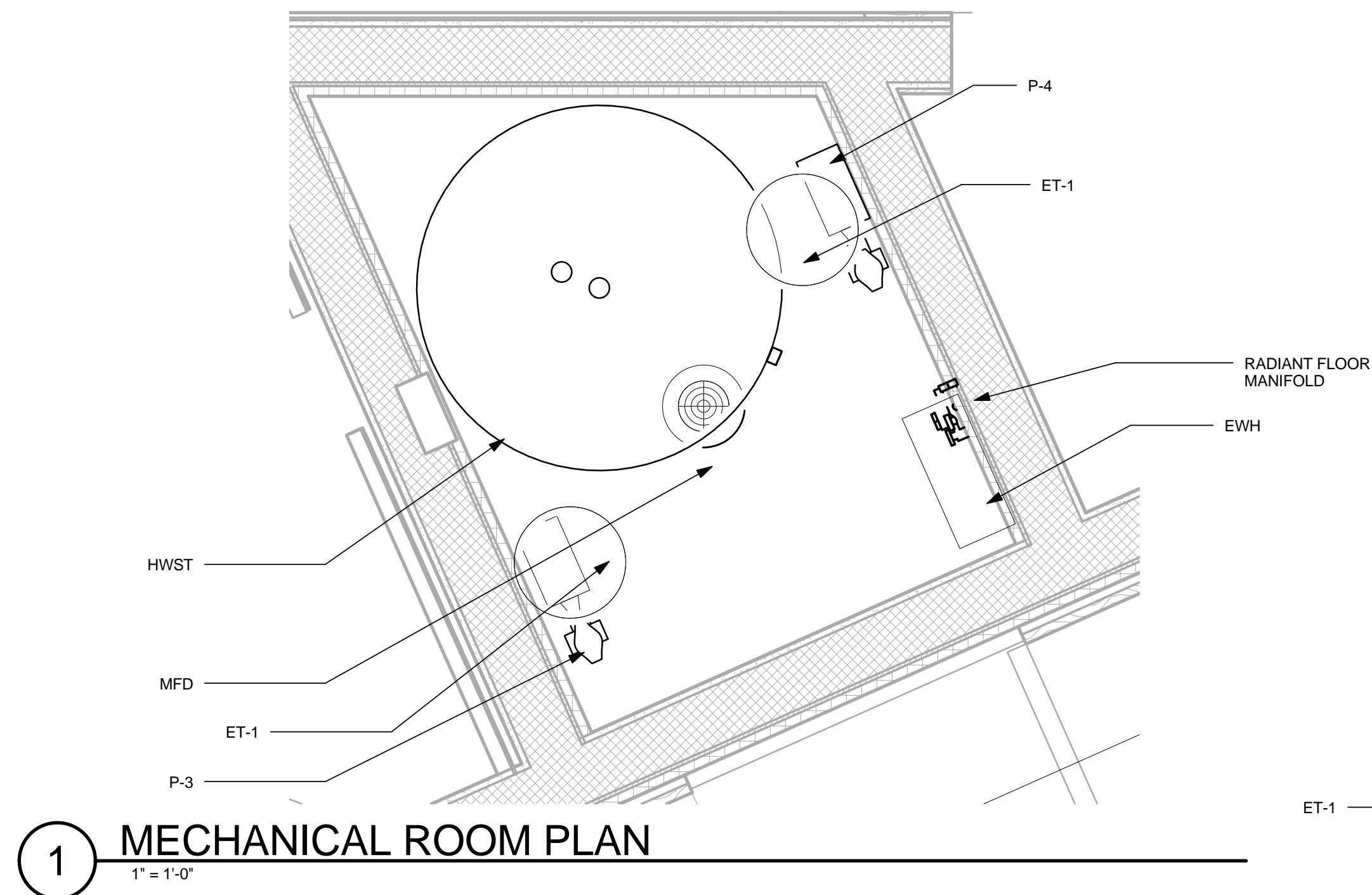
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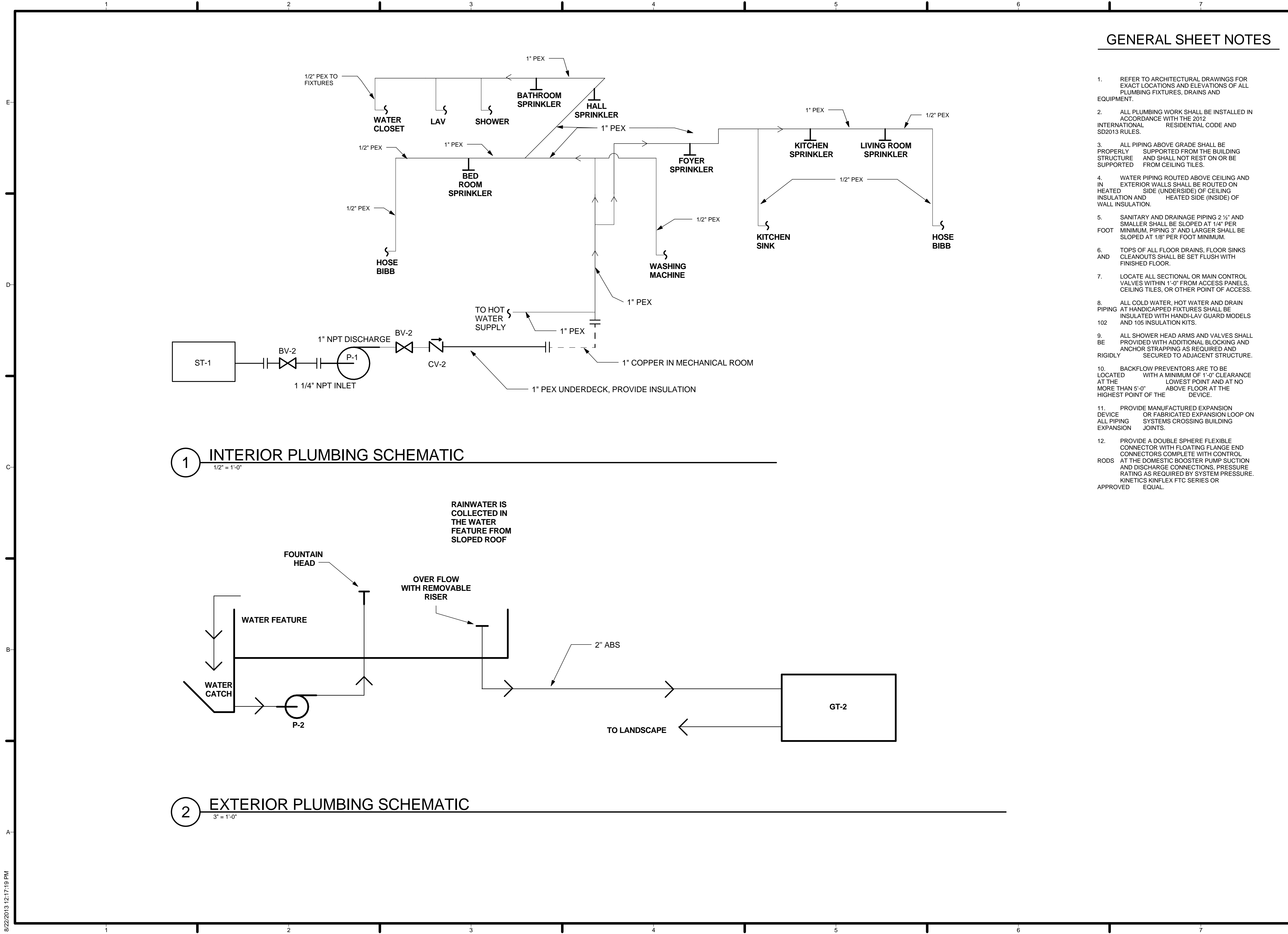
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MECHANICAL ROOM
PLAN & ELEVATIONS

P-401

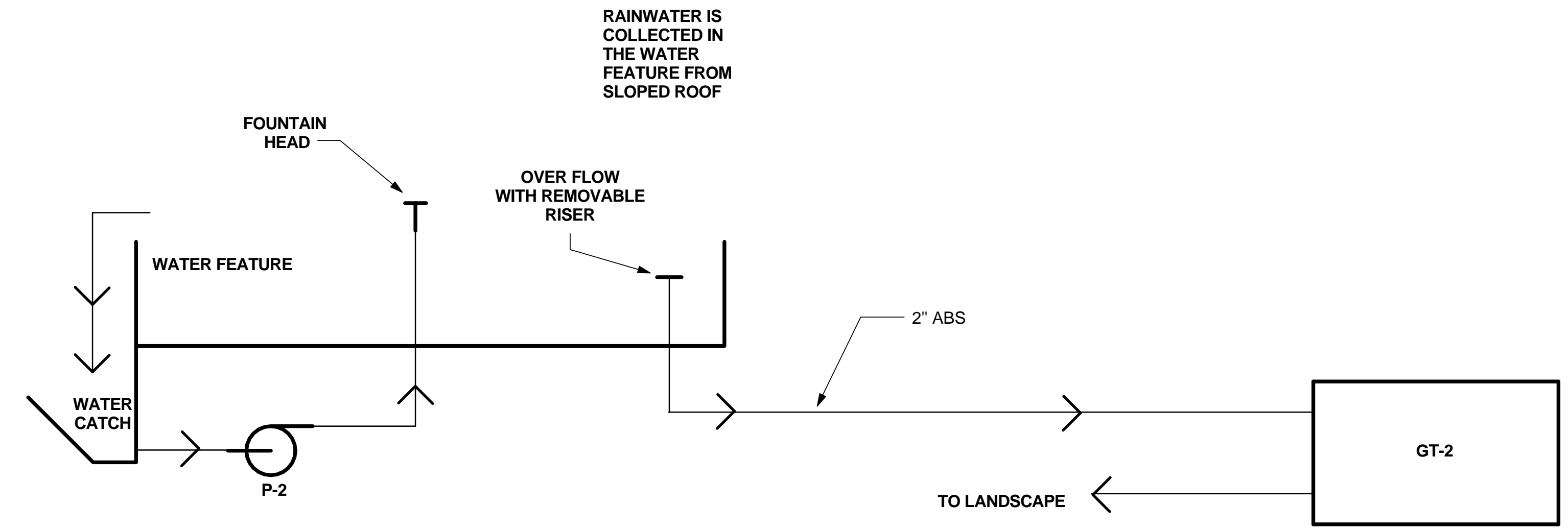




GENERAL SHEET NOTES

1. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS AND ELEVATIONS OF ALL PLUMBING FIXTURES, DRAINS AND EQUIPMENT.
2. ALL PLUMBING WORK SHALL BE INSTALLED IN ACCORDANCE WITH THE 2012 INTERNATIONAL RESIDENTIAL CODE AND SD2013 RULES.
3. ALL PIPING ABOVE GRADE SHALL BE PROPERLY SUPPORTED FROM THE BUILDING STRUCTURE AND SHALL NOT REST ON OR BE SUPPORTED FROM CEILING TILES.
4. WATER PIPING ROUTED ABOVE CEILING AND IN EXTERIOR WALLS SHALL BE ROUTED ON HEATED SIDE (UNDERSIDE) OF CEILING INSULATION AND HEATED SIDE (INSIDE) OF WALL INSULATION.
5. SANITARY AND DRAINAGE PIPING 2 1/2" AND SMALLER SHALL BE SLOPED AT 1/4" PER FOOT MINIMUM, PIPING 3" AND LARGER SHALL BE SLOPED AT 1/8" PER FOOT MINIMUM.
6. TOPS OF ALL FLOOR DRAINS, FLOOR SINKS AND CLEANOUTS SHALL BE SET FLUSH WITH FINISHED FLOOR.
7. LOCATE ALL SECTIONAL OR MAIN CONTROL VALVES WITHIN 1'-0" FROM ACCESS PANELS, CEILING TILES, OR OTHER POINT OF ACCESS.
8. ALL COLD WATER, HOT WATER AND DRAIN PIPING AT HANDICAPPED FIXTURES SHALL BE INSULATED WITH HAND-LAV GUARD MODELS AND 105 INSULATION KITS.
9. ALL SHOWER HEAD ARMS AND VALVES SHALL BE PROVIDED WITH ADDITIONAL BLOCKING AND ANCHOR STRAPPING AS REQUIRED AND RIGIDLY SECURED TO ADJACENT STRUCTURE.
10. BACKFLOW PREVENTORS ARE TO BE LOCATED WITH A MINIMUM OF 1'-0" CLEARANCE AT THE LOWEST POINT AND AT NO MORE THAN 5'-0" ABOVE FLOOR AT THE HIGHEST POINT OF THE DEVICE.
11. PROVIDE MANUFACTURED EXPANSION DEVICE OR FABRICATED EXPANSION LOOP ON ALL PIPING SYSTEMS CROSSING BUILDING EXPANSION JOINTS.
12. PROVIDE A DOUBLE SPHERE FLEXIBLE CONNECTOR WITH FLOATING FLANGE END CONNECTORS COMPLETE WITH CONTROL RODS AT THE DOMESTIC BOOSTER PUMP SUCTION AND DISCHARGE CONNECTIONS. PRESSURE RATING AS REQUIRED BY SYSTEM PRESSURE. KINETICS KINFLEX FTC SERIES OR APPROVED EQUAL.

1 INTERIOR PLUMBING SCHEMATIC
1/2" = 1'-0"



2 EXTERIOR PLUMBING SCHEMATIC
3" = 1'-0"



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CONSULTANTS
KIRSTEN NALLEY, PE, SE

SUBMISSIONS
100% CONSTRUCTION DOCUMENTATION 02.14.2013

REVISIONS

REV	DATE	DESCRIPTION
3	Date 3	AS-BUILT
1	21 MARCH 2013	NREL REVIEW COMMENTS

DATE: August 22, 2013
LOT NUMBER: 114
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PLUMBING
DIAGRAMS

P-601

8/22/2013 12:17:19 PM

GENERAL SHEET NOTES

1. ALL PIPING AND/OR TUBING NOT SPECIFIED AS SF OR PEX, WILL BE 3/4" COPPER WITH APPROPRIATE COPPER FITTINGS
2. ALL PIPING AND/OR COMPONENTS TO BE LOCATED IN MECHANICAL ROOM UNLESS OTHERWISE NOTED

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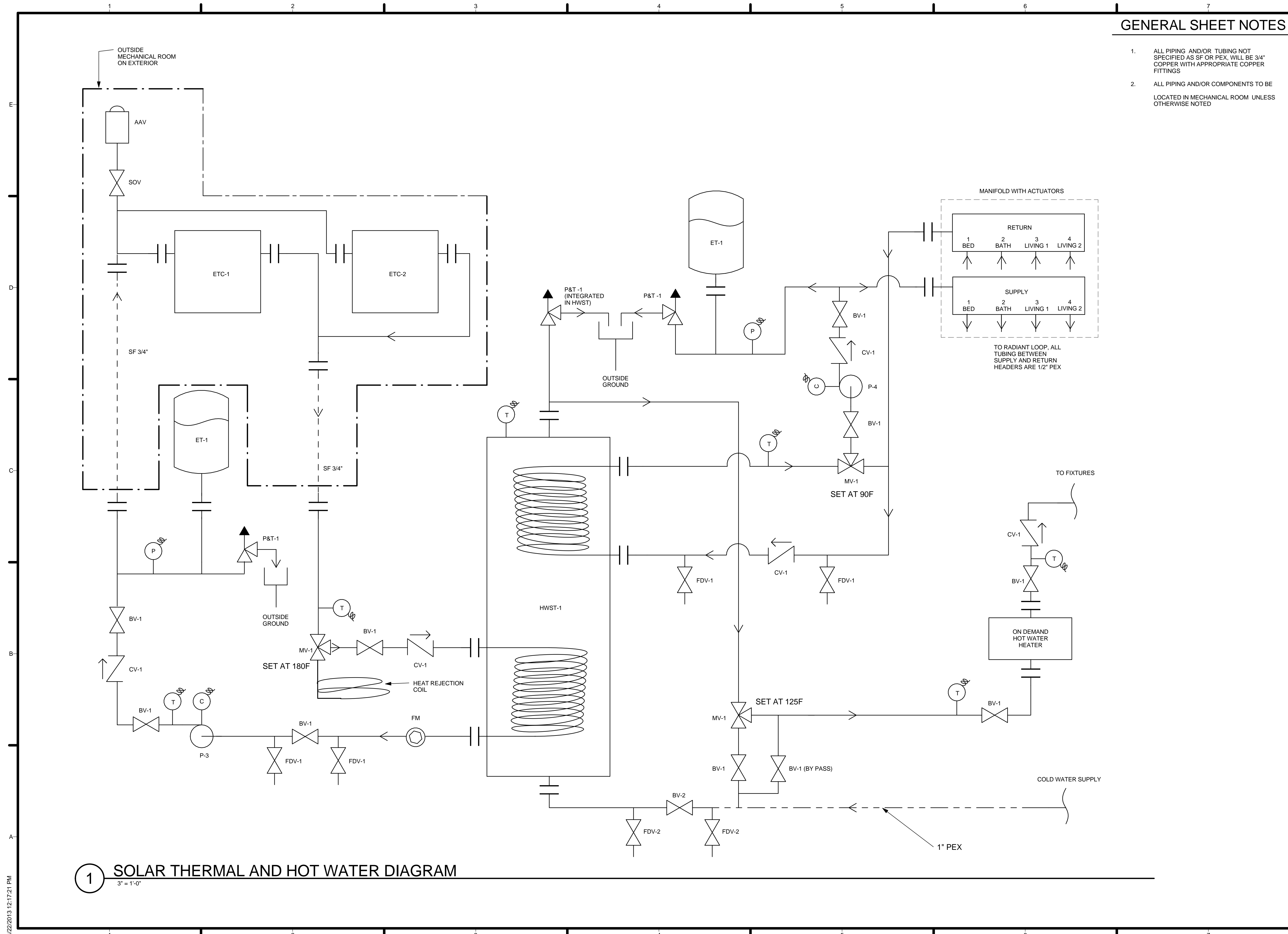
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SOLAR THERMAL AND
HOT WATER
DIAGRAM

P-602



1 SOLAR THERMAL AND HOT WATER DIAGRAM
3" = 1'-0"

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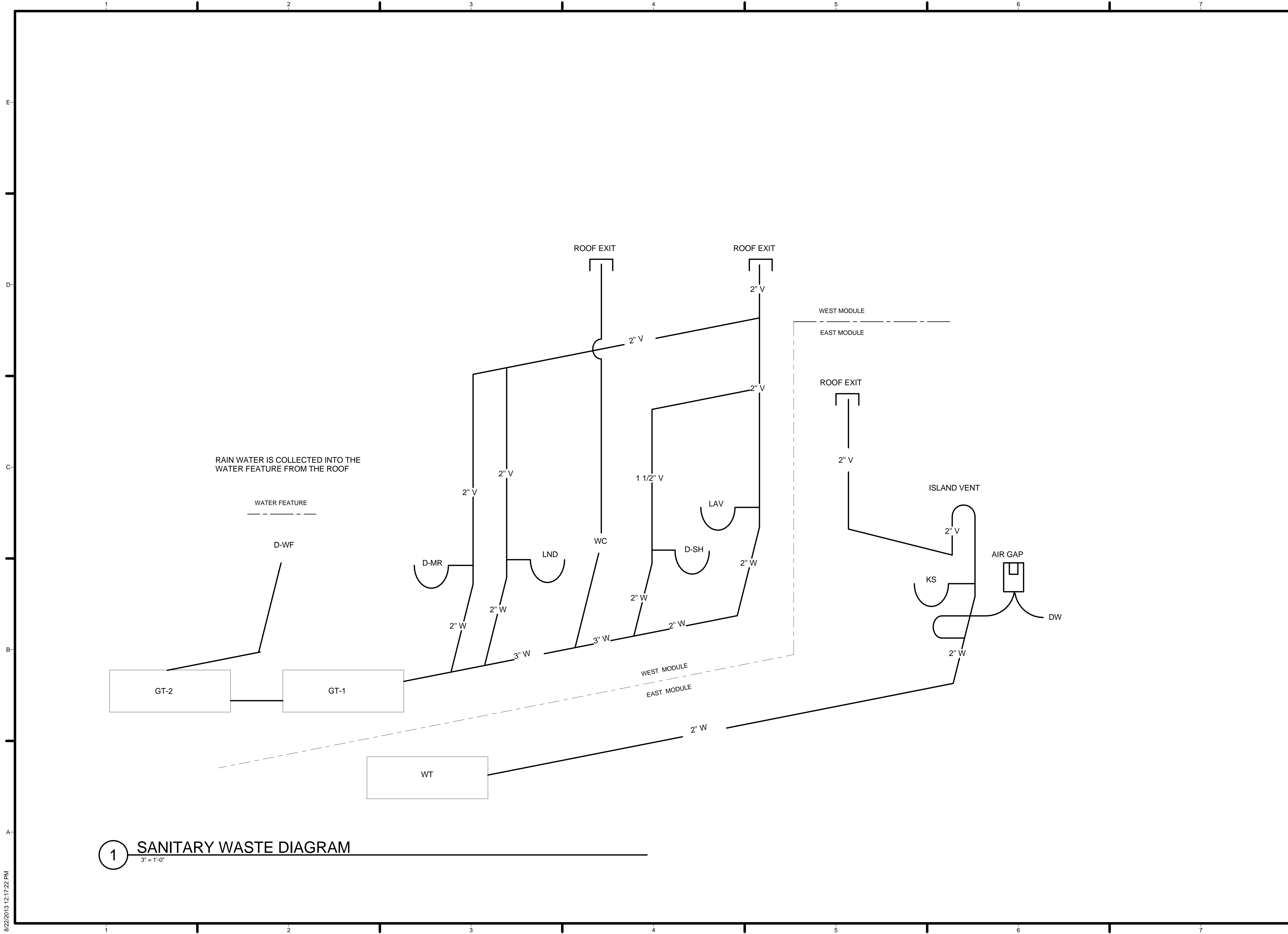
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SANITARY WASTE DIAGRAM

P-603



1 SANITARY WASTE DIAGRAM
3" = 1'-0"

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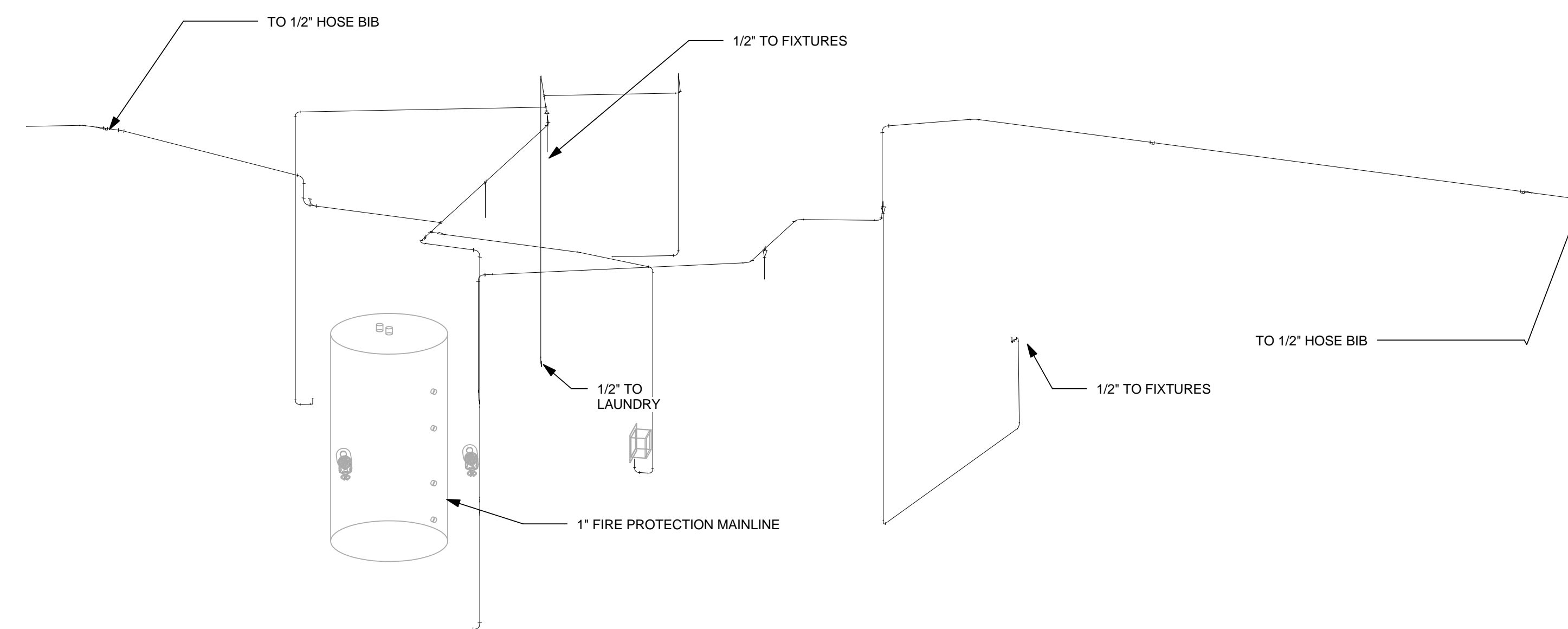
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1	21 MARCH 2013	NREL REVIEW COMMENTS

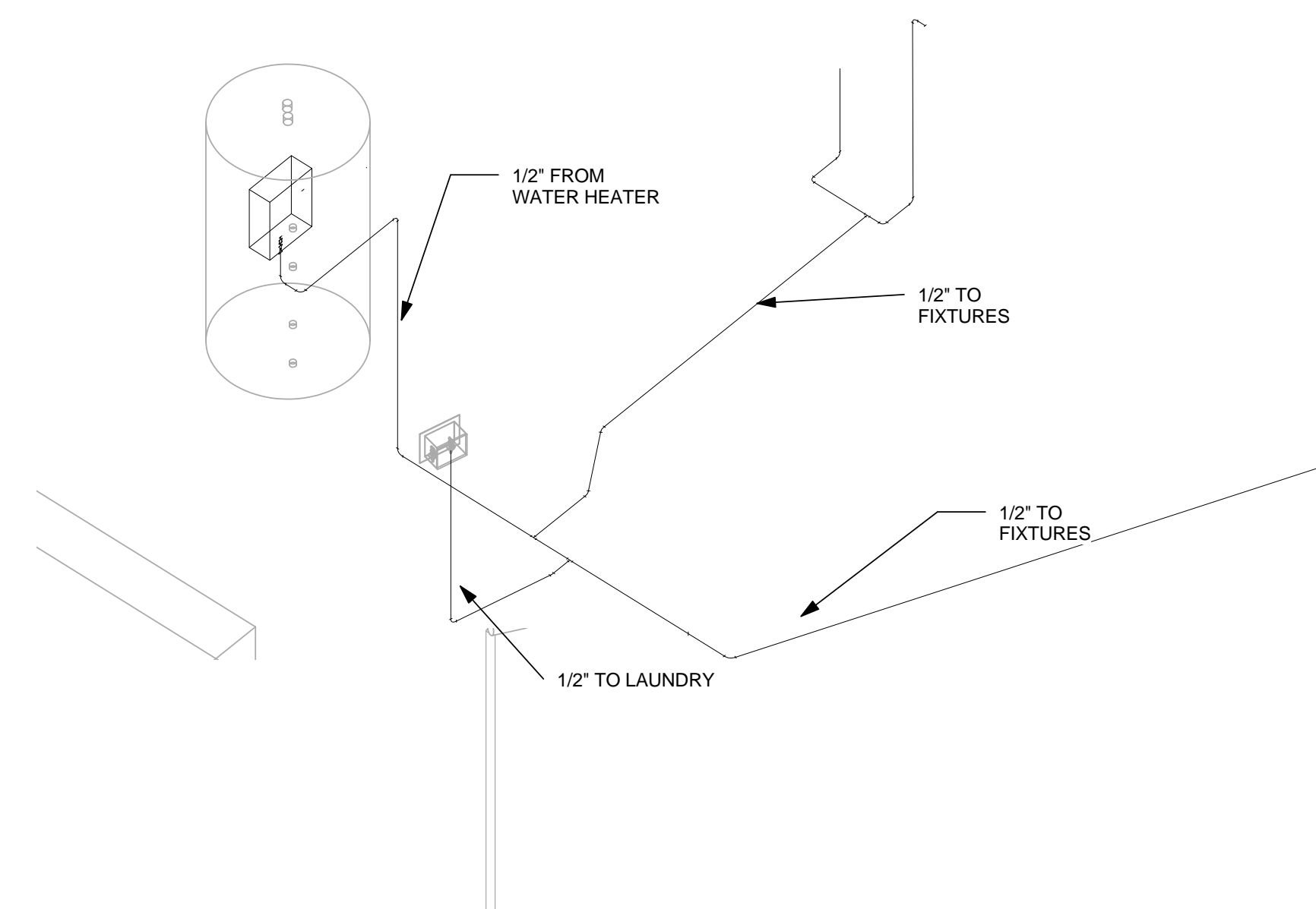
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PLUMBING
ISOMETRICS

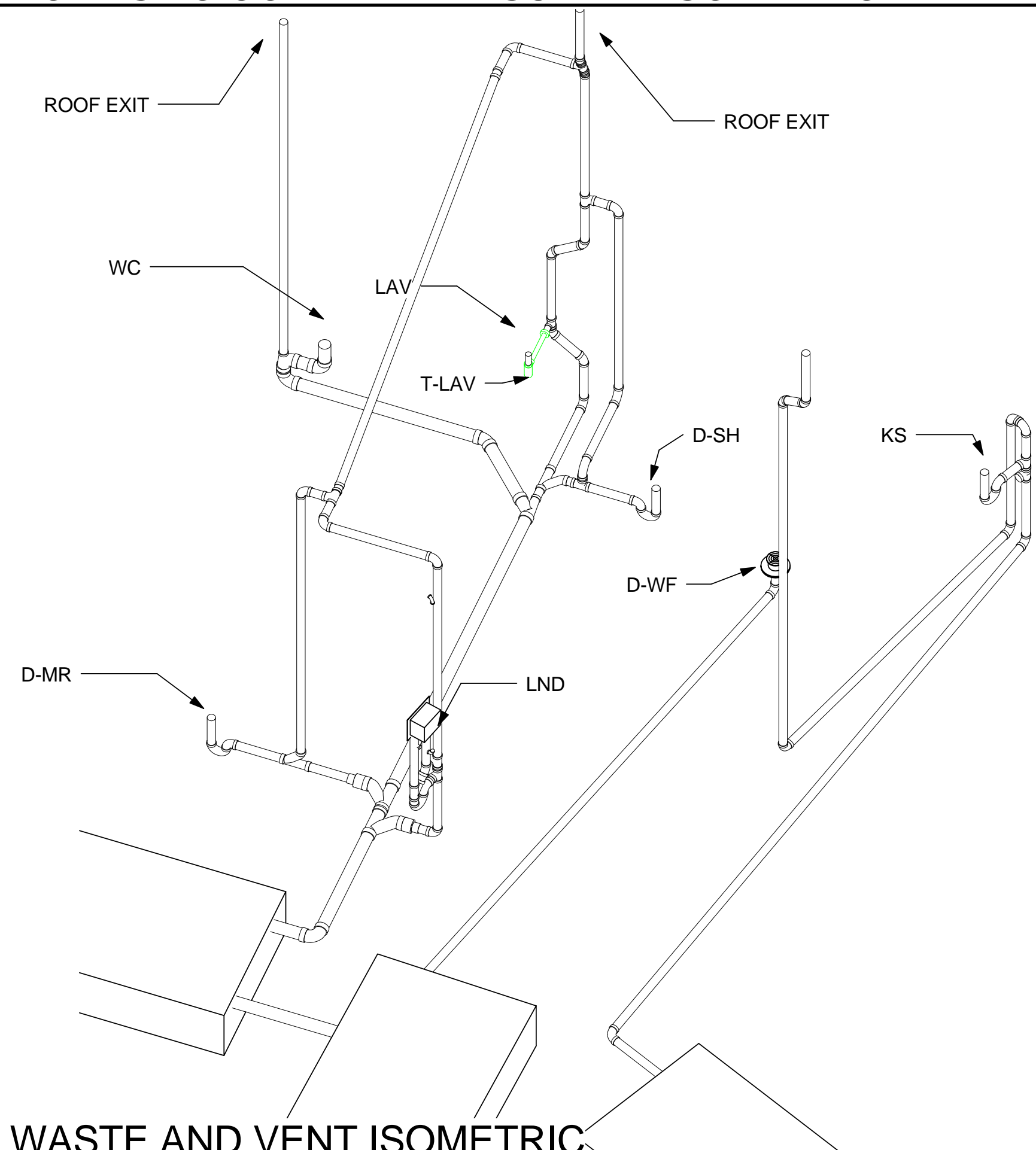
P-901



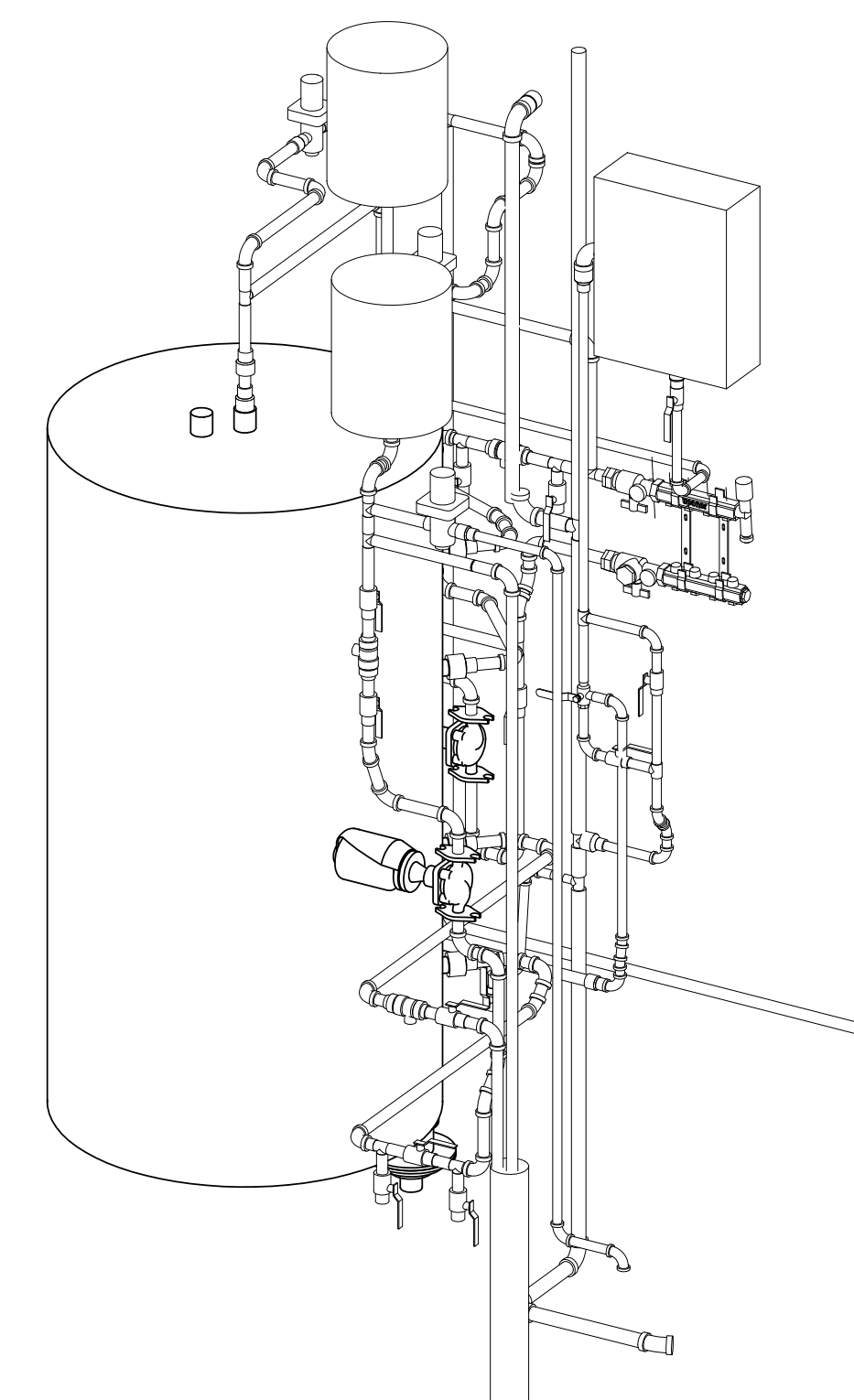
1 DOMESTIC COLD WATER SUPPLY ISOMETRIC



2 DOMESTIC HOT WATER SUPPLY ISOMETRIC



3 WASTE AND VENT ISOMETRIC



4 MECHANICAL ROOM ISOMETRIC

GENERAL SHEET NOTES

MECHANICAL EQUIPMENT SCHEDULE			
MARK	#	MANUFACTURER	MODEL
BE	1	BROAN	744 RECESSED FAN/LIGHT
ERV	1	PANASONIC	FV04VE1
FCU1	1	Mitsubishi Electric	MSZ-FE09NA-1
FCU2	1	Mitsubishi Electric	MSZ-FE09NA-1
KE	1	BOSCH	DHL755BUC
OU-1	1	Mitsubishi Electric	FE09NA
OU-2	1	Mitsubishi Electric	FE09NA

- GENERAL NOTES SHALL APPLY TO ALL WORK SHOWN
- VERIFY ALL MEASUREMENTS TO PROPERLY LOCATE COMPONENTS
- ALL NOTES COINCIDE WITH SIMILAR DRAWINGS
- COORDINATE ALL WORK AND PLACEMENT OF COMPONENTS WITH OTHER TRADES
- CONTRACTOR SHALL FOLLOW EQUIPMENT MANUFACTURERS INSTRUCTIONS FOR HANDLING AND INSTALLATION
- CONTRACTOR SHALL COORDINATE AND PERFORM NECESSARY MODIFICATIONS TO PROVIDE A COMPLETE INSTALLATION. MODIFICATIONS INCLUDE BUT ARE NOT LIMITED TO STRUCTURAL, ELECTRICAL, ARCHITECTURAL, PLUMBING, PIPING AND DUCTWORK
- ACCESS PANELS SHALL BE FABRICATED TO ALLOW FOR EASY ACCESS AT SECTIONED CONNECTIONS
- ERV INTAKE SHALL HAVE APPROVED GUARD
- LOCATE AND ORIENT ERV TO PROVIDE THE SHORTEST DUCT CONNECTIONS
- MOUNT UNITS TO STRUCTURALLY SUITABLE SURFACE
- PROVIDE SERVICE CLEARANCES AS INDICATED ON THE PLANES
- SEAL REFRIGERANT LINES WITH APPROVED SPRAY POLYURETHANE FOAM
- UTILIZE FACTORY SUPPLIED VIBRATION ISOLATION KIT FOLLOWING INSTRUCTIONS
- ALL DUCTWORK SHALL BE DESIGNED, CONSTRUCTED, SUPPORTED AND SEALED IN ACCORDANCE WITH SMACNA HVAC DUCT CONSTRUCTION STANDARDS AND PRESSURE CLASSIFICATIONS.
- AT A MINIMUM ALL DUCT RUNS TO THE OUTDOORS SHALL BE THERMALLY INSULATED AT LEVELS APPROPRIATE TO THE LOCAL CLIMATE. A CONTINUOUS VAPOR BARRIER SHALL ALSO BE PROVIDED ON WARM SURFACE OF THE INSULATION
- MAXIMUM LENGTH FOR REFRIGERANT LINE IS 65 FEET

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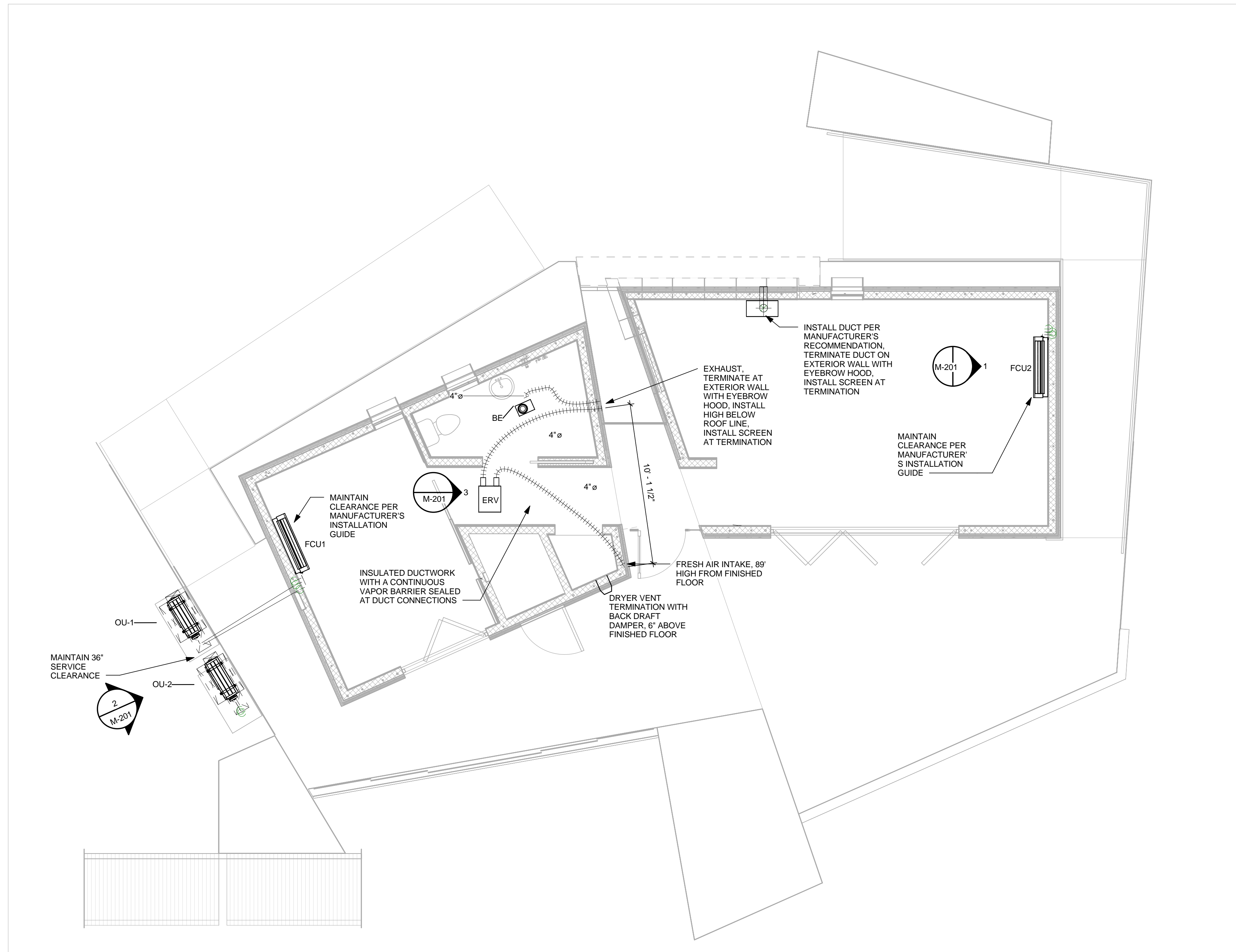
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HVAC PLAN

M-101



1 MECHANICAL LAYOUT
1/4" = 1'-0"

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GENERAL SHEET NOTES

- REFER TO P-602 FOR PIPING DIAGRAM
- INSTALL JOIST TRAK PER CONSTRUCTION SPECIFICATION



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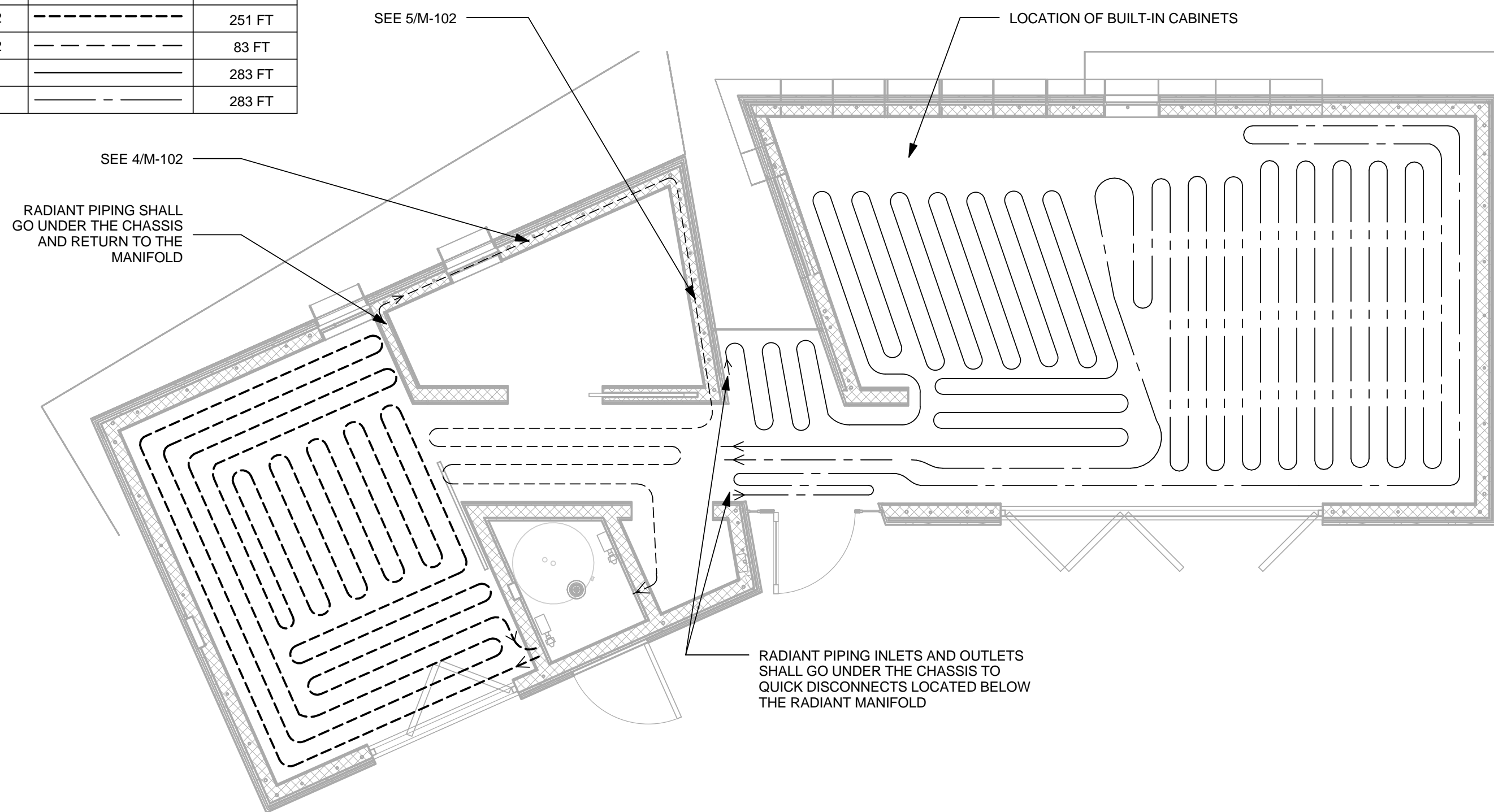
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RADIANT HEATING PLAN

M-102

LOOP	ROOM	ZONE	LINE TYPE	LENGTH
1	BEDROOM	2	-----	251 FT
2	BATHROOM	2	-----	83 FT
3	LIVING ROOM 1	1	-----	283 FT
4	LIVING ROOM 2	1	-----	283 FT

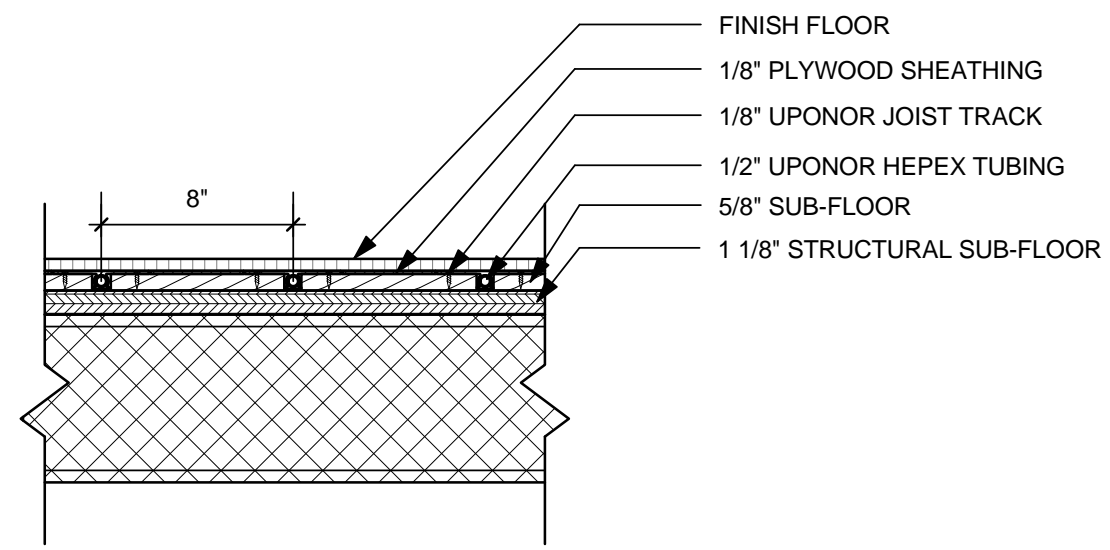


ZONE	TOTAL FLOW RATE	MAXIMUM HEAD LOSS	AREA SERVICED	TOTAL RADIANT LOAD
1	0.6 GPM	1.2FT(H2O)	LIVING ROOM AREA	2651 BTU/HR
2	0.6 GPM	2.1FT(H2O)	BEDROOM/BATHROOM	1212 BTU/HR

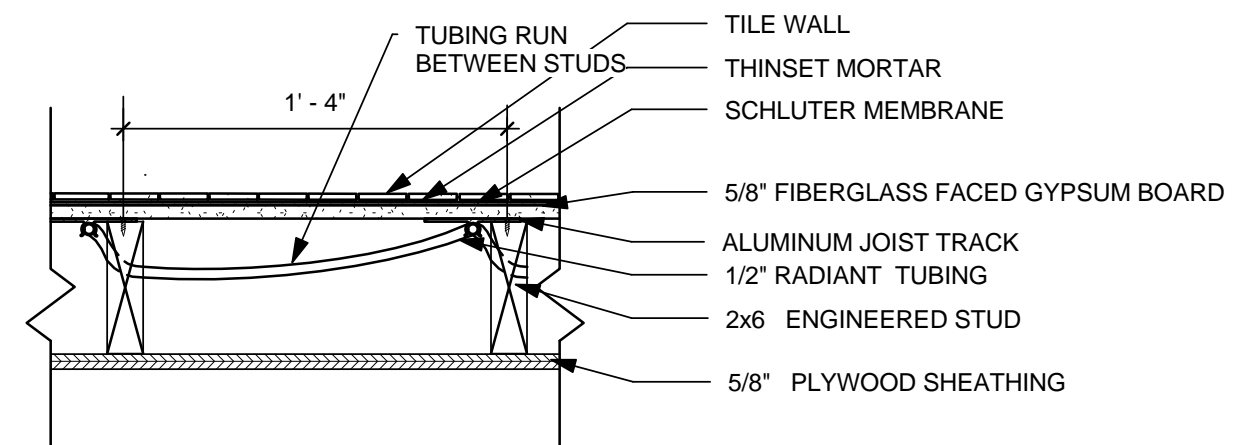
TOTAL AREA SERVICED: 546 SQFT
TOTAL MANIFOLDS: 1
TOTAL CIRCUITS: 4
TOTAL FLOWRATE: 1.2 GPM
MAXIMUM HEAD LOSS: 2.3 FT
CONTROLS: TEMPERING VALVE
MAXIMUM WATER TEMPERATURE: 86F



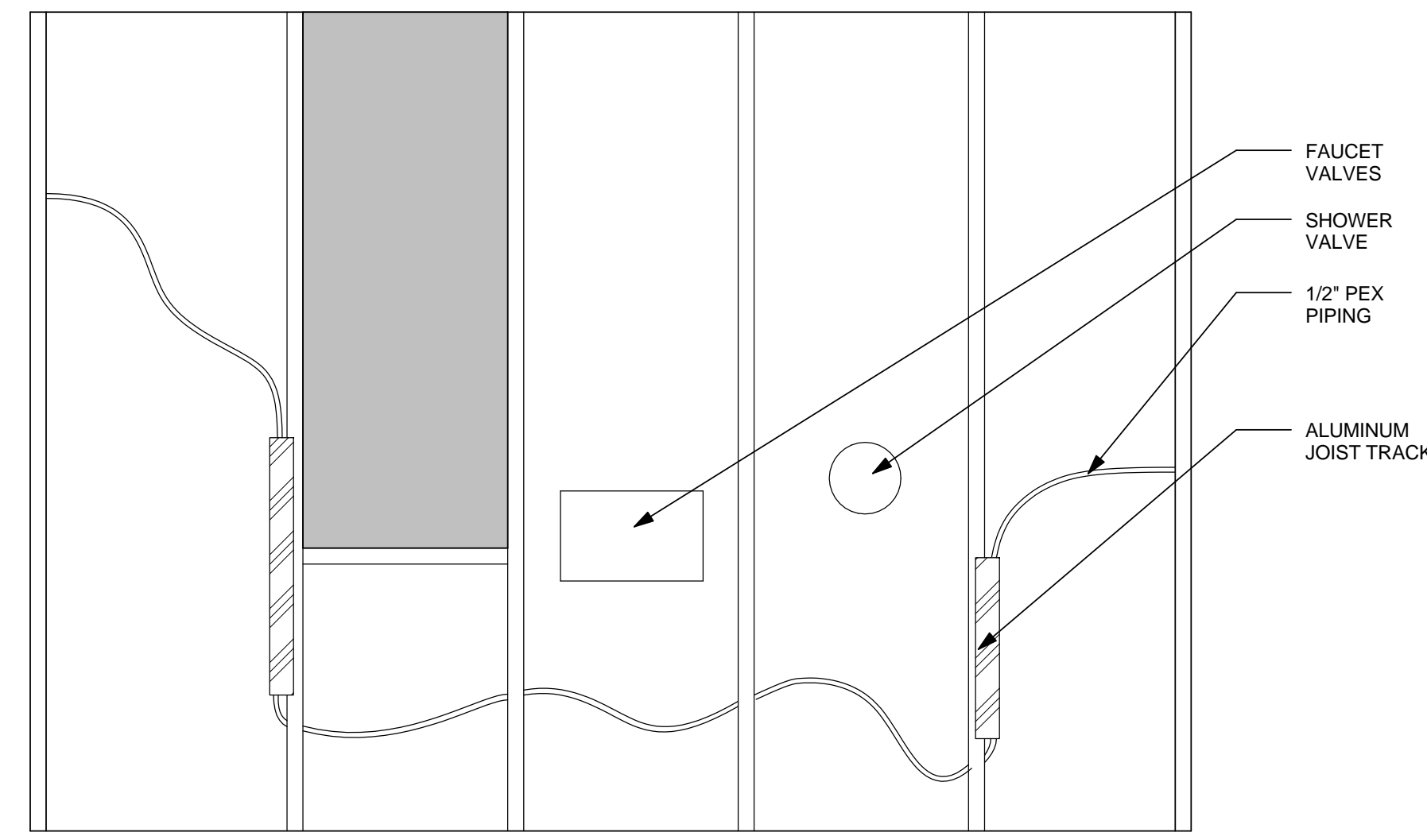
1 RADIANT FLOOR LAYOUT
1/4" = 1'-0"



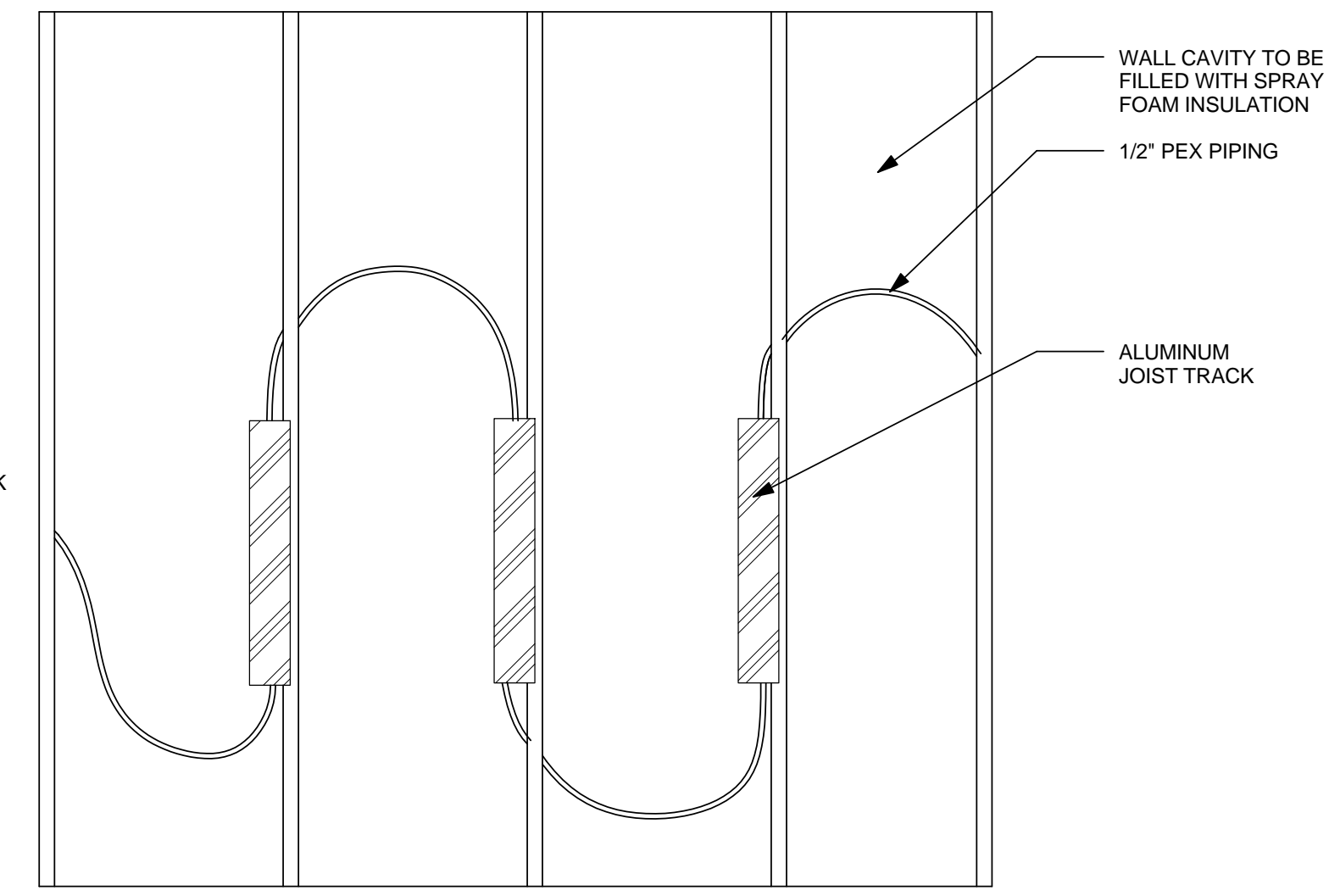
2 TYPICAL RADIANT FLOOR DETAIL
1 1/2" = 1'-0"



3 BATHROOM WALL DETAIL
1 1/2" = 1'-0"



4 BATHROOM RADIANT NORTH WALL
3/4" = 1'-0"



5 BATHROOM RADIANT EAST WALL
3/4" = 1'-0"

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GENERAL SHEET NOTES

1. VERIFY ALL MEASUREMENTS TO PROPERLY LOCATE COMPONENTS.
2. ALL NOTES COINCIDE WITH SIMILAR DRAWINGS COORDINATE ALL WORK AND PLACEMENT OF COMPONENTS WITH OTHER TRADES
3. CONTRACTOR SHALL FOLLOW EQUIPMENT MANUFACTURER'S INSTRUCTIONS FOR HANDLING AND INSTALLATION
4. CONTRACTOR SHALL COORDINATE AND PERFORM NECESSARY MODIFICATIONS TO PROVIDE A COMPLETE INSTALLATION



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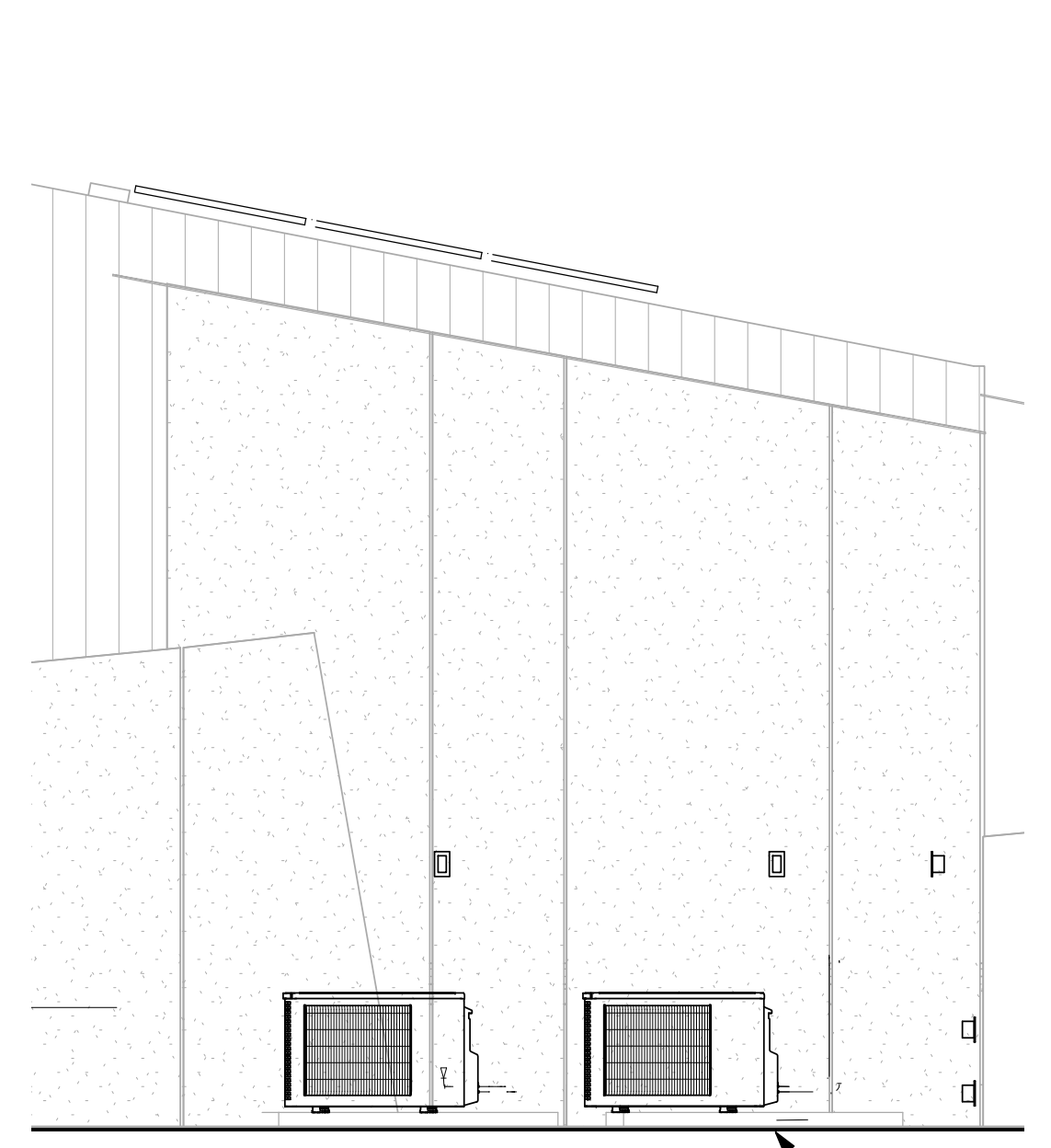
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HVAC ELEVATIONS

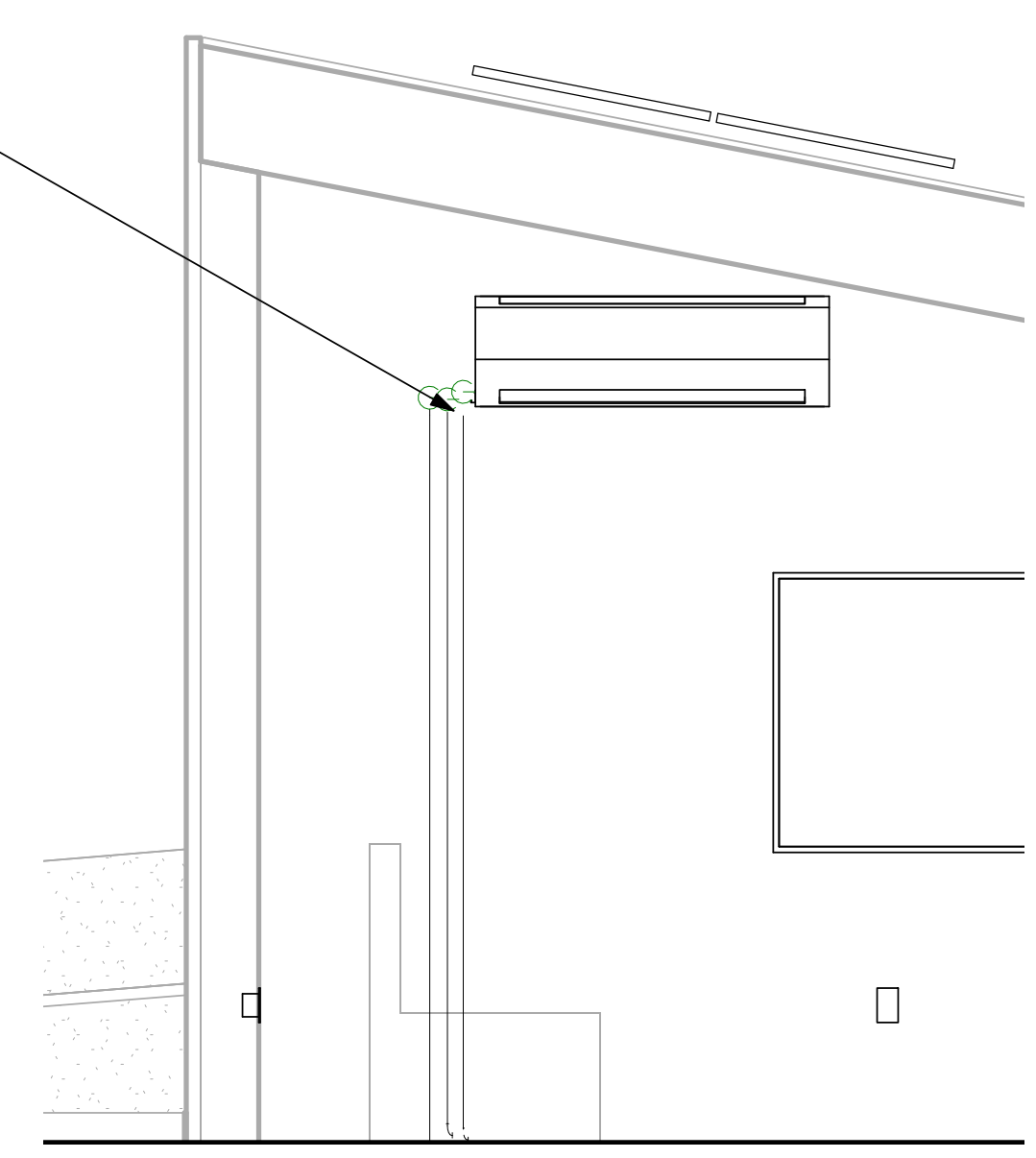
M-201

MINI-SPLIT SYSTEM SPECIFICATIONS:
MANUFACTURE: MITSUBISHI ELECTRIC
INDOOR UNIT: MSZ-FE09NA
 MCA: 1A
 FAN MOTOR: 0.76 F.L.A
 AIRFLOW
 COOLING(LO-MED-HI-POWERFUL): 162-226-339-381 DRY CFM
 144-202-307-343 WET CFM
 HEATING(LO-MED-HI-POWERFUL): 166-240-367-381 DRY CFM
 SOUND PRESSURE LEVEL
 COOLING(LO-MED-HI-POWERFUL): 22-31-39-42 DBA
 HEATING(LO-MED-HI-POWERFUL): 22-31-39-42 DBA
OUTDOOR UNIT: MUZ-FE09NA
 MCA: 12A
 FAN MOTOR: 0.56 F.L.A.
 SOUND PRESSURE LEVEL:
 COOLING: 48DBA
 HEATING: 49DBA
 REFRIGERANT TYPE: R410A
 REFRIGERANT PIPE SIZE O.D.
 VAPOR SIDE: 3/8"
 LIQUID SIDE: 1/4"
 MAX. REFRIGERANT PIPE LENGTH: 65'
 MAX. REFRIGERANT PIPE HEIGHT DIFFERENCE: 40'
 CONNECTION METHOD: FLARED
COOLING:
 RATED CAPACITY: 9000 BTU/HR
 MINIMUM CAPACITY: 2800 BTU/HR
 SEER: 26 BTU/H/W
 TOTAL INPUT: 580W
HEATING AT 47F:
 RATED CAPACITY: 10,900 BTU/HR
 MINIMUM CAPACITY: 3000 BTU/HR
 HSPF: 10BTU/H/W
 TOTAL INPUT: 710W
HEATING AT 17F:
 RATED CAPACITY: 6,700 BTU/HR
 RATED TOTAL INPUT: 650W
 MAXIMUM CAPACITY: 12,500 BTU/HR
 MAXIMUM TOTAL INPUT: 1730W
HEATING AT 5F:
 MAXIMUM CAPACITY: 10,900 BTU/HR
ELECTRICAL REQUIREMENTS:
 POWER SUPPLY: 208/230,1 PHASE, 60HZ
 BREAKER SIZE: 15A



2 MINISPLIT OUTDOOR UNIT
 3/8" = 1'-0"

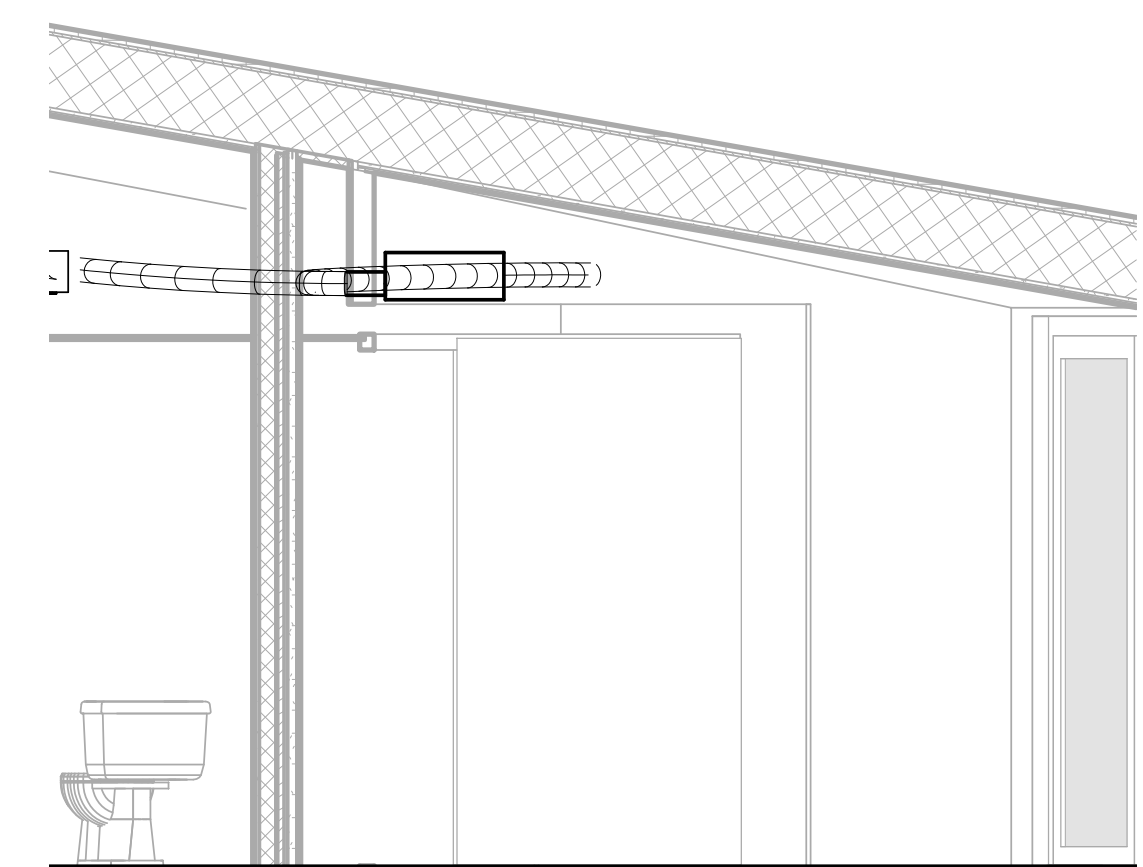
MAINTAIN CLEARANCE PER
 MANUFACTURE'S
 INSTALLATION GUIDE



1 MINISPLIT INDOOR UNIT
 1/2" = 1'-0"

INSTALL PADS UNDERNEATH UNITS

ERV SPECIFICATIONS:
MANUFACTURE: PANASONIC
 MODEL: FV-04VE1
 AIR DIRECTION: EXHAUST AND SUPPLY
 ELECTRICAL REQUIREMENTS: 120V, 60HZ
 DUCT: 4" X2
HIGH SPEED:
 GROSS AIR DELIVER AT 0.1"WG: EXHAUST 40CFM, SUPPLY 30CFM
 POWER CONSUMPTION: 24W
LOW SPEED:
 GROSS AIR DELIVER AT 0.1"WG: EXHAUST 20CFM, SUPPLY 20CFM
 POWER CONSUMPTION: 21W



3 ENERGY RECOVERY VENTILATOR
 3/8" = 1'-0"

EXHAUST FAN SPECIFICATIONS:

BATH EXHAUST:
 MANUFACTURE: BROAN NUTONE
 MODEL: 744LED
 STATIC PRESSURE: 0.1
 AIR DELIVERY: 70CFM
 ELECTRICAL CHARACTERISTICS: 120V, 1.2A, 125W
 FAN WATTS: 28.2 W
 SOUND LEVEL: 1.5 SONES
 DUCT: 4" ROUND

KITCHEN EXHAUST:
 MANUFACTURE: BOSCH
 MODEL: DHL755BUC
 MAXIMUM AIR DELIVERY: 440CFM
 ELECTRICAL CHARACTERISTICS: 120V, 270W

ELECTRICAL SERVICE FEEDER CALCULATIONS

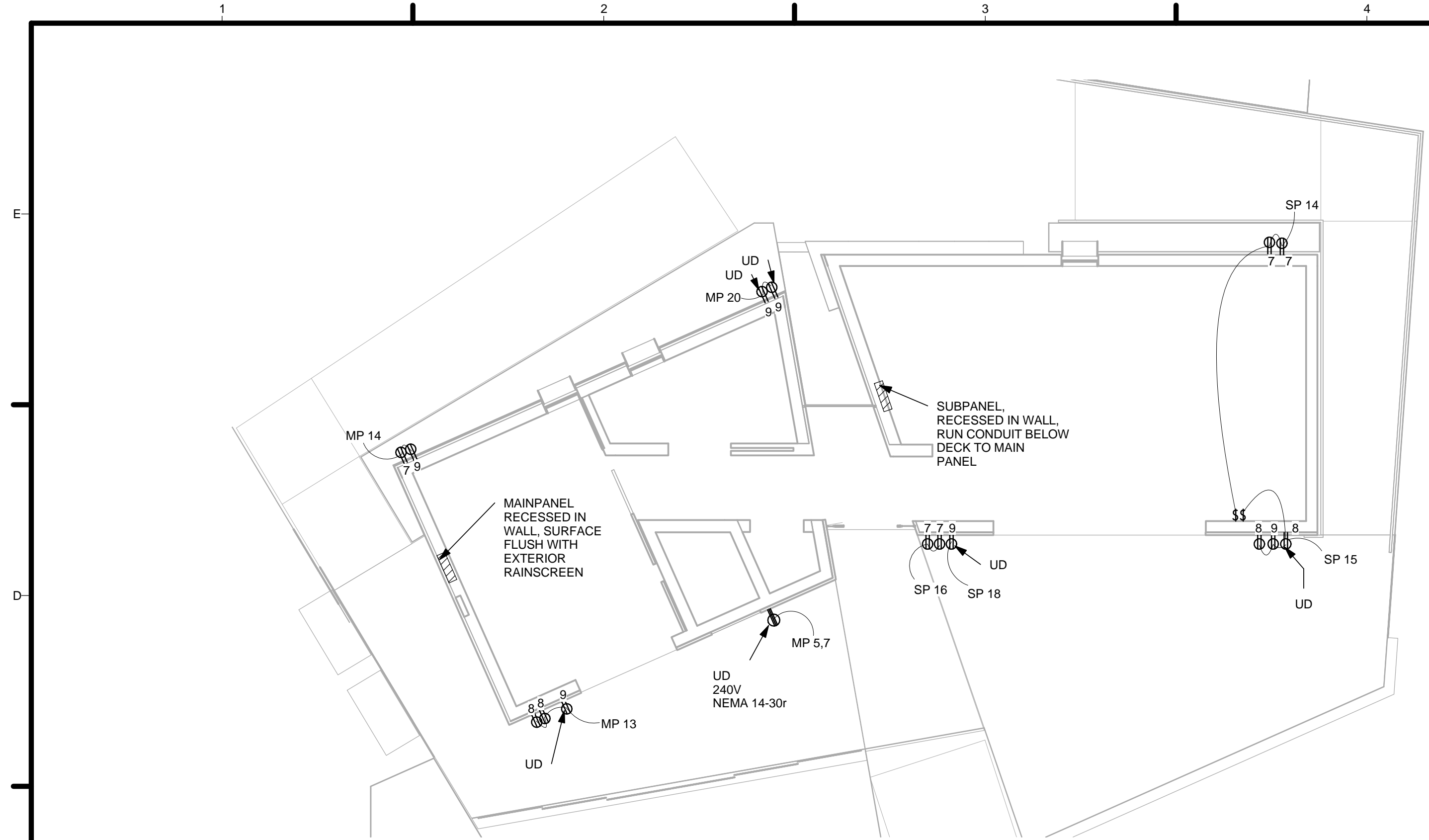
MAIN SERVICE PANEL									
	COMMENT	RATING		VOLTAGE	AMPACITY		DEMAND FACTOR		
GENERAL LIGHTING AND RECEPTACLES (NEC 2210.11C)									
GENERAL LIGHTING AND RECEPTACLES (NEC 220.10)	3VA*750 SQ. FT.	2025	VA	120 V	2.95	A	35%	708.75	VA
SMALL APPLIANCE CIRCUITS (NEC 220.52)	2 * 1500 VA	3000	VA	120 V	12.50	A	100%	3000	VA
LAUNDRY (NEC 220.52)	1 * 1500 VA	1500	VA	120 V	2.19	A	35%	525	VA
SUBTOTAL					17.64	A		4233.75	VA
COOKING									
STOVE (NEC 220.55)		3600	VA	240 V	11.25	A	75%	2700	VA
OVEN/MICROWAVE (NEC 220.55)		2800	VA	240 V	8.75	A	75%	2100	VA
SUBTOTAL					20.00	A		4800	VA
FIXED APPLIANCES									
WATER HEATER (NEC 220.53)		13000	VA	240 V	40.63	A	75%	9750	VA
DISHWASHER (NEC 220.53)		1440	VA	120 V	4.50	A	75%	1080	VA
WASHING MACHINE (NEC 220.53)		2400	VA	240 V	7.50	A	75%	1800	VA
RANGEHOOD / EXHAUST FAN (NEC 220.53)		348	VA	120 V	1.09	A	75%	261	VA
ENERGY RECOVERY VENTILATOR (NEC 220.53)		25	VA	120 V	0.08	A	75%	18.75	VA
SPRINKLER PUMP (NEC 220.53)		680	VA	240 V	2.13	A	75%	510	VA
REFRIGERATOR (NEC 220.53)		450	VA	120 V	1.41	A	75%	337.5	VA
SUBTOTAL					57.32	A		13757.3	VA
DRYER (W=VA FROM NEC 220.54)		7200	VA	240 V	30.00	A	100%	7200	VA
HVAC COMPRESSOR AND UNITS (NEC 220.82C)		1500	VA	240 V	6.25	A	100%	1500	VA
MOTORS (NEC 430.24)		2016	VA	240 V	2.10	A	25%	504	VA
SUBTOTAL					38.35	A		9204	VA
SUBPANEL									
	COMMENT	RATING		VOLTAGE	AMPACITY		DEMAND FACTOR		
ALL CALC INCLUDED IN MAIN PANEL, THIS IS A BREAK DOWN									
INDUCTION RANGE		3600	VA	240 V	11.25	A	75%	2700	VA
OVEN/MICROWAVE		2800	VA	240 V	8.75	A	75%	2100	VA
RANGEHOOD		348	VA	120 V	1.09	A	75%	261	VA
REFRIGERATOR		450	VA	120 V	1.41	A	75%	337.5	VA
DISHWASHER		1440	VA	120 V	4.50	A	75%	1080	VA
SMALL APPLIANCE CIRCUITS X2		3000	VA	120 V	12.50	A	100%	3000	VA
SUBTOTAL					39.49	A		9478.5	VA
TOTAL VA (Main Panel with Sub Panel included)									
								25792	VA
TOTAL CURRENT (Main Panel with Sub Panel included)									
					133.31	A			
NEUTRAL CONDUCTOR									
	COMMENT	RATING		VOLTAGE	AMPACITY		DEMAND FACTOR		
GENERAL LIGHTING AND RECEPTICLES (NEC 220.61(A))		4233.75	VA	120 V	17.64	A	100%	4233.75	VA
COOKING (NEC 220.61(B))		6400	VA	240 V	18.67	A	70%	4480	VA
FIXED APPLIANCES (NEC 220.61(A))		13757.3	VA	240 V	57.32	A	100%	13757.3	VA
DRYER (NEC 220.619(B))		7200	VA	240 V	21.00	A	70%	5040	VA
TOTAL					114.63	A		27511	VA

ELECTRICAL NOTES AND SPECIFICATIONS

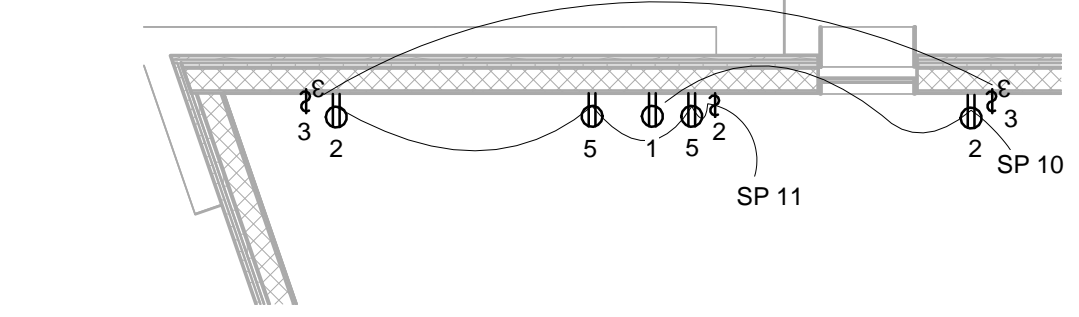
- INSTALL ALL ELECTRICAL WORK COVERED BY THE BELOW SPECIFICATIONS AND APPROVED DRAWINGS. PROVIDE ALL MATERIAL, LABOR, TRANSPORTATION, TOOLS, SUPERVISION, ETC., NECESSARY TO COMPLETE THE TOTAL ELECTRICAL JOB. ALL ITEMS NOT SPECIFICALLY MENTIONED HEREIN WHICH ARE OBVIOUSLY NECESSARY TO MAKE A COMPLETE WORKING INSTALLATION SHALL BE PROVIDED.
- ELECTRICAL COMPONENTS INCLUDING BUT NOT LIMITED TO CONDUCTOR SIZE, OVERCURRENT PROTECTIVE DEVICE AND DISCONNECT SWITCHES ARE BASED ON POWER REQUIREMENTS AS SHOWN ON SPECIFICATIONS.
- ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF THE ENFORCED EDITION OF THE NATIONAL ELECTRICAL CODE, N.F.P.A. 70, AND ALL LOCAL AND STATE CODES AND REGULATIONS.
- THE DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL ARRANGEMENT OF ELECTRICAL EQUIPMENT. COORDINATE DEVICE LOCATIONS WITH DOOR SWINGS, CABINETS, COUNTERS, ETC., AS INDICATED ON THE ARCHITECTURAL DRAWINGS. DO NOT SCALE ELECTRICAL PLANS. OBTAIN DIMENSIONS FOR LAYOUT OF EQUIPMENT FROM ARCHITECTURAL PLANS UNLESS INDICATED ON ELECTRICAL PLANS.
- COORDINATE WITH ALL OTHER TRADES AND SUBCONTRACTORS PERFORMING WORK ON THIS PROJECT. MINOR OFFSETS IN LOCATIONS OF FIXTURES, DEVICES, ETC. SHALL BE MADE TO AVOID CONFLICTS WITH OTHER TRADES. SUCH MODIFICATIONS SHALL BE APPROVED BY THE ARCHITECT PRIOR TO THE WORK BEING PERFORMED.
- MOUNTING HEIGHTS, UNLESS OTHERWISE NOTED, ARE TO THE CENTER LINE OF THE EQUIPMENT AND/OR DEVICE EXCEPT THE MOUNTING HEIGHT OF SUSPENDED LIGHT FIXTURES WHICH IS TO THE BOTTOM OF FIXTURE.
- ALL ELECTRICAL ITEMS SHALL BE U.L. LABELED AND LISTED FOR THEIR SPECIFIC USE.
- SPECIFICATIONS**
 - GROUNDING**
 - THE BUILDING ELECTRICAL SYSTEMS SHALL BE SOLIDLY GROUNDED. ALL NON-CURRENT CARRYING PARTS OF THE ELECTRICAL SYSTEM, I.E., RACEWAYS, EQUIPMENT ENCLOSURES, FRAMES, JUNCTION AND OUTLET BOXES AND OTHER CONDUCTIVE ITEMS IN CLOSE PROXIMITY WITH ELECTRICAL CIRCUITS, SHALL BE GROUNDED TO PROVIDE A LOW IMPEDANCE PATH FOR POTENTIAL GROUND FAULTS.
 - BRANCH CIRCUIT EQUIPMENT GROUNDING CONDUCTORS SHALL BE INSTALLED IN ALL RACEWAYS AND CABLES.
 - THE NEUTRAL AND GROUND BUS SHALL BE CONNECTED INSIDE THE SERVICE EQUIPMENT.
 - RACEWAYS AND CONDUITS**
 - CONDUITS SHALL BE RUN PARALLEL OR AT RIGHT ANGLES TO WALLS, CEILINGS, AND STRUCTURAL MEMBERS.
 - LIQUID TIGHT FLEXIBLE PVC COATED METAL CONDUIT SHALL BE USED FROM OUTDOOR EXPOSED CONNECTIONS TO GROUND OR ROOF MOUNTED EQUIPMENT.
 - ALL RACEWAYS SHALL BE INSTALLED CONCEALED EXCEPT IN UNFINISHED SPACES OR WHERE INDICATED ON THE DRAWINGS.
 - FASTENERS AND SUPPORTS SHALL BE AS MANUFACTURED BY GEDNEY, EFCOR OR EQUAL. SUPPORTING DEVICES SHALL BE THOSE AS MANUFACTURED FOR A SPECIFIC PURPOSE. NAILS, WIRE OR PIPE STRAP SHALL NOT BE USED.
 - PROVIDE FLEXIBLE EXPANSION CONDUIT FITTINGS ON ALL CONDUIT CROSSING MODULE JOINTS. SEE ARCHITECTURAL PLANS FOR EXPANSION JOINT LOCATIONS.
 - CONDUCTORS**
 - ALL BRANCH CIRCUIT CONDUCTORS SHALL BE COPPER, 60°C, ROMEX UNLESS OTHERWISE NOTED.
 - ALL FEEDER CONDUCTORS SHALL BE COPPER, THHN/THWN-2 INSULATION, 60°C.
 - WIRE NO. 8 AWG AND LARGER SHALL BE STRANDED, NO. 10 AND SMALLER SHALL BE SOLID.
 - OUTLET/JUNCTION BOXES**
 - ALL OUTLET/JUNCTION BOXES SHALL BE GALVANIZED STEEL.
 - WALL AND CEILING OUTLET BOXES SHALL BE 3/0, WITH A DEPTH OF 2 1/2". CEILING BOXES SHALL BE 4" OCTAGONAL WHERE REQUIRED DUE TO NUMBER OF WIRES.**
 - PANELBOARDS**
 - OVERCURRENT PROTECTIVE DEVICES SHALL BE AUTOMATIC TRIP THERMAL MAGNETIC TYPE WITH QUICK-MAKE QUICK-BREAK FOR BOTH MANUAL AND AUTOMATIC OPERATION. ALL MULTIPOLE BREAKERS SHALL BE COMMON TRIP; HANDLE TIES WILL NOT BE ACCEPTED.
 - TYPEWRITTEN DIRECTORIES AND PANELBOARD DESIGNATION PLATES SHALL BE PROVIDED BY THE CONTRACTOR FOR ALL PANELBOARDS. PANELBOARD DESIGNATIONS SHALL BE PHENOLIC-ENGRAVED.
 - COLOR OF DEVICES AND DEVICE PLATES SHALL BE AS DETERMINED BY ARCHITECT.

ELECTRICAL SYMBOLS AND ABBREVIATIONS

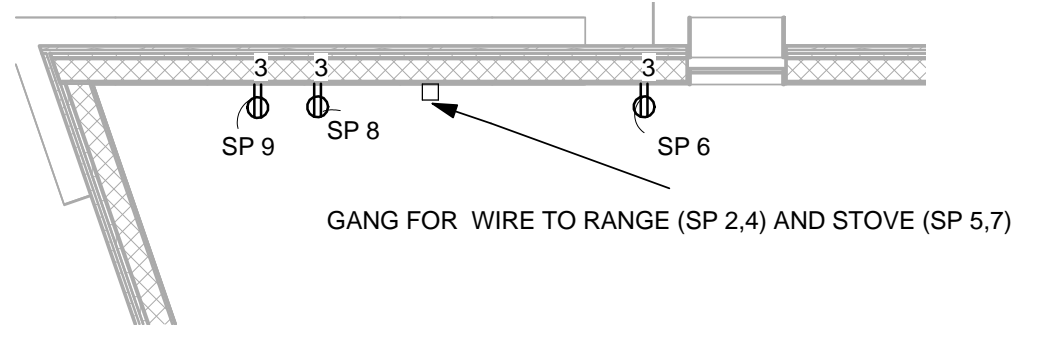
ABBREVIATIONS	DESCRIPTION
BE	BATHROOM EXHAUST
CF	CEILING FAN
ERV	ENERGY RECOVERY VENTILATOR
EWB	ELECTRIC TANKLESS WATER HEATER
FCU	FAN COILED UNIT
KE	KITCHEN EXHAUST
MP	MAIN PANEL
OU	OUTDOOR UNIT
SP	SUB PANEL
UC	UNDER CABINET
UD	UNDER DECK



1 EXTERIOR POWER DISTRIBUTION PLAN
3/16" = 1'-0"



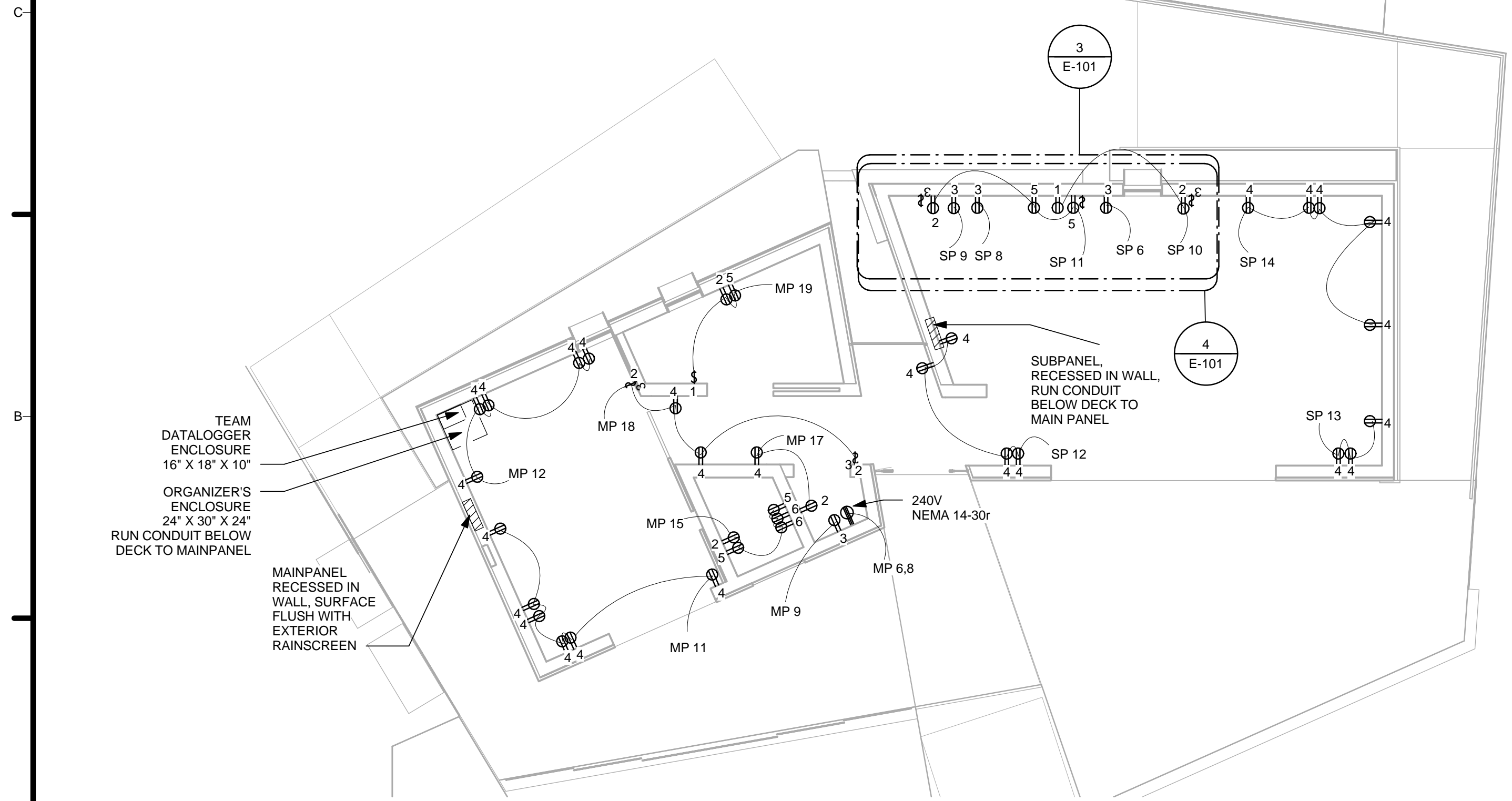
3 KITCHEN ABOVE COUNTER
1/4" = 1'-0"



4 KITCHEN BELOW COUNTER
1/4" = 1'-0"

GENERAL SHEET NOTES

- ALL BRANCH CIRCUITS THAT SUPPLY 125-VOLT, SINGLE PHASE, 15 & 20 AMP OUTLETS INSTALLED IN BEDROOM, LIVING ROOM, HALLWAY, DINING ROOM, AND CLOSETS SHALL BE PROTECTED BY AN ARC-FAULT CIRCUIT INTERRUPTER LISTED TO PROVIDE PROTECTION OF ENTIRE BRANCH CIRCUIT.
- IN EVERY AREA OF DWELLING UNITS, RECEPTACLE OUTLETS SHALL BE INSTALLED IN ACCORDANCE WITH THE GENERAL PROVISIONS SPECIFIED IN THE FOLLOWING ARTICLES:
SPACING - 2011 NEC 210.52(A)(1)
WALL SPACE - 2011 NEC 210.42(A)(2)
FLOOR RECEPTACLES - 2011 NEC 210.52(A)(3)
- AT COUNTERTOPS IN KITCHEN AND DINING ROOM, RECEPTACLE OUTLETS FOR COUNTER SPACES SHALL BE INSTALLED IN ACCORDANCE WITH THE FOLLOWING ARTICLES:
WALL COUNTER SPACE - 2011 NEC 210.52(C)(1)
RECEPTACLE OUTLET LOCATIONS - 2011 NEC 210.52 (A)(3)
- NO MORE THAN 5 DUPLEX RECEPTACLE OUTLETS SERVING THE REQUIRED COUNTERTOP RECEPTACLES SHALL BE INSTALLED ON ANY SMALL APPLIANCE BRANCH CIRCUIT - 2011 NEC 210.23
- RECEPTACLE OUTLETS SHALL NOT BE INSTALLED IN A FACE-UP POSITION IN THE WORK SURFACES OR COUNTERTOPS
- AS INDICATED ON THE PLANS, 120VAC WEATHERPROOF GFCI RECEPTACLES SHALL BE INSTALLED SO THAT NO HVAC EQUIPMENT IS MORE THAN 25 FEET FROM A RECEPTACLE
- FOR PV RELATED EQUIPMENT REFER TO SHEET E-104 AND E-105
- ALL RECEPTACLES MUST BE TAMPER RESISTANT PER 2011 NEC 406.12
- ALL EXTERIOR RECEPTACLES MUST BE WEATHER RESISTANT
- ALL RECEPTACLES AND SWITCHES WILL BE INSTALLED IN A VERTICAL POSITION 15' ABOVE THE FINISHED FLOOR HEIGHT UNLESS SPECIFIED OTHERWISE
- ALL AFCI CIRCUITS WILL USE AN AFCI BREAKER, NOT AN AFCI RECEPTACLE. SEE SHEET E-601
- ABOVE-COUNTER RECEPTACLES AND SWITCHES IN THE KITCHEN WILL BE INSTALLED 6" ABOVE COUNTER HEIGHT
- ALL RECEPTACLES WILL BE 120V DUPLEX RECEPTACLES UNLESS SPECIFIED OTHERWISE
- FOR PANEL SCHEDULE WITH INDICATED BRANCH CIRCUIT NUMBERS, ALL BREAKER SIZES, AND ALL WIRING SIZES, SEE E-601



2 INTERIOR POWER DISTRIBUTION PLAN
3/16" = 1'-0"

RECEPTACLE SCHEDULE	
MARK	DESCRIPTION
1	15A 120V TAMPER RESISTANT OUTLET
2	15A 120V GFCI TAMPER RESISTANT OUTLET
3	20A 120V GFCI TAMPER RESISTANT OUTLET
4	15A 120V AFCI PROTECTED TAMPER RESISTANT OUTLET
5	15A 120V GFCI PROTECTED TAMPER RESISTANT OUTLET
6	15A 120V GFCI PROTECTED TAMPER RESISTANT CONTROLLABLE OUTLET
7	15A 120V GFCI TAMPER RESISTANT WEATHER RESISTANT COVERED OUTLET
8	15A 120V GFCI PROTECTED TAMPER RESISTANT WEATHER RESISTANT COVERED OUTLET
9	15A 120V GFCI PROTECTED TAMPER RESISTANT WEATHER RESISTANT CONTROLLABLE COVERED OUTLET
NOTE	A "PROTECTED" CIRCUIT MEANS THE RECEPTACLE IS PROTECTED UPSTREAM OR AT THE BREAKER LEVEL

SWITCH SCHEDULE	
MARK	DESCRIPTION
1	TRADITIONAL SWITCH
2	INSTEON DISCRETE CONTROLLABLE SWITCH
3	INSTEON DIMMABLE CONTROLLABLE SWITCH
4	DOUBLE SINGLE POLE SINGLE GANG SWITCH

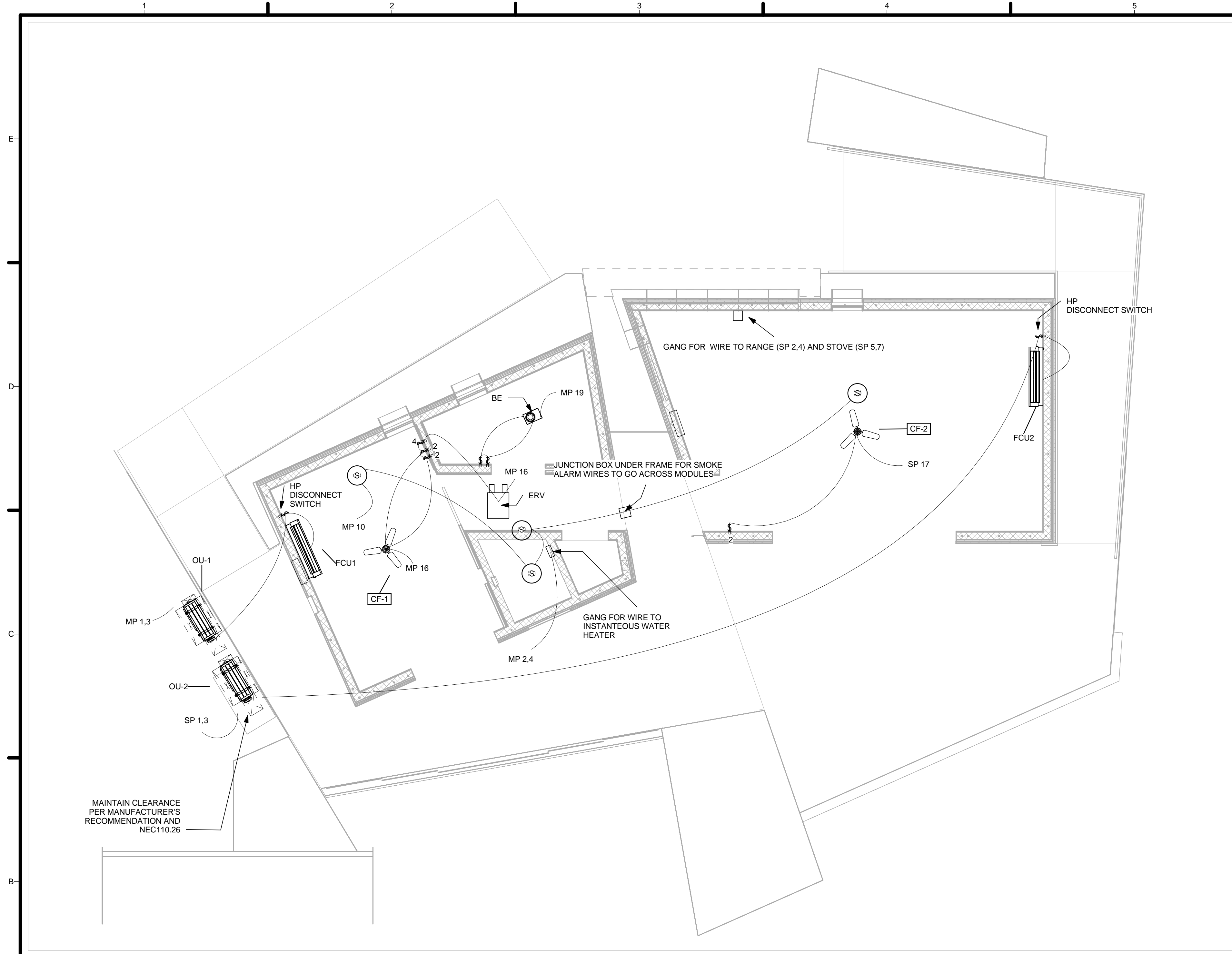
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REV	DATE	DESCRIPTION
2	30 MAY 2013	NTA REVIEW COMMENTS
1	21 MARCH 2013	NREL REVIEW COMMENTS

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POWER DISTRIBUTION PLAN

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GENERAL SHEET NOTES

1. ALL SMOKE DETECTORS SHALL BE HARDWIRED ON SAME CIRCUIT AND HAVE A BATTERY BACKUP SYSTEM.
2. SMOKE DETECTORS SHALL SOUND AN ALARM AUDIBLE IN ALL SLEEPING AREAS AND BE INTERCONNECTED PER IRC 2012.
3. FEEDERS TO AIR CONDITIONING EQUIPMENT SHALL BE RATED FOR FULL LOAD CURRENT. NON-FUSE DISCONNECTS SHALL BE INSTALLED AT AIR CONDITIONING EQUIPMENT LOCATIONS.
4. WHERE A BOX IS USED AS THE SOLE SUPPORT OF A CEILING-SUSPENDED FAN, THE BOX SHALL BE LISTED FOR THE APPLICATION AND FOR THE WEIGHT OF THE FAN SUPPORTED.
5. CEILING FAN BLADES SHALL NOT OBSTRUCT FIRE SPRINKLER PENDANT.



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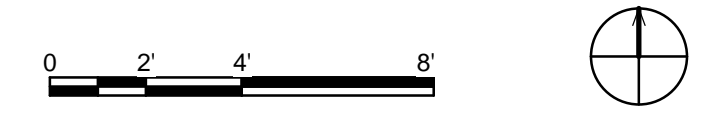
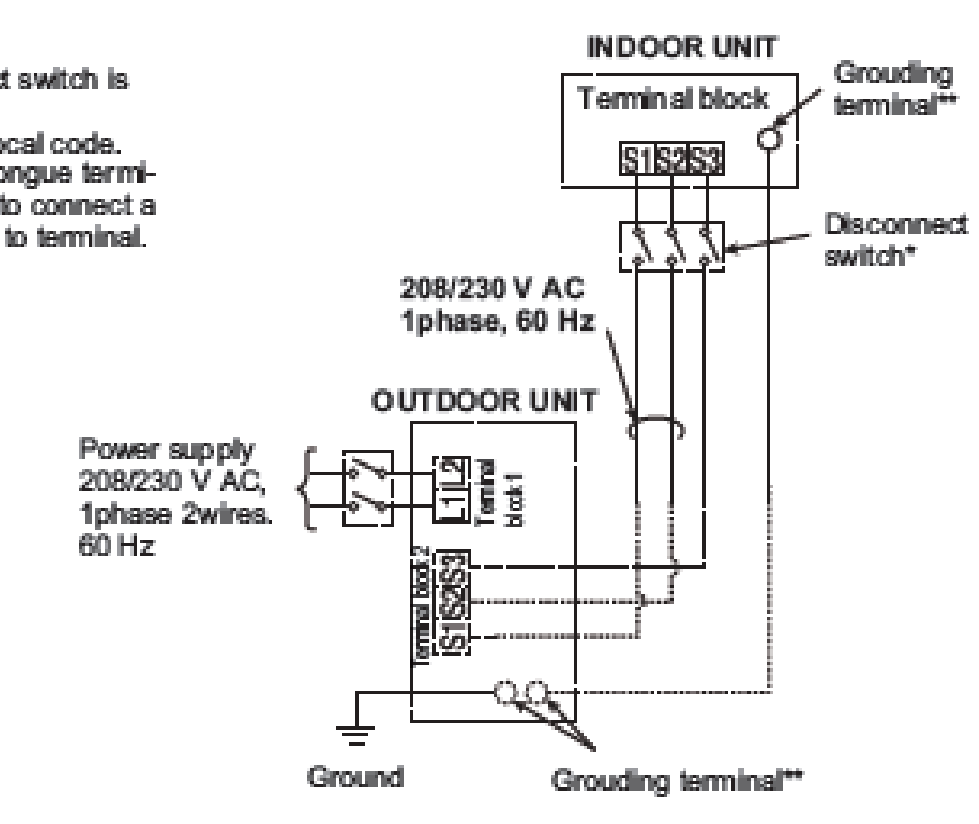
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KIRSTEN NALLEY, PE, SE

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Remark:
* A disconnect switch is required.
Check the local code.
** Use a ring tongue terminal in order to connect a ground wire to terminal.



1 HARDWIRED EQUIPMENT PLAN
1/4" = 1'-0"

2 MINI-SPLIT WIRING DIAGRAM
1" = 1'-0"

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HARDWIRED
EQUIPMENT PLAN

E-102

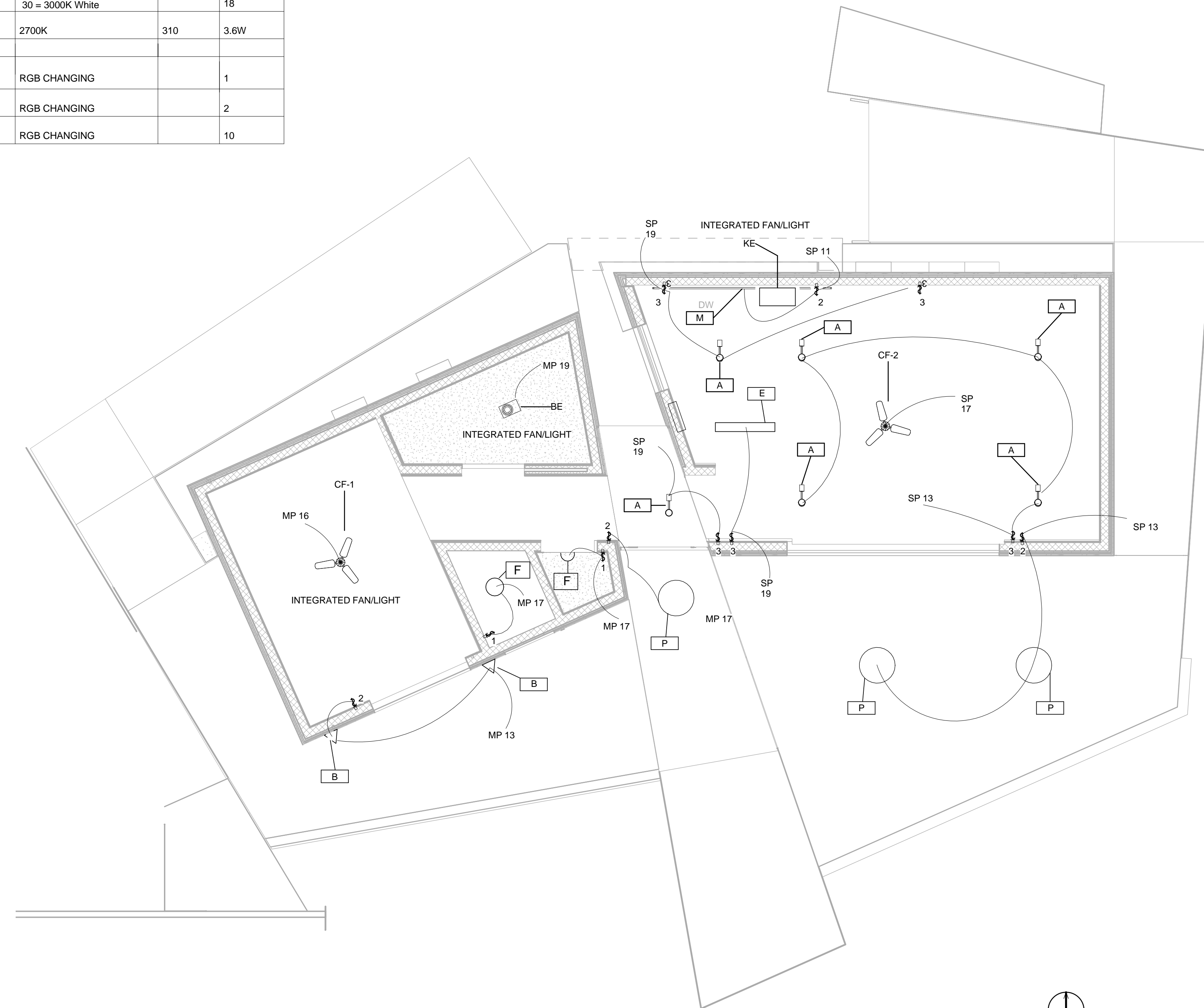
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SYMBOL	TYPE	#	UNIT	MANUFACTURER	MODEL	DESCRIPTION	FINISH	LAMP	LUMENS	WATTAGE
	A	6	EA	NORA LIGHTING	NSIC-401QAT	RECESSED CAN LIGHT	NS-44HZ: HAZE REFLECTOR WITH WHITE METAL RING	PAR20D-9W-30SS25-B01	700	9
	B	2	EA	HEVILITE	HL-340-2X-XLED	OUTDOOR SCONCE	AA - ANODIZED ALUMINUM	WARM WHITE	260	3
	E1	1	EA	TUBE LIGHTING PRODUCTS	STRANDS 12V INDOOR	DINING PENDANT UPLIGHT	-	2700K	320	5.84
	E2	1	EA	LEDING EDGE LIGHTING	MIN48 LED "SUPER BRIGHT" 48" LED T8	DINING PENDANT DOWNLIGHT	-	WARM WHITE	987	15.36
	F	1	EA	ZENARO	RSL 60T LAMP	SURFACE MOUNT LIGHT	-	2700K	450	7.5
	M1	5	EA	DIODE LED	TRUE FOCUS LED Tube Light DI-0255	UNDER CABINET LIGHT	13"	WARM WHITE	180	2.16
	M2	1	EA	DIODE LED	TRUE FOCUS LED Tube Light DI-0250	UNDER CABINET LIGHT	8.9"	WARM WHITE	120	1.44
	MM	6	EA	DIODE LED	TRUE FOCUS LED Tube Light DI-0255	BATH MIRROR LIGHT	13"	WARM WHITE	180	2.16
	P	3	EA	HEVILITE	HL-336	PATIO DOWNLIGHT	AA - ANODIZED ALUMINUM	3LED	260	3
	P-WAL	2	EA	FENG SHUI LIGHTING	FRM 12X12 AL	WALL ART LIGHT	AL - NATURAL ULTIMATE ALUMINUM	FL18 18W PL-L BIAx STD = ELECTRONIC NON-DIMING 30 = 3000K White		18
	P-WFL	2	EA	DIODE LED	CASCADE LIGHT BAR DI-0222	WATER FEATURE LIGHT	23.8 in.	2700K	310	3.6W
	P-Z		FT	FIBERSTARS	BRITEPAK	DECK ACCENT LIGHTING				
	LT	3	EA	ADESSO	ETERNITY FLAT HEAD DESK LAMP	TASK LIGHTING - BEDROOM	-	RGB CHANGING		1
	LF	1	EA	ADESSO	ETERNITY FLAT HEAD FLOOR LAMP	FLOOR LAMP (OPTIONAL)	-	RGB CHANGING		2
	J	4	EA		D7028A	FLOOD LIGHT FOR SLIDING SCREENS	-	RGB CHANGING		10

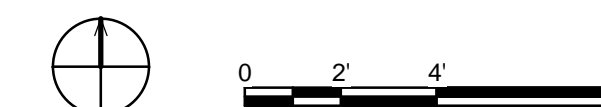
* THESE FIXTURES ARE PLUG-IN FF&E LAMPS

GENERAL SHEET NOTES

1. CEILING FAN BLADES SHALL NOT OBSTRUCT FIRE SPRINKLER PENDANT.
2. SWITCH TYPE SEE SHEET E-101



1 LIGHTING PLAN
1/4" = 1'-0"



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ELECTRICAL LIGHTING PLAN

GENERAL SHEET NOTES

- ALL PV SYSTEMS WILL BE DESIGNED AND INSTALLED IN FULL COMPLIANCE WITH 2011 NATIONAL ELECTRIC CODE AND THE 2013 SD RULES AND REGULATIONS.
- PV MODULES, SOURCE CIRCUIT COMBINERS, AND UTILITY INTERACTIVE INVERTERS MUST BE SAFETY CERTIFIED (LISTED) TO THE APPROPRIATE UNDERWRITERS LABORATORIES STANDARD (UL1741 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: UL, CSA, ETL OR TÜV RHEINLAND OF NORTH AMERICA THE EUROPEAN CE DESIGNATION AND TESTS BY LABORATORIES IN OTHER COUNTRIES ARE NOT ACCEPTABLE.
- DC CIRCUITS FROM THE PV MODULES TO THE DC PV DISCONNECT MUST BE IN METAL CONDUITS WHERE INSIDE THE STRUCTURE.
- ALL PV STRINGS TO USE MANUFACTURER PROVIDED CABLES FOR POWER TRANSMISSION.
- REFER TO SHEET E-602 FOR WIRING DIAGRAM
- GROUND PV PER NEC 690.43



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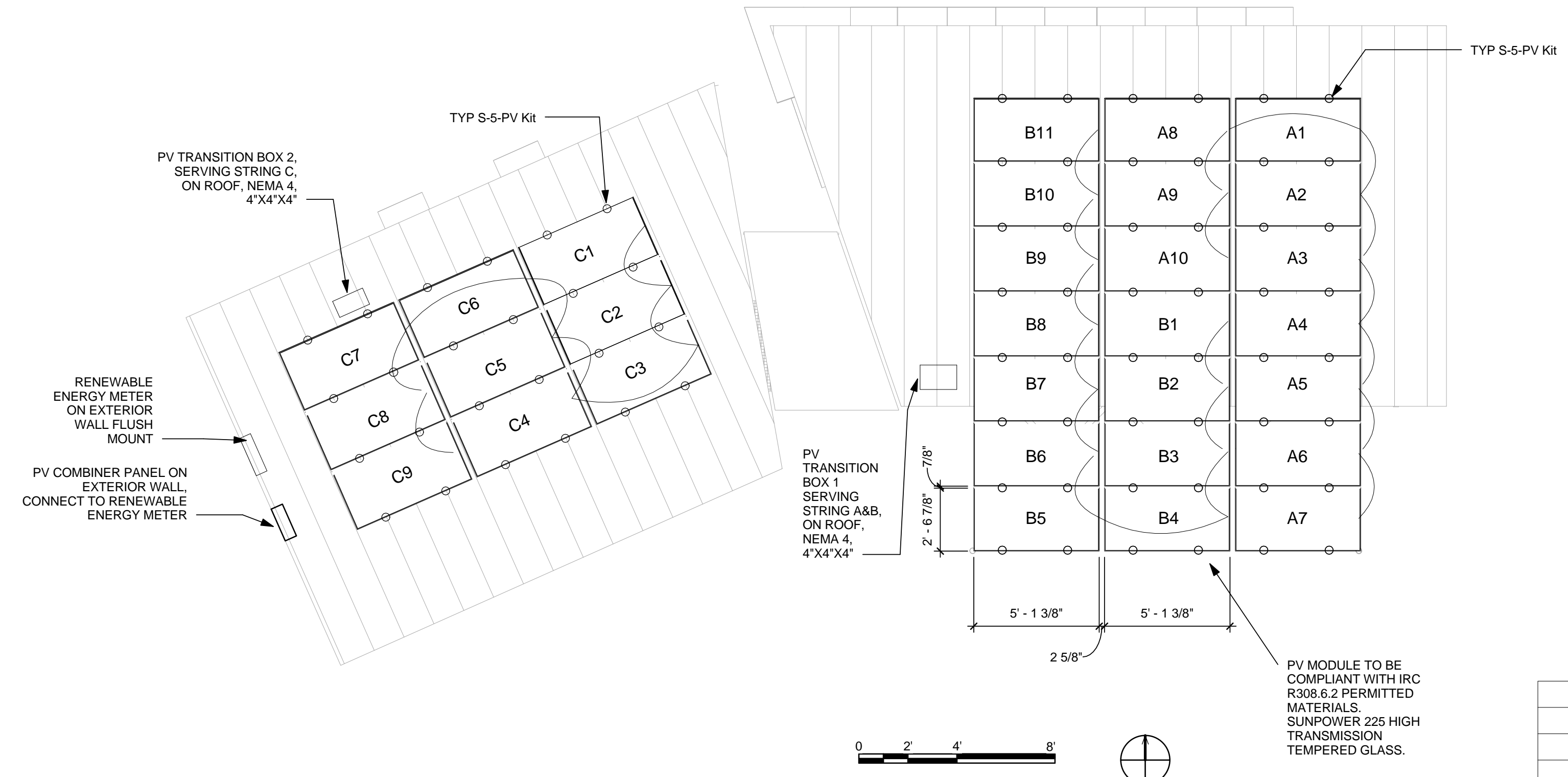
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PHOTOVOLTAIC ARRAY PLAN

E-104



MODULE SPECIFICATIONS	
DC ELECTRICAL DATA	
BRAND	SUNPOWER
MODEL	SPR-225-BLK-U
P_MAX	225 W
V_OC	48.5 V
I_SC	5.87 A
V_MP	41.0 V
I_MP	5.49 A
TEMPERATURE COEFFICIENTS	
POWER	-0.38% / CELSIUS
V_OC	-1.325 V / CELSIUS
I_SC	0.0035 A / CELSIUS

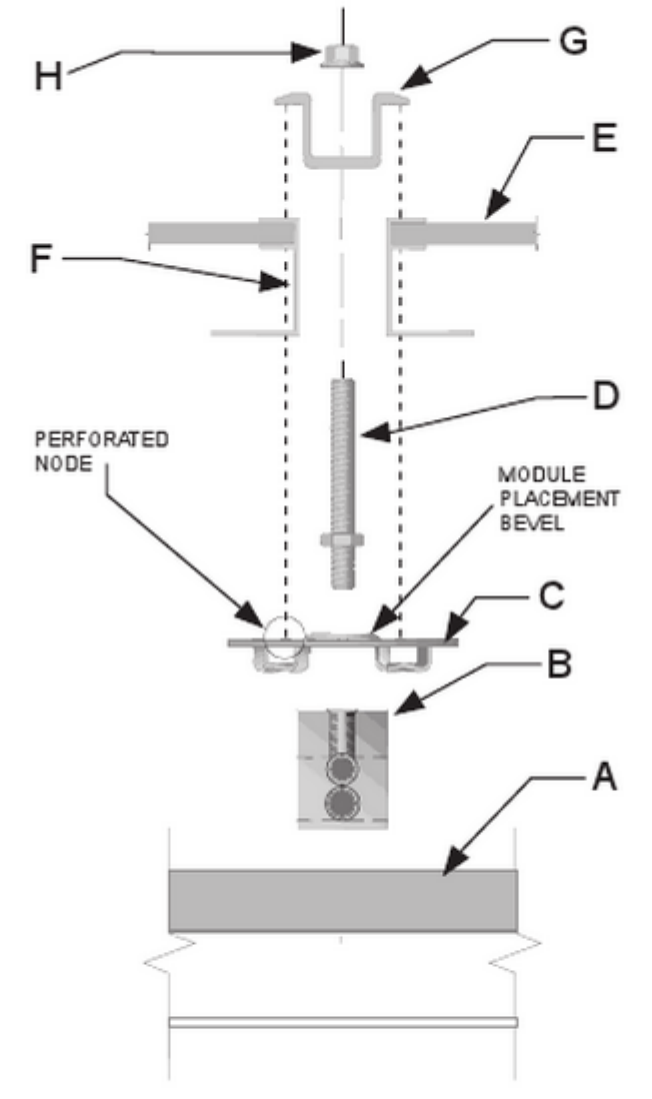
PHOTOVOLTAIC SCHEDULE			
SYSTEM NAME	COUNT	MANUFACTURE	MODEL
PHOTOVOLTAIC MODULE	30	SUNPOWER	SPR-225-BLK-U
ROOF MOUNTING	152	S-5	S-5-PV KIT
MICROINVERTER	30	POWER-ONE AURORA	MICRO-0.25-1-OUTD-US 208/240

MICROINVERTER SPECIFICATIONS			
INPUT DATA (DC)		OUTPUT DATA (AC)	
BRAND	POWER - ONE AURORA	ADJUSTABLE VOLTAGE RANGE	211-264 V
MODEL	MICRO-0.25-1-OUTD-US208/240	GRID FREQUENCY	60 HZ
MAX DC INPUT POWER	320 W	ADJUSTABLE GRID FREQUENCY RANGE	57-60.5 HZ
START-UP VOLTAGE	25 V	MAXIMUM CURRENT	1.5 A
MAX INPUT VOLTAGE	65 V	POWER FACTOR	>0.95
MPPT VOLTAGE	25-60 V	MAX NUMBER OF INVERTERS PER STRINGS	12
MAX DC I_SC	10.5 A	CEC EFFICIENCY	96%

PV MODULE AND MICROINVERTER COMPATABILITY				
SUNPOWER VOC AT HIGH TEMP	48.5V-(0.1325V(47.77-25))= 45.48 V	>	MICROINVERTER MIN INPUT VOLTAGE	25
SUNPOWER VOC AT LOW TEMP	48.6V-(0.1325V(-13.33-25))= 53.57 V	<	MICROINVERTER MAX INPUT VOLTAGE	65
SUNPOWER VMP AT HIGH TEMP	40.5V-(0.1325V(47.77-25))=37.48 V	>	MICROINVERTER MIN PPT VOLTAGE	30
SUNPOWER VMP AT LOW TEMP	40.5V-(0.1325V(-13.33-25))= 45.58 V	<	MICROINVERTER MAX PPT VOLTAGE	60
SUNPOWER ISC AT HIGH TEMP	5.87A+(0.0035A(47.77-25))= 5.95 A	<	MICROINVERTER MAX INPUT AMPERAGE	10.5

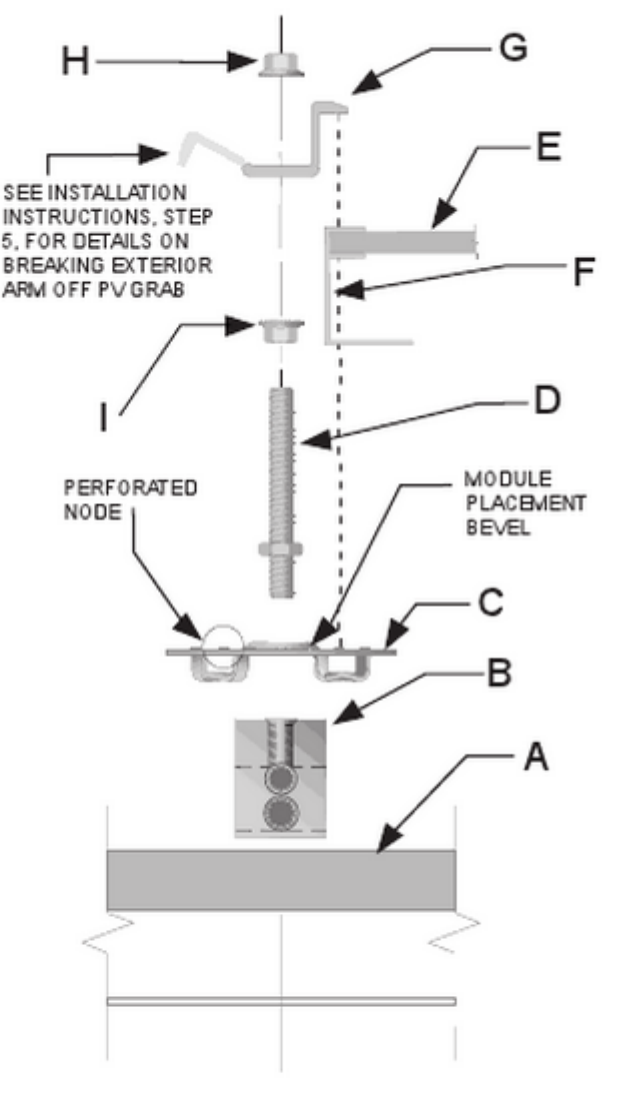
1 PHOTOVOLTAIC ARRAY PLAN
1/4" = 1'-0"

PV Mounting Assembly
Field Condition



- A. STANDING SEAM METAL ROOF
- B. S-5 MINI CLAMP (sold separately)
- C. STAINLESS STEEL MOUNTING DISC
- D. STAINLESS STEEL M8-1.25x98mm UNIVERSAL PV STUD (Tensioned between 140 and 160 inch pounds)
- E. GLASS
- F. MODULE FRAME CROSS SECTION (Frame thickness from 1.3" [33 mm] to 2.5" [64 mm])
- G. PV GRAB
- H. STAINLESS STEEL M8-1.25 HEX FLANGE NUT (Tensioned between 100 and 120 inch pounds)

PV Mounting Assembly
Edge Condition



- A. STANDING SEAM METAL ROOF
- B. S-5 MINI CLAMP (sold separately)
- C. STAINLESS STEEL MOUNTING DISC
- D. STAINLESS STEEL M8-1.25x98mm UNIVERSAL PV STUD (Tensioned between 140 and 160 inch pounds)
- E. GLASS
- F. MODULE FRAME CROSS SECTION (Frame thickness from 1.3" [33 mm] to 2.5" [64 mm])
- G. PV GRAB
- H. STAINLESS STEEL M8-1.25 HEX FLANGE NUT (Tensioned between 100 and 120 inch pounds)
- I. STAINLESS STEEL M8-1.25 HEX FLANGE NUT

2 S-5 MOUNTING DETAIL
3/4" = 1'-0"

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GENERAL SHEET NOTES

1. THE NUMBER OF BENDS IN A CONDUIT SECTION RUN SHALL NOT EXCEED TWO 90-DEGREE BENDS OR EQUIVALENT OF SWEEPS AND RADIUS BENDS.



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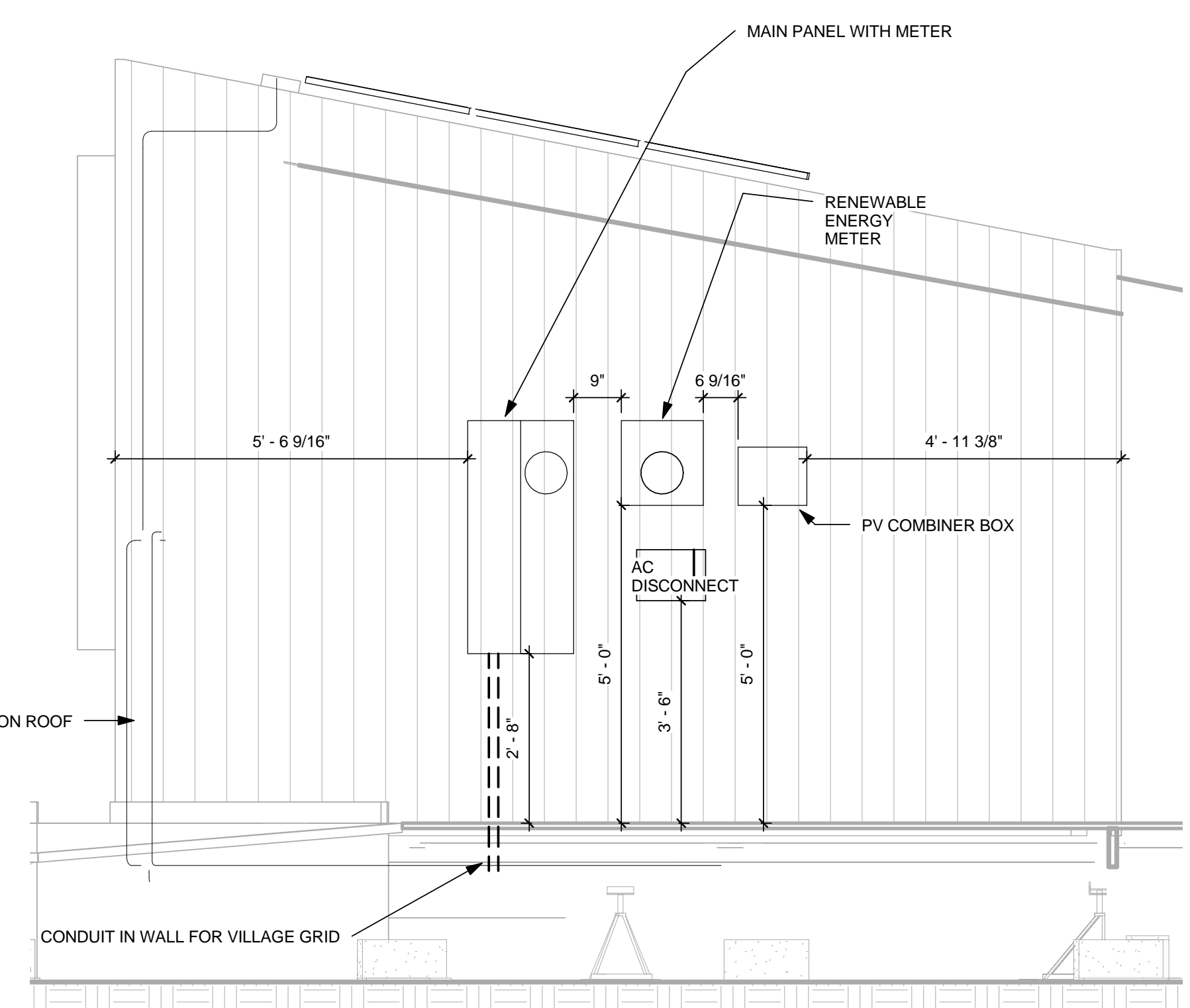
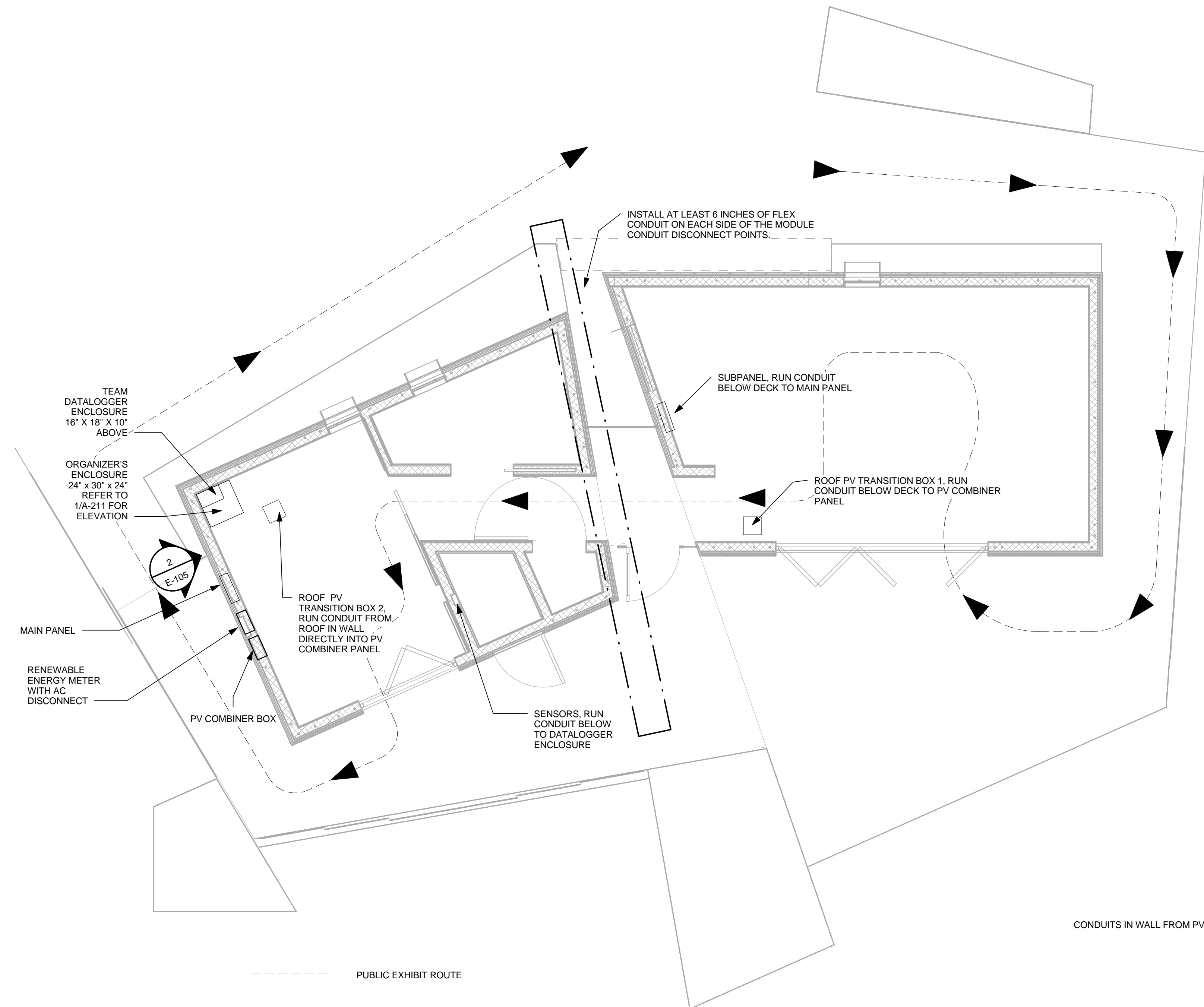
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ELECTRICAL SERVICE PLAN

E-105



1 ELECTRICAL SERVICE LOCATIONS
1/4" = 1'-0"



2 WEST WALL ELEVATION
1/2" = 1'-0"

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GENERAL SHEET NOTES

1. FOR ELECTRIC LOAD CALCULATION, REFER TO SHEET E-001



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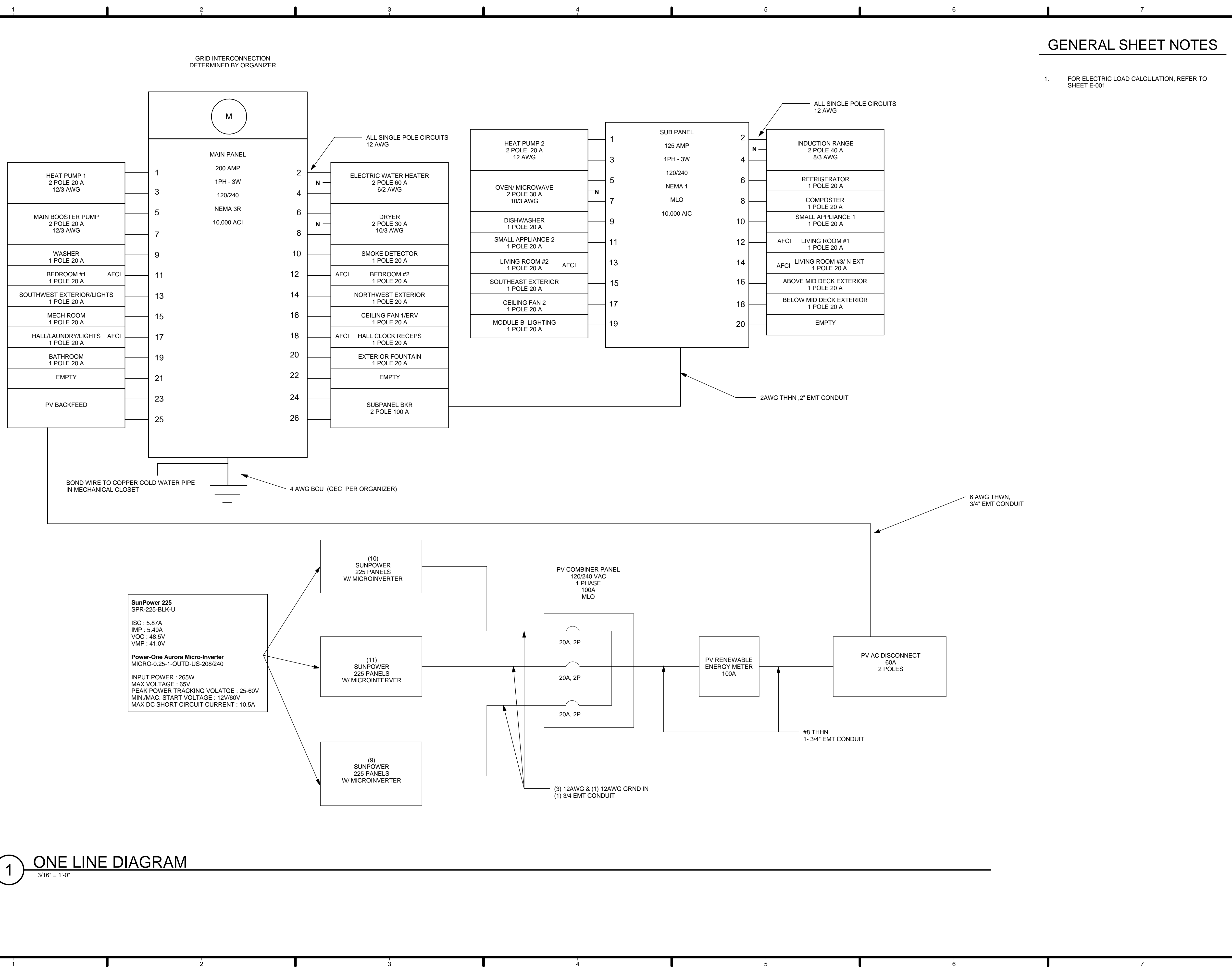
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ONE-LINE DIAGRAM

E-601



1 ONE LINE DIAGRAM
3/16" = 1'-0"

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GENERAL SHEET NOTES

- FROM MANUFACTURER PROVIDED CABLES TO BUILDING WIRE IN CONDUIT
- PROVIDE DISCONNECT ON ROOF PER CLARK COUNTY FIRE DEPARTMENT REQUIREMENT, BPF 27

CALCULATIONS:

WIRE RUN 1 - FROM MICROINVERTER TO TRANSITION BOX
 WIRE SIZE = AWG #12
 ALLOWABLE AMP NEC TABLE 310.15(B)(16) = 30A
 AMB TEMP (48) DERATE FACTOR NECT TABLE 310.15(B)(2)(A) = 0.82
 ADJUSTED ALLOWABLE AMP = 24.6A
 STRING A&B AMP: 11X0.9375AX1.25=12.89 A
 STRING C AMP: 9X0.94X1.25=10.6A

WIRE RUN 2 - FROM TRANSITION BOX TO PV COMBINER PANEL
 WIRE SIZE = AWG #12
 WIRE LENGTH FOR MOD A (STRING C) = 14 FT
 WIRE LENGTH FOR MOD B (STRING A&B) = 35 FT
 ALLOWABLE AMP NEC TABLE 310.15(B)(16) = 30A
 AMB TEMP (48) DERATE FACTOR NECT TABLE 310.15(B)(2)(A) = 0.82
 ADJUSTED ALLOWABLE AMP = 24.6A

WIRE RUN 3 - FROM PV COMBINER PANEL TO MAIN SERVICE PANEL
 WIRE SIZE = AWG #8
 WIRE LENGTH = 3 FT
 ALLOWABLE AMP NEC TABLE 310.15(B)(16) = 75A
 AMB TEMP (48) DERATE FACTOR NECT TABLE 310.15(B)(2)(A) = 0.58
 ADJUSTED ALLOWABLE AMP = 43A
 CIRCUIT AMP = 30X0.9375X1.25=35.2A



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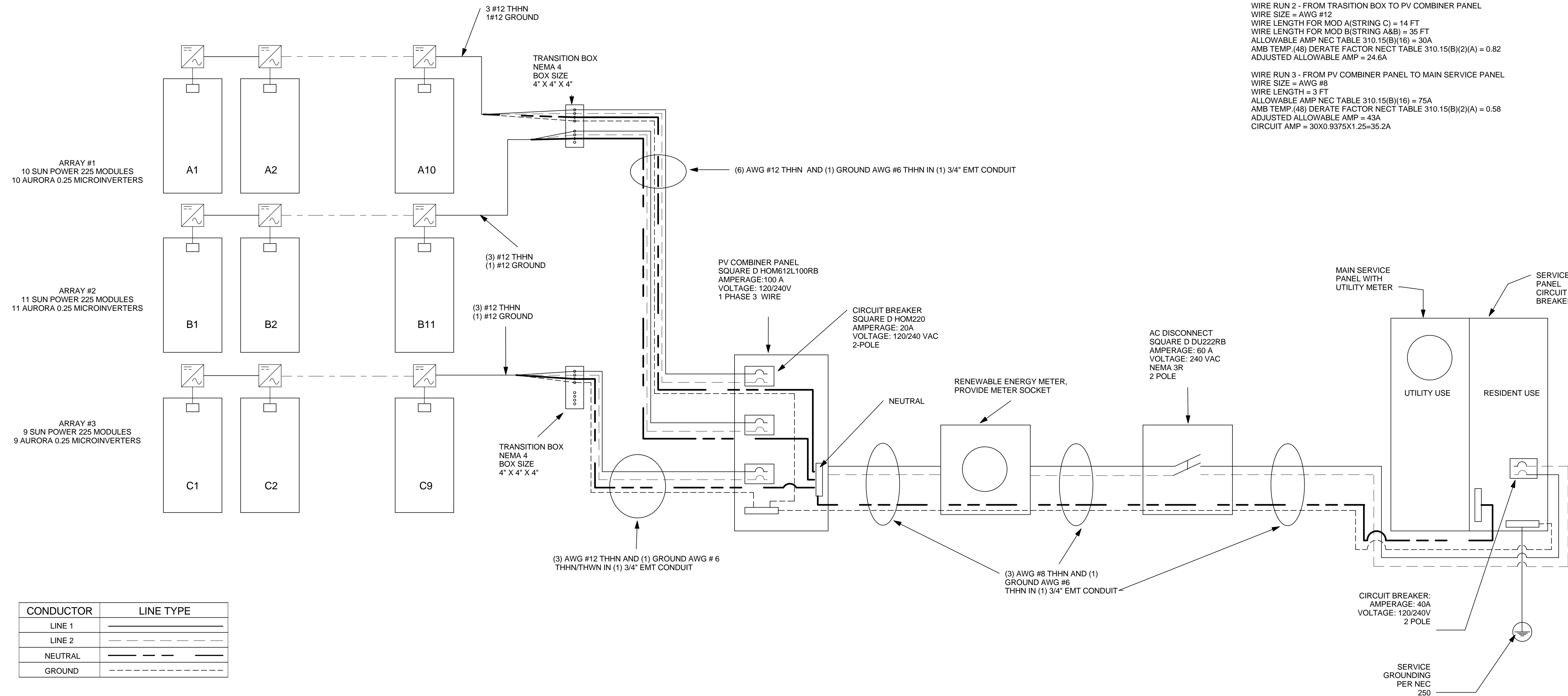
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THREE-LINE DIAGRAM

E-602



1 THREE LINE DIAGRAM
 3/8" = 1'-0"

GENERAL SHEET NOTES

1. ALL TELECOM/ ETHERNET BOXES ARE 2-GANG WALL BOXES. THEY WILL BE INSTALLED AT THE SAME HEIGHT AS ALL OTHER RECEPTACLES.
2. TELECOM BOXES WILL BE PLASETERED FOR SINGLE GANG SIZE UNLESS SPECIFIED OTHERWISE.
3. SPEAKER WIRES ARE ALL TERMINATED AT BINDING POSTS, EXCEPT BOX5B WHERE THEY ARE SPRING CLIPS.
4. NETWORK CABLES ARE CAT6, IN-WALL RATED.
5. CAT6 CABLES ROUTE THROUGH BOX2 BEFORE TERMINATING AT THE PATCH PANEL.
6. TELEPHON WIRING IS CAT3, IN-WALL RATED.
7. SPEAKER WIRE IS STRANDED 16/2, AND CL2, IN-WALL RATED.



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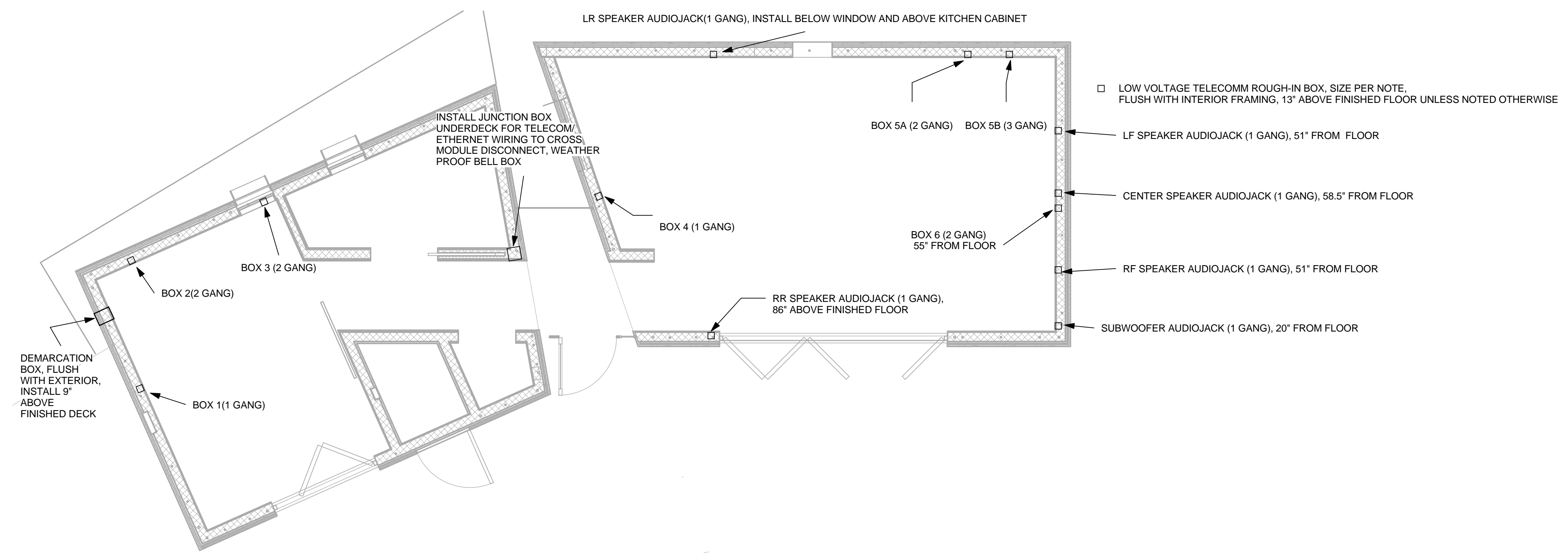
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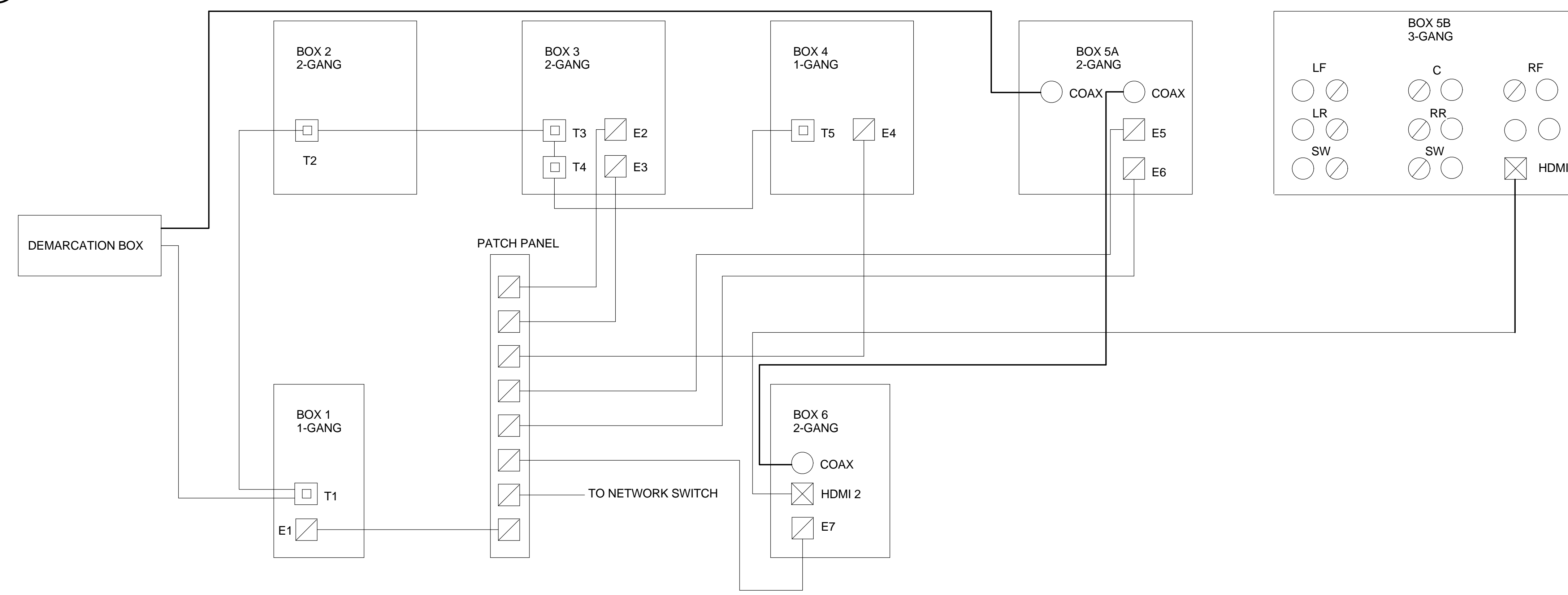
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TELECOMMUNICATION AND NETWORK EQUIPMENT PLAN

T-101



1 TELECOMMUNICATION AND NETWORK LOCATIONS
1/4" = 1'-0"



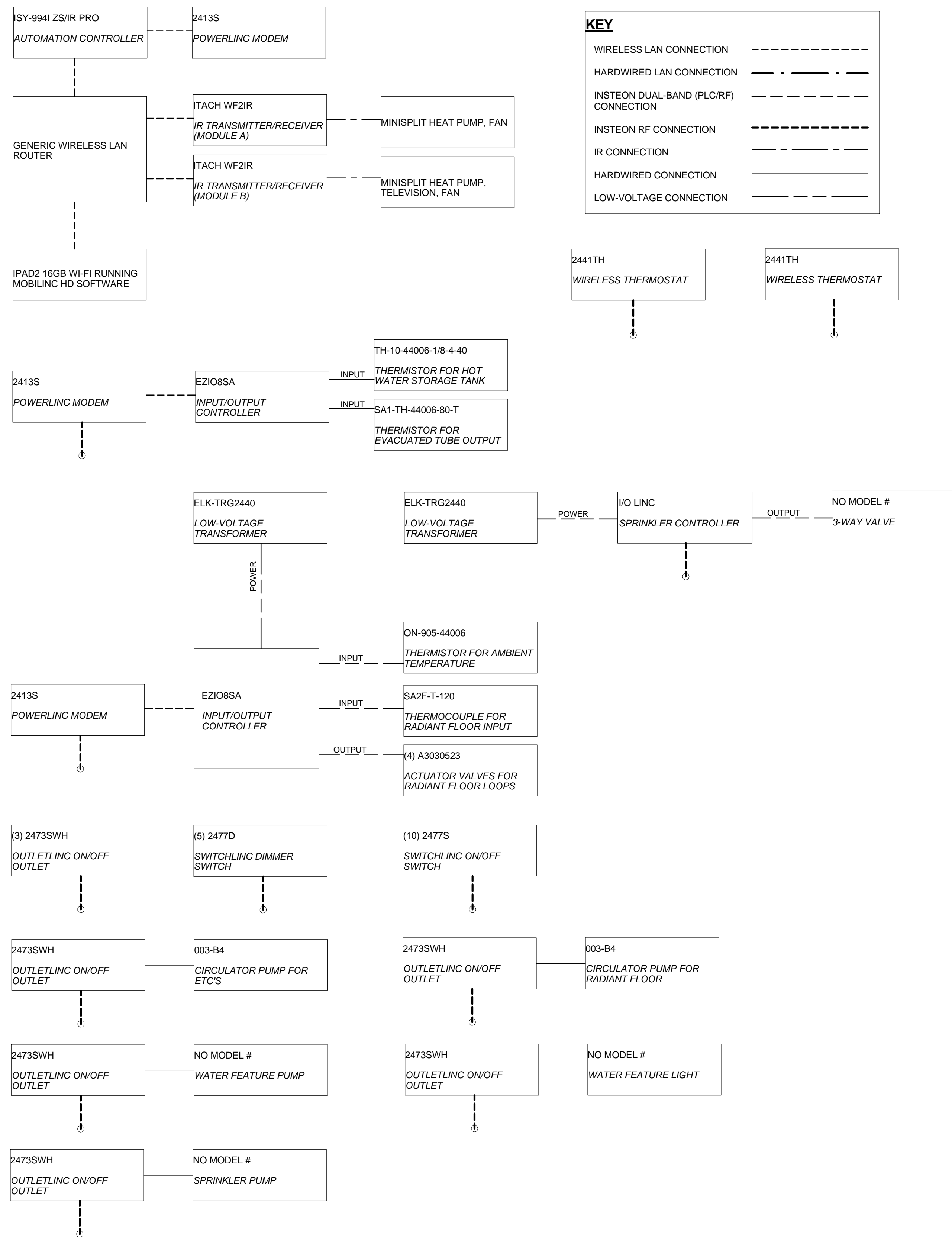
2 TELECOMMUNICATION AND NETWORK DIAGRAM
3/4" = 1'-0"

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HOME
AUTOMATION/CONTROLS
SCHEMATIC

T-601

ITEM	MANUFACTURER	MODEL	QUANTITY
SMART TABLET	APPLE	IPAD2 16GB WI-FI	1
IR TRANSMITTER	GLOBAL CACHE	ITACH WF2IR	2
POWERLINC MODEM, SERIAL (DUAL-BAND)	INSTEON	2413S	3
WIRELESS THERMOSTAT WITH HUMIDITY SENSOR	INSTEON	2441ZTH	2
OUTLETLINC-ON/OFF CONTROL OUTLET, WHITE	INSTEON	2473SWH	8
SWITCHLINC - DIMMER, WHITE	INSTEON	2477D	5
SWITCHLINC SWITCH (DUAL-BAND)	INSTEON	2477S	10
SMARTPAD CONTROLLING PROGRAM	MOBILE INTEGRATED SOLUTIONS	MOBILINC HD	1
INSTEON/X10 INPUT OUTPUT CONTROLLER	SIMPLEHOME.NET	EZIO8SA	2
AUTOMATION CONTROLLER	UNIVERSAL DEVICES	ISY-994I ZS/IR PRO	1
EXPOSED THERMISTOR	OMEGA	QN-905-44006	1
THERMISTOR	OMEGA	SA1-TH-44006-80-T	1
IMMERSION THERMISTOR	OMEGA	TH-10-44006-1/8-4-40	1
ROUTER	ROUTER	ROUTER	1
LOW-VOLTAGE TRANSFORMER	ELK	ELK-TRG2400	2
SPRINKLER CONTROLLER	INSTEON	I/O Linc	1
THERMOCOUPLES	OMEGA	SA2F-T-120	1

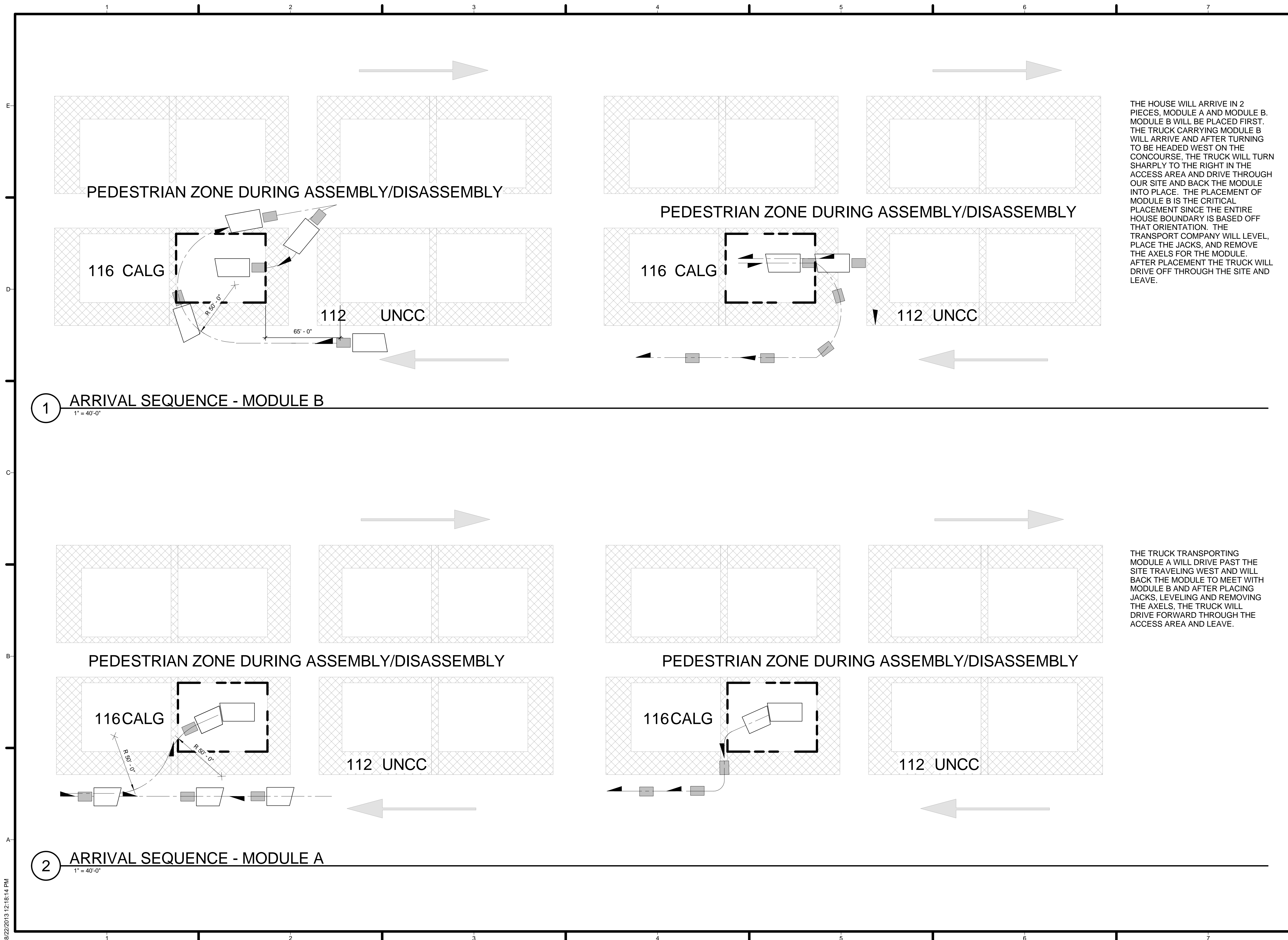


REVISIONS

REV	DATE	DESCRIPTION
3	Date 3	AS-BUILT

DATE: August 22, 2013
LOT NUMBER: 114
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ARRIVAL SEQUENCE PLANS



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DEPARTURE SEQUENCE PLAN

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