



CHIP 2011

COMPACT HYPER-INSULATED PROTOTYPE

U.S. DEPARTMENT OF ENERGY
SOLAR DECATHLON 2011
TEAM SCI-ARC / CALTECH

SOUTHERN CALIFORNIA INSTITUTE OF ARCHITECTURE
960 EAST 3RD STREET
LOS ANGELES, CA 90013

CALIFORNIA INSTITUTE OF TECHNOLOGY
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STRUCTURAL ENGINEERS
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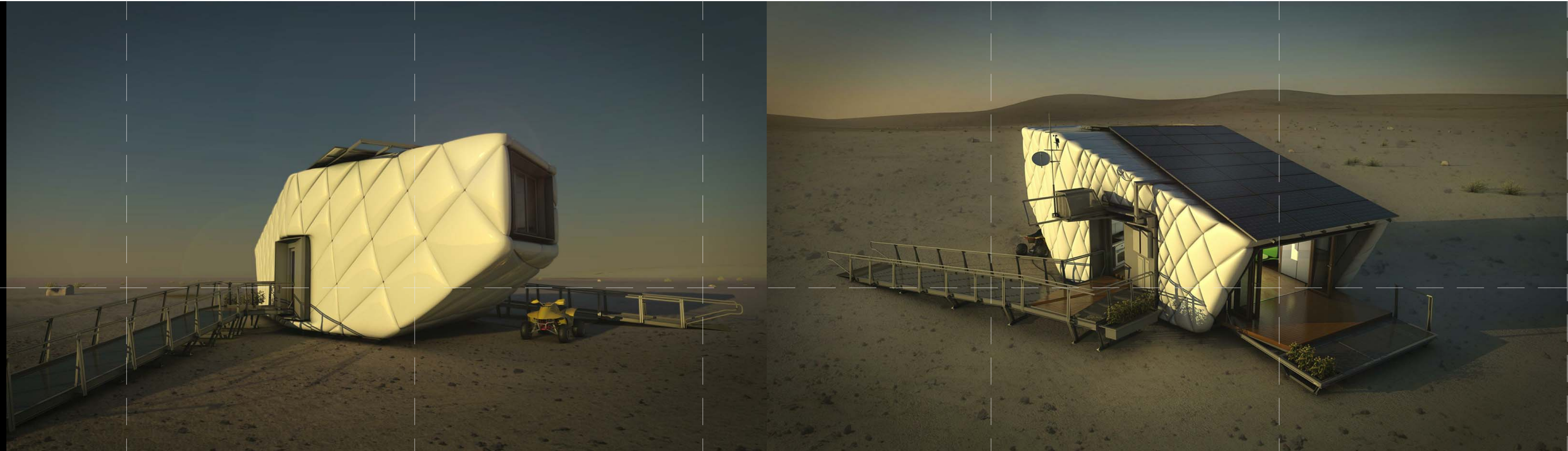
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RJC BUILDERS, INC.
3509 W 6TH ST.
LOS ANGELES, CA 90020
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SCI-ARC/CALTECH SOLAR DECATHLON 2011

PROJECT INFORMATION:

PROJECT NAME:	CHIP 2011
LOCATION:	NATIONAL MALL, WEST POTOMAC PARK WASHINGTON DC
OCCUPANCY:	R-RESIDENTIAL
CONSTRUCTION TYPE:	TYPE V
BUILDING DESCRIPTION:	NEW SINGLE STORY MODULE DWELLING
MAX BUILDING HT:	18'-0"
DESIGN TEAM:	SOUTHERN CALIFORNIA INSTITUTE OF ARCHITECTURE 1200 EAST CALIFORNIA BOULEVARD PASADENA, CA 91125 CALIFORNIA INSTITUTE OF TECHNOLOGY 1200 EAST CALIFORNIA BOULEVARD PASADENA, CA 91125
PROJECT MANAGER:	REED FINLAY
COMMUNICATIONS MANAGER:	ELISABETH NEIGERT



DESIGN NARRATIVE

CHIP'S ARCHITECTURAL CONCEPT IS DRIVEN BY THE TWO SIDES OF THE SUSTAINABLE LIVING EQUATION: ENERGY PRODUCTION AND ENERGY CONSUMPTION. CHIP'S DESIGN IS BOTH RESPONSIVE TO THE SUN IN ITS ORIENTATION AND MASSING, WHILE SIMULTANEOUSLY EXPRESSING THE PERFORMATIVE DUTIES OF ITS ENVELOPE WITH RESPECT TO ENERGY CONSERVATION.

THE MOST SINGULAR FEATURE OF THE DESIGN IS CHIP'S UNIQUE EXTERIOR ENVELOPE STRATEGY: A SKIN AND INSULATION ASSEMBLY WHICH TURNS CONVENTIONAL WISDOM ON ITS HEAD, WEARING ITS THERMAL PERFORMANCE "ON ITS SLEEVE". SEPARATING THE STRUCTURAL MEMBERS FROM THE INSULATING LAYER, AND WRAPPING THE INSULATION ASSEMBLY IN A FLEXIBLE VINYL MEMBRANE, GIVES CHIP A AN EXTERIOR ENVELOPE WITH THE EXTREMELY HIGH R-VALUES NECESSARY FOR A NET-ZERO HOUSE, AT A SIGNIFICANTLY REDUCED COST, WHILE INDEXING THIS PERFORMANCE IN ITS PHYSICAL APPEARANCE.

CHIP'S MASSING BEGINS AS A PRIMITIVE BOX, WHICH IS THEN FACETED IN SEVERAL DIMENSIONS: FIRST, IN ORDER TO NEGOTIATE BETWEEN AN OPTIMAL ROOF ANGLE FOR YEAR-ROUND SOLAR ENERGY COLLECTION, AND A COMFORTABLE, VAULTED INTERIOR SPACE. FURTHER FACETING OF THE PRIMITIVE SHAPE SHRINKS AND TORQUES THE PLAN TO MINIMIZE THE BUILDING'S FOOTPRINT ON THE EXTERIOR, WHILE ACCOMMODATING THE PROGRAMMATIC NEEDS OF THE OCCUPANT ON THE INTERIOR.

CHIP'S FLEXIBLE, STEPPED INTERIOR ADOPTS THE ETHIC OF DOING-MORE-WITH-LESS, ALLOWING A SINGLE, CONTINUOUS VOLUME TO PERFORM IN A VARIETY OF DIFFERENT WAYS TO SERVE THE OCCUPANTS DAILY NEEDS. THE PROGRAM IS DIVIDED INTO A SERIES OF PLATFORMS WHICH ARE TERRACED UPWARDS AND INWARDS, FROM MOST PUBLIC TO MOST PRIVATE. THE DISTRIBUTION OF PROGRAM FROM NORTH-TO-SOUTH, AND HIGH-TO-LOW, FACILITATES THE OCCUPANTS' DAILY RHYTHMS: A PROGRESSION DOWNHILL IN THE MORNING, -BED/GROOM/DRESS/EAT/LIVE/WORK- AND VICE VERSA IN THE EVENING.

MECHANICAL SYSTEMS DESIGN SUMMARY

THE HVAC AND WATER SYSTEMS MAXIMIZE ENERGY SAVINGS OVER A TYPICAL YEAR OF OPERATION IN CALIFORNIA WHILE LEVERAGING THERMAL SYNERGY BETWEEN THE TWO SYSTEMS. IN THE HOUSE'S DESIGN CLIMATE, THE LARGE MAJORITY OF HVAC LOADS ARE MANIFESTED IN COOLING LOADS. THE CORE OF THE SYSTEM IS A THERMAL STORAGE WATER TANK THAT ACTS AS BOTH A THERMAL MASS AND A HEAT TRANSFER MEDIUM. BECAUSE OF THE HIGH HEAT CAPACITY OF WATER, THE THERMAL MASS EFFICIENTLY EXTRACTS HEAT FROM THE HVAC SYSTEM WITH A MINIMUM OF ENERGY USE. IN ADDITION, THE HEATED THERMAL MASS PREHEATS THE DOMESTIC HOT WATER, THUS MAXIMIZING THE COMBINED EFFICIENCY OF THE TWO SYSTEMS. IN ADDITION, THE HVAC SYSTEM MAKES USE OF SIMPLE, CHEAP, YET COST-EFFECTIVE TECHNOLOGIES THAT REDUCE ENERGY USE BY TAKING ADVANTAGE OF THE CALIFORNIA CLIMATE. ECONOMIZERS AND WHOLE-HOUSE FANS SUBSTANTIALLY REDUCE COOLING DEMAND IN THE SUMMER AND IMPROVE OCCUPANT COMFORT AT MINIMAL COST AND ENERGY CONSUMPTION.

ELECTRICAL SYSTEMS DESIGN SUMMARY

CHIP'S ELECTRICAL SYSTEM IS DESIGNED TO BE AS SIMPLE AS POSSIBLE WHILE STILL CARRYING OUT IMPORTANT HOUSE FUNCTIONS AT AS LOW OF A COST AS POSSIBLE. THE PHOTOVOLTAIC SYSTEM IS DESIGNED TO MEET OUR HOUSE'S ENERGY NEEDS DURING THE COMPETITION WITH A 90% CONFIDENCE INTERVAL, USING MODULES OVER THE ENTIRE STRUCTURE AND AT AN IDEAL TILT. WE ARE USING TIGO MODULE MAXIMIZERS TO COMBINE BOTH SEGMENTS OF OUR ROOF INTO 4 STRINGS AND A SINGLE SMA AMERICA 7000 W INVERTER TO COMBINE THE STRINGS WITH AN INTEGRATED DC DISCONNECT SWITCH, DRASTICALLY SIMPLIFYING THE WIRING PROCESS. WE COMPARED THE COST OF MANY MODULES AND PERFORMANCE METRICS FROM 15 YEARS OF WEATHER DATA TO PICK MODULES THAT WOULD DELIVER THE ELECTRICAL POWER WE NEED AT THE LOWEST POSSIBLE PRICE. OUR LIGHTING DESIGN IS BASED ON UNCOMPROMISED QUALITY WHILE USING AS LITTLE ENERGY AS POSSIBLE. LIGHTING THE HOUSE WITH 4 LAYERS OF LIGHT THAT CAN BE CONTROLLED FROM ANYWHERE IN THE HOUSE. OUR WIRELESS SWITCHES REMOVE THE NEED FOR COMPLICATED 3-WAY SWITCHING.

COMPUTING SYSTEMS DESIGN SUMMARY

THE COMPUTING SYSTEM IS MUCH LIKE THE CENTRAL NERVOUS SYSTEM OF THE HUMAN BODY; NOT ONLY CAN IT PROCESS AND MONITOR THE STATE OF THE HOUSE, BUT IT CAN REACT TO CHANGES IN THE ENVIRONMENT AS WELL. THE COMPUTING SYSTEM IS MADE UP OF 5 DISTINCT BUT INTERRELATED COMPONENTS:
1) ENERGY MONITORING-THE ENERGY USE OF THE HOUSE IS MONITORED AT A WHOLE HOUSE LEVEL AS WELL AS AT AN INDIVIDUAL CIRCUIT LEVEL. USING EQUAGE MONITORING HARDWARE, WE CAN DETERMINE WHERE THE ENERGY FROM OUR PV PANELS ARE BEING USED.
2) CONTROL4:HOME AUTOMATION-NEARLY ALL THE LIGHTS AND APPLIANCES IN THE HOUSE ARE HOOKED UP TO THE CONTROL4 VIA A ZIGBEE NETWORK. THIS ALLOWS FOR ONE CENTRALIZED LOCATION AT WHICH EVERY DEVICE CAN BE CONTROLLED.
3) PREDICTION AND PLANNING-DATA IS POLLED FROM INTERNET WEATHER FORECASTING SITES AS WELL AS SO-LARANYWHERE TO DETERMINE THAT STATE OF ENERGY USAGE AND GENERATION BY THE HVAC AND PV ARRAY. THIS INFORMATION IS PASSED TO A PLANNING ALGORITHM, WHICH THEN CALCULATES THE MOST EFFECT USE OF THE ENERGY.
4) HOME INTERFACE- CUSTOM IPAD APPS ARE WRITTEN TO PROVIDE A "UNIVERSAL REMOTE" THAT NOT ONLY ALLOWS DEVICES TO BE CONTROLLED, BUT CAN DISPLAY THE STATE OF EACH DEVICE AND THE ENERGY DRAW OF THE HOUSE. A KINECT SYSTEM WITH A CUSTOM SOFTWARE PACKAGE THAT ALLOWS USERS TO CONTROL DEVICES IN THE HOME USING NATURAL GESTURES SUCH AS POINTING AND WAVING.

STRUCTURAL DESIGN SUMMARY

CHIP'S STRUCTURAL DESIGN STRIKES A BALANCE BETWEEN THE UNIQUE GEOMETRIES OF CHIP'S MASSING AND THE DECATHLON'S AFFORDABILITY REQUIREMENTS. AS WITH OTHER DESIGN ELEMENTS IN THE PROJECT, THE STRUCTURAL DESIGN SEEKS TO ACCOMPLISH ITS OBJECTIVES (A SIMPLE MODULAR ASSEMBLY WHICH ENABLES THE APPEARANCE OF A SEAMLESS UNIFORM BUILDING) IN A ROBUST, LOW-TECH FASHION, USING AS MANY ELEMENTS FROM TYPE V CONSTRUCTION AS POSSIBLE. ADDITIONALLY, WE HAVE WORKED IN CONJUNCTION WITH OUR CONSULTANTS AT BURO HAPFOLD TO REDUCE REDUNDANT AND UNNECESSARY STRUCTURE FROM TYPE V ASSEMBLIES WHERE POSSIBLE IN ORDER TO DELIVER A LIGHTER, MORE EFFICIENT BUILDING. THE RESULT IS A UNIQUE PROJECT WHICH USES EVERY-DAY CONSTRUCTION METHODS TO LOWER THE OVERALL COST OF CONSTRUCTION AND TRANSPORT, WHILE ENABLING A STABLE PLATFORM FOR THE PROJECT'S OTHER ENGINEERING AND DESIGN ELEMENTS.

SUBMISSIONS:

AS-BUILT DRAWING SET 08/11/2011

CONSTRUCTION DRAWING SET 09/22/2011

DESIGN DOCUMENTATION SET 11/23/2010

REVISIONS:

CD SET REVISION 05/02/2011

DATE:	08.11.2011
LOT NUMBER:	#402
DRAWN BY:	SCI-ARC / CALTECH
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PROJECT COVER

G-001



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GENERAL NOTES

G-002

STRUCTURAL GENERAL NOTES

- THE PROJECT SPECIFICATIONS FORM A PART OF THESE GENERAL NOTES.
- THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION. THE ARCHITECT SHALL BE NOTIFIED OF ANY DISCREPANCIES OR INCONSISTENCIES.
- CONTRACTOR SHALL FOLLOW DRAWING DIMENSIONS. DRAWINGS SHALL NOT BE SCALLED. IN CASE OF CONFLICT, DIMENSIONS ON ARCHITECTURAL DRAWINGS SHALL TAKE PRECEDENCE OVER STRUCTURAL DRAWINGS.
- NOTES & DETAILS ON DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL NOTES & TYPICAL DETAILS. WHERE NOTES & DETAILS ON DRAWINGS & THESE GENERAL NOTES & TYPICAL DETAILS ARE IN CONFLICT WITH THE PROJECT SPECIFICATIONS, THE MOST STRINGENT SHALL APPLY.
- ALL WORK SHALL CONFORM TO THE STANDARDS OF THE INTERNATIONAL RESIDENTIAL CODE 2009 EDITION. IN ADDITION, WORK SHALL CONFORM TO THE STANDARDS OF ANY PORTION OF THE WORK, INCLUDING THE STATE OF CALIFORNIA DIVISION OF INDUSTRY SAFETY & THOSE CODES & STANDARDS IN THE LISTED CONTRACT DOCUMENTS.
- MANUFACTURED MATERIALS SHALL BE APPROVED BY THE ARCHITECT PRIOR TO THEIR USE. ALL REQUIREMENTS OF THOSE APPROVALS SHALL BE FOLLOWED.
- SEE ARCHITECTURAL DRAWINGS FOR THE FOLLOWING:
 - SIZE & LOCATION OF ALL DOOR & WINDOW OPENINGS
 - SIZE & LOCATION OF ALL NON-BEARING PARTITIONS
 - SIZE & LOCATIONS OF ALL CONCRETE CURBS, FLOOR DRAINS, SLOPES, DEPRESSSED AREAS, CHANGES IN LEVEL, CHAMBERS, GROOVES, INSERTS, ETC.
 - SIZE & LOCATION OF ALL FLOOR & ROOF OPENINGS
 - STAIR FRAMING & DETAILS
 - DIMENSIONS NOT SHOWN OF STRUCTURAL DRAWINGS.
- SEE MECHANICAL, PLUMBING & ELECTRICAL OR VENDOR DRAWINGS FOR THE FOLLOWING:
 - PIPE RUNS, SLEEVES, HANGERS, TRENCHES, WALL, ROOF & FLOOR OPENINGS, ETC. NOT SHOWN OR NOTED.
 - ELECTRICAL CONDUIT RUNS, BOXES, OUTLETS IN WALLS & SLABS.
 - ANCHORAGE & BRACING FOR ELECTRICAL, MECHANICAL OR PLUMBING EQUIPMENT.
 - ANCHOR BOLTS FOR MOTOR MOUNTS.
 - SIZE & LOCATION OF MACHINE & EQUIPMENT BASES.
- THE CONTRACT DOCUMENTS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE DURING CONSTRUCTION SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO BRACING, SHORING FOR LOADS DUE TO CONSTRUCTION EQUIPMENT, ETC.
- OPENINGS, POCKETS, ETC. SHALL NOT BE PLACED IN STRUCTURAL MEMBERS UNLESS SPECIFICALLY DETAILED ON THE STRUCTURAL DRAWINGS, BUT WHICH ARE LOCATED IN STRUCTURAL MEMBERS.
- SPECIFICATIONS, CODES & STANDARDS NOTED IN THE CONTRACT DOCUMENTS SHALL BE OF THE LATEST APPROVED ISSUE INCLUDING SUPPLEMENTS, UNLESS OTHERWISE NOTED. MATERIAL SPECIFICATIONS ARE ASTM LATEST EDITION UNLESS NOTED OTHERWISE (U.N.O.). CONSTRUCTION MATERIALS SHALL BE PLACED ON FRAMED FLOORS OR ROOFS. LOAD SHALL NOT EXCEED THE DESIGN LIVE LOAD PER SQUARE FOOT. PROVIDE ADEQUATE SHORING & OR BRACING WHERE STRUCTURE HAS NOT ATTAINED DESIGN STRENGTH OR WHERE OVERLOAD IS ANTICIPATED

EQUIPMENT ANCHORAGE NOTES:

- ALL EQUIPMENT SHALL BE ANCHORED PER THE REQUIREMENTS OF THE CODE. FOR ANCHORAGE DETAILS & SPECIFICATIONS SEE VENDOR INSTALLATION DRAWINGS, UNLESS NOTED OTHERWISE HERIN.

WOOD GENERAL:

- DO NOT NOTCH OR DRILL JOISTS, BEAMS OR LOAD BEARING STUDS WITHOUT PRIOR APPROVAL OF THE STRUCTURAL ENGINEER THROUGH THE ARCHITECT. DOUBLE UP FLOOR JOISTS UNDER PARTITIONS. PROVIDE 1 X 3 OR METAL CROSS BRIDGING AT MIDSPAN OF ALL JOISTS. DOUBLE UP STUDS AT JAMBS & UNDER BEAMS IN BEARING WALLS. PROVIDE 2 X SOLID BLOCKING AT MID-HEIGHT OF LOAD BEARING STUD WALLS. ALL NAILS SHALL BE COMMON NAILS. ALL NAILING NOT NOTED SHALL BE IN ACCORDANCE WITH THE 2006 EDITION OF THE INTERNATIONAL RESIDENTIAL CODE. ALL FRAMING ANCHORS & CONNECTORS SHALL BE FILLED WITH NAILS PER MANUFACTURERS PUBLISHED NAIL SIZES. ALL BOLTS SHALL BE ASTM A307 BOLTS INSTALLED WITH STEEL WASHERS. ALL EXPANSION BOLTS SHALL BE HILTI KWIK BOLT II OR AN APPROVED T/OBO/ICC RATED PRODUCT.

WOOD STUD WALLS:

- USE 2 X 4 AT 16" O.C. TYPICAL UNLESS NOTED OTHERWISE ON PLANS. WOOD PLATE ANCHOR BOLTS SHALL BE 5/8" DIAMETER PLACED NOT TO EXCEED 32" O.C. UNLESS NOTED OTHERWISE. ANCHOR BOLTS SHALL BE PLACED AT ALL JAMBS, CORNERS, INTERSECTIONS & WALL ENDS. ALL BOTTOM PLATES SHALL HAVE A MINIMUM OF 2 ANCHOR BOLTS. ALL FOUNDATION PLATES OR SILLS & SLEEPERS WHICH IS IN DIRECT CONTACT WITH THE EARTH & SOIL SHALL BE PRESSURE TREATED WOOD IN ACCORDANCE WITH AWPB 50 ECIFICATION NO. LP-22 FOR ABOVE GROUND CONTACT.

FRAMING LUMBER:

BASE VALUES FOR DIMENTION LUMBER

MEMBER	Fb (PSI)	Fv (PSI)	E (PSI)	Fc11 (PSI)	SPECIES AND GRADE
JOISTS	900	180	1,600,000	1350	DOUG FIR, ARCH #2
BEAMS					
4X MEMBERS	1000	170	1,700,000	1500	DOUG FIR, ARCH #1
6X MEMBERS	1350	170	1,600,000	925	DOUG FIR, ARCH #1
POSTS					
4X MEMBERS	1000	170	1,700,000	1500	DOUG FIR, ARCH #1
6X MEMBERS	1200	170	1,600,000	1000	DOUG FIR, ARCH #1
STUDS	900	180	1,600,000	1350	DOUG FIR, ARCH #2
LEDGERS & TOP PLATES	900	180	1,600,000	1350	DOUG FIR, ARCH #2
TREATED SILL PLATES					DOUG FIR #2 MINIMUM. EACH PIECE BEAR A STAMP OF APPROVED INDEPENDENT AGENCY OPERATING UNDER AITC.

FRAMING LUMBER SHALL COMPLY WITH THE LATEST EDITION OF THE GRADING RULES OF THE WESTERN WOOD PRODUCTS ASSOCIATION OR WEST COAST LUMBER INSPECTIONS BUREAU. ALL SAWN LUMBER SHALL BE NOTIFIED OF ANY DISCREPANCIES OR INCONSISTENCIES. MACHINE NAILING IS NOT ALLOWED FOR 5/16 INCH PLYWOOD. IF THE NAIL HEADS PENETRATE THE OUTER PLY MORE THAN NORMAL FOR A HAND HELD HAMMER, OR IF THE MINIMUM ALLOWABLE EDGE DISTANCES ARE NOT MAINTAINED, THE PERFORMANCE WILL BE DEEMED UNSATISFACTORY & MACHINE NAILING SHALL BE DISCONTINUED.

MACHINE NAILING:

USE OF MACHINE NAILING IS SUBJECT TO A SATISFACTORY JOBSITE DEMONSTRATION FOR EACH PROJECT & THE APPROVAL OF THE PROJECT ARCHITECT OR STRUCTURAL ENGINEER & THE ENFORCEMENT AGENCY. THE APPROVAL IS SUBJECT TO CONTINUED SATISFACTORY PERFORMANCE. MACHINE NAILING IS NOT ALLOWED FOR 5/16 INCH PLYWOOD. IF THE NAIL HEADS PENETRATE THE OUTER PLY MORE THAN NORMAL FOR A HAND HELD HAMMER, OR IF THE MINIMUM ALLOWABLE EDGE DISTANCES ARE NOT MAINTAINED, THE PERFORMANCE WILL BE DEEMED UNSATISFACTORY & MACHINE NAILING SHALL BE DISCONTINUED.

UNLESS SPECIFICALLY SHOWN ON THESE PLANS NO STRUCTURAL MEMBER SHALL BE CUT, NEITHER DRILLED NOR NOTCHED WITHOUT PRIOR WRITTEN AUTHORIZATION FROM THE STRUCTURAL ENGINEER.

STRUCTURAL WOOD SHEATHING:

STRUCTURAL WOOD SHEATHING PROPERTIES & ATTACHMENT (MINIMUM, U.N.O.)

ITEM	THICKNESS	SPAN/INDEX RATIO	EDGE NAILING	INTERMEDIATE NAILING
ROOF	15/32'	24/0	8D @ 6" O.C.	8D @ 12" O.C.
FLOOR	19/32'	32/16	10D @ 6" O.C.	10D @ 10" O.C.

ALL STRUCTURAL WOOD SHEATHING IS TO BE DOUGLAS FIR CONFORMING TO PS-1-95, GROUP 1 OR 2 OR APA PERFORMANCE RATED PANELS. STRUCTURAL-1 SHEATHING INCLUDES ALL-VENEER PLYWOOD, COMPOSITE PANELS CONTAINING A COMBINATION OF VENEER & WOOD BASED MATERIALS & MAT-FORMED PANELS. SUCH PLYWOOD IS TO BE "EXTERIOR" TYPE, GRADED-MARKED BY THE AMERICAN PLYWOOD ASSOCIATION, GRADE STRUCTURAL-1 UNLESS NOTED OTHERWISE. SHEATHING PANEL INDEX TO BE MIN. 32/16 FOR FLOOR SHEATHING. PLYWOOD WIDTH FOR FLOOR SHEATHING SHALL BE 24' WIDE.

SILL PLATES ON SOIL TO BE 2x PRESSURE TREATED LUMBER. WALL STUDS & BLOCKING AT ADJOINING PANEL EDGES TO BE 2x OR LARGER. PLYWOOD JOINT & SILL PLATE NAILING TO BE STAGGERED IN ALL CASES.

ALL NAILS TO BE COMMON WIRE NAILS AS INDICATED IN THE NAILING SCHEDULE PER PLAN. DO NOT USE BOX TYPE NAILS. ALL FIELD NAILING TO BE 12" O.C. UNO. NAIL PLYWOOD AS SPECIFIED IN THE PLANS &/OR ON THE GENERAL NOTES. WITH PERIMETER NAILS NOT CLOSER THAN 1/2" FROM EDGES. DO NOT OVERDRIVE THE NAILS THROUGH THE FACE GRAIN OF THE PLYWOOD. OVER DRIVEN NAILS MAY RESULT IN REJECTION & REPLACEMENT OF PLYWOOD BY THE INSPECTOR OR ENGINEER. EXCEPT FOR PLYWOOD, NAILS SHALL NOT BE LESS THAN 1/2 THEIR LENGTH NOR CLOSER TO THE EDGE OR END OF LUMBER THAN 1/4 THEIR LENGTH. THE PENETRATION OF NAILS OR SPIKES INTO PIECES RECEIVING THE POINT SHALL NOT BE LESS THAN 1/2 THE NAIL LENGTH, EXCEPT THAT A 16d MAY BE USED TO CONNECT PIECES OF 2" NOMINAL THICKNESS. USE 16d COMMONS THROUGH SILL.

ALL FRAMING CONNECTORS TO BE SIMPSON STRONG TIE COMPANY OR AS REQUIRED BY THE STRUCTURAL PLANS. PROVIDE THE TYPE OF NAILS SPECIFIED BY THE MANUFACTURER & FULLY DRIVE NAILS INTO ALL HOLES OF THE CONNECTOR UNLESS NOTED OTHERWISE ON THE PLANS. ALL CONNECTORS SHALL BE GALVANIZED OR HAVE ANOTHER FACTORY APPLIED FINISH. ALL STEEL FRAMING HANGERS TO BE TORSIONAL RESTRAINT SOLID BLOCKING REQUIRED BETWEEN JOISTS WHERE TORSIONAL RESTRAINT HANGERS DO NOT OCCUR.

FOUNDATION:

- FOOTINGS ARE DESIGNED BASED ON THE ALLOWABLE SOIL BEARING CAPACITY OF 1500 PSF WHICH CAN BE INCREASED BY 1/3 DUE TO WIND OR SEISMIC LOADING
- FOOTINGS ARE DESIGNED TO RESULT IN A BEARING PRESSURE OF MORE THAN 1000 PSF

LOADING:

SEISMIC

- SEISMIC IMPORTANCE FACTOR, I = 1
- OCCUPANCY CATEGORY = I OR II FOR SINGLE STORY BUILDING
- MAPPED SPECTRAL RESPONSE ACCELERATIONS, Ss = 1.940 AND S1 = 0.988
- SITE CLASS D
- SPECTRAL RESPONSE COEFFICIENTS, SDS = 1.293 AND SD1 = 0.988
- SEISMIC DESIGN CATEGORY D
- BASIC SEISMIC FORCE RESISTING SYSTEM, BEARING WALL SYSTEM WITH WOOD SHEAR WALL PANELS
- DESIGN BASE SHEAR = 1.3 Cs W = 6.8 kips, WHERE W = BUILDING WEIGHT = 26.3 kips
- SEISMIC RESPONSE COEFFICIENT, Cs = 0.199
- RESPONSE MODIFICATION FACTOR, R = 6.5
- ANALYSIS PROCEDURE, EQUIVALENT LATERAL FORCE PROCEDURE.
- REDUNDANCY FACTOR = 1.3

WIND

- BASIC WIND SPEED (3-MILE GUEST) = 85 mph
- WIND IMPORTANCE FACTOR, I = 1
- WIND EXPOSURE = 18.6 psi
- DESIGN WIND PRESSURE FOR COMPONENTS AND CLADDING = 18.2 psi

GRAVITY

LIVE LOADING

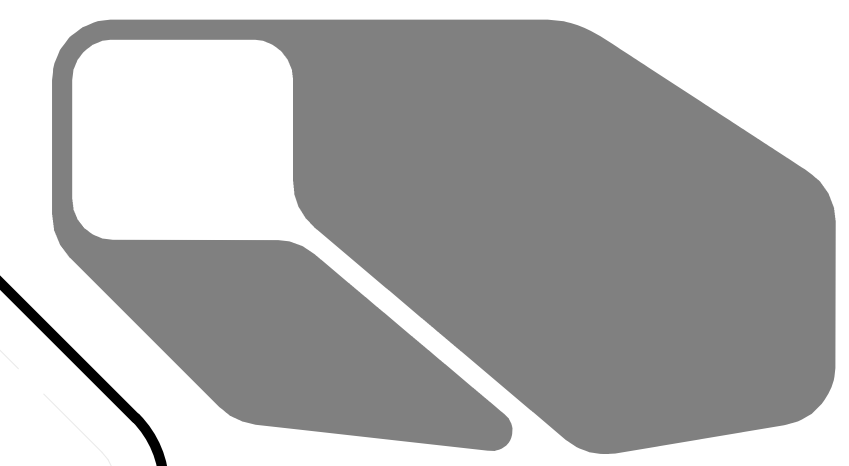
- ROOF 20 Psf
- FLOOR 40 Psf

ARCHITECTURAL GENERAL NOTES

- VERIFY ALL DIMENSIONS PRIOR TO BEGINNING CONSTRUCTION.
- EXISTING HOUSE PLANS BASED ON DRAWINGS FROM ARCHITECTS, PROVIDED BY OWNER. VERIFY ALL DIMENSIONS IN FIELD.
- PROVIDE ADEQUATE TEMPORARY SUPPORT AS NECESSARY TO ASSURE THE STRUCTURAL VALUE OR INTEGRITY OF ANY PORTION OF THE BUILDING AFFECTED BY THE WORK.
- ALL PHASES OF CONSTRUCTION SHALL BE REGULATED BY CURRENT VERSIONS OF THE INTERNATIONAL BUILDING CODE 2009 (IBC), THE LOS ANGELES CITY BUILDING CODE, THE UNIFORM PLUMBING, ELECTRICAL AND MECHANICAL CODES AND ANY APPLICABLE LOCAL REGULATIONS.
- STUD WALLS SHALL BE FIRE BLOCKED AT FLOOR, CEILING (INCLUDING FURRED AREAS), AND MID-HEIGHT OF STUD SPACES MORE THAN 8'-0" HIGH.
- THE LONG DIMENSION OF PLYWOOD WALL BOARD SHALL SPAN PERPENDICULAR TO THE SUPPORTS.
- UPON COMPLETION OF THE INSULATION WORK, BOTH BUILDER AND INSULATION INSTALLER SHALL COMPLETE AND CONSPICUOUSLY LOCATE A CARD CERTIFYING THAT THE INSTALLATION HAS BEEN INSTALLED IN ACCORDANCE WITH ACT 5, CHAPTER 1, TITLE 24 OF THE CALIFORNIA ADMINISTRATIVE CODE.
- ALL FRAMING SHALL BE INSTALLED MEETING THE REQUIREMENTS OF BOTH THE STRUCTURAL AND LIGHTING DESIGN. THE CONTRACTOR SHALL SURPASS THE SPECIFIED STRUCTURAL AND ADDITIONAL FRAMING WHERE NECESSARY TO ACCOMMODATE THE LOCATION OF THE ELECTRICAL AND LIGHTING FIXTURES AS LOCATED IN THE PLANS.
- ALL WATER CLOSETS AND SHOWER HEADS SHALL BE LOW-FLOW.
- PROVIDE 70" MIN. HIGH NON-ABSORBANT WALL ADJACENT TO SHOWER.
- PROVIDE HARDWIRED SMOKE DETECTORS FOR ALL BEDROOMS AND ROOMS/HALLS LEADING TO BEDROOMS.
- ALL NEW WINDOWS SHALL BE DUAL GLAZED.
- SMOKE DETECTORS SHALL SOUND AN ALARM AUDIBLE IN ALL SLEEPING AREAS. SMOKE DETECTORS ALSO SHALL BE HARD WIRED AND SHALL BE EQUIPPED WITH BATTERY BACK-UP.
- MAXIMUM FLOW RATE STANDARDS SET BY THE CALIFORNIA ENERGY COMMISSION:
 - WATER CLOSET: 1.6GPM
 - SHOWERHEADS: 2.5GPM
 - LAUNDRY FAUCETS: 2.2GPM
 - SINK FAUCETS: 2.5GPM
- SHOWERS AND TUB & SHOWERS TO BE INSTALL WITH ANTI-SCALDING VALVE.
- ALL HOSE BIBS MUST HAVE AN APPROVED ANTI-SIPHON DEVICE.
- LIGHTING IN BATHROOMS, LAUNDRY ROOMS, AND/OR UTILITY ROOMS MUST BE HIGH EFFICANCY OR MUST BE CONTROLLED BY A MANUAL-ON SENSOR. A MANUAL-ON OCCUPANCY SENSOR MUST BE MANUALLY TURNED ON AND AS LONG AS THE SENSOR DETECTS MOVEMENT STAYS ON. WHEN MOVEMENT IS NOT DETECTED, WHICH CANNOT BE LONGER THAN 30 MINUTES, THE FIXTURE MUST AUTOMATICALLY TURNS OFF.
- ALL PERMANENTLY INSTALLED LIGHTING IN OTHER ROOMS, INCLUDING HALLWAYS, DINING ROOMS, BEDROOMS, FAMILY ROOMS, MUST BE HIGH EFFICANCY; OR BE CONTROLLED BY A MANUAL-ON OCCUPANCY SENSOR; OR A DIMMER.
- OUTDOOR LIGHTING THAT IS ATTACHED TO A BUILDING MUST BE HIGH EFFICACY; OR CONTROLLED BY A MOTION SENSOR WITH AN INTEGRAL PHOTOCONTROL. LIGHTING AROUND SWIMMING POOLS, WATER FEATURES, OR OTHER LOCATIONS SUBJECT TO ARTICLE 680 OF THE CALIFORNIA ELECTRIC CODE ARE EXEMPT.
- PROVIDE AT LEAST ONE OUTSIDE WEATHERPROOF 120V RECEPTACLE AT FRONT AND BACK OF DWELLING UNIT.
- PROVIDE G.F.I. PROTECTION TO ALL 120V, 15A AND 20A RECEPTACLES INSTALLED OUTDOORS, IN BATHROOMS, IN BASEMENT, AT COUNTER TOP RECEPTACLES (WITHIN 6 FEET OF SINK) AND GARAGE UTILIZED FOR A FIXED OR STATIONARY APPLIANCE.
- RECEPTACLE OUTLETS IN BEDROOMS SHALL BE PROTECTED BY AN ARC-FAULT CIRCUIT INTERRUPTER(S).
- IN THE KITCHEN AND DINING AREA, A RECEPTACLE SHALL BE PROVIDED FOR EACH COUNTERSPACE WIDER THAN 12" SO THAT NO POINT IS MORE THAN 24" FROM THE OUTLET.
- WATER HEATERS HAVING NON-RIGID WATER CONNECTIONS AND OVER 4' IN HEIGHT SHALL BE ANCHORED OR STRAPPED TO THE STRUCTURE.
- DRYER MOISTER EXHAUST DUCT MUST BE 4" DIAMETER MINIMUM TO THE OUTSIDE AND EQUIPPED WITH A BACK-DRAFT DAMPER. EXHAUSE DUCT LENGTH IS LIMITED TO 14' WITH 2 ELBOW.
- WALLS 2 FEET WIDE OR GREATER SHALL HAVE AN OUTLET. OUTLETS SHALL BE SPACED NO MORE THAN 6' APART, AND A MAXIMUM OF 6' FROM END OF WALLS OR OPENING.
- CONTRACTOR TO PROVIDE UFER GROUNDING PER CEC 250.

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SHEET INDEX AND ABBREVIATIONS

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O-101	OPERATIONAL SITE EQUIPMENT & TRUCK ROUTE
O-102	EQUIPMENT SCHEDULE & CRANING ASSEMBLY PROCEDURE
O-103	CRANING ASSEMBLY PROCEDURE

ABBREVIATIONS

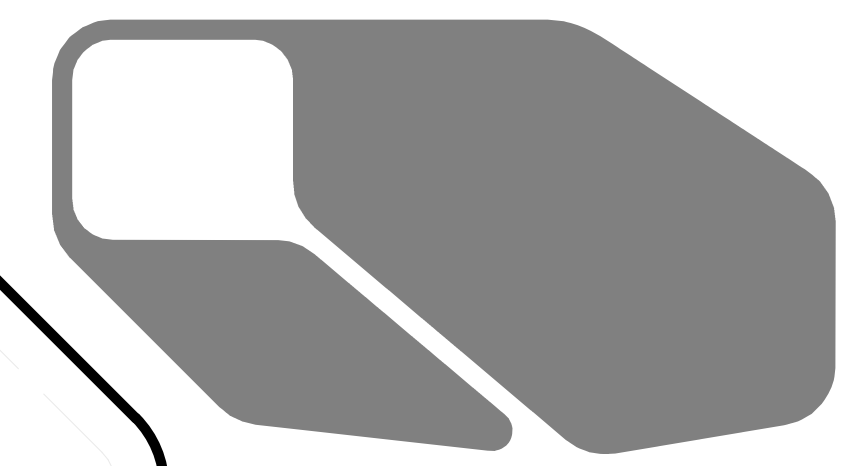
AC	ALTERNATE CURRENT	H	HOT
ACCESS.	ACCESSORY	HD.	HEAD
ACOUS.	ACOUSTIC(AL)	HDWD.	HARDWOOD
ADJ.	ADJUSTABLE	HDWE.	HARDWARE
AFCI	AFCI FAULT CIRCUIT INTERRUPTER	HEX	HEAT EXCHANGER
AFF	ABOVE FINISHED FLOOR	H.M.	HOLLOW METAL
ALUM.	ALUMINUM	H.P.	HEAT PUMP
ALT.	ALTERNATE	HT.	HEIGHT
ANOD.	ANODIZED	HVAC	HEATING, VENTILATING, AND AIR CONDITIONING
ARCH.	ARCHITECT(URAL)	HW	HOT WATER
AUTO.	AUTOMATIC	IIC	IMPACT INSULATION CLASS
AVG.	AVERAGE	INFO	INFORMATION
AWG.	AMERICAN WIRE GAUGE	INSTRUM.	INSTRUMENT(ATION)
&	AND	INSUL.	INSULATION
BD.	BOARD	INTLK.	INTERLOCK(ING)
BLDG.	BUILDING	INT.	INTERIOR
BLKG	BLOCKING	INFILTR.	INFILTRATION
BOLL	BOLLARD	K	KELVIN
BOT.	BOTTOM	KIT.	KITCHEN
BRDLM	BROADLOOM	kw	KILOWATT
B.U.	BUILT UP	LAV.	LAVATORY
C	COLD	LT.	LIGHT
CAB.	CABINET	LVLG.	LEVELING
CD	COMPRESSIBLE DUCT	LVR.	LOUVER
CEM.	CEMENT(TIOUS)	MAX.	MAXIMUM
CER.	CERAMIC	MFD.	MANUFACTURED
CLG.	CEILING	MFR.	MANUFACTURER
CMU	CONCRETE MASONRY UNIT	MATL.	MATERIAL
COL.	COLUMN EQ.	MECH.	MECHANICAL
COILG	COILING	MEMB.	MEMBRANE
CONC.	CONCRETE	MEZZ.	MEZZANINE
CONSTR.	CONSTRUCTION	MIN.	MINIMUM
CONN.	CONNECTION	MISC.	MISCELLANEOUS
CONT.	CONTINUOUS(ATION)	MILLWK.	MILLWORK
CONTR.	CONTRACT(OR)	MTL.	METAL
COORD.	COORDINATE	MOIST	MOISTURE
COV.	COVER	MPPT	MAXIMUM POWER POINT TRACKER
CPT	CARPET	MTD.	MOUNTED
CTR.	CENTER	NIC	NOT IN CONTRACT
CW	COLD WATER	NO.	NUMBER
DBL	DOUBLE	NOTO	NORMAL OPERATING CELL TEMPERATURE
DC	DIRECT CURRENT	NPT	NATIONAL PIPE THREAD
DEPT.	DEPARTMENT	N.	NEW
DTL.	DETAIL	NPT	NPT REDUCER
DHW	DOMESTIC HOT WATER	NTS	NOT TO SCALE
DIA	DIAMETER	ORNA.	ORNAMENTAL
DIFF.	DIFFUSER	O/	OVER
DIM.	DIMENSION	OA.	OVERALL S.F.
DISP.	DISPENSER	OVFL.	OVERFLOW
DN.	DOWN	OVHD	OVERHEAD
S	DOLLAR (US CURRENCY)	OC	ON CENTER
DR.	DOOR	OPNG.	OPENING
DRN.	DRAIN	OPP.	OPPOSITE
DS.	DOWNSPOUT	OPR.	OPERABLE
DW	DRINKING WATER	PTN.	PARTITION
DWVG.	DRAWING	PC	COPPER FITTING
DWR.	DRAWER	PEO.	PEDESTRIAN
DWS	DRINKING WATER SUPPLY	PBD	PARTIAL BOARD
EA.	EACH	PI	PIPING INSULATION
EF	EXHAUST FAN	PNF	HEX-NPT FEMALE ADAPTER
ELEV.	ELEVATION	PNL.	PANEL
ELAST.	ELASTOMERIC	PNM	HEX-NPT MALE ADAPTER
ELEC.	ELECTRICAL	P.LAM	PLASTIC LAMINATE
EMBED	EMBEDD(ED)(ING)	PLY.	PLYWOOD
EMT	ELECTRICAL METALLIC TUBING	PLAS.	PLASTER
EQ.	EQUAL	PLSTC.	PLASTIC
EQUIP.	EQUIPMENT	POLYST.	POLYSTYRENE
ERV.	ENERGY RECOVERY VENTILATOR	PORT.	PORTABLE
EXIST.	EXISTING	PREFIN.	PREFINISHED
EXP JT.	EXPANSION JOINT	PREFAB	PREFABRICATED
EXPS.	EXPOSE(D)	PVC	POLYVINYL CHLORIDE
EXT.	EXTERIOR	PX	HEX WATER PIPING
FAB.	FABRICATION	RAD.	RADIUS
FOF	FACE OF FINISH	RD.	REFRIGERANT DISCHARGE
FOS	FACE OF STUD	R.W.L.	RAIN WATER LEADER
FCU.	FAN COIL UNIT	REFL.	REFLECTED
F.D.	FLOOR DRAIN	REF.	REFERENCE
F.E.	FIRE EXTINGUISHER	REFR.	REFRIGERATOR
FIN.	FINISH	REQD.	REQUIRED
F.R.	FIRE RATING	RESIS.	RESIST(ANT)(IVE)
FXD.	FIXED	REINF.	REINFORCE(D)(ING)(MENT)
FXTR.	FIXTURE	RFG.	ROOFING
FL.	FLOOR	RFL	REFRIGERANT LINE SET
FLR.	FLOORING	RD.	ROOF DRAIN
FLASH.	FLASHING	RL.	REFRIGERANT LIQUID
FLDG.	FOLDING	RM.	ROOM
FT.	FOOT OR FEET	RNG.	RANGE
FTG.	FOOTING	R.O.	ROUGH OPENING
FURN.	FURNITURE	S	SOLENOID
GAL.	GALLON	SCR.	SCRIBE
GALV.	GALVANIZED GLASS	SCHED.	SCHEDULE
GA	GAUGE	SECUR.	SECURITY
GFCI	GROUND FAULT CIRCUIT INTERRUPTER	SECT.	SECTION
GFRG	GLASS FIBER REINFORCED CONCRETE	S.S.D.	SEE STRUCTURAL DRAWINGS
GFRP	GLASS FIBER REINFORCED GYPSUM	SHORG.	SHORING
GFRP	GLASS FIBER REINFORCED GYPSUM	SGL	SINGLE
GL	GLASS	SIM	SIMILAR
GR.	GRADE(ING)	S.F.	SQUARE FOOT (FEET)
GND.	GROUND	SF	SPRINKLER FOOTINGS
GYP.	GYPSUM	SST	STAINLESS STEEL
		STC	SOUND TRANSMISSION CLASS
		STD.	STANDARD
		STL.	STEEL
		STOR.	STORAGE
		STRUCT.	STRUCTURAL
		SURF.	SURFACE
		SUSP.	SUSPENDED
		SW	SPRINKLER SYSTEM
		SYS.	SYSTEM

TEMP.	TEMPERED
THWN	THERMOPLASTIC HIGH WATER RESISTANT NYLON COATED
TL.	THERMOCOUPLE DATA LOGGER
TLT.	TOILET
T&G	TONGUE AND GROOVE
TRTD.	TREATED
TS	TEMPERATURE SENSOR
TT-1	THERMAL STORAGE TANK
TYP.	TYPICAL
UNDRLAY.	UNDERLAYMENT
UTIL.	UTILITY
UNO	UNLESS OTHERWISE NOTED
V	VALVE
VEH.	VEHICLE
VERT.	VERTICAL
VIF	VERIFY IN FIELD
VOC	VOLATILE ORGANIC COMPOUND
W	WATTS
W/	WITH
W.C.	WATER CLOSET
WD.	WOOD
WDW	WINDOW
WHF	WHOLE HOUSE FAN
W/O	WITHOUT
WT.	WEIGHT
WP.	WATER PROOF
WP	WATER PUMP

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SYMBOLS LEGEND

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ARCHITECTURAL SYMBOLS

	BUILDING SECTION
	SECTION NUMBER SHEET NUMBER
	CABINET TAG
	CENTER LINE
	DETAIL DRAWING NUMBER SHEET NUMBER
	AREA OF DETAIL
	DOOR NUMBER KEY
	ELEVATION DRAWING NUMBER SHEET NUMBER
	GRAPHIC SCALE 1/4IN TO 1 FT (EXAMPLE)
	GRID LINE
	INTERIOR ELEVATION ELEVATION NUMBER SHEET NUMBER
	KEYNOTES
	NORTH ARROW
	PROPERTY LINE
	ROOM NAME & NUMBER
	ROTATION ANGLE
	SHEET NOTE
	SPOT ELEVATION
	WALL SECTION DRAWING NUMBER SHEET NUMBER
	WINDOW NUMBER KEY
	WALL TYPE

EGRESS/ADA SYMBOLS

	DIRECTIONAL CHANGE
	EGRESS PATH
	EMERGENCY MEETING AREA
	FIRE EXTINGUISHER
	SMOKE DETECTOR

ELECTRICAL SYMBOLS

	3-WAY VALVE
	6-KEY SWITCH
	AFCI RECEPTABLE
	APPLIANCES
	DC TO AC INVERTER
	DIMMER SWITCH
	ELECTRICAL METER
	ELECTRICAL SUBSTATION
	EXHAUST FAN
	GROUNDING ROD
	GFCI RECEPTABLE
	JUNCTION BOX
	LIGHT FIXTURE
	LOAD CENTER
	PHOTOVOLTAIC MODULE
	PV JUNCTION BOX
	SINGLE-POLE CIRCUIT BREAKER
	SMOKE DETECTOR
	TWO-POLE CIRCUIT BREAKER
	WATER PUMP

TRANSPORT PICTOGRAM SYMBOLS

	FLAMMABLE LIQUID, GAS, AEROSOL (RED)		OXIDIZING GASES, LIQUIDS, SOLIDS (YELLOW)		ACUTE TOXICITY: ORAL, DERMAL, INHALATION (WHITE)		ORGANIC PEROXIDES (RED OVER YELLOW)
	SUBSTANCES, WHICH IN CONTACT WITH WATER, EMIT FLAMMABLE GASES (BLUE)		FLAMMABLE SOLID SELF-REACTIVE SUBSTANCES (WHITE WITH RED STRIPES)		PYROPHORICS, SELF-HEATING SUBSTANCES (WHITE OVER RED)		COMPRESSED GASES (GREEN)
	EXPLOSIVE DIVISION 1.4 (ORANGE)		EXPLOSIVE DIVISION 1.5 (ORANGE)		EXPLOSIVE DIVISION 1.6 (ORANGE)		EXPLOSIVE DIVISIONS 1.1, 1.2, 1.3 (ORANGE)
	MARINE POLLUTANT (WHITE WITH BLACK)		CORROSIVES (WHITE OVER BLACK)				

GHS PICTOGRAM/HAZARD SYMBOLS

	OXIDIZERS (WHITE WITH RED BORDER)		CORROSIVES (WHITE WITH RED BORDER)		GAS UNDER PRESSURE (WHITE WITH RED BORDER)		ACUTE TOXICITY (WHITE WITH RED BORDER)
	ENVIRONMENTAL TOXICITY (WHITE WITH RED BORDER)		-EXPLOSIVES -SELF REACTIVES -ORGANIC PEROXIDES (WHITE WITH RED BORDER)		-CARCINOGEN -RESPIRATORY SENSITIZER -REPRODUCTIVE TOXICITY -TARGET ORGAN TOXICITY -ASPIRATION TOXICITY -MUTAGENICITY (WHITE WITH RED BORDER)		-FLAMMABLES -SELF REACTIVES -PYROPHORICS -SELF-HEATING -EMITS FLAMMABLE GAS -ORGANIC PEROXIDES (WHITE WITH RED BORDER)
	-IRRITANT -ACUTE TOXICITY -NARCOTIC EFFECTS (WHITE WITH RED BORDER)						

ACUTE ORAL TOXICITY SYMBOLS

	CATEGORY 1 5 MG/KG DANGER FATAL IF SWALLOWED (WHITE WITH RED BORDER)		CATEGORY 2 >5<50 MG/KG DANGER FATAL IF SWALLOWED (WHITE WITH RED BORDER)		CATEGORY 3 50-300 MG/KG DANGER TOXIC IF SWALLOWED (WHITE WITH RED BORDER)		CATEGORY 4 2000-5000 MG/KG WARNING MAY BE HARMFUL IF SWALLOWED (WHITE WITH RED BORDER)
--	--	--	--	--	---	--	--

CHEMICAL SYMBOLS

	<p>BLUE = HEALTH HAZARD RED = FLAMMABILITY YELLOW = REACTIVITY WHITE = OTHER HAZARDS EXAMPLE: CHEMICAL REACTS VIOLENTLY WITH WATER OR IS AN OXIDIZER</p> <p>0 = NO OR MINIMAL HAZARD 1 = SLIGHT HAZARD 2 = MODERATE HAZARD 3 = SERIOUS HAZARD 4 = EXTREME HAZARD</p>
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SYMBOLS LEGEND

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LIGHTING SYMBOLS

	DIMMER SWITCH
	LED EXTERIOR FLOOD LIGHT
	LED EXTERIOR MUSHROOM LIGHT
	LED LIGHT POST
	LIGHTING/EXTERIOR BUILDING
	LINEAR LED FIXTURE
	PENDANT LIGHT
	RECESSED DOWNLIGHT
	SIX BUTTON KEYPAD
	SWITCH
	SOLAR TUBE
	TASK LIGHT/LED
	WALL MOUNTED LIGHT

MECHANICAL SYMBOLS

	4-WAY VALVE
	CENTRIFUGAL PUMP
	COMPRESSOR
	DOMESTIC HOT WATER HEAT PUMP
	DRINKING COLD WATER
	DRINKING HOT WATER
	DRINKING SUPPLY
	DRINKING WATER STORAGE TANK
	EXPANSION VALVE
	FAN
	FAN COIL UNIT
	IN-LINE CIRCULATING PUMP
	MUNICIPAL WATER SUPPLY TANK
	REFRIGERANT CONDENSER
	REFRIGERANT DISCHARGE LINE
	REFRIGERANT LIQUID LINE
	REFRIGERANT SUCTION LINE
	REFRIGERANT TO WATER HEAT EXCHANGER
	SOLENOID VALVE
	THERMAL STORAGE TANK
	THERMOCOUPLE
	WATER TO WATER HEAT EXCHANGER

PLUMBING SYMBOLS

	2-WAY BALL VALVE
	BACKFLOW PREVENTER
	CENTRIFUGAL PUMP
	DOMESTIC HOT WATER HEAT PUMP
	DRAIN
	DRINKING COLD WATER
	DRINKING HOT WATER
	DRINKING WATER SUPPLY
	DRINKING WATER STORAGE TANK
	FIRE SPRINKLER HEAD
	FLOOR DRAIN
	IN-LINE CIRCULATING PUMP
	MUNICIPAL WATER SUPPLY TANK
	PRESSURE REGULATOR
	SOLENOID VALVE
	STRAIGHT SIZE TEE JOINT
	THERMAL STORAGE TANK
	WASTE LINE AND VENT
	WASTE WATER TANK
	WATER TO WATER HEAT EXCHANGER

REFLECTED CEILING SYMBOLS

	CEILING MOUNTED SPEAKER
	PROJECTOR
	SCREEN, PROJECTION CEILING MOUNTED

TELECOMMUNICATIONS SYMBOLS

	BUILDING CONTROL HARDWARE
	CONTACT SENSORS
	DIMMER SWITCH
	ETHERNET OUTPUT AND JACK
	FIBER OPTICS LINE
	INTERCOM LINE
	TELEPHONE LINE
	TEMPERATURE AND HUMIDITY SENSOR
	THERMOCOUPLE

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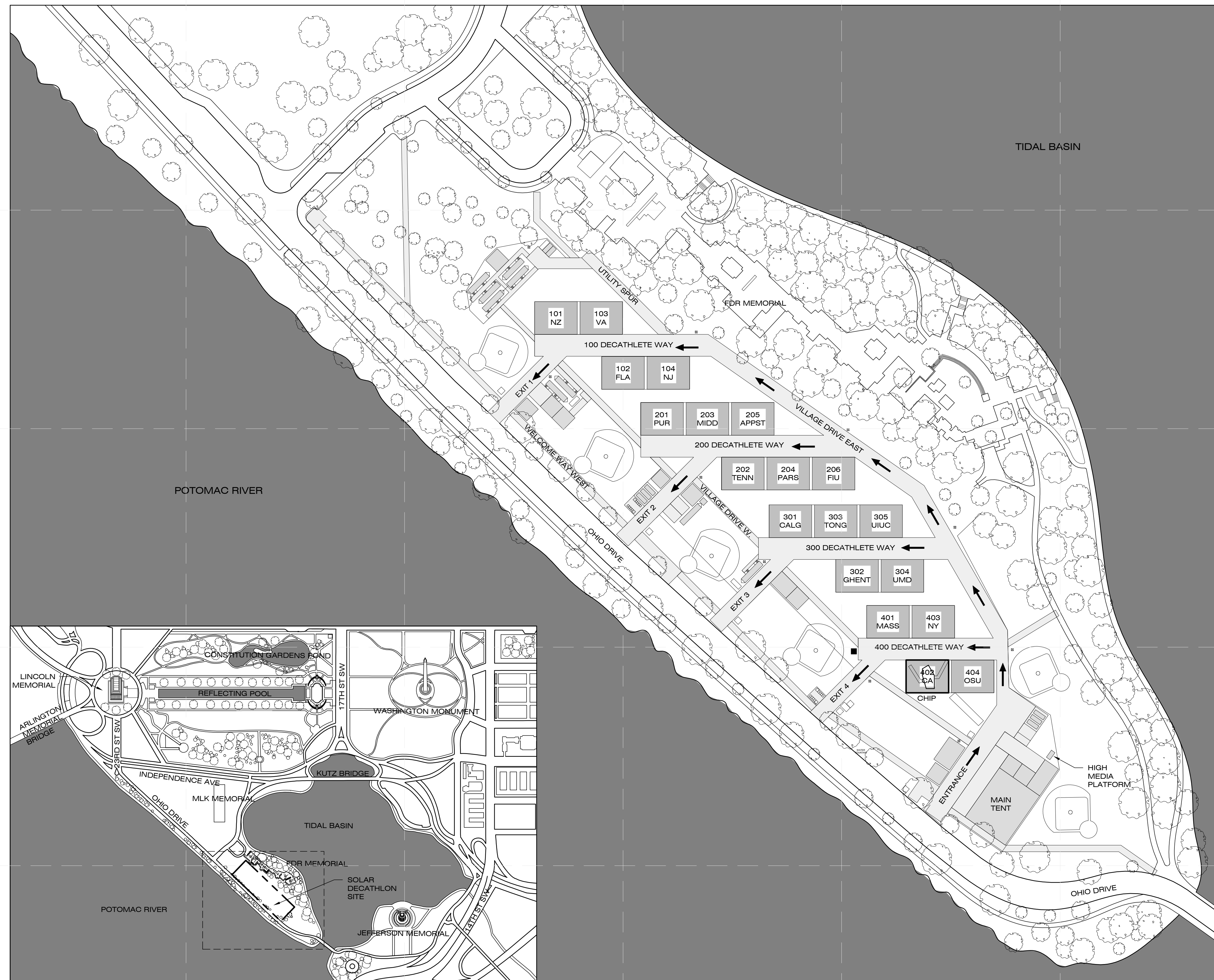
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- 1. REFER TO O-101 FOR SITE OPERATIONS

SHEET NOTES

REFERENCE KEYNOTES



A1 VICINITY MAP
1"=1000'

A4 LOCAL SITE MAP
1"=100'

SITE MAP

G-201

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TEL: 571.970.3400

BUILDING CONSTRUCTION
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3509 W 6TH ST.
LOS ANGELES, CA 90020
TEL: 213.388.9327

SUBMISSIONS:

AS-BUILT DRAWING SET 08/11/2011

CONSTRUCTION DRAWING SET 03/22/2011

DESIGN DOCUMENTATION SET 11/23/2010

REVISIONS:

CD SET REVISION 05/02/2011

DATE: 08.11.2011

LOT NUMBER: #402

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EGRESS PLAN

G-301

GENERAL SHEET NOTES

- DRAWING OF EXTERIOR SKIN DOES NOT REPRESENT ACTUAL SHAPE.
- GRID "B" DENOTES CHANGE IN SLOPE OF ROOF.
- GRID "C.1" DENOTES THE AXIS OF ROTATION FOR CANTILEVER EXTERIOR ENVELOPE.

SHEET NOTES

- FOOTPRINT OF FINISHED FLR. SQUARE FOOTAGE = 715 S.F. CALCULATION OF S.F. MADE BY USING FURTHEST EXTENT OF EXTERIOR DIM.

FINISHED S.F. CALCULATIONS FOR THIS HOUSE WERE MADE BASED ON PLAN DIM. ONLY AND MAY VARY FROM THE FINISHED S.F. OF THE HOUSE AS BUILT.

FINISHED S.F. CALCULATIONS FOR THIS HOUSE WERE MADE BASED ON ESTIMATED DIM. ONLY AND MAY INCLUDE UNFINISHED AREAS, OR IN FLR. NOT ASSOCIATED WITH STAIRS, OR ASSOCIATED STAIRS.
- PV PANEL ARRAY ABOVE
- DECKING BOARD PROVIDED BY EVENT ORGANIZERS

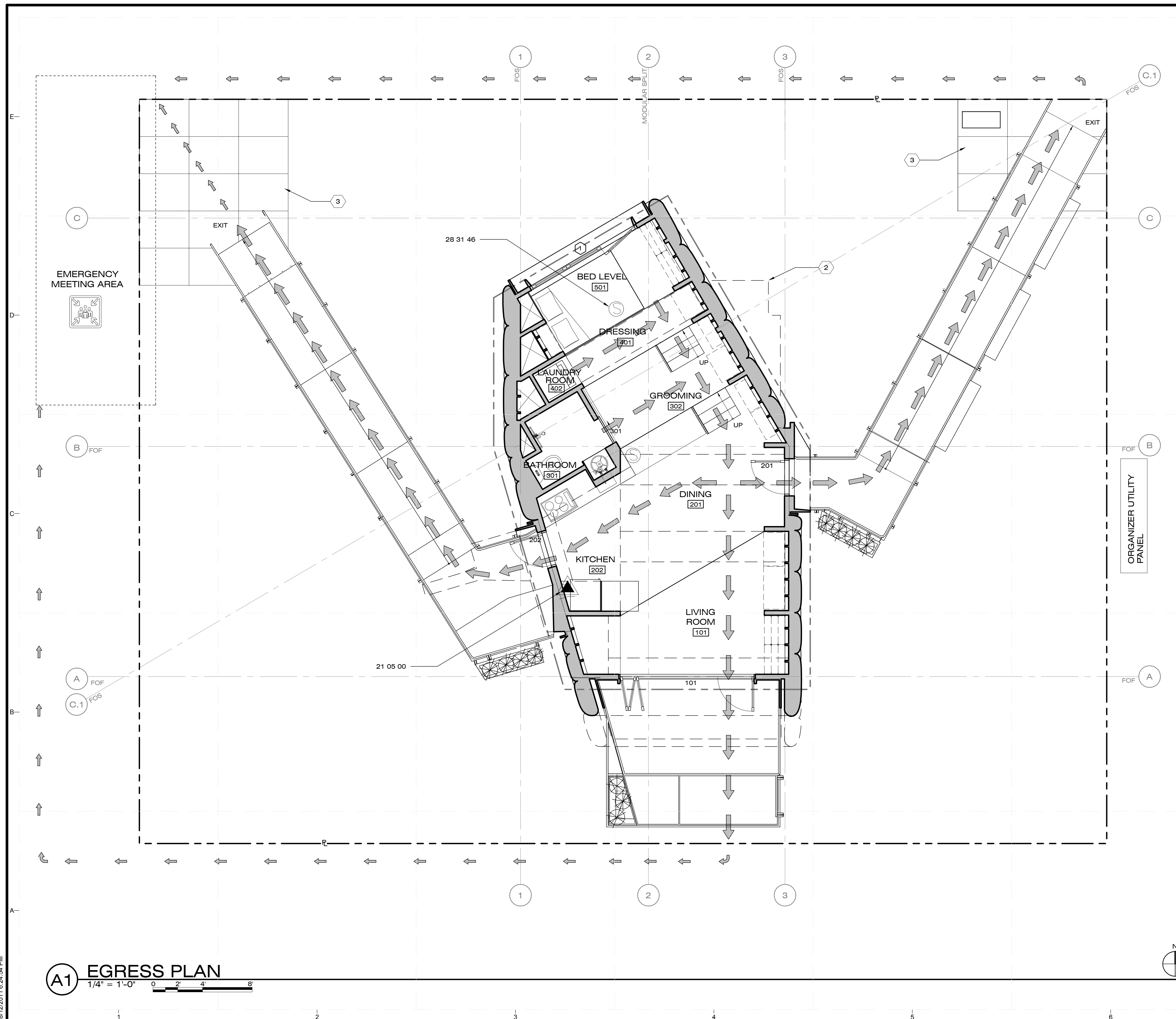
REFERENCE KEYNOTES

DIVISION 21 - FIRE SUPPRESSION
21 05 00 FIRE EXTINGUISHER

DIVISION 28 - ELECTRONIC SAFETY AND SECURITY
28 31 46 SMOKE DETECTOR

LEGEND

- EGRESS PATH
- EMERGENCY MEETING AREA
- SMOKE DETECTOR
- FIRE EXTINGUISHER LOCATION
- FIRE EXTINGUISHER LOCATION



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

8/12/2011 6:24:54 PM



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COMPACT HYPER-INSULATED PROTOTYPE

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TEAM SCI-ARC / CALTECH

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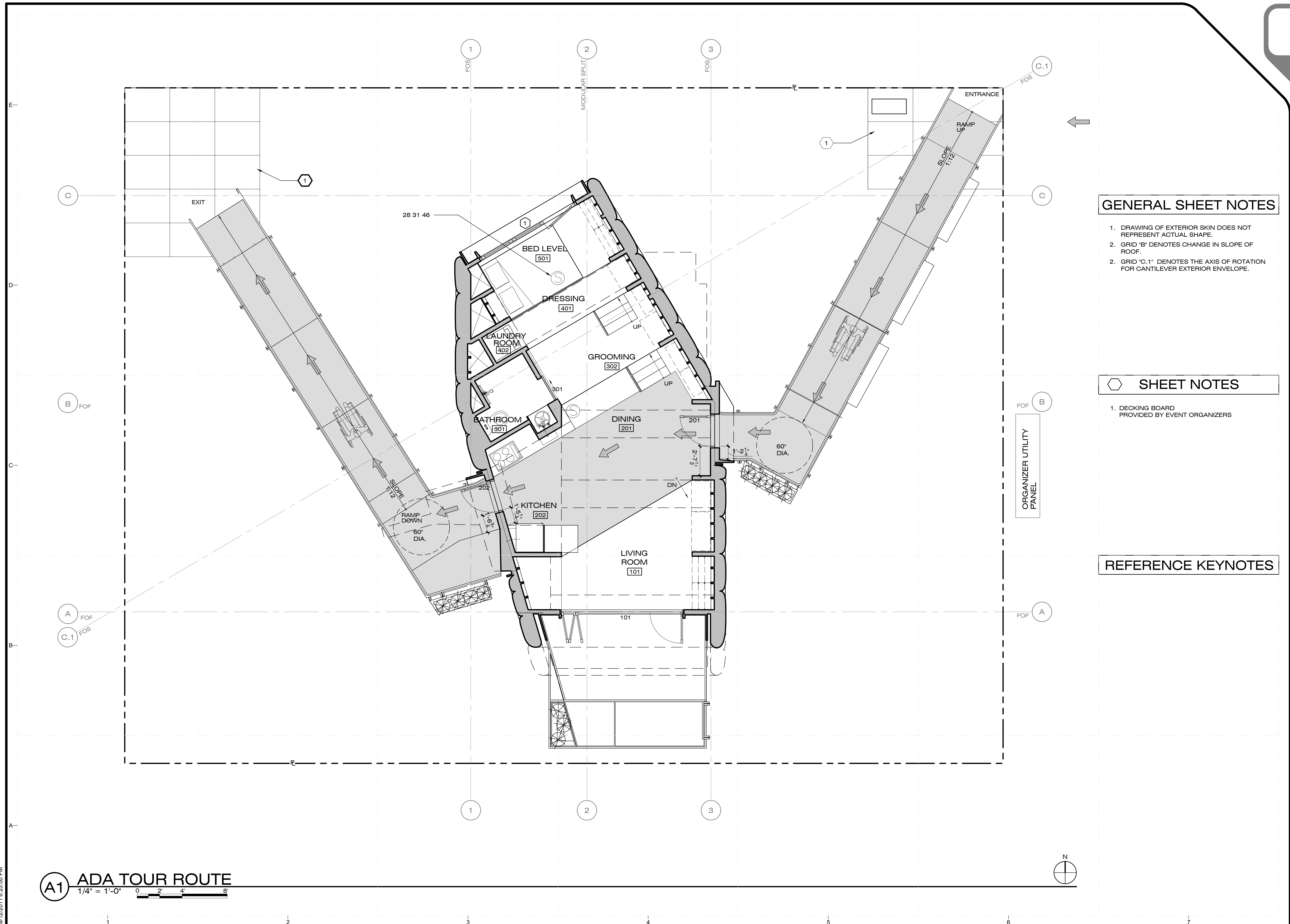
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ADA TOUR ROUTE

G-302



GENERAL SHEET NOTES

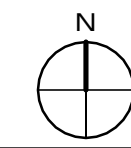
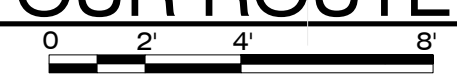
1. DRAWING OF EXTERIOR SKIN DOES NOT REPRESENT ACTUAL SHAPE.
2. GRID 'B' DENOTES CHANGE IN SLOPE OF ROOF.
2. GRID 'C.1' DENOTES THE AXIS OF ROTATION FOR CANTILEVER EXTERIOR ENVELOPE.

SHEET NOTES

1. DECKING BOARD PROVIDED BY EVENT ORGANIZERS

REFERENCE KEYNOTES

A1 ADA TOUR ROUTE
1/4" = 1'-0"





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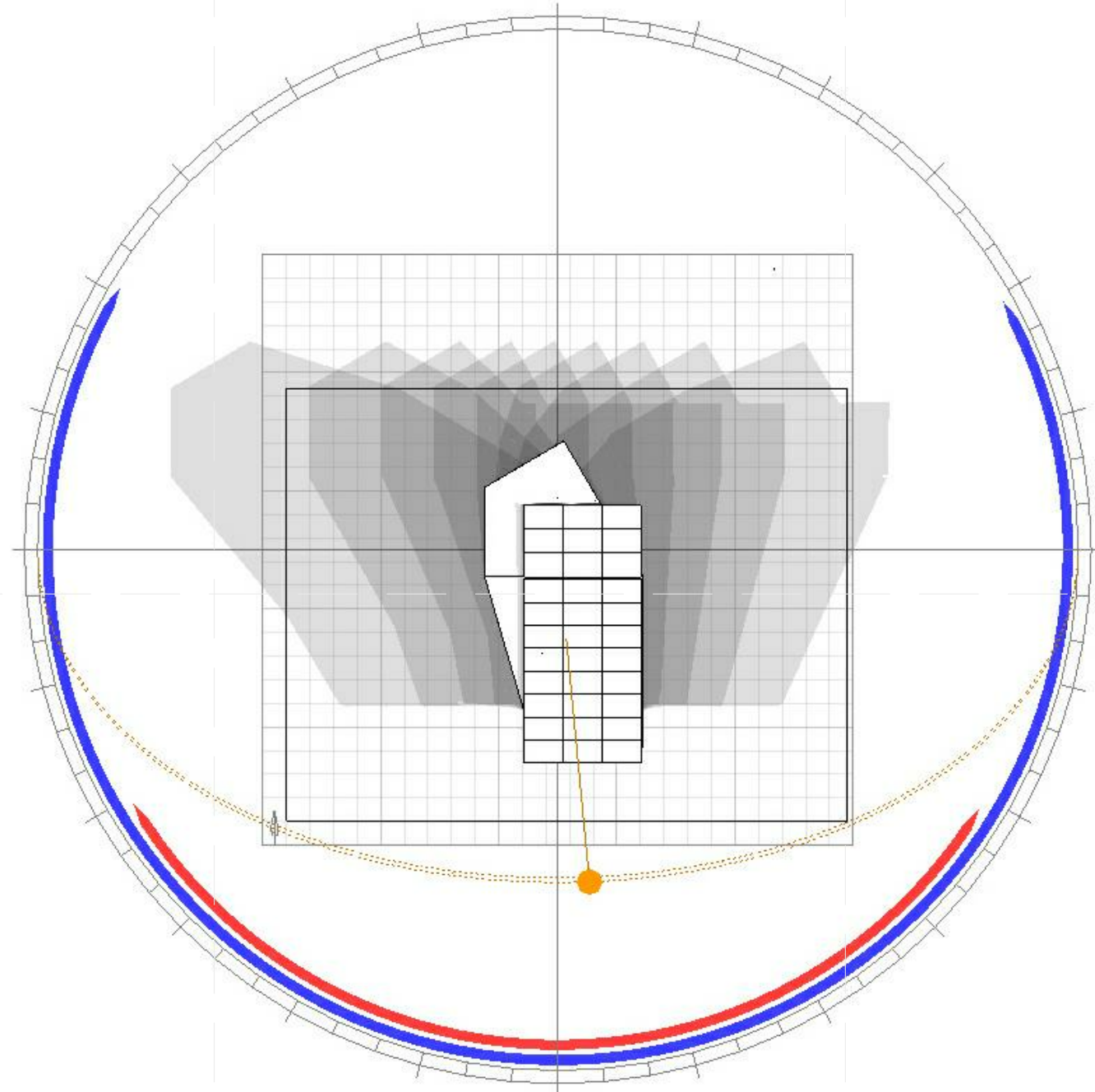
SHADING DIAGRAM

G-601

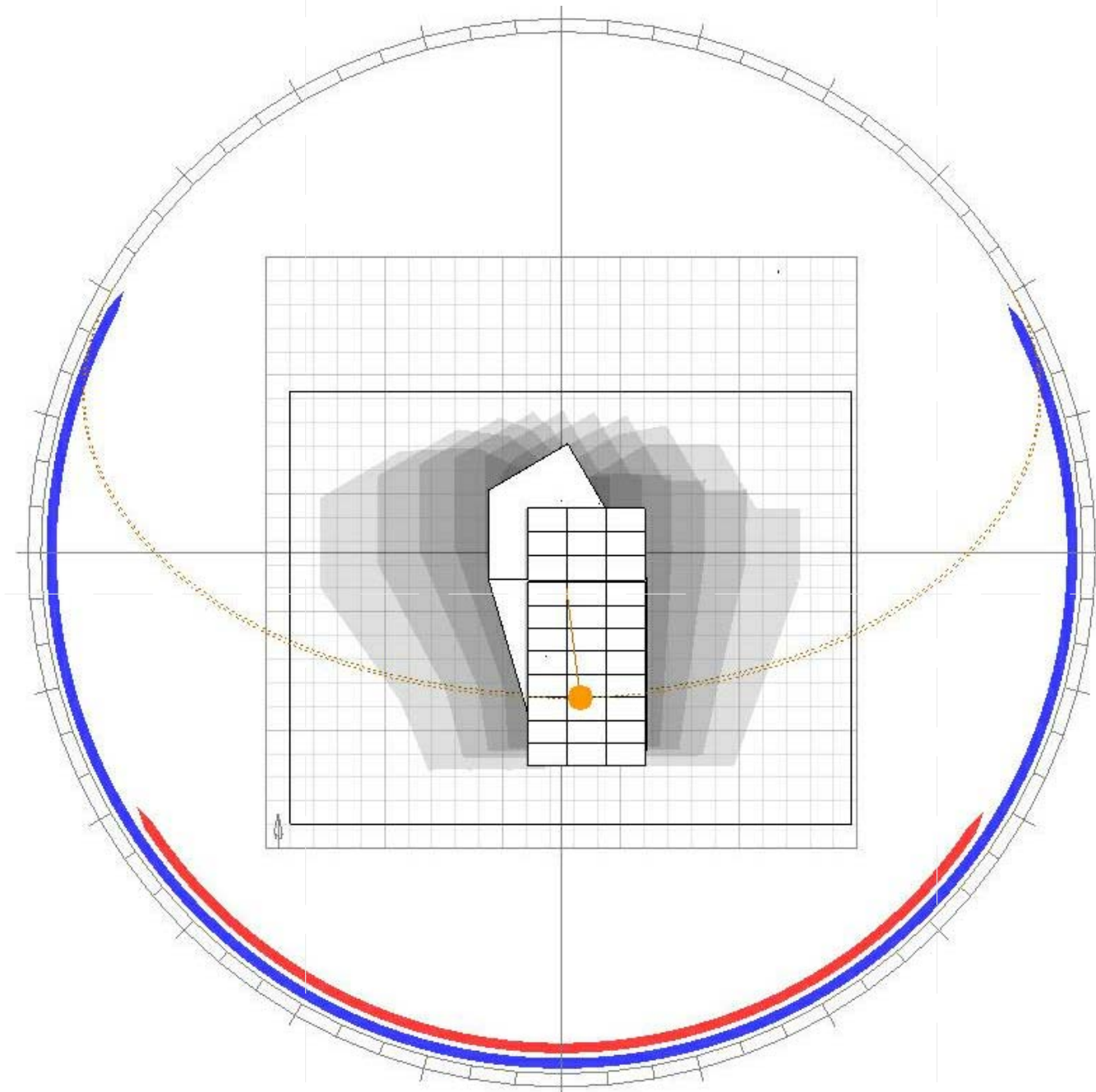
GENERAL SHEET NOTES

SHEET NOTES

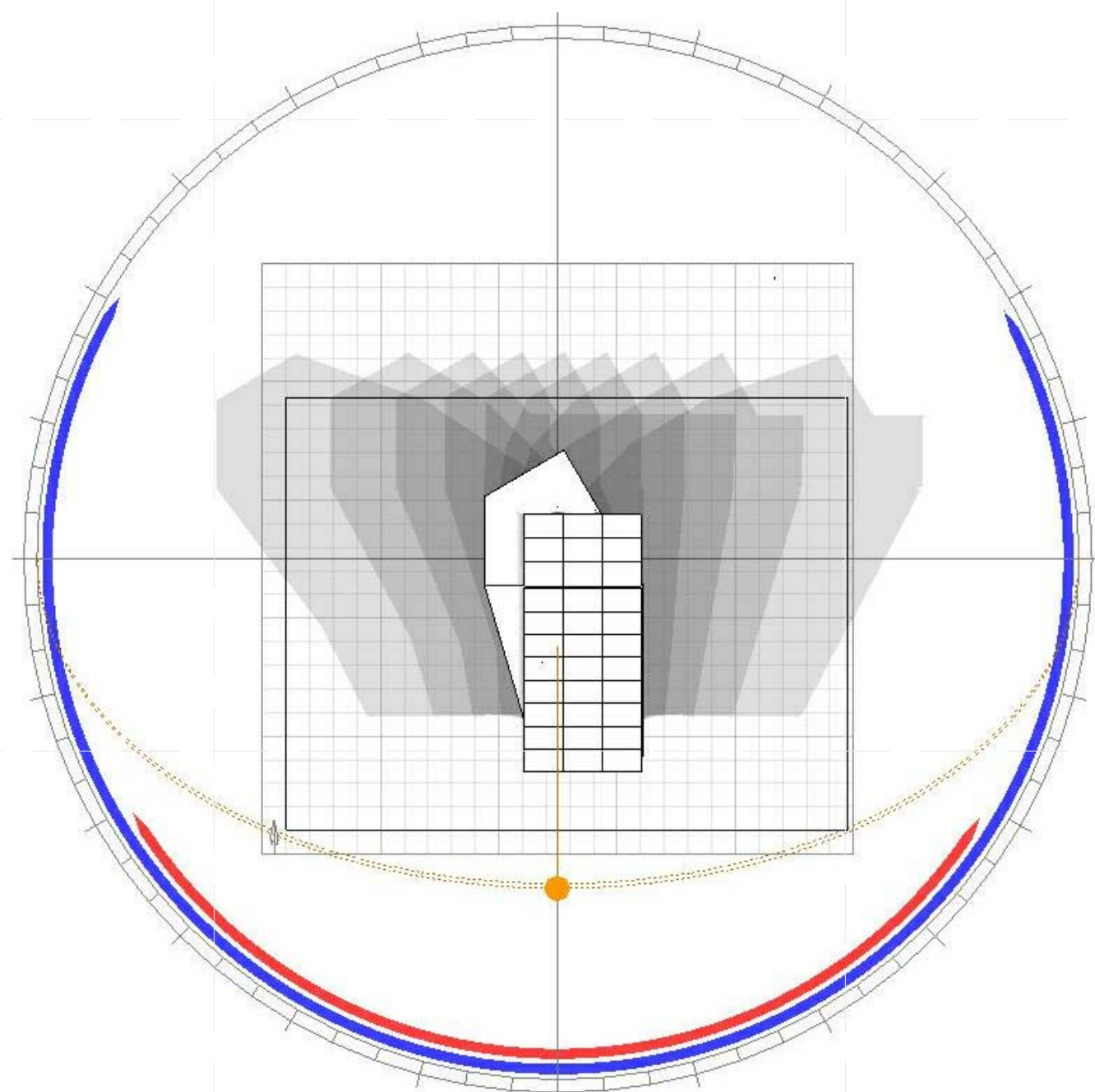
REFERENCE KEYNOTES



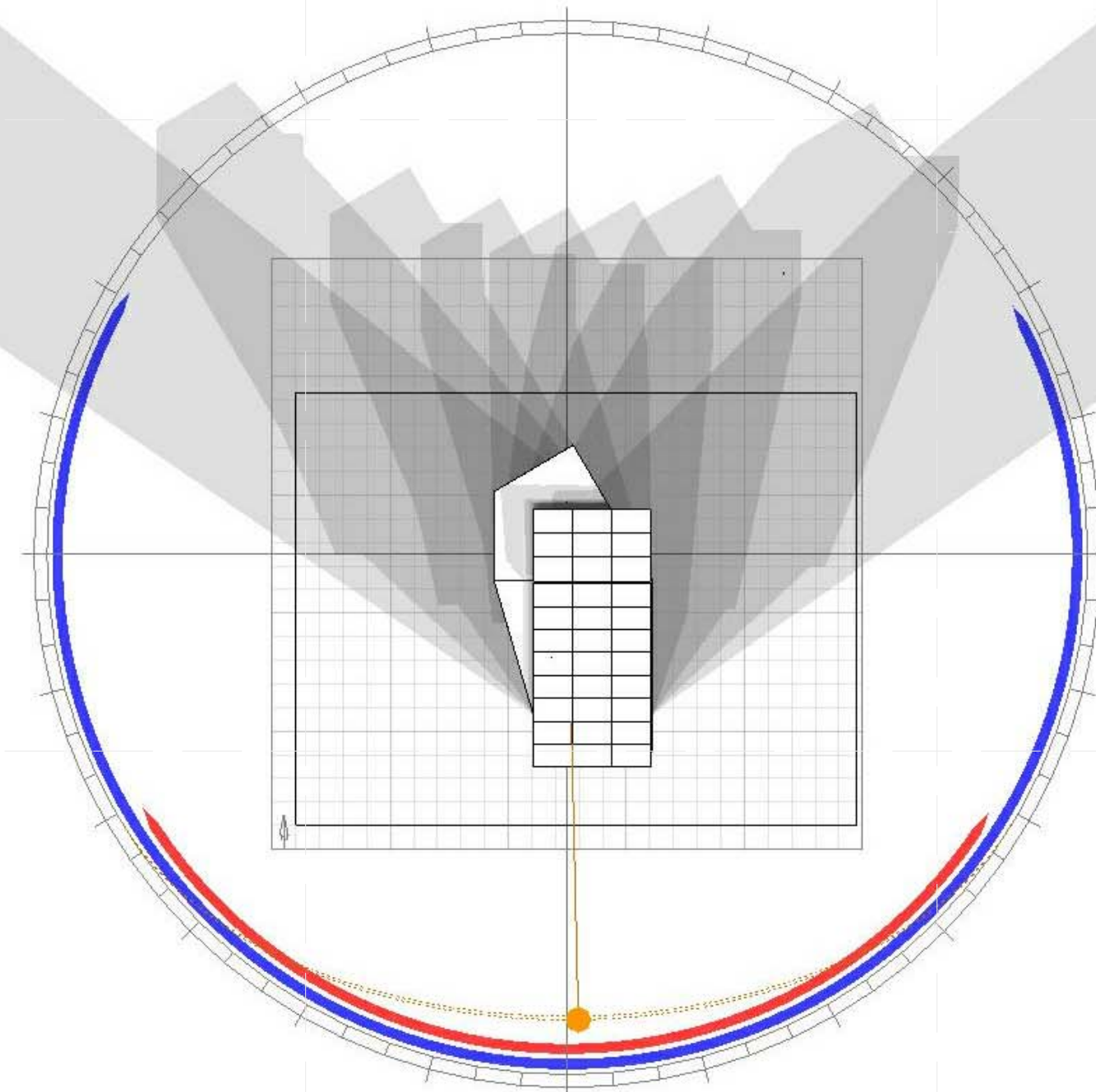
D1 SPRING EQUINOX
NTS



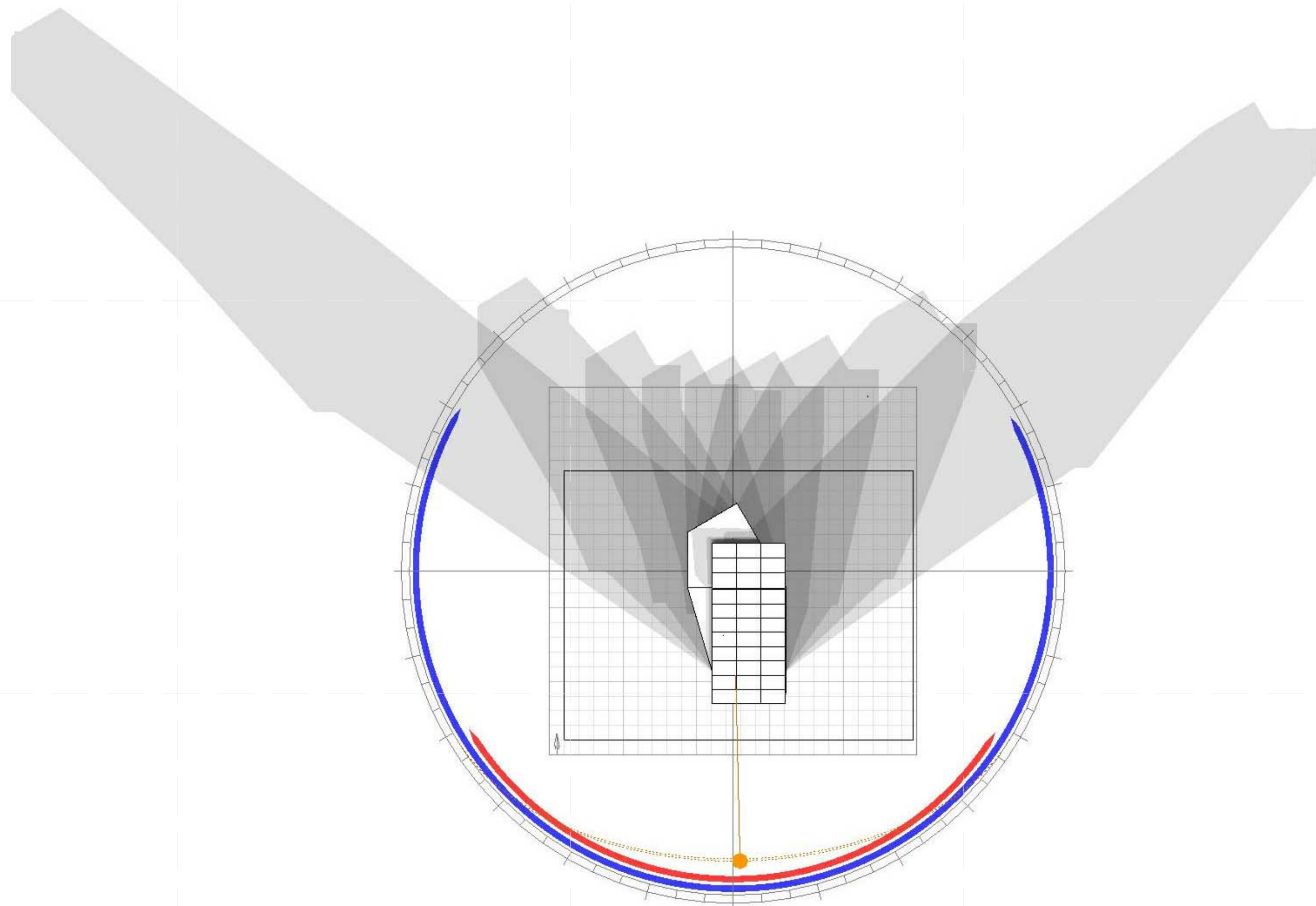
D4 SUMMER SOLSTICE
NTS



A1 FALL EQUINOX
NTS



B1 WINTER SOLSTICE
NTS



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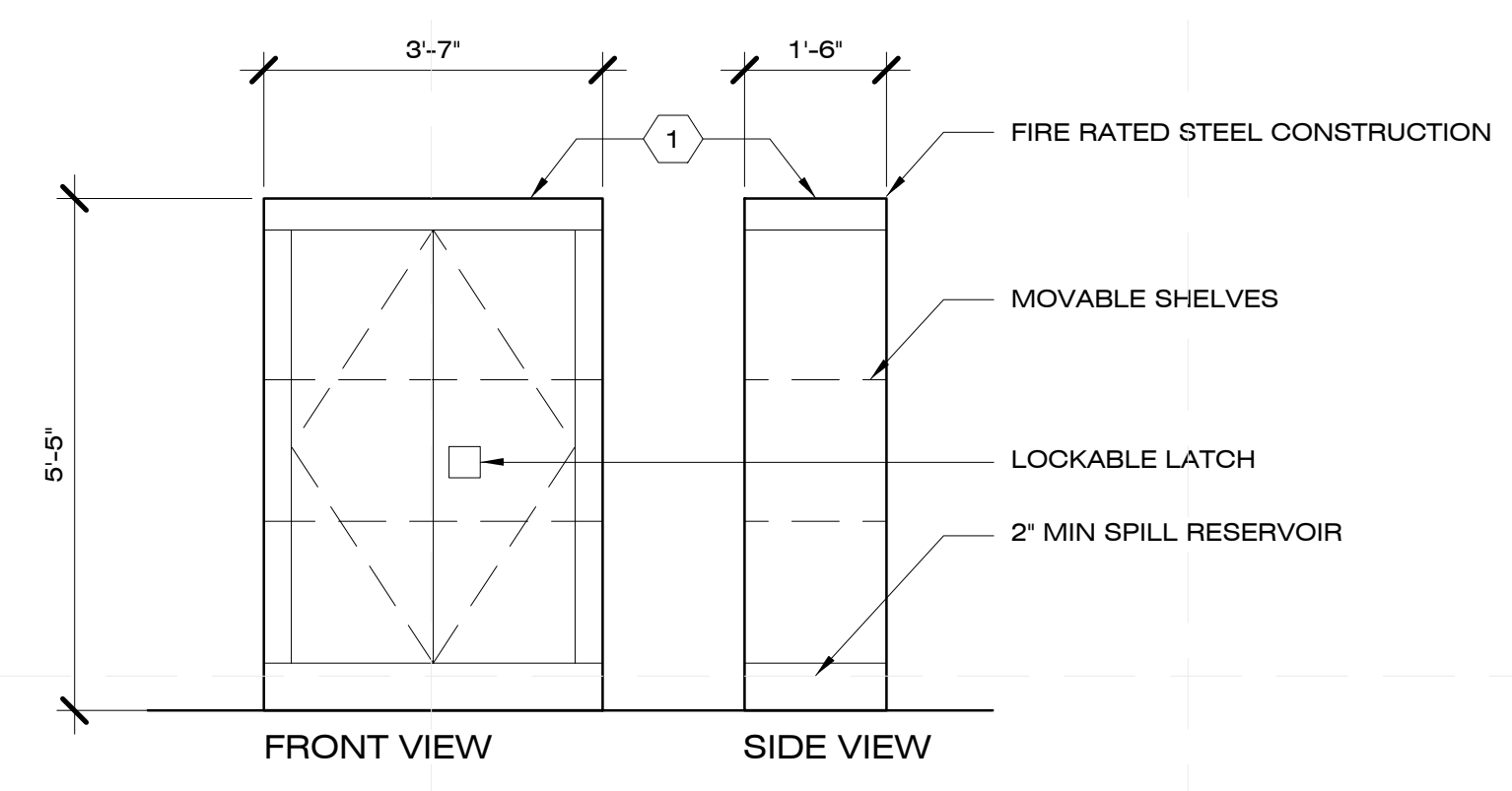
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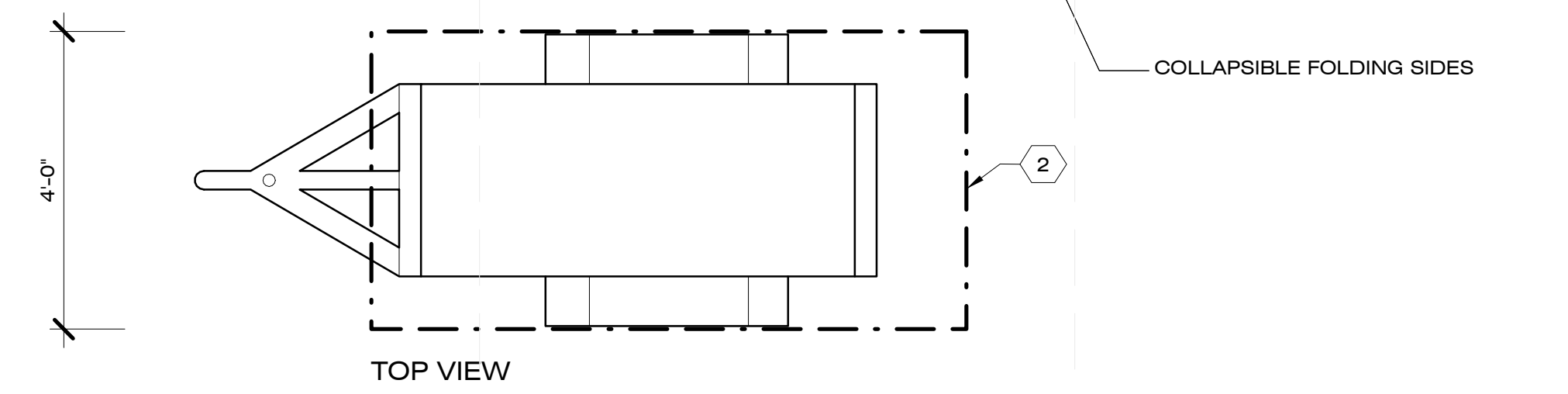
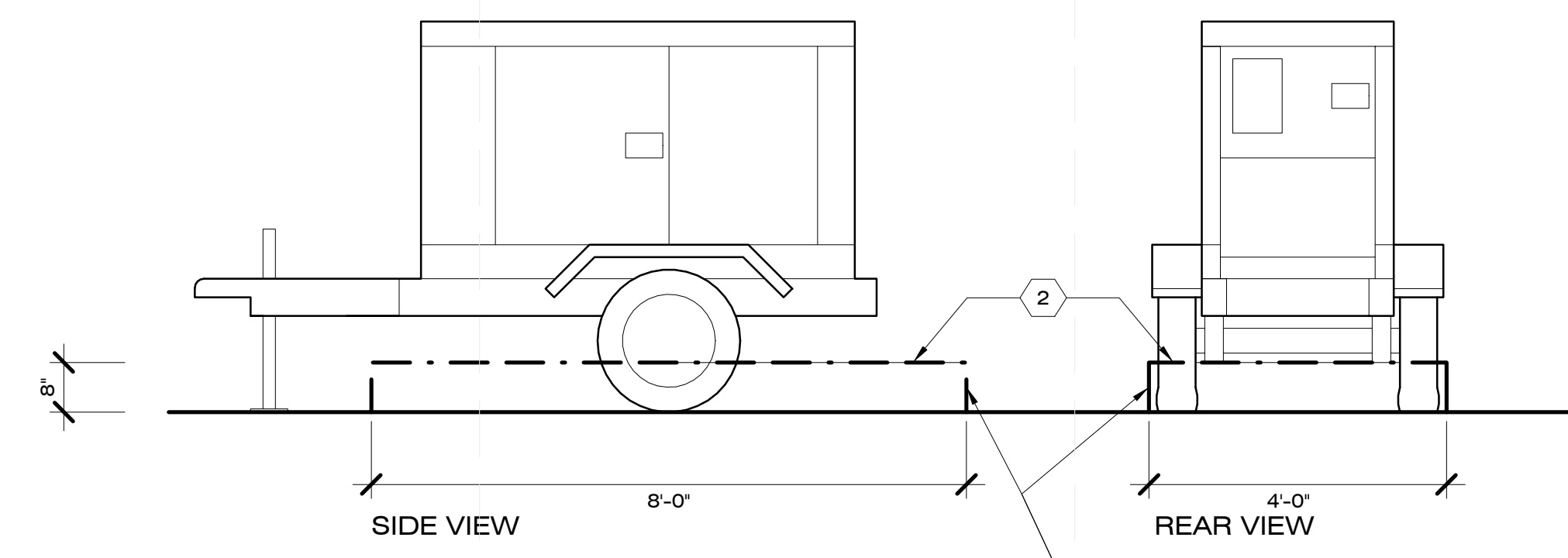
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LIQUID LOCATION AND SPILL CONTAINMENT PLAN

H-101



D1 HAZARDOUS LIQUID CONTAINER
1/2" = 1'-0"
0 1' 2' 4'



D4 GENERATOR SPILL CONTAINMENT
1/2" = 1'-0"
0 1' 2' 4'

GENERAL SHEET NOTES

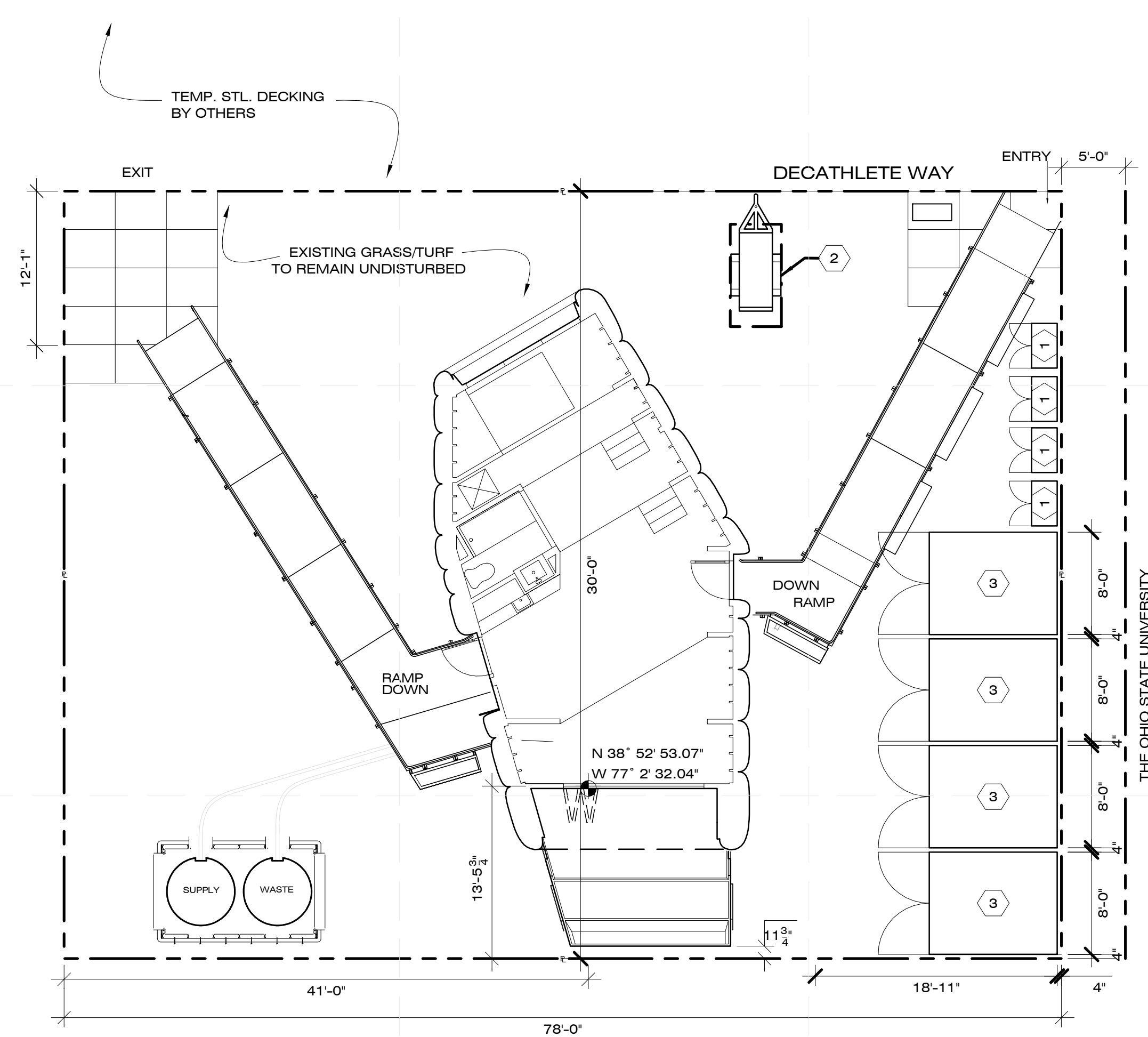
1. ALL HAZARDOUS LIQUID CONTAINMENT & CABINETS SHALL BE OSHA AND NFPA APPROVED
2. FIRE EXTINGUISHERS SHALL BE INSTALLED AS PER CABINETS SHALL BE OSHA AND NFPA APPROVED
3. ALL FUELS ARE TO BE PROPERLY STORED & LABELED IN AN OSHA & NFPA APPROVED CONTAINER
4. ALL HAZARDOUS LIQUID SHALL HAVE A MSDS SHEET AVAILABLE ON SITE

SHEET NOTES

1. TEMPORARY OSHA APPROVED HAZARDOUS LIQUIDS CONTAINERS (AS NEEDED)
2. MOVABLE OSHA APPROVED HAZARDOUS COLLAPSIBLE VINYL LIQUIDS SPILL CONTAINMENT (FOR TEMP. CONST. GENERATOR DWG O-101)
3. TEMP. 8'X10' METAL SHIPPING CONTAINER (FOR CONST. DURATION ONLY DWG O-101)

REFERENCE KEYNOTES

HAZARDOUS LIQUID SCHEDULE		
LIQUID	USE	LOCATION / STORAGE
DIESEL	TEMP POWER FUEL	GENERATOR / HAZAROUS LIQUID CABINET #1
CONST. ADHESIVES	CONSTRUCTION	VARIOUS / HAZAROUS LIQUID CABINET #2
CLEANING SOLVENTS	CLEANING	VARIOUS / HAZAROUS LIQUID CABINET #3
TBD	TBD	TBD/HAZAROUS LIQUID CABINET #3 (IF NEEDED)



A4 HAZAROUS LIQUID & SPILL CONTAINMENT SITE PLAN
1/8" = 1'-0"
0 4' 8' 16'



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FOUNDATION PLAN

S-101

GENERAL SHEET NOTES

4X4 BUILDING POST OR GREATER

DEAD AND LIVE WEIGHTS
HOUSE - 50 000 lb.
DECK - 9 000 lb.
RAMP WEIGHT - 14 000 lb. EACH

FOOTING AREAS
HOUSE - 47 SQ. FEET
DECK - 12 SQ. FEET
RAMP - 15 SQ. FEET EACH

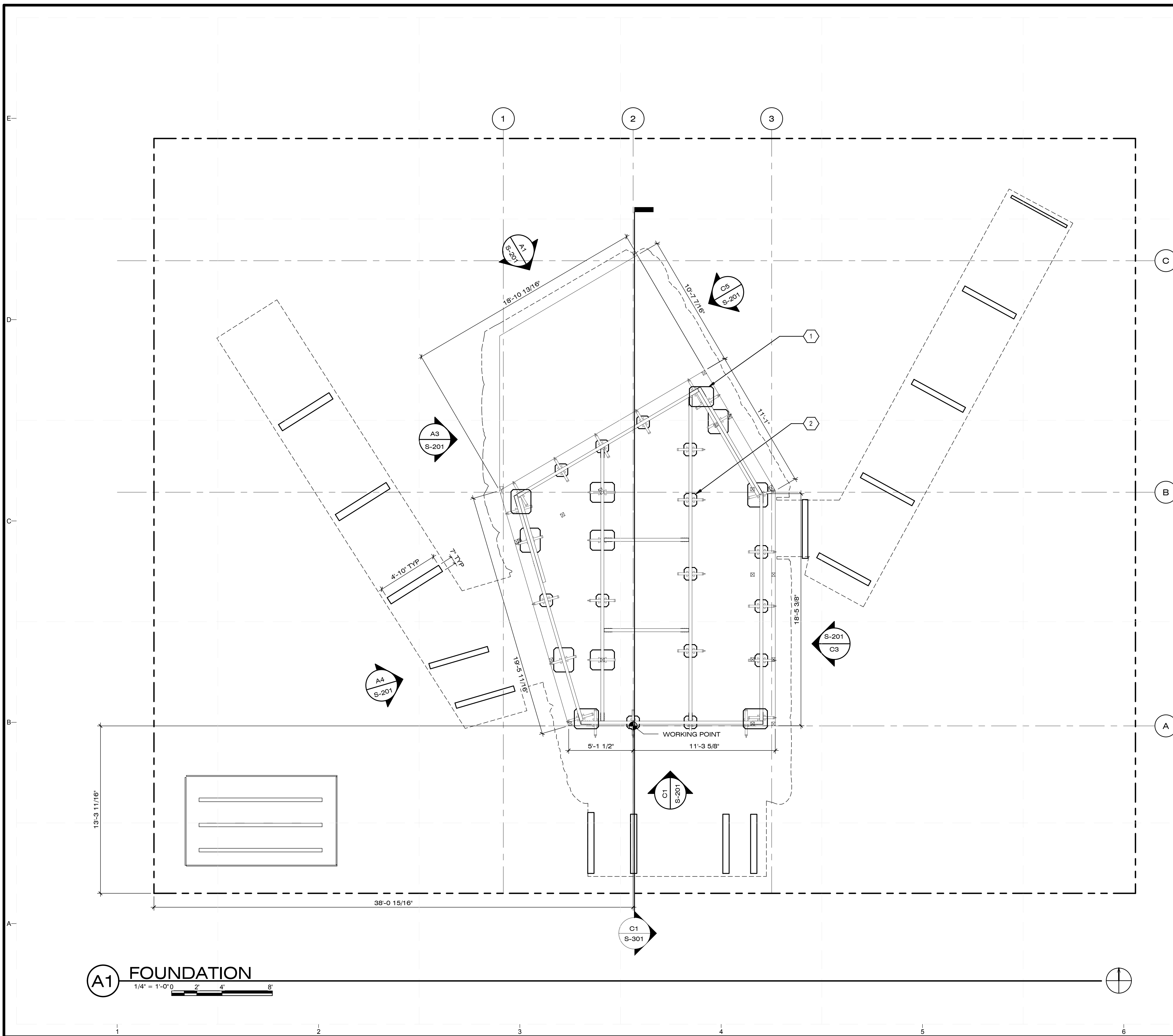
AVERAGE FOOTING PRESSURE
HOUSE - 1063 psf
DECK - 1000 psf
RAMP - 1150 psf

FOR WORST CASE CONDITIONS SEE
STRUCTURAL CALCULATIONS IN PROJECT
MANUAL

SHEET NOTES

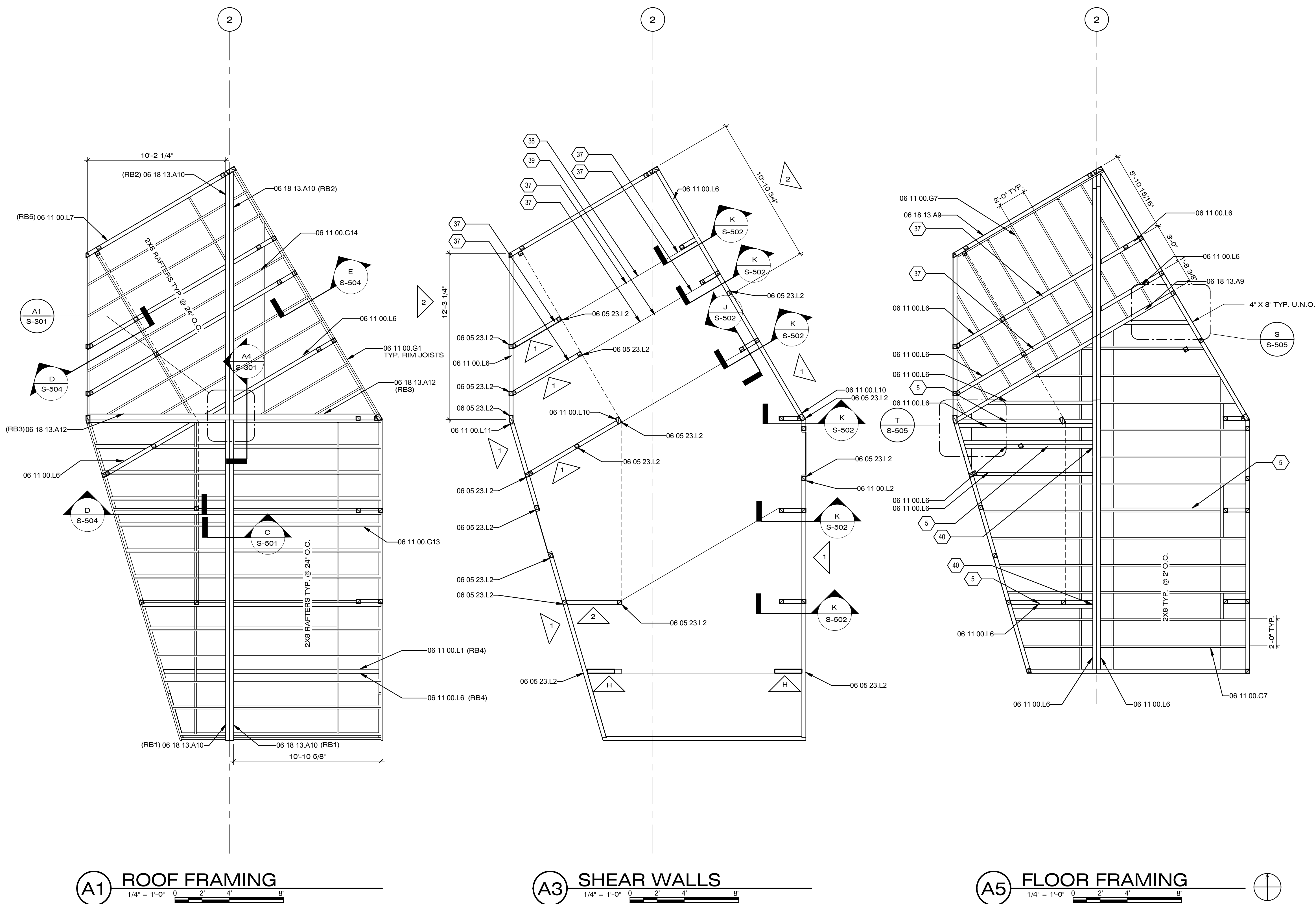
- 19" X 23" 3/8" THICK FOOTING PLATE
- 12" X 12" 1/4" THICK FOOTING PLATE

REFERENCE KEYNOTES



A1 FOUNDATION
1/4" = 1'-0"
0 2 4 8

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GENERAL SHEET NOTES

- 1 SHEAR WALL PER STRUCTURAL DETAILS (S 503)
- 4X4 POST (06 11 00.L02) OR GREATER

SHEET NOTES

- 5 TWIN MEMBERS
- 37 15/32" PLY BOTH SIDES STR 1 W/ 10d @ 3", 12"
- 38 26" TALL WALL
- 39 24" TALL WALL
- 40 TYP HU5 HANGER @ EACH END

REFERENCE KEYNOTES

- 06 05 23.L2 HDU5
- 06 11 00.G1 2X8
- 06 11 00.G7 2X8 JOISTS @ 24" O.C.
- 06 11 00.G13 2X8 RAFTERS @ 16" O.C.
- 06 11 00.G14 2X8 RAFTERS @ 24" O.C.
- 06 11 00.L1 4X4
- 06 11 00.L2 4X4 POST
- 06 11 00.L6 4X8 BEAM
- 06 11 00.L7 4X10 BEAM
- 06 11 00.L0 4X6 POST
- 06 11 00.L11 4X8 POST
- 06 18 13.A9 4X8 LAMINATE VENEER LUMBER
- 06 18 13.A10 4X10 LAMINATE VENEER LUMBER
- 06 18 13.A12 6X10 LAMINATE VENEER LUMBER



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FRAMING ELEVATIONS

S-201

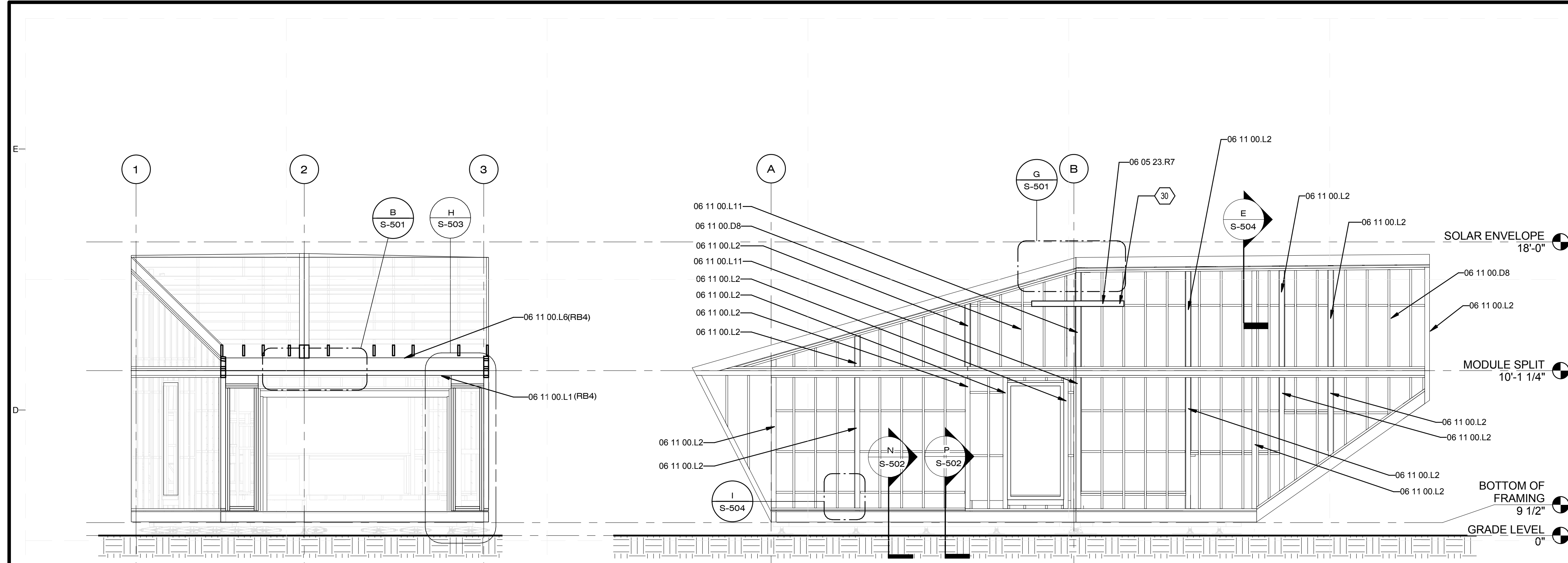
GENERAL SHEET NOTES

SHEET NOTES

30 4X BLOCKING

REFERENCE KEYNOTES

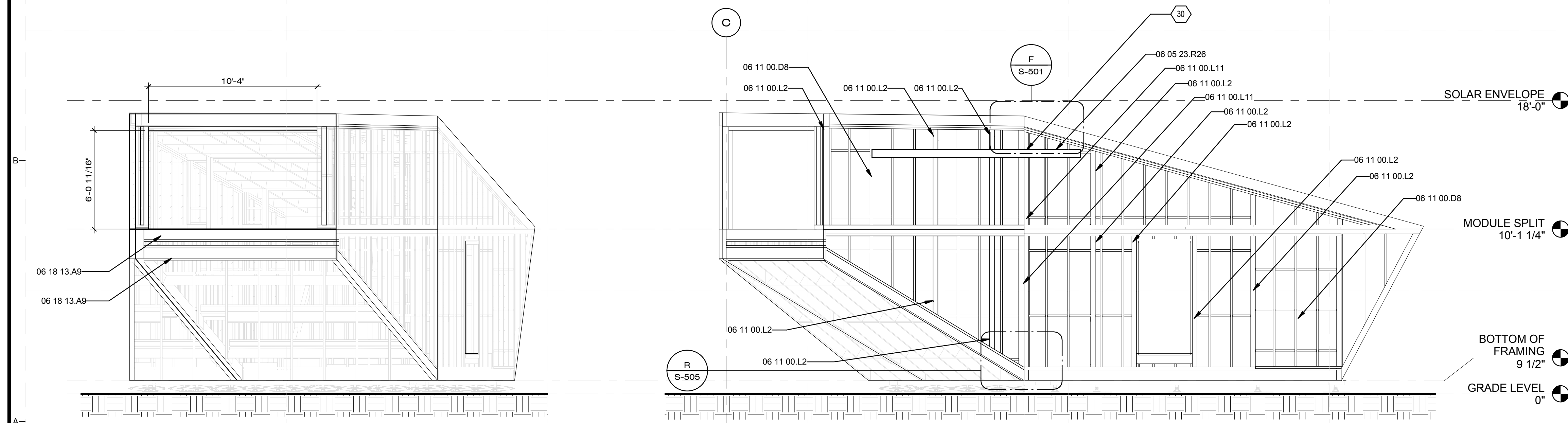
06 05 23.R7	MST48
06 05 23.R26	CMST14
06 11 00.D8	2X4 STUDS @ 16" O.C.
06 11 00.L1	4X4
06 11 00.L2	4X4 POST
06 11 00.L6	4X8 BEAM
06 11 00.L11	4X8 POST
06 18 13.A9	4X8 LAMINATE VENEER LUMBER



C1 SOUTH ELEVATION
1/4" = 1'-0"
0 2' 4' 8'

C3 EAST ELEVATION
1/4" = 1'-0"

C5 NORTH EAST ELEVATION
1/4" = 1'-0"



A1 NORTH ELEVATION
1/4" = 1'-0"
0 2' 4' 8'

A3 WEST ELEVATION
1/4" = 1'-0"

A4 SOUTH WEST ELEVATION
1/4" = 1'-0"

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FRAMING SECTION

S-301

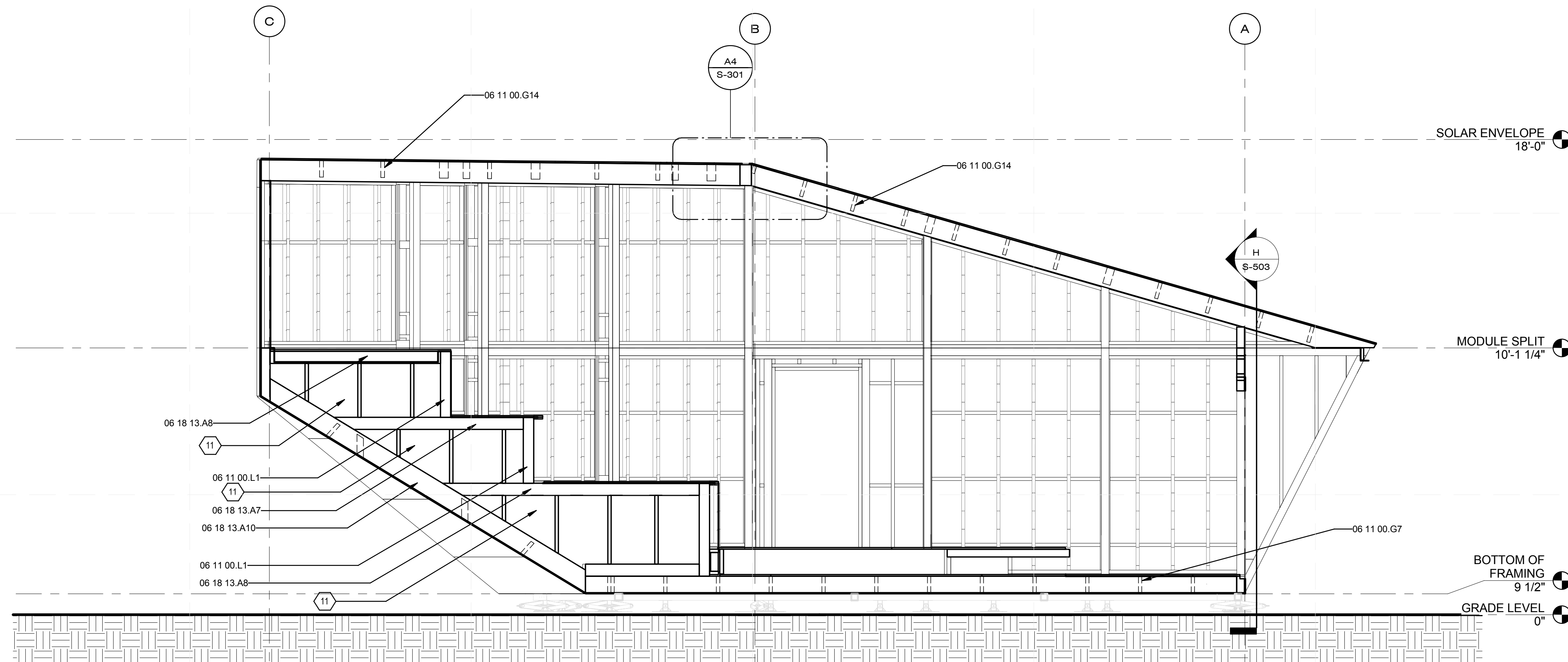
GENERAL SHEET NOTES

SHEET NOTES

- 11 SHEETED
- 23 3/4" WELDED STUD

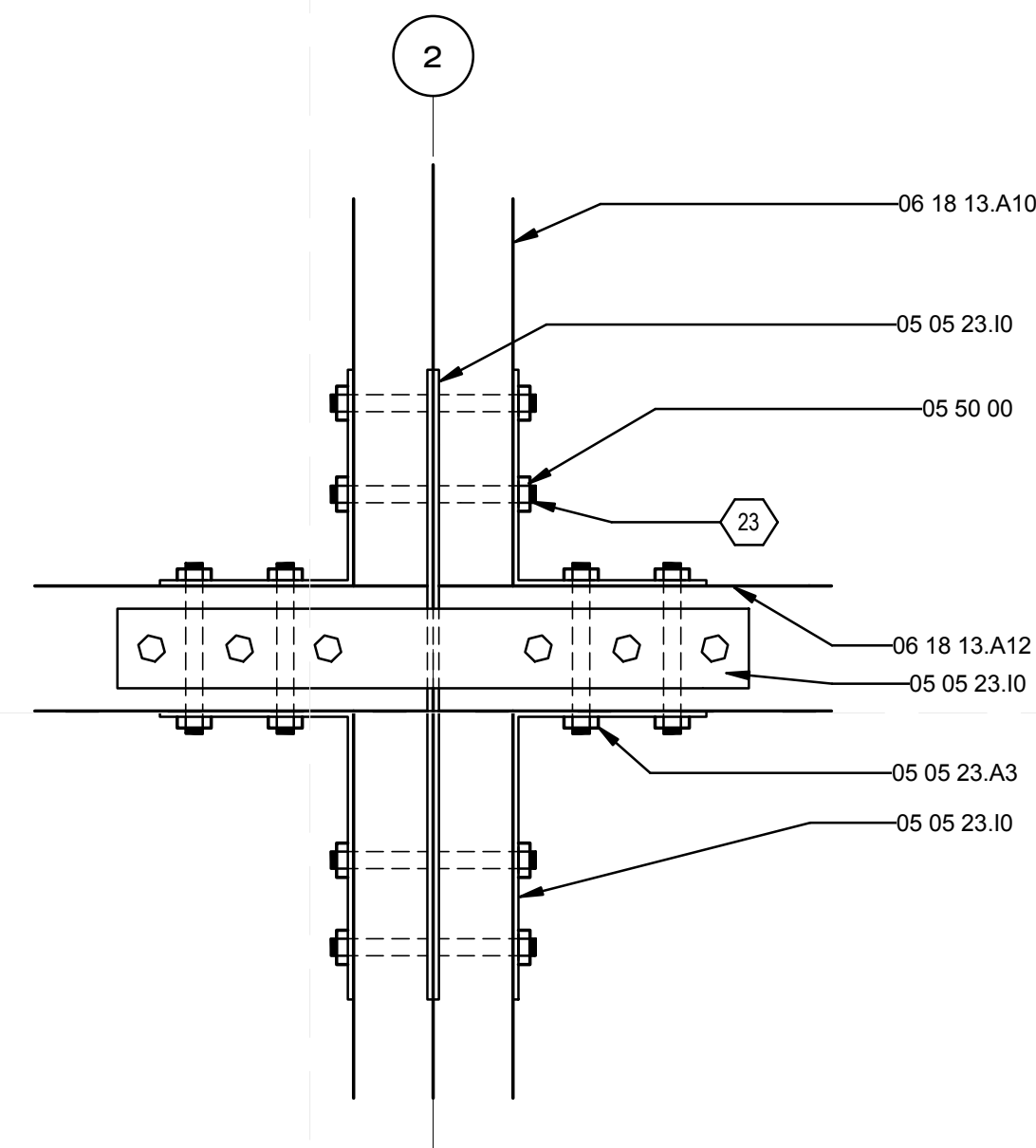
REFERENCE KEYNOTES

- 05 05 23.A3 3/4" A307 BOLT
- 05 05 23.I0 1/4" STEEL PLATE
- 05 50 00 METAL FABRICATIONS
- 06 11 00.G7 2X8 JOISTS @ 24" O.C.
- 06 11 00.G14 2X8 RAFTERS @ 24" O.C.
- 06 11 00.L1 4X4
- 06 18 13.A7 4X4 LAMINATE VENEER LUMBER
- 06 18 13.A8 4X6 LAMINATE VENEER LUMBER
- 06 18 13.A10 4X10 LAMINATE VENEER LUMBER
- 06 18 13.A12 6X10 LAMINATE VENEER LUMBER



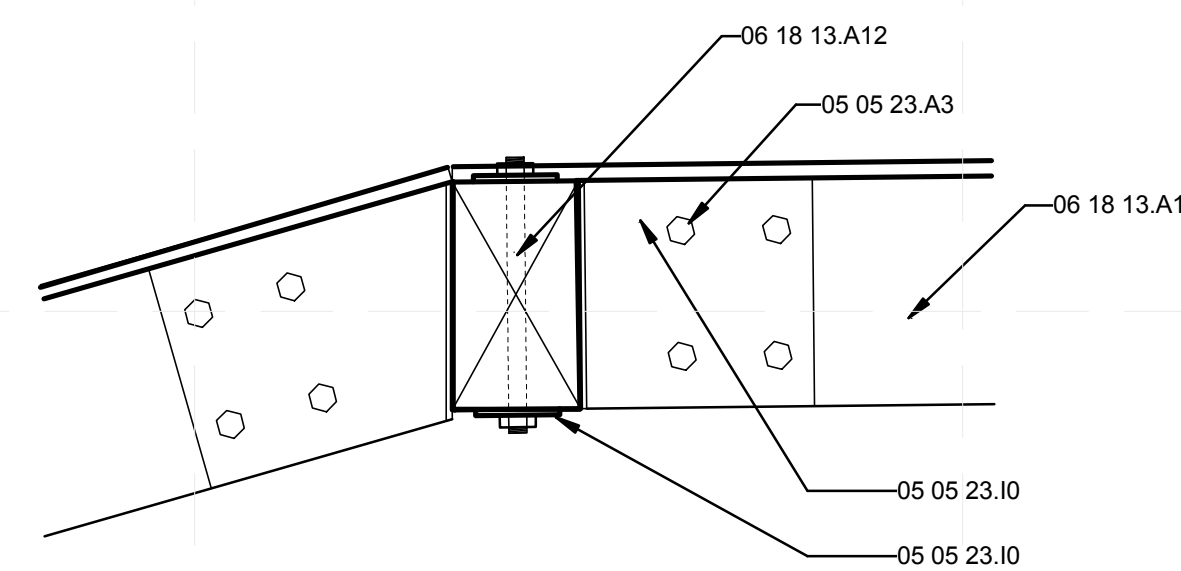
C1 SECTION FACING EAST

3/8" = 1'-0" 0 2' 4' 6'



A1 MODULE CONNECTION AT RIDGE BEAM

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



A4 RIDGE BEAM CONNECTION TO WALL

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



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STRUCTURAL ROOF DETAILS

S-501

GENERAL SHEET NOTES

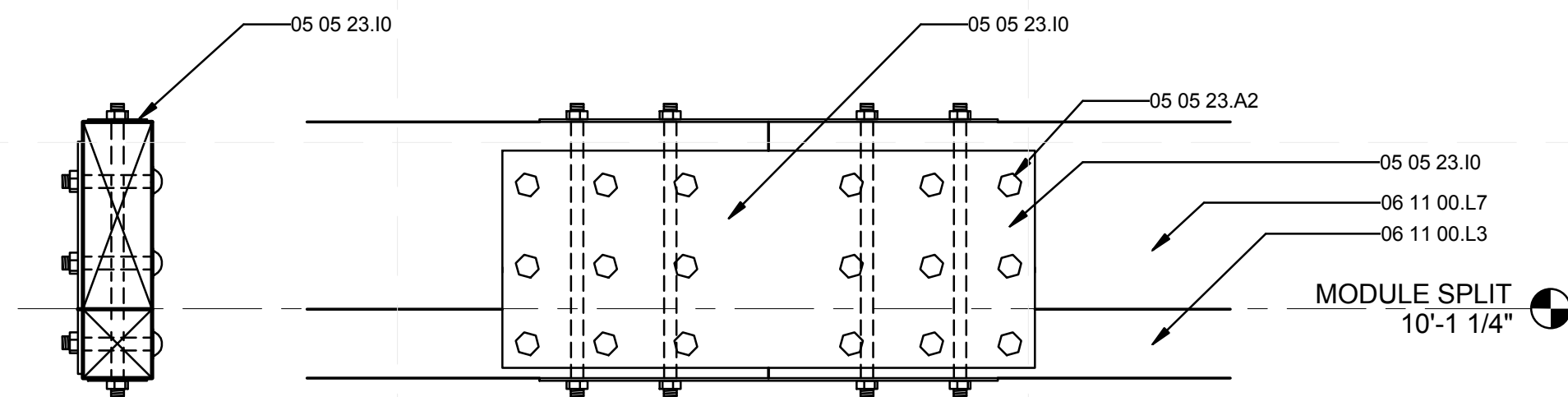
VIEW NAMING CONVENTION PER STRUCTURAL CALCULATIONS IN PROJECT MANUAL

SHEET NOTES

7 3/4" THRU BOLT @ 32" OC w/ 12" AT EA. END

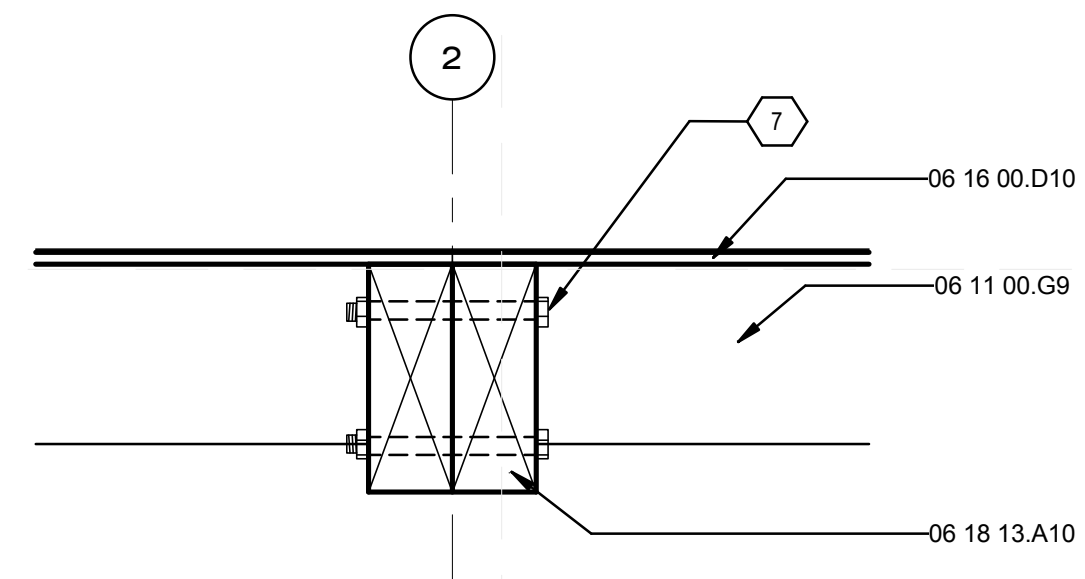
REFERENCE KEYNOTES

05 05 23.A2	5/8" A307 BOLT
05 05 23.I0	1/4" STEEL PLATE
06 05 23.F2	A35
06 11 00.A1	BLOCKING
06 11 00.A8	DOUBLE TOP PLATE
06 11 00.D7	2X4 STUDS
06 11 00.D8	2X4 STUDS @ 16" O.C.
06 11 00.G9	2X8 CEILING JOISTS @ 16" O.C.
06 11 00.L2	4X4 POST
06 11 00.L3	4X4 HEADER
06 11 00.L6	4X8 BEAM
06 11 00.L7	4X10 BEAM
06 16 00.D10	5/8" EXTERIOR GRADE PLYWOOD
06 18 13.A10	4X10 LAMINATE VENEER LUMBER
06 18 13.A12	6X10 LAMINATE VENEER LUMBER



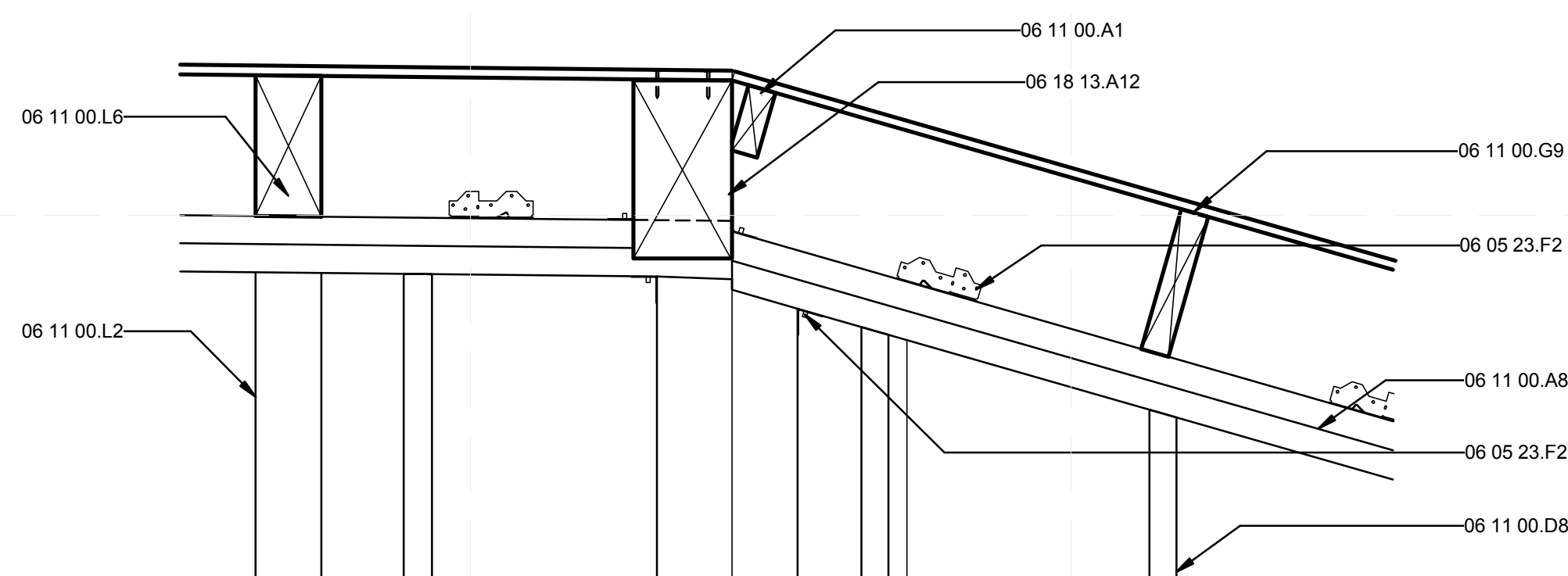
B SOUTH FACE MODULE CONNECTION

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



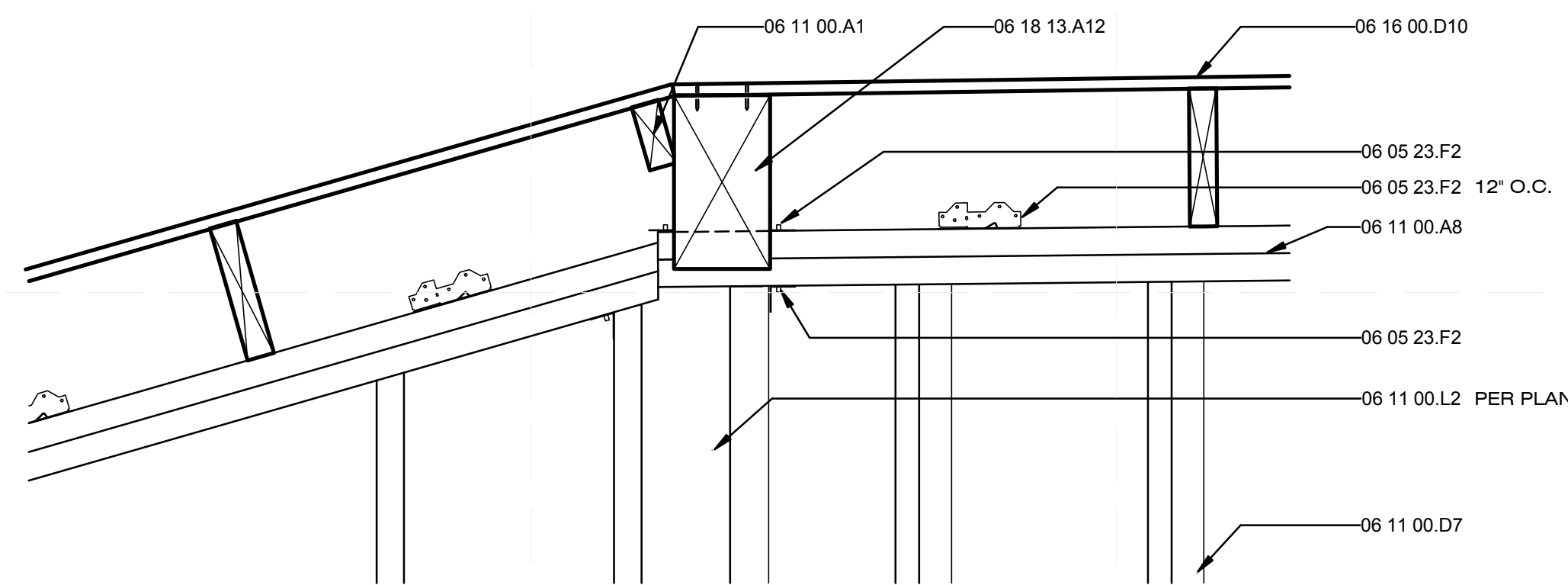
C MODULE CONNECTION ROOF BEAM TYP.

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



F WOOD BEAM TO STUDWALL CONNECTION

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



G WOOD BEAM TO STUDWALL CONNECTION

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

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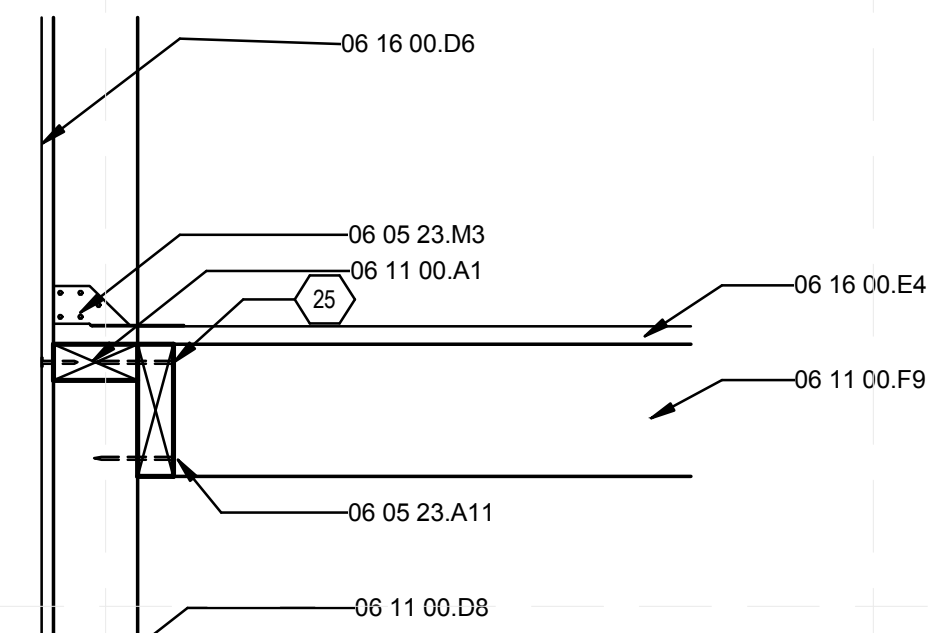
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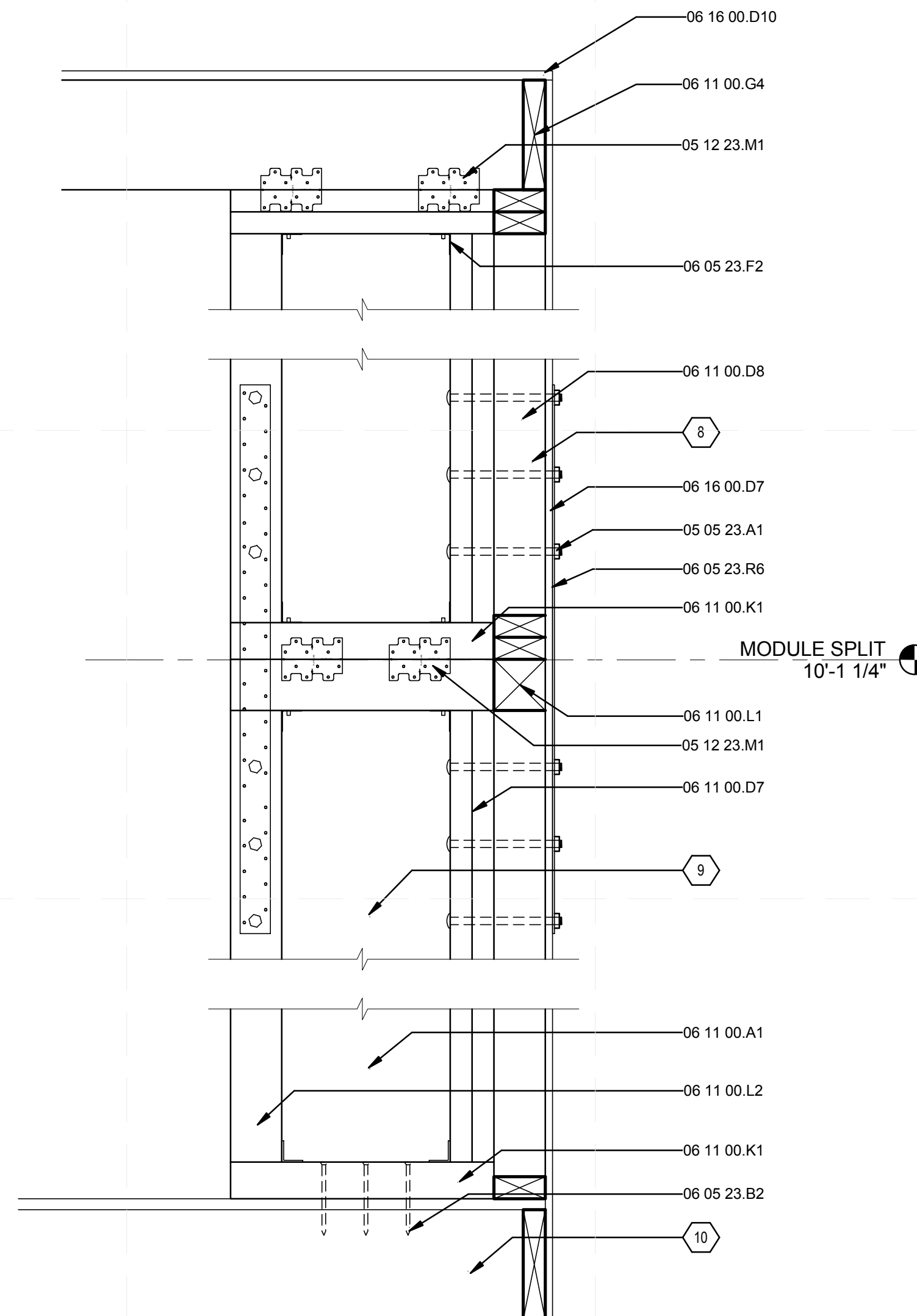
STRUCTURAL DETAILS

S-502



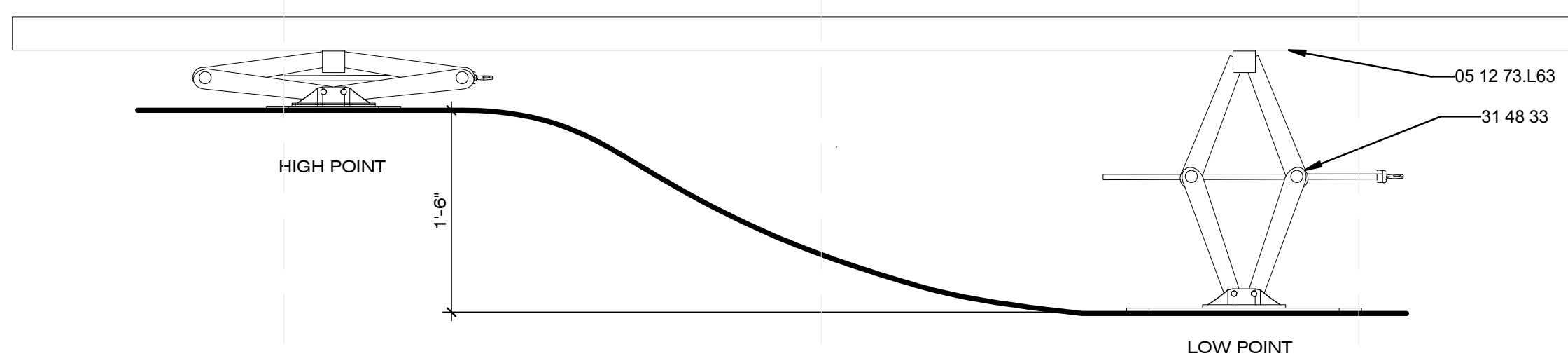
J SHEAR WALL FLOOR

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



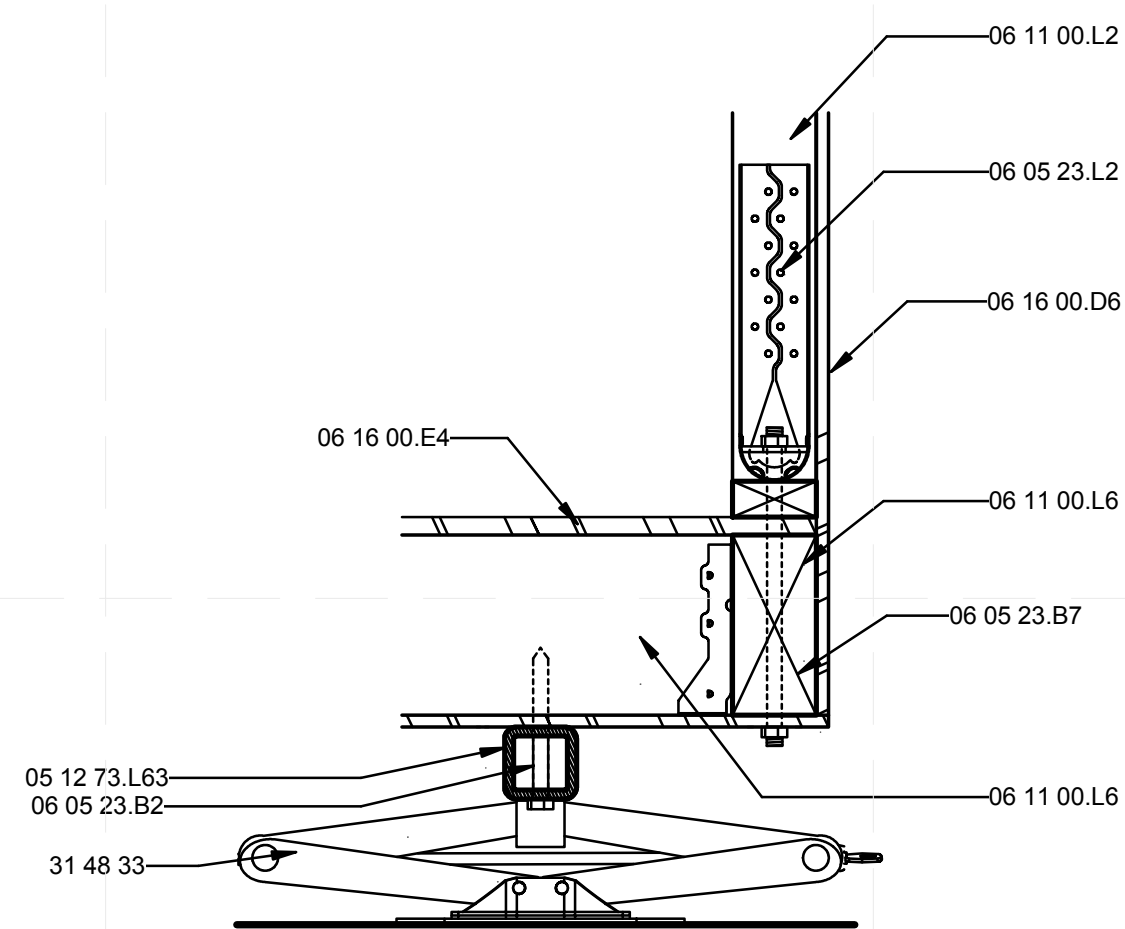
K SHEAR WALL DETAIL

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



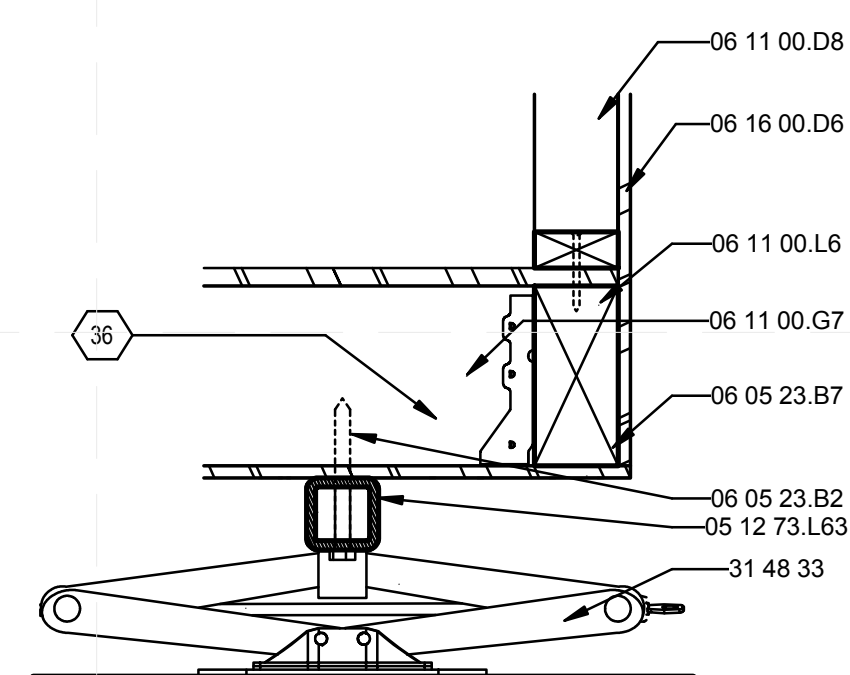
Q FOOTING TRAVEL DETAIL

1" = 1'-0" 0 1 2



N FOOTING DETAIL SHEAR WALL SPECIAL

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



P FOOTING DETAIL

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

GENERAL SHEET NOTES

VIEW NAMING CONVENTION PER STRUCTURAL CALCULATIONS IN PROJECT MANUAL

SHEET NOTES

- 8 4X4 @ SLENDER WALL (PER PLAN)
- 9 10D @ 3" O.C. STAGGERED W/ 15/32" OSB STR 1
- 10 WOOD BEAM (PER PLAN)
- 25 BLOCK NAILING
- 36 2-10d TO EACH JOIST

REFERENCE KEYNOTES

- 05 05 23.A1 1/2" A307 BOLT
- 05 12 23.M1 LPT4
- 05 12 73.L63 TS3X3X0.3125
- 06 05 23.A11 16 PENNY NAIL
- 06 05 23.B2 1/2" LAG SCREW
- 06 05 23.B7 1/4" LAG SCREW
- 06 05 23.F2 A35
- 06 05 23.L2 HDU5
- 06 05 23.M3 H2.5
- 06 05 23.R6 MST37
- 06 11 00.A1 BLOCKING
- 06 11 00.D7 2X4 STUDS
- 06 11 00.D8 2X4 STUDS @ 16" O.C.
- 06 11 00.F9 2X6 JOISTS
- 06 11 00.G4 2X8 JOISTS
- 06 11 00.G7 2X8 JOISTS @ 24" O.C.
- 06 11 00.K1 3X4
- 06 11 00.L1 4X4
- 06 11 00.L2 4X4 POST
- 06 11 00.L6 4X8 BEAM
- 06 16 00.D6 1/2" PLYWOOD
- 06 16 00.D7 1/2" EXTERIOR GRADE PLYWOOD
- 06 16 00.D10 5/8" EXTERIOR GRADE PLYWOOD
- 06 16 00.E4 3/4" T&G STRAND BOARD DECKING
- 31 48 33 STEEL LEVELLING JACK



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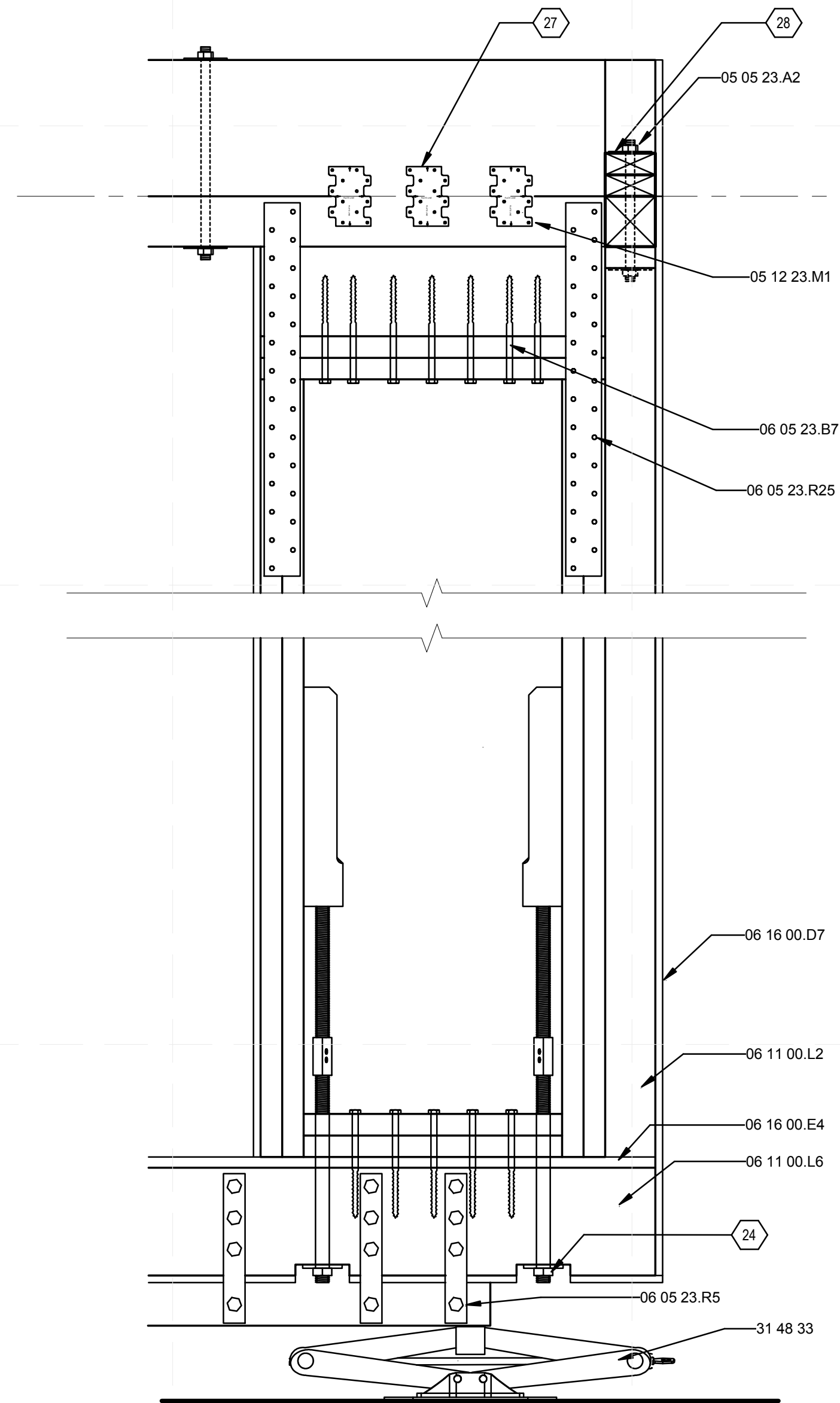
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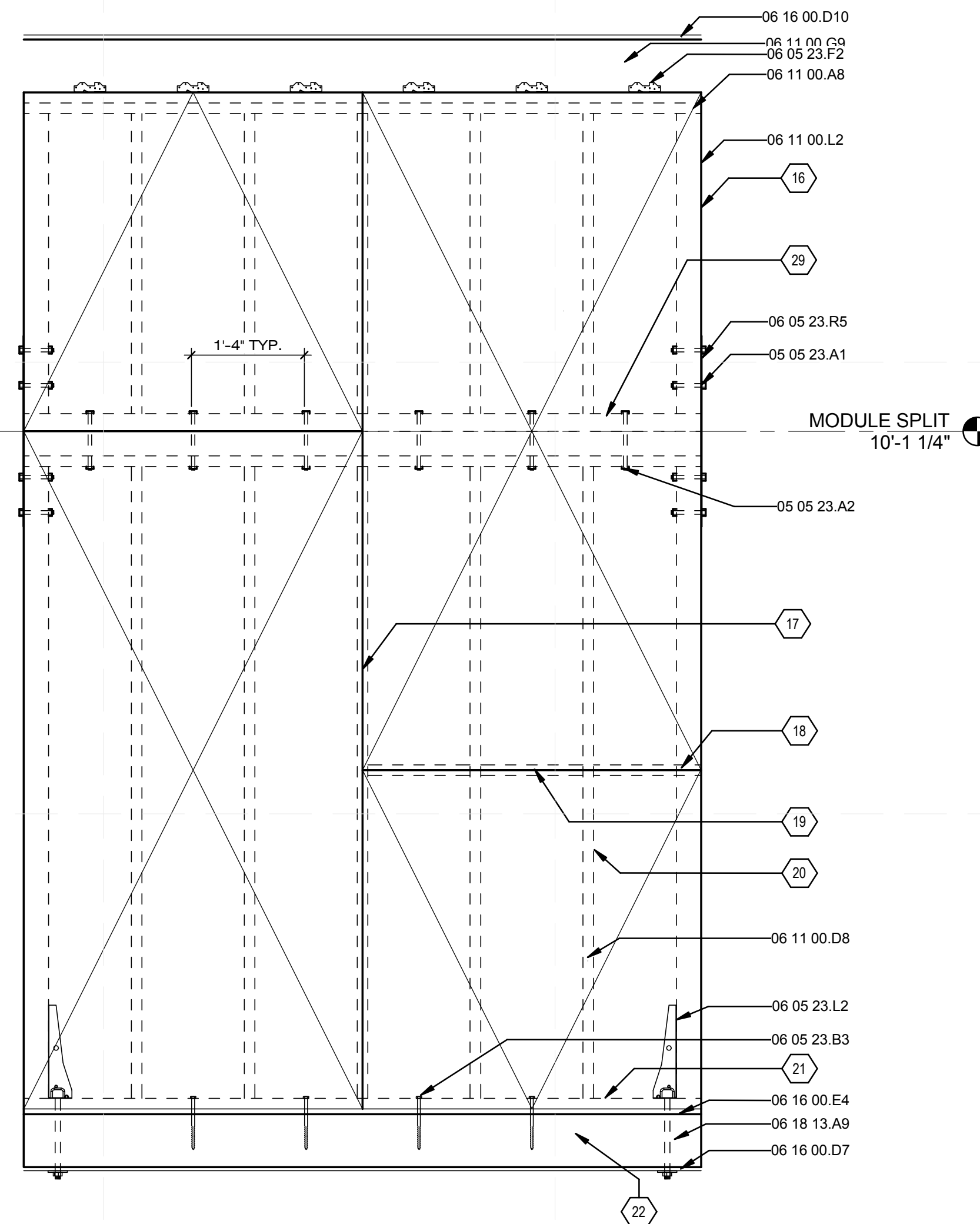
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SHEAR WALL DETAILS AND NAILING SCHEDULES

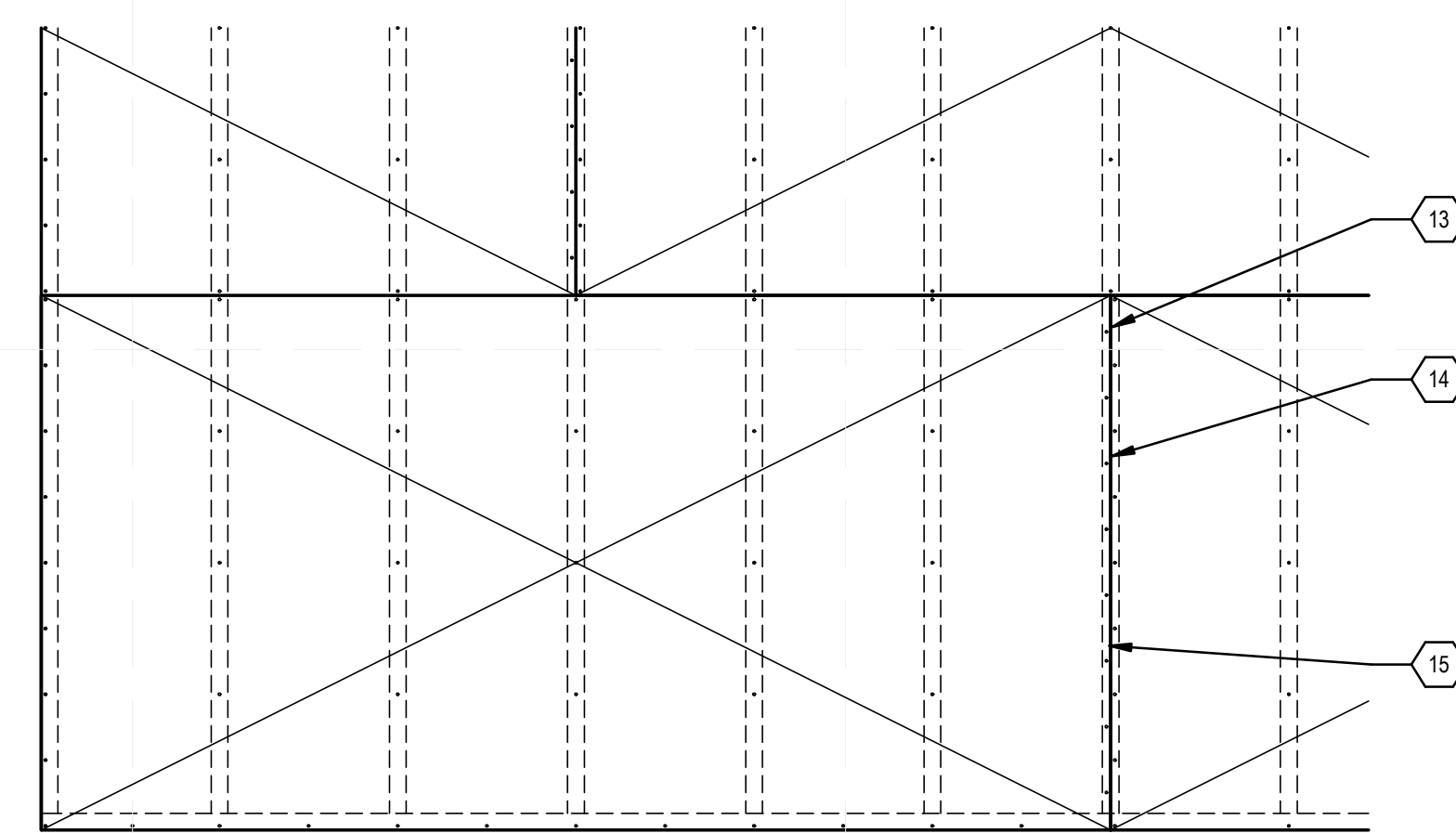
S-503



H SIMPSON 24" STRONG WALL
1 1/2" = 1'-0" 0 1/2" 1" 1 1/2"



M SHEAR WALL PLYWOOD SHEATHING
3/4" = 1'-0" 0 1' 2' 3'



L FLOOR & ROOF PLYWOOD TYP.
3/4" = 1'-0" 0 1' 2' 3'

GENERAL SHEET NOTES

1. BLOCK ALL PANEL EDGES PER SCHEDULE
2. SHEET MIN WIDTH IS 2'-0"
3. 4' SIDE OF PLYWOOD SHEETS TO BE SPLICED JOISTS
4. HOLD DOWN CONNECTORS SHALL BE RETIGHTENED JUST PRIOR TO ENCLOSURE
5. SHEATH ENTIRE WALL BETWEEN CROSS WALLS TO PROVIDE FLUSH SURFACE
6. ALL ANCHOR BOLTS SHALL HAVE 3" SQ PLATE WASHERS
7. ALL PLYWOOD NAILING TO BE COMMON NAILS
8. OSB STR I MAY BE REPLACED WITH CDX STR I PLYWOOD
9. MIN EDGE DISTANCE FOR NAILS SHALL BE 3/8"
10. PLYWOOD FACE GRAIN MAY BE VERTICAL OR HORIZONTAL
11. SEE PLAN FOR LOCATION OF PLYWOOD SHEATHING
12. FLOOR INDEX 32/16
13. ROOF INDEX 24/0
14. VIEW NAMING CONVENTION PER STRUCTURAL CALCULATIONS IN PROJECT MANUAL

SHEET NOTES

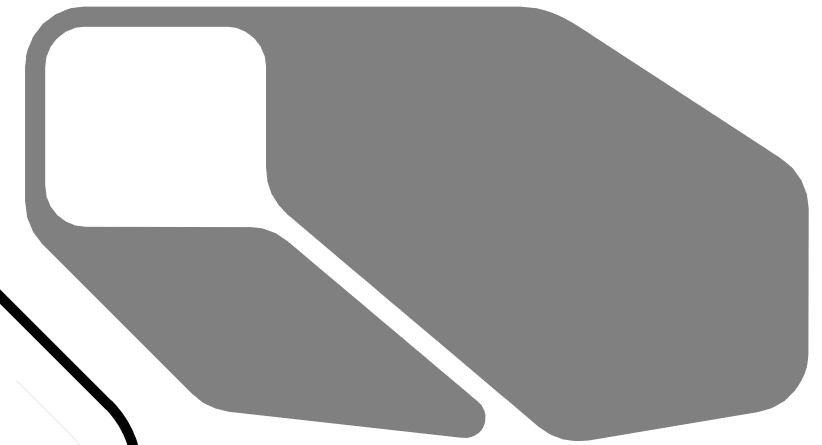
- 13 STAGGERED END NAILING AT SUPPORTED PANELS EDGES
- 14 BOUNDARY NAILING 8D @ 6" @ ROOF BOUNDARY NAILING 10D @ 6" @ FLOOR INTERMEDIATE NAILS 8D @ 12" O.C. @ ROOF INTERMEDIATE NAILS 10D @ 10" O.C. @ FLOOR
- 16 BOUNDARY WALL B.N.
- 17 2X OR 3X STUDS PER SHEAR WALL SCHEDULE
- 18 2X OR 3X BLOCKING PER SCHEDULE
- 19 EDGE NAILING PER SCHEDULE
- 20 INTERMEDIATE NAILING @ 12"
- 21 2X OR 3X SILL PLATE (PER SCHEDULE)
- 22 (CONTINUOUS W/ HU5 HANGERS AT EACH END)
- 24 COUNTERSUNK 2.75"x2.75" 1/4" PLT
- 27 5 ON EACH SIDE
- 28 3"x3" 1/8" PLT
- 29 3 X PLATE

REFERENCE KEYNOTES

- | | |
|--------------|-------------------------------|
| 05 05 23.A1 | 1/2" A307 BOLT |
| 05 05 23.A2 | 5/8" A307 BOLT |
| 05 12 23.M1 | LPT4 |
| 06 05 23.B3 | 5/8" LAG SCREW |
| 06 05 23.B7 | 1/4" LAG SCREW |
| 06 05 23.F2 | A35 |
| 06 05 23.L2 | HDU5 |
| 06 05 23.R5 | MST27 |
| 06 05 23.R25 | MST126 |
| 06 11 00.A8 | DOUBLE TOP PLATE |
| 06 11 00.D8 | 2X4 STUDS @ 16" O.C. |
| 06 11 00.G9 | 2X8 CEILING JOISTS @ 16" O.C. |
| 06 11 00.L2 | 4X4 POST |
| 06 11 00.L6 | 4X8 BEAM |
| 06 16 00.D7 | 1/2" EXTERIOR GRADE PLYWOOD |
| 06 16 00.D10 | 5/8" EXTERIOR GRADE PLYWOOD |
| 06 16 00.E4 | 3/4" T&G STRAND BOARD DECKING |
| 06 18 13.A9 | 4X8 LAMINATE VENEER LUMBER |
| 31 48 33 | STEEL LEVELLING JACK |

PLYWOOD SHEAR WALL

MARK	PLYWOOD PANEL		SILL	SILL PLATE ANCHOR TO WOOD BEAM	ALLOWABLE SHEAR	SHEAR TRANSFER
	THK	TYPE				
1	15/32"	OSB STRUCT I	2x	5/8" DIAM LAG SCREW @ 16 O.C.	340	A35 @ 16" O.C.
2	19/32"	OSB STRUCT I W/ 3x BLKG & 3x STUDS AT PANEL JOINTS	3x	5/8" DIAM LAG SCREW @ 16 O.C.	510	A35 @ 16" O.C.



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TYPICAL
STRUCTURAL
DETAILS

S-504

GENERAL SHEET NOTES

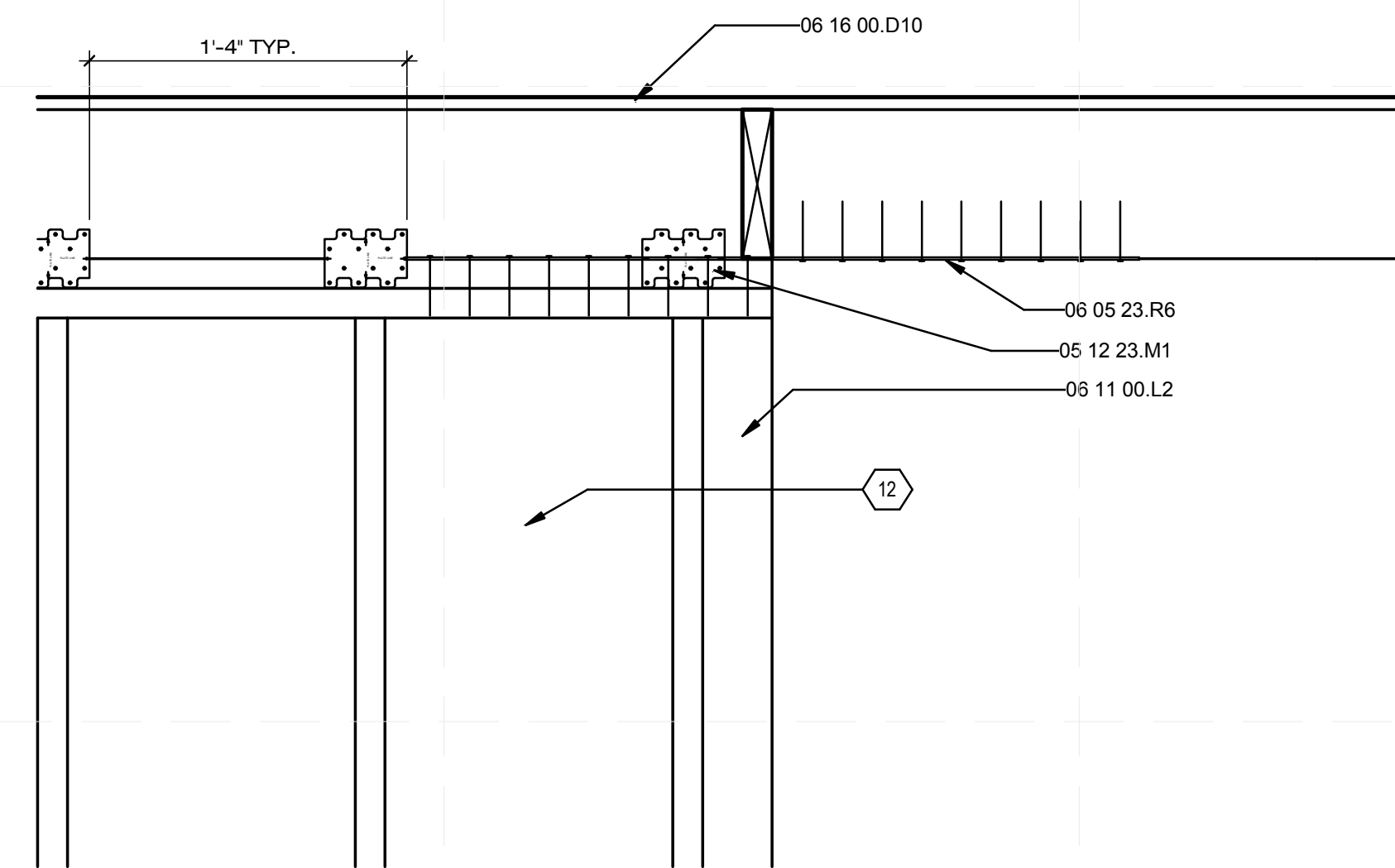
VIEW NAMING CONVENTION PER STRUCTURAL CALCULATIONS IN PROJECT MANUAL

SHEET NOTES

- 12 TYP. SHEAR WALL PER PLAN
- 25 BLOCK NAILING
- 26 2 3/4" sq. 1/4" STEEL WASHER PL.

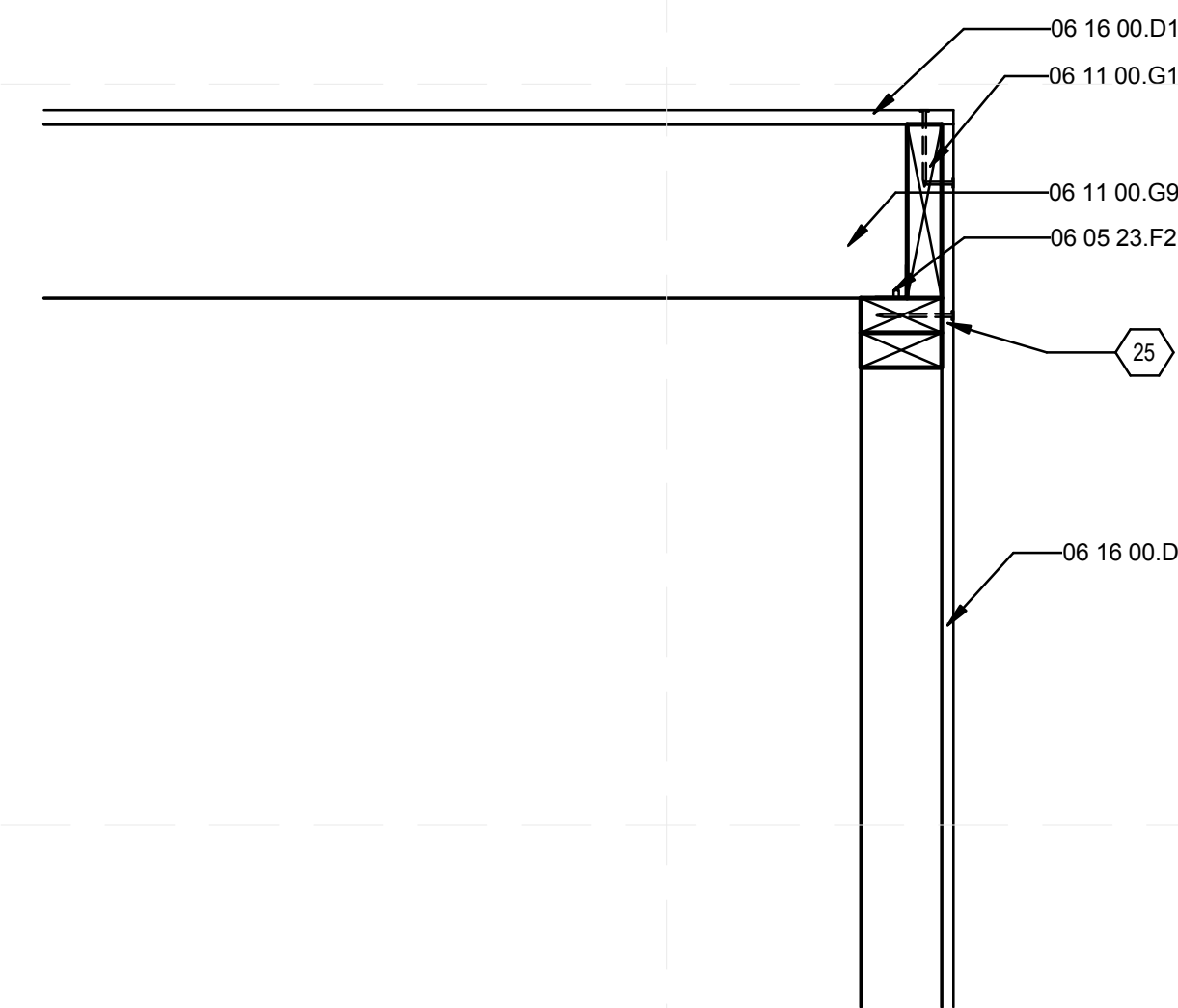
REFERENCE KEYNOTES

- | | |
|--------------|-------------------------------|
| 05 12 23.M1 | LPT4 |
| 06 05 23.F2 | A35 |
| 06 05 23.L2 | HDU5 |
| 06 05 23.R6 | MST37 |
| 06 11 00.D1 | 2X4 |
| 06 11 00.G1 | 2X8 |
| 06 11 00.G9 | 2X8 CEILING JOISTS @ 16" O.C. |
| 06 11 00.L2 | 4X4 POST |
| 06 16 00.D6 | 1/2" PLYWOOD |
| 06 16 00.D7 | 1/2" EXTERIOR GRADE PLYWOOD |
| 06 16 00.D10 | 5/8" EXTERIOR GRADE PLYWOOD |
| 06 16 00.E4 | 3/4" T&G STRAND BOARD DECKING |



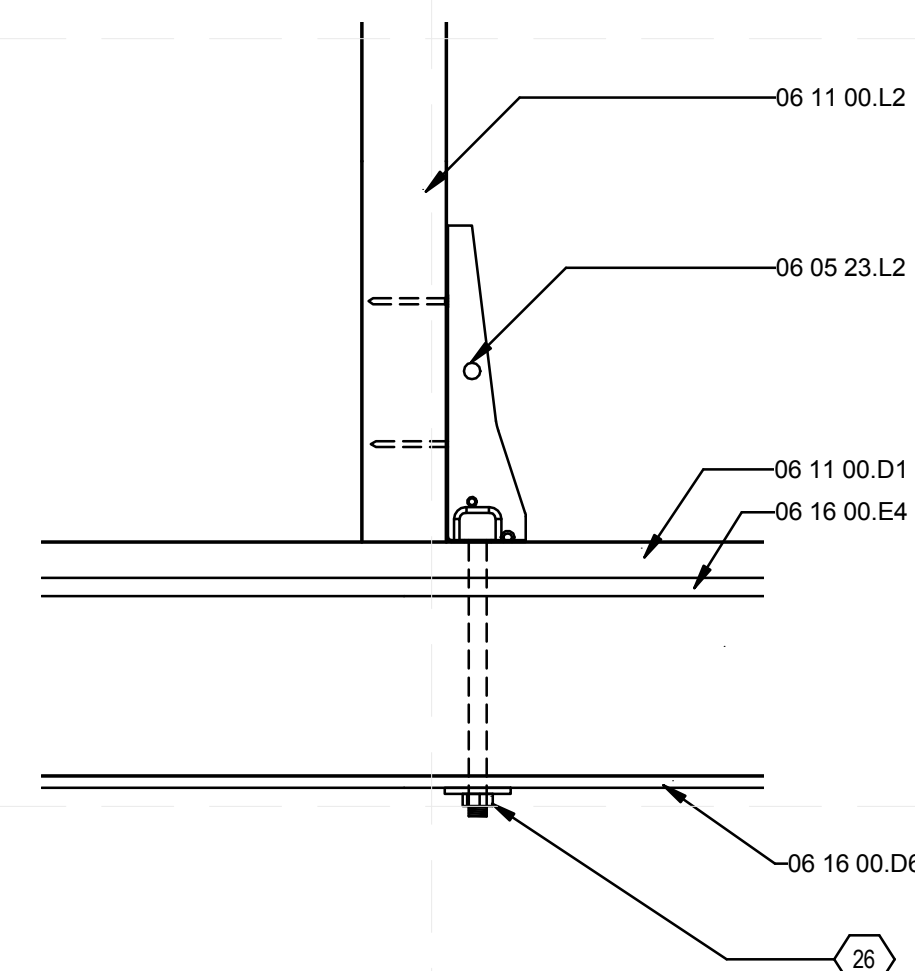
D DRAG DETAIL TYP.

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



E WALL STUD TO RAFTER CONNECTION TYP.

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



I HDU5 CONNECTION TYP.

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



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FLOOR DETAILS

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GENERAL SHEET NOTES

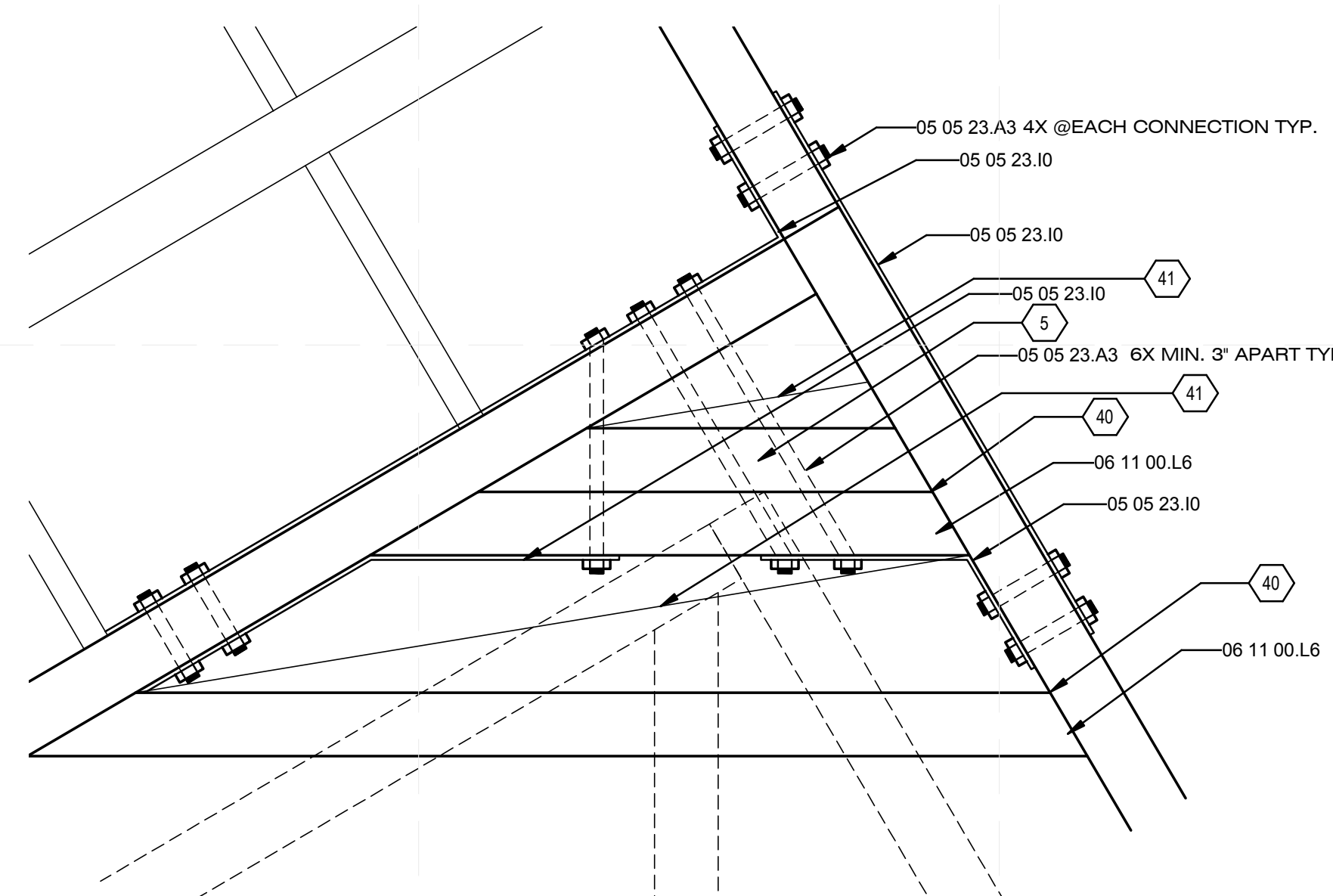
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SHEET NOTES

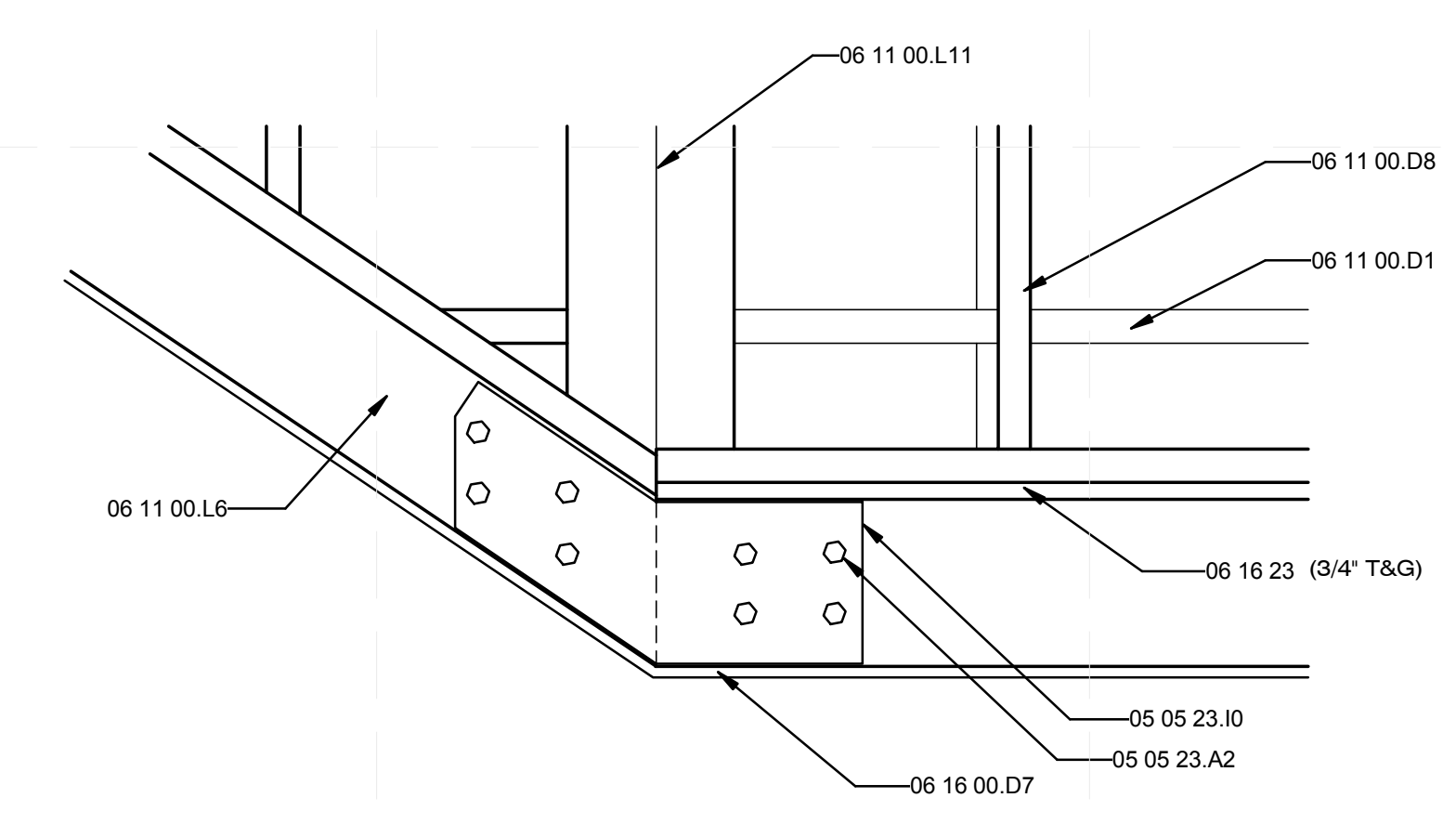
- 5 TWIN MEMBERS
- 40 TYP HUS HANGER @ EACH END
- 41 BLOCKING

REFERENCE KEYNOTES

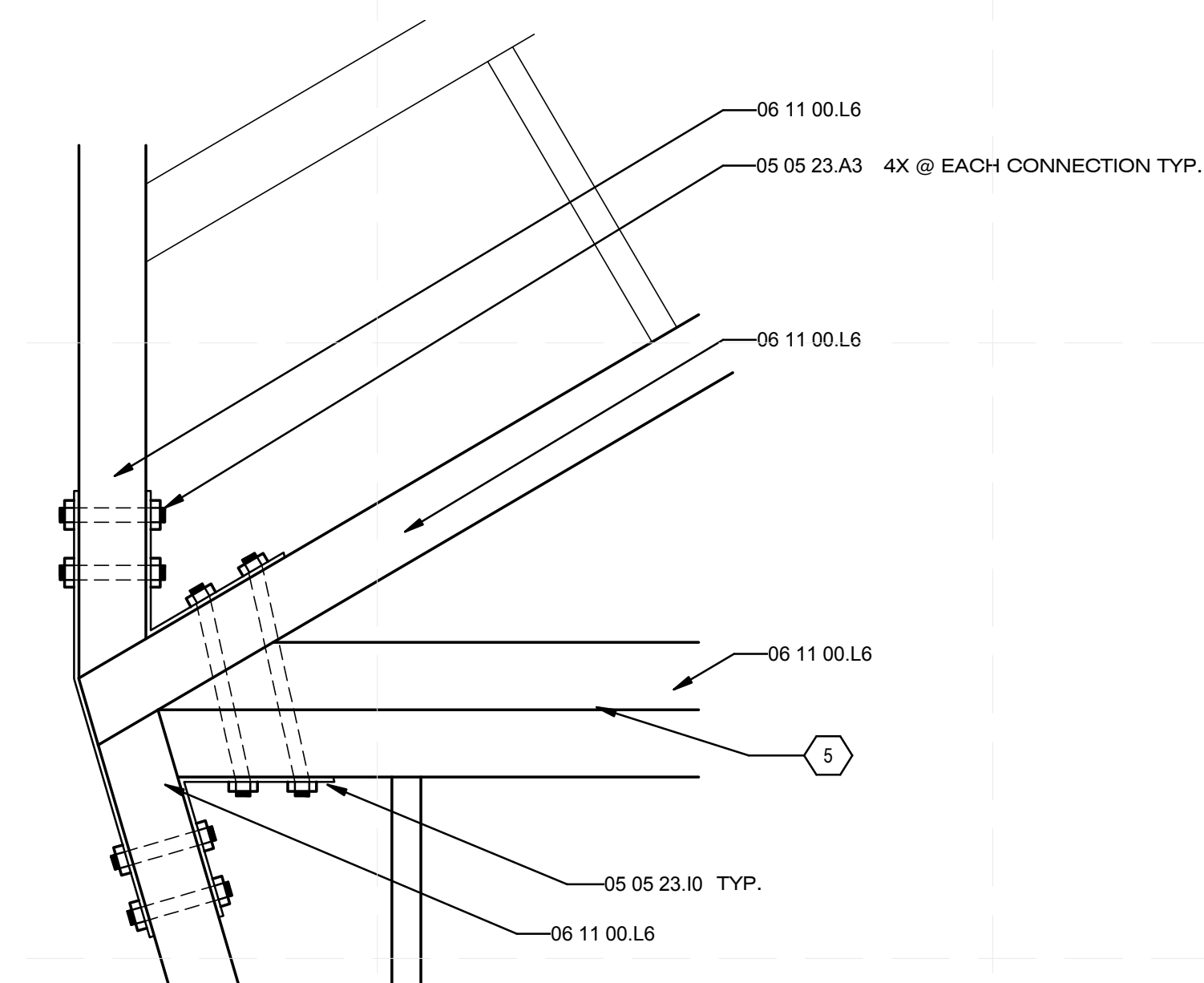
- 05 05 23.A2 5/8" A307 BOLT
- 05 05 23.A3 3/4" A307 BOLT
- 05 05 23.I0 1/4" STEEL PLATE
- 06 11 00.D1 2X4
- 06 11 00.D8 2X4 STUDS @ 16" O.C.
- 06 11 00.L6 4X8 BEAM
- 06 11 00.L11 4X8 POST
- 06 16 00.D7 1/2" EXTERIOR GRADE PLYWOOD
- 06 16 23 SUBFLOORING



S FLOOR DETAIL EAST WALL
1 1/2" = 1'-0" 0 1/2" 1' 1 1/2"

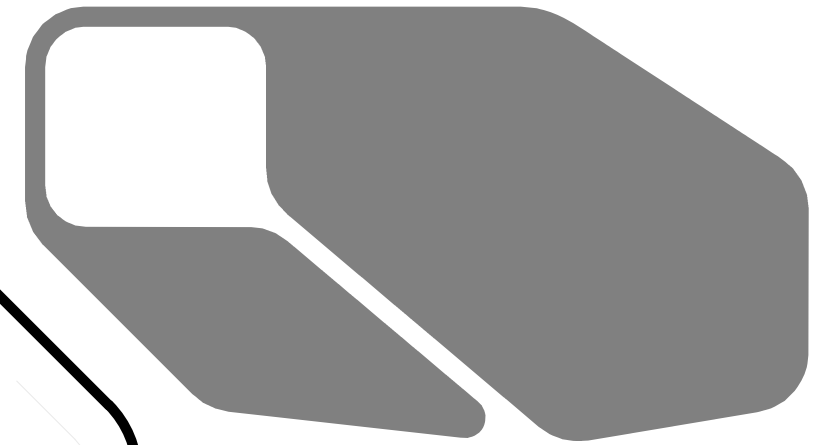


R WEST WALL CANTILEVER CONNECTION
1 1/2" = 1'-0" 0 1/2" 1' 1 1/2"



T FLOOR DETAIL WEST WALL
1 1/2" = 1'-0" 0 1/2" 1' 1 1/2"

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REINFORCING AND FRAMING SCHEDULES

S-601

MATERIALS BY DISCRETE LENGTH		
MEMBER TYPE	QUANTITY	LENGTH (LF)
2x4	97	8
	123	10
	24	12
	10	14
	8	16
	7	20
	11	22
2x6	35	8
	4	10
	3	16
3x4	6	10
2x8	44	8
	62	10
	47	12
	7	14
	2	20
	2	24
	2	26
2x12	15	12
	3	14
	46	8
4x4	23	10
	1	12
	1	14
	1	22
	1	24
	1	26
4x6	4	16
	1	18
	2	20
4x8	2	8
	2	12
	2	14
	3	16
	3	18
	1	20
	1	24
	3	26
4x10	2	16
LVL 3.5x9.5	1	14
	2	18
LVL 3.5x7.5	2	26
	1	14
LVL 5.25x9.5	5	10
	1	26

GENERAL SHEET NOTES

SHEET NOTES

REFERENCE KEYNOTES

SHEATING SCHEDULE		
TYPE	LOCATION	NUMBER OF SHEETS
5/8 CDX	ROOF, CANTILEVER	35
1/2 CDX	UNDER MODULE	20
1/2 BCX	PERIMETER WALL	78
1/2 OSB	PLATFORM FACE	10
3/4 T&G	SUBFLOOR	52



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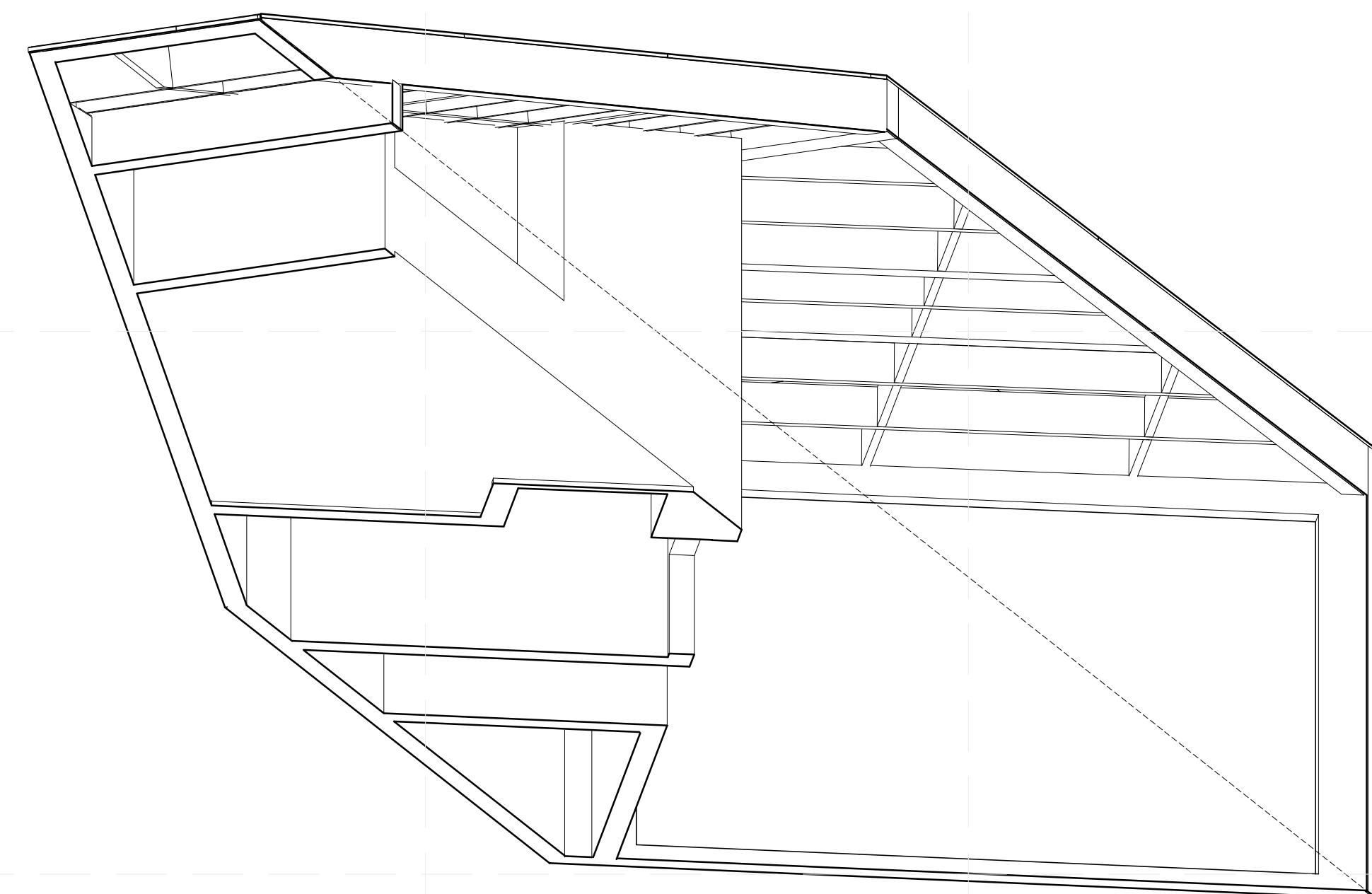
MODULE ISOMETRICS

S-902

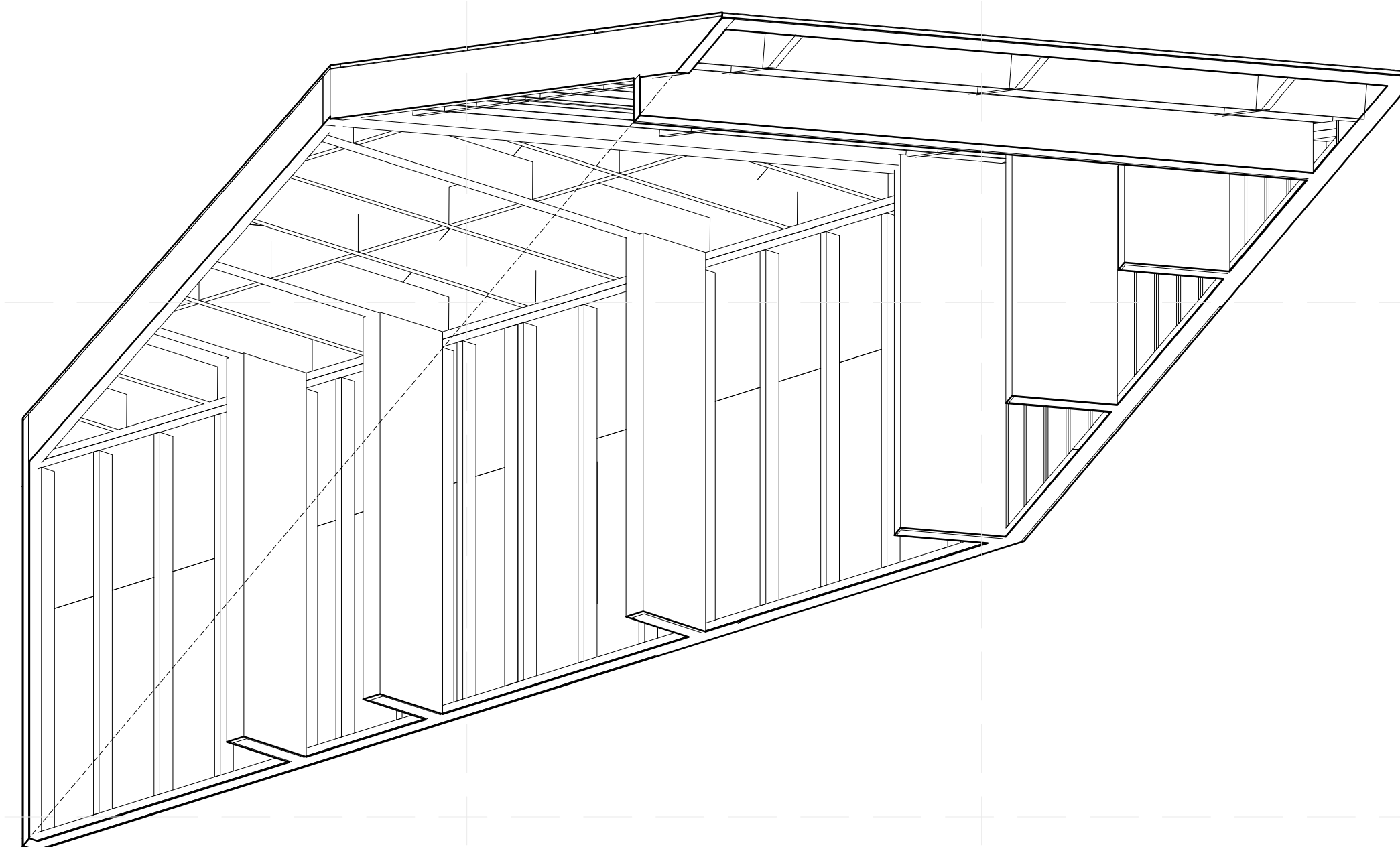
GENERAL SHEET NOTES

SHEET NOTES

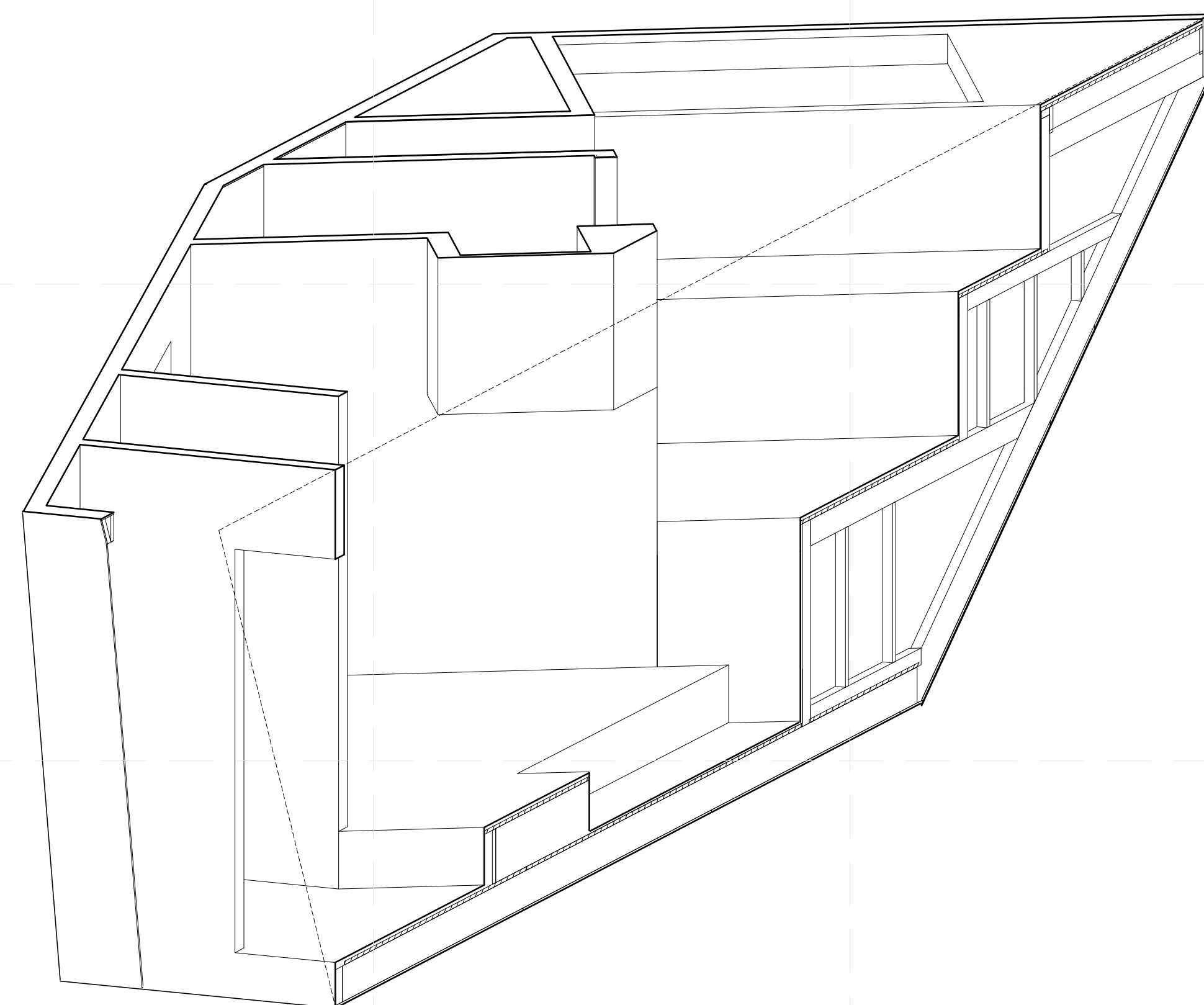
REFERENCE KEYNOTES



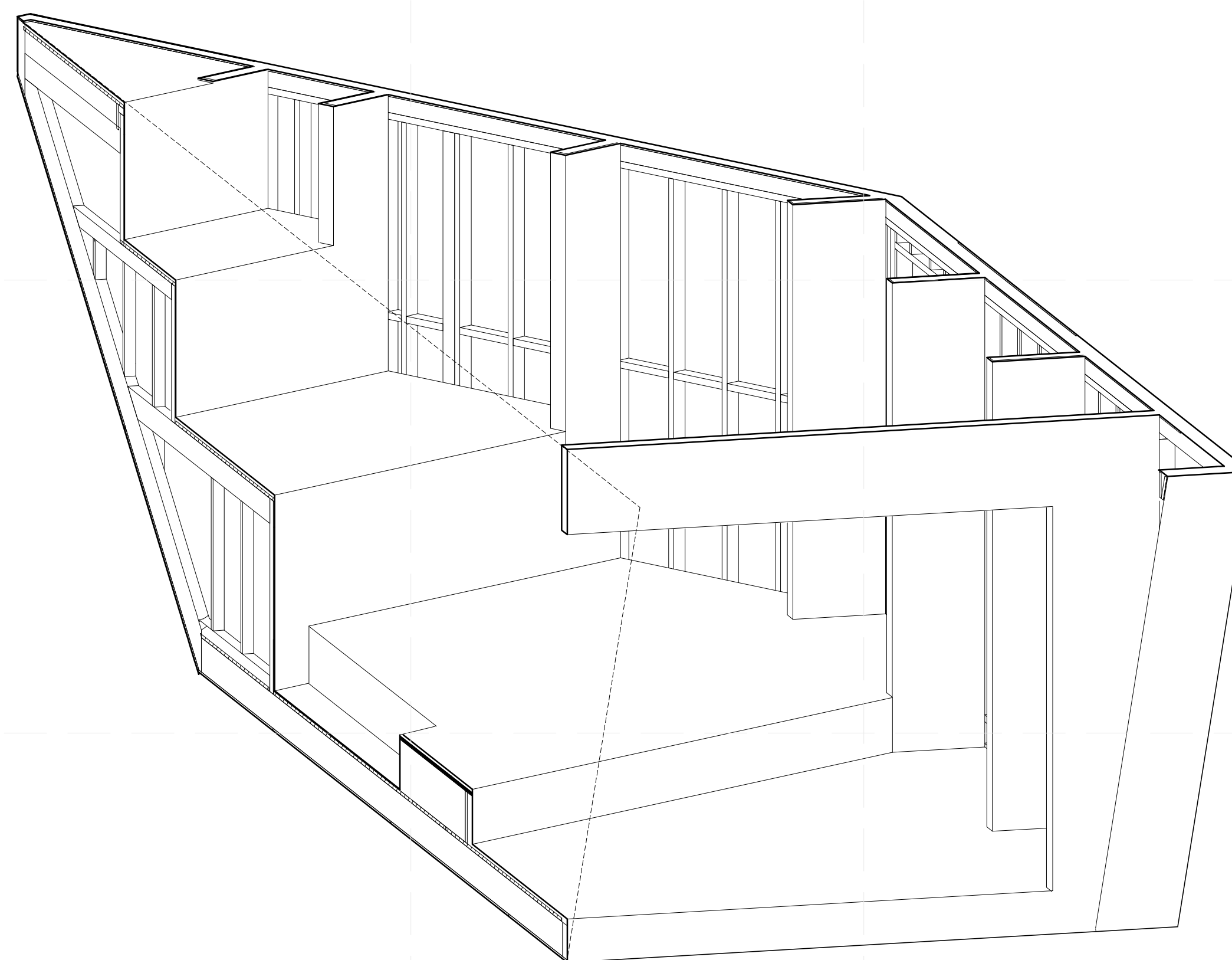
C1 WEST TOP MODULE



C4 EAST TOP MODULE



A1 WEST BOTTOM MODULE



A4 EAST BOTTOM MODULE

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CONSTRUCTION DRAWING SET 03/22/2011

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REVISIONS:

CD SET REVISION 05/02/2011

DATE: 08.11.2011

LOT NUMBER: #402

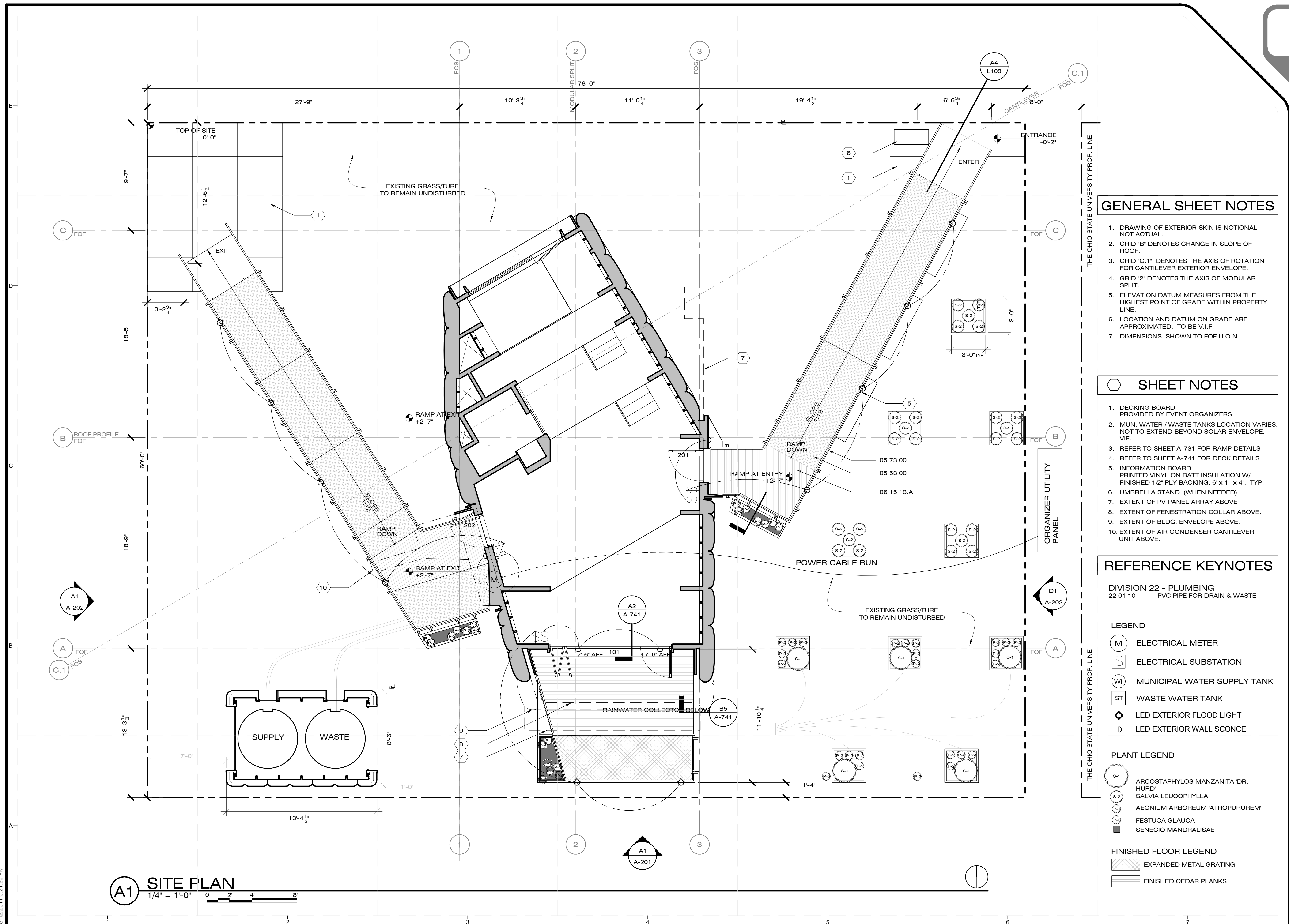
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SITE PLAN

A-101



GENERAL SHEET NOTES

- DRAWING OF EXTERIOR SKIN IS NOTIONAL NOT ACTUAL.
- GRID 'B' DENOTES CHANGE IN SLOPE OF ROOF.
- GRID 'C.1' DENOTES THE AXIS OF ROTATION FOR CANTILEVER EXTERIOR ENVELOPE.
- GRID '2' DENOTES THE AXIS OF MODULAR SPLIT.
- ELEVATION DATUM MEASURES FROM THE HIGHEST POINT OF GRADE WITHIN PROPERTY LINE.
- LOCATION AND DATUM ON GRADE ARE APPROXIMATED. TO BE V.I.F.
- DIMENSIONS SHOWN TO FOF U.O.N.

SHEET NOTES

- DECKING BOARD PROVIDED BY EVENT ORGANIZERS
- MUN. WATER / WASTE TANKS LOCATION VARIES. NOT TO EXTEND BEYOND SOLAR ENVELOPE. VIF.
- REFER TO SHEET A-731 FOR RAMP DETAILS
- REFER TO SHEET A-741 FOR DECK DETAILS
- INFORMATION BOARD PRINTED VINYL ON BATT INSULATION W/ FINISHED 1/2" PLY BACKING. 6' x 1' x 4", TYP.
- UMBRELLA STAND (WHEN NEEDED)
- EXTENT OF PV PANEL ARRAY ABOVE
- EXTENT OF FENESTRATION COLLAR ABOVE.
- EXTENT OF BLDG. ENVELOPE ABOVE.
- EXTENT OF AIR CONDENSER CANTILEVER UNIT ABOVE.

REFERENCE KEYNOTES

DIVISION 22 - PLUMBING
22 01 10 PVC PIPE FOR DRAIN & WASTE

LEGEND

- (M) ELECTRICAL METER
- (S) ELECTRICAL SUBSTATION
- (WI) MUNICIPAL WATER SUPPLY TANK
- (ST) WASTE WATER TANK
- ◆ LED EXTERIOR FLOOD LIGHT
- ◇ LED EXTERIOR WALL SCONCE

PLANT LEGEND

- (S-1) ARGOSTAPHYLOS MANZANITA 'DR. HURD'
- (S-2) SALVIA LEUCOPHYLLA
- (P-3) AEONIUM ARBOREUM 'ATROPUREUM'
- (F-2) FESTUCA GLAUCA
- (M-2) SENECIO MANDRALISAE

FINISHED FLOOR LEGEND

- [Hatched Box] EXPANDED METAL GRATING
- [Solid Box] FINISHED CEDAR PLANKS

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

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FLOOR PLAN

A-111

GENERAL SHEET NOTES

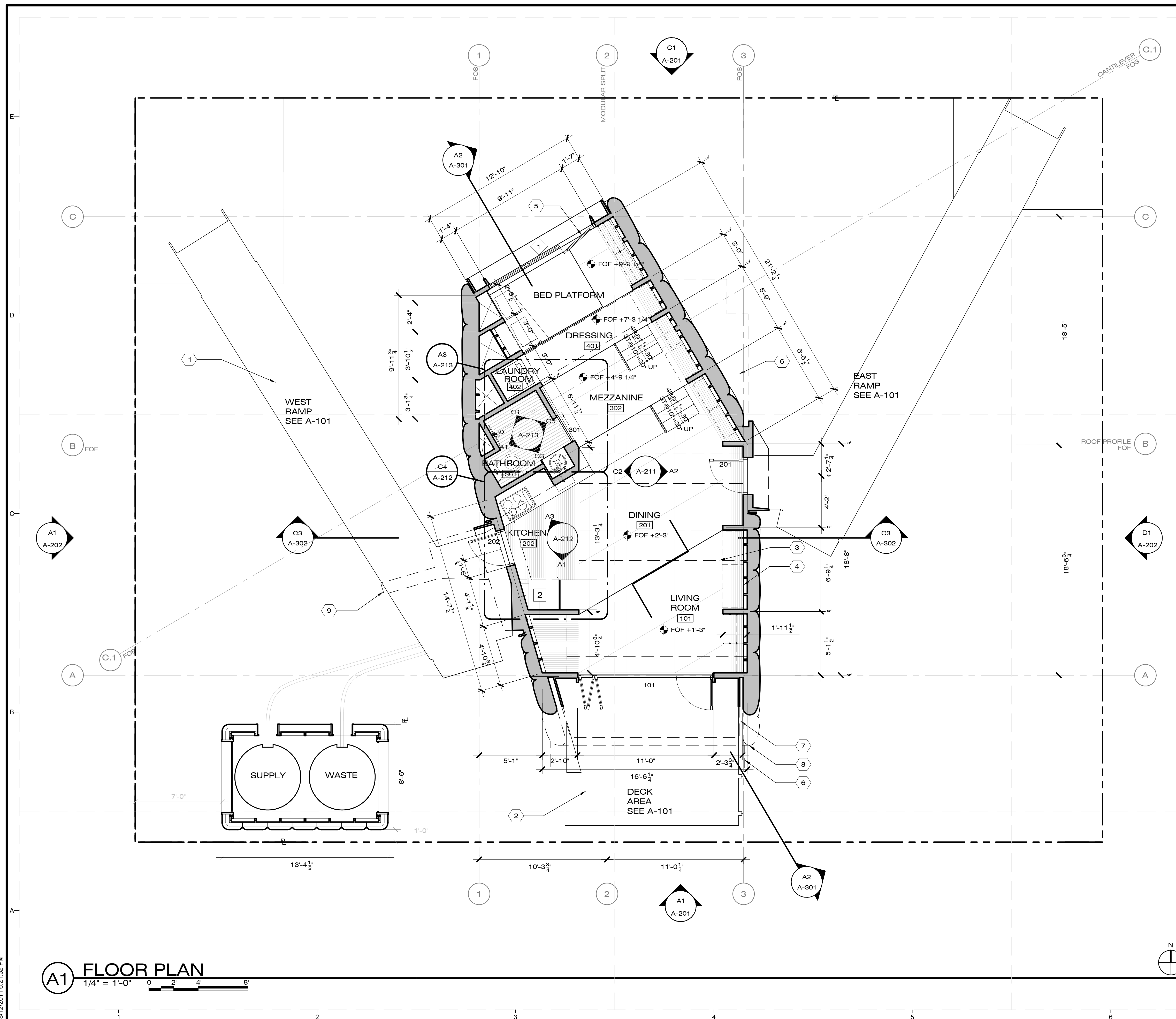
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3. GRID 'C.1' DENOTES THE AXIS OF ROTATION FOR CANTILEVER EXTERIOR ENVELOPE.
4. GRID '2' DENOTES THE AXIS OF MODULAR SPLIT.
5. ELEVATION DATUM MEASURES FROM THE HIGHEST POINT OF GRADE WITHIN PROPERTY LINE.
6. DIMENSIONS SHOWN TO FOF U.O.N.

SHEET NOTES

1. SEE SHEET A-741 FOR DECK DETAILS
2. SEE SHEET A-731 FOR RAMP DETAILS
3. OVERHANG CABINETS ABOVE, TYP.
4. REMOVABLE CABINETS & SOFT FURNITURE, TYP.
5. WINDOW 2 INSTALLED WITH VENT LOCK ALLOWING FOR 4" MAX OPENING.
6. EXTENT OF PV PANEL ARRAY ABOVE.
7. EXTENT OF FENESTRATION COLLAR ABOVE.
8. EXTENT OF BLDG. ENVELOPE ABOVE.
9. EXTENT OF AIR CONDENSER CANTILEVER UNIT ABOVE.

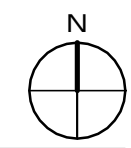
REFERENCE KEYNOTES

- FINISHED FLOOR LEGEND**
- [Hatched Box] FINISHED CDX PLYWOOD
 - [Horizontal Lines Box] FINISHED CEDAR PLANKS



A1 FLOOR PLAN

1/4" = 1'-0" 0 2 4 8



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ROOF PLAN

A-112

GENERAL SHEET NOTES

1. DRAWING OF EXTERIOR SKIN DOES NOT REPRESENT ACTUAL SHAPE.
2. HORIZONTAL PV RAIL DIMENSIONED REL. TO REFERENCE BASE LINES 'A' AND '2'
3. VERTICAL PV RAIL DIMENSIONED REL. TO REFERENCE BASE LINES 'C' AND '2'
4. 2" DIAMETER PIPE GRID DIMENSIONED REL. TO REFERENCE GRID LINES 'B' AND '3'

SHEET NOTES

1. EXTENT OF WOOD STRUCTURE
2. EXTENT OF PV PANEL ARRAY ABOVE
3. AIR CONDENSER CANTILEVER UNIT

REFERENCE KEYNOTES

DIVISION 05 - METALS

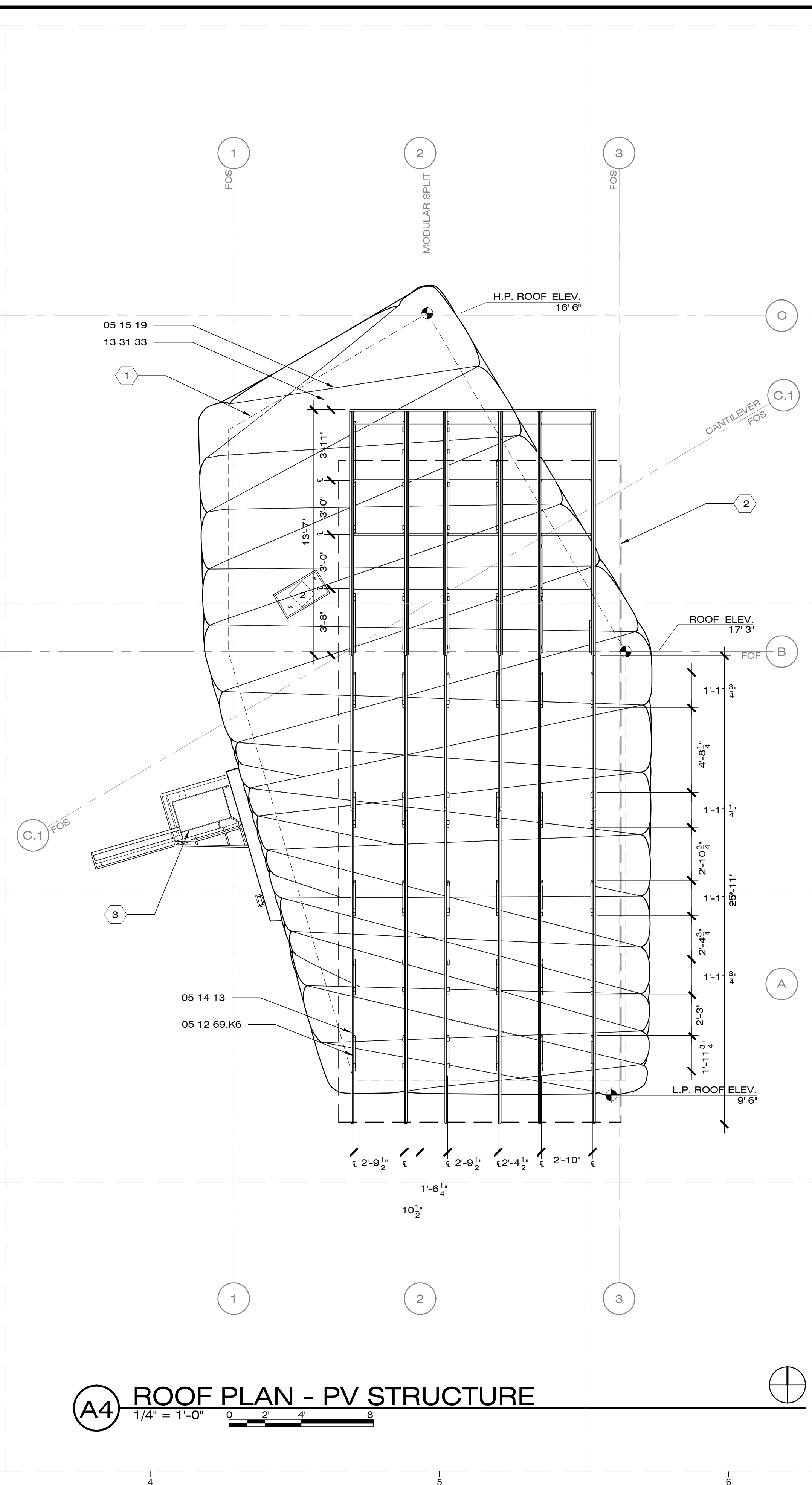
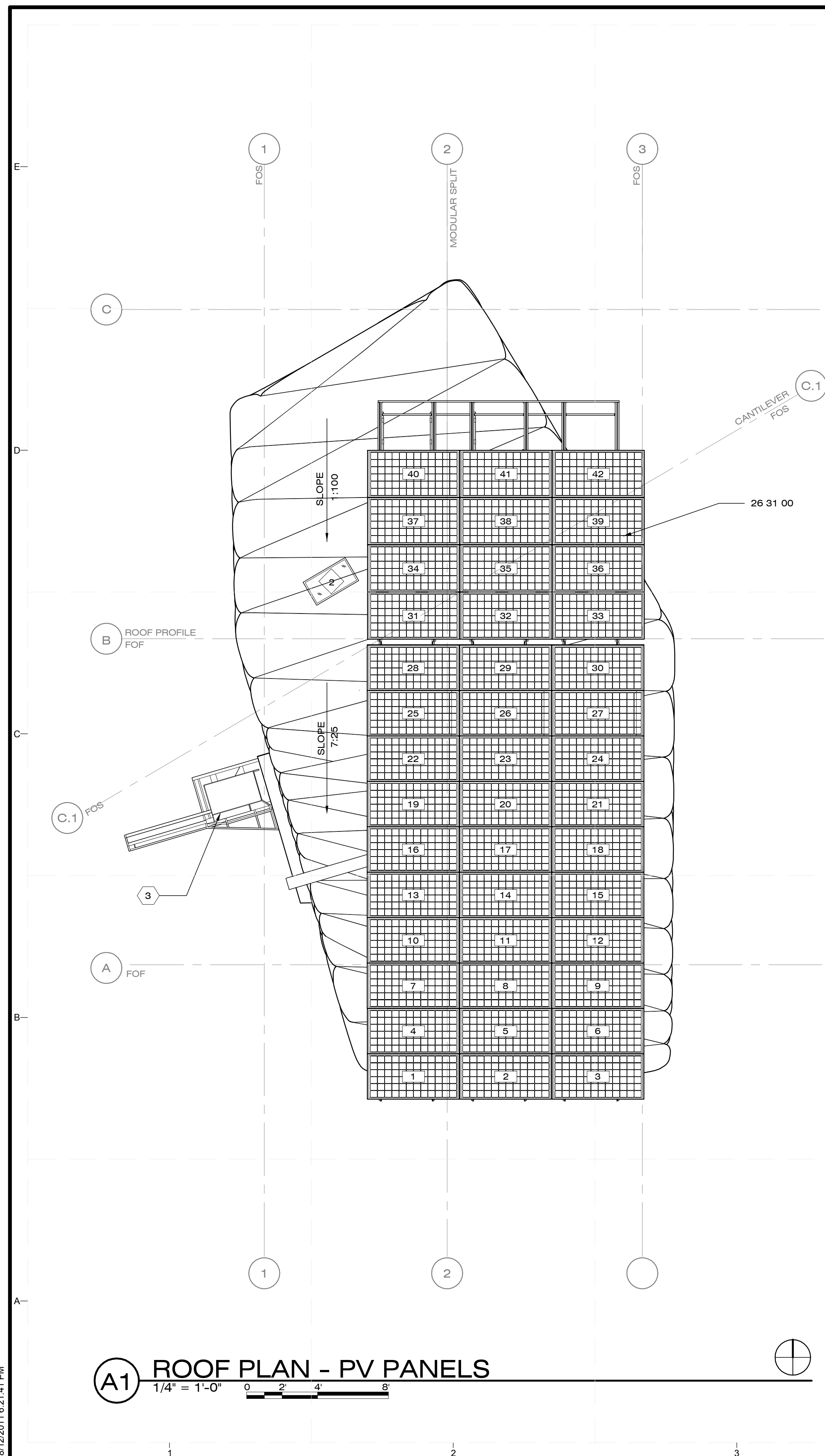
- 05 14 13 IRON RIDGE PV MOUNT RAIL
- 05 12 69.K6 2" STEEL PIPE BENEATH VINYL FOR CLIP MOUNTING
- 05 15 19 WOVEN GALVANIZED STEEL CABLE CLEAR VINYL COATED

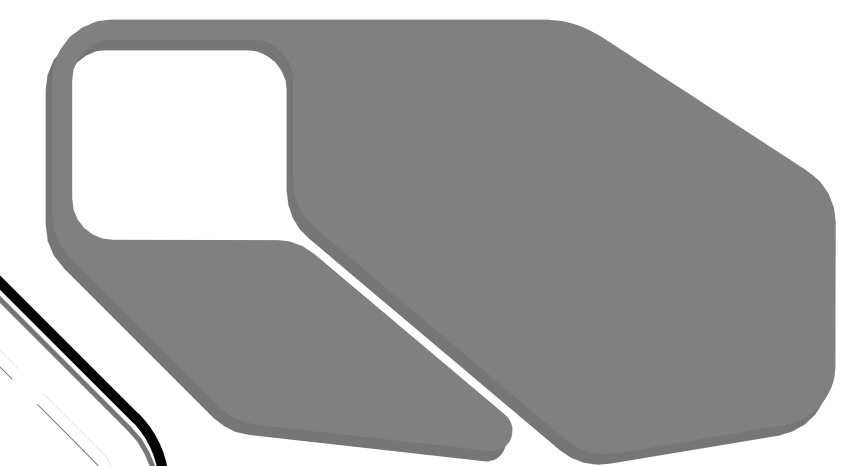
DIVISION 13 - SPECIAL CONSTRUCTION

- 13 31 33 CONTINUOUS VINYL COATED POLYESTER MEMBRANE

DIVISION 26 - ELECTRICAL

- 26 31 00 PV PANELS





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REFLECTED CEILING PLAN

A-121

GENERAL SHEET NOTES

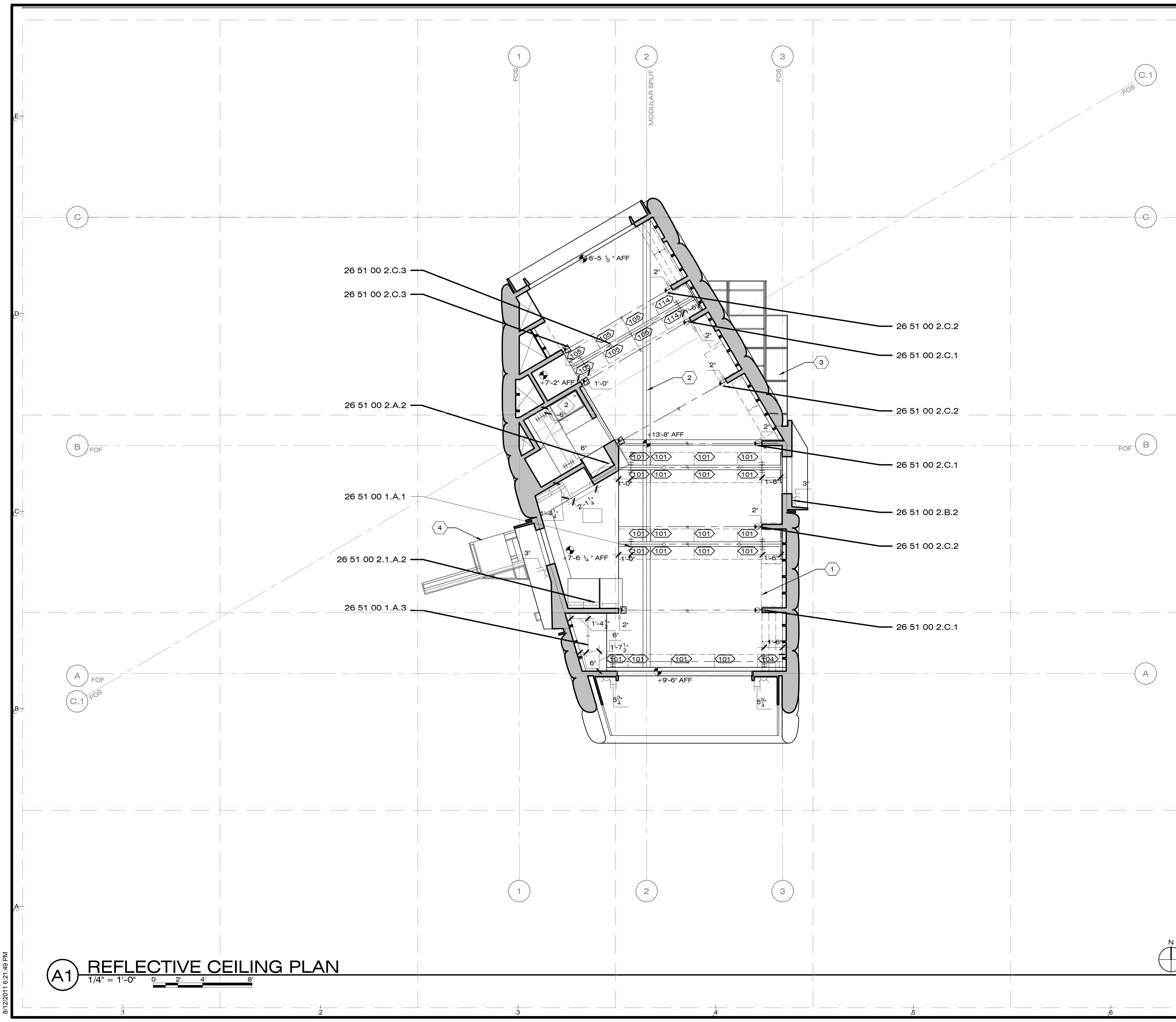
1. DRAWING OF EXTERIOR SKIN DOES NOT REPRESENT ACTUAL SHAPE.
2. GRID 'B' DENOTES CHANGE IN SLOPE OF ROOF.
3. GRID 'C.1' DENOTES THE AXIS OF ROTATION FOR CANTILEVER EXTERIOR ENVELOPE.
4. REFER TO SHEET F-101 FOR FIRE DETECTION AND SUPPRESSION DEVICE LOCATIONS.

SHEET NOTES

1. REFER TO SHEET A-711 ON CASEWORK DETAILS.
2. EXPOSED MODULAR BEAMS.
3. PV PANEL ARRAY
4. AIR CONDENSER CANTILEVER UNIT

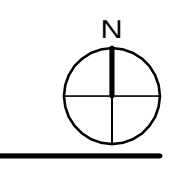
REFERENCE KEYNOTES

- LEGEND**
- SHEAR WALL TASK
 - SHEAR WALL AMBIENT
 - BEAM SHELF TASK
 - UNDER CABINET LED
 - OVER CABINET LED
 - LED STRIP LIGHT
 - T8 LIGHT FIXTURE
 - EXTERIOR WALL LIGHT



A1 REFLECTIVE CEILING PLAN

1/4" = 1'-0" 0 2 4 8



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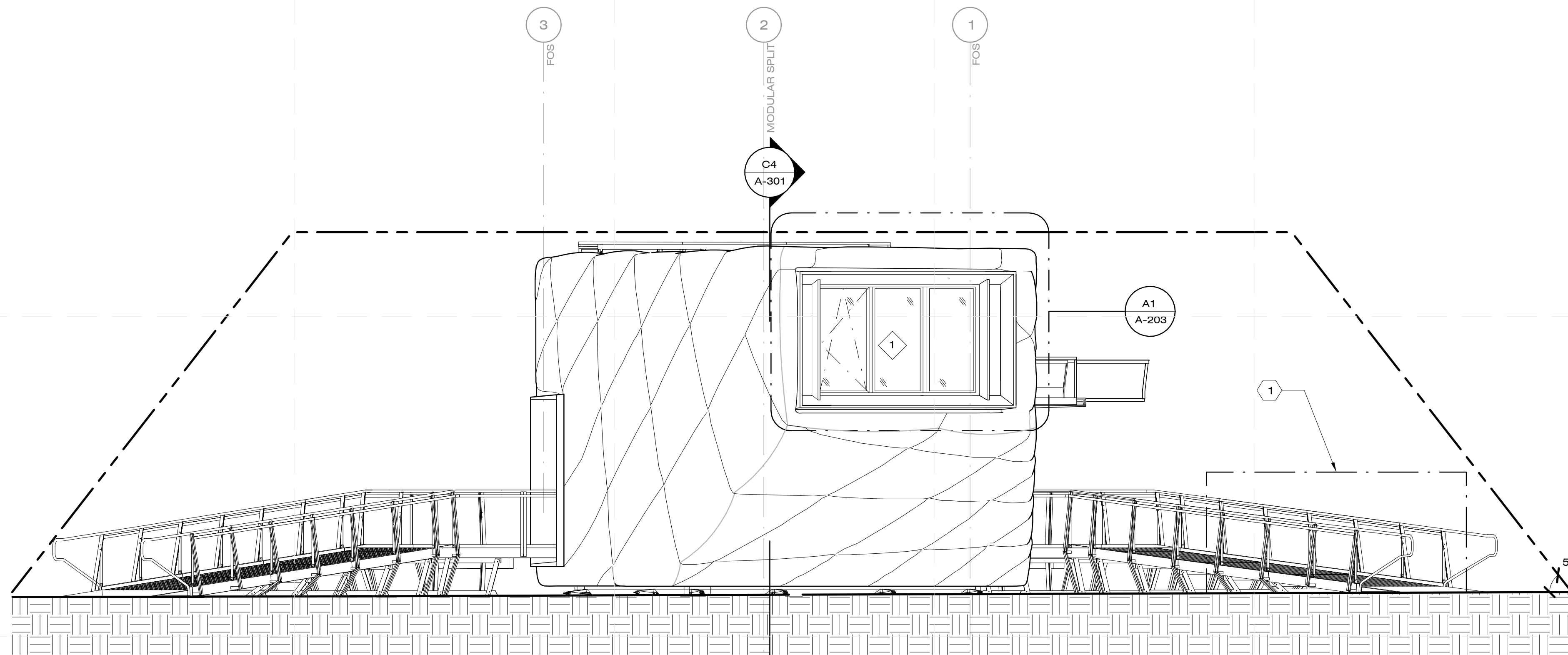
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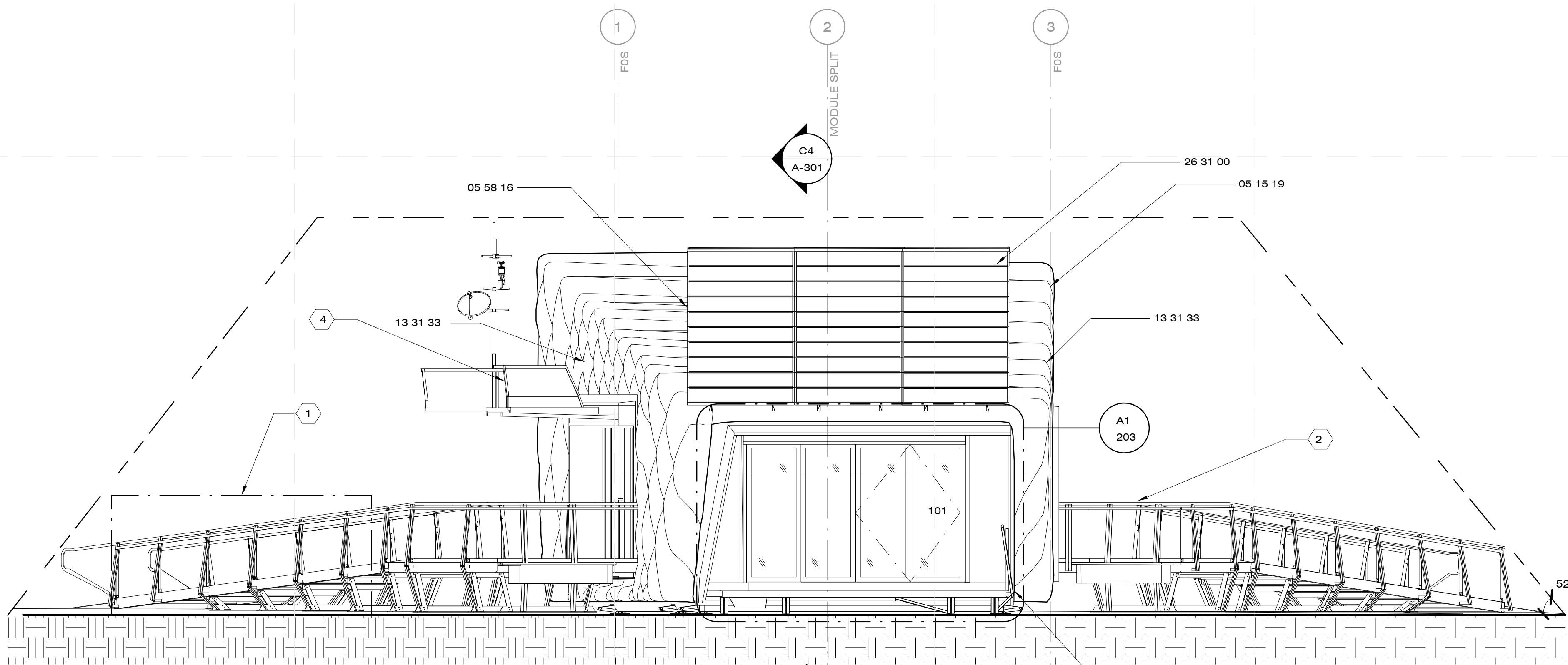
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EXTERIOR ELEVATIONS

A-201



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



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

SOLAR ENVELOPE 18'-0"

T.O. PLYWOOD 16'-11 3/4"

MODULE SPLIT 9'-9 1/4"

LAUNDRY 7'-3 1/4"

BATHROOM 4'-9 1/4"

KITCHEN 2'-3"

LIVING ROOM 1'-3"

T.O. GRADE 0'-0"

GENERAL SHEET NOTES

1. ELEVATION DATUM REFERS TO F.O.F.

SHEET NOTES

- 1. WATER UTILITY UNIT
- 2. RAMP - SEE SHEET 731 FOR RAMP DETAILS
- 3. DECK - SEE SHEET 741 FOR DECK DETAILS
- 4. AIR CONDENSER CANTILEVER UNIT

REFERENCE KEYNOTES

- DIVISION 05 - METALS
05 15 19 1/8" DIA. WOVEN GALVANIZED STEEL CABLE CLEAR VINYL COATED
- DIVISION 13- SPECIAL CONSTRUCTION
13 31 33 1" THK. VINYL COATED POLYESTER MEMBRANE
- DIVISION 26 - ELECTRICAL
26 31 00 PV PANELS

SOLAR ENVELOPE 18'-0"

T.O. PLYWOOD 16'-11 3/4"

MODULE SPLIT 9'-9 1/4"

LAUNDRY 7'-3 1/4"

BATHROOM 4'-9 1/4"

KITCHEN 2'-3"

LIVING ROOM 1'-3"

T.O. GRADE 0'-0"



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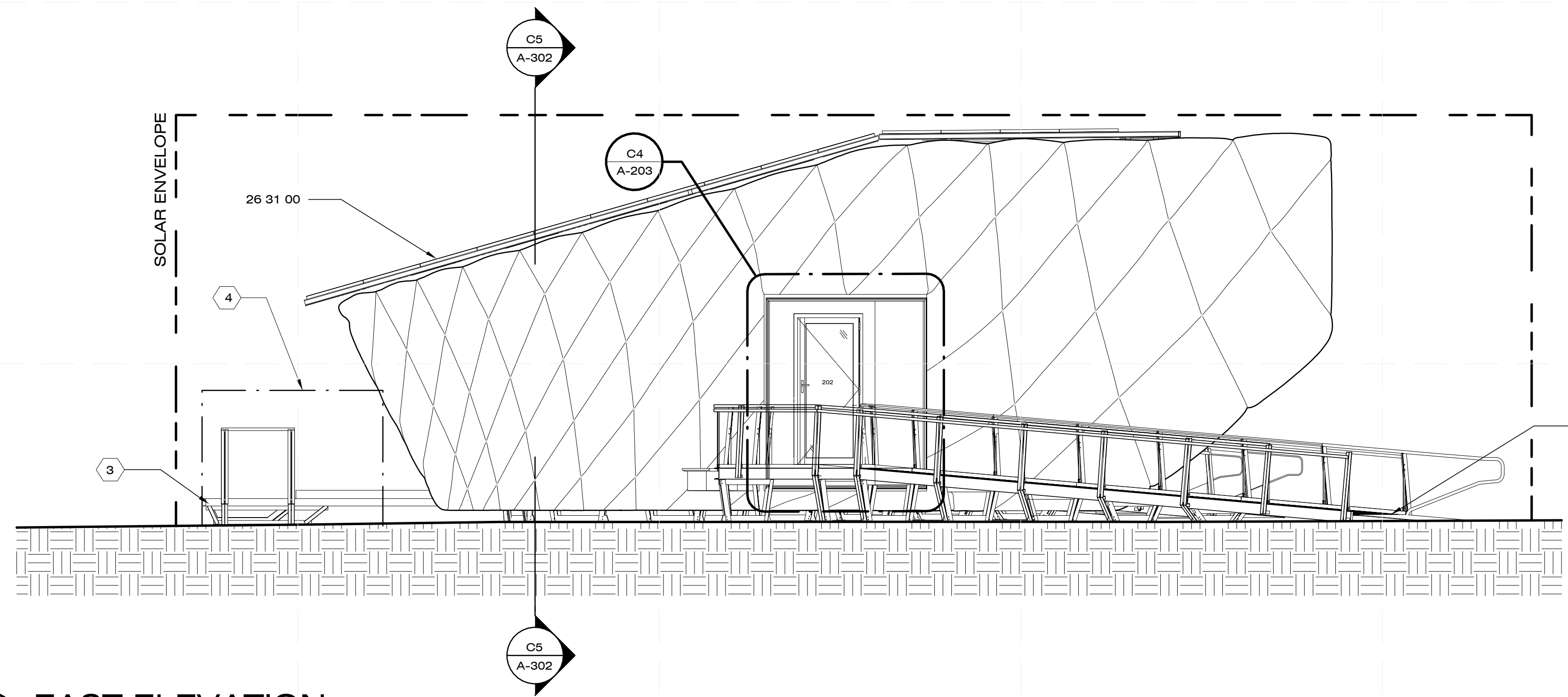
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EXTERIOR ELEVATIONS

A-202



- SOLAR ENVELOPE 18'-0"
- T.O. PLYWOOD 16'-11 3/4"
- MODULE SPLIT 9'-9 1/4"
- LAUNDRY 7'-3 1/4"
- BATHROOM 4'-9 1/4"
- KITCHEN 2'-3"
- LIVING ROOM 1'-3"
- T.O. GRADE 0'-0"

GENERAL SHEET NOTES

1. DRAWING OF EXTERIOR SKIN IS NOTIONAL NOT ACTUAL.

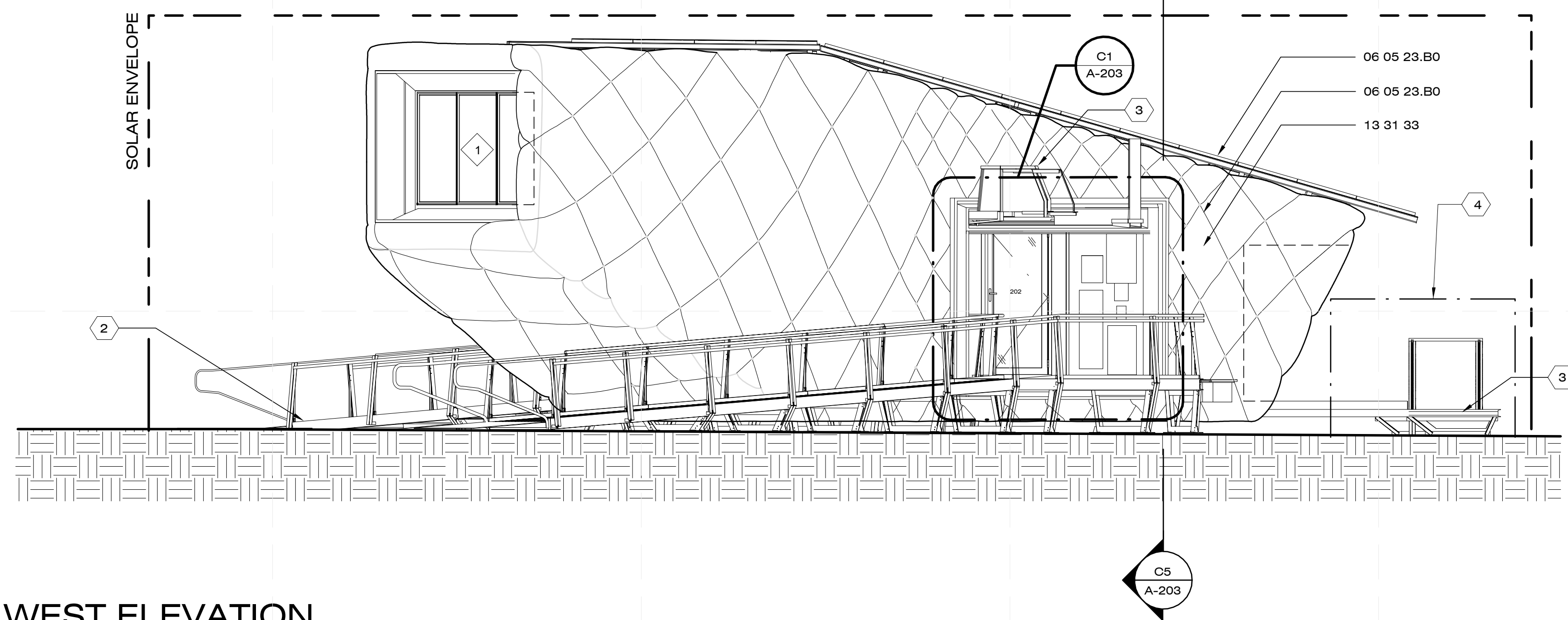
SHEET NOTES

1. RAMP - SEE SHEET A-731 FOR RAMP DETAILS
2. DECK - SEE SHEET A-741 FOR DECK DETAILS
3. AIR CONDENSER CANTILEVER UNIT
4. WATER UTILITY UNIT

REFERENCE KEYNOTES

- DIVISION 05 - METALS
05 15 19 1/8" DIA. WOVEN GALVANIZED STEEL CABLE CLEAR VINYL COATED
- DIVISION 13 - SPECIAL CONSTRUCTION
13 31 33 1/8" THK. VINYL COATED POLYESTER MEMBRANE
- DIVISION 26 - ELECTRICAL
26 31 00 PV PANELS

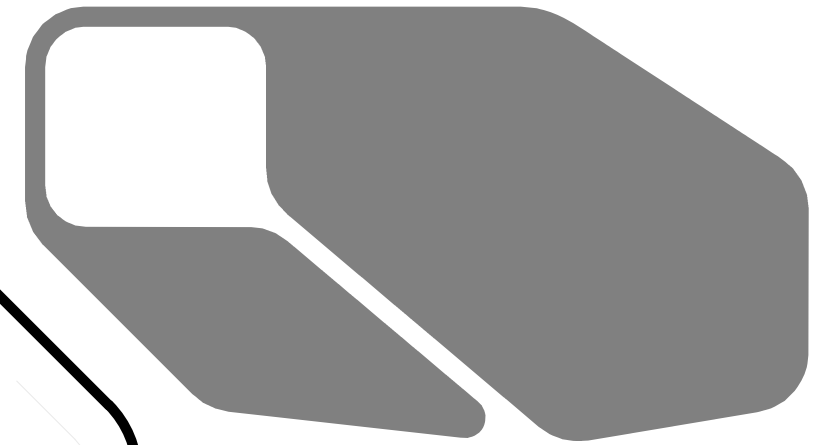
D1 EAST ELEVATION
1/4" = 1'-0"



- SOLAR ENVELOPE 18'-0"
- T.O. PLYWOOD 16'-11 3/4"
- MODULE SPLIT 9'-9 1/4"
- LAUNDRY 7'-3 1/4"
- BATHROOM 4'-9 1/4"
- KITCHEN 2'-3"
- LIVING ROOM 1'-3"
- T.O. GRADE 0'-0"

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

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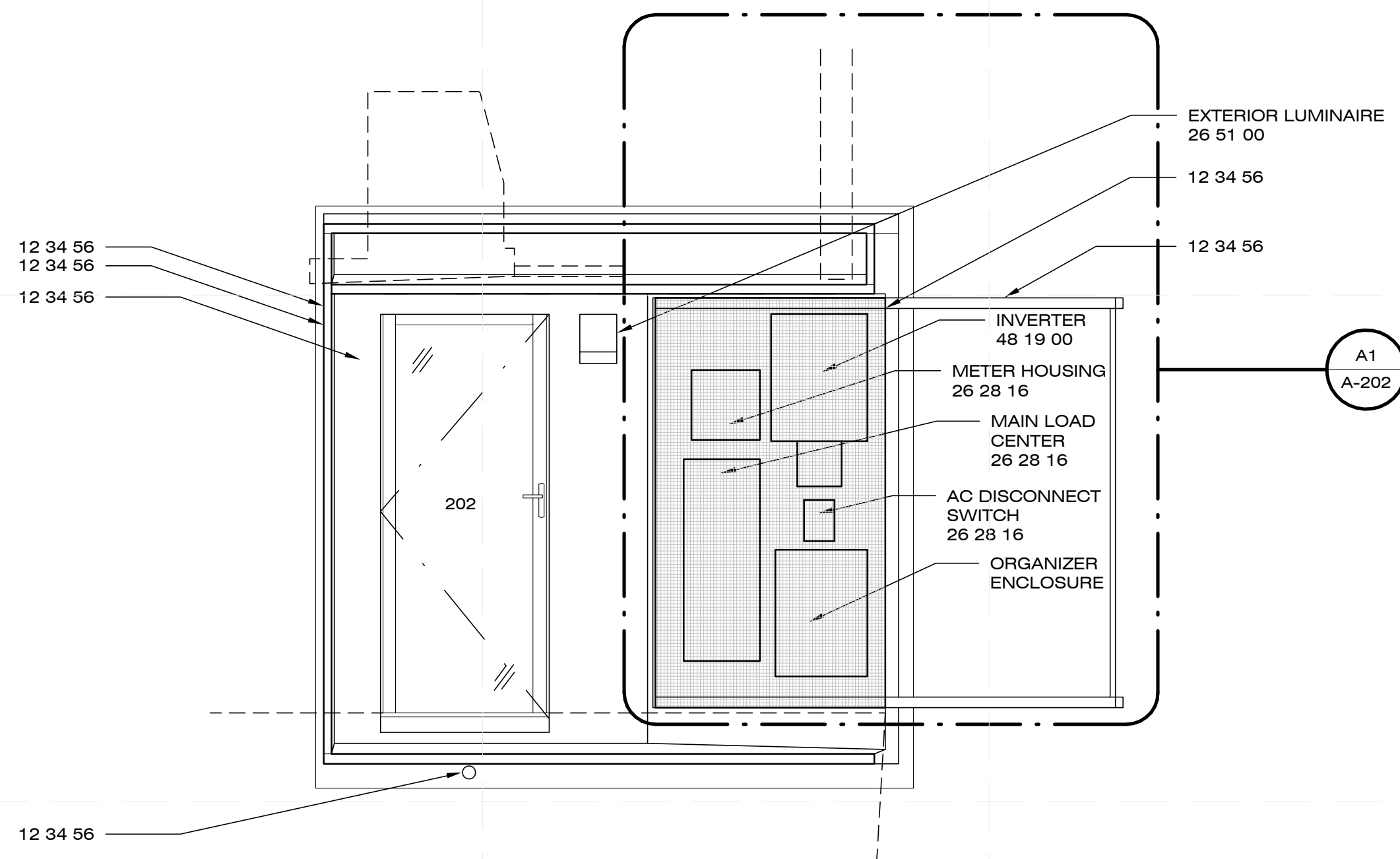
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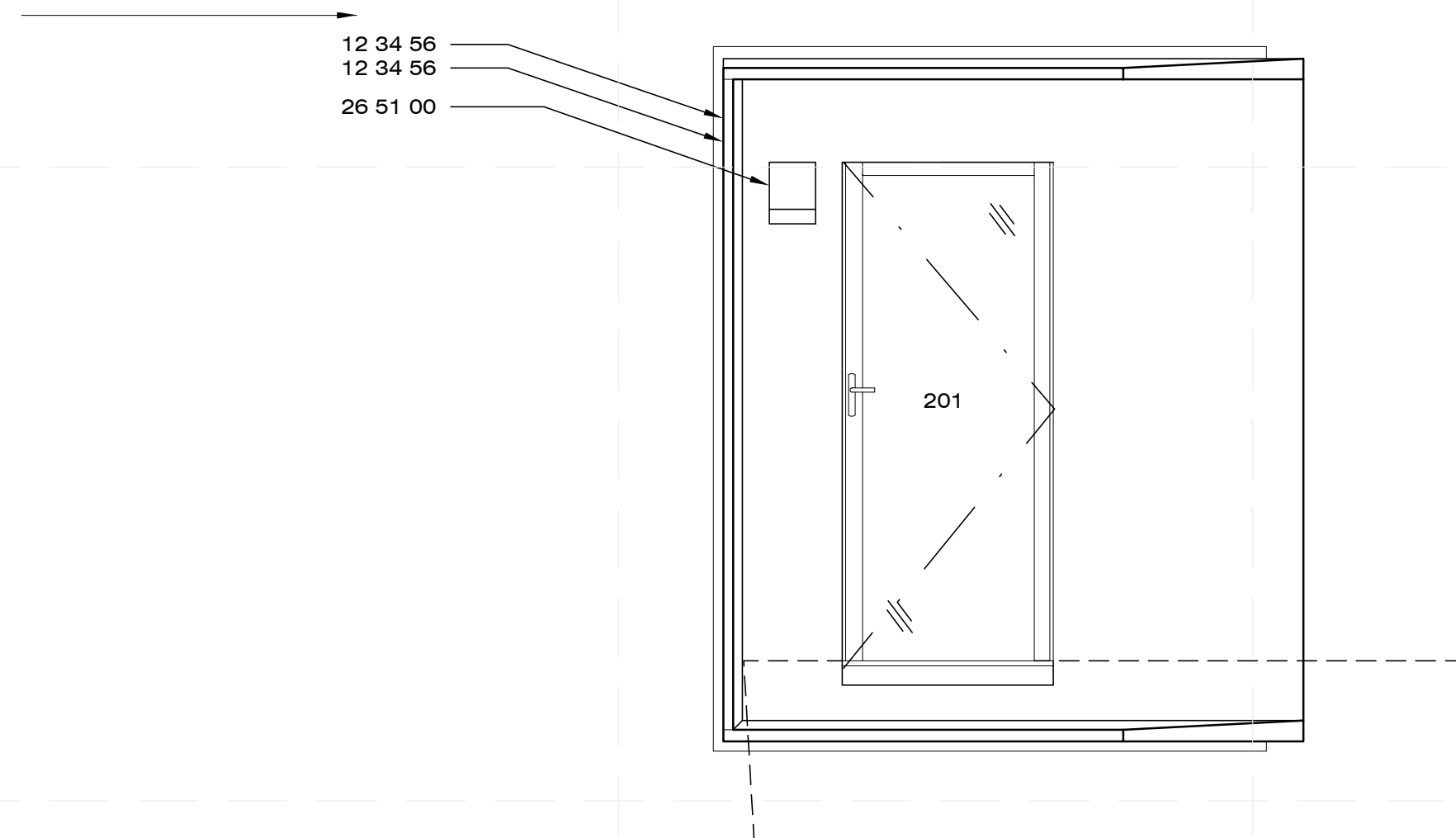
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FENESTRATION COLLAR ELEVATIONS

A-203

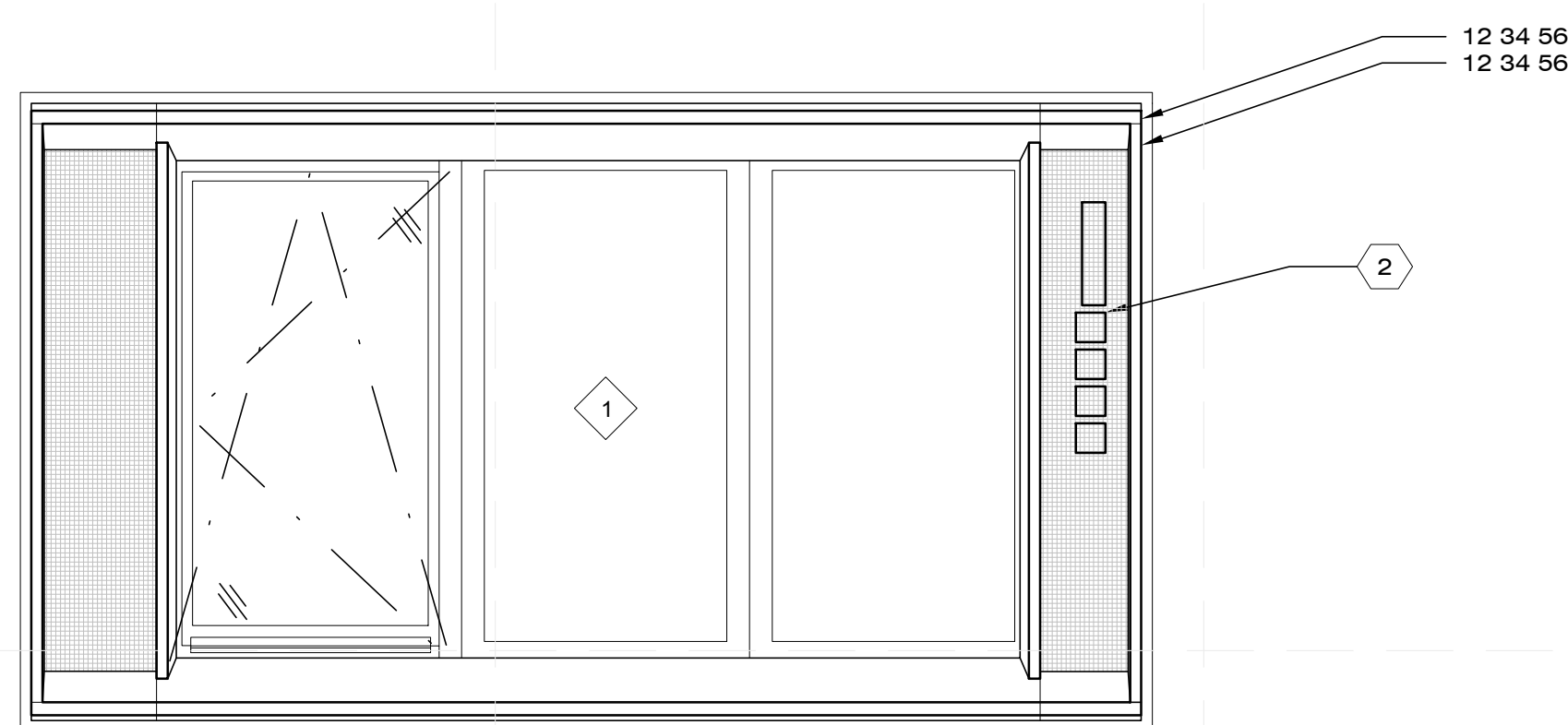


C1 NORTH FENESTRATION ELEVATION
1/2" = 1'-0" 0 1' 2' 4'

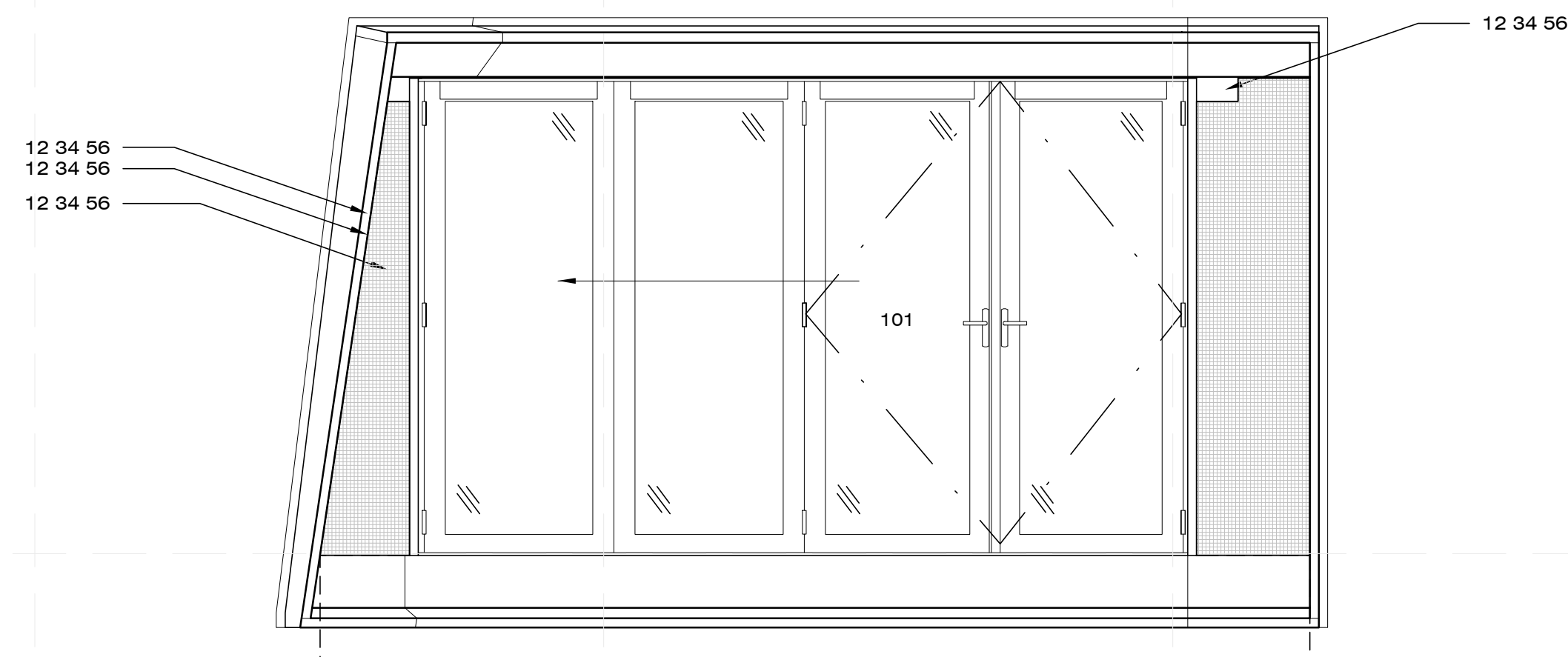


C4 SOUTH FENESTRATION ELEVATION
1/2" = 1'-0" 0 1' 2' 4'

- 1. WOOD PANEL NORTH WINDOW
SEE SHEET A-601 FOR DOOR SCHEDULE
- 2. HOUSE EXHAUST VENTS



A1 NORTH FENESTRATION ELEVATION
1/2" = 1'-0" 0 1' 2' 4'



A4 SOUTH FENESTRATION ELEVATION
1/2" = 1'-0" 0 1' 2' 4'

- DIVISION 05 - METALS**
ALUMINUM RAILING
1/4" STEEL PLATE
2" ALUMINUM TEE, 2" ALUMINUM ANGLE
SHEET METAL (FALSE PANELS)
METAL GRATINGS
- DIVISION 06 - WOODS, PLASTICS, AND COMPOSITIONS**
10' LAG SCREW
3/8" 3.5" LAG SCREW
- DIVISION 07 - THERMAL AND MOISTURE PROTECTION**
FRAMING- FLOOR JOISTS
FRAMING- RAFTERS
FRAMING-4x8 BEAM
3/8" 3.5" LAG SCREW
PLYWOOD- EXTERIOR WALL SHEATHING
PLYWOOD- UNDERSIDE ROOF SHEATHING
- DIVISION 08 - OPENING**
4X10 LAMINATE VENEER LUMBER
6X10 LAMINATE VENEER LUMBER
PLYWOOD- EXTERIOR WALL SHEATHING
- DIVISION 09 - FINISHES**
1-1/2" ROUND RAIL
EXTERIOR GRADE FINISH PLYWOOD
ADJUSTABLE HANGER
2x8 HANGER
- DIVISION 13 - SPECIAL CONSTRUCTION**
SRAY FOAM INSULATION
BATT INSULATION
METAL GRATINGS
- DIVISION 26 - ELECTRICAL**
07 21 16.A10
05 53 00
08 52 00
08 35 13.13
NORTH WINDOW ASSEMBLY
SOUTH BI-FOLD (4 PANEL) DOOR:
NANAWALL
- DIVISION 32 - EXTERIOR IMPROVEMENTS**
09 64 19
13 31 00.A1
26 31 00
32 05 19.13
FLOORING MATERIALS
CONTINUOUS PTFE COATED
GLASS POLYESTER MEMBRANE
PV PANELS
GEO-TEXTILE GROUND COVER

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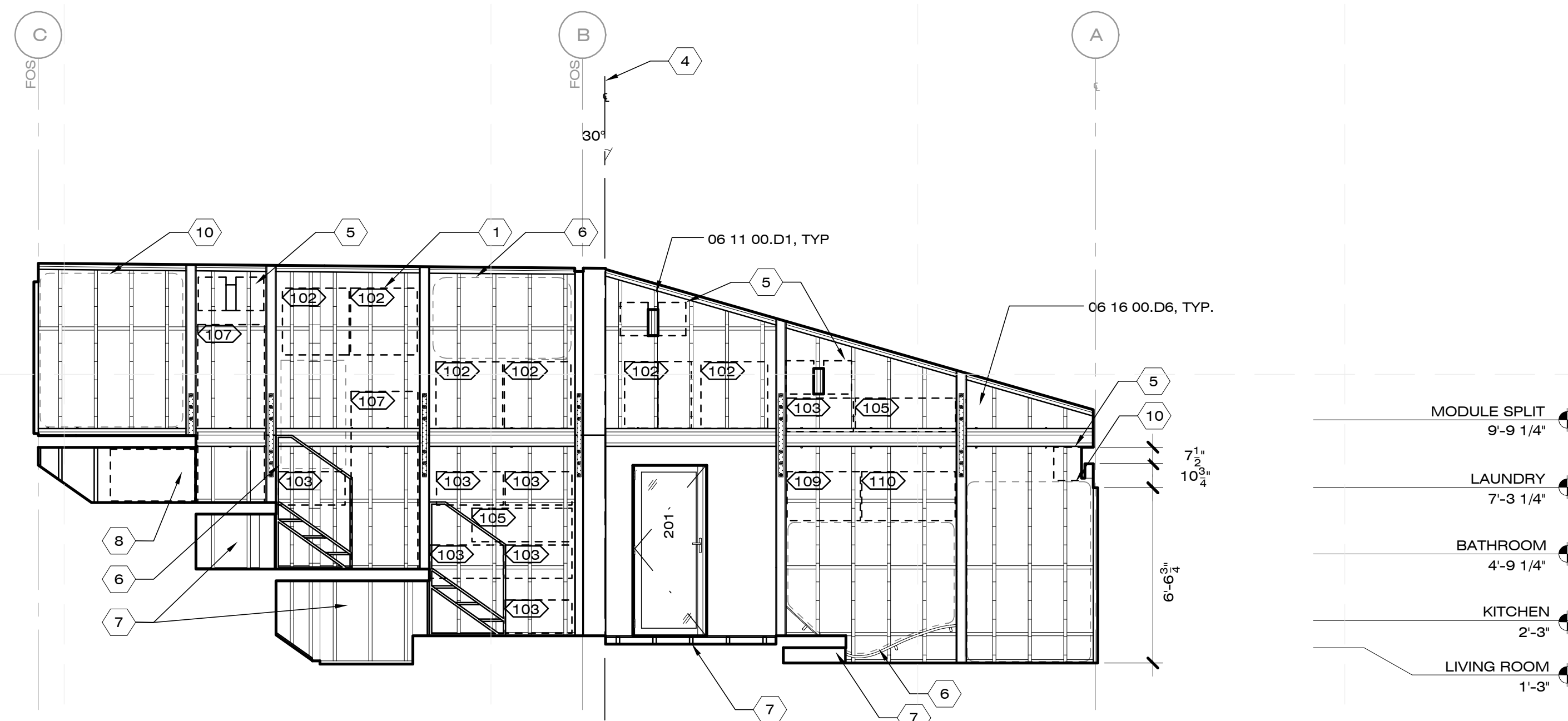
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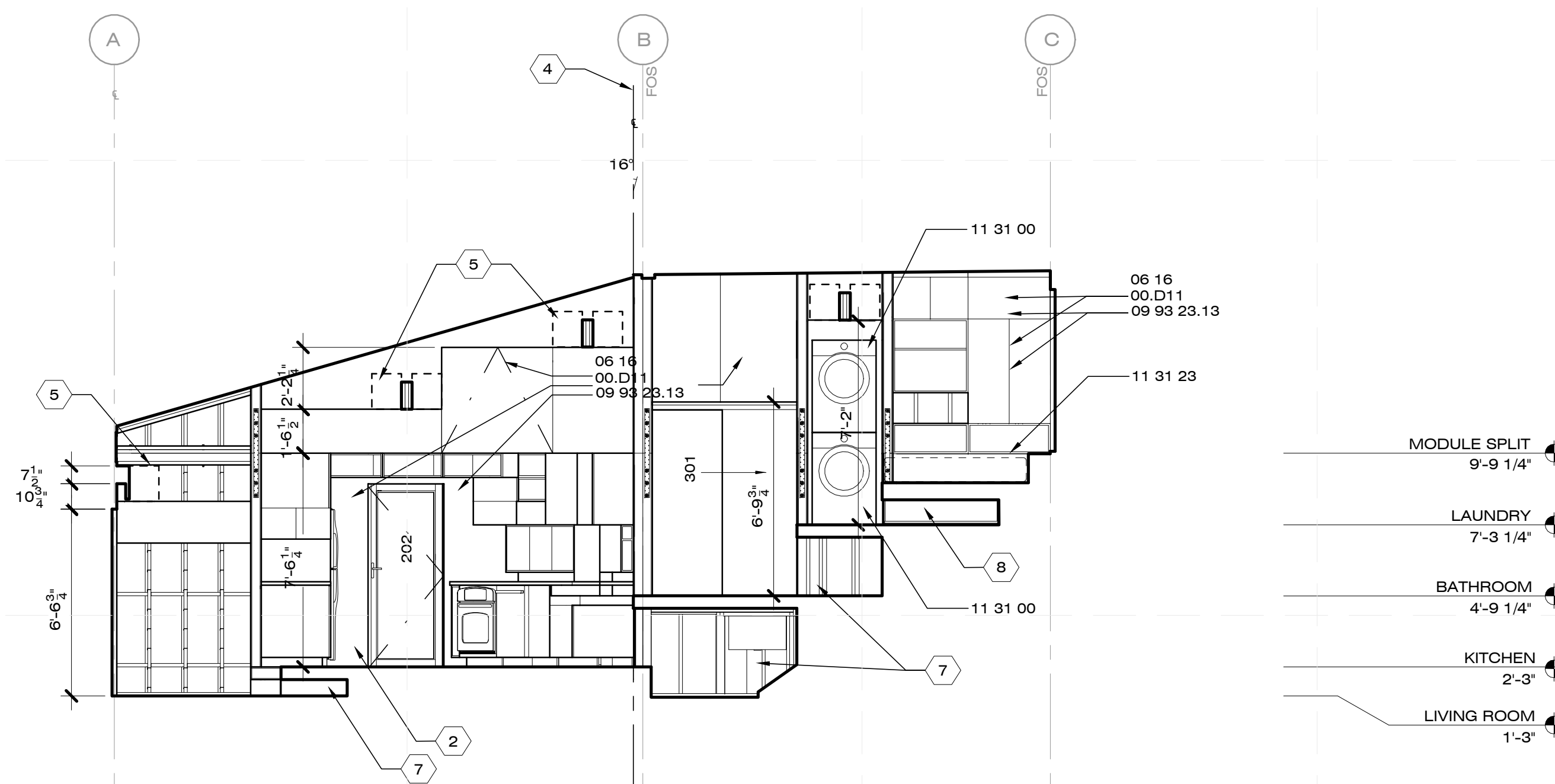
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INTERIOR ELEVATIONS

A-211



C2 INTERIOR ELEVATION EAST
1/4" = 1'-0" 0 2' 4'



A2 INTERIOR ELEVATION WEST
1/4" = 1'-0" 0 2' 4' 8'

GENERAL SHEET NOTES

- REFER TO SHEET A-711 FOR CASEWORK SCHEDULE AND DETAILS
- ALL CABINETS ARE ORDERED AS STOCK SIZES
- CABINETRY ON EAST WALL IS RECONFIGURABLE

SHEET NOTES

- DASHED LINE INDICATES CONDITIONAL CABINET LAYOUT
- REFER TO SHEET A-213 FOR INT. KITCHEN ELEVATION NORTH AND SOUTH
- REFER TO SHEET A-212 FOR INT. BATHROOM ELEVATION NORTH, SOUTH, EAST, & WEST
- VIEW ROTATION AXIS
- REFER TO SHEET A-121 REFLECTED CEILING PLAN FOR BEAM SHELF CABINET TAGS
- AREA RESERVED FOR LOOSE FOAM FURNITURE STORAGE.
TO BE COMPLIANT TO STATE AND FEDERAL REGULATIONS INCLUDING BUT NOT LIMITED TO STANDARDS ESTABLISHED BY CPSC, IRC R302/R314, NFPA 701/256, ASTM e84, AND UL 725.
- STORAGE CRAWLSPACE
- ROLLING STORAGE CABINET
- CEDAR WD FLOOR GRATING W/ STAINLESS STEEL PAN BELOW.
- AREA RESERVED FOR DEPLOYABLE INSULATING PANELS STORAGE.

REFERENCE KEYNOTES

- DIVISION 05- METAL
05 52 00 METAL RAILING
- DIVISION 06- WOOD, PLASTICS, AND COMPOSITES
06 16 00.D6 PLYWOOD- EXTERIOR WALL SHEATHING
06 11 00.D1 2X4 STUDS @ 16" O.C.
06 16 00.D11 1/2" PLYWOOD
- DIVISION 09- FINISHES
09 93 23 INTERIOR STAIN
- DIVISION 11- EQUIPMENT
11 31 00 CLOTHS WASHER
11 31 00 CLOTHS DRYER



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KITCHEN PLAN & ELEVATION

A-212

GENERAL SHEET NOTES

SHEET NOTES

- 1. DINING TABLE

REFERENCE KEYNOTES

DIVISION 06 - WOOD, PLASTICS, AND COMPOSITES

- 06 15 13 WOOD DECKING
- 06 46 00.LO THRESHOLD

DIVISION 7 - THERMAL / MOISTURE

- 07 60 30 STAINLESS STEEL SHEET METAL

DIVISION 11 - EQUIPMENT

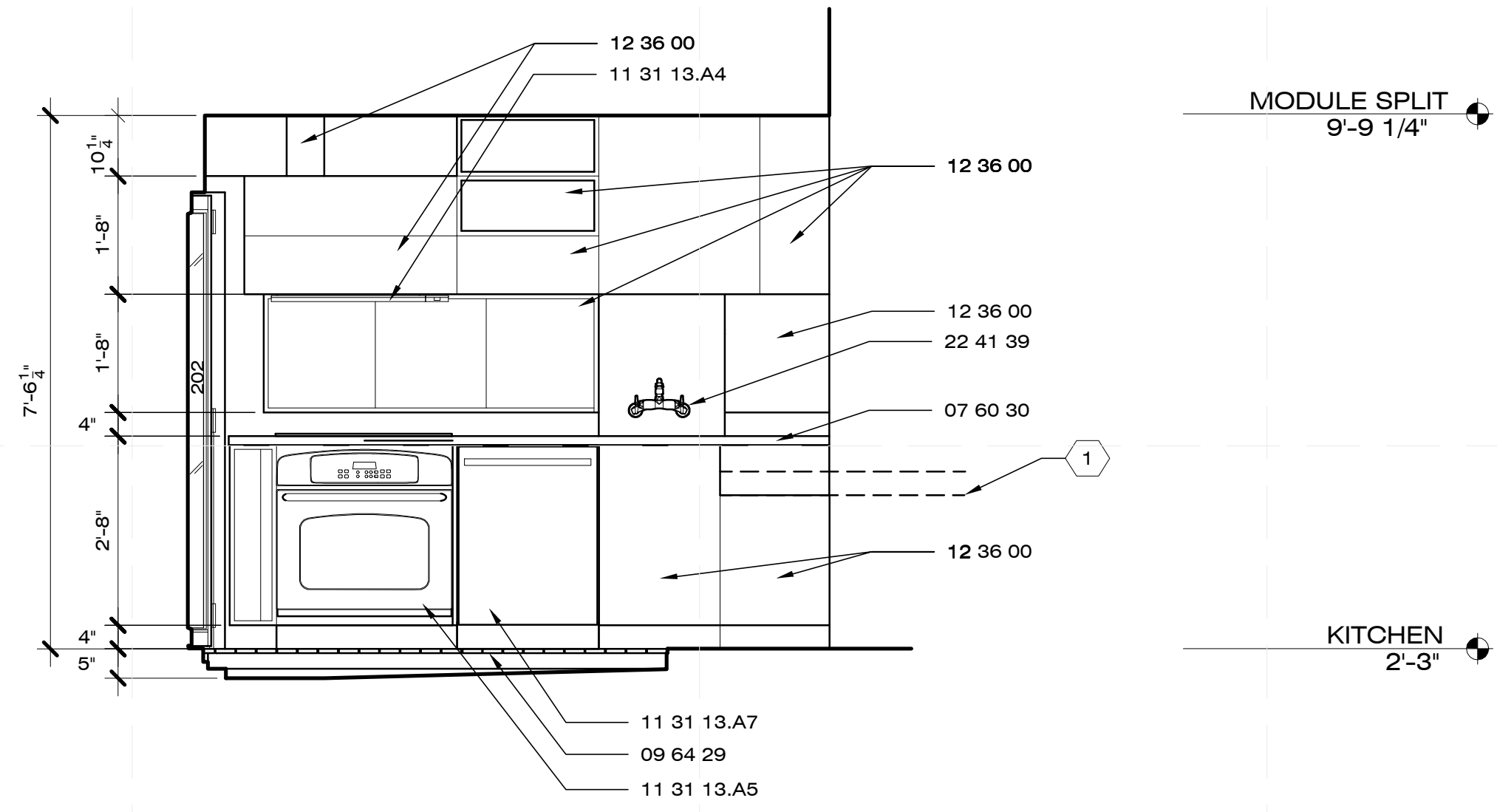
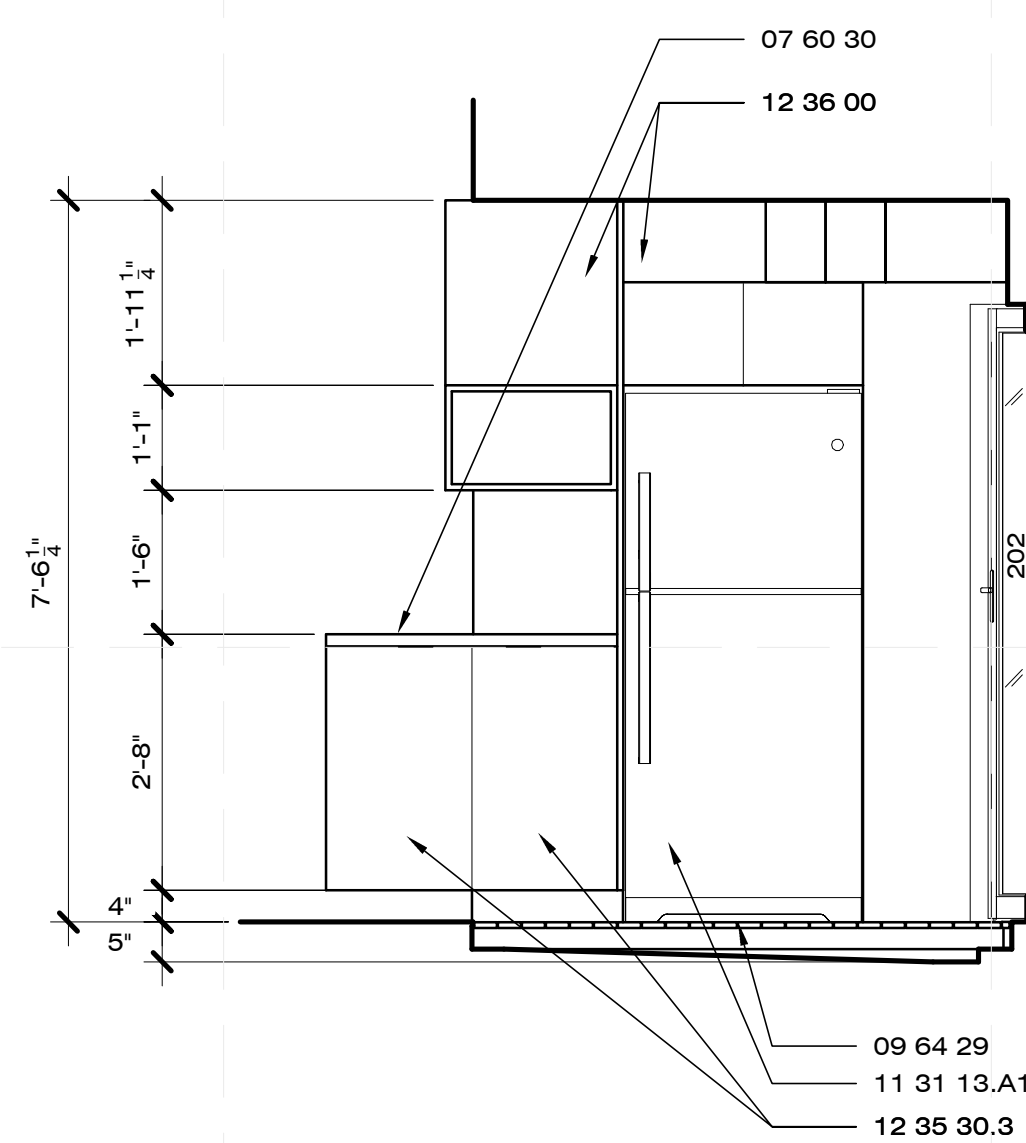
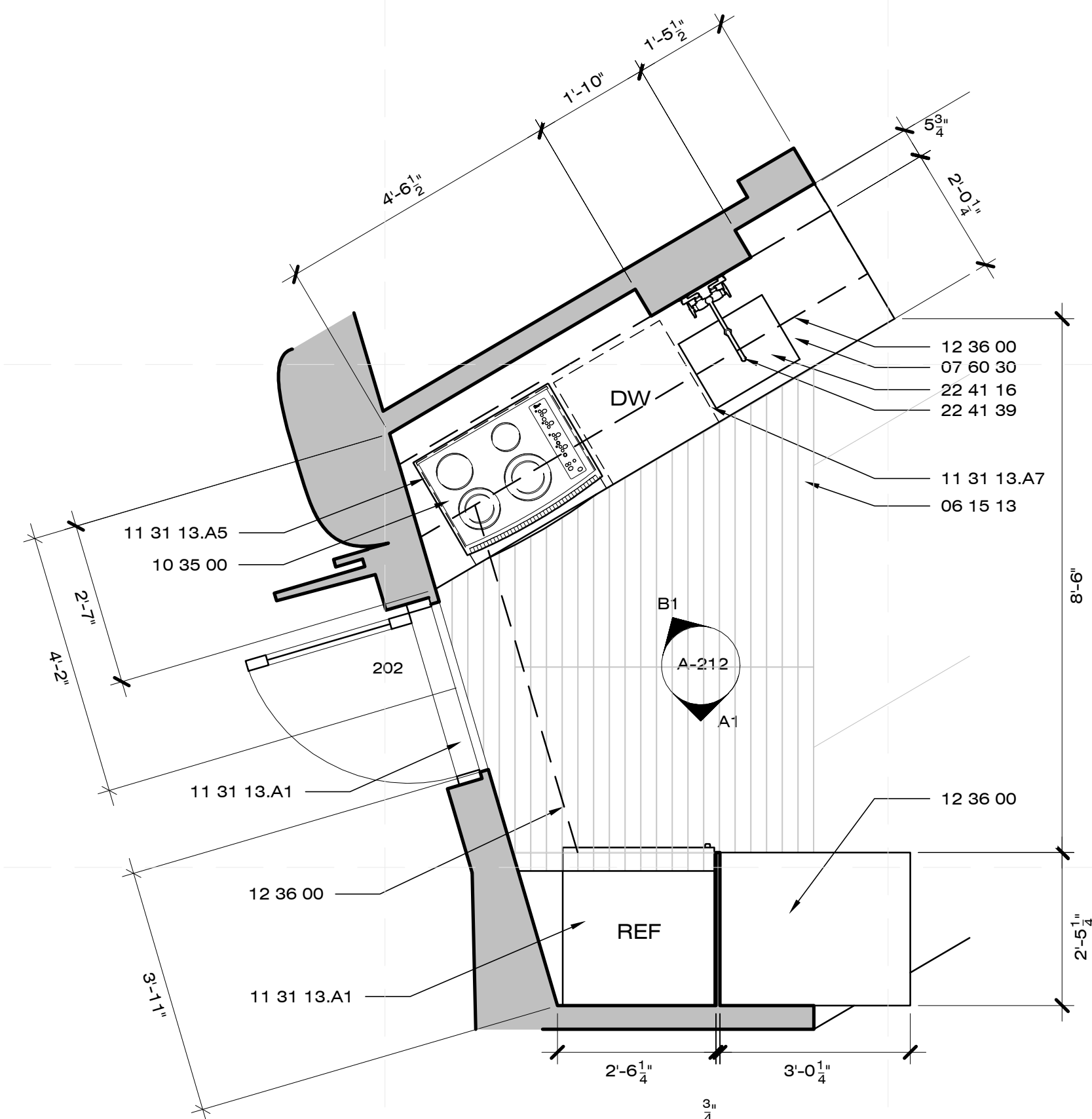
- 11 31 13.A1 REFRIGERATOR
- 11 31 13.A2 COOKTOP
- 11 31 13.A4 EXHAUST HOOD
- 11 31 13.A5 OVEN
- 11 31 13.A7 DISHWASHER

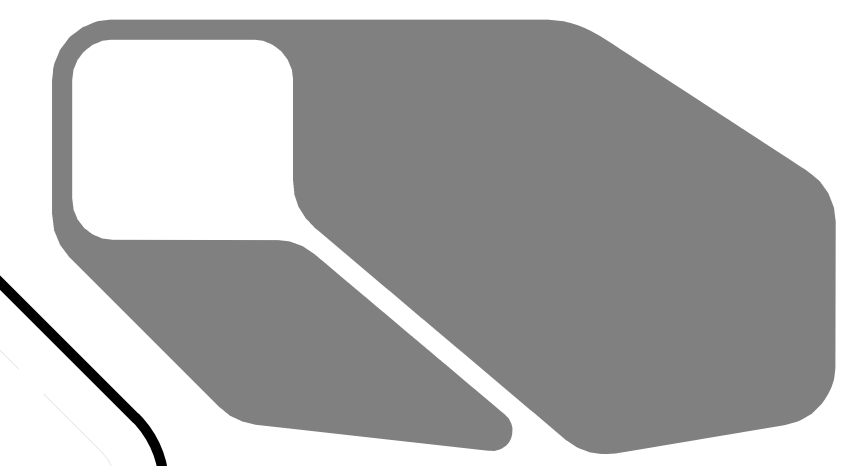
DIVISION 12 - FURNISHINGS

- 12 35 30.3 KITCHEN CASEWORK
- 12 36 00 KITCHEN CABINETRY

DIVISION 22 - PLUMBING

- 22 41 39 RESIDENTIAL FAUCETS
- 22 41 16 KITCHEN SINK





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BATHROOM PLAN & ELEVATION

A-213

GENERAL SHEET NOTES

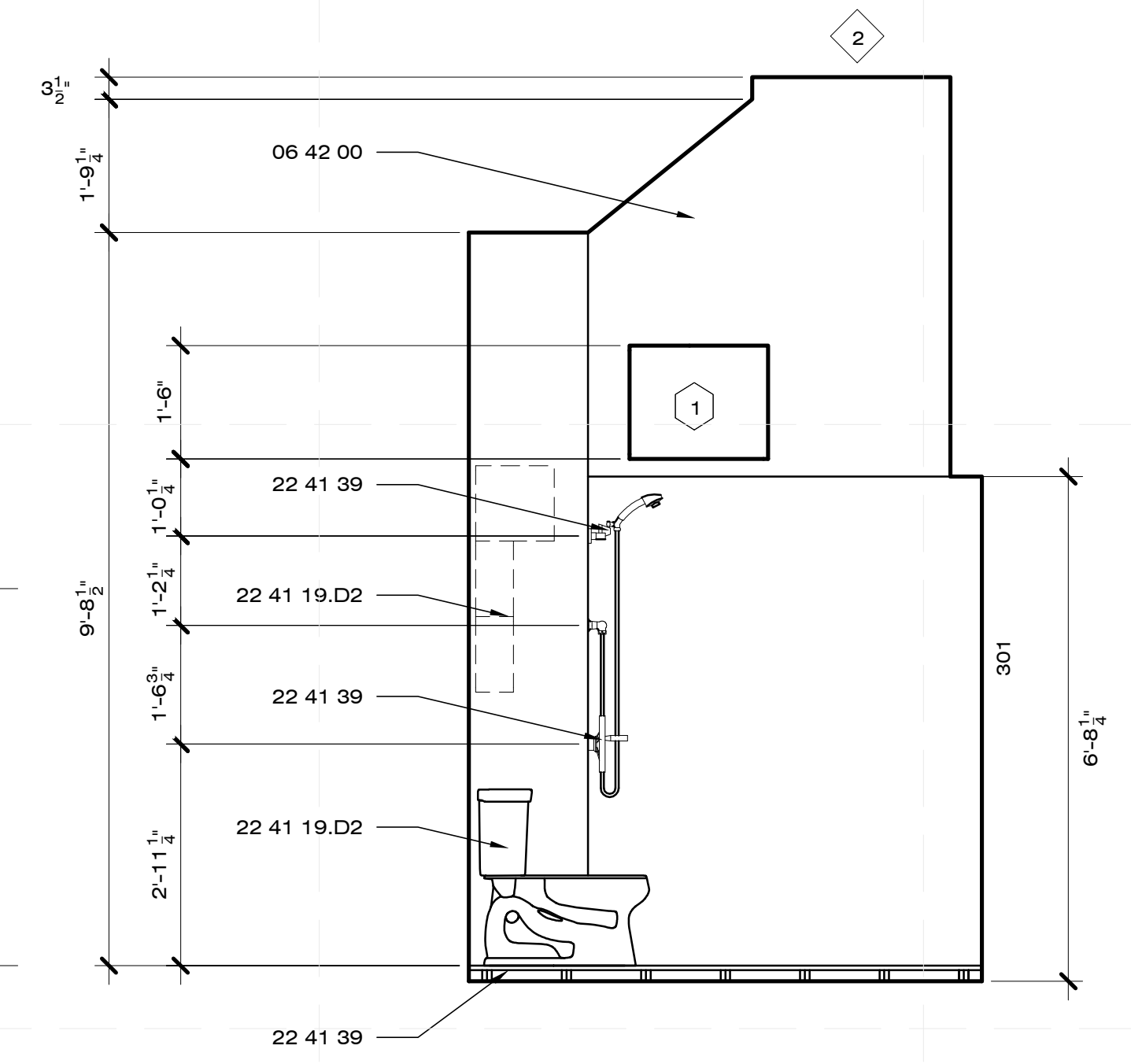
- REFER TO SHEET A-711 FOR CASEWORK SCHEDULE AND DETAILS

SHEET NOTES

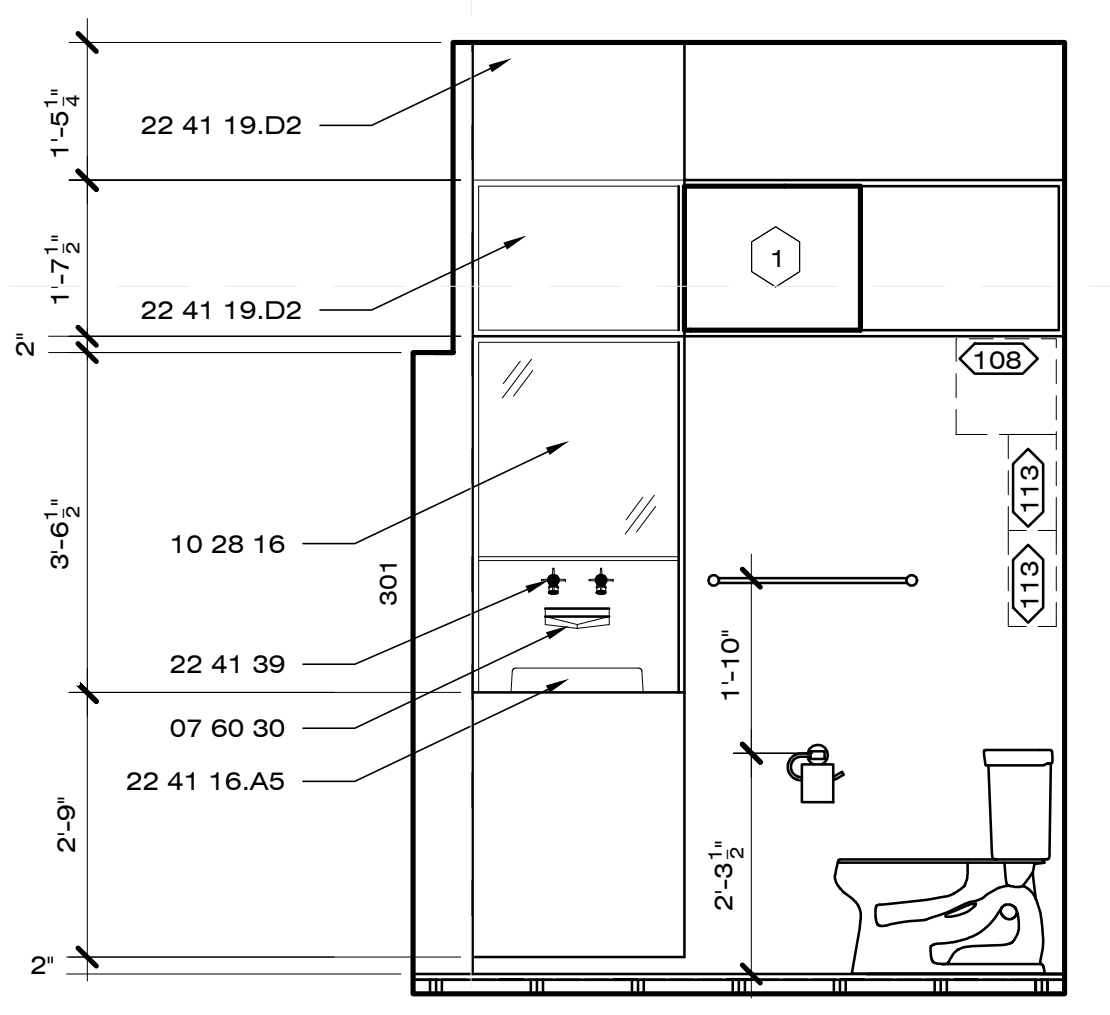
- SHELF BEAM CASEWORK W/ SHELF SPACE & MEP DUCTS & CONDUITS

REFERENCE KEYNOTES

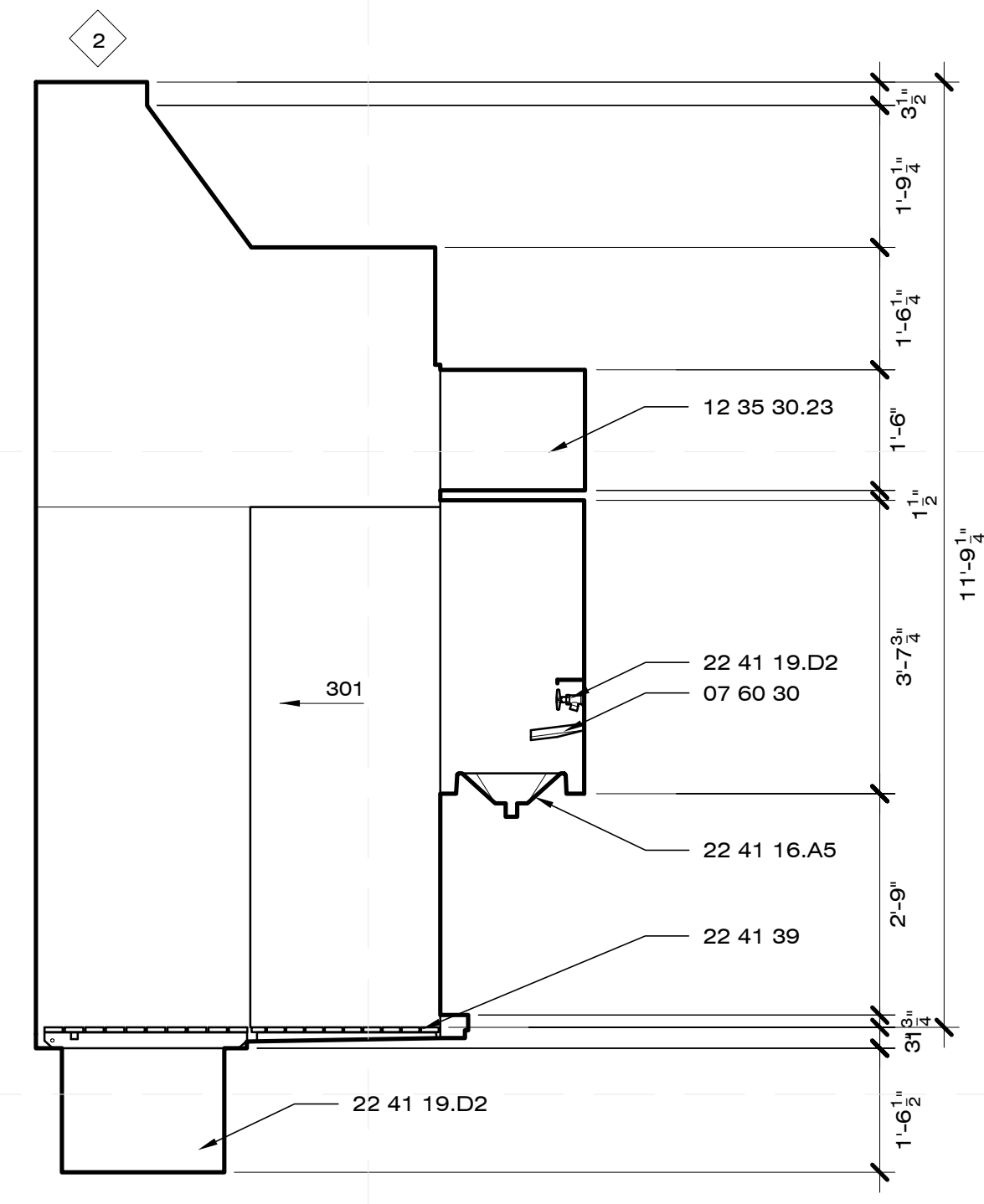
- DIVISION 06 - WOOD, PLASTICS, AND COMPOSITES**
06 15 13 WOOD DECKING
06 20 00 FINISHED CARPENTRY
- DIVISION 07 - THERMAL / MOISTURE**
07 60 30 STAINLESS STEEL SHEET METAL
- DIVISION 09 - FINISHES**
05 64 29 MARINE PLANK FLOORS
- DIVISION 10 - SPECIALTIES**
10 28 16 BATH ACCESSORIES
- DIVISION 12 - FURNISHINGS**
12 35 30.23 BATHROOM CASEWORK
- DIVISION 22 - PLUMBING**
22 41 13.A1 WATER CLOSET - ELONGATED BOWL TOILET
22 41 19.D2 BATHTUB - DROP IN INSTALL
22 41 39 UNDER COUNTER LAVATORY SINK
22 41 39 SINGLE-HANDLE LAVATORY FAUCET
22 41 39 SINGLE HANDLE TUB/SHOWER KIT
22 41 39 RESIDENTIAL FAUCETS
22 41 19.D2 BATHTUB



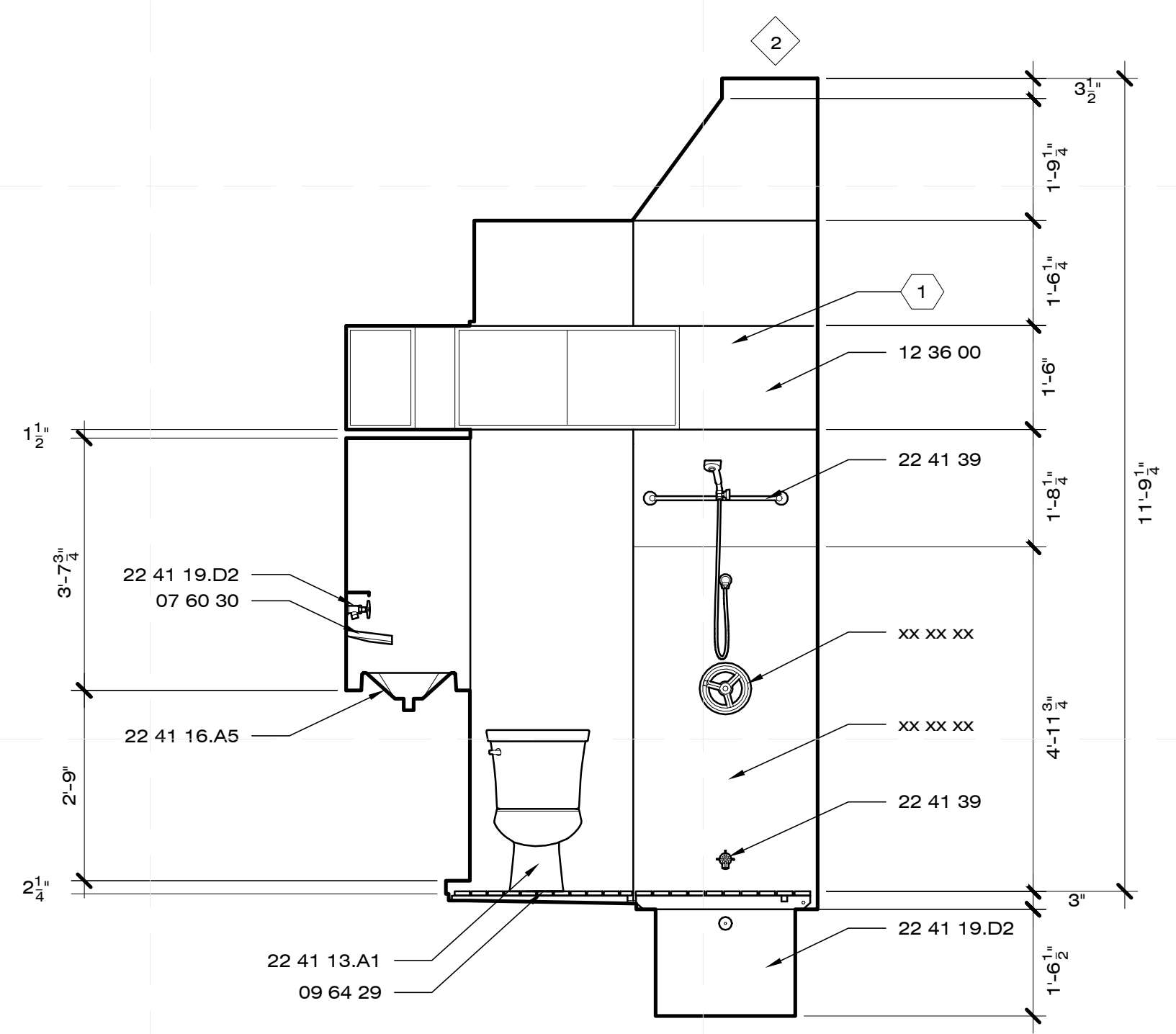
C1 N. BATHROOM ELEV.
1/2" = 1'-0" 0 1' 2' 4'



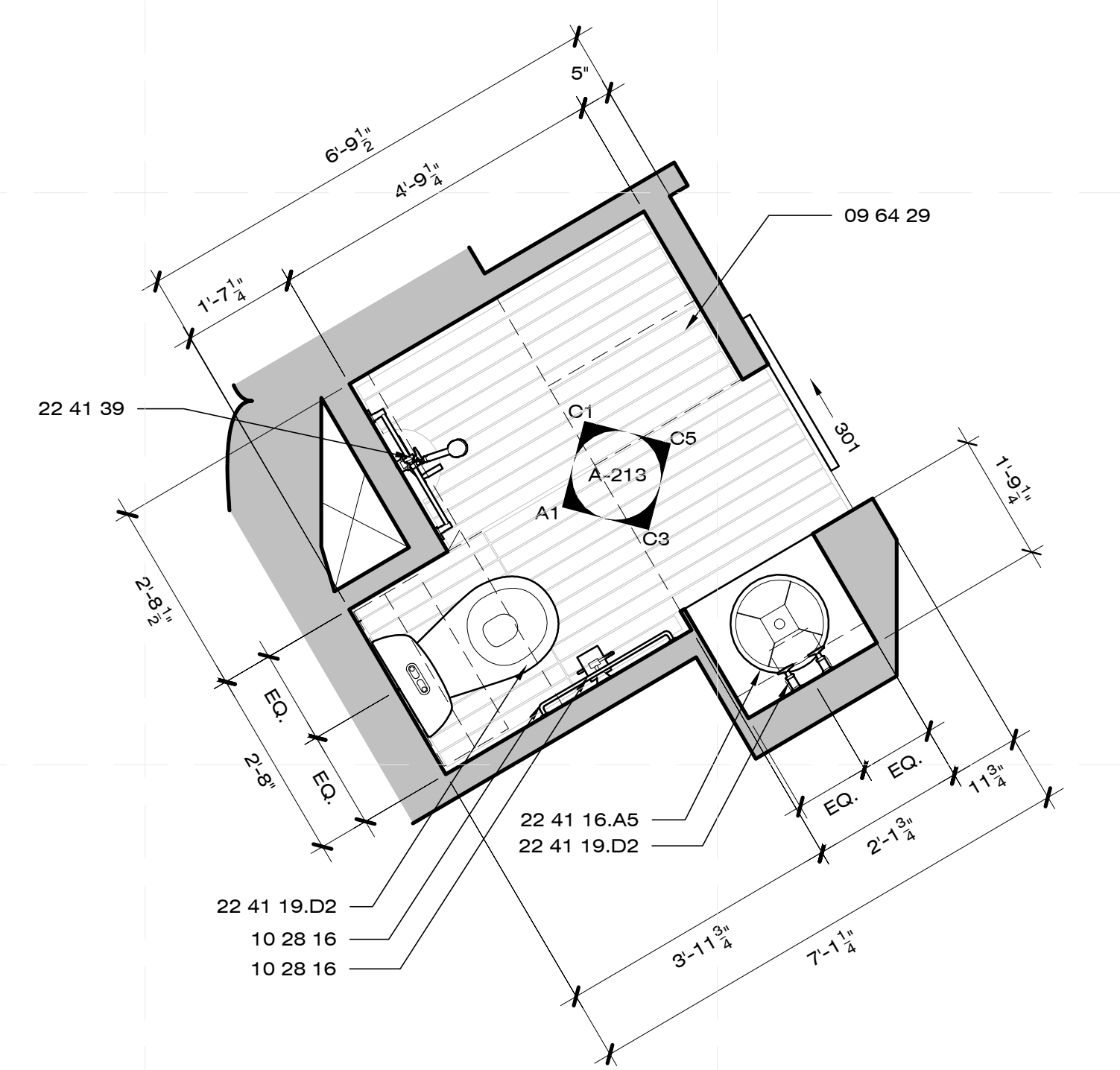
C3 S. BATHROOM ELEV.
1/2" = 1'-0" 0 1' 2' 4'



C5 E. BATHROOM ELEV.
1/2" = 1'-0" 0 1' 2' 4'



A1 W. BATHROOM ELEV.
1/2" = 1'-0" 0 1' 2' 4'



A3 BATHROOM - ENLARGED PLAN
1/2" = 1'-0" 0 1' 2' 4'

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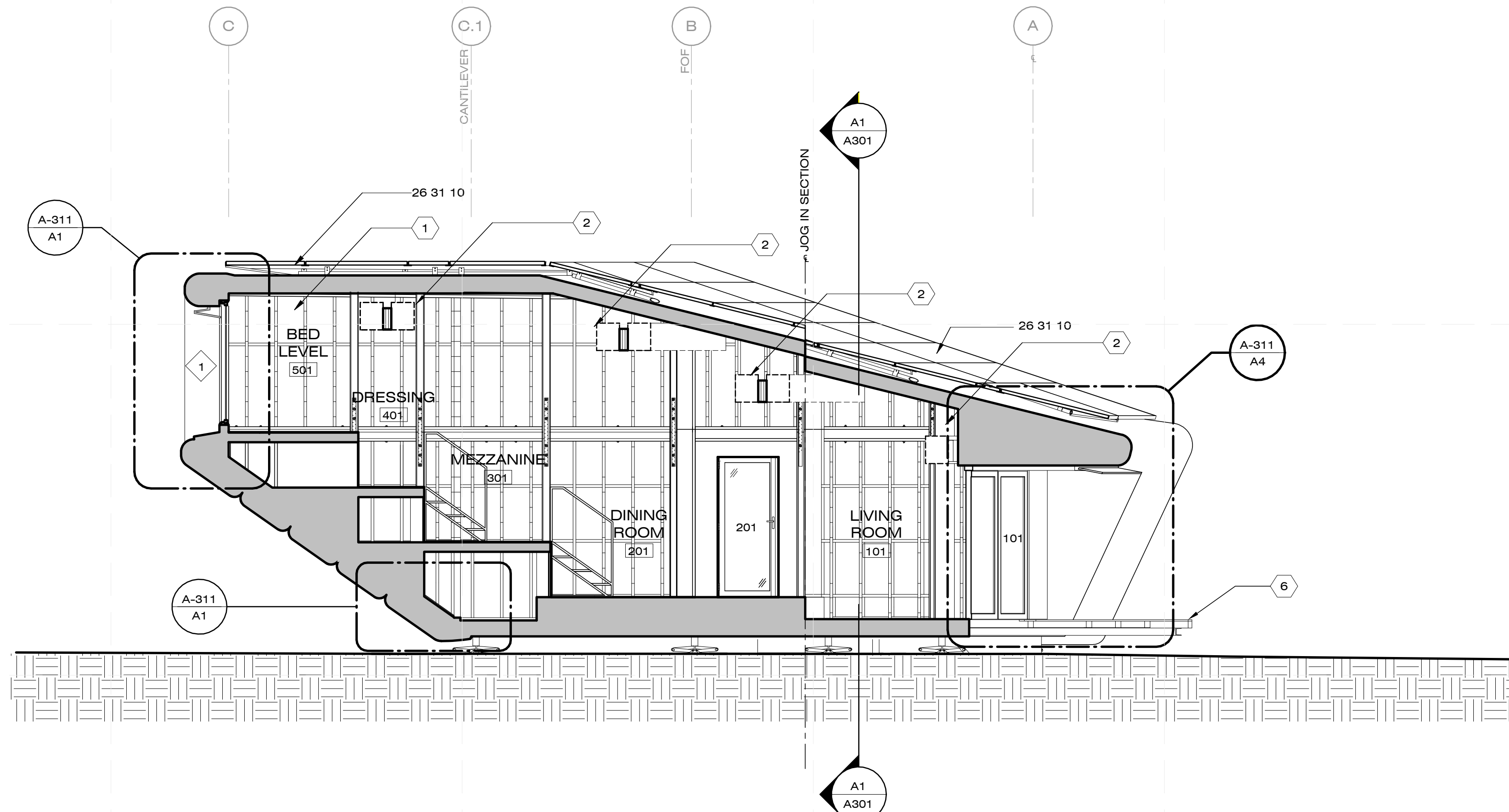
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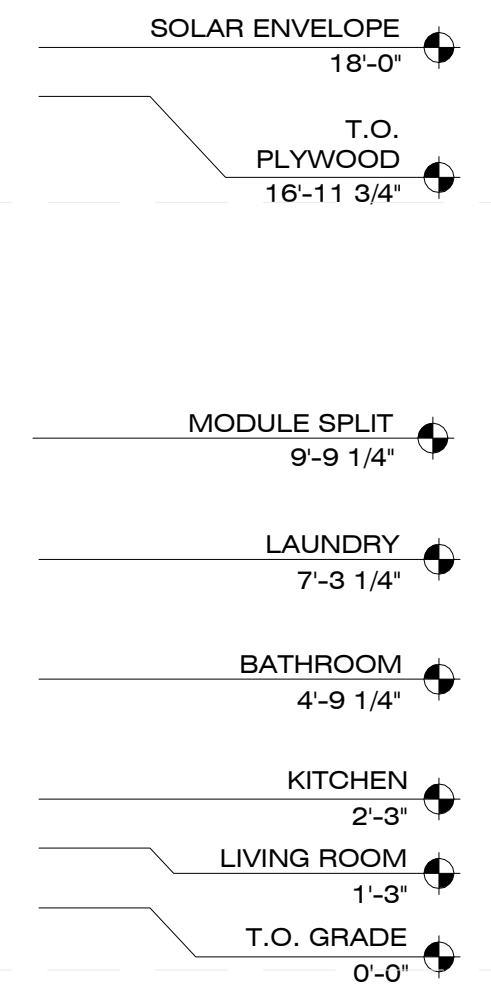
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BUILDING SECTIONS

A-301



C1 BLDG. SECTION FACING EAST
1/4" = 1'-0"



GENERAL SHEET NOTES

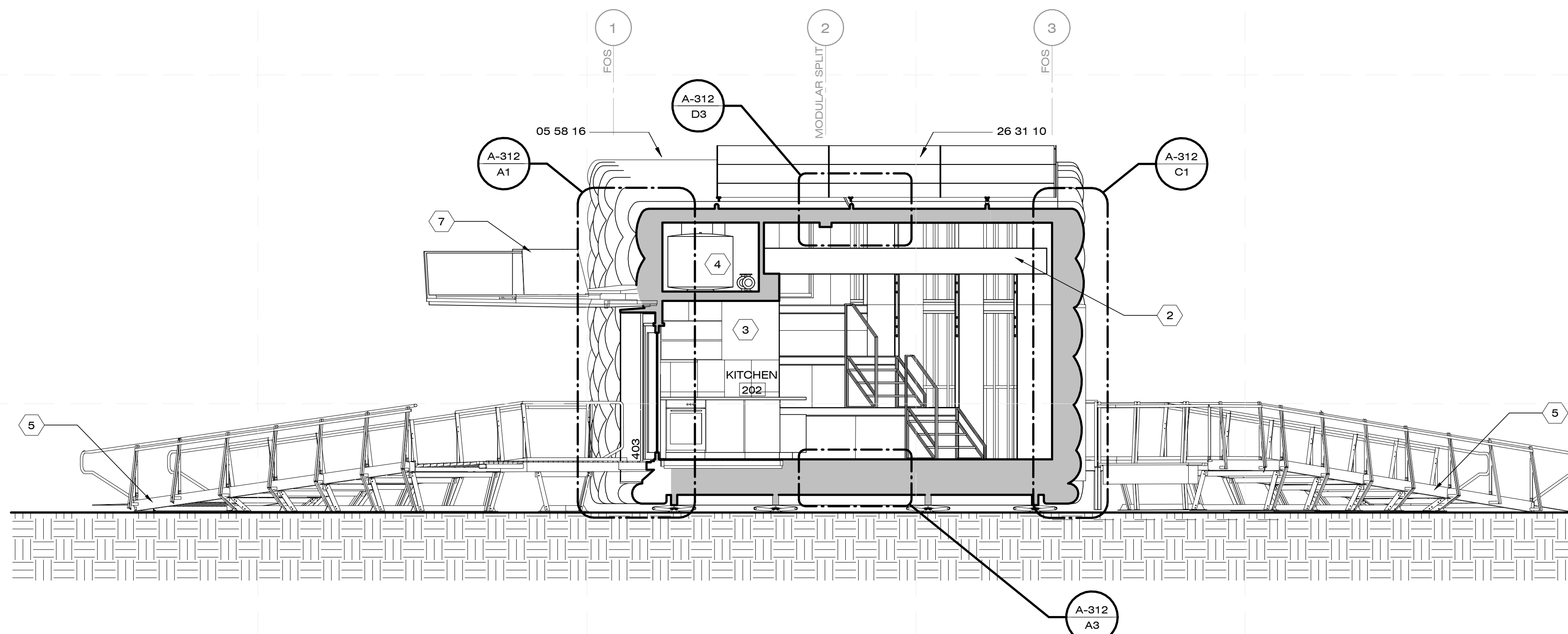
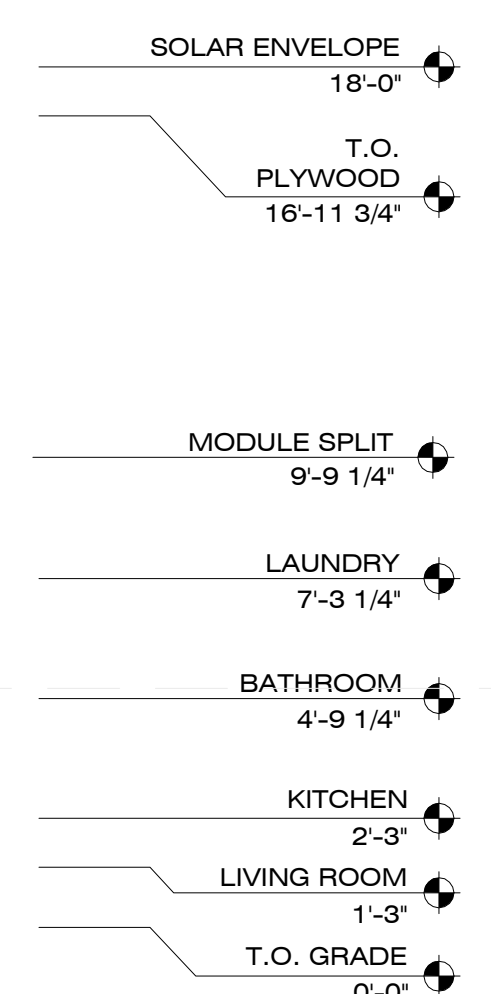
1. DRAWING OF EXTERIOR SKIN IS NOTIONAL. NOT ACTUAL.
2. ELEVATION DATUM REFERS TO F.O.F.

SHEET NOTES

1. DASHED LINE INDICATES A CONDITIONAL CABINET LAYOUT, REFER TO SHEET A-211 FOR CABINET LAYOUT AND A-711 FOR CABINET DETAIL. TYP.
2. OVERHEAD CASE WORK, REFER TO SHEET A-112 RCP FOR CABINET TAG, SEET A-711 FOR CABINET DETAIL.
3. REFER TO A-213 FOR INT KITCHEN ELEVATIONS
4. MECHANICAL SPACE ABOVE KITCHEN
5. RAMP - SEE SHEET A-731 FOR RAMP DETAILS
6. DECK - SEE SHEET A-741 FOR DECK DETAILS
7. AIR CONDENSER CANTILEVER UNIT

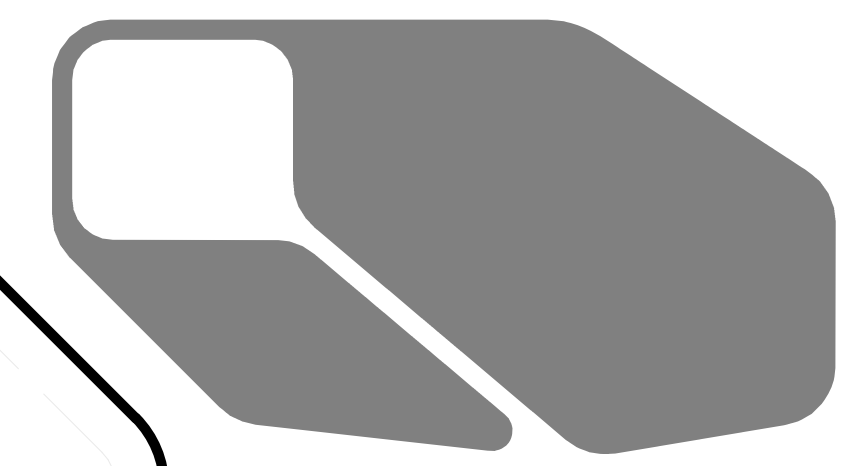
REFERENCE KEYNOTES

- DIVISION 05 - METALS**
05 73 00 STEEL DECK RAILINGS
05 53 00 STEEL GRATINGS
05 58 16 SHEET METAL
- DIVISION 06 - WOODS**
06 15 13 WOOD FLOOR DECKING
- DIVISION 26 - ELECTRICAL**
26 31 10 PV PANELS



A1 BLDG. SECTION FACING NORTH
1/4" = 1'-0"

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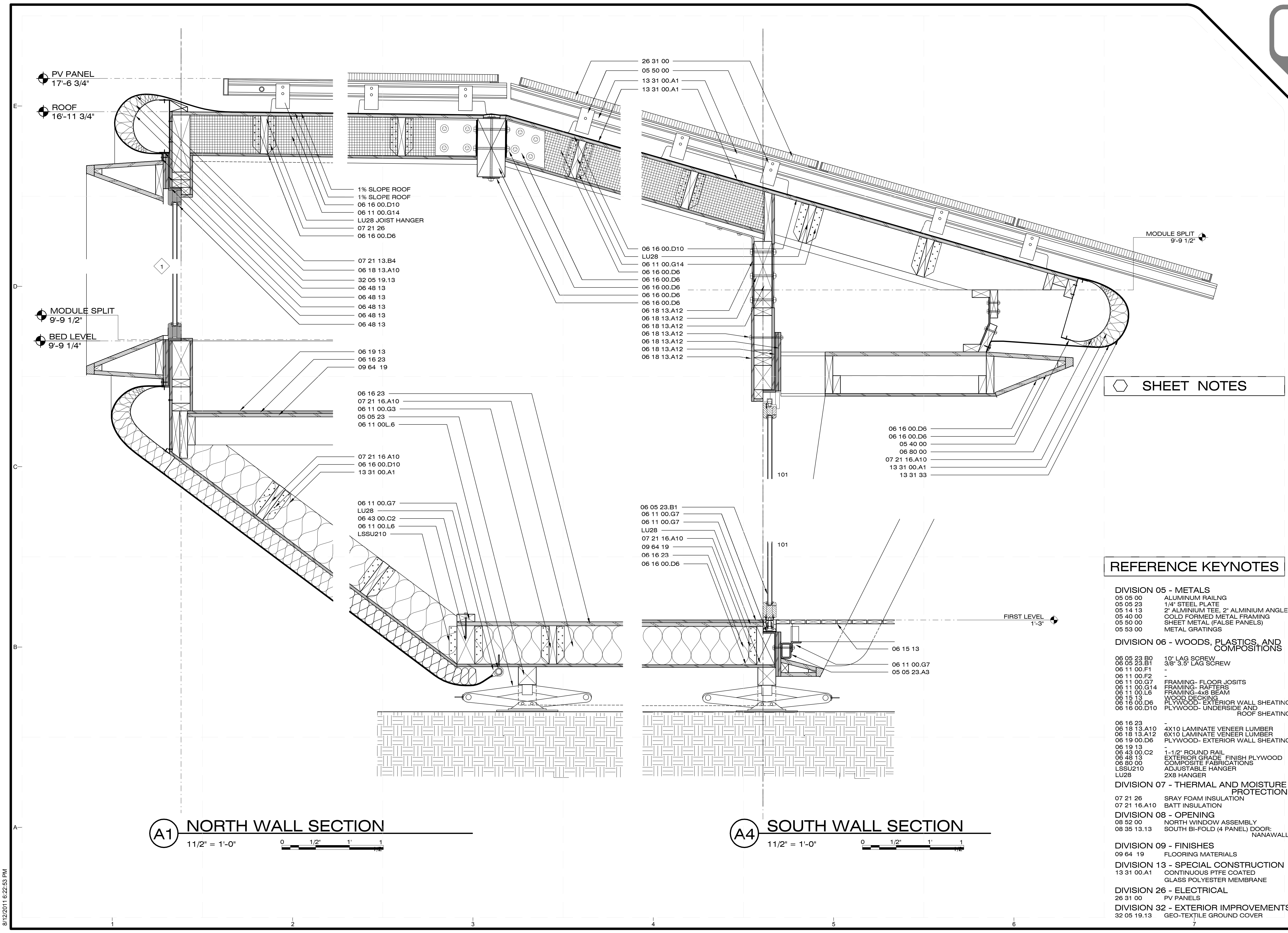
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WALL SECTIONS

A-311



SHEET NOTES

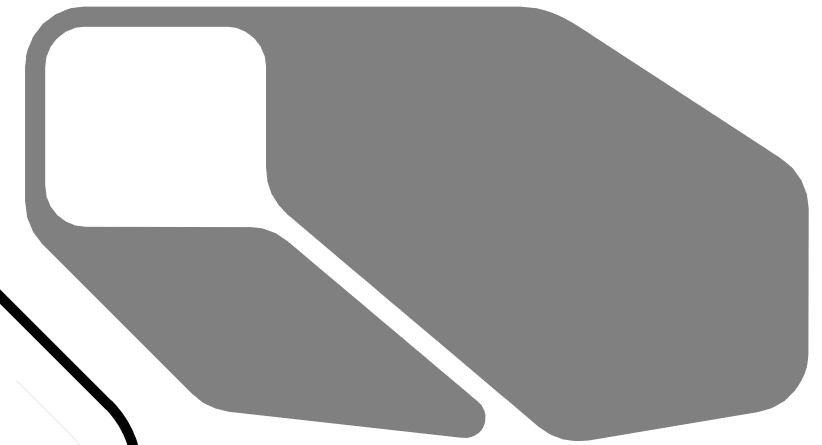
REFERENCE KEYNOTES

- DIVISION 05 - METALS**
 - 05 05 00 ALUMINUM RAILING
 - 05 05 23 1/4" STEEL PLATE
 - 05 14 13 2" ALUMINUM TEE, 2" ALUMINUM ANGLE
 - 05 40 00 COLD FORMED METAL FRAMING
 - 05 50 00 SHEET METAL (FALSE PANELS)
 - 05 53 00 METAL GRATINGS
- DIVISION 06 - WOODS, PLASTICS, AND COMPOSITIONS**
 - 06 05 23 B0 10" LAG SCREW
 - 06 05 23 B1 3/8" 3.5" LAG SCREW
 - 06 11 00.F1 -
 - 06 11 00.F2 -
 - 06 11 00.G7 FRAMING- FLOOR JOISTS
 - 06 11 00.G14 FRAMING- RAFTERS
 - 06 11 00.L6 FRAMING-4X8 BEAM
 - 06 15 13 WOOD DECKING
 - 06 16 00.D6 PLYWOOD- EXTERIOR WALL SHEATING
 - 06 16 00.D10 PLYWOOD- UNDERSIDE AND ROOF SHEATING
 - 06 16 23 -
 - 06 18 13.A10 4X10 LAMINATE VENEER LUMBER
 - 06 18 13.A12 6X10 LAMINATE VENEER LUMBER
 - 06 19 00.D6 PLYWOOD- EXTERIOR WALL SHEATING
 - 06 19 13 -
 - 06 43 00.C2 1-1/2" ROUND RAIL
 - 06 48 13 EXTERIOR GRADE FINISH PLYWOOD
 - 06 80 00 COMPOSITE FABRICATIONS
 - LSSU210 ADJUSTABLE HANGER
 - LU28 2X8 HANGER
- DIVISION 07 - THERMAL AND MOISTURE PROTECTION**
 - 07 21 26 SRAY FOAM INSULATION
 - 07 21 16.A10 BATT INSULATION
- DIVISION 08 - OPENING**
 - 08 52 00 NORTH WINDOW ASSEMBLY
 - 08 35 13.13 SOUTH BI-FOLD (4 PANEL) DOOR: NANAWALL
- DIVISION 09 - FINISHES**
 - 09 64 19 FLOORING MATERIALS
- DIVISION 13 - SPECIAL CONSTRUCTION**
 - 13 31 00.A1 CONTINUOUS PTFE COATED GLASS POLYESTER MEMBRANE
- DIVISION 26 - ELECTRICAL**
 - 26 31 00 PV PANELS
- DIVISION 32 - EXTERIOR IMPROVEMENTS**
 - 32 05 19.13 GEO-TEXTILE GROUND COVER

A1 NORTH WALL SECTION
1 1/2" = 1'-0"

A4 SOUTH WALL SECTION
1 1/2" = 1'-0"

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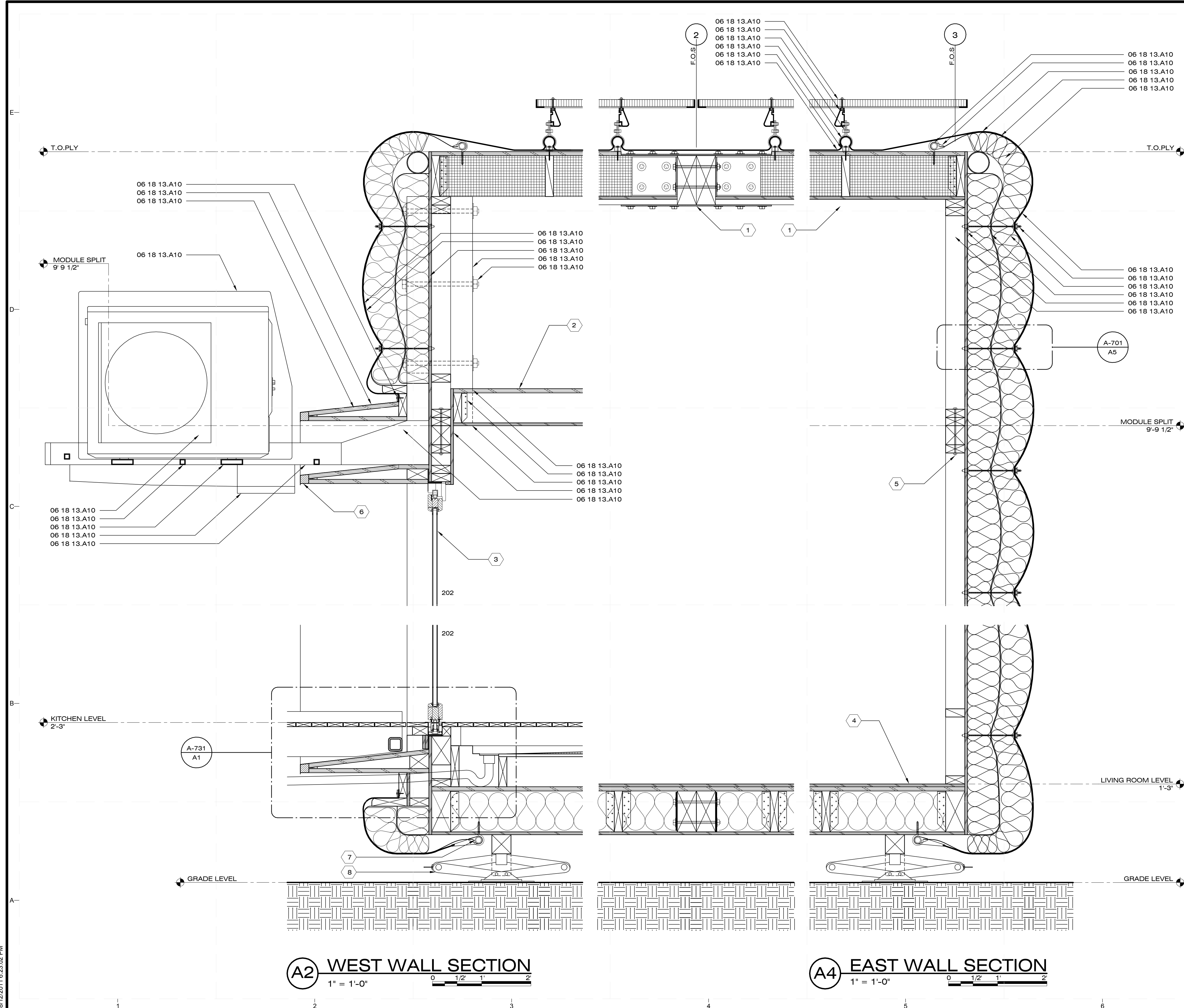
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WALL SECTIONS

A-312



GENERAL SHEET NOTES

1. SECTIONS INDICATE COMPONENTS OF A COMPLETE TRANSVERSE SECTION
2. ANNOTATION DENOTES INDIVIDUAL ELEMENTS ONLY ONCE YET INDICATES TYP. REPEATED CONDITIONS IN OTHER AREAS OF THE SECTION U.O.N.

SHEET NOTES

1. MODULE SPLITS OCCUR IN FOUR PLACES REFER TO EACH SPLIT FOR SPECIFIC DETAILS
2. MECHANICAL CRAWL SPACE ABOVE KITCHEN
3. WOOD PANEL SINGLE LIGHT DOOR TYPICAL AT WEST AND EAST DOORS SHEET A-601 FOR DOOR SCHEDULE
4. FLOOR LEVEL OF EAST WALL IS CUT AT LOWER LIVING ROOM LEVEL
5. 1/2" GRADE 8 MOUNTING BOLT
6. 3/4" PTD PLYWOOD DOOR TRIM ASSEMBLY W/ CLAD SHEET METAL DRIP
7. 1/2" STEEL HANG BRACKET WITH STEEL PIPE
8. FOUNDATION

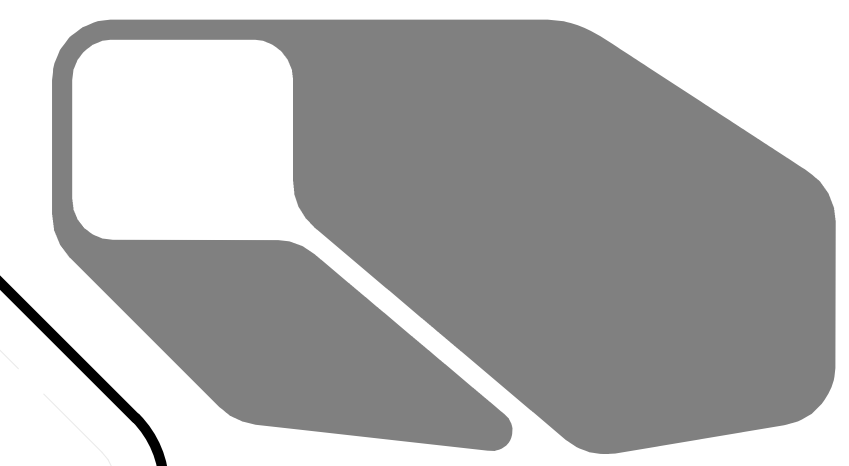
REFERENCE KEYNOTES

- DIVISION 05 - METALS**
 05 LU 28 2X8 HANGER
 05 05 00 ALUMINUM RAILING
 05 14 13 2" ALUMINUM TEE AND ANGLE
 05 16 69.K6 2" STEEL PIPE
 05 50 00 2" STEEL HALF BATTEN PIPE CLAMP
 05 12 73.L263 TUBE SHAPE
- DIVISION 06 - WOODS, PLASTICS, AND COMPOSITE**
 06 11 00.D05 2X4 FRAMING - SOLID WOOD WALLS
 06 11 00.F12 2X6 FRAMING - FLOOR JOIST
 06 11 00.G13 2X8 RAFTERS @ 12" O.C.
 06 16 00 1/2" PLYWOOD - OSB
 06 16 00.D6 1/2" PLYWOOD
 06 16 00.D10 5/8" PLYWOOD - UNDERSIDE / ROOF
- DIVISION 07 - THERMAL / MOISTURE**
 07 21 26 SPRAY FOAM INSULATION
 07 21 16.A10 BATT INSULATION
- DIVISION 08 - OPENINGS**
 08 14 00 WEST DOOR ENTRY
- DIVISION 13 - SPECIAL CONSTRUCTION**
 13 31 33 VINYL COATED POLYESTER MEMBRANE
- DIVISION 26 - ELECTRICAL**
 26 31 00 PV PANELS

A2 WEST WALL SECTION
1" = 1'-0"

A4 EAST WALL SECTION
1" = 1'-0"

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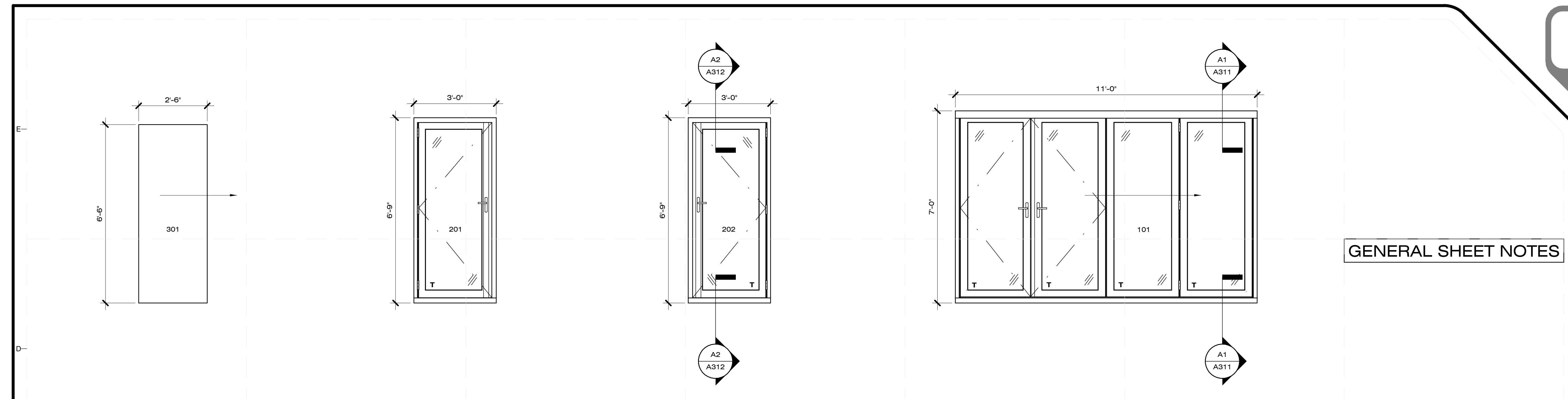
WINDOW/ DOOR SCHEDULE

A-601

GENERAL SHEET NOTES

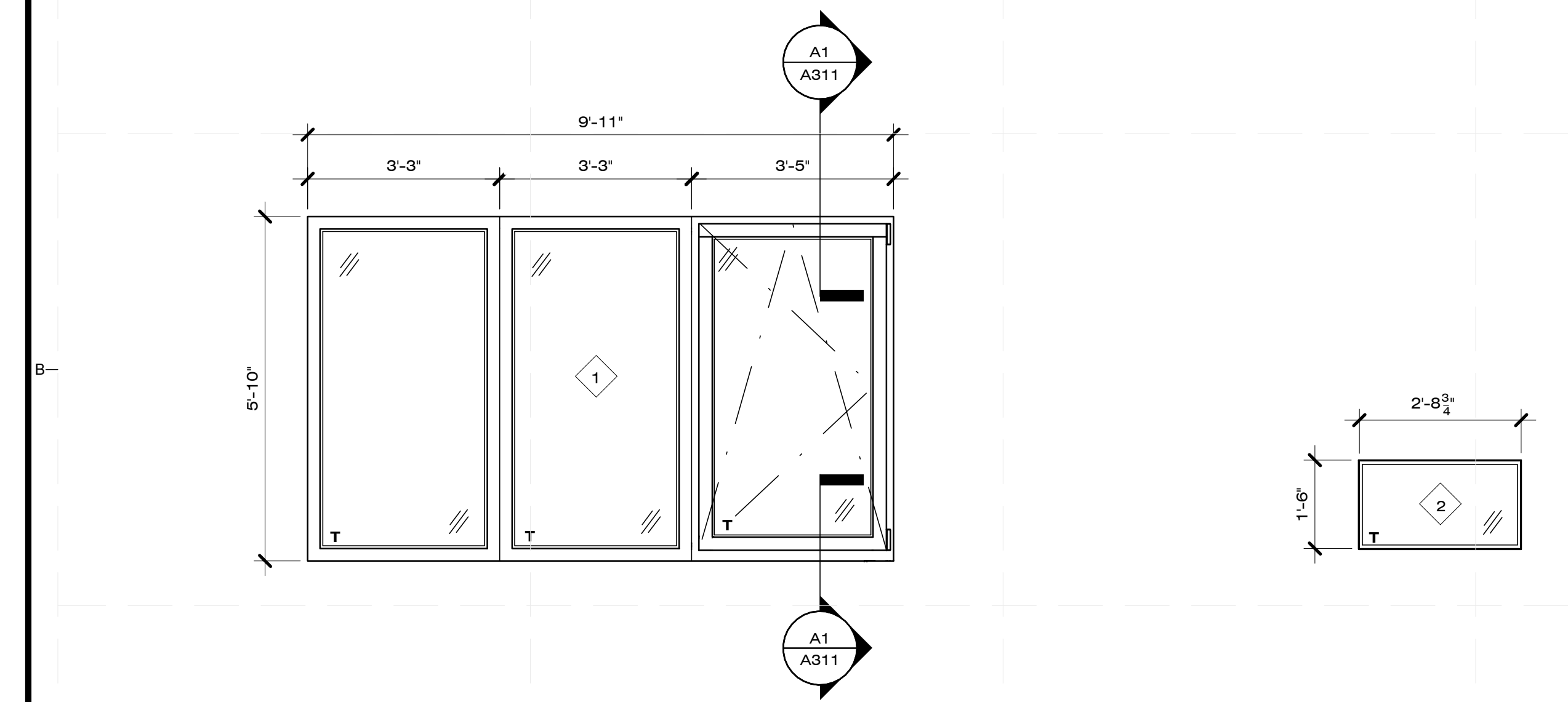
SHEET NOTES

REFERENCE KEYNOTES



DOOR SCHEDULE

MARK	DR TYPE	DR SIZE	ROUGH OPENING	MANUFACTURER	MODEL	FRAME TYPE	FIRE RATING	DETAILS		DESCRIPTION	FINISH		NOTES	
								HEAD	THRESHOLD		DOOR	FRAME		HARDWARE
101	1	84" x 132"	83 1/2" x 132 1/2"	NANAWALL SYSTEMS, INC.	WD 66 CONFIG: 01L3R	WD	N/A	A1 A311	A1 A311	BOTTOM-MOUNT SINGLE TRACK OUTWARD SWING	GLAZED CLEAR	STAINED	MULTI POINT LOCKING WITH LATCH, DEADBOLT AND LEVER HANDLES ON BOTH SIDES ON PRIMARY SWING PANEL ONLY	TEMPERED ARGON FILLED, LOW E GLASS
201	2	36" x 93"	36 1/2" x 93 1/2"	NANAWALL SYSTEMS, INC.	WD 66 CONFIG: 11R	WD	N/A	A2 A312	A2 A312	BOTTOM-MOUNT INWARD SWING	GLAZED CLEAR	STAINED	MULTI POINT LOCKING WITH LATCH, DEADBOLT AND LEVER HANDLES ON BOTH SIDES	TEMPERED ARGON FILLED, LOW E GLASS
202	3	36" x 93"	36 1/2" x 93 1/2"	NANAWALL SYSTEMS, INC.	WD 66 CONFIG: 01R	WD	N/A	A2 A312	A2 A312	BOTTOM-MOUNT OUTWARD SWING	GLAZED CLEAR	STAINED	MULTI POINT LOCKING WITH LATCH, DEADBOLT AND LEVER HANDLES ON BOTH SIDES	TEMPERED ARGON FILLED, LOW E GLASS
301	4	30" x 78"	TO MATCH ROUGH OPENING	CUSTOM	N/A	WOOD	N/A			1 1/2" LAMINATED PLY. SLIDING	PAINT	PAINT	I-BEAM ROLLER TRACK, TWO WHEEL HANGER	



WINDOW SCHEDULE

MARK	ROUGH OPENING		TYPE	MANUFACTURER	MODEL	MATERIAL	FINISH	DETAILS		GLAZING		HEAD HEIGHT	HARDWARE	COMMENTS
	WIDTH	HEIGHT						HEAD	SILL	THICKNESS	TYPE			
1	70 1/2"	119 1/2"	FIXED CASEMENT W/ 2-WAY OPERABLE PANEL	NANAWALL SYSTEMS, INC.	WD 68TT CONFIG: 1F 1F 1R	WOOD	STAINED	A1 A311	A1 A311	DUAL LAYER	TEMPERED LOW-E ARGON GAS	6'-0"	WINDOW VENT LOCK. 4" MAX OPENING	WINDOW SIZE: 70" x 119"
2	18 5/8"	33 1/2"	FIXED CASEMENT SKYLIGHT	OLD CASTLE BUILDING ENVELOPE	SUN GLASS	METAL	METAL			DUAL LAYER	TEMPERED LOW-E ARGON GAS	N/A		WINDOW SIZE: 18 1/8" x 33"



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COMPACT HYPER-INSULATED PROTOTYPE

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CD SET REVISION 05/02/2011

DATE: 08.11.2011

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SCHEDULES

A-611

LIGHTING SCHEDULE

ROOM NUMBER	ROOM NAME	LIGHT SOURCE	ICON	MANUFACTURER	MODEL	TYPE	DESCRIPTION
101	LIVING ROOM	LED		SYLVANIA	ULTRA PAR38 DIMMABLE	PAR38	LED FLOOD, DIMMABLE
		LED		PHILIPS	227249	R20	LED FLOOD, DIMMABLE
		LED		PHILIPS	3GU10-E	MR16-GU10	TASK LIGHT
		LED		ELITE	SL2-LED	LED COVE	AMBIENT STRIP LIGHT
		LED		FINELITE	UCE-21'-S	LED STRIP	UNDERCABINET DESK LIGHT
201	DINING ROOM	LED		SYLVANIA	ULTRA PAR38 DIMMABLE	PAR38	LED FLOOD, DIMMABLE
		LED		PHILIPS	3GU10-E	MR16-GU10	TASK LIGHT
		LED		ELITE	SL2-LED	LED COVE	AMBIENT STRIP LIGHT
202	KITCHEN	LED		FINELITE	UCE-21'-S	LED STRIP	UNDERCABINET DESK LIGHT
		LED		LIGHTING SCIENCE GROUP	CRD-WW-A-MTL-W48-DFF-NTL	LED STRIP	ABOVE CABINET WASH LIGHT
		FLUORESCENT		PROGRESS LIGHTING		T8 F. TUBE	VANITY LIGHT
301	BATHROOM	LED		LIGHTING SCIENCE GROUP	CRD-WW-A-MTL-W48-DFF-NTL	LED STRIP	ABOVE CABINET WASH LIGHT
		LED		ELITE	SL2-LED	LED COVE	AMBIENT STRIP LIGHT
		LED		PHILIPS	227249	R20	LED FLOOD, DIMMABLE
302	MEZZ.	LED		ELITE	SL2-LED	LED COVE	AMBIENT STRIP LIGHT
		LED		SYLVANIA	ULTRA PAR38 DIMMABLE	PAR38	LED FLOOD, DIMMABLE
401	DRESSING	LED		PHILIPS	3GU10-E	MR16-GU10	TASK LIGHT
		LED		ELITE	SL2-LED	LED COVE	AMBIENT STRIP LIGHT
		LED		PHILIPS	3GU10-E	MR16-GU10	TASK LIGHT
501	SLEEPING	LED		ELITE	SL2-LED	LED COVE	AMBIENT STRIP LIGHT
		LED		PHILIPS	227249	R20	LED FLOOD, DIMMABLE

GENERAL SHEET NOTES

SHEET NOTES

REFERENCE KEYNOTES

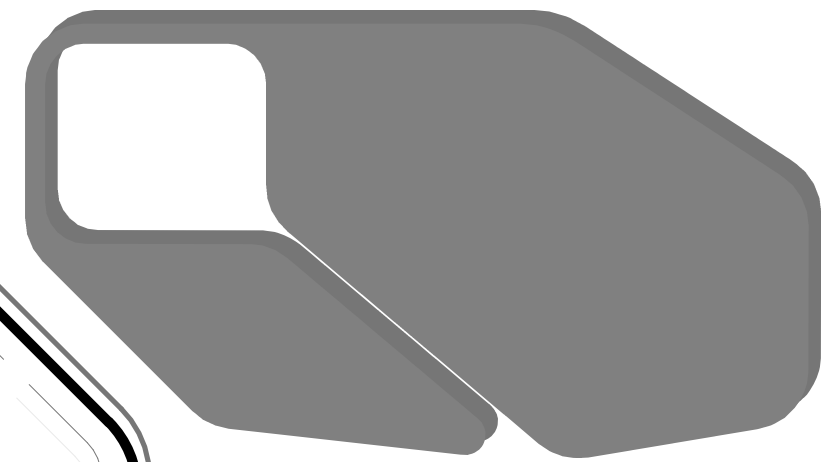
DIVISION 09 - FINISHES
06 15 13. A2 INTERIOR WOOD DECKING:
KITCHEN, BATHROOM, LAUNDRY ROOM FLOOR
06 16 00. D11 3/4" PLYWOOD: FLOORING
06 61 16 CORIAN: COUNTER, BACKSPLASH
06 64 00 POLY PLASTIC PEGBOARD: BACKSPLASH
09 93 23 13 OLD MASTERS WHITE PICKLING: STAIN
09 93 23 53 DEFT POLYURETHANE, MATTE FINISH

APPLIANCE SCHEDULE

APPLIANCE	ROOM NUMBER	ROOM NAME	MANUFACTURER	MODEL	FINISH	DESCRIPTION
REFRIGERATOR/ FREEZER	202	KITCHEN	GE	GTH18ISXSS	STAINLESS	18 CU FT. TOP FREEZER REFRIGERATOR
RANGE HOOD	202	KITCHEN	GE	JV930SCBR	STAINLESS	30" SLIDE OUT VENT - HOOD
COOKTOP	202	KITCHEN	GE	PP912SMSS	STAINLESS	30" BUILT-IN ELECTRIC COOKTOP
CONVECTION OVEN	202	KITCHEN	GE	JTP70DPWW	WHITE	29 3/4" WIDE
DISHWASHER	202	KITCHEN	BOSCH	SHV4313UC	STAINLESS	24" WIDE
CLOTHES WASHER	402	LAUNDRY	LG	WM2140CW	WHITE	STACKING
CLOTHES DRYER	402	LAUNDRY	LG	DLE2140W	WHITE	STACKING

FINISH SCHEDULE

ROOM NUMBER	ROOM NAME	FLOOR	FLOOR FINISH	WALLS				CEILING FINISH	COUNTER	BACKSPLASH
				NORTH	SOUTH	EAST	WEST			
101	LIVING ROOM	06 20 00	09 61 00	N/A	09 93 23.13	09 93 23.13	natura	09 93 23.13	N/A	N/A
201	DINING ROOM	06 20 00	09 61 00	N/A	N/A	09 93 23.13	natura	09 93 23.13	N/A	N/A
202	KITCHEN	06 15 13	09 93 00	natura	natura	N/A	09 93 23.13	natura	N/A	N/A
301	BATHROOM	06 15 13	09 93 00	N/A	09 93 23.13	09 93 23.13	09 93 23.13	09 93 23.13	N/A	N/A
302	GROOMING	06 20 00	09 61 00	N/A	N/A	09 93 23.13	natura	09 93 23.13	N/A	N/A
401	DRESSING	06 20 00	09 61 00	N/A	N/A	09 93 23.13	natura	09 93 23.13	N/A	N/A
402	LAUNDRY	06 15 13	09 93 00	09 93 23.13	09 93 23.13	09 93 23.13	natura	09 93 23.13	N/A	N/A
501	SLEEPING	N/A	N/A	09 93 23.13	N/A	09 93 23.13	natura	09 93 23.13	N/A	N/A



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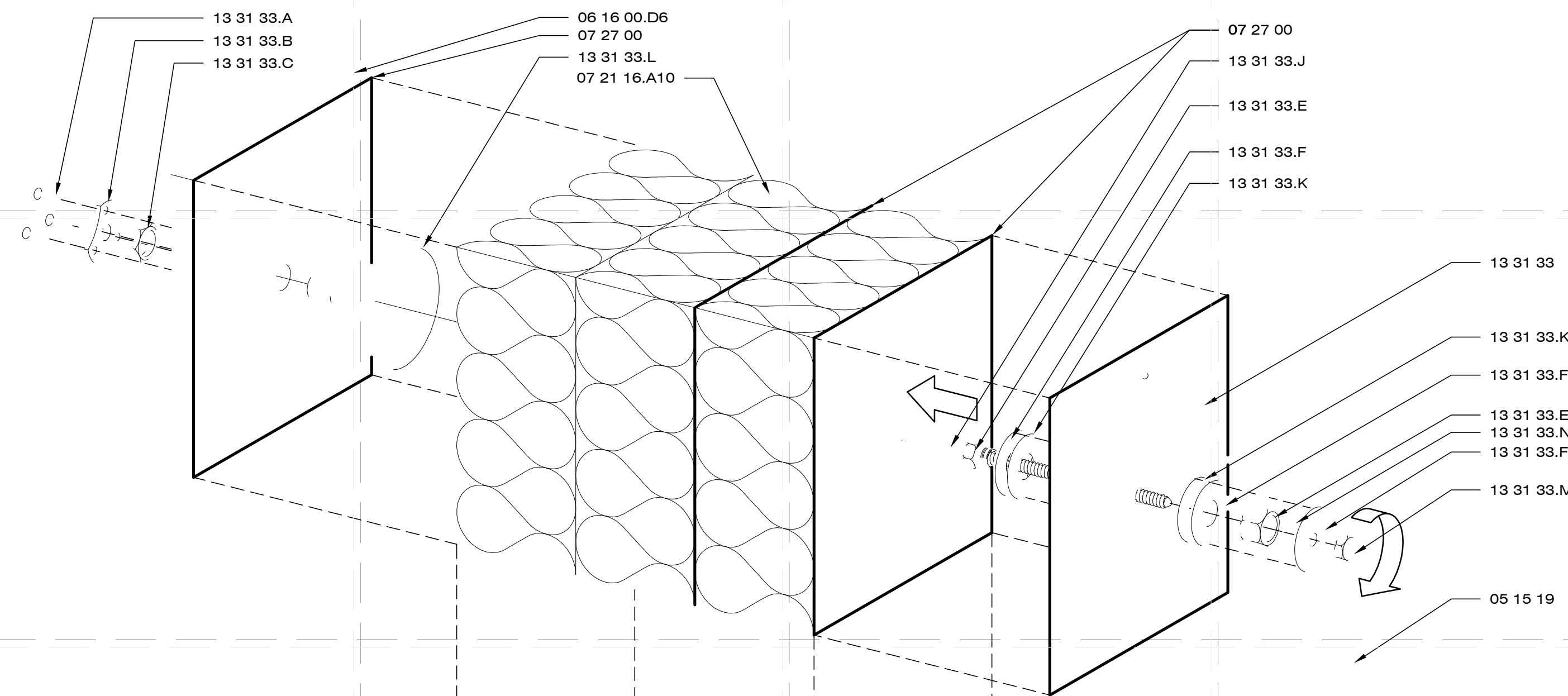
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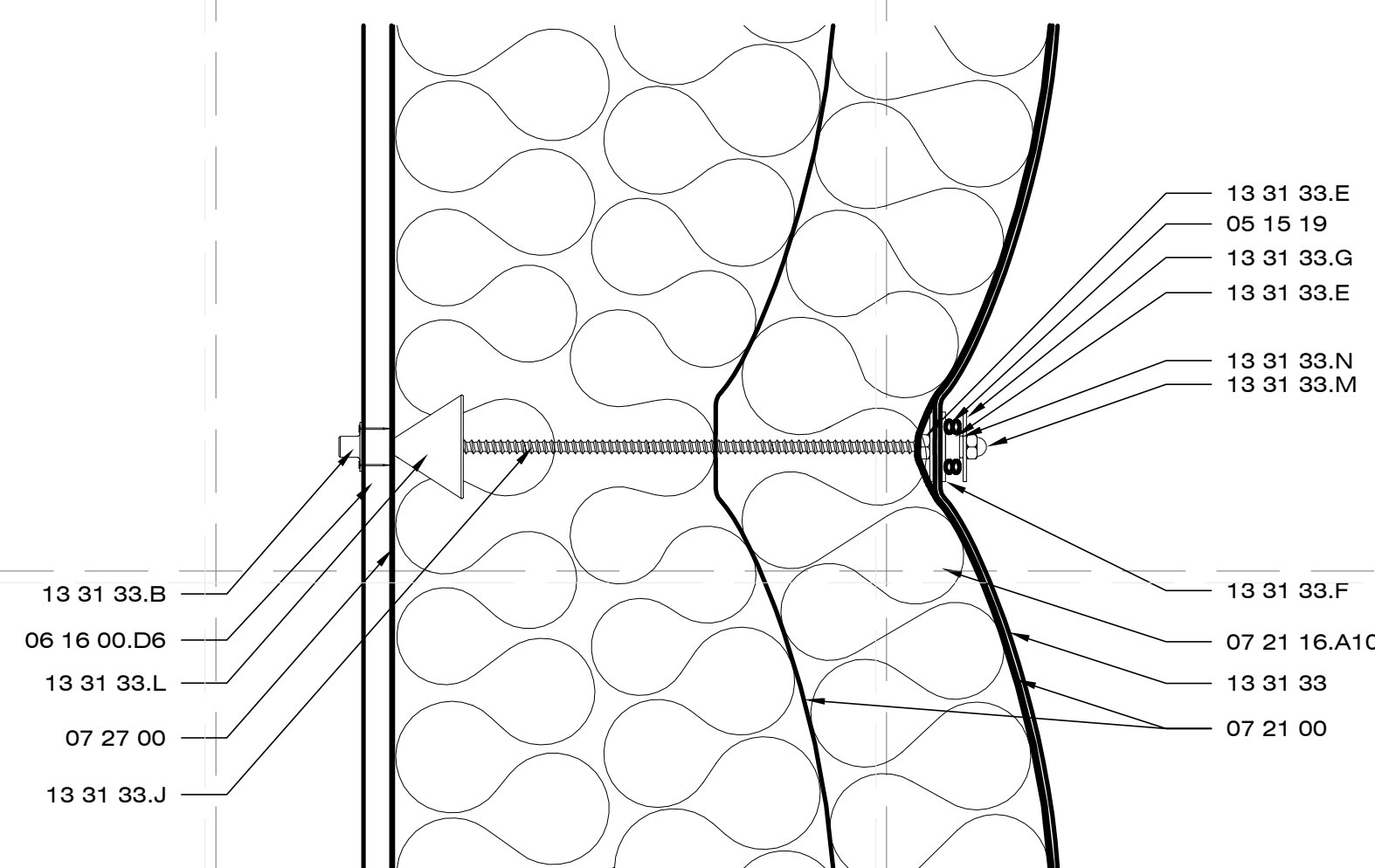
TUFT DETAIL

A-701



B1 TUFT ASSEMBLY

NTS



A5 TUFT DETAIL

3" = 1'-0" 0 3' 6' 1'

GENERAL SHEET NOTES

1. ANNOTATION DENOTES INDIVIDUAL ELEMENTS ONLY ONCE YET INDICATES TYP. REPEATED CONDITIONS IN OTHER AREAS OF THE SECTION U.O.N.

SHEET NOTES

REFERENCE KEYNOTES

DIVISION 05 - METALS
05 15 19 1/8" DIA. WOVEN GALVANIZED STEEL CABLE CLEAR VINYL COATED

DIVISION 06 - WOODS, PLASTICS, AND COMPOSITE
06 11 00.D05 2X4 FRAMING - SOLID WOOD WALLS
06 16 00.D6 1/2" EXTERIOR GRADE PLYWOOD
06 05 23 3/16" X 1-1/4" NEOPRENE WASHER
06 05 23 1/4" PLAS. SPACER TYP.

DIVISION 07 - THERMAL / MOISTURE
07 21 16.A10 BATT INSULATION
07 27 00 AIR BARRIER BUILDING WRAP

DIVISION 13 - SPECIAL CONSTRUCTION
13 31 33 1/8" THK. VINYL COATED POLYESTER MEMBRANE
13 31 33.A #4 X 1/2" PAN HEAD PHILLIPS SCREWS
13 31 33.B 5/16"-18 SCREW-MOUNT NUTS
13 31 33.C 1/4"-IP HEX NUTS (LOCK NUTS)
13 31 33.D 1/4"-IP THREAD STEEL NIPPLES
13 31 33.E 5/16"-18 NUT
13 31 33.F 3/8" X 1-1/2" WASHER
13 31 33.G 1/2" ID 1-1/2" OD FENDER WASHERS
13 31 33.H FINE THREAD GR5 1/2"-20 HEX NUTS
13 31 33.J 5/16"-18 ALL-THREAD
13 31 33.K 3/8" X 1-1/2" NEOPRENE WASHER
13 31 33.L TAPPED ALUMINIUM CONE
13 31 33.M 1/4" ACORN NUT
13 31 33.N GASKET RING



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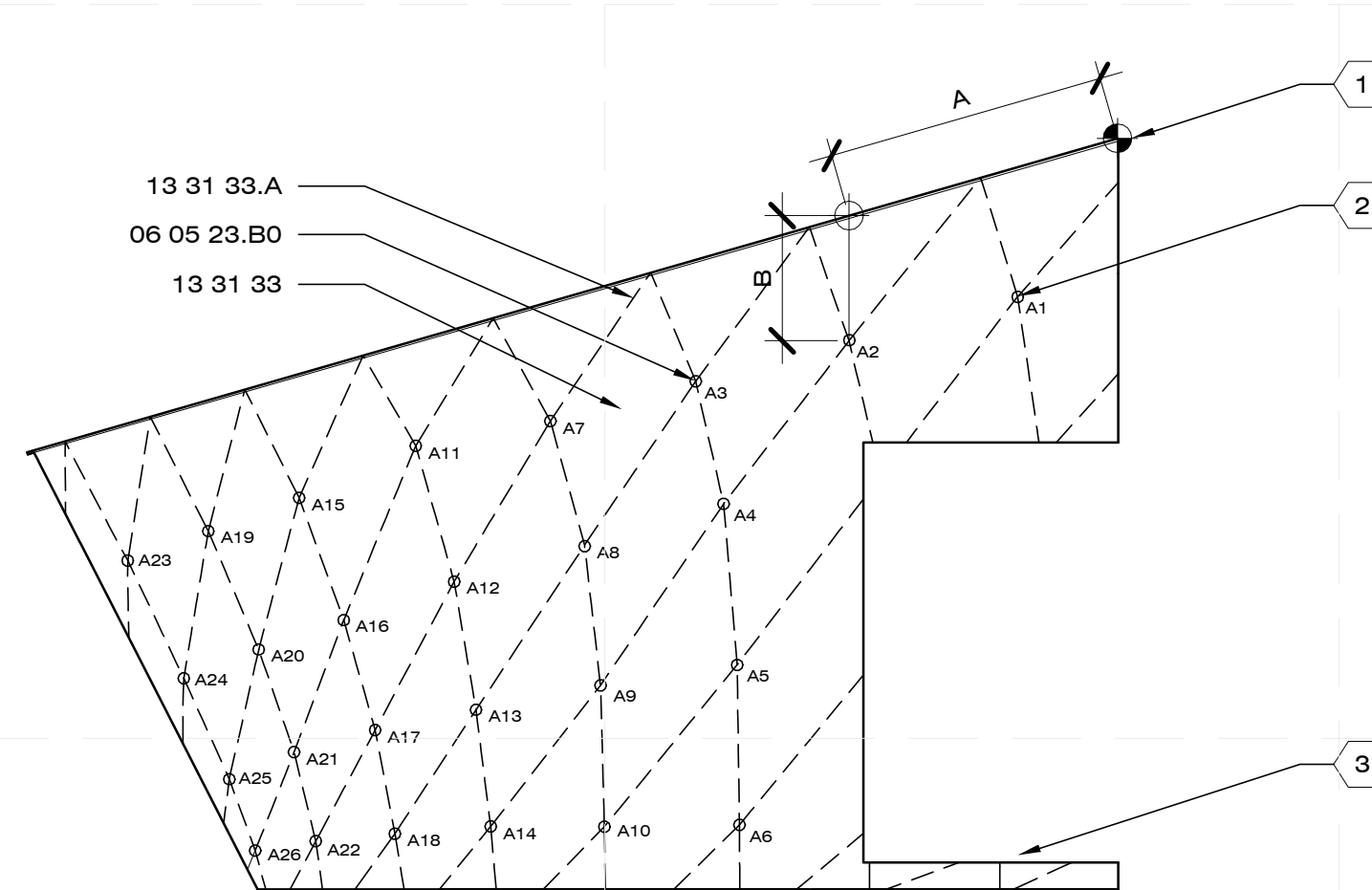
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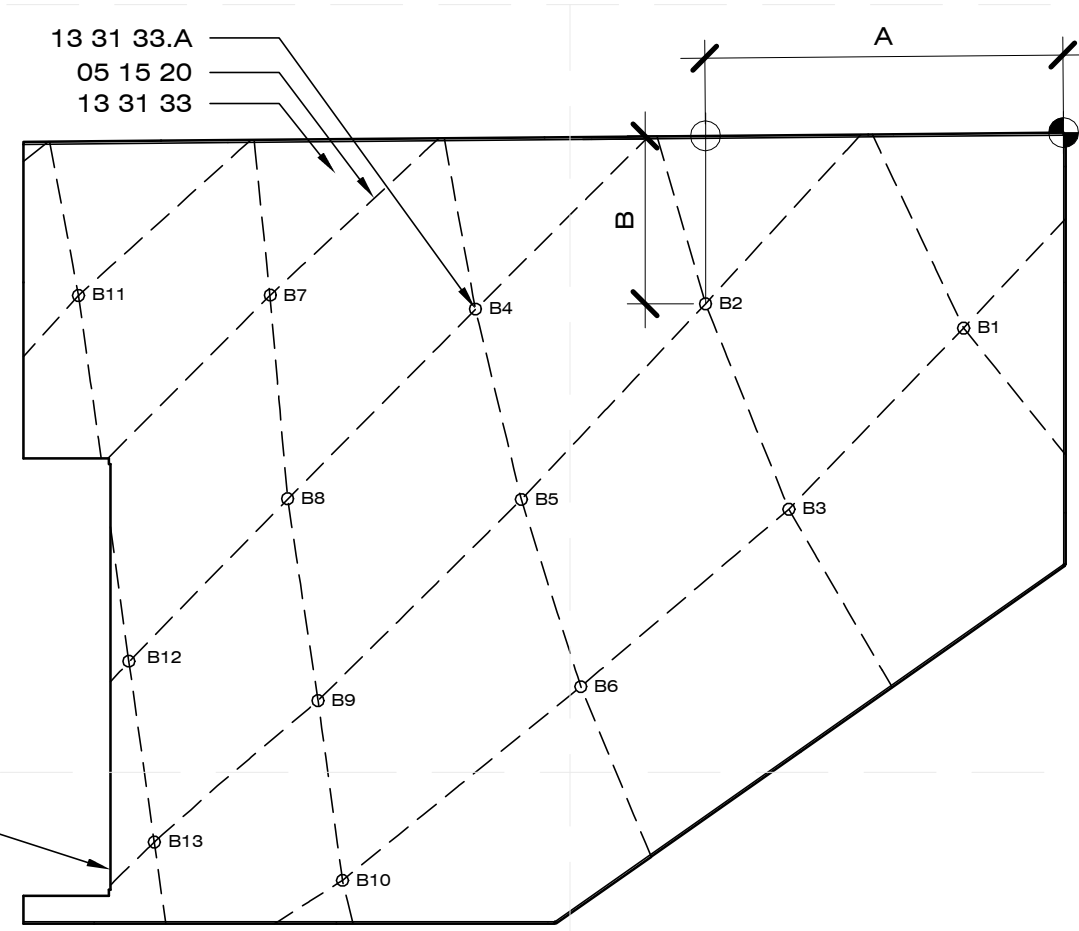
TUFTING DETAILS

A-702



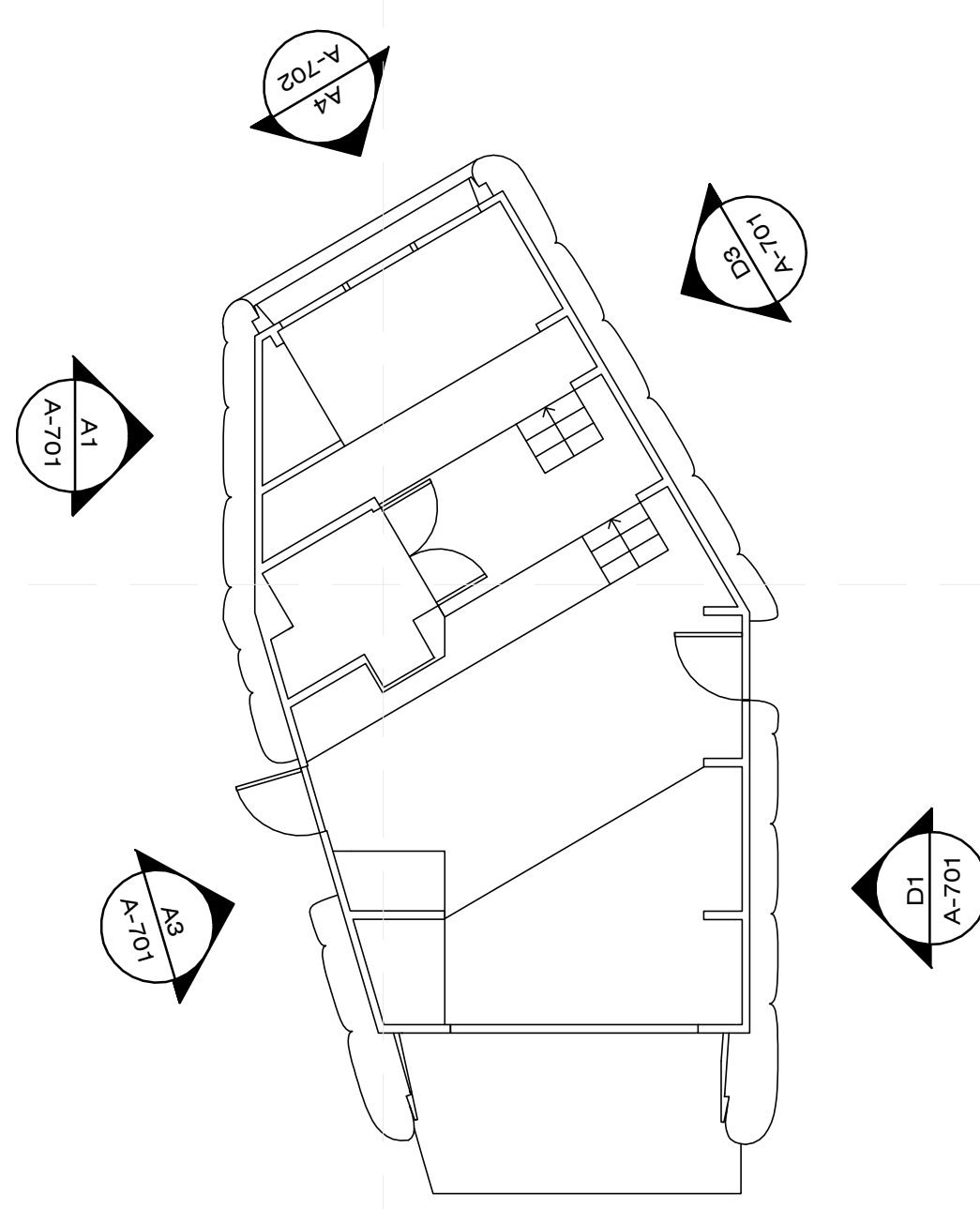
D1 TUFTING ELEVATION
1/4" = 1'-0" 0 2 4 8

SIDE A TUFT SCHEDULE					
MARK	A	B	MARK	A	B
A1	2'-3 1/4"	2'-10"	A14	14'-2 1/2"	11'-0 3/4"
A2	6'-1"	2'-7 3/4"	A15	18'-6 3/4"	2'-8 1/2"
A3	9'-6 3/4"	2'-7 3/4"	A16	17'-6 1/2"	5'-7 3/4"
A4	8'-11 1/4"	5'-6"	A17	16'-10"	8'-3"
A5	8'-7 1/2"	9'-1 1/4"	A18	16'-4 3/4"	10'-7 1/2"
A6	8'-7"	12'-7 1/4"	A19	20'-7 1/2"	2'-10 1/4"
A7	12'-10 1/2"	11'-9 1/2"	A20	19'-5 3/4"	5'-9"
A8	12'-1 1/4"	8'-8 1/4"	A21	18'-8 1/4"	8'-2 1/2"
A9	11'-9"	5'-6 1/4"	A22	18'-2 1/4"	10'-3 1/2"
A10	11'-7 3/4"	2'-7 1/4"	A23	22'-5 1/2"	3'-0"
A11	15'-11"	2'-3"	A24	21'-2 1/4"	5'-11"
A12	15'-0 1/2"	5'-6"	A25	20'-1 3/4"	8'-4 3/4"
A13	14'-6 3/4"	8'-5 1/4"	A26	19'-6 3/4"	10'-1 1/4"



D3 TUFTING ELEVATION
1/4" = 1'-0" 0 2 4 8

SIDE B TUFT SCHEDULE					
MARK	A	B	MARK	A	B
B1	2'-1"	4'-0 3/4"	B8	16'-2"	7'-6"
B2	7'-5 1/2"	3'-6 3/4"	B9	15'-6 1/2"	11'-8 1/2"
B3	5'-8 3/4"	7'-10 1/4"	B10	15'-0 1/4"	15'-5 1/4"
B4	12'-3"	3'-6 3/4"	B11	20'-6 1/4"	3'-2 1/2"
B5	11'-3 1/2"	7'-6 1/2"	B12	19'-5 3/4"	10'-10"
B6	10'-0 3/4"	11'-5 1/2"	B13	18'-11 1/2"	14'-7 1/4"
B7	16'-6 1/2"	3'-3"			



C5 KEY PLAN
1/8" = 1'-0" 0 2 4

SIDE D TUFT SCHEDULE					
MARK	A	B	MARK	A	B
D1	0'-6 1/2"	3'-1"	D25	10'-1"	2'-4 1/2"
D2	4'-7"	1'-3 1/4"	D26	12'-7 1/2"	0'-7 3/4"
D3	3'-11 1/4"	2'-8 1/2"	D27	11'-8 3/4"	2'-1 3/4"
D4	2'-3 3/4"	6'-0 3/4"	D28	13'-6 1/2"	1'-5 1/4"
D5	0'-4 1/2"	9'-6 3/4"	D29	15'-9"	1'-0 1/4"
D6	6'-2 1/2"	0'-10"	D30	17'-5 1/2"	2'-0 3/4"
D7	5'-5"	2'-4"	D31	16'-9 1/2"	0'-10"
D8	4'-7 3/4"	3'-9 3/4"	D32	18'-4 1/4"	1'-10"
D9	7'-0 1/2"	1'-8 1/2"	D33	17'-8 1/2"	2'-11 3/4"
D10	6'-2 3/4"	3'-4 1/2"	D34	17'-0"	4'-3"
D11	5'-5"	4'-11 3/4"	D35	17'-8 1/4"	6'-6 1/2"
D12	4'-7"	6'-10"	D36	17'-0 1/4"	5'-2 1/2"
D13	3'-9 1/2"	8'-8 1/4"	D37	21'-6"	1'-8 3/4"
D14	1'-11 1/4"	12'-2 1/4"	D38	19'-8 1/2"	3'-11 3/4"
D15	0'-2 1/2"	15'-9"	D39	18'-4 1/4"	6'-1 1/2"
D16	5'-5 1/2"	8'-2"	D40	17'-7 3/4"	7'-6 1/4"
D17	4'-7 1/4"	9'-11 3/4"	D41	17'-0 1/2"	8'-8 3/4"
D18	5'-4 1/2"	14'-9 1/2"	D42	17'-8"	9'-7 3/4"
D19	4'-7 1/4"	12'-9 1/4"	D43	16'-11 1/4"	10'-10"
D20	3'-8"	11'-2"	D44	22'-10 3/4"	3'-10 3/4"
D21	5'-4 1/4"	13'-11 1/4"	D45	21'-1 1/4"	6'-1 1/4"
D22	9'-0"	1'-0 1/4"	D46	19'-6 3/4"	8'-3 3/4"
D23	8'-0 1/2"	2'-9 1/4"	D47	18'-3"	10'-5 3/4"
D24	10'-10"	1'-1 1/2"			

GENERAL SHEET NOTES

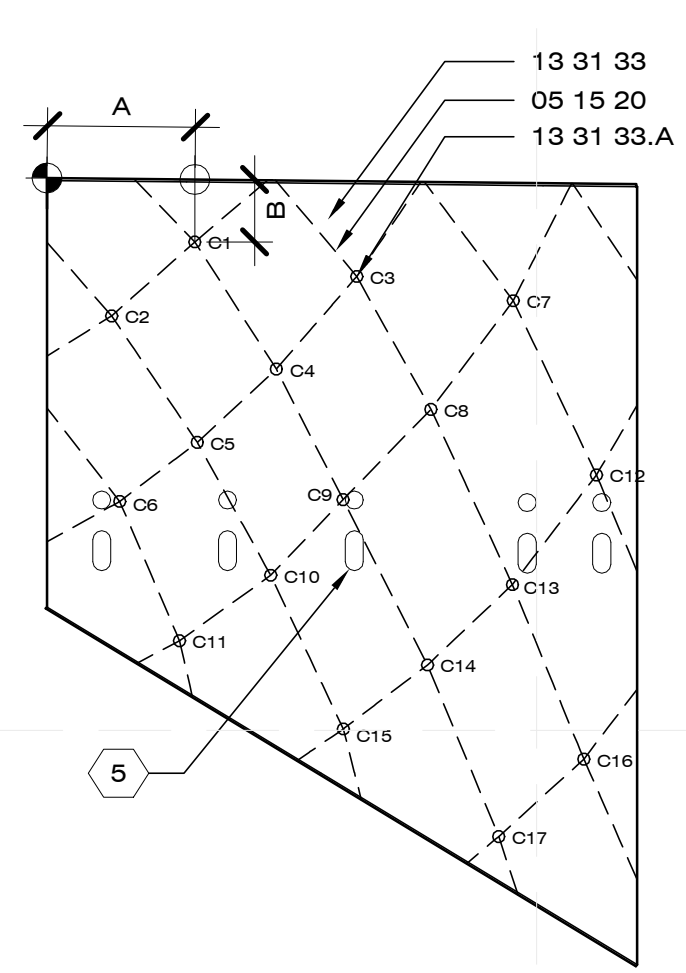
- DRAWING OF EXTERIOR SKIN DOES NOT REPRESENT ACTUAL SHAPE.
- START POINT: MEASURE FROM EXTERIOR EDGE OF PLYWOOD
- LOCATION VARIES: VERTICALLY ALIGNED WITH TUFT MARK
- TO LOCATE TUFT POINTS:
 - MEASURE DOWN TOP EDGE FROM START POINT TO DISTANCE (A)
 - STRIKE VERTICAL LINE DOWN DISTANCE (B) POINT TO DISTANCE (A)
- DASHED LINE INDICATES PATH OF CABLE LAYOUT. DOES NOT REPRESENT ACTUAL CABLE LOCATION.

SHEET NOTES

- START POINT
- TUFT MARK
- EDGE OF EAST COLLAR
- EDGE OF WEST COLLAR
- PTHORLE ACCESS TO MODULAR CONNECTION BOLTS

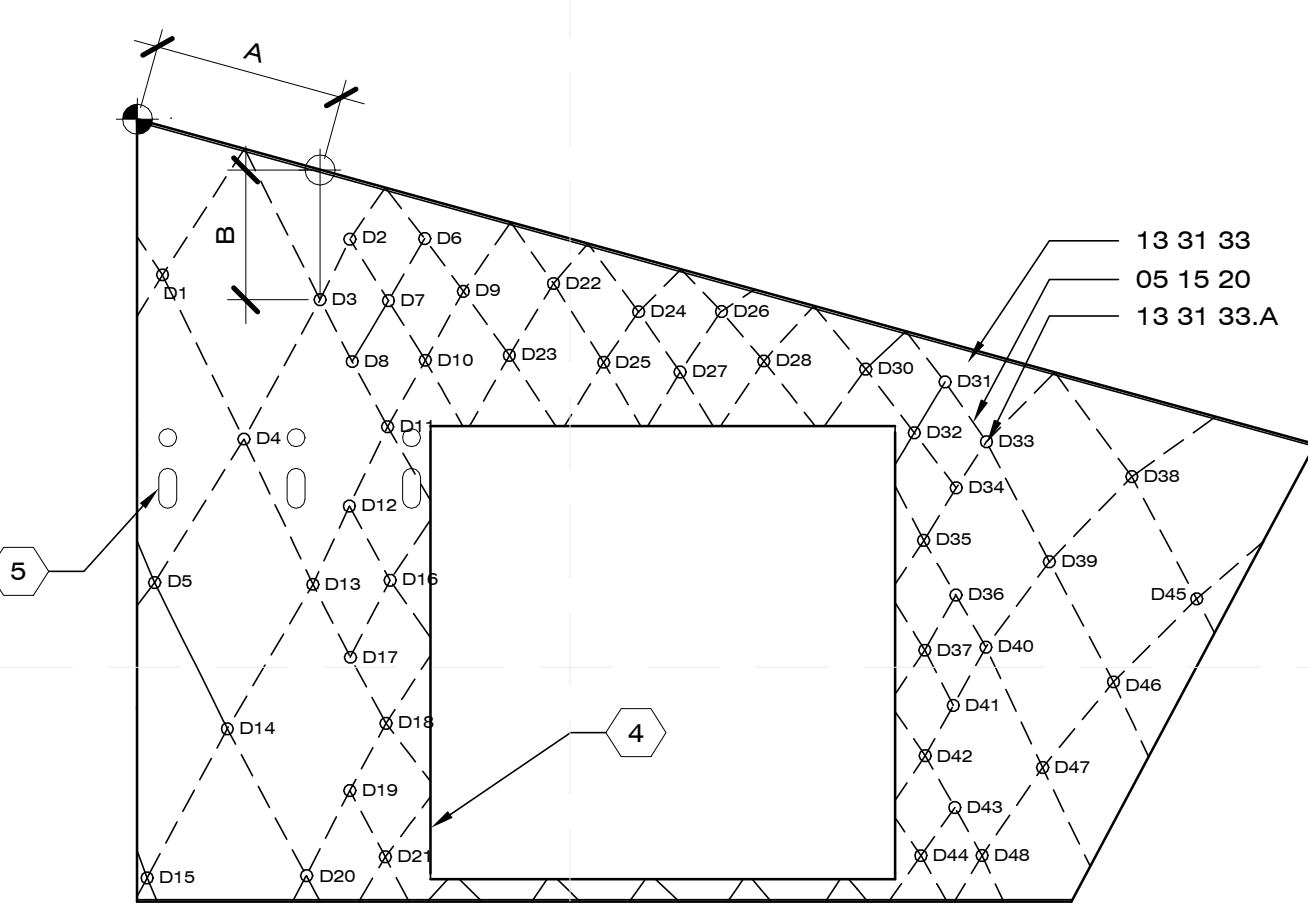
REFERENCE KEYNOTES

- DIVISION 05 - METALS**
05 15 19 WOVEN GALVANIZED STEEL STEEL CABLE
- DIVISION 06 - WOODS, PLASTICS, AND COMPOSITES**
06 05 23.B0 10" LAG SCREW
- DIVISION 13 - SPECIAL CONSTRUCTION**
13 31 33 CONTINUOUS VINYL COATED POLYESTER MEMBRANE
13 31 33.A CONTINUOUS VINYL COATED POLYESTER MEMBRANE FASTENER ASSEMBLY



A1 TUFTING ELEVATION
1/4" = 1'-0" 0 2 4 8

SIDE C TUFT SCHEDULE		
MARK	A	B
C1	3'-1"	1'-3 1/2"
C2	1'-4 1/4"	2' 10 1/2"
C3	6'-5 1/2"	1'-11 3/4"
C4	4'-9 1/2"	3'-11 1/2"
C5	3'-1 1/2"	5'-5 3/4"
C6	1'-6 1/4"	6'-8 3/4"
C7	9'-8 1/2"	2'-5 1/2"
C8	8'-0"	4'-8 3/4"
C9	6'-2"	6'-7 3/4"
C10	4'-8"	8'-2 3/4"
C11	2'-9 1/4"	9'-7 1/2"
C12	11'-5 1/2"	6'-0 3/4"
C13	9'-8 1/2"	8'-4 1/2"
C14	7'-11 1/4"	10'-0 1/2"
C15	6'-2"	11'-5"
C16	11'-2 1/4"	12'-0"
C17	9'-5"	13'-7 1/2"



A3 TUFTING ELEVATION
1/4" = 1'-0" 0 2 4 8



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TUFTING DETAILS

A-703

GENERAL SHEET NOTES

1. DRAWING OF EXTERIOR SKIN DOES NOT REPRESENT ACTUAL SHAPE.
2. DASHED LINE INDICATES PATH OF CABLE LAYOUT. DOES NOT REPRESENT ACTUAL CABLE LOCATION.

SHEET NOTES

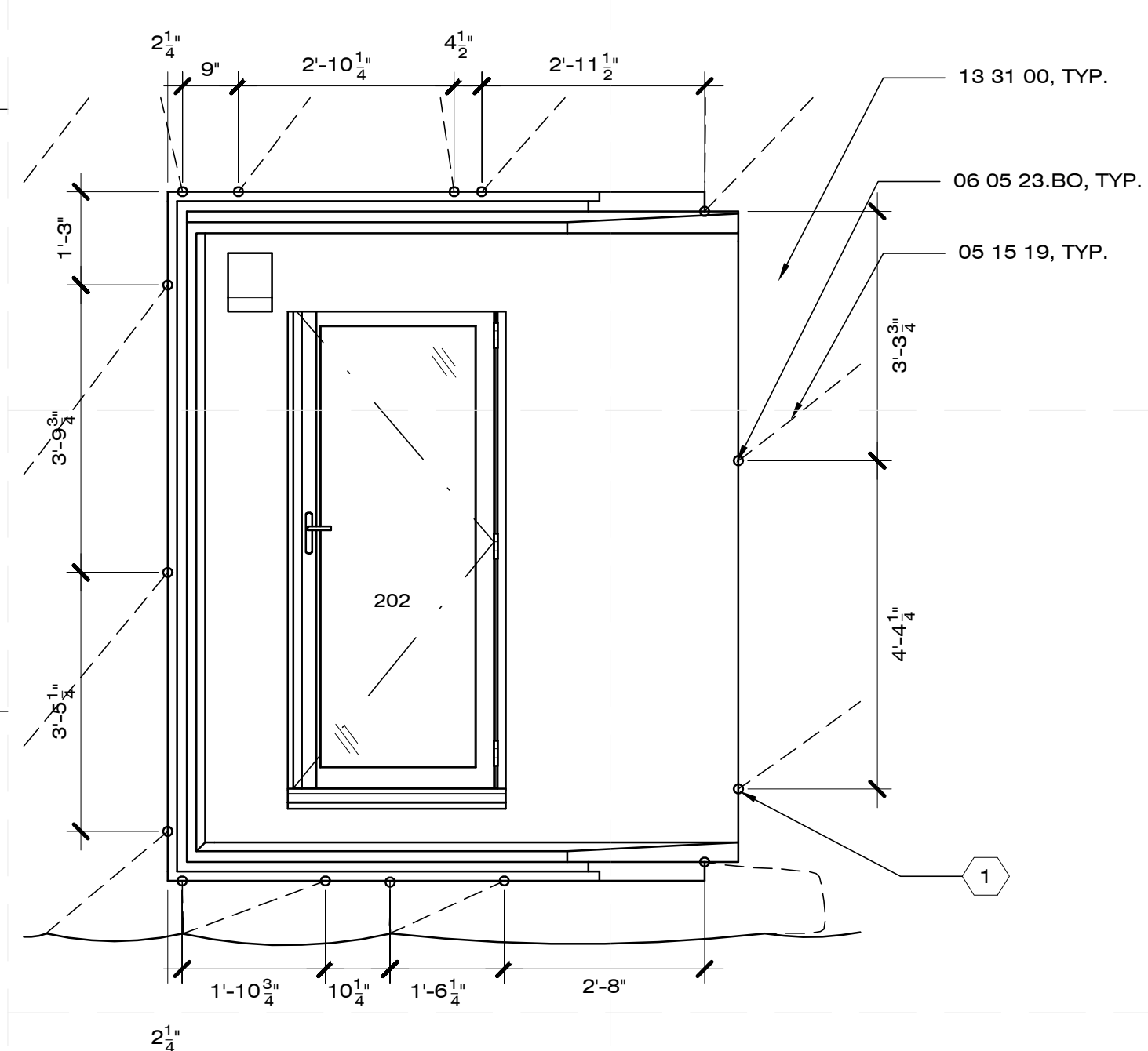
REFERENCE KEYNOTES

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05 15 19 WOVEN GALVANIZED STEEL CABLE

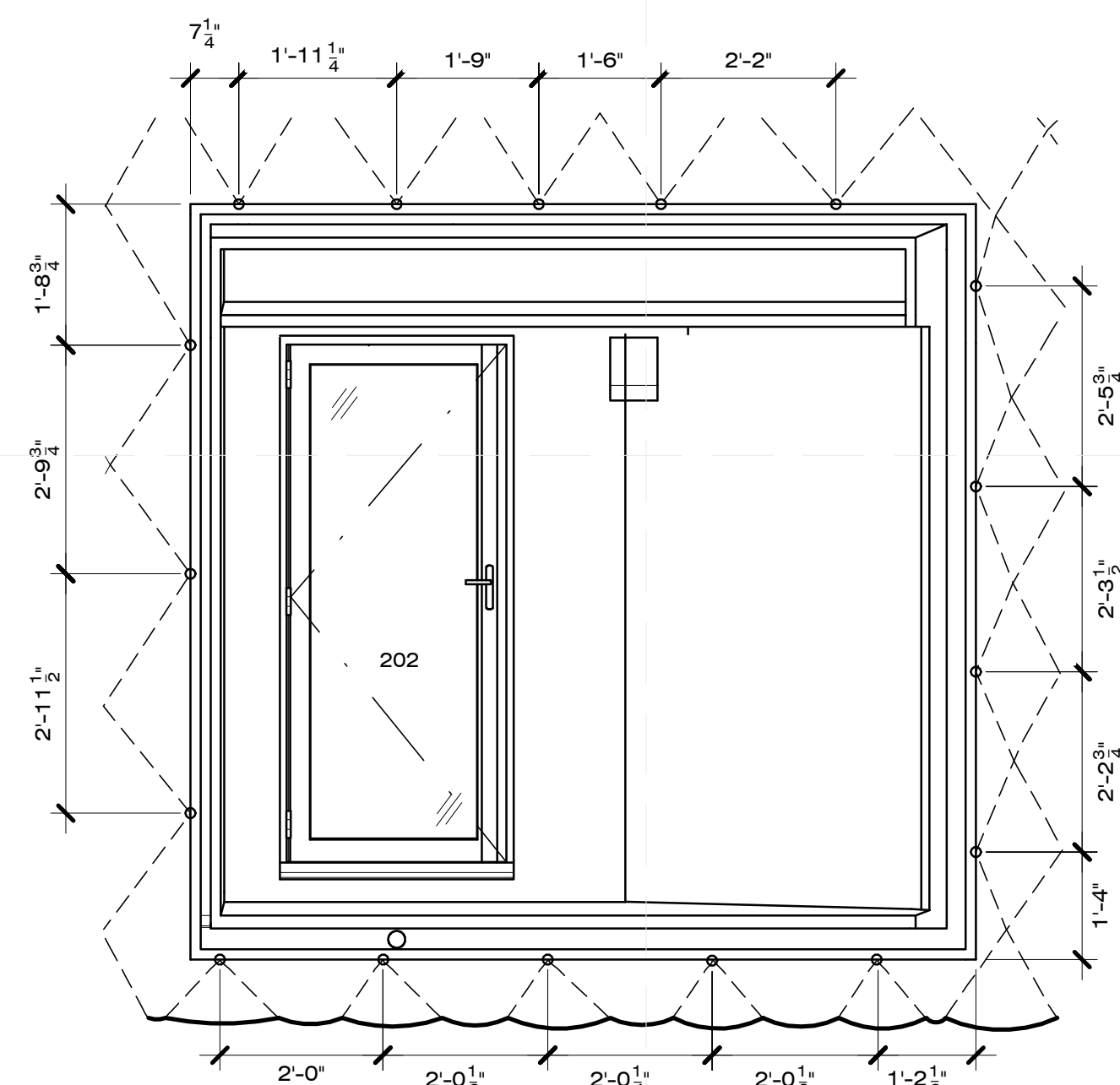
DIVISION 06 - WOODS, PLASTICS, AND COMPOSITES
06 05 23.B0 2" LAG SCREWS
06 48 13 1" WOOD BLOCKING

DIVISION 13 - SPECIAL CONSTRUCTION
13 31 33 CONTINUOUS VINYL COATED POLYESTER MEMBRANE

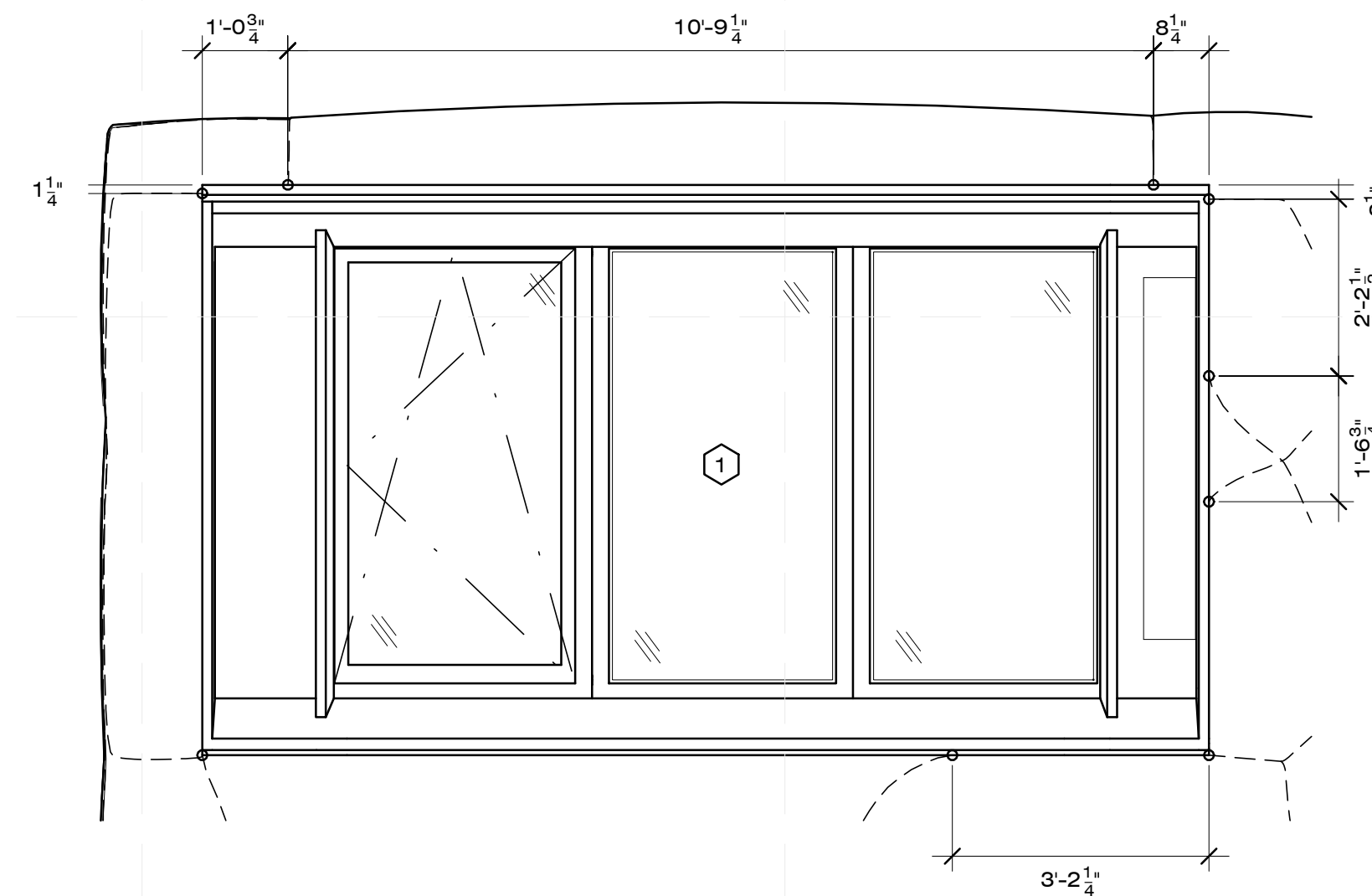
13 31 33.A CONTINUOUS VINYL COATED POLYESTER MEMBRANE FASTENER ASSEMBLY



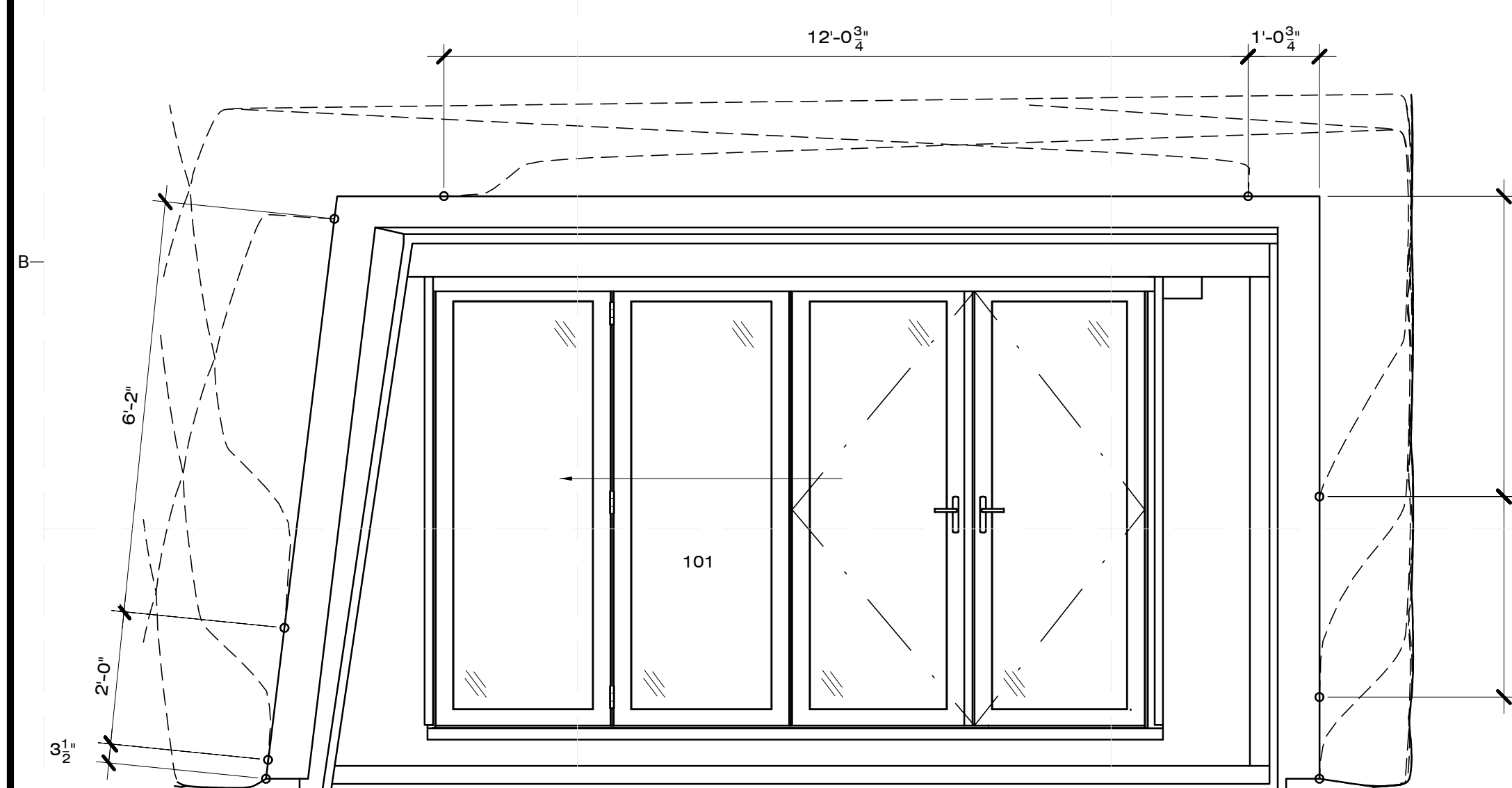
C1 TUFT LOCATIONS @ DOOR 201
1/2" = 1'-0" 0 1' 2' 4'



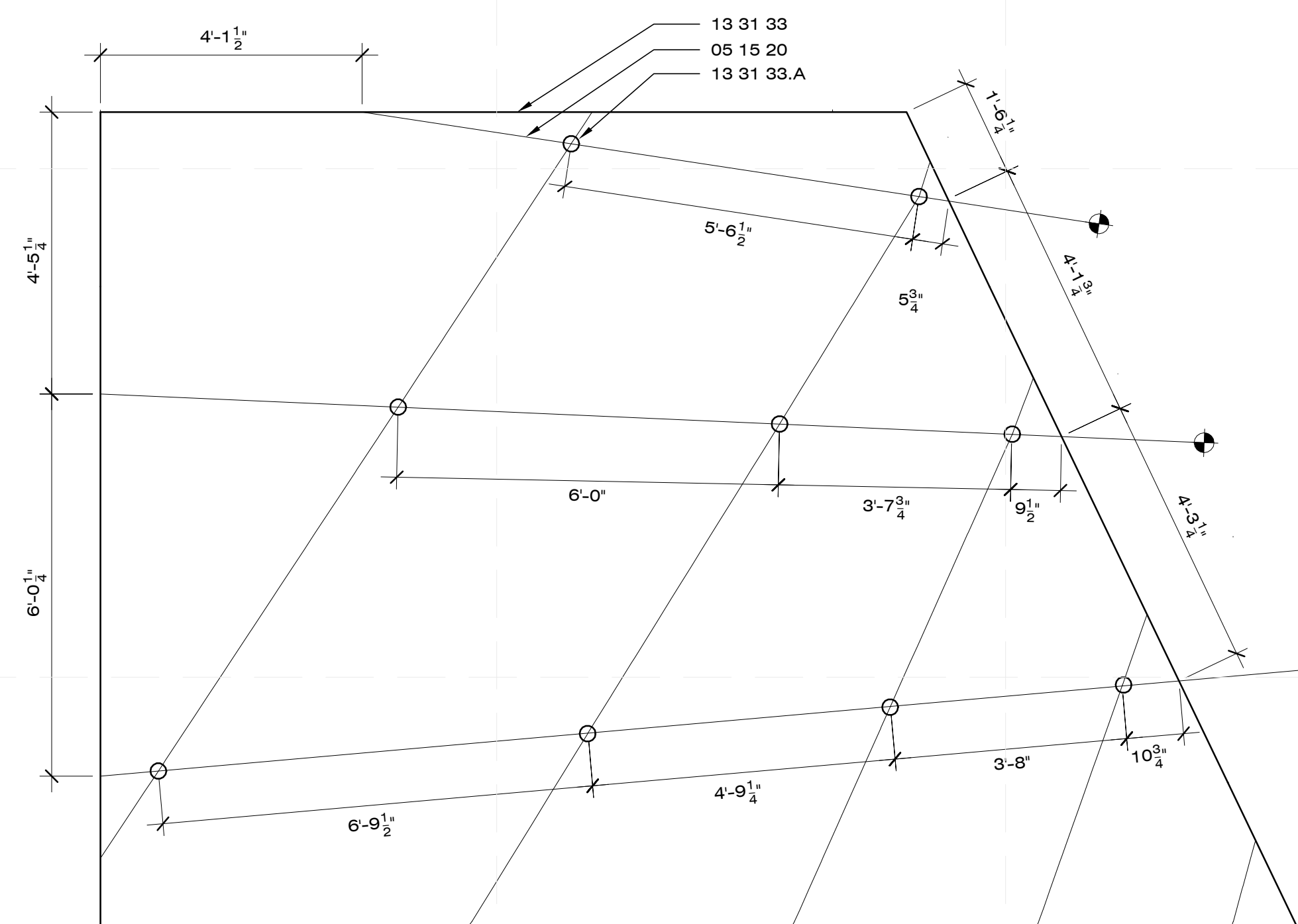
C3 TUFT LOCATIONS @ DOOR 202
1/2" = 1'-0" 0 1' 2' 4'



C5 TUFT LOCATIONS @ NORTH WINDOW
1/2" = 1'-0" 0 1' 2' 4'



A1 TUFT LOCATIONS @ DOOR 402
1/2" = 1'-0" 0 1' 2' 4'



A4 TUFT LOCATIONS @ UNDERSIDE OF CANTILEVER
1/2" = 1'-0" 0 2' 4' 8'



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WALL ASSEMBLY

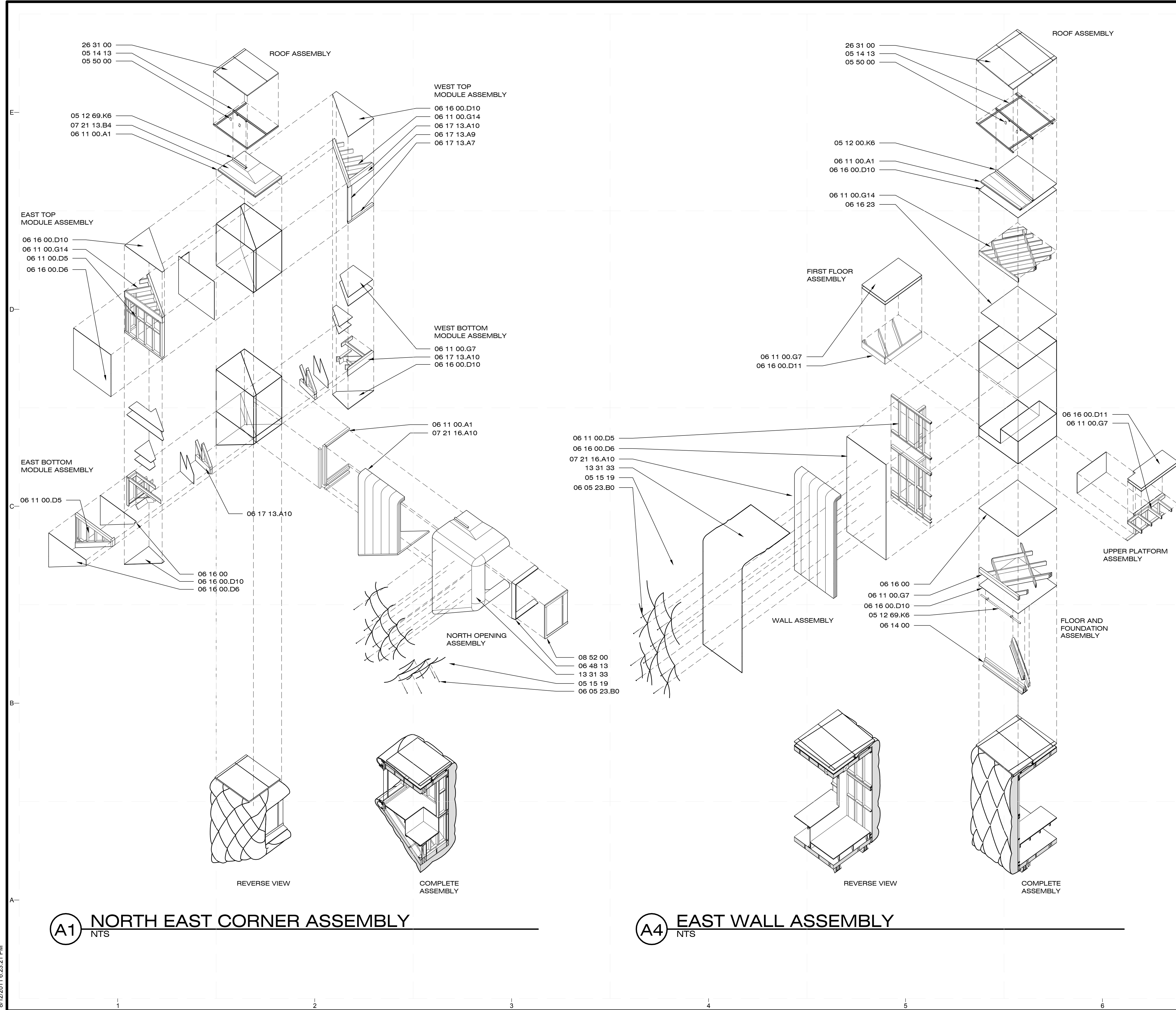
A-711

GENERAL SHEET NOTES

SHEET NOTES

REFERENCE KEYNOTES

- DIVISION 05 - METALS**
 - 05 12 69.K9 2" STEEL PIPE
 - 05 15 19 WOVEN GALVANIZED STEEL CABLE
 - 05 14 13 CLEAR VINYL COATED ARCH. EXPOSED STRUCT. ALUMINUM FRAMING PV
 - 05 50 00 2" STEEL HALF BATTEN PIPE CLAMP
- DIVISION 06 - WOODS, PLASTICS, AND COMPOSITES**
 - 06 05 23.B0 10" LAG SCREW
 - 06 11 00.A1 WOOD BLOCKING
 - 06 11 00.D5 2X4 STUDS @ 16" O.C.
 - 06 11 00.G7 2X8 JOISTS @ 24" O.C.
 - 06 11 00.G14 2X8 RAFTERS @ 24" O.C.
 - 06 11 00.I5 2X12 JOISTS @ 24" O.C.
 - 06 14 00 2X8 FOUNDATION FRAMING
 - 06 16 00 PLYWOOD - OSB
 - 06 16 00.D6 1/2" EXTERIOR GRADE PLYWOOD
 - 06 16 00.D10 5/8" EXTERIOR GRADE PLYWOOD
 - 06 16 00.D11 3/4" PLYWOOD
 - 06 16 23 1/2" EXTERIOR GRADE PLYWOOD
 - 06 17 13.A7 4X4 LAMINATE VENEER LUMBER
 - 06 17 13.A9 4X8 LAMINATE VENEER LUMBER
 - 06 17 13.A10 4X10 LAMINATE VENEER LUMBER
 - 06 48 13 3/4" EXTERIOR GRADE FINISH PLYWOOD
- DIVISION 07 - THERMAL AND MOISTURE PROTECTION**
 - 07 21 16.A10 BATT INSULATION
- DIVISION 08 - OPENINGS**
 - 06 52 00 NORTH WINDOW ASSEMBLY
- DIVISION 13 - SPECIAL CONSTRUCTION**
 - 13 31 33 CONTINUOUS VINYL COATED POLYESTER MEMBRANE
- DIVISION 26 - ELECTRICAL**
 - 26 31 00 PHOTOVOLTAIC PANEL



A1 NORTH EAST CORNER ASSEMBLY
NTS

A4 EAST WALL ASSEMBLY
NTS



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COMPACT HOUSE, INFINITE POSSIBILITIES

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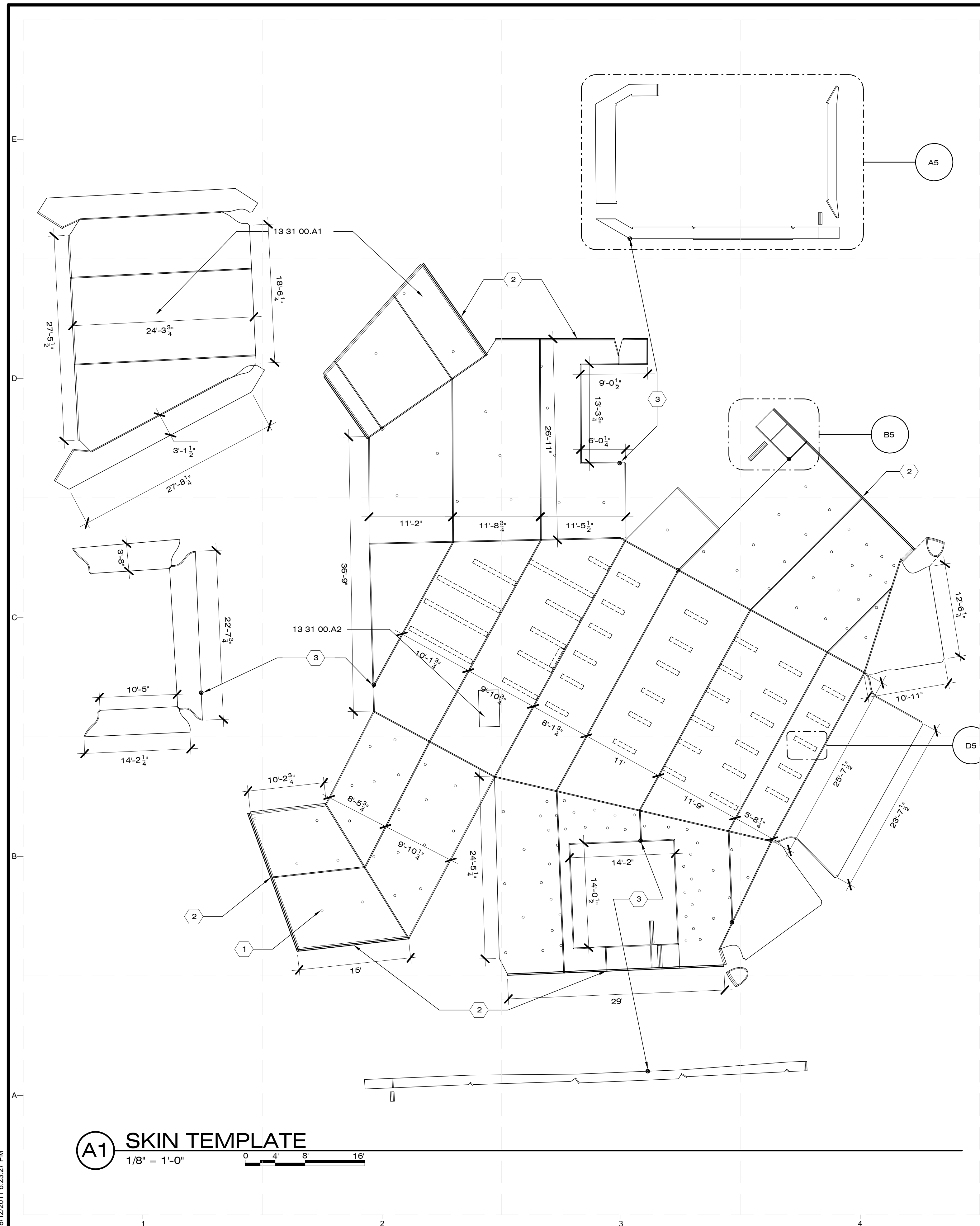
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REVISIONS:

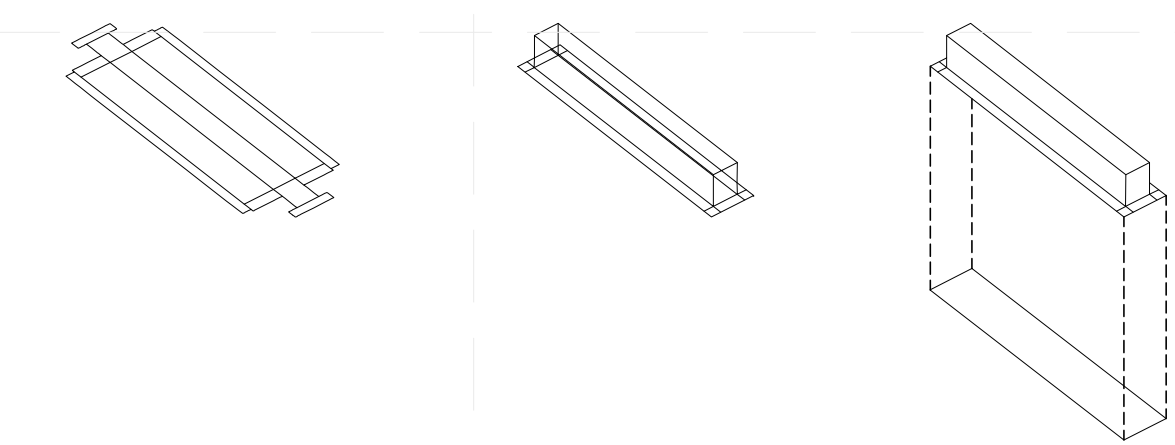
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SKIN DETAILS

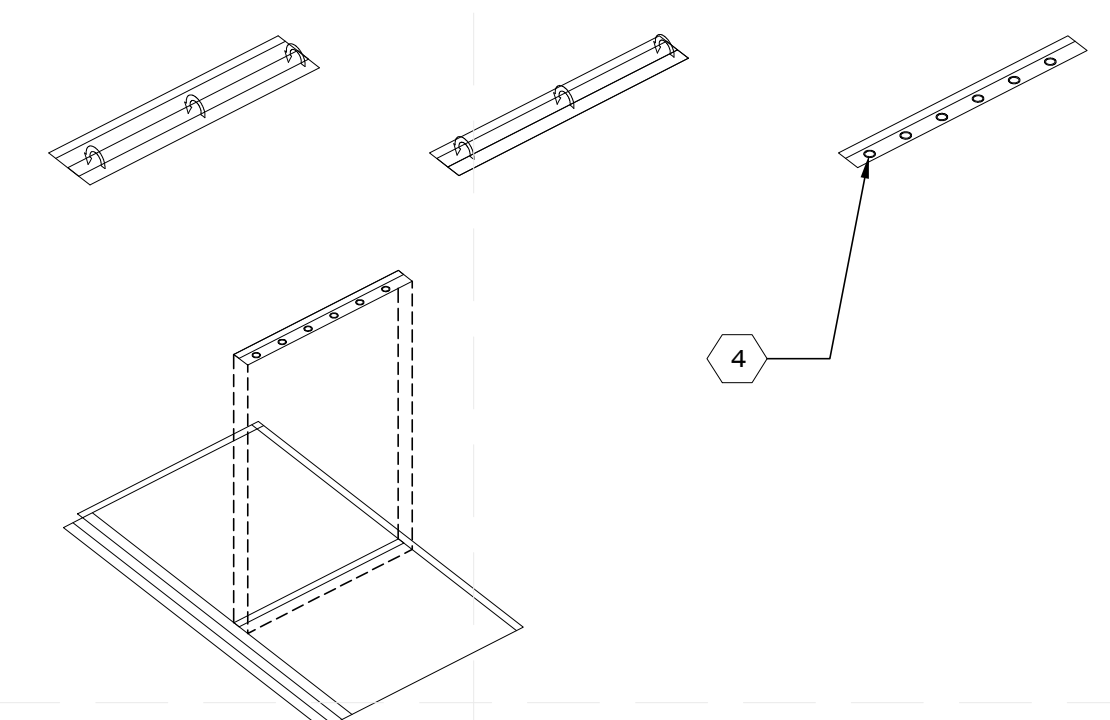
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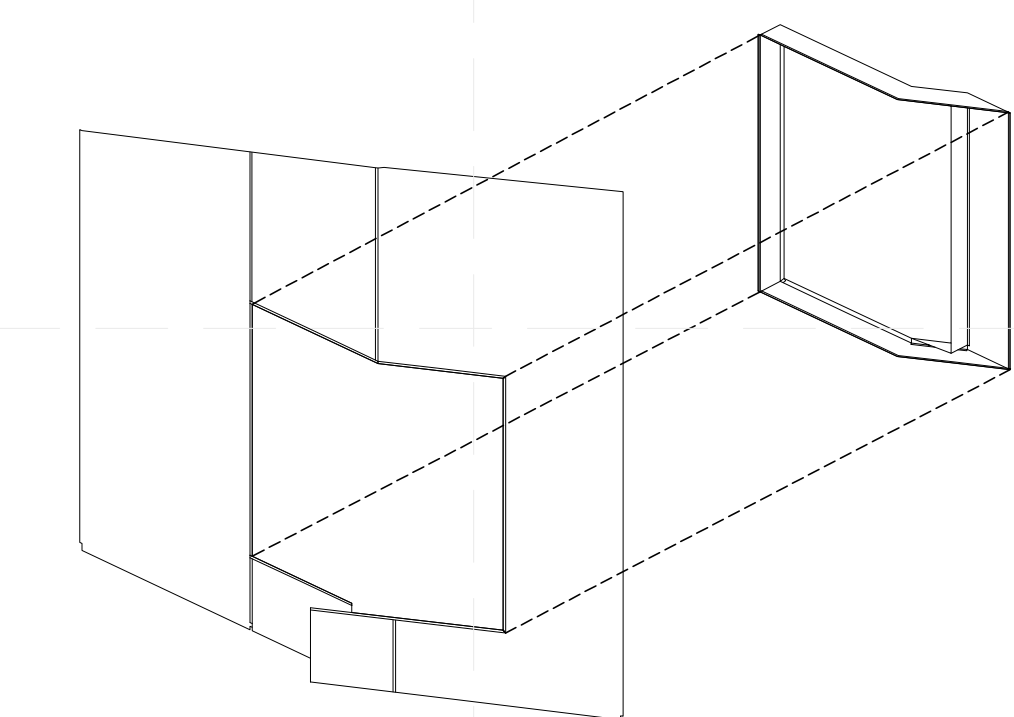
A1 SKIN TEMPLATE
 1/8" = 1'-0"
 0 4 8 16



A1 PV MOUNT POCKET DETAIL
 SCALE: NTS



A1 GROMMET FLAP DETAIL
 SCALE: NTS



A1 WEST DOOR ASSEMBLY
 SCALE: NTS

GENERAL SHEET NOTES

1. ALL SEAMS HEAT SEALED UNLESS OTHERWISE NOTED

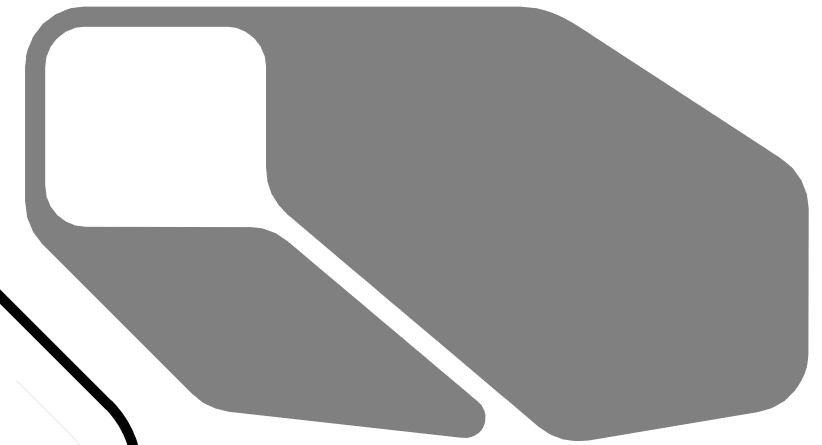
SHEET NOTES

1. TUFT LOCATION: INSERT GROMMET TO RECEIVE ALL-THREAD THROUGH BOLT
2. INSERT GROMMET ALONG FLAP @ 12" O.C.
3. ALIGNMENT POINTS FOR VINYL PIECES
4. INSERT GROMMETS ALONG FLAP @ 4" O.C.

REFERENCE KEYNOTES

DIVISION 13 - SPECIAL CONSTRUCTION
 13 31 33.A1 1/8" THK. VINYL COATED POLYESTER MEMBRANE WHITE FINISH
 13 31 33.A2 1/8" THK. VINYL COATED POLYESTER MEMBRANE CLEAR FINISH

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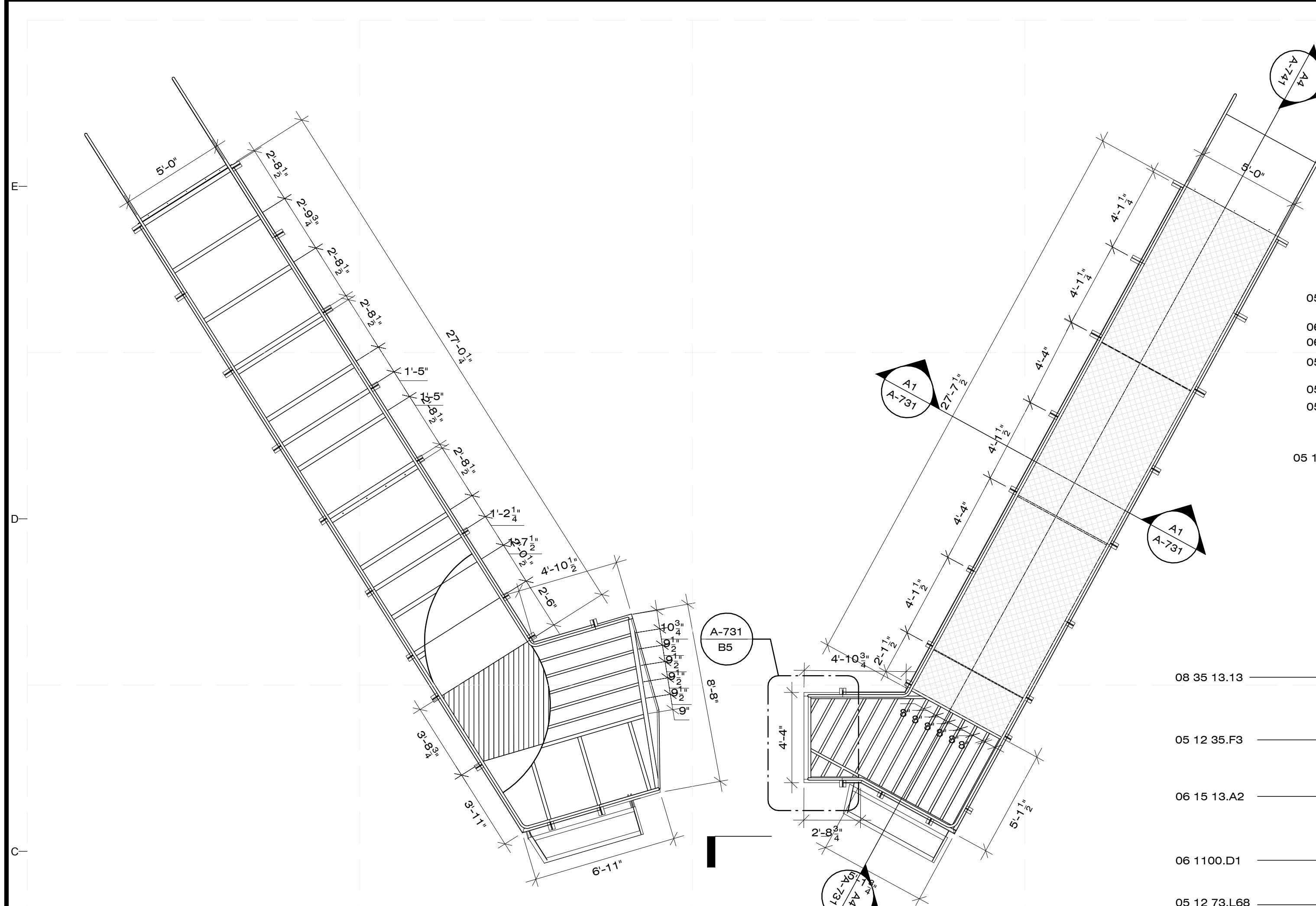
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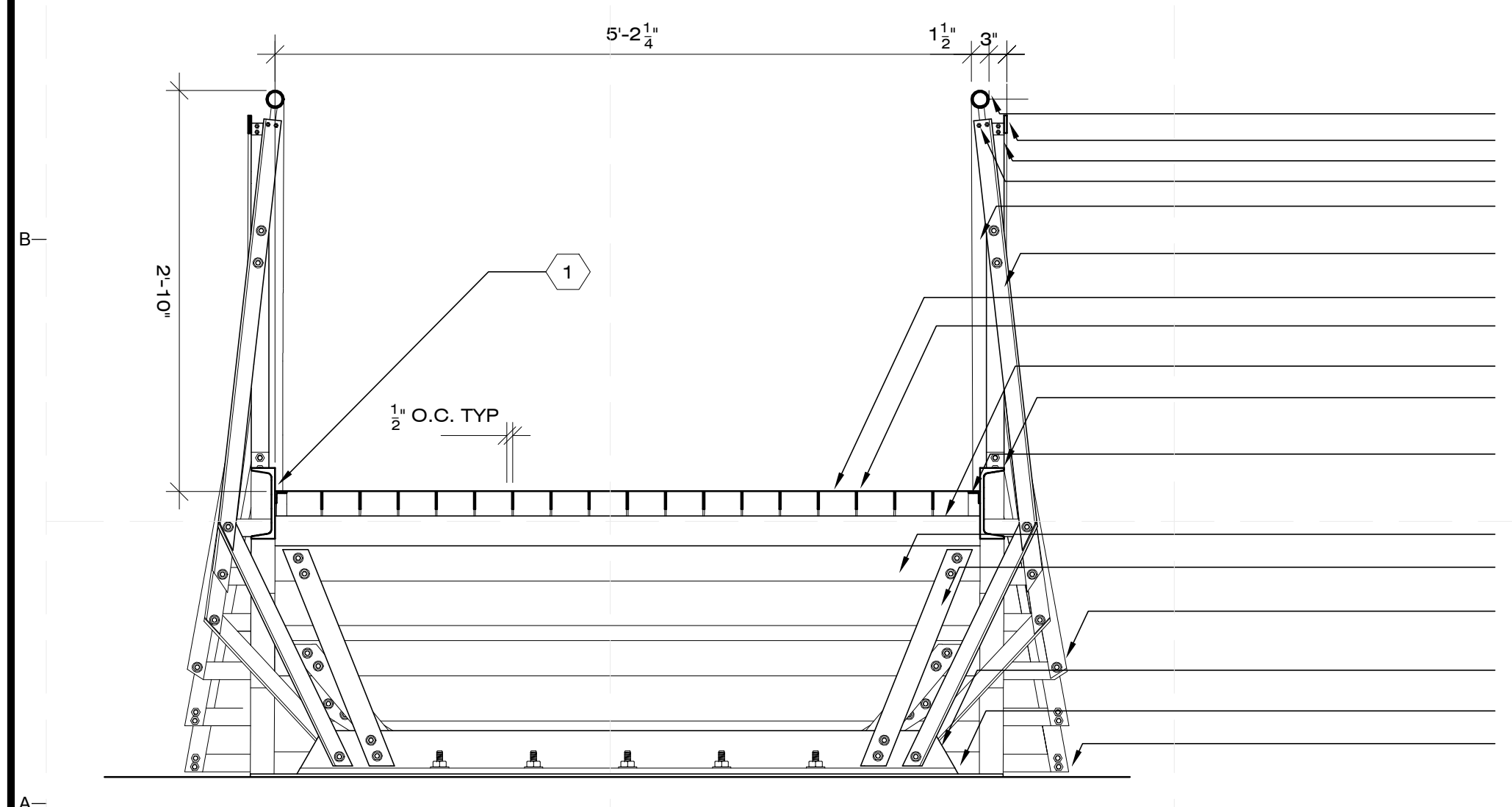
RAMP DETAILS

A-731

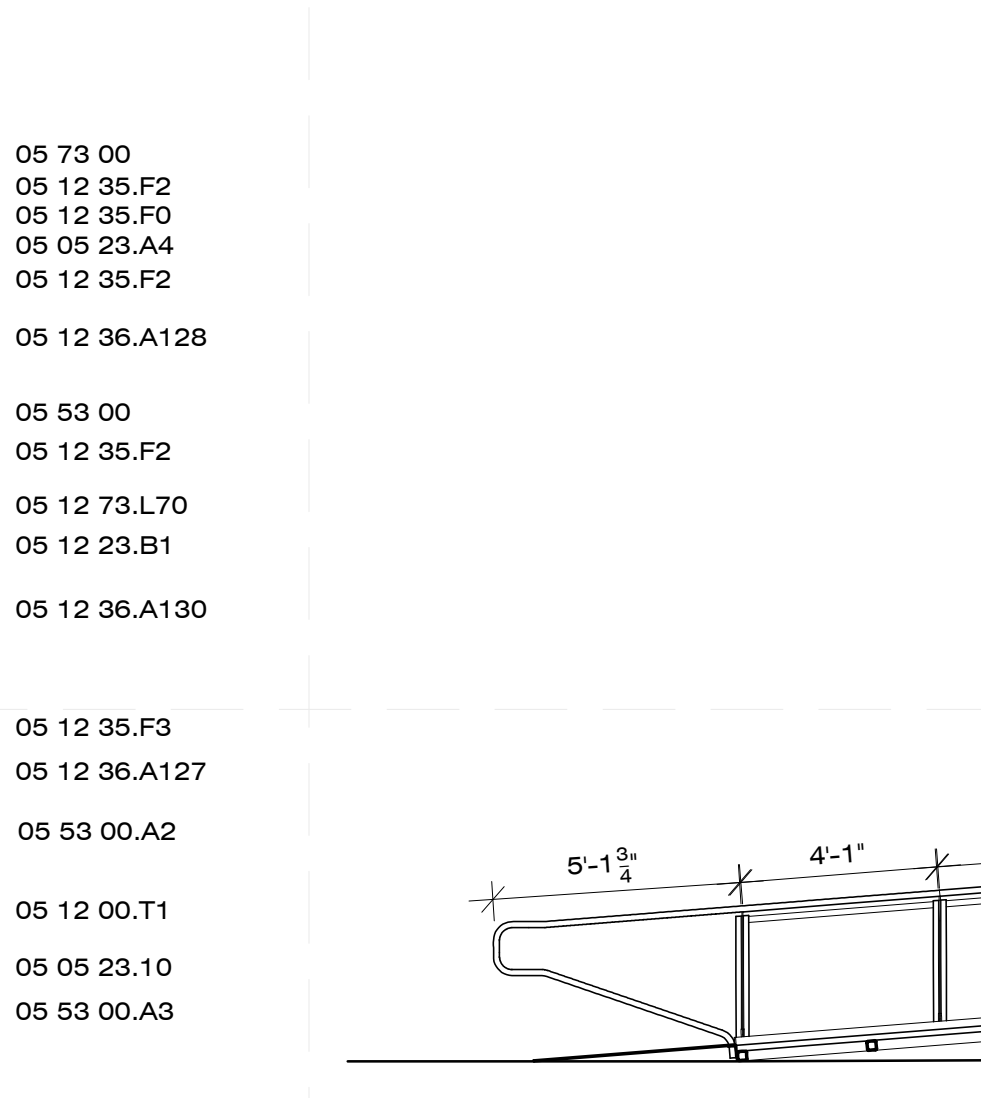


C1 WEST RAMP
1/4" = 1'-0"

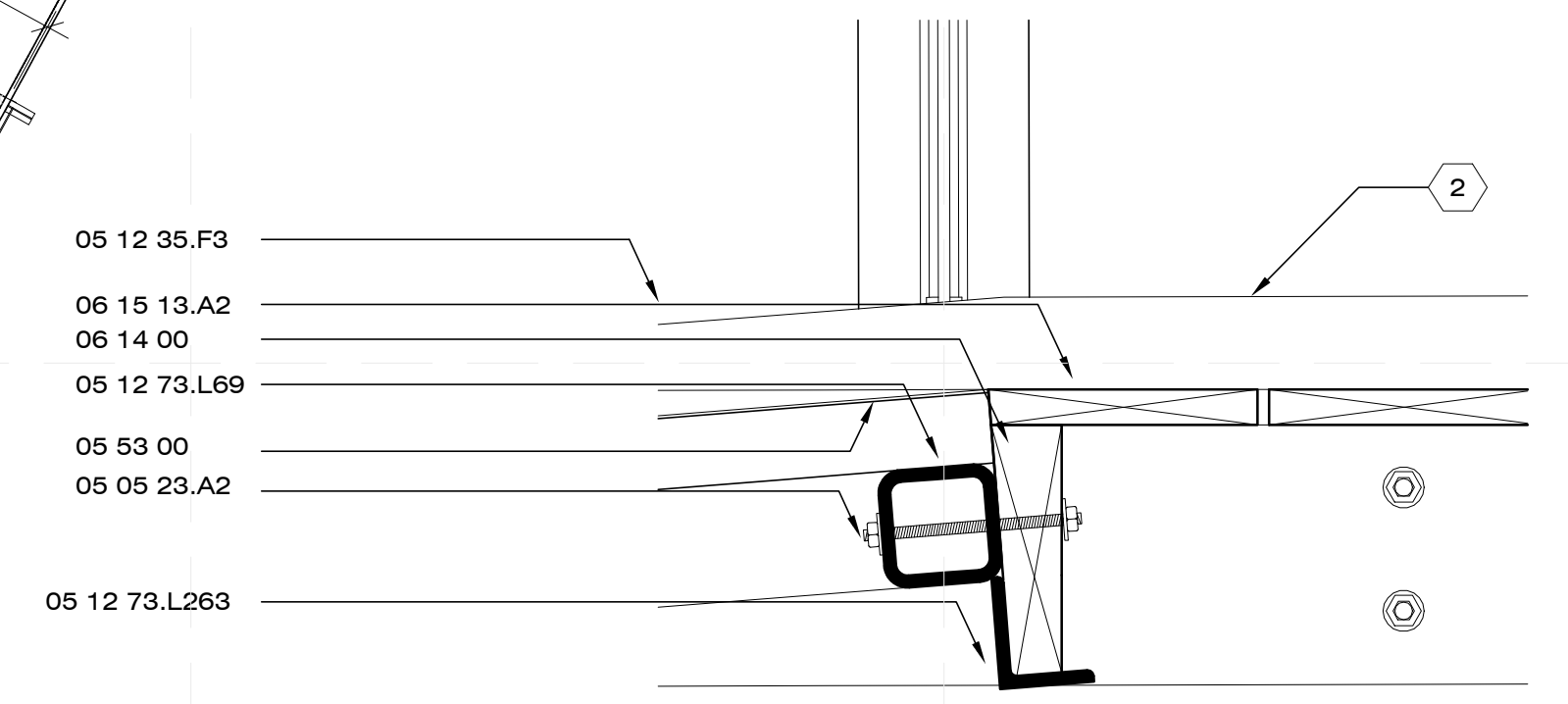
C3 EAST RAMP
1/4" = 1'-0"



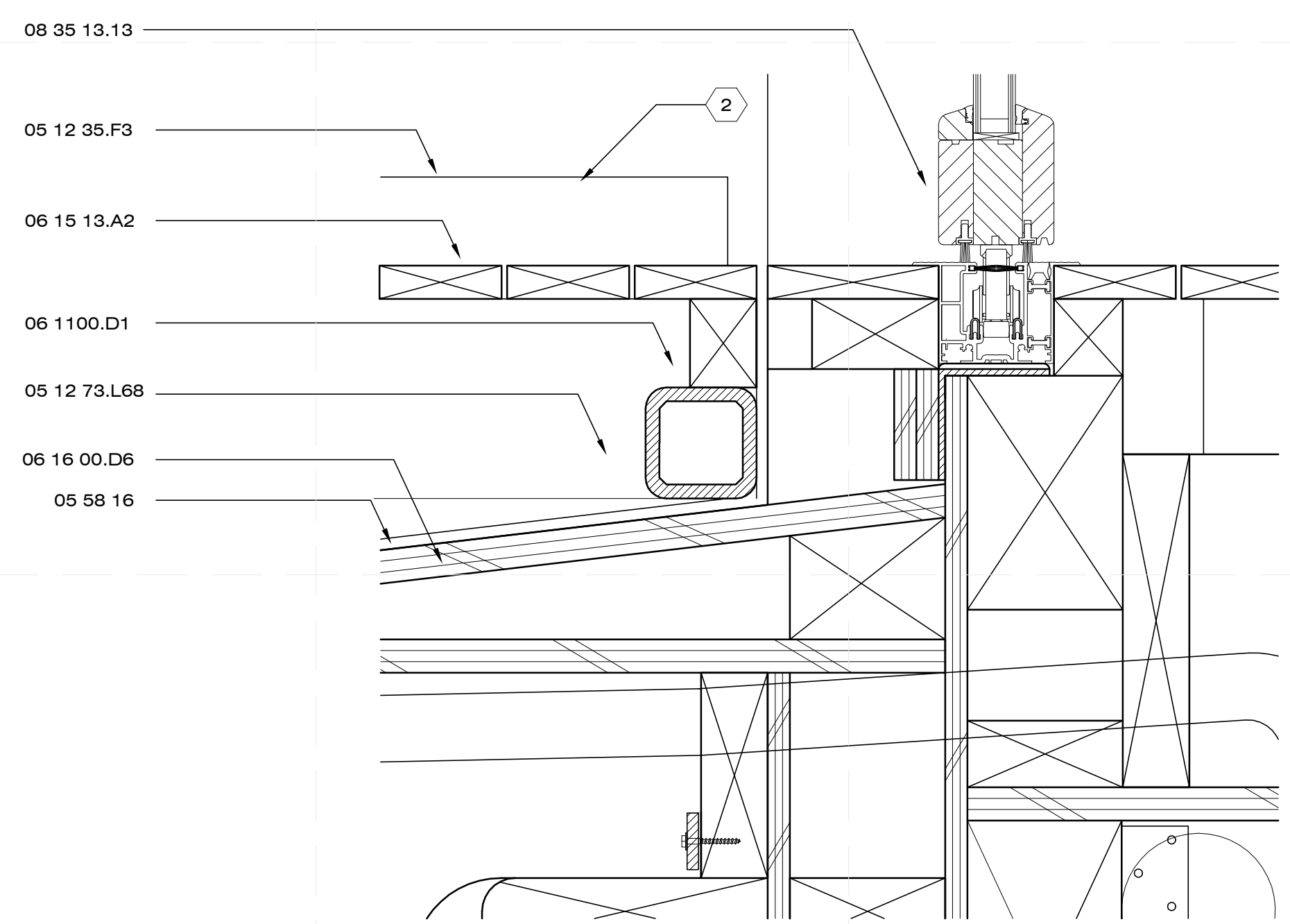
A1 RAMP SECTION
1" = 1'-0"



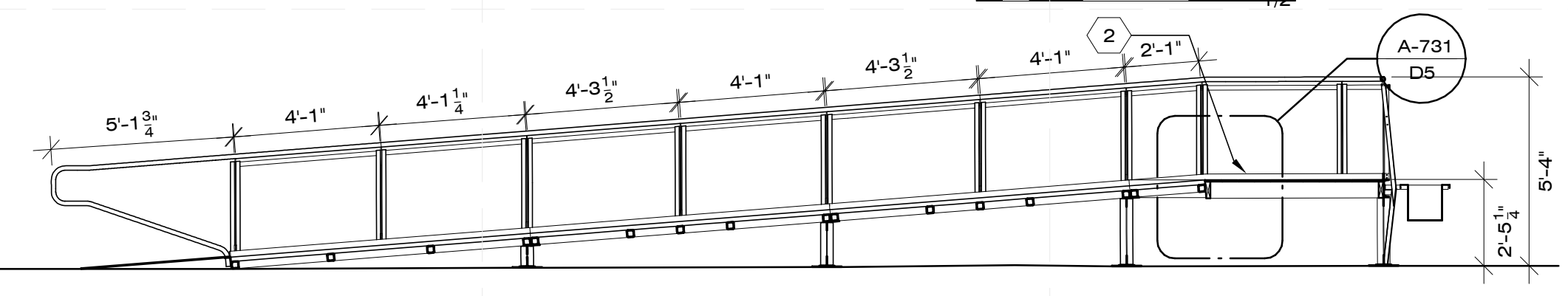
A4 RAMP SECTION
1/4" = 1'-0"



D5 RAMP DETAIL
3" = 1'-0"



B5 RAMP DETAIL
3" = 1'-0"



A4 RAMP SECTION
1/4" = 1'-0"

GENERAL SHEET NOTES

SHEET NOTES

- GRATE SUNKEN INTO RAMP STRUCTURE ALLOWS CHANNEL TO FORM CONTINUOUS GUARD RAIL
- 2" X 1/4" FLAT BAR STEEL FASTENED TO EDGE OF DECK TO FORM 2" ADA WHEEL CHAIR GUARD

REFERENCE KEYNOTES

- DIVISION 05 - METALS**
- 05 05 23.10 1/4" STEEL PLATE
 - 05 05 23.A2 1/2" A307 BOLT
 - 05 05 23.A3 3/8" A307 BOLT
 - 05 05 23.A4 3/16" A307 BOLT
 - 05 05 23.A5 1-1/4" SHEET METAL SCREW
 - 05 12 00.T1 STEEL WT 5-1/4"x3-1/2"x1/4"
 - 05 12 23.B0 STEEL CHANNEL 4" X 4.5LBS.
 - 05 12 35.F0 STEEL FLATSTOCK 1"x1/8"
 - 05 12 35.F1 STEEL FLATSTOCK 1-1/2"x3/16"
 - 05 12 35.F2 STEEL FLATSTOCK 1-1/2"x1/4"
 - 05 12 35.F3 STEEL FLATSTOCK 3"x1/4"
 - 05 12 36.A130 STEEL ANGLE 1"x1/8"
 - 05 12 36.A129 STEEL ANGLE 1-1/2"x1-1/2"x1/8"
 - 05 12 36.A128 STEEL ANGLE 1-1/2"x1-1/2"x3/16"
 - 05 12 36.A127 STEEL ANGLE 2"x-2"x1/4"
 - 05 12 73.L70 STEEL TUBE 2"x2"x1/4"
 - 05 12 73.L69 STEEL TUBE 2"x2"x1/4"
 - 05 12 73.L263 STEEL TUBE 2"x3"x1/4"
 - 05 53 00 METAL GRATINGS
 - 05 58 16 SHEET METAL
 - 05 73 00 DECK RAILING
- DIVISION 06 - WOODS, PLASTICS, AND COMPOSITIONS**
- 06 05 23.B1 3/8" 3.5" LAG SCREW
 - 06 14 00 2X6 PRESSURE TREATED
 - 06 11 00 2X4 PRESSURE TREATED
 - 06 15 13.A1 2X6 REDWOOD
 - 06 15 13.A2 CEDAR DECK BOARDS
 - 06 16 00.D6 PLYWOOD- EXTERIOR WALL SHEATING
- DIVISION 08 - OPENING**
- 08 35 13.13 SOUTH BI-FOLD (4 PANEL) DOOR:

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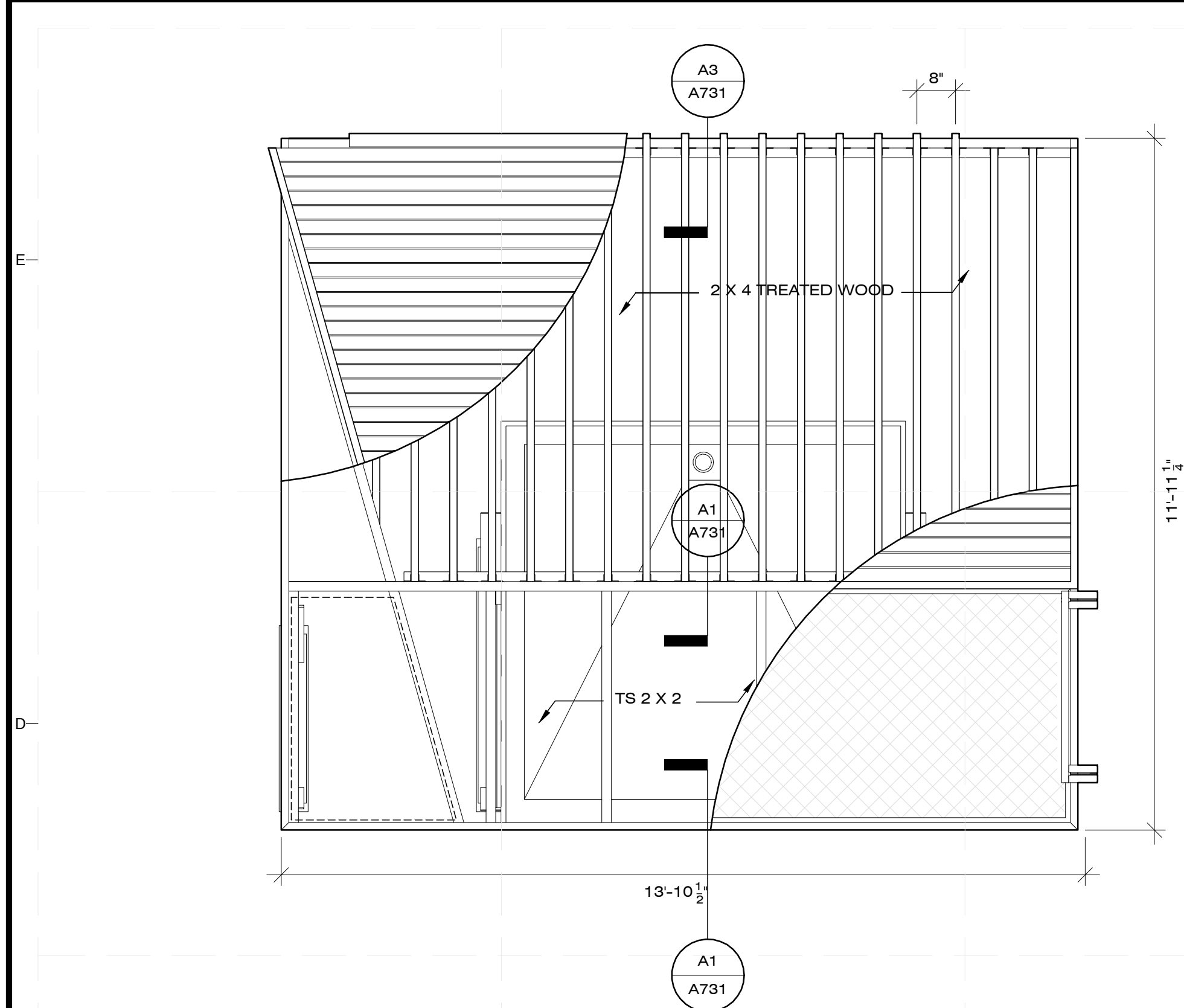
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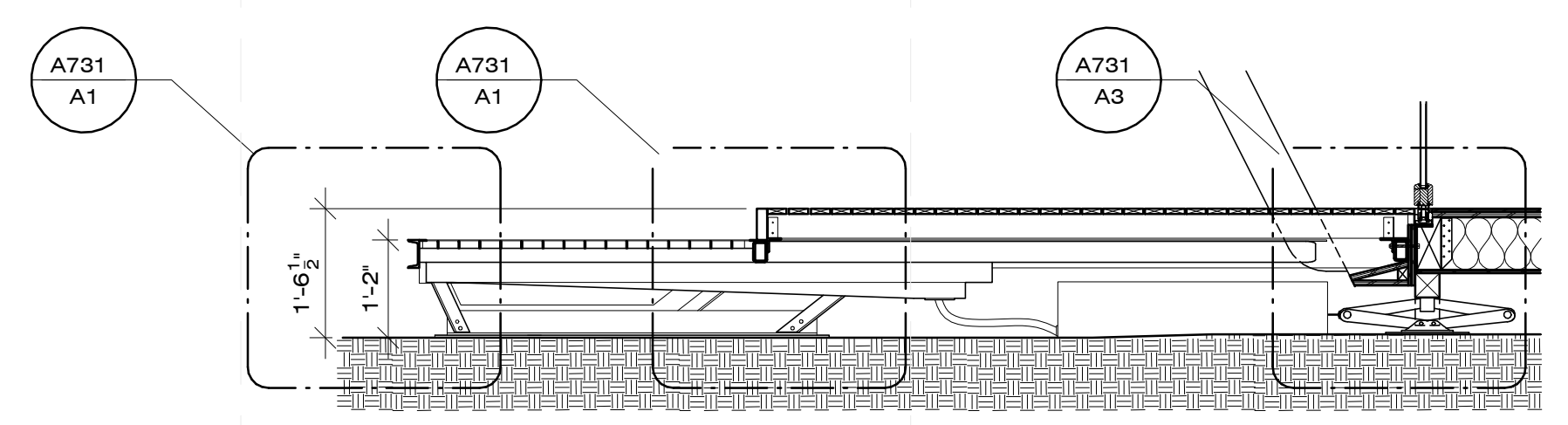
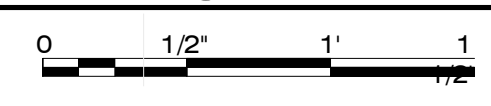
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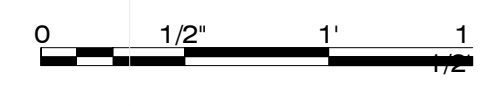
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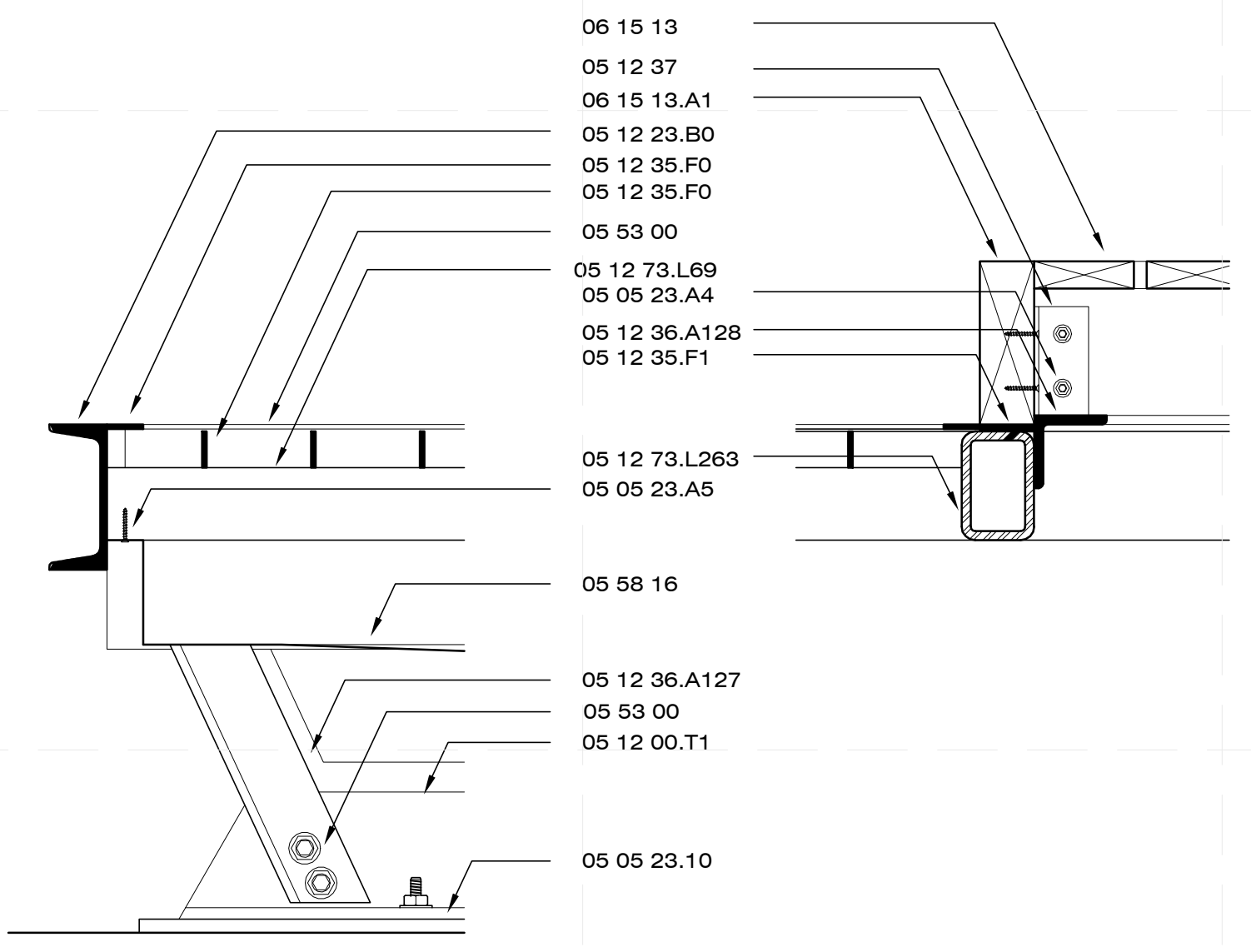
C1 DECK PLANKING
1/2" = 1'-0"



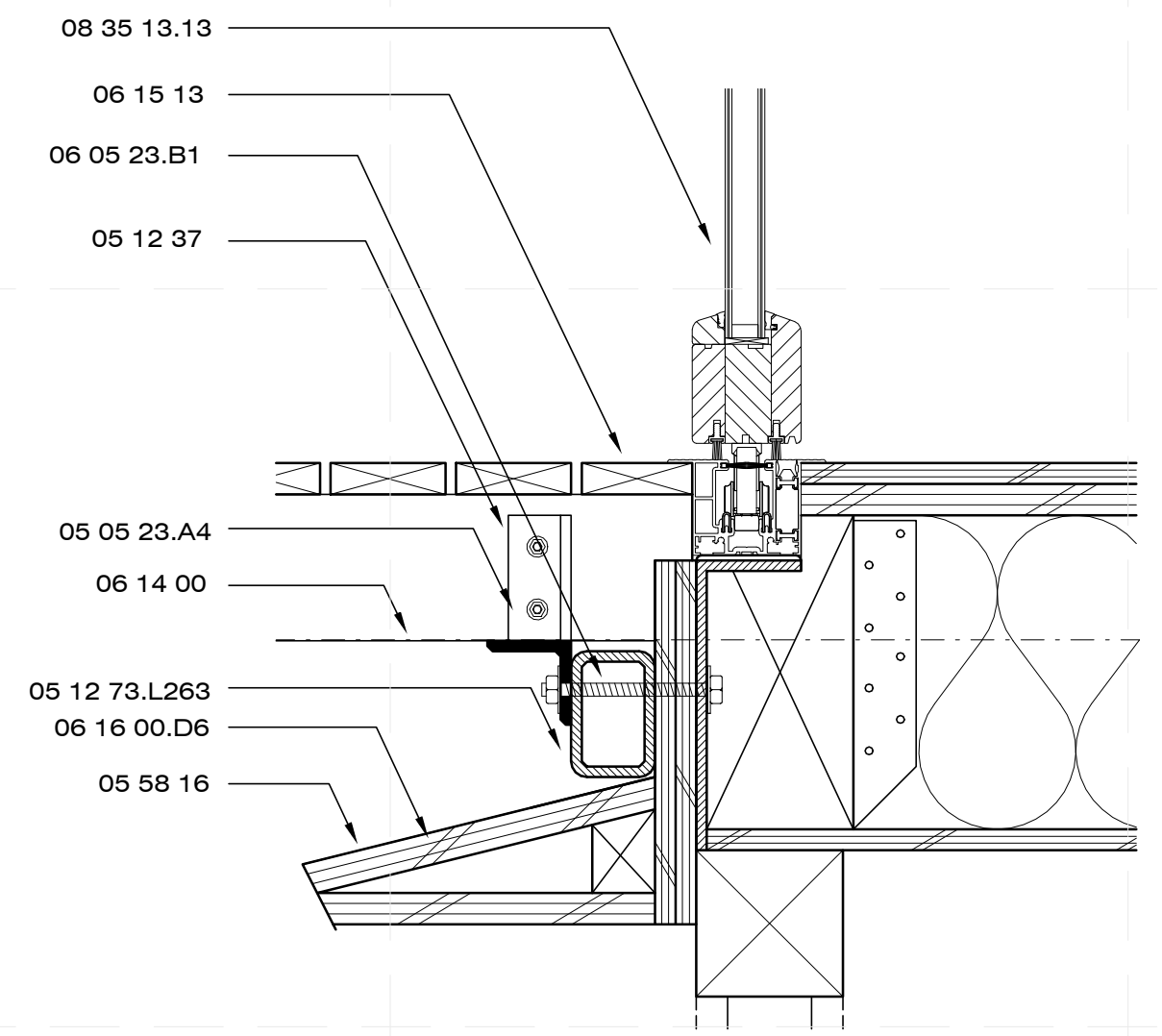
C4 DECK SECTION
1/2" = 1'-0"



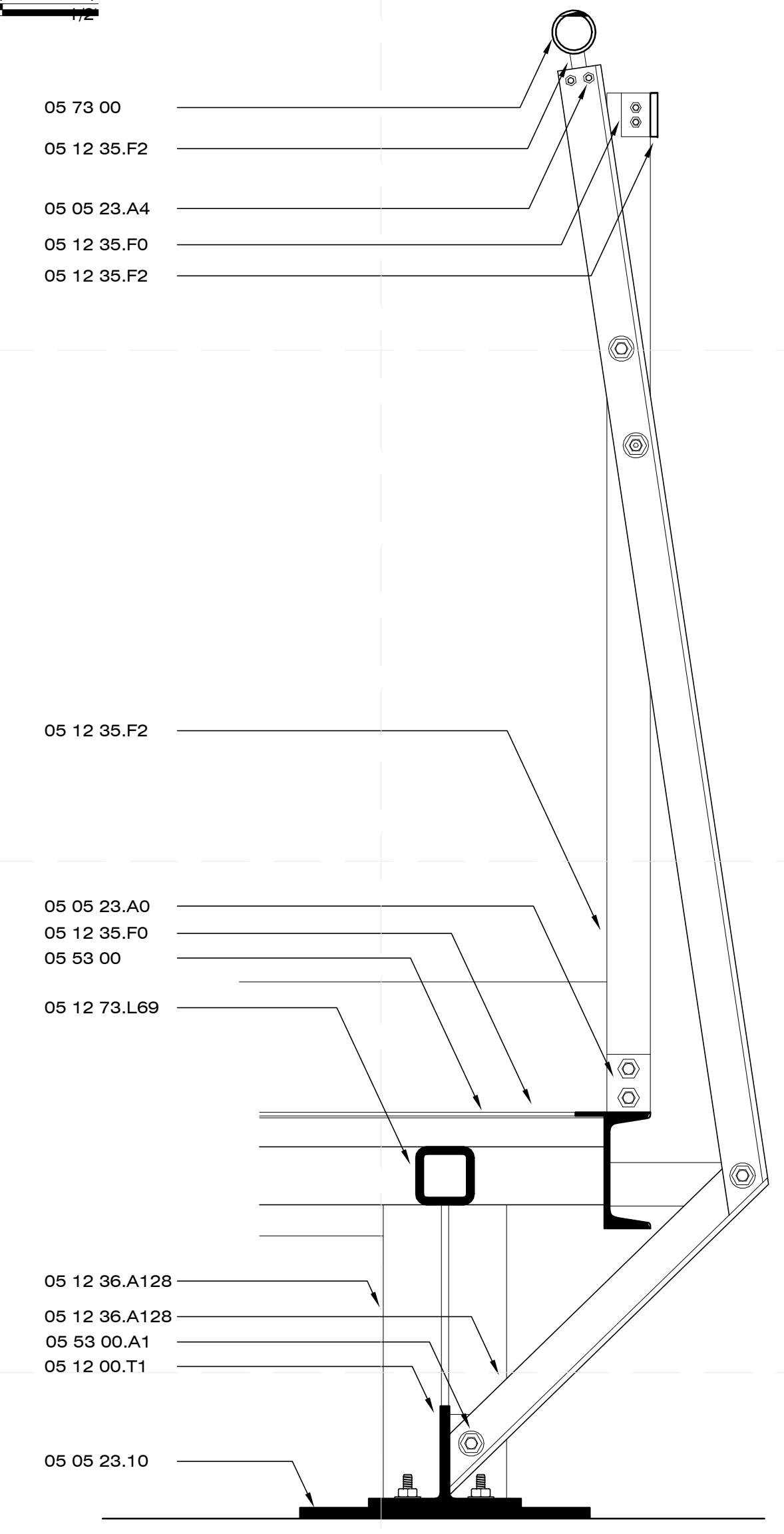
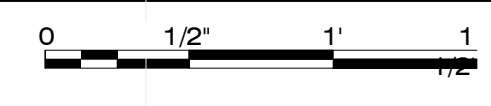
- 05 73 00
- 05 12 35.F2
- 05 05 23.A4
- 05 12 35.F0
- 05 12 35.F2



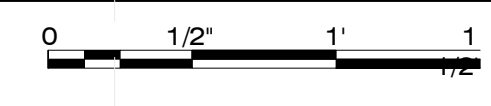
A1 DECK DETAIL
3" = 1'-0"



A3 DECK DETAIL
3" = 1'-0"



A5 DECK DETAIL
3" = 1'-0"



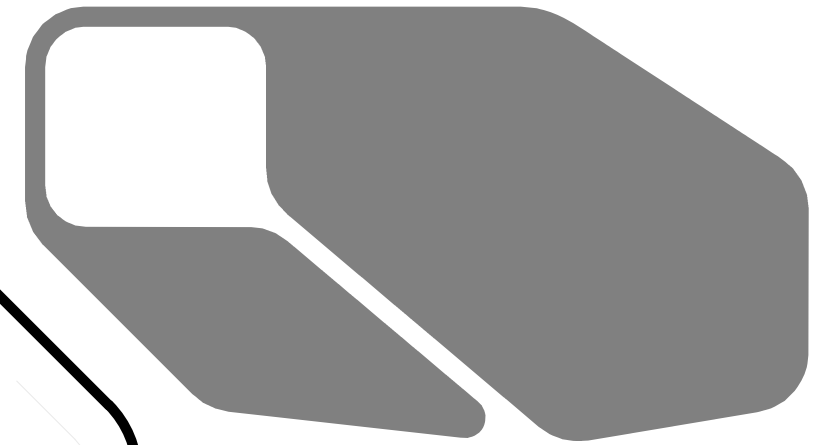
GENERAL SHEET NOTES

SHEET NOTES

REFERENCE KEYNOTES

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 - 05 05 23.A2 1/2" A307 BOLT
 - 05 05 23.A3 3/8" A307 BOLT
 - 05 05 23.A4 3/16" A307 BOLT
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 - 05 12 00.T1 STEEL WT 5-1/4"x3-1/2"x1/4"
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 - 05 12 73.L69 STEEL TUBE 2"x2"x1/4"
 - 05 12 73.L263 STEEL TUBE 2"x3"x1/4"
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 - 05 58 16 SHEET METAL
 - 05 73 00 DECK RAILING
- DIVISION 06 - WOODS, PLASTICS, AND COMPOSITIONS**
- 06 05 23.B1 3/8" 3.5" LAG SCREW
 - 06 14 00 2X6 PRESSURE TREATED
 - 06 15 13.A1 2X6 REDWOOD
 - 06 15 13.A2 CEDAR DECK BOARDS
 - 06 16 00.D6 PLYWOOD- EXTERIOR WALL SHEATING

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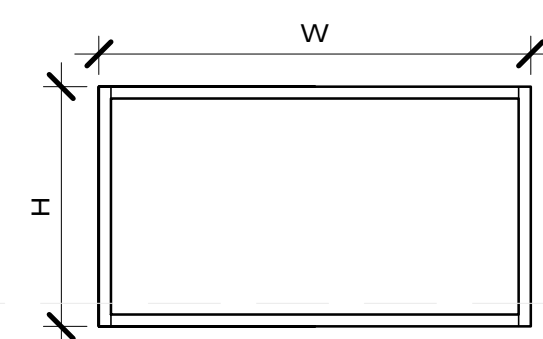
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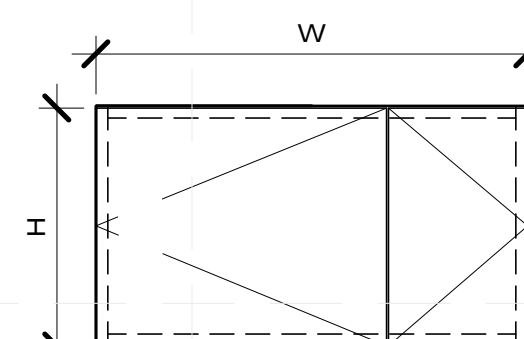
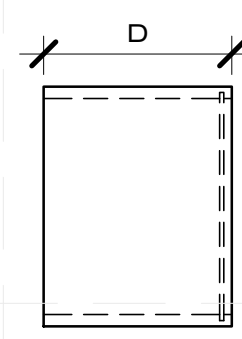
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CASEWORK DETAILS

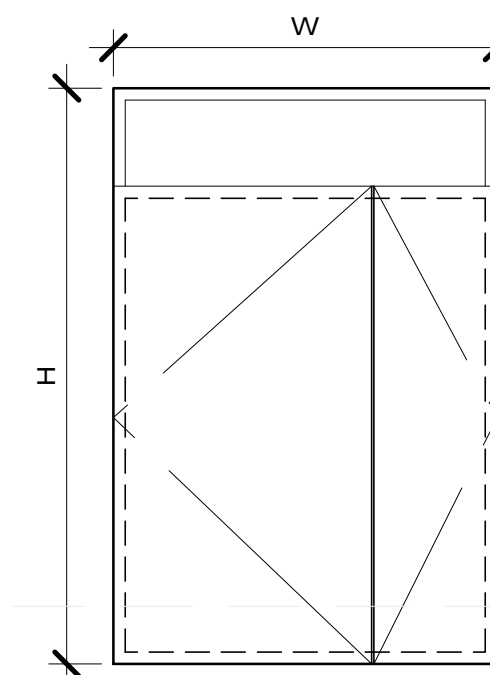
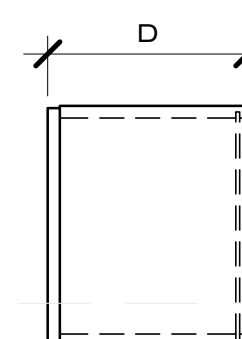
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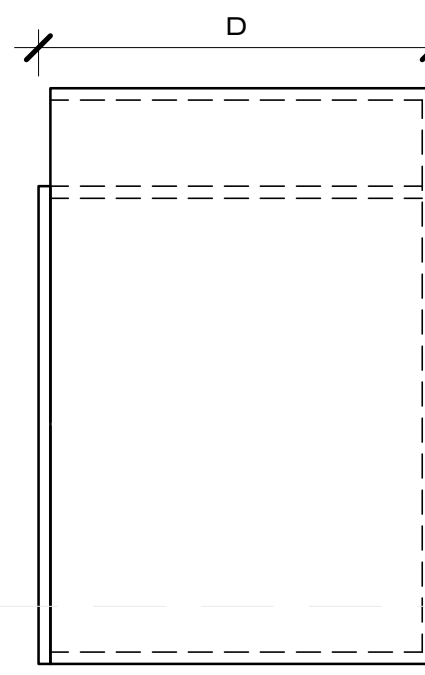
TYPE 1



TYPE 2



TYPE 3



CASEWORK SCHEDULE

MARK	COUNT	TYPE	MANUFACTURER	MODEL	SIZE			DESCRIPTION	FINISH		
					WIDTH(W)	HEIGHT(H)	DEPTH(D)		DOOR	FRAME	COMPONENTS
101	22	2	CABPARTS	W4215	42"	15"	11-3/4"	STOCK DOUBLE DOOR	3/4" PLYWOOD	3/4" PLYWOOD	BLUM SOFT-CLOSE 110 ° BLUMOTION CLIP TOP HINGE
102	9	2	CABPARTS	W3030	30"	30"	11-3/4"	STOCK DOUBLE DOOR	3/4" PLYWOOD	3/4" PLYWOOD	BLUM SOFT-CLOSE 110 ° BLUMOTION CLIP TOP HINGE
103	9	1	CABPARTS	W3015	30"	15"	11-3/4"	STOCK DOUBLE DOOR	3/4" PLYWOOD	3/4" PLYWOOD	BLUM SOFT-CLOSE 110 ° BLUMOTION CLIP TOP HINGE
104	2	2	CABPARTS	W2115	21"	15"	11-3/4"	STOCK DOUBLE DOOR	3/4" PLYWOOD	3/4" PLYWOOD	BLUM SOFT-CLOSE 110 ° BLUMOTION CLIP TOP HINGE
105	2	1	CABPARTS	W4515	45"	15"	11-3/4"	STOCK DOUBLE DOOR	3/4" PLYWOOD	3/4" PLYWOOD	BLUM SOFT-CLOSE 110 ° BLUMOTION CLIP TOP HINGE
106	7	2	CABPARTS	W3315	33"	15"	11-3/4"	STOCK DOUBLE DOOR	3/4" PLYWOOD	3/4" PLYWOOD	BLUM SOFT-CLOSE 110 ° BLUMOTION CLIP TOP HINGE
107	2	3	CABPARTS	TS3084-21	30"	84"	11-3/4"	STOCK DOUBLE DOOR	3/4" PLYWOOD	3/4" PLYWOOD	BLUM SOFT-CLOSE 110 ° BLUMOTION CLIP TOP HINGE
108	1	2	CABPARTS	W3312	33"	12"	20-3/4"	STOCK DOUBLE DOOR	3/4" PLYWOOD	3/4" PLYWOOD	BLUM SOFT-CLOSE 110 ° BLUMOTION CLIP TOP HINGE
109	1	2	CABPARTS	custom	33"	22"	20-3/4"	STOCK DOUBLE DOOR	3/4" PLYWOOD	3/4" PLYWOOD	BLUM SOFT-CLOSE 110 ° BLUMOTION CLIP TOP HINGE
110	1	2	CABPARTS	custom	42"	22"	11-3/4"	STOCK DOUBLE DOOR	3/4" PLYWOOD	3/4" PLYWOOD	BLUM SOFT-CLOSE 110 ° BLUMOTION CLIP TOP HINGE
111	3	2	CABPARTS	custom	26-1/2"	10-1/4"	11-3/4"	STOCK DOUBLE DOOR	3/4" PLYWOOD	3/4" PLYWOOD	BLUM SOFT-CLOSE 110 ° BLUMOTION CLIP TOP HINGE
112	1	2	CABPARTS	custom	23"	10-1/4"	11-3/4"	STOCK DOUBLE DOOR	3/4" PLYWOOD	3/4" PLYWOOD	BLUM SOFT-CLOSE 110 ° BLUMOTION CLIP TOP HINGE
113	2	2	CABPARTS	custom	33"	12"	6"	STOCK DOUBLE DOOR	3/4" PLYWOOD	3/4" PLYWOOD	BLUM SOFT-CLOSE 110 ° BLUMOTION CLIP TOP HINGE
114	3	1	CABPARTS	W3615	33"	15"	11-3/4"	STOCK DOUBLE DOOR	3/4" PLYWOOD	3/4" PLYWOOD	BLUM SOFT-CLOSE 110 ° BLUMOTION CLIP TOP HINGE

GENERAL SHEET NOTES

SHEET NOTES

REFERENCE KEYNOTES



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STAIRS DETAIL

A-761

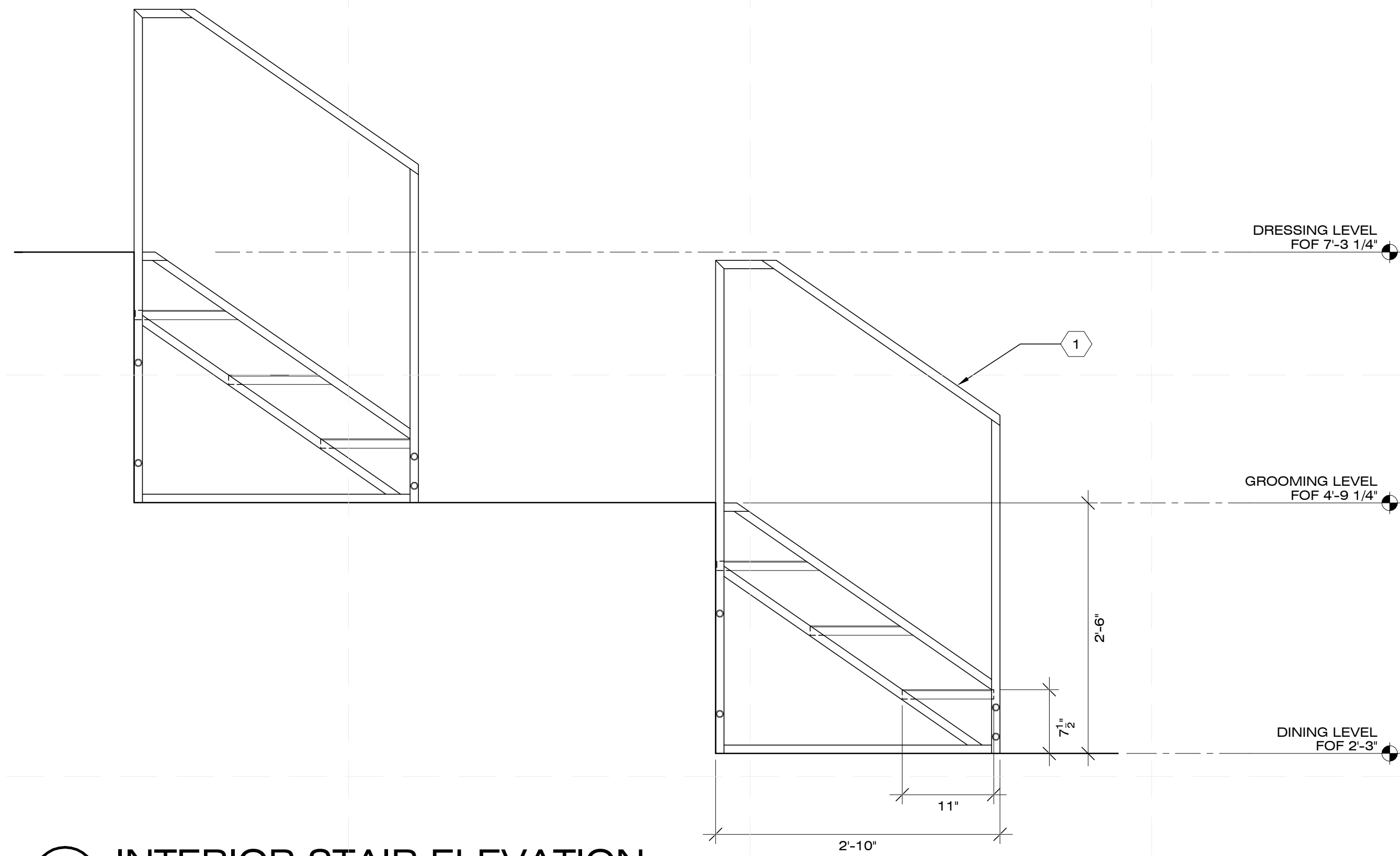
GENERAL SHEET NOTES

SHEET NOTES

1. STEEL STAIRCASE SAME FOR BOTH LEVELS

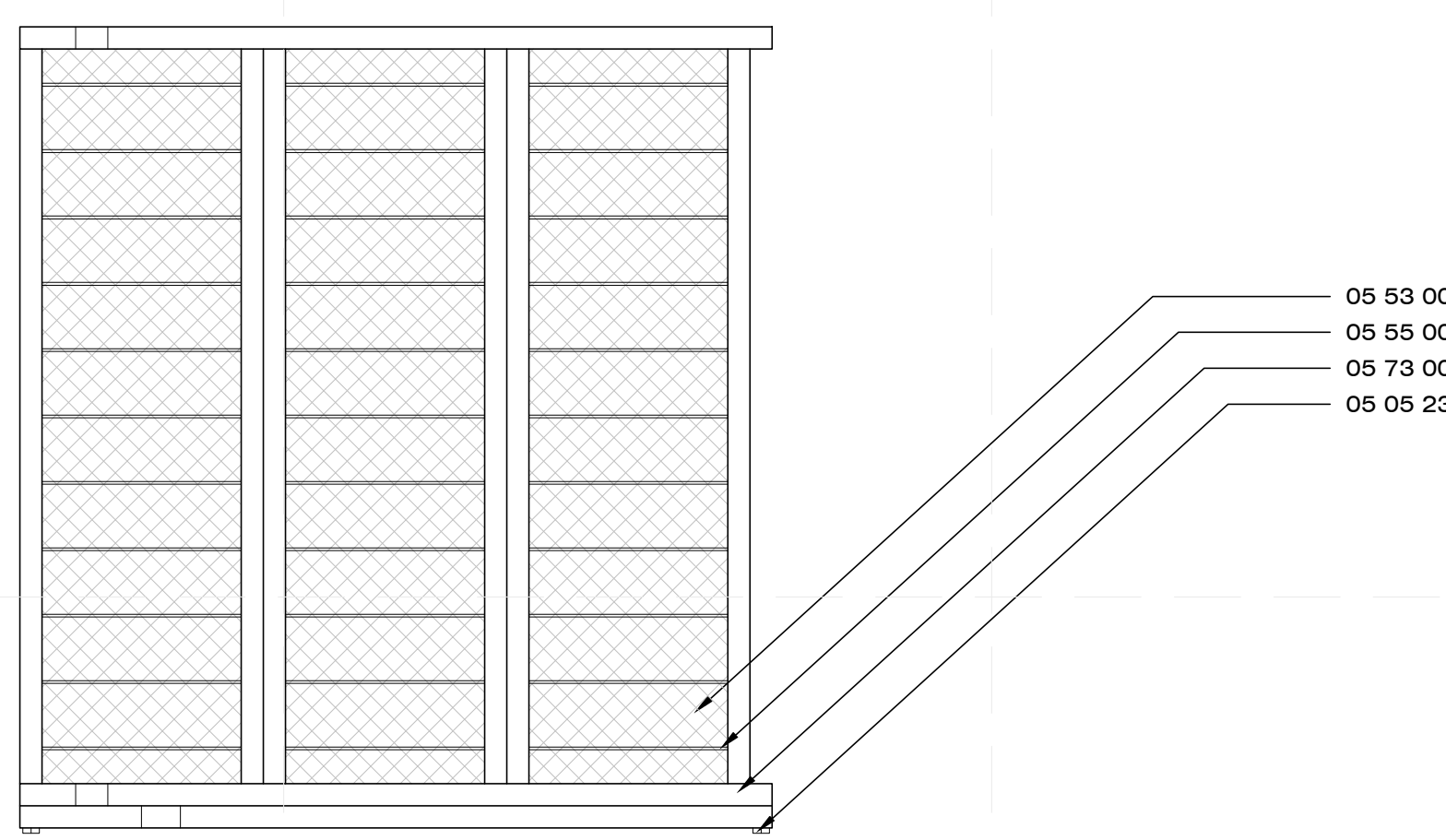
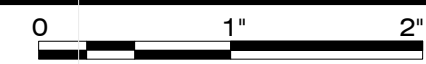
REFERENCE KEYNOTES

- DIVISION 05 - METALS
- 05 05 23 METAL FASTENING
 - 05 53 00 METAL GRATINGS
 - 05 55 00 METAL FABRICATIONS
 - 05 73 00 METAL RAILINGS



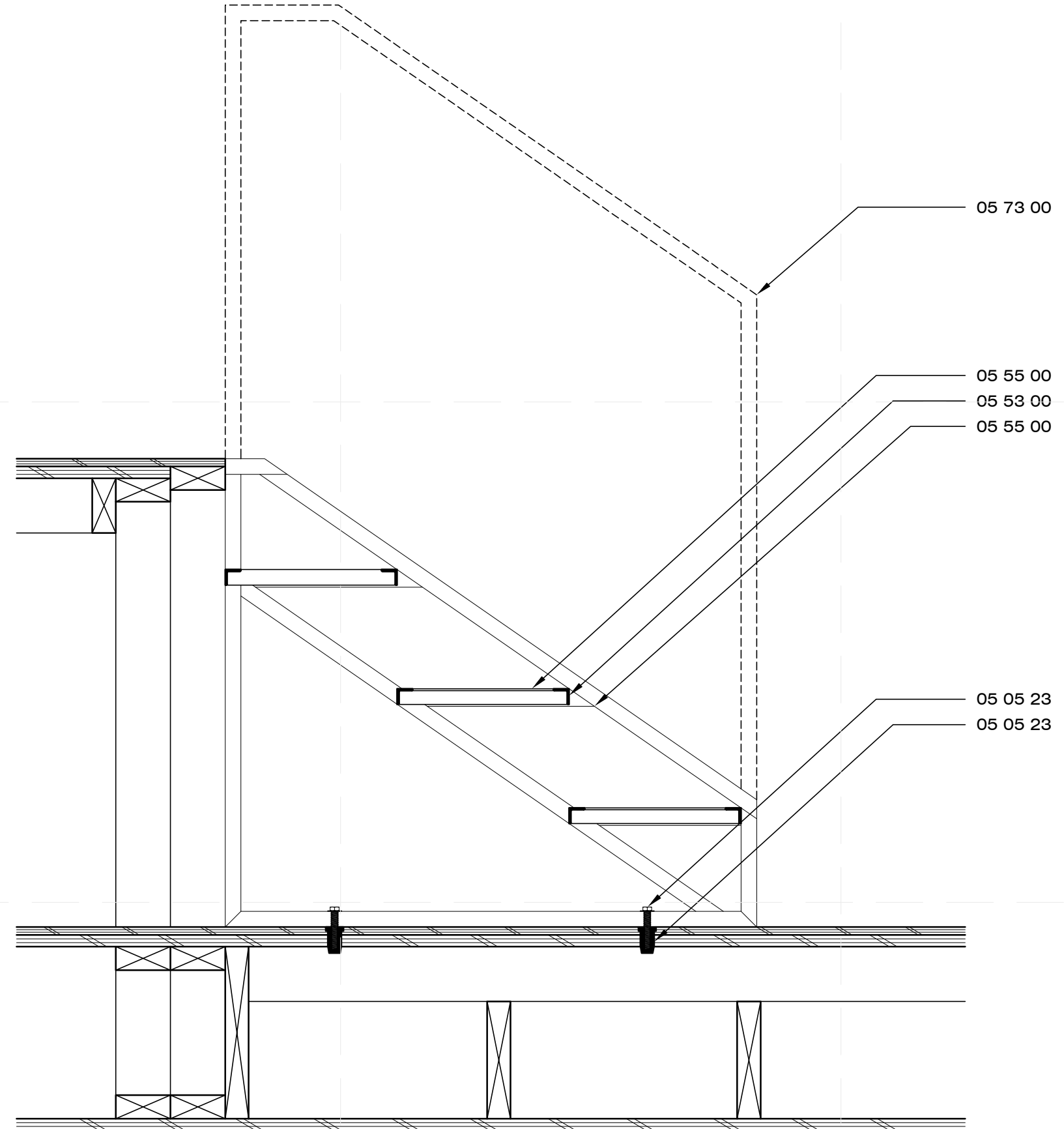
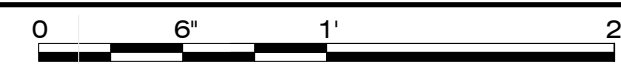
C1 INTERIOR STAIR ELEVATION

1" = 1'-0"



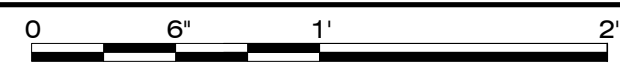
A1 STAIR PLAN

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



A4 STAIR SECTION

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



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WATER UTILITY UNIT

A-771

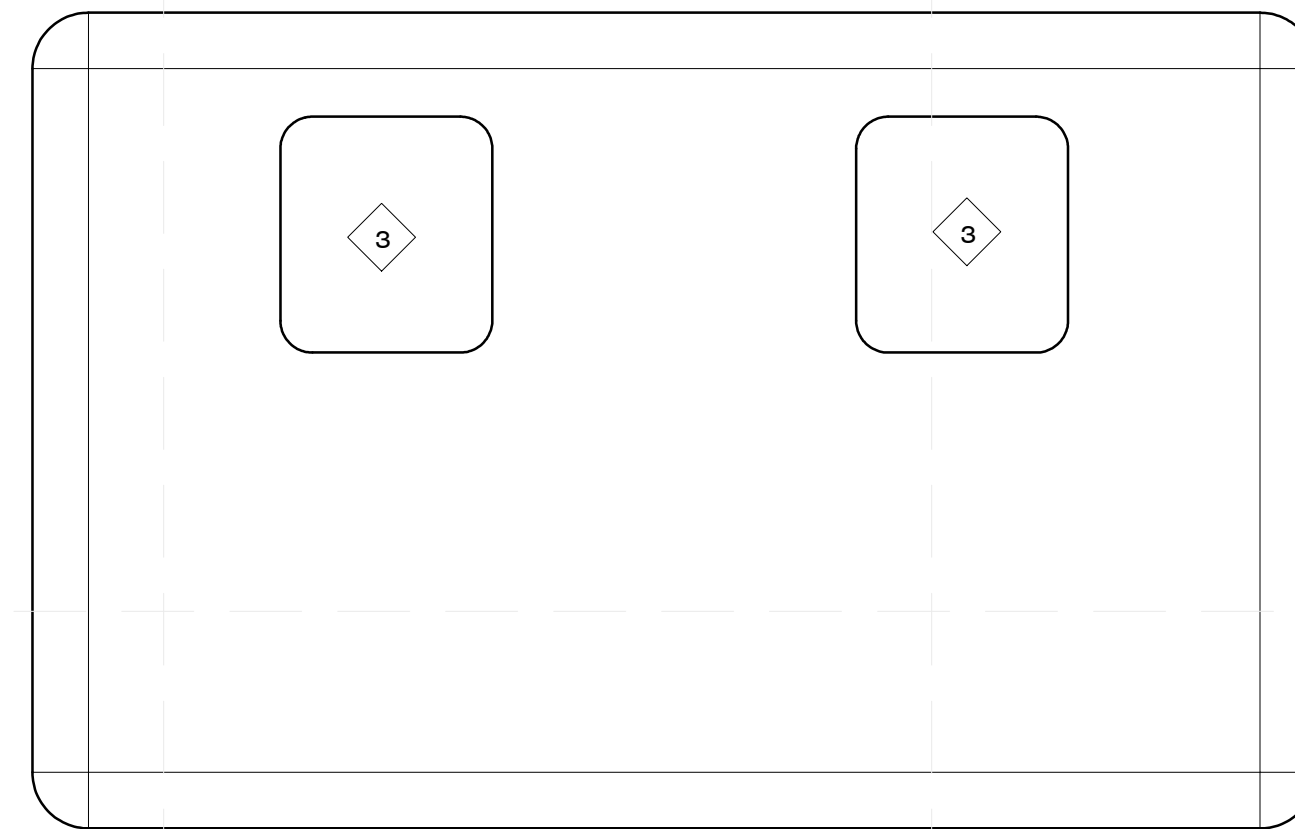
GENERAL SHEET NOTES

1. DRAWING OF EXTERIOR SKIN IS NOTIONAL NOT ACTUAL.
2. GRID 'B' DENOTES CHANGE IN SLOPE OF ROOF.
3. GRID 'C.1' DENOTES THE AXIS OF ROTATION FOR CANTILEVER EXTERIOR ENVELOPE.
4. GRID '2' DENOTES THE AXIS OF MODULAR SPLIT.
5. ELEVATION DATUM MEASURES FROM THE HIGHEST POINT OF GRADE WITHIN PROPERTY LINE.
6. DIMENSIONS SHOWN TO FOF U.O.N.

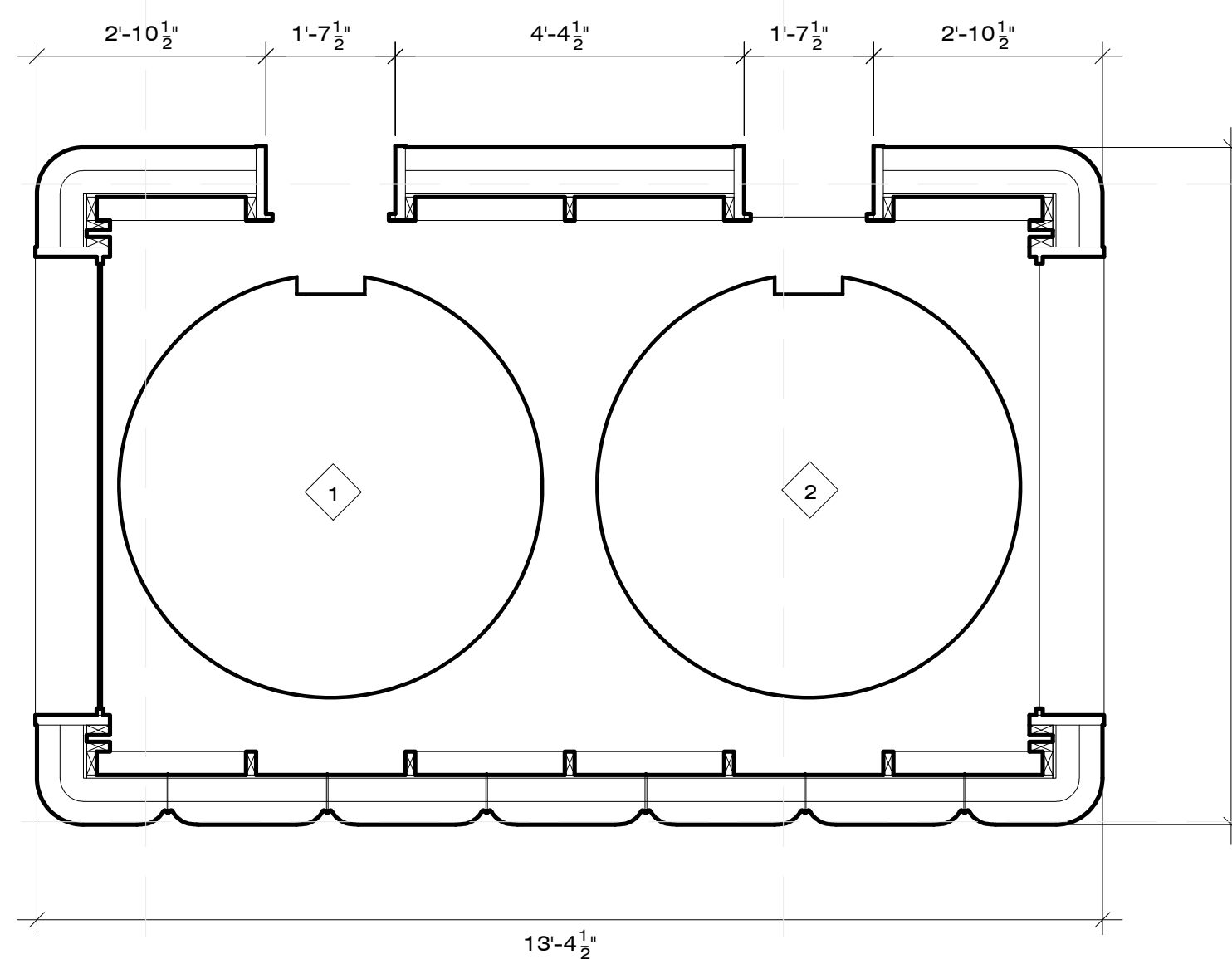
SHEET NOTES

1. GREYWATER TANK
2. MUNICIPAL SUPPLY TANK
3. ACCESS HATCH

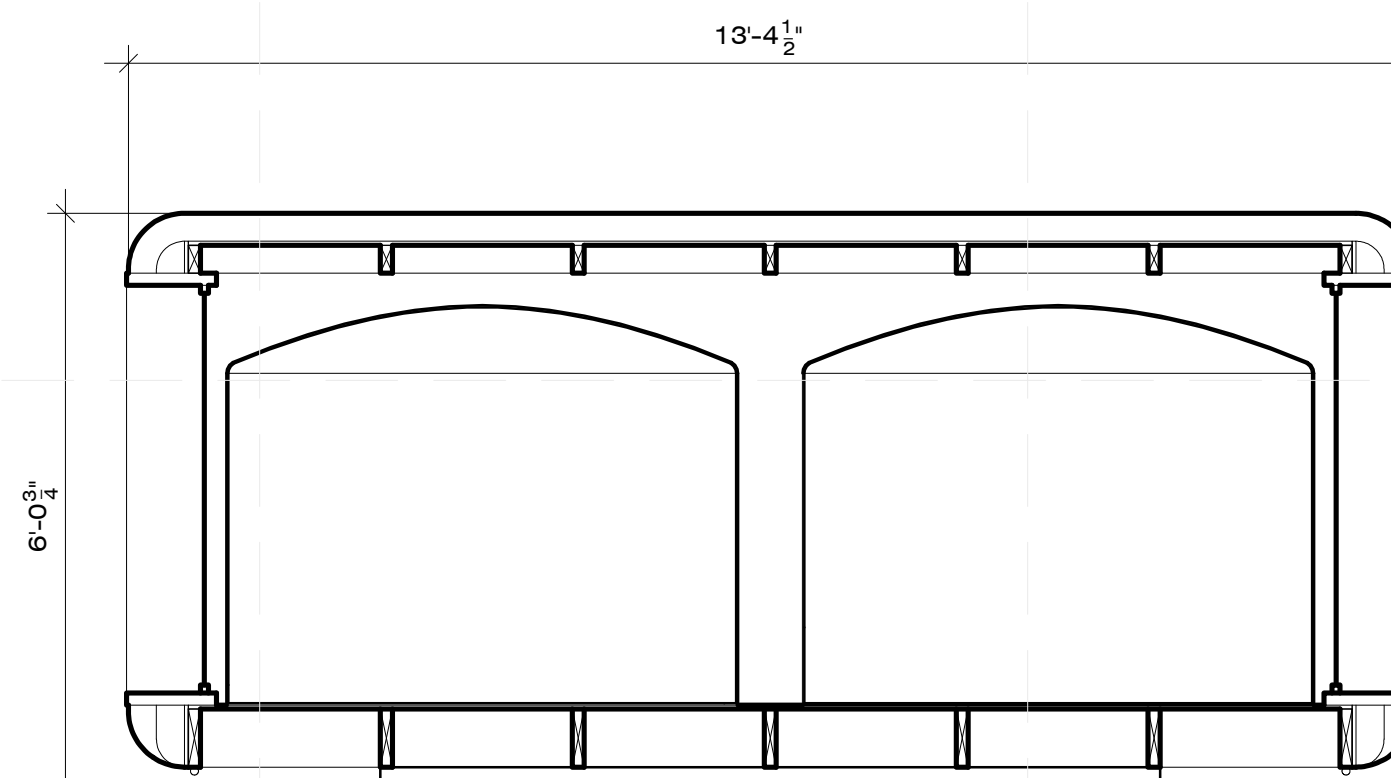
REFERENCE KEYNOTES



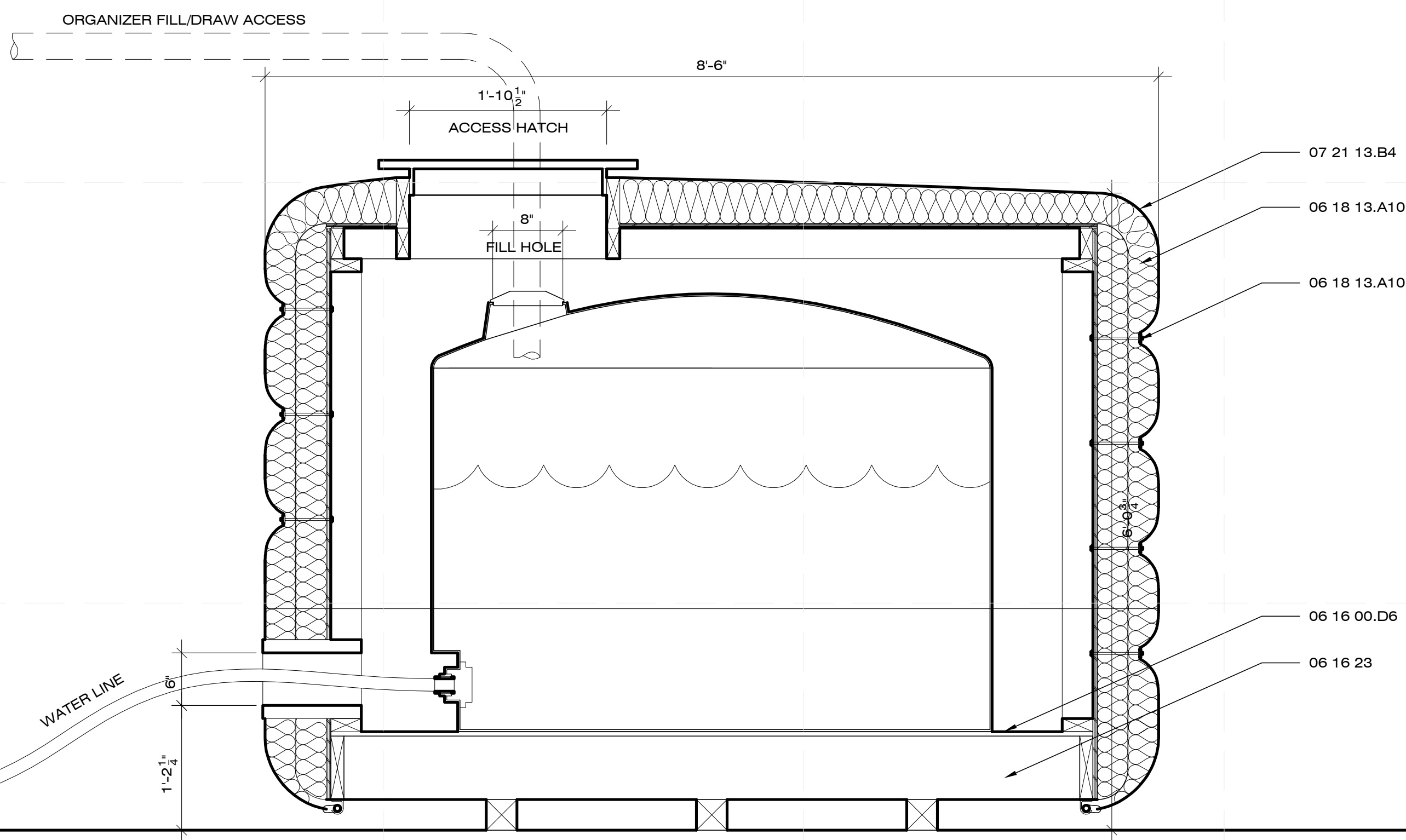
D4 OVERHEAD PLAN
1/2" = 1'-0" 0 2 4 8



B4 PLAN
1/2" = 1'-0" 0 2 4 8



A4 SECTION
1/2" = 1'-0" 0 2 4 8



A1 SECTION
1" = 1'-0" 0 2 4 8

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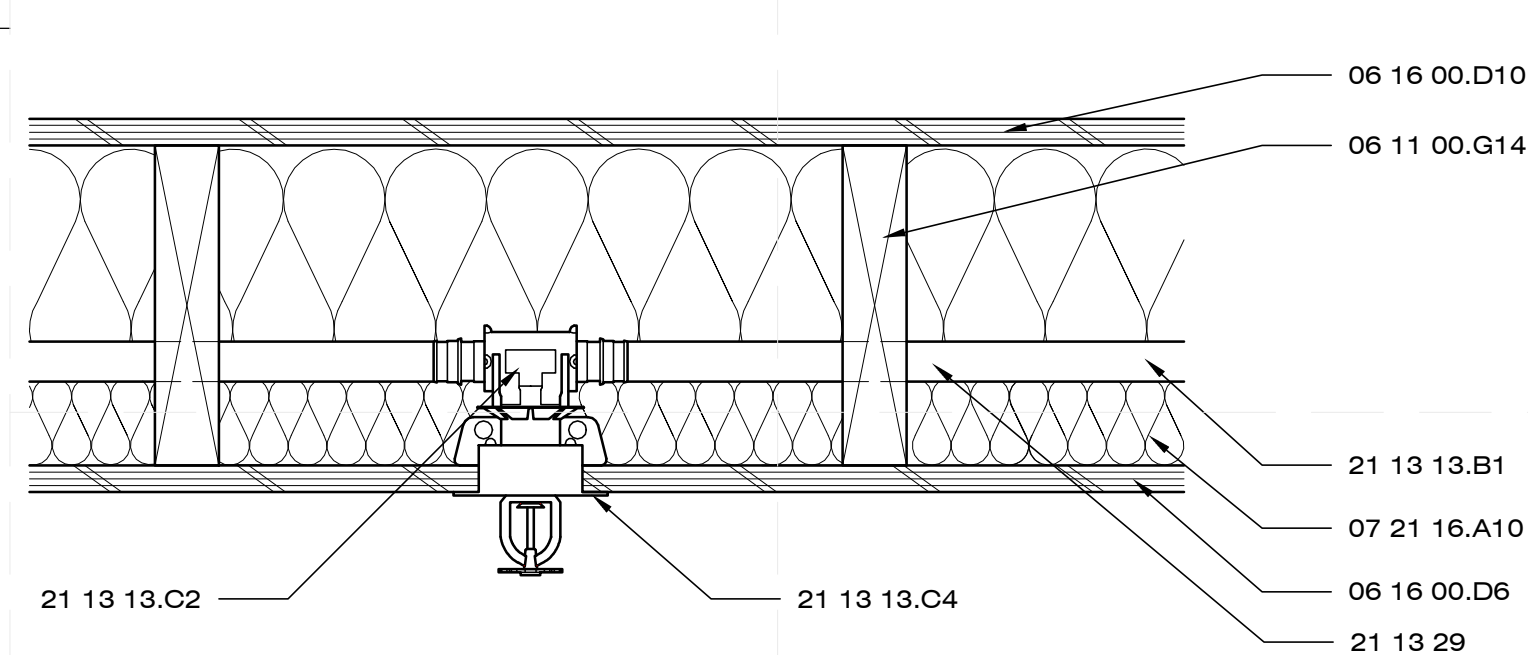
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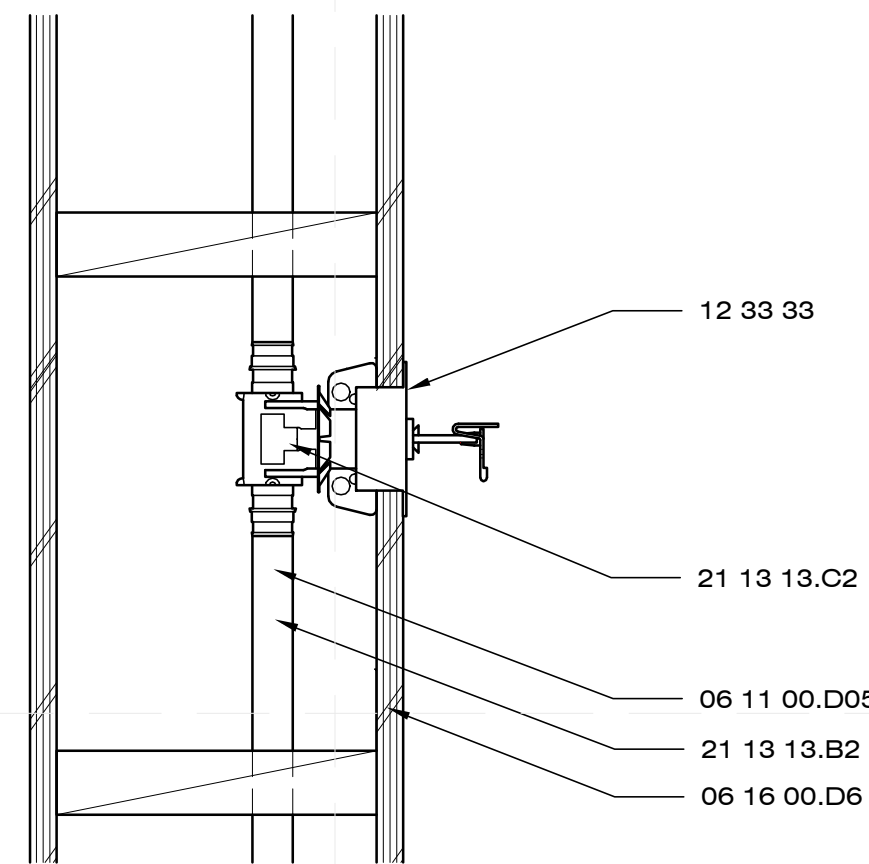
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FIRE DETECTION AND SUPPRESSION

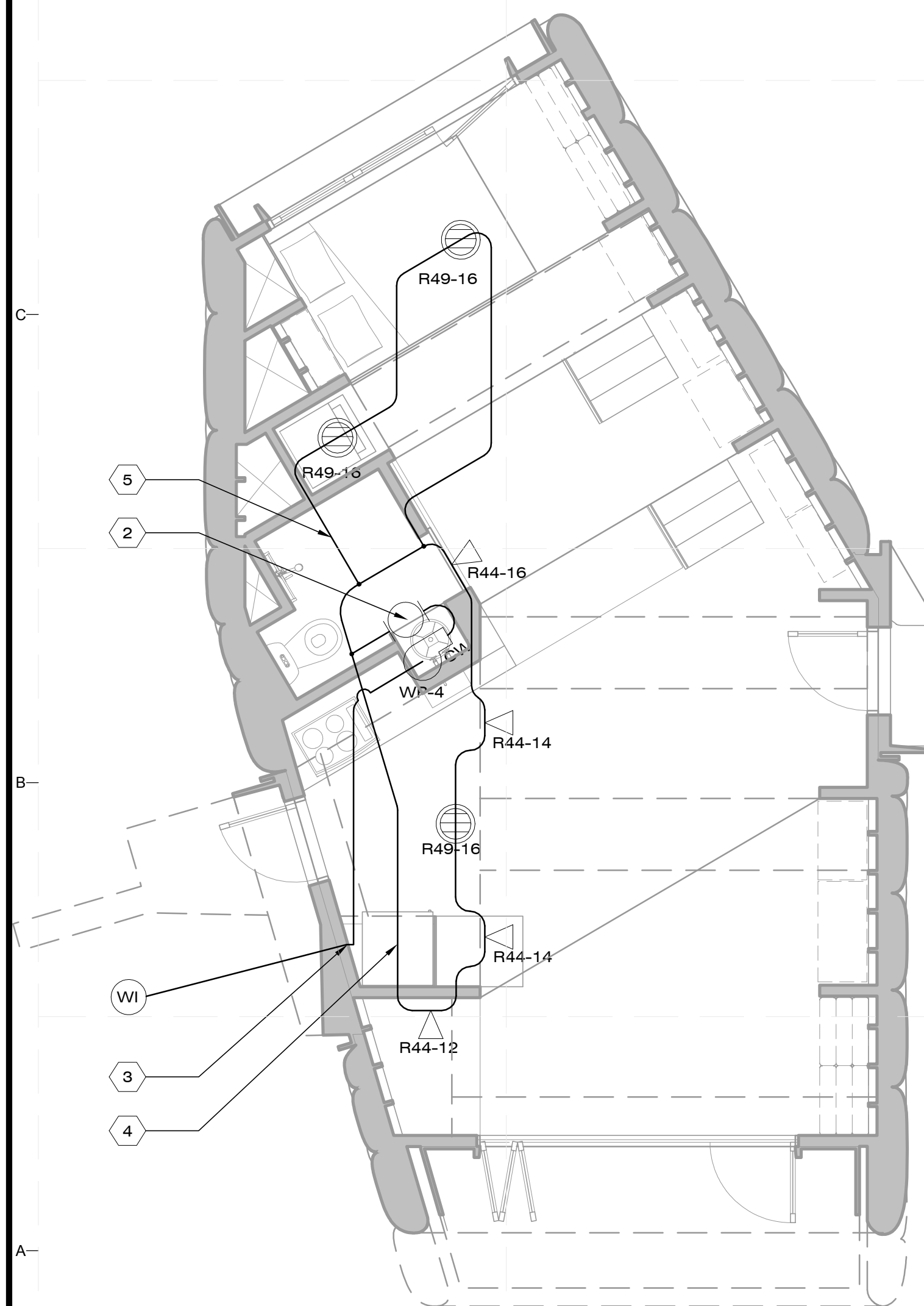
F-101



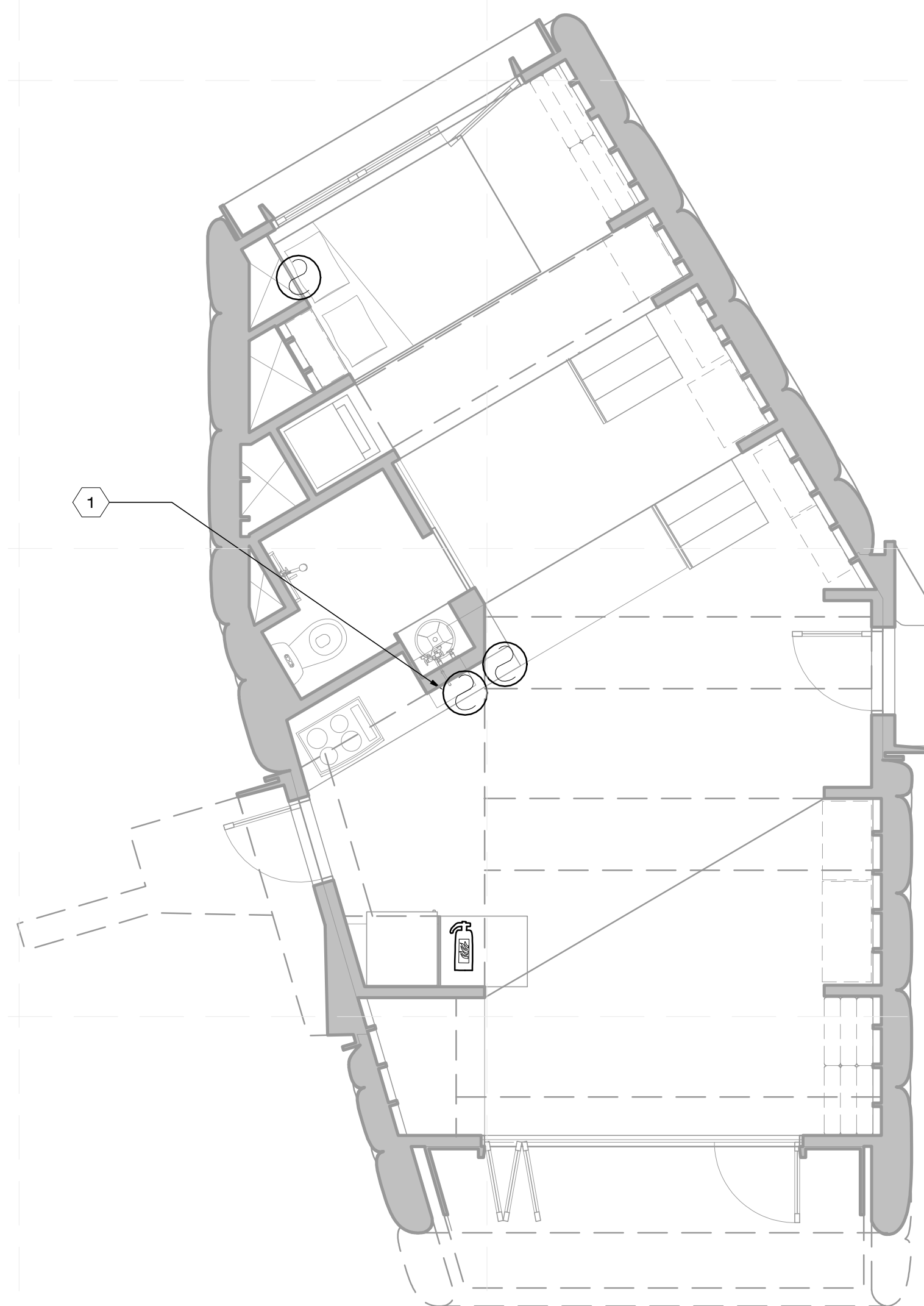
D1 SPRINKLER DETAIL (PENDANT)
6" = 1'-0"



D3 SPRINKLER DETAIL (SIDEWALL)
6" = 1'-0"



B1 SPRINKLER PLAN
1/4" = 1'-0"



B3 SMOKE DETECTOR PLAN
1/4" = 1'-0"

GENERAL SHEET NOTES

1. SPRINKLER SHOULD BE COORDINATED AND INSTALLED SUCH THAT THERE IS NO OBSTRUCTION IN ITS SPRAY PATTERN. OTHERWISE ADDITIONAL SPRINKLERS ARE REQUIRED.
2. SPACING NOT TO EXCEED 20'

SHEET NOTES

1. SMOKE DETECTOR LOCATED IN MECHANICAL ROOM ABOVE.
2. S.1 FIRE SPRINKLER MAIN SHUT-OFF VALVE.
3. 1" SUPPLY TO FIRE LOOP
4. 1" LOOP
5. 3/4" LOOP

LEGEND

- 28 31 46 SMOKE DETECTOR
- 05 12 69.K6 2" STEEL PIPE
- 05 14 13 2" ALUMINUM TEE, 2" ALUMINUM ANGLE
- 21 05 00 FIRE EXTINGUISHER LOCATION
- 21 13 13.A2 RELIABLE F1-R49F1-R49 RECESSED PENDANT SPRINKLER K=4.9, 155F°, 7/16" ORIFICE, MAX. SPACING 16' x 16' SPRINKLER HEAD DEMAND: 13GPM @ 7.04
- 21 13 13.A1 RELIABLE F1-R44-<F1-R44 RECESSED SIDEWALL SPRINKLER K=4.4, 155F°, 3/8" ORIFICE, MAX. SPACING 12' x 12' SPRINKLER HEAD DEMAND: 12GPM @ 7.05 4'-6" DEFLECTOR
- 21 13 13.A1 RELIABLE F1-R44-<F1-R44 RECESSED SIDEWALL SPRINKLER K=4.4, 155F°, 3/8" ORIFICE, MAX. SPACING 16' x 16' SPRINKLER HEAD DEMAND: 16GPM @ 13.3 4'-6" DEFLECTOR
- 21 13 13.A1 RELIABLE F1-R44-<F1-R44 RECESSED SIDEWALL SPRINKLER K=4.4, 155F°, 3/8" ORIFICE, MAX. SPACING 14' x 14' SPRINKLER HEAD DEMAND: 14.1GPM @ 70.2 4'-6" DEFLECTOR

REFERENCE KEYNOTES

- DIVISION 05 - METALS**
 - 05 12 69.K6 2" STEEL PIPE
 - 05 14 13 2" ALUMINUM TEE, 2" ALUMINUM ANGLE
- DIVISION 06 - WOODS, PLASTICS, AND COMPOSITES**
 - 06 11 00.G14 FRAMING- RAFTERS
 - 06 16 00.D6 1/2" PLYWOOD
 - 06 16 00.D10 PLYWOOD- UNDERSIDE AND ROOF SHEATHING
 - 06 05 23.J29 SIMPSON HU28 JOIST HANGER
- DIVISION 07 - THERMAL AND MOISTURE PROTECTION**
 - 07 21 16.A10 BATT INSULATION
- DIVISION 21 - FIRE SUPPRESSION**
 - 21 13 13.A1 HORIZONTAL SIDEWALL SPRINKLERS
 - 21 13 13.A2 HORIZONTAL PENDANT SPRINKLERS
 - 21 13 13.B1 3/4" PIPE FOR SPRINKLER SYSTEM
 - 21 13 13.B2 1" PIPE FOR SPRINKLER SYSTEM
 - 21 13 13.A2 HORIZONTAL PENDANT SPRINKLERS
 - 21 13 13.C2 FIRE SPRINKLER ADAPTER

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DOMESTIC WATER SUPPLY

P-102

GENERAL SHEET NOTES

1. THE CENTRIFUGAL PUMP PROVIDES PRESSURIZED MUNICIPAL WATER TO THE HOUSE AS WELL AS THE FIRE SPRINKLER SYSTEM.
2. COLD SUPPLY WATER GOES THROUGH THE WATER TO WATER HEAT EXCHANGER AND GET PREHEATED BY WASTE HEAT FROM THE OUTDOOR UNIT, WHICH IS STORED IN THE THERMAL STORAGE TANK UNTIL HOT WATER DRAWN.
3. PREHEATED WATER THEN GOES INTO THE DOMESTIC WATER TANK WHICH IS FURTHER HEATED TO THE DESIRED TEMPERATURE BY A HEAT PUMP BEFORE THE HOUSE SUPPLIED.
4. THE PRESSURE REGULATORS ON THE SUPPLY LINES MAKE SURE THAT WE HAVE THE SAME HOT/COLD WATER PRESSURE WHEN COMES OUT.

SHEET NOTES

1. WATERSUPPLY DISTRIBUTION IS ACHIEVED BY THE USE OF A MANIFOLD.
2. WATERSUPPLY DISTRIBUTION IS ACHIEVED BY THE USE OF A MANIFOLD.

SYMBOLS

	2-WAY BALL VALVE
	DOMESTIC HOT WATER HEAT PUMP
	DRINKING WATER SUPPLY
	DRAIN FLOOR
	DRINKING COLD WATER
	DRINKING HOT WATER
	IN-LINE CIRCULATING PUMP
	MUNICIPAL WATER SUPPLY TANK
	PENDANT HEAD SPRINKLERS
	SIDEWALL UPRIGHT HEAD SPRINKLERS
	THERMAL STORAGE TANK
	HEAT EXCHANGER
	MODULE SPLIT FITTING
	THERMOWELL
	REFRIGERANT LINE
	OUTDOOR UNIT
	INDOOR UNIT
	AIR ADMITTANCE VALVE

REFERENCE KEYNOTES

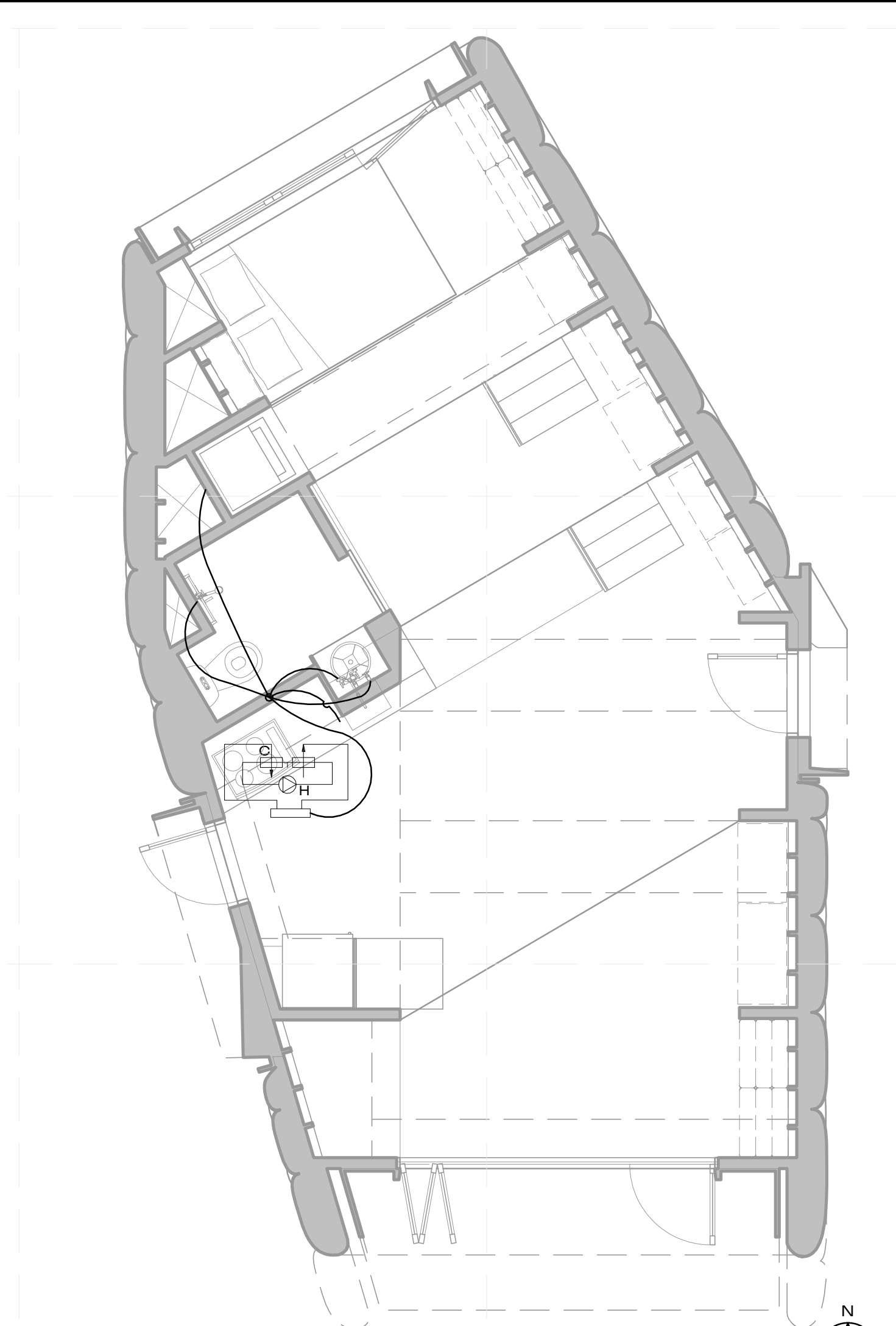
DIVISION 21 - FIRE SUPPRESSION
21 13 13 FIRE SPRINKLER HEAD
21 13 29 BACKFLOW PREVENTER

DIVISION 22 - PLUMBING
22 11 16 TYP 3/4" 2-WAY BALL VALVE
22 11 16.A PEX LINE (1/2", 3/4", 1")
22 11 23.A CENTRIFUGAL PUMP
22 11 23 CIRCULATING PUMP
22 12 23 MUNICIPAL WATER SUPPLY TANK
22 33 30.A DOMESTIC WATER TANK
22 33 30.B HEAT PUMP

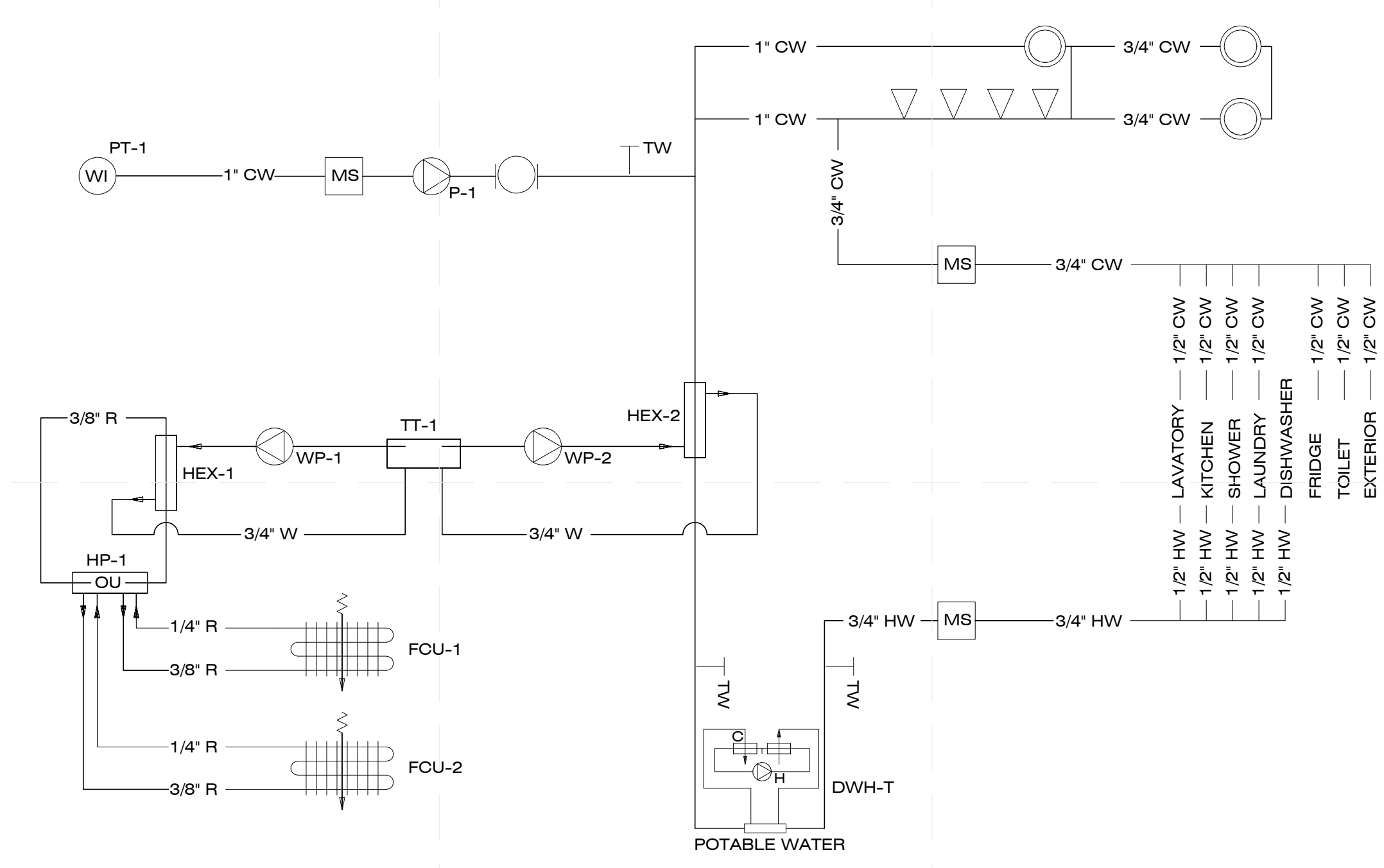
DIVISION 23 - HVAC
23 57 16.A DESUPERHEATER COIL
23 57 19.A LIQUID-LIQUID HEAT EXCHANGER
23 71 13.A THERMAL STORAGE TANK
23 81 26.21 OUTDOOR HVAC UNIT
23 81 26.22 INDOOR FANCOIL UNIT



C1 DOMESTIC COLD WATER
1/4" = 1'-0" 0 2 4 8'



C4 DOMESTIC HOT WATER
1/4" = 1'-0" 0 2 4 8'



A3 SUPPLY WATER SCHEMATIC
NTS

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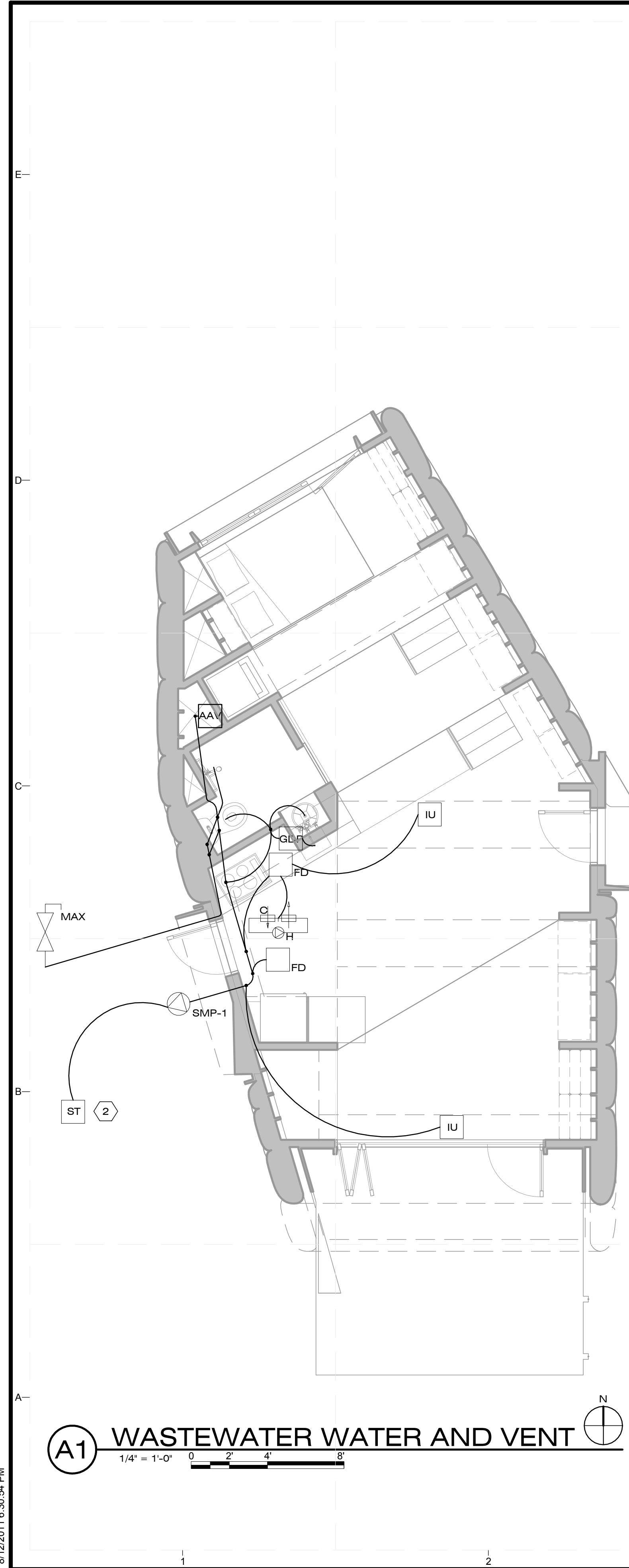
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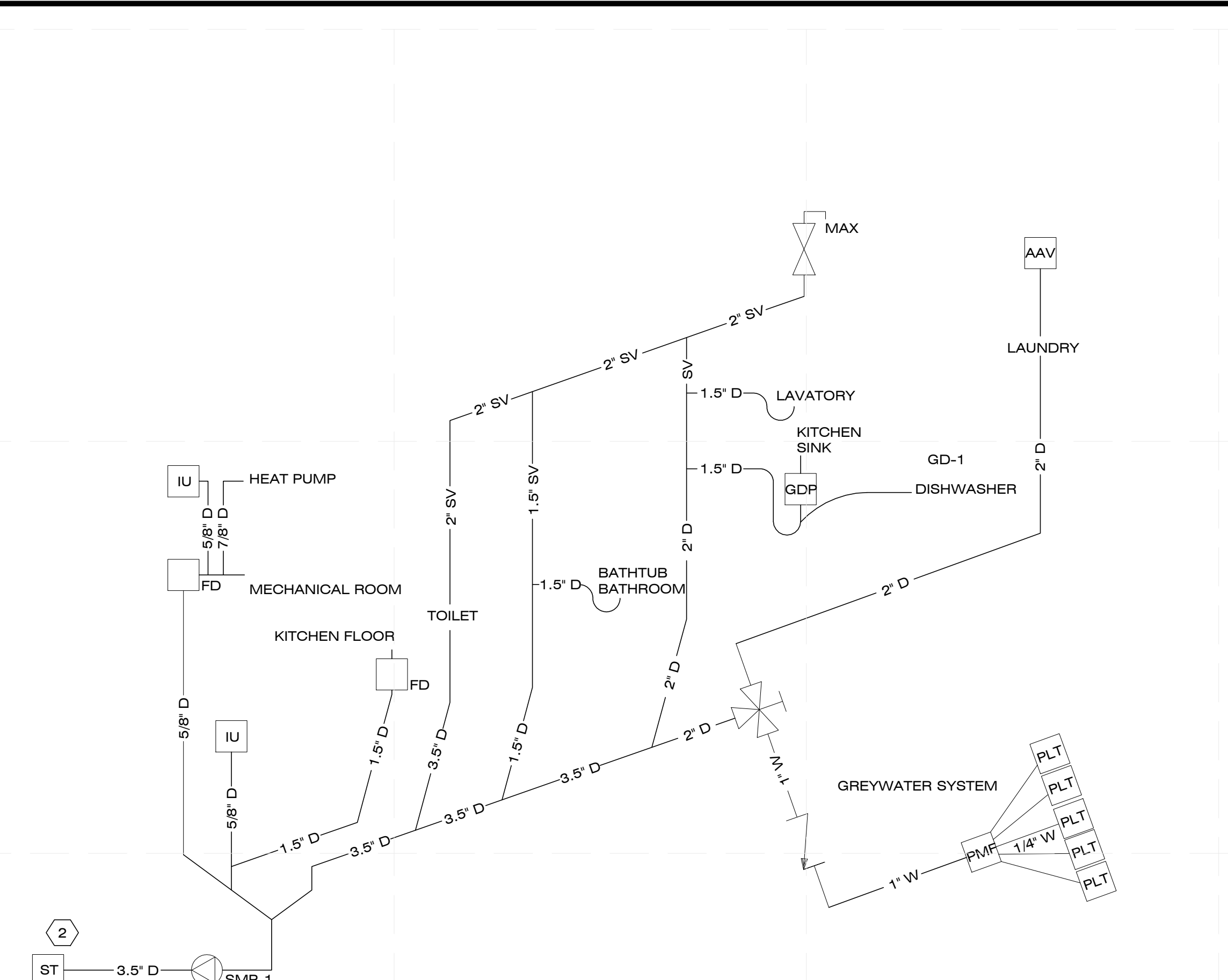
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DOMESTIC WASTEWATER AND GREYWATER SYSTEM

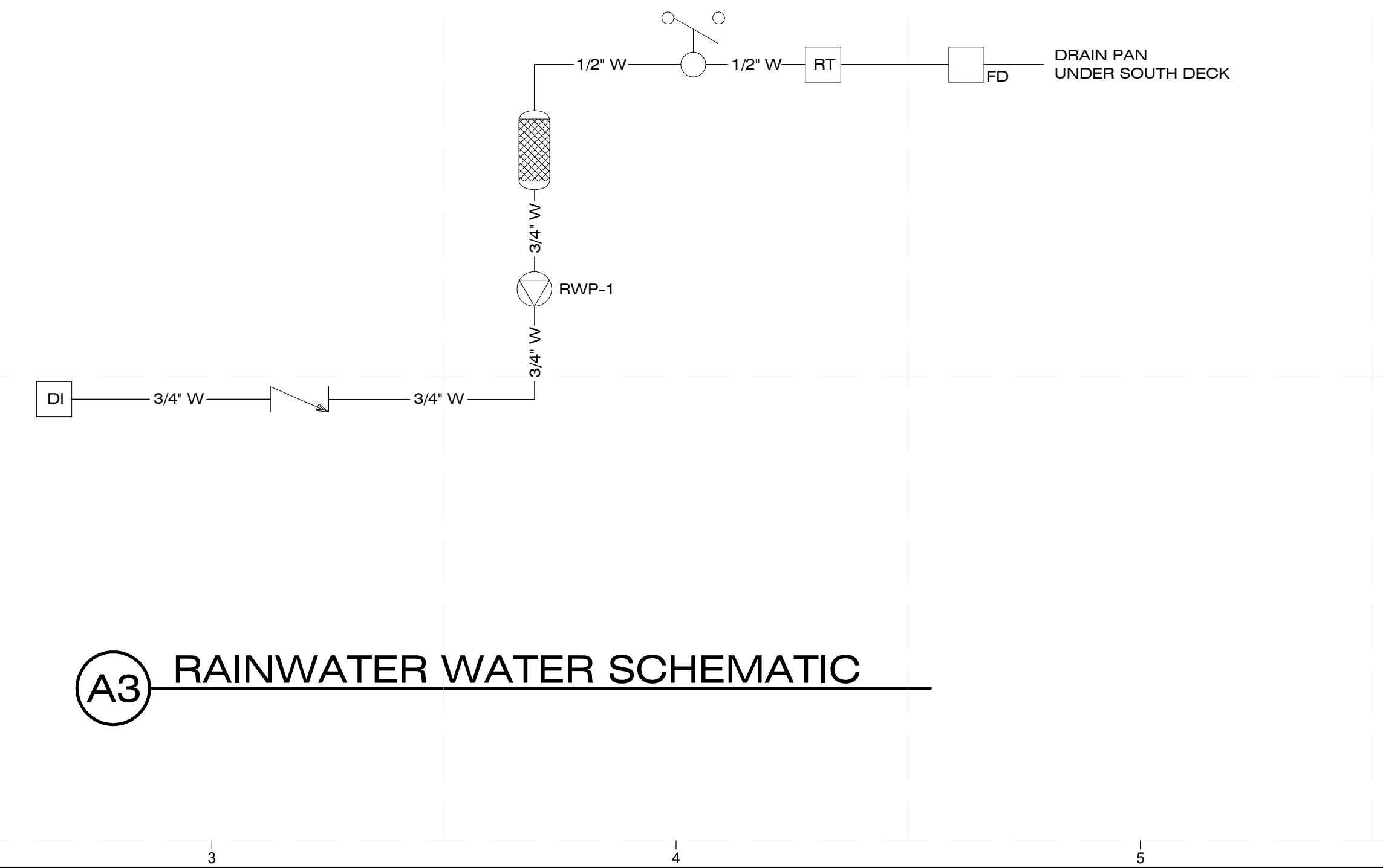
P-103



A1 WASTEWATER WATER AND VENT
1/4" = 1'-0" 0 2 4 8



C3 WASTEWATER / GREYWATER SCHEMATIC



A3 RAINWATER WATER SCHEMATIC

LEGEND

- CHECK VALVE
- DRAIN FLOOR
- DOMESTIC HOT WATER HEAT PUMP
- IN-LINE CIRCULATING PUMP
- 3-WAY DIVERTER VALVE
- NORMALLY OPEN FLOAT SWITCH
- Y MESH FILTER
- DRAIN LINE
- REFRIGERANT LINE
- WASTE LINE AND VENT
- WATER
- DRIP IRRIGATION
- PIPE MANIFOLD
- PLANTERS MODULE SPLIT FITTING
- WASTE WATER TANK
- INDOOR UNIT AIR ADMITTANCE VALVE
- DRIP IRRIGATION
- RAINWATER TANK
- GARBAGE DISPOSAL
- MANUAL AIR VENT

GENERAL SHEET NOTES

- THE CLOTHES WASHER, SHOWER, KITCHEN/BATHROOM SINKS AND DISH WASHER HAVE DRAINS CONNECT TO THE MAIN 3.5" DRAIN WHICH TAKES WASTE WATER TO THE WATER RETURN STORAGE TANK BY A SUMP PUMP.
- THE DISH WASHER DRAIN MERGES INTO THE KITCHEN SINK DRAIN BEFORE GOING TO THE MAIN DRAIN.
- THE MECHANICAL ROOM HAS A FLOOR DRAIN TO REMOVE ANY CONDENSATION FROM THE MECHANICAL ROOM TO THE WATER RETURN STORAGE TANK.
- THE FIRE SPRINKLER SYSTEM HAS A VALVE THAT CAN DRAIN THE SYSTEM TO THE WATER RETURN STORAGE TANK FOLLOWING THE REGULATIONS.

SHEET NOTES

- ALL THE AVS CONNECTIONS ARE ACHIEVED WITH APPROPRIATE AVS FITTINGS.
- STORAGE TANK SHALL NOT BE USED FOR LANDSCAPE WATERING

REFERENCE KEYNOTES

- DIVISION 21 - FIRE SUPPRESSION**
21 13 13 FIRE SPRINKLER HEAD
21 13 29 BACKFLOW PREVENTER
- DIVISION 22 - PLUMBING**
22 11 23.A CENTRIFUGAL PUMP
22 12 23.A MUNICIPAL WATER SUPPLY TANK
22 13 53.A WATER RETURN STORAGE TANK
22 13 53.B RAINWATER TANK
22 14 29.A SUMP PUMP WITHHOLDING TANK
22 33 30.A HEAT PUMP
22 33 30.A DOMESTIC WATER TANK

- DIVISION 32 - EXTERIOR IMPROVEMENTS**
32 82 00.A RAINWATER PUMP
32 84 00.B CHECK VALVE
32 84 00.C 3-WAY DIVERTER VALVE
32 84 00.D FLOAT SWITCH
32 84 00.E Y MESH FILTER
32 84 13 DRIP IRRIGATION

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PLUMBING SCHEDULE

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GENERAL SHEET NOTES

SHEET NOTES

REFERENCE KEYNOTES

FACILITY POTABLE WATER STORAGE

NAME	TYPE	MAKE	MODEL	MASTER FORMATCODE
PT-1	WATER SUPPLY TANK	ACE	A-VT0625-64	22 12 23
PT-2	WASTEWATER TANK	ACE	A-VT0625-64	22 13 53

WATER-BASED FIRE SUPPRESSION SYSTEMS

MARK	DESCRIPTION	MAKE	MODEL	MASTER FORMAT CODE
SW-1	PIPE FOR SPRINKLER SYSTEM	UPONOR	F1040750	21 13 13
SW-2	PIPE FOR SPRINKLER SYSTEM	UPONOR	F1041000	21 13 13
S-1	SPRINKLER HEAD	UPONOR	Q74900WH	21 13 13
S-2	SPRINKLER HEAD	UPONOR	Q74900WH	21 13 13
S-3	SPRINKLER HEAD	UPONOR	Q74900WH	21 13 13
S-4	SPRINKLER HEAD	UPONOR	Q74400WH	21 13 13
S-5	SPRINKLER HEAD	UPONOR	Q74400WH	21 13 13
S-6	SPRINKLER HEAD	UPONOR	Q74400WH	21 13 13
S-7	SPRINKLER HEAD	UPONOR	Q74400WH	21 13 13
SF-1	SPRINKLER FITTINGS	UPONOR	LF7707575	21 13 13
SF-2	SPRINKLER FITTINGS	UPONOR	LF7701010	21 13 13
MB-1	MOUNTING BRACKET	UPONOR	A7750700	21 13 13

PLUMBING EQUIPMENT

NAME	TYPE	MAKE	MODEL	MASTER FORMATCODE
PE-1	HEAT PUMP RETROFIT	AIRGENERATE	A7	22 33 30
E-2	DOMESTIC WATER HEATER	RHEEM	RHES PRO 40-2	22 33 30

PLUMBING FIXTURES

MARK	TYPE	MAKE	MODEL	MASTER FORMATCODE
PF-1	TOILET	CAROMA	609151AW/ABI	22 41 13
PF-3	LAVATORY BASIN	KOHLER	K-2388	22 41 16
PF-4	LAVATORY FAUCET	CHICAGO	293-XXRCF	22 41 39
PF-5	KITCHEN SINK FAUCET	CHICAGO	445-DJ13E1CP	22 41 39
PF-6	KITCHEN SINK BASIN	CUSTOM		22 41 16
PF-7	SHOWER HEAD	CHICAGO	151-CP	22 41 39
PF-8	SCALDING PREVENTION VALVE	KOHLER	K-304-UX	22 41 39
PF-10	BATH DRAIN	OATEY	42150	22 41 19
PF-11	BATH TUB	CUSTOM		22 41 19
PF-12	TUB SPOUT	CHICAGO	293-XXRCF	22 41 39
PF-13	SHOWER SPOUT	CHICAGO	629-LESSSPTCP	22 41 39
PF-14	KITCHEN DRAIN	SIOUX CHIEF	821-2APK	22 41 19
PF-15	BATH OVERFLOW DRAIN	WESTBRASS	WB79220CP	22 41 19
AAV-1	AIR ADMITTANCE VALVE	STUDOR	MINI-VENT	22 41 19

PLUMBING PIPING AND PUMPS

NAME	TYPE	MAKE	MODEL	MASTER FORMATCODE
PI-1	PIPING INSULATION	K-FLEX USA	6RXL048058	22 07 19
PI-2	PIPING INSULATION	K-FLEX USA	6RXL048078	22 07 19
PX-1	1/2" WHITE PEX	UPONOR	F1040500	22 11 16
PX-2	3/4" WHITE PEX	UPONOR	F1040750	22 11 16
PX-3	1/2" RED PEX	UPONOR	F2040500	22 11 16
PX-4	3/4" RED PEX	UPONOR	F2040750	22 11 16
P-1	CENTRIFUGAL PUMP	GRUNDFOS	MQ3-45	22 11 23
P-2	CIRCULAR PUMP	GRUNDFOS	59896832	22 11 23
SMP-1	SUMP PUMP TANK	LITTLE GIANT	505055	22 14 29

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HVAC EQUIPMENT AND DISTRIBUTION

M-101

GENERAL SHEET NOTES

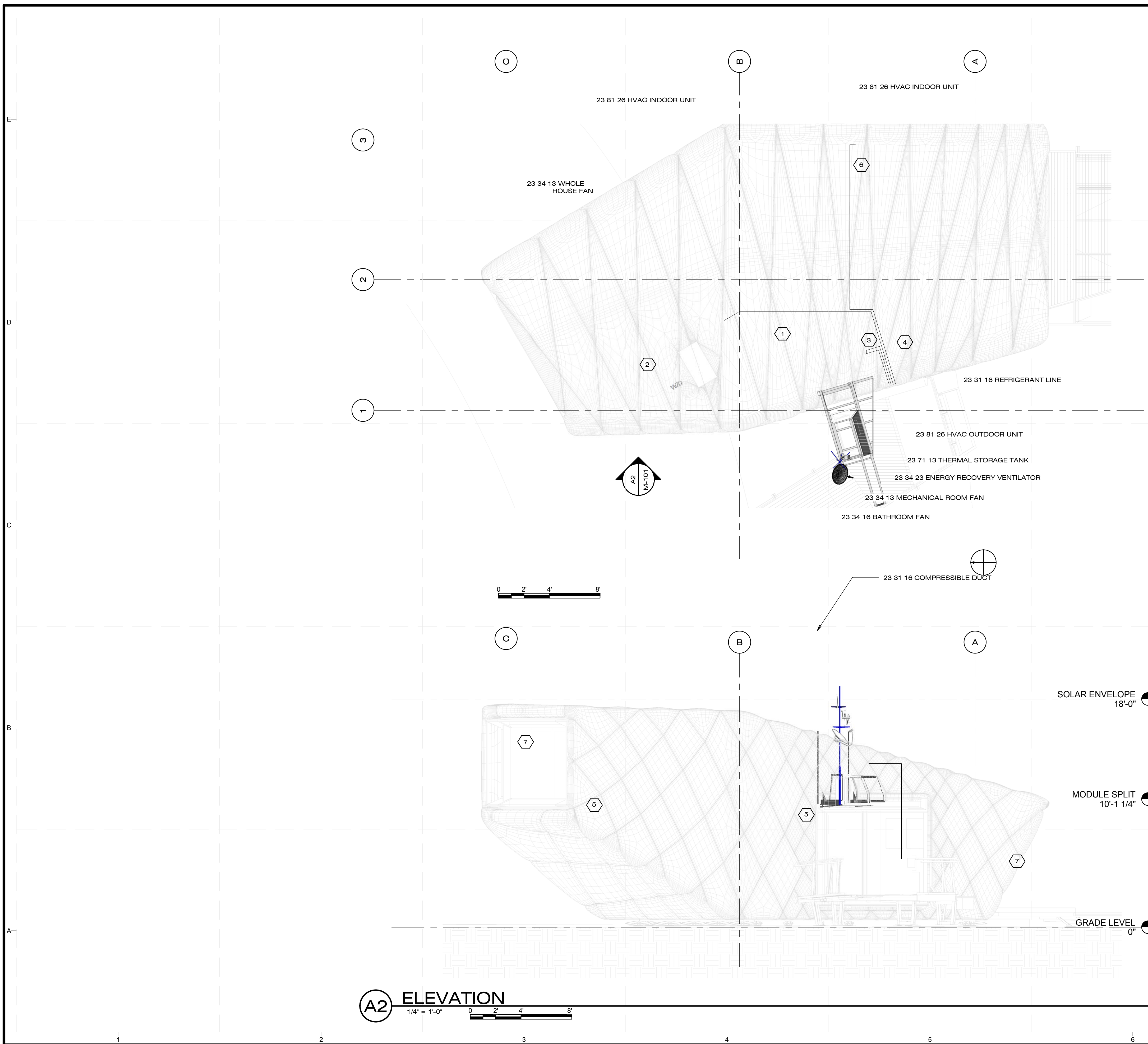
1. REFER TO M-601 FOR THE SCHEMATIC DIAGRAM.
2. REFER TO M-602 FOR EQUIPMENT SCHEDULES.
3. REFER TO M-901 FOR ISOMETRIC DRAWINGS.
4. FAN COIL UNITS, SUPPLY AIR DUCTS AND FANS, EXHAUST DUCTS AND FANS, AND HOT WATER EQUIPMENT ARE STORED IN REINFORCED SOFFITS ABOVE THE LIVING AREA.

SHEET NOTES

1. THE ERV (ENERGY RECOVERY VENTILATOR) DRAWS IN FRESH AIR AND EXHAUSTS STALE AIR WHILE EXCHANGING HEAT AND HUMIDITY BETWEEN THE TWO STREAMS.
2. THE WHOLE HOUSE FAN FORCES WARM HUMID AIR OUT OF THE HOUSE, IMPROVING INDOOR AIR QUALITY AND REDUCING COOLING LOADS.
3. A HEAT PUMP DUMPS EXCESS HEAT INTO THE THERMAL STORAGE TANK, WHICH IS USED TO PREHEAT DOMESTIC HOT WATER.
4. REFRIGERANT LINES CONNECT THE HVAC INDOOR UNITS TO THE OUTDOOR UNIT, ALLOWING REFRIGERANT TO FLOW BOTH TO AND FROM THE INDOOR UNITS.
5. RIGID DUCTS EXHAUST LINT AND GREASE FROM THE LAUNDRY AND KITCHEN, RESPECTIVELY.
6. ONE HVAC INDOOR UNIT IS MOUNTED ON THE EAST SIDE OF THE HOUSE TO PROMOTE EVEN AIR CIRCULATION THROUGHOUT THE ENTIRE SOUTH END OF THE HOUSE. REFRIGERANT AND ELECTRICAL LINES BETWEEN THE INDOOR AND OUTDOOR UNITS RUN INSIDE A BOX BEAM ACROSS THE CEILING.
7. LARGE APERTURES ON THE NORTH AND SOUTH SIDES OF THE HOUSE PROMOTE NATURAL VENTILATION THROUGH THE HOUSE. THE UPWARD-SLOPING SPACES OF THE HOUSE ENCOURAGE NATURAL CONVECTION AS A RESULT OF THE THERMAL CHIMNEY EFFECT.

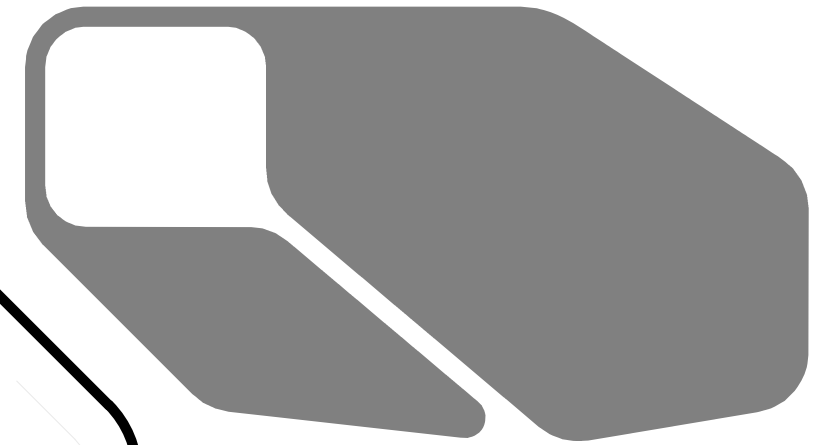
REFERENCE KEYNOTES

- 23 31 16 NONMETAL DUCTS
- 23 34 13 AXIAL HVAC FANS
- 23 34 16 CENTRIFUGAL HVAC FANS
- 23 34 23 HVAC POWER VENTILATORS
- 23 71 13 THERMAL HEAT STORAGE
- 23 81 26 SPLIT SYSTEM AIR-CONDITIONERS



A2 ELEVATION
1/4" = 1'-0"

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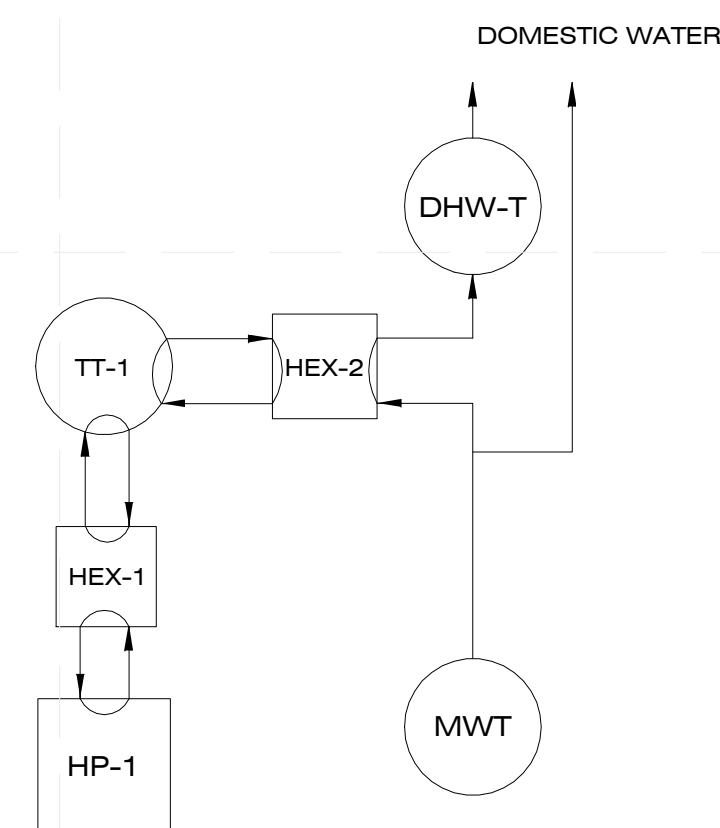
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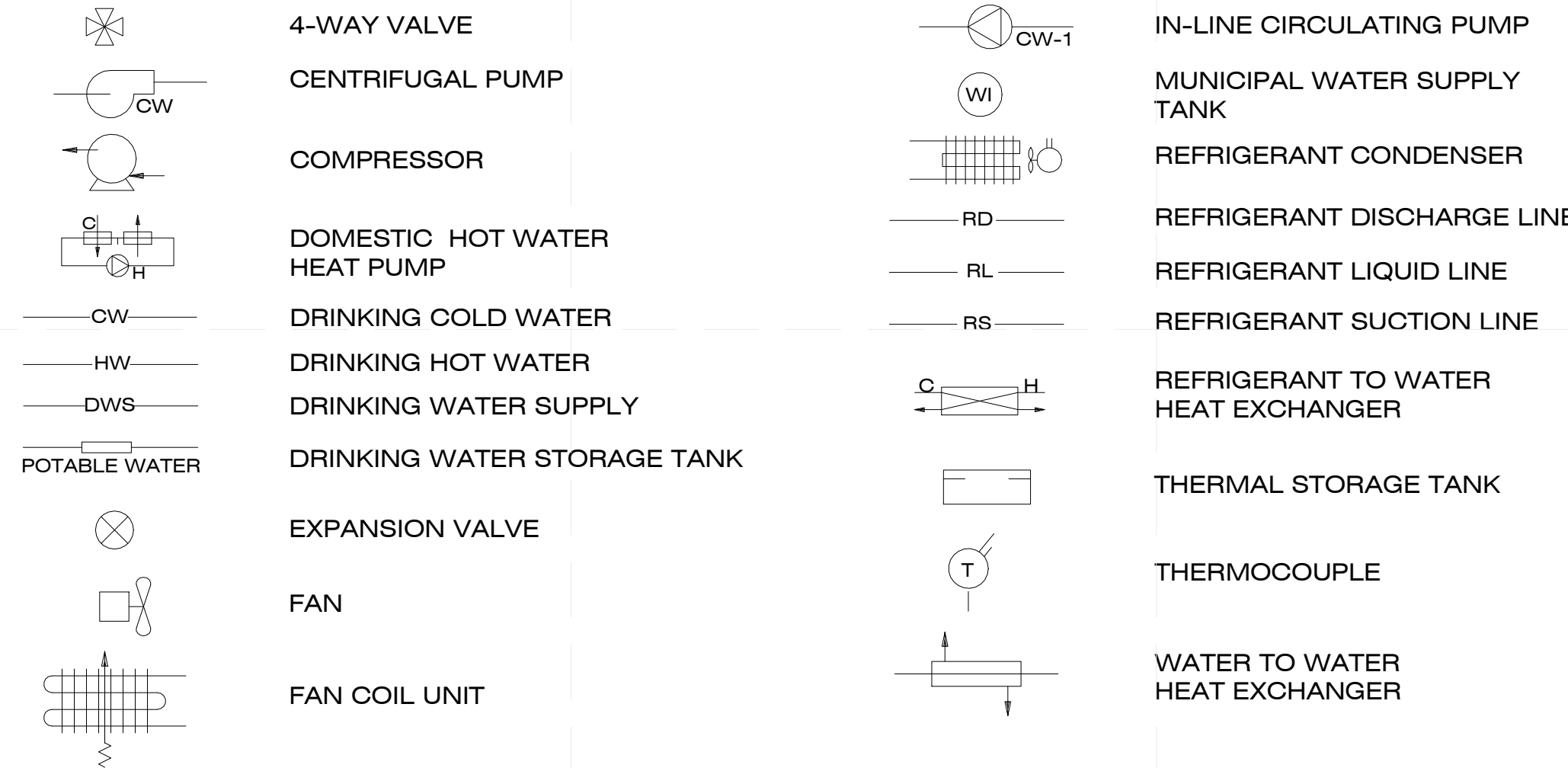
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SCHEMATIC DIAGRAM

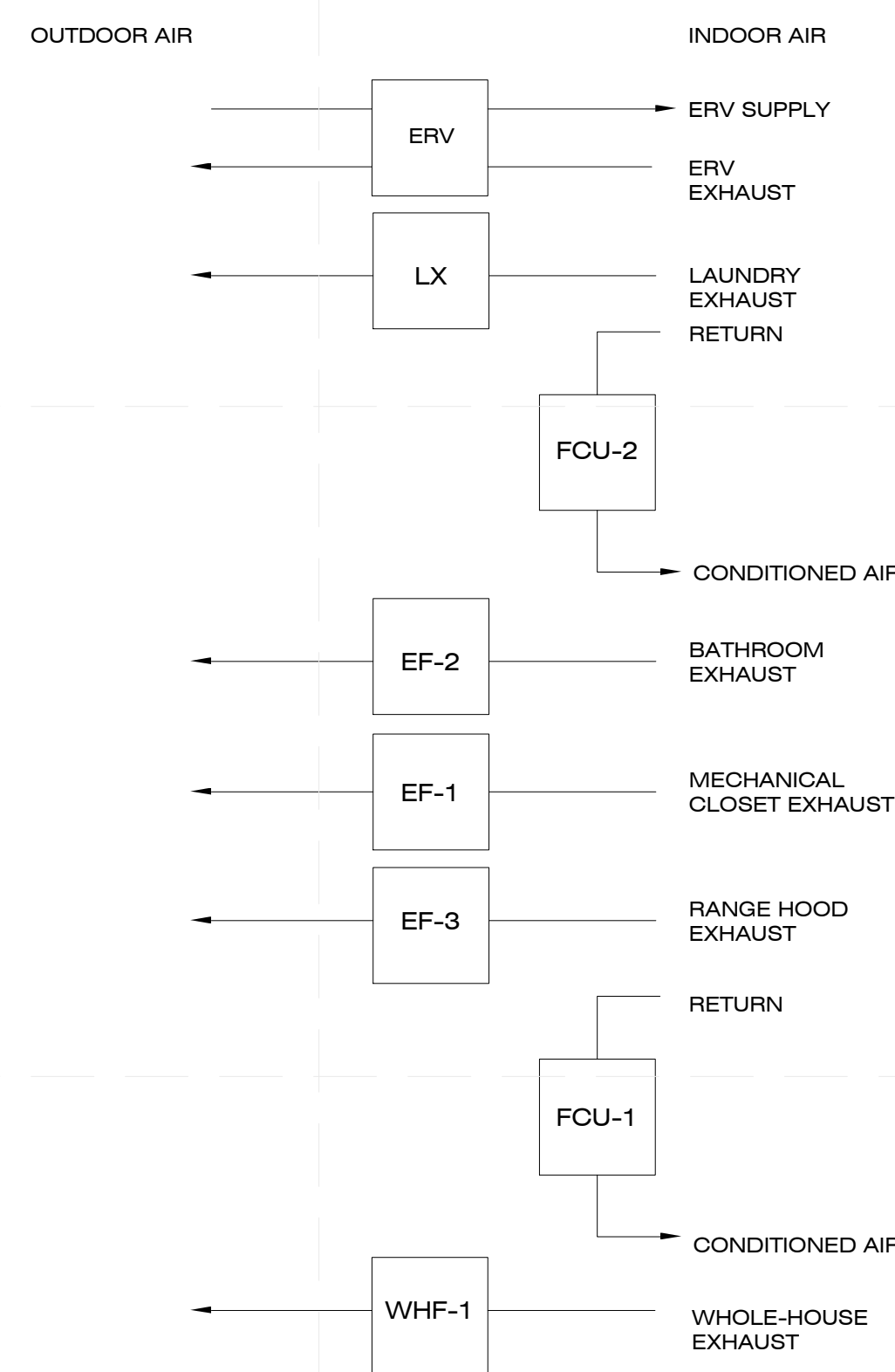
M-601



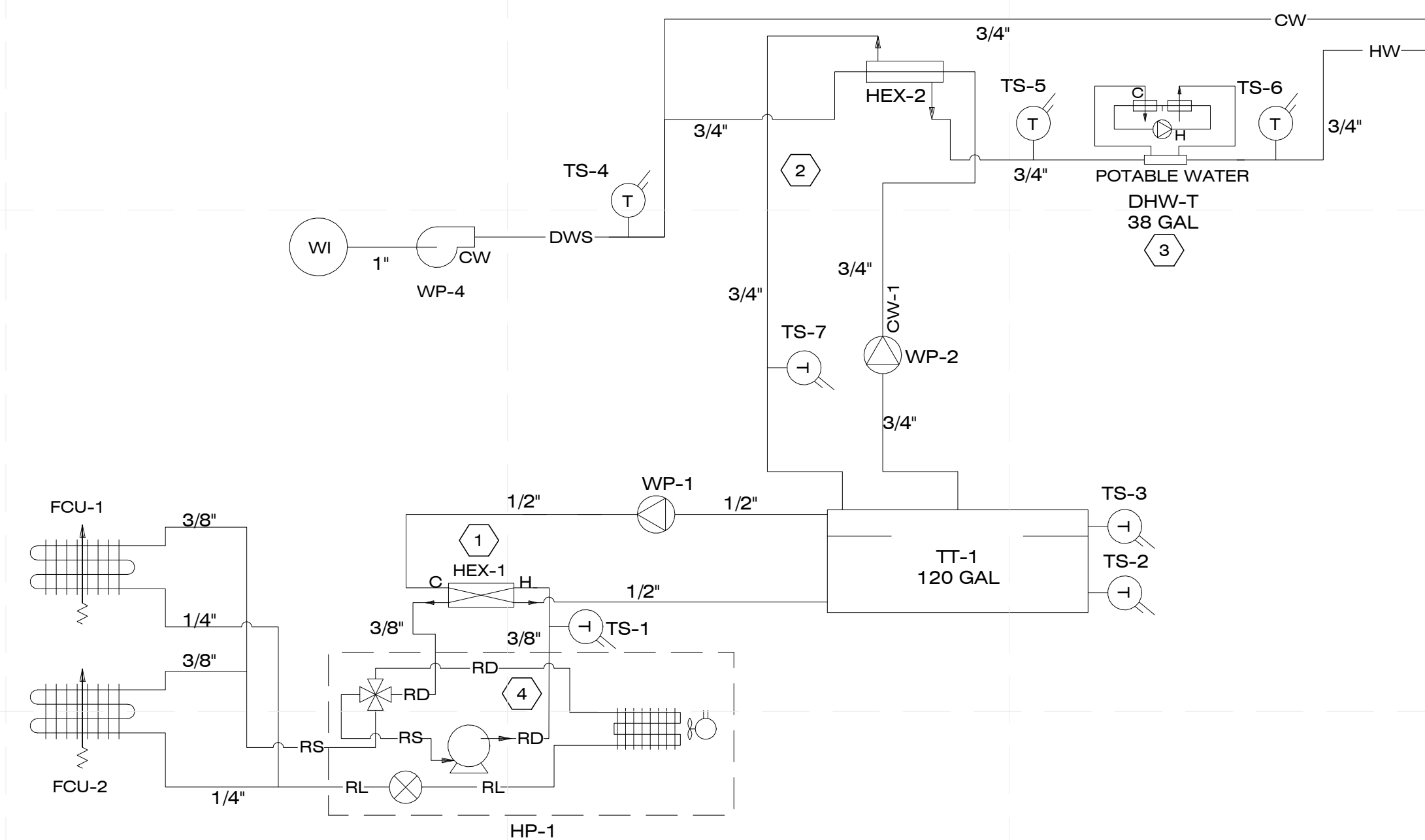
D1 HVAC/DHW HEAT EXCHANGE DIAGRAM



D4 HVAC/DHW LEGEND



A1 VENTILATION SCHEMATIC DIAGRAM



A4 HVAC/DHW SCHEMATIC DIAGRAM

GENERAL SHEET NOTES

- REFER TO M-602 FOR EQUIPMENT SCHEDULES
- REFER TO M-101 FOR HVAC EQUIPMENT AND DISTRIBUTION PLAN/ELEVATION
- EQUIPMENT IS NOT DRAWN TO SCALE

SHEET NOTES

- DURING HVAC OPERATION, SUPERHEATED REFRIGERANT COMING OUT OF COMPRESSOR IS COOLED DOWN USING A DESUPERHEATER COIL WITH WATER CIRCULATING FROM THE THERMAL STORAGE TANK.
- HOT WATER FROM THE THERMAL STORAGE TANK IS CIRCULATED THROUGH A BRAZED PLATE HEAT EXCHANGER TO PREHEAT DHW.
- A BACKUP ELECTRIC HEAT PUMP HOT WATER TANK IS USED TO MAINTAIN TEMP. STABILITY OF DHW.
- AN OFF THE SHELF DUCTLESS MULTIZONE CONDENSER UNIT IS CUSTOMIZED BY CUTTING THE COPPER PIPE COMING OUT OF THE COMPRESSOR AND BRAZING NEW PIPING TO CONNECT A DESUPERHEATER COIL IN LINE WITH THE STANDARD REFRIGERANT LOOP.

REFERENCE KEYNOTES

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GENERAL SHEET NOTES

SHEET NOTES

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SCHEDULES

M-602

RESIDENTIAL APPLIANCES

MARK	DESCRIPTION	MAKE	MODEL	MASTER FORMAT CODE
EK-1	REFRIGERATOR/FREEZER	GE	GTH18ISXSS	11 31 13
EK-2	RANGE HOOD	GE	JV930SCBR	11 31 13
EK-3	COOKTOP	GE	PP912SMSS	11 31 13
GD-1	GARBAGE DISPOSAL	KITCHEN AID	KODB250G	11 82 26
EK-4	CONVECTION OVEN	GE	JTP70DPWW	11 31 13
EK-5	DISHWASHER	BOSCH	SHV4313UC	11 31 13
EL-1	CLOTHESWASHER	LG	WM2140CW	11 13 23
EL-2	CLOTHESDRYER	LG	DLE2140W	11 13 23

EXPLODE

NAME	TYPE	MAKE	MODEL	MASTER FORMAT CODE
TS-1	TEMPERATURE SENSOR	OMEGA	TC-PVC-K	23 09 13
TS-2	TEMPERATURE SENSOR	OMEGA	TC-PVC-K	23 09 13
TS-3	TEMPERATURE SENSOR	OMEGA	TC-PVC-K	23 09 13
TS-4	TEMPERATURE SENSOR	OMEGA	TC-PVC-K	23 09 13
TS-5	TEMPERATURE SENSOR	OMEGA	TC-PVC-K	23 09 13
TS-6	TEMPERATURE SENSOR	OMEGA	HSTC-TT-K	23 09 13
TS-7	TEMPERATURE SENSOR	OMEGA	HSTC-TT-K	23 09 13
TS-8	TEMPERATURE SENSOR	OMEGA	HSTC-TT-K	23 09 13
TS-9	TEMPERATURE SENSOR	RAPHNET	USBTENKI-T-RH-SHT	23 09 13
TL-1	THERMOCOUPLE DATA LOGGER	PICO	TC-08	23 09 13
TM-1	THERMOCOUPLE DATA LOGGER	LUX	LV-1	23 09 13
TM-2	THERMOCOUPLE DATA LOGGER	LUX	LV-3	23 09 13
DM-2	DEHUMIDISTAT	HONEYWELL	H46C1166	23 09 13

HVAC PIPING AND PUMPS

NAME	TYPE	MAKE	MODEL	MASTER FORMAT CODE
WP-1	WATER PUMP	GRUNDFOS	ALPHA 15-55 F/LC	23 21 23
WP-2	WATER PUMP	GRUNDFOS	ALPHA 15-55 F/LC	23 21 23
FL	FLANGE	MCMMASTER-CARR	4596K154	23 21 13
NR-1	NPT REDUCER	MCMMASTER-CARR	4880K349	23 21 13
NR-2	NPT REDUCER	MCMMASTER-CARR	4880K348	23 21 13
PX-1	PEX WATER PIPING	UPONOR	F2040500	23 21 13
PX-2	PEX WATER PIPING	UPONOR	F2040750	23 21 13
PX-3	PEX WATER PIPING	UPONOR	F1040500	23 21 13
PX-4	PEX WATER PIPING	UPONOR	F1040750	23 21 13
RF-1	REFRIGERANT	HONEYWELL	R-410A	23 23 23
RFL-1	REFRIGERANT LINE SET	GENERIC	LS143850F	23 23 16

HVAC AIR DISTRIBUTION

NAME	TYPE	MAKE	MODEL	MASTER FORMAT CODE
WHF-1	WHOLE-HOUSE FAN	BROAN	L700	23 34 16
EF-1	MECHANICAL ROOM EXHAUST FAN	PANASONIC	FV-10NLF1	23 34 16
EF-2	BATHROOM EXHAUST FAN	PANASONIC	FV-08VKS3	23 34 16
EF-3	RANGE HOOD	GENERAL ELECTRIC	JV930SCBR	11 31 13
ERV	ENERGY RECOVERY VENTILATOR	PANASONIC	FV-04VE1	23 34 23

CENTRAL HEATING EQUIPMENT

NAME	TYPE	MAKE	MODEL	MASTER FORMAT CODE
HEX-1	STEAM-TO-WATER HEAT EXCHANGER	PACKLESS	CDAX-5030-H	23 57 16
HEX-2	LIQUID-TO-LIQUID HEAT EXCHANGER	BRAZETEK	BT3X8-30	23 57 19

CENTRAL HVAC EQUIPMENT

NAME	TYPE	MAKE	MODEL	MASTER FORMAT CODE
TT-1	THERMAL STORAGE TANK	CHEM-TAINER	NW120MINI	23 71 13

DECENTRALIZED HVAC EQUIPMENT

NAME	TYPE	MAKE	MODEL	MASTER FORMAT CODE
HP-1	DUCTLESS MINI-SPLIT HEAT PUMP	DAIKIN	FXS2000	23 81 26
FCU-1	FAN COIL UNIT	MITSUBISHI	MSZ-FE09NA	23 81 26
FCU-2	FAN COIL UNIT	MITSUBISHI	MSZ-FE09NA	23 81 26



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MECHANICAL
ISOMETRIC

M-901

GENERAL SHEET NOTES

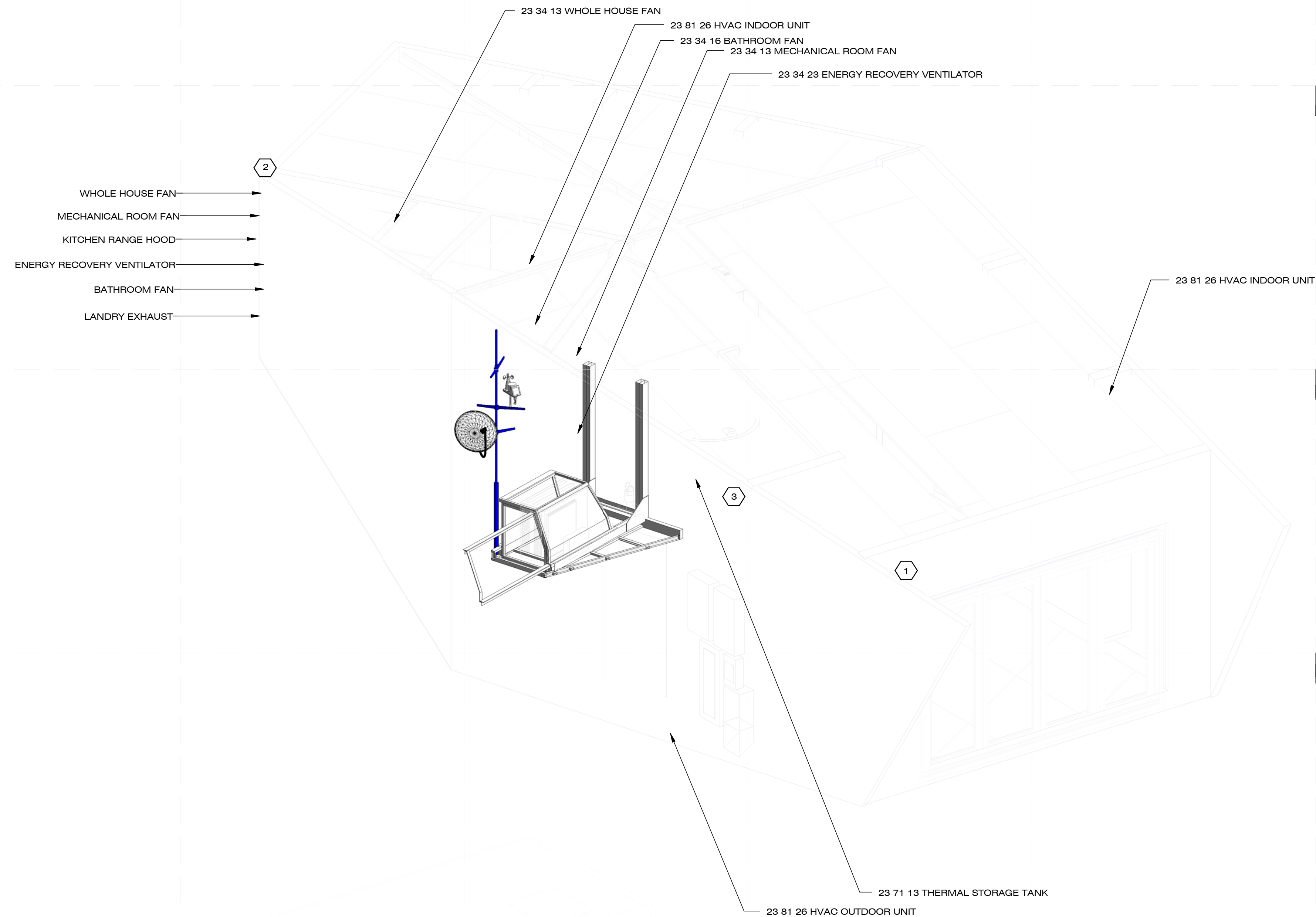
1. REFER TO M-101 FOR THE PLAN AND ELEVATION VIEWS.
2. REFER TO M-601 FOR THE SCHEMATIC DIAGRAM.
3. REFER TO M-602 FOR EQUIPMENT SCHEDULES.

SHEET NOTES

1. THE VENTILATION SYSTEM DRAWS IN FRESH AIR FROM THE SOUTH END OF THE HOUSE TO MAINTAIN INDOOR AIR QUALITY.
2. THE VENTILATION SYSTEM EXHAUSTS STALE AIR FROM A SERIES OF REGISTERS ON THE NORTH END OF THE HOUSE. THIS PREVENTS CONTAMINATION OF FRESH AIR AND DIRECTS EXHAUST UPWARDS AND AWAY FROM THE HOUSE.
3. THE THERMAL STORAGE TANK IS STORED IN A STRUCTURALLY REINFORCED SOFFIT ABOVE THE KITCHEN AREA.

REFERENCE KEYNOTES

- 23 31 16 NONMETAL DUCTS
- 23 34 13 AXIAL HVAC FANS
- 23 34 16 CENTRIFUGAL HVAC FANS
- 23 34 23 HVAC POWER VENTILATORS
- 23 71 13 THERMAL HEAT STORAGE
- 23 81 26 SPLIT SYSTEM AIR-CONDITIONERS



A1 ISOMETRIC

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ELECTRICAL DISTRIBUTION PLAN

E-101

GENERAL SHEET NOTES

1. ALL WIRES EXPOSED SHALL BE ENCLOSED IN EMC 1/2" CONDUIT OR LARGER AS NECESSARY.
2. ALL MECHANICAL COMPONENTS ARE POWERED BY AN ADJACENT JUNCTION BOX AND CONNECTED BY ROMEX 1/2" OR 3/4" FLEXIBLE CONDUIT, AS NECESSARY.
3. REFER TO E-601 ONE-LINE DISTRIBUTION DIAGRAM AND E-603 LOAD DIAGRAM FOR MORE INFORMATION.
4. REFER TO A-202 FOR EXTERIOR WALL ELEVATION SCHEMATIC INCLUDING ORGANIZER ENCLOSURE LOCATION
5. WALL LENGTH ALONG NORTH WINDOW DOES NOT EXCEED 11 FEET, ENSURING COMPLIANCE WITH NEC 210.52(A)(1)

SHEET NOTES

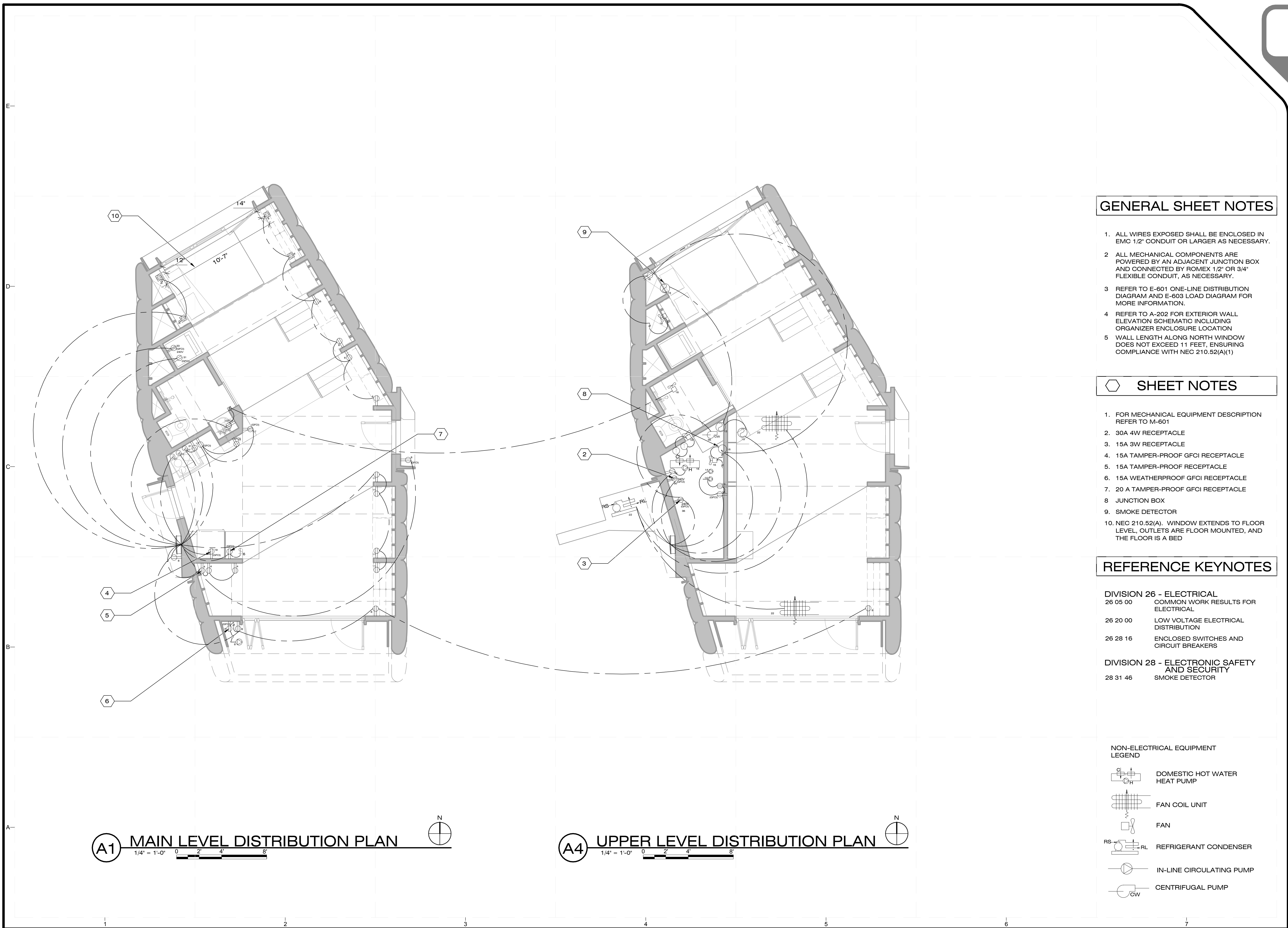
1. FOR MECHANICAL EQUIPMENT DESCRIPTION REFER TO M-601
2. 30A 4W RECEPTACLE
3. 15A 3W RECEPTACLE
4. 15A TAMPER-PROOF GFCI RECEPTACLE
5. 15A TAMPER-PROOF RECEPTACLE
6. 15A WEATHERPROOF GFCI RECEPTACLE
7. 20 A TAMPER-PROOF GFCI RECEPTACLE
8. JUNCTION BOX
9. SMOKE DETECTOR
10. NEC 210.52(A). WINDOW EXTENDS TO FLOOR LEVEL, OUTLETS ARE FLOOR MOUNTED, AND THE FLOOR IS A BED

REFERENCE KEYNOTES

- DIVISION 26 - ELECTRICAL**
- 26 05 00 COMMON WORK RESULTS FOR ELECTRICAL
 - 26 20 00 LOW VOLTAGE ELECTRICAL DISTRIBUTION
 - 26 28 16 ENCLOSED SWITCHES AND CIRCUIT BREAKERS
- DIVISION 28 - ELECTRONIC SAFETY AND SECURITY**
- 28 31 46 SMOKE DETECTOR

NON-ELECTRICAL EQUIPMENT LEGEND

- DOMESTIC HOT WATER HEAT PUMP
- FAN COIL UNIT
- FAN
- REFRIGERANT CONDENSER
- IN-LINE CIRCULATING PUMP
- CENTRIFUGAL PUMP



A1 MAIN LEVEL DISTRIBUTION PLAN
1/4" = 1'-0" 0 2 4 8'

A4 UPPER LEVEL DISTRIBUTION PLAN
1/4" = 1'-0" 0 2 4 8'

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LIGHTING AND CONSUMER ELECTRONICS PLAN

E-102

GENERAL SHEET NOTES

SHEET NOTES

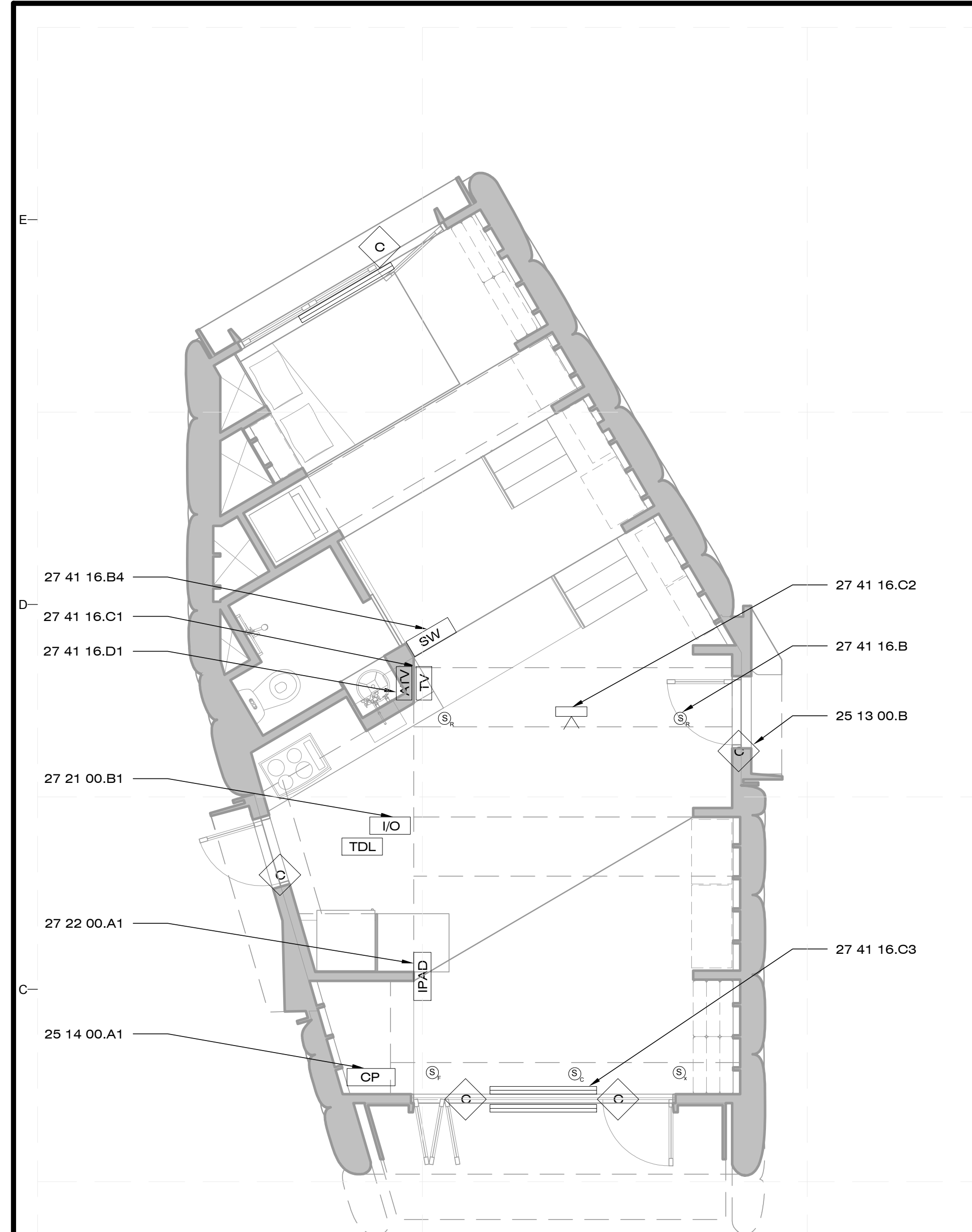
1. EXTERIOR LIGHTING PLAN REFERS TO A-101

REFERENCE KEYNOTES

DIVISION 25- INTEGRATED AUTOMATION
25 13 00.B DOOR AND WINDOW SENSOR
25 14 00.A1 HOME CONTROLLER
25 14 00.B1 DIMMER SWITCH
25 14 00.B2 WIRELESS OUTLET SWITCH
25 14 00.B3 SIX BUTTON KEYPAD

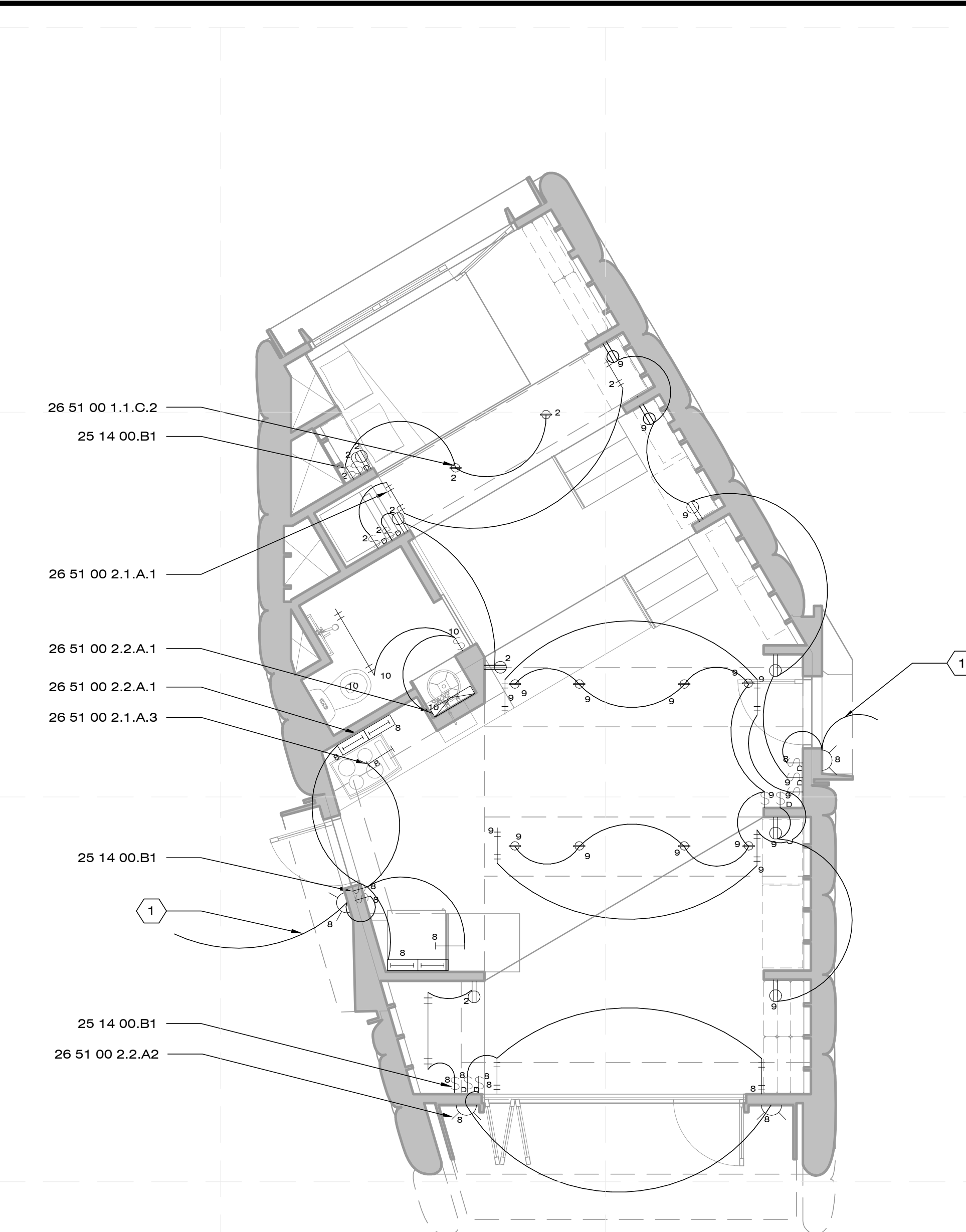
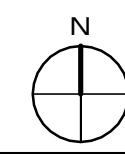
DIVISION 26- ELECTRICAL
26 51 00 INDOOR AND OUTDOOR LIGHTS AND LUMINAIRES

DIVISION 27- DATA COMMUNICATION
27 21 00.B1 I/O EXTENDER
27 22 00.A1 WALL MOUNT IPAD
27 41 16.A1 RECEIVER
27 41 16.B SPEAKERS
27 41 16.B4 SUB WOOFER
27 41 16.C1 LED HDTV
27 41 16.C2 PROJECTOR
27 41 16.C3 PROJECTOR SCREEN
27 41 16.D1 APPLE TV (VIDEO SOURCE)



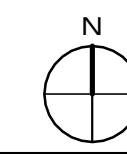
B1 CONSUMER ELECTRONIC PLACEMENT

1/4" = 1'-0" 0 2 4 8



B4 LIGHT SWITCH

1/4" = 1'-0" 0 2 4 8



LEGEND

- | | | | | | |
|--|-------------------------------|--|--------------------------|--|------------------------|
| | TASK LIGHT/LED | | ORGANIZER DATA LOGGER | | DOOR AND WINDOW SENSOR |
| | LINEAR LED FIXTURE | | ORGANIZER ENCLOSURE | | SHEAR WALL TASK |
| | TASK LIGHT | | SUBWOOFER | | SHEAR WALL AMBIENT |
| | LIGHTING/EXTERIOR BUILDING | | THERMOCOUPLE DATA LOGGER | | BEAM SHELF TASK |
| | DIMMER SWITCH | | LED HDTV | | UNDER CABINET LED |
| | SIX BUTTON KEYPAD | | APPLE TV | | OVER CABINET LED |
| | WIRELESS LIGHT SWITCH CONTROL | | APPLE IPAD | | LED STRIP LIGHT |
| | SPEAKER, FRONT | | BLUE RAY PLAYER | | T8 LIGHT FIXTURE |
| | SPEAKER, CENTER | | A/V RECEIVER | | EXTERIOR WALL LIGHT |
| | SPEAKER, REAR | | AUTOMATED SHADE | | |



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EXTERIOR CONNECTION PLAN

E-103

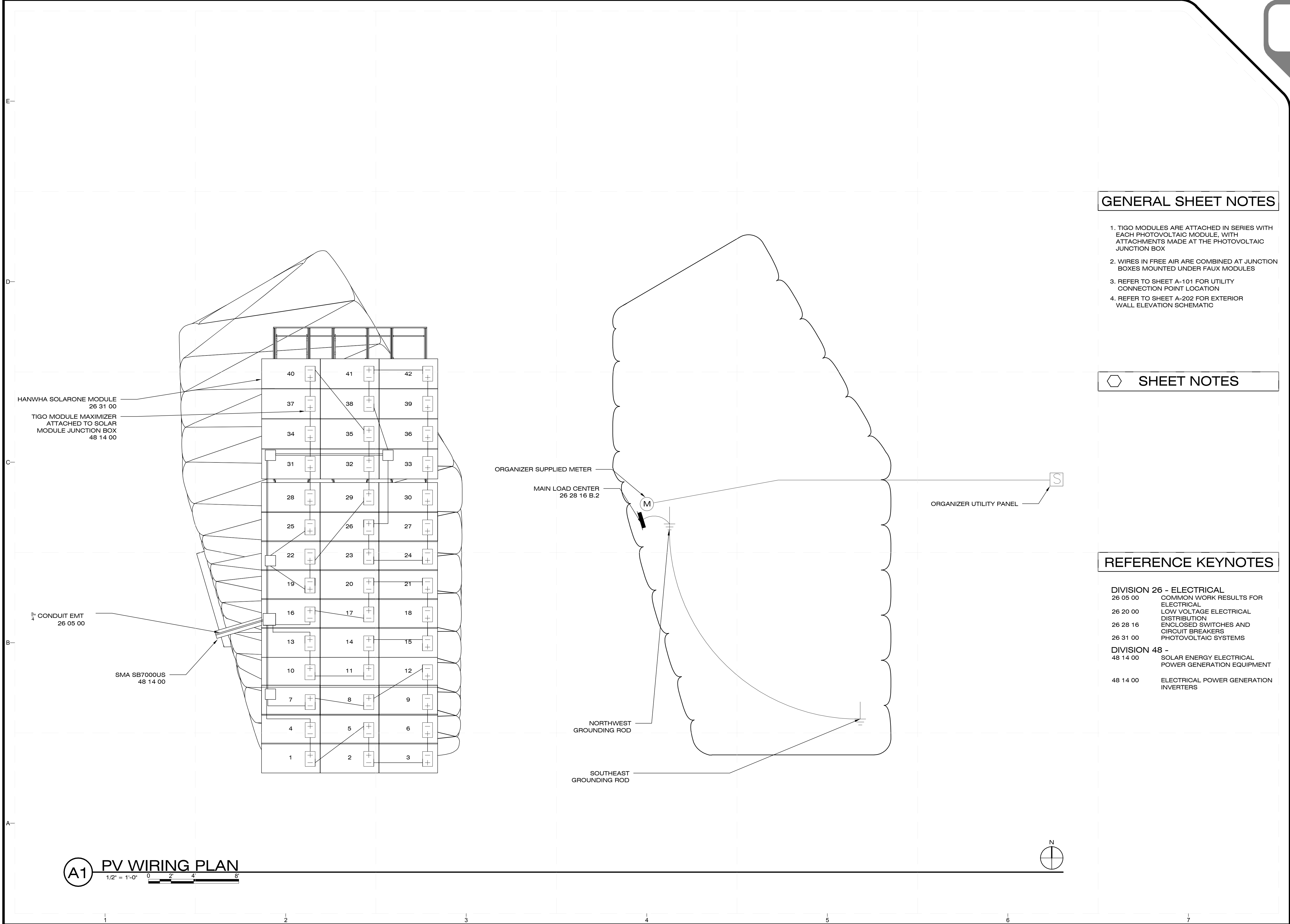
GENERAL SHEET NOTES

1. TIGO MODULES ARE ATTACHED IN SERIES WITH EACH PHOTOVOLTAIC MODULE, WITH ATTACHMENTS MADE AT THE PHOTOVOLTAIC JUNCTION BOX
2. WIRES IN FREE AIR ARE COMBINED AT JUNCTION BOXES MOUNTED UNDER FAUX MODULES
3. REFER TO SHEET A-101 FOR UTILITY CONNECTION POINT LOCATION
4. REFER TO SHEET A-202 FOR EXTERIOR WALL ELEVATION SCHEMATIC

SHEET NOTES

REFERENCE KEYNOTES

- DIVISION 26 - ELECTRICAL**
- 26 05 00 COMMON WORK RESULTS FOR ELECTRICAL
 - 26 20 00 LOW VOLTAGE ELECTRICAL DISTRIBUTION
 - 26 28 16 ENCLOSED SWITCHES AND CIRCUIT BREAKERS
 - 26 31 00 PHOTOVOLTAIC SYSTEMS
- DIVISION 48 - SOLAR ENERGY ELECTRICAL**
- 48 14 00 POWER GENERATION EQUIPMENT
 - 48 14 00 ELECTRICAL POWER GENERATION INVERTERS



A1 PV WIRING PLAN

1/2" = 1'-0" 0 2' 4' 8'



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ONE-LINE DIAGRAM

E-601

GENERAL SHEET NOTES

1. ALL WIRES SIZE #12 AWG NM-B ROMEX, U.O.N.

SHEET NOTES

REFERENCE KEYNOTES

DIVISION 22 - PLUMBING
22 01 00 OPERATION AND MAINTENANCE
22 33 00 ELECTRIC DOMESTIC WATER HEATER

DIVISION 23 - HVAC
23 09 00 INSTRUMENTATION AND CONTROL
23 21 00 HYDRONIC PIPING AND PUMPS
23 34 00 HVAC FANS
23 81 00 DECENTRALIZED UNITARY HVAC EQUIPMENT

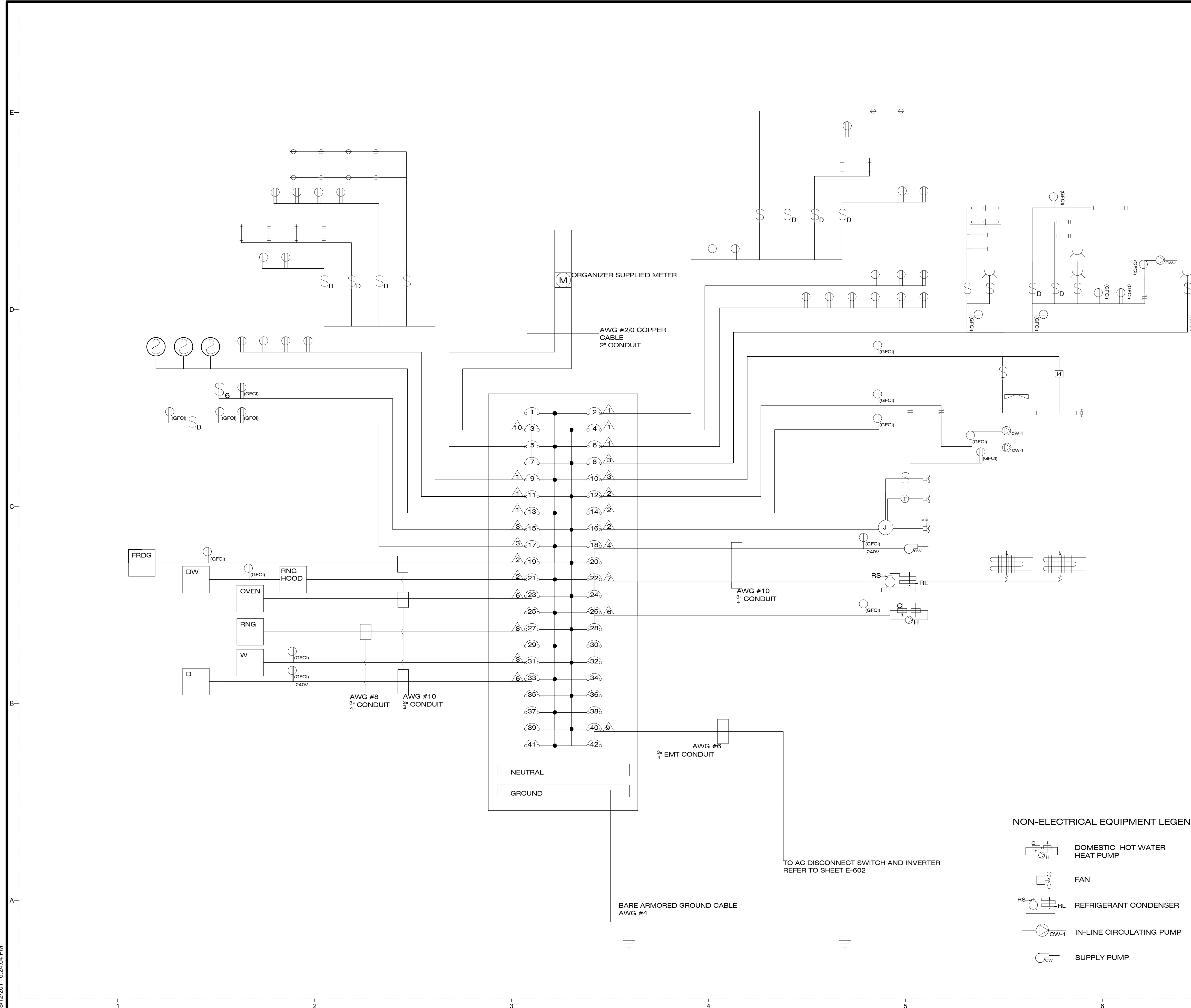
DIVISION 26 - ELECTRICAL
26 05 00 COMMON WORK RESULTS FOR ELECTRICAL
26 20 00 LOW VOLTAGE ELECTRICAL DISTRIBUTION
26 28 16 ENCLOSED SWITCHES AND CIRCUIT BREAKERS
26 31 00 PHOTOVOLTAIC SYSTEMS
26 51 00 LIGHTING

NON-ELECTRICAL EQUIPMENT LEGEND

- DOMESTIC HOT WATER HEAT PUMP
- FAN
- REFRIGERANT CONDENSER
- IN-LINE CIRCULATING PUMP
- SUPPLY PUMP

WIRE TYPE LEGEND

- 15A AFOI SINGLE POLE
- 15A GFCI SINGLE POLE
- 20A GFCI SINGLE POLE
- 15A GFCI TWO POLE
- 20A GFCI TWO POLE
- 30A GFCI TWO POLE
- 30A TWO POLE
- 40A GFCI TWO POLE
- 45A TWO POLE
- 200A TWO POLE MAIN SERVICE DISCONNECT



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THREE-LINE DIAGRAM

E-602

GENERAL SHEET NOTES

SHEET NOTES

REFERENCE KEYNOTES

DIVISION 26 - ELECTRICAL
26 28 16 ENCLOSED SWITCHES AND CIRCUIT BREAKERS
26 31 00 COMMON WORK RESULTS FOR SOLAR ENERGY ELECTRICAL POWER GENERATION EQUIPMENT
48 14 00 ELECTRICAL POWER GENERATION INVERTERS

PHOTOVOLTAIC ARRAY STRINGS 1, 2
11 HANWHA SOLARONE SF-160-M190 MODULES PER STRING 26 31 00
6 FLAT, 5 TILTED
ATTACHED BY MC-4 CABLE TO TIGO MM-ES50 UNITS 48 14 00
ISC 5.68 A
VOC 492.8 V
NOMINAL ARRAY POWER 2090 W PER STRING

PHOTOVOLTAIC ARRAY STRINGS 3, 4
10 HANWHA SOLARONE SF-160-M190 MODULES PER STRING 26 31 00
10 TILTED
ATTACHED BY MC-4 CABLE TO TIGO MM-ES50 UNITS 48 14 00
ISC 5.68 A
VOC 448.0 V
NOMINAL ARRAY POWER 1900 W PER STRING

SQUARE D QO142L225GRB
MAIN LOAD CENTER
225 A
65 KA SHORT CIRCUIT CURRENT RATING
26 28 16

SMA AMERICA SB7000US INVERTER
7000 W
INTEGRATED DC DISCONNECT
48 14 00

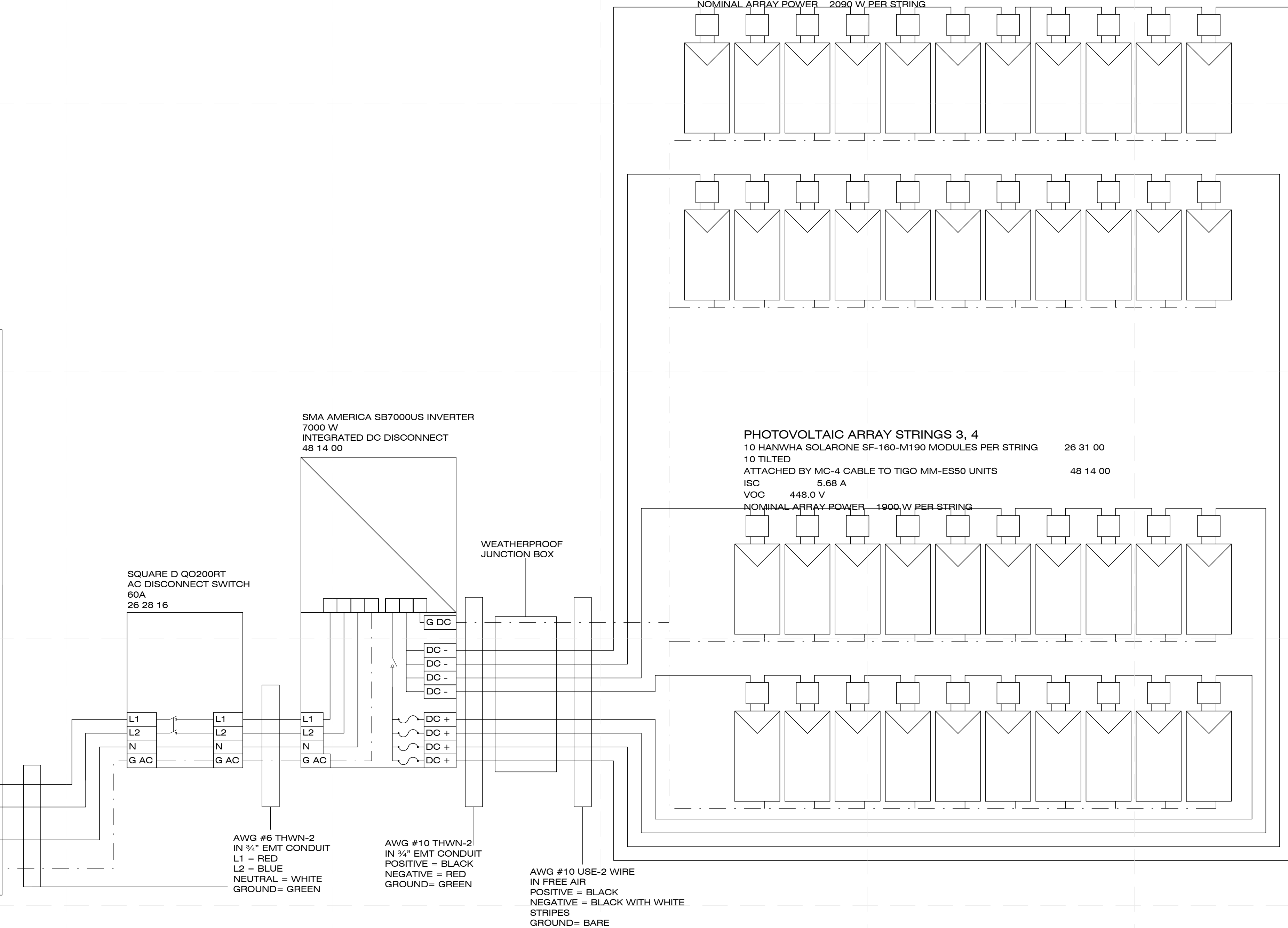
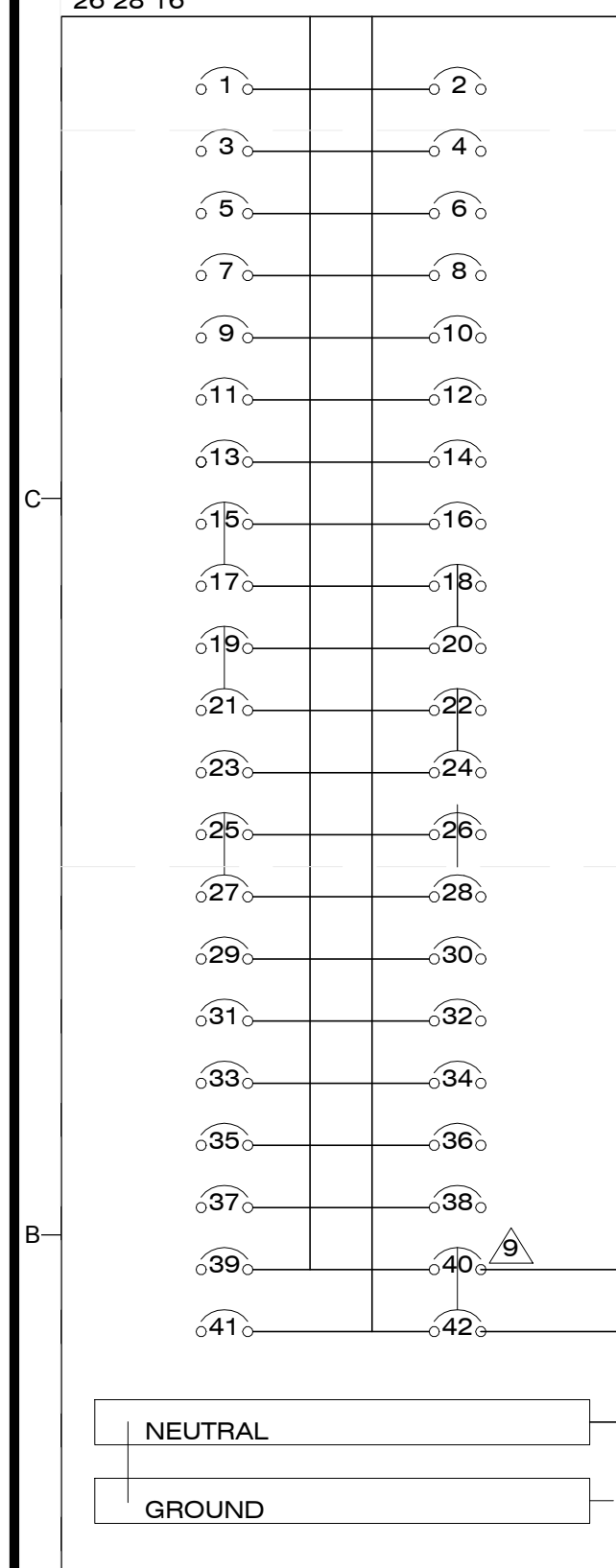
SQUARE D QO200RT
AC DISCONNECT SWITCH
60A
26 28 16

WEATHERPROOF
JUNCTION BOX

AWG #6 THWN-2
IN 3/4" EMT CONDUIT
L1 = RED
L2 = BLUE
NEUTRAL = WHITE
GROUND = GREEN

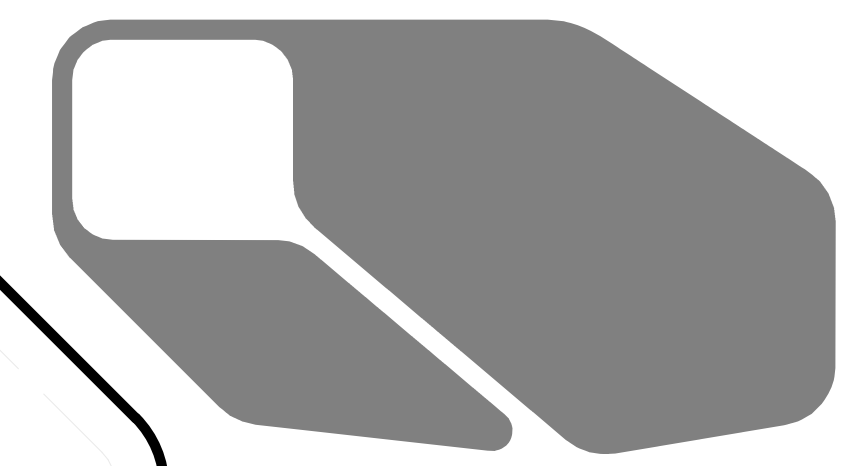
AWG #10 THWN-2
IN 3/4" EMT CONDUIT
POSITIVE = BLACK
NEGATIVE = RED
GROUND = GREEN

AWG #10 USE-2 WIRE
IN FREE AIR
POSITIVE = BLACK
NEGATIVE = BLACK WITH WHITE STRIPES
GROUND = BARE



MODULE OUTPUT:	HANWHA SOLARONE SF-160-M190 MODULES	TIGO MODULE MAXIMIZER	SMA AMERICA SB7000US
STRING VOC*1.14 = 561.8 V DC STRING ISC*1.56 = 8.86 A STRING VMP = 393.8 V DC STRING IMP = 5.33 A	STC NOCT* PMP 190 W 137 W VMP 35.8 V 32.2 V IMP 5.33 A 4.26 VOC 44.8 V 41.2 V ISC 5.78 A 4.68 A	TIGO MM-ES50 MAXIMUM VOC 52V VMP RANGE: 16-48 V MAXIMUM IMP: 9.5 A MAXIMUM ISC: 10 A MAXIMUM OUTPUT POWER 300W MAXIMUM ISC 9.5A	SUNNY BOY SB7000US MAX INPUT CURRENT 30 A MAX INPUT VOLTAGE 300 V STRING FUSE RATING 15 A START VOLTAGE 300 V MPPT VOLTAGE RANGE 250 - 480 V MAX OUTPUT CURRENT 29 A OUTPUT VOLTAGE 240 V
TIGO OUTPUT TIGO STRING VOC*1.14 = 561.8 V DC TIGO STRING ISC*1.56 = 8.86 A TIGO STRING IMP = 5.33 A	TEMPERATURE COEFFICIENTS PMPP -0.44%/K V -0.33%/K I -0.03%/K MAXIMUM SYSTEM VOLTAGE 600 V SERIES FUSE RATING 10 A		
MAX CURRENT INPUT TO INVERTER 5.33 A *4 = 21.32 A	*NOCT: 45 °C, 800W/M ² , 1 M/S WIND SPEED		
INVERTER OUTPUT CURRENT IMP*1.25 = 36.25 A			

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PANEL SCHEDULE

E-603

GENERAL SHEET NOTES

1. REFER TO SHEET A-112 FOR SOLAR PANEL LAYOUT

SHEET NOTES

REFERENCE KEYNOTES

MAIN PANEL TEAM CA 2011		RATING: 225 A				ENCLOSURE TYPE: NEMA 3R WEATHERPROOF, SURFACE MOUNTED				AIC: 65K							
		SERVICE: 240 V, 2P, 3W				MODEL NO.: SQ. D QO142L225GRB				BREAKER SPACES: 42							
CIRCUIT NUMBER	DESCRIPTION	WIRE SIZE	WIRE TYPE	BREAKER TRIP	BREAKER TYPE	POLES	VA PHASE A	VA PHASE B	VA PHASE A	VA PHASE B	POLES	BREAKER TYPE	BREAKER TRIP	WIRE TYPE	WIRE SIZE	DESCRIPTION	CIRCUIT NUMBER
1	MAIN SERVICE FEED								900+lighting		1	AFCI	15	ROMEX NM-B	12	NORTHWEST RECEPTACLES	2
3	MAIN SERVICE FEED	2/0		200		2				540	1	AFCI	15	ROMEX NM-B	12	SOUTHWEST RECEPTACLES	4
5	MAIN SERVICE FEED								1080		1	AFCI	15	ROMEX NM-B	12	NORTHEAST RECEPTACLES	6
7	MAIN SERVICE FEED									540+lighting	1	GFCI	20	ROMEX NM-B	12	EXTERIOR RECEPTACLES, LIGHTS	8
9	SOUTHEAST LIGHTS	12	ROMEX NM-B	15	AFCI	1	1080+lighting		180+lighting		1	GFCI	20	ROMEX NM-B	12	BATHROOM RECEPTACLES, LIGHT	10
11	SOUTHEAST RECEPTACLES	12	ROMEX NM-B	15	AFCI	1			1080		1	GFCI	15	ROMEX NM-B	12	PUMP RECEPTACLES	12
13	SMOKE DETECTORS	12	ROMEX NM-B	15	AFCI	1	29			1440	1	GFCI	15	ROMEX NM-B	12	AIRTAP RECEPTACLE	14
15	KITCHEN RECEPTACLES 1	12	ROMEX NM-B	20	GFCI	1		180		410	1	GFCI	15	ROMEX NM-B	12	FANS	16
17	KITCHEN RECEPTACLES 2	12	ROMEX NM-B	20	GFCI	1	360			1440	1	GFCI	30	ROMEX NM-B	10	HOT WATER TANK RECEPTACLE	18
19	FRIDGE	12	ROMEX NM-B	15	GFCI	1		1440		1440						HOT WATER TANK RECEPTACLE	20
21	DISHWASHER, RANGE HOOD	12	ROMEX NM-B	20	GFCI	1	1894			825	1		30	ROMEX NM-B	10	COMPRESSOR AND FAN COILS	22
23	OVEN	10	ROMEX NM-B	30	GFCI	2				825						COMPRESSOR AND FAN COILS	24
25	OVEN						2250			335	1	GFCI	15	ROMEX NM-B	12	SUPPLY PUMP RECEPTACLE	26
27	RANGE	8	ROMEX NM-B	40	GFCI	2		3800		335						SUPPLY PUMP RECEPTACLE	28
29	RANGE						3800									SPARE	30
31	WASHER	12	ROMEX NM-B	20	GFCI	1		180								SPARE	32
33	DRYER	10	ROMEX NM-B	30	GFCI	2	2500									SPARE	34
35	DRYER							2500								SPARE	36
37	SPARE															SPARE	38
39	SPARE										2		45	THHN, 3/4 EMT	6	SOLAR FEED	40
41	SPARE															SOLAR FEED	42

FEEDER SIZE CALC		LINE A	NEUTRAL	LINE B
GENERAL LIGHTING LOAD	600 SQ FT x 3 VA/FT	1800 VA		
SMALL APPLIANCE LOAD		3000 VA		
BATHROOM LOAD		1500 VA		
LAUNDRY		1500 VA		
TOTAL LOAD - LIGHTING LOAD		7800 VA		
DEMAND FACTOR	3000 VA x 1.0	3000 VA		
DEMAND FACTOR	(7800-3000) 4800 VA x 0.35	1680 VA		
NET GENERAL LOAD		4680 VA	4680 VA	4680 VA
DRYER	0.70 NEUTRAL DEMAND FACTOR	1250 VA	1750 VA	1250 VA
RANGE	0.70 NEUTRAL DEMAND FACTOR	1900 VA	0	1900 VA
OVEN	0.70 NEUTRAL DEMAND FACTOR	2250 VA	3150 VA	2250 VA
COMPRESSOR - HEATING MODE		825 VA	0	825 VA
WATER HEATER - AIRTAP		1440 VA	1440 VA	0
FANS		0	410 VA	410 VA
SUPPLY PUMP		335 VA	0	335 VA
WATER HEATER TANK	NOT TO BE INSTALLED	0	0	0
FRIDGE		0	1440 VA	1440 VA
TOTAL VA		12680 VA	12870	13090 VA
TOTAL A		106 A	107 A	109 A
THE REQUIRED SERVICE CONDUCTORS AND DISCONNECTING MEANS SHALL BE RATED FOR NOT LESS THAN 110 AMPERES				

POWER SUPPLY CALC
SERVICE FEED BREAKER = 200 A
INVERTER FEED BREAKER = 45 A
SUM = 245 A
225 x 1.20 270 A; 690.64(B)(2) IS SATISFIED

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TELECOMMUNICATIONS WIRING PLAN

T-101

GENERAL SHEET NOTES

- HVAC MECHANICAL SYSTEM LOCATED ABOVE KITCHEN. CONTAINS TEMP. SENSORS, RELAYS FOR CONTROL PUMPS, FANS AND 3-WAY VALVES. REFER TO HVAC SECTION SHEET.
- ALL CABLES RUNNING THROUGH OPEN CONDITIONED SPACE WILL BE RUN BENEATH THE FLOOR OR THROUGH THE RAFTERS.

SHEET NOTES

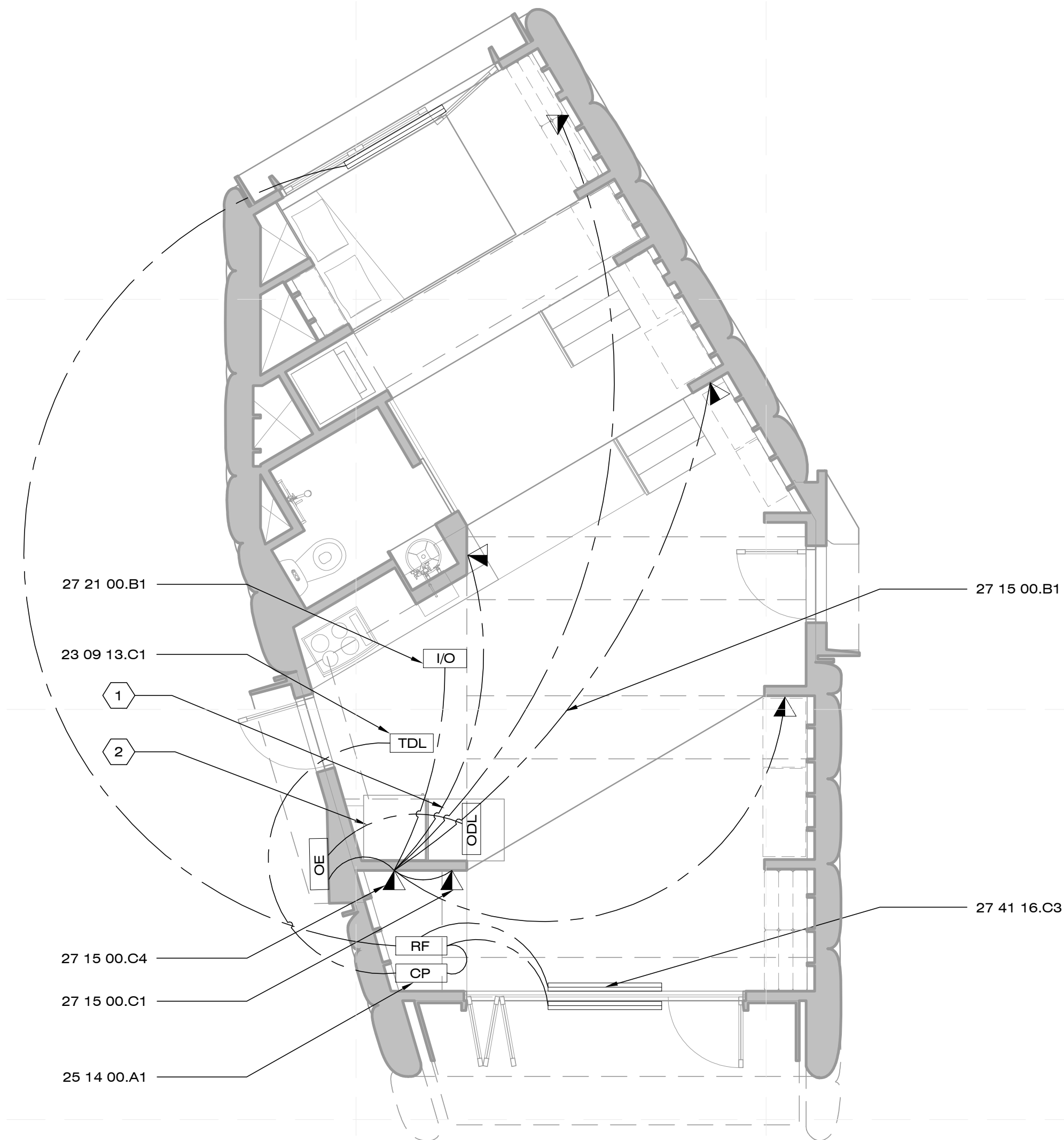
- COMMUNICATIONS EQUIPMENT IN CUPBOARD
- CONDUIT FOR DATA UPLINK AND LOGGER CABLE

REFERENCE KEYNOTES

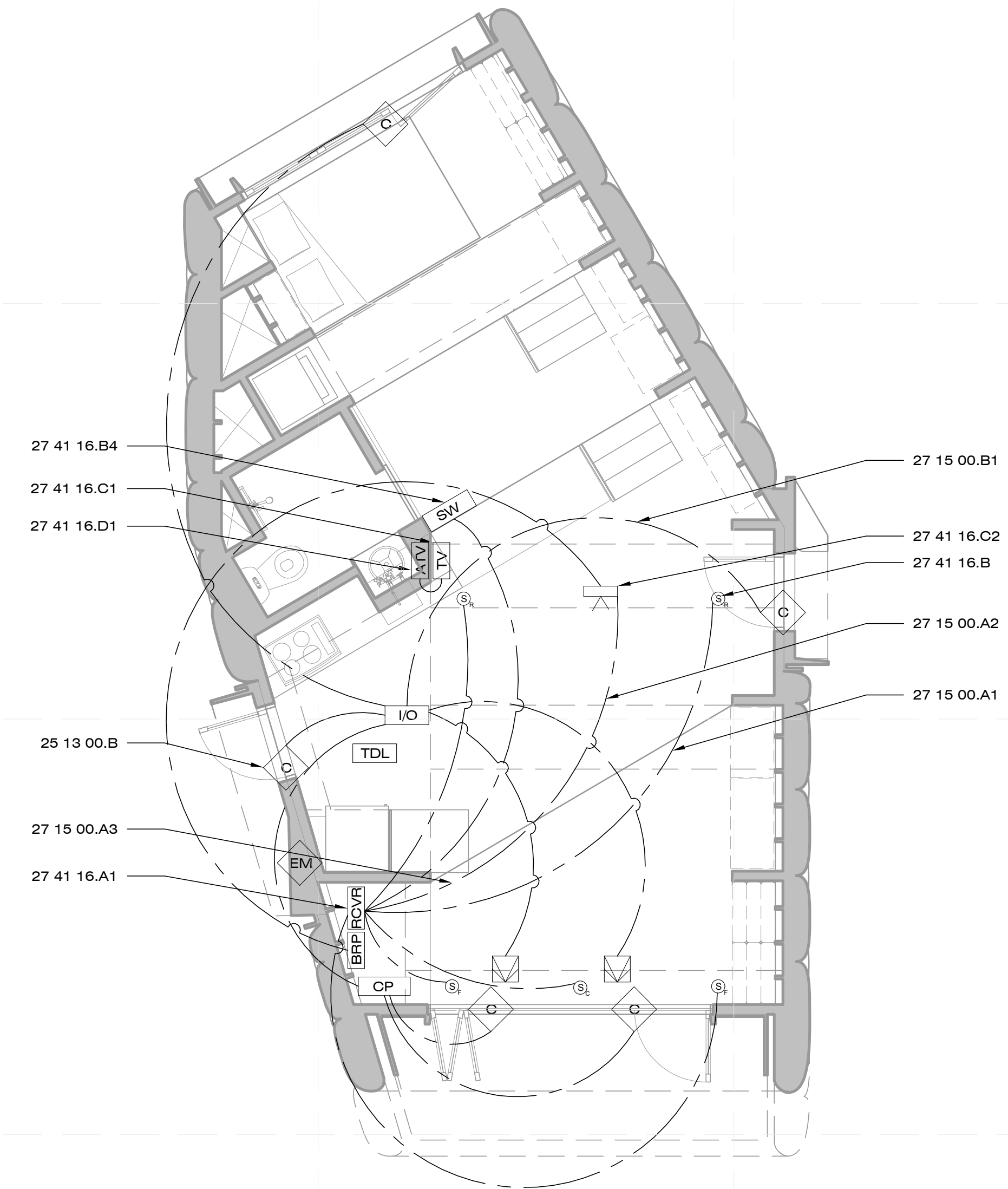
DIVISION 23-INSTRUMENTATION AND CONTROL FOR HVAC
23 09 13.C1 THERMOCOUPLE DATA LOGGER

DIVISION 25-INTEGRATED AUTOMATION
25 13 00.B DOOR AND WINDOW SENSOR
25 14 00.A1 HOME CONTROLLER

DIVISION 27-DATA COMMUNICATION
27 15 00.A1 TWO-WIRE SPEAKER CABLE
27 15 00.A2 HDMI CABLE
27 15 00.A3 COAXIAL AUDIO CABLE
27 15 00.B1 CAT6 CABLE
27 15 00.C1 2-PORT ETHERNET WALL PLATE
27 15 00.C4 ETHERNET PATCH PANEL
27 21 00.B1 I/O EXTENDER
27 41 16.A1 BLUE RAY PLAYER
27 41 16.B1 AV RECEIVER
27 41 16.B4 SUBWOOFER
27 41 16.C SPEAKERS
27 41 16.D1 LED HDTV
27 41 16.D2 PROJECTOR
27 41 16.E1 APPLE TV (VIDEO SOURCE)



A1 COMMUNICATIONS WIRING
1/4" = 1'-0"
0 2 4 8'



A4 AV AND SENSOR WIRING
1/4" = 1'-0"
0 2 4 8'

LEGEND

- NORMALLY OPEN RELAY CONTACT
- EM ENERGY MONITORING SENSOR
- C DOOR AND WINDOW SENSOR
- AUTOMATED SHADE
- MOTION SENSOR
- SPEAKER, FRONT
- SPEAKER, CENTER
- SPEAKER, REAR
- RF RADIO FREQUENCY HUB
- ODL ORGANIZER DATA LOGGER
- OE ORGANIZER ENCLOSURE
- SW SUBWOOFER
- TDL THERMOCOUPLE DATA LOGGER
- TV LED HDTV
- ATV APPLE TV
- BRP BLUE RAY PLAYER
- RCVR RECEIVER
- AUTOMATED SHADE

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BUILDING CONTROL OVERVIEW

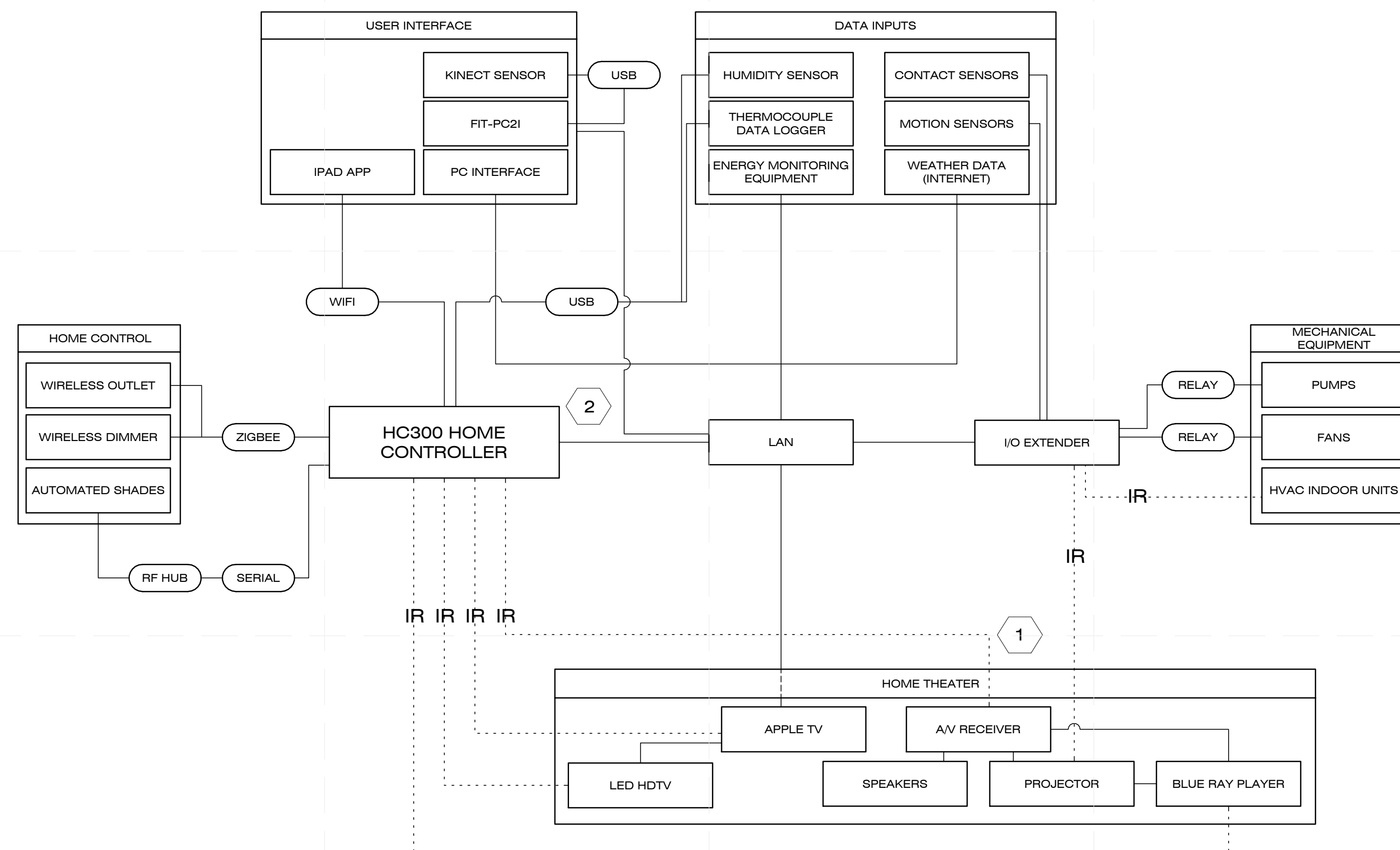
T-601

GENERAL SHEET NOTES

SHEET NOTES

1. IR CONNECTIONS ARE WIRES WITH IR EMITTERS
2. THE HOME CONTROLLER IS RESPONSIBLE FOR ESTABLISHING THE ZIGBEE NETWORK, BUT REQUIRES AN EXTERNAL WIFI NETWORK

REFERENCE KEYNOTES



B3 CONTROL SYSTEM SCHEMATIC
NTS

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SUBMISSIONS:

AS-BUILT DRAWING SET 08/11/2011

CONSTRUCTION DRAWING SET 03/22/2011

DESIGN DOCUMENTATION SET 11/23/2010

REVISIONS:

CD SET REVISION 05/02/2011

DATE: 08.11.2011

LOT NUMBER: #402

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OPERATIONAL SITE
EQUIPMENT &
TRUCK ROUTE

O-101

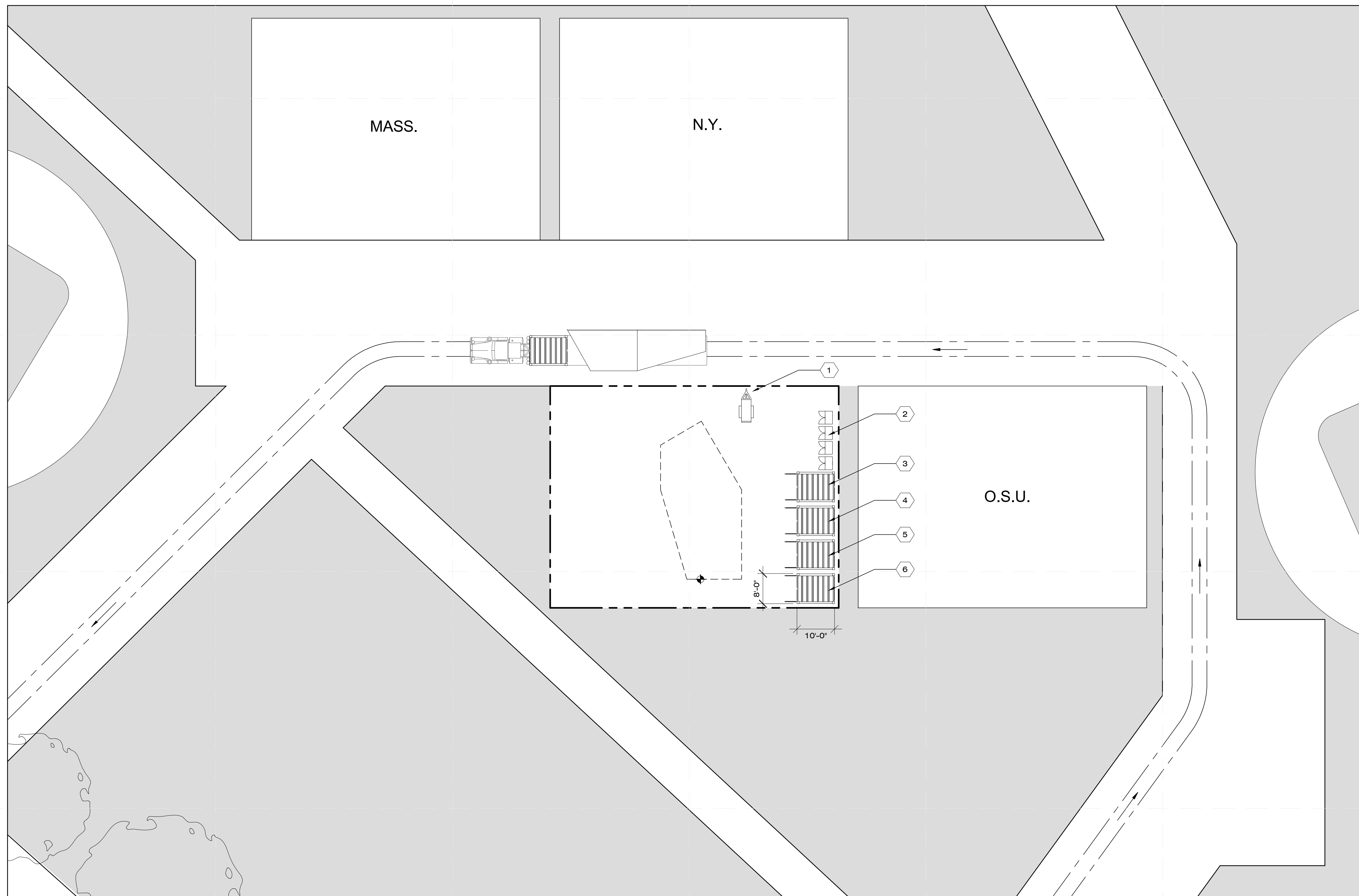
GENERAL SHEET NOTES

1. TRUCK ROUTE PENDING APPROVAL
2. CRANING OPERATION SUBJECT TO CHANGE AWAITING SITE CONDITION INFORMATION

SHEET NOTES

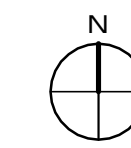
1. TEMP. CONST. GENERATOR
REFER TO H-101 FOR SPILL CONTAINMENT DETAILS.
GENERATOR NOISE AT FULL LOAD NOT TO EXCEED 60dB @ 50' V.F.
OPERATIONS AND REFUELING OF GENERATOR LIMITED TO APPROVED TIME BY ORGANIZERS.
2. TEMP. OSHA APPROVED HAZARDOUS CONTAINERS (REFER TO H-101 FOR DETAILS)
3. CONTAINER C1 CONTENTS:
-LIGHTING
-TOOLS & SAFETY EQUIPMENT
-TENTS AND WEATHER PROTECTION
-GENERATOR
-FOOD PREPARATION
4. CONTAINER C2 CONTENTS:
-ADDITIONAL LIGHTING
-TOOLS & SAFETY EQUIPMENT
-FABRIC ASSEMBLY
-EXTERIOR FRAMING
-GENERAL HARDWARE
5. CONTAINER C3 CONTENTS:
-P.V. MODULES
-P.V. RAILS AND MOUNTS
-INTERIOR DESIGN ITEM
-NORTH WINDOWS
-EAST, WEST, & SOUTH DOORS
6. CONTAINER C4 CONTENTS:
-DECKING MODULES & FOOTING
-LANDSCAPING
-3 HAZ-MAT CONTAINERS
-PUBLIC TOUR ITEMS

REFERENCE KEYNOTES



A1 OPERATION SITE EQUIPMENT & TRUCK ROUTE

1/16"=1' 0 8 16 32



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CHIP 2011

COMPACT HYPER-INSULATED PROTOTYPE

U.S. DEPARTMENT OF ENERGY
SOLAR DECATHLON 2011
TEAM SCI-ARC / CALTECH

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EQUIPMENT SCHEDULE & CRANING ASSEMBLY PROCEDURE

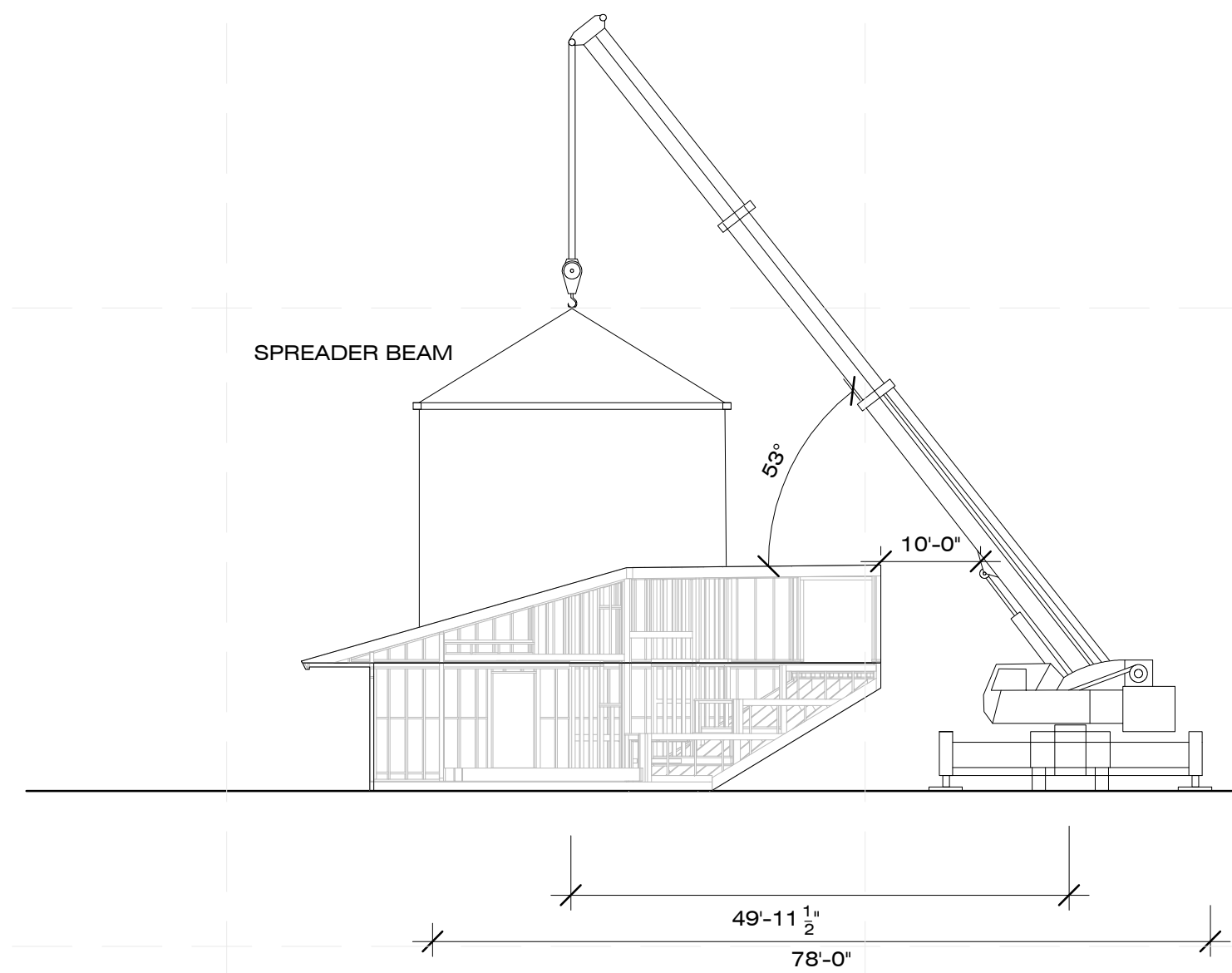
O-102

PLAN NO.	PROJECT MANUAL MASTER FORMAT	ARTICLE NAME	PART NUMBER	ARTICLE MANUFACTURER	ARTICLE NUMBER	SIZE			QTY.	NOTES
						L	W	H		
O-101-O-103	DIV 34	CRANE	-	-	101-001	-	-	-	1	60' MAXIMUM REACH
O-102-O-103	DIV 34	ARTICULATING BOOM LIFT 40FT REACH	Z-40/23N	GENIE	102-001	-	59"	78"	1	UP&OVERH213' PLATFORM CAPACITY500lbs.
O-101-O-103	DIV 34	PORTABLE HALIDE WORK LIGHT	20330	ALLMAND	101-004	2'	2'	12'	4	1000WATT
O-101-O-103	DIV 34	COMPRESSOR	-	-	101-003	2'	3'	3'	1	WILL SATISFY NPS NOISE REG.
O-101-O-103	DIV 34	LASER LEVEL	LL300	SPECTRA	101-005	1'	1'	1'	1	60' MAXIMUM REACH
O-101-O-103	DIV 34	STEP DECK TRAILER	-	-	101-002	64'	11.5'	13.5'	4	38FT LOWER DECK 10FT UPPER DECK
O-101-O-103	DIV 34	SPREADER BEAM	-	-	101-006	22'	17'	1'	1	SPEC. FOR SPREADER TBD
O-101-O-103	DIV 34	GENERATOR	DCA25USI	WHISPERWATT	101-007	70"	31"	50"	1	
O-101-O-103	DIV 34	10' CONTAINER	MM-10	MOBILE MINI	101-008	10'	8.5'	8.5'	8	

C1 OPERATIONS SCHEDULE

C4 CRANING ELEVATION

1/16" = 1'-0" 0 8' 16' 32'



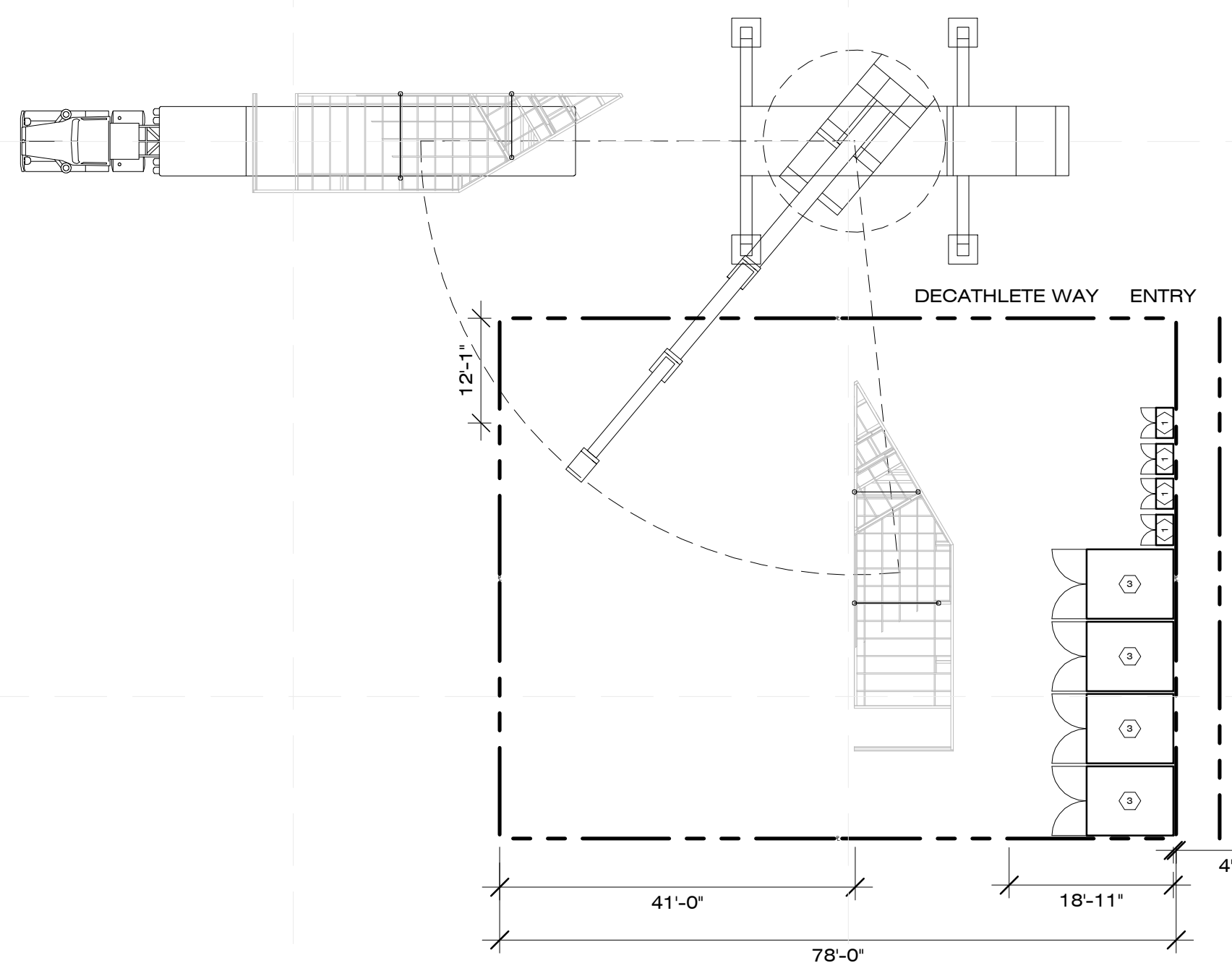
GENERAL SHEET NOTES

- DISASSEMBLY PROCEDURE IS SAME AS ASSEMBLY IN REVERSE ORDER STARTING IN FOURTH CRAIN PICK IN SHT. O-103.

SHEET NOTES

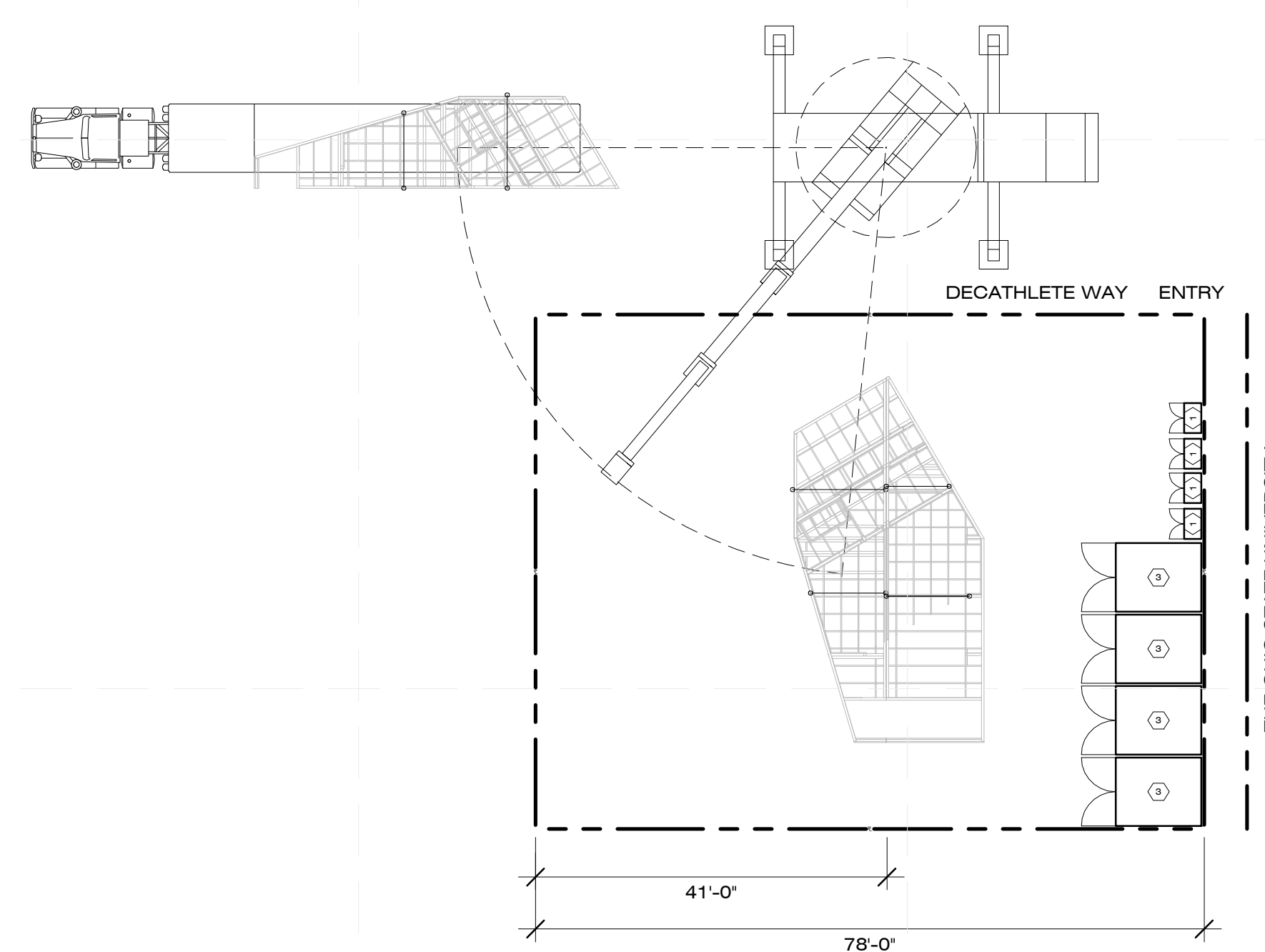
- TEMPORARY OSHA APPROVED HAZARDOUS LIQUIDS CONTAINERS (AS NEEDED)
- MOVABLE OSHA APPROVED HAZARDOUS COLLAPSIBLE VINYL LIQUIDS SPILL CONTAINMENT (FOR TEMP. CONST. GENERATOR DWG O-101)
- TEMP. 8X10' METAL SHIPPING CONTAINER (FOR CONST. DURATION ONLY DWG O-101)

REFERENCE KEYNOTES



A1 FIRST CRANE PICK

1/16" = 1'-0" 0 8' 16' 32'



A4 SECOND CRANE PICK

1/16" = 1'-0" 0 8' 16' 32'



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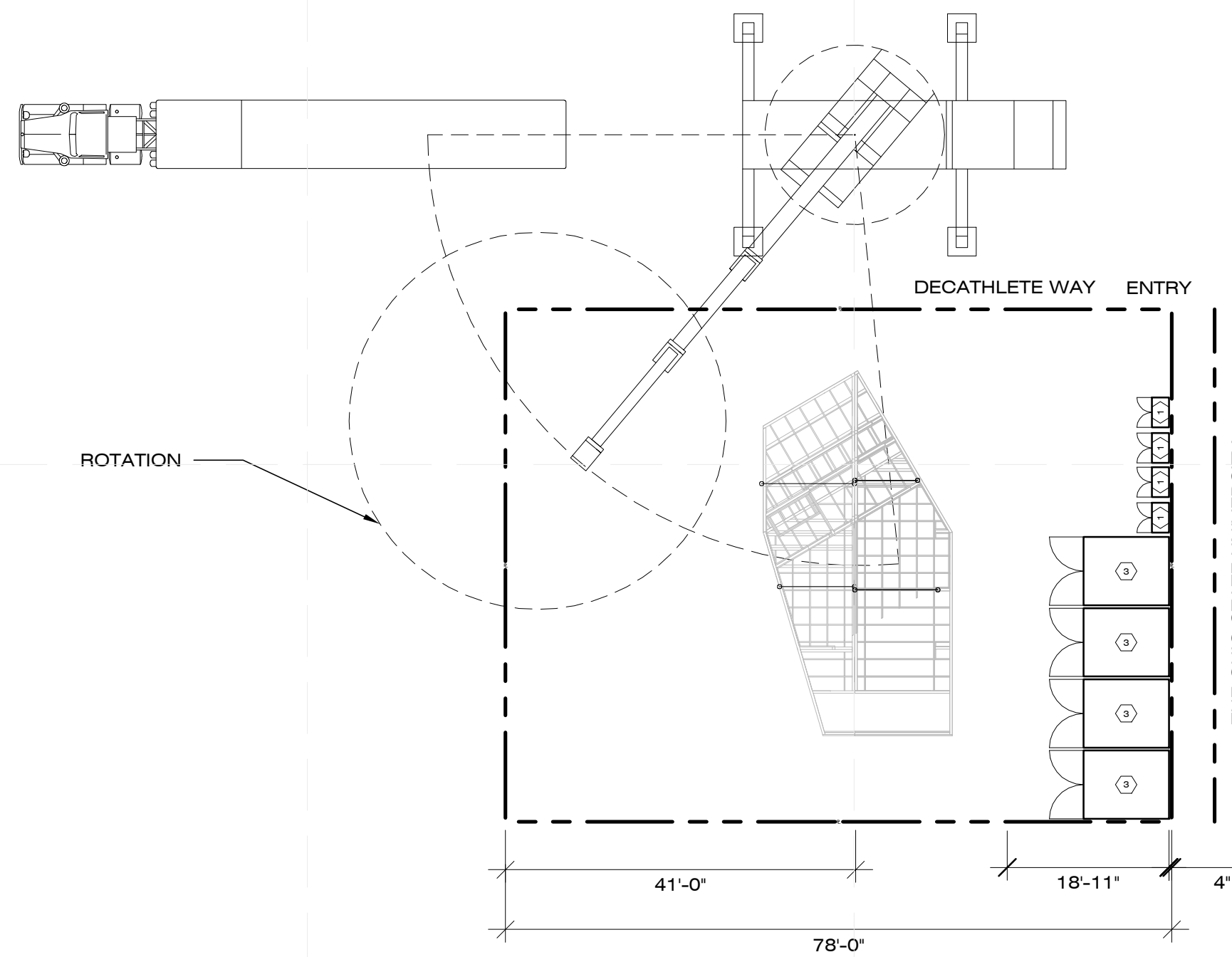
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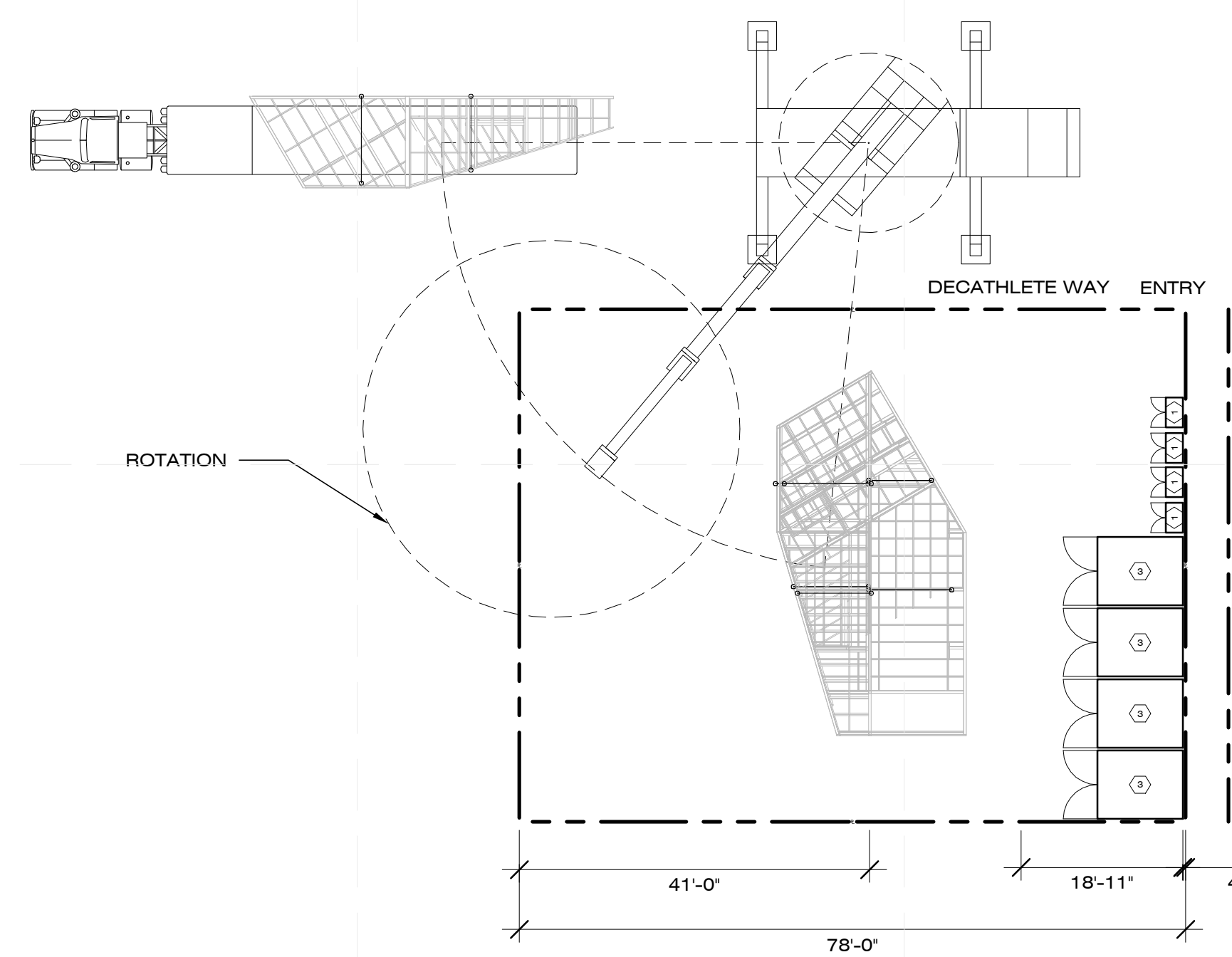
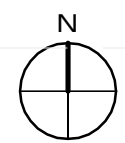
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CRANING ASSEMBLY PROCEDURE

O-103



C1 THIRD CRANE PICK
1/16" = 1'-0" 0 8' 16' 32'



C4 FOURTH CRANE PICK
1/16" = 1'-0" 0 8' 16' 32'



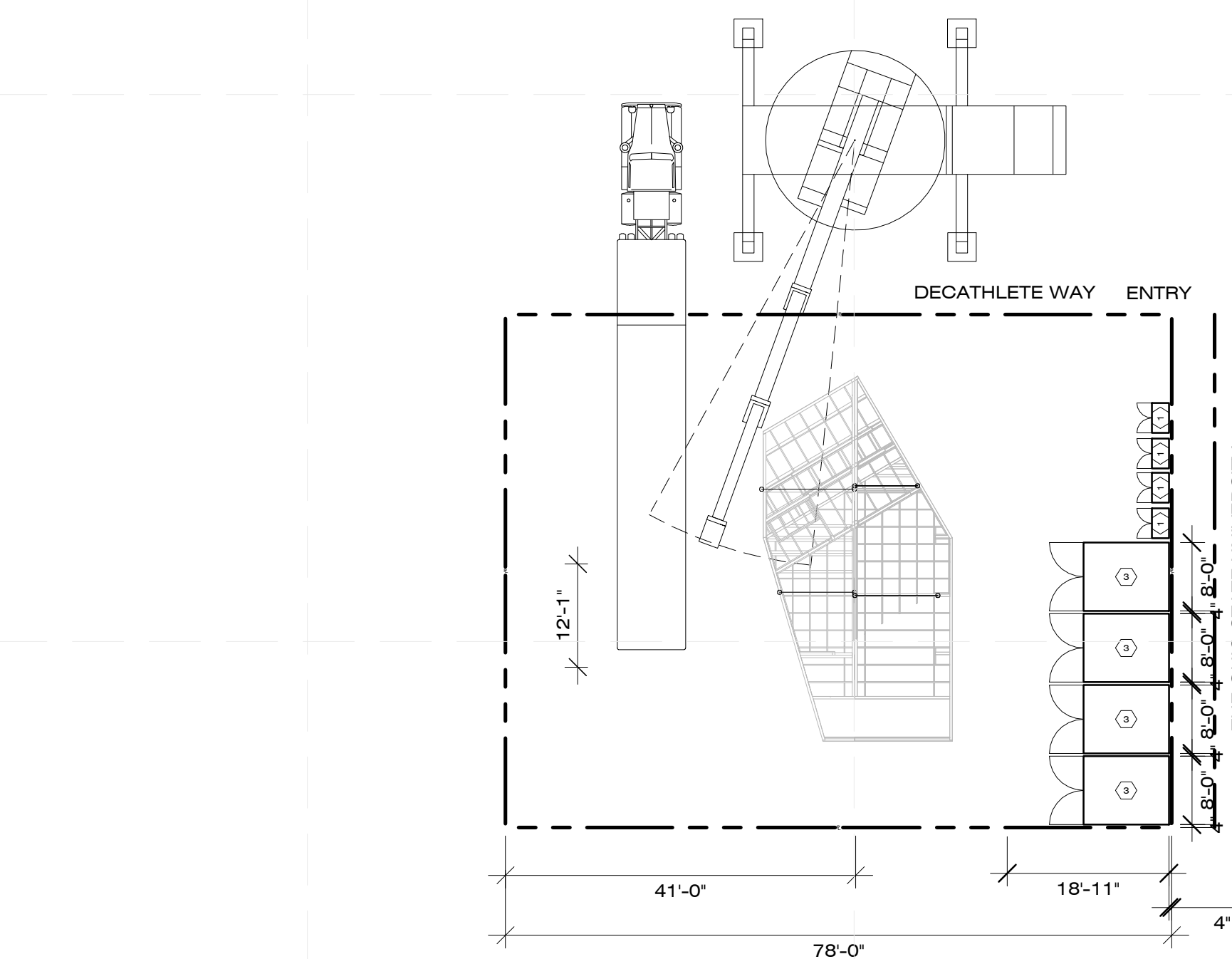
GENERAL SHEET NOTES

1. DISASSEMBLY PROCEDURE IS SAME AS ASSEMBLY IN REVERSE ORDER.

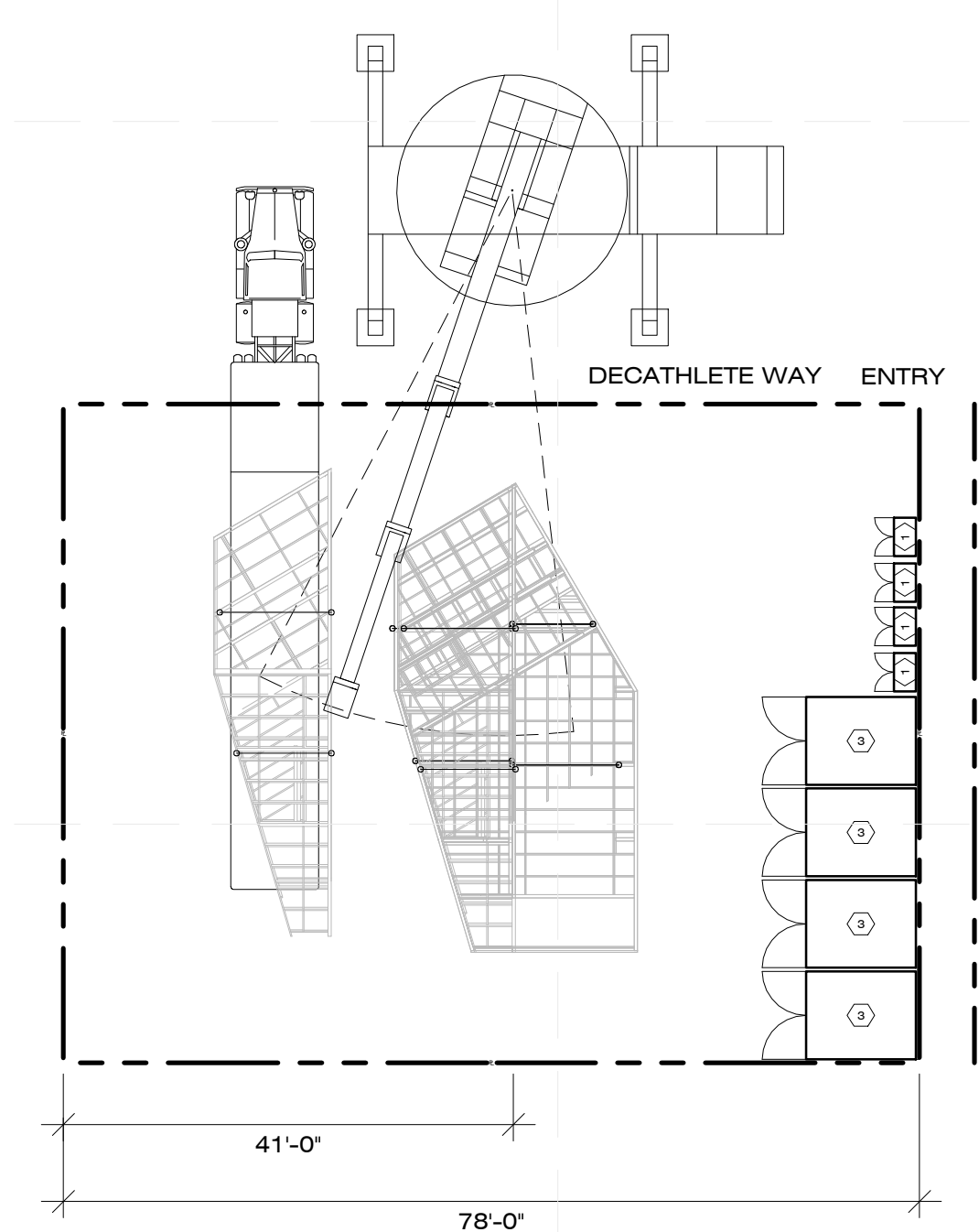
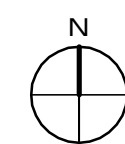
SHEET NOTES

1. TEMPORARY OSHA APPROVED HAZARDOUS LIQUIDS CONTAINERS (AS NEEDED)
2. MOVABLE OSHA APPROVED HAZARDOUS COLLAPSIBLE VINYL LIQUIDS SPILL CONTAINMENT (FOR TEMP. CONST. GENERATOR DWG O-101)
3. TEMP. 8'X10' METAL SHIPPING CONTAINER (FOR CONST. DURATION ONLY DWG O-101)

REFERENCE KEYNOTES



A1 (OPTIONAL) THIRD CRANE PICK
1/16" = 1'-0" 0 8' 16' 32'



A4 (OPTIONAL) FOURTH CRANE PICK
1/16" = 1'-0" 0 8' 16' 32'

