US DEPARTMENT OF ENERGY
SOLAR DECATHLON 2021 BUILD CHALLENGE
www.solardecathlon.gov

TEAM ILLINOIS
www.solardecathlon.illinois.edu/

UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN
1202 N Walnut Street, Champaign, Illinois

D7. CONSTRUCTION DRAWINGS SET

March 2nd, 2021

ADAPTHAUS
FLEXIBLE, SUSTAINABLE, AFFORDABLE

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A303	WALL SECTIONS
A304	WALL SECTIONS
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A603	INTER-MODULE DETAILS
A604	INTER-MODULE DETAILS
A605	INTER-MODULE DETAILS
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A607	EXTERIOR WALL CLADDING DETAILS
A608	DOOR WINDOW DETAILS
A608A	DOOR WINDOW DETAILS

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A611	SERVICE CUTOUT DETAILS
A612	DROP CEILING DETAILS
A-LB101	LOCAL BUILD ACCESS ROUTE
A-LB104	LOCAL BUILD REMOVABLE WALL DETAILS
A-NS101	NATIONAL SHOWCASE MODULE C-ACCESS ROUTE
M001	HVAC ISOMETRIC
M101	HVAC EQUIPMENT AND DISTRIBUTION PLAN
M102	MECHANICAL ROOM DETAIL
E001	GENERAL NOTES AND SYMBOLS
E002	SIZING CALCULATION
E003	PV WIRING PLAN
E004	ONE-LINE DIAGRAM
E005	THREE-LINE DIAGRAM
E006	AC/DC LAYOUT AFCI AND GFCI RECEPTACLE OUTLETS
E007	AC/DC LAYOUT 240V RECEPTACLE OUTLETS
E008	NORTH DECK ELECTRICAL EQUIPMENT
E009	CONDUIT NOTES
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E017	MODULE A LIVING ROOM CONDUIT LAYOUT
E018	MODULE A LIVING ROOM BRANCH CIRCUIT
E019	MODULE A TOILET CONDUIT LAYOUT
E020	MODULE A TOILET BRANCH CIRCUIT
E021	MODULE C OFFICE/AIRBNB CONDUIT LAYOUT
E022	MODULE C OFFICE/AIRBNB BRANCH CIRCUIT
E023	MODULE C DINING AND STUDY CONDUIT LAYOUT
E024	MODULE C DINING AND STUDY BRANCH CIRCUIT
E025	MODULE A UTILITY/MECHANICAL SHAFT CONDUIT LAYOUT
E026	MODULE A UTILITY/MECHANICAL SHAFT BRANCH CIRCUIT
E027	MODULE A KITCHEN CONDUIT LAYOUT
E028	MODULE A KITCHEN BRANCH CIRCUIT
E029	NORTH DECK CONDUIT LAYOUT
E031	CAR CHARGER CONDUIT LAYOUT
E032	ACCESS PANEL CONNECTIONS
E033	3 MODULE CONDUIT LAYOUT WITH NOTES
E100	ENERGY ANALYSIS
E101	ENERGY ANALYSIS
E102	ENERGY ANALYSIS
E103	ENERGY ANALYSIS
E104	HERS SCORE AND ERI
P001	PLUMBING NOTES
P101	PLUMBING SITE PLAN
P102	DOMESTIC WATER SUPPLY PLAN
P103	VENT AND WASTE PLAN
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P201	PLUMBING ISOMETRIC
L101	LIGHTING PLAN
L102	APPLIANCES
L103	TELECOMMUNICATION

DRAWING INDEX

1/8" = 1'-0"

ADAPTHAUS

FLEXIBLE, SUSTAINABLE, AFFORDABLE

ILLINOIS SOLAR DECATHLON 2018 - 21

TEAM NAME

ADAPTHAUS

CONTACT

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CONSULTANTS:

- DARCY BEAN CONSTRUCTION
- THORNTON TOMASETTI
- AFFILIATED ENGINEERS INC

NO.	DESCRIPTION	DATE

DRAWING INDEX

DRAWN BY:

CHECKED BY:

G001

ARCHITECTURAL

A. FIRE RESISTANCE COMPLIANCE

A.01 SEE CODE COMPLIANCE PLANS IN A-SERIES FOR DETAILED CODE REQUIREMENTS.

A.02 ANY ASSOCIATED PENETRATIONS THROUGH THE FIRE RATED WALL, SHALL BE SEALED WITH A CERTIFIED ASSEMBLY TO MANTAIN FIRE RATING.

A.03 ALL PIPING, DUCTS, ETC. THAT PENETRATE FLOOR SLABS SHALL BE INSTALLED IN A MANNER THAT WILL PRESERVE THE FIRE-RESISTANT AND STRUCTURAL INTEGRITY. PENETRATIONS INTO FIRE-RATED WALLS OF MORE THAN 1HR. RATING SHALL BE PROVIDED WITH APPROVED FIRE DAMPERS WHETHER OR NOT SHOWN IN THE MECHANICAL DRAWINGS.

A.04 ALL RATINGS ARE TO COMPLY WITH UNDERWRITERS LABORATORIES (UL) TEST RATINGS. IN THE ABSENCE OF TESTED ASSEMBLY, A CERTIFICATE FOF EQUIVALENCY FROM UL MUST BE PROVIDED. MEET ALL THE REQUIREMENTS OF FACTORY MUTUAL ENGINEERING FOR BOTH CONSTRUCTION AND FIRE PROTECTION.

B. DIMENSIONING

B.01 UNLESS NOTED OTHERWISE, PARTITIONS ARE DIMENSIONED TO THE FACE OF THE WALL.

B.02 ALL DIMENSIONS ARE IN IMPERIAL SYSTEM, UNLESS OTHERWISE IS SPECIFIED.

B.03 ALL DIMENSIONS SHALL BE VERIFIED IN THE FIELD BEFORE PROCEEDING WITH THE WORK. THE ARCHITECT SHALL BE NOTIFIED OF ANY CORRECTION.

B.04 DOOR OPENINGS ARE GENERALLY DIMENISIONED TO CENTERLINE OF OPENING. THOSE THAT ARE NOT DIMENSIONALLY LOCATED ARE TO BE CENTERED BETWEEN WALLS OR POSITIONED WITH ONE JAMB AGAINST AN ADJACENT WALL OR COLUMN AS SHOWN ON THE DRAWINGS.

B.05 ALL DIMENSIONS SHALL BE VERIFIED AND COORDINATED WITH THE WORK OF ALL TRADES.

C. ADA COMPLIANCE

C.01 BASED ON U.S ADA REQUIREMENTS, DOOR OPENINGS SHALL BE 36".

C.02 BASED ON U.S ADA REQUIREMENTS, ALL COUNTER HEIGHTS COMPILED ARE 34" TO THE FLOOR FINISH.

C.03 BASED ON U.S ADA REQUIREMENTS, ALL ABOVE COUNTER CABINETS BEGIN AT 48" ABOVE FINISHED FLOOR LEVELS.

C.04 BASED ON U.S ADA REQUIREMENTS, ALL FLOORING TRANSITIONS STRIPS AND DOOR SEALS ARE COMPLIANT.

C.05 THE HOUSE IS DESIGNED AS PER ADA GUIDELINES ISSUED BY UNITED STATES ACCESS BOARD. SPECIAL CARE NEEDS TO BE GIVEN TO THE EXECUTION OF DOORS AND OPENINGS, PASSAGEWAY CLEARANCE AND FLOOR TRANSITIONS BASED ON THE DRAWINGS.

D. INSULATION

D.01 WHETHER SPECIFICALLY SHOWN, OR NOT, PROVIDE INSULATION WITH VAPOR BARRIER BETWEEN ALL EXTERIOR AND INTERIOR HEATED SPACES TO MAINTAIN DESIGN U - VALUES. WHEN IN DOUBT, CONFIRM WITH THE ARCHITECT.

D.02 WALL TO ROOF, WALL TO OPENING, WALL TO FLOOR AND MODULE A TO MODULE B FLASHING, SHALL BE CONSTRUCTED IN ACCORDANCE WITH STANDARD SPECIFICATIONS

D.03 ALL JOINTS AND PENETRATIONS IN INSULATION BARRIER SHALL PROVIDE A CONTINUOUS AIR/VAPOR TIGHT INSTALLATION.

D.04 SPECIAL ATTENTION SHALL BE GIVEN TO CLADDING FABRICATION IN ORDER TO GREATLY MINIMIZE THERMAL BRIDGING

D.05 THE EXTERIOR CLADDING WILL SERVE AS RAIN SCREEN AND NOT AS AN INSULATION MATERIAL.OTHER ELEMENTS WILL SERVE THAT PURPOSE.

D.06 ALL DOOR AND WINDOWS EXTERIOR FRAMES WILL BE ALLIGNED TO THE EXTERIOR CLADDING AND SERVE AS RAIN SCREENS.

D.07 ALL EXTERIOR JOINTS AROUND WINDOW AND DOOR FRAMES, BETWEEN WALLS AND FOUNDATION, BETWEEN ROOF AND WALL PANELS, AT PENETRATION OF UTILITIES THROUGH THE ENVELOPE, SHALL BE SEALED, CAULKED OR WEATHER-STRIPPED TO PREVENT AIR LEAKAGE /INFILTRATION.

D.08 THE CONSTRUCTION METHODS PROVIDE THE FOLLOWING THERMAL RESISTANCE VALUES (R-VALUES) : R- 63.3 FOR ROOF CONSTRUCTION, R- 20.6 FOR FOUNDATION WALL CONSTRUCTION AND R-37.8 FOR WALL CONSTRUCTION (R-37.0 AT SHEAR LOCATIONS. THERMAL ANALYSIS PERFORMED ON WUFI PLUS HYDROTHERMAL SIMULATION SOFTWARE.

E. MECHANICAL AND ELECTRICAL AREAS

E.01 THE CONTRACTOR IS TO VERIFY THAT ALL MECHANICAL FLOOR, ROOF, AND WALL SLEEVES, AS WELL AS ALL MECHANICAL SHAFTS AND OPENINGS, ARE COMPLIANT WITH ALL DRAWINGS, SUCH AS MECHANICAL, PLUMBING, FIRE-PROTECTION, STRUCTURAL, AND ARCHITECTURAL. ANY POTENTIAL CONFLICTS AND DISCREPANCIES SHALL BE IDENTIFIED AND NOTIFIED TO THE ARCHITECT. THE CONTRACTOR SHALL PROVIDE SLEEVES AS WELL AS FLOOR AND ROOF OPENINGS AS REQUIRED TO ALLOW ALL DUCTS AND PIPING, AS SHOWN ON MECHANICAL AND ELECTRICAL DRAWINGS.

E.02 GENERAL CONTRACTOR TO COORDINATE ALL MECHANICAL AND ELECTRICAL FLOOR, ROOF AND WALL SLEEVES AND ALL MECHANICAL SHAFTS AND OPENINGS WITH MECHANICAL, PLUMBING, FIRE PROTECTION, ELECTRICAL, STRUCTURAL AND ARCHITECTURAL DRAWINGS AND NOTIFY THE ARCHITECT OF ANY DISCREPANCIES. GENERAL CONTRACTOR SHALL PROVIDE SLLEVES AND FLOOR AND ROOF OPENINGS AS REQUIRED TO ALLOW INSTALLATION OF ALL DUCTS AND PIPING AS SHOWN ON THE MECHANICAL AND ELECTRICAL DRAWINGS.

E.03 FIRE DAMPERS SHALL BE PROVIDED AS SHOWN AND WHEREVER AIR DUCTS PEENTRATE FIRE RATED WALLS OR CEILING. FIRE DAMPERS SHALL BE FIRE DEPARTMENT LISTED AND APPROVED.

F. EXTERIOR WALLS

F.01 THE EXTERIOR WALL AS SHOWN SHALL BE A COMPLETE SYSTEM INCLUDING ALL STIFFENERS, FASTENERS, SEALANTS,SEALANTS, MISCELLANEOUS JOINING PIECES, AND MATERIAL THICKNESSE AS REQUIRED TO FORM A WATERTIGHT ENCLOSURE.

F.02 ALL DETAILS ARE TO BE COORDINATED WITH THE STRUCTURAL FRAMING AND OTHER BUILDING COMPONENTS INCLUDING ROOFING, EXTERIOR-CLADDING ITEMS, GLAZING, INTERIOR FINISH AND OTHER RELATED BUILDING COMPONENTS.

F.03 ALL SEALANT JOINTS SHALL BE SIZED SUCH THAT THEY WILL BE WITHIN THE SIZE RANGE RECOMMENDED BY THE SEALANT MANUFACTURER.

F.04 VERIFY OR GUARANTEE ALL CLEAR OPENINGS FOR DOOR AND WINDOW INSTALLATION.

F.05 ALL SILLS, WINDOW HEADS, AND SHELF ANGLES SHALL HAVE FLASHING AS SHOWN ON THE DRAWINGS.

General Notes

1 FOR FORMALITY PURPOSES, THE CLIENT AND DESIGNER IN THIS PROJECT WILL BE REFERED TO AS THE SOLAR DECATHLON MEMBERS, THE CONTRACTOR WILL BE REFERED TO AS THE COMPANY BROEREN RUOSSO AND THE SUB- CONTRACTOR TO THE COMPANY SKENDER.

2 DRAWINGS ARE NOT NECESSARILY TO SCALE, IT IS STRONGLY ADVISED NOT TO SCALE THEM. EXPLICIT DIMENSIONS SHALL HAVE PRECEDENCE OVER SCALE.

3 ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE APPLICABLE CODES. ENGINEER/ARCHITECT SHALL CONFIRM WITH ALL APPLICABLE MUNICIPAL, STATE AND FEDERAL REGULATIONS HAVING JURISDICTION INCLUDING ACCESSIBILITY STANDARDS AND ILLINOIS ACCESSIBILITY REQUIREMENTS.

4 THE CONTRACTOR ALONE SHALL BE RESPONSIBLE FOR THE SAFETY AND ADEQUACY OF HIS/HER PLANT, APPLIANCES, METHODS AND DAMAGES WHICH MAY RESULT FROM THEIR IMPROPER REMOVAL, CONSTRUCTION, MAINTENANCE OR OPERATION. HE/SHE SHALL ERECT AND PROPERLY MAINTAIN AT ALL TIMES AS REQUIRED BY THE CONDITIONS AND PROGRESS OF THE WORK, PROPER SAFEGUARDS FOR THE PROTECTION OF WORKPERSONS, OWNER, AND OWNERS PROPERTY. AND SHALL POST ANGER WARNINGS AGAINST HAZARDS CREATED BY CONSTRUCTION OPERATIONS.

5 INSPECTION BY CONTRACTOR: THE CONTRACTOR ACKNOWLEDGES AND AGREES THAT HE/SHE HAS INVISIBLE INDELEGABLE, INTRANSFERABLE AND CONTRACTURAL OBLIGATION TO THE CLIENT TO MAKE HIS/HER OWN INSPECTIONS ON HIS/HER OWN WORK AT THE STAGES OF CONSTRUCTION, AND SHALL SUPERVISE AND SUPERINTEND PERFORMANCE OF WORK IN SUCH MANNER AS TO ENABLE HIM/HER TO CONFIRM, CERTIFY AND CORROBORATE AT ALL TIMES THAT ALL WORK HAS BEEN EXECUTED ACCORDINGLY TO THE CONTRACT DOCUMENT.

6 NOTES ON DRAWINGS SHALL APPLY TO ALL SIMILAR CONDITIONS WHETHER REPEATED OR NOT. DETAILS NOT SHOWN ARE SIMILAR IN CHARACTER TO THOSE SHOWN.

7 CONTRACTOR'S WARRANTY: THE CONTRACTOR WARRANTS THAT HE IS FAMILIAR WITH THE CODES AND REGULATIONS APPLICABLE TO THE WORK AND THAT HE HAS THE SKILL, KNOWLEDGE, COMPETENCE, ORGANIZATION AND PLANT TO EXECUTE THE WORK PROMPTELY AND EFFICIENTLY IN COMPLIANCE WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS, INCLUDING THE TIME SCHEDULE.

8 ASBESTOS-CONTAINING MATERIALS MAY NOT BE USED ON THIS PROJECT.

9 PAINT WITH LEAD OR VOC COMPONENTS WILL NOT BE USED IN THIS PROJECT.

10 MATERIALS WITH PLASTIC COMPONENTS WILL NOT BE USED IN THIS PROJECT.

11 SUBCONTRACTORS FOR EACH TRADE ARE ADVISED THAT INFORMATION PERTINENT TO THEIR WORK MAY OCCUR IN OTHER PORTIONS OF THE CONTRACT DOCUMNETS. ALL SHEETS AND NOTES TO BE REVIEWED.

12 THE STRUCTURAL, MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS IN DEFINING THE WORK OF THE CONTRACT DOCUMENTS. SHOULD THERE BE A DISCREPANCY BETWEEN THE ARCHITECTURAL DRAWINGS AND THE ENGINEERING DRAWINGS THAT WOULD CAUSE AN IMPROPER INSTALLATIONS, IT SHALL BE BROUGHT TO THE ARCHITECTS ATTENTION FOR CLARIFICATION PRIOR TO INSTALLATION OF SAID WORK. ANY WORK INSTALLED IN CONFLICT WITH THE ARCHITECTURAL DRAWINGS SHALL BE CORRECTED BY THE CONTRACTOR AT HIS EXPENSE.

13 THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ACCURATE PLACEMENT OF BUILDINGS ON THE SITE.

14 THE CONTRACTOR SHALL VISIT THE SITE AND BE KNOWLEGEABLE OF THE CONDITIONS THERE ON. PRIOR TO SUBMITTING A BID, HE/SHE SHALL INVESTIGATE, VERIFY AND BE RESPONSIBLE FOR ALL CONDITIONS OF THE PROJECT AND SHALL NOTIFY THE CLIENT OF ANY CONDITIONS REQUIRING MODIFICATION BEFORE PROCEEDING WITH THE WORK.

SYMBOLS

0	COLUMN LINE W/ COLUMN NUMBER / LETTER
1 A101 SIM	DETAIL TAG DETAIL IDENTIFICATION SHEET WHERE DETAIL IS DRAWN
1 View Name 1/8" = 1'-0"	DETAIL TAG DETAIL TITLE DETAIL IDENTIFICATION DETAIL SCALE
Ref View Name / Ref View Name / 1 A101 1 / 1	ELEVATION(S) TAG ELEVATION IDENTIFICATION SHEET WHERE ELEVATION IS DRAWN
1 A101	WALL SECTION TAG SECTION IDENTIFICATION SHEET WHERE SECTION IS DRAWN
1 A101	PART-SECTION TAG SECTION IDENTIFICATION SHEET WHERE SECTION IS DRAWN
1 A101 SIM	CALLOUT TAG CALLOUT IDENTIFICATION SHEET WHERE DETAIL IS DRAWN CALLED OUT DETAIL
1	REVISION CLOUD TAG REVISION CLOUD REVISION NUMBER
101	DOOR TAG DOOR NUMBER
1t	WINDOW TAG WINDOW NUMBER
	NORTH ARROW

PATTERNS

	EXTERIOR WOODEN CLADDING TYPE A
	EXTERIOR WOODEN CLADDING TYPE B
	GYPSUM DRYWALL
	GENERAL FLOORING (INDOOR)
	TILE FLOORING
	WOODEN DECKING
	EXTERIOR-INTERIOR FLOOR TRANSITION STRIP
	GENERAL FLOOR (INDOOR)-TOILET TRANSITION STRIP
	GENERAL FLOOR (INDOOR) TRANSITION STRIP
	CONCRETE
	WOODEN SECTION (FLOORING, BLOCKING, OSB BOARD, CANOPY SECTION)
	KINGSPAN RIGID INSULATION
	FIRESTONE TAPERED RIGID INSULATION
	SPRAY FOAM INSULATION
	EMSEAL SELF EXPANDING FOAM
	RUBBER GASKET
	RAMMED EARTH
	COARSE GRAVEL
	OVERHEAD LINES
	LINE FOR EXPANDABLE ELEMENTS
	EPDM ROOF MEMBRANE
	AIR/WATER BARRIER
	VAPOR BARRIER
	WATERPROOFING

SYMBOLS

1/4" = 1'-0"

ADAPTHAUS

FLEXIBLE, SUSTAINABLE, AFFORDABLE

ILLINOIS SOLAR DECATHLON 2018 - 21

TEAM NAME

ADAPTHAUS

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CONSULTANTS:

- DARCY BEAN CONSTRUCTION
- THORNTON TOMASETTI
- AFFILIATED ENGINEERS INC

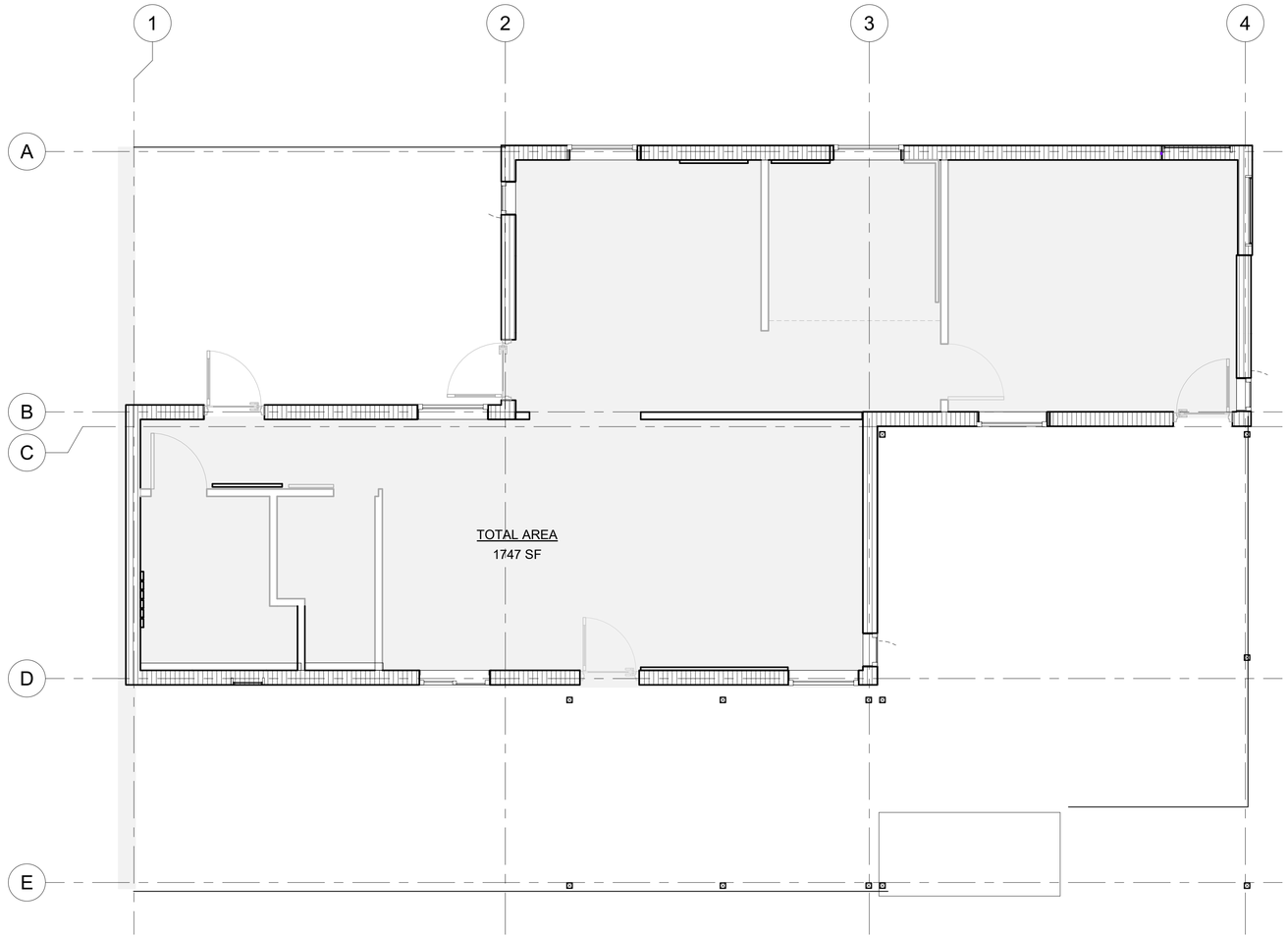
NO.	DESCRIPTION	DATE

GENERAL NOTES AND SYMBOLS

DRAWN BY:

CHECKED BY:

G002



1 FINISHED SQUARE FOOTAGE

1/4" = 1'-0"

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GENERAL NOTES

1. SQUARE FOOTAGE MEASUREMENT CACLCULATION VERIFIED WITH ANSI Z765-2003
2. FINISHED AREA IS MEASURED AT THE FLOOR LEVEL TO THE EXTERIOR FINISHED SURFACE OF OUTSIDE WALLS

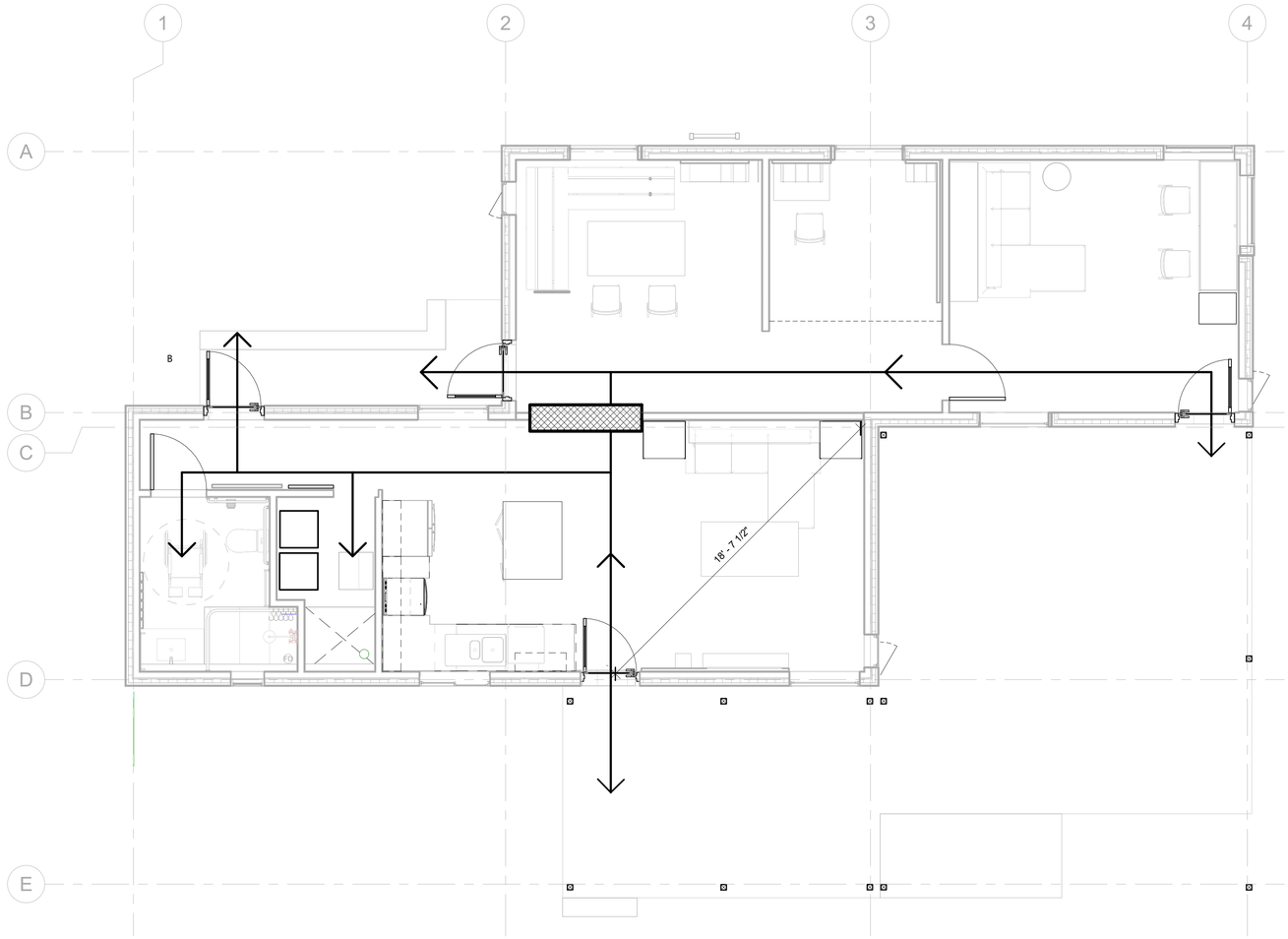
NO.	DESCRIPTION	DATE

FINISHED SQUARE FOOTAGE

DRAWN BY:

CHECKED BY:

G101



1 EGRESS PLAN

1/4" = 1'-0"

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GENERAL NOTES

1. CEILING HEIGHT IS 7'- 8".
2. SLIP-RESISTANT AND SECURELY ATTACHED WALKING SURFACE ALONG ENTIRE MEANS OF EGRESS.
3. LONGEST EGRESS BETWEEN A AND B = 35' 6"
4. ALL DOORS ARE 36" WIDE
5. DIMENSIONS SPECIFIED IN THE DRAWING INDICATE THE LONGEST EGRESS DISTANCES TRAVELED IN THE HOUSE.

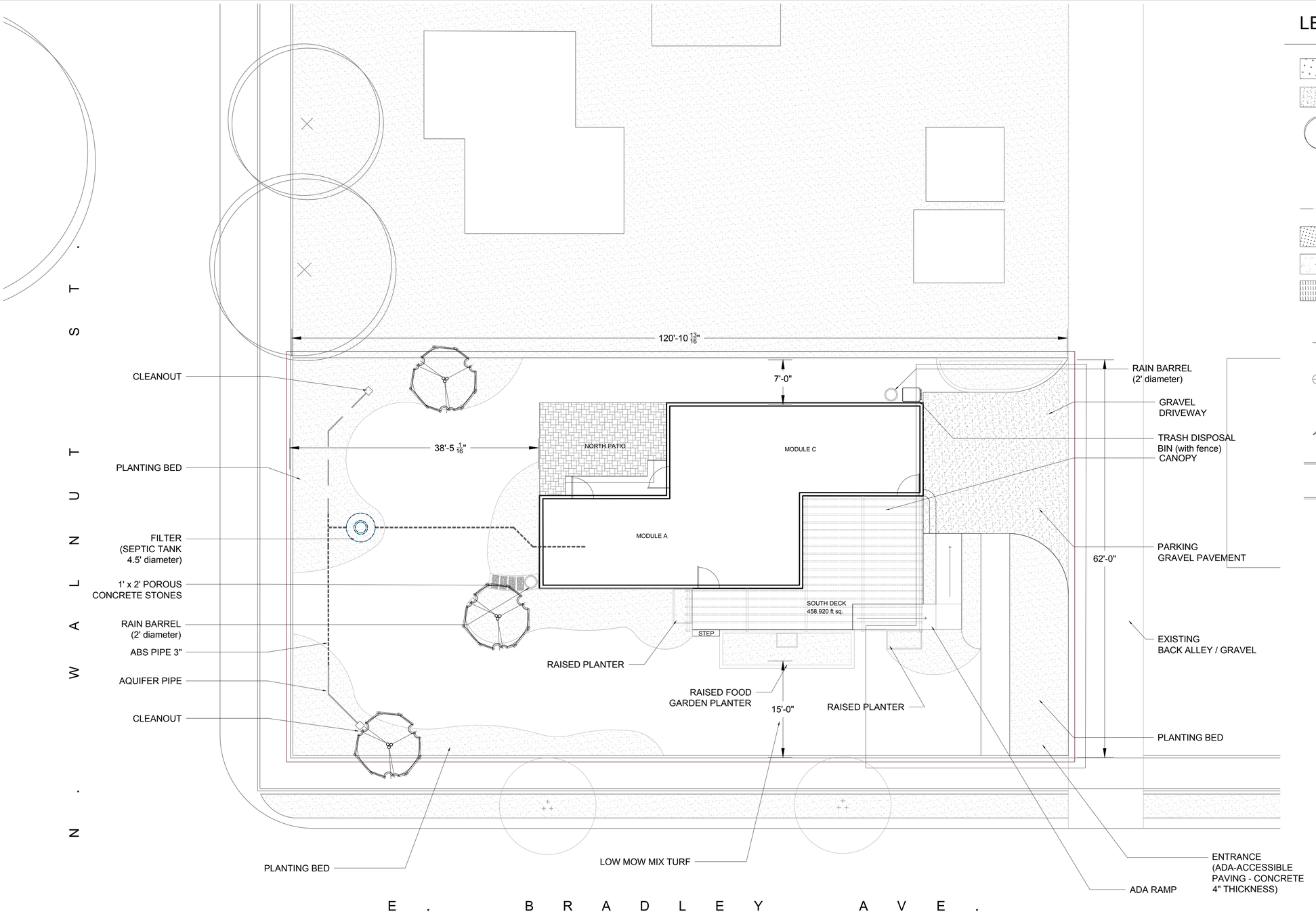
NO.	DESCRIPTION	DATE

EGRESS PLAN

DRAWN BY:

CHECKED BY:

G102



1 LANDSCAPE PLAN - 1202 N. WALNUT

1' = 1/8"

LEGEND

- EXISTING LAWN
- EXISTING GRAVEL
- EXISTING TREES
- SITE EXTENTS
- SEEDED GRASSES
- GRAVEL PAVEMENT
- CONCRETE PATHWAY
- 736.1 EXISTING ELEVATION POINT
- 736.1 PROPOSED ELEVATION POINT
- RUNOFF DIRECTION
- GREYWATER AQUIFER CONNECT PIPE
- GREYWATER AQUIFER PIPE

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CONSULTANTS:

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PLANTS

ALC	Allium canadense
ALS	Allium schoenoprasum
ARM	Aronia melanocarpa
CAI	Callirhoe involucrata
CAP	Carex pensylvanica
CAR	Carex rosea
CARA	Campsis radicans
CEC	Cercis canadensis
CHL	Chasmanthium latifolium
COS	Cornus sericea
ECP	Echinacea pallida
GEM	Geranium maculatum
OLR	Oligoneuron rigidum
PAQ	Parthenocissus quinquefolia
PAV	Panicum virgatum 'Apache Rose'
PHG	Phlox x glaberrima 'ForeverPink'
PHP	Phlox paniculata 'Ditomfra'
PYV	Pycnanthemum virginianum
SAN	Salvia nemorosa 'Caradonna'
SON	Sorghastrum nutans
SPH	Sporobolus heterolepis

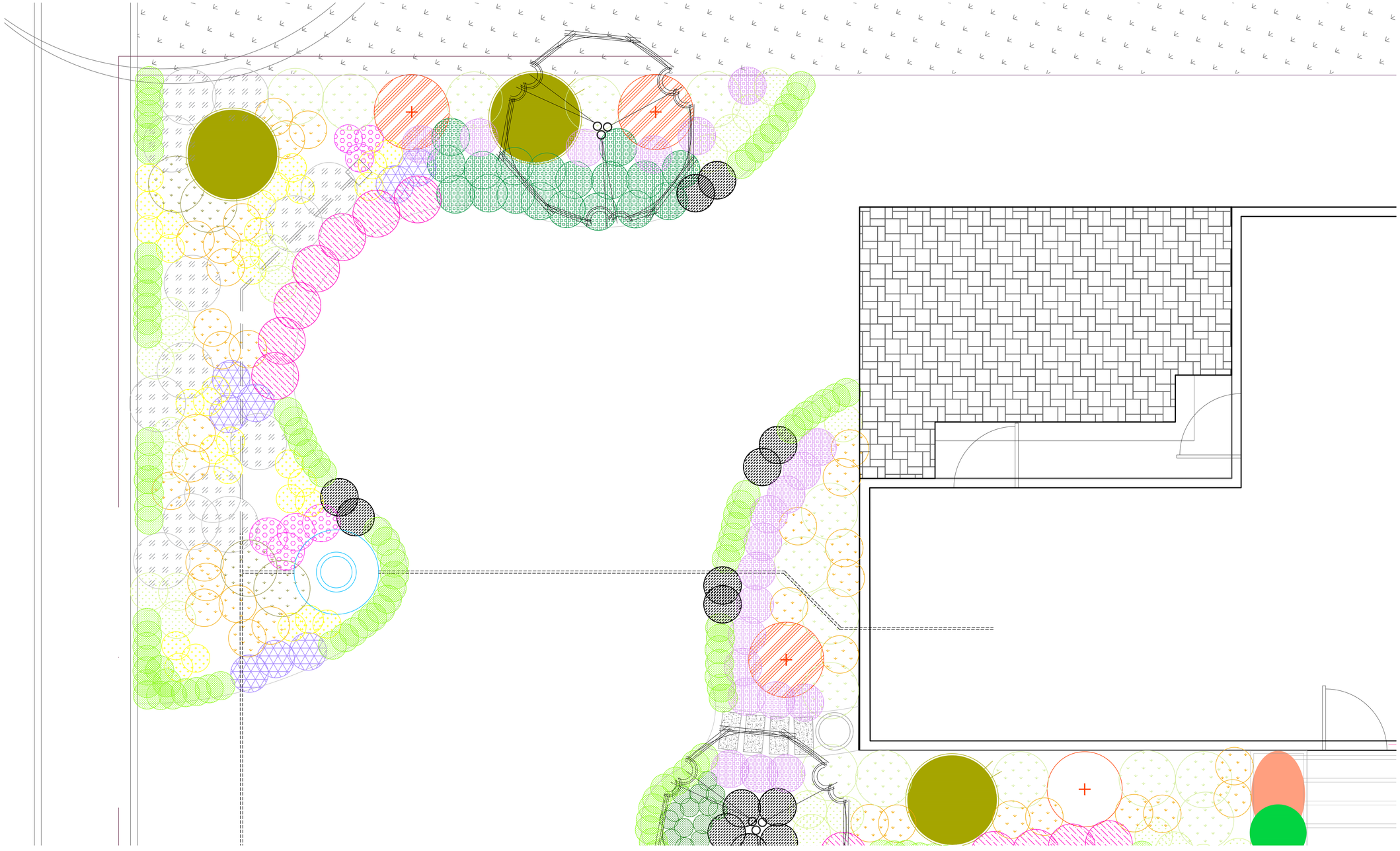
NO.	DESCRIPTION	DATE
1	DETAIL REVISION	2/23/2021

LANDSCAPE PLAN

DRAWN BY: LANDSCAPE TEAM

CHECKED BY:

L101



1 NW PLANTING BED

1' = 3/8 "

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PLANTS

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ARM	Aronia melanocarpa
CAI	Callirhoe involucrata
CAP	Carex pensylvanica
CAR	Carex rosea
CARA	Campsis radicans
CEC	Cercis canadensis
CHL	Chasmanthium latifolium
COS	Cornus sericea
ECP	Echinacea pallida
GEM	Geranium maculatum
OLR	Oligoneuron rigidum
PAQ	Parthenocissus quinquefolia
PAV	Panicum virgatum 'Apache Rose'
PHG	Phlox x glaberrima 'ForeverPink'
PHP	Phlox paniculata 'Ditomfra'
PYV	Pycnanthemum virginianum
SAN	Salvia nemorosa 'Caradonna'
SON	Sorghastrum nutans
SPH	Sporobolus heterolepis

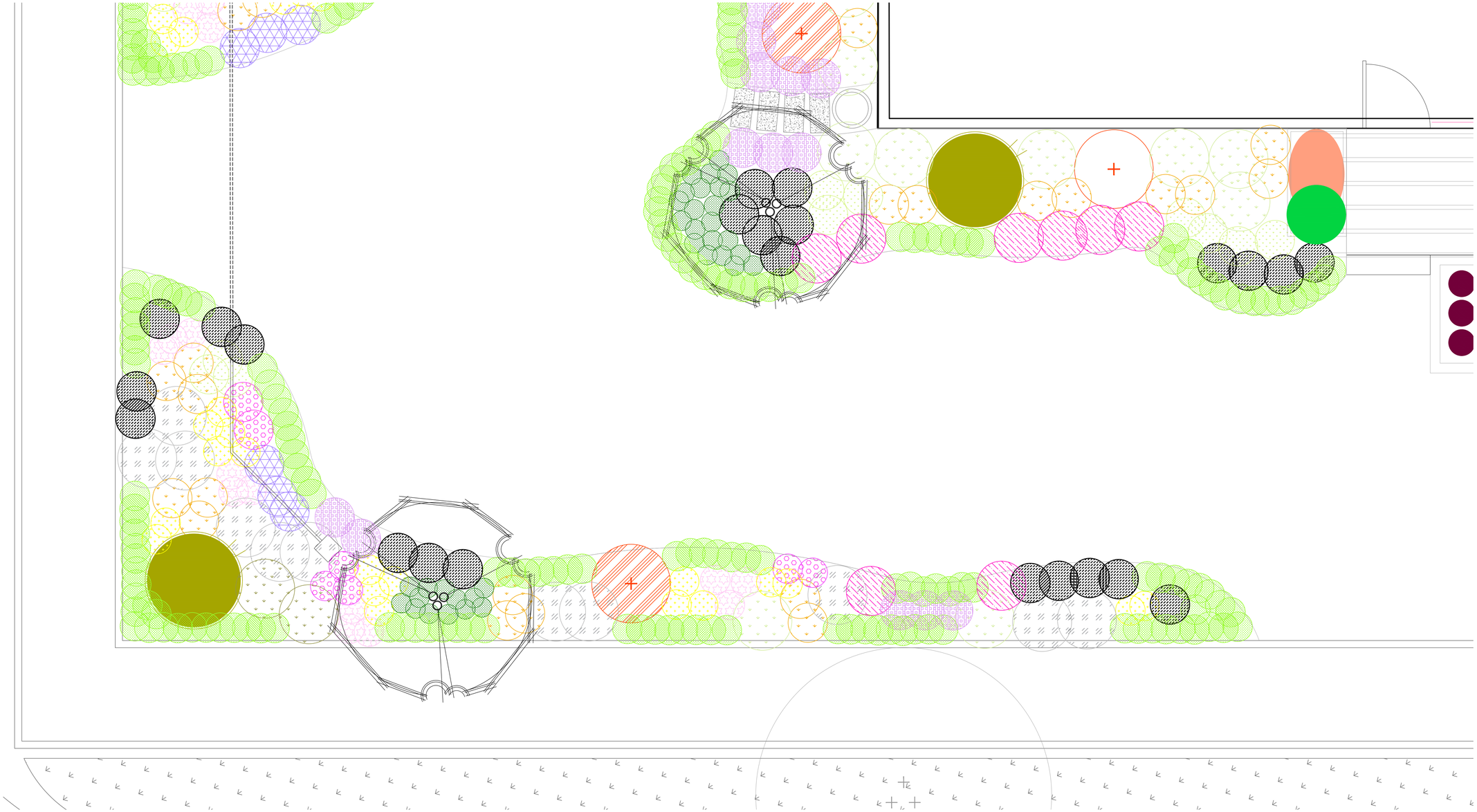
NO.	DESCRIPTION	DATE
1	DETAIL REVISION	2/23/2021

NW PLANTING BED PLAN

DRAWN BY: LANDSCAPE TEAM

CHECKED BY:

L501



2 SW PLANTING BED

1' = 3/8 "

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CARA	Campsis radicans
CEC	Cercis canadensis
CHL	Chasmanthium latifolium
COS	Cornus sericea
ECP	Echinacea pallida
GEM	Geranium maculatum
OLR	Oligoneuron rigidum
PAQ	Parthenocissus quinquefolia
PAV	Panicum virgatum 'Apache Rose'
PHG	Phlox x glaberrima 'ForeverPink'
PHP	Phlox paniculata 'Ditomfra'
PYV	Pycnanthemum virginianum
SAN	Salvia nemorosa 'Caradonna'
SON	Sorghastrum nutans
SPH	Sporobolus heterolepis

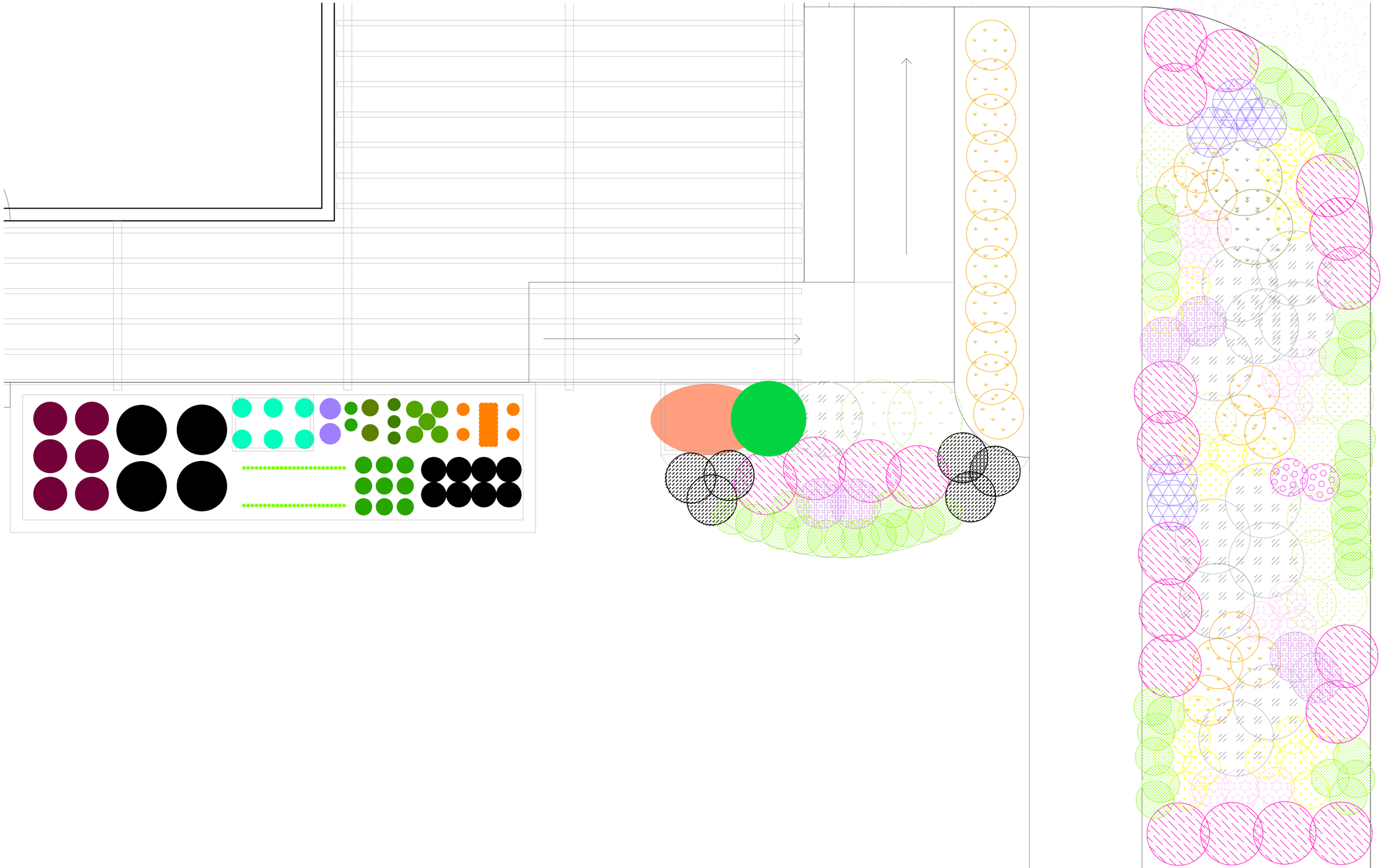
NO.	DESCRIPTION	DATE
1	DETAIL REVISION	2/23/2021

SW PLANTING BED PLAN

DRAWN BY: LANDSCAPE TEAM

CHECKED BY:

L502



3 EAST PLANTING BED

1' = 1/2 "

ADAPTHAUS

FLEXIBLE, SUSTAINABLE, AFFORDABLE

ILLINOIS SOLAR DECATHLON 2018 - 21

TEAM NAME

ADAPTHAUS

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CONSULTANTS:

- DARCY BEAN CONSTRUCTION
- T ORNTON TOMASETTI
- AFFILIATED ENGINEERS INC

PLANTS

ALC	Allium canadense
ALS	Allium schoenoprasum
ARM	Aronia melanocarpa
CAI	Callirhoe involucrata
CAP	Carex pensylvanica
CAR	Carex rosea
CARA	Campsis radicans
CEC	Cercis canadensis
CHL	Chasmanthium latifolium
COS	Cornus sericea
ECP	Echinacea pallida
GEM	Geranium maculatum
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SAN	Salvia nemorosa 'Caradonna'
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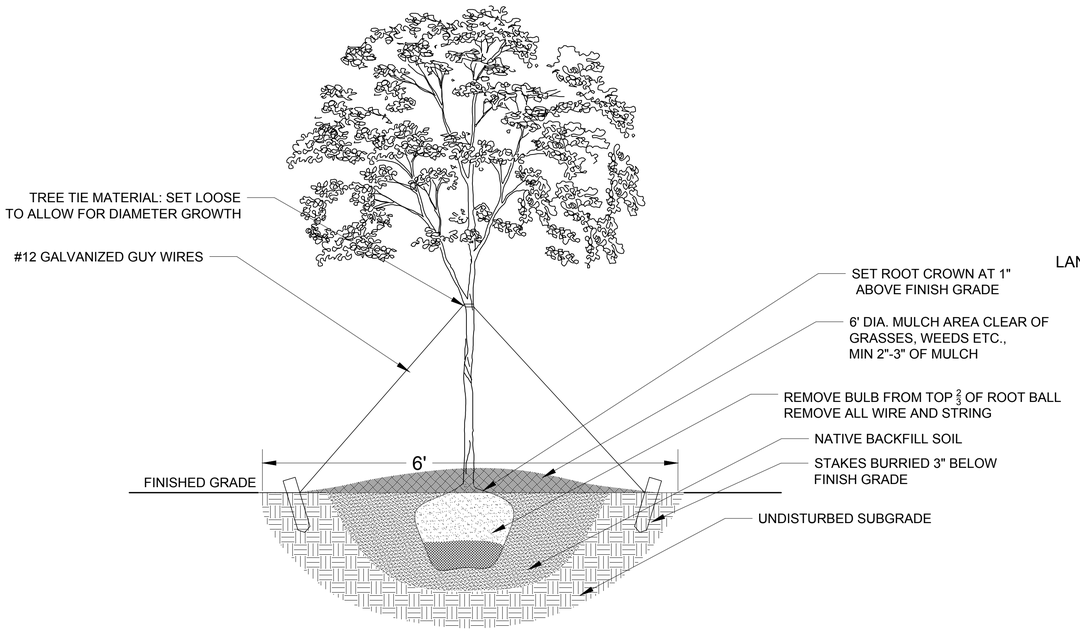
NO.	DESCRIPTION	DATE
1	DETAIL REVISION	2/23/2021

EAST PLANTING BED PLAN

DRAWN BY: LANDSCAPE TEAM

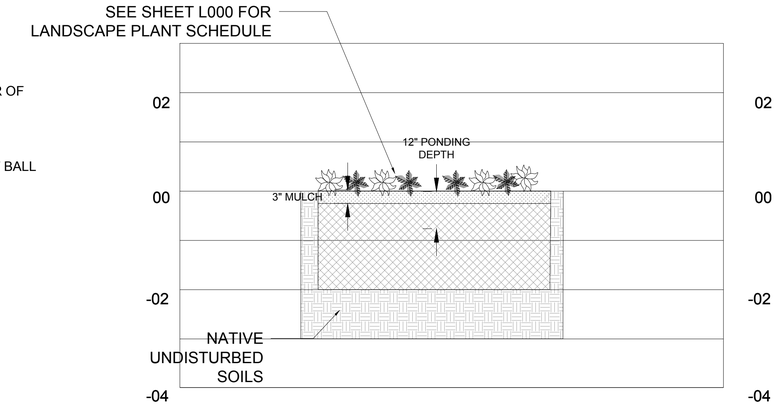
CHECKED BY:

L503



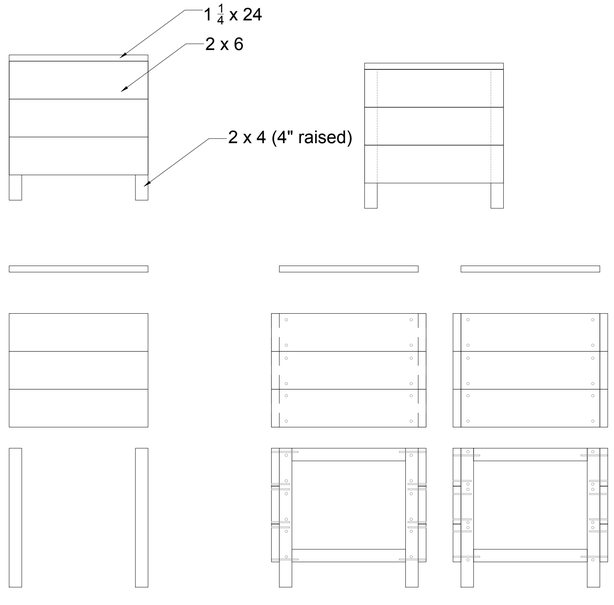
1 TREE PLANTING - SECTION

1"=1'



2 PLANTING BED - SECTION

1'=1'



3 MODULAR BOX - SECTION

1"=1'

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NO.	DESCRIPTION	DATE
1	DETAIL REVISION	2/23/2021

DETAIL SECTIONS

DRAWN BY: LANDSCAPE TEAM

CHECKED BY:

L504

1 **ADA ACCESS PLAN**
1/4" = 1'-0"

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GENERAL NOTES

1.IN REFERENCE TO 2010 ADA STANDARDS FOR ACCESIBLE DESIGN, SECTION 207: WHERE MEANS OF EGRESS ARE PERMITTED BY LOCAL BUILDING OR LIFE SAFETY CODES TO SHARE A COMMON PATH OF EGRESS TRAVEL, ACCESIBLE MEANS OF EGRESS SHALL BE PERMITTED TO SHARE A COMMON PATH OF TRAVEL.

2. CEILING HEIGHT IS STANDARD 7'- 7".

3. SLIP-RESISTANT AND SECURLY ATTACHED WALKING SURFACE ALONG ENTIRE MEANS OF EGRESS.

4. ALL DOORS IN ADA ACCESS PLAN ARE AT LEAST 36" WIDE AND WHEELCHAIR ACCESSIBLE.

5. EXIT DOORS IDENTIFIED BY TACTILE SIGNS.

NO.	DESCRIPTION	DATE

ADA TOUR ROUTE COMPLIANCE PLAN

DRAWN BY:
CHECKED BY:

G103

GENERAL STRUCTURAL NOTES

GR GENERAL REQUIREMENTS

GR-1 AS USED IN THESE GENERAL NOTES:
- a. "DRAWINGS" MEANS THE LATEST STRUCTURAL DESIGN DRAWINGS, UON.
- b. "SPECIFICATIONS" MEANS THE LATEST PROJECT SPECIFICATIONS, UON.
- c. "CONTRACT DOCUMENTS" IS DEFINED AS THE DESIGN DRAWINGS AND THE SPECIFICATIONS
- d. "EOR" IS DEFINED AS THE ENGINEER OF RECORD FOR THE STRUCTURE IN ITS FINAL CONDITION.
- e. "DESIGN PROFESSIONALS" IS DEFINED AS THE OWNER'S ARCHITECT AND EOR.
- f. "MEP" INCLUDES, BUT IS NOT LIMITED TO MECHANICAL, ELECTRICAL, PLUMBING, FIRE PROTECTION.
- g. "CONTRACTOR" IS DEFINED TO INCLUDE ANY OF THE FOLLOWING: GENERAL CONTRACTOR AND THEIR SUBCONTRACTORS, CONSTRUCTION MANAGER AND THEIR SUBCONTRACTORS, STRUCTURAL STEEL FABRICATOR OR STRUCTURAL STEEL ERECTOR.
- h. "BASE BUILDING STRUCTURE" IS DEFINED AS THE STRUCTURAL FRAME DESIGNED BY ILLINOIS SOLAR DECATHLON.
- i. "STRUCTURE IN ITS FINAL CONDITION" MEANS ALL STRUCTURAL ELEMENTS SHOWN ON THE STRUCTURAL CONTRACT DOCUMENTS ARE INSTALLED AND COMPLETELY CONNECTED AND INSPECTED WITH NO OUTSTANDING NON-COMPLIANCE ISSUES.
- j. "DELEGATED DESIGN" MEANS A SCOPE OF WORK THAT MEETS PERFORMANCE CRITERIA ESTABLISHED IN THE CONTRACT DOCUMENTS AND IS TO BE COMPLETED BY THE CONTRACTOR'S LICENSED ENGINEER.

GR-2 THE CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF THE STRUCTURAL WORK WITH THE ARCHITECTURAL, CIVIL, MEP CONTRACT DOCUMENTS, AS WELL AS ANY OTHER APPLICABLE TRADES.

GR-3 THE CONTRACTOR IS RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE UNTIL THE CONSTRUCTION OF THE STRUCTURE REACHES ITS FINAL CONDITION.

GR-4 THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE DESIGN, INSTALLATION, AND REMOVAL OF TEMPORARY BRACING AND CONSTRUCTION SUPPORTS, FOR NEW AND EXISTING STRUCTURES, AS NECESSARY TO COMPLETE THE PROJECT. NO PORTION OF THE PROJECT WHILE UNDER CONSTRUCTION IS INTENDED TO BE STABLE IN THE ABSENCE OF THE CONTRACTOR'S TEMPORARY SUPPORTS AND BRACES. CONTRACTOR SHALL RETAIN A STRUCTURAL ENGINEER LICENSED IN THE STATE WHERE THE PROJECT IS LOCATED TO DESIGN TEMPORARY BRACING AND CONSTRUCTION SUPPORTS.

GR-5 LATERAL LOAD RESISTANCE AND STABILITY OF THE STRUCTURE IN ITS FINAL CONDITION IS PROVIDED BY SHEAR WALLS AND LATERAL STABILITY OF OTHER ELEMENTS IS PROVIDED THROUGH FLOOR SLABS AND IN FLOOR BRACING.

GR-6 THE SPECIFICATIONS ARE AN INTEGRAL PART OF THE CONTRACT DOCUMENTS AND SHALL BE USED IN CONJUNCTION WITH THE STRUCTURAL DRAWINGS.

GR-7 THE CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS AND COORDINATE WITH THE STRUCTURAL DRAWINGS, ARCHITECTURAL DRAWINGS, DRAWINGS FROM OTHER CONSULTANTS, PROJECT SHOP DRAWINGS AND FIELD CONDITIONS.

GR-8 IN CASES OF CONFLICT BETWEEN DRAWINGS AND/OR SPECIFICATIONS AND OTHER DISCIPLINES OR EXISTING CONDITIONS, CONTRACTOR SHALL NOTIFY THE DESIGN PROFESSIONALS AND OBTAIN CLARIFICATION PRIOR TO BIDDING AND PROCEEDING WITH WORK.

GR-9 APPLY DETAILS, SECTIONS, AND NOTES ON THE DRAWINGS WHERE CONDITIONS ARE SIMILAR TO THOSE INDICATED BY DETAIL, DETAIL TITLE OR NOTE.

GR-10 ONLY USE DIMENSIONS INDICATED ON THE DRAWINGS. DO NOT SCALE DRAWINGS.

GR-11 ASSUME EQUAL SPACING BETWEEN ESTABLISHED DIMENSIONS, IF NOT INDICATED ON DRAWINGS.

GR-12 CENTERLINES OF COLUMNS AND FOUNDATIONS COINCIDE WITH GRID LINE INTERSECTIONS, UON.

GR-13 CENTERLINES OF WALLS COINCIDE WITH CENTERLINES OFFOUNDATIONS, UON.

GR-14 CENTERLINES OF FRAMING MEMBERS COINCIDE WITH COLUMN CENTERLINES, UON.

GR-15 THE CONTRACTOR SHALL PROTECT EXISTING FACILITIES, STRUCTURES AND UTILITIES FROM DAMAGE.

GR-16 THE CONTRACTOR SHALL VERIFY THAT CONSTRUCTION LOADS DO NOT EXCEED THE CAPACITY OF THE STRUCTURE AT THE TIME THE LOAD IS APPLIED.

GR-17 THE CONTRACTOR SHALL COORDINATE THE BOTTOM OF BASE PLATE ELEVATIONS WITH THE AS-BUILT TOP OF SUPPORT ELEVATIONS.

GR-18 THE CONTRACTOR SHALL VERIFY ALL OPENING SIZES AND LOCATIONS WITH OTHER DISCIPLINES. THE DRAWINGS DO NOT SHOW ALL OPENINGS REQUIRED. ADDITIONAL OPENINGS, BLOCKOUTS AND SLEEVES MAY BE REQUIRED BY OTHER DISCIPLINES AND SHALL BE CONSTRUCTED USING THE TYPICAL DETAILS AND/OR THE CRITERIA INDICATED ON THE DRAWINGS. OPENINGS REQUIRED BUT NOT SHOWN ON THE STRUCTURAL DRAWINGS MUST BE APPROVED BY THE SER.

GR-19 ELEVATIONS INDICATED ON STRUCTURAL DRAWINGS ARE BASED ON A PROJECT DATUM INDICATED ON THE CIVIL DRAWINGS.

GR-20 SEE ARCHITECTURAL, CIVIL, AND MEP FOR ADDITIONAL INFORMATION RELATING TO THE COORDINATION OF STRUCTURAL COMPONENTS INCLUDING, BUT NOT LIMITED TO:

CIVIL:
PROJECT DATUM
SITING OF BUILDING GRID LINES WITH RESPECT TO CITY BENCHMARKS
SITE PREPARATION
BACKFILLING MATERIALS AND REQUIREMENTS
NEW AND EXISTING SITE UTILITIES

ARCHITECTURAL:
PLAN DIMENSIONS AND PROJECT DATUM
FINISH ELEVATIONS
WATERPROOFING AND DAMP-PROOFING DETAILS
RAMP GEOMETRY, PITS, SLAB SLOPES AND DEPRESSIONS
EMBEDMENTS, INSERTS, BLOCKOUTS, ETC.
EXACT OPENING SIZES FOR PIPES, DUCTS, ETC.
CONCRETE FINISHES AND TOPPING SLABS
FIRE RATINGS
OPERABLE PARTITIONS

MEP:
PIPE AND DUCT SIZES FOR OPENING AND SLEEVE COORDINATION
CONDUITS AND EMBEDMENTS IN WALLS AND SLABS

SU SUBMITTALS

SU-1 TEN WORKING DAYS PRIOR TO SUBMITTING SHOP DRAWINGS, THE CONTRACTOR SHALL SUBMIT FOR SER'S REVIEW A SCHEDULE WHICH DETAILS THE ESTIMATED QUANTITY OF SHOP DRAWINGS AND THE DATE THE SHOP DRAWINGS WILL BE RECEIVED BY THE SER. THE SER SHALL HAVE THE OPPORTUNITY TO REVIEW THE PROPOSED SCHEDULE AND SUBMIT COMMENTS TO THE CONTRACTOR. THE FINAL SHOP DRAWING SCHEDULE SHALL BE DEVELOPED AND SUBMITTED TO THE SER. IN ACCORDANCE WITH THE SHOP DRAWING SCHEDULE, THE SER WILL RETURN THE SHOP DRAWING ITEMS WITHIN TEN WORKING DAYS AFTER HAVING RECEIVED THE ELECTRONIC SHOP DRAWING.

SU-2 THE CONTRACTOR IS TO REVIEW EACH SUBMITTAL PRIOR TO FORWARDING TO DESIGN PROFESSIONALS. THE CONTRACTOR IS TO STAMP EACH SUBMITTAL VERIFYING THAT THE FOLLOWING IS ADDRESSED:

1. THE SHOP DRAWING IS REQUESTED.
2. THE SHOP DRAWING IS BASED ON THE LATEST DESIGN.
3. THE DESIGN PROFESSIONALS' COMMENTS FROM ANY PREVIOUS SUBMITTALS ARE ADDRESSED.
4. THE WORK IS COORDINATED AMONG ALL CONSTRUCTION TRADES.
5. REVISIONS FROM PREVIOUS SUBMITTALS ARE CLEARLY MARKED BY CIRCLING OR CLOUDS.
6. SUBMITTAL IS COMPLETE.
7. SUBMITTAL DOES NOT INCLUDE SUBSTITUTION REQUEST
8. SUBMITTAL SHALL INCLUDE A STAMP INDICATING PROJECT NAME AND LOCATION, SUBMITTAL NUMBER, SPECIFICATION SECTION NUMBER.

THE EOR SHALL RETURN, WITHOUT COMMENT, SUBMITTALS WHICH THE CONTRACTOR HAS NOT STAMPED OR WHICH DO NOT MEET THE ABOVE REQUIREMENTS. THE EOR'S REVIEW OF SUBMITTALS SHALL BE FOR GENERAL CONFORMANCE WITH THE DESIGN INTENT. NO WORK SHALL BE STARTED WITHOUT SUCH REVIEW.

SU-3 FOR COMPONENTS THAT REQUIRE ENGINEERING BY THE CONTRACTOR, PROVIDE A NOTE ON EACH SHOP DRAWING, WRITTEN AND SIGNED BY THE SUPPLIER'S ENGINEER, INDICATING THAT THE SHOP DRAWING IS IN CONFORMANCE WITH THE CALCULATIONS OF THE CONTRACTOR'S ENGINEER.

SU-5 THE ITEMS IN THIS SECTION REFER TO LOADS IMPOSED BY CONTRACTOR DESIGNED SYSTEMS, SPECIFICALLY:

EXTERIOR CLADDING SYSTEMS

WHERE CONTRACTOR LOADS IMPOSED DO NOT EXCEED AND/OR CONNECTION CONDITIONS DO NOT DIFFER FROM WHAT IS INDICATED IN THE STRUCTURAL DRAWINGS, SUBMIT FOR RECORD A LETTER SEALED AND SIGNED BY A STRUCTURAL ENGINEER LICENSED IN THE STATE WHERE THE PROJECT IS LOCATED STATING THE FOLLOWING:

"THE CONTRACTOR DESIGNED SYSTEM HAS BEEN DESIGNED TO IMPOSE LOADS ON THE BASE BUILDING STRUCTURE THAT ARE WITHIN THE LOAD LIMITS AND AT THE LOCATIONS INDICATED ON THE STRUCTURAL DRAWINGS."

WHERE CONTRACTOR LOADS IMPOSED FOR THE FOLLOWING ITEMS EXCEED AND/OR CONNECTION CONDITIONS DIFFER FROM WHAT IS SHOWN IN THE STRUCTURAL DRAWINGS, SUBMIT FOR APPROVAL TO SER LOADS IMPOSED ON THE PRIMARY STRUCTURAL FRAME DUE TO THE DEAD, LIVE, AND WIND/SEISMIC LOADS INDICATED ON THE CONTRACT DOCUMENTS.

SUBMITTAL SHALL LIST THE DESIGN LOADS USED AND BE SEALED AND SIGNED BY A STRUCTURAL ENGINEER LICENSED IN THE STATE WHERE THE PROJECT IS LOCATED. SUBMITTAL SHALL INCLUDE LOCATION, MAGNITUDE AND DIRECTION OF UNFACTORED IMPOSED LOADS, GRAPHICALLY REPRESENTED IN THEIR APPROPRIATE LOCATIONS ON A COPY OF THE CONTRACT DOCUMENT STRUCTURAL FRAMING PLANS OR ELEVATIONS AS APPROPRIATE. DETAIL REFERENCES IN THE CONNECTIONS APPLICABLE AT EACH LOCATION SHALL BE NOTED ON THE SUBMITTAL DRAWINGS.

FOR EXTERIOR WALL ASSEMBLIES, THE LOADS IMPOSED SUBMITTAL SHALL BE COMPREHENSIVE INDICATING THE LOADS IMPOSED ON THE BASE BUILDING STRUCTURE AND SHALL INCLUDE THE REACTIONS BASED ON THE ACTUAL LOADS OF THE ENTIRE ASSEMBLY, INCLUDING BUT NOT LIMITED TO GLAZING, CLADDING, METAL STUD BACKUP, AND MULLIONS.

FOR MEP SYSTEMS, THE LOADS IMPOSED SUBMITTAL SHALL BE COMPREHENSIVE INDICATING THE LOADS IMPOSED ON THE BASE BUILDING STRUCTURE AND SHALL INCLUDE THE REACTIONS BASED ON THE ACTUAL LOADS OF THE ENTIRE MECHANICAL, ELECTRICAL, PLUMBING, AND FIRE PROTECTION SYSTEM, INCLUDING BUT NOT LIMITED TO PIPING, DUCTS, ELECTRICAL RACEWAYS, AND EQUIPMENT WEIGHTS.

CD CODES AND DESIGN CRITERIA

CD-1 PERFORM ALL CONSTRUCTION IN CONFORMANCE WITH THE BUILDING AND DESIGN CODES REFERENCED WITHIN THESE DOCUMENTS. THE PROJECT DOCUMENTS REFER TO THE FOLLOWING CODES AND STANDARDS, UON:

FOR PERMENANT CONDITION:
INTERNATIONAL RESIDENTIAL CODE, 2015 EDITION WITH CITY OF CHAMPAIGN AMENDMENTS

STRUCTURAL CONCRETE:
"BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE"
THE AMERICAN CONCRETE INSTITUTE (ACI 318-16)

COLD FORMED STEEL:
AMERICAN IRON & STEEL INSTITUTE "NORTH AMERICAN SPECIFICATION FOR DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS"- 2012 EDITION

STRUCTURAL STEEL:
"SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS", JULY 2016 16TH EDITION CONFORMING TO THE PROVISIONS OF LOAD RESISTANCE FACTOR DESIGN.

WOOD:
"NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION"
AMERICAN NATIONAL STANDARDS INSTITUTE / AMERICAN FOREST & PAPER ASSOCIATION (ANSI/AF&PA NDS-2012)

CD-2 LIVE LOADS:

SEE DESIGN LOAD DIAGRAMS ON SHEET S002 FOR LOCATIONS AND EXTENT OF LIVE LOAD

CD-3 SUPERIMPOSED DEAD LOADS:

SEE DESIGN LOAD DIAGRAMS ON SHEET S002 FOR LOCATIONS AND EXTENT OF SUPERIMPOSED DEAD LOADS.

CD-4 RISK CATEGORY II

CD-5 SNOW LOADS:

FLAT ROOF SNOW LOAD (Pf):	14 PSF
GROUND SNOW LOAD (Pg)	20 PSF
SNOW EXPOSURE FACTOR (Ce):	1
SNOW LOAD IMPORTANCE FACTOR (Is):	1
THERMAL FACTOR (Ct):	1
SNOW DRIFTING	PER CODE

CD-6 WIND LOAD DESIGN DATA:

MAIN WIND FORCE RESISTING SYSTEM	
BASIC WIND SPEED, V	115 MPH
EXPOSURE	Category C
INTERNAL PRESSURE COEFFICIENT	- 0.9

CD-7 SEISMIC LOAD DESIGN DATA:

SEISMIC IMPORTANCE FACTOR (I_e)	I
S_s	0.172 g
S_1	0.091 g
S_{DS}	0.183 g
S_{D1}	0.145 g
SITE CLASS	D
SEISMIC DESIGN CATEGORY	B
LATERAL SYSTEM DESCRIPTION	SHEAR WALL
SEISMIC RESPONSE COEFFICIENT (Cs)	0.0282
RESPONSE MODIFICATION FACTOR (R)	6.5
ANALYSIS PROCEDURE DESCRIPTION	FUNDAMENTAL PERIOD CALCULATION
DESIGN BASE SHEAR	0.57 KIPS

CD-8 IN CASES WHERE THE CONTRACTOR DETERMINES THAT SUSPENDED OR FLOOR MOUNTED EQUIPMENT LOADS EXIST WHICH EXCEED DESIGN LOADS INDICATED ON CONTRACT DOCUMENTS, CONTRACTOR SHALL SUBMIT LOAD DATA TO DESIGN PROFESSIONALS FOR REVIEW PRIOR TO PROCEEDING WITH WORK.

CD-9 DISTRIBUTE THE MAXIMUM LOAD HUNG FROM ANY STRUCTURAL MEMBER FOR DUCTWORK, PIPING ETC OVER THE MEMBER'S TRIBUTARY AREA IN A WAY THAT THE MEP DESIGN SUPERIMPOSED DEAD LOADS LISTED IN CONTRACT DOCUMENTS ARE NOT EXCEEDED. THE CONTRACTOR SHALL COORDINATE THE LOADS OF ALL TRADES AND PROVIDE ADDITIONAL SUPPORT OR DISTRIBUTION FRAMING AS REQUIRED TO ACHIEVE THE ALLOWABLE LOAD DISTRIBUTION.

CD-10 STRUCTURAL COMPONENTS ARE NOT DESIGNED FOR VIBRATING EQUIPMENT. MOUNT VIBRATING EQUIPMENT ON VIBRATION ISOLATORS.

CD-11 SERVICEABILITY

LIVE LOAD DEFLECTION IS LESS THAN L/360

TOTAL DEFLECTION IS LESS THAN L/240

EXTERIOR EDGE BEAMS HAVE BEEN DESIGNED TO LIMIT LIVE LOAD MIDSPAN VERTICAL DEFLECTION TO 1/360 OF THE SPAN OR 0.5", WHICHEVER IS LESS.

EXTERIOR EDGE BEAMS HAVE BEEN DESIGNED TO LIMIT DEAD PLUS SUPERIMPOSED DEAD LOAD MIDSPAN VERTICAL DEFLECTION TO 1/360 OF THE SPAN OR 0.5", WHICHEVER IS LESS.

LATERAL DRIFT DUE TO WIND LOADS IS LESS THAN OR EQUAL TO H/360 OR 0.5', WHICHEVER IS LESS

CD-12 CONNECTIONS OF SYSTEMS DESIGNED BY CONTRACTOR'S ENGINEER SUCH AS, BUT NOT LIMITED TO, CLADDING, STAIRS, AND MEP LOADS ARE ASSUMED TO IMPOSE VERTICAL AND/OR HORIZONTAL LOADS ON THE BASE BUILDING STRUCTURAL MEMBERS WITHOUT GENERATING TORSION IN THE SUPPORTING STRUCTURAL MEMBERS. CONTRACTOR IS RESPONSIBLE FOR FURNISHING AND INSTALLING ALL SUPPLEMENTARY BRACING MEMBERS AS REQUIRED TO PREVENT TORSION ON THE BASE BUILDING STRUCTURE.

CD-13 FOR FIRE RATING AND FIREPROOFING ASSEMBLY EVALUATIONS, CONSIDER THE FOLLOWING ASSEMBLIES RESTRAINED: COMPOSITE WIDE-FLANGE STEEL FRAMING, INTERIOR BAYS OF CONTINUOUS CAST-IN-PLACE CONCRETE CONSTRUCTION. CONSIDER ALL OTHER ASSEMBLIES UNRESTRAINED.

CD-14 THERE HAVE BEEN NO LOAD RESTRICTION FACTORS APPLIED TO THE STRUCTURAL DESIGN FOR THE PURPOSES OF SELECTING FIREPROOFING ASSEMBLIES.

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NO.	DESCRIPTION	DATE
1	60% CD SET	
2	80% CD SET	
3	90% CD SET	
4	1ST REVISION	
5	2ND REVISION	
6	3RD REVISION	
7	95% CD SET	
8	4TH REVISION	
9	OPENING REVISION	
10	DETAIL REVISION	12/22/2019
11	5TH REVISION	2/1/2020
12	D5 SUBMISSIN	2/17/2020
13	2-MODULE REVISION	3/8/2020
14	BRACING REVISION	3/11/2020
15	STUD SPACING REVISION	7/27/2020

GENERAL STRUCTURAL NOTES

DRAWN BY:

CHECKED BY:

S001

CF COLD-FORMED STEEL FRAMING

CF-1 THE COLD-FORMED FRAMING MATERIALS ARE MANUFACTURED BY ANY STEEL STUD MANUFACTURERS ASSOCIATION (SSMA) OR STEEL FRAMING INDUSTRY ASSOCIATION (SFIA) MEMBER MANUFACTURER IN ACCORDANCE WITH AMERICAN SOCIETY OF TESTING AND MATERIALS (ASTM) C955. MATERIAL SIZES AND THICKNESSES ARE INDICATED ON THE DRAWINGS. ALL COLD-FORMED MEMBERS SHALL BE MANUFACTURED FROM SHEET STEEL AND GALVANIZED IN ACCORDANCE WITH ASTM A1003, WITH A MINIMUM COATING AS NOTED IN THE PROJECT SPECIFICATIONS OR DRAWINGS.

CF-2 THE MINIMUM YIELD STRENGTH OF THE COLD-FORMED FRAMING COMPONENTS SHALL BE AS FOLLOWS:
a. ALL C.F.S. FRAMING MEMBERS 54 MIL (16 GAGE) OR HEAVIER - MINIMUM 50,000 PSI
b. ALL C.F.S. FRAMING MEMBERS 43 MIL (18 GAGE) OR LIGHTER - MINIMUM 33,000 PSI UNLESS NOTED OTHERWISE

CF-3 THE COLD-FORMED WALL STUDS SHALL BE PUNCHED (UNLESS NOTED OTHERWISE ON THE SHOP DRAWINGS).

CF-4 THE COLD-FORMED FRAMING HAS BEEN DESIGNED IN ACCORDANCE WITH THE FOLLOWING CODES, STANDARDS AND SPECIFICATIONS:

a. IRC 2015 WITH CHAMPAIGN CITY ADMENDMENTS
b. AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE) 7 (APPLICABLE VERSION PER BUILDING CODE)
c. AMERICAN IRON & STEEL INSTITUTE "NORTH AMERICAN SPECIFICATION FOR DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS"- 2012 EDITION
d. AMERICAN IRON & STEEL INSTITUTE "CODE OF STANDARD PRACTICE FOR STRUCTURAL COLD-FORMED STEEL FRAMING"-2015
e. AMERICAN IRON & STEEL INSTITUTE "STANDARD FOR COLD- FORMED STEEL FRAMING: PRODUCT DATA"-2012
f. AMERICAN IRON & STEEL INSTITUTE "STANDARD FOR COLD- FORMED STEEL FRAMING: GENERAL PROVISIONS"-2012
g. AMERICAN IRON & STEEL INSTITUTE "STANDARD FOR COLD- FORMED STEEL FRAMING: WALL STUD DESIGN"-2012
h. AMERICAN IRON & STEEL INSTITUTE "STANDARD FOR COLD- FORMED STEEL FRAMING: HEADER DESIGN"-2012

CF-5 ALL CONNECTIONS SHALL BE FASTENED AS INDICATED ON THESE DRAWINGS.
a. SCREWS -#10 SELF DRILLING SCREWS (UNLESS NOTED OTHERWISE) MANUFACTURED BY GRABBER, HILTI, BUILDEX, COMPASS, SIMPSON STRONG-TIE, OR EQUAL AND INSTALLED PER THE FASTENER MANUFACTURER'S SPECIFICATIONS. MINIMUM½" LENGTH FOR COLD-FORMED TO COLD-FORMED CONNECTIONS. SCREWS SHALL COMPLY WITH ASTM C1513. MINIMUM 1½" LENGTH FOR COLD-FORMED TO TIMBER CONNECTIONS. SCREWS SHALL BE SPACED A MINIMUM OF½" BETWEEN ADJACENT SCREWS AND FROM METAL EDGES.
b. POWDER ACTUATED FASTENERS (P.A.F.)- 0.145" MINIMUM SHANK DIAMETER P.A.F. UNLESS NOTED OTHERWISE MANUFACTURED BY RAMSET, HILTI, DEWALT, SIMPSON STRONG-TIE, OR EQUAL AND INSTALLED PER THE FASTENER MANUFACTURER'S SPECIFICATIONS.
c. PROVIDE MINIMUM 1¼" LONG P.A.F. FOR COLD-FORMED CONNECTIONS TO CONCRETE. P.A.F. IN CONCRETE SHALL BE SPACED A MINIMUM OF 4" BETWEEN ADJACENT P.A.F. AND A MINIMUM OF 3" FROM CONCRETE EDGES. MINIMUM P.A.F. EMBEDMENT IN CONCRETE SHALL BE 1⅛".
d. SCREW ANCHORS (SELF TAPPING)-¼" DIAMETER x MIN. 4" OR 3¼" EMBED AS NOTED (TITEN HD BY SIMPSON STRONG-TIE) OR EQUAL. SCREW ANCHOR IN CONCRETE SHALL BE SPACED A MINIMUM OF 8" BETWEEN ADJACENT ANCHOR AND A MINIMUM OF 3" FROM CONCRETE EDGES AND INSTALLED PER THE FASTENER MANUFACTURER'S SPECIFICATIONS FOR COLD-FORMED CONNECTIONS TO CONCRETE OR

CF-6 ALL MEMBERS SHALL BE CUT SQUARELY FOR ATTACHMENT TO PERPENDICULAR MEMBERS OR SLOPE CUT AS REQUIRED FOR AN ANGULAR FIT AGAINST ABUTTING MEMBERS.

CF-7 FIELD CUTTING OF COLD-FORMED MEMBERS SHALL BE DONE BY SAWING OR SHEARING. TORCH CUTTING OF COLD-FORMED MEMBERS IS NOT PERMITTED.

CF-8 DO NOT CUT OR SPLICE COLD-FORMED FRAMING MEMBERS UNLESS INDICATED BY THESE DRAWINGS.

CF-9 DO NOT BEAR OR CONNECT COLD-FORMED MEMBERS WITHIN TEN INCHES OF THE PUNCHED OPENINGS IN THE MEMBER WEBS UNLESS THE MEMBERS ARE REINFORCED WITH A MINIMUM 18" LONG UNPUNCHED TRACK OR STUD AT THE PUNCH OPENING. THE TRACK OR STUD REINFORCING PIECE SHALL BE THE SAME SIZE AND GAGE AS THE PUNCHED MEMBER. FASTEN THE REINFORCING PIECE TO THE MEMBER WITH A MINIMUM OF FOUR SCREWS.

CF-10 THE COLD-FORMED FRAMING HAS BEEN DESIGNED TO SUPPORT THE LOADS INDICATED IN THE CALCULATIONS. ADDITIONAL TEMPORARY BRACING AND SHORING SHALL BE PROVIDED AS REQUIRED TO STABILIZE THE FRAMING AND TO SUPPORT CONSTRUCTION LOADS. TEMPORARY BRACING SHALL REMAIN IN PLACE UNTIL PERMANENT BRACING IS INSTALLED AND/OR ADDITIONAL CONSTRUCTION LOADS ARE REMOVED.

CF-11 THE CONTRACTOR SHALL PROVIDE COLD-FORMED MEMBERS AT THE SIZE AND SPACING INDICATED ON THESE DRAWINGS. LARGER SIZES AND/OR CLOSER SPACING MAY BE SUBSTITUTED PROVIDED THE SUBSTITUTIONS ARE COORDINATED WITH THE PROJECT ARCHITECTURAL DRAWINGS.

CF-12 SHEATHING ON THE COLD-FORMED FRAMING SHALL BE INSTALLED AS INDICATED IN THE PROJECT CONSTRUCTION DOCUMENTS AND SPECIFICATIONS AND PER ASTM C955 UNLESS SPECIFIC FASTENER SPACING IS CALLED FOR IN THESE DRAWINGS.

CF-13 UNLESS OTHERWISE NOTED, THIS SUBMITTAL DOES NOT INCLUDE THE DESIGN AND DETAILING FOR THE INTERIOR NON-STRUCTURAL COLD-FORMED FRAMING.

CF-14 ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) STANDARDS.

CF-15 SUBSTITUTION OF SPECIFIED CONNECTORS AND FASTENERS MUST BE APPROVED BY ILLINOIS SOLAR DECATHLON

FN FOUNDATIONS (PENDING)

FN-1 THE FOUNDATION DESIGN IS BASED ON THE GEOTECHNICAL REPORT BY **[GEOTECHNICAL ENGINEER. REPORT DATE] (PENDING)**.

FN-2 FOUNDATIONS HAVE BEEN DESIGNED BASED ON THE FOLLOWING DESIGN VALUES FROM THE GEOTECHNICAL REPORT:

BEARING STRATUM
NET ALLOWABLE BEARING CAPACITY: 1,500 PSF

SEE GEOTECHNICAL REPORT FOR ADDITIONAL REQUIREMENTS AND INFORMATION. DESIGN VALUES SHALL BE FIELD VERIFIED BY QUALIFIED GEOTECHNICAL ENGINEER RETAINED BY THE OWNER.

FN-3 THE CONTRACTOR SHALL VERIFY FOUNDATION INSTALLATION AND CONSTRUCTION IS IN CONFORMANCE WITH THE RECOMMENDATIONS OUTLINED IN THE GEOTECHNICAL REPORT.

FN-4 CONTRACTOR SHALL BE RESPONSIBLE TO ADEQUATELY PROTECT ALL EXCAVATION. WHERE NECESSARY, SHEET AND SHORE THE EXCAVATION WITH ALL REQUIRED TIEBACKS AND BRACING AS DETERMINED BY CONTRACTOR'S ENGINEER.

.

CM CONCRETE MATERIALS

CM-1 CONCRETE STRENGTH SHALL MEET THE FOLLOWING 28-DAY COMPRESSIVE STRENGTHS (f' c), UON:

FOOTINGS	4,000 PSI

CM-2 PROVIDE NORMALWEIGHT CONCRETE WITH CURED DENSITY OF 145 +/- 5 PCF, AND AGGREGATE CONFORMING TO ASTM C33, UON.

CM-3 THE USE OF CALCIUM CHLORIDE AND OTHER CHLORIDE CONTAINING AGENTS IS PROHIBITED. THE USE OF RECYCLED CONCRETE IS PROHIBITED. PLACEMENT WITHIN AND CONTACT BETWEEN ALUMINUM ITEMS, INCLUDING ALUMINUM CONDUIT, AND CONCRETE IS PROHIBITED.

CM-4 ALL CAST-IN-PLACE CONCRETE WILL EXPERIENCE DIFFERING VARIATIONS OF CRACKING. ANY ELEMENT EXPOSED TO DIRECT WEATHER AND/OR TEMPERATURE VARIATIONS DURING CONSTRUCTION OR IN THE FINAL CONDITION IS TO BE TREATED AND REGULARLY MAINTAINED TO PREVENT PROPAGATION OF CRACKS AND WATER PENETRATION. THE CONTRACTOR SHALL DEVELOP A REGULAR MAINTENANCE PROGRAM AND SUBMIT IT TO THE OWNER.

RE CONCRETE REINFORCEMENT

RE-1 ALL CONCRETE SHALL INCLUDE REINFORCEMENT. IF REINFORCEMENT IS NOT SPECIFICALLY INDICATED ON THE DRAWINGS VERIFY WITH THE SER.

RE-2 REINFORCEMENT SHALL CONFORM TO THE FOLLOWING STANDARDS AND MATERIAL PROPERTIES UON:

DEFORMED BARS:	ASTM A615 GRADE 60
WELDABLE DEFORMED BARS:	ASTM A706
EPOXY COATED DEFORMED BARS:	ASTM A615 / A775
WELDED WIRE REINFORCEMENT	ASTM A1064
EPOXY COATED WELDED WIRE REINFORCEMENT	ASTM A1064 / A884

RE-3 DETAIL REINFORCEMENT BASED ON THE PROJECT REQUIREMENTS, ACI-318 AND ACI-315, UON.

RE-4 WHERE A 90-DEG, 135 –DEG OR 180-DEG HOOK IS GRAPHICALLY INDICATED, PROVIDE CORRESPONDING ACI STANDARD HOOKS UON.

RE-5 DOWELS SHALL MATCH SIZE AND SPACING OF MAIN REINFORCEMENT UON.

RE-6 REINFORCEMENT SHALL HAVE CONCRETE PROTECTION (CLEAR COVER) PER ACI 318 UNLESS OTHERWISE INDICATED ON THE DRAWINGS.

RE-7 UNLESS OTHERWISE NOTED ALL LAP SPLICES ARE TO BE TENSION LAP SPLICES PER LAP SPLICE AND EMBEDMENT SCHEDULE.

RE-8 LAP WELDED WIRE REINFORCEMENT TWO PANEL SPACINGS, UON.

RE-9 PROVIDE LAP SPLICE LOCATIONS AS FOLLOWS, UON:
A. WALL (TOP HORIZONTAL REINFORCEMENT): AT CENTER OF SPAN
B. WALL (BOTTOM HORIZONTAL REINFORCEMENT): AT SUPPORTS
C. WALL INSIDE FACE (VERTICAL REINFORCEMENT): AT SUPPORT
D. WALL OUTSIDE FACE (VERTICAL REINFORCEMENT): AT STORY MIDHEIGHT OF WALL FOR BELOW GRADE FOUNDATION WALLS, AT SUPPORT FOR OTHER WALLS
E. UNLESS OTHERWISE NOTED TERMINATE BARS AT DISCONTINUOUS ENDS WITH STANDARD HOOKS.

AC ARCHITECTURAL CLADDING

AC-1 TYPICAL DETAILS INDICATE GENERAL CRITERIA FOR ASSUMED CONNECTIONS OF ARCHITECTURAL CLADDING TO BASE BUILDING STRUCTURE. PROVIDE DESIGNS THAT MEET INDICATED CRITERIA AND CONFORM TO LISTED CODES AND STANDARDS. REFER TO SUBMITTALS SECTION IN THESE GENERAL NOTES FOR ADDITIONAL REQUIREMENTS

ADAPTHAUS
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ILLINOIS SOLAR DECATHLON 2018 - 21

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- THORNTON TOMASETTI
- AFFILIATED ENGINEERS INC

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13	2-MODULE REVISION	3/8/2020
14	BRACING REVISION	3/11/2020
15	STUD SPACING REVISION	7/27/2020

GENERAL STRUCTURAL NOTES (CONT.)

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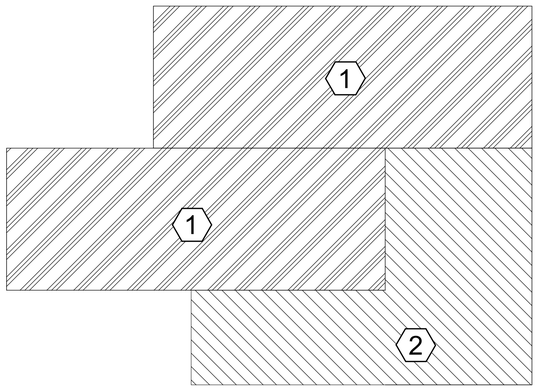
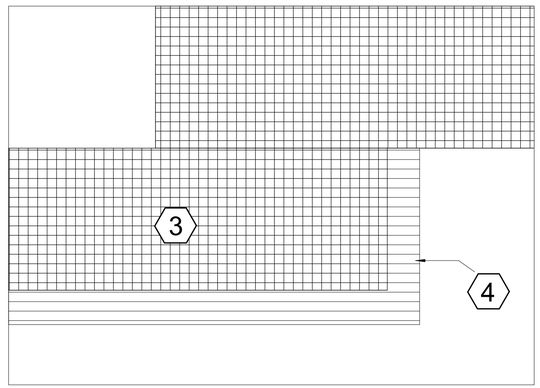
S002



1 FIRST FLOOR

1/8" = 1'-0"



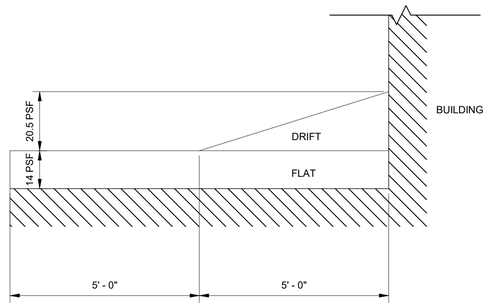
2 ROOF

1/8" = 1'-0"

SUPERIMPOSED LOAD SCHEDULE				
DESCRIPTION	DESIGNATION MARK	UNFACTORED DEAD LOAD (PSF UON)	UNFACTORED LIVE LOAD (PSF UON)	UNFACTORED SNOW LOAD (PSF UON)
RESIDENTIAL	1	10	50	0
DECK	2	10	100	20
ROOF	3	10	30	30
CANOPY	4	10	0	20

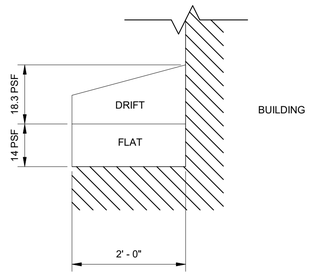
3 LOADING SCHEDULE

1/4" = 1'-0"



5 WOOD DECK SNOW DRIFT

1/2" = 1'-0"



4 OVERHANG SNOW DRIFT

3/4" = 1'-0"

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LOADING DIAGRAM

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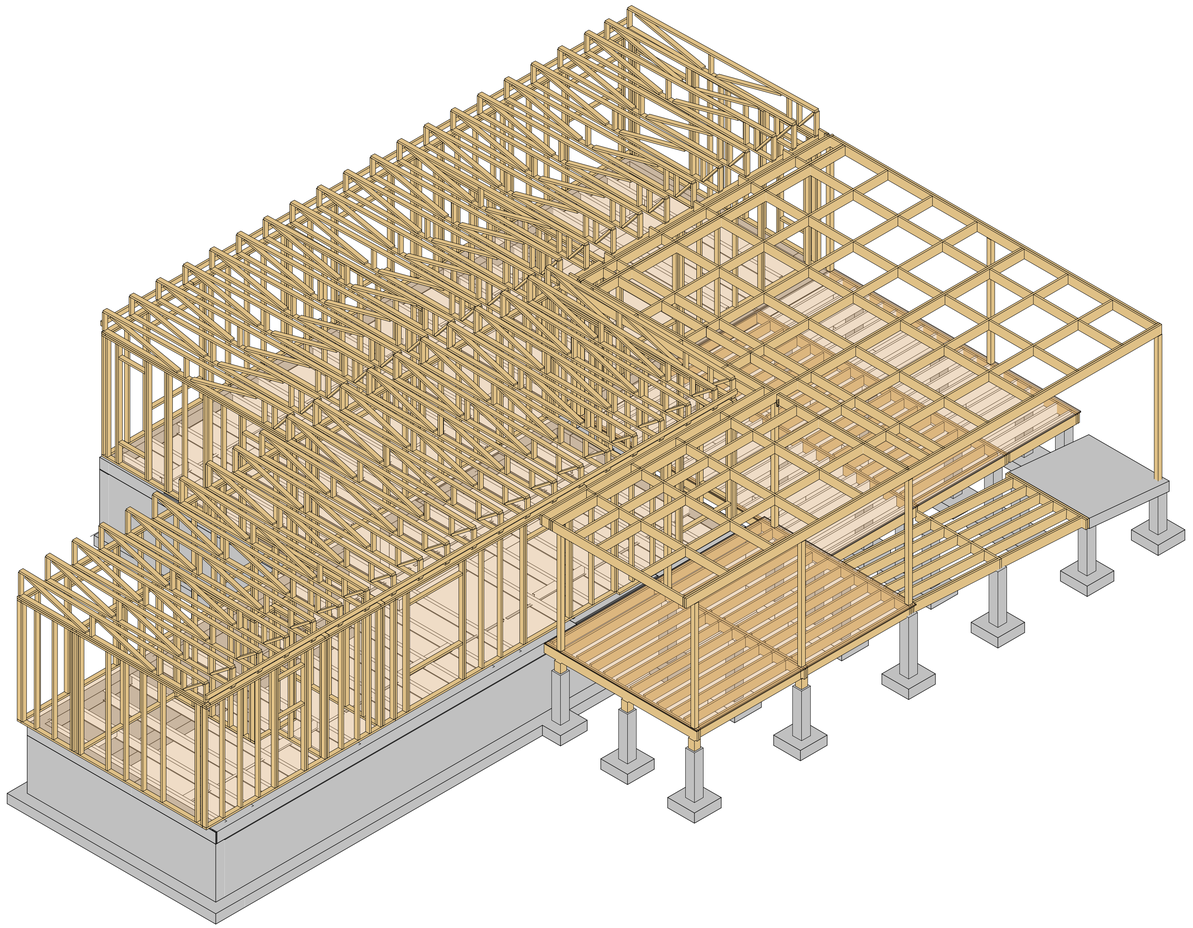

1 STRUCTURAL ISOMETRIC

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STRUCTURAL ISOMETRIC

DRAWN BY:

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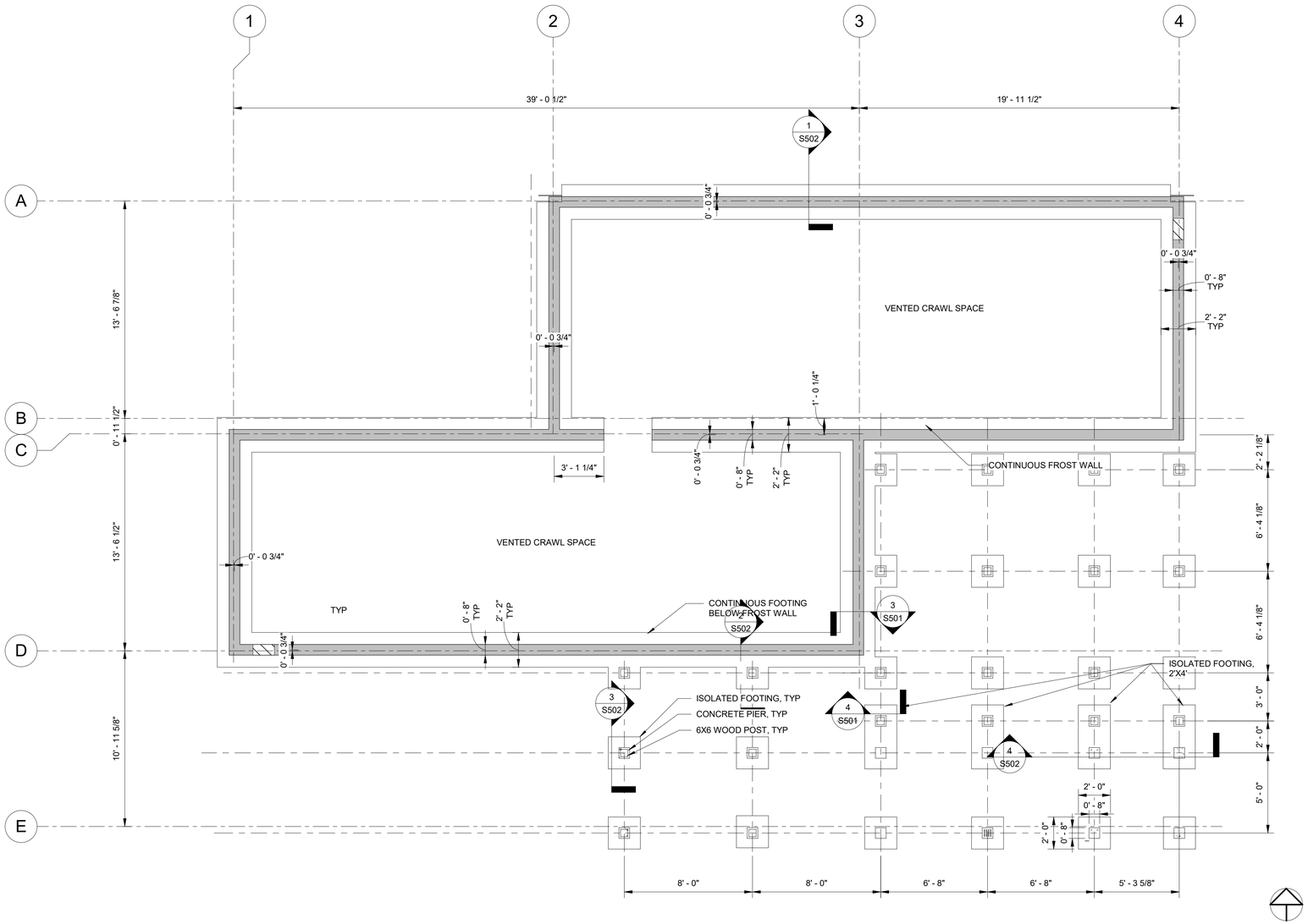
S004



1 FOUNDATION PLAN

1/4" = 1'-0"

SHEET NOTES:

1. T/CONTINUOUS FROST WALL ELEVATION = 0' - 6"
2. T/ISOLATED FOOTING ELEVATION = 0' - 0"
3. T/DECK ELEVATION = 1' - 4"
4. INDICATES 14"X6" VENT OPENINGS ON TOP OF THE CONCRETE STEM WALL WITHIN 3' FROM CORNERS.

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FOUNDATION PLAN

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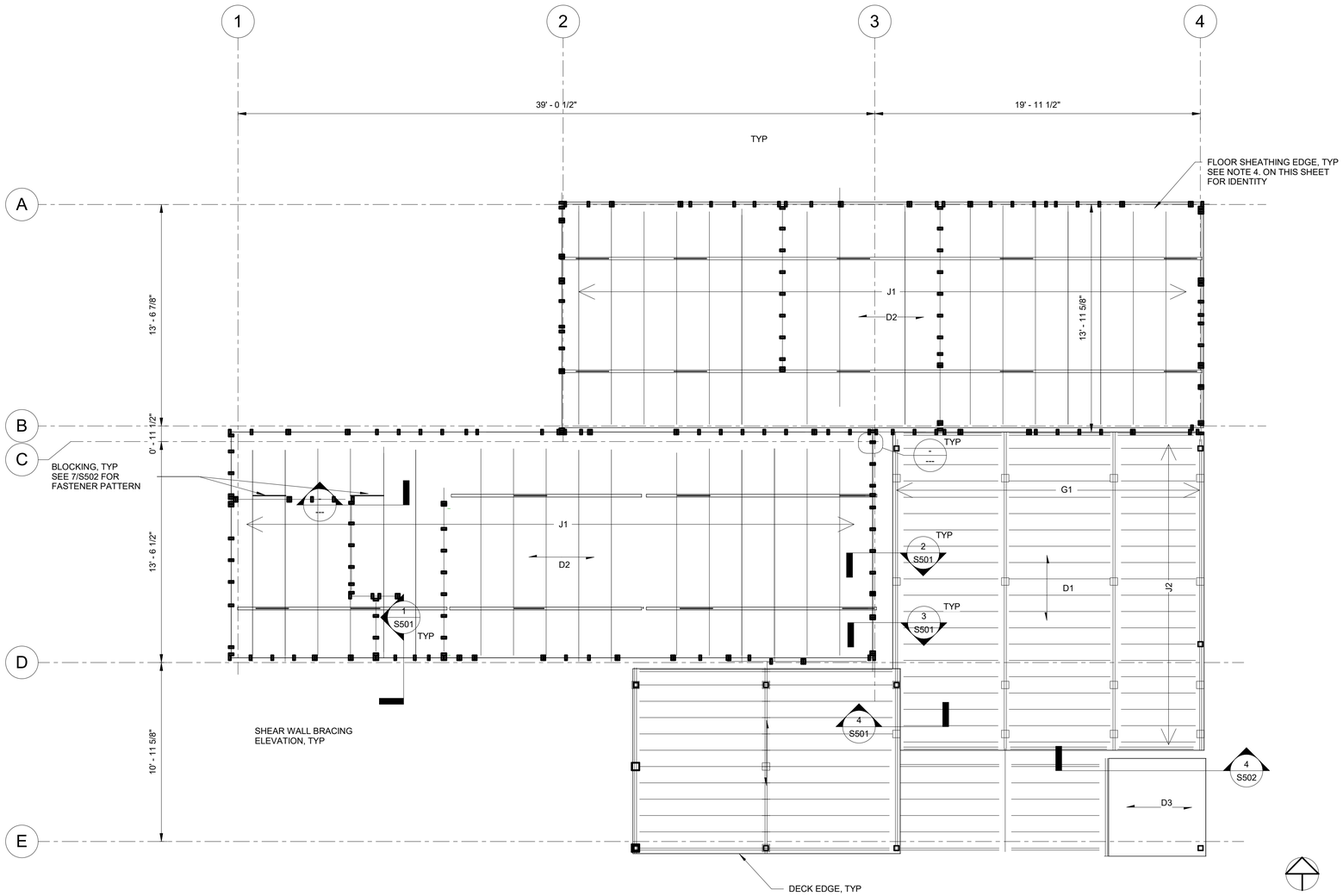
S101



1 FIRST FLOOR FRAMING PLAN

1/4" = 1'-0"

SHEET NOTES:

1. INDICATES 6FT SHEAR WALL WITH CONCRETE SHEATHING ON EXTERIOR OF STUD. PROVIDE HOLDDOWN AT EACH END OF SHEAR WALL PER DETAIL 8/S502. SEE DETAIL 2/S502 FOR FASTENER PATTERN.
2. INDICATES NON STRUCTURAL WALL FOR FUTURE REMOVAL
3. INDICATES 350S200-54 STUDS W/ 350T150-54 BRACED TRACK ON TOP AND BOTTOM
4. INDICATES FLAT STRAP X BRACING ON 350S200-54 STUDS. PROVIDE HOLD DOWN AT EACH END OF WALL PANEL PER DETAIL 5/S502. PROVIDE HSS9X5X5/16 AS FLOOR JOIST. SEE S505 FOR FASTENER PATTERN.
5. INDICATES HSS9X5X5/16
6. T/JOIST ELEVATION = 1' - 3 1/2"
7. T/DECK ELEVATION = 1' - 4 1/2"
8. D1 INDICATES 7/16" WOOD PLANKS
9. D2 INDICATES 3/4" THICK STRUCTURAL 1 WOOD PANEL. SEE DETAIL 1/S502 FOR FASTENER PATTERN.
10. D3 INDICATES 8" CONCRETE RAMP
11. J1 INDICATES 800S200-68 JOISTS @ 24" O.C. PROVIDE 2 ROWS OF BRIDGING AT 1/4 POINTS W/ 600S300-68 BLOCKING. SEE 7/S502 FOR BRIDGING DETAIL. RIM JOISTS SHALL BE HSS9X5X5/16.
12. J2 INDICATES 2X8 JOISTS @ 12" O.C. RIM JOISTS SHALL BE (2) 2X8.
13. G1 INDICATES (2) 2X8 GIRDERS ALIGNED W/ FOUNDATION.
14. PROVIDE STRAPPING POINTS WITH MIN 3.1K LOAD CONNECTED TO OUTER FACE OF RIM JOIST WHERE HSS FLOOR JOIST IS CONNECTED TO INNER FACE OF RIM JOISTS.

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FIRST FLOOR FRAMING PLAN

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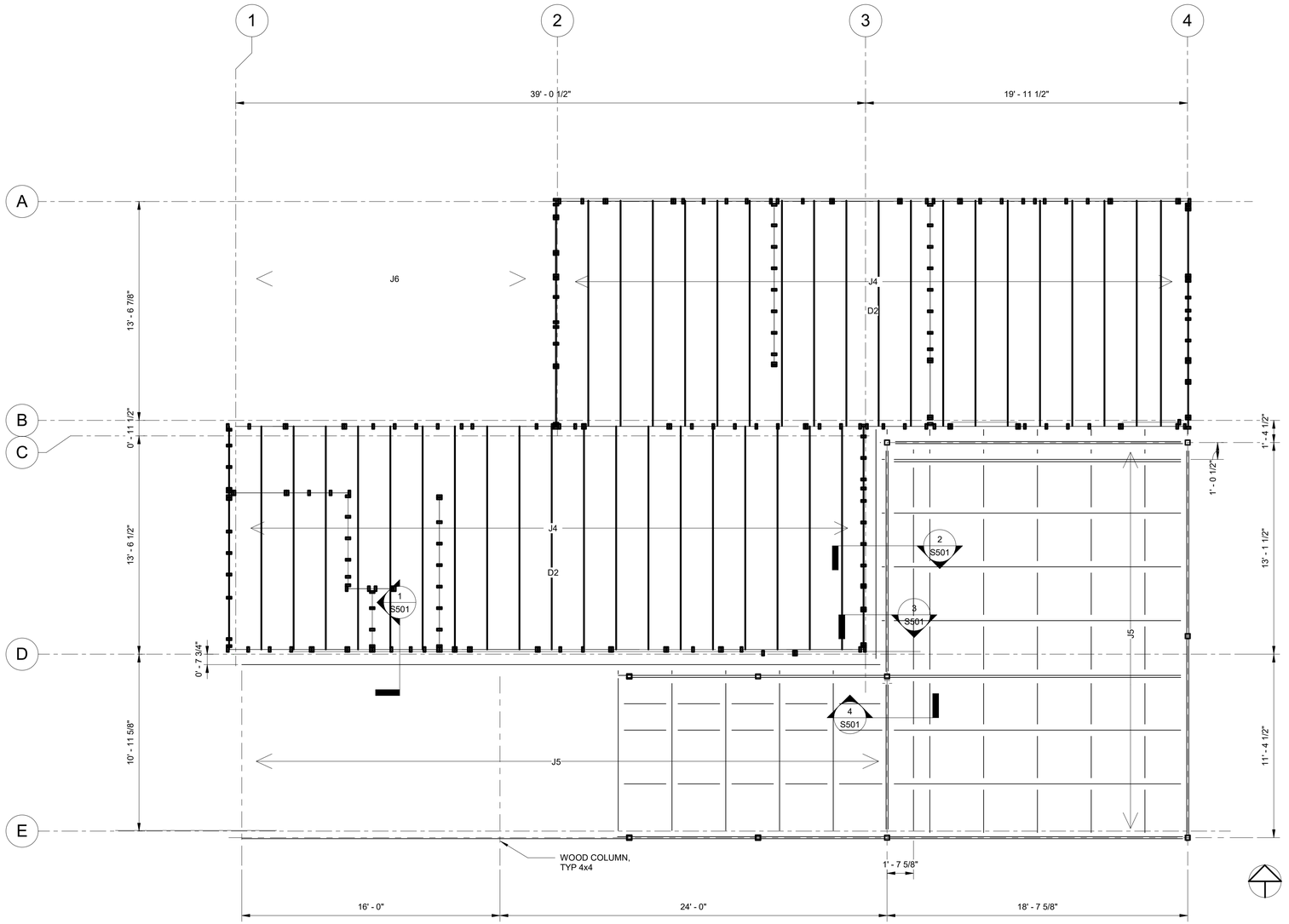
S102



1 ROOF FRAMING PLAN

1/4" = 1'-0"

SHEET NOTES:

1. INDICATES 6FT SHEAR WALL WITH CONCRETE SHEATHING. PROVIDE HOLDDOWN AT EACH END OF SHEAR WALL PER DETAIL 8/S502.
2. T/ROOF JOIST ELEVATION = 10' - 6 3/4"
3. D2 INDICATES 3/4" THICK STRUCTURAL WOOD PANEL. SEE DETAIL 1/S502 FOR FASTENER PATTERN.
4. J4 INDICATES 600S300-68 JOISTS @ 24" O.C. PROVIDE 2 ROWS OF BRIDGING AT 1/4 POINTS W/ 350S162-68 BLOCKING. SEE 7/S502 FOR BRIDGING DETAIL. RIM JOISTS SHALL BE 600T200-68.
5. J5 INDICATES 2X8 JOISTS @ 40" O.C. W/ (2) 2X8 GIRDERS AT PERIMETER.
6. J6 INDICATES 2X8 JOISTS @ 43" O.C. W/ (2) 2X8 GIRDERS AT PERIMETER.
7. DROP CEILING ASSEMBLY BY OTHERS

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ROOF FRAMING PLAN

DRAWN BY:

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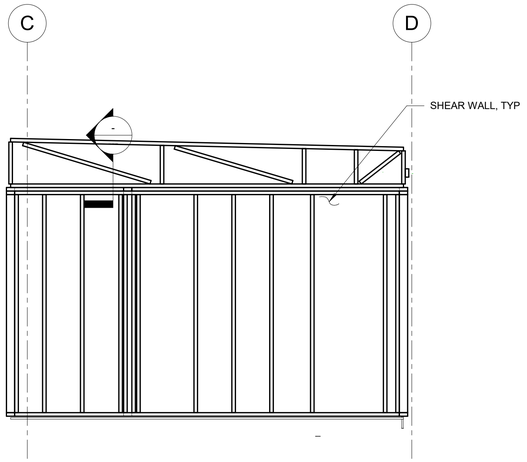
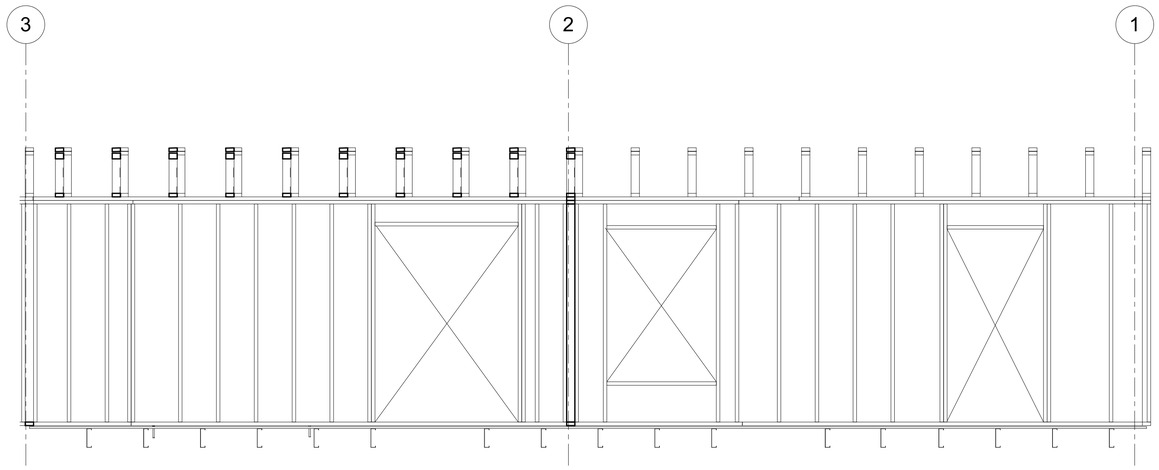
S103



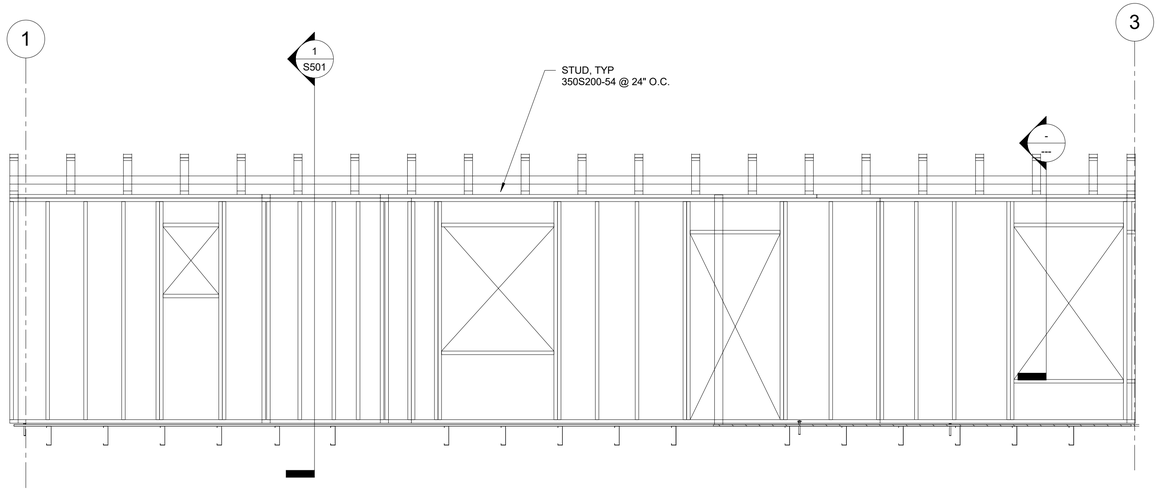
1 FIRST MODULE (WEST VIEW)

3/8" = 1'-0"



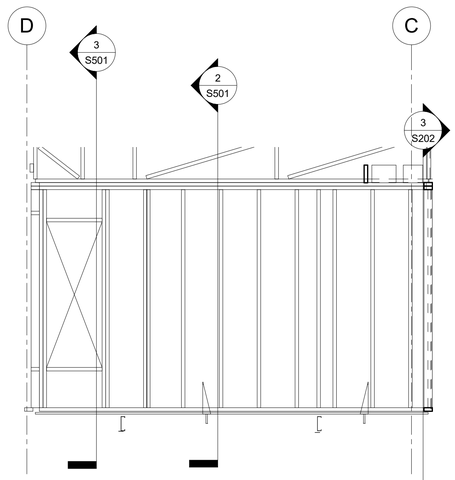
2 FIRST MODULE (NORTH VIEW)

3/8" = 1'-0"



3 FIRST MODULE (SOUTH VIEW)

3/8" = 1'-0"

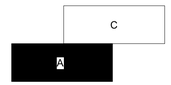


4 FIRST MODULE (EAST VIEW)

3/8" = 1'-0"

SHEET NOTES:

1. T / DECK ELEVATION = 1' - 4 1/2"
2. T / ROOF DECK ELEVATION = 10' - 7 1/2"
3. X-BRACING IS PRESENTED WITHIIN ALL SHEAR WALL LOCATION AS INDICATED IN 3/S203.



KEY PLAN

ADAPTHAUS

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FRAMING ELEVATION (FIRST MODULE)

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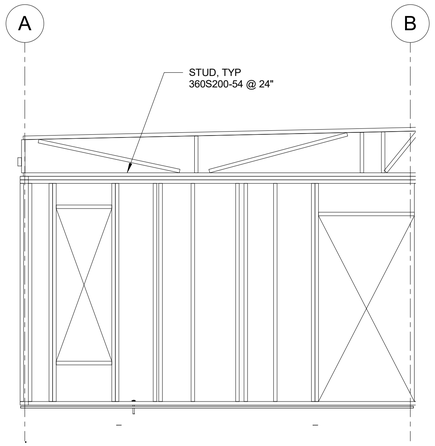
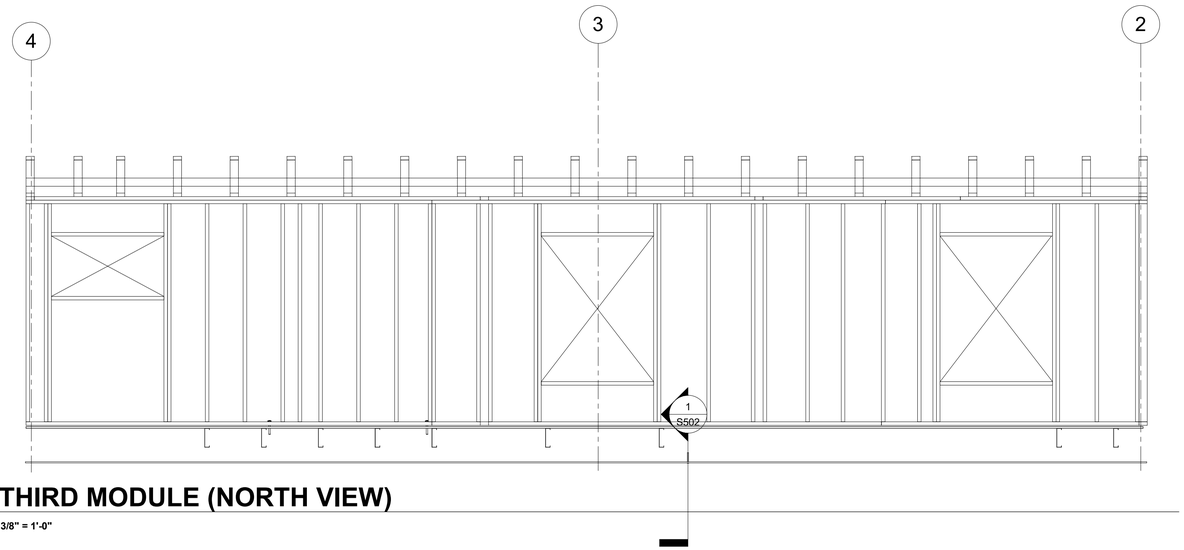


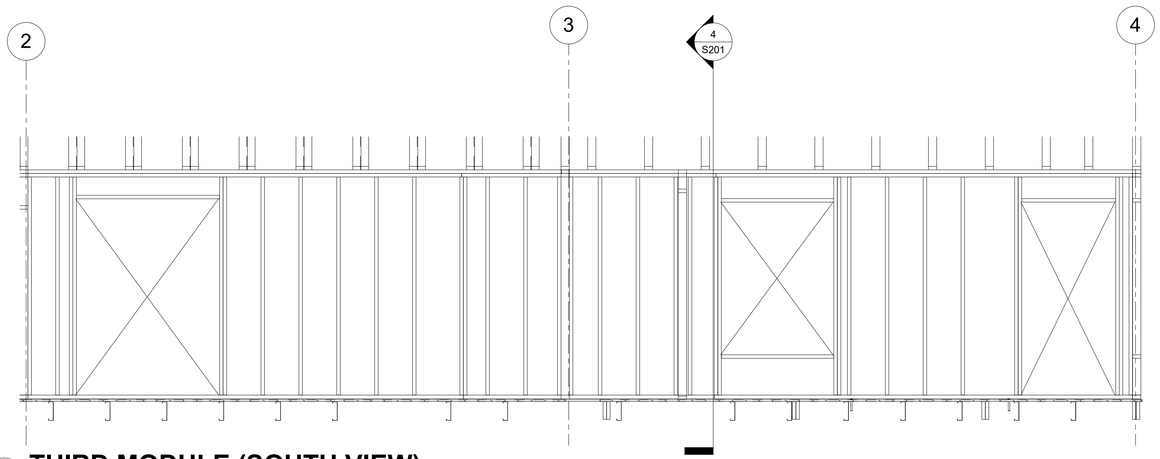
1 THIRD MODULE (WEST VIEW)

3/8" = 1'-0"



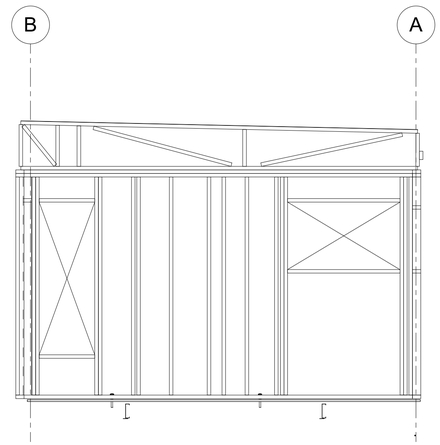
2 THIRD MODULE (NORTH VIEW)

3/8" = 1'-0"



3 THIRD MODULE (SOUTH VIEW)

3/8" = 1'-0"

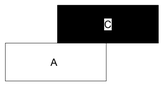


4 THIRD MODULE (EAST VIEW)

3/8" = 1'-0"

SHEET NOTES:

1. T / DECK ELEVATION = 1' - 4 1/2"
2. T / ROOF DECK ELEVATION = 10' - 7 1/2"
3. X-BRACING IS PRESENTED WITHIN ALL SHEAR WALL LOCATION AS INDICATED IN 3/S203.



KEY PLAN

ADAPTHAUS

FLEXIBLE, SUSTAINABLE, AFFORDABLE

ILLINOIS SOLAR DECATHLON 2018 - 21

TEAM NAME
ADAPTHAUS

CONTACT
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CONSULTANTS:

- DARCY BEAN CONSTRUCTION
- THORNTON TOMASETTI
- AFFILIATED ENGINEERS INC

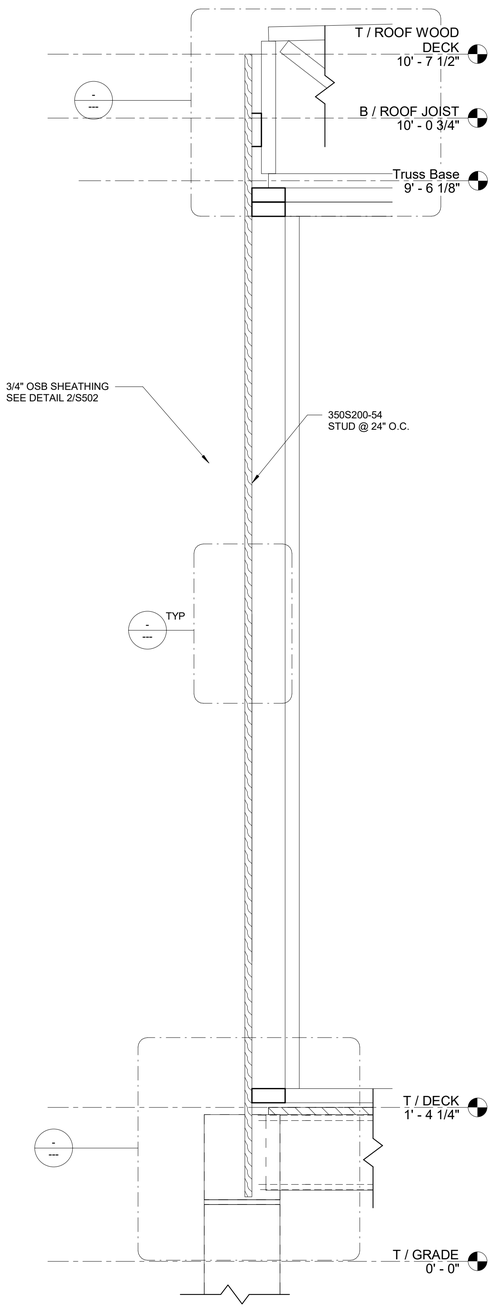
NO.	DESCRIPTION	DATE
1	60% CD SET	
2	80% CD SET	
3	90% CD SET	
4	1ST REVISION	
5	2ND REVISION	
6	3RD REVISION	
7	95% CD SET	
8	4TH REVISION	
9	OPENING REVISION	
10	DETAIL REVISION	12/22/2019
11	5TH REVISION	2/1/2020
12	D5 SUBMISSIN	2/17/2020
13	2-MODULE REVISION	3/8/2020
14	BRACING REVISION	3/11/2020
15	STUD SPACING REVISION	7/27/2020

FRAMING ELEVATION (SECOND MODULE)

DRAWN BY:

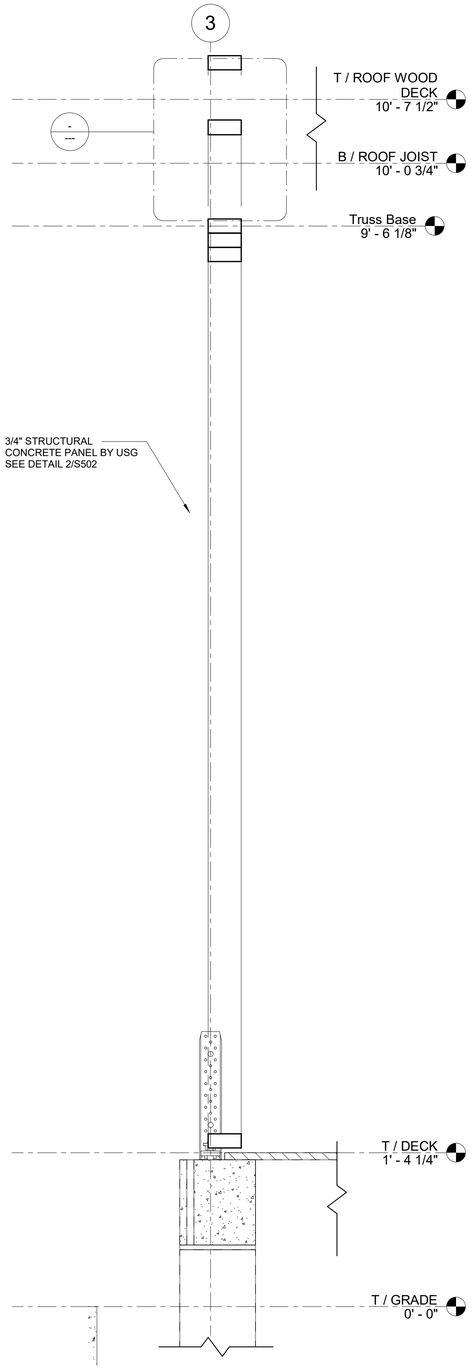
CHECKED BY:

S202



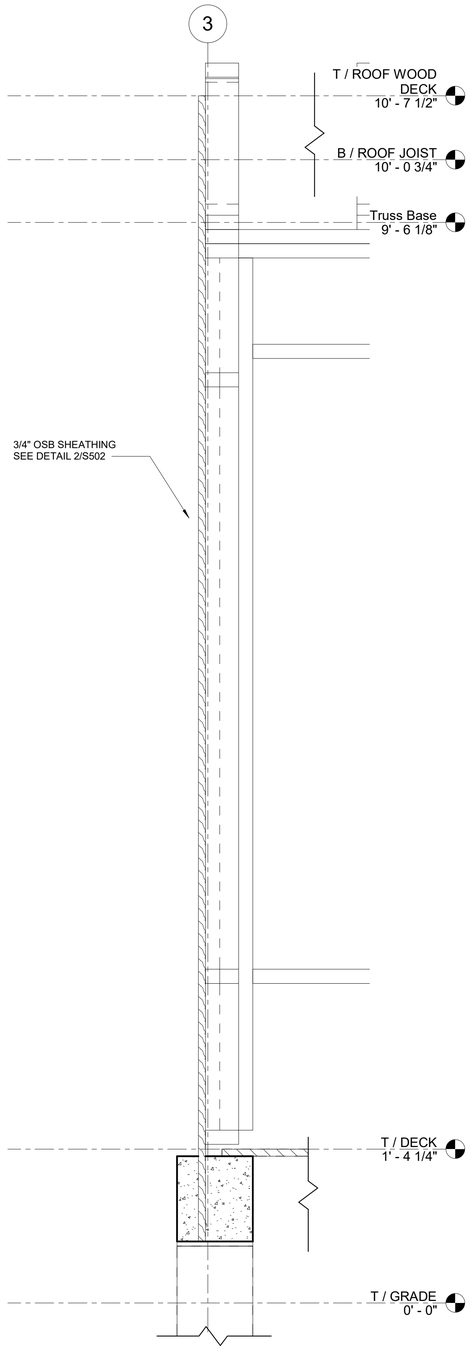
1 NON SHEAR WALL SECTION PERPENDICULAR TO JOIST

1 1/2" = 1'-0"



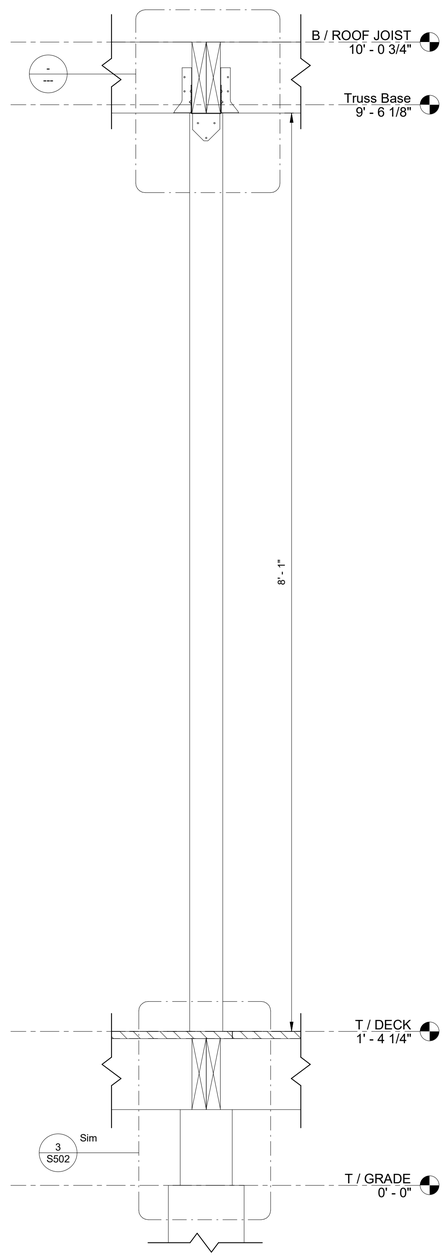
2 SHEAR WALL SECTION PARALLEL TO JOIST

1 1/2" = 1'-0"



3 NON SHEAR WALL SECTION PARALLEL TO JOIST

1 1/2" = 1'-0"



4 TYP CANOPY SECTION

1 1/2" = 1'-0"

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ILLINOIS SOLAR DECATHLON 2018 - 21

TEAM NAME

ADAPTHAUS

CONTACT

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CONSULTANTS:

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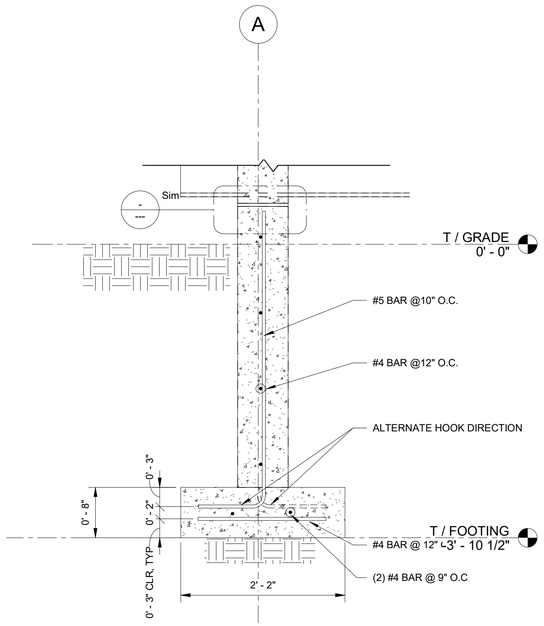
12	D5 SUBMISSIN	2/17/2020
13	2-MODULE REVISION	3/8/2020
14	BRACING REVISION	3/11/2020
15	STUD SPACING REVISION	7/27/2020

SECTIONS AND ELEVATIONS

DRAWN BY:

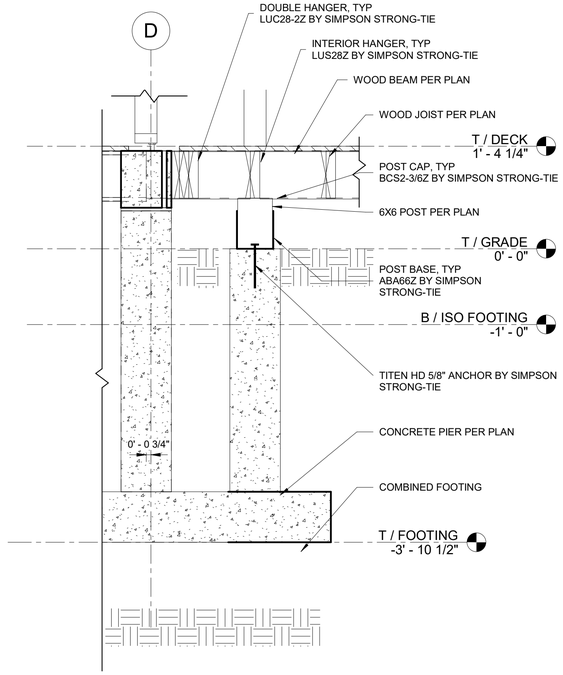
CHECKED BY:

S501



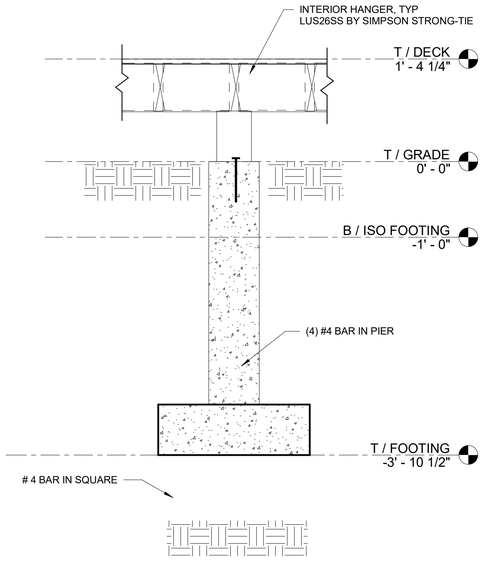
1 FOUNDATION DETAIL

1" = 1'-0"



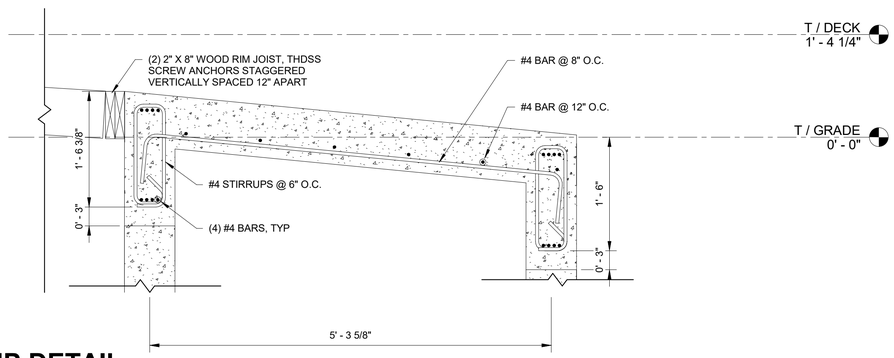
2 DECK FOUNDATION AND FRAMING CONNECTION DETAIL AT EDGE FOOTING

1" = 1'-0"



3 TYP DECK FOUNDATION AND FRAMING CONNECTION DETAIL

1" = 1'-0"



4 RAMP DETAIL

1" = 1'-0"

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7	95% CD SET	
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10	DETAIL REVISION	12/22/2019
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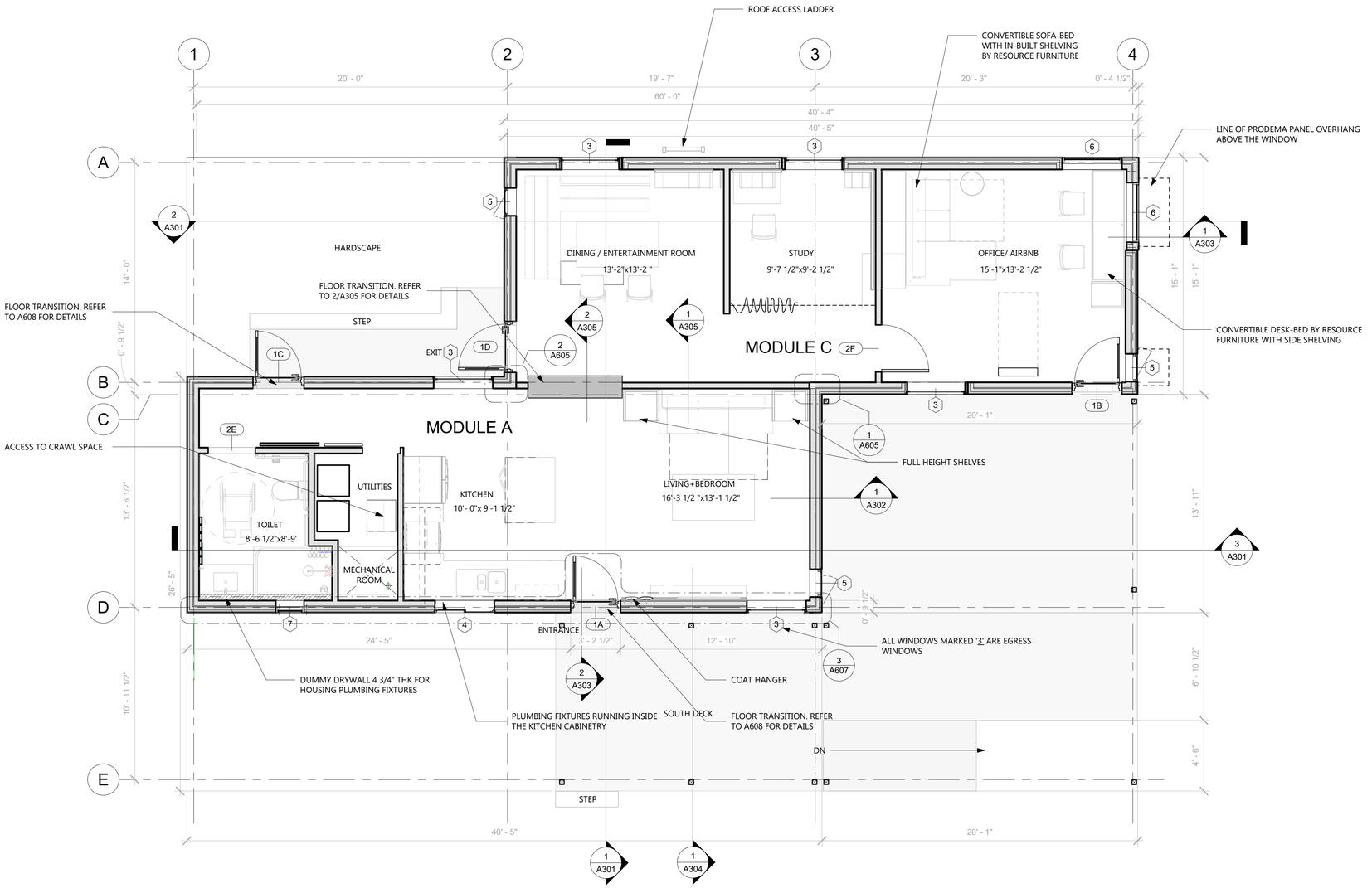
12	D5 SUBMISSIN	2/17/2020
13	2-MODULE REVISION	3/8/2020
14	BRACING REVISION	3/11/2020
15	STUD SPACING REVISION	7/27/2020

FOUNDATION DETAIL

DRAWN BY:

CHECKED BY:

S502



1 FIRST FLOOR PLAN

1/4" = 1'-0"

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CONSULTANTS:

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- AFFILIATED ENGINEERS INC

GENERAL NOTES AND SPECS:

1. DRAWING NOT TO BE SCALED, REFER TO MEASUREMENTS FOR CONSTRUCTION
2. TRANSITIONS FROM OUTDOORS TO INDOORS, GENERAL AREAS TO TOILETS, AND FROM MODULE A TO MODULE C ARE DESIGNED AS/ ADA ACCESSIBILITY CODES. REFER TO THE RESPECTIVE TRANSITION DETAILS.

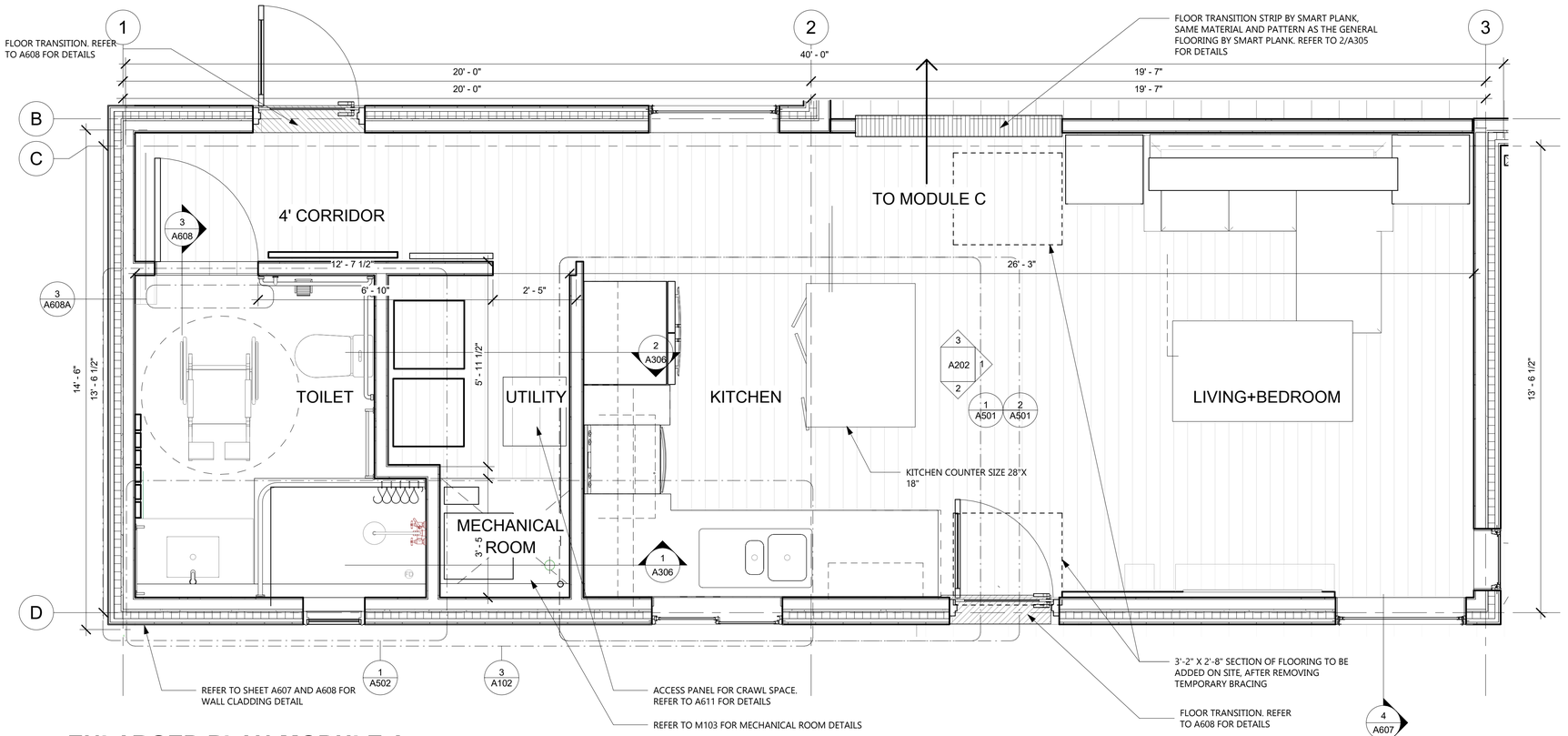
NO.	DESCRIPTION	DATE

FIRST FLOOR PLAN

DRAWN BY:

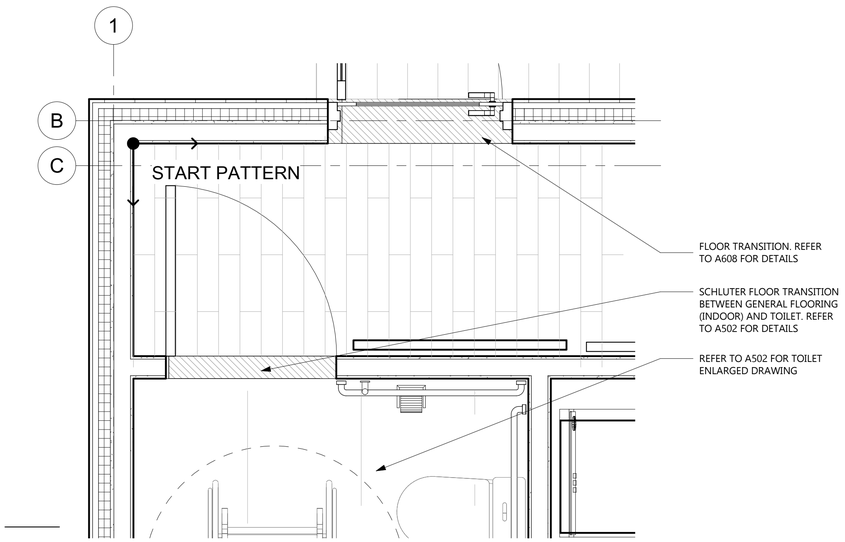
CHECKED BY:

A101



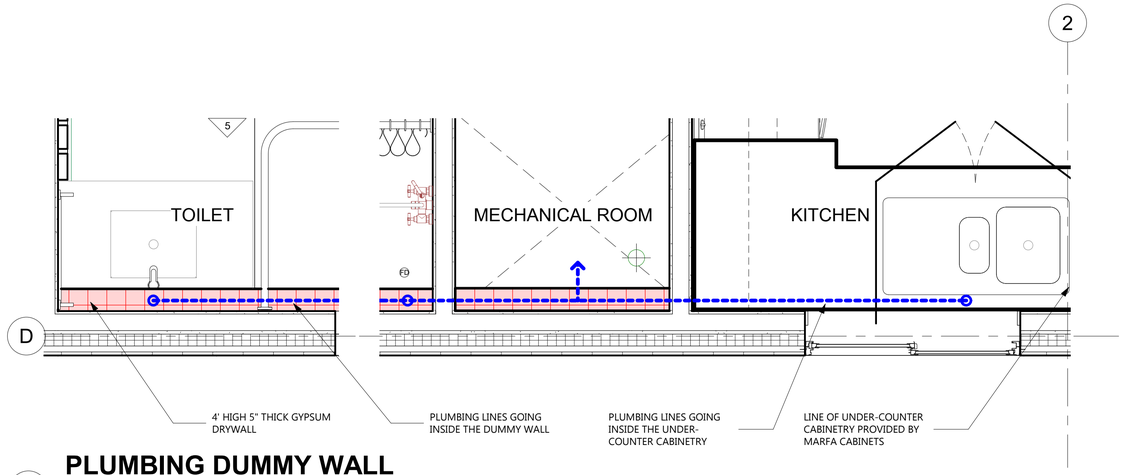
1 ENLARGED PLAN-MODULE A

1/2" = 1'-0"



2 MODULE A WOODEN FLOORING DETAIL

3/4" = 1'-0"



3 PLUMBING DUMMY WALL

3/4" = 1'-0"

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CONSULTANTS:

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- THORNTON TOMASETTI
- AFFILIATED ENGINEERS INC

GENERAL NOTES AND SPECS:

1. DRAWING NOT TO BE SCALED, REFER TO MEASUREMENTS FOR CONSTRUCTION
2. FURNITURE SHOWN IS REPRESENTATIVE OF CHOSEN TYPE.
3. MAKE SPECIAL NOTE OF TRANSITION OF THE FLOORING PATTERN BETWEEN MODULE A AND C AND BETWEEN MODULE A AND NORTH DECK
4. FLOORING PATTERN TRANSITION BETWEEN MODULE A AND SOUTH DECK IS THE SAME AS SHOWN BETWEEN MODULE A AND NORTH DECK
5. FLOORING PATTERN STAYS THE SAME BETWEEN MODULES A AND C
6. REFER TO SHEET A502 FOR TOILET FLOORING PATTERN
7. REFER TO SHEET A607 AND A608 FOR EXTERIOR WALL CLADDING DETAILS

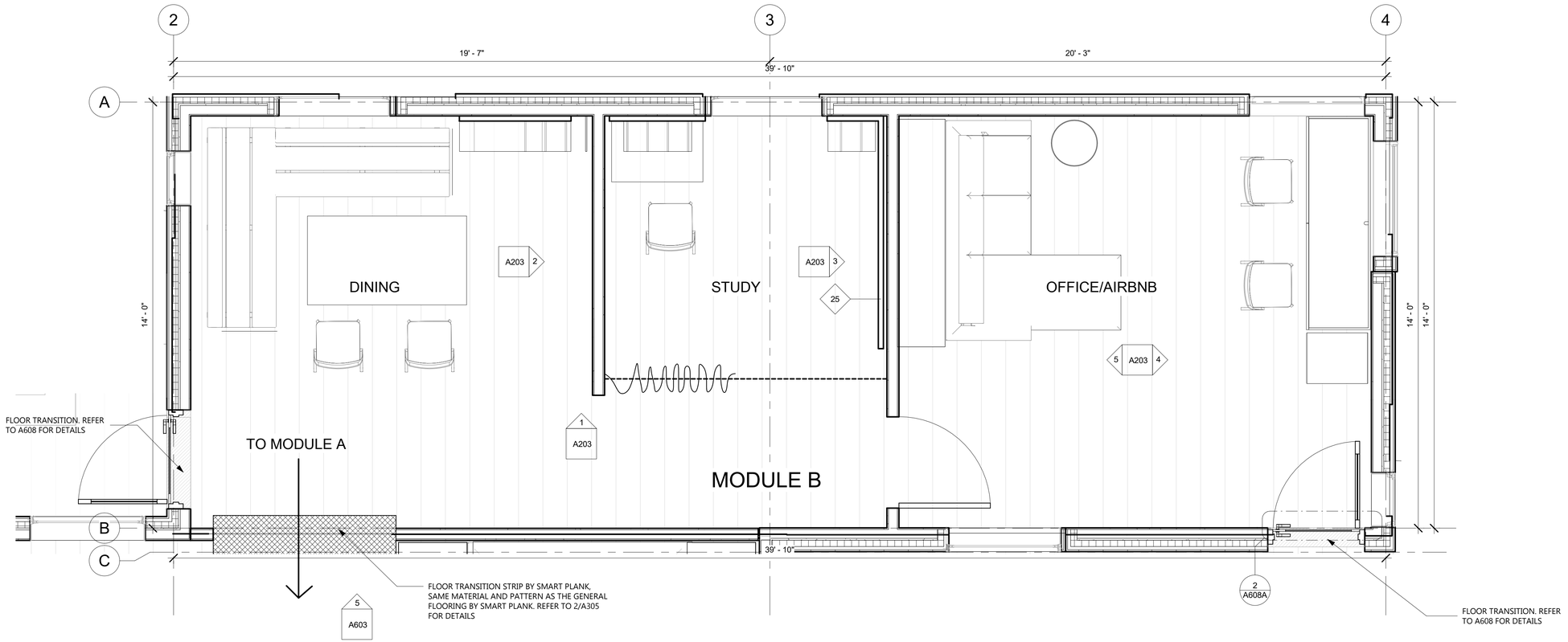
NO.	DESCRIPTION	DATE

ENLARGED PLAN-MODULE A

DRAWN BY:

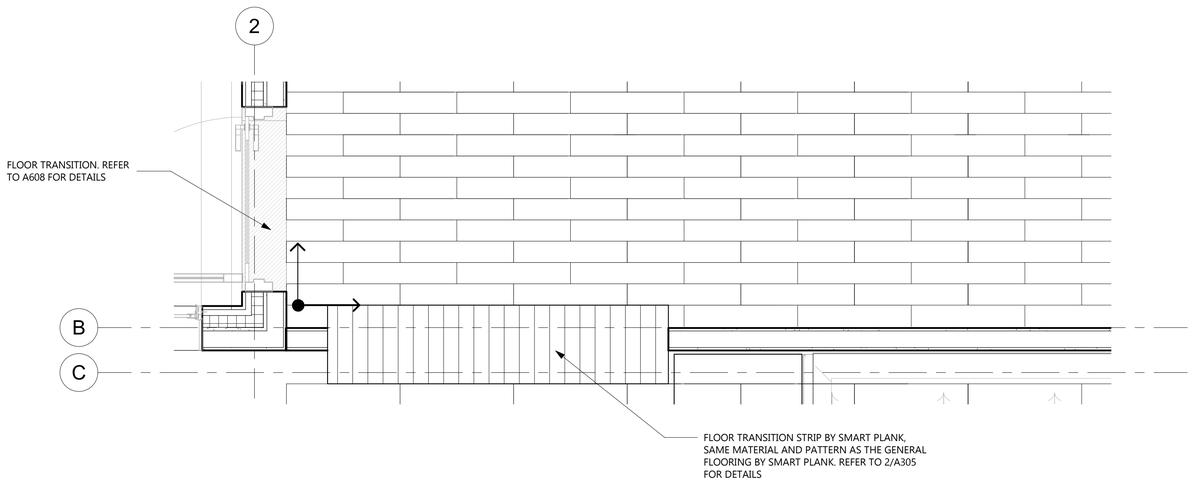
CHECKED BY:

A102



1 ENLARGED PLAN-MODULE C

1/2" = 1'-0"



2 MODULE C WOODEN FLOORING

3/4" = 1'-0"

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ILLINOIS SOLAR DECATHLON 2018 - 21

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- THORNTON TOMASETTI
- AFFILIATED ENGINEERS INC

GENERAL NOTES AND SPECS:

1. DRAWING NOT TO BE SCALED, REFER TO MEASUREMENTS FOR CONSTRUCTION
2. FURNITURE SHOWN IS REPRESENTATIVE OF CHOSEN TYPE.
3. MAKE SPECIAL NOTE OF TRANSITION OF THE FLOORING PATTERN BETWEEN MODULE A AND C AND BETWEEN MODULE C AND NORTH DECK
4. FLOORING PATTERN TRANSITION BETWEEN MODULE A AND SOUTH DECK IS THE SAME AS SHOWN BETWEEN MODULE A AND NORTH DECK
5. FLOORING PATTERN STAYS THE SAME BETWEEN MODULES A AND C
6. REFER TO SHEET A502 FOR TOILET FLOORING PATTERN
7. REFER TO SHEET A607 AND A608 FOR EXTERIOR WALL CLADDING DETAILS

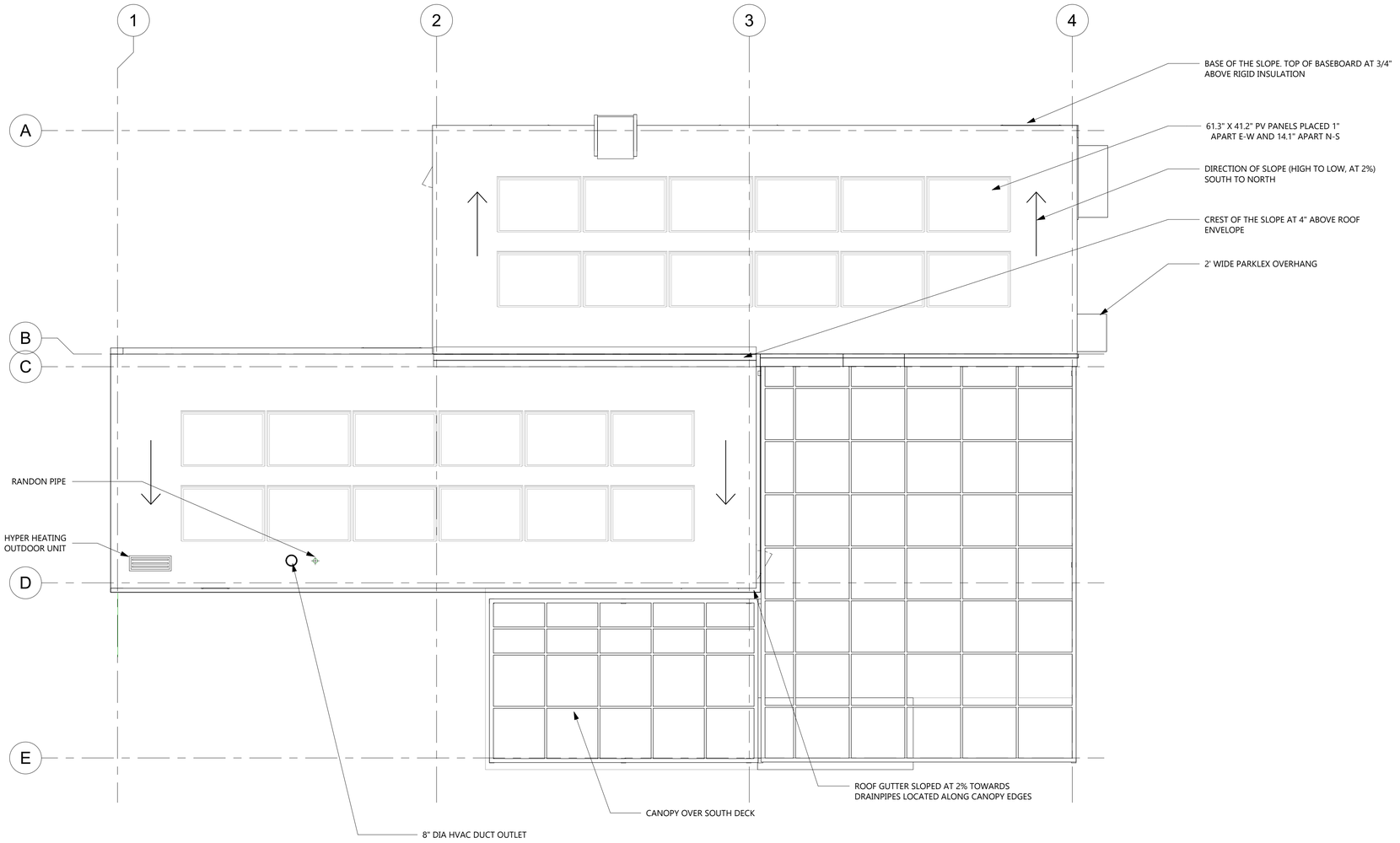
NO.	DESCRIPTION	DATE

ENLARGED PLAN-MODULE C

DRAWN BY:

CHECKED BY:

A104



1 ROOF PLAN

1/4" = 1'-0"

ADAPTHAUS

FLEXIBLE, SUSTAINABLE, AFFORDABLE

ILLINOIS SOLAR DECATHLON 2018 - 21

TEAM NAME

ADAPTHAUS

CONTACT

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CONSULTANTS:

- DARCY BEAN CONSTRUCTION
- THORNTON TOMASETTI
- AFFILIATED ENGINEERS INC

1. DRAWING NOT TO BE SCALED, REFER TO MEASUREMENTS FOR CONSTRUCTION
2. TRANSITIONS FROM OUTDOORS TO INDOORS, GENERAL AREAS TO TOILETS, AND FROM MODULE A TO MODULE C ARE DESIGNED AS/ ADA ACCESSIBILITY CODES. REFER TO THE RESPECTIVE TRANSITION DETAILS.
3. 15LB OF FELT PAPER OVER ROOF SHEATHING

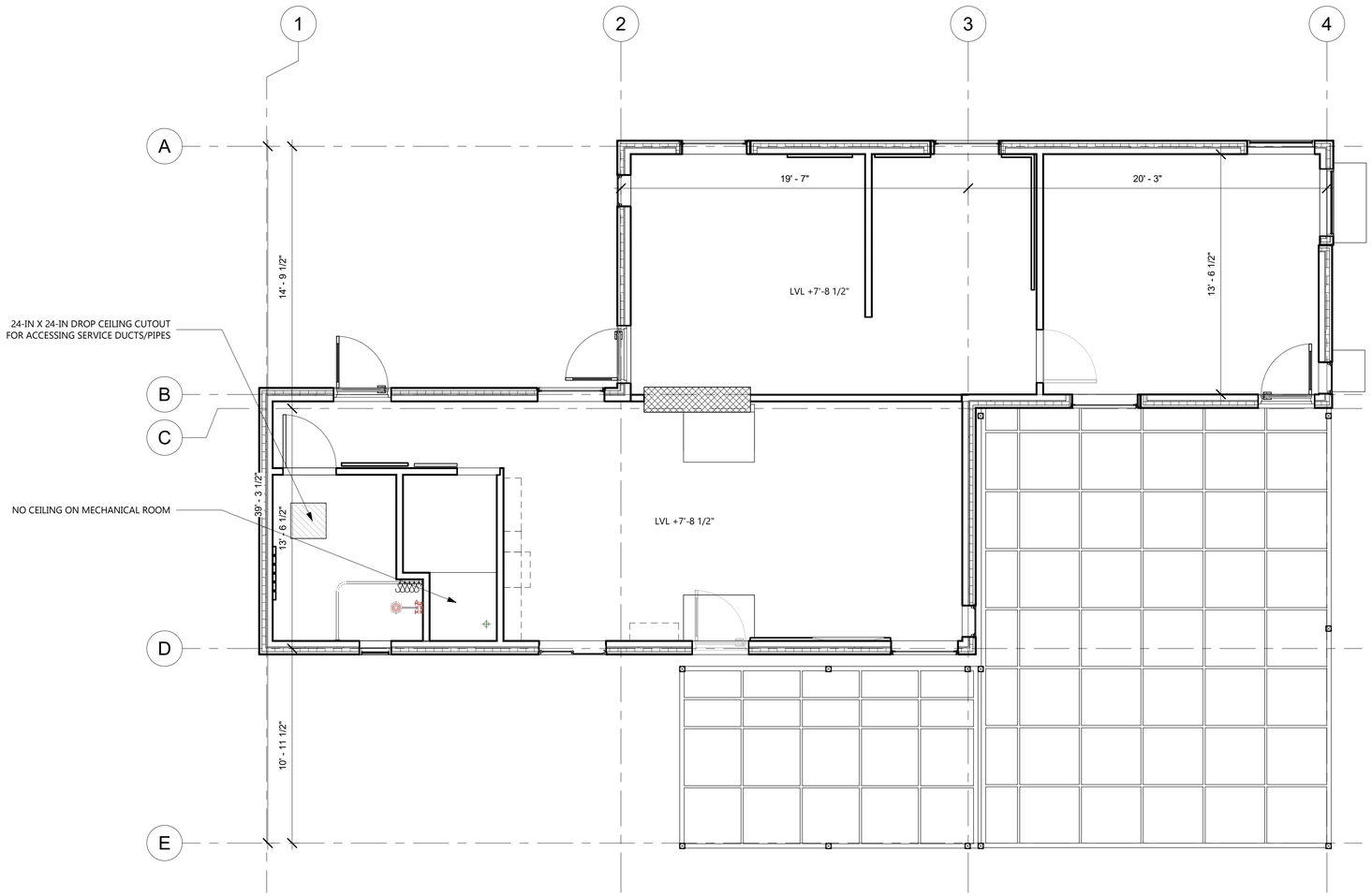
NO.	DESCRIPTION	DATE

ROOF PLAN

DRAWN BY:

CHECKED BY:

A105



1 REFLECTED CEILING PLAN

1/4" = 1'-0"

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FLEXIBLE, SUSTAINABLE, AFFORDABLE

ILLINOIS SOLAR DECATHLON 2018 - 21

TEAM NAME

ADAPTHAUS

CONTACT

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CONSULTANTS:

- DARCY BEAN CONSTRUCTION
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- AFFILIATED ENGINEERS INC

GENERAL NOTES AND SPECS:

1. UNIFORM DROP CEILING OF 9' - 5"

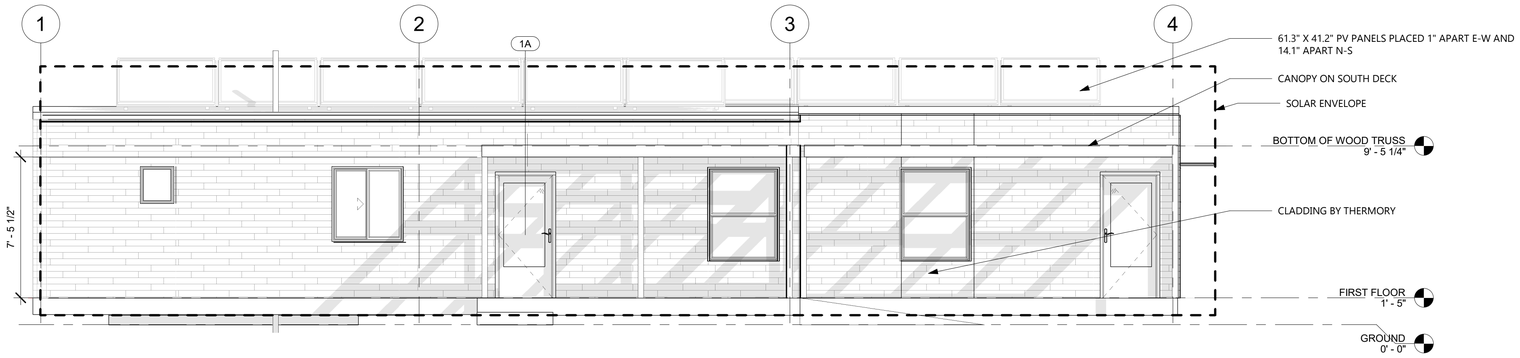
NO.	DESCRIPTION	DATE

REFLECTED CEILING PLAN

DRAWN BY:

CHECKED BY:

A106

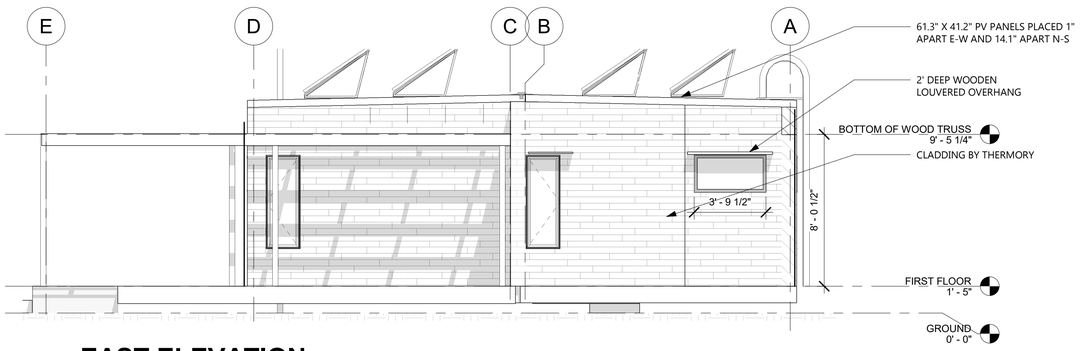


1 SOUTH ELEVATION

1/4" = 1'-0"

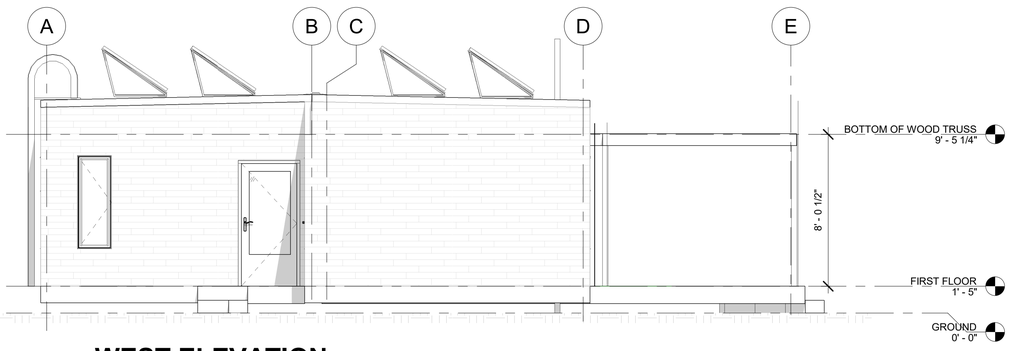
2 NORTH ELEVATION

1/4" = 1'-0"



3 EAST ELEVATION

1/4" = 1'-0"



4 WEST ELEVATION

1/4" = 1'-0"

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CONSULTANTS:

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- AFFILIATED ENGINEERS INC

GENERAL NOTES AND SPECS:

1. DRAWING NOT TO BE SCALED, REFER TO MEASUREMENTS FOR CONSTRUCTION
2. FOR EXTERIOR CLADDING DETAILS, REFER TO A606 AND A607
3. LIST OF TAGS USED:

1A: HINGED 3/4 LIGHT ENTRY GLASS DOOR 1
1B: HINGED 3/4 LIGHT ENTRY GLASS DOOR 2
1C: HINGED 3/4 LIGHT ENTRY GLASS DOOR 3
3: SINGLE-HUNG WINDOW
4: SLIDING WINDOW
6: FIXED WINDOW 1
7: FIXED WINDOW 2

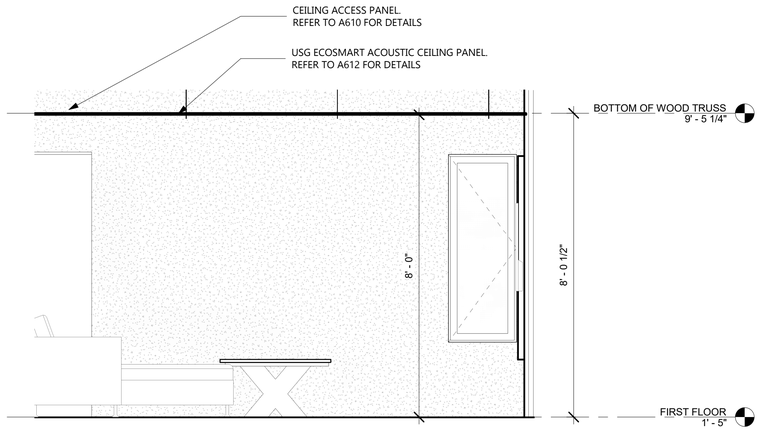
NO.	DESCRIPTION	DATE

EXTERIOR ELEVATIONS

DRAWN BY:

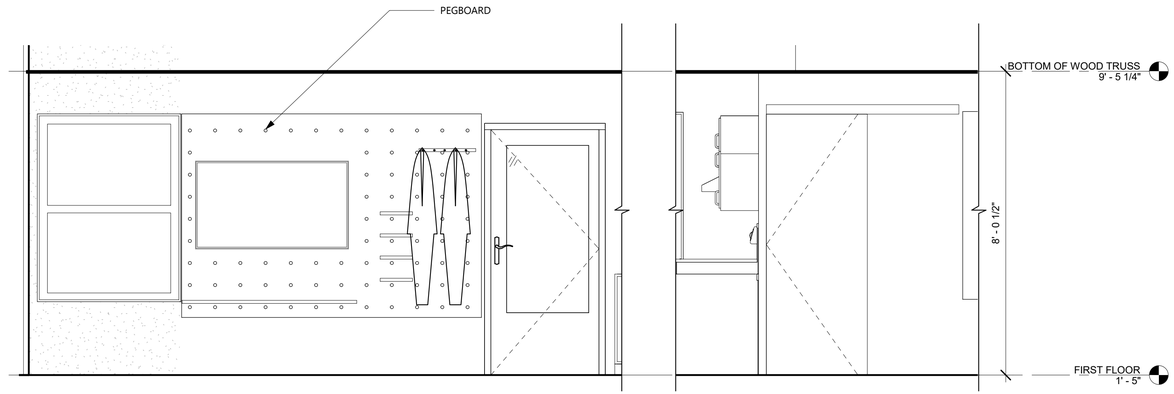
CHECKED BY:

A201



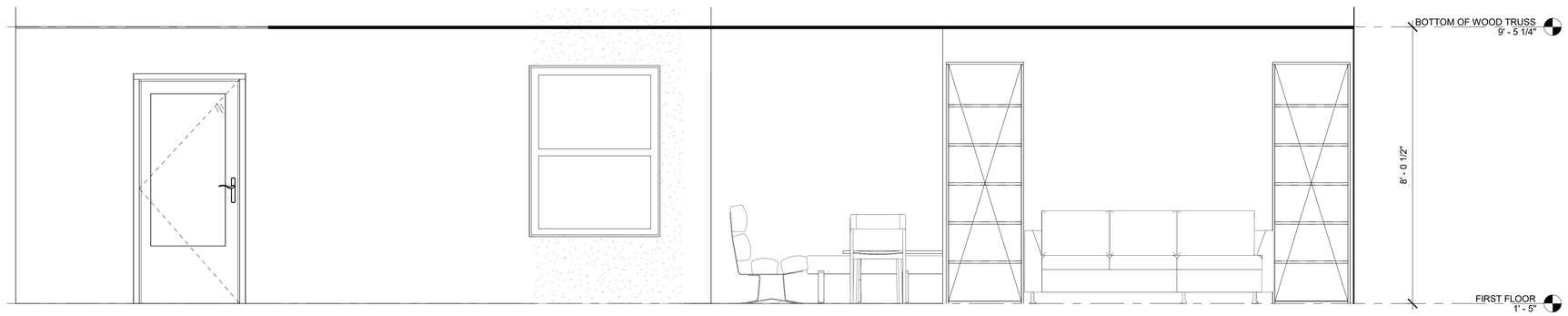
1 LIVING-EAST VIEW

1/2" = 1'-0"



2 LIVING/UTILITY-SOUTH VIEW

1/2" = 1'-0"



3 LIVING-NORTH VIEW

1/2" = 1'-0"

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CONSULTANTS:

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GENERAL NOTES AND SPECS:

1. DRAWING NOT TO BE SCALED, REFER TO MEASUREMENTS FOR CONSTRUCTION
2. DOOR OPENINGS ARE GENERALLY DIMENSIONED TO CENTERLINE OF OPENING. THOSE THAT ARE NOT DIMENSIONALLY LOCATED ARE TO BE CENTERED BETWEEN WALLS OR POSITIONED WITH ONE JAMB AGAINST AN ADJACENT WALL OR COLUMN AS SHOWN ON THE DRAWINGS.
3. ALL DOOR AND WINDOWS EXTERIOR FRAMES WILL BE ALLIGNED TO THE EXTERIOR CLADDING AND SERVE AS RAIN SCREENS.

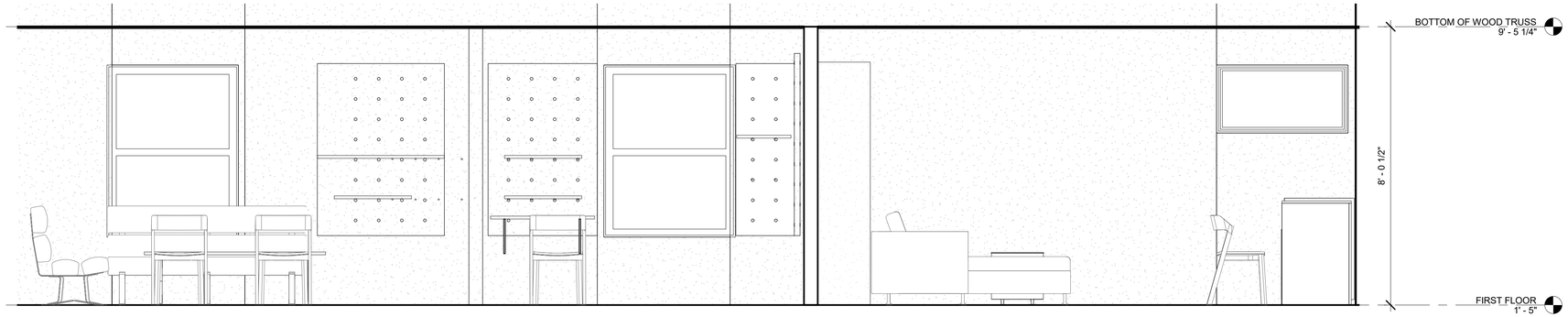
NO.	DESCRIPTION	DATE

INTERIOR ELEVATIONS- MODULE A

DRAWN BY:

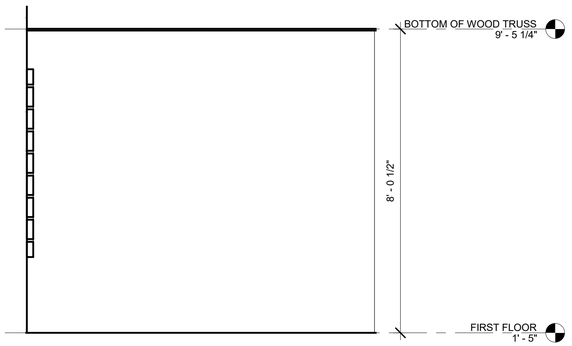
CHECKED BY:

A202



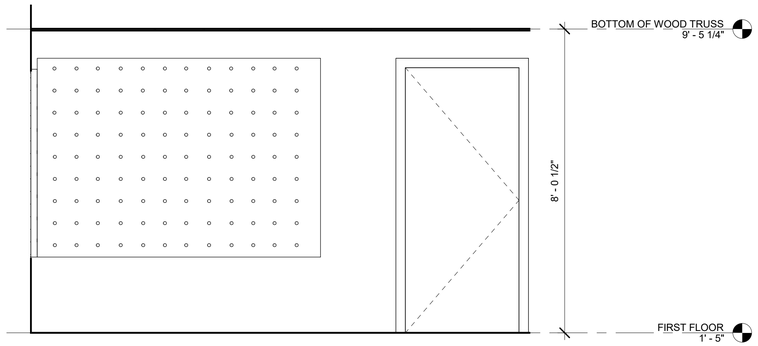
1 MODULE C NORTH VIEW

1/2" = 1'-0"



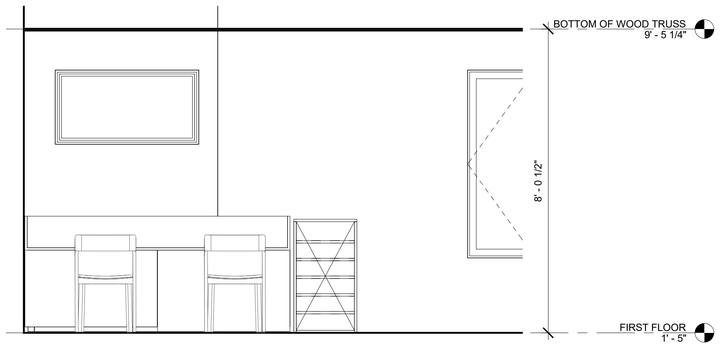
2 DINING-EAST VIEW

1/2" = 1'-0"



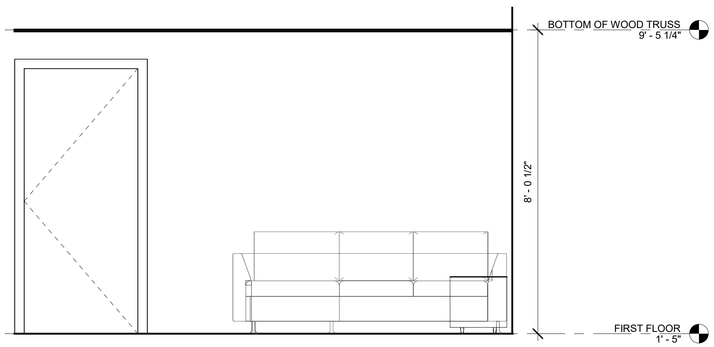
3 STUDY-EAST VIEW

1/2" = 1'-0"



4 OFFICE/AIRBNB-EAST VIEW

1/2" = 1'-0"



5 OFFICE/AIRBNB-WEST VIEW

1/2" = 1'-0"

ADAPTHAUS

FLEXIBLE, SUSTAINABLE, AFFORDABLE

ILLINOIS SOLAR DECATHLON 2018 - 21

TEAM NAME

ADAPTHAUS

CONTACT

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CONSULTANTS:

- DARCY BEAN CONSTRUCTION
- THORNTON TOMASETTI
- AFFILIATED ENGINEERS INC

GENERAL NOTES AND SPECS:

LIST OF TAGS USED:

W1: WHITE PAINT
25: PEGBOARD + DOWELS/STANDS
66: CENTER TABLE-ADJUSTING
67: MOVABLE/FOLDABLE CHAIRS
68: FIXED DESK
69: CONVERTIBLE TABLE/BED

1: DRAWING NOT TO BE SCALED, REFER TO MEASUREMENTS FOR CONSTRUCTION.

2: PAINT WITH LEAD OR VOC COMPONENTS WILL NOT BE USED IN THIS PROJECT.

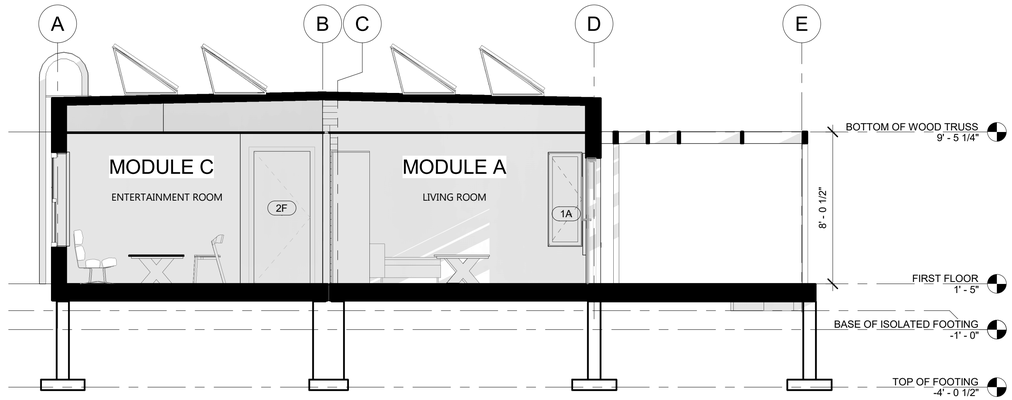
NO.	DESCRIPTION	DATE

INTERIOR ELEVATIONS- MODULE C

DRAWN BY:

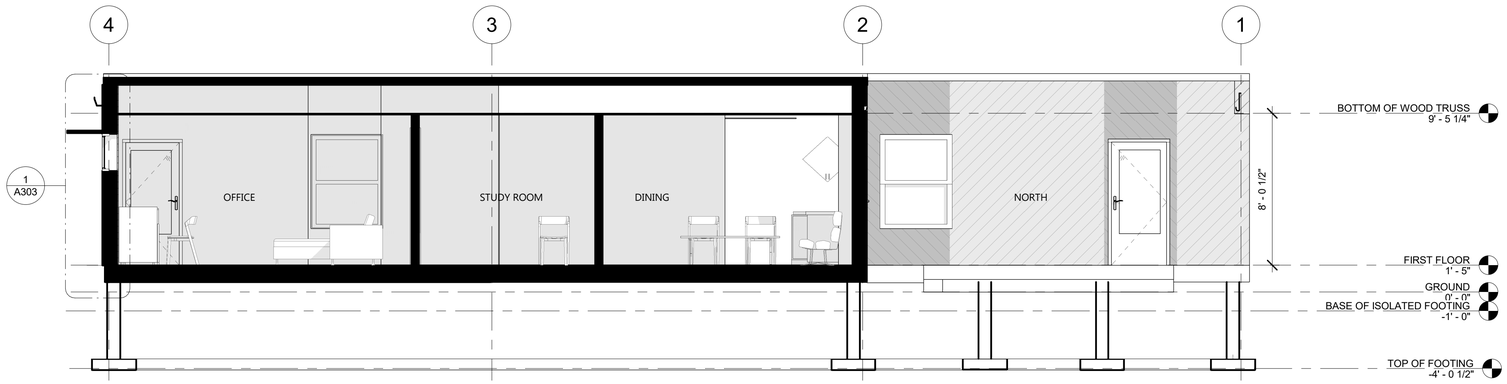
CHECKED BY:

A203



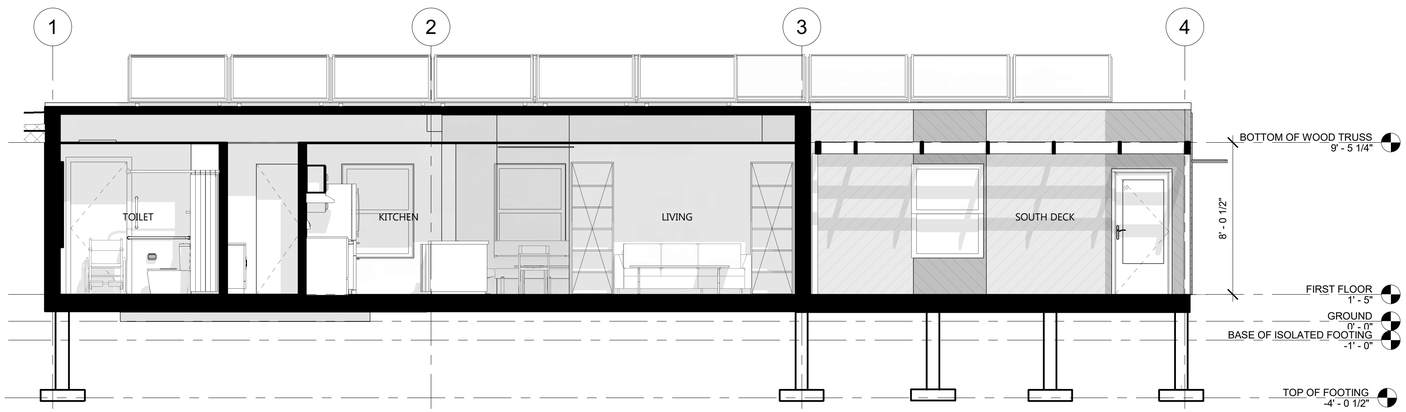
1 Section 1

1/4" = 1'-0"



2 Section 2

1/4" = 1'-0"



3 Section 3

1/4" = 1'-0"

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- AFFILIATED ENGINEERS INC

GENERAL NOTES AND SPECS:

1. FURNITURE ITEMS ARE REPRESENTATIVE OF ACTUAL ITEMS AND MAY MARGINALLY VARY FROM THEM.

2. LIST OF TAGS USED:

1a:	HINGED FRAMED GLASS DOOR-SWING 1
1b:	HINGED FRAMED GLASS DOOR-SWING 2
1c:	HINGED FRAMED GLASS DOOR
3:	WINDOW 1, SLIDING
4:	WINDOW 2, SLIDING
5:	WINDOW 3, SLIDING
6:	WINDOW 4, FIXED
7:	WINDOW 5, FIXED
10:	SOLAR PANELS WITH RACKING
16:	MECHANICAL SHAFT DOOR
21:	TRANFORMABLE SOFA BED
25:	PEGBOARD
27:	PARTITION WALL
29:	KITCHEN ISLAND
32:	REFRIGERATOR
34:	COOKING RANGE
44:	TOILET SINK
45:	FAUCET
48:	WATER CLOSET
49:	TOILET PAPER HOLDER
52:	TOWEL ROD
54:	GRAB BAR
55:	QUEEN SIZED BED
56:	STUDY TABLE 1
57:	STUDY TABLE 2
58:	FULL HEIGHT CABINETRY
60:	SHOWER PANEL
61:	BUNK BED
62:	CUBBIES
65:	BANQUETTE SEATING
66:	TRANSFORMABLE COFFEE TABLE
67:	STACKABLE CHAIR

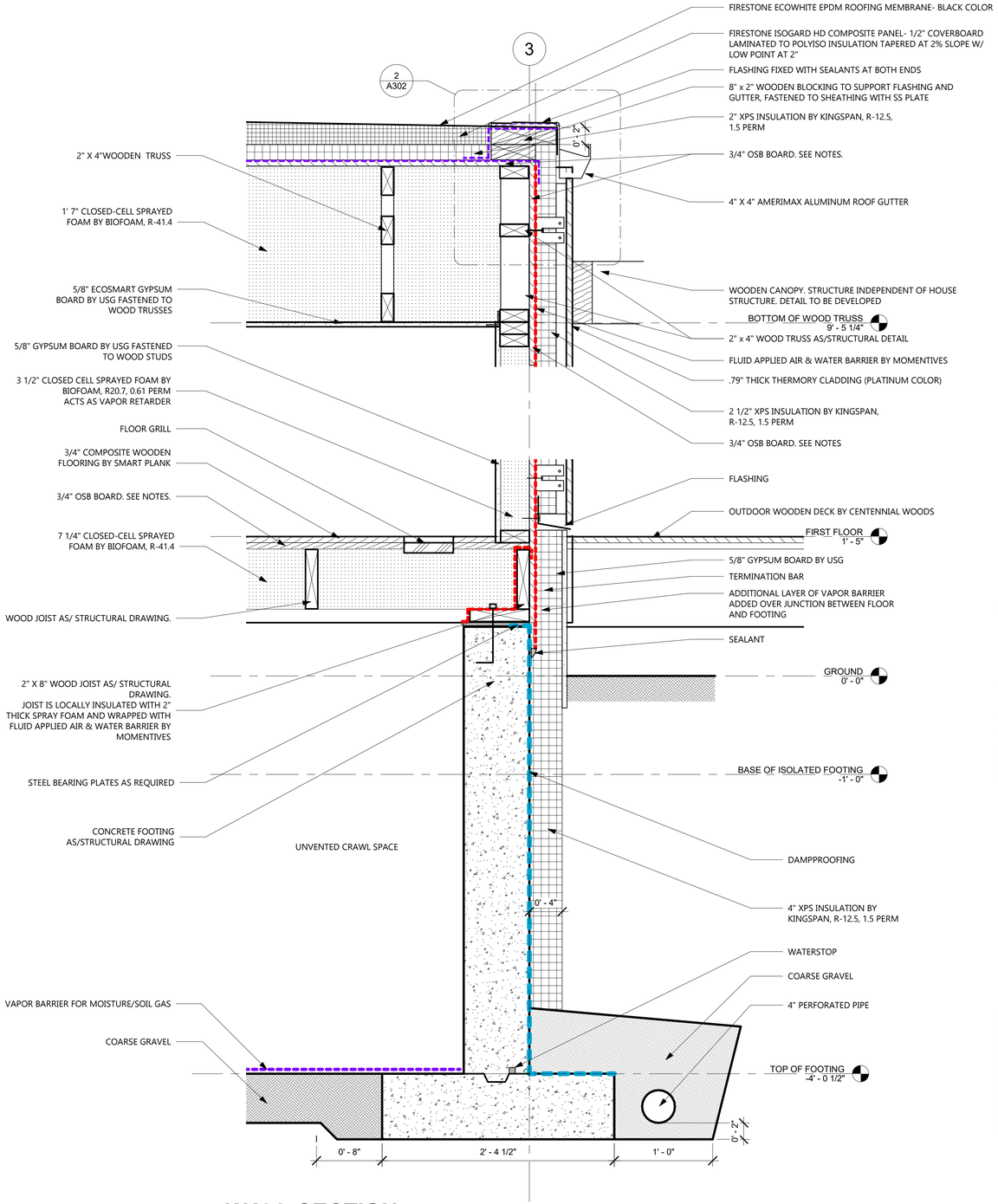
NO.	DESCRIPTION	DATE

BUILDING SECTIONS

DRAWN BY:

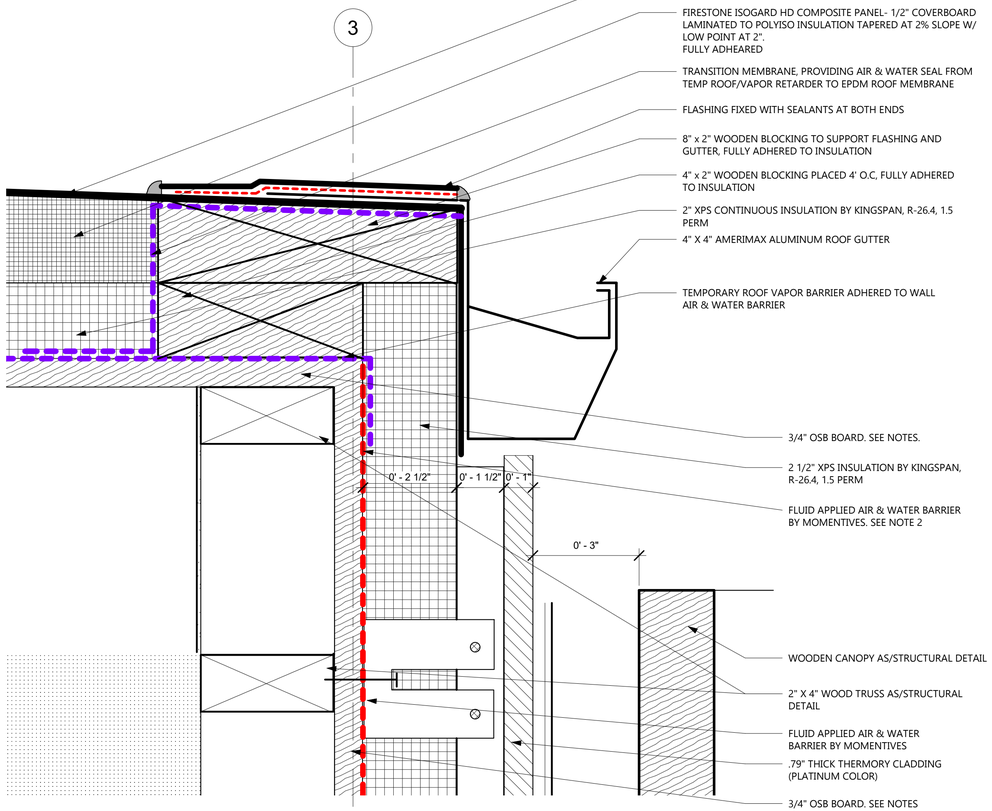
CHECKED BY:

A301



1 WALL SECTION

1 1/2" = 1'-0"



2 ROOF EDGE DETAIL

6" = 1'-0"

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ILLINOIS SOLAR DECATHLON 2018 - 21

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CONSULTANTS:

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- AFFILIATED ENGINEERS INC

GENERAL NOTES AND SPECS:

1. OSB OR CONCRETE SHEATHING WILL RUN CONTINUOUSLY FROM ROOF TO WALLS TO FLOOR. REFER TO STRUCTURE DRAWING FOR DETAILS ABOUT CONNECTION AND LOCATION.
2. AIR & WATER BARRIER SHOULD BE REAPPLIED OVER PENETRATIONS CREATED AS A RESULT OF CLADDING FASTENERS, TO FULLY-SEAL THEM AND AVOID THERMAL BRIDGING.
3. 15LB OF FELT PAPER OVER ROOF SHEATHING

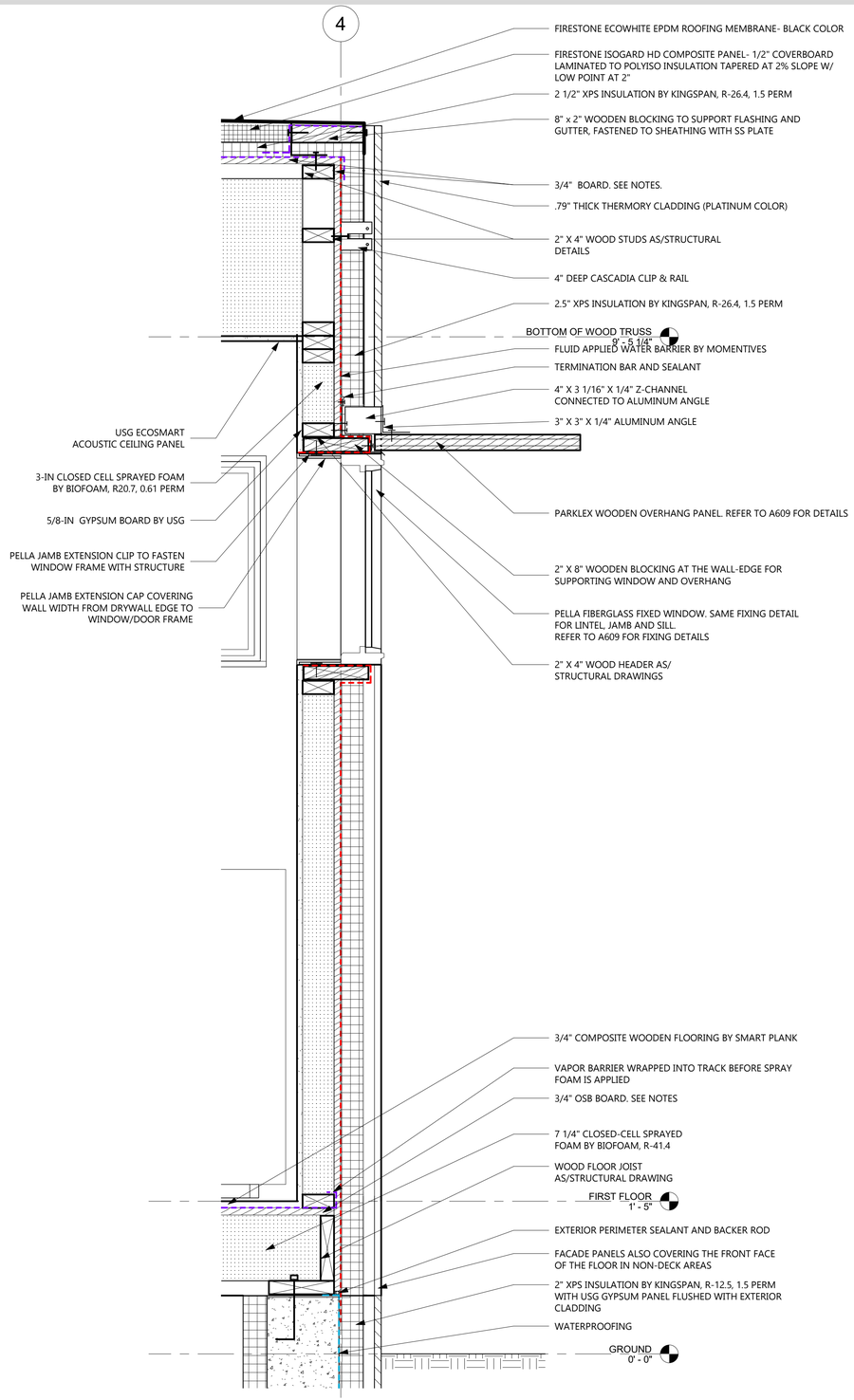
NO.	DESCRIPTION	DATE

WALL SECTIONS

DRAWN BY:

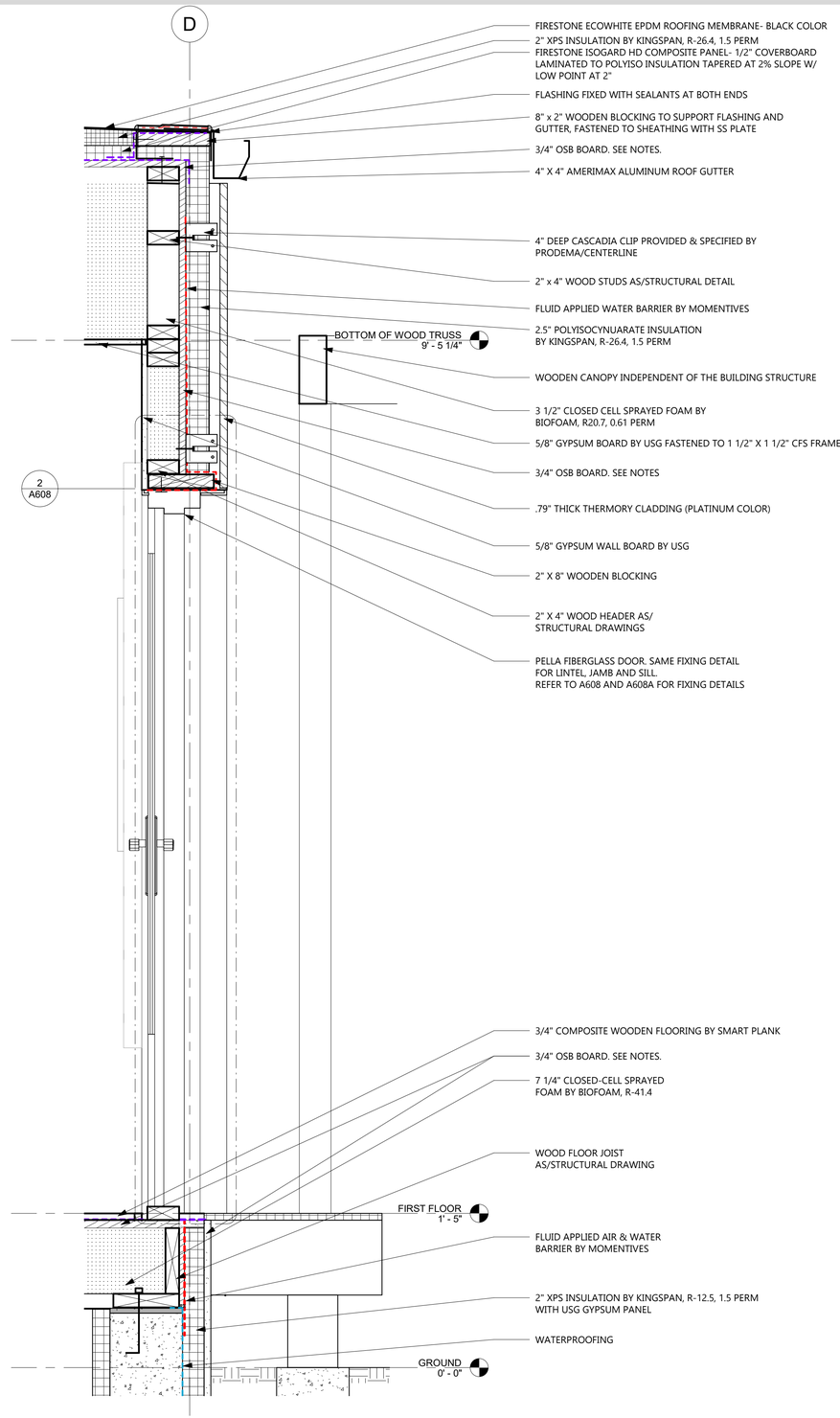
CHECKED BY:

A302



1 WALL SECTION THROUGH OVERHANG

1 1/2" = 1'-0"



2 WALL SECTION THROUGH CANOPY W/ GUTTER

1 1/2" = 1'-0"

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2. 15LB OF FELT PAPER OVER ROOF SHEATHING

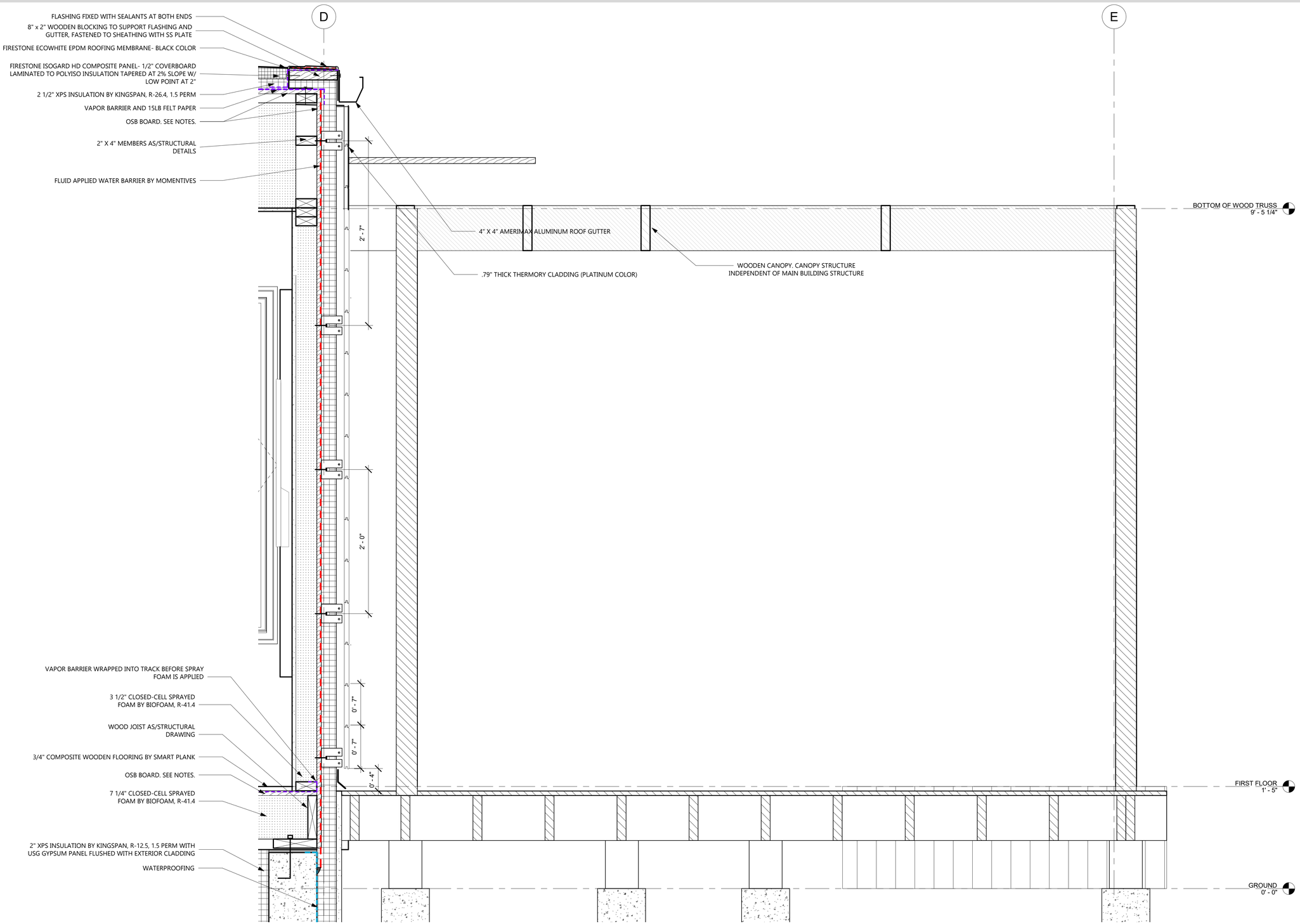
NO.	DESCRIPTION	DATE

WALL SECTIONS

DRAWN BY:

CHECKED BY:

A303



1 WALL SECTION THROUGH CANOPY

1 1/2" = 1'-0"

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ILLINOIS SOLAR DECATHLON 2018 - 21

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2. 15LB OF FELT PAPER OVER ROOF SHEATHING

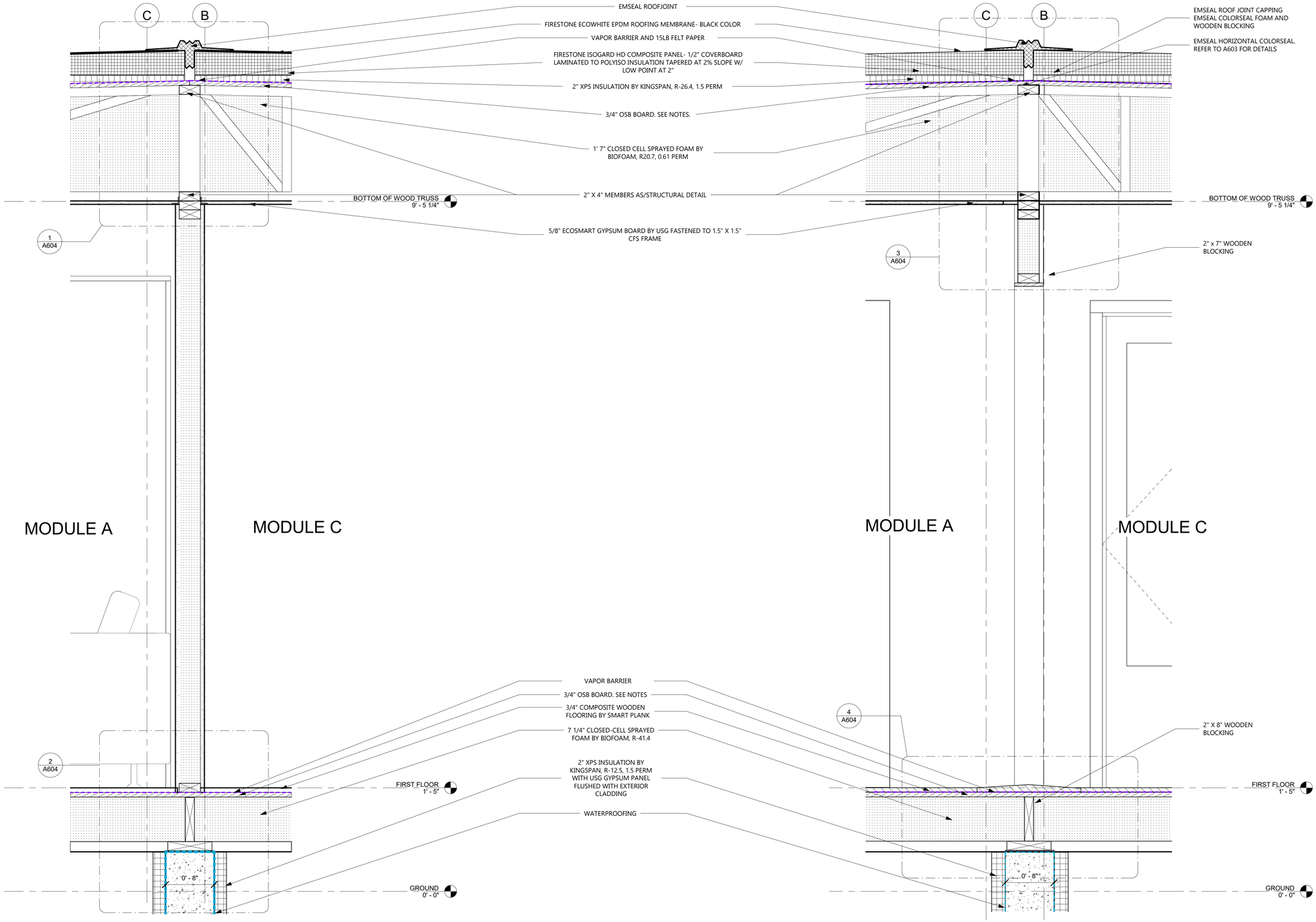
NO.	DESCRIPTION	DATE

WALL SECTIONS

DRAWN BY:

CHECKED BY:

A304



1 WALL SECTION BETWEEN MODULES A AND C

1 1/2" = 1'-0"

2 OPENING SECTION BETWEEN MODULES A AND C

1 1/2" = 1'-0"

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GENERAL NOTES AND SPECS:

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2. 15LB OF FELT PAPER OVER ROOF SHEATHING

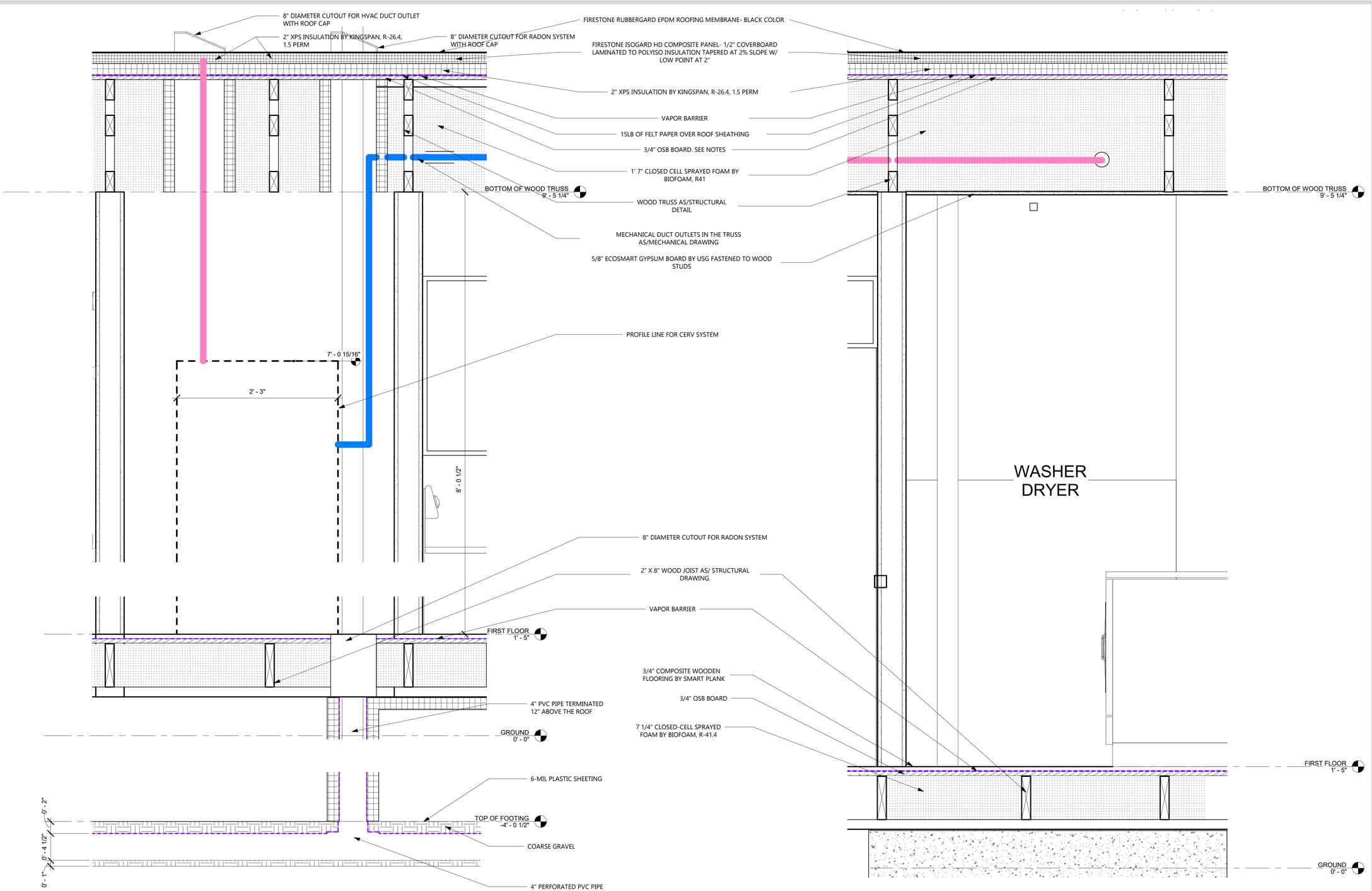
NO.	DESCRIPTION	DATE

WALL SECTIONS

DRAWN BY:

CHECKED BY:

A305



1 SECTION THROUGH MECH. SHAFT

1 1/2" = 1'-0"

2 SECTION THROUGH UTILITY

1 1/2" = 1'-0"

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CONTACT

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- AFFILIATED ENGINEERS INC

GENERAL NOTES AND SPECS:

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2. 15LB OF FELT PAPER OVER ROOF SHEATHING

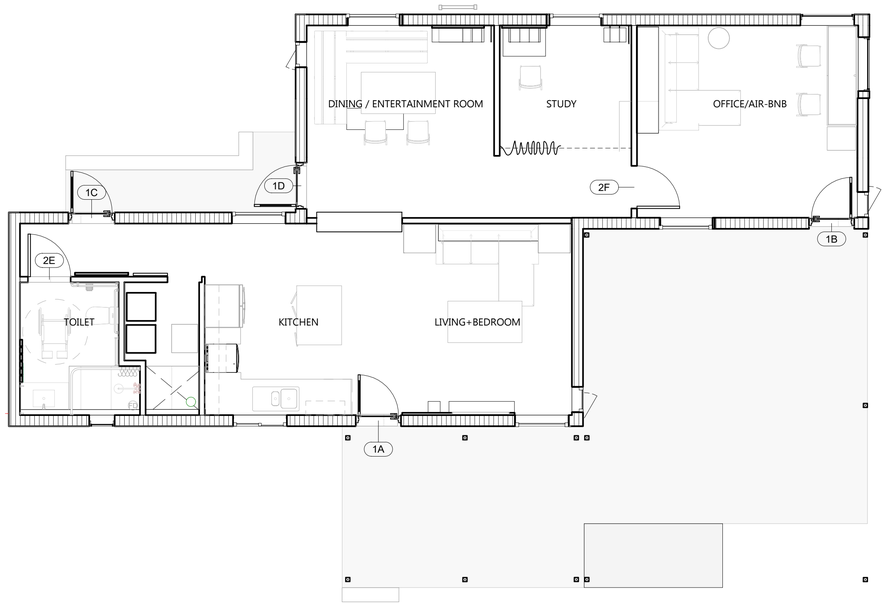
NO.	DESCRIPTION	DATE

WALL SECTIONS

DRAWN BY:

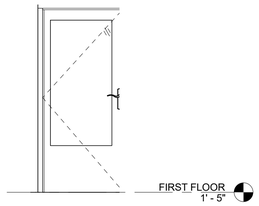
CHECKED BY:

A306



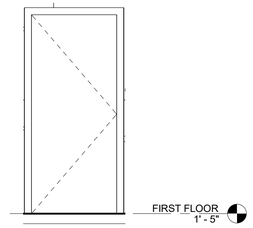
1 DOORS AND WINDOWS LOCATION

3/16" = 1'-0"



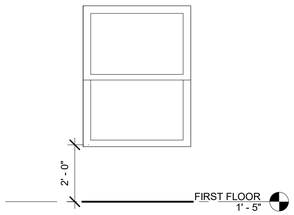
3 HINGED GLASS DOOR

3/8" = 1'-0"



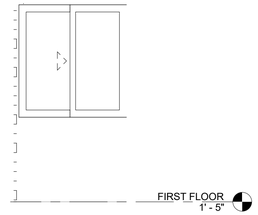
4 HINGED FLUSH DOOR

3/8" = 1'-0"



5 SINGLE-HUNG WINDOW

3/8" = 1'-0"



6 SLIDING WINDOW

3/8" = 1'-0"

DOOR SCHEDULE								
ITEM NO.	TYPE	MANUFACTURER	WIDTH X HEIGHT	FRAME DEPTH	PANEL DEPTH	FIRE RATING	FINISH	COUNT
1A	HINGED FIBERGLASS 3/4 LIGHT ENTRY DOOR WITH FROSTED GLASS-LEFT INSWING	PELLA	37.5" X 80.75"	6 13/16"	1 11/16"		TAN PAINT	1
1B	HINGED FIBERGLASS 3/4 LIGHT ENTRY DOOR WITH FROSTED GLASS-RIGHT INSWING	PELLA	37.5" X 80.75"	6 13/16"	1 11/16"		TAN PAINT	1
1C	HINGED FIBERGLASS 3/4 LIGHT ENTRY DOOR WITH FROSTED GLASS-LEFT OUTSWING	PELLA	38.25" X 80.937"	6 13/16"	1 11/16"		TAN PAINT	1
1D	HINGED FIBERGLASS 3/4 LIGHT ENTRY DOOR WITH FROSTED GLASS-LEFT OUTSWING	PELLA	38.25" X 80.937"	6 13/16"	1 11/16"		TAN PAINT	1
2E	HINGED BIRCHWOOD SOLID CORE FLUSH INTERIOR DOOR-LEFT SWING	NATIONAL DOOR & TRIM	36" X 84"	4 3/4"	1 3/4"		CHESTNUT STAIN	1
2F	HINGED BIRCHWOOD SOLID CORE FLUSH INTERIOR DOOR-RIGHT SWING	NATIONAL DOOR & TRIM	36" X 84"	4 3/4"	1 3/4"		CHESTNUT STAIN	1

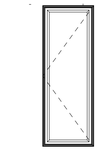
TOTAL : 6

WINDOW SCHEDULE						
ITEM NO.	TYPE	MANUFACTURER	WIDTH X HEIGHT	FRAME DEPTH	FINISH	COUNT
3	FIBERGLASS SINGLE-HUNG	PELLA-IMPERVIA	45.5" X 59.5"	3 1/4"	TAN PAINT	5
4	FIBERGLASS SLIDING, VENT-RIGHT	PELLA-IMPERVIA	45.5" X 47.5"	3 1/4"	TAN PAINT	1
5	FIBERGLASS CASEMENT-LEFT	PELLA-IMPERVIA	21.5" X 59.5"	3 1/4"	TAN PAINT	3
6	FIBERGLASS FIXED FRAME RECTANGLE	PELLA-IMPERVIA	45.5" X 23.5"	3 1/4"	TAN PAINT	2
7	FIBERGLASS FIXED FRAME RECTANGLE	PELLA-IMPERVIA	21.5" X 23.5"	3 1/4"	TAN PAINT	1

TOTAL : 12

2 DOOR-WINDOW SCHEDULE

1/8" = 1'-0"



7 CASEMENT WINDOW

3/8" = 1'-0"

8 FIXED WINDOW-I

3/8" = 1'-0"

9 FIXED WINDOW-II

3/8" = 1'-0"

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ILLINOIS SOLAR DECATHLON 2018 - 21

TEAM NAME
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CONSULTANTS:

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- AFFILIATED ENGINEERS INC

GENERAL NOTES AND SPECS:

1. DRAWING NOT TO BE SCALED, REFER TO MEASUREMENTS FOR CONSTRUCTION.
2. UNLESS NOTED OTHERWISE, PARTITIONS ARE DIMENSIONED TO THE FACE OF THE WALL.
3. DOOR OPENINGS ARE GENERALLY DIMENISIONED TO CENTERLINE OF OPENING. THOSE THAT ARE NOT DIMENSIONALLY LOCATED ARE TO BE CENTERED BETWEEN WALLS OR POSITIONED WITH ONE JAMB AGAINST AN ADJACENT WALL OR COLUMN AS SHOWN ON THE DRAWINGS.
4. BASED ON U.S ADA REQUIREMENTS, DOOR OPENINGS HAVE 36".
5. ALL DOOR AND WINDOWS EXTERIOR FRAMES WILL BE ALLIGNED TO THE EXTERIOR CLADDING AND SERVE AS RAIN SCREENS.

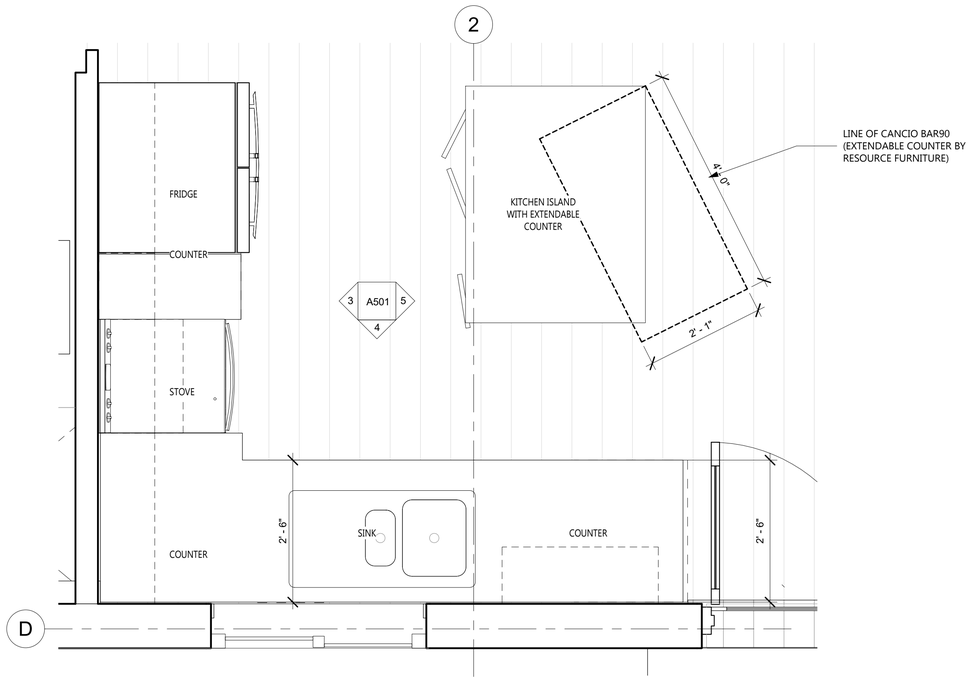
NO.	DESCRIPTION	DATE

DOOR WINDOW SCHEDULE

DRAWN BY:

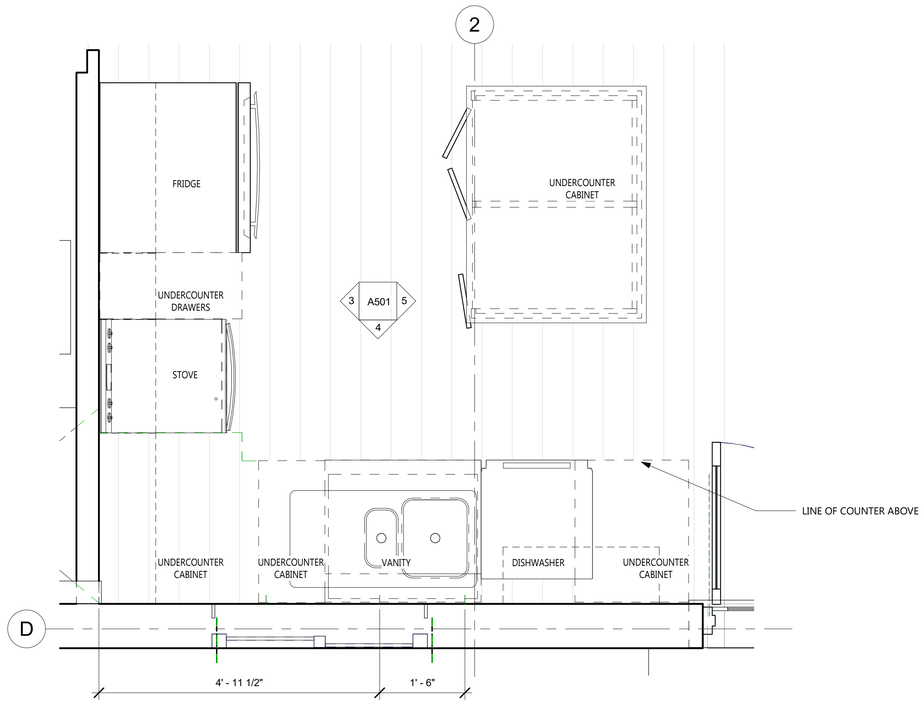
CHECKED BY:

A401



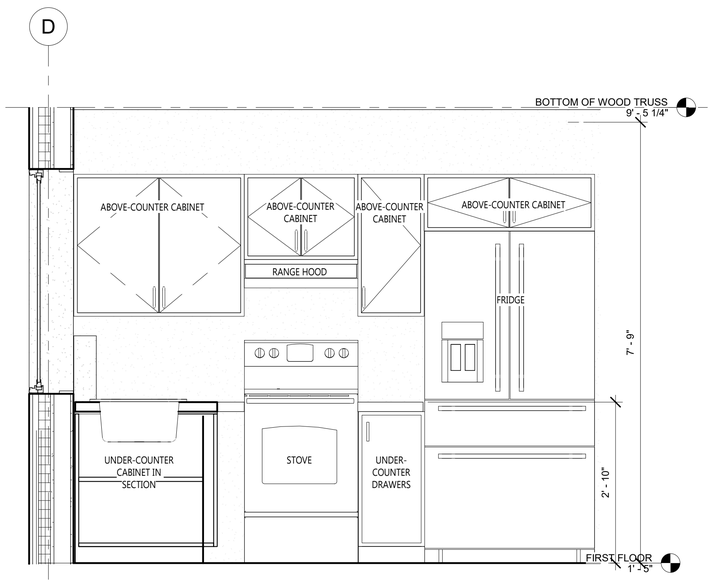
1 KITCHEN- COUNTER LEVEL PLAN

3/4" = 1'-0"



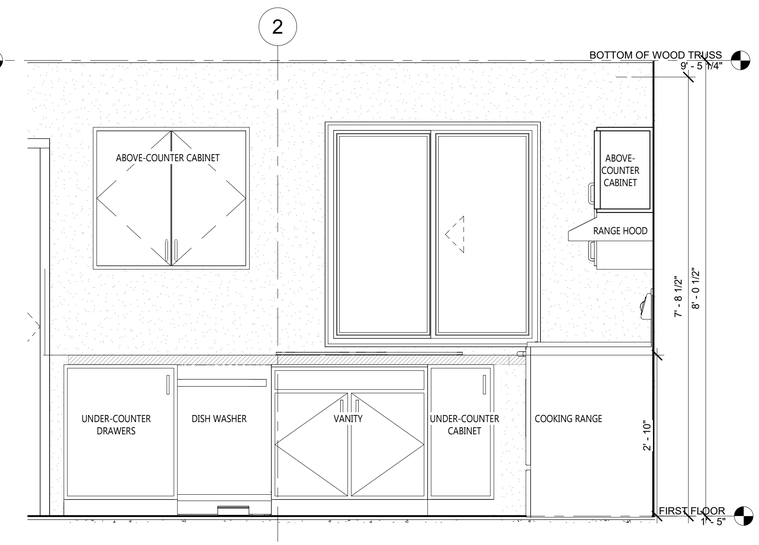
2 KITCHEN- UNDERCOUNTER PLAN

3/4" = 1'-0"



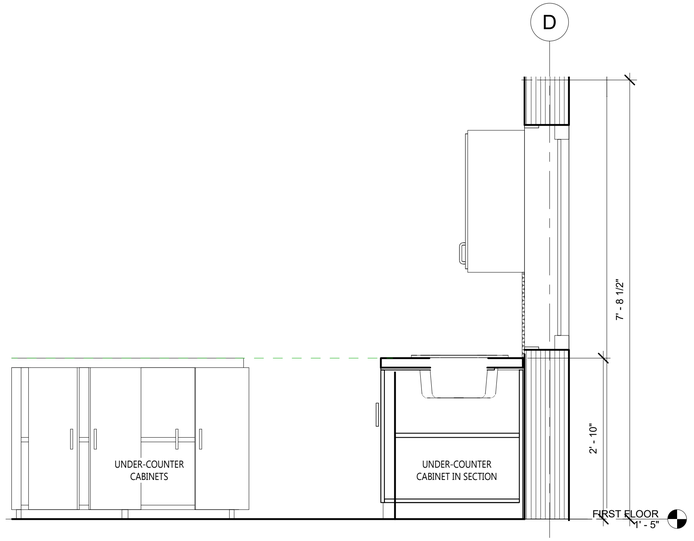
3 KITCHEN- ELEVATION 1

3/4" = 1'-0"



4 KITCHEN- ELEVATION 2

3/4" = 1'-0"



5 KITCHEN- ELEVATION 3

3/4" = 1'-0"

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GENERAL NOTES AND SPECS:

1. DRAWING NOT TO BE SCALED, REFER TO MEASUREMENTS FOR CONSTRUCTION.
2. CLEARANCE FROM THE FURTHERST PROJECTING FACE OF OPPOSING BASE CABINETS, COUNTER TOPS, APPLIANCES AND WALLS, EXCLUDING HARDWARE EXCEEDS 40 INCH MIN AT NORTH ENTRANCE TO KITCHEN. EAST CABINET IS MOVEABLE AND ALLOWS FOR 40 INCH MIN CLEARANCE.
3. THE KITCHEN ISLAND AND COUNTER ON THE SOUTH WALL ARE 30 INCH WIDE TO ACCOMODATE ADA COMPLIANT COUNTER SURFACE REQUIREMENTS.
4. ALL WORK SURFACES ARE 34 INCH MAX ABOVE THE FINISHED FLOOR.
5. HARDWARE ITEMS SHOWN ARE INDICATIVE. DETAILS PROVIDED BY MARFA CABINETS ARE ACCURATE AND NEED TO BE CONSIDERED.
6. POSITION AND INSTALLATION OF CANCIO BAR90 TO BE COORDINATED BETWEEN MARFA CABINETS AND RESOURCE FURNITURE
7. AT LEAST ONE 30 INCH WIDE MIN. SECTION OF COUNTER PROVIDES A KITCHEN WORK SURFACE.

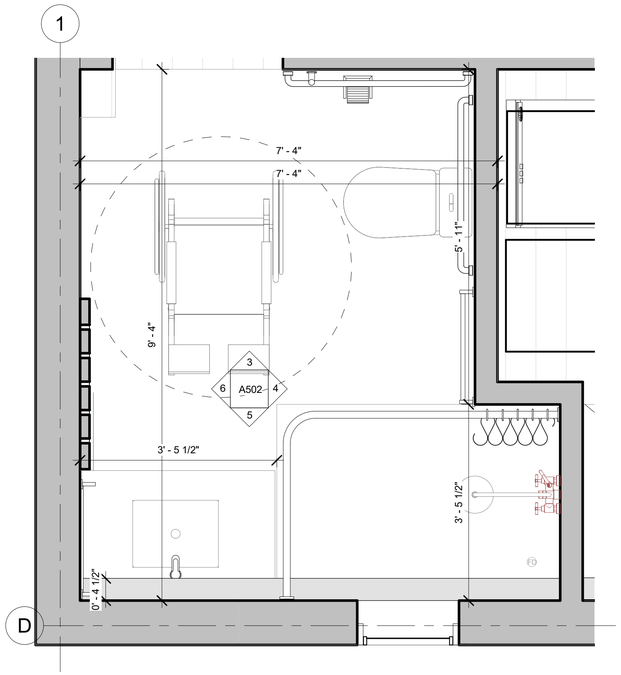
NO.	DESCRIPTION	DATE
R2	REVISION	08/05/20

KITCHEN ENLARGED DRAWING

DRAWN BY:

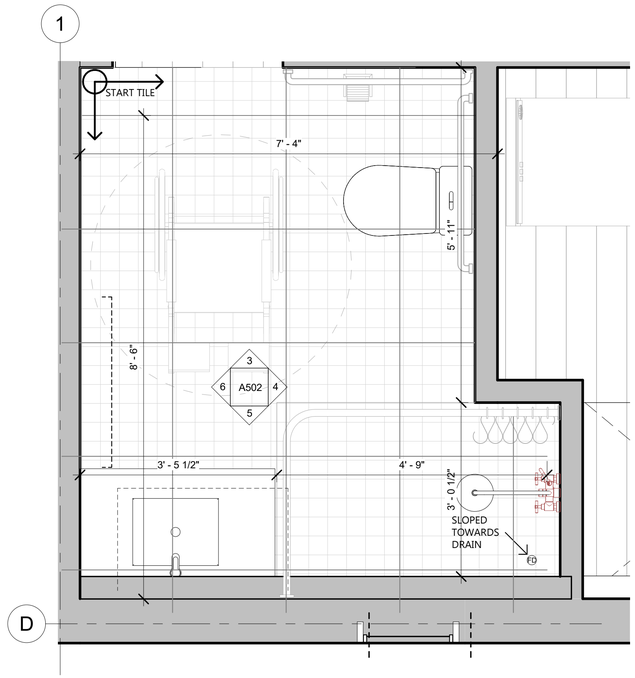
CHECKED BY:

A501



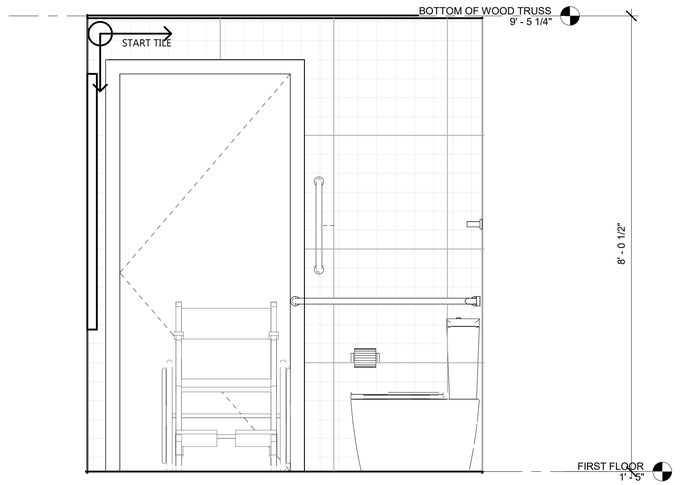
TOILET COUNTERLEVEL PLAN 1

1 — 3/4" = 1'-0"



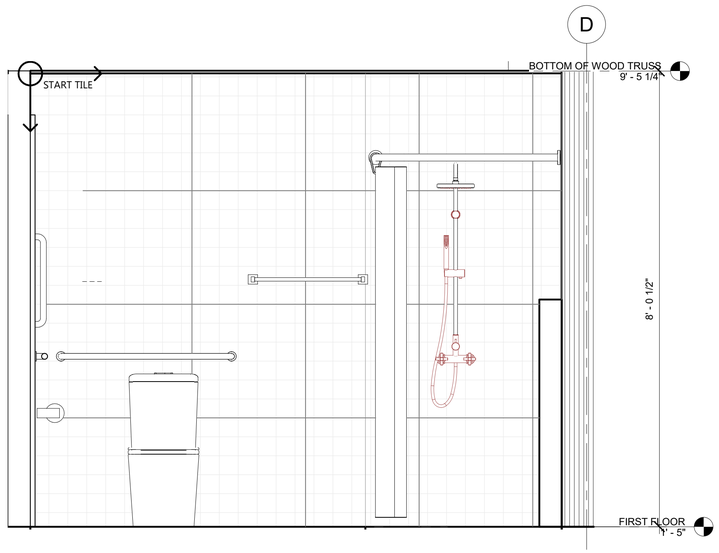
TOILET FLOORING PLAN 1

2 — 3/4" = 1'-0"



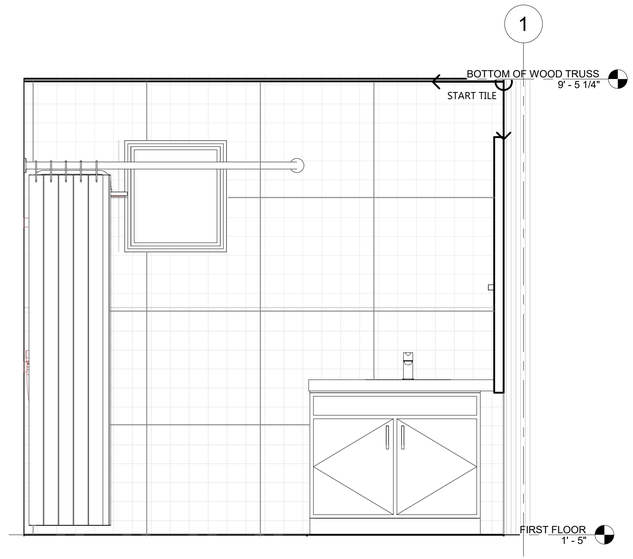
TOILET ELEVATION 1

3 — 3/4" = 1'-0"



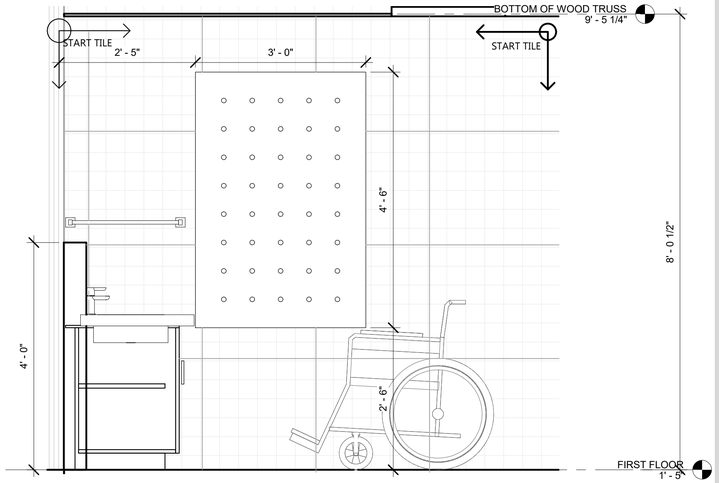
TOILET ELEVATION 2

4 — 3/4" = 1'-0"



TOILET ELEVATION 3

5 — 3/4" = 1'-0"



TOILET ELEVATION 4

6 — 3/4" = 1'-0"

ADAPTHAUS

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ILLINOIS SOLAR DECATHLON 2018 - 21

TEAM NAME

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CONSULTANTS:

- DARCY BEAN CONSTRUCTION
- THORNTON TOMASETTI
- AFFILIATED ENGINEERS INC

GENERAL NOTES AND SPECS:

1. BASED ON U.S ADA REQUIREMENTS, ALL ABOVE COUNTER CABINETS BEGIN AT 48" ABOVE FINISHED FLOOR LEVELS.
2. BASED ON U.S ADA REQUIREMENTS, ALL FLOORING TRANSITIONS STRIPS AND DOOR SEALS ARE COMPLIANT.
3. THE HOUSE IS DESIGNED AS PER ADA GUIDELINES ISSUED BY UNITED STATES ACCESS BOARD. SPECIAL CARE NEEDS TO BE GIVEN TO THE EXECUTION OF DOORS AND OPENINGS, PASSAGEWAY CLEARANCE AND FLOOR TRANSITIONS BASED ON THE DRAWINGS.
4.TOILET SEAT HEIGHT IS 17 INCH MIN.
5. SINK KNEE CLEARANCE IS 27 INCH MIN.

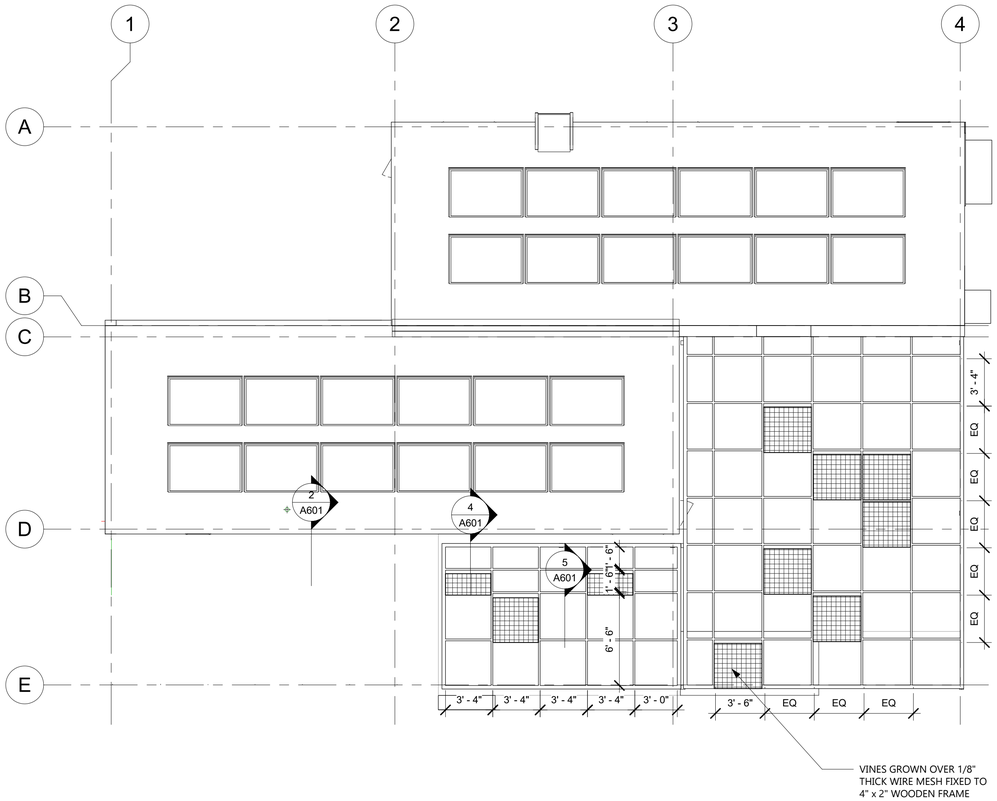
NO.	DESCRIPTION	DATE

TOILET 1 ENLARGED DRAWING

DRAWN BY:

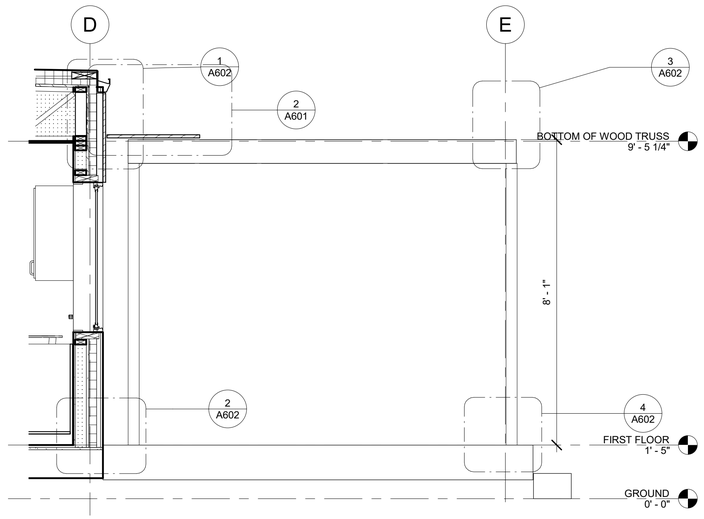
CHECKED BY:

A502



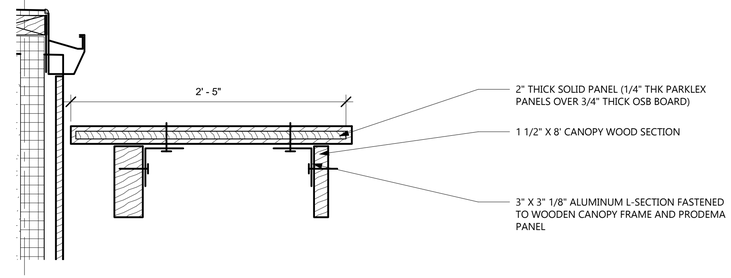
CANOPY PLAN

1 — 3/16" = 1'-0"



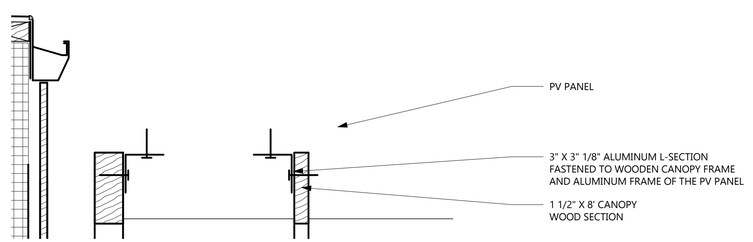
CANOPY SECTION

3 — 1/2" = 1'-0"



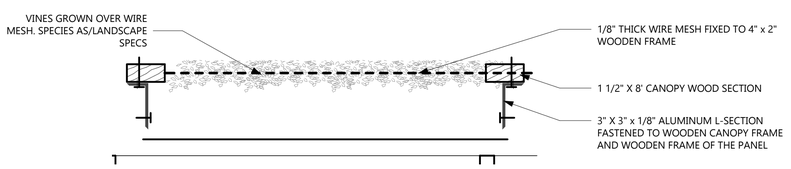
CANOPY PANEL A-SOLID PANEL

2 — 1 1/2" = 1'-0"



CANOPY PANEL C-SOLAR PANEL AS SHADING DEVICE

4 — 1 1/2" = 1'-0"



CANOPY PANEL C-VINE ON FRAME

5 — 1 1/2" = 1'-0"

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- AFFILIATED ENGINEERS INC

GENERAL NOTES AND SPECS:

1. BECAUSE OF THE ADJUSTABLE DESIGN, SEVERAL JUNCTIONS :TURE. CAN BE IMPLEMENTED IN DIFFERENT AREAS TO CREATE DIFFERENT PURPOSES.

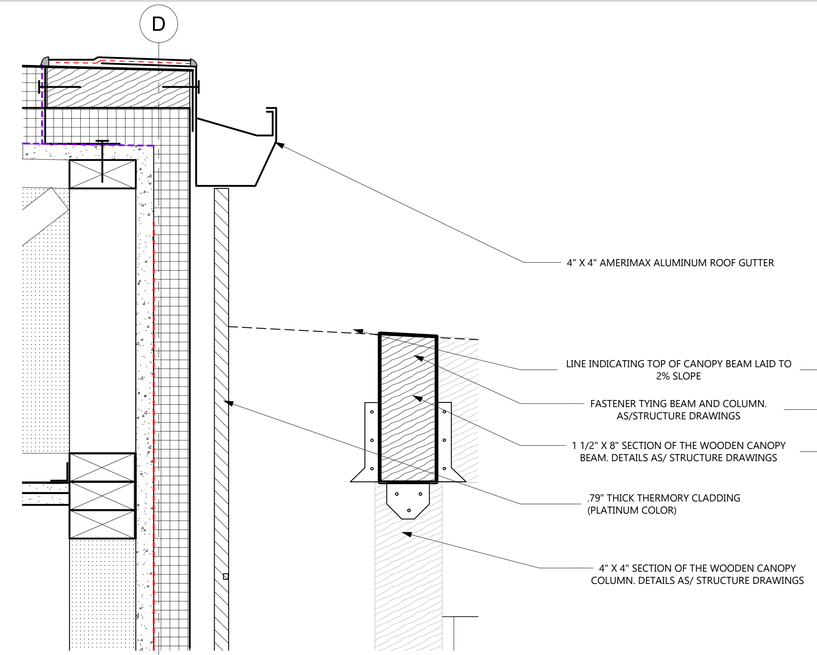
NO.	DESCRIPTION	DATE

CANOPY DETAILS

DRAWN BY:

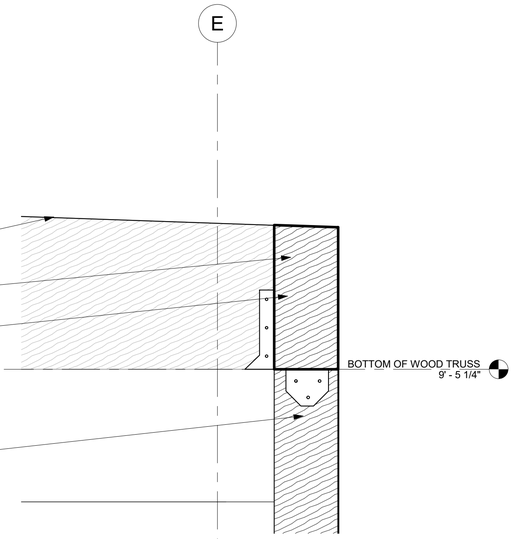
CHECKED BY:

A601



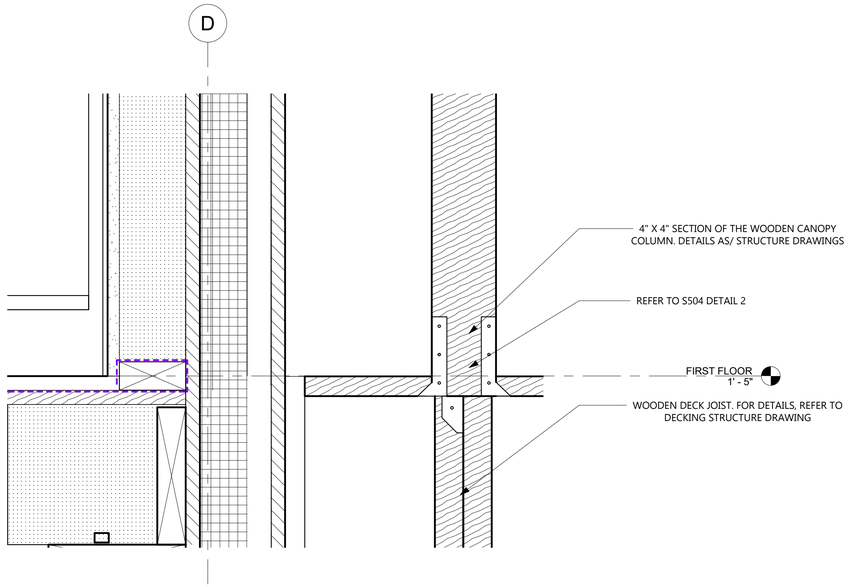
1 WALL-CANOPY BEAM JUNCTION

3" = 1'-0"



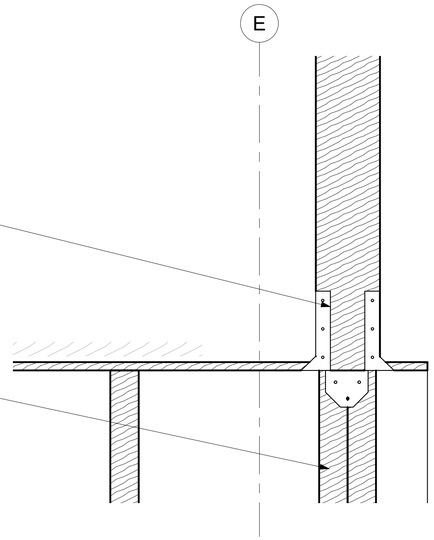
3 CANOPY BEAM-EDGE COLUMN JUNCTION

3" = 1'-0"



2 CANOPY COLUMN-DECK JUNCTION 1

3" = 1'-0"



4 CANOPY COLUMN-DECK JUNCTION 2

3" = 1'-0"

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GENERAL NOTES AND SPECS:

1. BECAUSE OF THE ADJUSTABLE DESIGN, SEVERAL JUNCTIONS CAN BE IMPLEMENTED IN DIFFERENT AREAS TO CREATE DIFFERENT PURPOSES.
2. REFER TO S504 DETAIL 2

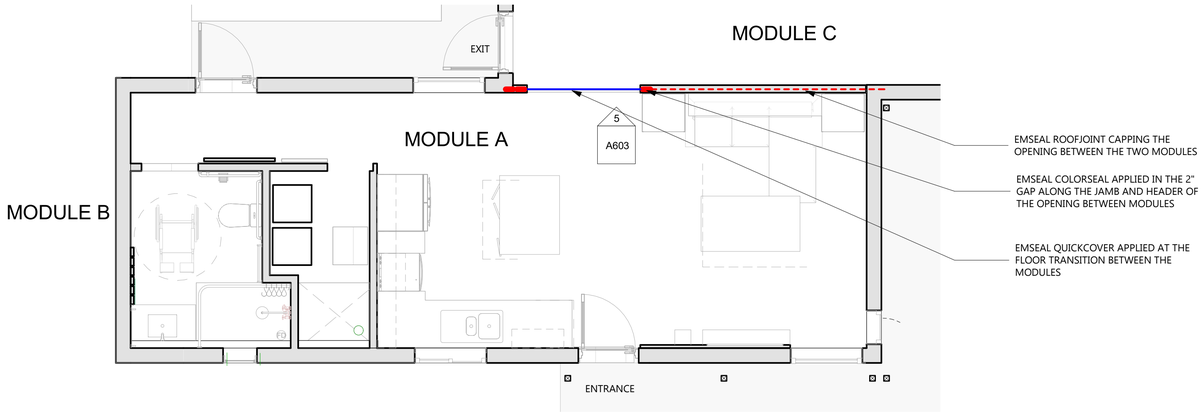
NO.	DESCRIPTION	DATE

CANOPY DETAILS

DRAWN BY:

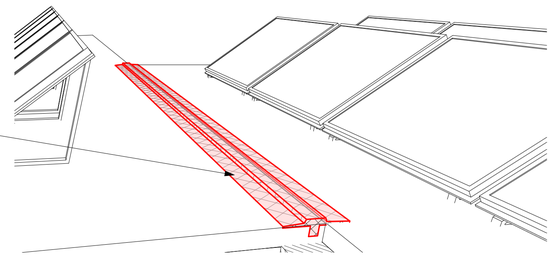
CHECKED BY:

A602

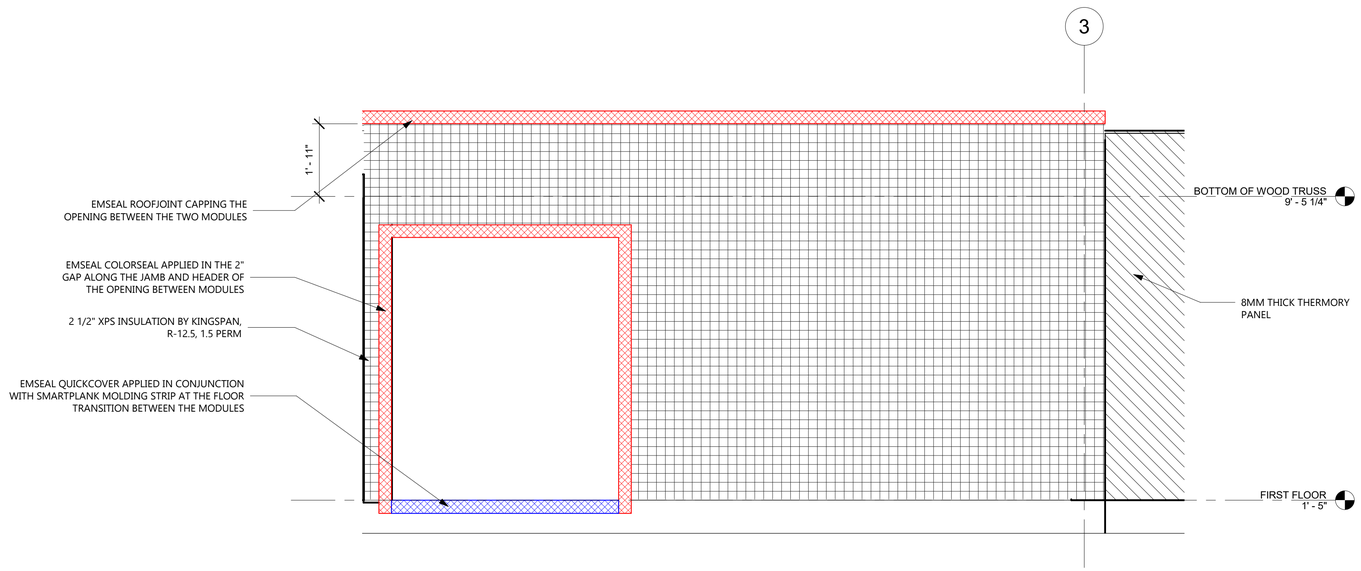


1 PLAN WITH INTER-MODULE JUNCTION FILLERS

1/4" = 1'-0"



2 MODULE A-MODULE C JUNCTION



5 RAW ELEVATION OF MODULE C SOUTH WALL

1/2" = 1'-0"

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GENERAL NOTES AND SPECS:

1. RAW ELEVATION REFERS TO ELEVATION OF THE WALL WITHOUT CLADDING, CONSIDERED BEFORE ATTACHMENT OF TWO MODULES TO EACH OTHER.
2. EMSEAL COLORSEAL AND QUICKCOVER TO BE FINISHED IN BLACK OR DRK BROWN COLOR, WHICHEVER IS AVAILABLE.
3. EMSEAL UNIVERSAL AND CUSTOM 90'S TO BE APPLIED ON EDGES OF HORIOZONTAL AND VERTICAL EXPANSION FOAMS.

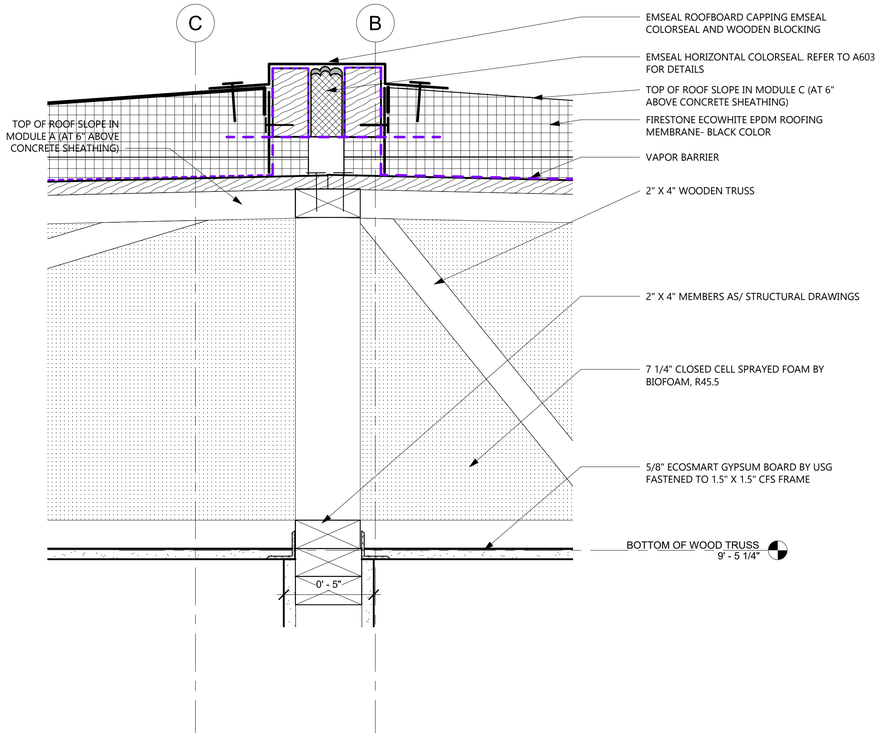
NO.	DESCRIPTION	DATE

INTER MODULE DETAILS

DRAWN BY:

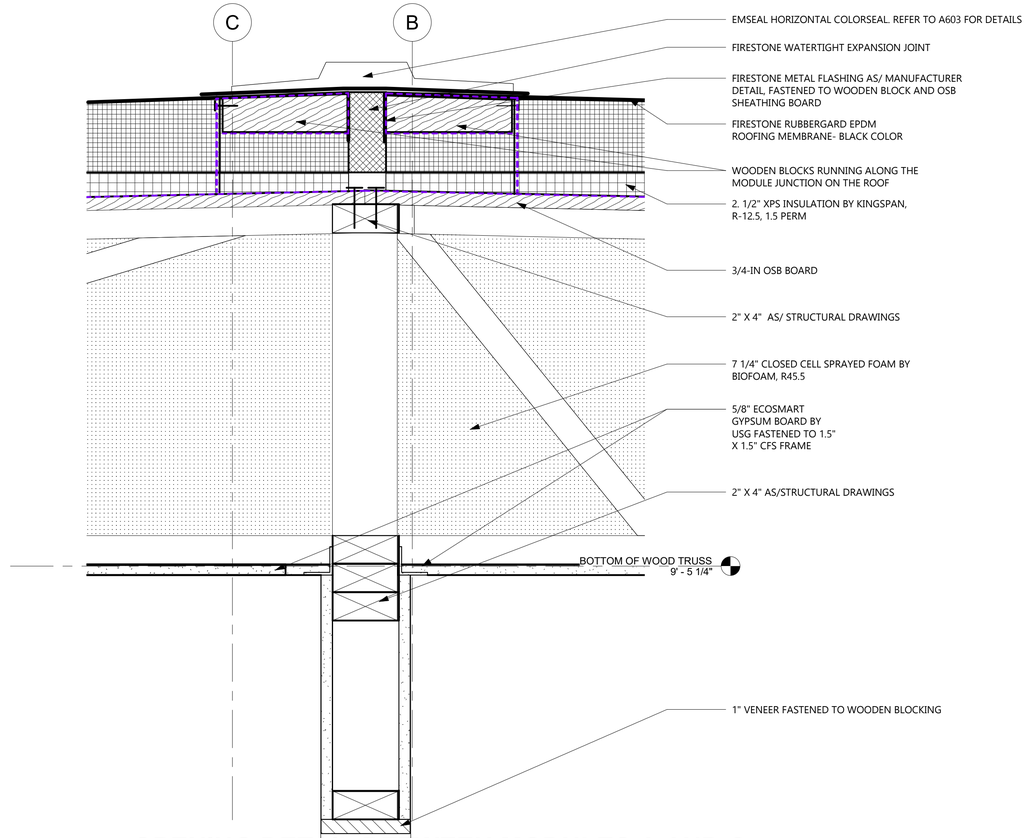
CHECKED BY:

A603



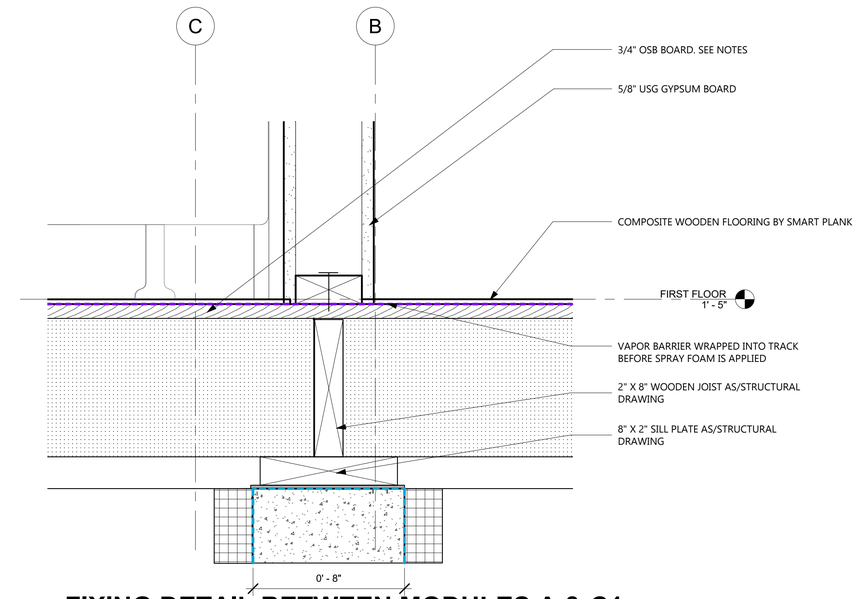
1 FIXING DETAIL BETWEEN MODULES A & C

3" = 1'-0"



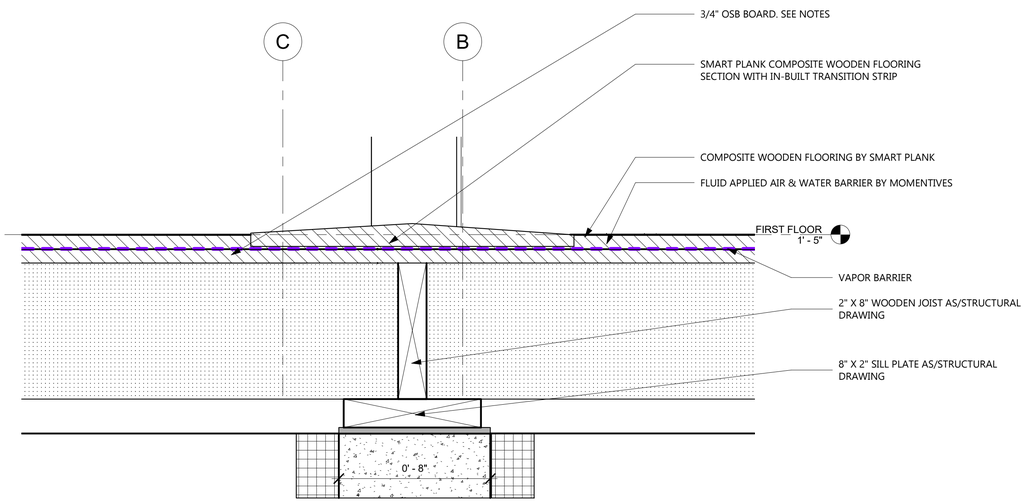
3 OPENING DETAIL BETWEEN MODULES A AND C

3" = 1'-0"



2 FIXING DETAIL BETWEEN MODULES A & C1

3" = 1'-0"



4 OPENING DETAIL BETWEEN MODULES A AND C- 2

3" = 1'-0"

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- THORNTON TOMASETTI
- AFFILIATED ENGINEERS INC

GENERAL NOTES AND SPECS:

1. OSB OR CONCRETE SHEATHING WILL RUN CONTINUOUSLY FROM ROOF TO WALLS TO FLOOR. REFER TO STRUCTURE DRAWING FOR DETAILS ABOUT CONNECTION AND LOCATION.
2. REFER TO ELECTRICAL DRAWINGS FOR WIRING.
3. FINAL PROVIDER DESIGN WILL HAVE THE LAST WORD.

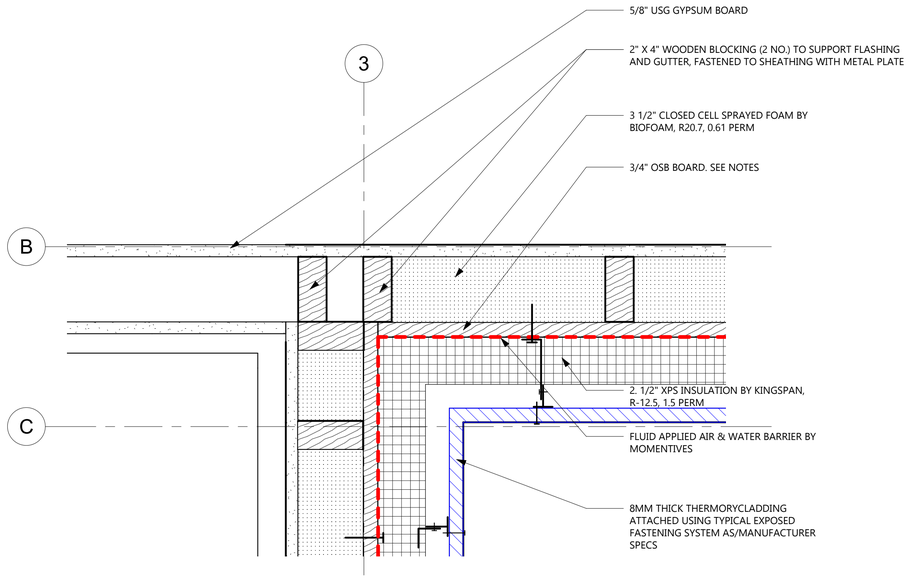
NO.	DESCRIPTION	DATE

INTER MODULE DETAILS

DRAWN BY:

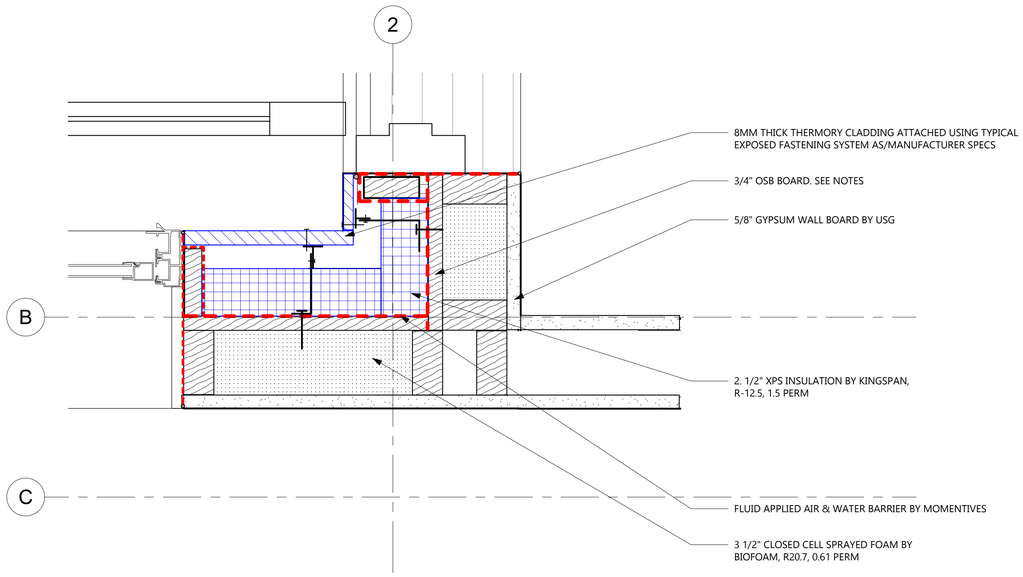
CHECKED BY:

A604



1 EDGE CONDITION 1 BETWEEN MODULES A & C

3" = 1'-0"



2 EDGE CONDITION 2 BETWEEN MODULES A & C

3" = 1'-0"

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GENERAL NOTES AND SPECS:

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2. REFER TO ELECTRICAL DRAWINGS FOR WIRING.
3. FINAL PROVIDER DESIGN WILL HAVE THE LAST WORD.

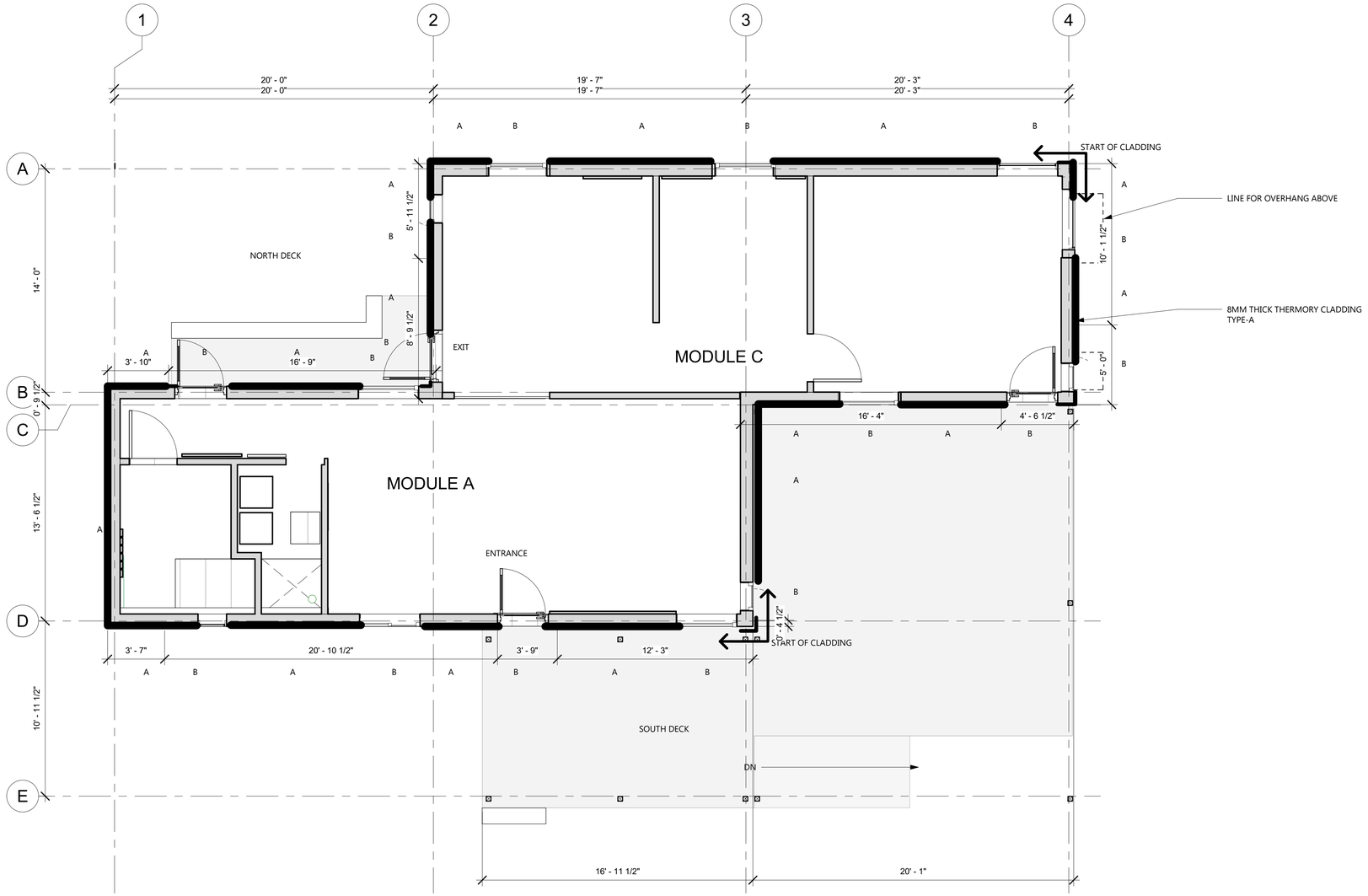
NO.	DESCRIPTION	DATE

INTER MODULE DETAILS

DRAWN BY:

CHECKED BY:

A605



1 WALL CLADDING PLAN

1/4" = 1'-0"

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- AFFILIATED ENGINEERS INC

GENERAL NOTES AND SPECS:

1. DO NOT MEASURE DRAWINGS. REFER TO SCALES AND DIMENSIONS SPECIFIED.

2. WALL TYPE-B IS CLAD OVER A 46-IN WIDE OPENING FOR WINDOWS. VARIATIONS OF THIS INCLUDE THE FOLLOWING:
   A. FOR EDGE CONDITIONS, WALL TYPE-B COVERS 46-IN WIDE OPENING+ PART OF THE WALL BETWEEN THE WINDOW AND THE BUILDING EDGE.
   B. FOR 24-IN WIDE WINDOWS, WALL TYPE-B BEGINS ALONG AN EDGE OF THE WINDOW AND EXTENDS 48-IN TO THE LEFT/RIGHT BASED ON THE DRAWING.

3. EXACT DIMENSION OF WALL TYPE-B MAY VARY MARGINALLY, BASED ON WINDOW FRAME SIZES. TO BE VERIFIED DURING CONSTRUCTION.

4. WALL TYPE-A IS CLAD OVER ALL OTHER SURFACES, WHICH DO NOT HAVE AN OPENING.

5. IN ORDER TO MINIMIZE THERMAL BRIDGING AS MUCH AS POSSIBLE, CLADDING FABRICATION MUST BE DONE WITH EXTRA DETAIL AND CONSIDERATION.

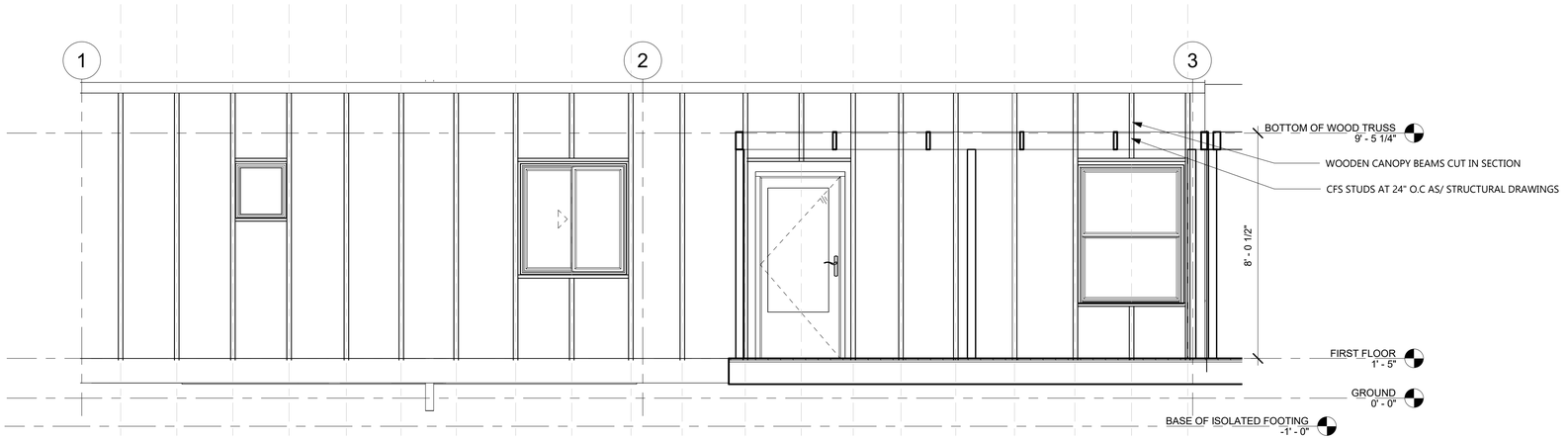
NO.	DESCRIPTION	DATE

EXTERIOR WALL CLADDING DETAILS

DRAWN BY:

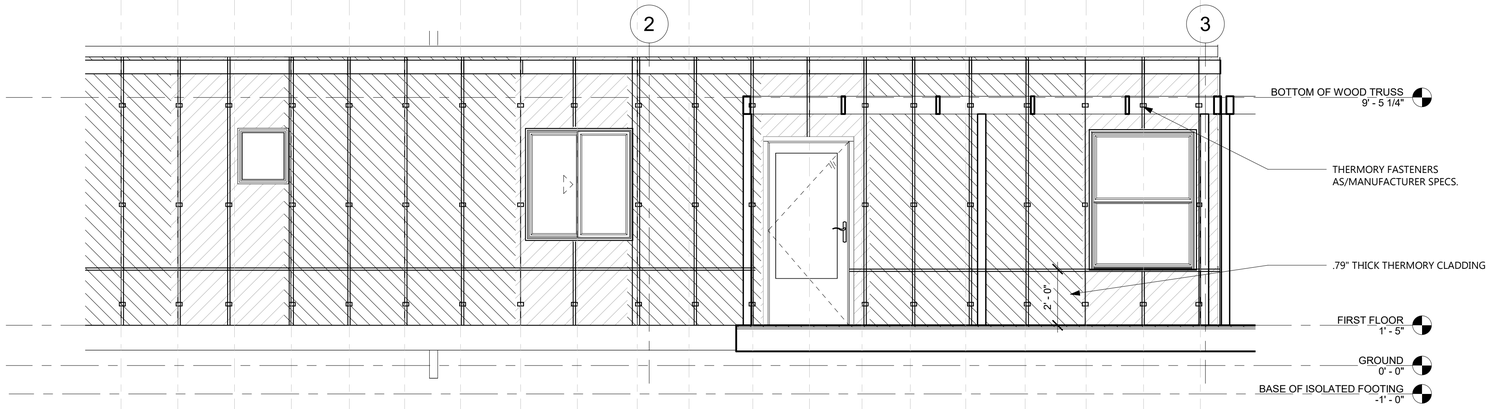
CHECKED BY:

A606



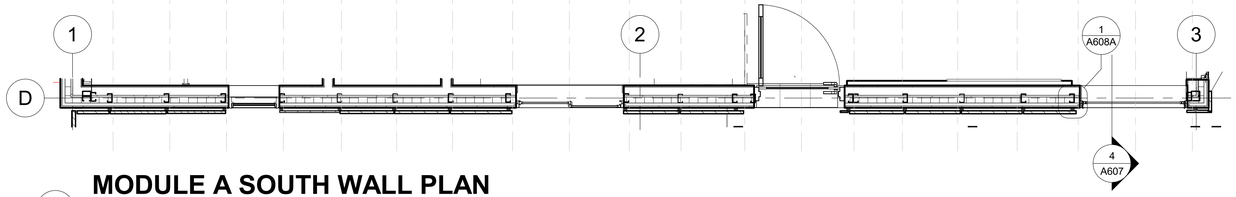
1 MODULE A SOUTH WALL FRAMING ELEVATION

3/8" = 1'-0"



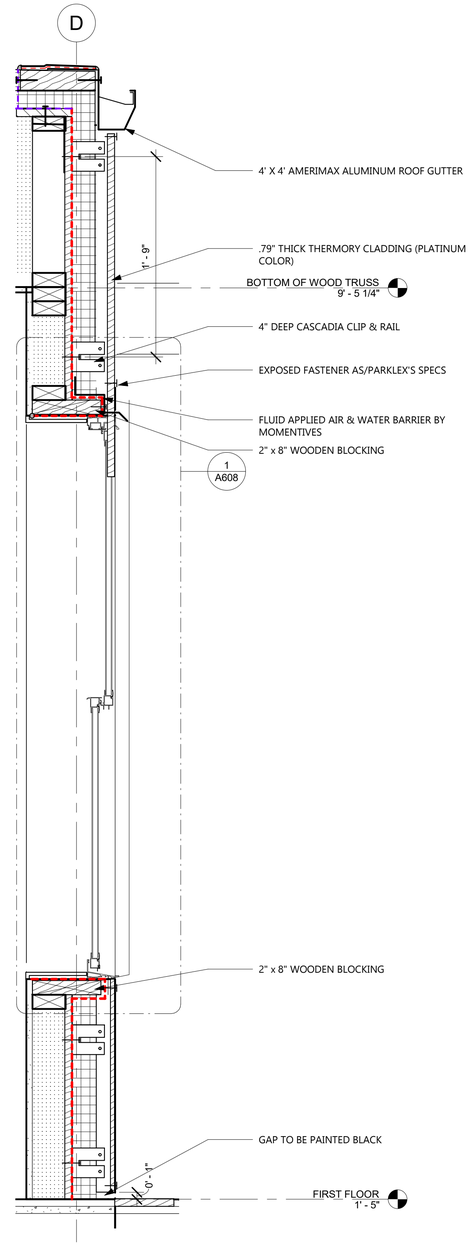
2 MODULE A SOUTH WALL CLADDING INSTALLATION ELEVATION

3/8" = 1'-0"



3 MODULE A SOUTH WALL PLAN

3/8" = 1'-0"



4 MODULE A-SOUTH WALL PANEL SECTION

1 1/2" = 1'-0"

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GENERAL NOTES AND SPECS:

1. DO NOT MEASURE DRAWINGS. REFER TO SCALES AND DIMENSIONS SPECIFIED.
2. WALL TYPE-B IS CLAD OVER A 46-IN WIDE OPENING FOR WINDOWS. VARIATIONS OF THIS INCLUDE THE FOLLOWING:
   A. FOR EDGE CONDITIONS, WALL TYPE-B COVERS 46-IN WIDE OPENING+ PART OF THE WALL BETWEEN THE WINDOW AND THE BUILDING EDGE
   B. FOR 24-IN WIDE WINDOWS, WALL TYPE-B BEGINS ALONG THE RIGHT EDGE OF THE WINDOW AND EXTENDS 46-IN TO THE LEFT.
2. EXACT DIMENSION OF WALL TYPE-B MAY VARY MARGINALLY, BASED ON WINDOW FRAME SIZES. TO BE VERIFIED DURING CONSTRUCTION.
3. WALL TYPE-A IS CLAD OVER ALL OTHER SURFACES, ONES THAT DO NOT HAVE AN OPENING.
4. EXACT CLADDING PRODUCT TO BE DETERMINED BASED ON SPONSORSHIP, BUT THE DETAIL USED IS TYPICAL AND IS EASILY AVAILABLE WITH OTHER MANUFACTURERS.
5. IN ORDER TO MINIMIZE THERMAL BRIDGING AS MUCH AS POSSIBLE, CLADDING FABRICATION MUST BE DONE WITH EXTRA DETAIL AND CONSIDERATION.

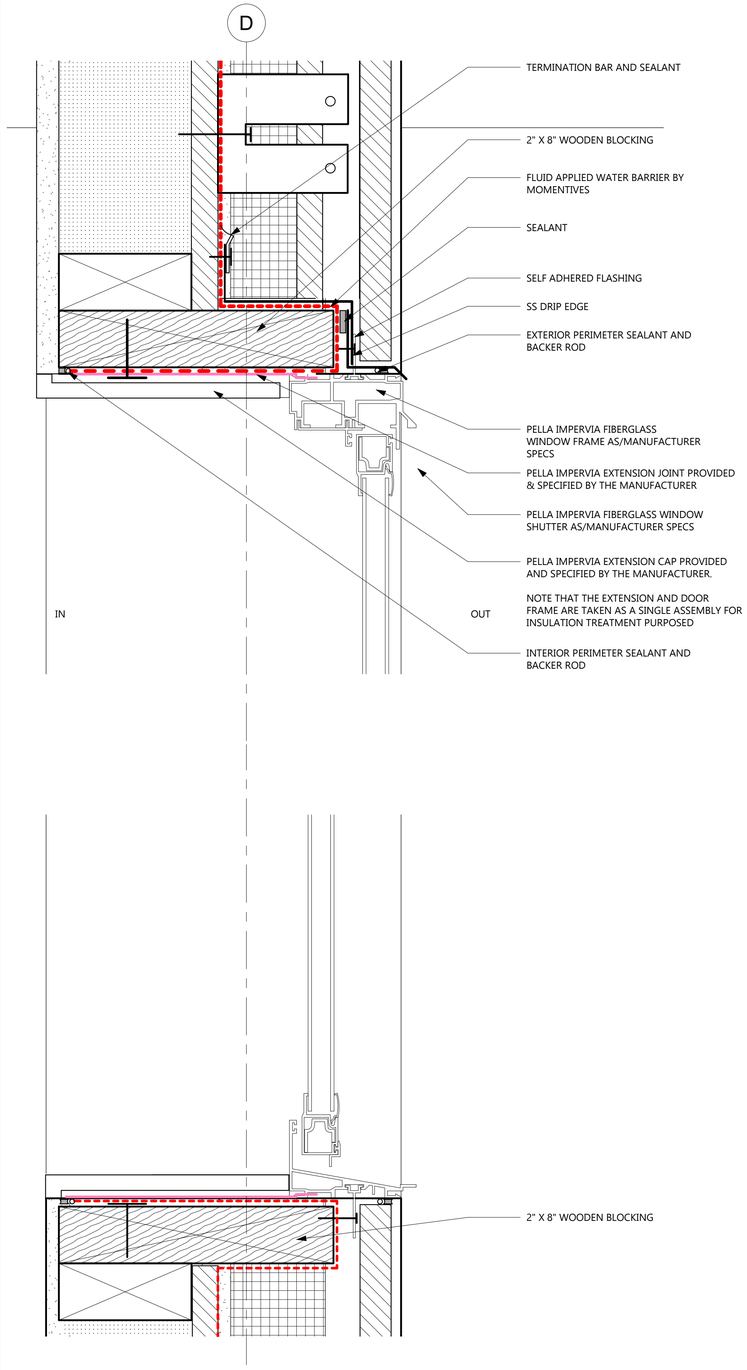
NO.	DESCRIPTION	DATE

EXTERIOR WALL CLADDING DETAILS

DRAWN BY:

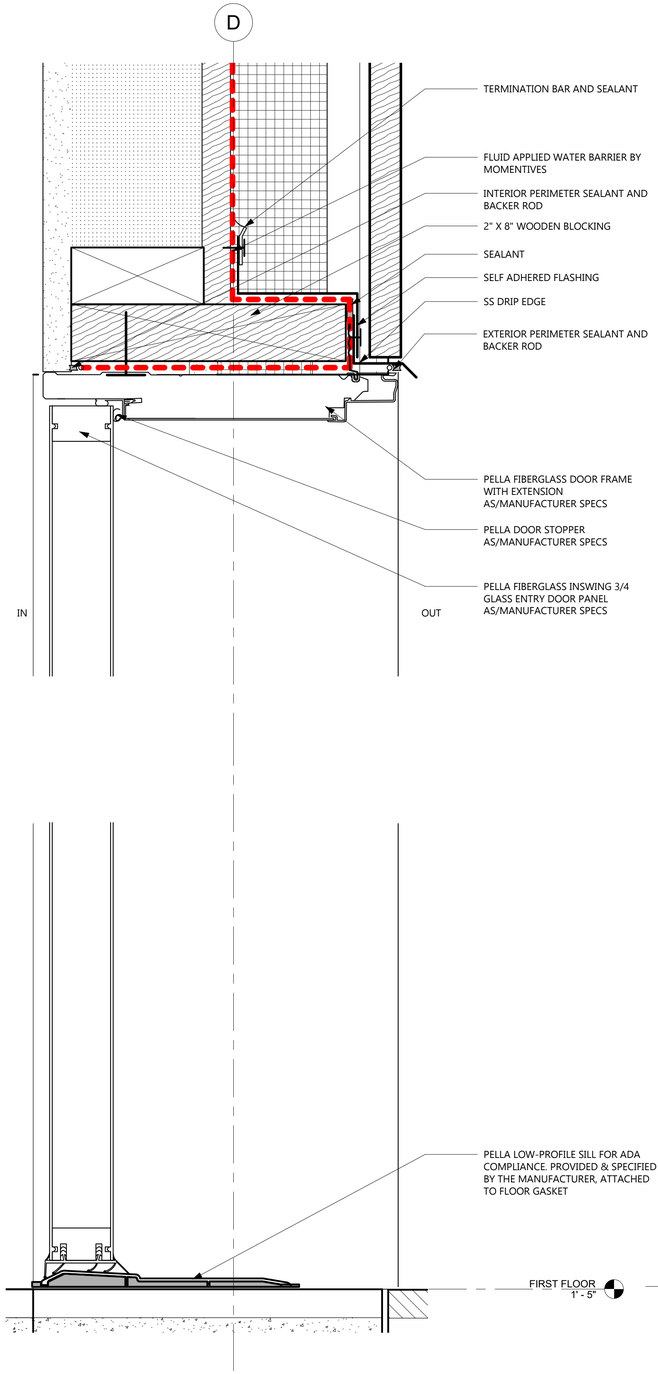
CHECKED BY:

A607



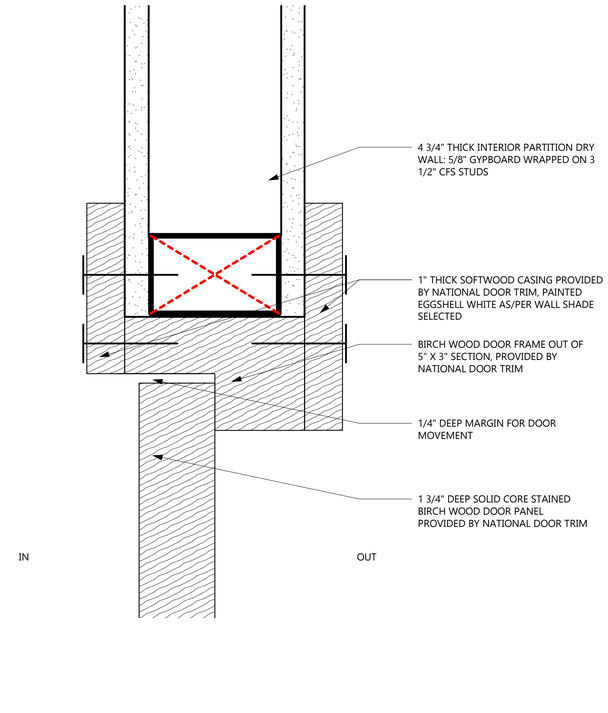
1 WINDOW HEADER AND SILL DETAIL

6" = 1'-0"



2 EXTERIOR INSWING DOOR HEADER AND SILL DETAIL

6" = 1'-0"



3 INTERIOR DOOR HEADER AND SILL DETAIL

6" = 1'-0"

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GENERAL NOTES AND SPECS:

1. DRAWING NOT TO BE SCALED, REFER TO MEASUREMENTS FOR CONSTRUCTION.
2. UNLESS NOTED OTHERWISE, PARTITIONS ARE DIMENSIONED TO THE FACE OF THE WALL.
3. DOOR OPENINGS ARE GENERALLY DIMENISIONED TO CENTERLINE OF OPENING. THOSE THAT ARE NOT DIMENSIONALLY LOCATED ARE TO BE CENTERED BETWEEN WALLS OR POSITIONED WITH ONE JAMB AGAINST AN ADJACENT WALL OR COLUMN AS SHOWN ON THE DRAWINGS.
4. BASED ON U.S ADA REQUIREMENTS, DOOR OPENINGS HAVE 36".
5. ALL DOOR AND WINDOWS EXTERIOR FRAMES WILL BE ALLIGNED TO THE EXTERIOR CLADDING AND SERVE AS RAIN SCREENS.

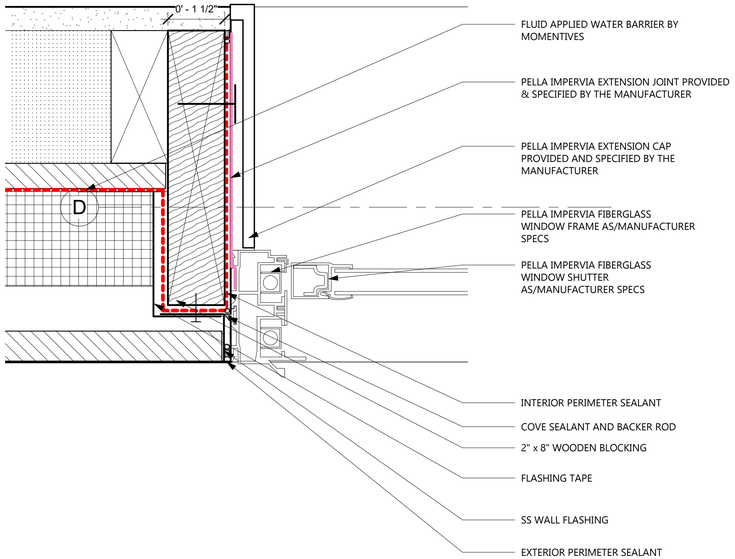
NO.	DESCRIPTION	DATE

DOOR WINDOW DETAILS

DRAWN BY:

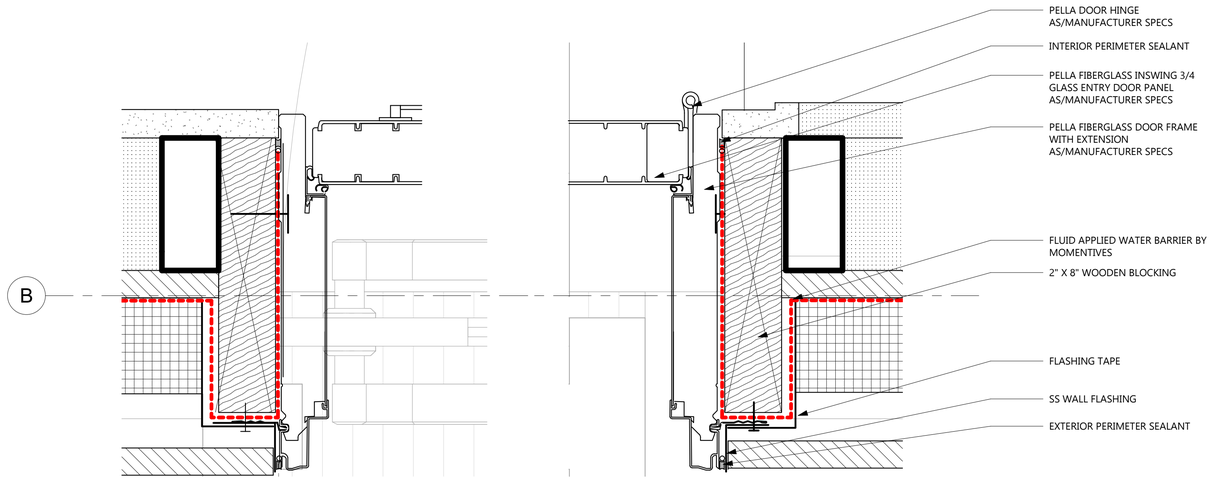
CHECKED BY:

A608



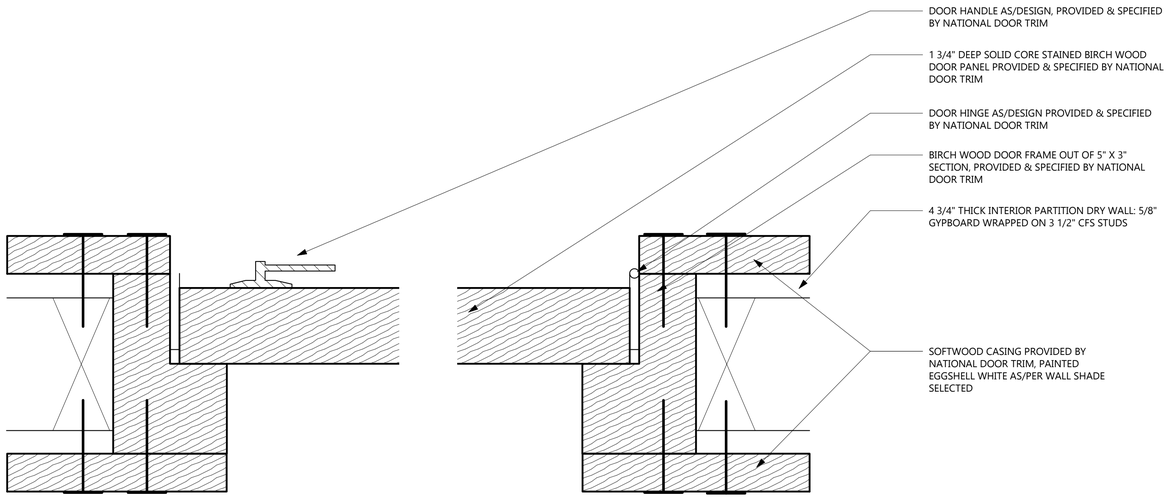
1 WINDOW JAMB DETAIL

6" = 1'-0"



2 EXTERIOR INSWING DOOR JAMB DETAIL

6" = 1'-0"



3 INTERIOR DOOR JAMB DETAIL

6" = 1'-0"

ADAPTHAUS

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ILLINOIS SOLAR DECATHLON 2018 - 21

TEAM NAME

ADAPTHAUS

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- THORNTON TOMASETTI
- AFFILIATED ENGINEERS INC

GENERAL NOTES AND SPECS:

1. DRAWING NOT TO BE SCALED, REFER TO MEASUREMENTS FOR CONSTRUCTION.
2. UNLESS NOTED OTHERWISE, PARTITIONS ARE DIMENSIONED TO THE FACE OF THE WALL.
3. DOOR OPENINGS ARE GENERALLY DIMENSIONED TO CENTERLINE OF OPENING. THOSE THAT ARE NOT DIMENSIONALLY LOCATED ARE TO BE CENTERED BETWEEN WALLS OR POSITIONED WITH ONE JAMB AGAINST AN ADJACENT WALL OR COLUMN AS SHOWN ON THE DRAWINGS.
4. BASED ON U.S ADA REQUIREMENTS, DOOR OPENINGS HAVE 36".
5. ALL DOOR AND WINDOWS EXTERIOR FRAMES WILL BE ALLIGNED TO THE EXTERIOR CLADDING AND SERVE AS RAIN SCREENS.

NO.	DESCRIPTION	DATE

DOOR WINDOW DETAILS

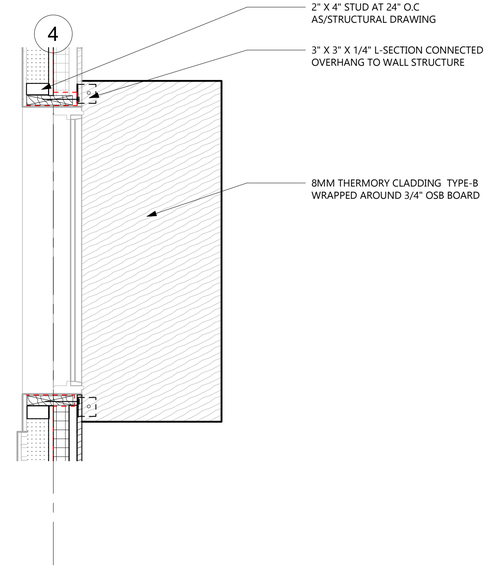
DRAWN BY:

CHECKED BY:

A608A

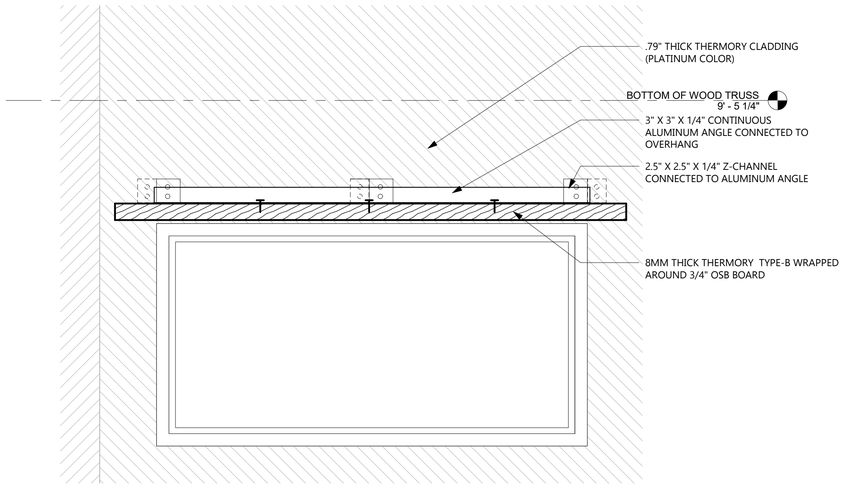
1 REFLECTED PLAN FOR OVERHANG LOCATION

1/8" = 1'-0"



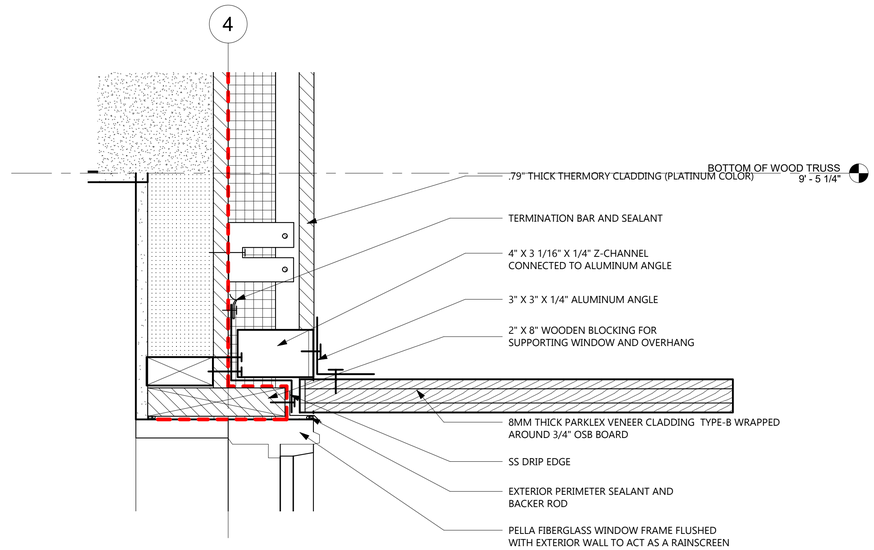
3 OVERHANG PLAN

1" = 1'-0"



2 OVERHANG ELEVATION

1 1/2" = 1'-0"



4 OVERHANG SECTION DETAIL

3" = 1'-0"

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GENERAL NOTES AND SPECS:

1. THERMORY PANELS:
   i. TYPE A: CREAM COLORED PANELS, 12MM THICK
   ii. TYPE B:COLORED PANELS, 8MM THICK
2. REFER TO STRUCTURAL PLANS TO SEE THE RESPECTIVE CALCULATION OF THE OVERHANG.

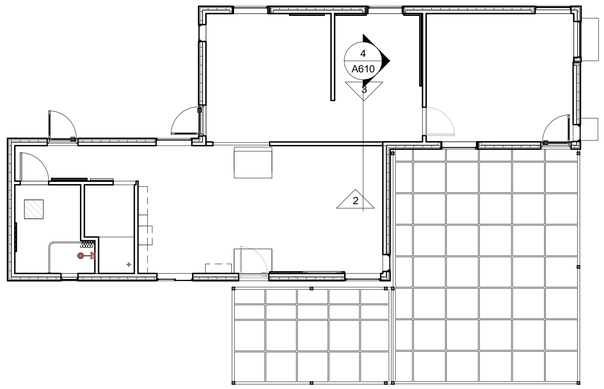
NO.	DESCRIPTION	DATE

OVERHANG DETAILS

DRAWN BY:

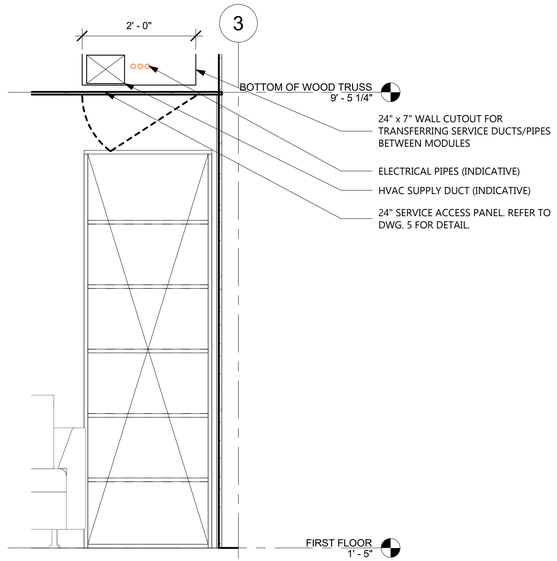
CHECKED BY:

A609



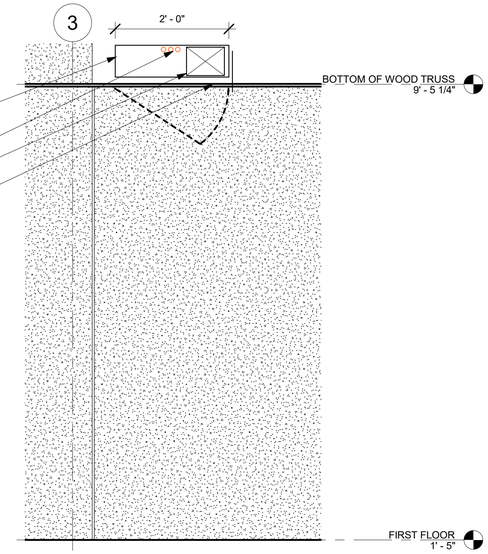
1 WALL CUTOUTS KEY REFLECTED PLAN

1/8" = 1'-0"



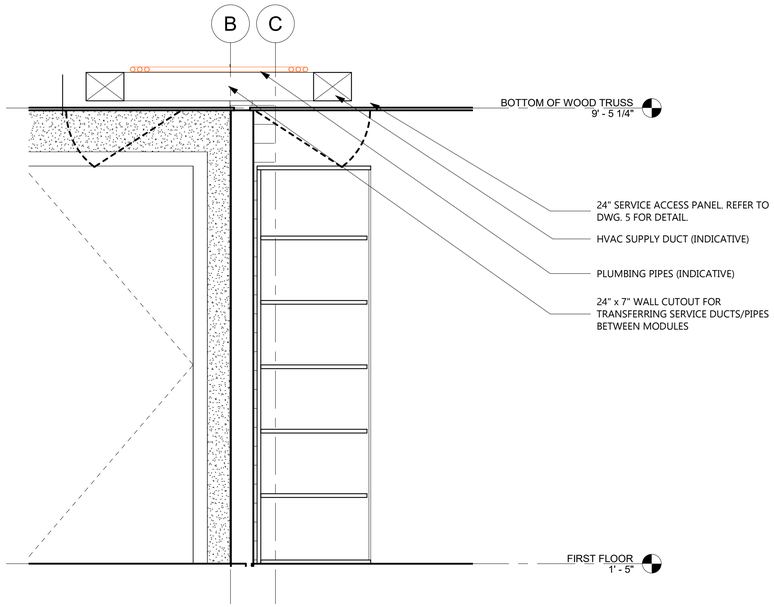
2 SERVICE CUTOUT ELEVATION 3

3/4" = 1'-0"



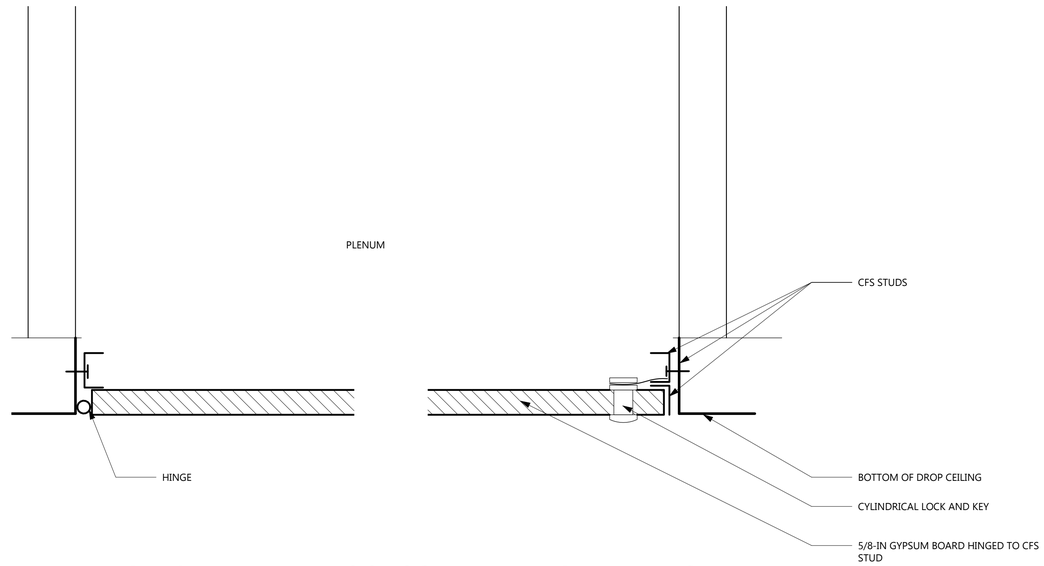
3 SERVICE CUTOUT ELEVATION 4

3/4" = 1'-0"



4 WALL CUTOUT SECTION 2

3/4" = 1'-0"



5 DETAIL-FIRE RATED ACCESS PANEL WITH FLANGE

6" = 1'-0"

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CONSULTANTS:

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- AFFILIATED ENGINEERS INC

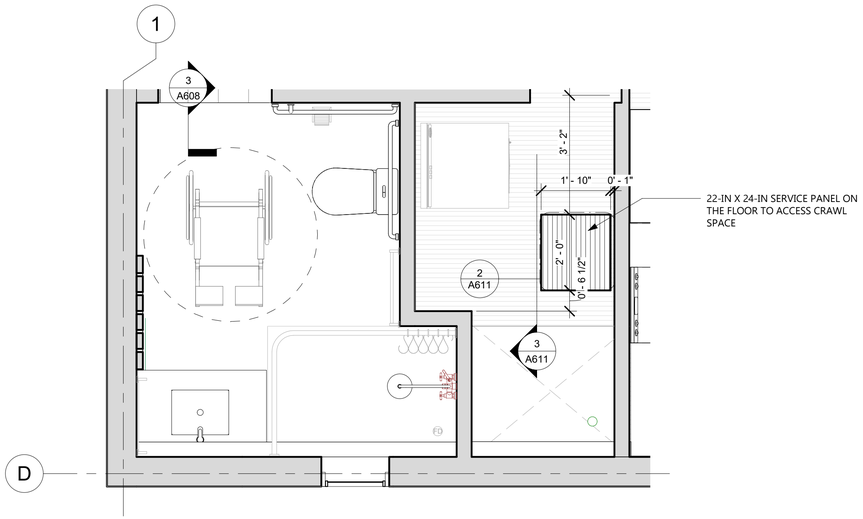
NO.	DESCRIPTION	DATE

SERVICE CUTOUT DETAILS

DRAWN BY:

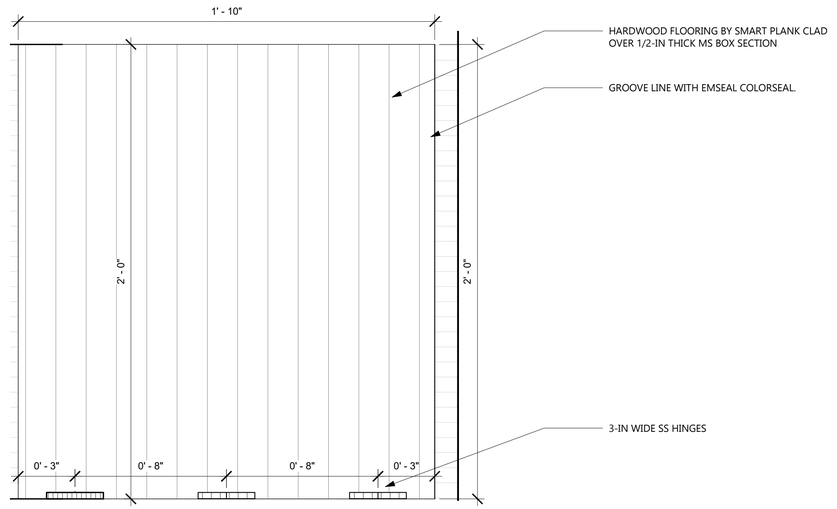
CHECKED BY:

A610



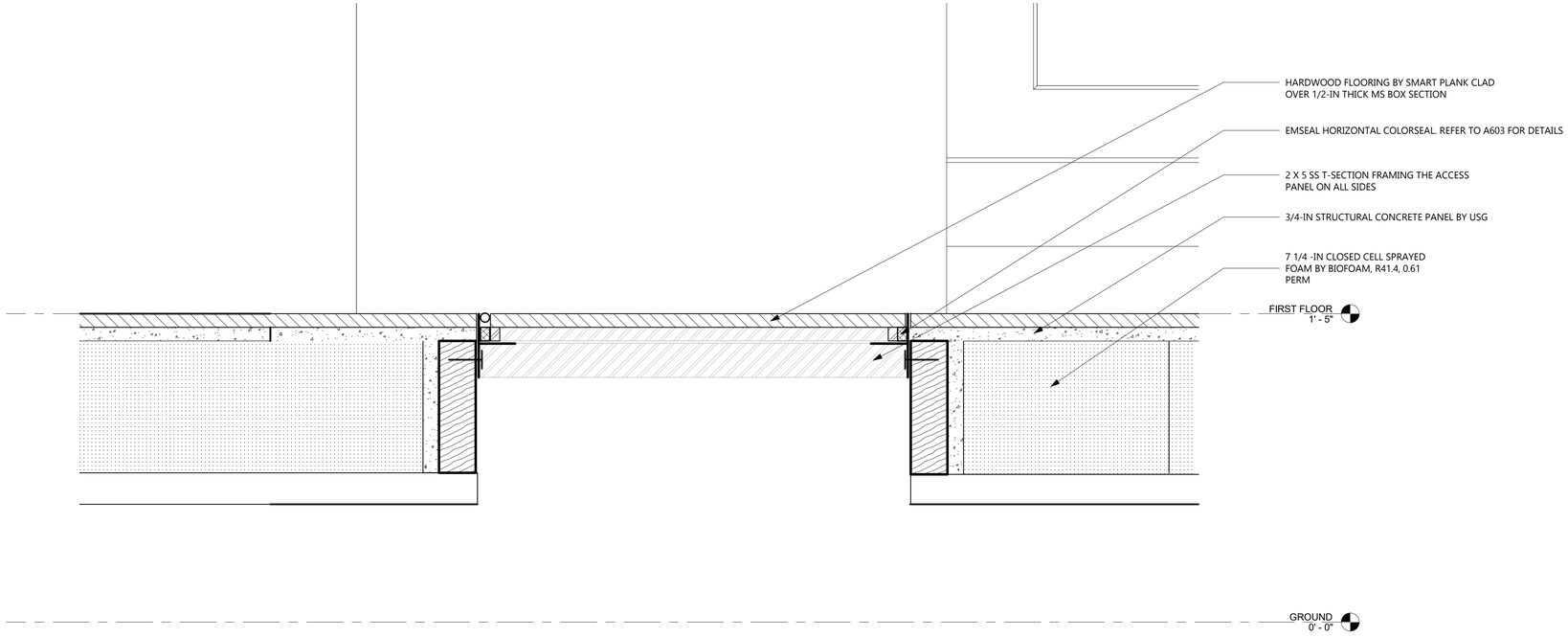
1 KEY PLAN FOR FLOOR ACCESS PANEL

1/2" = 1'-0"



2 FLOOR ACCESS PANEL-PLAN

3" = 1'-0"



3 FLOOR ACCESS PANEL CUTOUT DETAIL

3" = 1'-0"

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- AFFILIATED ENGINEERS INC

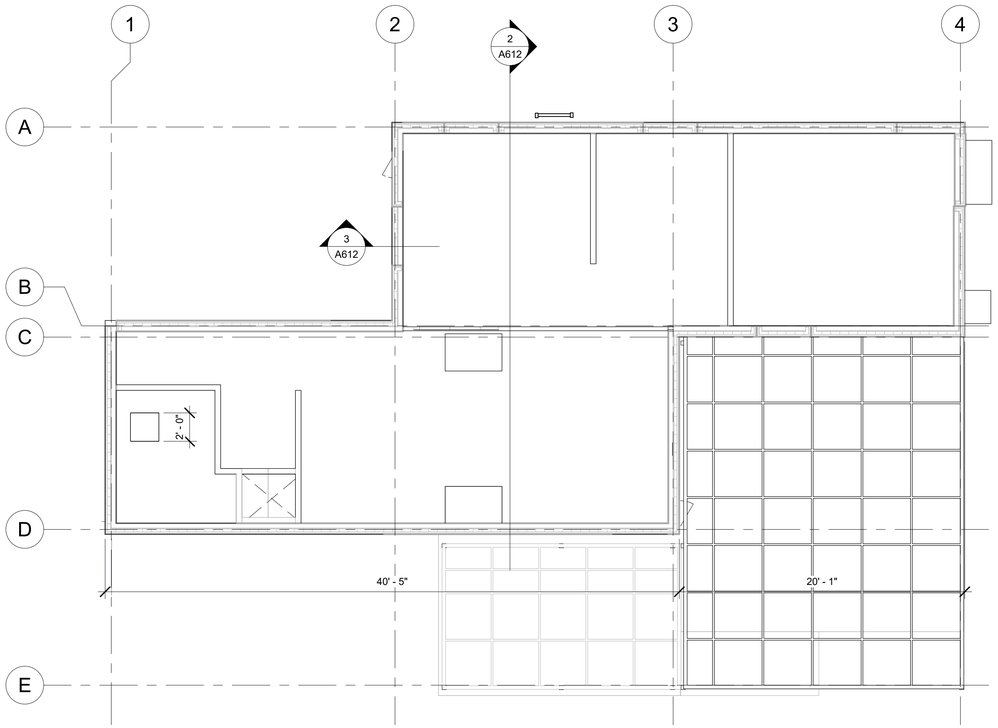
NO.	DESCRIPTION	DATE

SERVICE CUTOUT DETAILS

DRAWN BY:

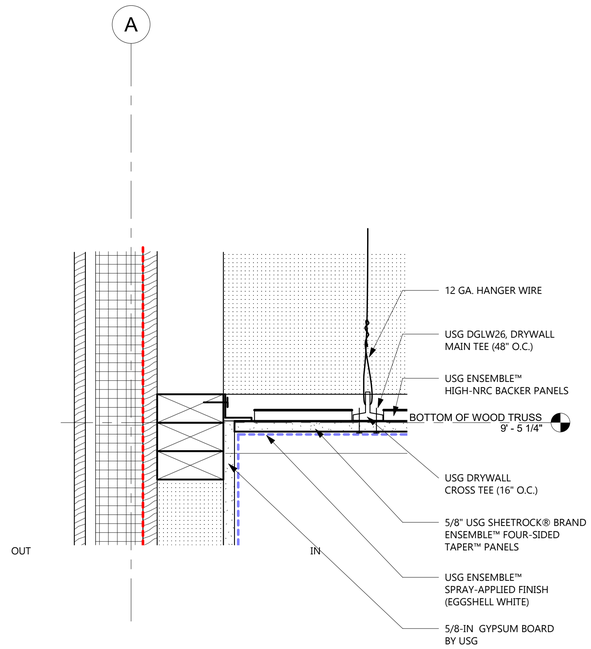
CHECKED BY:

A611



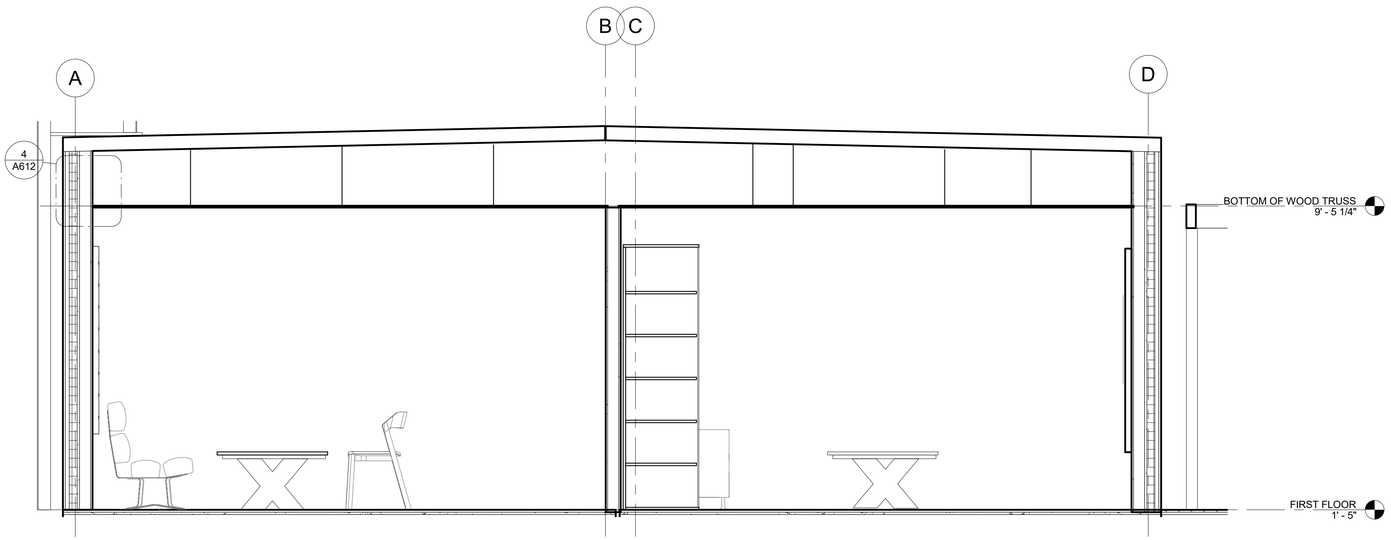
1 DROP CELING PLAN

3/16" = 1'-0"



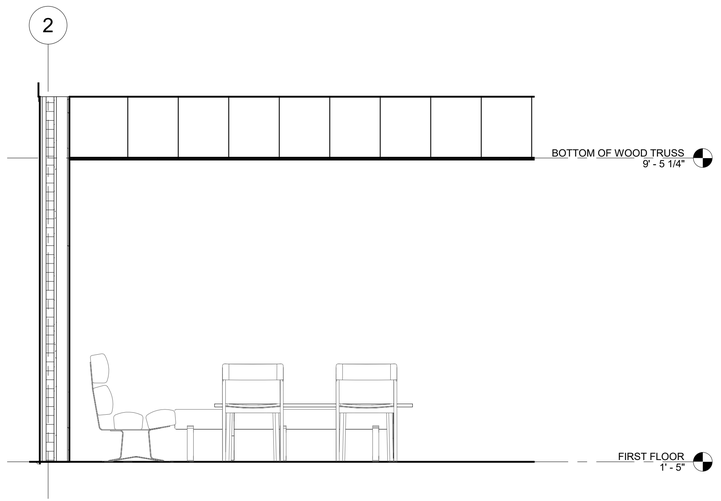
4 DROP CEIING DETAIL

3" = 1'-0"



2 DROP CEIING SECTION 1

1/2" = 1'-0"



3 DROP CEILING SECTION 2

1/2" = 1'-0"

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- AFFILIATED ENGINEERS INC

GENERAL NOTES AND SPECS:

1. SUBJECT TO APPROVAL FROM TT.
2. DRAWING DETAILS BASED ON USG ENSEMBLE ACOUSTIC PANEL DETAILS. SUBJECT TO CONFIRMATION OF PRODUCT AVAILABILITY BY USG.
3. THE FREE HEIGHT BETWEEN THE FLOOR AND DROP CEILING IS 7' 8 1/2".
4. DROP CEILING STRUCTURE GRID HAS BEEN CHECKED WITH PROVIDER FOR MINIMUM REQUIREMENT.

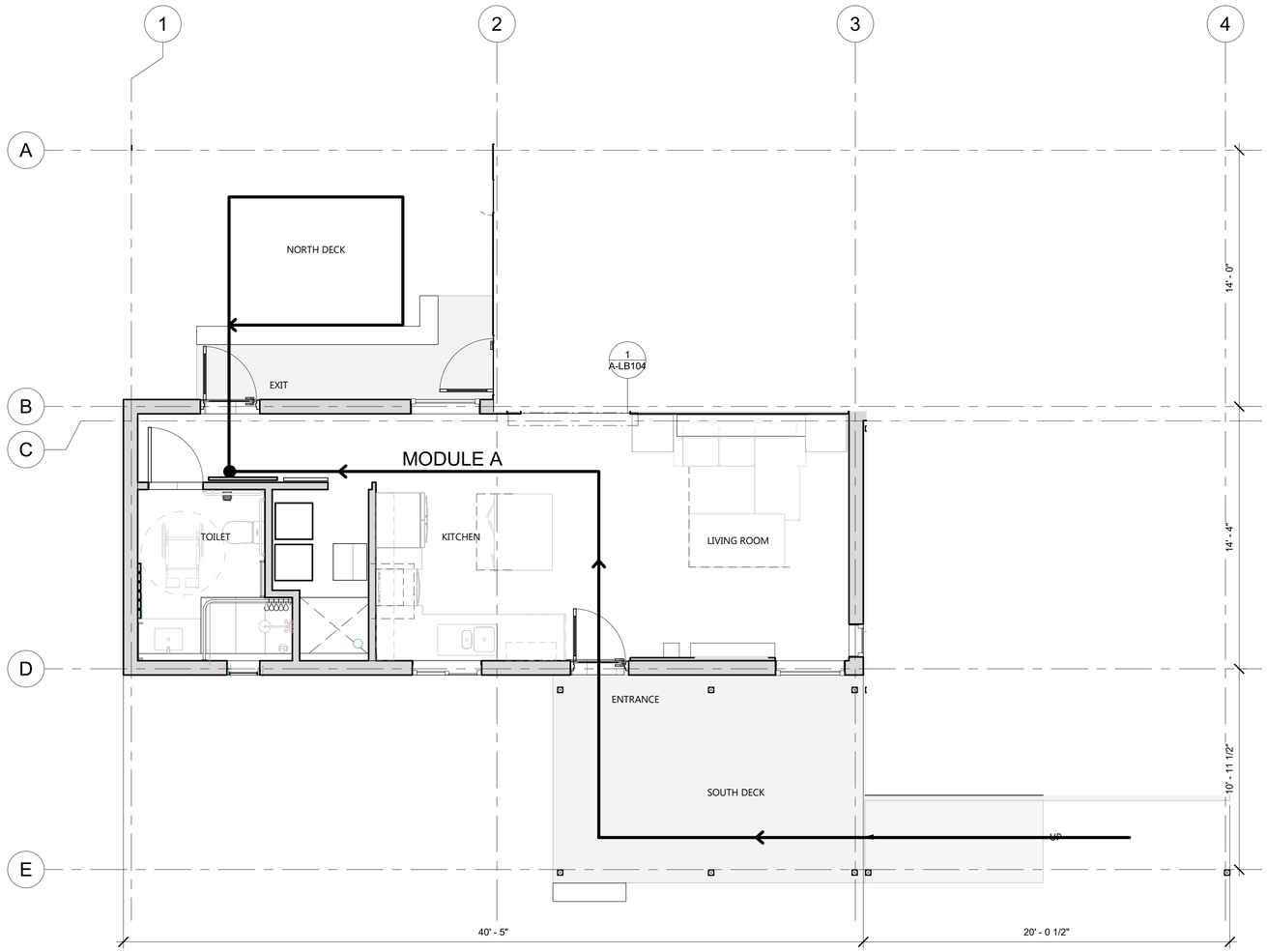
NO.	DESCRIPTION	DATE

DROP CEILING DETAILS

DRAWN BY:

CHECKED BY:

A612



1 LOCAL BUILD TOUR ROUTE PLAN

1/4" = 1'-0"

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- AFFILIATED ENGINEERS INC

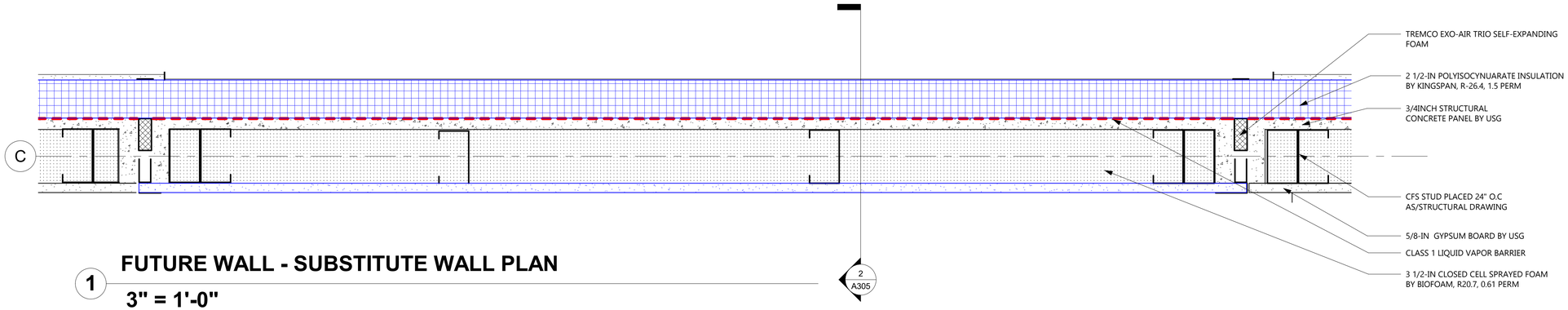
NO.	DESCRIPTION	DATE

LOCAL BUILD ACCESS ROUTE

DRAWN BY:

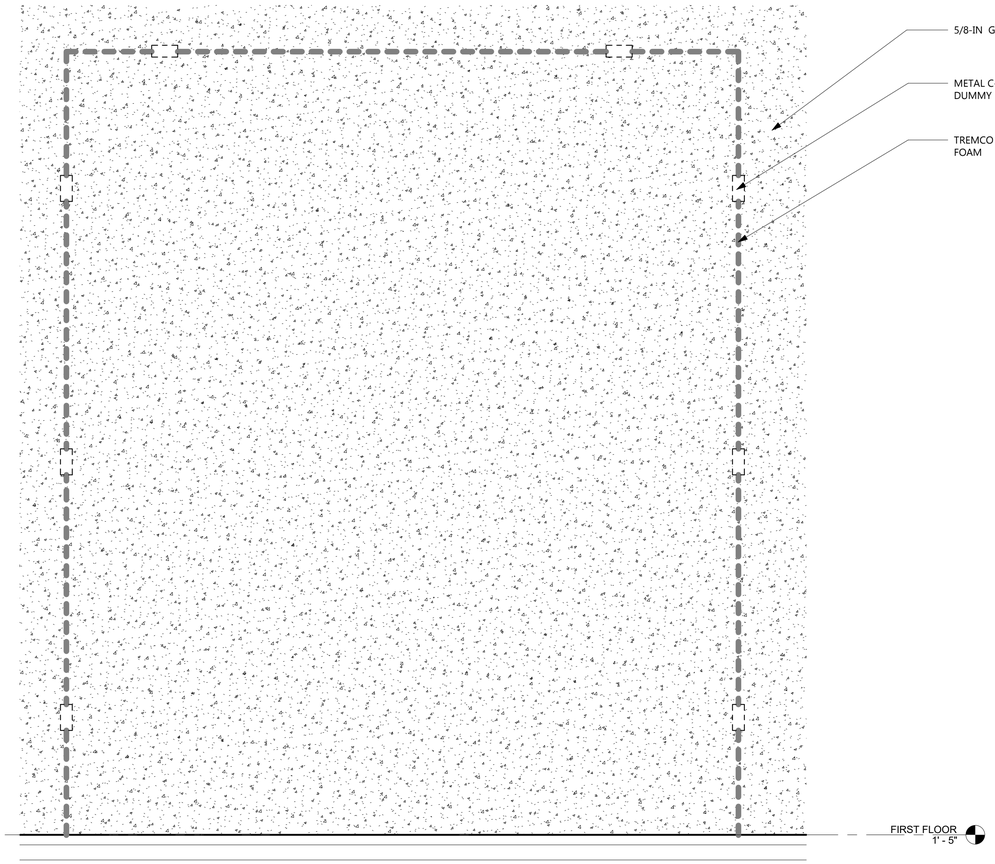
CHECKED BY:

A-LB101



1 FUTURE WALL - SUBSTITUTE WALL PLAN

3" = 1'-0"



2 FUTURE WALL ELEVATION

1 1/2" = 1'-0"

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CONSULTANTS:

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- AFFILIATED ENGINEERS INC

GENERAL NOTES AND SPECS:

1. DUMMY WALL IS A PROP WALL INSTALLED WITH THE EXTERIOR WALL TO COVER THE 6-FT WIDE OPENING WHEN MODULES A AND C ARE PLACED ISOLATED FROM EACH OTHER.
2. THE DETAIL FOR THE WALL WILL BE THE SAME AS THE EXTERIOR WALL, INCLUDING THE CLADDING PANELS, AND WILL REMAIN THE SAME FOR THE WALL ON MODULE A AND MODULE C.
3. PARTS INDICATED IN BLUE SHALL BE INSTALLED AFTER INSTALLATION OF THE DUMMY PANEL STRUCTURE.
4. TO REFER TO STRUCTURE DRAWINGS FOR STUD PLACEMENT.

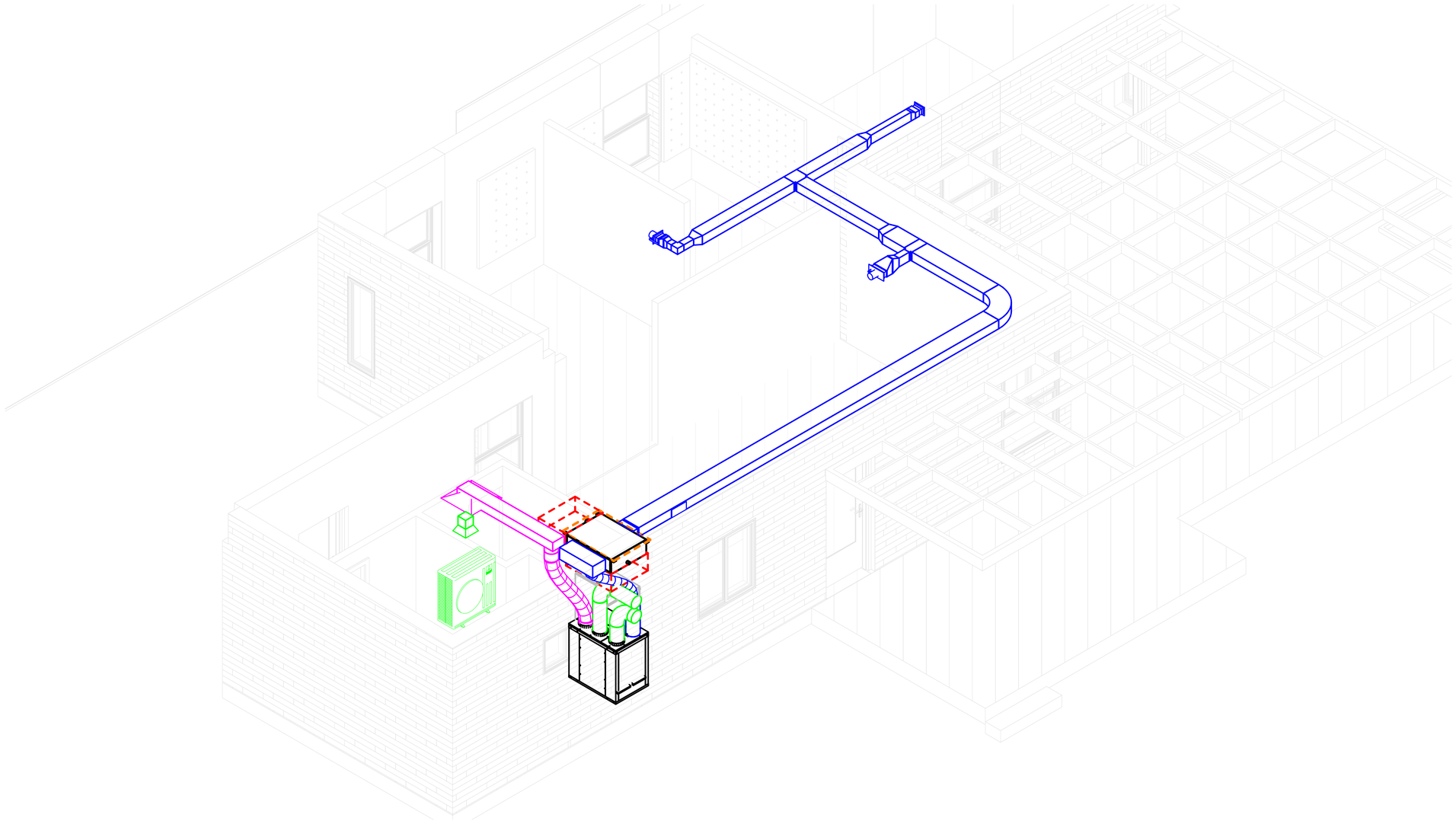
NO.	DESCRIPTION	DATE

LOCAL BUILD- REMOVABLE WALL DETAILS

DRAWN BY:

CHECKED BY:

A-LB104



1 **Isometric Drawing**

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- AFFILIATED ENGINEERS INC

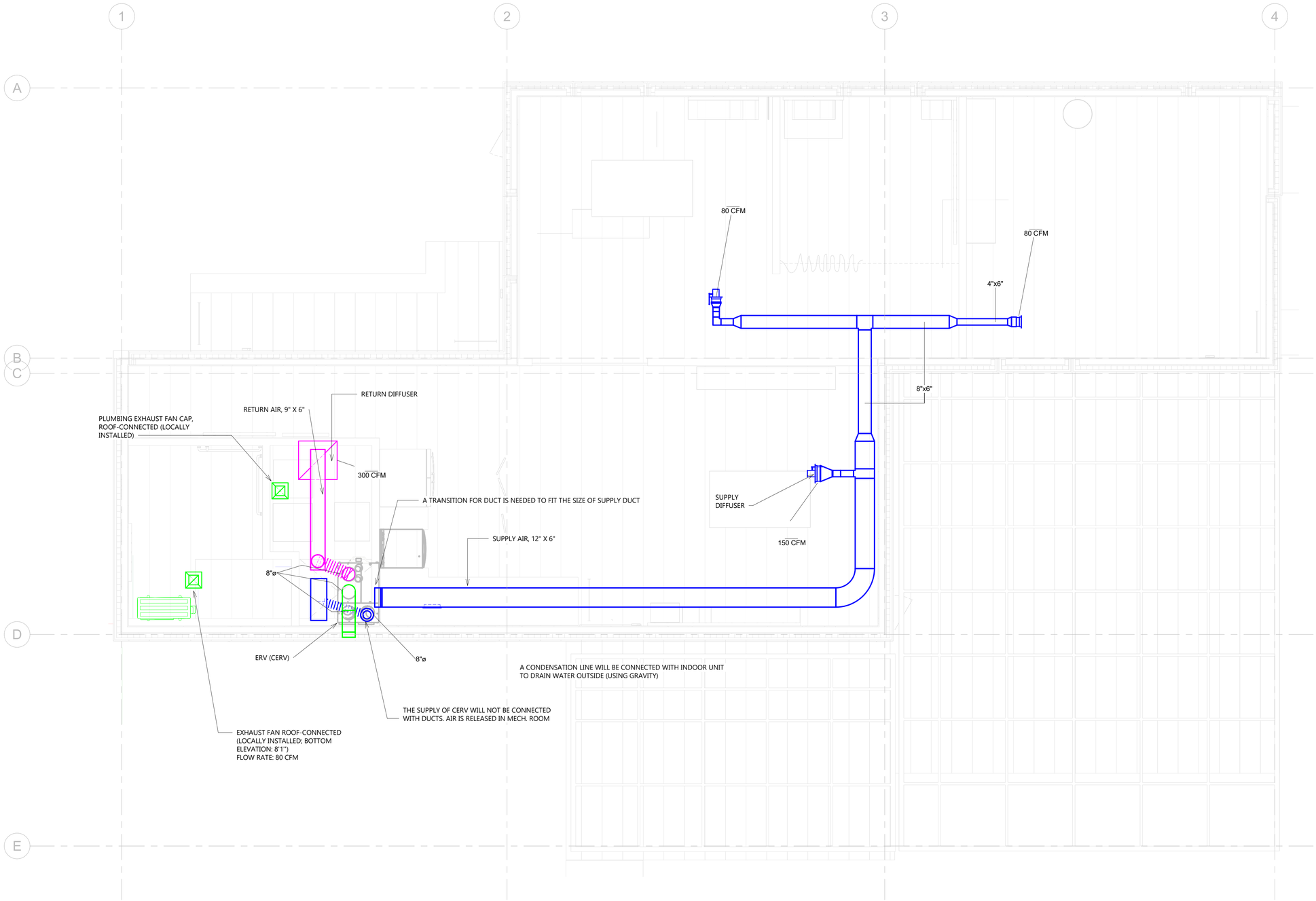
NO.	DESCRIPTION	DATE

HVAC ISOMETRIC

DRAWN BY:

CHECKED BY:

M001



1 Floor Plan Drawing

3/8" = 1'-0"

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ABBREVIATION:	DESCRIPTION
SD	SUPPLY DIFFUSER
RD	RETURN DIFFUSER
SA	SUPPLY AIR
RA	RETURN AIR
CFM	CUBIC FEET PER MINUTE
ERV	ENERGY RECOVERY VENTILATION
IAU	INDOOR AIR UNIT
OAU	OUTDOOR AIR UNIT

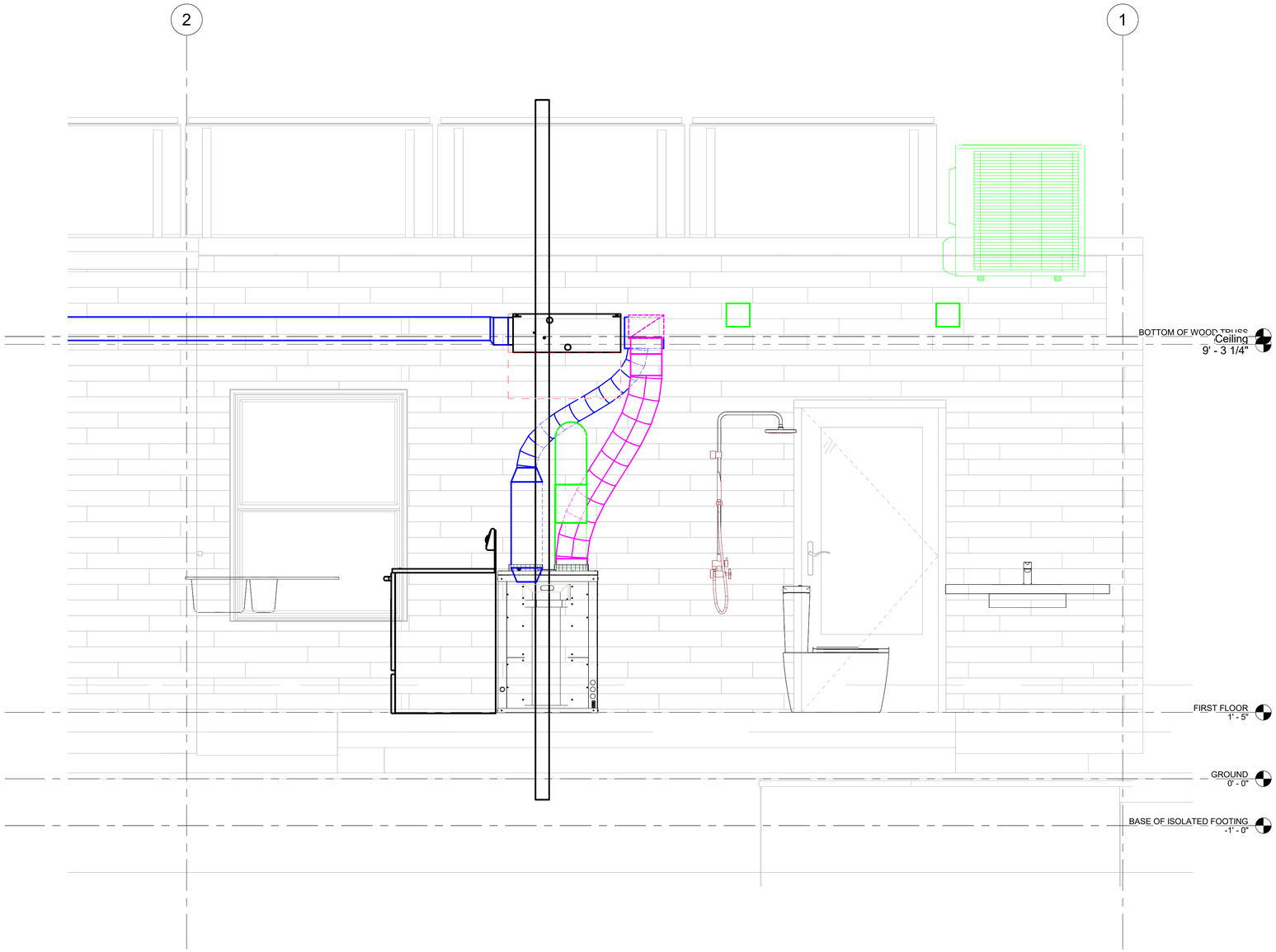
NO.	DESCRIPTION	DATE

HVAC EQUIPMENT AND DISTRIBUTION PLAN

DRAWN BY:

CHECKED BY:

M101



1 North Ele. Mech. Room Details

3/4" = 1'-0"

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- AFFILIATED ENGINEERS INC

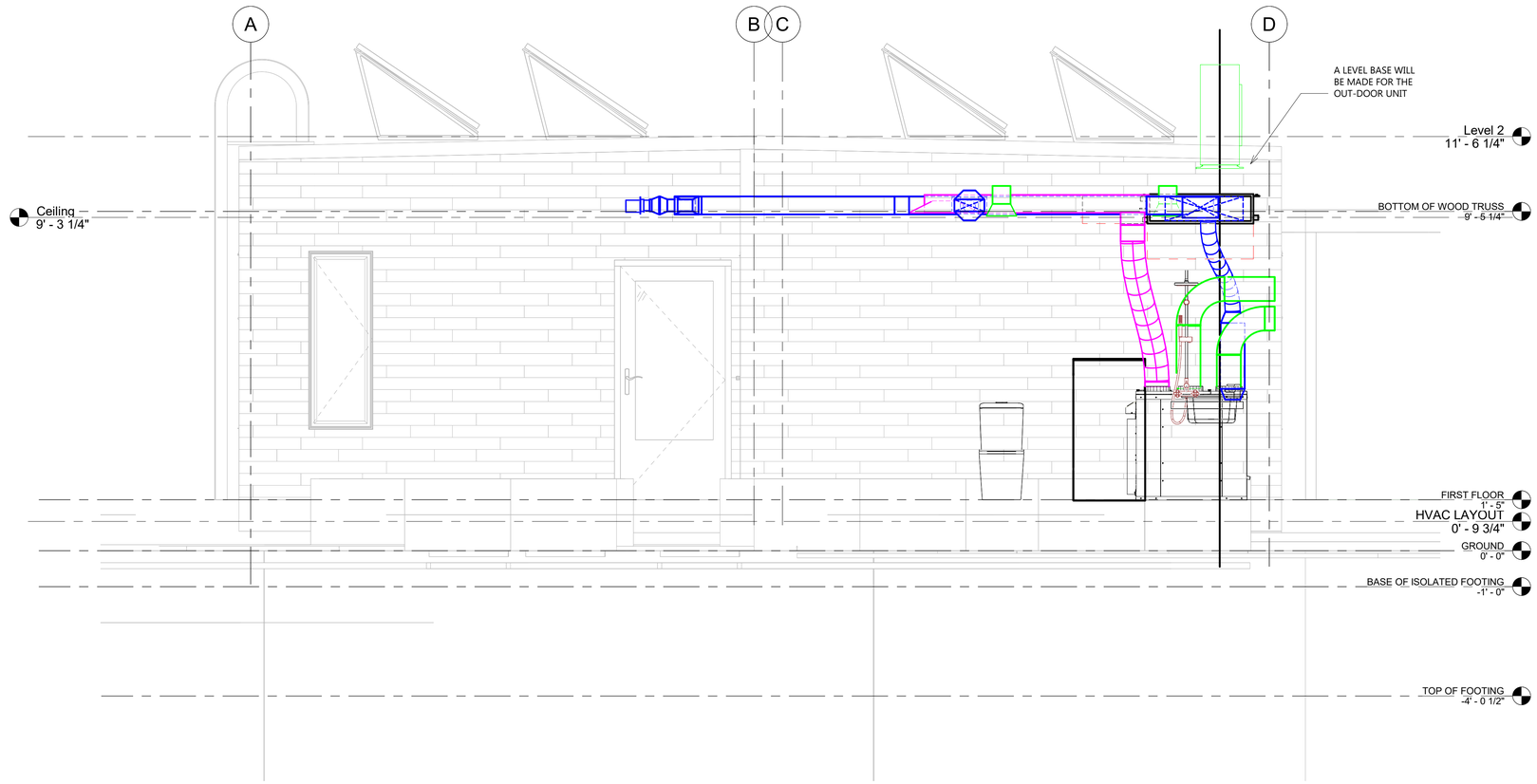
NO.	DESCRIPTION	DATE

MECHANICAL ROOM DETAIL

DRAWN BY:

CHECKED BY:

M102



1 W.Ele. Drawing

1/2" = 1'-0"

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CONSULTANTS:

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- AFFILIATED ENGINEERS INC

NO.	DESCRIPTION	DATE

HVAC EQUIPMENT ELEVATION VIEW

DRAWN BY:

CHECKED BY:

M103

ELECTRICAL NOTES AND COMPLIANCES

FCSP FIRE CODE COMPLIANCE AND SAFETY PRECAUTIONS

FCSP-1	THIS STRUCTURE WAS DESIGNED TO ADHERE TO ALL NECESSARY FIRE CODES FOR A RESIDENTIAL HOME.
FCSP-2	ALL STANDARD 120V RECEPTACLE OUTLETS LOCATED IN THE KITCHEN, BATHROOMS, GARAGE, OUTSIDE, OR MECHANICALS ROOM MUST BE GROUND FAULT CIRCUIT INTERRUPTING (GFCI).
FCSP-3	ALL STANDARD 120V RECEPTACLE OUTLETS LOCATED OUTSIDE OF THE STRUCTURE MUST BE WEATHERPROOFED GROUND FAULT CIRCUIT INTERRUPTING (GFCI WP).
FCSP-4	ALL STANDARD 120V RECEPTACLE OUTLETS LOCATED IN LIVING AREAS, INCLUDING BEDROOMS, LIVING ROOM, FAMILY ROOMS, ENTRYWAYS, AND WALK-IN CLOSETS, MUST BE ARC FAULT CIRCUIT INTERRUPTING (AFCI).
FCSP-5	PHOTOVOLTAIC (PV) ARRAY SPACING MUST BE IN COMPLIANCE WITH SECTION 605.11.1.2.3 OF THE ILLINOIS RESIDENTIAL FIRE CODE. FIREFIGHTERS MUST BE ABLE TO GET AROUND STRINGS OF PANELS IN THE CASE OF A ROOFTOP FIRE.
FCSP-6	THE ABILITY TO CUT OFF THE FLOW OF ELECTRICITY FROM THE ROOF-MOUNTED SOLAR ARRAY MUST BE AVAILABLE THROUGH THE USE OF A DC DISCONNECT SWITCH. AN AC DISCONNECT SWITCH MUST ALSO BE EMPLOYED WHETHER MADE AVAILABLE ON THE EXTERIOR OF THE BUILDING OR BUILT INTO THE MAIN BREAKER PANEL.
FCSP-7	TO REDUCE THE RISK OF ELECTRIC SHOCK, ALL HIGH VOLTAGE EQUIPMENT INCLUDING THE SOLAR EDGE STOREDGE SE10000H INVERTER, LG CHEM RESU10H BATTERY STORAGE, ELECTRIC CAR CHARGER, AND DC DISCONNECT BOX, WILL BE LOCATED ON THE EXTERIOR OF THE HOUSE.

GE GENERAL ELECTRICAL NOTES

GE-1	ALL 240V RECEPTACLE OUTLETS MUST HAVE THEIR OWN RESPECTIVE SWITCH ON THE MAIN BREAKER PANEL
GE-2	ANY RECEPTACLE OUTLETS LOCATED ON THE EXTERIOR OF THE BUILDING MUST BE BOTH WEATHERPROOFED AND GROUND FAULT CIRCUIT INTERRUPTING (GFCI WP).
GE-3	GFCI AND AFCI RECEPTACLE OUTLETS MAY BE SUPPLIED BY THE SAME CONDUITS, BUT NEITHER CAN BE LOCATED IN THE SAME CONDUIT THAT SUPPLIES A 240V RECEPTACLE OUTLET.
GE-4	ELECTRICAL FROM THE ROOF MOUNTED SOLAR PANELS WILL BE DISTRIBUTED BETWEEN THE UTILITY GRID, CHARGE CONTROLLER/BATTERY STORAGE, AND MAIN BREAKER PANEL, BY AN AUTOMATIC TRANSFER SWITCH INBUILT IN THE OUTBACK SKYBOX INVERTER
GE-5	ALL AFCI RECEPTACLE OUTLETS REQUIRE THE USE OF 14 GAUGE WIRING RATED FOR 15 AMPS OF CURRENT
GE-6	ALL GFCI RECEPTACLE OUTLETS, INSIDE OR OUTSIDE, REQUIRE THE USE OF 12 GAUGE WIRING RATED FOR 20 AMPS OF CURRENT
GE-7	ALL 240V RECEPTACLE OUTLETS, INSIDE OR OUTSIDE, REQUIRE THE USE OF 10 TO 8 GAUGE WIRE DEPENDING ON OPERATING CURRENTS OF 30 TO 40 AMPS, RESPECTIVELY.
GE-8	THERE SHALL BE NO MORE THAN 8 WIRES LOCATED IN ANY CONDUIT SO AS TO REDUCE THE RISK OF HEAT BUILDUP AS WELL AS SPACIAL ISSUES.

ELECTRICAL NOTES
1/4" = 1'-0"

ELECTRICAL SYMBOLS

	AFIC RATED OUTLET WALL ASSIGNMENT
GFI	GFIC RATED OUTLET WALL ASSIGNMENT
	240V RECEPTACLE
	MAIN BREAKER PANEL (MBP)
	CRITICAL LOADS PANEL (CLP)
GFCI	GROUND FAULT CIRCUIT INTERRUPTER RECEPTACLE
AFCI	ARC FAULT CIRCUIT INTERRUPTER RECEPTACLE
GFCI WP	WEATHERPROOF GROUND CIRCUIT INTERRUPTER RECEPTACLE
	WIRED CONNECTION
	LIGHTING SWITCHES: SINGLE POLE
3	LIGHTING SWITHCES: 3 WAY
	CIRCUIT BREAKER
	SMOKE DETECTOR

ELECTRICAL SYMBOLS
1/4" = 1'-0"

ELECTRICAL SYMBOLS

	BIG BATTERY ENERGY STORAGE
	OUTBACK SKYBOX INVERTER
	SOLAREDGE SINGLE PHASE INVERTER

ADAPTHAUS
FLEXIBLE, SUSTAINABLE, AFFORDABLE

ILLINOIS SOLAR DECATHLON 2018 - 21

TEAM NAME
ADAPTHAUS
CONTACT
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CONSULTANTS:
- DARCY BEAN CONSTRUCTION
- THORNTON TOMASETTI
- AFFILIATED ENGINEERS INC

NO.	DESCRIPTION	DATE

GENERAL NOTES AND SYMBOLS

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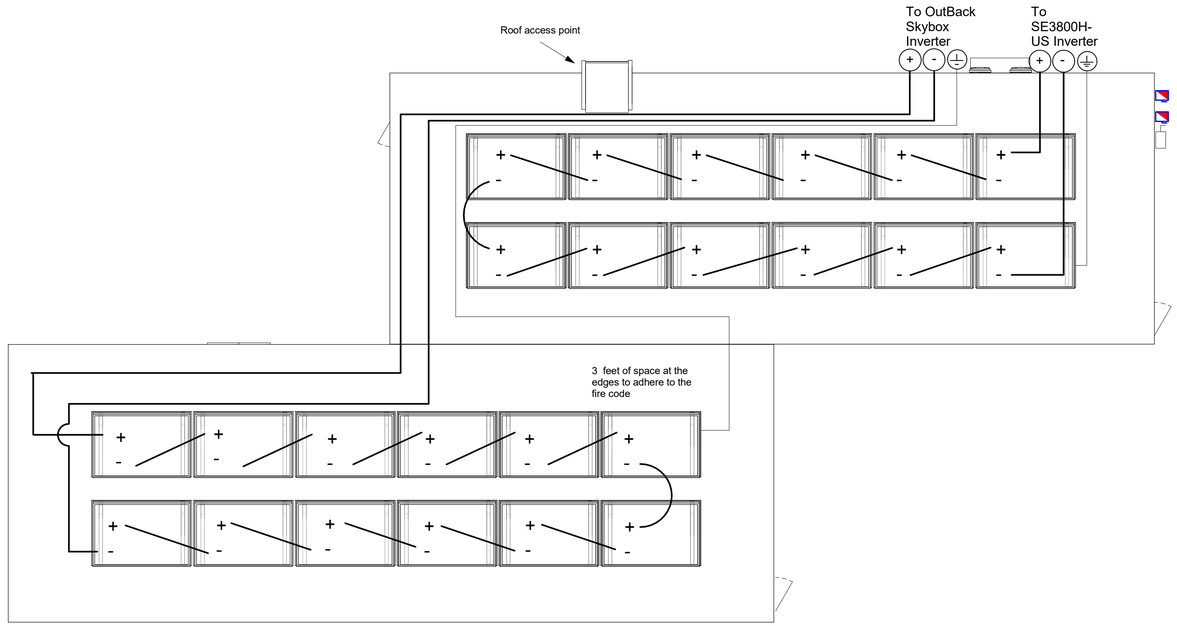
E001



1 PV WIRING PLAN

1/4" = 1'-0"

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NO.	DESCRIPTION	DATE

PV WIRING PLAN

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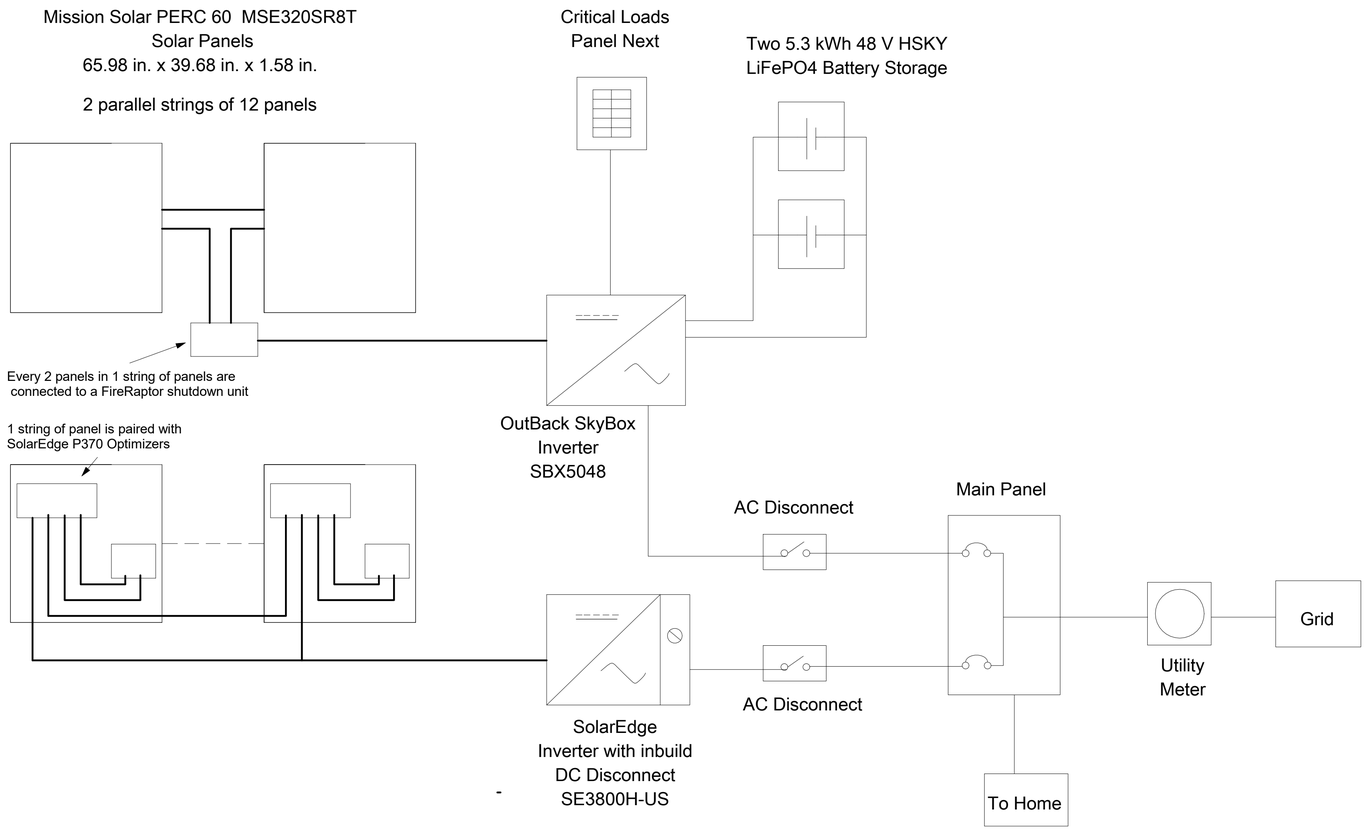
E002



Battery: 48 V HSKY - LifePO4		Module: MSE PERC 60 MSE320SR8T		Inverter 1: Solar Edge SE3800H-US		Inverter 2: OutBack Skybox SBX5048-120/240		Optimizers : Solar Edge P370	
Capacity:	5.3 kWh / 103 Ah	P_{max}:	320 W	Type:	Transformerless, Ungrounded	Type:	Transformerless, Ungrounded	Rated Input DC Power	370 W
Max Continuos Discharge Current:	130 A	I_{sc}:	10.028 A	Max AC Power Rating:	3.8 kW	Max AC Power Rating:	5 kW	Max String Length:	25
Max Continuous Power:	6.7 kW	V_{oc}:	40.80 V	AC Output Voltage Range:	211 - 264 V	MPPT Voltage Range:	250 - 600V	ISC	11 A
Max Discharge Peak Current:	350 A (6 Seconds)	I_{mp}:	9.351 A	Max Input Voltage:	480 V	Max Input Current:	20 A	Voc	60 V
Voltage Range:	43 - 58.5 V	V_{mp}:	34.22 V	Min Input Current:	10.5 A	Max Short-Circuit Current:	32 A	Max Output Voltage:	60 V
				Max Continuous Output Current:	16 A	Max Continuous Output Current:	24 A @ 25 degrees Celcius	Max Output Current:	15 A

1 SINGLE LINE

1/2" = 1'-0"

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NO.	DESCRIPTION	DATE

SINGLE LINE

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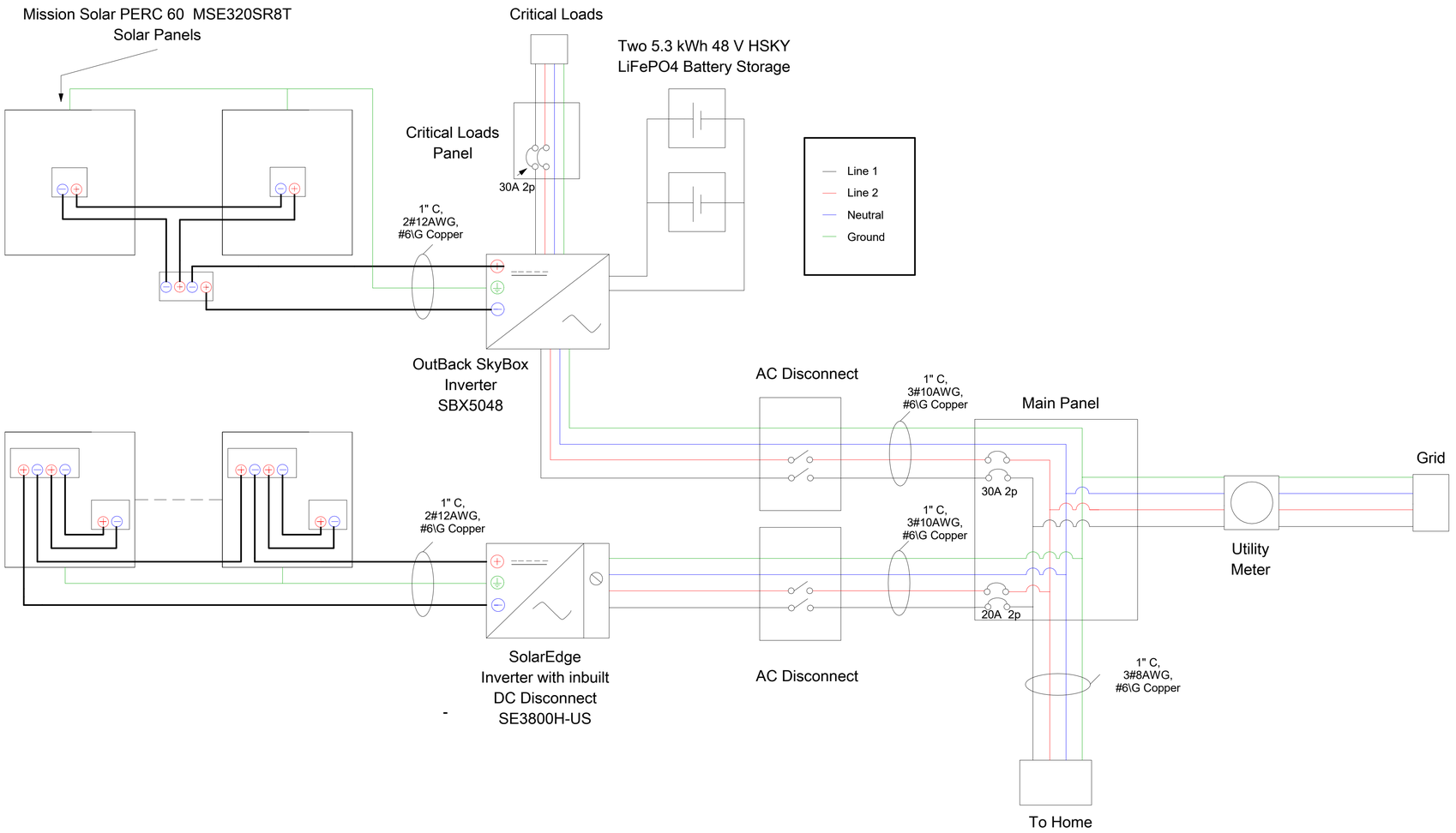
E003



1 THREE LINE

1/2" = 1'-0"

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NO.	DESCRIPTION	DATE

THREE LINE

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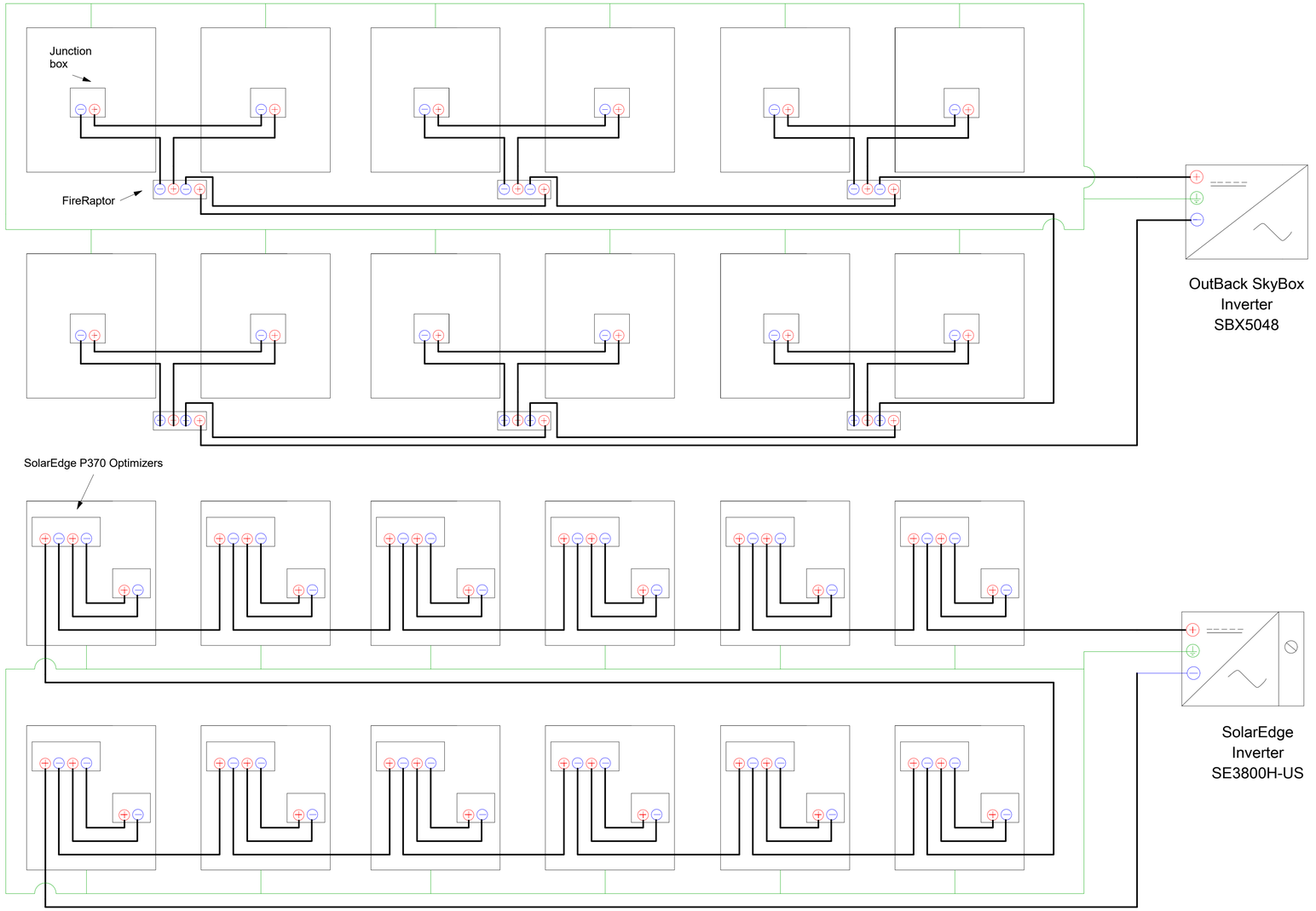
E004



1 P370 AND FRS-01 WIRING

1/2" = 1'-0"

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NO.	DESCRIPTION	DATE

POWER OPTIMIZER AND FIRERAPTOR WIRING

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CHECKED BY:

E005

Main Panel: 200 Amps 120/240V, 1 PHASE, 3 WIRE W/ GRND

Space N	DESCRIPTION	WATTS, VA A	WATTS, VA B	CB TYPE	CB TYPE	WATTS, VA A	WATTS, VA B	DESCRIPTION	Space N
1	SPARE			20A 1P	20A 1P			SPARE	2
3	SPARE			20A 1P	20A 1P			SPARE	4
5	SPARE			20A 1P	20A 1P			SPARE	6
7	SPARE			20A 1P	20A 1P			SPARE	8
9	SPARE			20A 1P	20A 1P			SPARE	10
11	SPARE			20A 1P	20A 1P			SPARE	12
13	SPARE			20A 1P	20A 1P			SPARE	14
15	SPARE			20A 1P	15A 1P		968	Kitchen Receptacles (120V x 4) + Hood (F402404)	16
17	CERV	1400		20A 1P	15A 1P	1440		North Module Lights (x12)	18
19	WMY10148C2 (Washer)		2400	20A 1P	15A 1P		910	Study Receptacles (120V x 5)	20
21	Water Heater	4312.5		40A 2P	15A 1P	1456		Office Receptacles (120V x 8)	22
23	Water Heater		4312.5	40A 2P	20A 1P		364	North Exterior Receptacles (120V x 2)	24
25	Water Heater	4312.5		40A 2P	20A 1P	910		South Exterior Receptacles (120V x 5)	26
27	Water Heater		4312.5	40A 2P	20A 1P		1440	DDT39432X (Dishwasher)	28
29	Water Heater	4312.5		40A 2P	20A 1P	728		Kitchen Receptacles (120V x 4)	30
31	Water Heater		4312.5	40A 2P	20A 1P		910	Dining Receptacles (120V x 5)	32
33	SPARE			20A 1P	20A 1P	182		Bath	34
35	SLER24410SS (Range)		4347	50A 2P	20A 2P		1100	Minisplit	36
37	SLER24410SS (Range)	4347		50A 2P	20A 2P	1100		Minisplit	38
39	HPD24412W (Dryer)		460	30A 2P	20A 2P			SPARE	40
41	HPD24412W (Dryer)	460		30A 2P	20A 2P			SPARE	42

TOTAL WATTAGE PHASE "A"	19,145		24,961	5,816	
TOTAL WATTAGE PHASE "B"		20,145	25,837		5,692
PANEL TOTAL WATTAGE, VA			50,797		
PANEL TOTAL AMPS, A			212		

Critical Loads Panel: 125Amps, 120/240V, 1 PHASE, 3 WIRE W/ GRND

Space N	DESCRIPTION	WATTS, VA A	WATTS, VA B	CB TYPE	CB TYPE	WATTS, VA A	WATTS, VA B	DESCRIPTION	Space N
1	BFSB3622SS (Refrigerator)	300		20A 1P	15A 1P	10		Smoke Detector	2
3	South Module Lights (x8)		960	15A 1P	15A 1P		2592	Living room receptacles (120V x 6) + Small Appliance	4
5	SPARE			20A 1P	30A 2P	2500		OutBack SkyBox Inverter *	6
7	SPARE			20A 1P	30A 2P		2500	OutBack SkyBox Inverter	8
9	SPARE			20A 1P	20A 1P			SPARE	10
11	SPARE			20A 1P	20A 1P			SPARE	12

TOTAL WATTAGE PHASE "A"	300		310	10	
TOTAL WATTAGE PHASE "B"		960	3,552		2,592
PANEL TOTAL WATTAGE, VA			3,862		
PANEL TOTAL AMPS, A			16		

* The OutBack SkyBox inverter and Solar Edge Inverter are connected to the meter main panel so it is not included in the calculations

Main Panel Sizing	Watts, VA	Amps, A
First 10 kW	10000	41.666667
100% Minisplit	2200	9.1666667
40% remaining loads	15438.8	64.328333
** Total Loads	27638.8	115.16167

** Rounded up to 200 A

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NO.	DESCRIPTION	DATE

PANEL SCHEDULE

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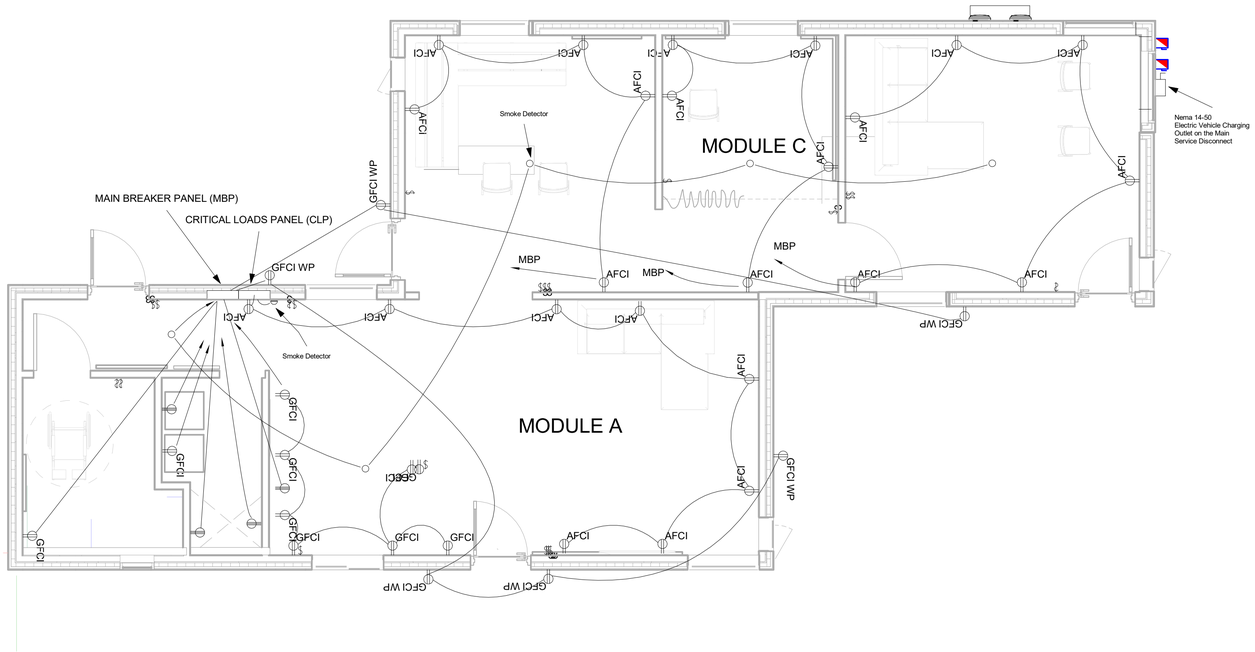
E006



1 POWER DISTRIBUTION PLAN AND RECEPTACLE LAYOUT

1/4" = 1'-0"

ADAPTHAUS

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ILLINOIS SOLAR DECATHLON 2018 - 21

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NO.	DESCRIPTION	DATE

POWER DISTRIBUTION PLAN AND RECEPTACLE LAYOUT

DRAWN BY:

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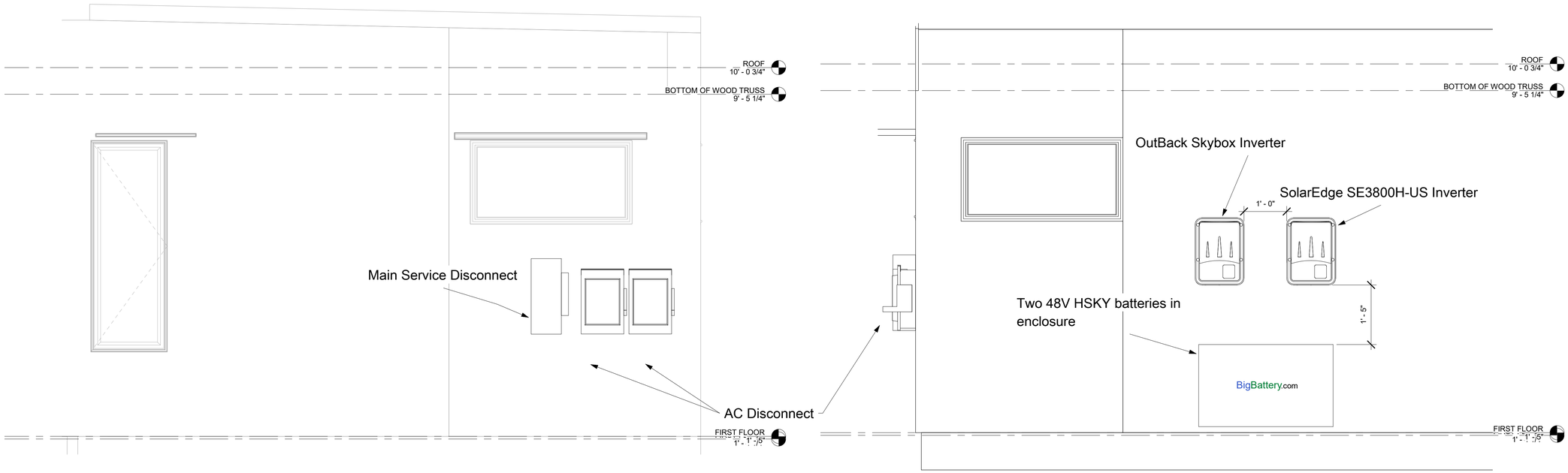
E007



2 **EAST WALL**

3/4" = 1'-0"

1 **NORTH WALL**

3/4" = 1'-0"

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NO.	DESCRIPTION	DATE

ELECTRICAL EQUIPMENT

DRAWN BY:

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E008

GENERAL NOTES

1. ALL WORK, METHODS, AND INSTALLATIONS INVOLVED IN THE PLUMBING DESIGN SHALL BE IN ACCORDANCE WITH THE BUILDING AND INSPECTION REGULATIONS OF ALL OFFICIALS HAVING JURISDICTION.
2. DRAWINGS ARE DIAGRAMMATIC IN NATURE, CONTAINING INFORMATION TO A DEGREE OF DETAIL CONSISTENT WITH THEIR SCALE AND ADEQUATE TO CONVEY DESIGN INTENT.
3. SLOPES AND PITCHES OF PIPING INSTALLED ARE TO COMPLY WITH THE LOCAL CODE.
4. CONTRACTOR SHALL PROVIDE LABOR AND MATERIALS AS REQUIRED TO MAKE FINAL CONNECTIONS FOR ALL PLUMBING FIXTURES, EQUIPMENT, OR RELATED ITEMS PROVIDED UNDER SEPARATE DIVISIONS.
5. PROVIDE CLEANOUTS AT EACH CHANGE OF DRAINLINE CONNECTION GREATER THAN 45 DEGREES. PROVIDE CLEANOUTS AT THE BASE OF ALL RISERS AND IN COMPLIANCE WITH PLUMBING CODE.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD COORDINATING LOCATIONS OF SANITARY VENTS UP THROUGH ROOF.
7. ALL DHW AND DCW LINES ARE PEX PIPING. ALL SANITARY AND VENT PIPES ARE PVC SCHEDULE 40 PIPING.
8. ALL DW PIPES 3/4" AND ABOVE ARE TO BE INSULATED PER BUILDING CODE.
9. ALL RELEVANT SPECIFICATIONS ARE FOUND IN SECTION 22 (PLUMBING).
10. COORDINATE THE PIPES IN THE WALLS TO GO THROUGH HOLES IN THE JOISTS.
11. ENSURE THE PIPES IN THE WALLS ARE INSTALLED ON THE RIGHT SIDE OF THE BUILDING INSULATION TO PREVENT FREEZING.
12. EQUIPMENT/MATERIAL SHOWN ON DRAWINGS ARE BASED ON MANUFACTURER'S PUBLISHED DATA, AND ARE ASSUMED TO BE REPRESENTATIVE OF TYPICAL SIZES. ALL EQUIPMENT, FIXTURES, AND SERVICEABLE DEVICES SHALL BE INSTALLED WITH ADEQUATE ACCESS AND CLEARANCE FOR MAINTENANCE AND OPERATIONS. COORDINATE WITH OTHER TRADES TO PROVIDE THIS ACCESS AND CLEARANCE. INSTALL ALL EQUIPMENT AND MATERIALS PER MANUFACTURER'S INSTRUCTIONS.
13. IF EQUIPMENT, FIXTURES OR MATERIAL OTHER THAN THOSE SCHEDULED OR SPECIFIED, IS APPROVED AND ACQUIRED, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE AND PROVIDED REVISED UTILITIES AND SERVICE CONNECTIONS, AND TO VERIFY THE SPACE ALLOTTED FOR ADEQUECY AND CLEARANCE REQUIREMENTS.
14. COORDINATE ALL LOCATIONS AND SIZES OF STRUCTURAL FLOOR AND WALL PENETRATIONS WITH GENERAL CONTRACTOR, AND PROVIDE CODE-COMPLIANT SEALS AT ALL FIRE-RATED WALL, CEILING, ROOF AND FLOOR PENETRATIONS.
15. ACCESS DOORS/PANELS SHALL BE PROVIDED AT ALL MAINTENANCE AND SERVICE LOCATIONS FOR CONCEALED CONTROL DEVICES, VALVES AND PLUMBING EQUIPMENT/DEVICES/FIXTURES. UNLESS A SIZE IS SPECIFICALLY NOTED, PANELS SHALL BE AN APPROPRIATE SIZE TO ALLOW EASY SERVICE AND MAINTENANCE. DOORS AND PANELS SHALL HAVE THE SAME FIRE RATING AS THE WALL OR CEILING IN WHICH THEY ARE INSTALLED.

PLUMBING NOTES

1. FURNISH THERMOSTATIC MIXING VALVES, IF NECESSARY, TO PREVENT ANY SCALDING TO ANYONE USING THE PLUMBING FIXTURE. INSTALLATION OF THE TMV SHALL BE IN ACCORDANCE WITH THE BUILDING AND INSPECTION REGULATIONS OF ALL OFFICIALS HAVING JURISDICTION.
2. SANITARY PIPES SHALL BE INSTALLED AT A SLOPE OF 1/4" PER 1'.
3. VENTING PIPES SHALL BE INSTALLED AT A SLOPE OF 1/8" PER 1'.
4. VENT PIPE IN THE ROOF MUST BE REACH A MINIMUM OF 3" ABOVE ROOF.
5. VENT PIPE IN THE ROOF MUST BE INSTALLED TO MINIMIZE VIEWING FROM THE GROUND.
6. INSULATE DOMESTIC HOT WATER PEX PIPES 3/4" AND ABOVE.
7. COORDINATE PIPE LINES TO GO THROUGH THE HOLES IN THE WALL JOISTS.
8. PIPES IN THE CEILING SHALL BE ATTACHED TO THE CEILING JOISTS.
9. INSTALL SHUT-OFF VALVES AT EACH FIXTURE. INSTALL BRANCH SHUTOFF VALVES WHERE NECESSARY FOR EASE OF MAINTENANCE OR REQUIRED BY CODE. LOCATE AND ORIENT VALVE OPERATORS FOR EASE OF ACCESS AND FULL LIMITS OF OPERATION.
10. INSULATION AND VAPOR BARRIER SHALL BE PROVIDED ON ALL PIPING/EQUIPMENT SUBJECT TO HEAT LOSS, CONDENSATION, OR POSING A POTENTIAL BURN HAZARD.
11. INSULATION SHALL NOT BE CRUSHED OR COMPRESSED BY INTERFERENCE WITH SYSTEMS INSTALLED BY OTHER TRADES OR BUILDING CONSTRUCTION.
12. ALL PIPING SHALL BE INSTALLED TO AVOID FREEZING. NO PIPING SHALL BE INSTALLED WITHIN EXTERIOR WALLS. IF ABSOLUTELY NECESSARY, PIPING SHALL BE INSULATED PROPERLY TO AVOID FREEZING. THE INSTALLATION OF PLUMBING SYSTEMS SHALL NOT CRUSH OR COMPROMISE BUILDING INSULATION. ALL BELOWGRADE WATER PIPING SHALL BE INSTALLED NO LESS THAN 3 FEET BELOW GROUND.
13. FOLLOWING COMPLETION OF THE WORK AND PRIOR TO FINAL ACCEPTANCE, ALL PARTS SHALL BE THOROUGHLY CLEANED.
14. PIPNG SHALL BE CONCEALED IN WALLS OR BEHIND FIXED FURNISHINGS UNLESS OTHERWISE INDICATED.
15. ALL PIPING SHALL RUN PARALLEL TO BUILDING LINES AND BE ANCHORED AND SUPPORTED AS REQUIRED FOR EXPANSION AND CONTRACTION. ALL PIPING SHALL BE CONCEALED EXCEPT IN UNFINISHED SPACES OR THE CRAWL SPACE. INSTALL AS REQUIRED TO MEET ALL CONTSTRUCTION CONDITIONS AND TO ALLOW FOR INSTALLATION OF OTHER WORK - INCLUDING DUCTS AND ELECTRICAL CONDUITS. ANY PIPING EXPOSED TO VIEW SHALL BE ROUTED AS HIGH AS POSSIBLE AND TO THE UNDERSIDE OF THE STRUCTURE.
16. PLUMBING CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL WORK UNDER HIS/HER CONTRACT WILL WITH ALL OTHER BUILDING TRADES, AS NECESSARY. NOTIFY THE ENGINEER/DESIGNER OF ALL DISCREPANCIES OR QUESTIONS PERTAINING TO EXTENT OF WORK PRIOR TO BUILDING, WHEN POSSIBLE.

ADAPTHAUS

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NO.	DESCRIPTION	DATE
1	50% CD SETS	08/09/2019
2	DETAIL REVISION	12/22/2019
3	95% CD SETS	02/14/2020

PLUMBING NOTES

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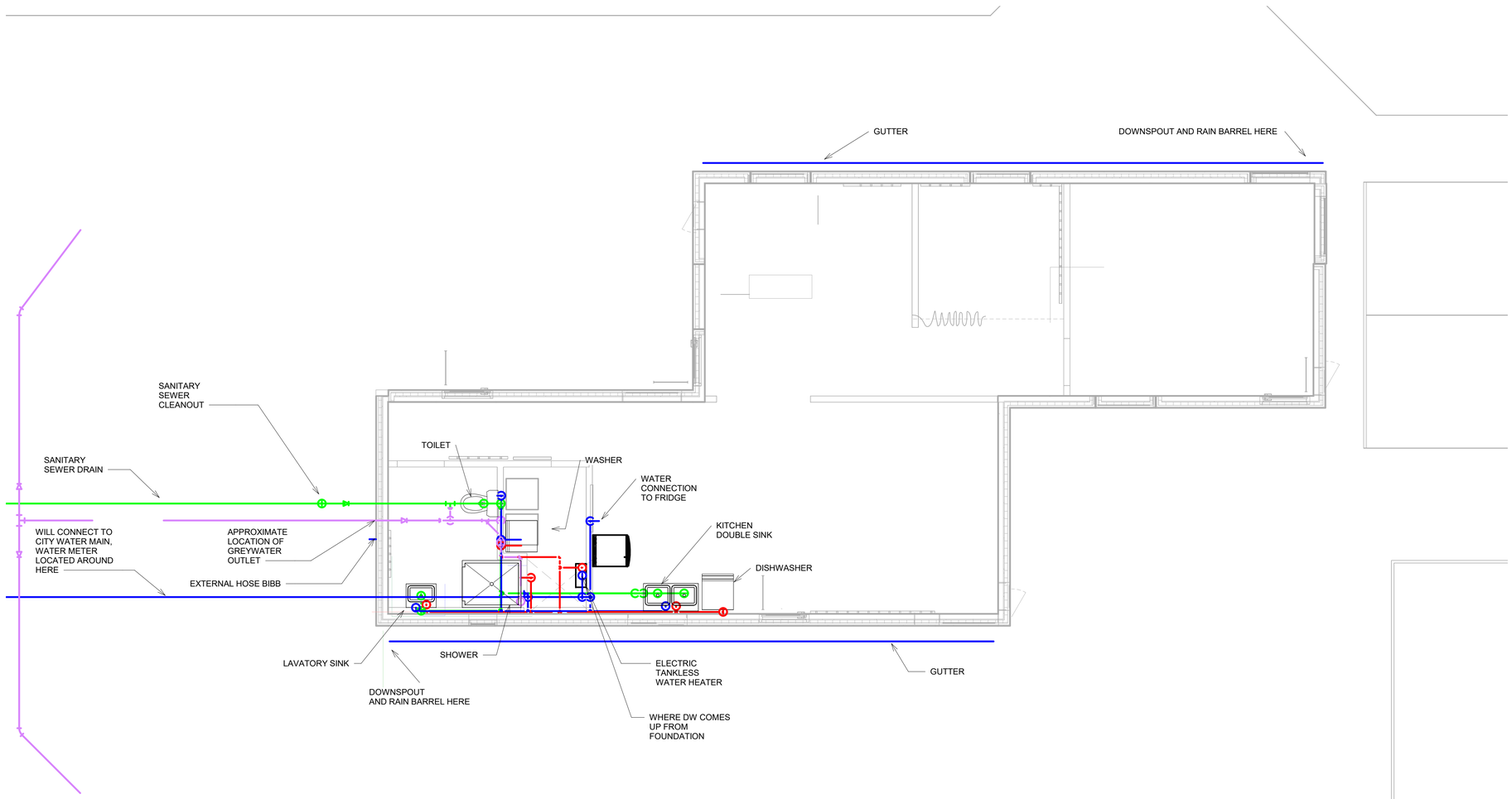
P001



1 PLUMBING SITE PLAN

1/4" = 1'-0"

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NO.	DESCRIPTION	DATE

PLUMBING SITE PLAN

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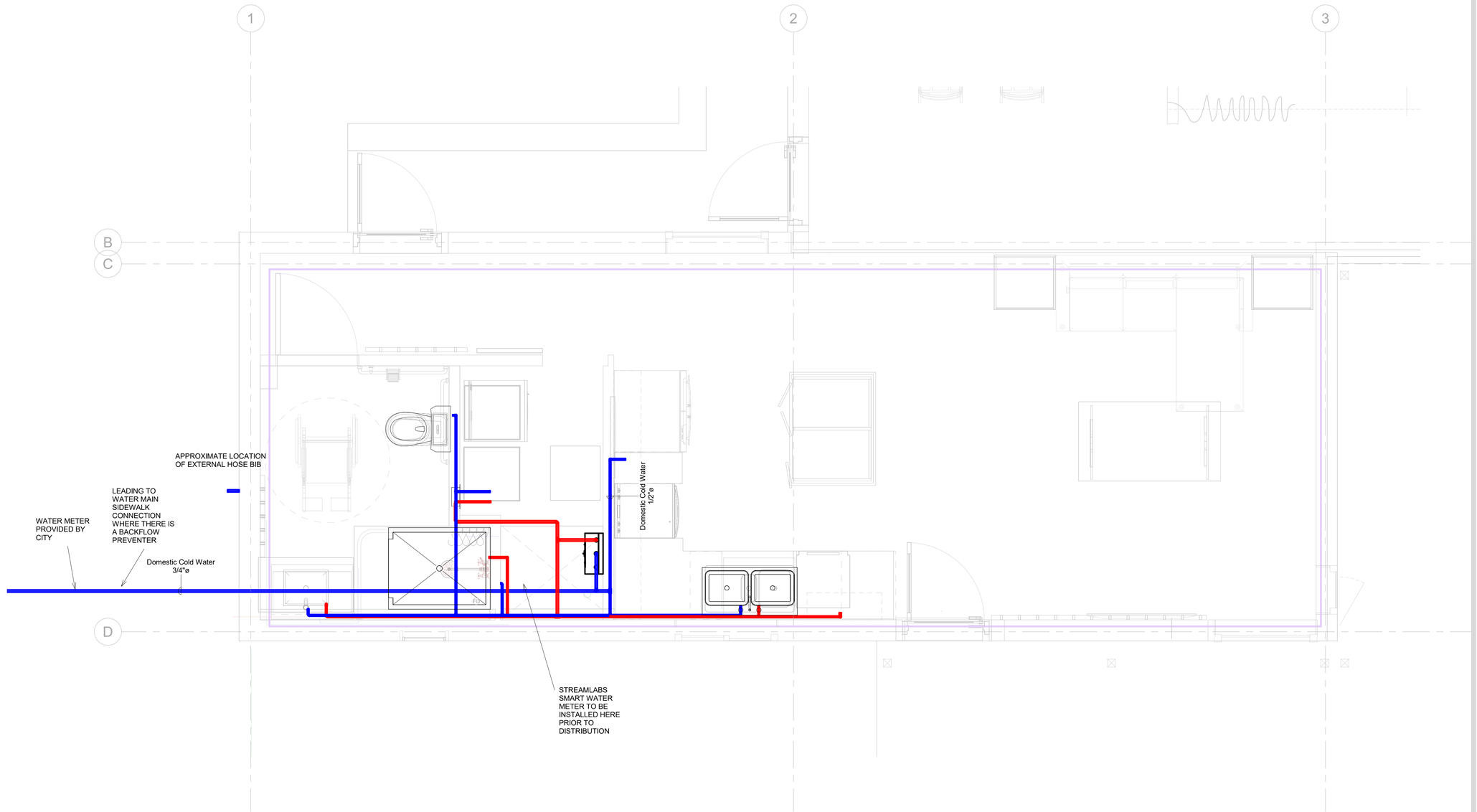
P101



1 PLUMBING WATER SUPPLY PLAN

1/2" = 1'-0"

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NO.	DESCRIPTION	DATE
1	Revision 1	Date 1

DOMESTIC WATER SUPPLY PLAN

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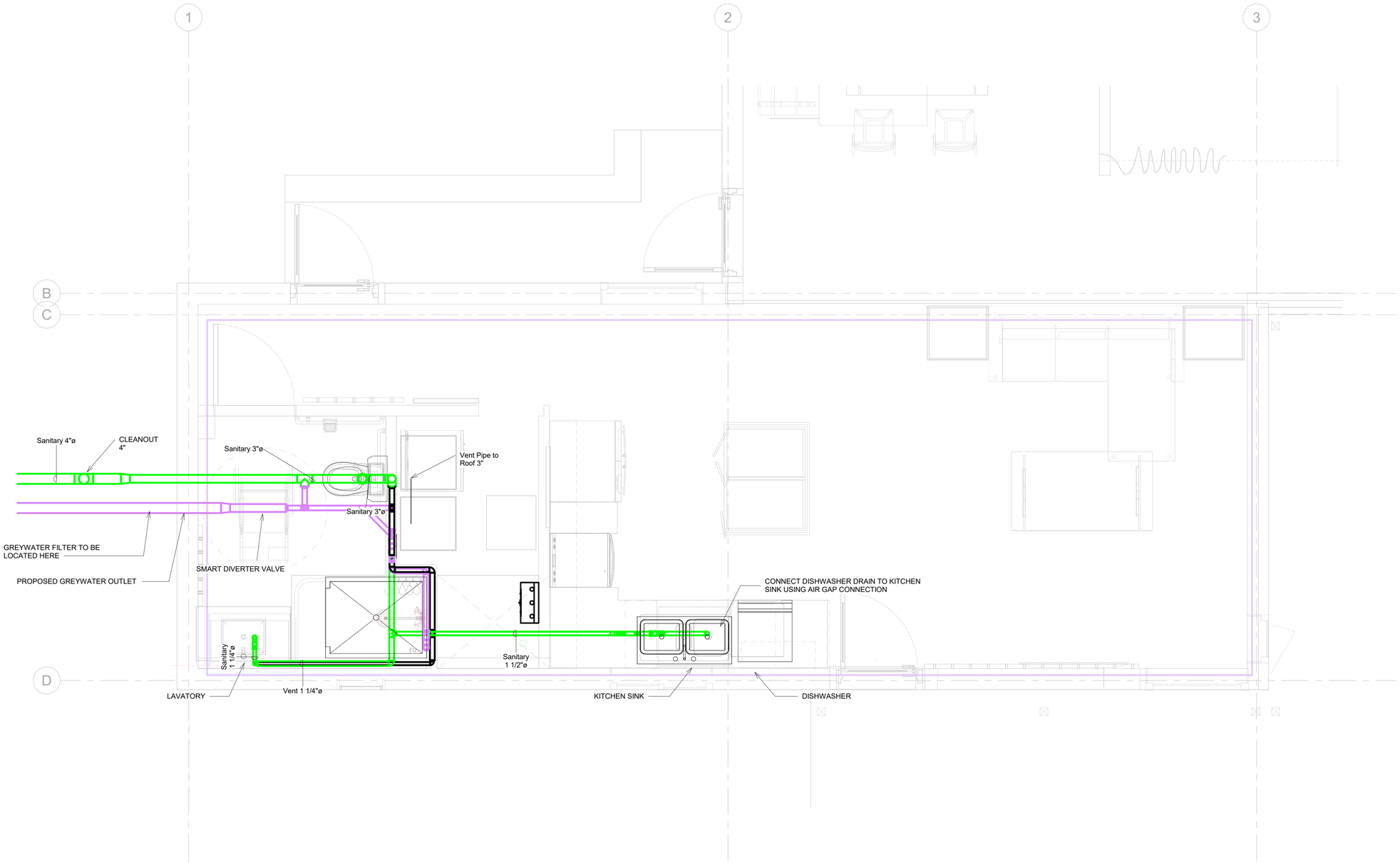

1 VENT AND WASTE PLAN

1/2" = 1'-0"

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NO.	DESCRIPTION	DATE
1	Revision 1	Date 1

VENT AND WASTE PLAN

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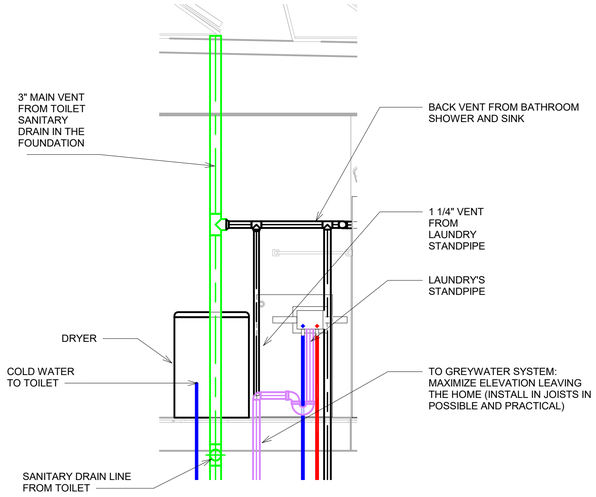
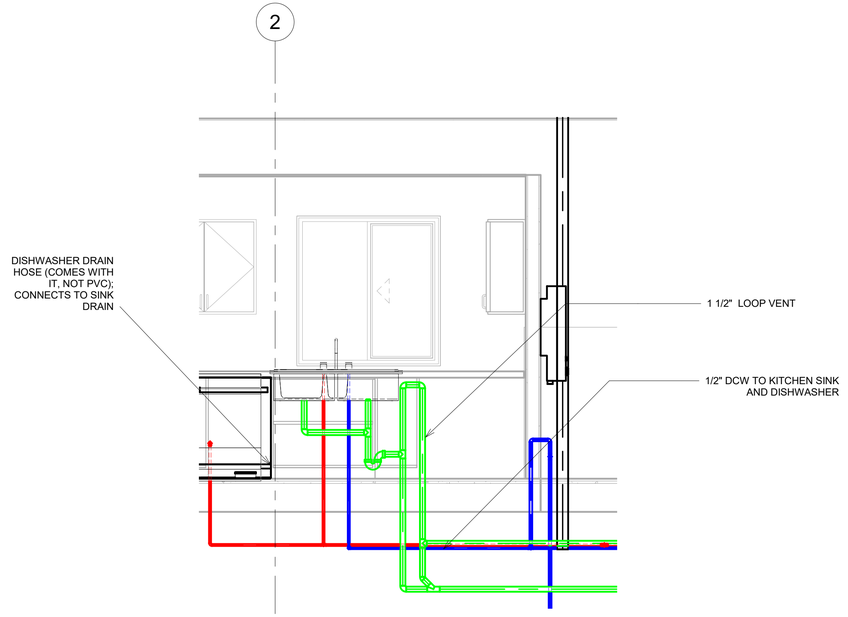


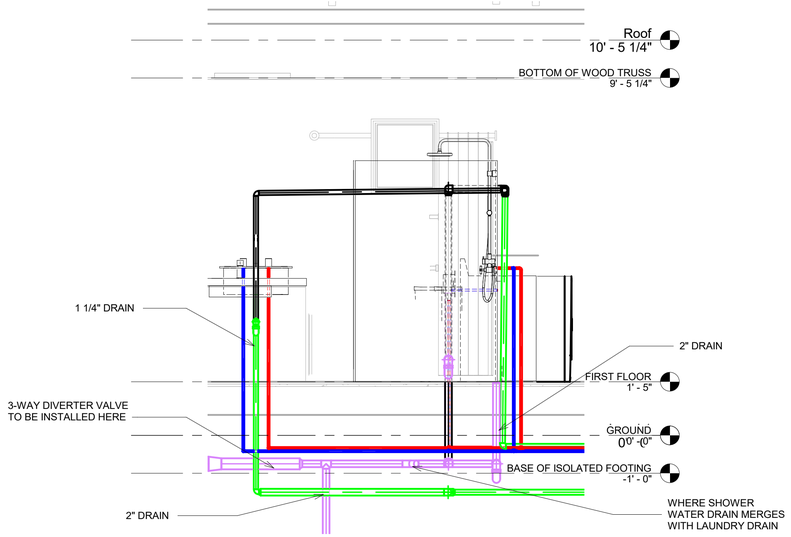
1 LAUNDRY STANDPIPE VIEW

1/2" = 1'-0"



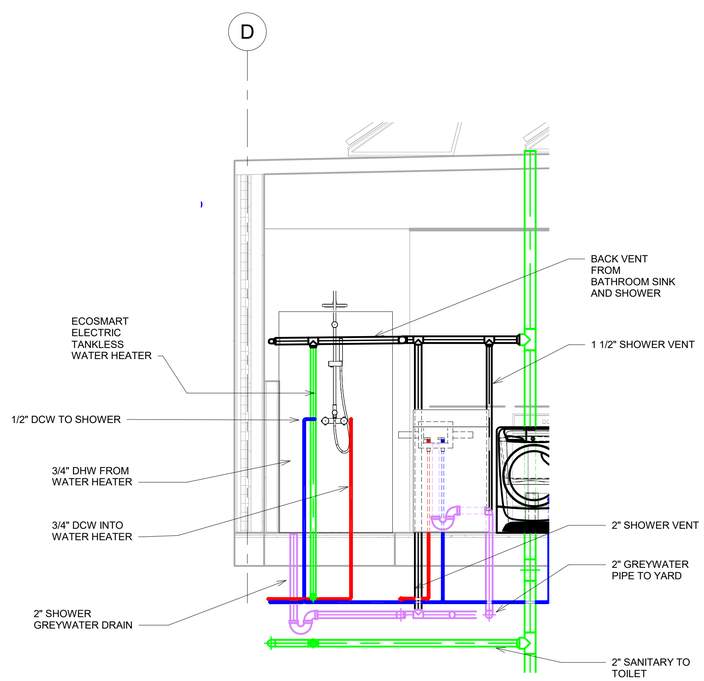
2 DISHWASHER TO SINK DRAINAGE VIEW

1/2" = 1'-0"



3 BATHROOM GREYWATER DRAINAGE VIEW

1/2" = 1'-0"



4 MECHANICAL WEST FACING VIEW

1/2" = 1'-0"

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1202 N WALNUT STREET, CHAMPAIGN, IL -61820

CONSULTANTS:

- DARCY BEAN CONSTRUCTION
- THORNTON TOMASETTI
- AFFILIATED ENGINEERS INC

NO.	DESCRIPTION	DATE
1	Revision 1	Date 1

SECTION VIEWS

DRAWN BY:

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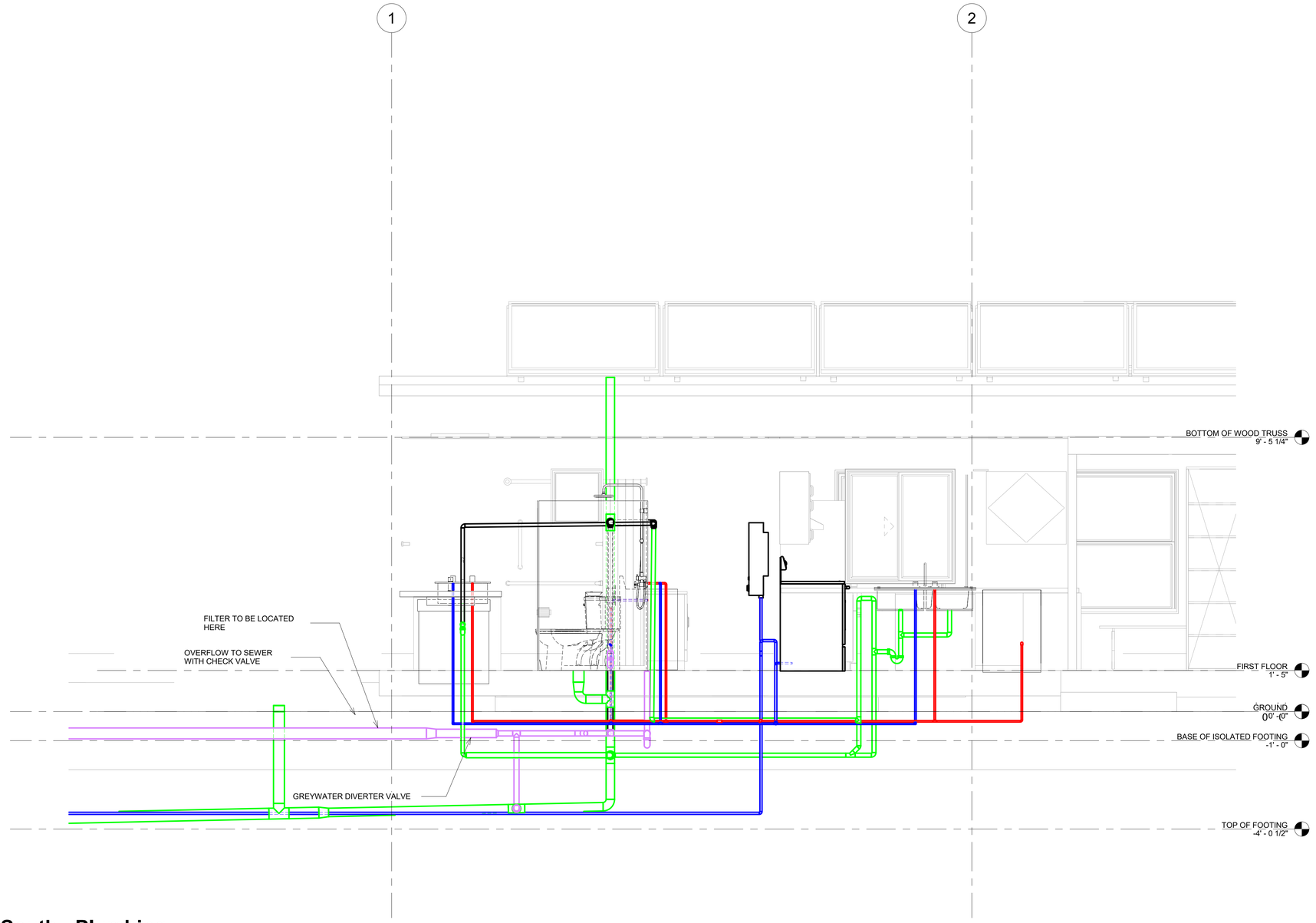

1 South - Plumbing

1/2" = 1'-0"

ADAPTHAUS

FLEXIBLE, SUSTAINABLE, AFFORDABLE

ILLINOIS SOLAR DECATHLON 2018 - 21

TEAM NAME

ADAPTHAUS

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NO.	DESCRIPTION	DATE

SOUTH ELEVATION

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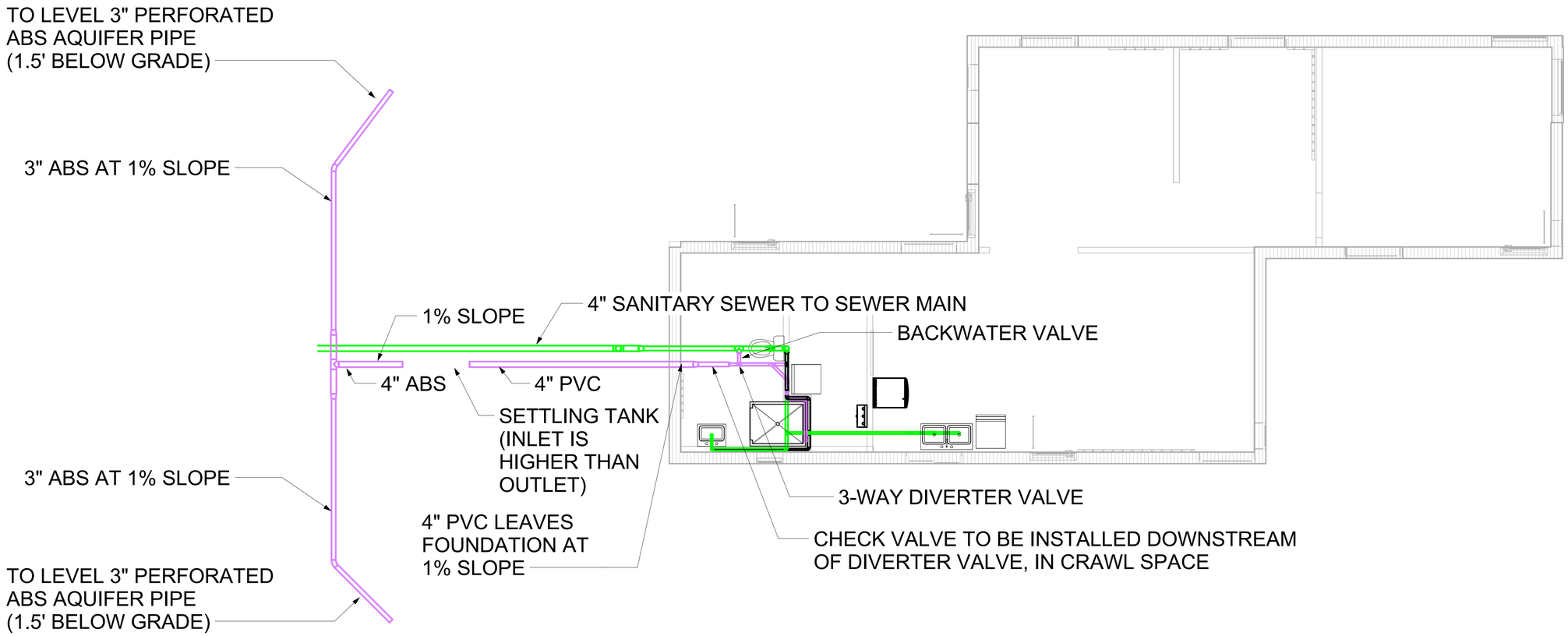
P105



1 Proposed Greywater (Yard)

1/4" = 1'-0"

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NO.	DESCRIPTION	DATE

Greywater Site Plan

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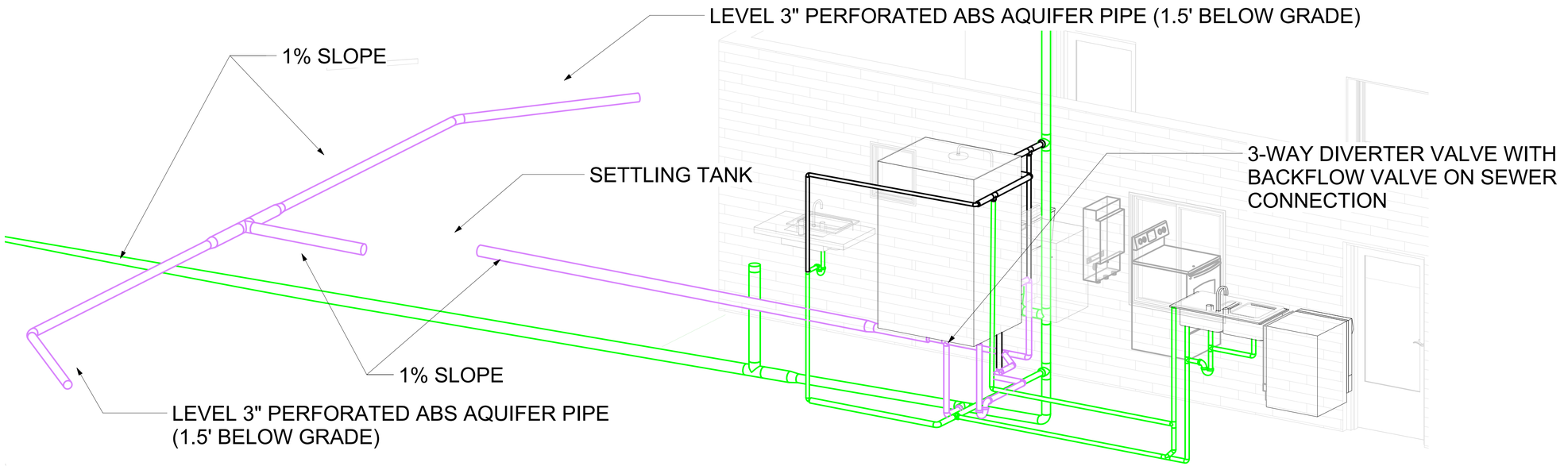
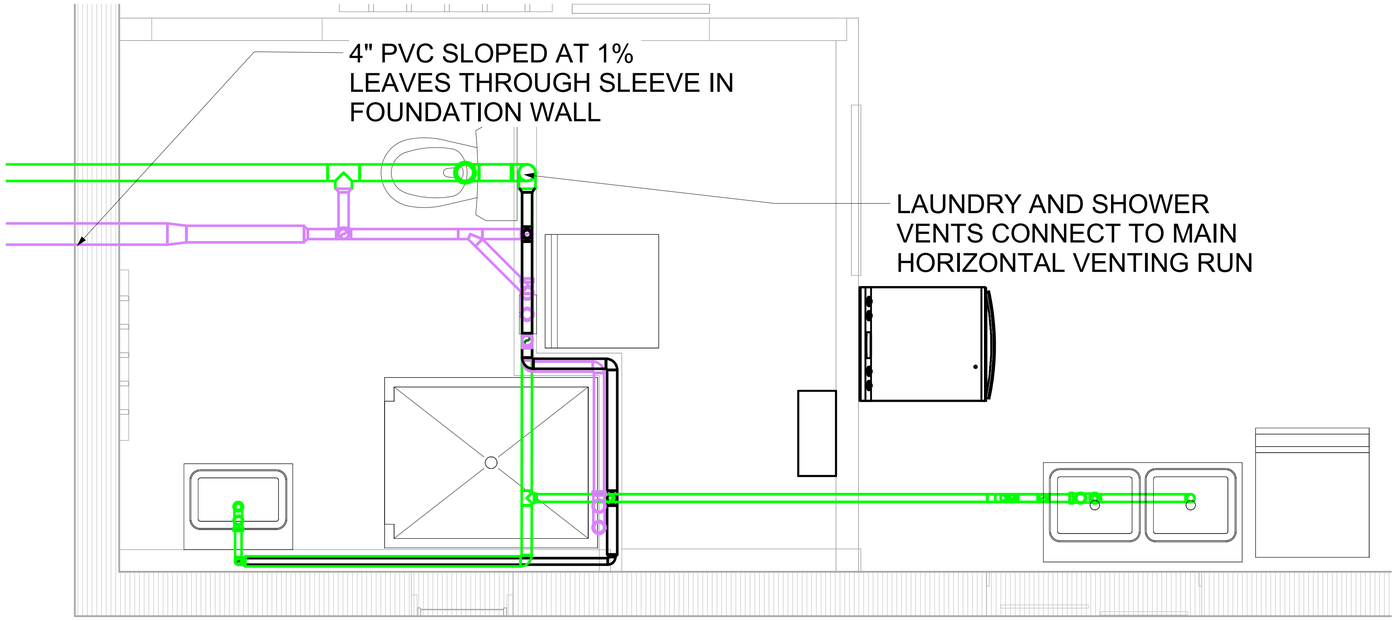
P106



1 Greywater Isometric



2 Proposed Greywater (Crawl Space)

3/4" = 1'-0"

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Greywater Isometric

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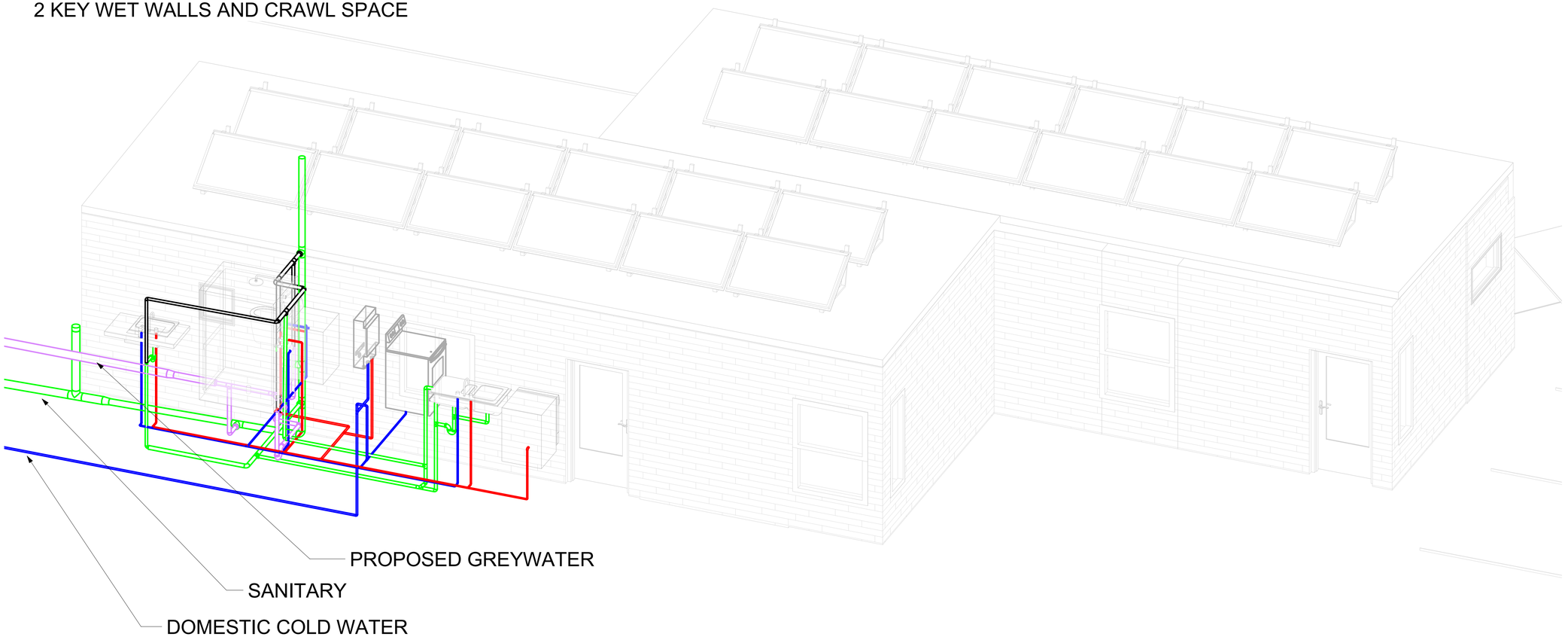
*PLUMBING IS CONSOLIDATED IN ONE CORNER
OF THE HOME AND TO BE ACCESSED THROUGH
2 KEY WET WALLS AND CRAWL SPACE



1 PLUMBING ISOMETRIC

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NO.	DESCRIPTION	DATE
1	Revision 1	Date 1

PLUMBING ISOMETRIC

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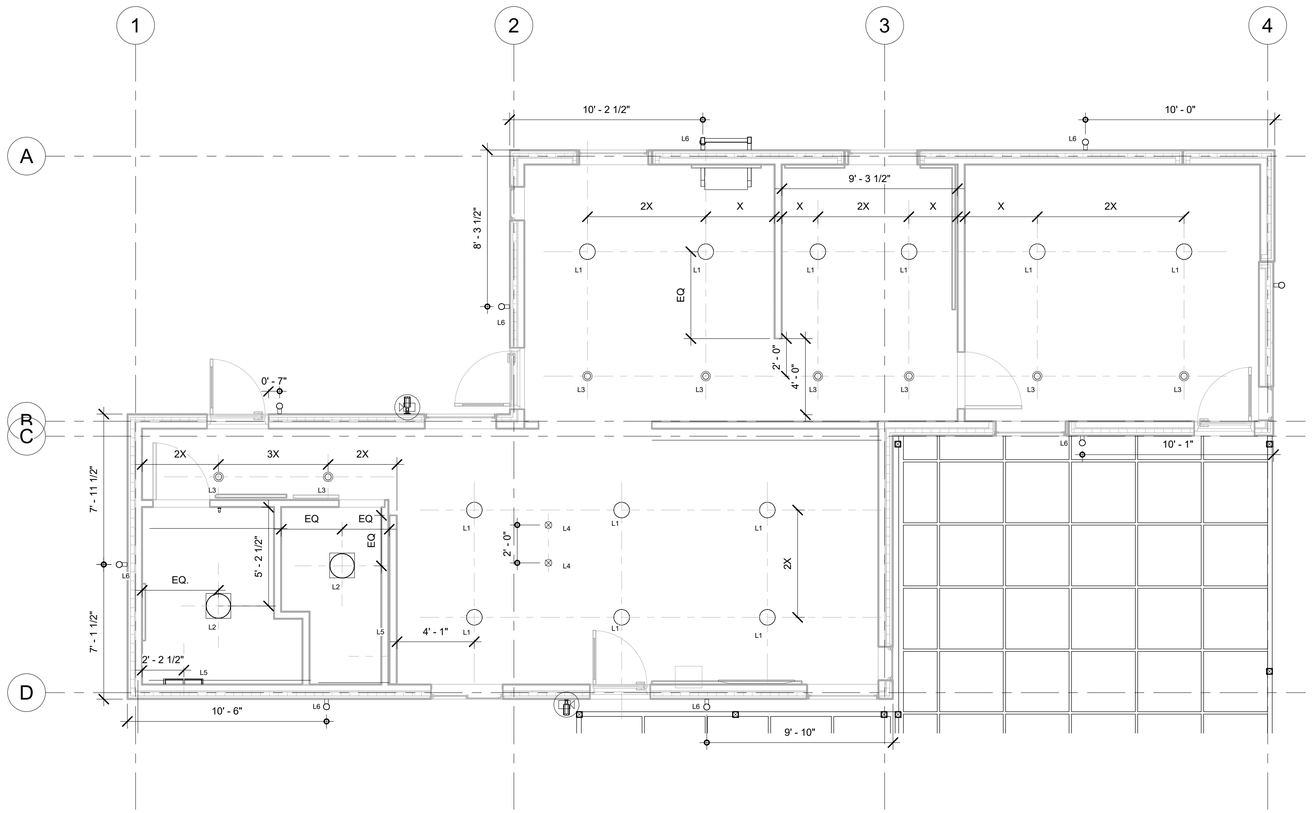
P201



1 REFLECTED CEILING PLAN-LIGHTING

1/4" = 1'-0"

LIGHTING SCHEDULE

S.NO.	ICON	FIXTURE TYPE	MANUFACTURER	MODEL NO.	MOUNT HEIGHT	COLOR	DIMMABILITY	APP CONTROL	FINISH	POWER/LUMEN	QUANTITY	LOCATION
L1	○	DISC LED 6" FLUSH MOUNT LIGHT	WAC LIGHTING	FM-304-930-WT-4	NOT APPLICABLE	SOFT WHITE, 3000K	YES	YES	WHITE	12W / 670LUMEN	12	INTERIOR | LIVING, KITCHEN, DINING, STUDY, AIRBNB
L2	▢	SQUARE CEILING MOUNT LIGHT	WAC LIGHTING	FM-07SQ-935-BN	NOT APPLICABLE	BRIGHT WHITE, 3500K	YES	YES	BRUSHED NICKEL	15W / 1100LUMEN	2	INTERIOR | TOILET AND UTILITY
L3	◦	RECESSED LED 8 INCH WHITE FLUSH MOUNT CEILING LIGHT	WAC LIGHTING	FM-616G2-930-WT	NOT APPLICABLE	SOFT WHITE, 3000K	YES	YES	WHITE	16W / 1150LUMEN	8	INTERIOR | ENTRY PASSAGE, CORRIDORS
L4	※	CHARMED PENDANT LIGHT	WAC LIGHTING	PD-54901-BN	NOT APPLICABLE	SOFT WHITE, 3000K	YES	YES	BRUSHED NICKEL	15W / 1100LUMEN	2	INTERIOR | KITCHEN ISLAND
L5	▭	TURBO BATH AND VANITY LIGHT	WAC LIGHTING	WS-180424-30-BN	6' - 6" FROM INTERIOR FLOOR LVL	SOFT WHITE, 3000K	YES	YES	BRUSHED NICKEL	12W / 1480 LUMEN	2	INTERIOR | TOILET SINK, MECHANICAL SHAFT
L6	▭○	DESIGNERS FOUNTAIN VALUE COLLECTION WALL LANTERNS	DESIGNERS FOUNTAIN	1161-BK	6' - 6" FROM DECK LVL	SOFT WHITE, 2700K	NO	YES	BLACK	60W / 800 LUMEN	9	EXTERIOR | FACADES

TOTAL QUANTITY: **35**

2 LIGHTING SCHEDULE

1/8" = 1'-0"

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GENERAL NOTES AND SPECS:

1. THE SYMBOLS USED ARE INDICATIVE OF FIXTURE TYPE, BUT NOT NECESSARILY THE EXACT SHAPE AND SIZE. EXACT PRODUCT TO BE REFERRED TO WITH THE MODEL DETAILS STATED IN THE LIGHTING SCHEDULE.

NO.	DESCRIPTION	DATE

LIGHTING

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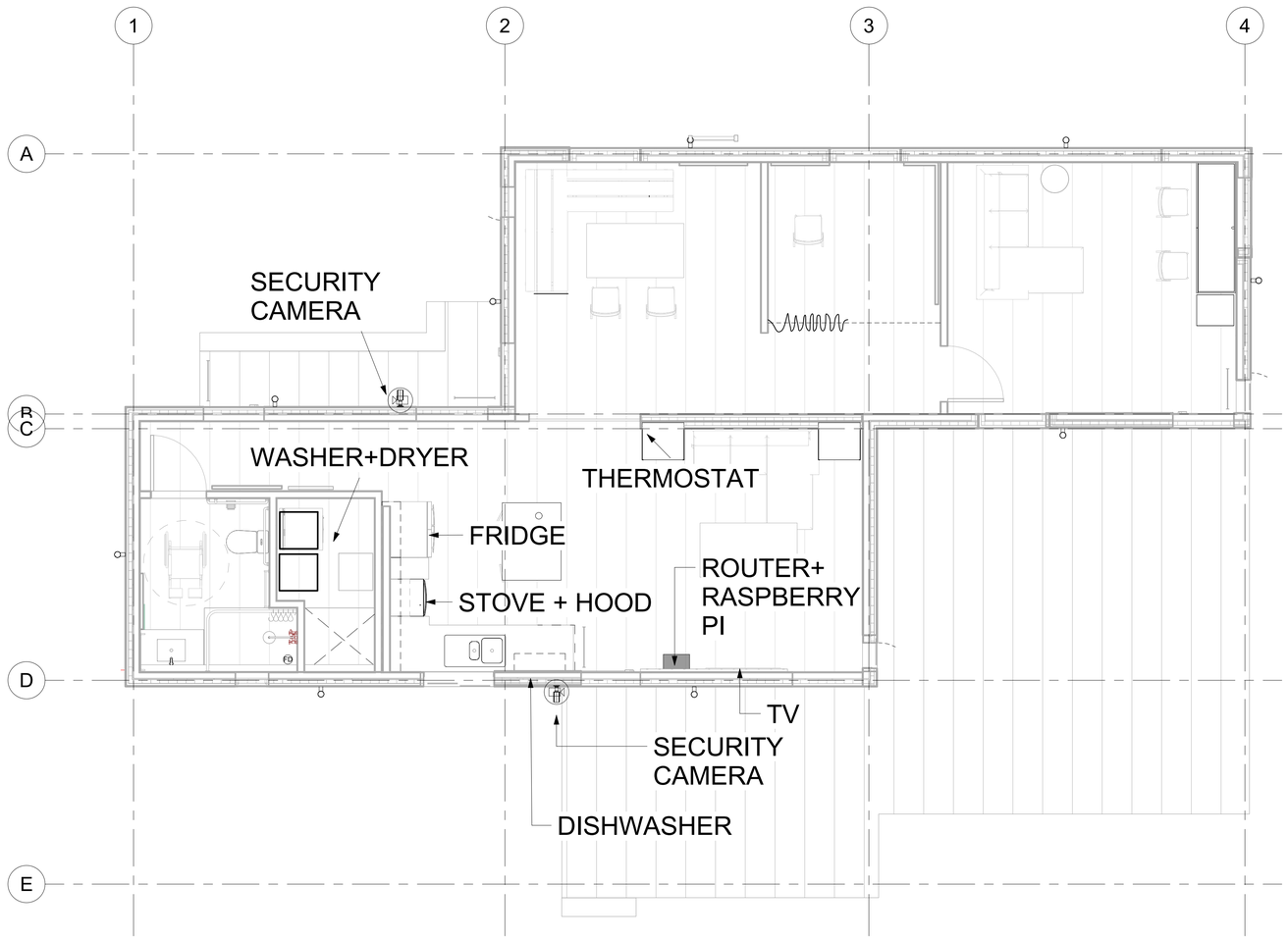
LI101



1 APPLIANCES PLAN

1/4" = 1'-0"

APPLIANCES SCHEDULE		
FIXTURE NAME	**MANUFACTURER**	**MODEL NO.**
36" FREESTANDING SIDE-BY-SIDE REFRIGERATOR	BEKO	BFSB3622SS
24" SLIDE-IN ELECTRIC RANGE	BEKO	SLER24410SS
24" TALL TUB, TOP CONTROL DISHWASHER	BEKO	DDT39432X
24" FRONT-LOAD 2.5 CU FT WASHER	BEKO	WMY10148C2
24" FRONT-LOAD HEAT PUMP VENTLESS DRYER	BEKO	HPD24412W
EXHAUST FAN FOR UNDER CABINET FOUR-WAY CONVERTIBLE RANGE HOOD	BROAN	F402404

APPLIANCES SCHEDULE

1/8" = 1'-0"

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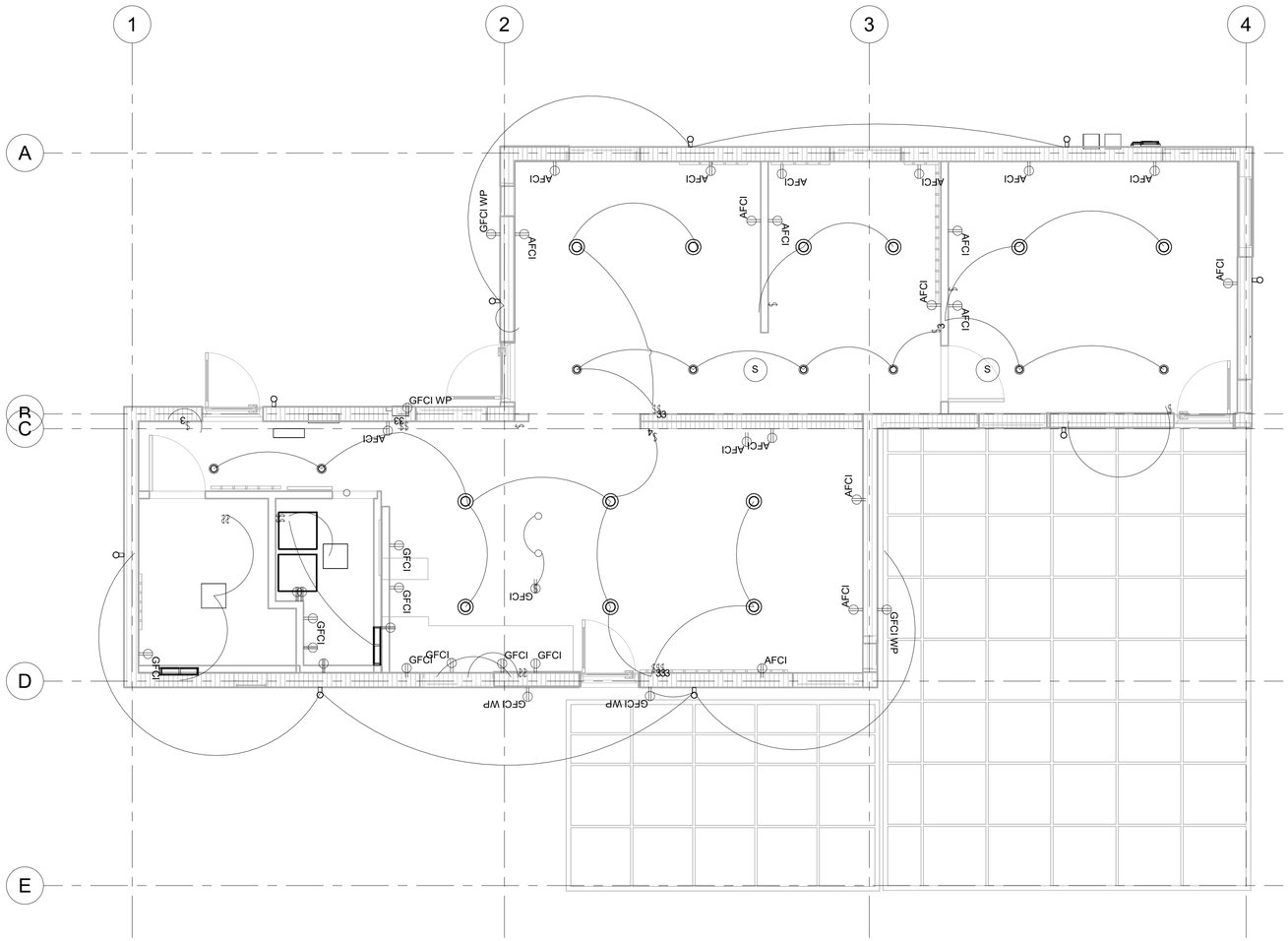
NO.	DESCRIPTION	DATE

APPLIANCES

DRAWN BY:

CHECKED BY:

LI102



1 REFLECTED CEILING PLAN-SWITCH PLAN

1/4" = 1'-0"

ELECTRICAL SYMBOLS	
	AFIC RATED OUTLET WALL ASSIGNMENT
GFI	GFIC RATED OUTLET WALL ASSIGNMENT
	240V RECEPTACLE
	MAIN BREAKER PANEL

ELECTRICAL SYMBOLS

1/4" = 1'-0"

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GENERAL NOTES AND SPECS:

1. ALL FIXTURES SHALL BE OPERATED THROUGH HOME AUTOMATION SYSTEM. SWITCHES ARE NOT THE PRIMARY SOURCE OF OPERATION AND ARE PROVIDED AS A BACKUP.

NO.	DESCRIPTION	DATE
1	FINAL VERSION	10/21/2019

SWITCH PLAN

DRAWN BY: CHANG CHEN

CHECKED BY:

LI103