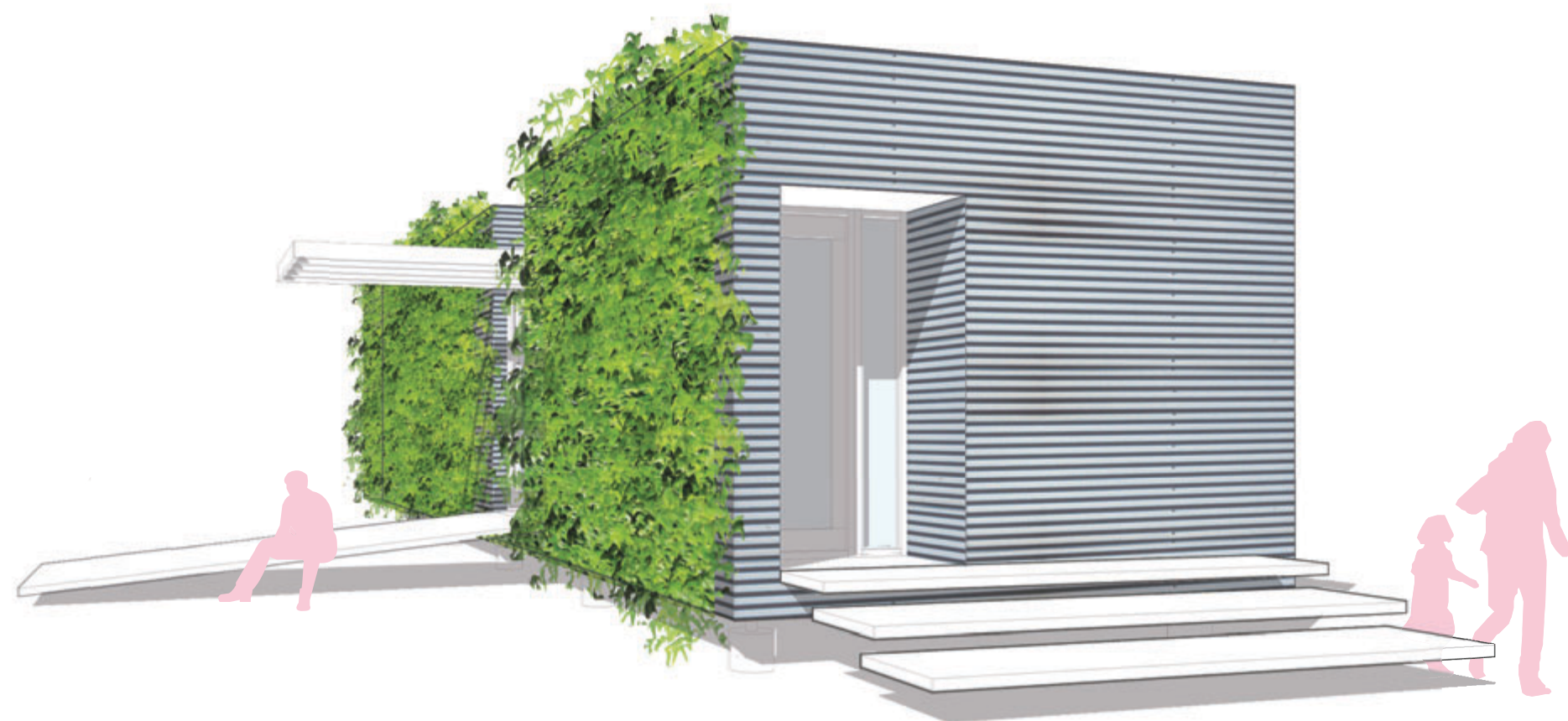
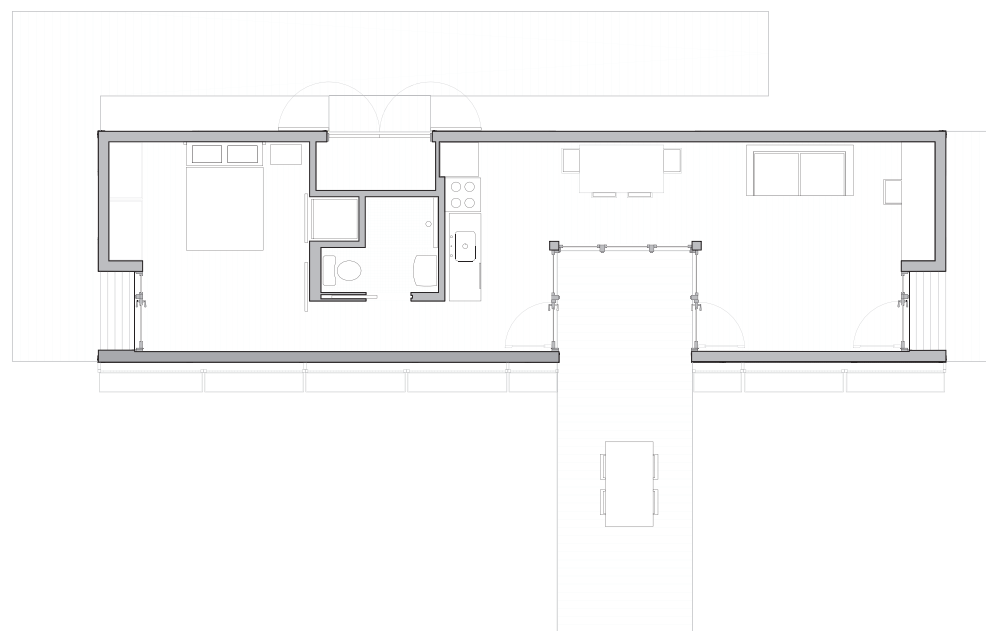
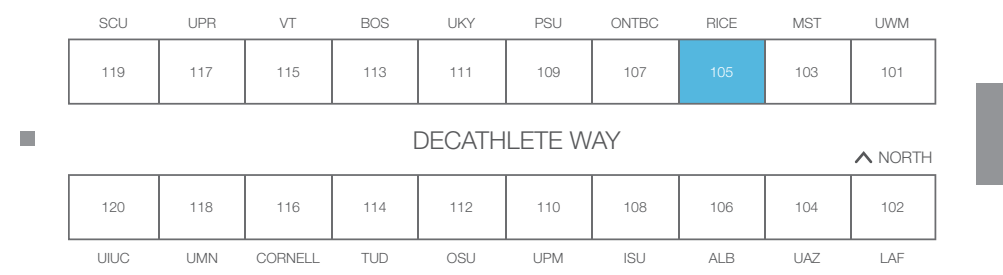


ZEROW HOUSE

Zero Energy Row House

Rice Solar Decathlon 2009
Construction Set
June 2, 2009

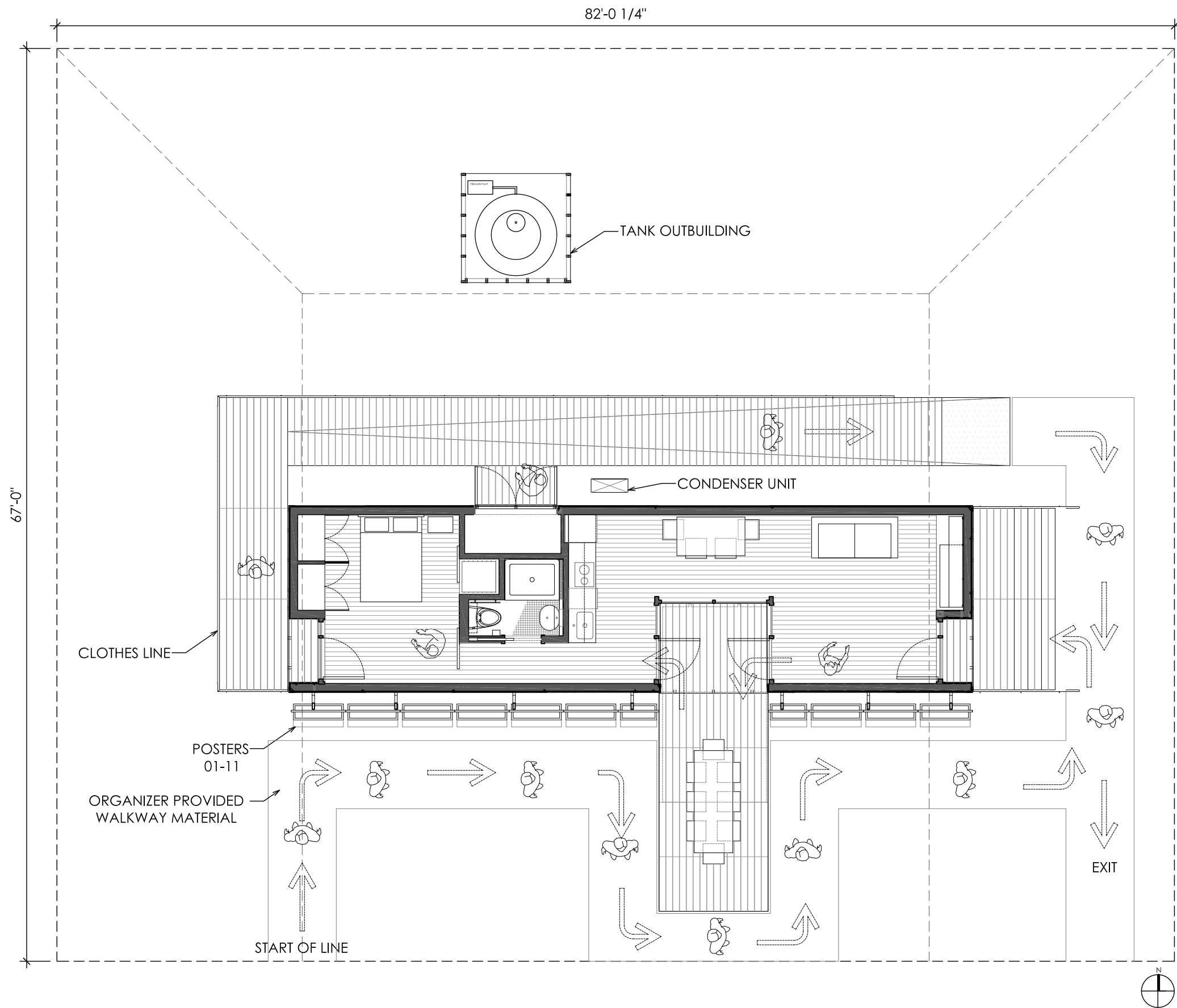
The ZEROW HOUSE will be located at Project Row Houses in the Third Ward community of Houston, and is planned in partnership with Row House Community Development Corporation. Our design addresses the small size and limited budget of typical row houses through replication, innovative use of current technologies, local materiality, and an understanding of life-cycle costs. The ZEROW HOUSE is a re-imagining of zero-energy living for an affordable solar home for Houston.



Rice Building Workshop
Rice University School of Architecture, MS-50
P.O. Box 1892, Houston, Texas 77251-1892

2009 Rice University Solar Decathlon Sheet Index

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A5.02	Wall Details		S4.02	Light Core Shade Detail				
A5.03	Wall Details							
A5.04	Wall Details							

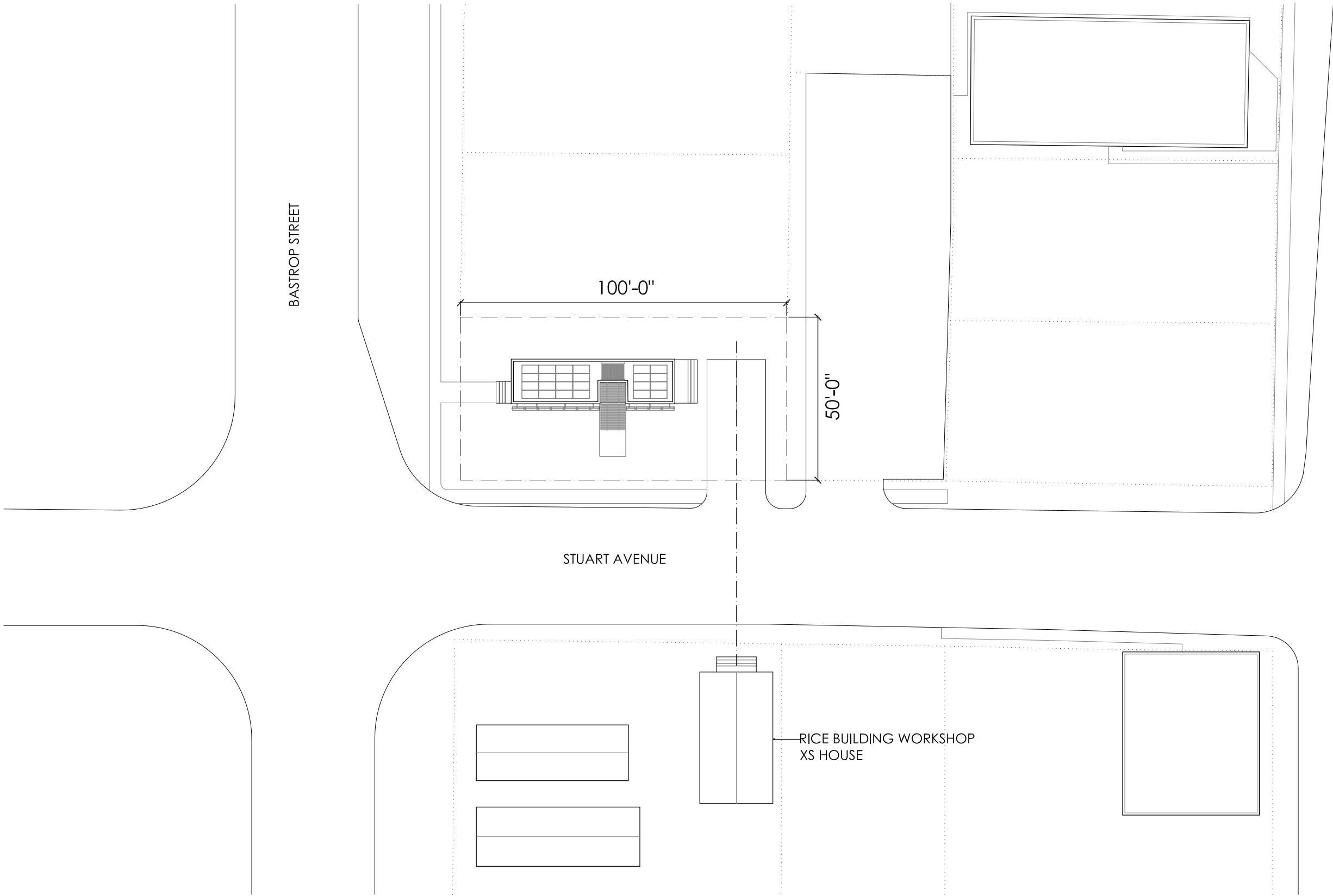


1 SITE PLAN-THE MALL D.C.
1/8"=1'



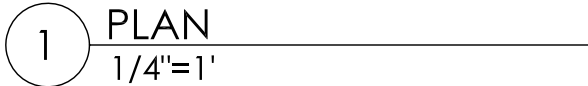
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	12.2.2008 RS
	05.30.2009 JLC

Date: 06.02.2009
Drawn by: SLS
Checked by: DS
Approved by: xx



1 SITE PLAN-PROJECT ROW HOUSE-HOUSTON
1/32"=1'

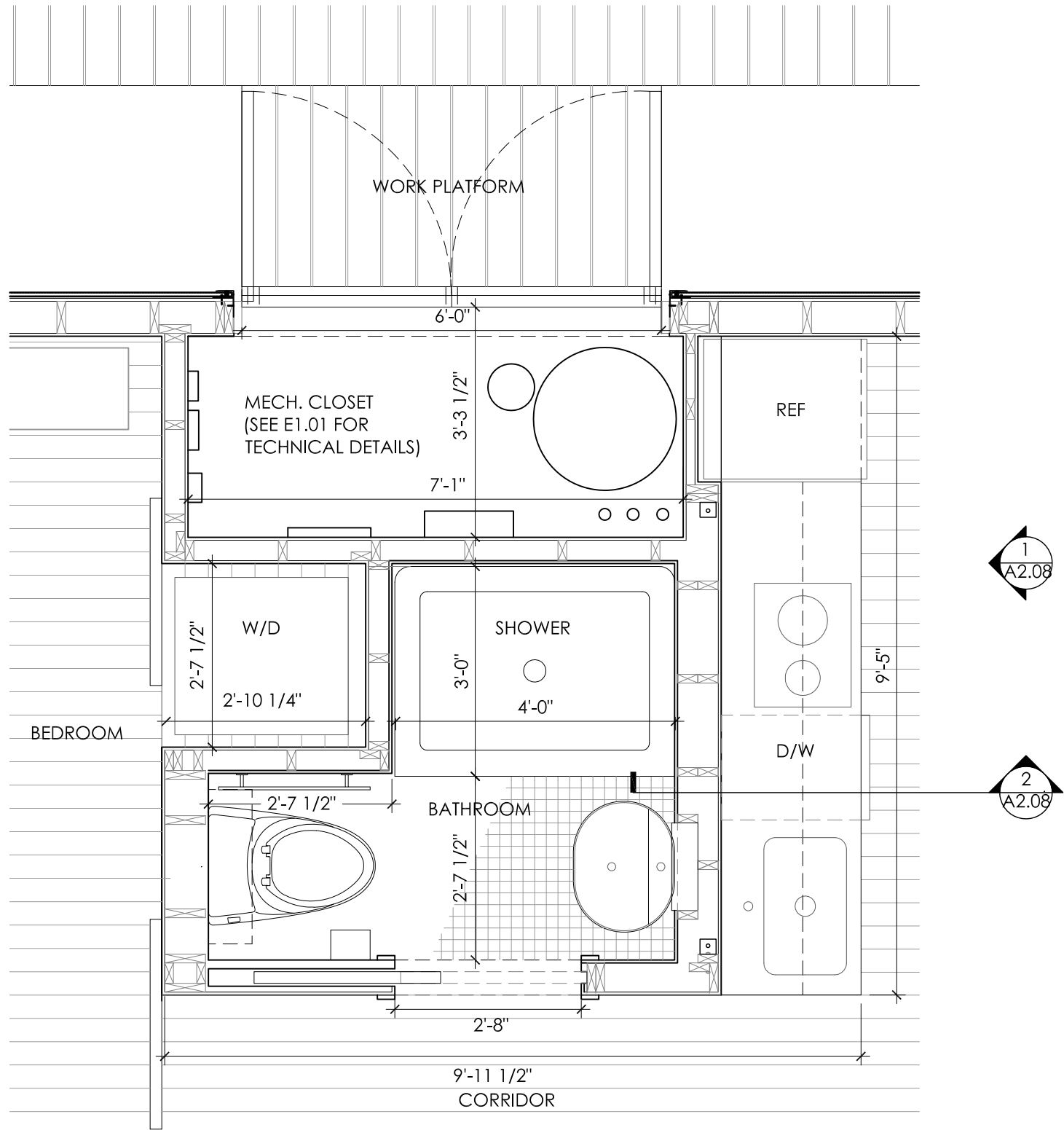
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Date:	06.02.2009
Drawn by:	JLC
Checked by:	DS
Approved by:	xx



SOLAR DECATHLON

Date: 06.02.2009
 Drawn by: SLS
 Checked by: DS
 Approved by: xx

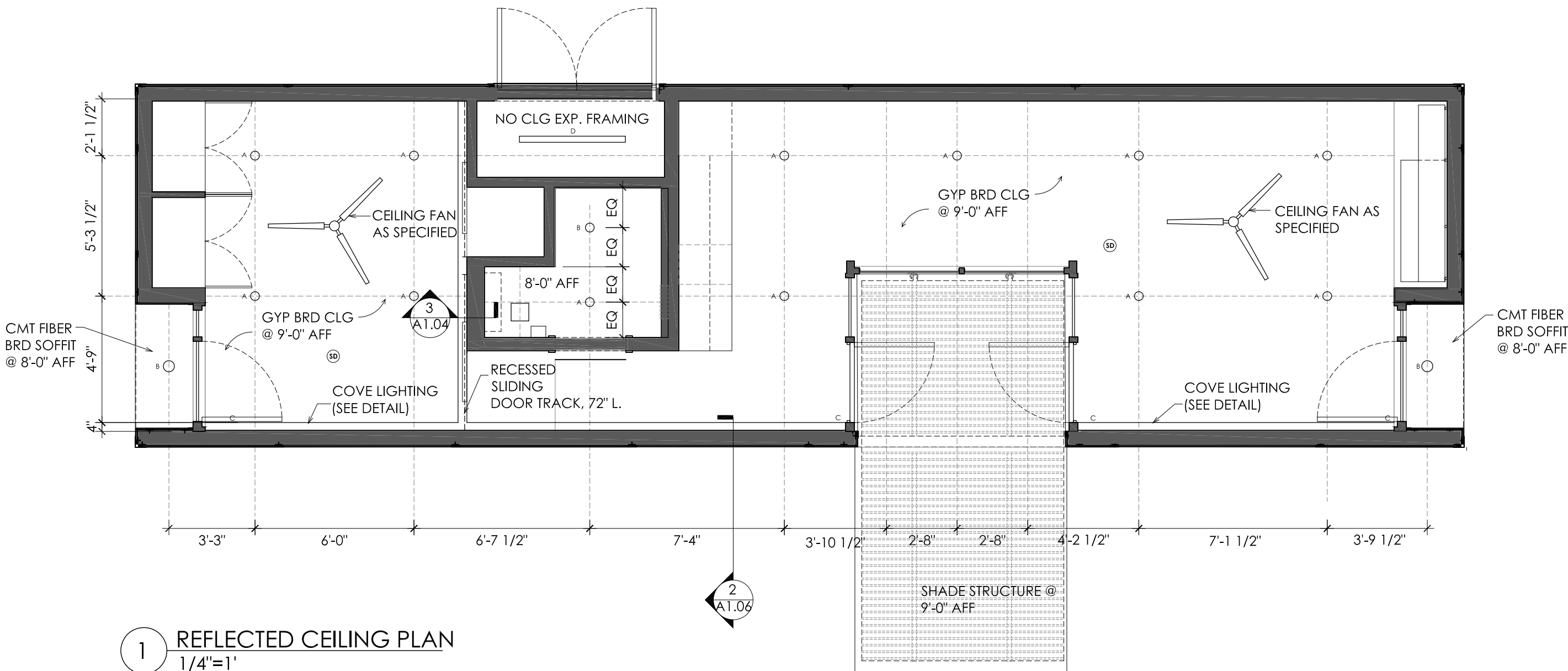
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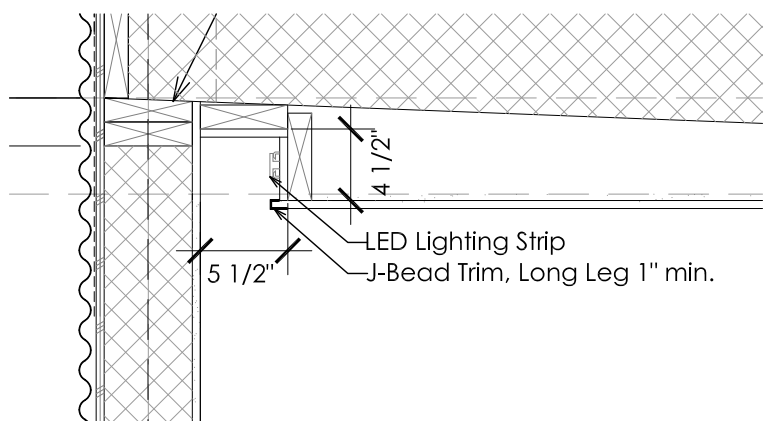
1 WET CORE PLAN
1/2"=1'-0"

Revisions:	
12.3.2008 RS	
12.06.2008 SLS	
05.19.2009 JLC	

Date: 06.02.2009
Drawn by: SLS
Checked by: DS
Approved by: xx



1 REFLECTED CEILING PLAN
1/4"=1'

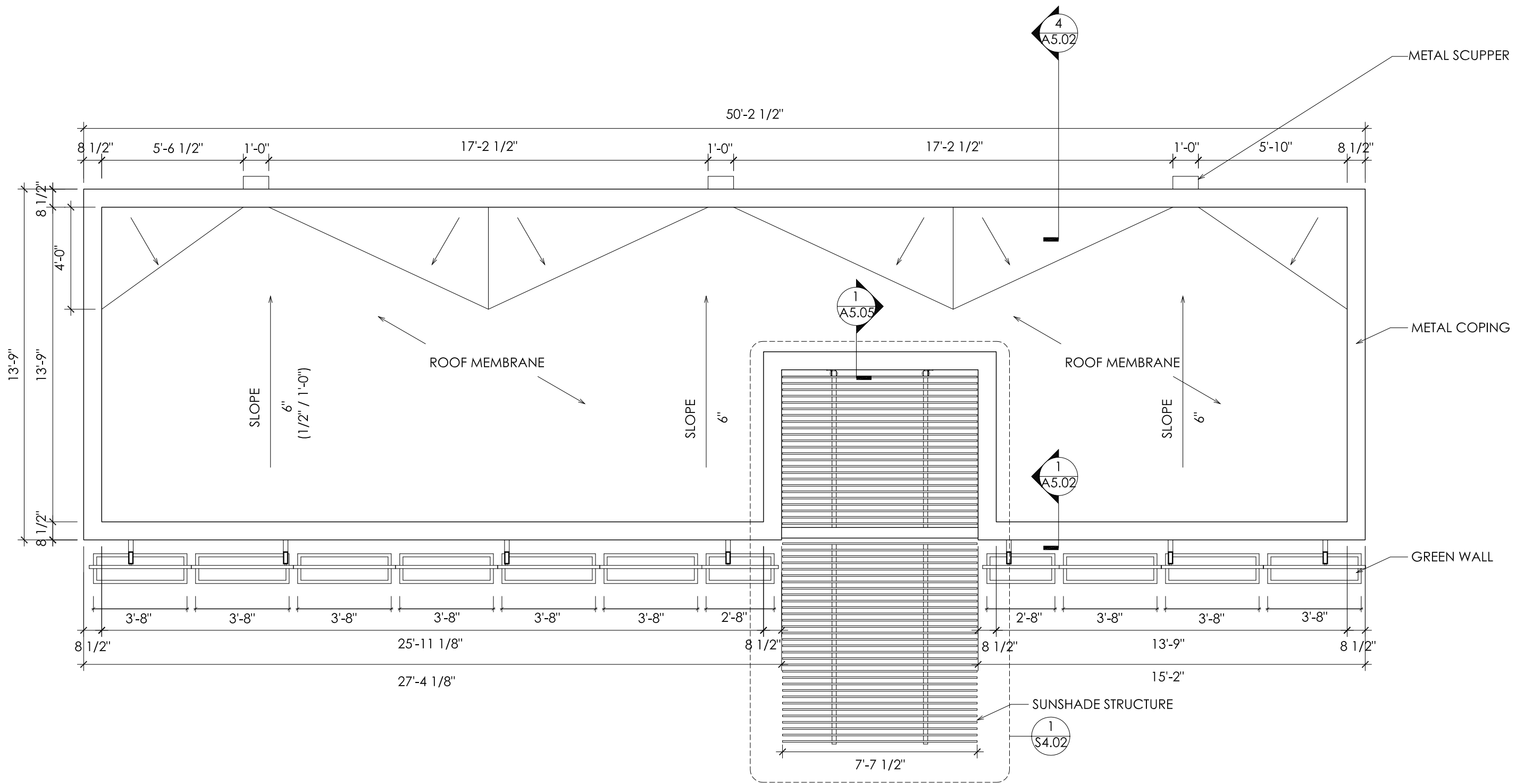


2 COVE DETAIL- LED LIGHTING STRIP
1"=1'

Revisions:

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05.19.2009	JLC
05.24.2009	SBG

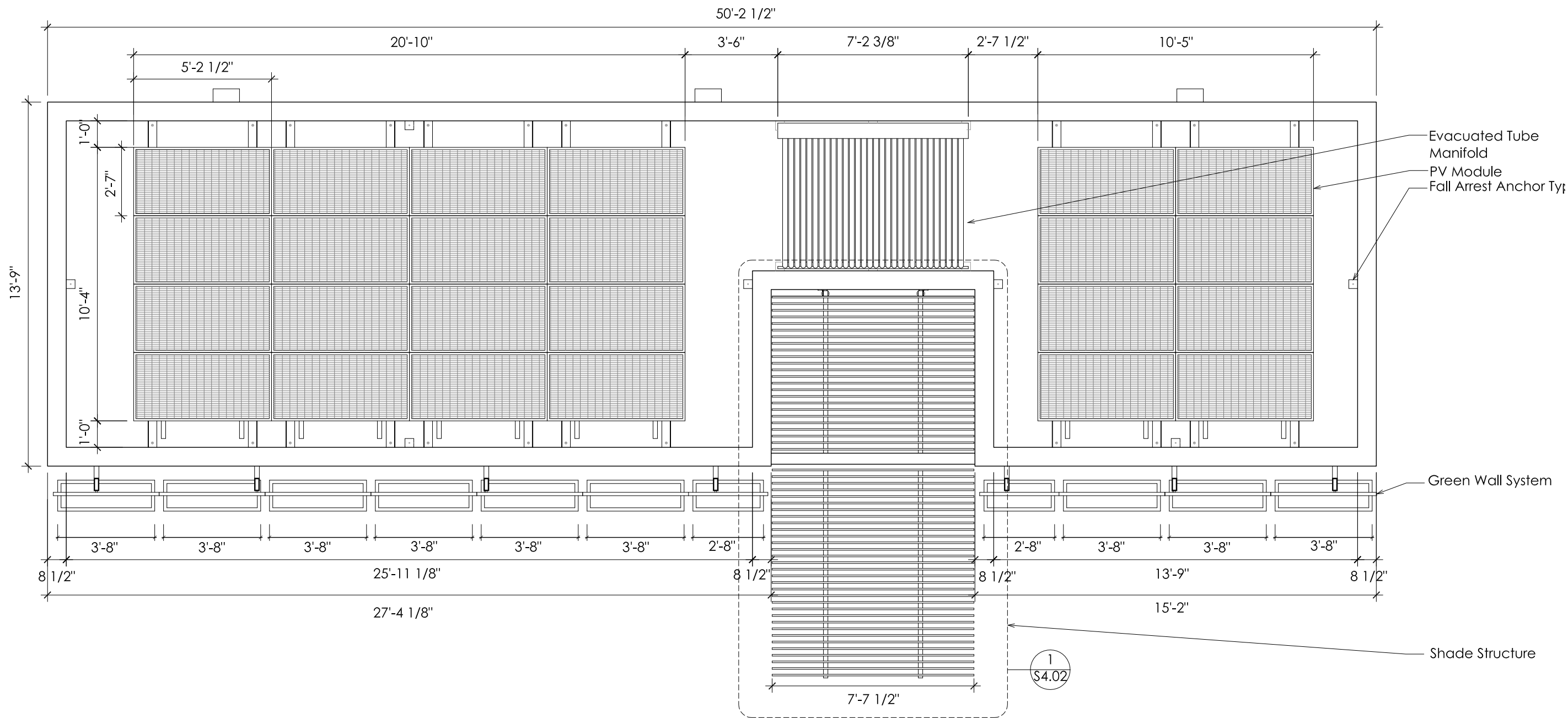
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 Drawn by: SBG
 Checked by: DS
 Approved by: xx



1 ROOF DRAINAGE PLAN
1/4"=1'

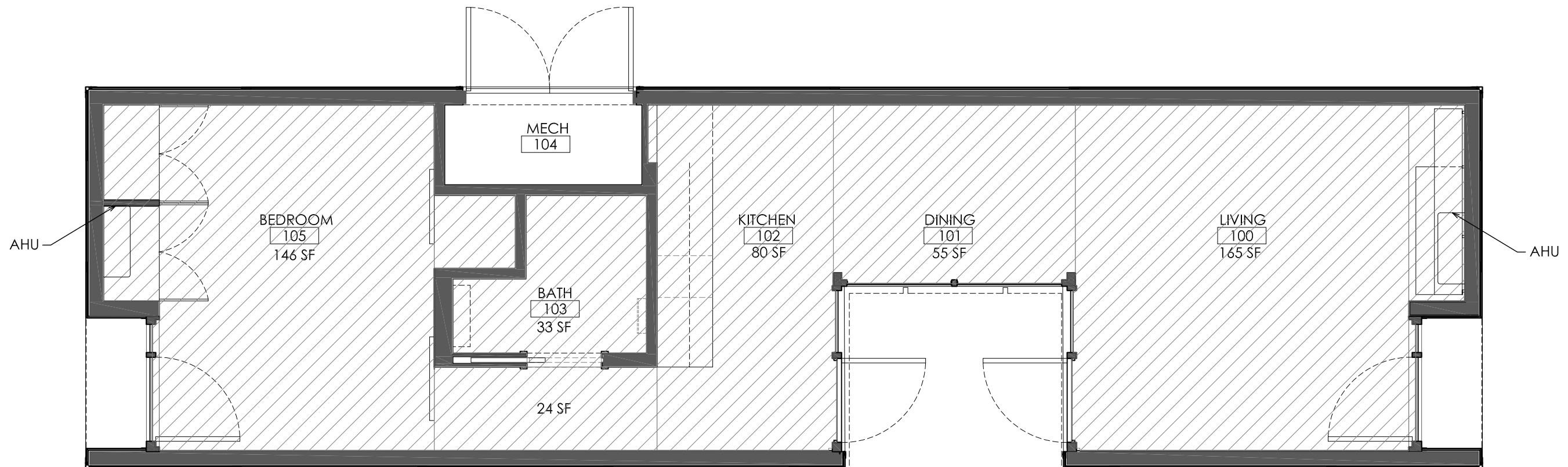
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05.23.2009 SBG	

Date: 06.02.2009
Drawn by: SBG
Checked by: DS
Approved by: xx



1 ROOF SOLAR PLAN
1/4"=1'

Revisions:	
	05.19.2009 JLC
Date:	06.02.2009
Drawn by:	JLC
Checked by:	DS
Approved by:	xx



CONDITIONED SPACE:	
BEDROOM	146 SF
HALL	24 SF
BATH	33 SF
KITCHEN	80 SF
DINING	55 SF
LIVING	165 SF
TOTAL	503 SF

1 **CONDITIONED AREA PLAN**
1/4"=1'

ZEROWHOUSE

Rice University Solar Decathlon 2009
Zero Energy Row House



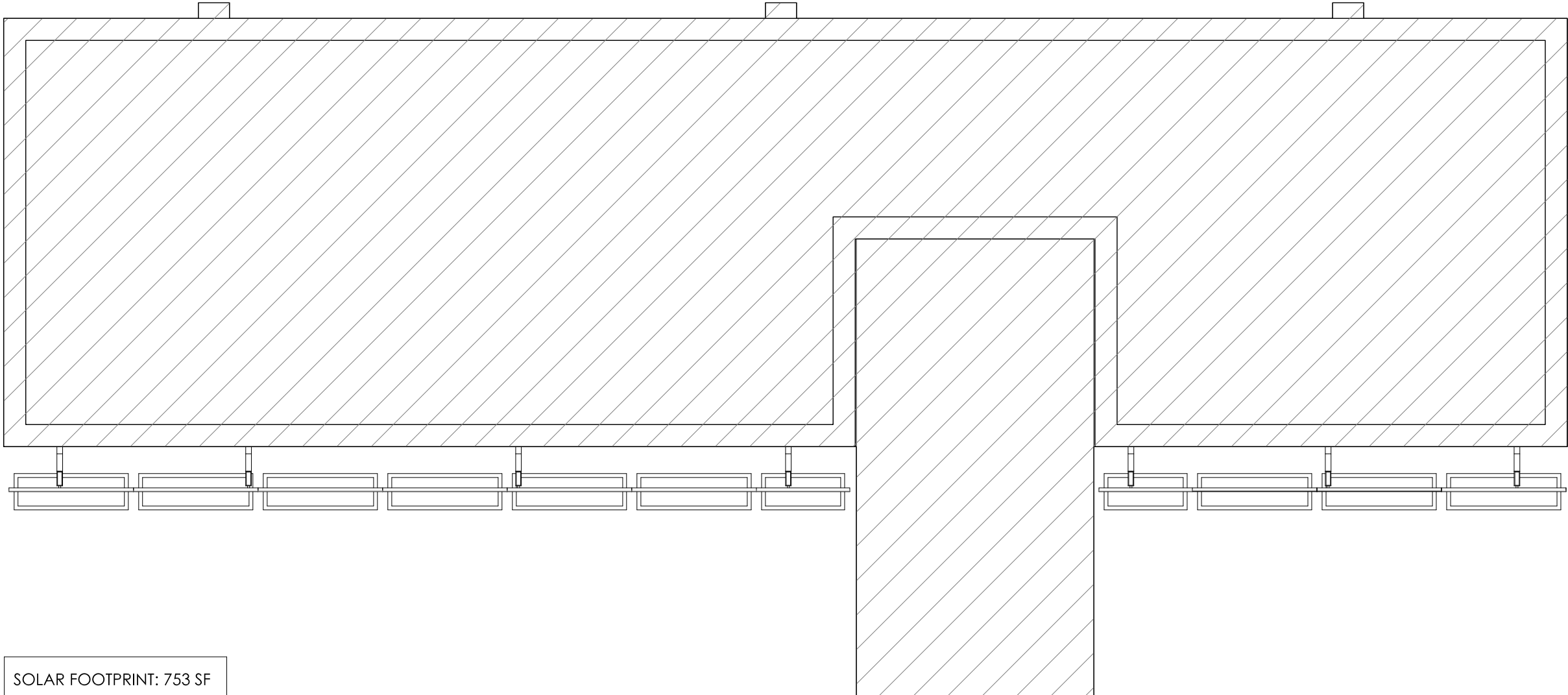
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Rice University School of Architecture, MS-50
P.O. Box 1892, Houston, Texas 77251-1892

Revisions:

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12.05.2008	SLS
05.19.2009	JLC

Date:	06.02.2009
Drawn by:	SLS
Checked by:	xx
Approved by:	xx

Scale: 1/4" = 1'-0"
ARCH PLANS
A1.09



1 SOLAR FOOTPRINT PLAN
1/4"=1'

Revisions:

05.19.2009	JLC

Date: 06.02.2009
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Checked by: DS
Approved by: xx

Scale: 1/4" = 1'-0"
ARCH PLANS

A1.10

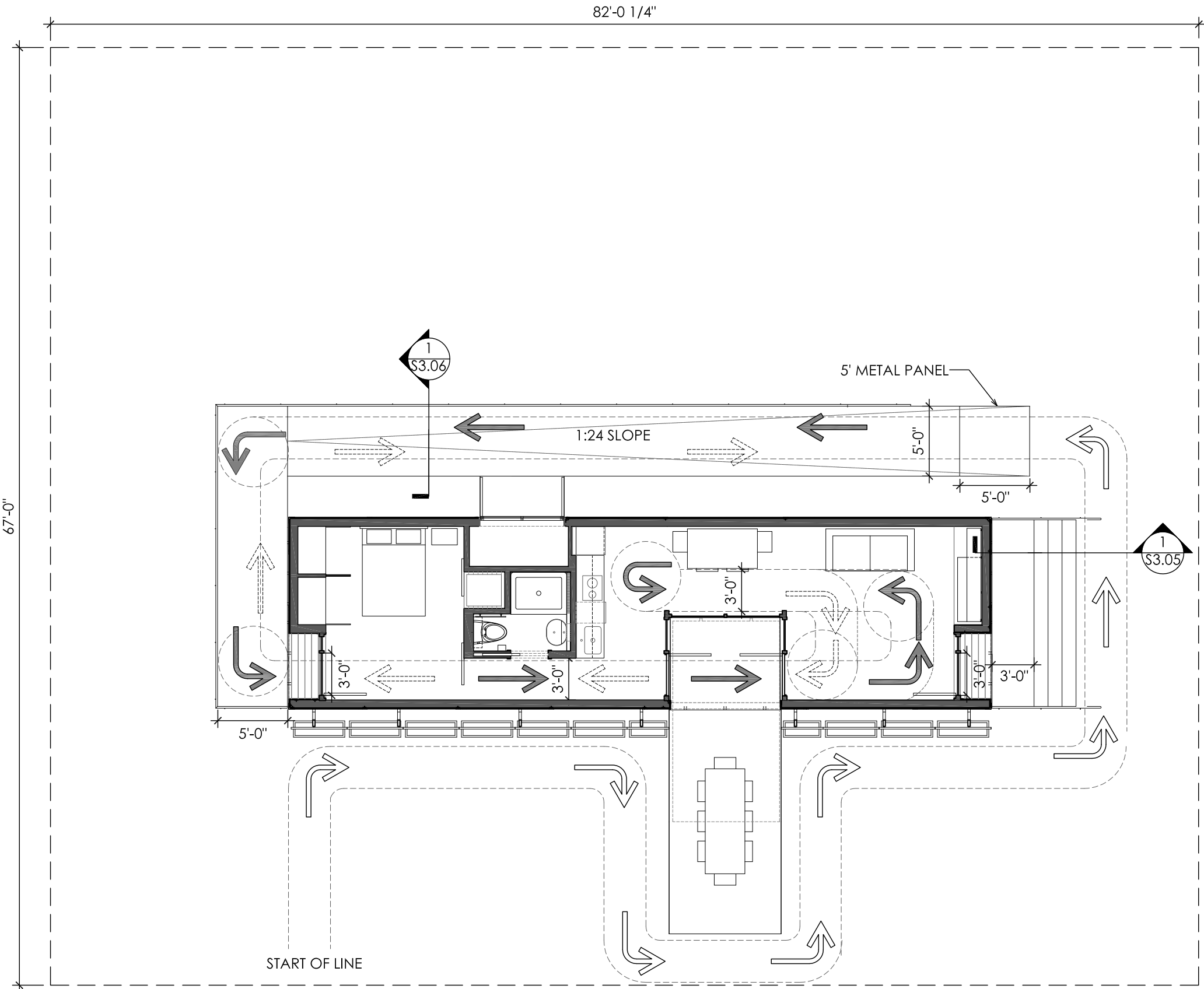
KEY

EXIT ROUTE

ENTRANCE ROUTE

WAITING LINE ROUTE

60" WHEEL CHAIR TURNING CIRCLE



1

ADA TOUR PLAN

1/8"=1'

Revisions:

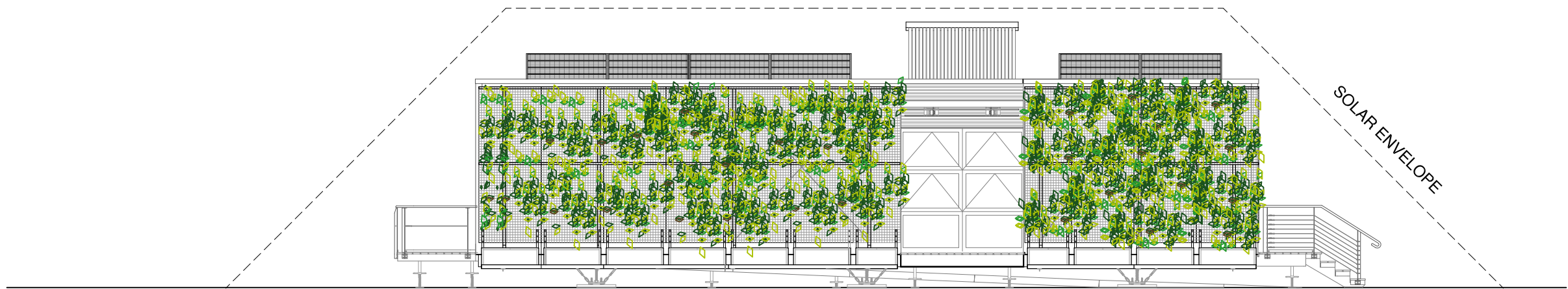
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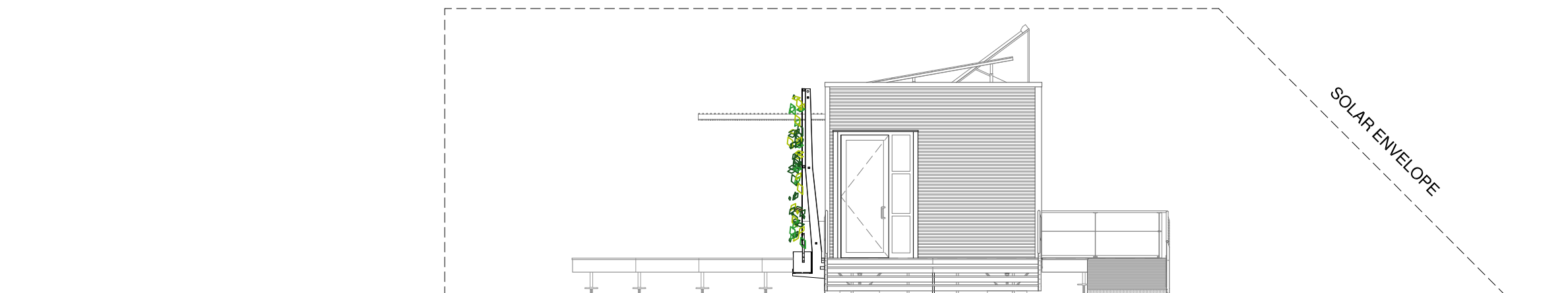
Drawn by: SLS

Checked by: DS

Approved by: xx



1 SOUTH ELEVATION
1/8"=1'



2 EAST ELEVATION
1/8"=1'

ZEROWHOUSE

Rice University Solar Decathlon 2009

Zero Energy Row House

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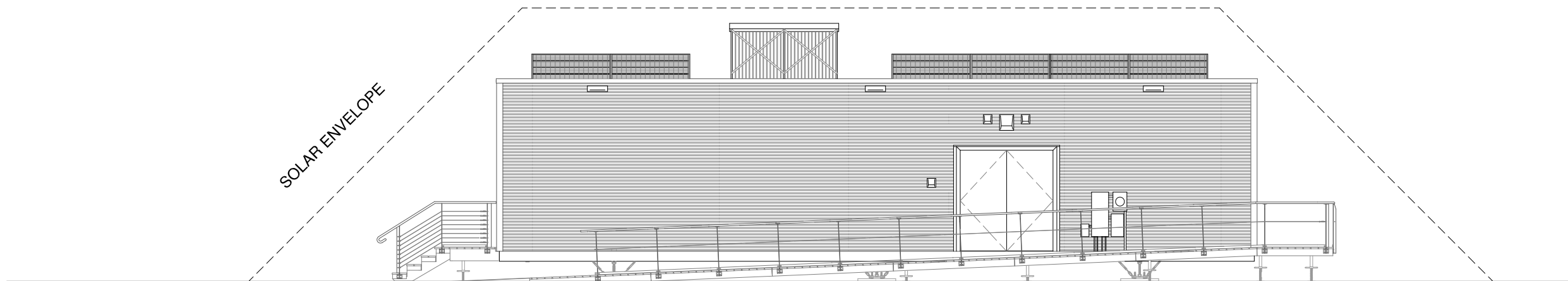
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05.28.2009 JLC

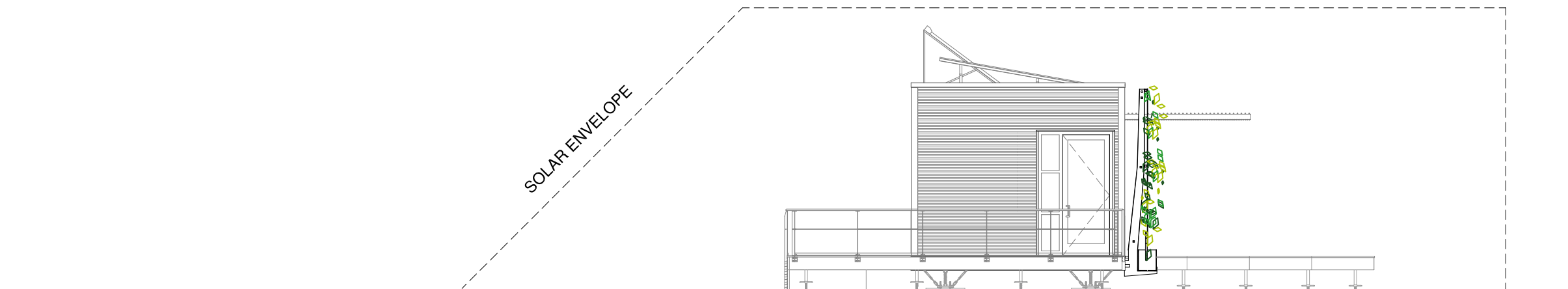
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 Drawn by: SLS
 Checked by: DS
 Approved by: xx

Scale: 1/8" = 1'-0"
 ARCH
 ELEVATIONS

A2.01



1 NORTH ELEVATION
1/8"=1'

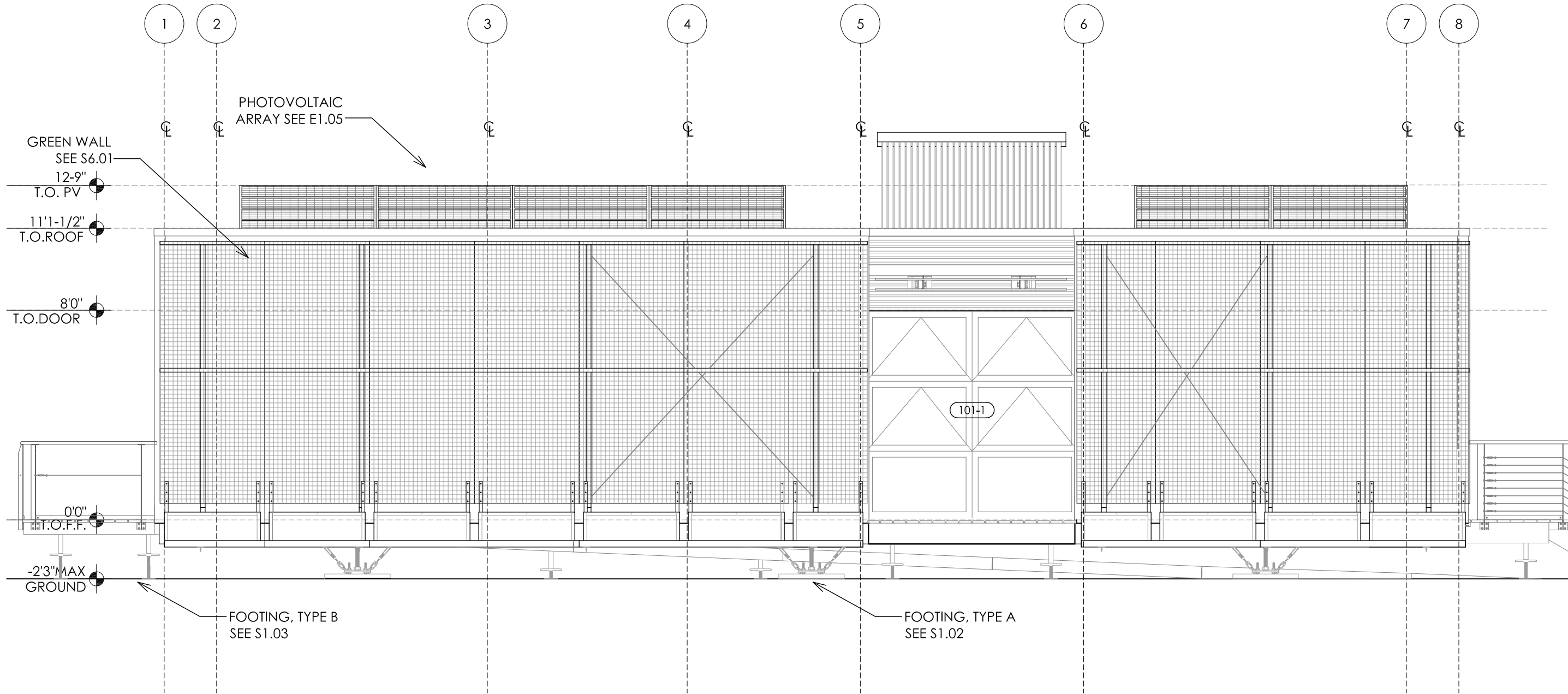


2 WEST ELEVATION
1/8"=1'

Revisions:

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05.28.2009	JLC

Date: 06.02.2009
Drawn by: SLS
Checked by: DS
Approved by: xx

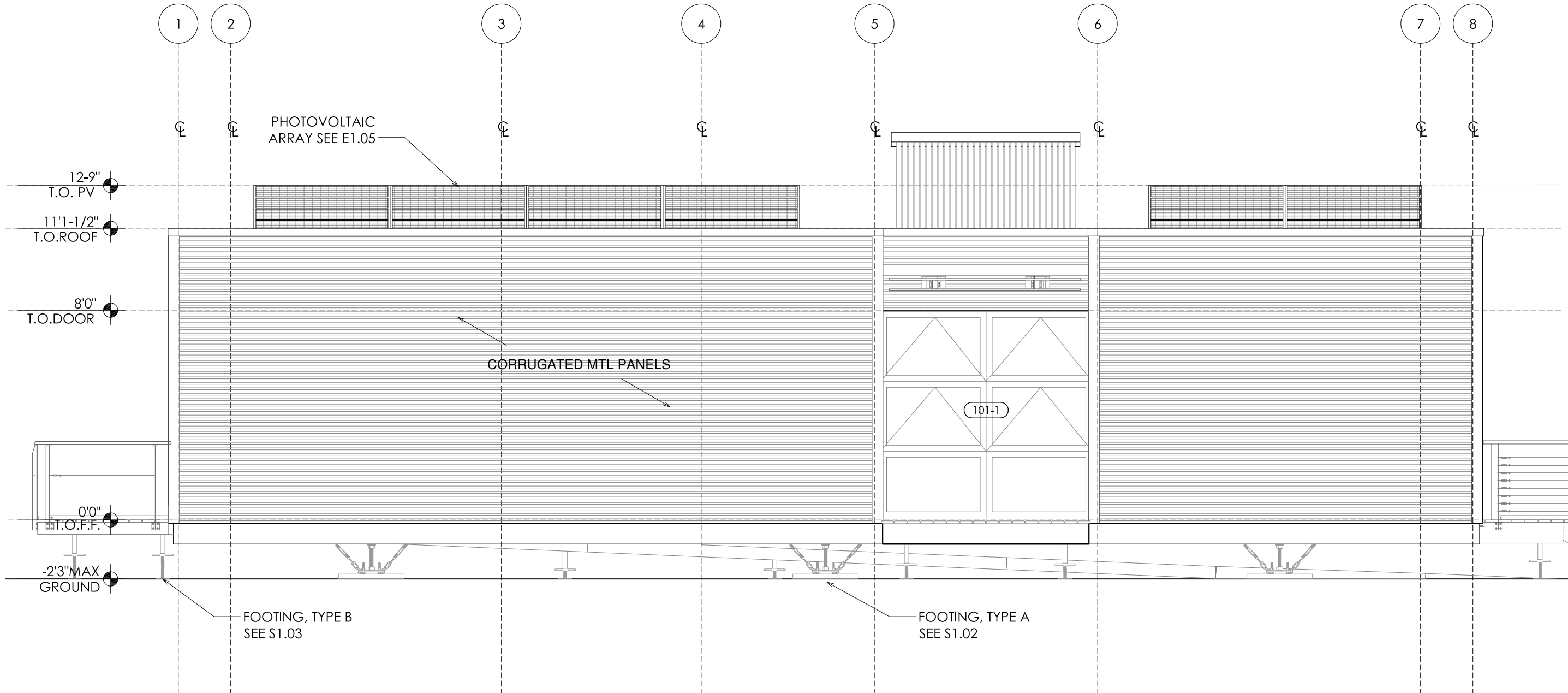


1 SOUTH ELEVATION
1/4"=1'-0"



Revisions:	
10.21.2008 SLS	
12.05.2008 SLS	
05.28.2009 JLC	

Date: 06.02.2009
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Checked by: DS
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1 SOUTH ELEVATION WITHOUT GREEN WALL
1/4"=1'-0"



Revisions:	
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12.05.2008 SLS	
05.30.2009 CGS	

Date: 06.02.2009
Drawn by: SLS
Checked by: DS
Approved by: xx

Scale: 1/4" = 1'-0"
ARCH
ELEVATIONS

A2.04

ZEROWHOUSE

Rice University Solar Decathlon 2009
Zero Energy Row House

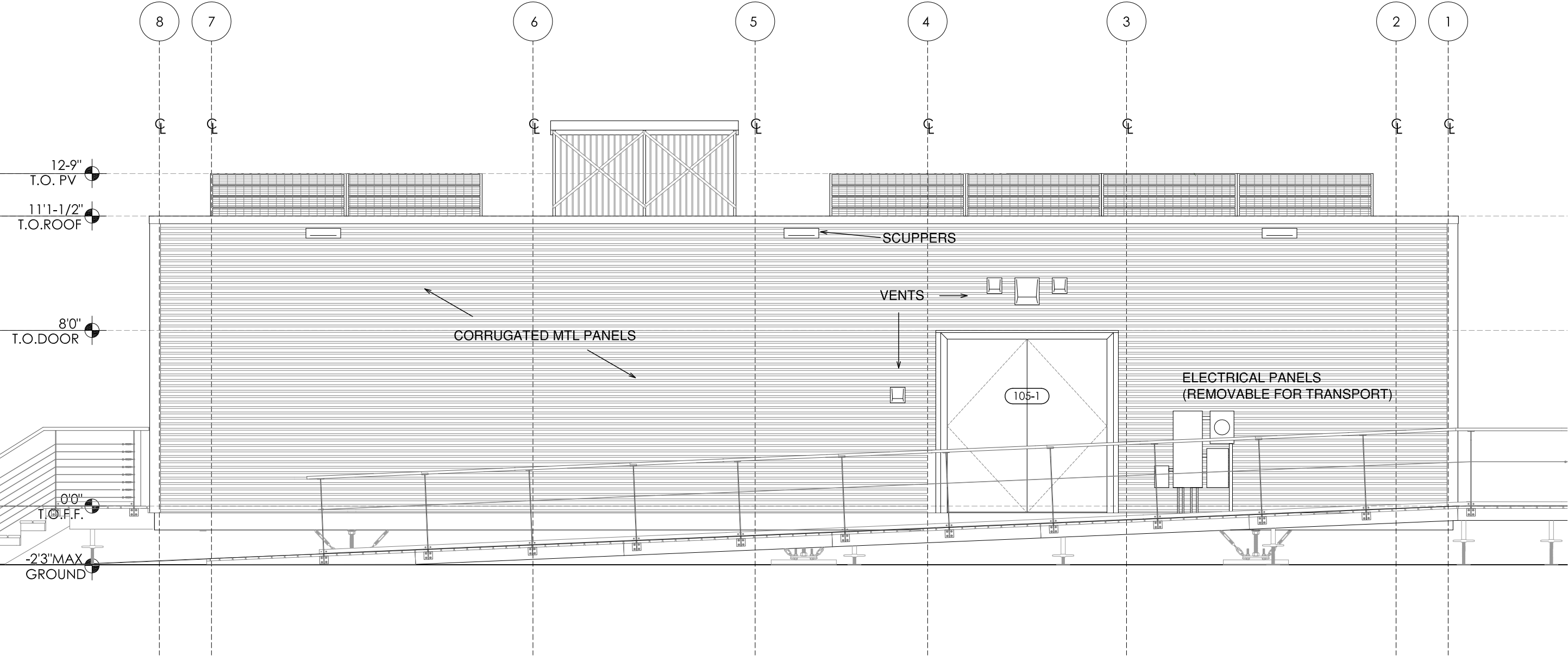
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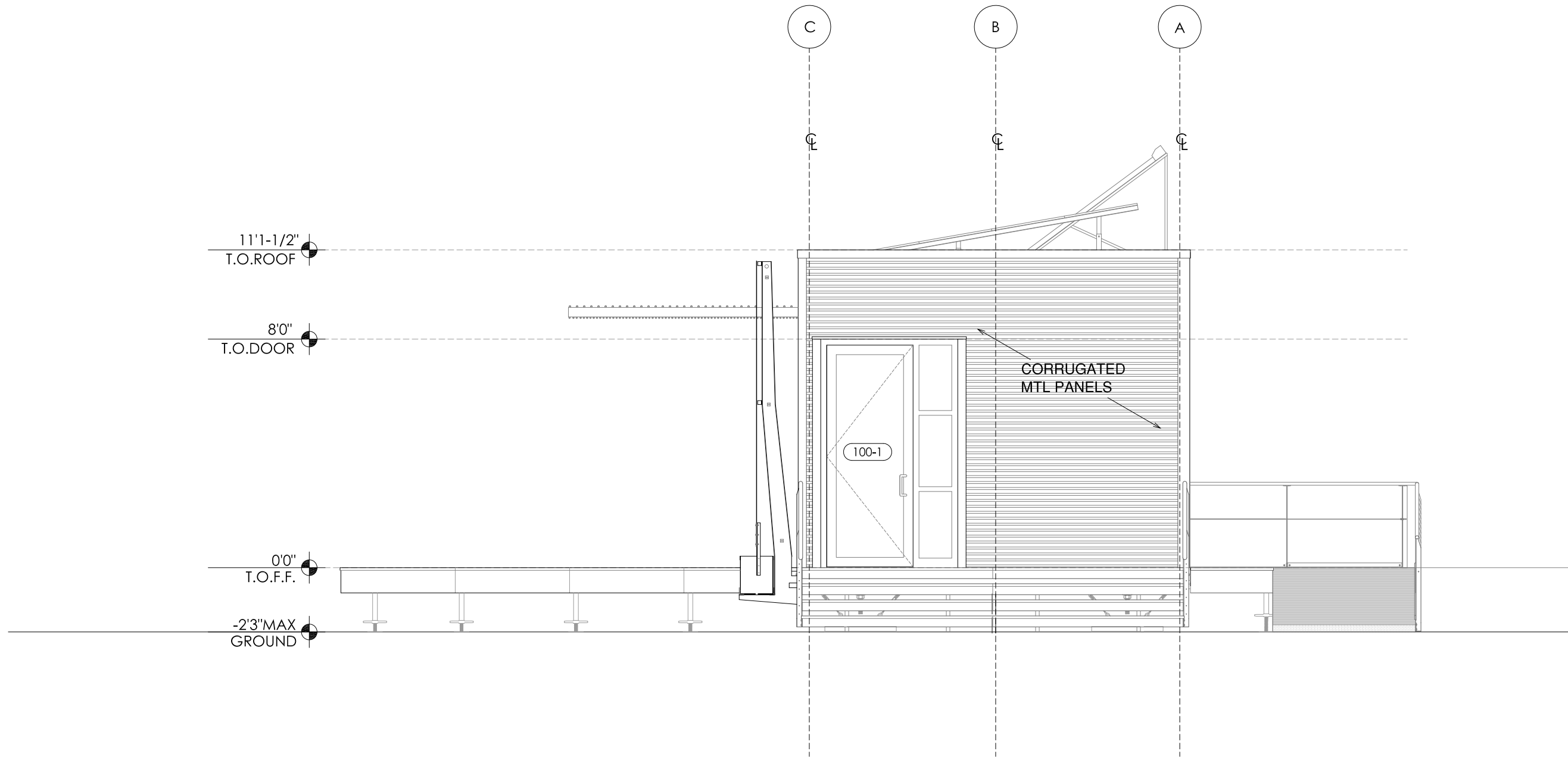
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05.28.2009	JLC

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Approved by: xx

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ARCH
ELEVATIONS
A2.05



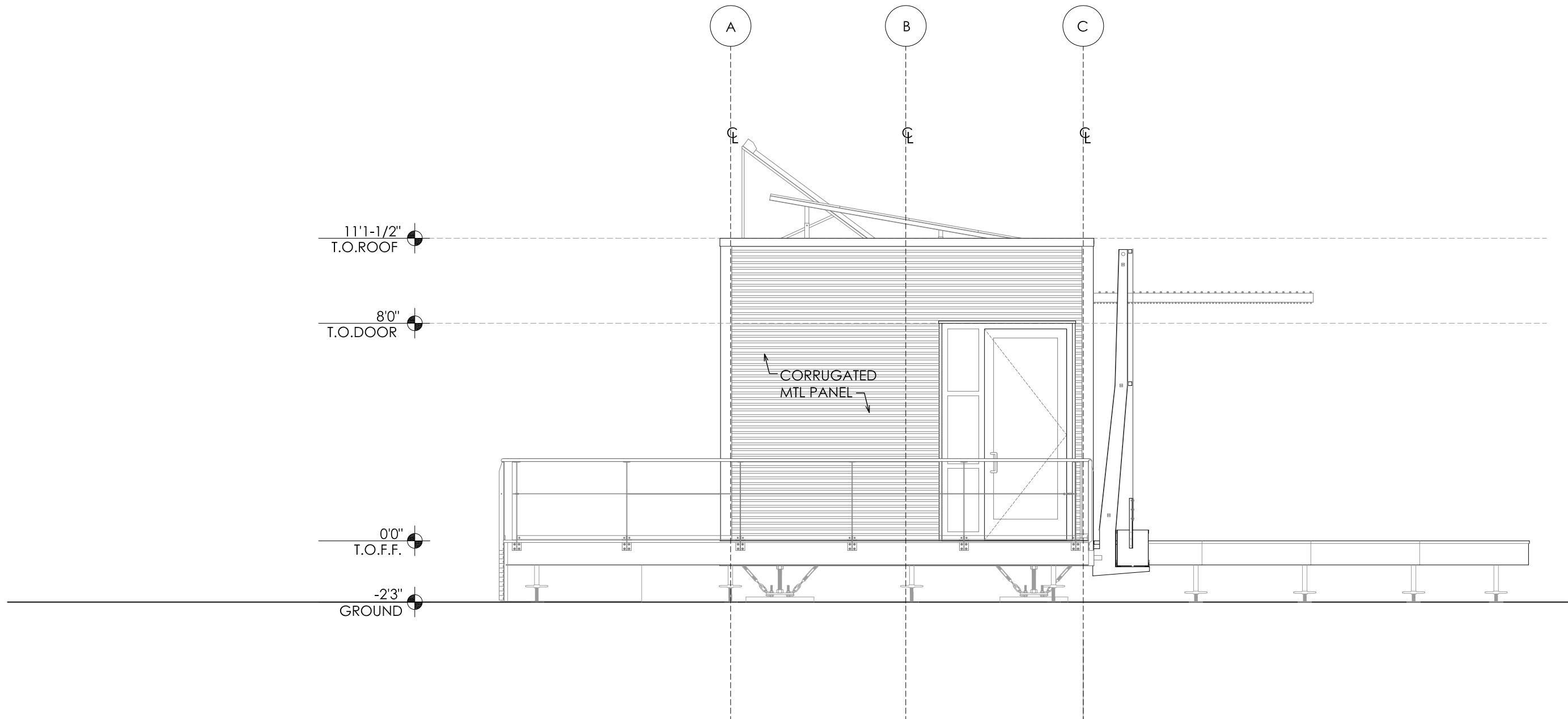
1 NORTH ELEVATION
1/4"=1'-0"



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

Revisions:	
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05.28.2009 JLC	

Date:	06.02.2009
Drawn by:	SLS
Checked by:	DS
Approved by:	xx



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

ZEROWHOUSE

Rice University Solar Decathlon 2009
Zero Energy Row House

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Revisions:

12.03.2008 SLS

12.05.2008 SLS

05.28.2009 JLC

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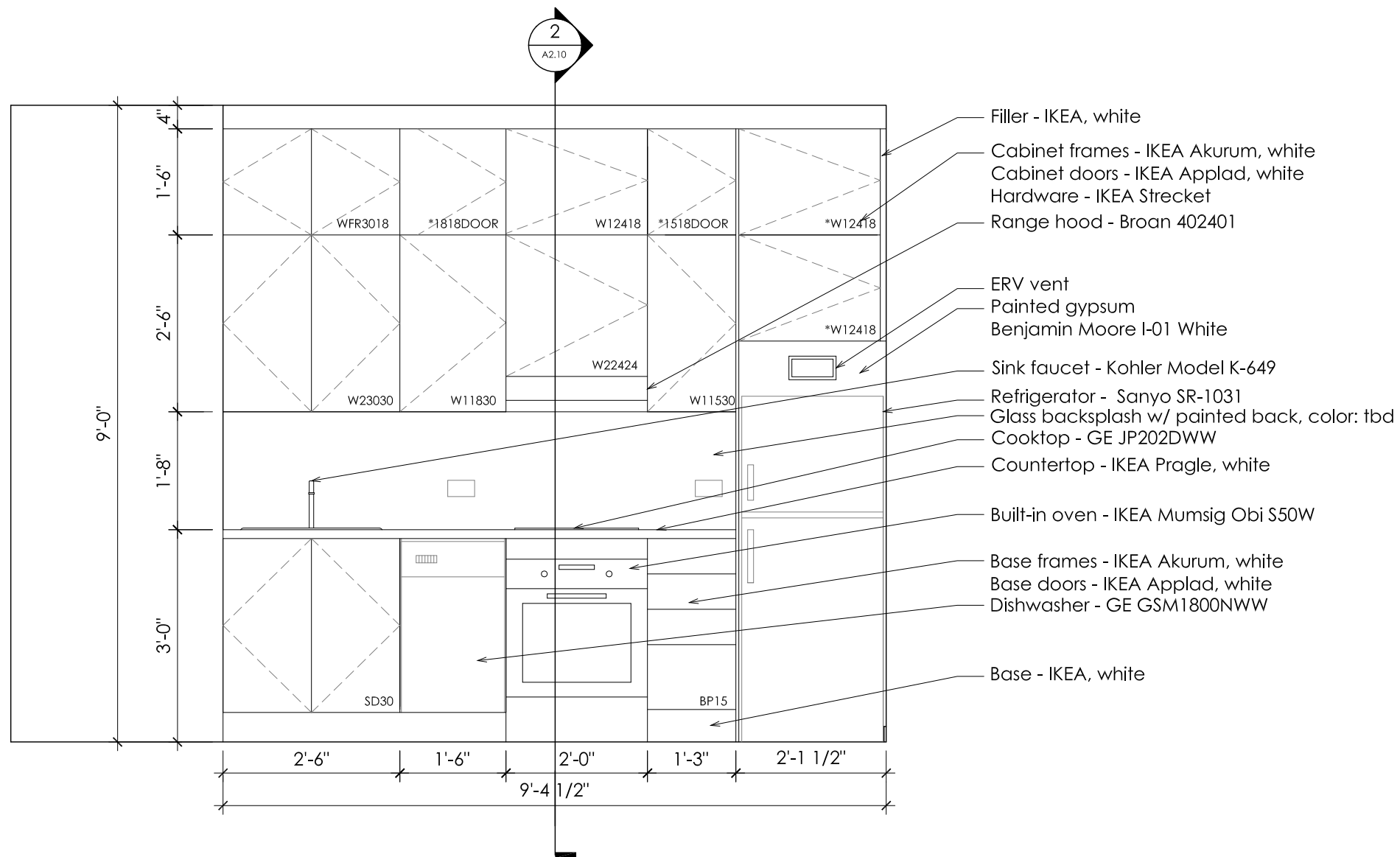
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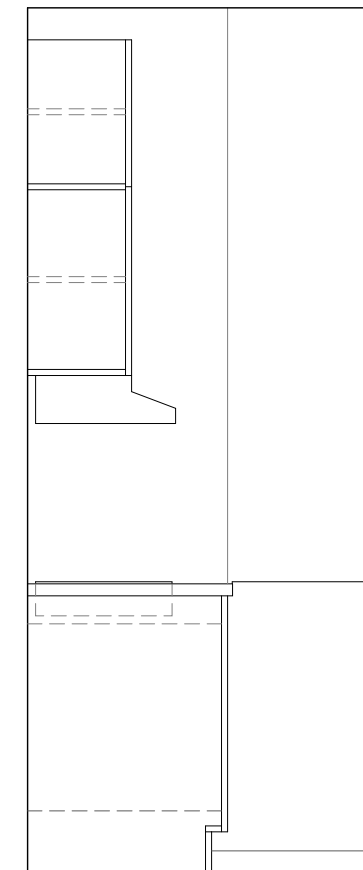
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ARCH
ELEVATIONS

A2.07



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

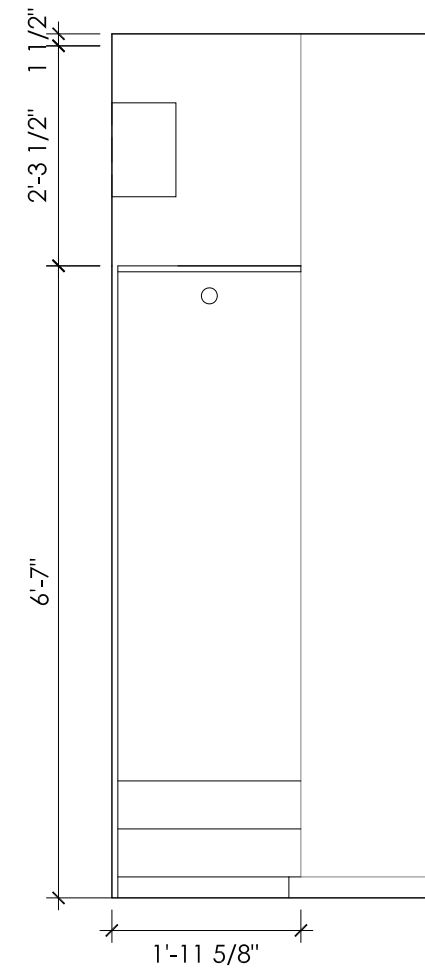
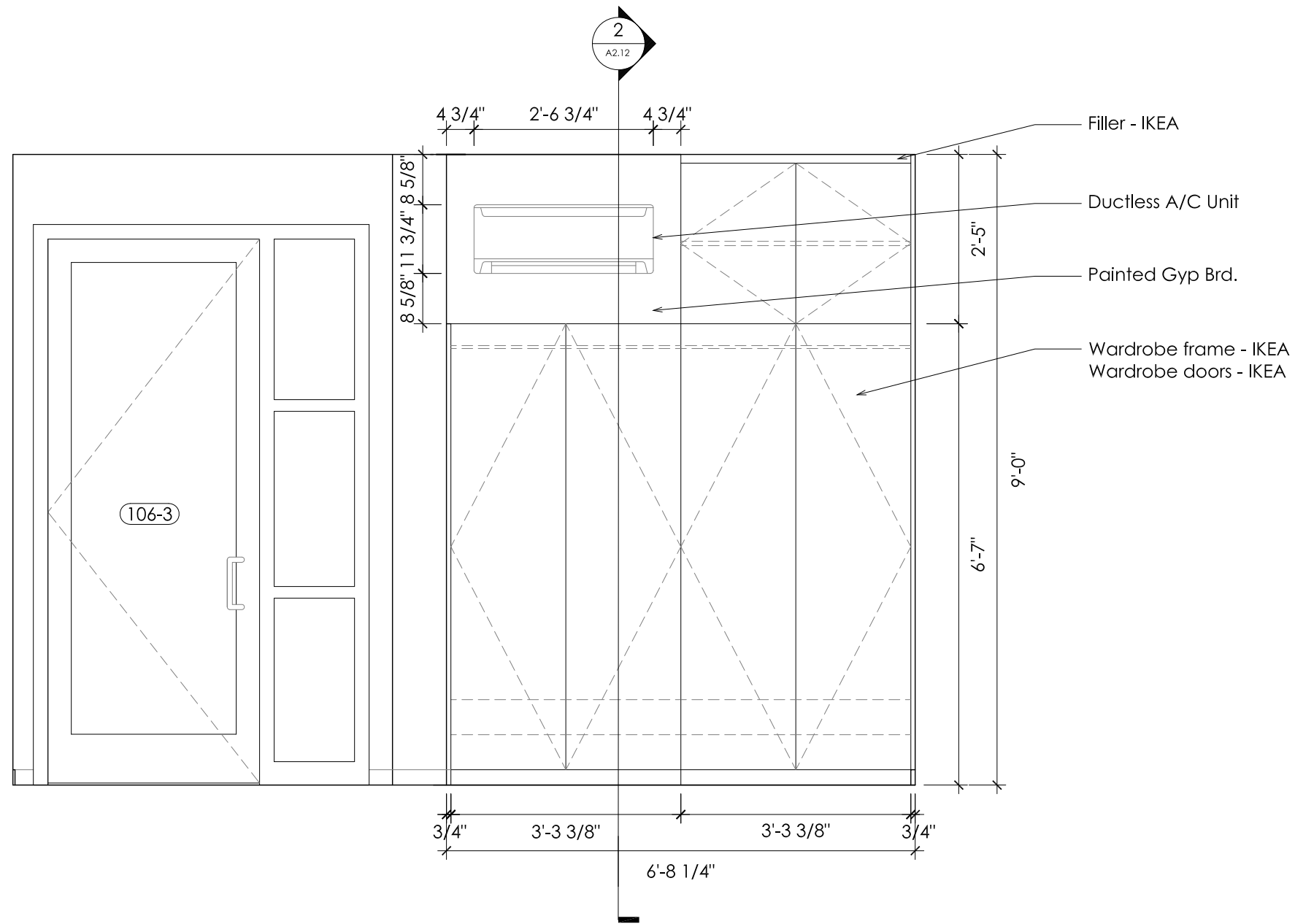


2 KITCHEN SECTION
1/2"=1'-0"

Revisions:

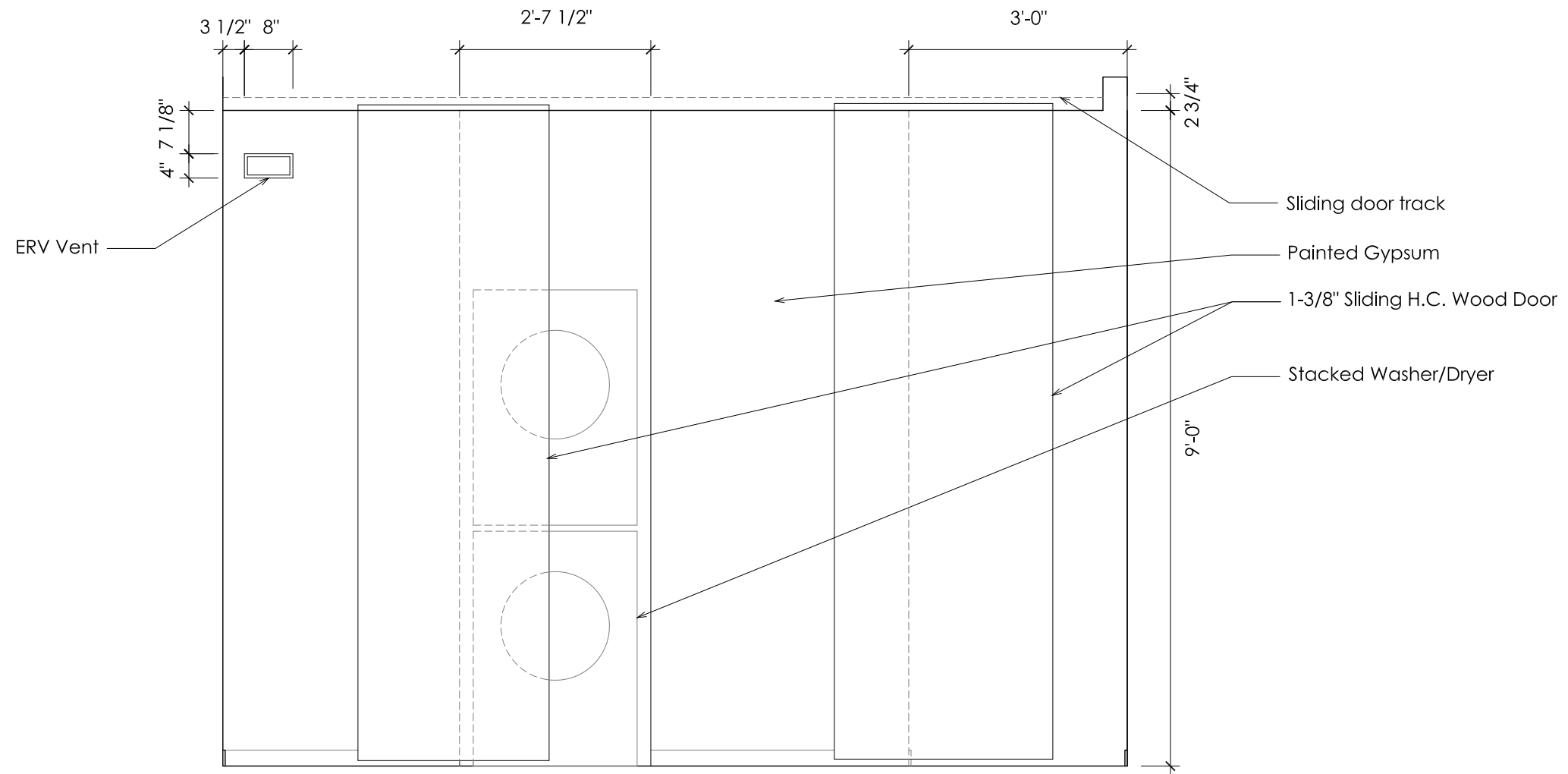
12.16.2008	SLS
05.26.2009	JLC

Date: 06.02.2009
Drawn by: SLS
Checked by: DS
Approved by: xx



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

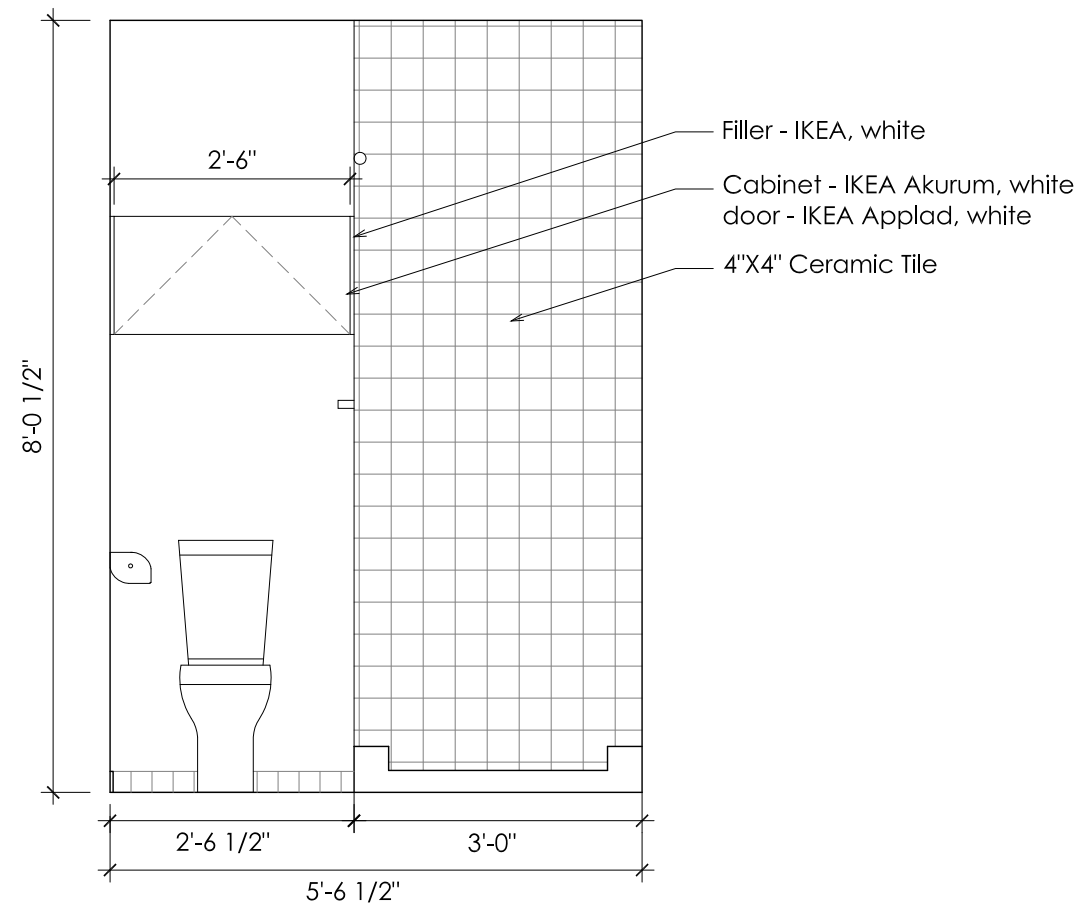
2 SECTION @ WARDROBE
1/2"=1'-0"



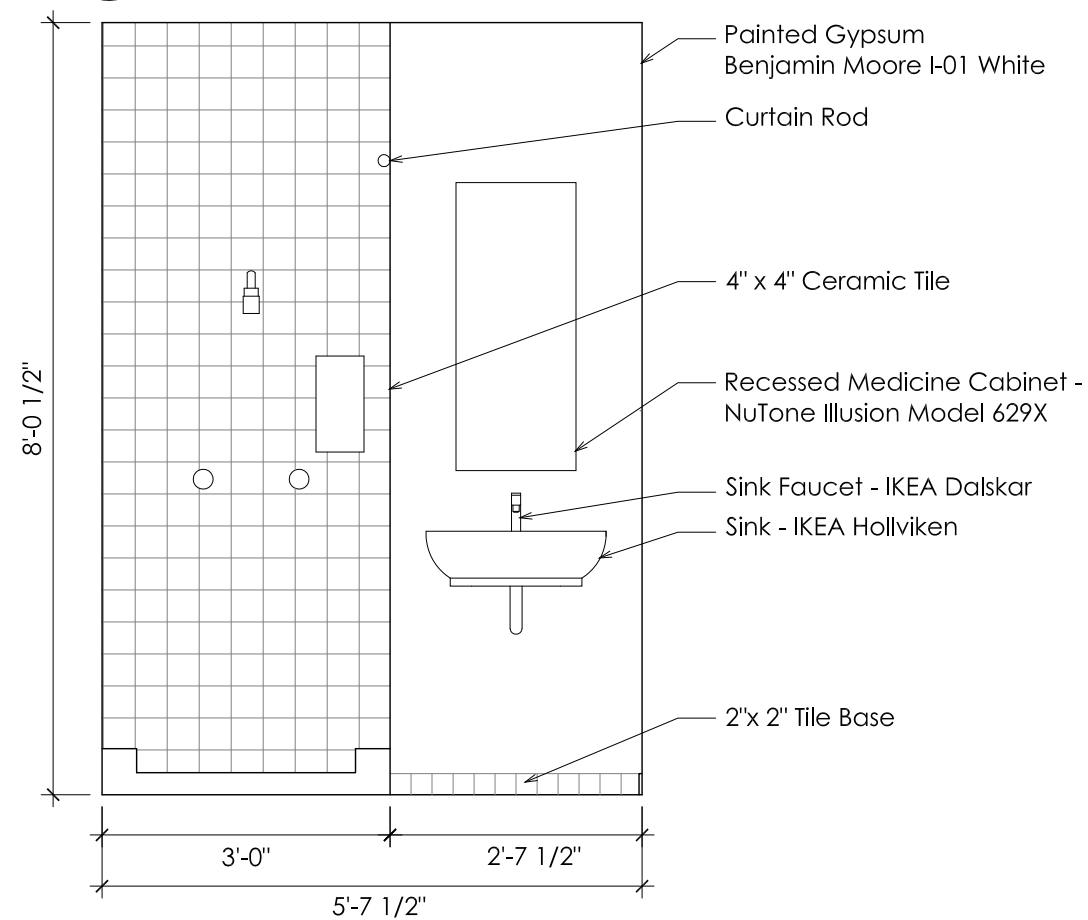
2 ELEVATION AT BEDROOM - EAST
1/2"=1'-0"

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05.26.2009 JLC	

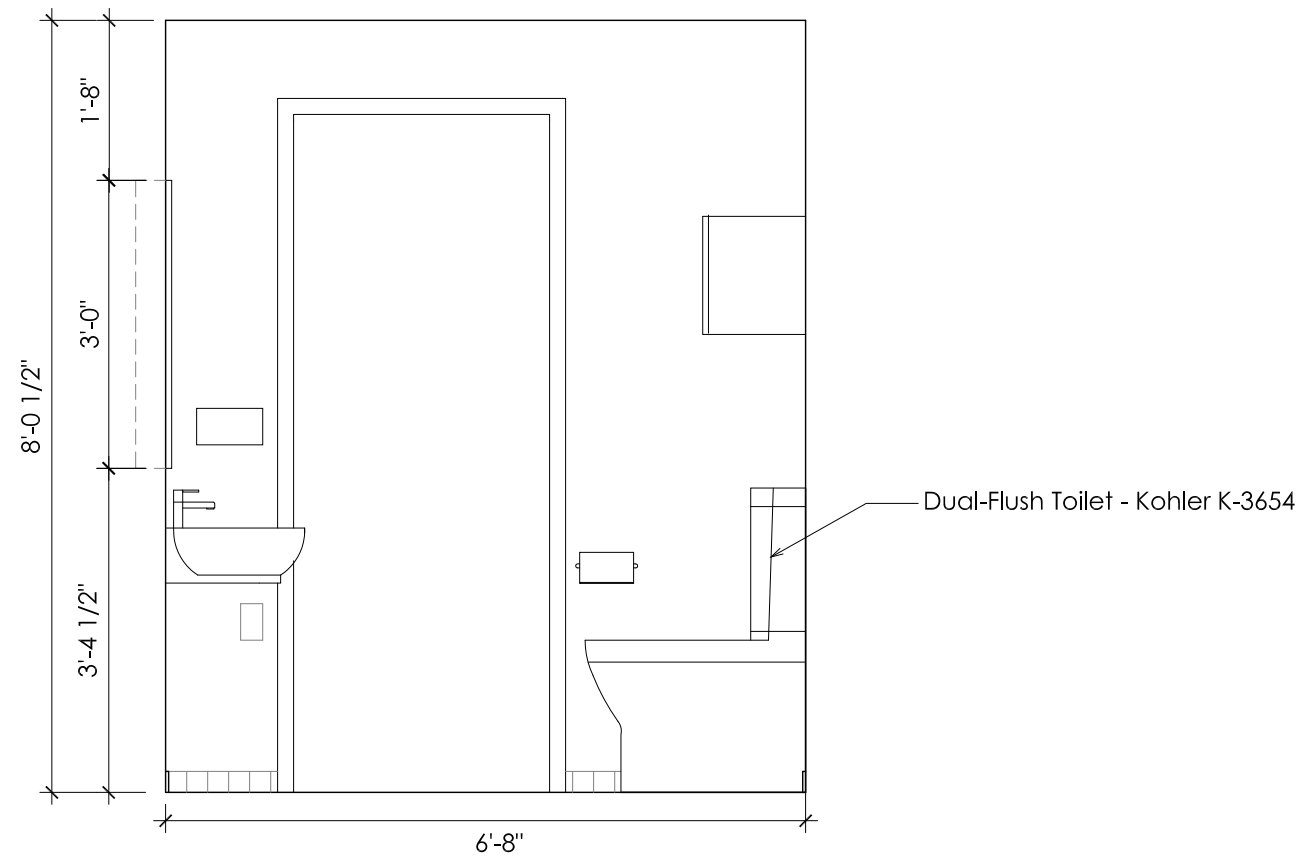
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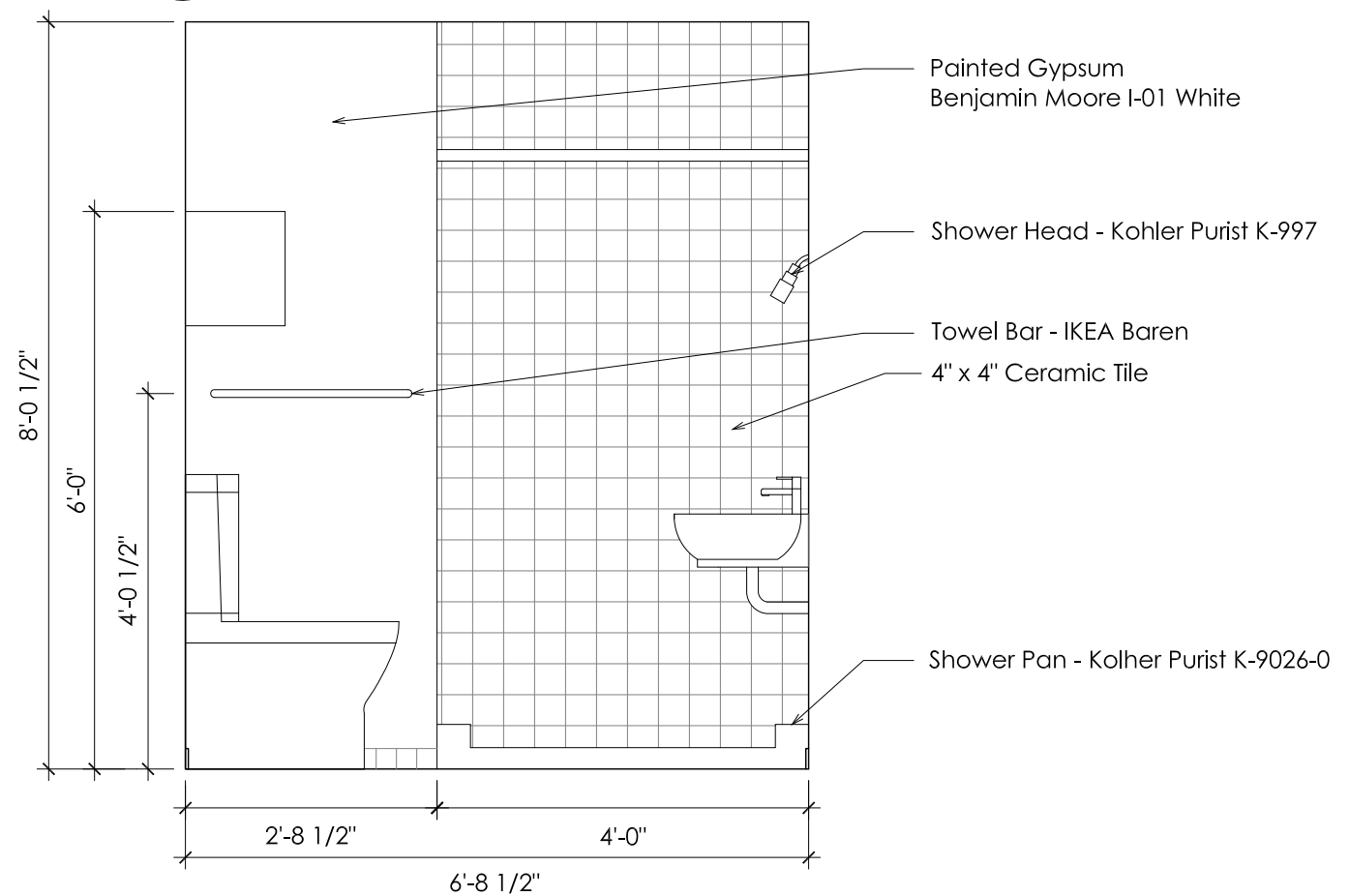
1 BATHROOM ELEVATION
1/2"=1'-0"



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



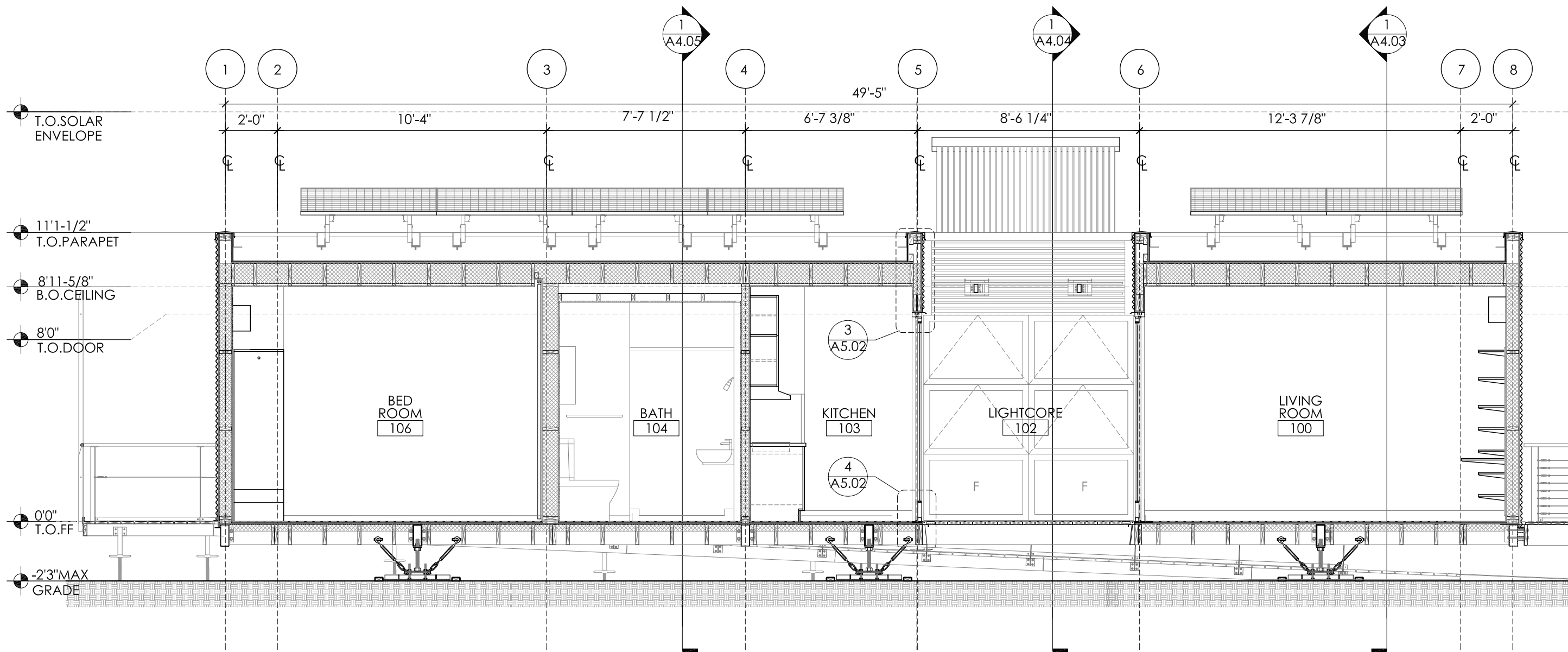
3 BATHROOM ELEVATION
1/2"=1'-0"



4 BATHROOM ELEVATION
1/2"=1'-0"

Revisions:	
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	05.26.2009 JLC

Date: 06.02.2009
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Checked by: DS
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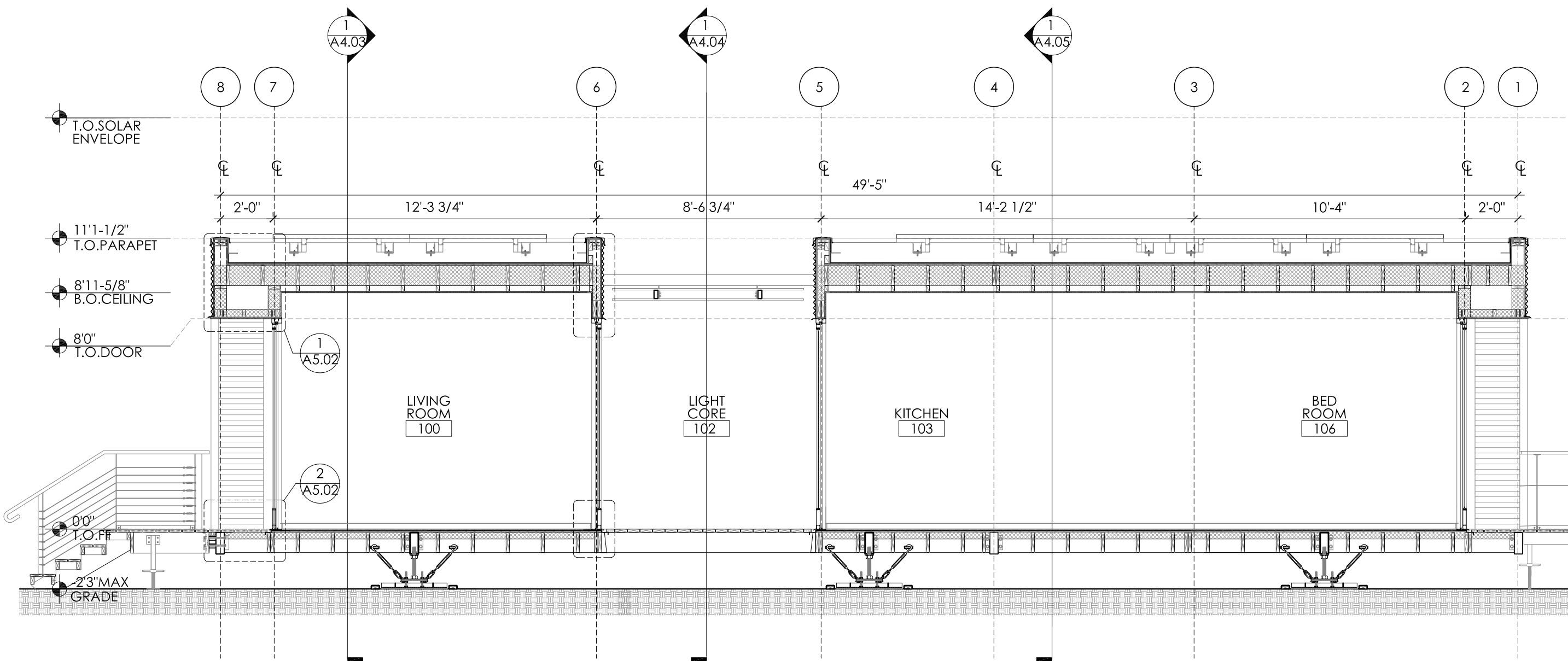


1 LONGITUDINAL SECTION - NORTH
1/4"=1'

Revisions:	
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12.8.2008 RS	
06.02.2009 JLC	

Date: 06.02.2009
Drawn by: SLS
Checked by: DS
Approved by: xx

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ARCH SECTIONS
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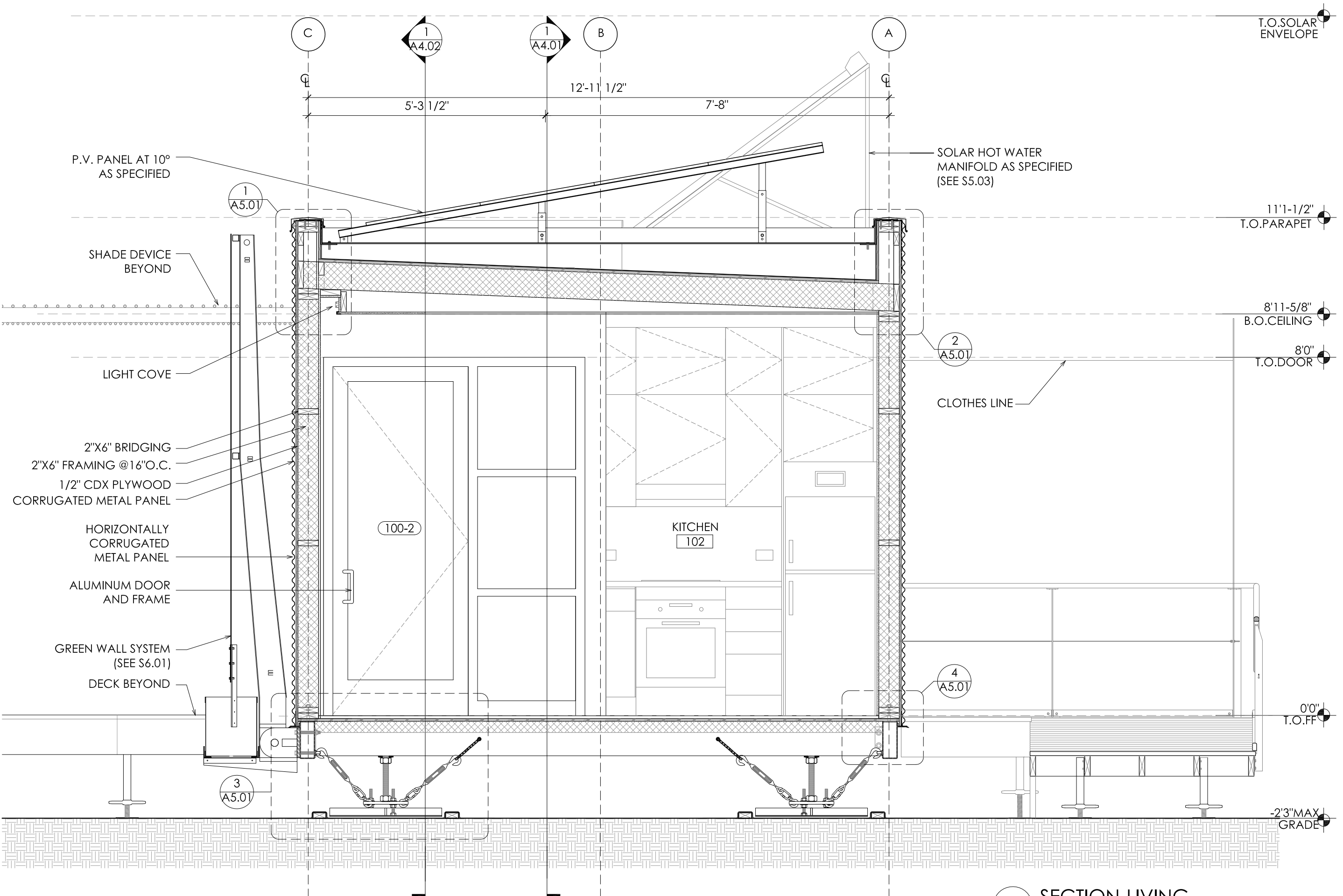
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12.8.2008 SLS	
05.28.2009 JLC	

Date: 06.02.2009
Drawn by: JLC
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Approved by: xx

Scale: 1/4" = 1'-0"
ARCH SECTIONS

A4.02



1 SECTION-LIVING
1/2"=1'

ZEROWHOUSE

Rice University Solar Decathlon 2009
Zero Energy Row House

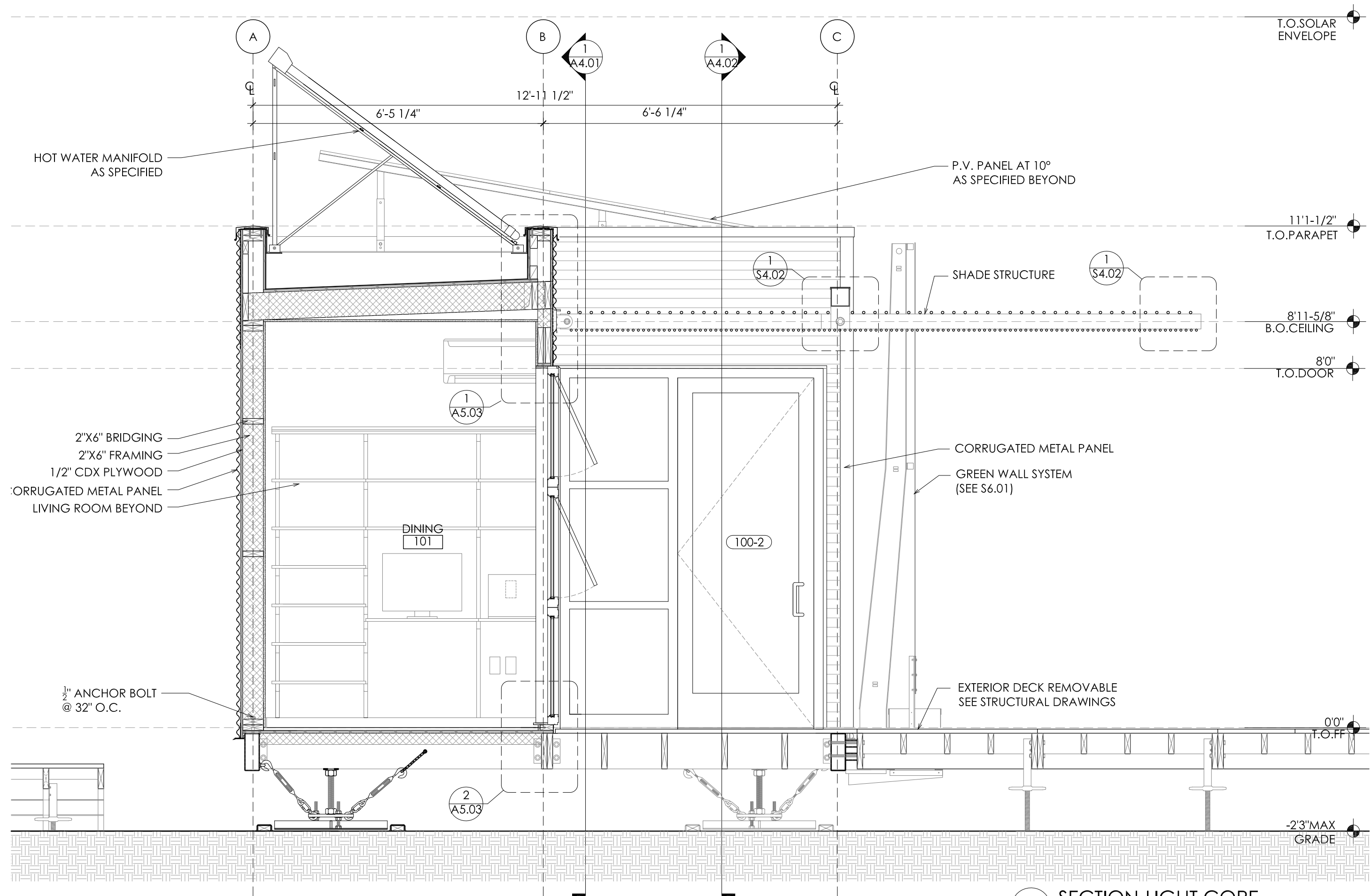
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Revisions:	
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12.8.2008 RS	
05.28.2009 JLC	

Date: 06.02.2009
Drawn by: JLC
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Scale: 1/2" = 1'-0"
ARCH SECTIONS
A4.03



1 SECTION-LIGHT CORE
1/2"=1'

ZEROWHOUSE

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Zero Energy Row House

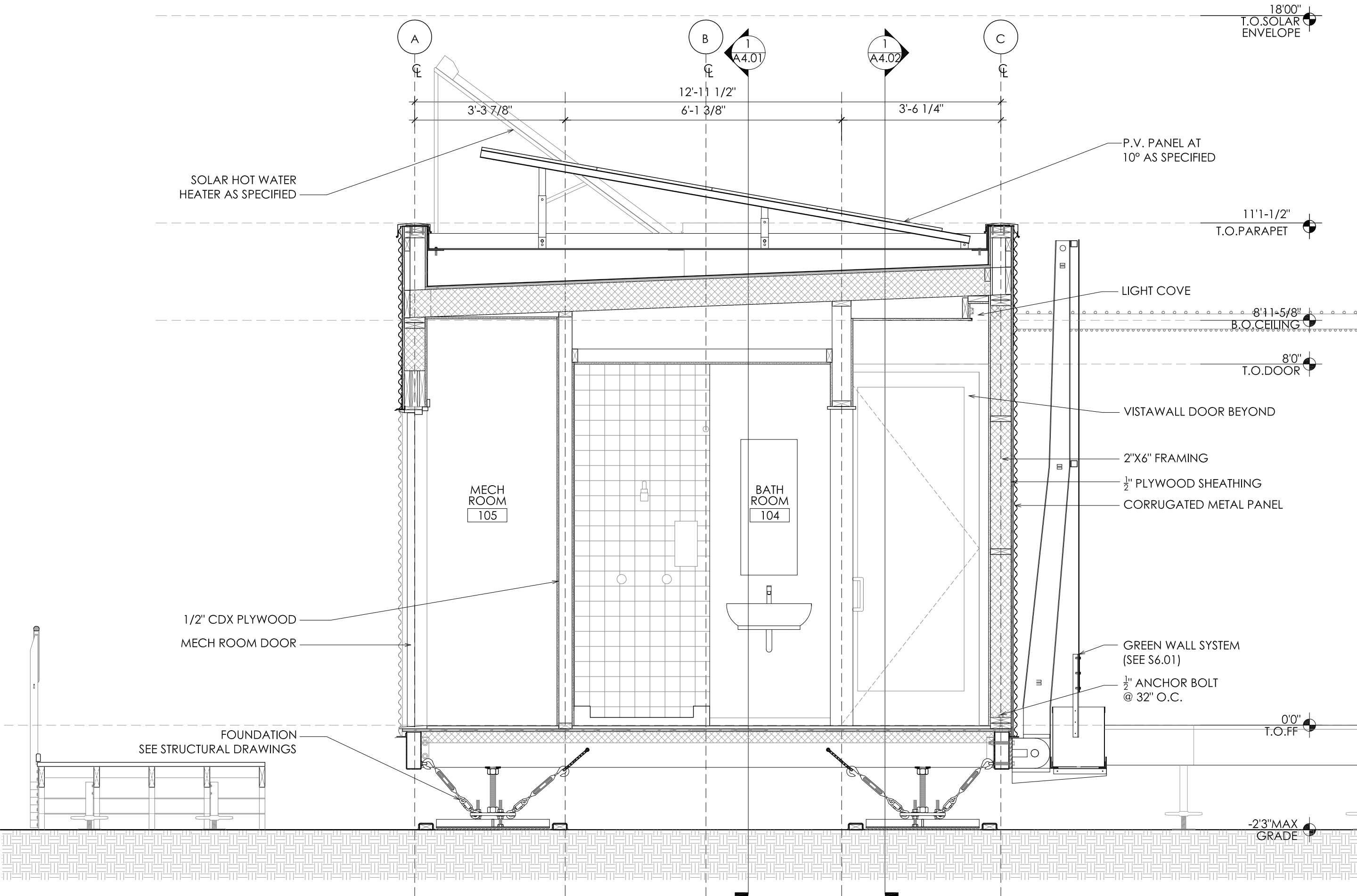
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ARCH SECTIONS
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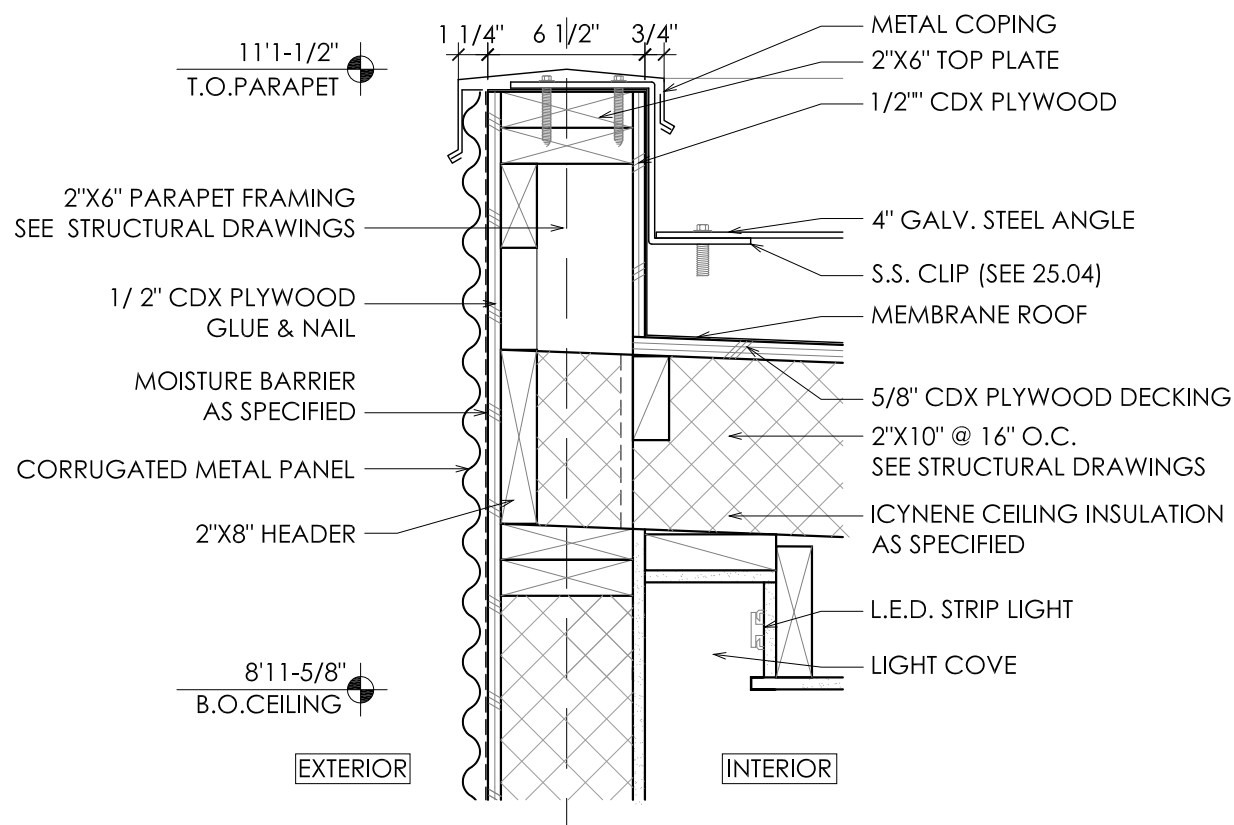


1 SECTION - WET CORE
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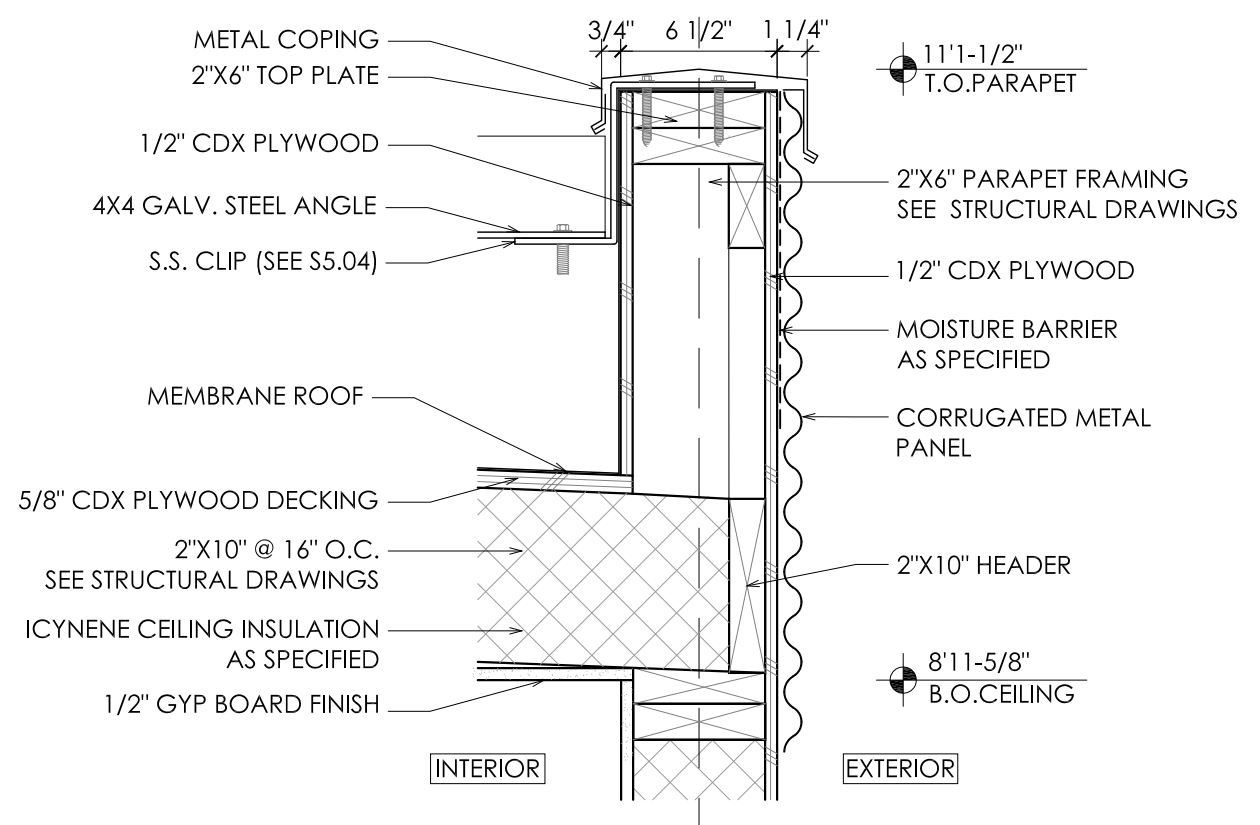
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Date: 06.02.2009
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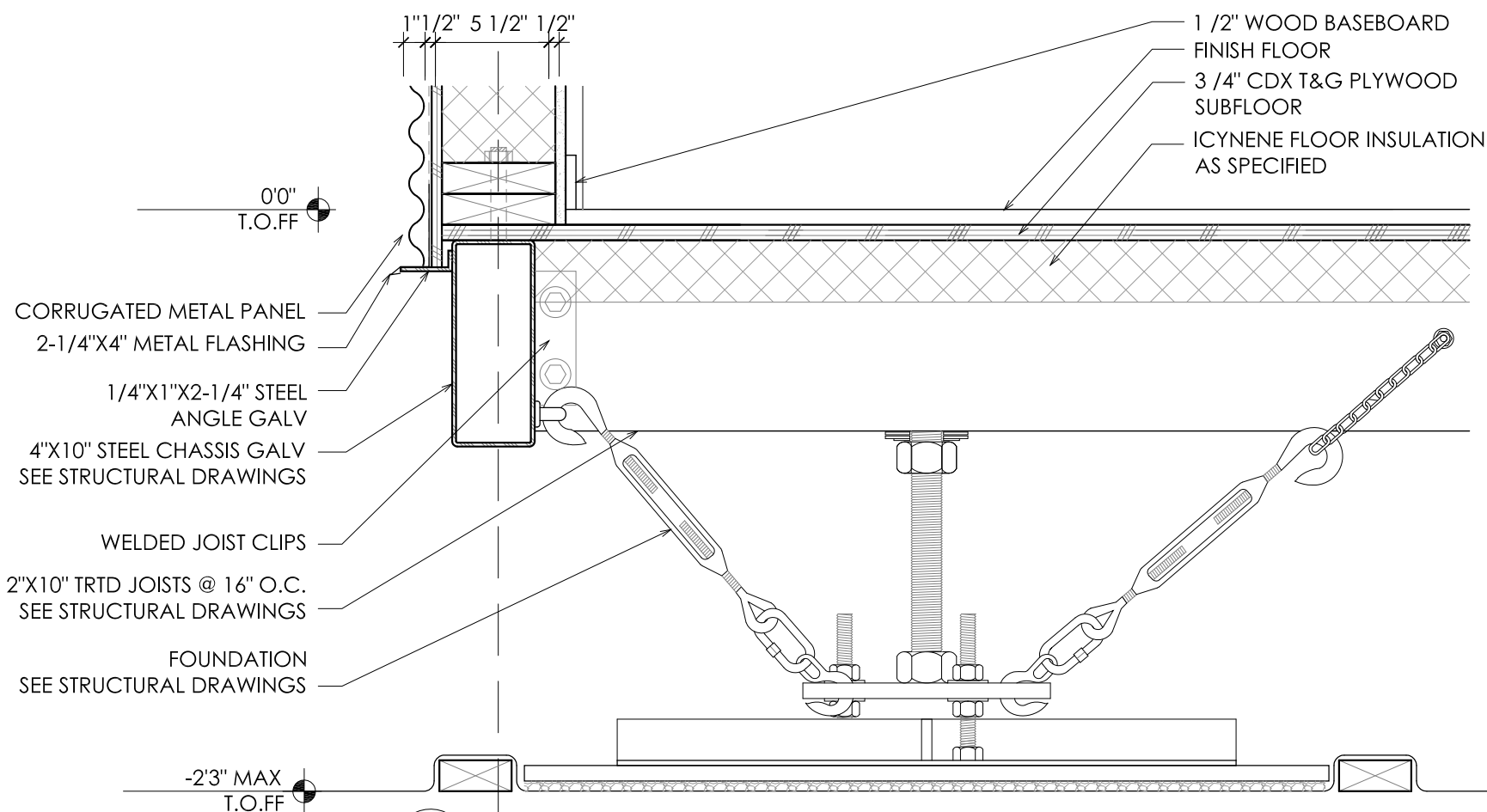
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ARCH SECTIONS
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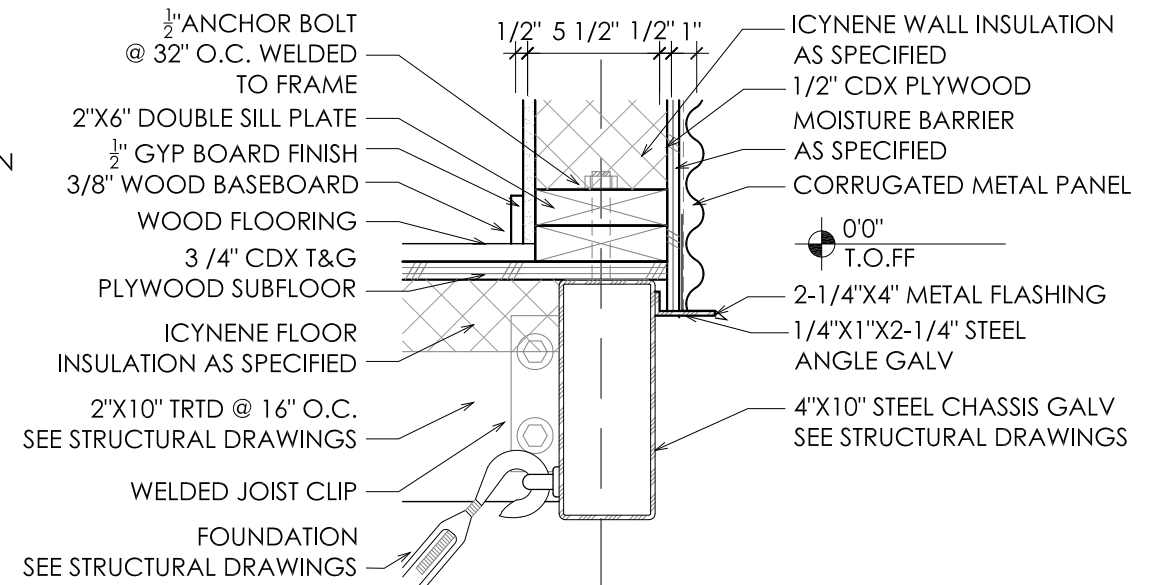
1 Section Detail
1-1/2"=1'



2 Section Detail
1-1/2"=1'



3 Section Detail
1-1/2"=1'



4 Section Detail
1-1/2"=1'

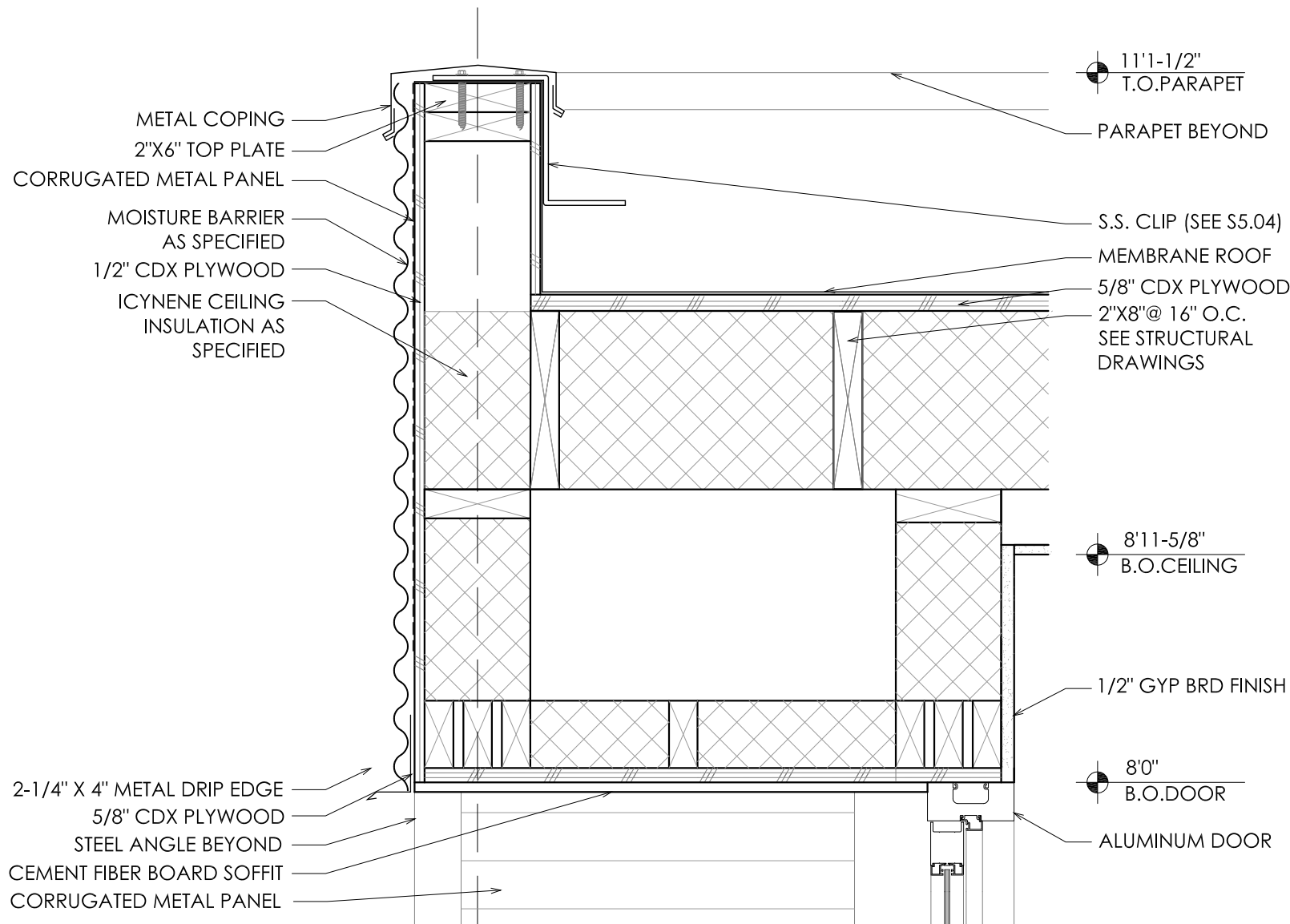
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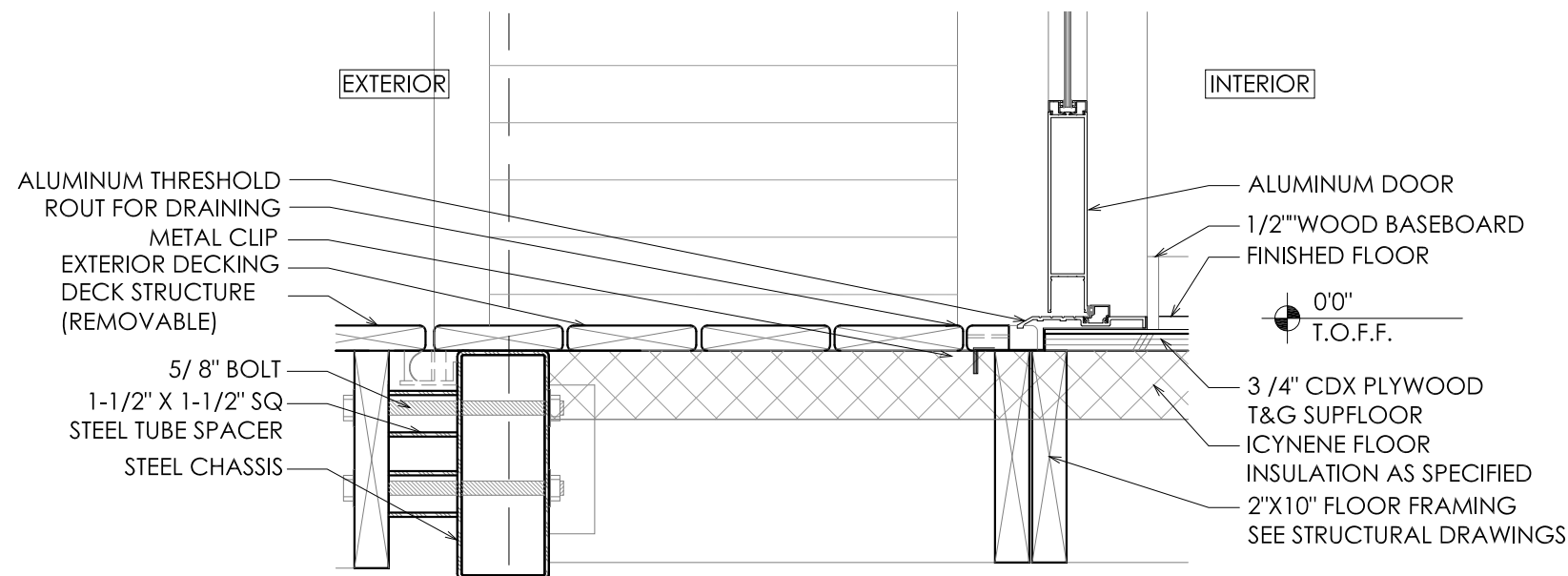
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ARCH
WALL DETAILS

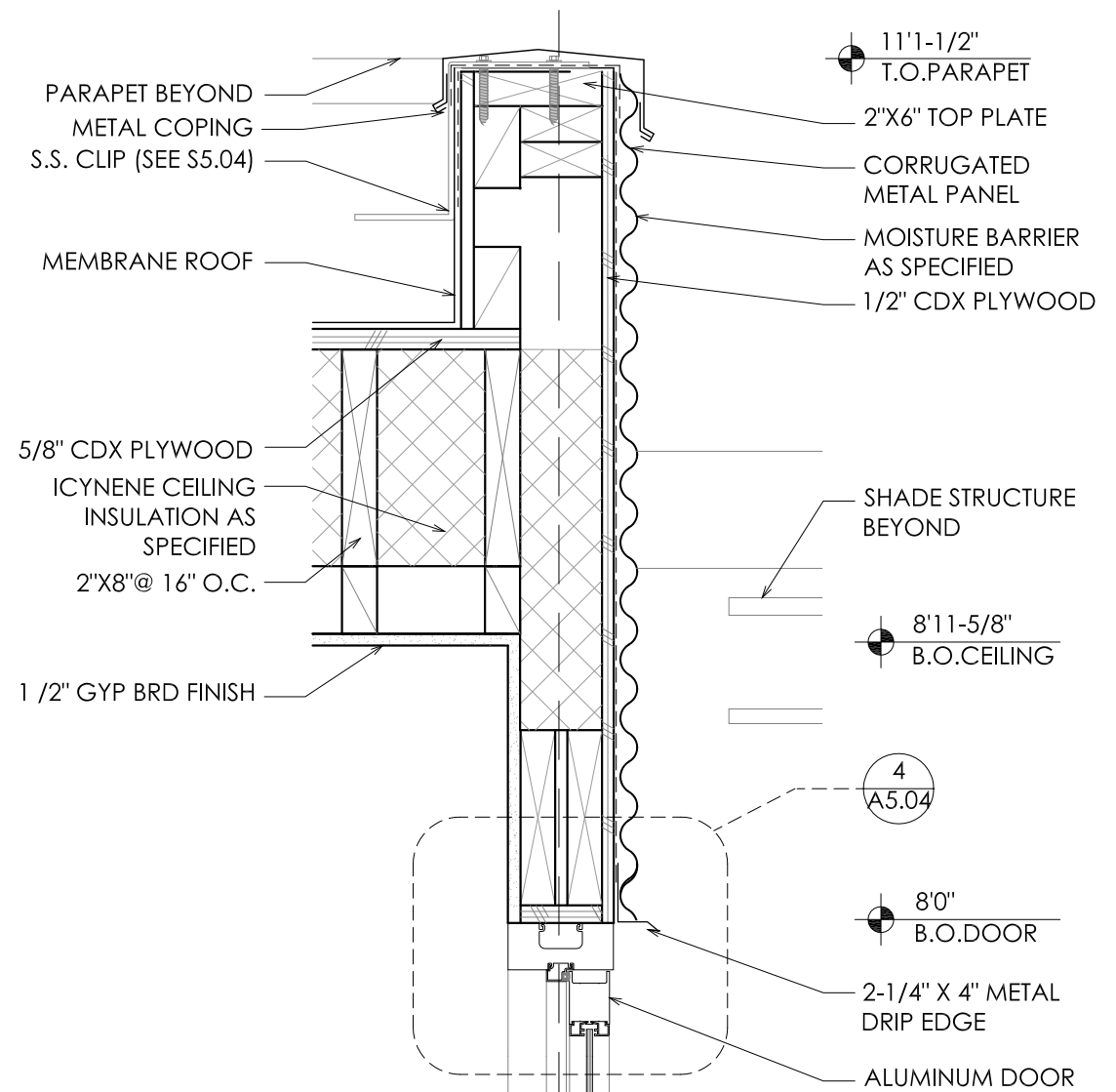
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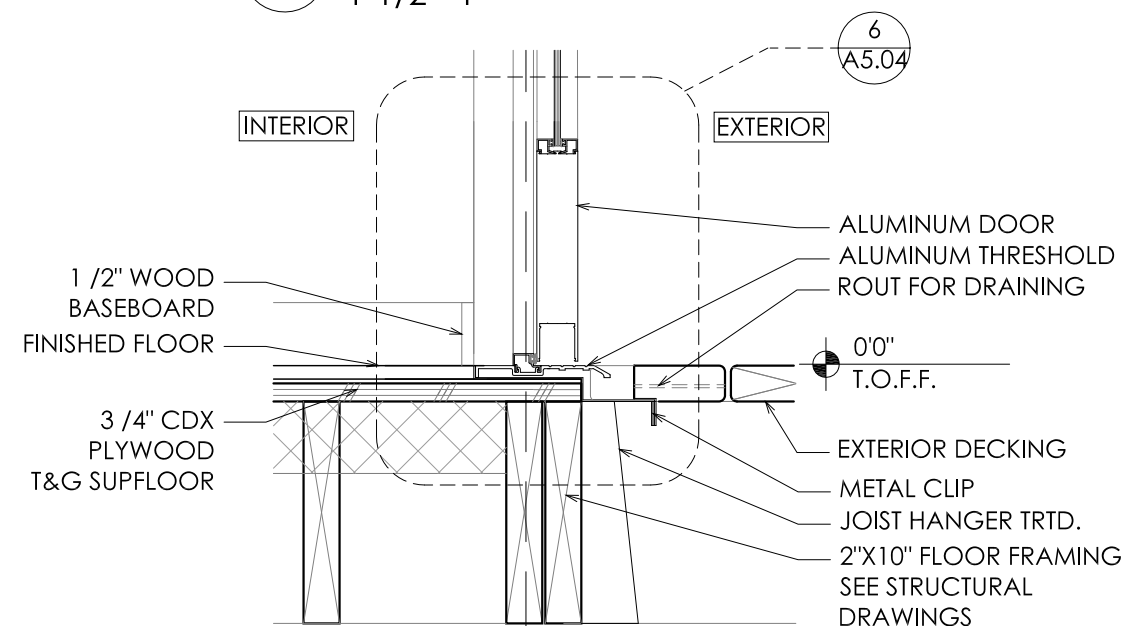
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1-1/2"=1'



2 Section-Entry Door
1-1/2"=1'



3 Section-Light Core Door
1-1/2"=1'



3 Section-Light Core Door
1-1/2"=1'

Revisions:

10.21.2008 SLS

12.9.2008 RS

05.30.2009 JLC

Date: 06.02.2009

Drawn by: JLC

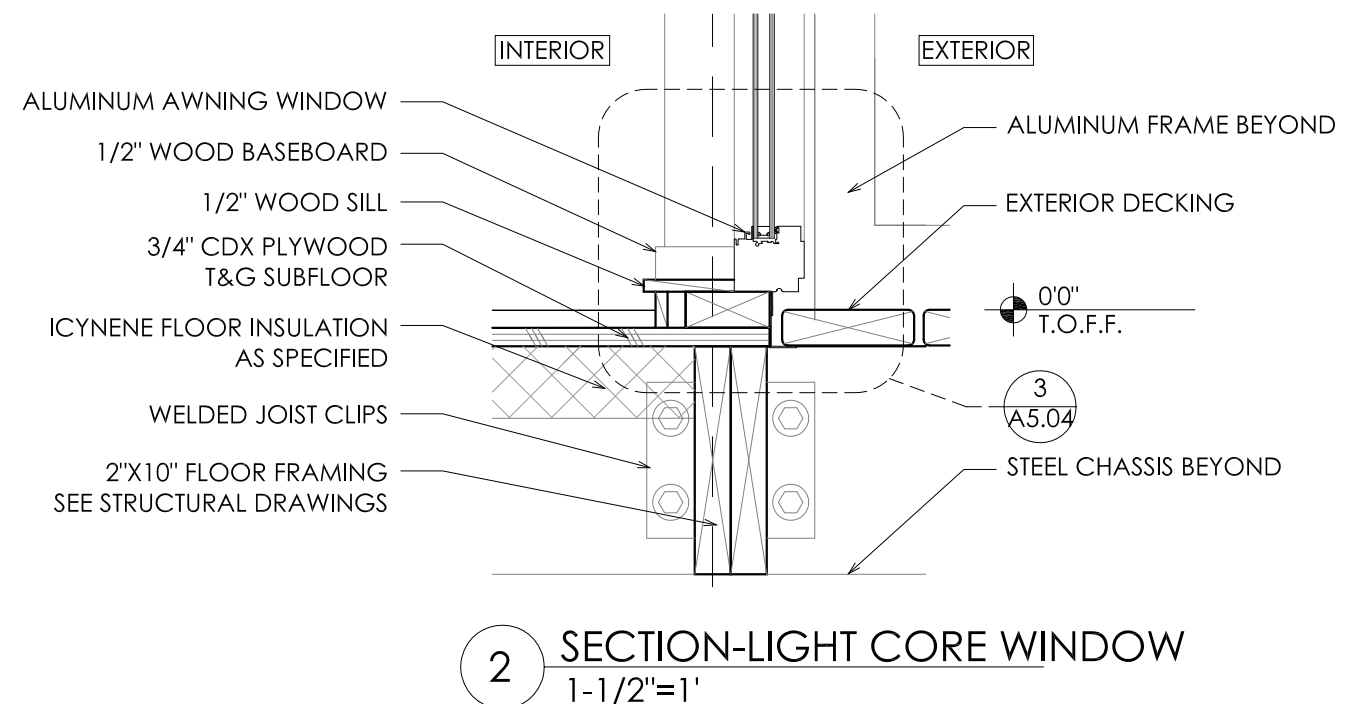
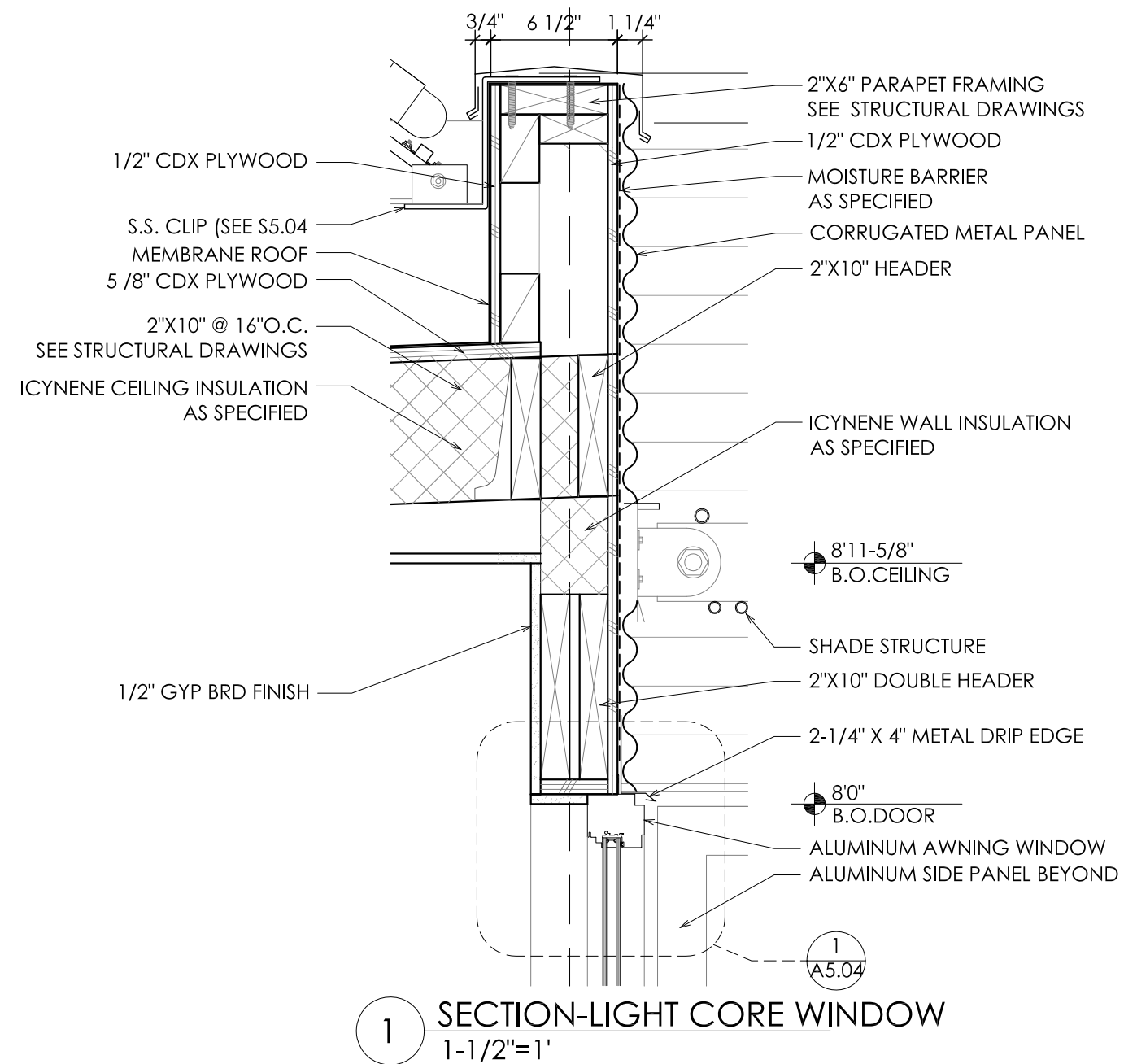
Checked by: DS

Approved by: xx

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

ARCH
WALL DETAILS

A5.02



Revisions:

10.21.2008 SLS

12.9.2008 RS

05.28.2009 JLC

Date: 06.02.2009

Drawn by: JLC

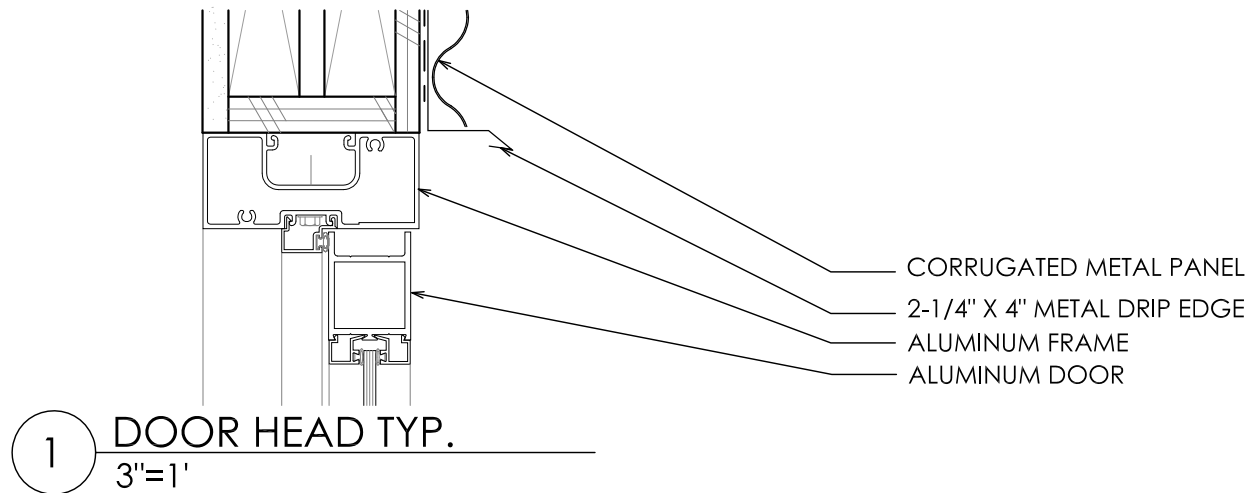
Checked by: DS

Approved by: xx

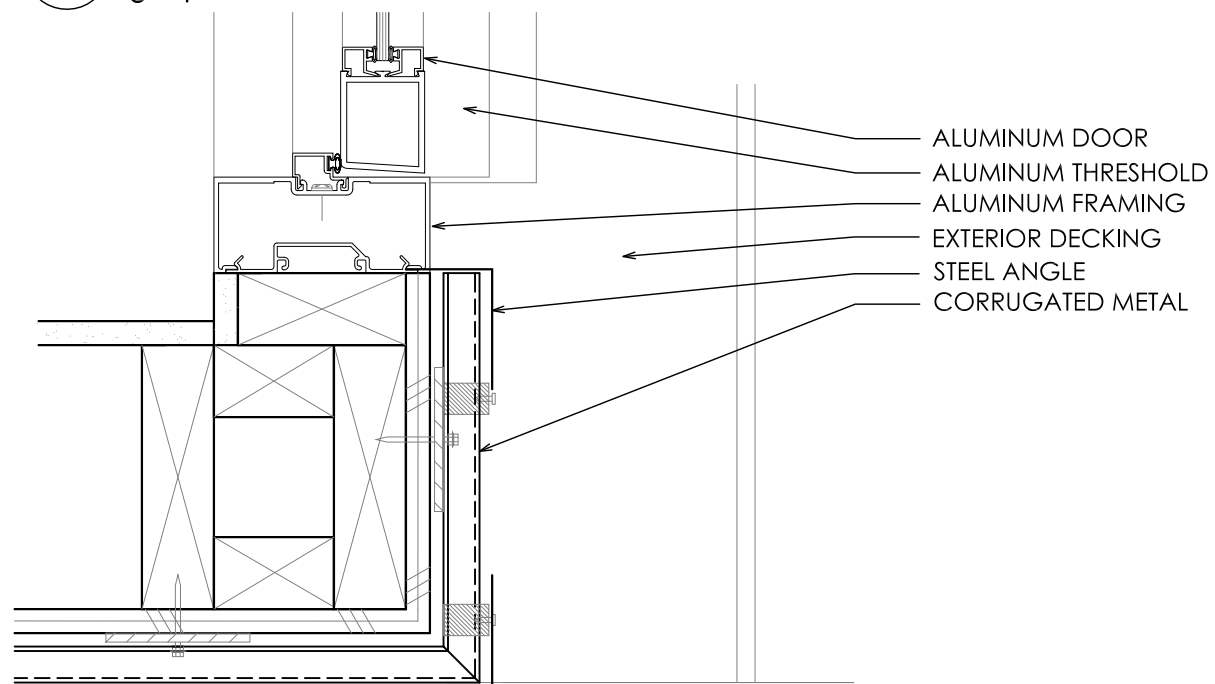
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ARCH
WALL DETAILS

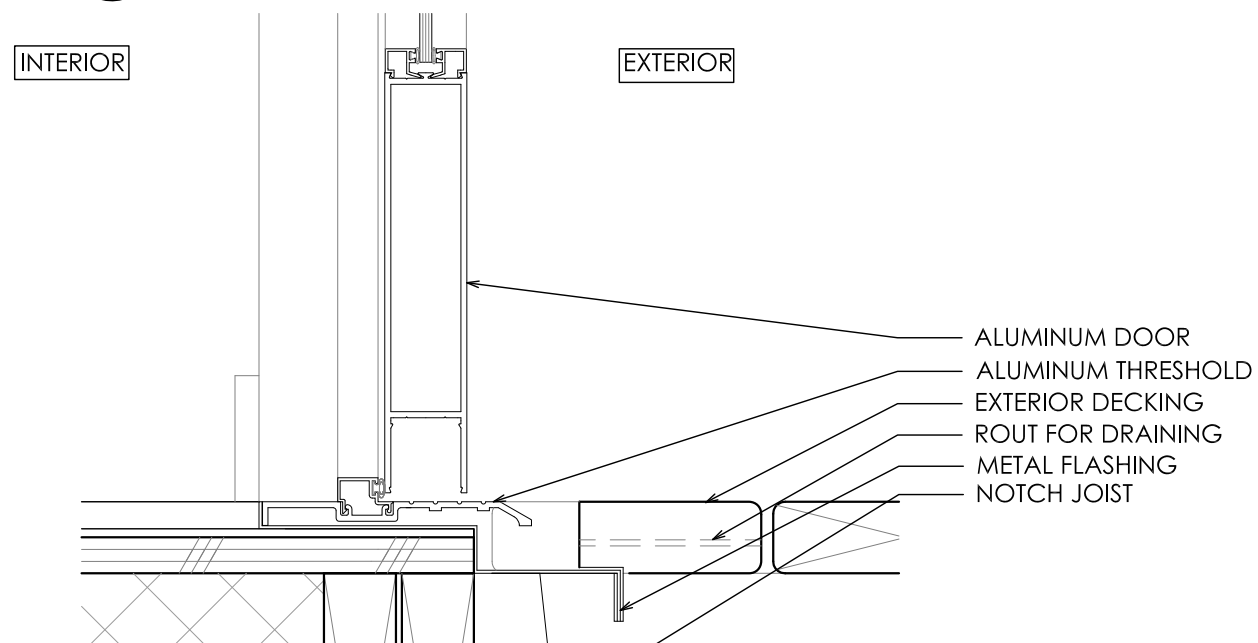
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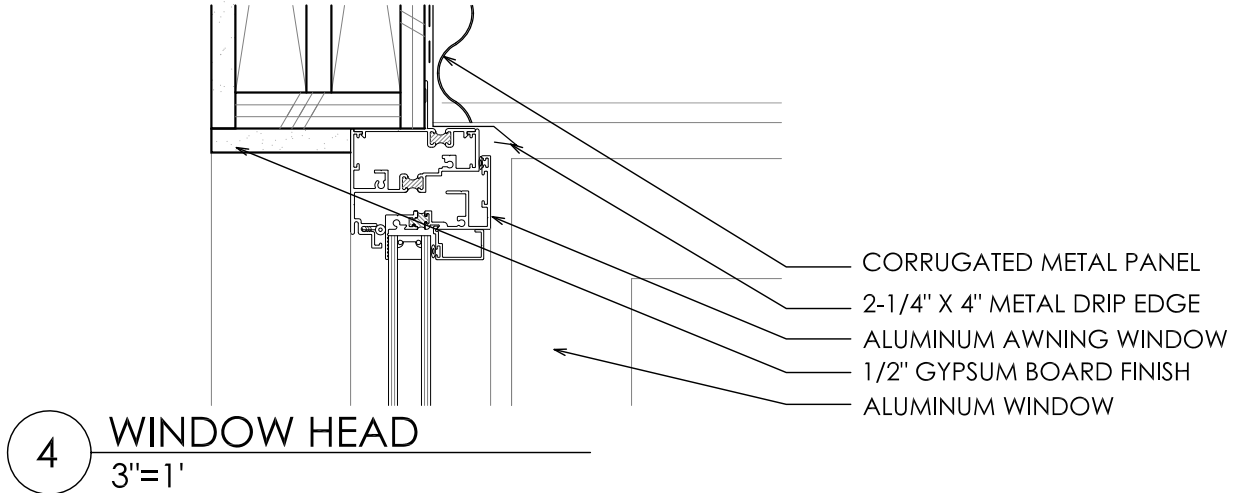
1 DOOR HEAD TYP.
3"=1'



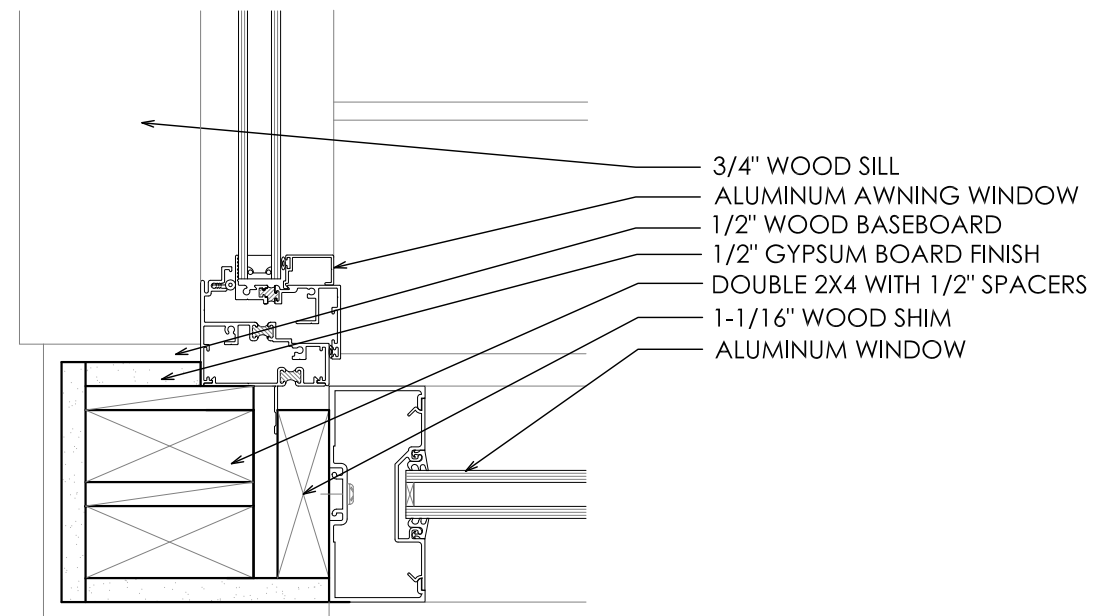
2 DOOR JAMB TYP.
3"=1'



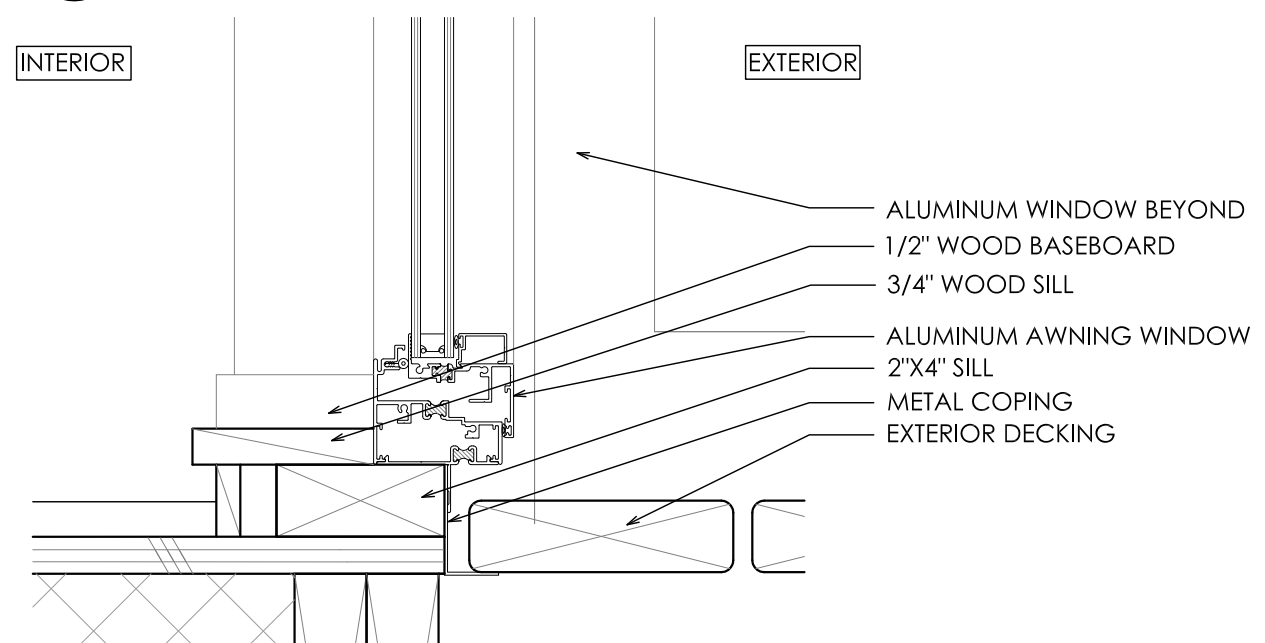
3 DOOR SILL TYP.
3"=1'



4 WINDOW HEAD
3"=1'



5 WINDOW JAM
3"=1'



6 WINDOW SILL
3"=1'

Revisions:

10.21.2008 SLS

12.9.2008 RS

05.28.2009 JLC

Date: 06.02.2009

Drawn by: JLC

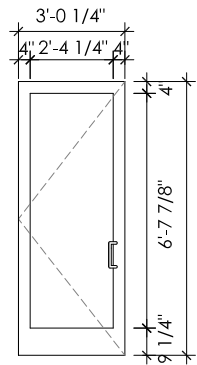
Checked by: DS

Approved by: xx

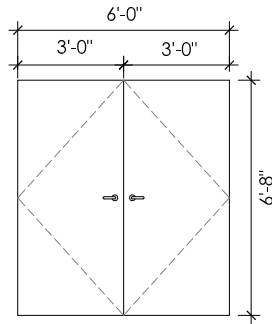
Scale: 1 1/2" = 1'-0"

ARCH
WALL DETAILS

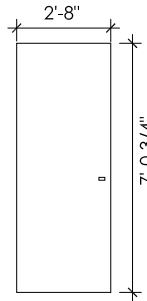
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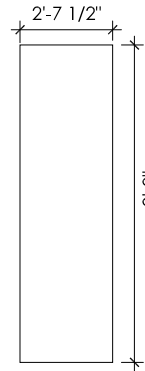
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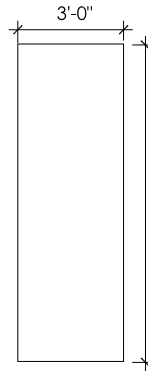
B. EXT. SOLID CORE WOOD, STEEL CLAD DOOR



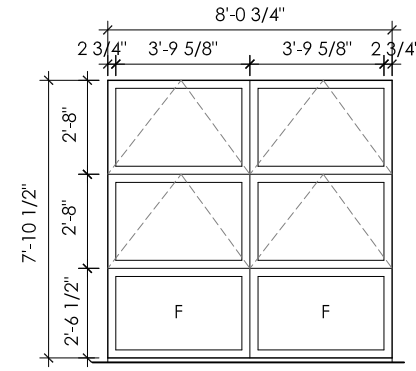
C. INT. SOLID CORE MASONITE FACE DOOR -PTD.



D. INT. HOLLOW CORE, BIRCH FACE DOOR -PTD.



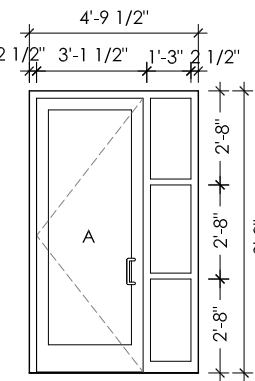
E. INT. HOLLOW CORE, BIRCH FACE DOOR -PTD.



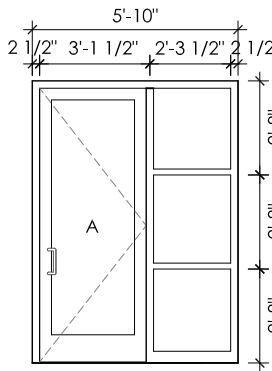
A. ALUMINUM AWNING WINDOW

1 DOOR TYPES

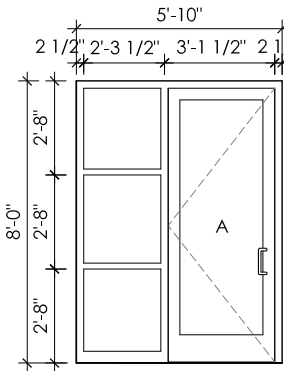
3/16"=1'-0"



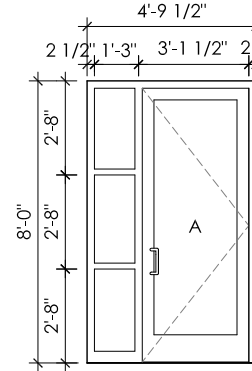
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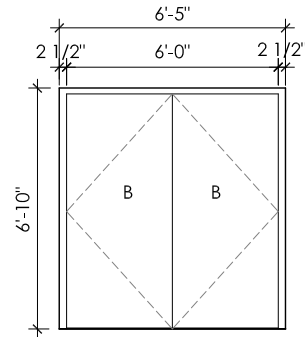
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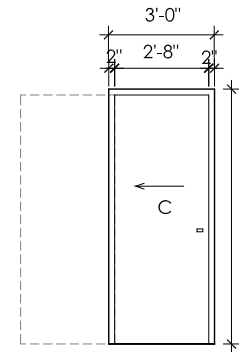
CC



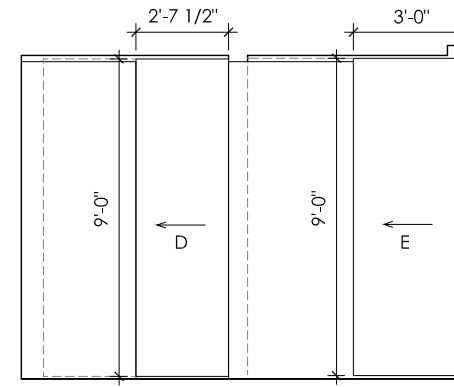
DD



EE



FF



GG

3 OPENING TYPES

3/16"=1'-0"

DOOR SCHEDULE													
DOOR									FRAME			OPENING TYPE	REMARKS
NO.	SIZE	MATERIAL & TYPE	THK.	LOCATION		ELEV.	FINISH	LABEL	MAT.	FINISH	LABEL		
				FROM	TO								
100-1	3'-1/4" x 7'-9 1/8"	ALUMINUM W/ GLASS	1-3/4"	EXTERIOR	LIVING	A	ANOD.		ALUM	ANOD.		AA	
100-2	3'-1/4" x 7'-9 1/8"	ALUMINUM W/ GLASS	1-3/4"	LIVING	LIGHT CORE	A	ANOD.		ALUM	ANOD.		BB	
103-1	3'-1/4" x 7'-9 1/8"	ALUMINUM W/ GLASS	1-3/4"	LIGHT CORE	LIVING	A	ANOD.		ALUM	ANOD.		CC	
104-1	2'8" x 7'-3/4"	S.C. MASONITE FACE	1-3/4"	HALL	BATHROOM	C	PAINT		WOOD	PAINT		FF	
105-1	3'-0" x 6'-8"	S.C. STEEL	1-3/4"	EXTERIOR	MECHANICAL	B	PAINT		ALUM	ANOD.		EE	
106-1	3'-7 1/2" x 9'-0"	S.C. BIRCH FACE	1-3/8"	BEROOM	LAUNDRY	D	PAINT		WOOD	PAINT		HH	
106-2	3'-0" x 9'-0"	S.C. BIRCH FACE	1-3/8"	BEROOM	HALL	E	PAINT		WOOD	PAINT		HH	
106-3	3'-0" x 7'-0"	ALUMINUM W/ GLASS	1-3/4"	BEDROOM	EXTERIOR	A	ANOD.		ALUM	ANOD.		DD	

WINDOW SCHEDULE													
WINDOW									FRAME			OPENING TYPE	REMARKS
NO.	SIZE	MATERIAL & TYPE	THK.	LOCATION		ELEV.	FINISH	LABEL	MAT.	FINISH	LABEL		
				FROM	TO								
101-1	8'-3/4" x 7'-10 1/2"	ALUMINUM AWNING WINDOW	1-3/4"	DINING	EXTERIOR	A	ANOD.		ALUM	ANOD.		N/A	

LIGHTING SCHEDULE						
	LIGHT SOURCE	ROOM NUMBER	ROOM NAME	MANUFACTURER	MODEL	DESCRIPTION
A	1W DIODE RECESSED	N/A	–	STEP 1 DEZIGNS	STDC141–1A	
B	3W DIODE RECESSED	N/A	–	STEP 1 DEZIGNS	STDC141–3	
C	LED LINEAR LIGHTING STRIP	N/A	–	JESCO LIGHTING	DL–FLEX–UP	
D	FLORESCENT STRIPLIGHT	105	MECHANICAL	COOPER LIGHTING	METALUX CRICKET T5 MICRO	
E	UNDER COUNTER LED LIGHT	103	KITCHEN	IKEA	DIODER LIGHTING STRIP	
F	LED PAVER LIGHTS	N/A	EXTERIOR DECKING	METEOR	SH–200C	
G	LED	102	LIGHT CORE	io LIGHTING	0–01–C–3K–3K–100–3–0	
H	LED	106	BEDROOM	STEP 1 DESIGNZ	STDC150–1	

APPLIANCE SCHEDULE						
APPLIANCE	ROOM NUMBER	ROOM NAME	MANUFACTURER	MODEL	COLOR	DESCRIPTION
COMPUTER	100	LIVING	HP	HP COMPACT 6820S	WHITE	NOTEBOOK PC
TELEVISION	100	LIVING	TOSHIBA	22LV505	WHITE	22" LCD HDTV W/ BUILT IN DVD PLAYER
COOKTOP RANGE	103	KITCHEN	GE	JP202DWW	WHITE	COMPACT ELECTRIC RANGE
OVEN	103	KITCHEN	IKEA	MUMSIG OBI S50 W	WHITE	
DISHWASHER	103	KITCHEN	GE	GSM1860NWW	WHITE	18" COMPACT DISWASHER
REFRIDGERATOR/FREEZER	103	KITCHEN	SANYO	SR–1031 W/S	WHITE	BUILT–IN TOP MOUNT
VENT HOOD	103	KITCHEN	BROAN NU–TONE	402108	WHITE	UNDER CABINET NON–DUCTED
CLOTHES WASHER	106	BEDROOM	MAYTAG	MAH2400AWW	WHITE	STACKABLE FRONTLOADER
CLOTHES DRYER	106	BEDROOM	MAYTAG	MDE2400AYW	WHITE	STACKABLE FRONTLOADER

ROOM FINISH SCHEDULE											
ROOM NUMBER	ROOM NAME	FLOOR	BASE	WALLS				CEILING	CEILING HEIGHT	COUNTER TOP	REMARKS
				NORTH	SOUTH	EAST	WEST				
100	LIVING	B–1	W–1	PT–1	PT–1	PT–1	PT–1	GYP	9 FT	N/A	
101	DINING	B–1	W–1	PT–1	PT–1	PT–1	PT–1	GYP	9 FT	N/A	
103	KITCHEN	B–1	W–1	PT–1	PT–1	PT–1	PT–2	GYP	9 FT	PL	
104	BATHROOM	C–1	W–1	PT–2	PT–2	PT–2	PT–2	GYP	9 FT	N/A	
105	MECHANICAL	B–1	W–1	PT–1	PT–1	PT–1	PT–1	GYP	9 FT	N/A	
106	BEDROOM	B–1	W–1	PT–1	PT–1	PT–2	PT–1	GYP	9 FT	N/A	

FINISH CODE LEGEND

FLOOR

B–1 –BAMBOO
C–1 –2"x2" CERMANIC TILE

BASE

W–1 –PAINTED WOOD BASE 1/2"x 2 1/2"

WALLS

PT–1 –WHITE LATEX PAINT (FLAT FINISH)
PT–2 –LIGHT BLUE LATEX PAINT (FLAT FINISH)

CEILINGS

GYP –PAINTED GYP BOARD

COUNTERTOPS

PL –PLASTIC

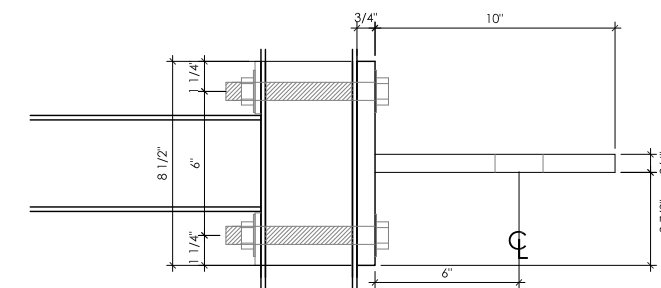
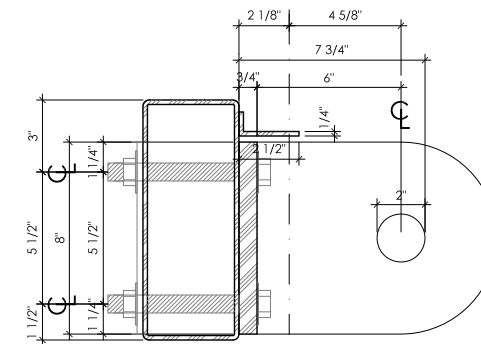
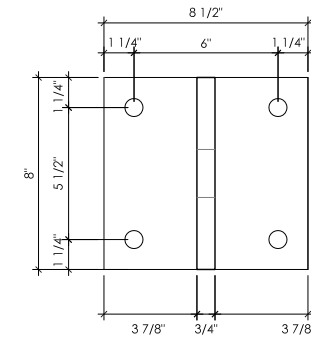
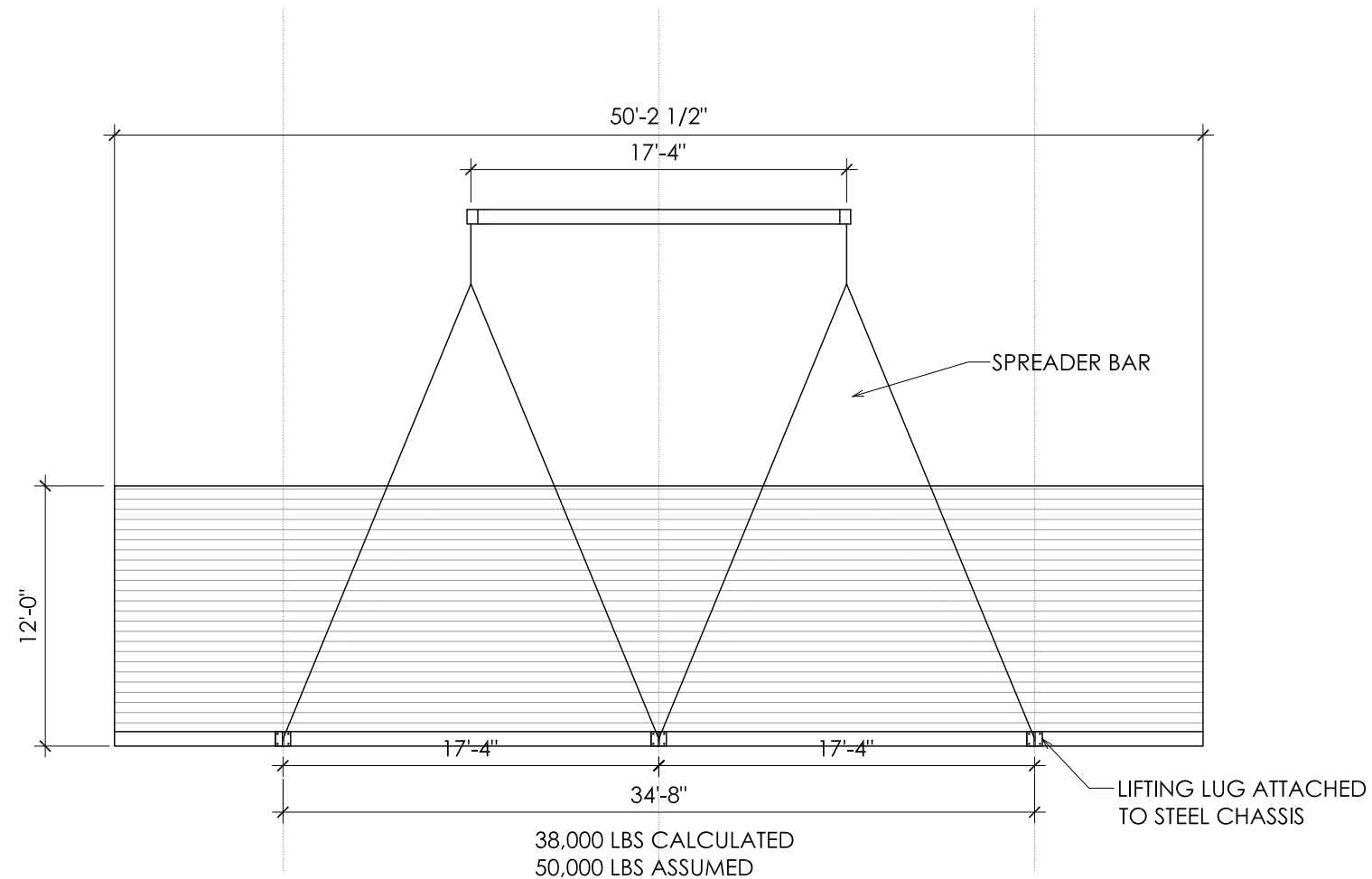
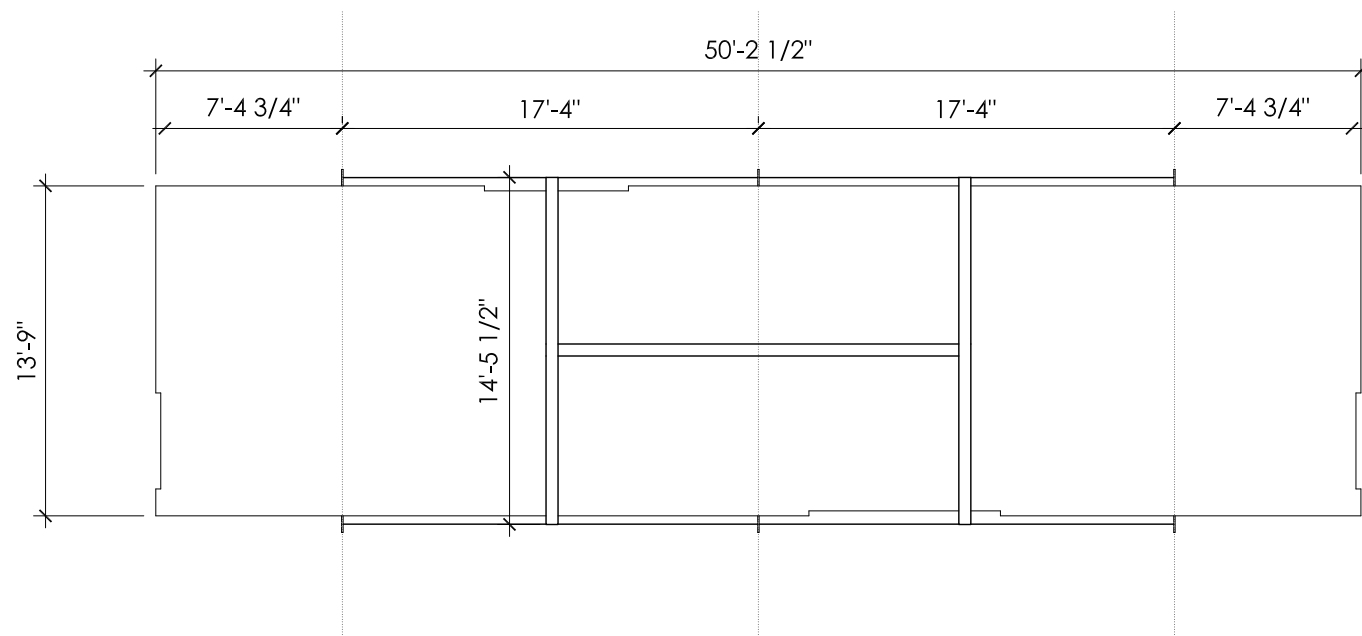
Revisions:

10.29.2008	SLS
05.26.2009	JLC

Date: 06.02.2009
Drawn by: JLC
Checked by: DS
Approved by: xx

LIGHTING,
APPLIANCE &
FINISH
SCHEDULE

A6.02



ZEROHOUSE

Rice University Solar Decathlon 2009
Zero Energy Row House

Rice University School of Architecture, MS-50
P.O. Box 1892, Houston, Texas 77251-1892



Revisions:

10.23.2008 SLS

05.28.2009 SBG

Date: 06.02.2009

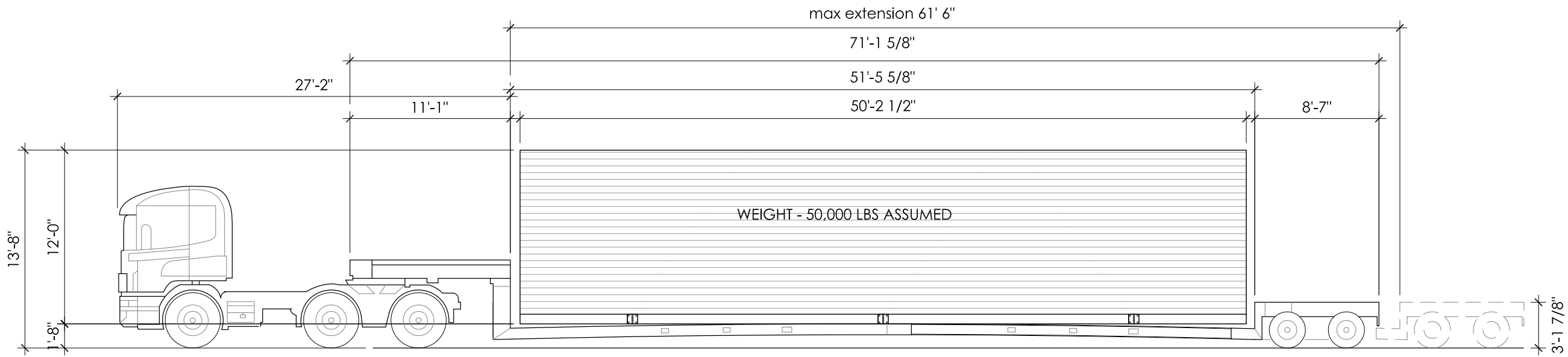
Drawn by: SBG

Checked by: DS

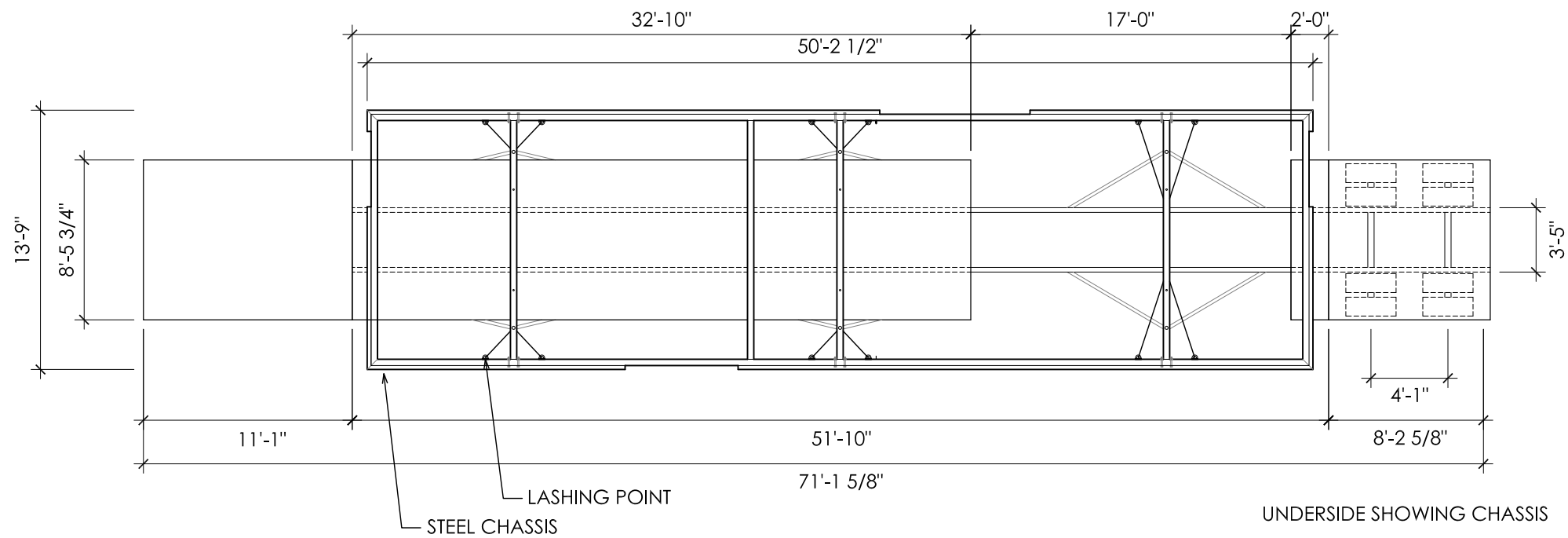
Approved by: xx

LIFTING PLANS

C1.01



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



1 TRUCK TRANSPORT
1/8" = 1'-0"

Revisions:

12.03.2008 SLS

12.04.2008 KM

05.28.2009 SBG

Date: 06.02.2009

Drawn by: SBG

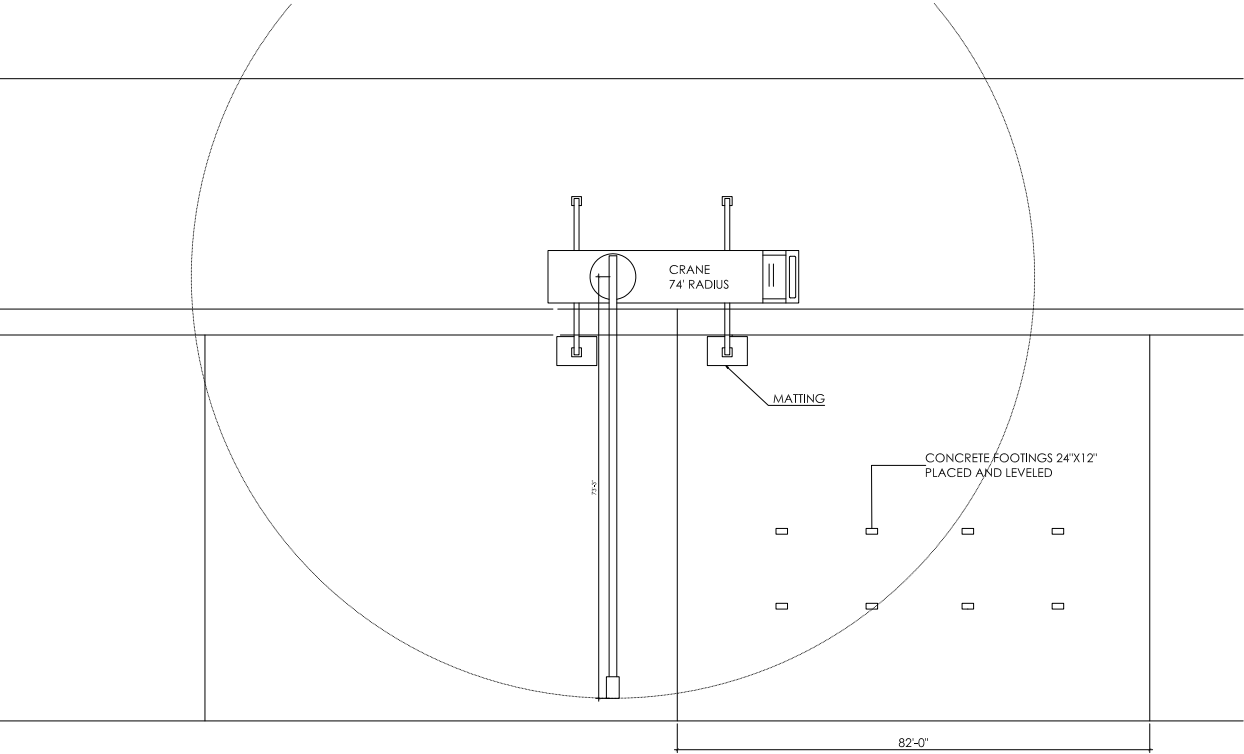
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Approved by: xx

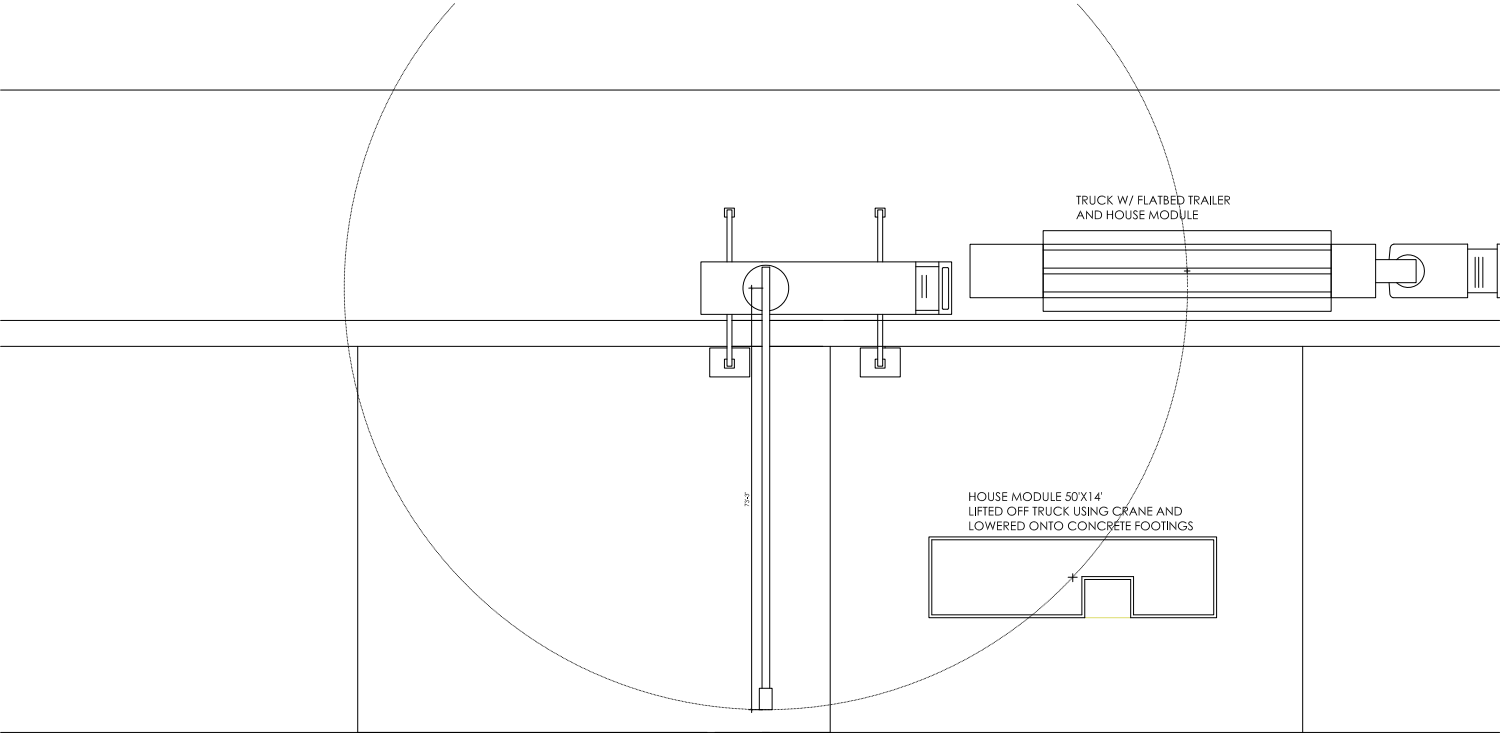
Scale: 1/8" = 1'-0"

TRANSPORT PLA

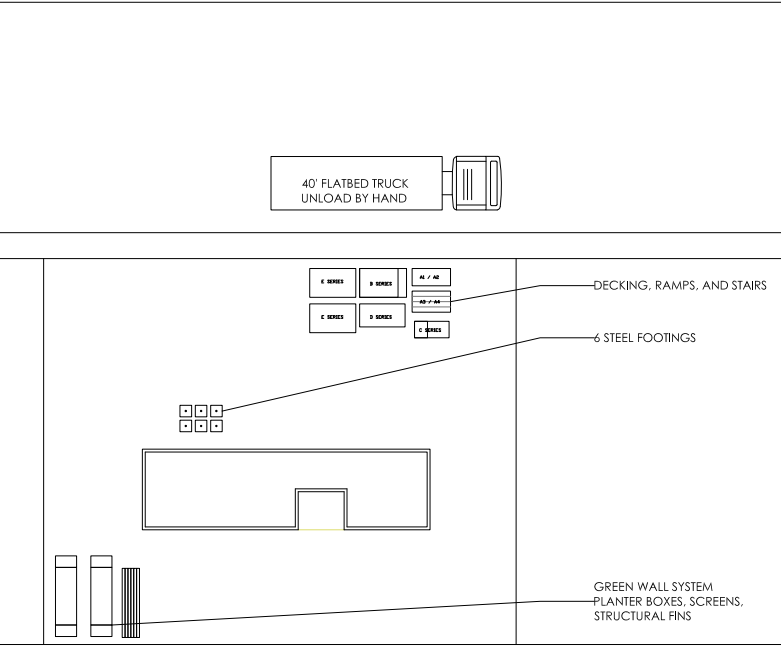
C1.02



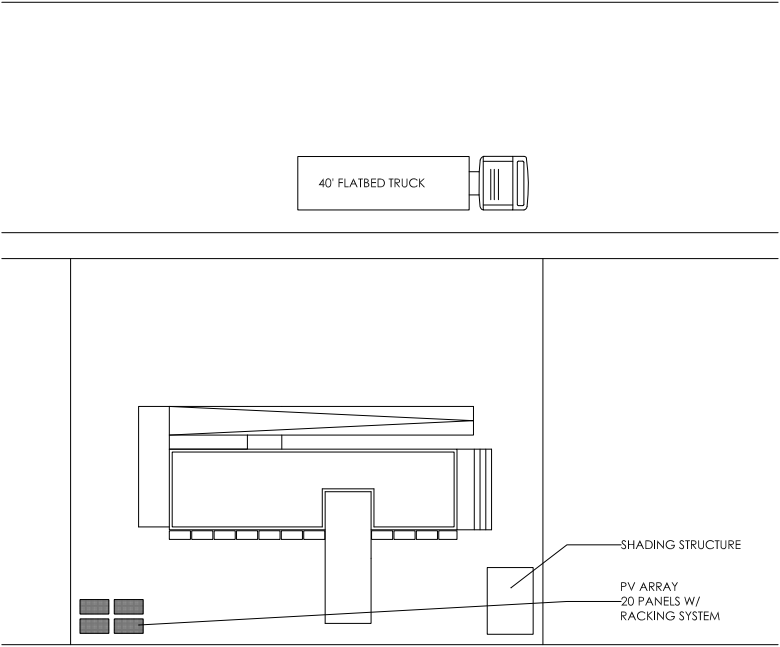
1 ASSEMBLY PLANS
1"= 400'



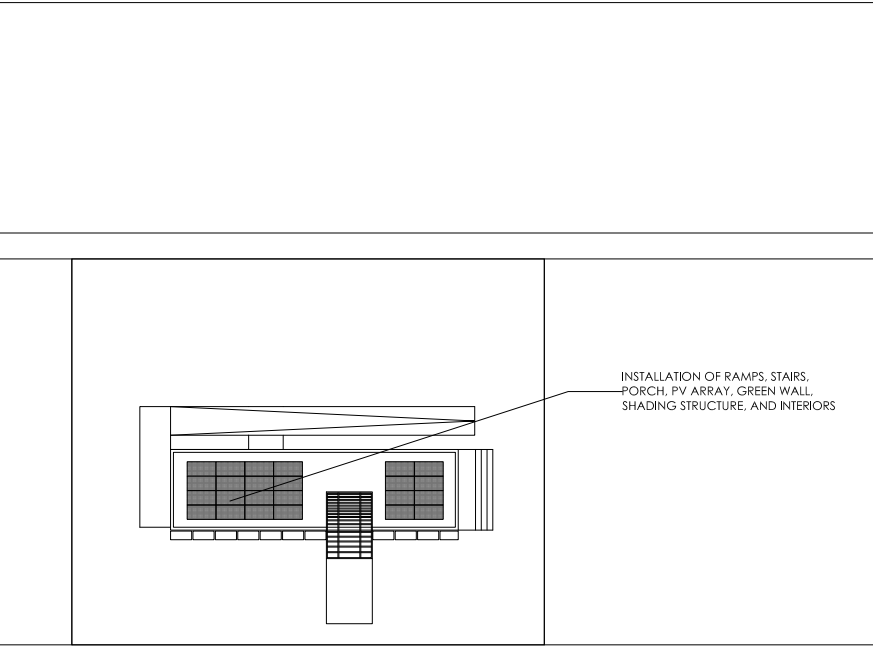
2 ASSEMBLY PLANS
1"= 400'



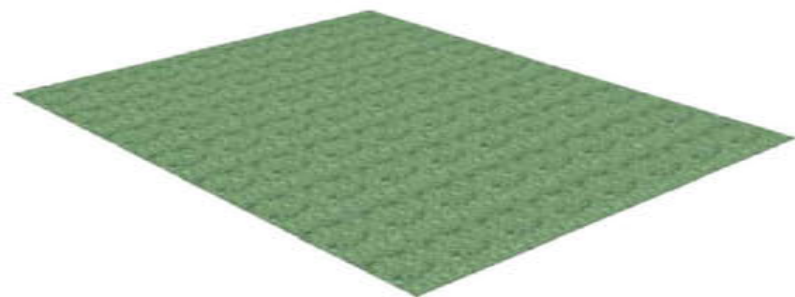
3 ASSEMBLY PLANS
1"= 400'



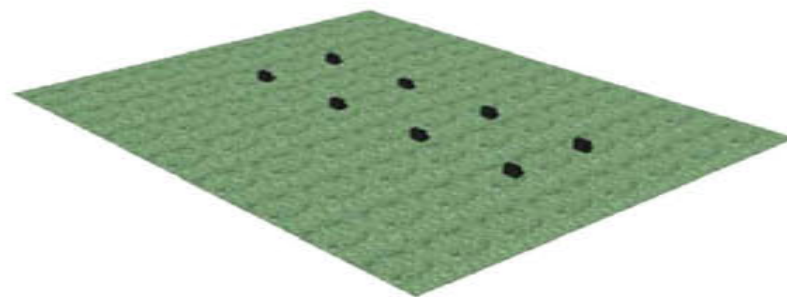
4 ASSEMBLY PLANS
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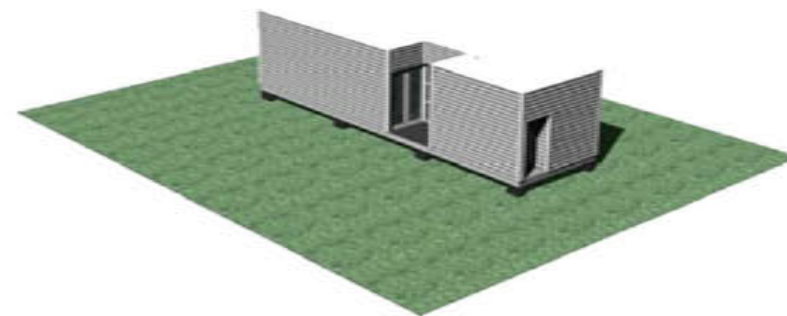
5 ASSEMBLY PLANS
1"= 400'



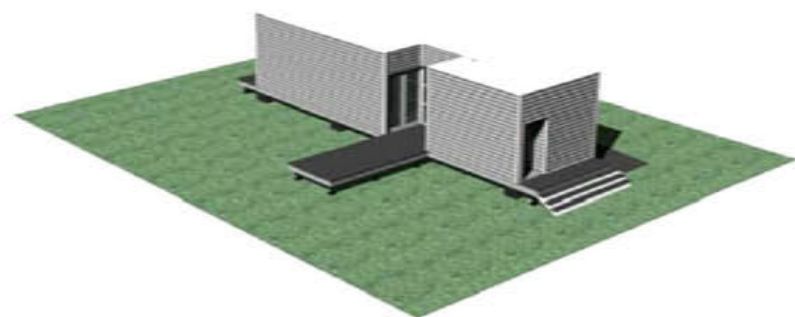
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- Site: 86' x 67'



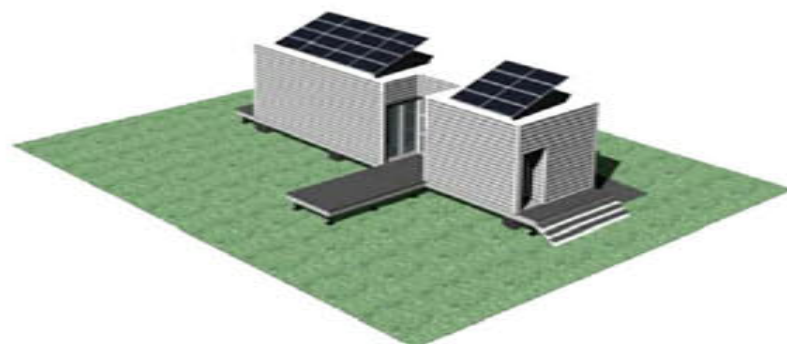
2
- Concrete footings placed and levelled



3
- House lowered onto footings



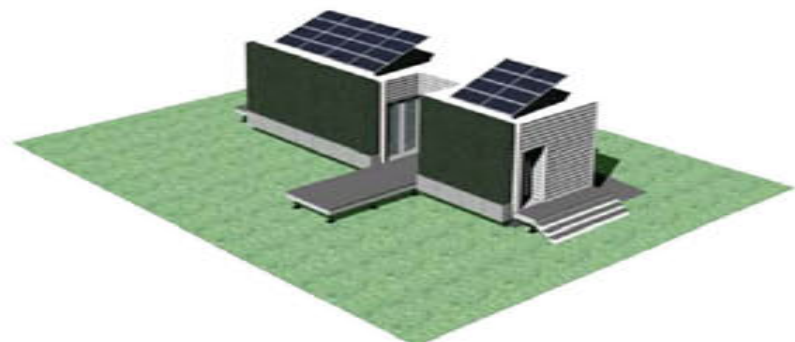
4
- Metal footings put in place
- House leveled
- Porch, stairs and ramp installed



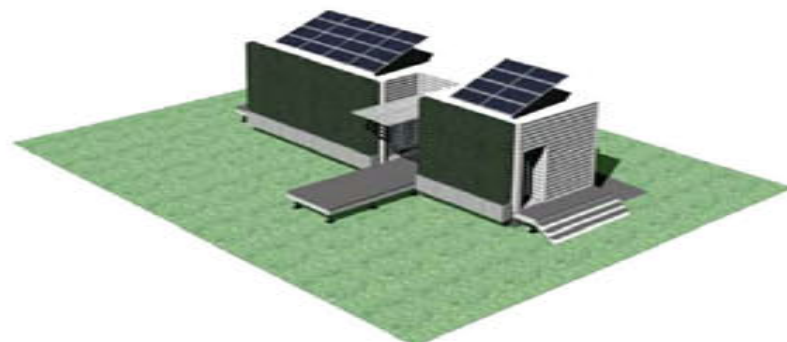
5
- UV panels put in place



6
- Fins and shelf for green wall installed



7
- Planter boxes put in place



8
- Shading device installed

Revisions:

05.28.2009 JLC

Date: 06.02.2009

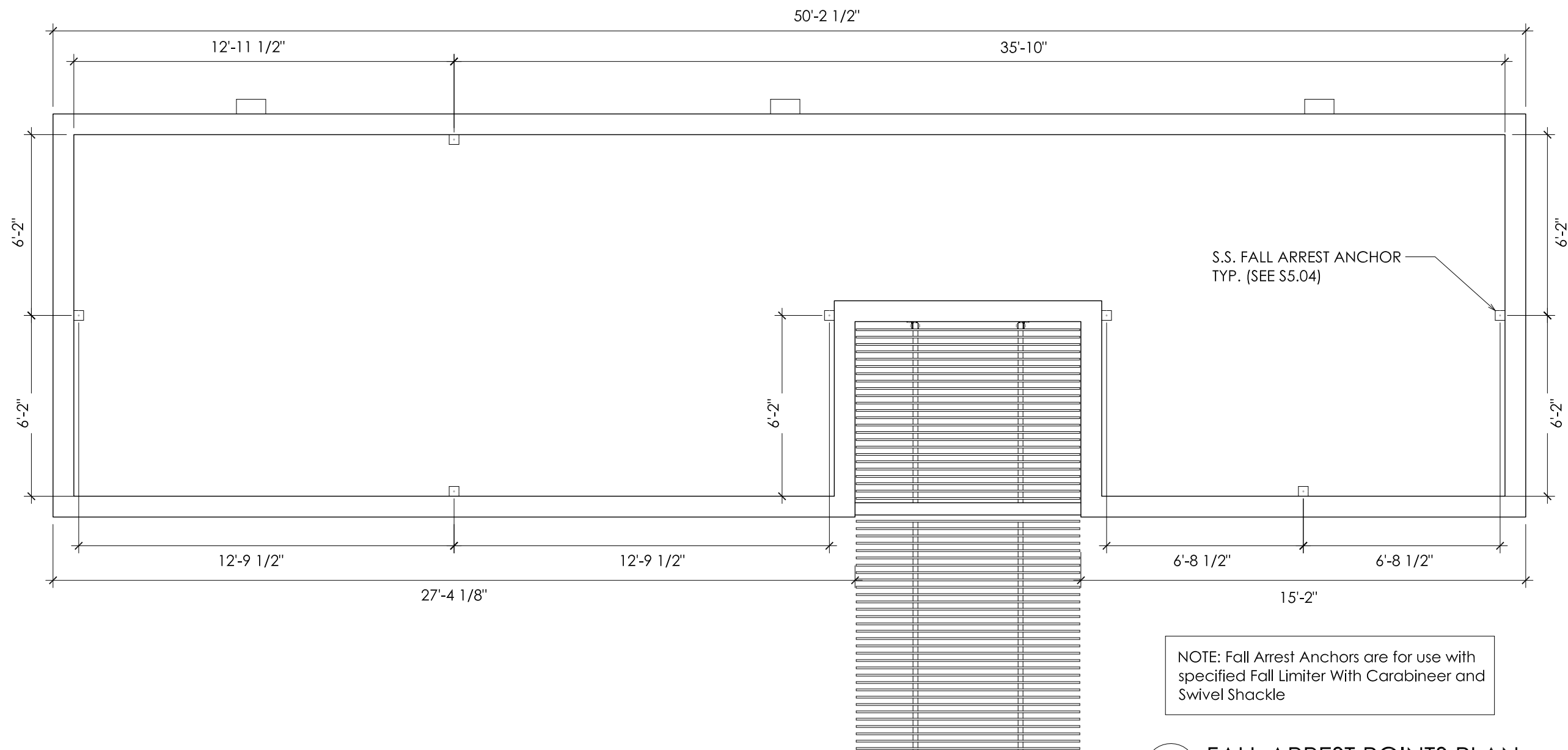
Drawn by: JLC

Checked by: DS

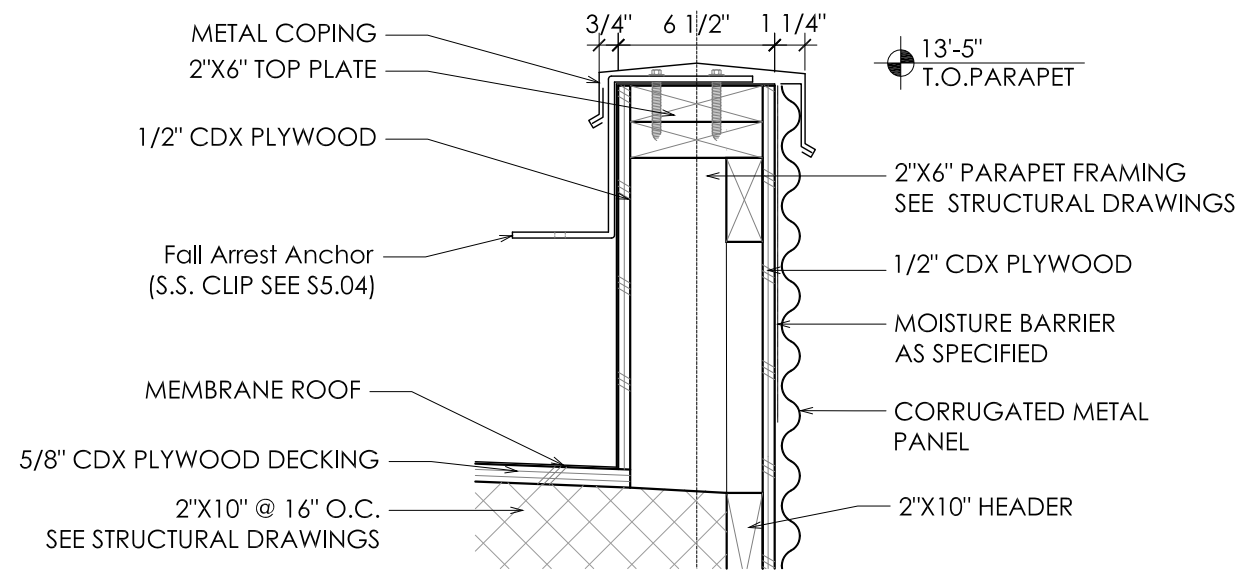
Approved by: xx

ASSEMBLY
DIAGRAM

C1.04



1 FALL ARREST POINTS PLAN
1/4"=1



2 FALL ARREST POINT SECTION DETAIL
1'-1/2"=1

Revisions:
05.28.2009 JLC

Date: 06.02.2009
Drawn by: JLC
Checked by: DS
Approved by: xx

Building Code

1. International Building Code with City of Houston amendments.
2. 2009 Solar Decathlon Building Code

Loads

1. Floor live load: 50 psf (exceeds IBC requirement of 40)
2. Roof live load: 20 psf
3. Railings: 200 lb. force in any direction applied at top rail
4. Wind: 110 Mph exposure B for permanent site; 60 mph exposure C for Solar Decathlon site

Materials

1. Wood: Southern Yellow Pine #2 unless noted otherwise; walls studs may be Douglas Fir–Larch stud grade.
2. Walls studs: 2x6 @ 16" O.C. with blocking at 6'3" O.C. max. Holes may be bored in studs up to 2" in diameter at mid-depth. Provide double studs or 6x6 posts at ends of exterior headers.
3. Rafters and joists: see plan. Provide blocking at 8' O.C. max.
4. Steel: A500 grade B for tube shapes; A36 for connection materials. All steel shall be galvanized.
5. Plywood sheathing: ½" plywood (except Group 5 species), nailed to studs and top/bottom plate with 10d nails at 6" O.C. at panel edges and 12" O.C. elsewhere, with blocking at all joints. Simpson HD2A holdowns where shown on plan.
6. Tied-downs: Simpson H2.5 clip at each rafter, ½" bolts at 32" O.C. from baseplate.
7. Bolts: A325 minimum for steel to steel connections; A307 minimum for all other connections.

Foundation Design

1. Permanent foundation design shall be submitted with permit submittal for permanent site.
2. 1,500 PSF bearing capacity for Solar Decathlon site per Solar Decathlon building code.

Revisions:

10.16.2008 SLS

Date: 06.02.2009

Drawn by: SLS

Checked by: DS

Approved by: xx

STRUCTURAL NOTES

\$0.00



ZEROHOUSE
Rice University Solar Decathlon 2009
Zero Energy Row House

Rice Building Workshop
Rice University School of Architecture, MS-50
P.O. Box 1892, Houston, Texas 77251-1892

FASTENER SCHEDULE FOR STRUCTURAL MEMBERS			
DESCRIPTION OF BUILDING ELEMENTS		NUMBER AND TYPE OF FASTENER a, b, c, d	SPACING OF FASTENERS
1. Joist to sill or girder, toe nail		3 – 8d	----
2. Sole plate to joist or blocking, face nail		16 d	16 " o.c.
3. Top or sole plate to stud, end wall		2 – 16d	----
4. Stud to sole plate, toe nail		3 – 8d or 2 – 16d	----
5. Double studs, face nail		10d	24" o.c.
6. Double top plates, face nail		10d	24" o.c.
7. Sole plate to joist or blocking at braced wall panels		3 – 16d	16" o.c.
8. Double top plates, minimum 48–inch offset of end joints, face nail in lapped area		8 – 16d	----
9. Blocking between joists or rafters to top plate, toe nail		3 – 8d	----
10. Rim joist to top plate, toe nail		8d	6" o.c.
11. Top plates, laps at corners and intersections, toe nail		2 – 10d	----
12. Built–up header, two pieces with 1/2" spacer		16d	16" o.c. along each edge
13. Continued header, two pieces		16d	16" o.c. along each edge
14. Ceiling joists to plate, toe nail		3 – 8d	----
15. Continuous header to stud, toe nail		4 – 8d	----
16. Ceiling joist, laps over partitions, face nail		3 – 10d	----
17 Ceiling joist to parallel rafters, face nail		3 – 10d	----
18. Rafter to plate, toe nail		2 – 16d	----
19 Built–up corner studs		10d	24" o.c.
20 Built–up girders and beams, 2–inch lumber layers		10d	Nail each layer as follows: 32" o.c. at top and bottom and staggered. Two nails at ends and at each splice.
21. 2" planks		2 – 16d	At each bearing
22. Roof rafters to ridge, valley or hip rafters: toe nail face nail		4 – 16d 3 – 16d	---- ----
23. Rafter ties to rafters, face		3 – 8d	----
WOOD STRUCTURAL PANELS, SUB FLOOR, ROOF AND WALL SHEATHING TO FRAMING, AND PARTICLEBOARD WALL SHEATHING TO FRAMING			
5/16 – 1/2	6d common nail (sub floor, wall) 8d common nail (roof)	6	12g
19/32 – 1	8d common nail	6	12g
1 1/8 – 1 1/4	10d common nail or 8d deformed nail	6	12

DESCRIPTION OF BUILDING MATERIALS	DESCRIPTION OF FASTENER b, c, d	SPACING OF FASTENERS	
		EDGE (INCHES) j	INTERMEDIATE SUPPORTS c, e (INCHES)
1/2 gypsum sheathing	1 1/2 galvanized roofing nail; 6d common nail; staple galvanized 1 1/2 long; 1 1/4 screws, Type W or S	4	8
5/8 gypsum sheathing	1 3/4 galvanized roofing nail; 8d common nail; staple galvanized 1 5/8 long; 1 5/8 screws, Type W or S	4	8
WOOD STRUCTURAL PANELS, COMBINATION SUB FLOOR UNDERLAYMENT TO FRAMING			
3/4 and less	6d deformed nail or 8d common nail	6	12
7/8 – 1	8d deformed nail or 8d common nail	6	12
1 1/8 – 1 1/4	8d deformed nail or 10d common nail	6	12

- For S1: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 mile per hour = 1.609 km/h.
- a. All nails are smooth–common, box or deformed shanks except where otherwise stated.
 - b. Staples are 16 gage wire and have a minimum 7/16–inch on diameter crown width.
 - c. Nails shall be spaced at not more than 6–inches on center at all supports where spans are 48 inches or greater.
 - d. Four–foot–by–8–foot or 4–foot–by–9–foot panels shall be applied vertically.
 - e. Spacing of fasteners not included in this table shall be base on Table R602.3 (1)
 - f. For regions having basic wind speed of 110 mph or greater, 8d deformed nails shall be used for attaching plywood wood structural panel roof sheathing to framing within minimum 48–inch distance from gable end walls, if mean roof height is more than 25 feet, up to 35 feet maximum.
 - g. For regions having basic wind speed of 100 mph or less, nails for attaching wood structural panel roof sheathing to gable end wall framing shall be spaced 6–inches on center. When basic wind speed is greater than 100 mph, nails for attach panel roof sheathing to intermediate supports shall be space 6–inches on center for minimum 48–inch distance from ridges, eaves and gable end walls: and 4–inches on center to gable end wall framing.
 - h. Gypsum sheathing shall conform to ASTM C 79 and shall be installed in accordance with GA 253. Fiberboard sheathing shall conform to either AHA 194.1 or ASTM C 108.
 - j. Spacing of fasteners on floor sheathing panel edges applies to panel edges supported by framing members and at all floor perimeters only. Spacing of fasteners on roof sheathing panel edges applies to panel edges supported by framing members and at all roof plane perimeters. Blocking of roof or floor sheathing panel edges perpendicular to the framing members shall not be required at intersection of adjacent roof planes. Floor and roof perimeter shall be supported by framing members or solid blocking.

Building Code

- 1. International Building Code with City of Houston amendments.
- 2. 2009 Solar Decathlon Building Code

Loads

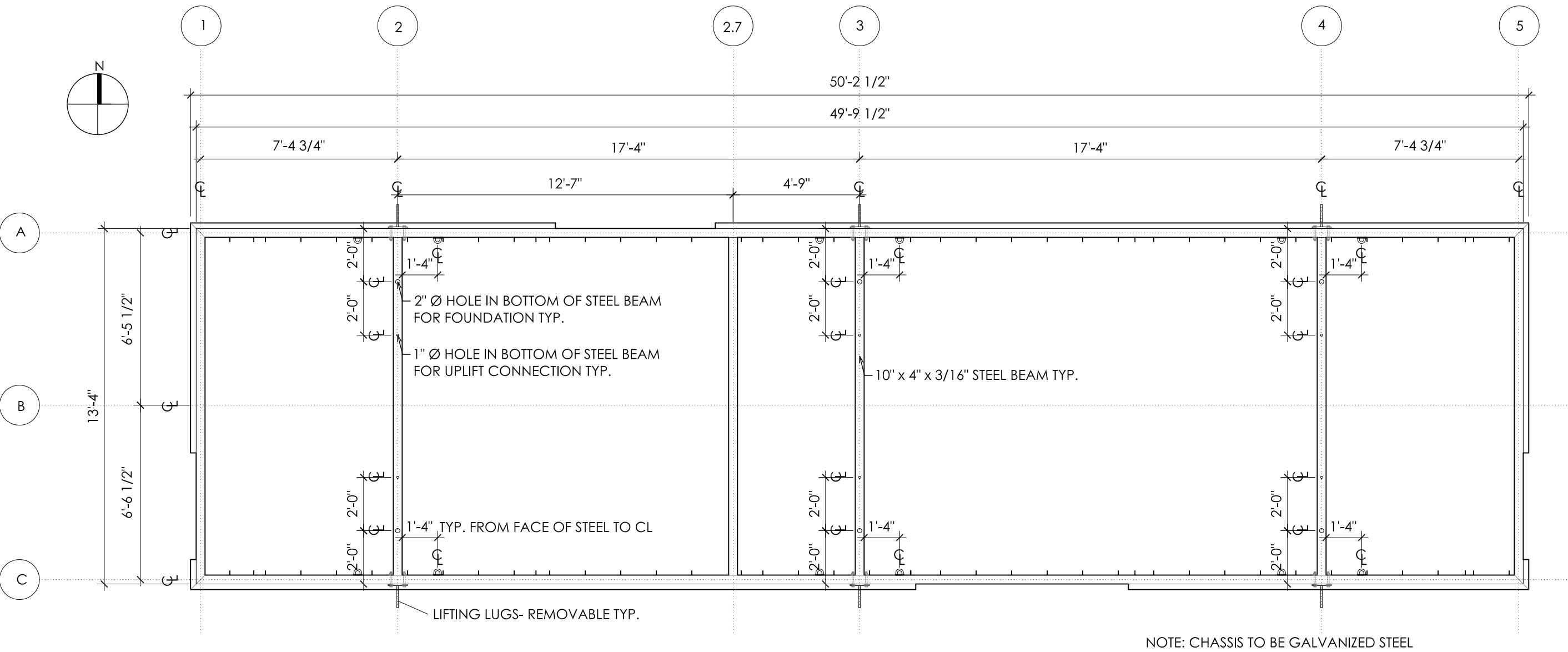
- 1. Floor live load: 50 psf (exceeds IBC requirement of 40)
- 2. Roof live load: 20 psf
- 3. Railings: 200 lb. force in any direction applied at top rail
- 4. Wind: 110 Mph exposure B for permanent site; 60 mph exposure C for Solar Decathlon site

Materials

- 1. Wood: Southern Yellow Pine #2 unless noted otherwise; walls studs may be Douglas Fir–Larch stud grade.
- 2. Walls studs: 2x6 @ 16" O.C. with blocking at 6'3" O.C. max. Holes may be bored in studs up to 2" in diameter at mid–depth. Provide double studs or 6x6 posts at ends of exterior headers.
- 3. Rafters and joists: see plan. Provide blocking at 8' O.C. max.
- 4. Steel: A500 grade B for tube shapes; A36 for connection materials. All steel shall be galvanized.
- 5. Plywood sheathing: ½" plywood (except Group 5 species), nailed to studs and top/bottom plate with 10d nails at 6" O.C. at panel edges and 12" O.C. elsewhere, with blocking at all joints. Simpson HD2A holddowns where shown on plan.
- 6. Tied–downs: Simpson H2.5 clip at each rafter, ½" bolts at 32" O.C. from baseplate.
- 7. Bolts: A325 minimum for steel to steel connections; A307 minimum for all other connections.

Foundation Design

- 1. Permanent foundation design shall be submitted with permit submittal for permanent site.
- 2. 1,500 PSF bearing capacity for Solar Decathlon site per Solar Decathlon building code.



1 CHASSIS PLAN BOTTOM
1/4"=1'

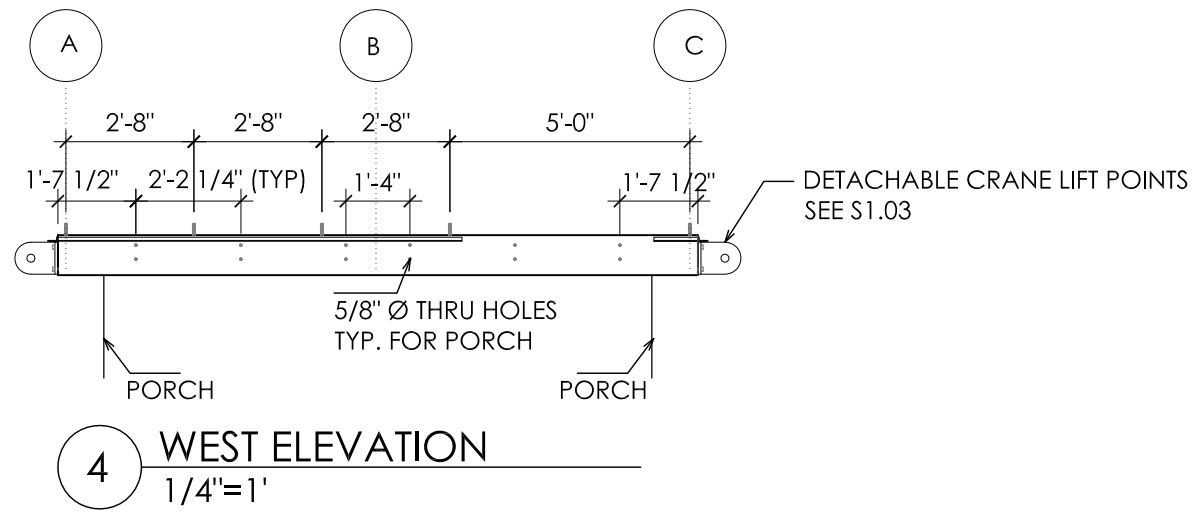
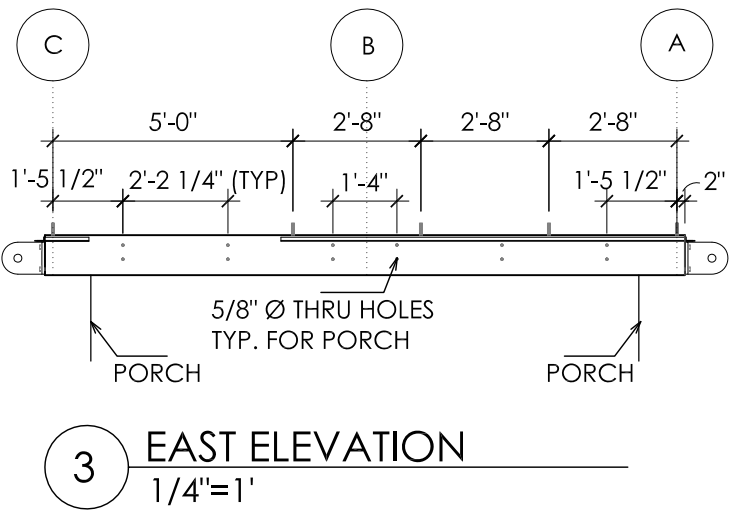
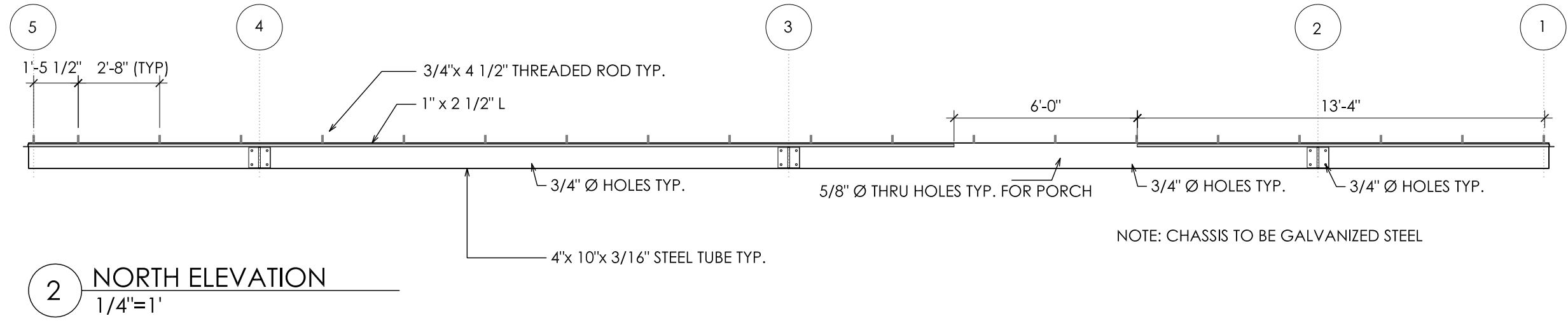
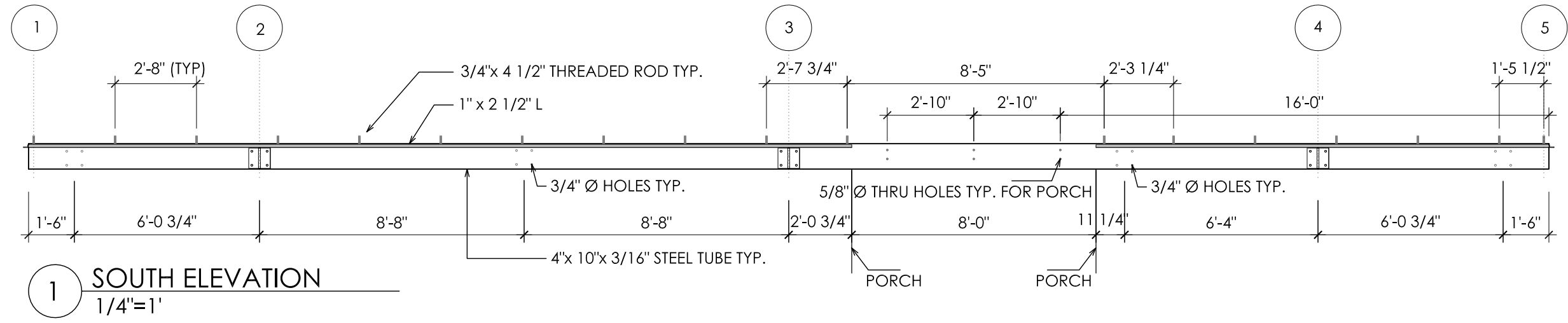
Revisions:	
10.23.2008 SLS	
05.24.2009 SBG	
Date:	06.02.2009
Drawn by:	SBG
Checked by:	DS
Approved by:	xx

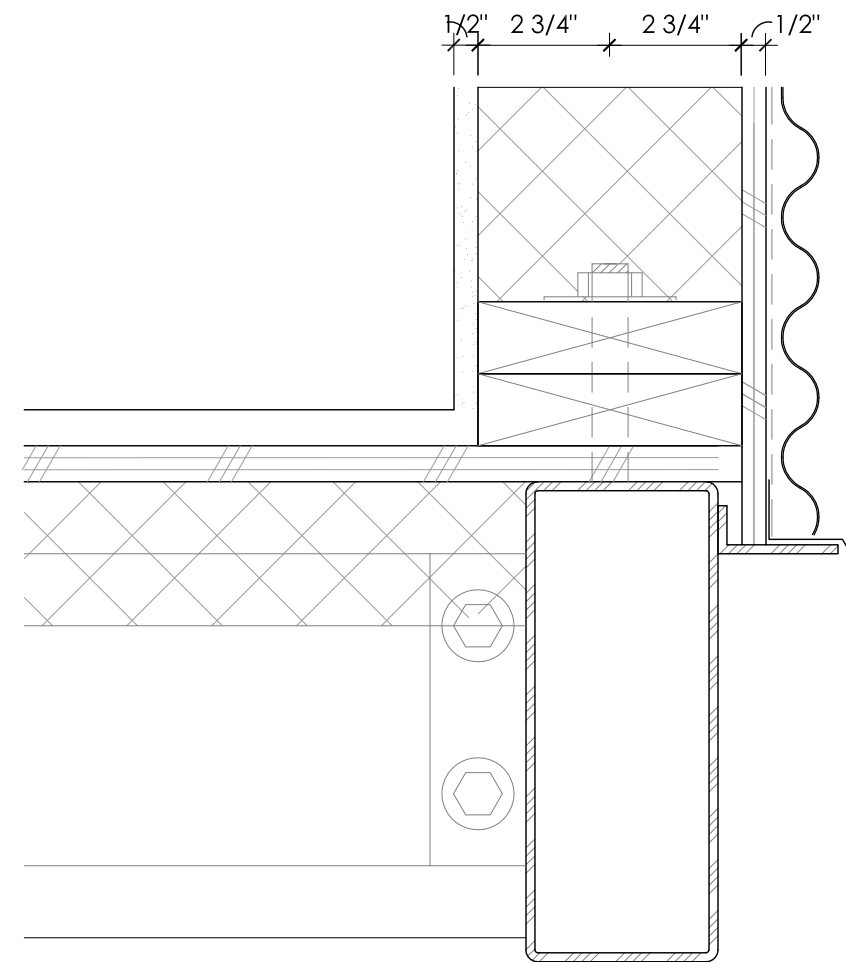
Scale: 1/4" = 1'-0"
CHASSIS
PLAN
S1.01

Revisions:	
10.23.2008 SLS	
05.24.2009 SBG	
Date:	06.02.2009
Drawn by:	DD
Checked by:	DS
Approved by:	xx

Scale: 1/4" = 1'-0"
CHASSIS
ELEVATION

S1.02





3"

10"

6 1/2"

3 1/2"

1 1/2"

1 1/2"

1 1/2"

1 1/2"

2"

1 3/4"

4"

1/4"

2 3/8"

1/4"

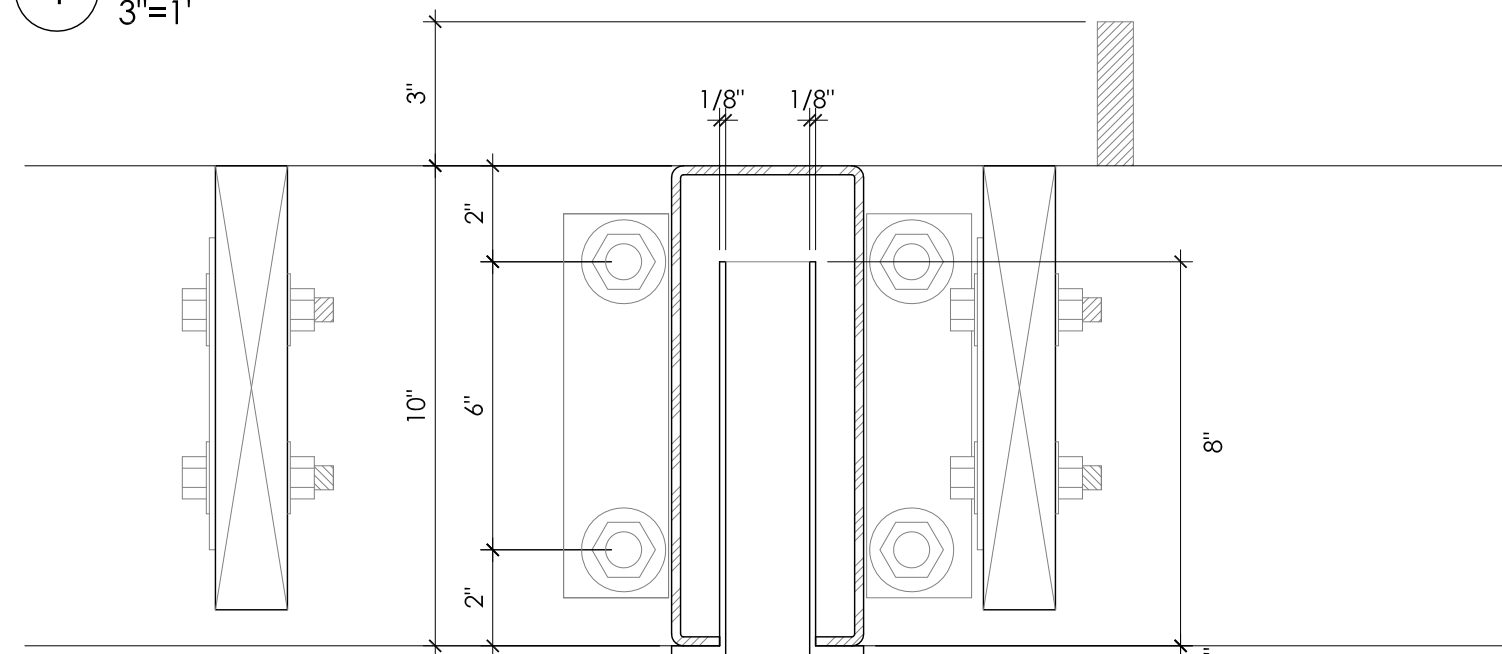
2 1/2"

TABS @ 16" O.C.
SEE PLAN

3/4"x4 1/2" THREADED
ROD @ 32" O.C.

4"x10"x3/16"
ST. TUBE

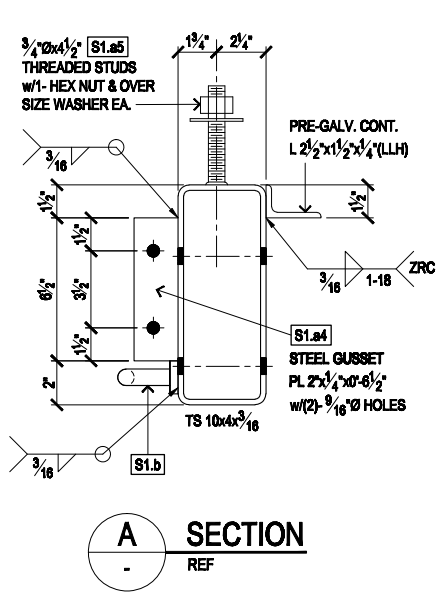
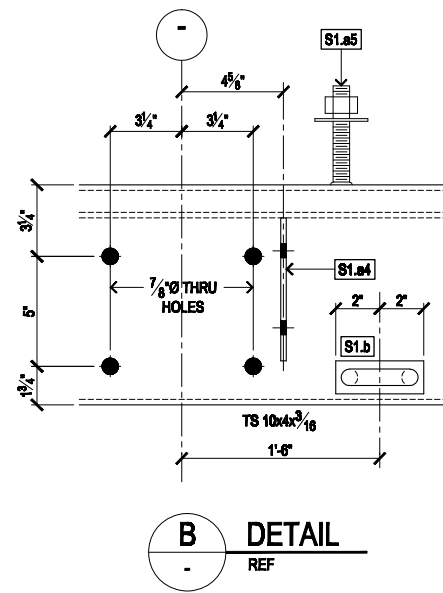
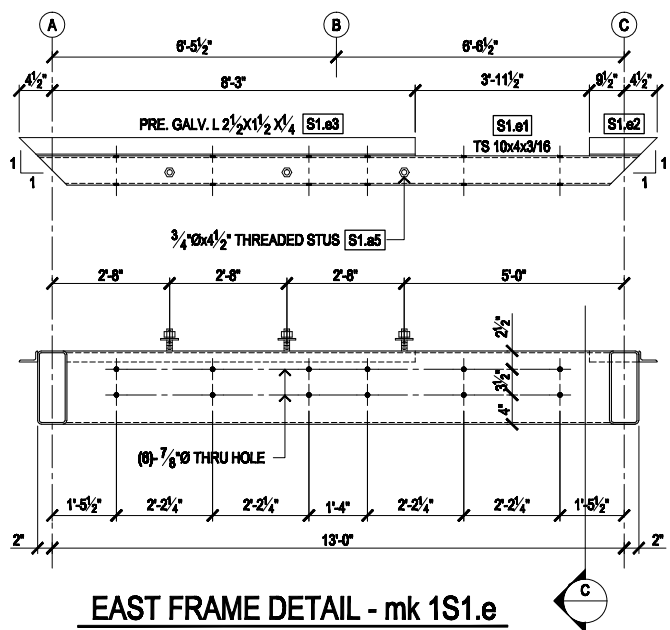
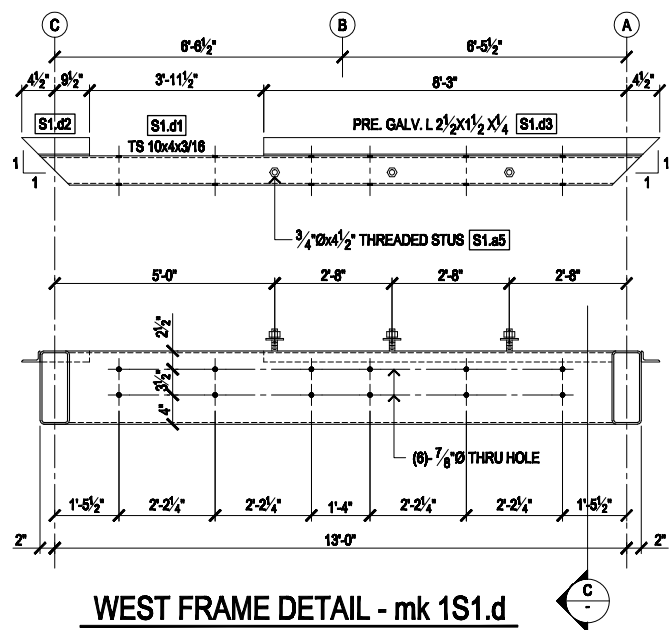
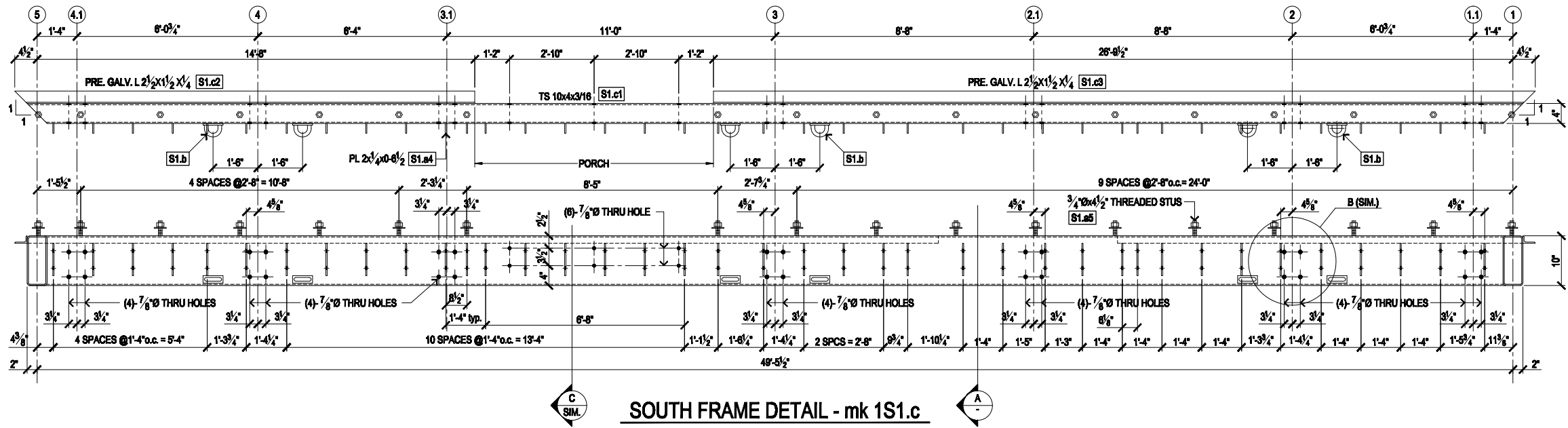
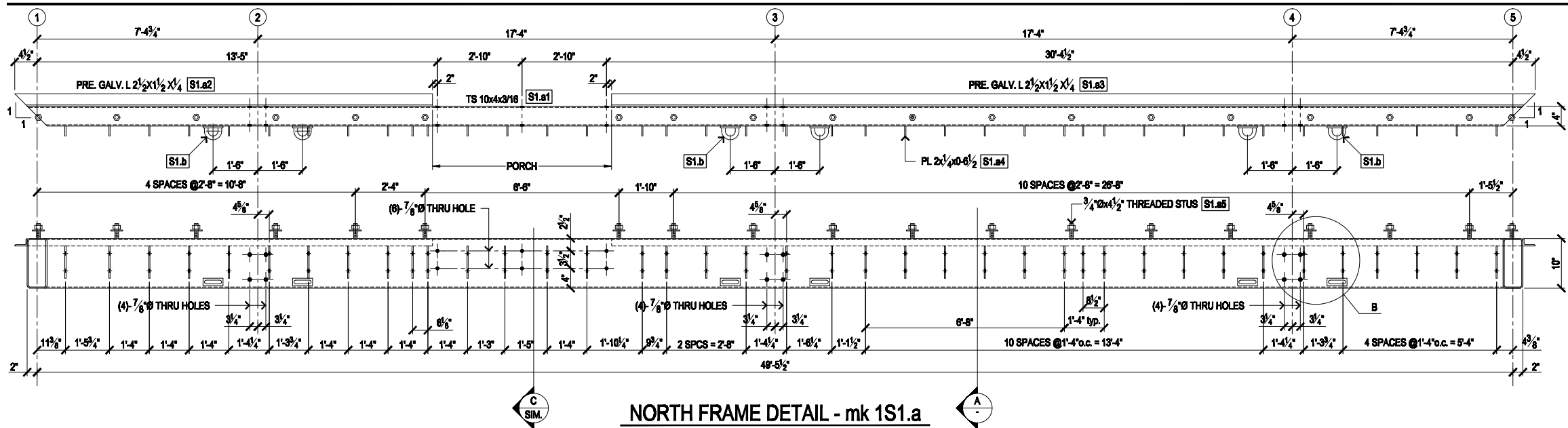
2 CHASSIS SECTION $\frac{9}{16}$
3"=1'



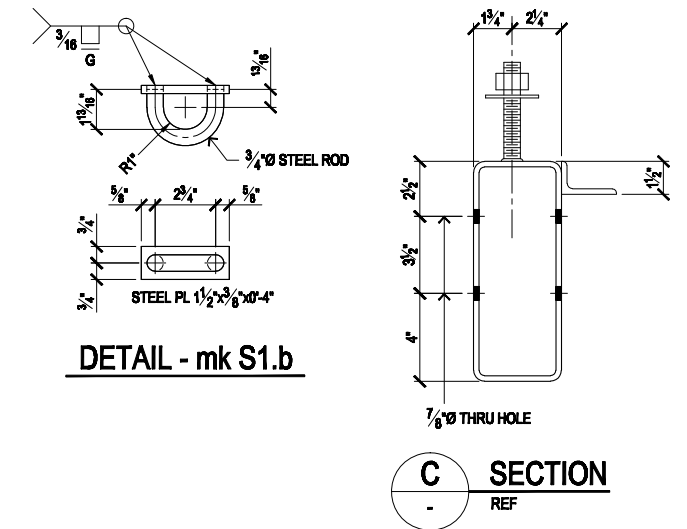
3 CHASSIS @ FOUNDATION
3"=1'

 SOLAR DECATHLON

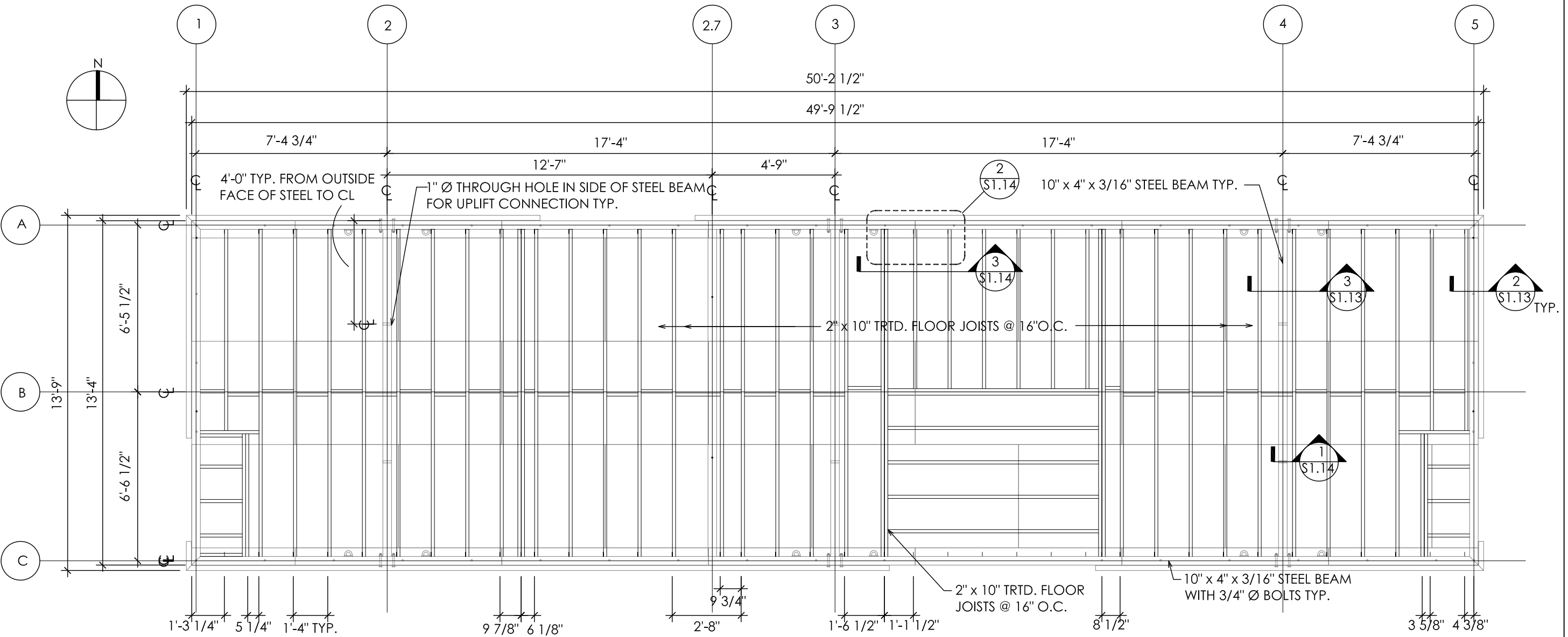
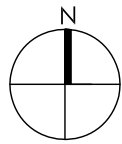
S1.04



BILL OF MATERIAL			REF.		DATE:	
MARK	REQ'D	DESCRIPTION	LENGTH		REMARKS	
			FEET	INCH		
mk 1S1.a	ONE	NORTH FRAME				
S1.a1	ONE	TS 10x4x3/16	49	9 1/2	MITER ENDS	
S1.a2	ONE	PRE-GALV. L 2 1/2x1 1/2x1/4	13	7 1/2	MITER END	
S1.a3	ONE	PRE-GALV. L 2 1/2x1 1/2x1/4	30	7	MITER END	
S1.a4	39	STEEL GUSSET PL 2x1/4	0	6 1/2		
S1.a5	18	(3/4"-10") THREADED ROD STUDS	0	4 1/2		
S1.b	6	STEEL PL 1 1/2x3/8	0	4	SEE DETAIL	
	6	3/4"Ø STEEL ROD (ROLLED)	0	6		
mk 1S1.c	ONE	SOUTH FRAME				
S1.c1	ONE	TS 10x4x3/16	49	9 1/2	MITER ENDS	
S1.c2	ONE	PRE-GALV. L 2 1/2x1 1/2x1/4	15	0 1/2	MITER END	
S1.c3	ONE	PRE-GALV. L 2 1/2x1 1/2x1/4	27	2	MITER END	
S1.c4	39	STEEL GUSSET PL 2x1/4	0	6 1/2		
S1.c5	18	(3/4"-10") THREADED ROD STUDS	0	4 1/2		
S1.b	6	STEEL PL 1 1/2x3/8	0	4	SEE DETAIL	
	6	3/4"Ø STEEL ROD (ROLLED)	0	6		
mk 1S1.d	ONE	WEST FRAME				
S1.d1	ONE	TS 10x4x3/16	13	4	MITER ENDS	
S1.d2	ONE	PRE-GALV. L 2 1/2x1 1/2x1/4	1	2	MITER END	
S1.d3	ONE	PRE-GALV. L 2 1/2x1 1/2x1/4	8	7 1/2	MITER END	
S1.a5	3	(3/4"-10") THREADED ROD STUDS	0	4 1/2		
mk 1S1.e	ONE	EAST FRAME				
S1.e1	ONE	TS 10x4x3/16	13	4	MITER ENDS	
S1.e2	ONE	PRE-GALV. L 2 1/2x1 1/2x1/4	1	2	MITER END	
S1.e3	ONE	PRE-GALV. L 2 1/2x1 1/2x1/4	8	7 1/2	MITER END	
S1.a5	3	(3/4"-10") THREADED ROD STUDS	0	4 1/2		
		SHOP BOLTS				
	43	(3/4"-10) GALV. HEX NUTS & OVER SIZE FLAT WASHERS				



ITEM NO. 1		REF. S1.10-S1.14		APP'L	SHOP	ERE
No.	DATE	REVISION	BY	CHKD	10/20/08	10/22/08
1	10/22/08	REVISED PER APP. DWG.	EV	SC		
FINISH		STL.		H. D. GALV.		
SST.		ALM.		BRZ.		
GLS.		NOTE:		DRWN: EV		
				DATE: 10/15/08		
				CHKD: SC		
				DATE: 10/20/08		
				DRAWING NO.		
				1S1 OF		

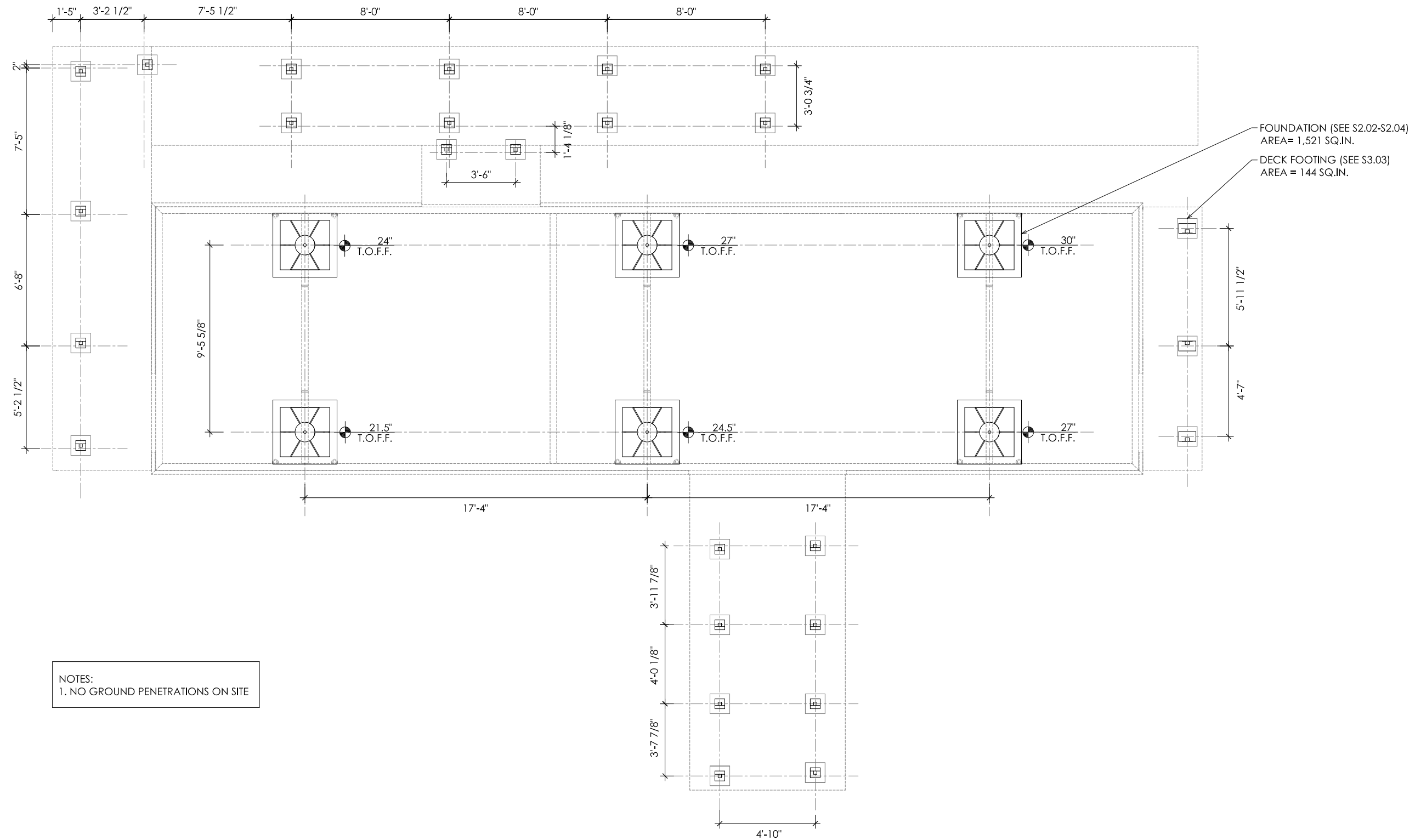


1 FLOOR FRAMING PLAN
1/4"=1'



Revisions:	
10.23.2008 SLS	
05.30.2009 JLC	

Date: 06.02.2009
Drawn by: SLS
Checked by: DS
Approved by: xx



1 FOOTING LOCATION PLAN
3/16"=1'

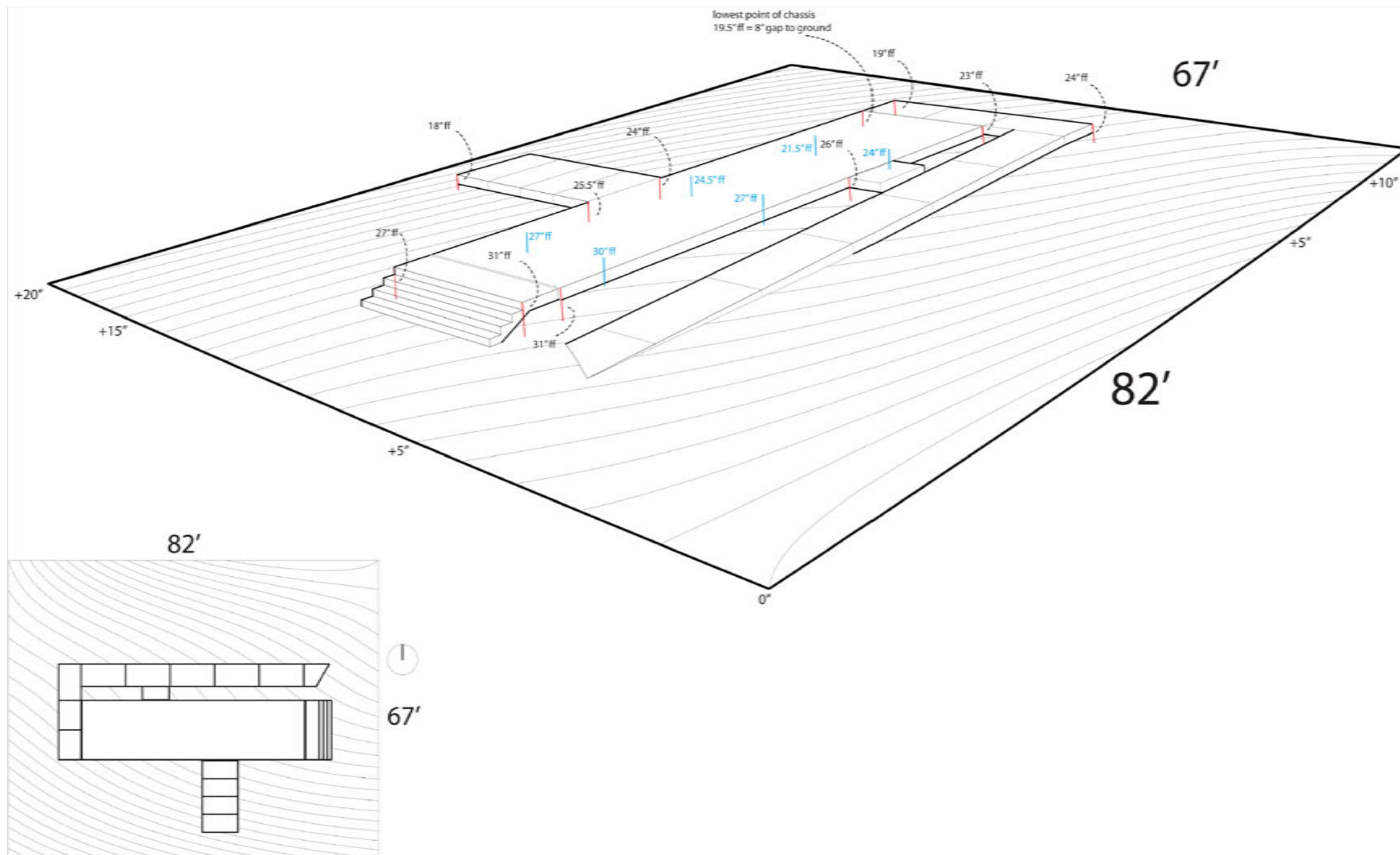
Revisions:	
	05.19.2009 JLC

Date: 06.02.2009
Drawn by: JLC
Checked by: DS
Approved by: xx

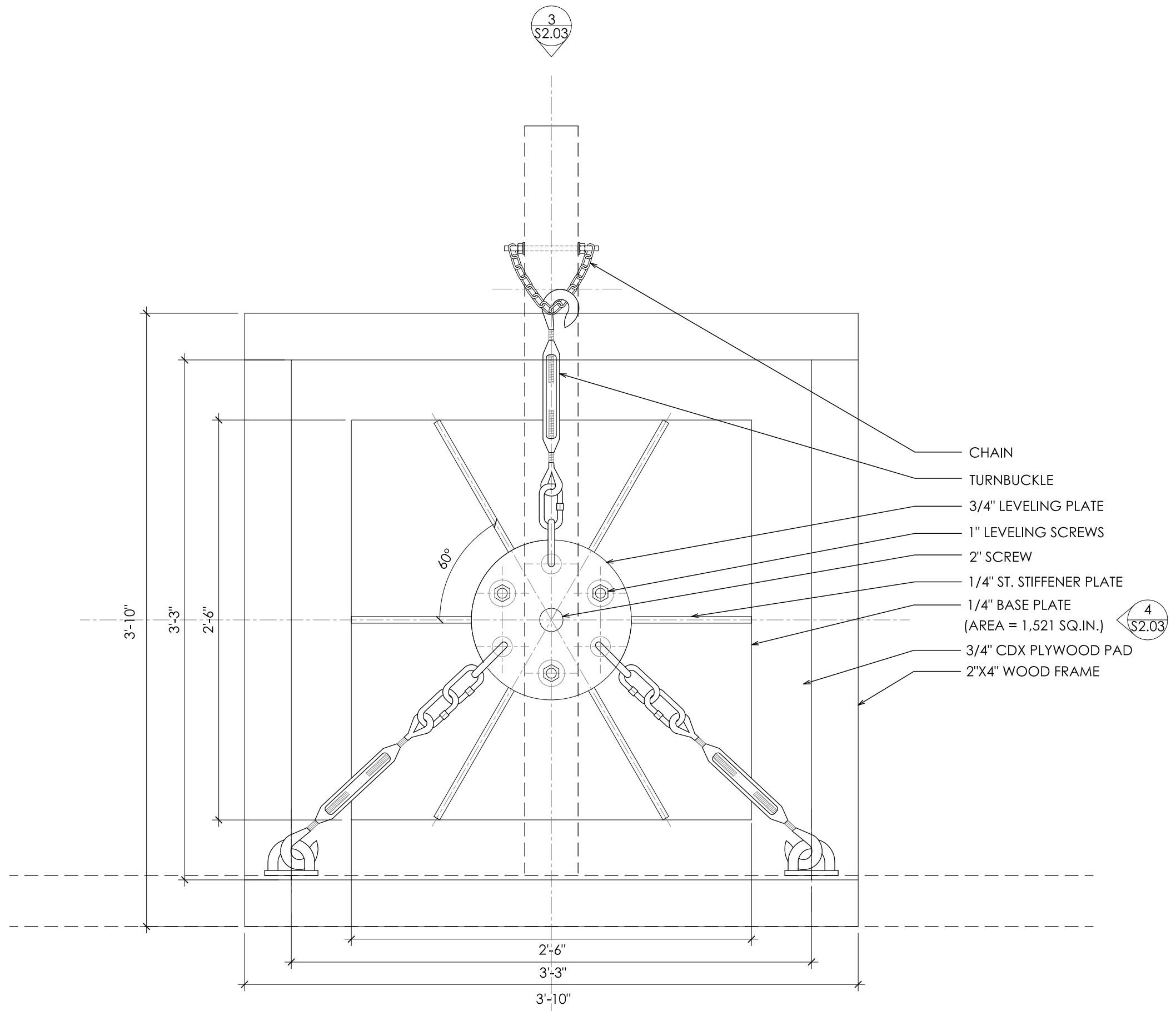
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ARCH PLANS

S2.01





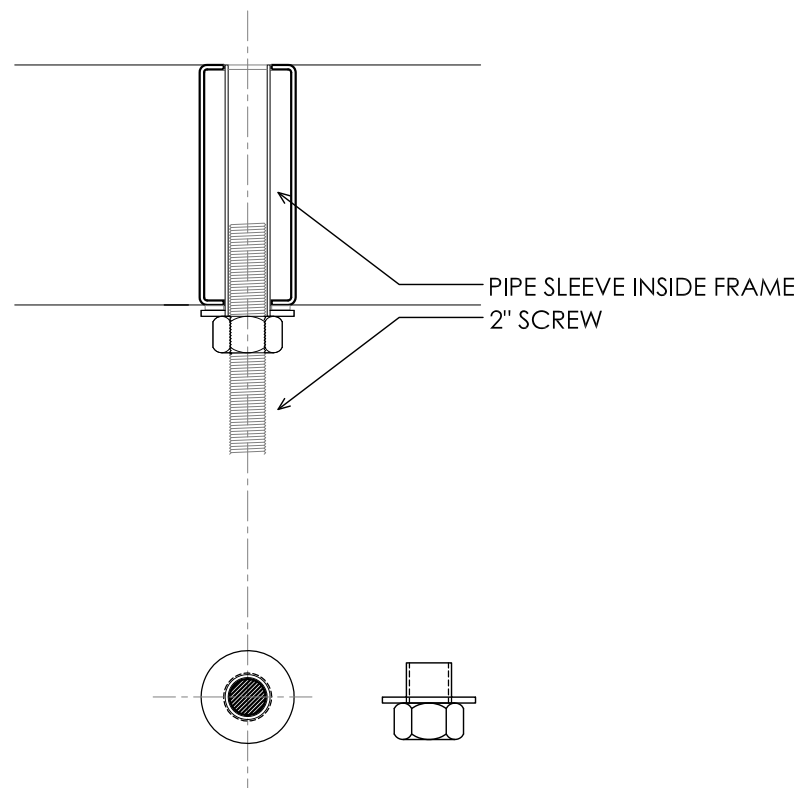
Revisions:	
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Date:	06.02.2009
Drawn by:	JY
Checked by:	DS
Approved by:	xx



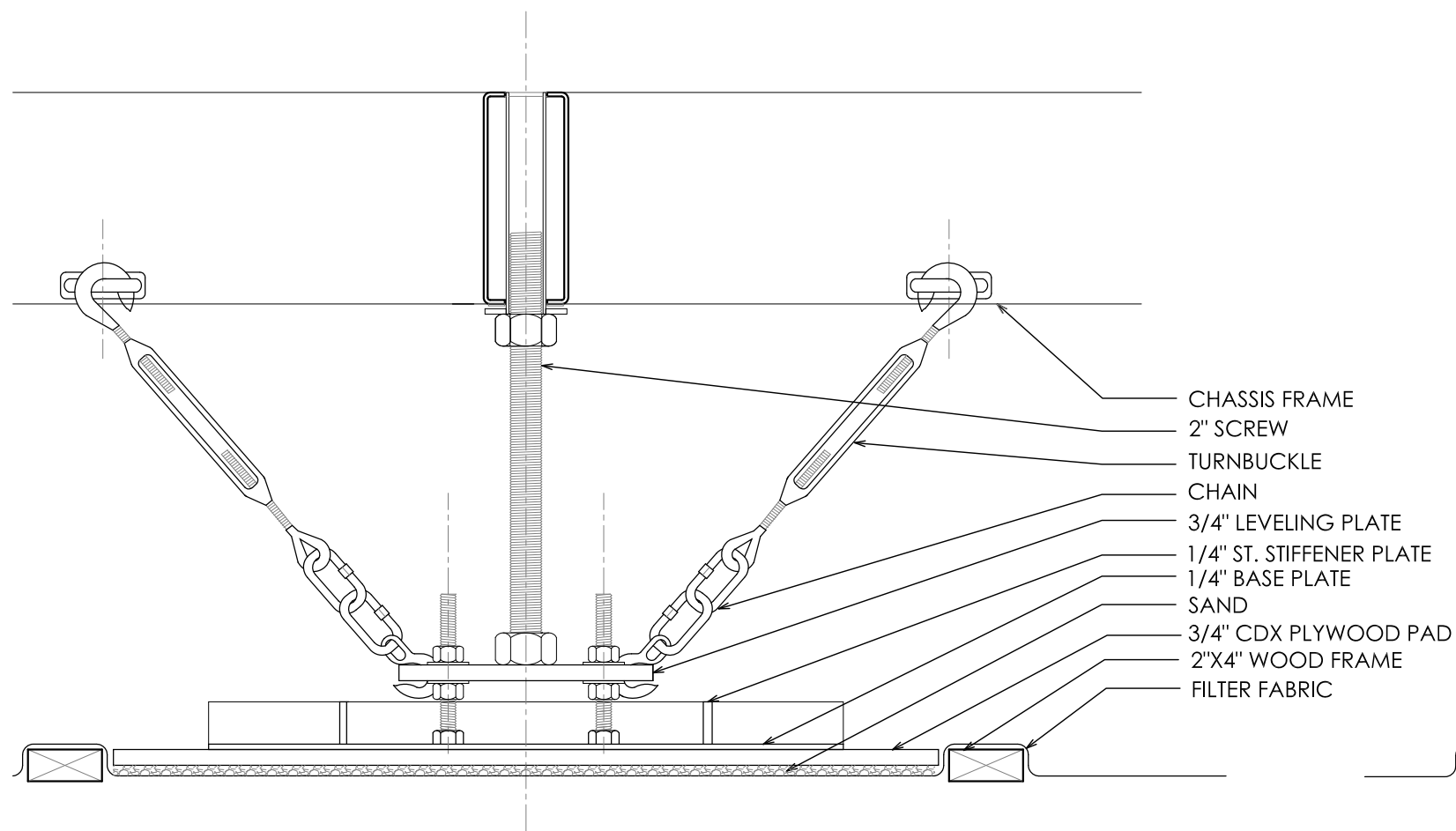
1 FOUNDATION PLAN
1-1/2"=1'

Revisions:	
10.16.2008 SLS	
05.24.09 JLC	

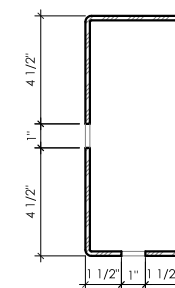
Date: 06.02.2009
Drawn by: JLC
Checked by: DS
Approved by: xx



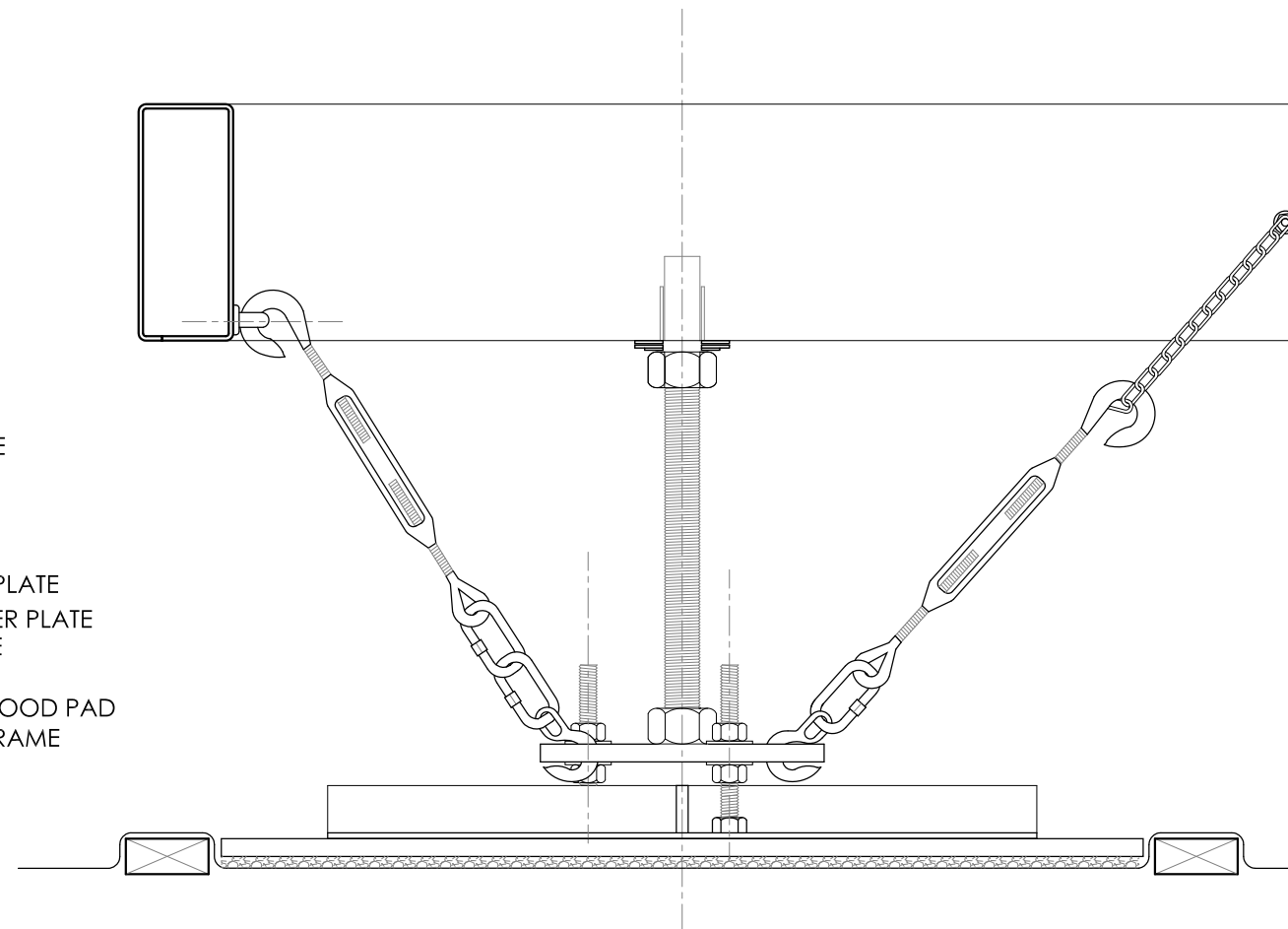
1 FOUNDATION DETAIL AT CHASSIS
1-1/2"=1'



3 FOUNDATION ELEVATION
1-1/2"=1'



2 UPLIFT CONNECTION
1-1/2"=1'



4 FOUNDATION ELEVATION
1-1/2"=1'

Revisions:

10.16.2008 SLS

05.24.09 JLC

Date: 06.02.2009

Drawn by: JLC

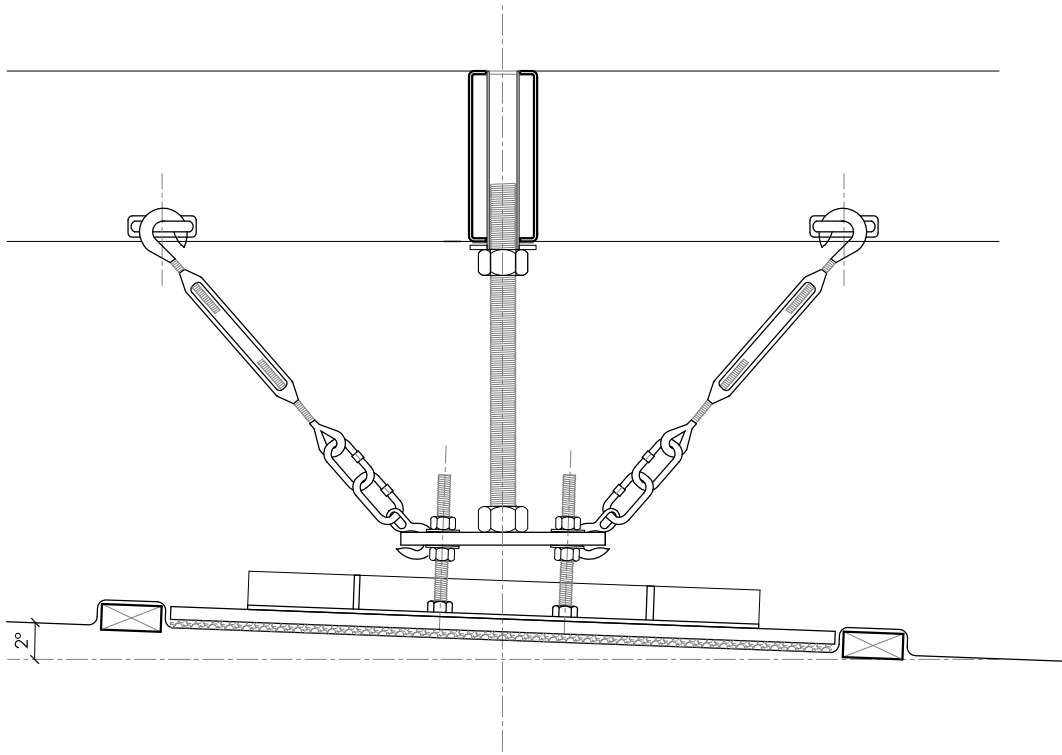
Checked by: DS

Approved by: xx

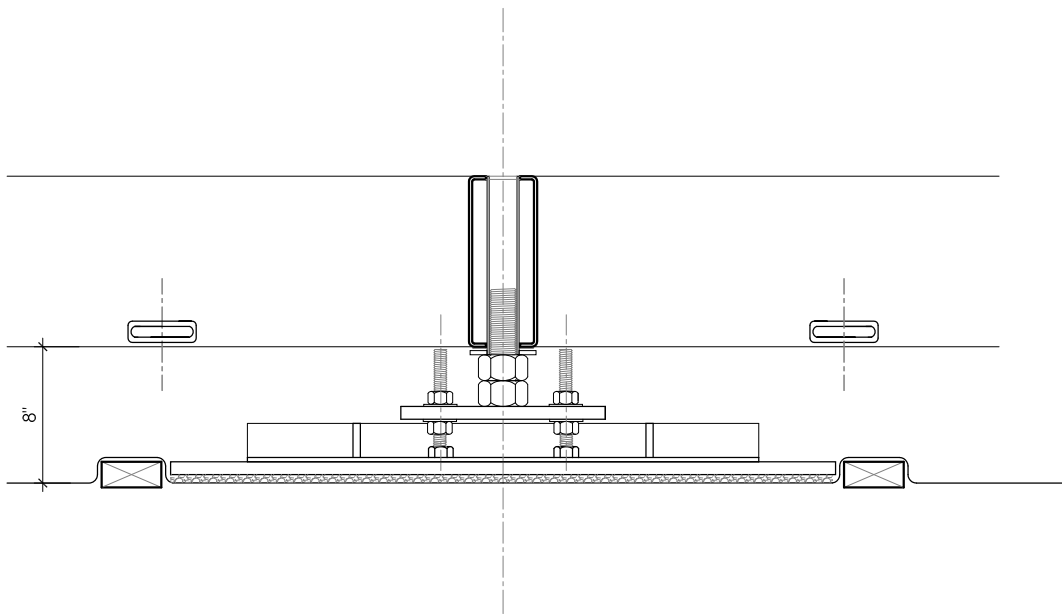
Scale: 1-1/2" = 1'-0"

FOUNDATION
ELEVATION &
DETAILS

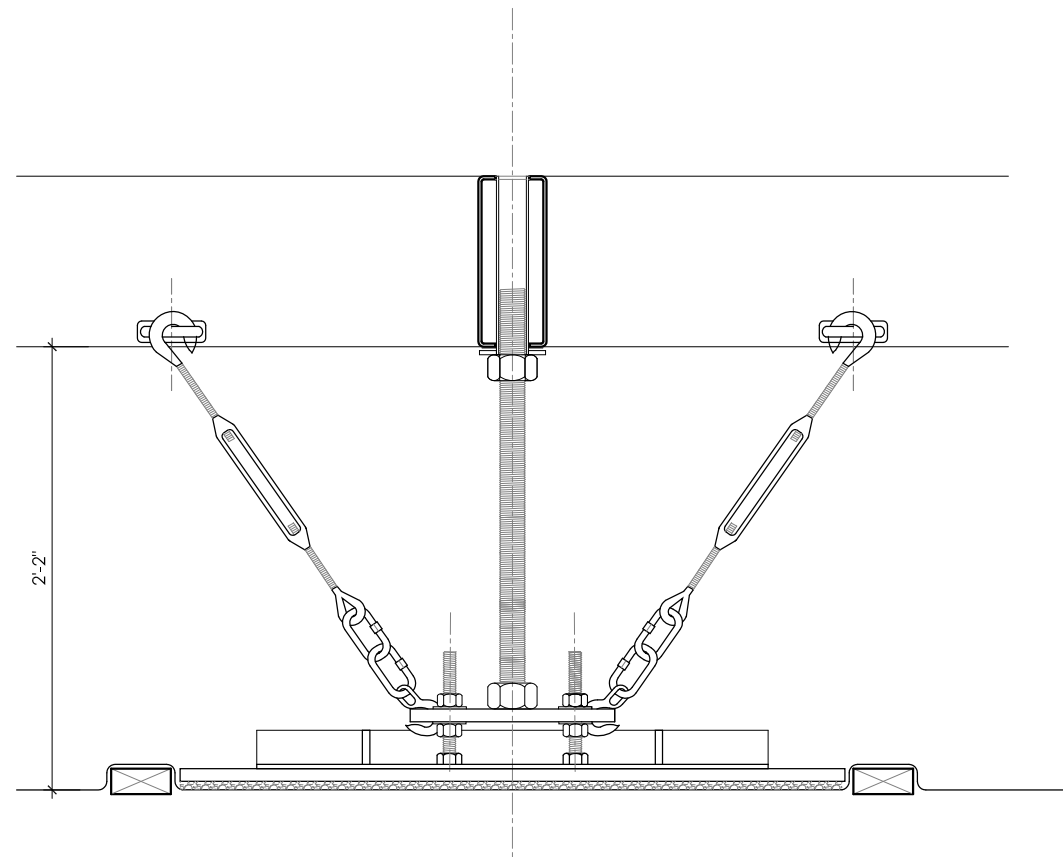
S2.04



1 FOUNDATION LEVELING MECHANISM
1-1/2"=1'



1 FOUNDATION MINIMUM EXTENSION
1-1/2"=1'



2 FOUNDATION MAXIMUM EXTENSION
1-1/2"=1'

Revisions:

10.16.2008 SLS

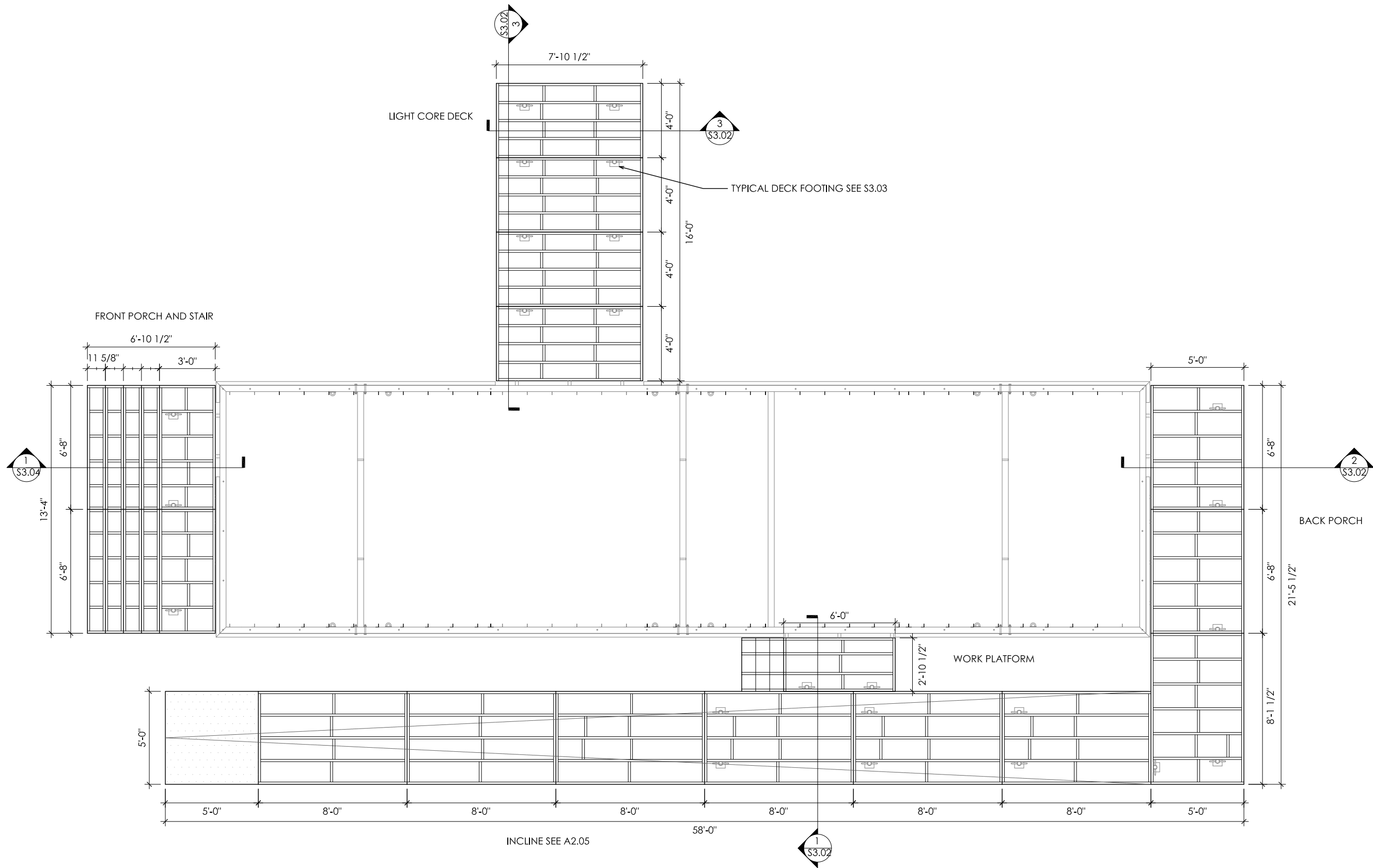
05.24.09 JLC

Date: 06.02.2009
Drawn by: JLC
Checked by: DS
Approved by: xx

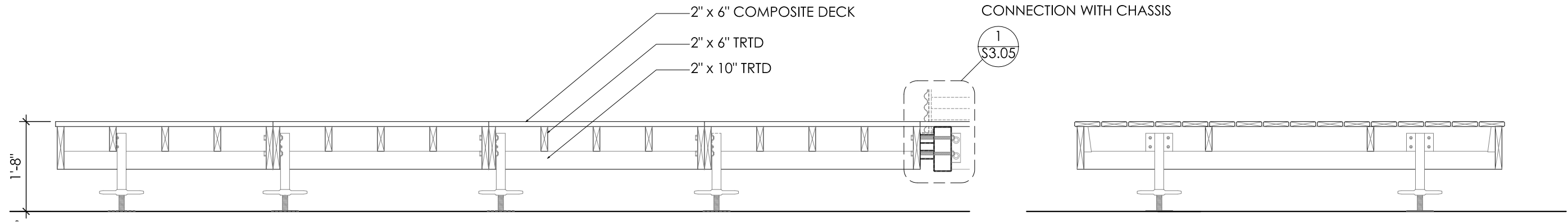
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FOUNDATION
DETAILS

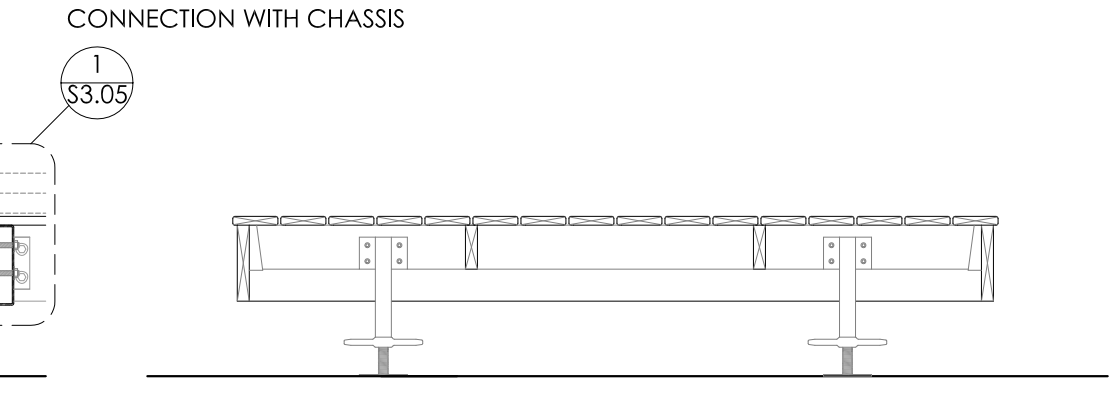
S2.05



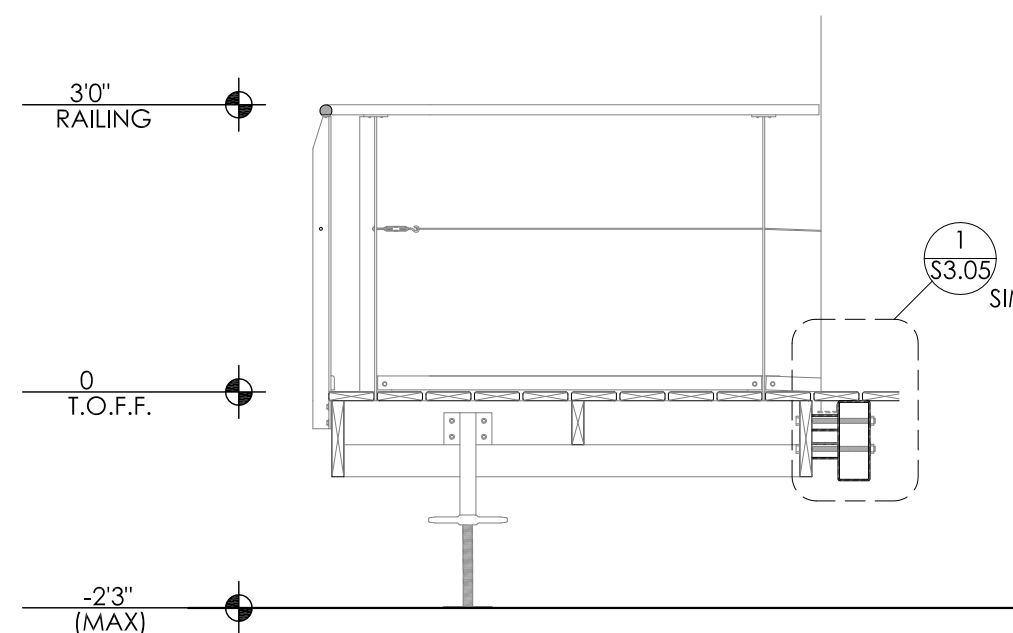
1 DECK & INCLINE FRAMING PLAN
3/16"=1'



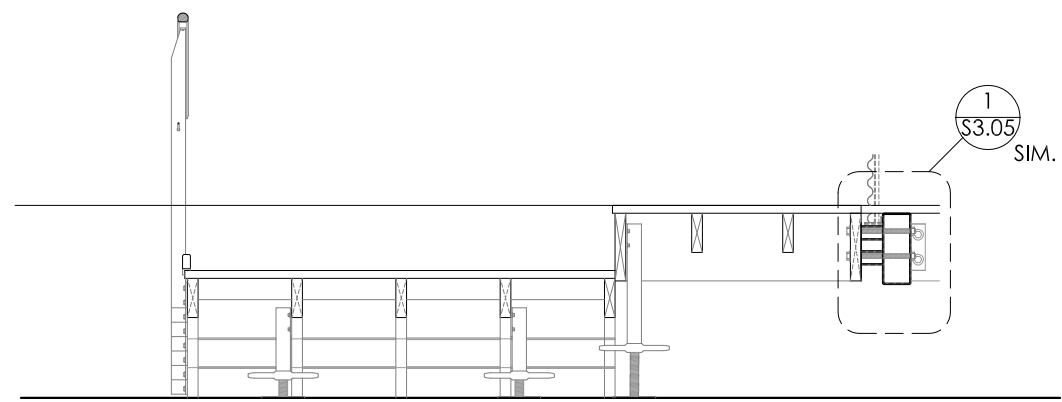
4 LIGHT CORE DECK SECTION
1/2"=1'



3 LIGHT CORE DECK SECTION
1/2"=1'



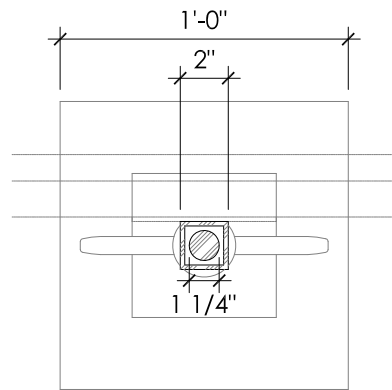
2 BACK PORCH SECTION
1/2"=1'



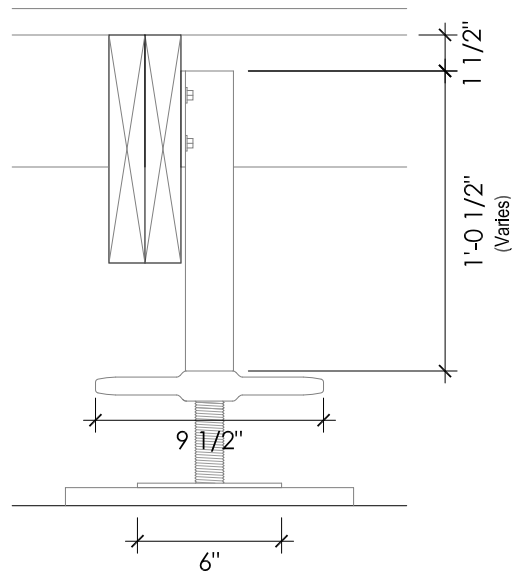
1 WORK PLATFORM AND INCLINE SECTION
1/2"=1'

Revisions:

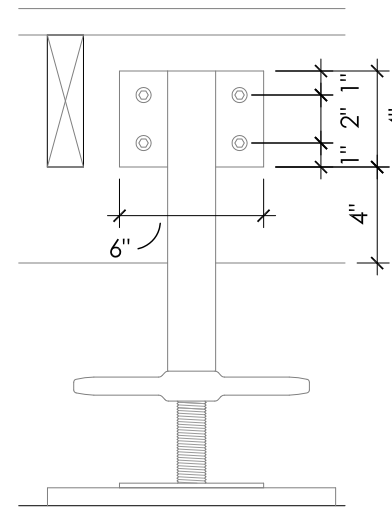
Date: 06.02.2009
Drawn by: JY
Checked by: DS
Approved by: xx



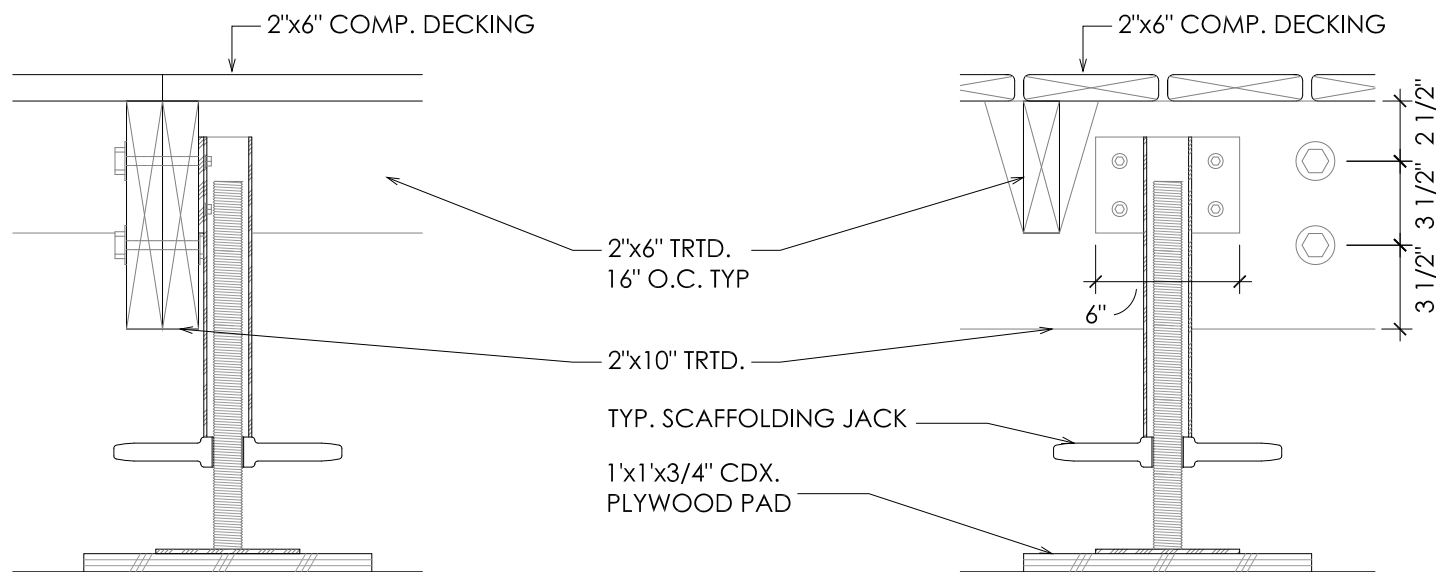
1 FOOTING PLAN
1-1/2"=1'



2 FOOTING ELEVATION
1-1/2"



3 FOOTING ELEVATION
1-1/2"=1'



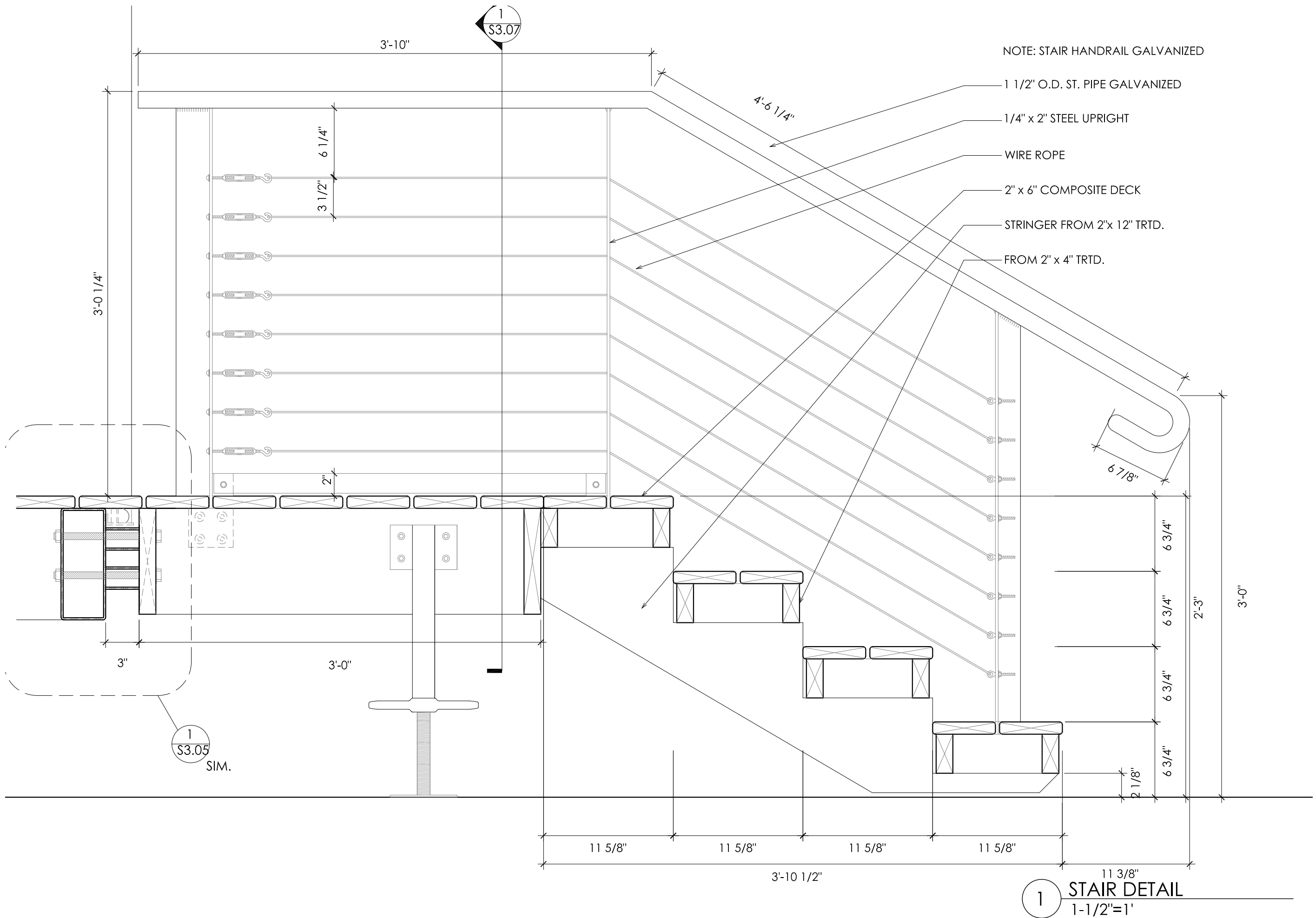
4 FOOTING SECTION
1-1/2"=1'

5 FOOTING SECTION
1-1/2"=1'

Revisions:	
Date:	06.02.2009
Drawn by:	SLS
Checked by:	DS
Approved by:	xx

Scale: 1-1/2" = 1'-1
DECK FOOTING
DETAILS

S3.03

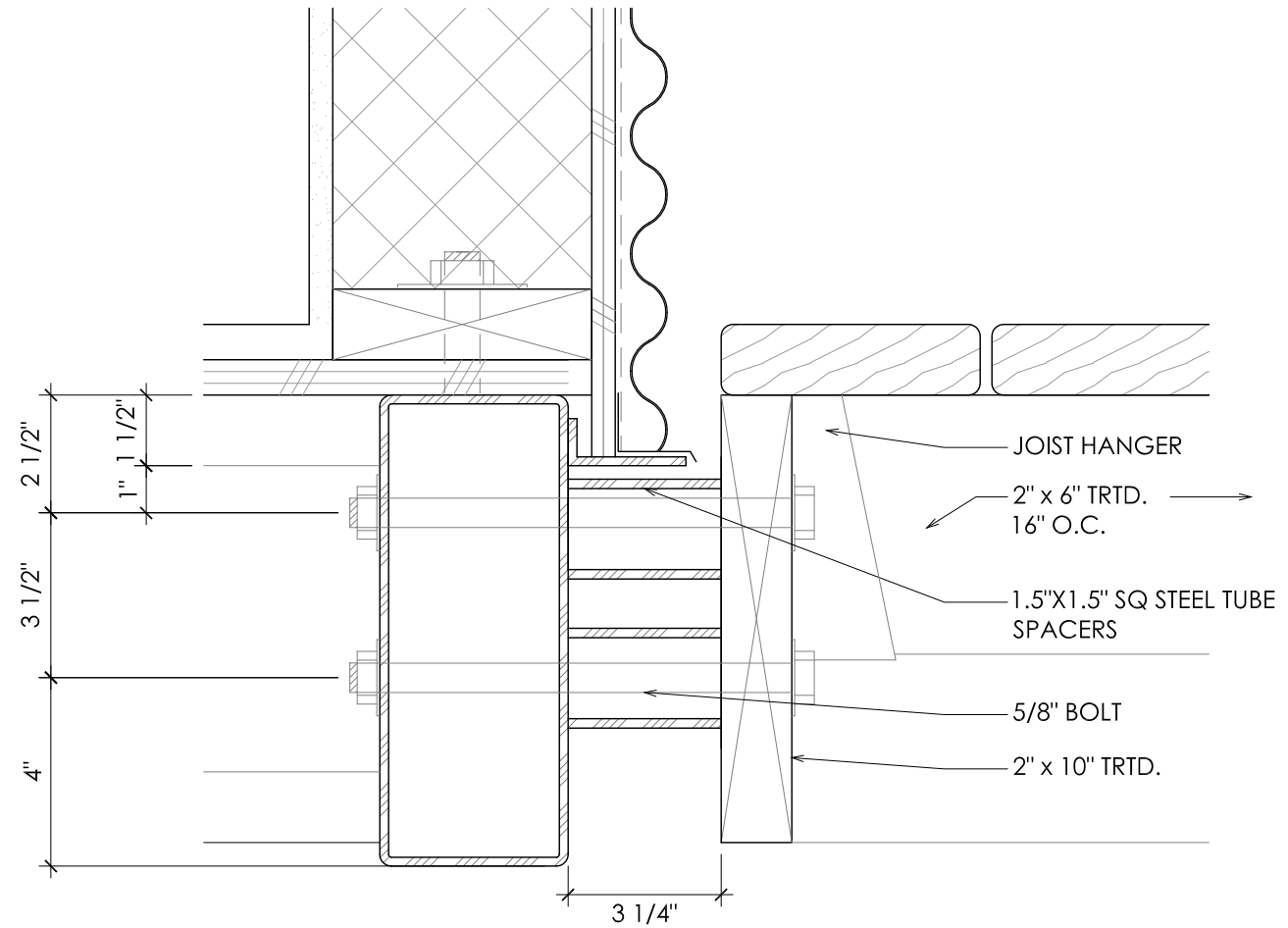


Revisions:
10.16.2008 SLS
05.24.2009 JLC

Date: 06.02.2009
Drawn by: JY
Checked by: DS
Approved by: xx

Scale: 1-1/2"=1'-0"
STAIR DETAIL

S3.04



1 PORCH /CHASSIS CONNECTION DETAIL
3"=1'

Revisions:

10.23.2008 SLS

05.26.2009 SBG

Date: 06.02.2009

Drawn by: DD

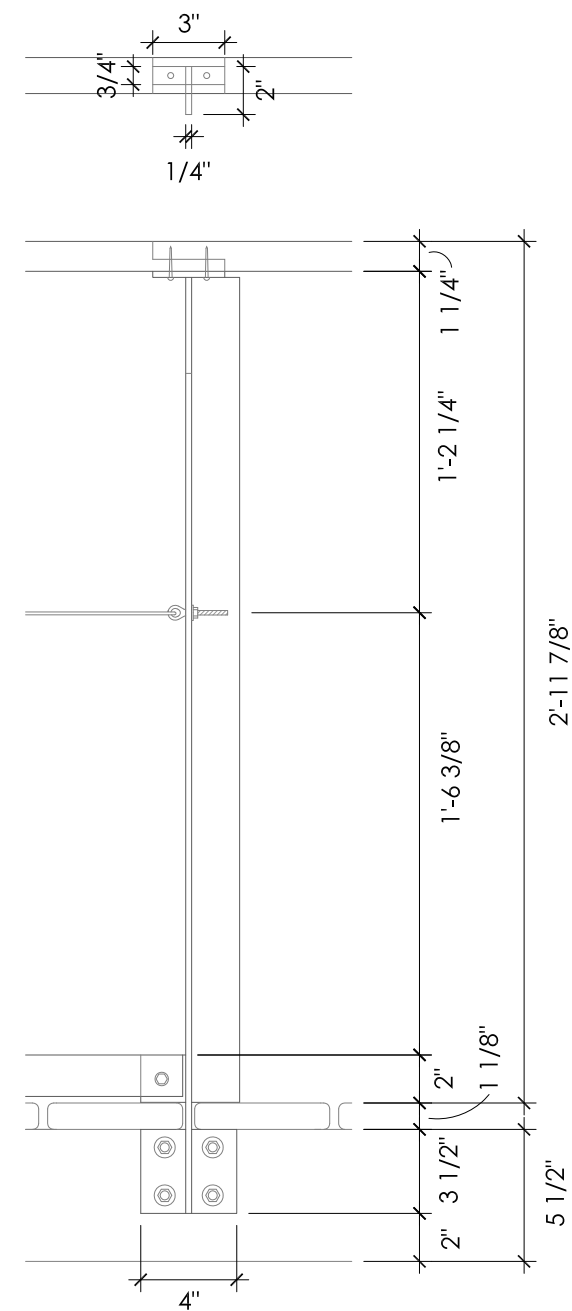
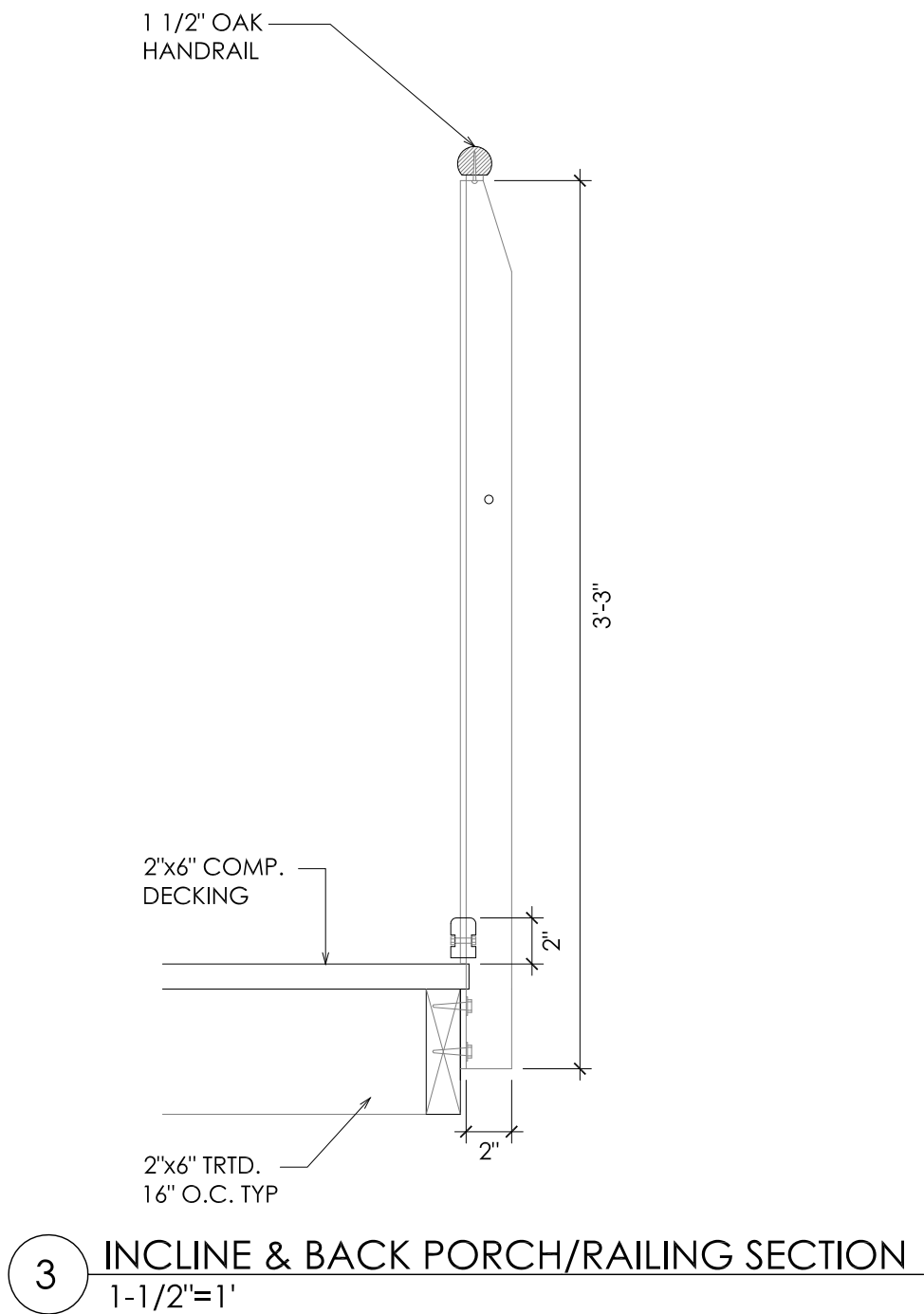
Checked by: DS

Approved by: xx

Scale: 3" = 1'-0"

PORCH AND
CHASSIS DETAILS

S3.05

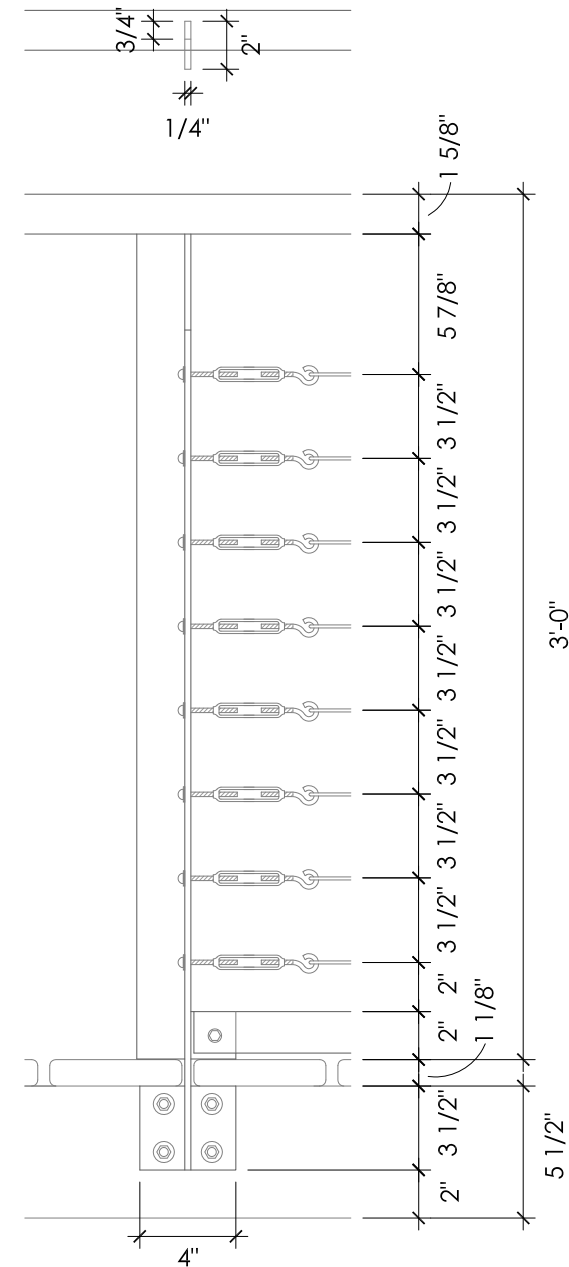
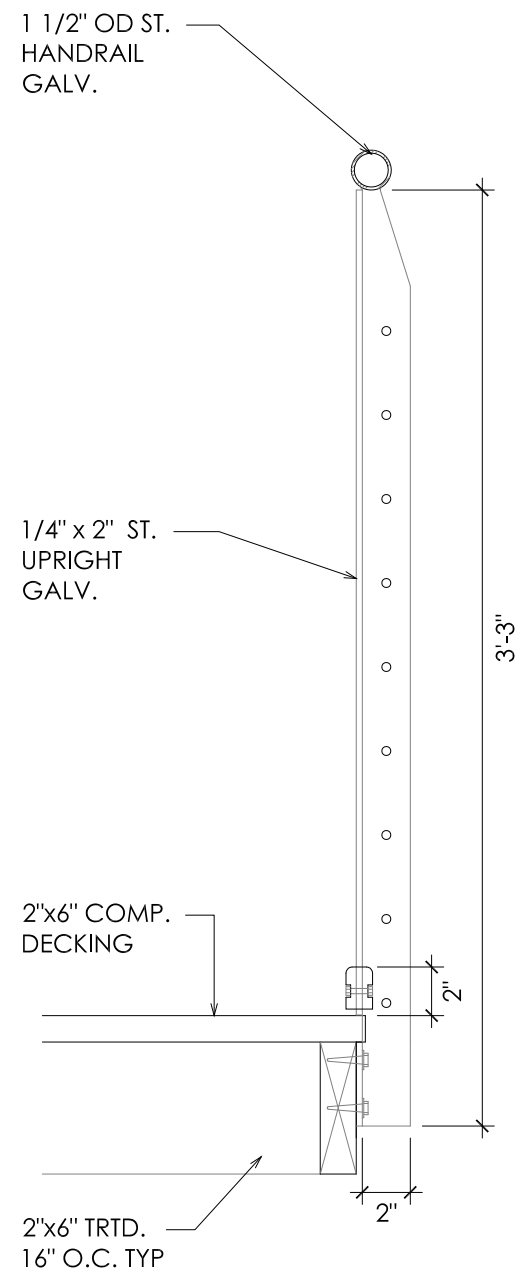


NOTE: ALL STEEL SECTIONS GALVANIZED

Revisions:

Date: 06.02.2009
 Drawn by: SLS
 Checked by: DS
 Approved by: xx

Scale: 1'1/2" = 1'-0"
 INCLINE & BACK PORCH/HANDRA DETAILS



NOTE: ALL STEEL SECTIONS GALVANIZED

ZEROHOUSE

Rice University Solar Decathlon 2009
Zero Energy Row House

Zero Energy Row House

Zero Energy Row House



Rice University School of Architecture, MS-50
P.O. Box 1892. Houston. Texas 77251-1892

Rice University School of Architecture, MS-50
P.O. Box 1892. Houston. Texas 77251-1892

Rice University School of Architecture, MS-50
P.O. Box 1892. Houston. Texas 77251-1892

Revisions:

Date: 06.02.2009
 Drawn by: SLS
 Checked by: DS
 Approved by: xx

Drawn by: SLS

Checked by: DS

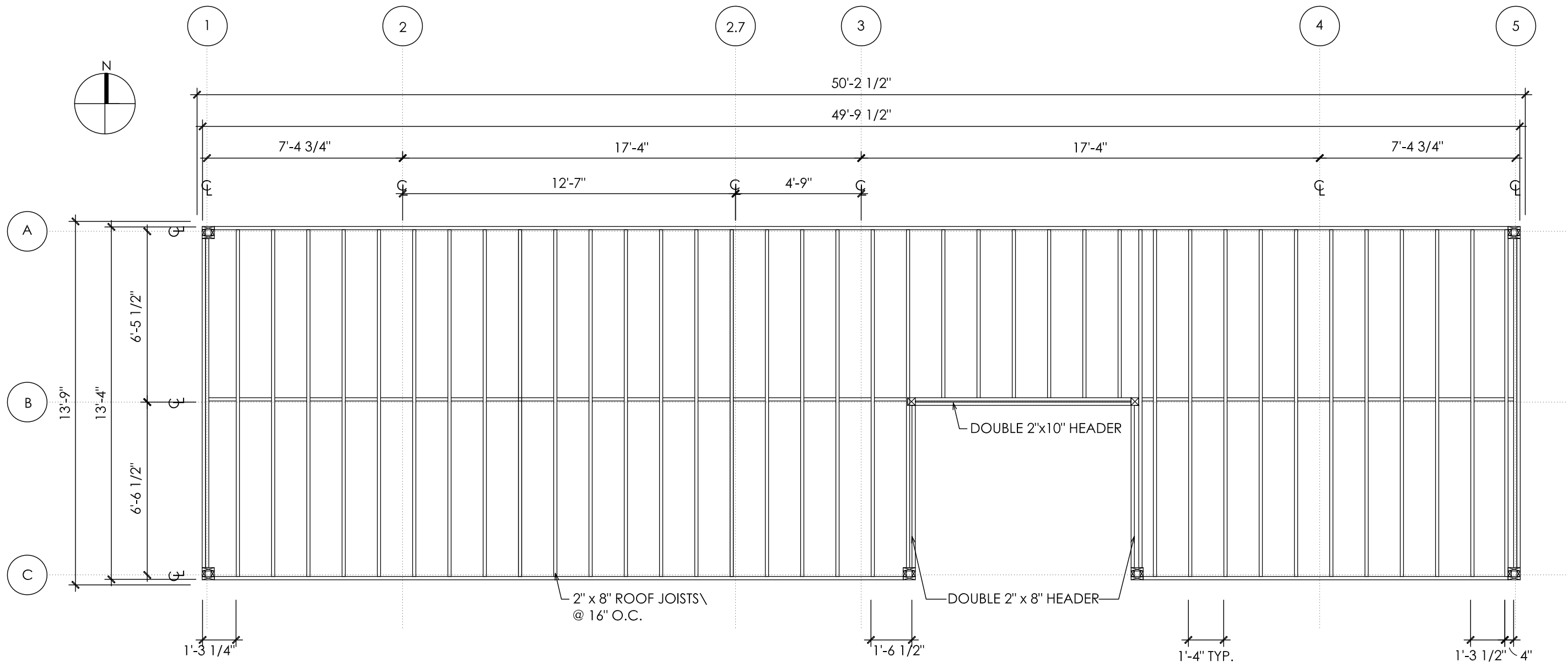
Approved by: xx

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

HANDRAIL DETAIL

HANDRAIL DETAIL

S3.07



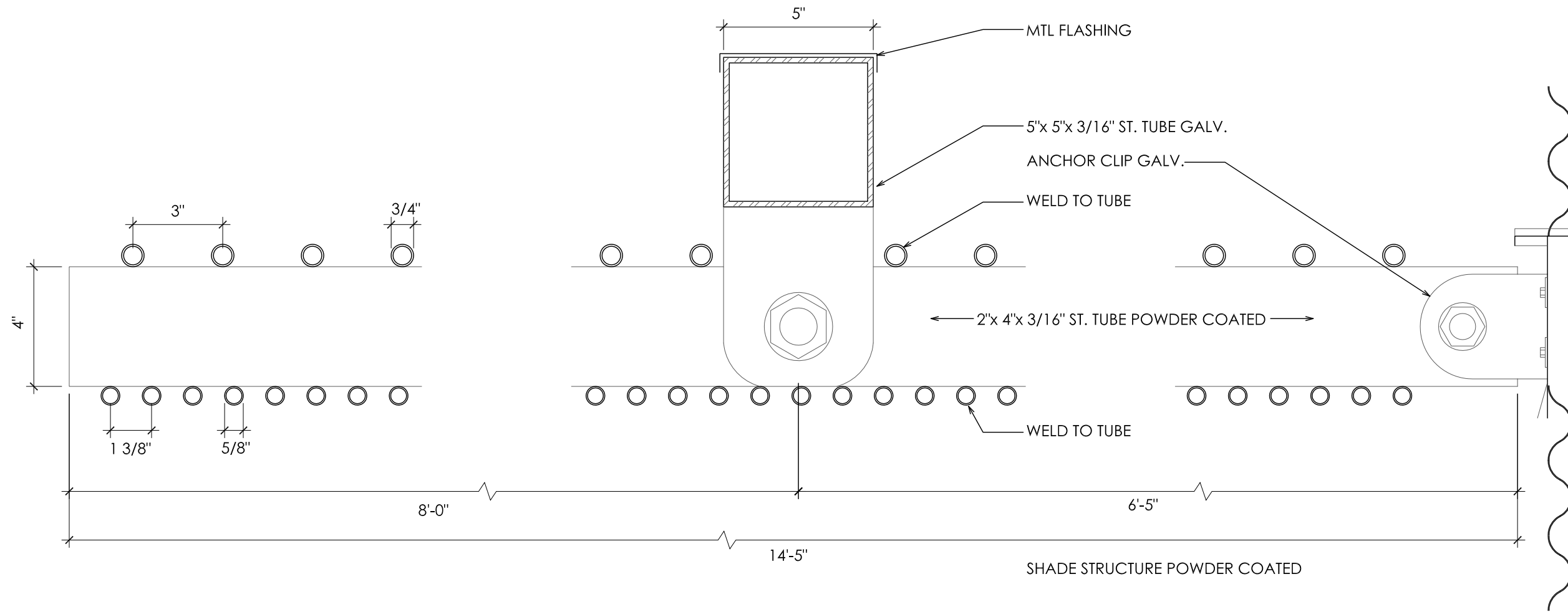
Revisions:	
10.16.2008 SLS	
05.28.2009 SBG	

Date: 06.02.2009
Drawn by: SLS
Checked by: xx
Approved by: xx

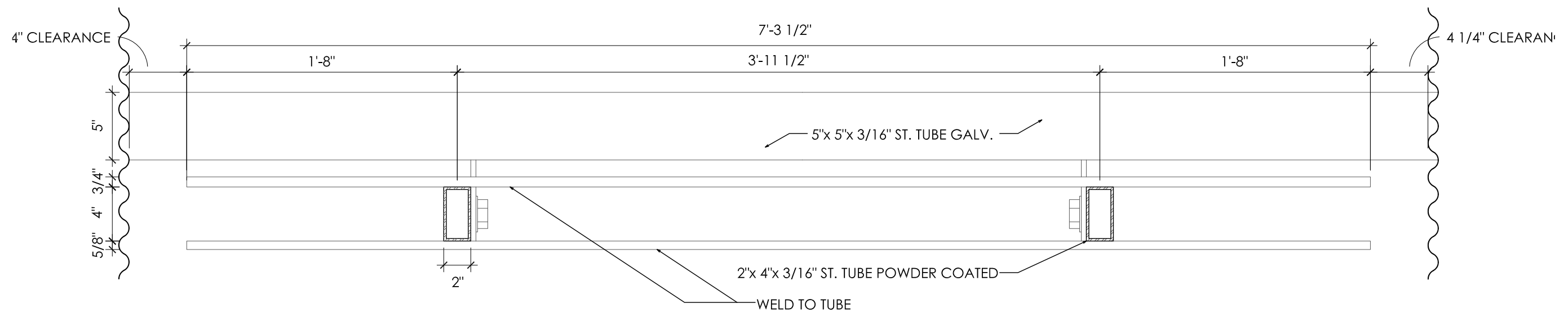
Scale: 1/4" = 1'-0"
ROOF FRAMING
PLAN

S4.01

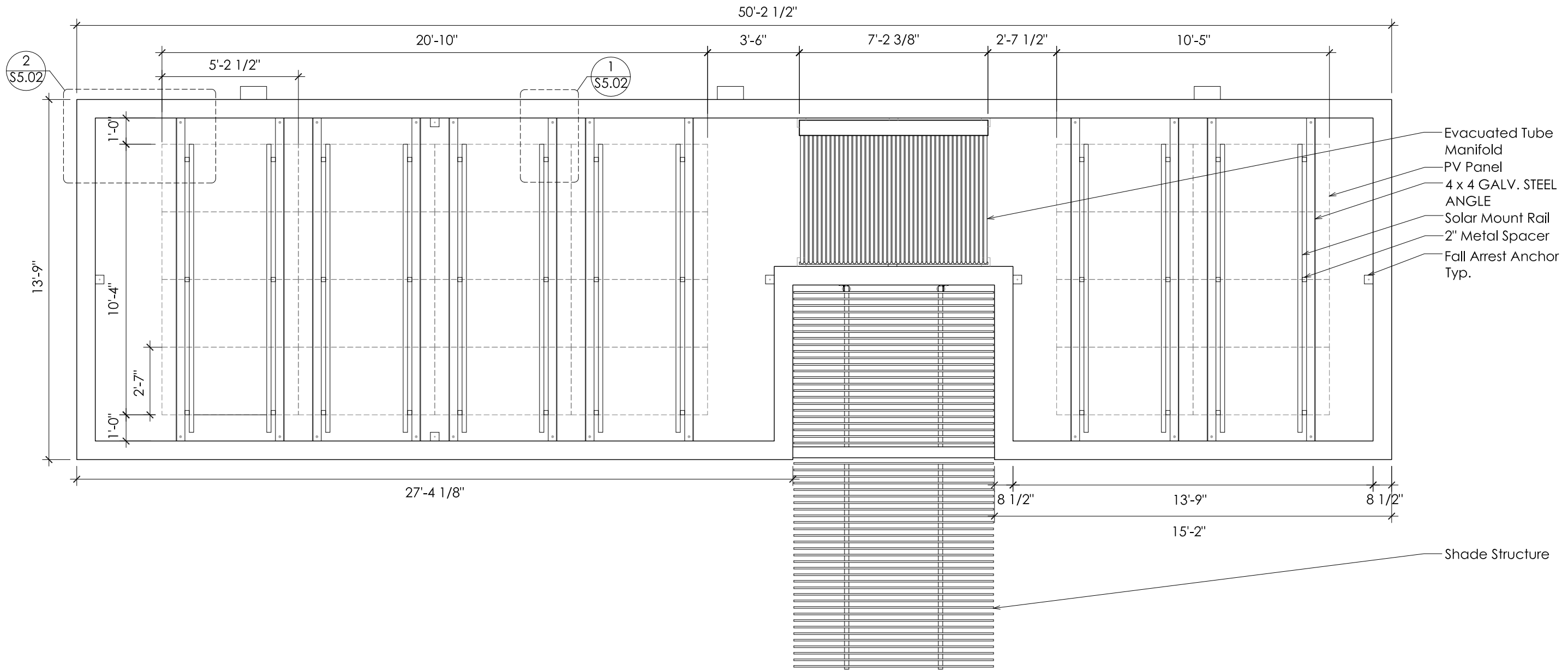




1 SHADE STRUCTURE DETAILS
3"=1'



2 SHADE STRUCTURE DETAILS
1-1/2"=1'

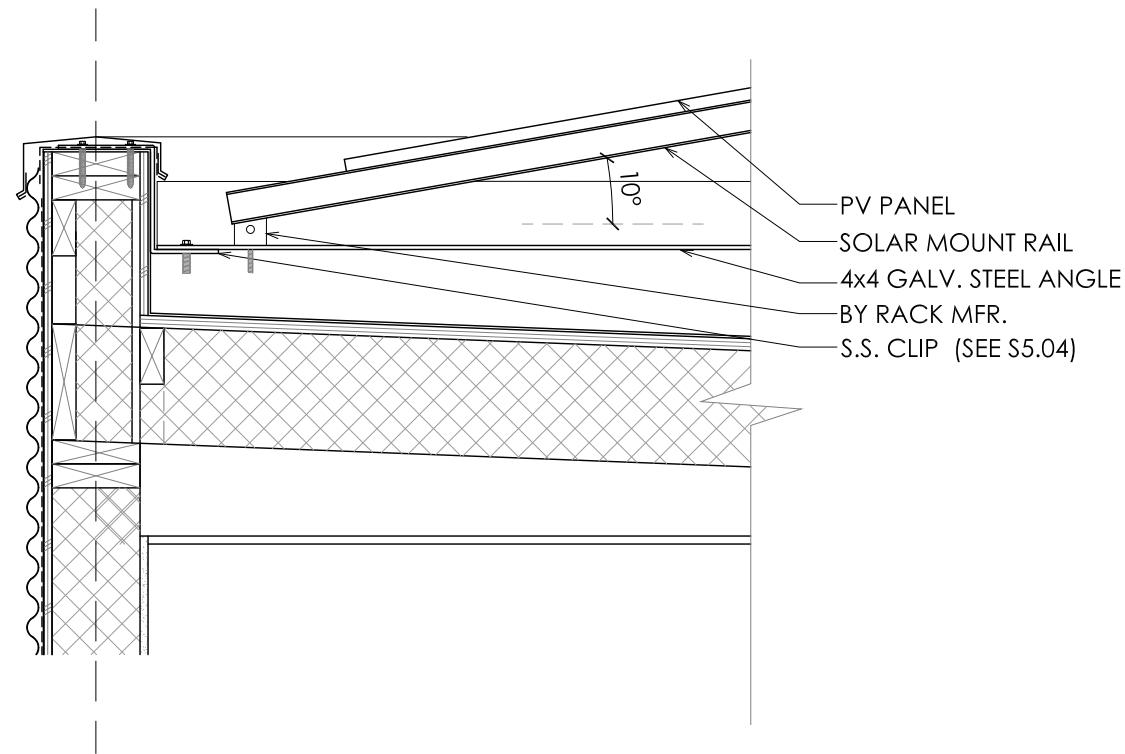


1 PV RACK PLAN
1/4"=1'

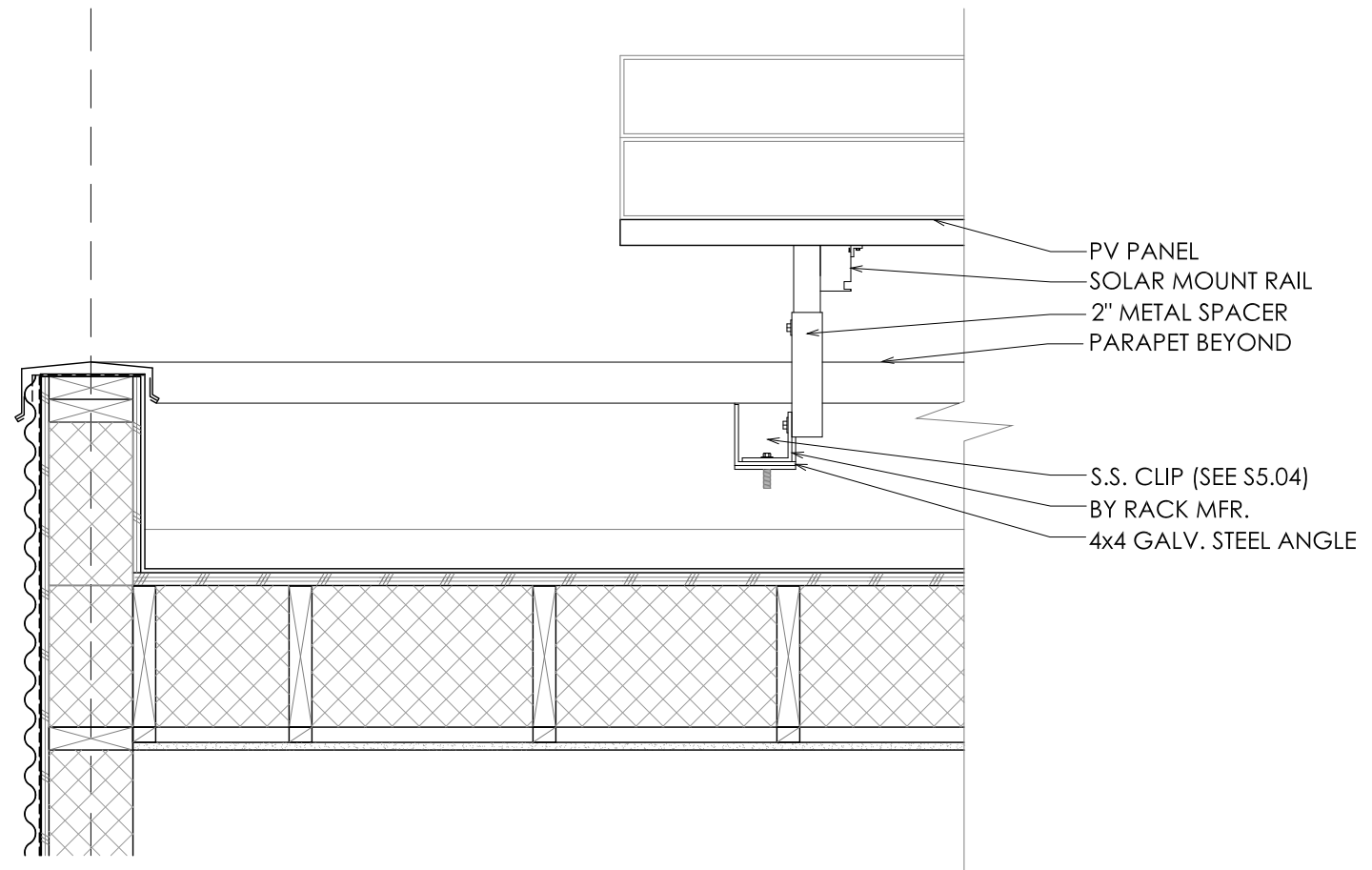
Revisions:	
10.16.2008 SLS	
12.12.2008 SWS	
05.26.2009 JLC	

Date: 06.02.2009
Drawn by: JLC
Checked by: DS
Approved by: xx





1 SOLAR MOUNT DETAIL
1"=1'-0"



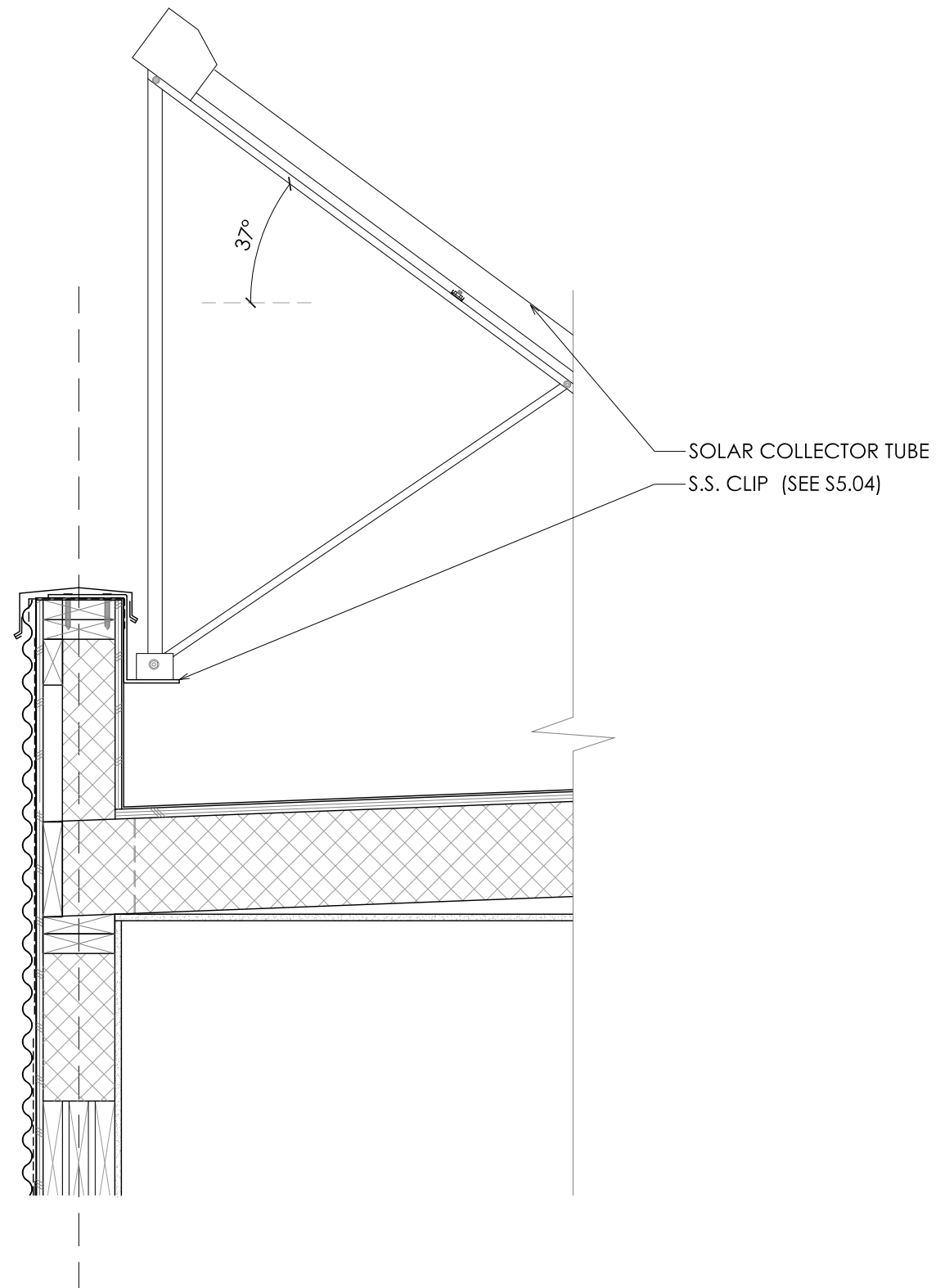
2 SOLAR MOUNT DETAIL
1"=1'-0"

Revisions:	
	10.16.2008 SLS
	12.13.2008 SWS KC
	05.24.2009 JLC

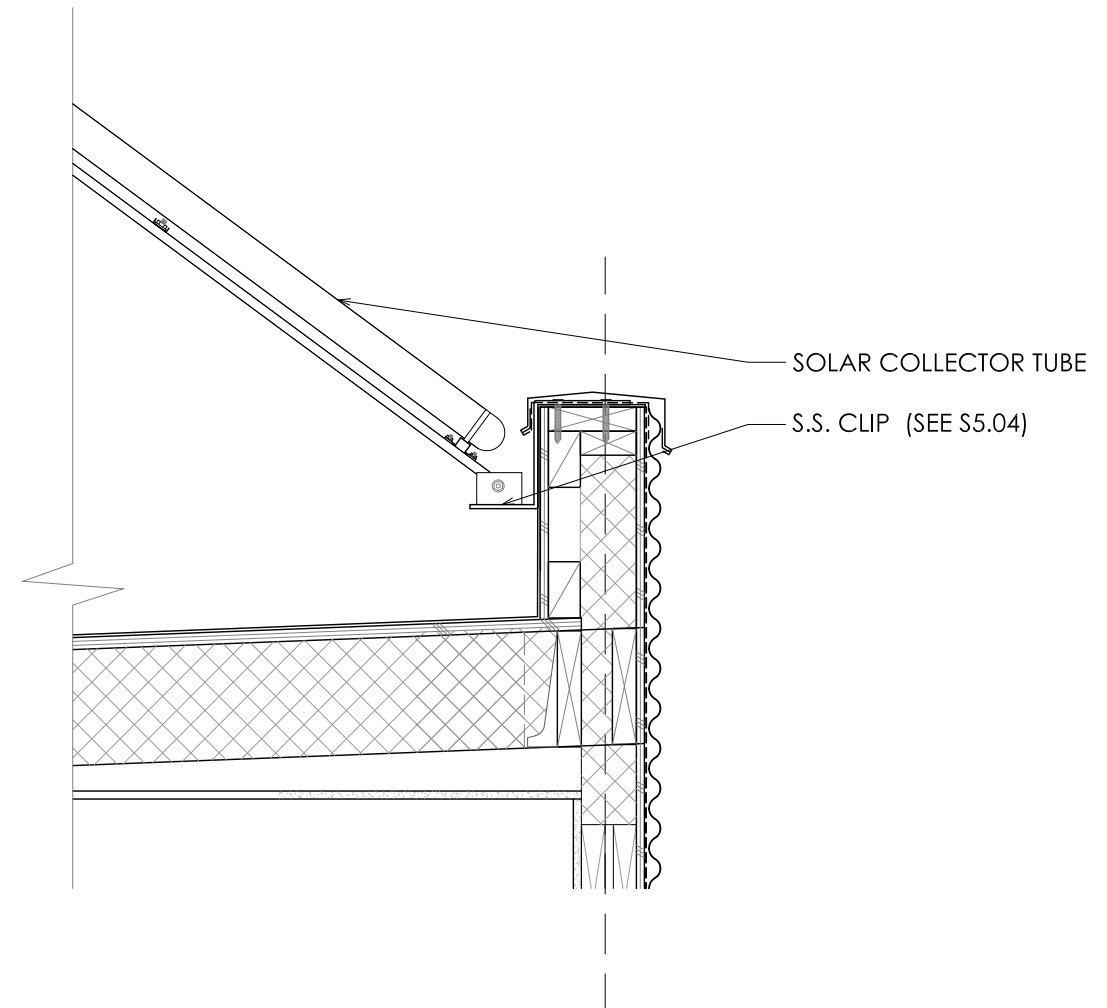
Date: 06.02.2009
Drawn by: SLS
Checked by: xx
Approved by: xx

Scale: 1" = 1'-0"
PV RACK
DETAILS

S5.02



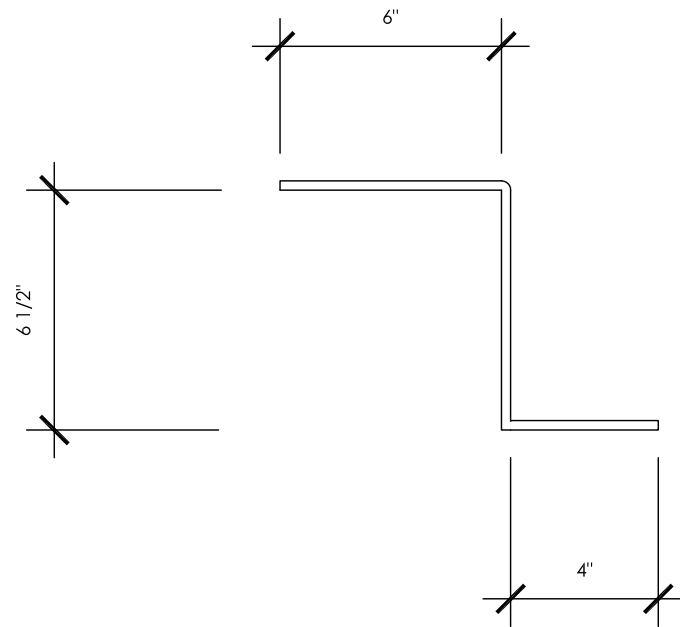
1 SOLAR HOT WATER RACK DETAIL
1"=1'-0"



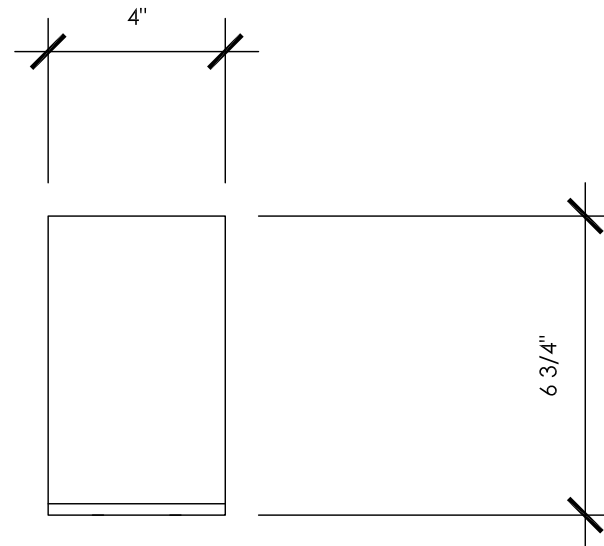
2 SOLAR HOT WATER RACK DETAIL
1"=1'-0"

Revisions:	
10.16.2008 SLS	
12.13.2008 SWS KC	
05.24.2009 JLC	

Date: 06.02.2009
 Drawn by: SLS
 Checked by: DS
 Approved by: xx



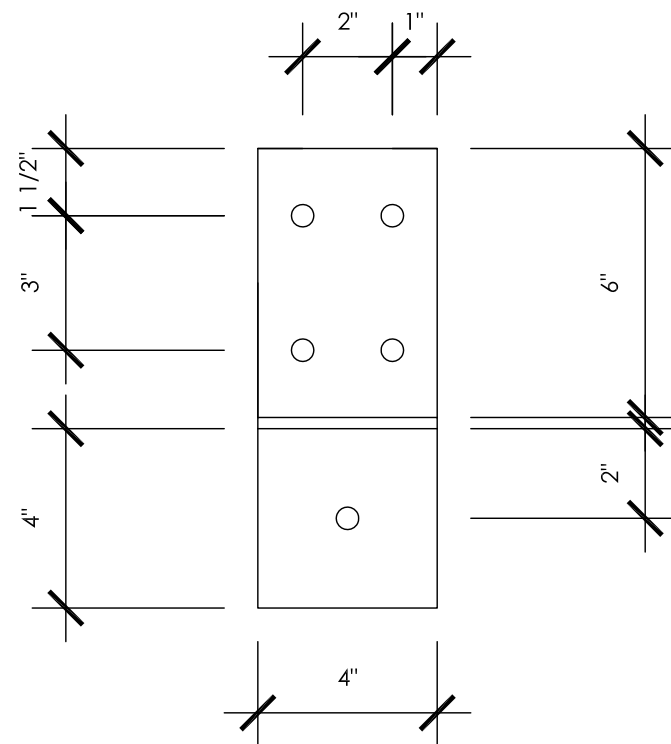
1 SOLAR MOUNTING BRACKETS - SIDE VIEW
1"=1'-0"



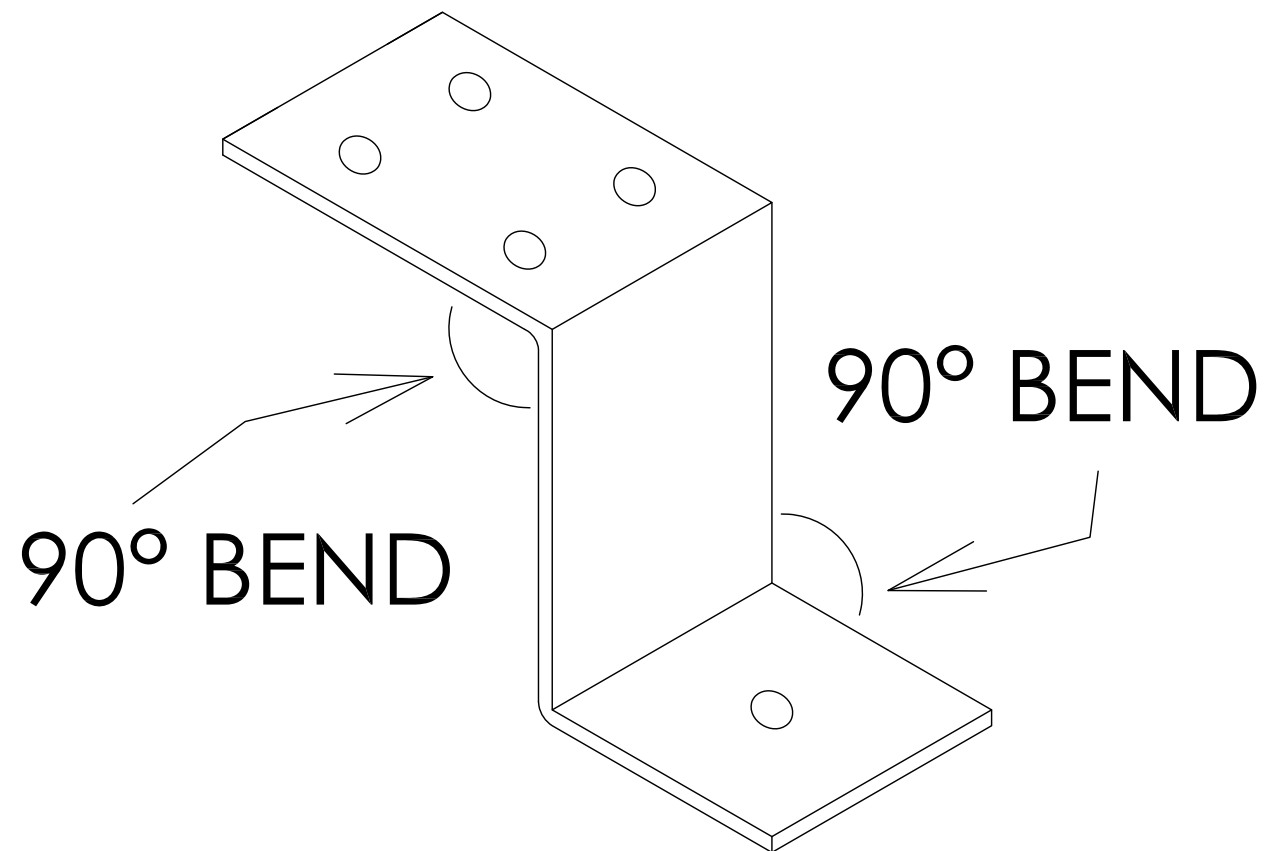
2 SOLAR MOUNTING BRACKETS - FRONT VIEW
1"=1'-0"

NOTES

1. ALL BRACKET CONSTRUCTION FROM $\frac{1}{4}$ " PLATE STAINLESS STEEL UNLESS OTHERWISE SPECIFIED
2. BRACKETS TO BE MOUNTED USING $\frac{3}{8}$ "X3" LAG BOLTS, 4 BOLTS PER BRACKET
3. PV RACKING AND SOLAR HOT WATER COLLECTORS SHALL BE ATTACHED TO MOUNTING BRACKETS USING $\frac{3}{4}$ " GALVINIZED BOLTS.



3 SOLAR MOUNTING BRACKETS - TOP VIEW
1"=1'-0"



4 SOLAR MOUNTING BRACKETS - 3D VIEW
1"=1'-0"

Revisions:

2.21.2009 RTS

Date: 06.02.2009

Drawn by: RTS

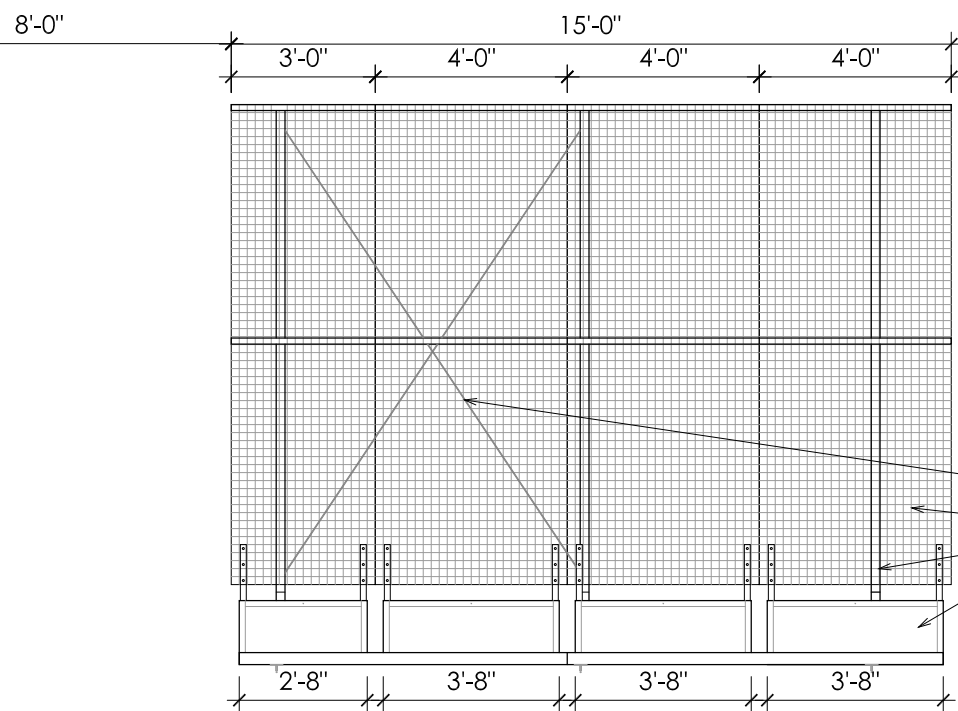
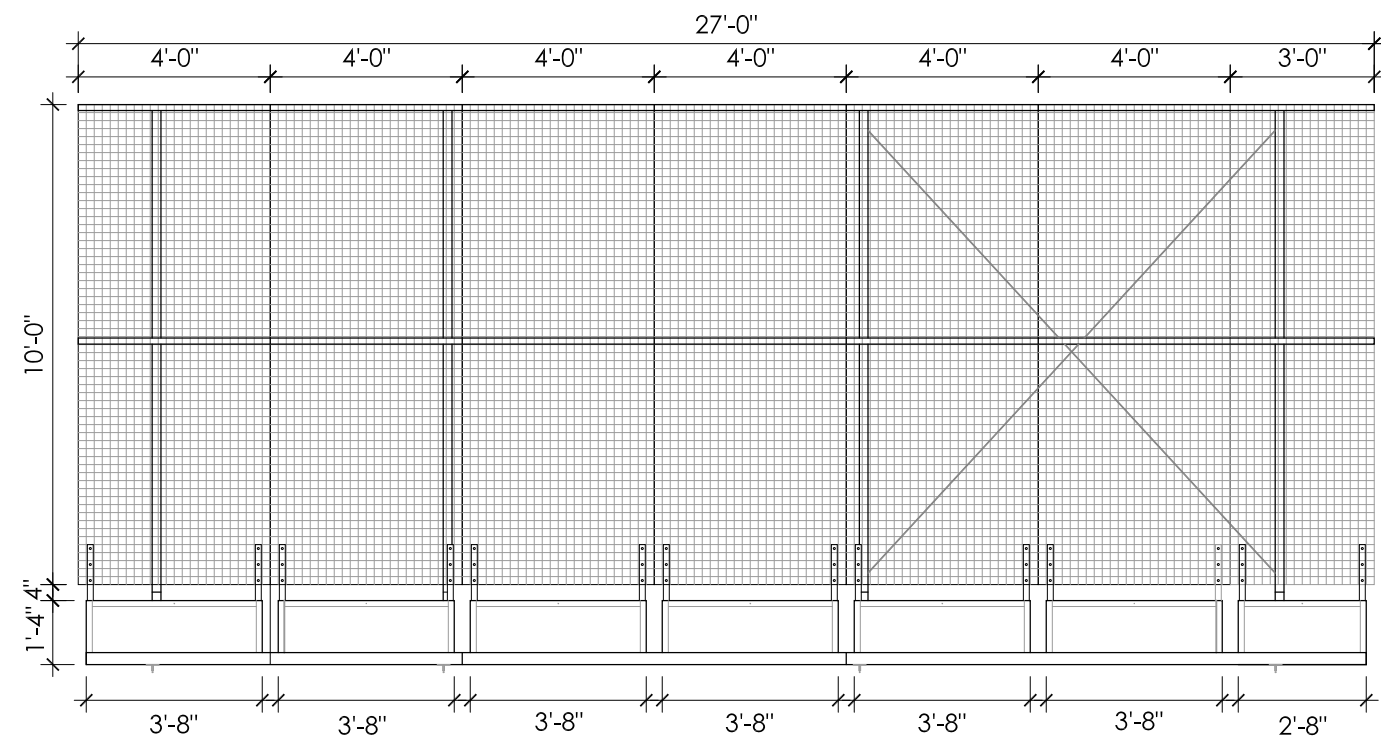
Checked by: DS

Approved by: xx

Scale: 1" = 1'-0"

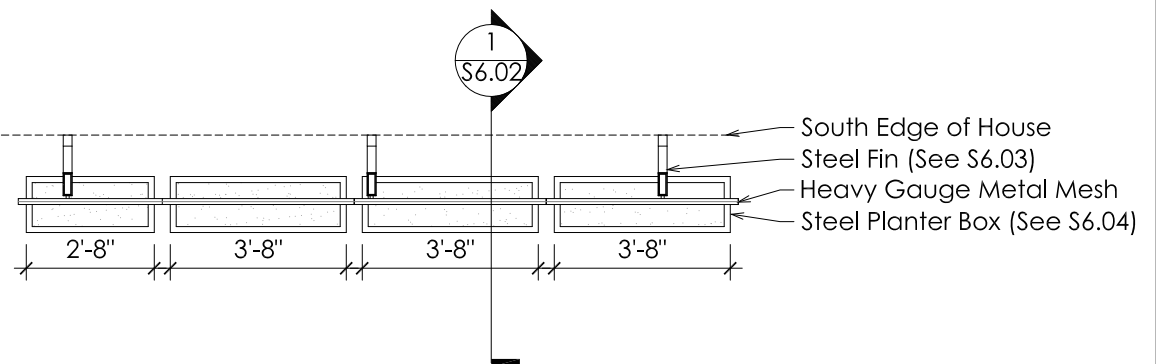
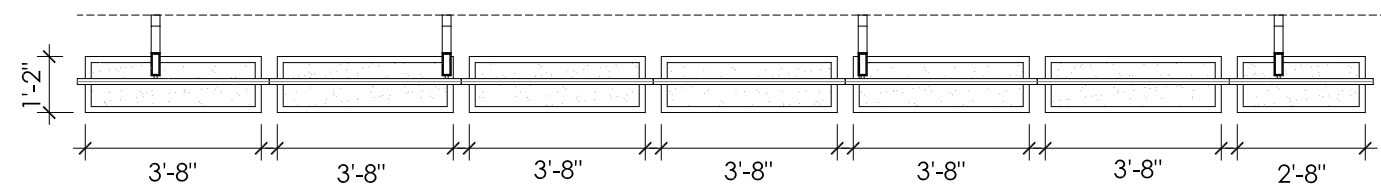
PV MOUNTING
DETAILS

S5.04



Diagonal Cable Bracing
Heavy Gauge Metal Mesh
Steel Fin (See S6.03)
Steel Planter Box (See S6.04)

1 GREEN WALL ELEVATION
1/4"=1'



South Edge of House
Steel Fin (See S6.03)
Heavy Gauge Metal Mesh
Steel Planter Box (See S6.04)

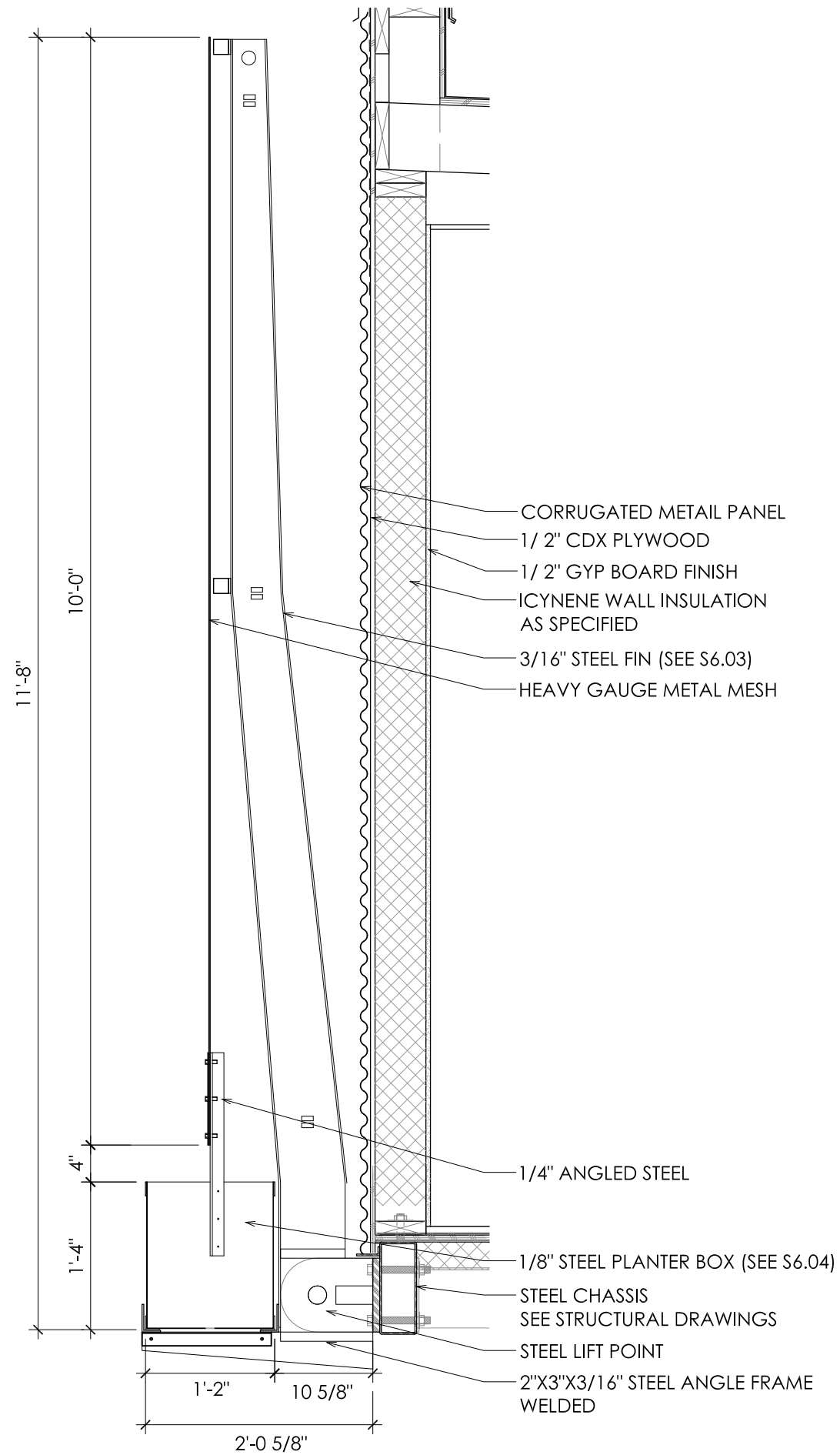
1 GREEN WALL PLAN
1/4"=1'

Revisions:
10.16.2008 SLS
05.25.2009 RL

Date: 06.02.2009
Drawn by: RL
Checked by: DS
Approved by: xx

Scale: 1/4"=1'
GREEN WALL PL
& ELEVATION

S6.01

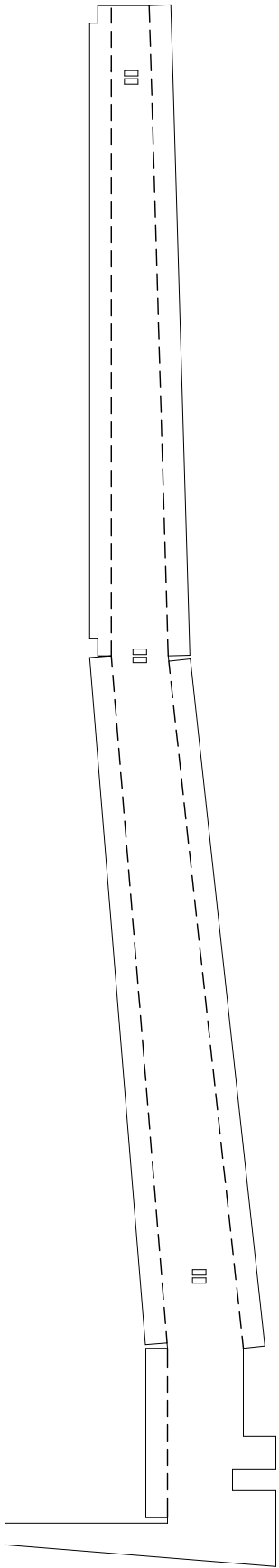


1 GREEN WALL SECTIONS
3/4"=1'

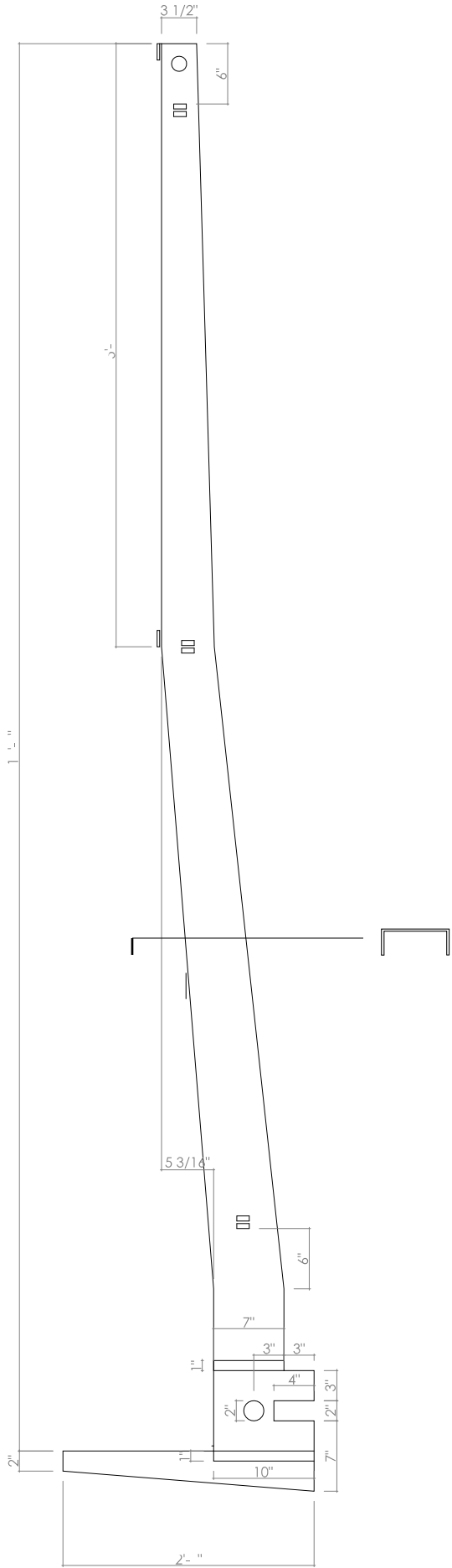
Revisions:	
10.16.2008 SLS	
05.25.2009 RL	

Date: 06.02.2009
Drawn by: RL
Checked by: DS
Approved by: xx

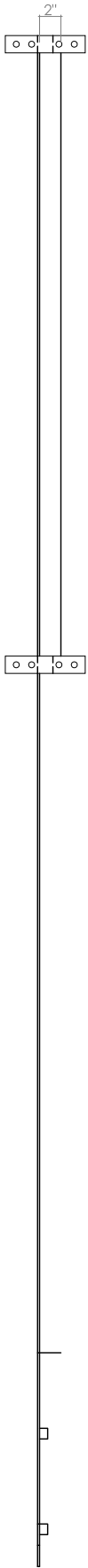
Scale: 3/4"=1'
GREEN WALL
SECTION
S6.02



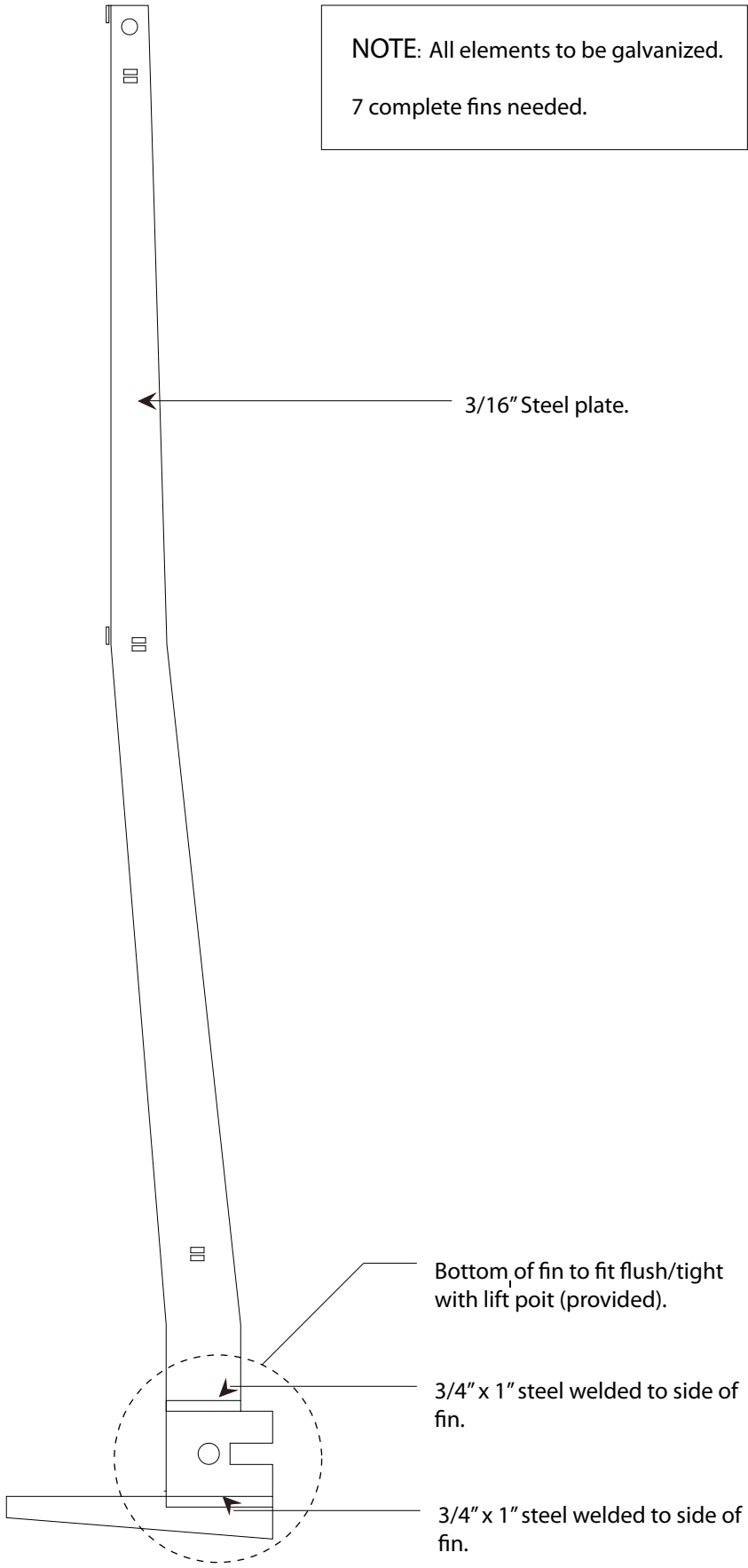
1 FIN SHEET BENDS
3/4"=1'



2 FIN ALL
3/4"=1'



3 FIN FRONT
3/4"=1'



4 FIN NOTES
3/4"=1'

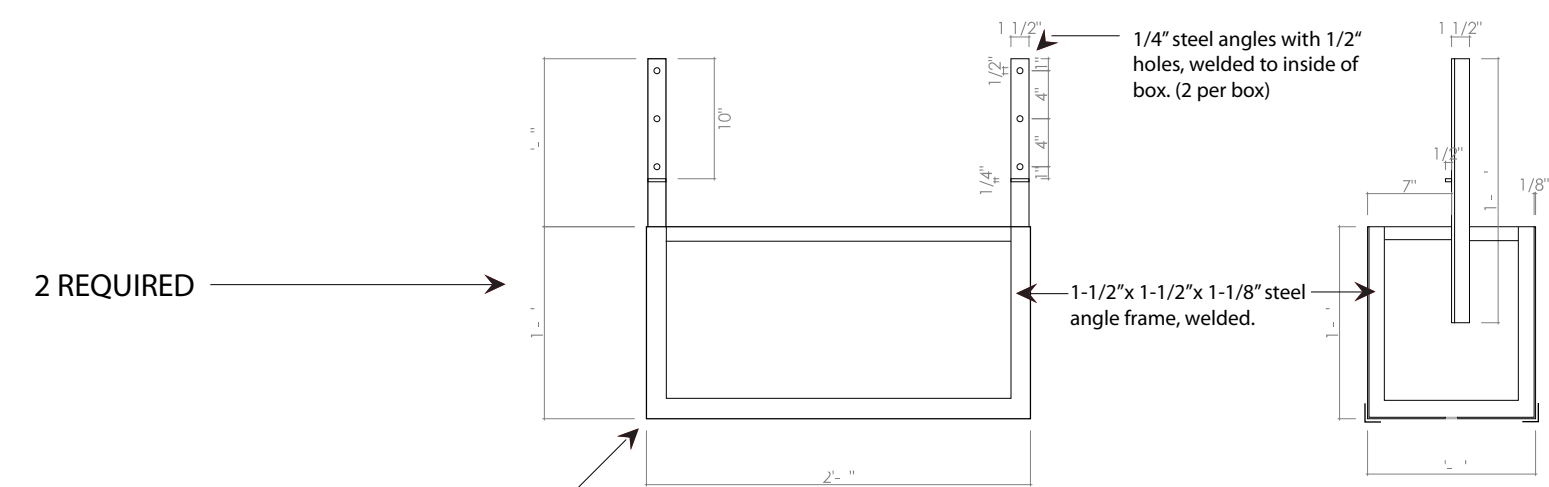
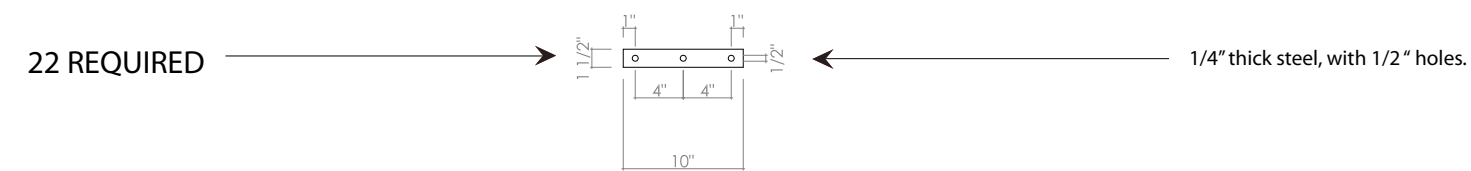
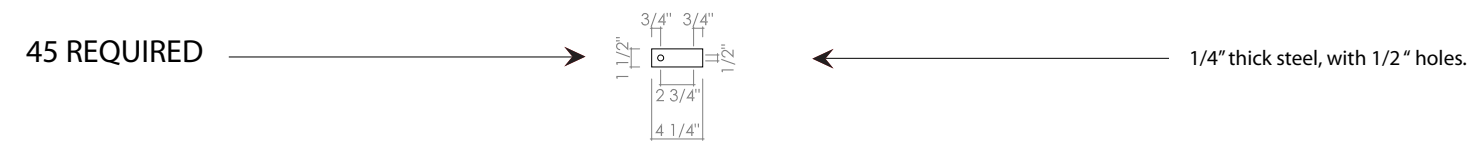
NOTE: All elements to be galvanized.
7 complete fins needed.

3/16" Steel plate.

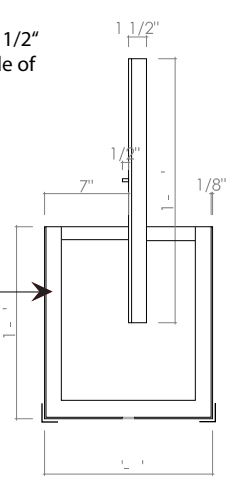
Bottom of fin to fit flush/tight
with lift poit (provided).

3/4" x 1" steel welded to side of
fin.

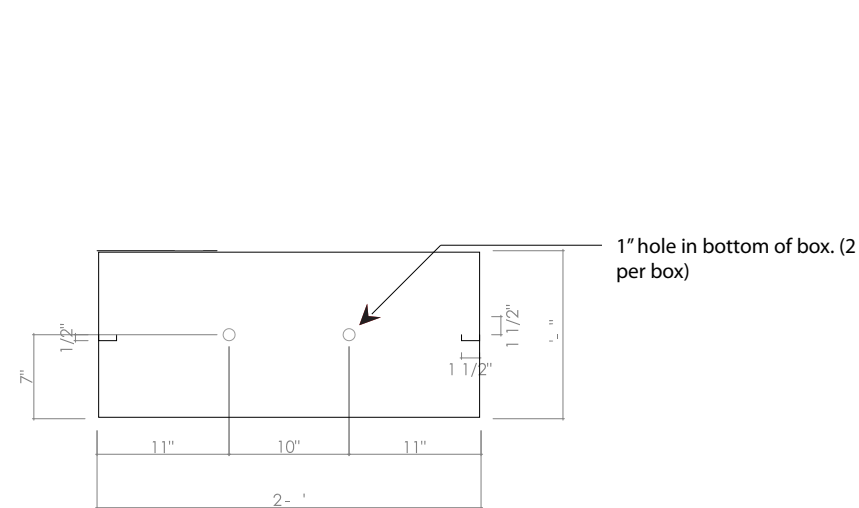
3/4" x 1" steel welded to side of
fin.



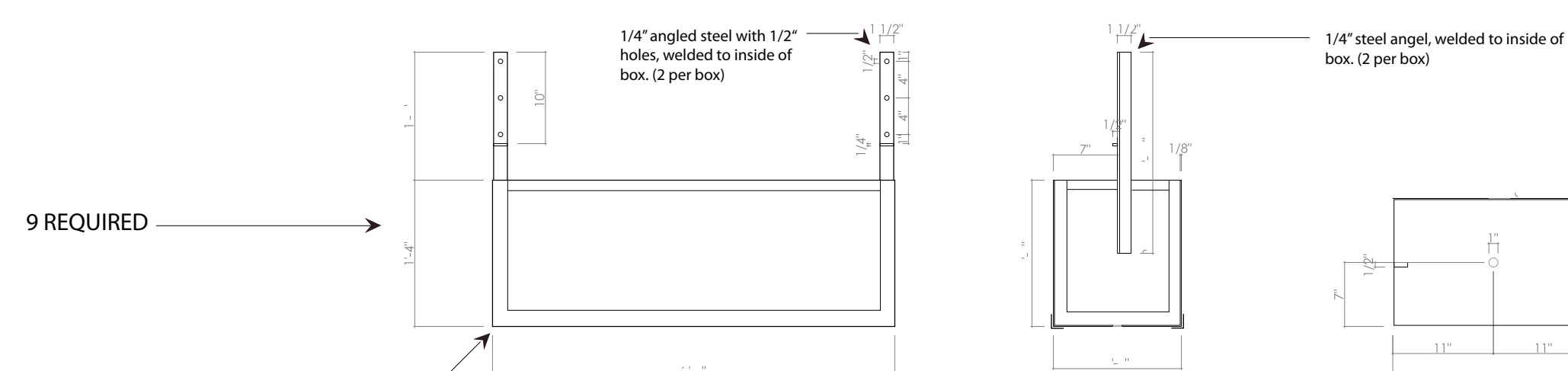
Elevation



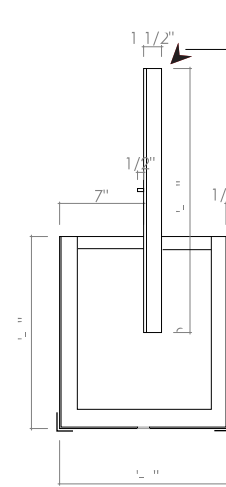
Section



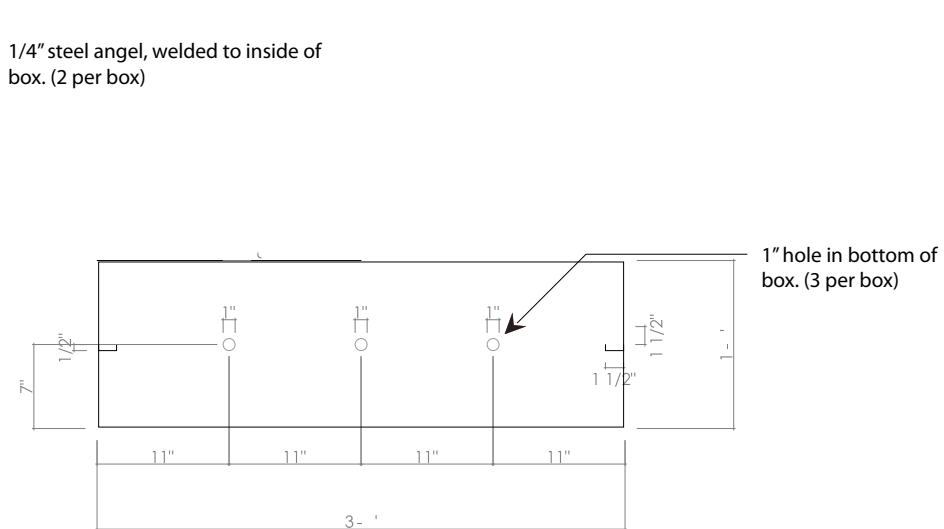
Plan



Elevation



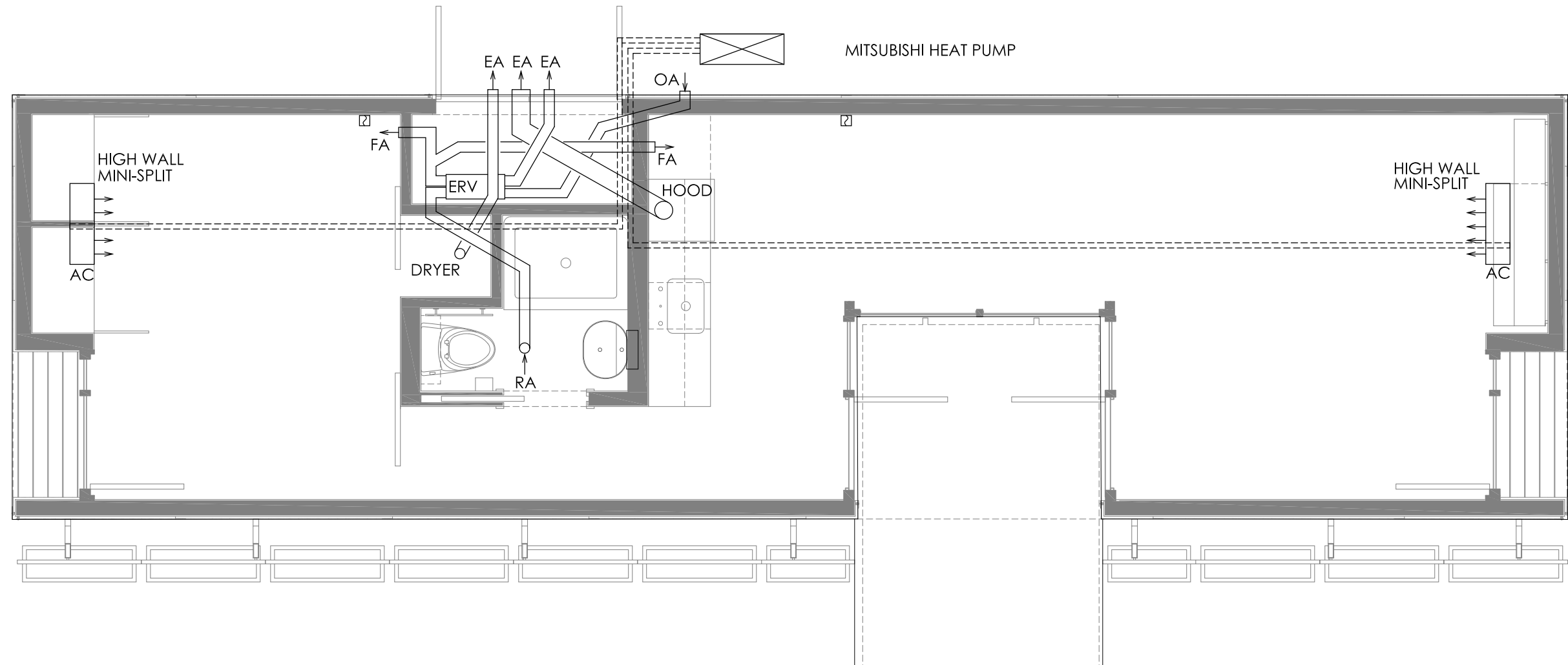
Section





Plan

Revisions:	
10.16.2008 SLS	
05.25.2009 RL	

Date: 06.02.2009
 Drawn by: RL
 Checked by: DS
 Approved by: xx



LEGEND	NOTES
EA- EXHAUST AIR	1. MITSUBISHI DUCTLESS MINI-SPLIT HEAT PUMP MXZ-2A20NA*5
OA- OUTSIDE AIR INTAKE	2. COOLANT TYPE R-410A
RA-INTERIOR AIR EXHAUST	3. INDOOR HEAT PUMP UNITS MITSUBISHI MSZ-A09NA, MSZ-A12NA
FA- FRESH AIR TO INTERIOR	4. ERV SYSTEM FANTECH SE704N
 THERMOSTAT	5. BROAN RANGE HOOD 42000 SERIES 24" WHITE
 R410A COOLANT LINE	

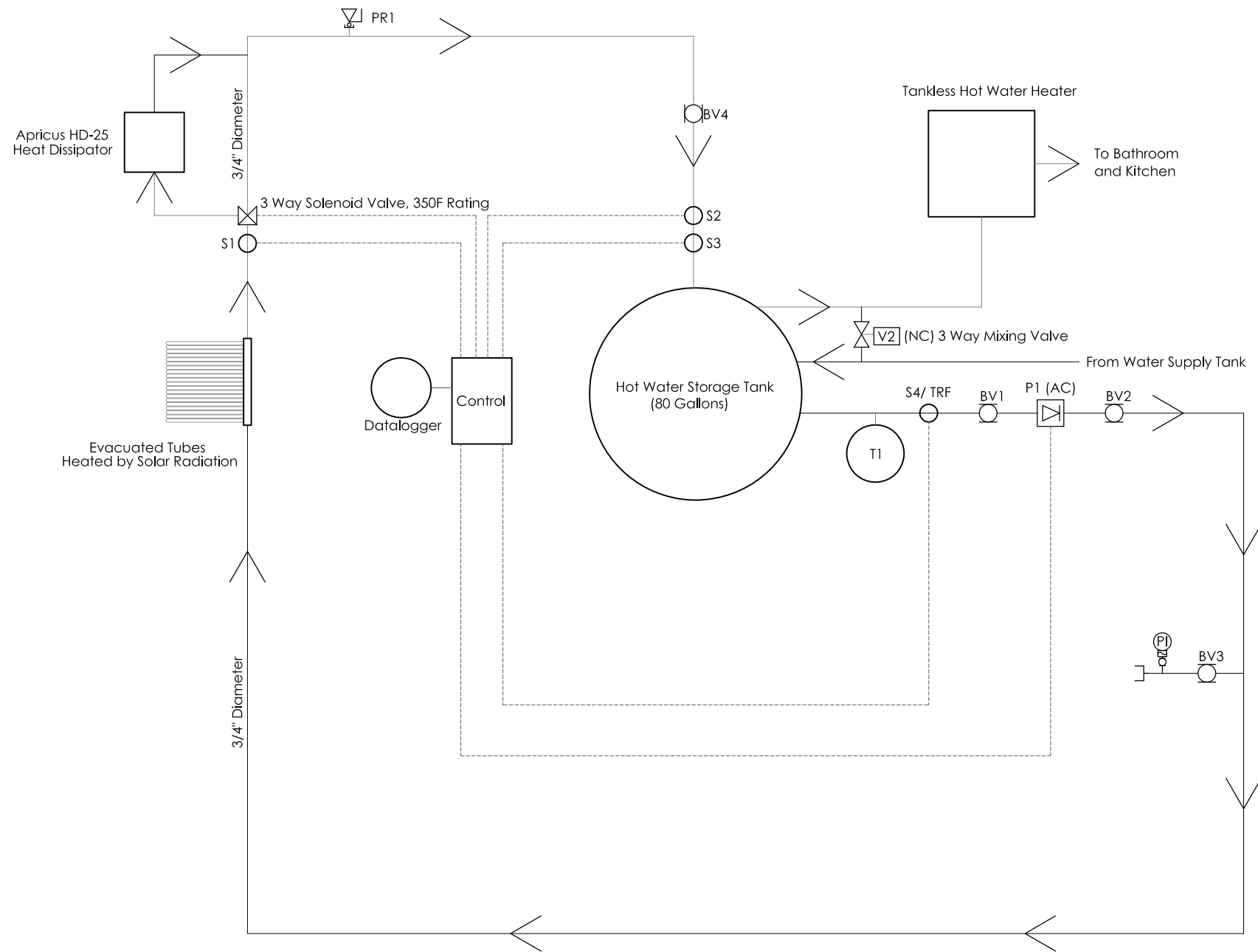
1 HVAC EQUIPMENT PLAN
1/4"=1'-0"

Revisions:
10.29.2008 SLS
12.12.2008 RTS
6.11.2009 RTS

Date: 06.02.2009
Drawn by: RTS
Checked by: DS
Approved by: xx

Scale:1/4" = 1'-0"
HVAC
EQUIPMENT
PLAN

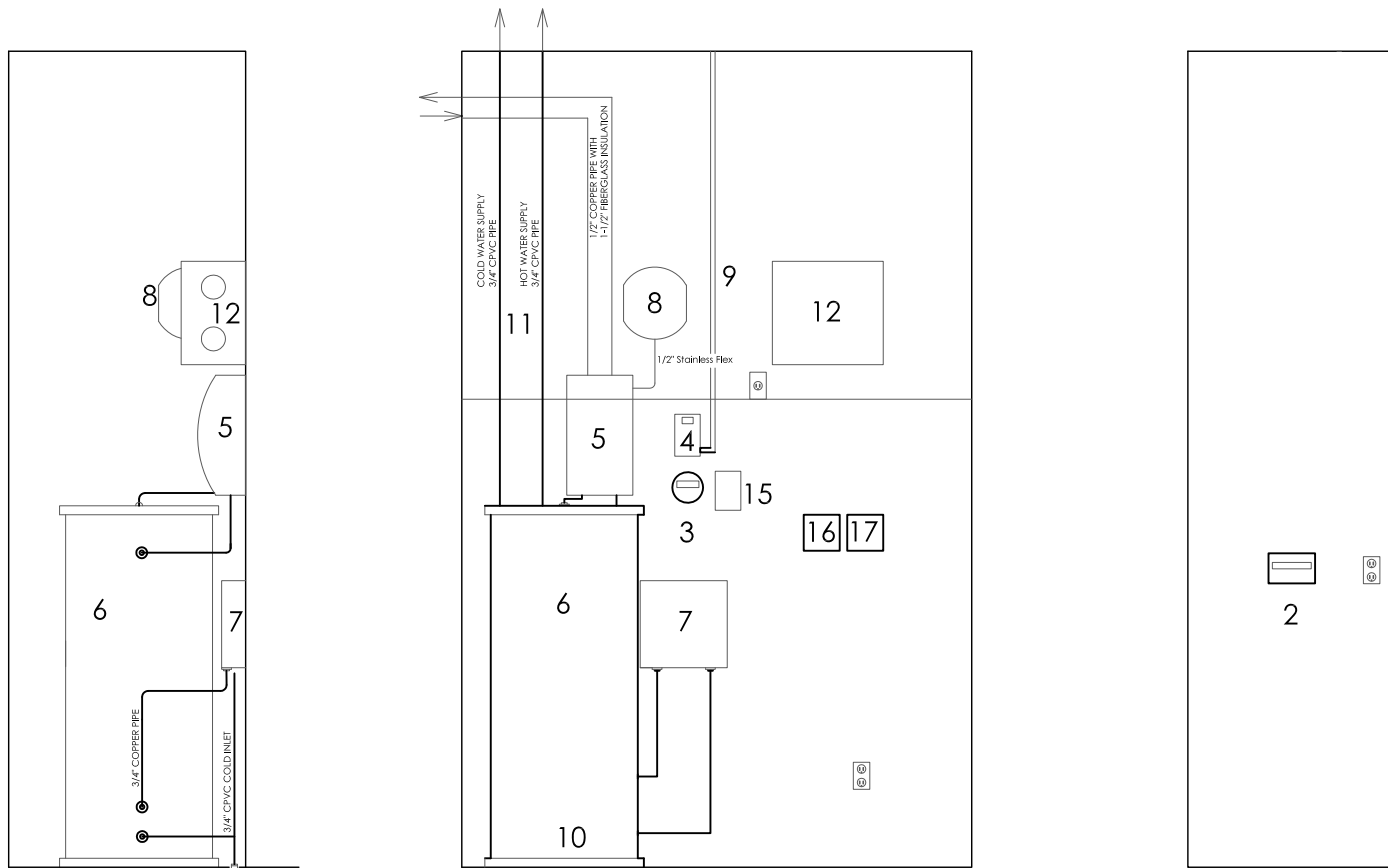
M1.01



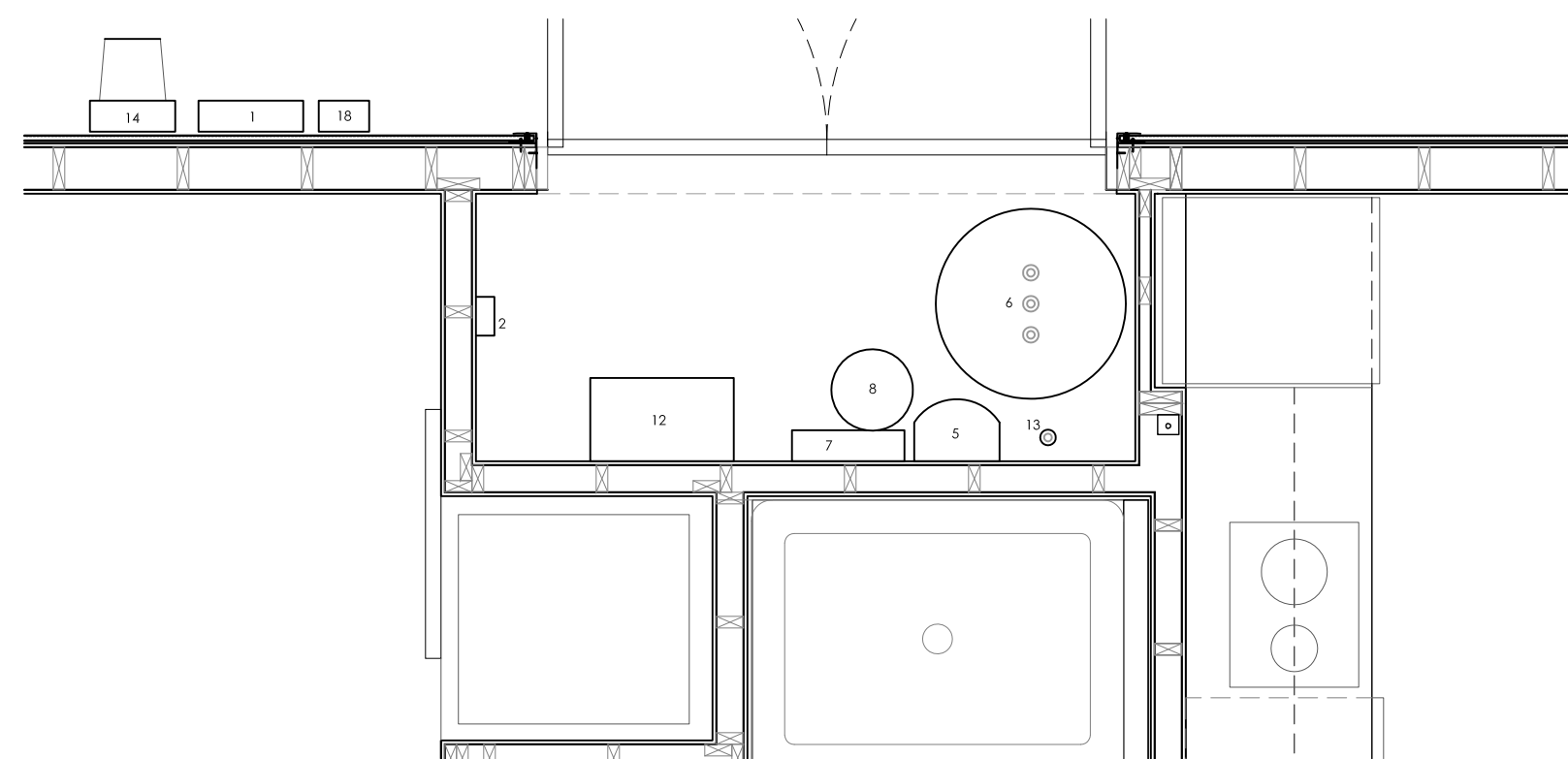
Rice University Solar Decathlon 2008
Hot Water System

Symbol Key	
P# (AC)	Apricus Pump Station Pump, Automatic Control
BV#	Ball Valve
V#	Automatic Valve
PR#	Valve Pressure Relief
3-Way Solenoid Valve	3-Way Solenoid Valve
1/4" Quick-Connect Coupler, Male	1/4" Quick-Connect Coupler, Male
Pressure Indicator	Pressure Indicator
T#	Thermal Expansion Tanks
Control	Apricus Sentinel S6 Solar Controller
Control Wiring	Control Wiring
Flow Direction	Flow Direction

Sensor Key	
S1	-Collector Sensor
S2	-Lower Store Sensor
S3	-Upper Store Sensor
S4/ TRF	-Sensor for Heat Quantity Measurement



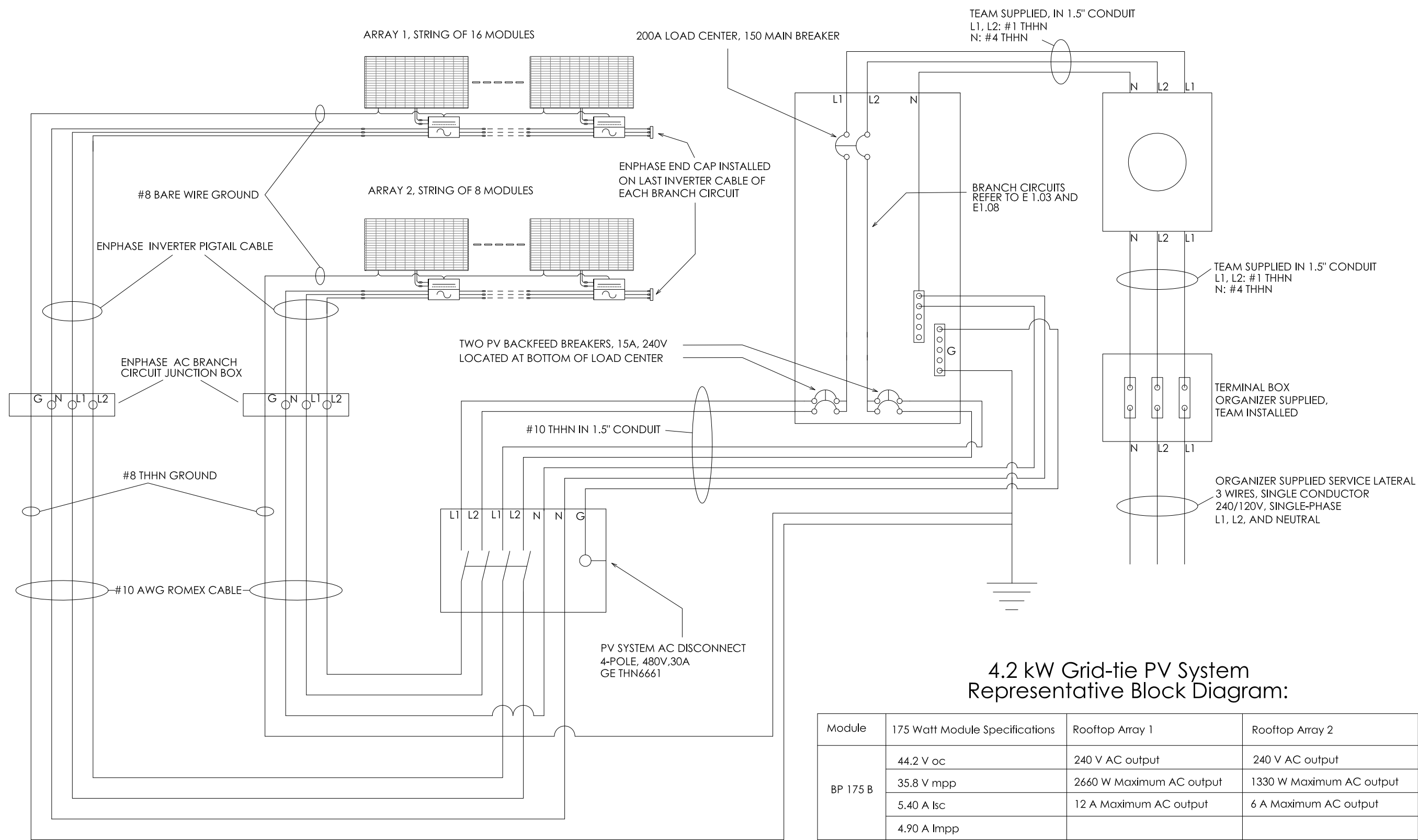
1 Mechanical Room Elevations
3/8"=1'-0"



2 Mechanical Room Plan
3/4"=1'-0"

Legend	
1.	200A LOAD PANEL
2.	ENPHASE ENVOY COMMUNICATIONS GATEWAY
3.	APRICUS DATALOGGER
4.	APRICUS CONTROLLER
5.	APRICUS 3-SPEED PUMP
6.	SOLARAIDE 80 GAL. HOT WATER STORAGE TANK
7.	STEIBEL ELTRON TANKLESS WATER HEATER
8.	THERMAL EXPANSION TANK
9.	3/4" CONDUIT TO SENSORS AND AP-30
10.	HOT WATER TANK DRIP PAN
11.	COLD AND HOT WATER SUPPLIES TO HOUSE (REFER TO P1.01 FOR DETAIL)
12.	FANTECH ERV (SEE M1.01 FOR DETAIL)
13.	3/4" WATER SUPPLY CPVC
14.	ELECTRIC METER HOUSING
15.	60A AC WATER HEATER DISCONNECT
16.	CAT-5 AND TELEPHONE INTERFACE
17.	COAXIAL INTERFACE
18.	HEAT PUMP DISCONNECT

Revisions:	
	10.30.2008 SLS
	12.10.2008 SWS
	6.1.2009 RTS
Date:	06.02.2009
Drawn by:	RTS
Checked by:	xx
Approved by:	xx



4.2 kW Grid-tie PV System
Representative Block Diagram:

Module	175 Watt Module Specifications	Rooftop Array 1	Rooftop Array 2
BP 175 B	44.2 V oc	240 V AC output	240 V AC output
	35.8 V mpp	2660 W Maximum AC output	1330 W Maximum AC output
	5.40 A Isc	12 A Maximum AC output	6 A Maximum AC output
	4.90 A Impp		

Revisions:

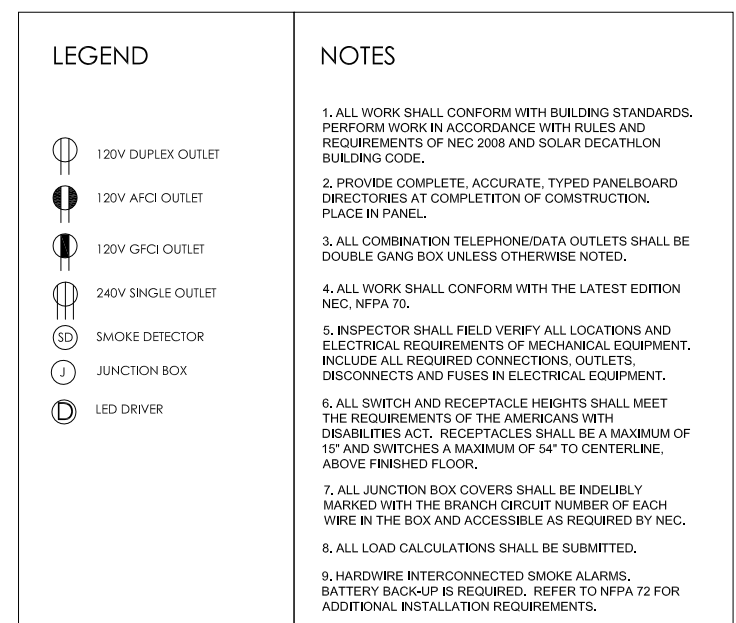
10.29.2008	SLS
12.15.2008	RTS
6.1.2009	RTS

Date: 06.02.2009
Drawn by: RTS
Checked by: xx
Approved by: xx

Scale: 3/16" = 1'-0"

PHOTOVOLTAIC
THREE LINE
DIAGRAM

E1.02



1 RECEPTACLE PLAN
1/4"=1'

ZEROWHOUSE

Rice University Solar Decathlon 2009
Zero Energy Row House

Revisions:

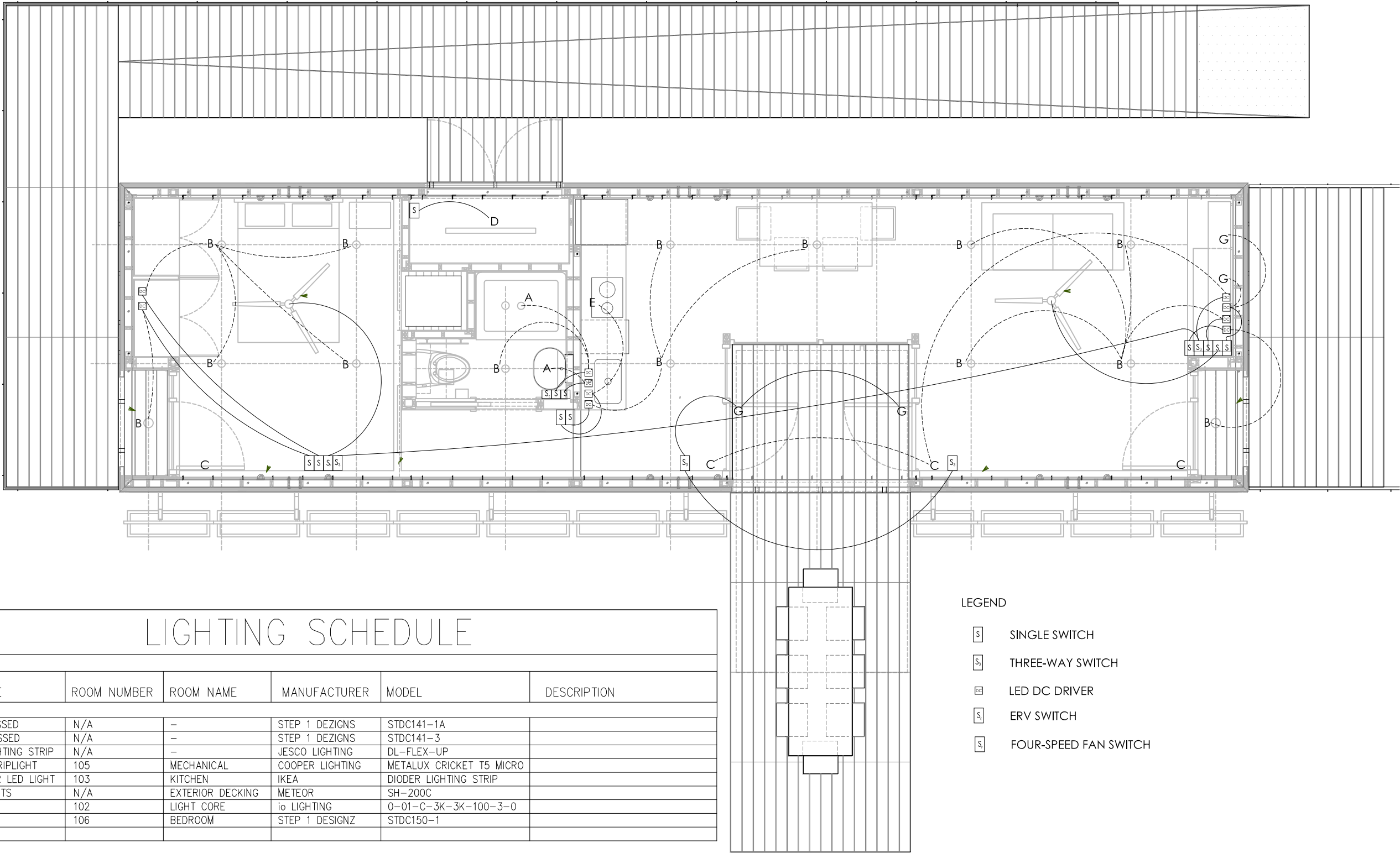
10.29.2008	SLS
12.12.2008	RTS
5.31.2009	RTS

Date: 06.02.2009
 Drawn by: RTS
 Checked by: xx
 Approved by: xx






Scale: 1/4" = 1'-0"

RECEPTACLE
PLAN

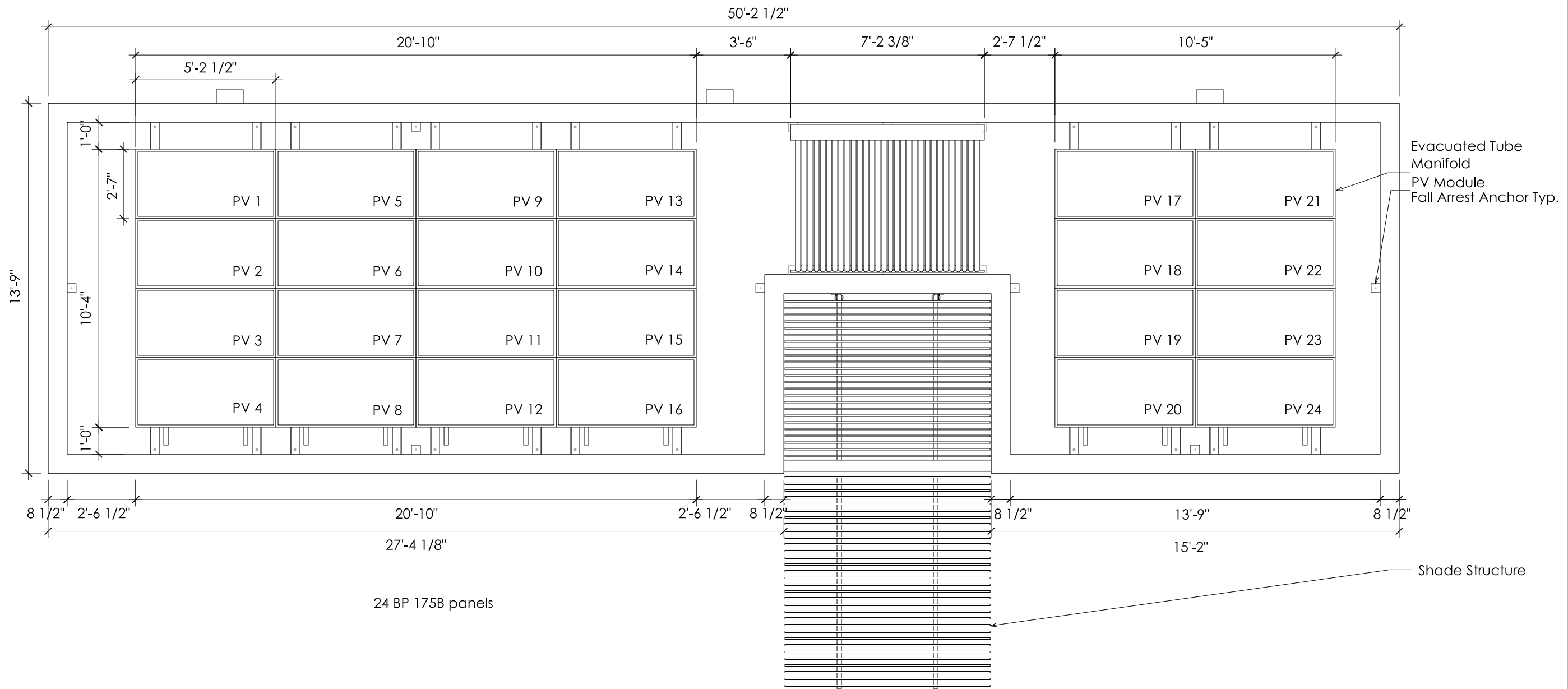
E1.04



LIGHTING SCHEDULE						
	LIGHT SOURCE	ROOM NUMBER	ROOM NAME	MANUFACTURER	MODEL	DESCRIPTION
A	1W DIODE RECESSED	N/A	–	STEP 1 DEZIGNS	STDC141–1A	
B	3W DIODE RECESSED	N/A	–	STEP 1 DEZIGNS	STDC141–3	
C	LED LINEAR LIGHTING STRIP	N/A	–	JESCO LIGHTING	DL–FLEX–UP	
D	FLORESCENT STRIPLIGHT	105	MECHANICAL	COOPER LIGHTING	METALUX CRICKET T5 MICRO	
E	UNDER COUNTER LED LIGHT	103	KITCHEN	IKEA	DIODER LIGHTING STRIP	
F	LED PAVER LIGHTS	N/A	EXTERIOR DECKING	METEOR	SH–200C	
G	LED	102	LIGHT CORE	io LIGHTING	0–01–C–3K–3K–100–3–0	
H	LED	106	BEDROOM	STEP 1 DESIGNZ	STDC150–1	

- LEGEND
-  SINGLE SWITCH
 -  THREE-WAY SWITCH
 -  LED DC DRIVER
 -  ERV SWITCH
 -  FOUR-SPEED FAN SWITCH

1 SWITCH & LIGHTING PLAN
1/4"=1'



1 PV ARRAY PLAN
1/4"=1'

Revisions:

10.29.2008 SLS

12.09.2008 KC

05.26.2009 JLC

Date: 06.02.2009

Drawn by: JLC

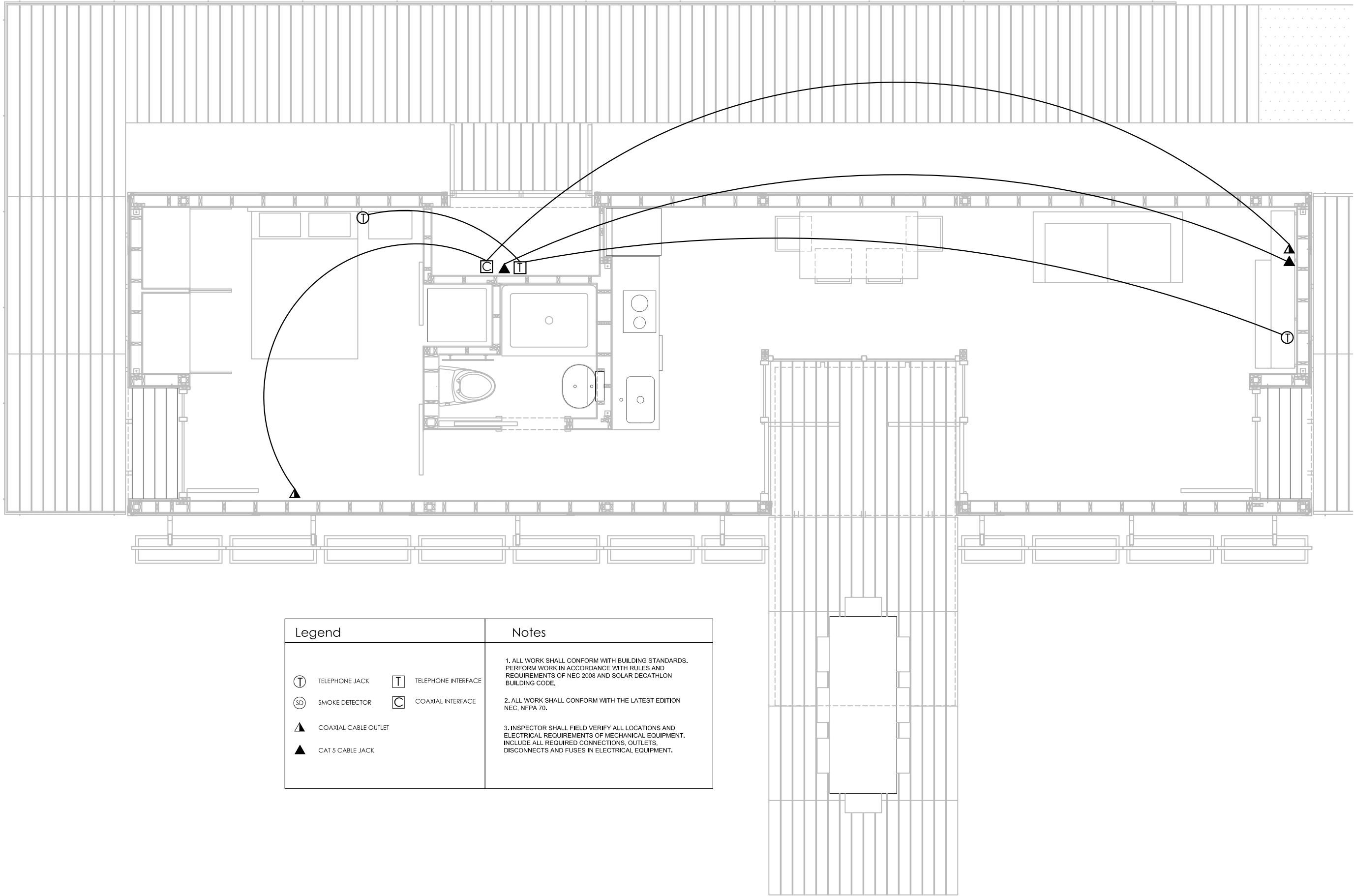
Checked by: xx

Approved by: xx

Scale: 1/4" = 1'-0"

PV ARRAY
PLAN

E1.06



Legend	Notes
<div><div><div>T</div><div>TELEPHONE JACK</div></div><div><div>SD</div><div>SMOKE DETECTOR</div></div><div><div>▲</div><div>COAXIAL CABLE OUTLET</div></div><div><div>▲</div><div>CAT 5 CABLE JACK</div></div></div> <div><div><div>T</div><div>TELEPHONE INTERFACE</div></div><div><div>C</div><div>COAXIAL INTERFACE</div></div></div>	<div>1. ALL WORK SHALL CONFORM WITH BUILDING STANDARDS. PERFORM WORK IN ACCORDANCE WITH RULES AND REQUIREMENTS OF NEC 2008 AND SOLAR DECATHLON BUILDING CODE.</div> <div>2. ALL WORK SHALL CONFORM WITH THE LATEST EDITION NEC, NFPA 70.</div> <div>3. INSPECTOR SHALL FIELD VERIFY ALL LOCATIONS AND ELECTRICAL REQUIREMENTS OF MECHANICAL EQUIPMENT. INCLUDE ALL REQUIRED CONNECTIONS, OUTLETS, DISCONNECTS AND FUSES IN ELECTRICAL EQUIPMENT.</div>

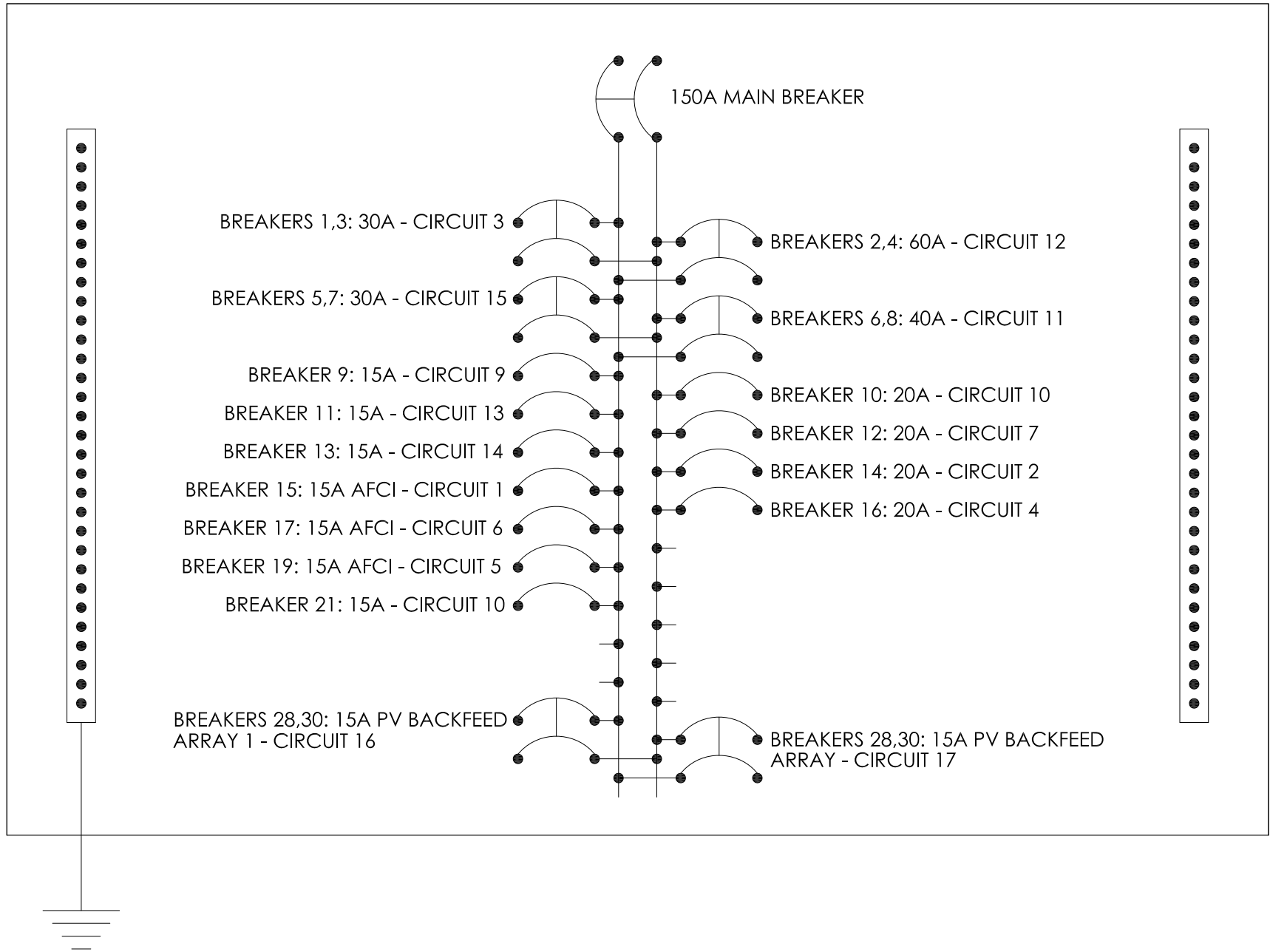
Revisions:	
	4.10.2009 RTS

Date:	06.02.2009
Drawn by:	RTS
Checked by:	xx
Approved by:	xx

Scale:1/4" = 1'-0"

DATA WIRING
PLAN

E1.07



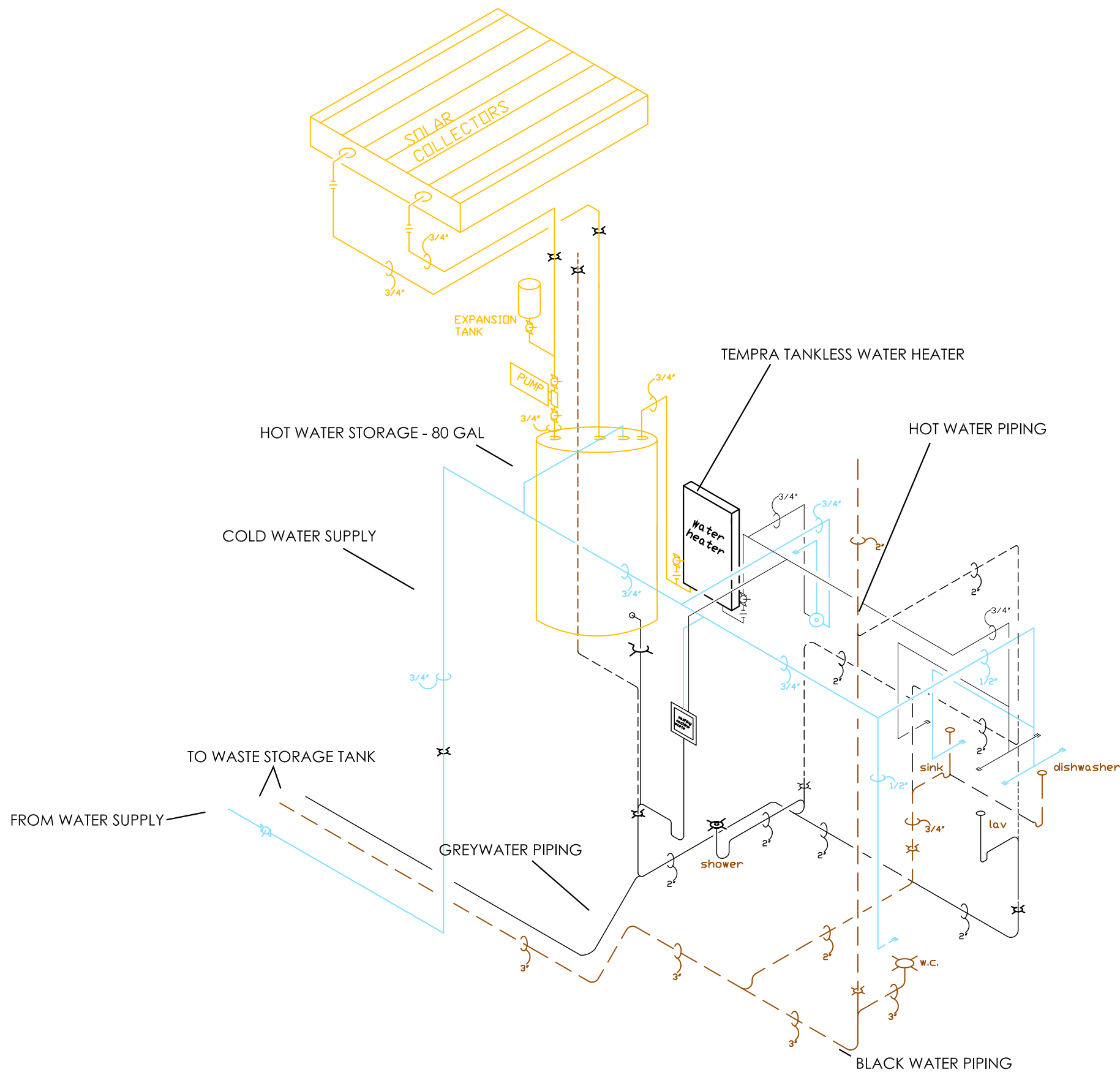
Revisions:

6.1.2009	RTS

Date: 06.02.2009
Drawn by: RTS
Checked by: xx
Approved by: xx

Scale: 3/16" = 1'-0"

LOAD CENTER
DIAGRAM

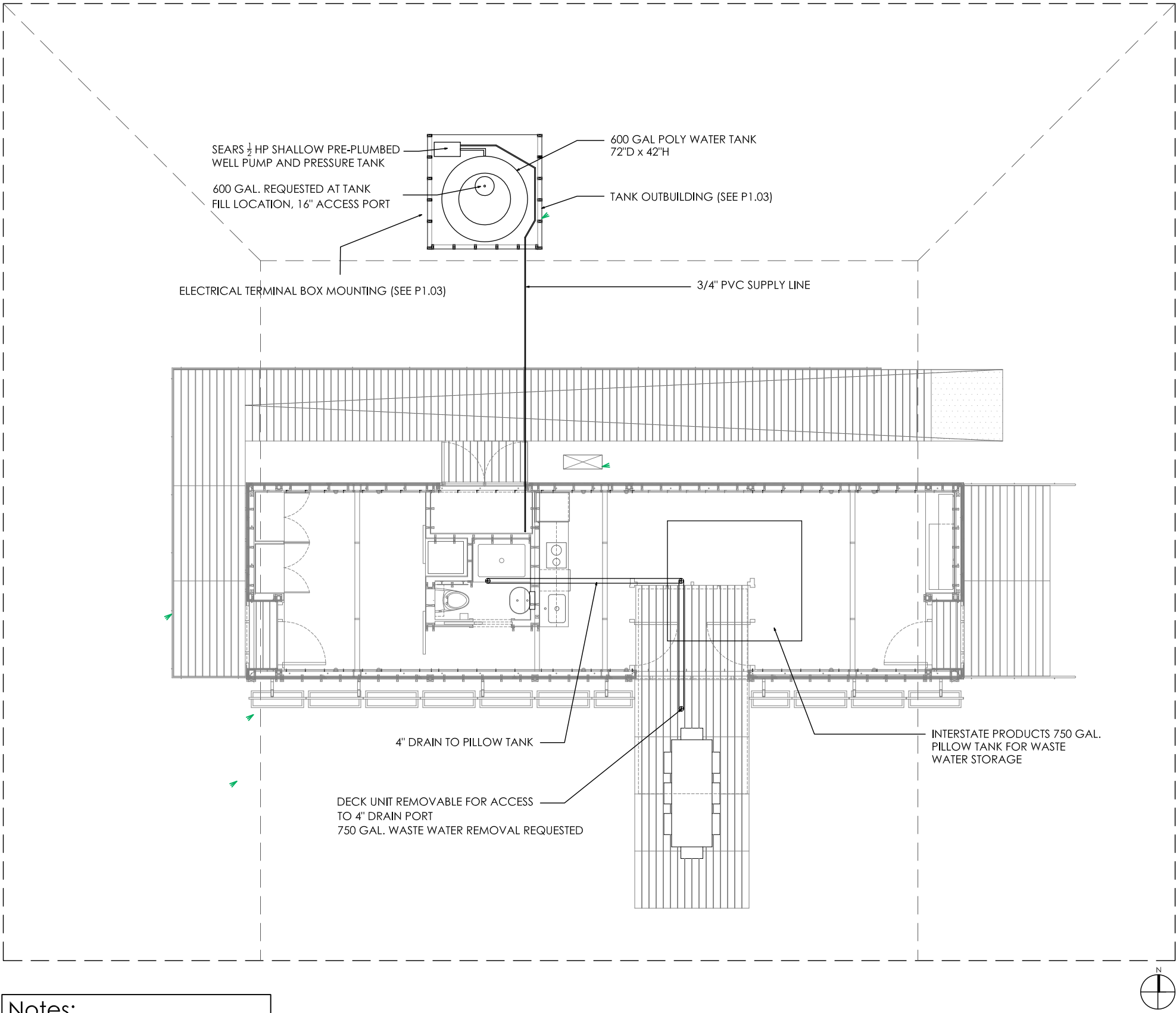


	GREY WATER PIPING
	COLD WATER PIPING
	HOT WATER PIPING
	BLACK WATER PIPING
	SOLAR HOT WATER

Revisions:
12.11.2008 SWS
12.15.2008 RTS

Date: 06.02.2009
 Drawn by: SWS
 Checked by: RTS
 Approved by: xx

Scale: N/A
 Plumbing
 Diagram



- Notes:
1. ROTONICS 650 GAL. VERTICAL WATER TANK
 2. SEARS SHALLOW PREPLUMBED WELL PUMP AND PRESSURE TANK
 3. INTERSTATE PRODUCTS 750 GAL. PILLOW TANK FOR WASTE WATER STORAGE

1 WATER TANK LAYOUT PLAN
1/8"=1'

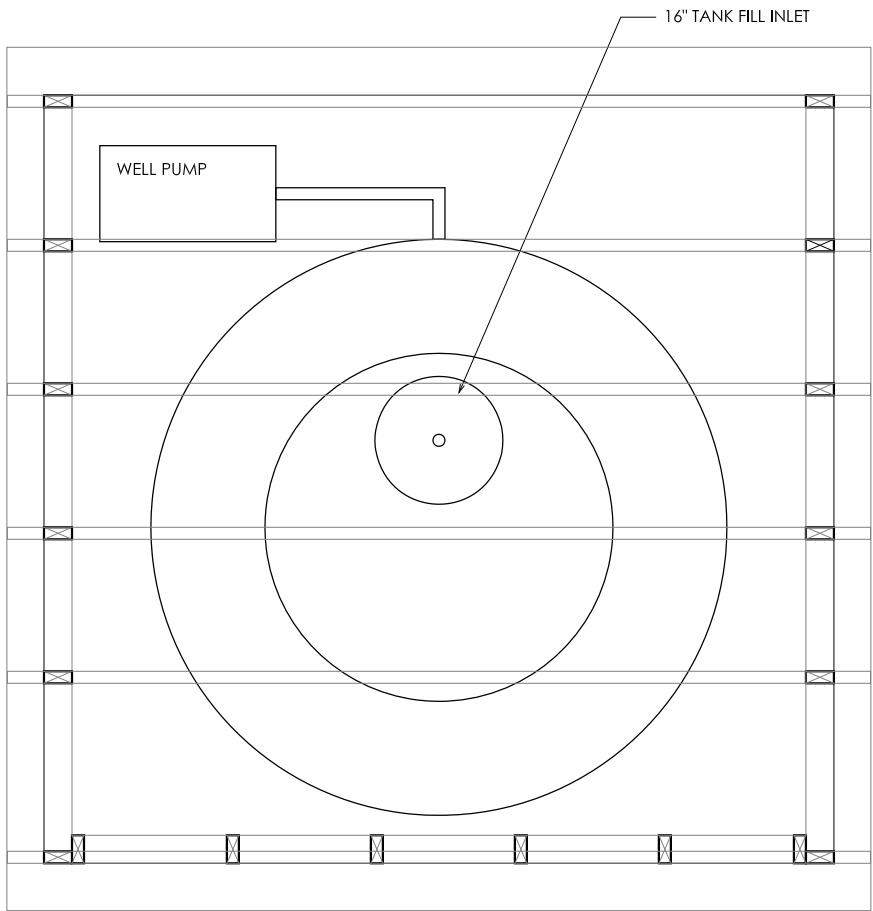
Revisions:

10.29.2008	SLS
12.09.2008	KC
05.28.2009	RTS

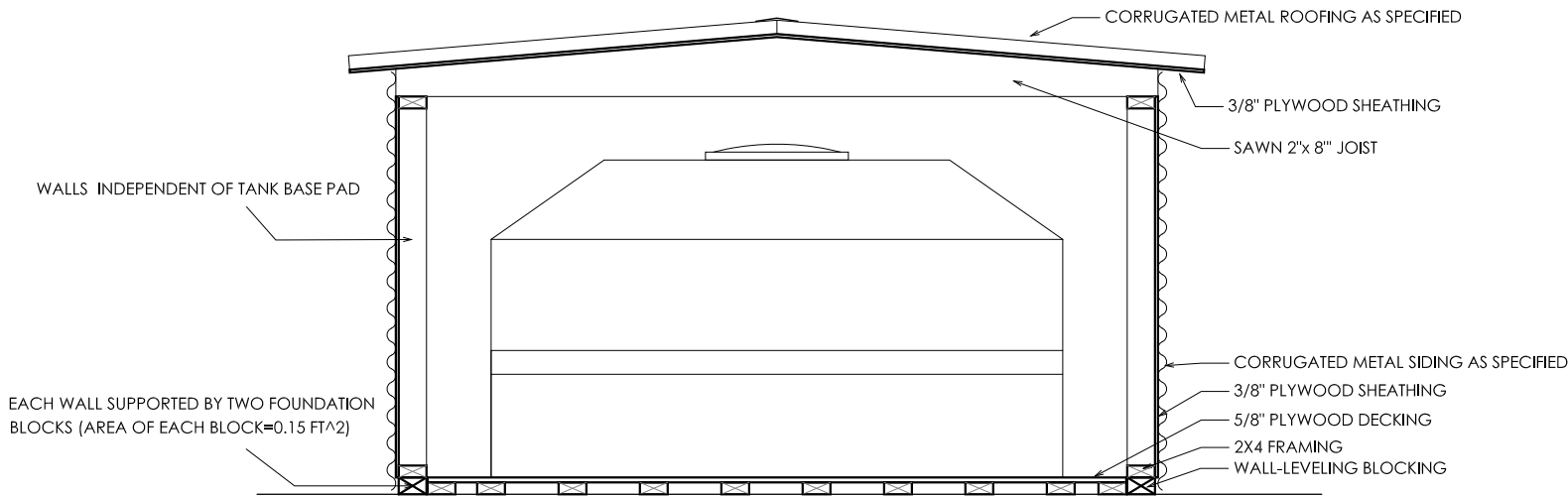
Date: 06.02.2009
Drawn by: RTS
Checked by: DS
Approved by: xx

Scale: 1/8" = 1'-0"
**WATER TANK
LAYOUT**

P1.02



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



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



3 EAST ELEVATION
1/2"=1'-0"

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

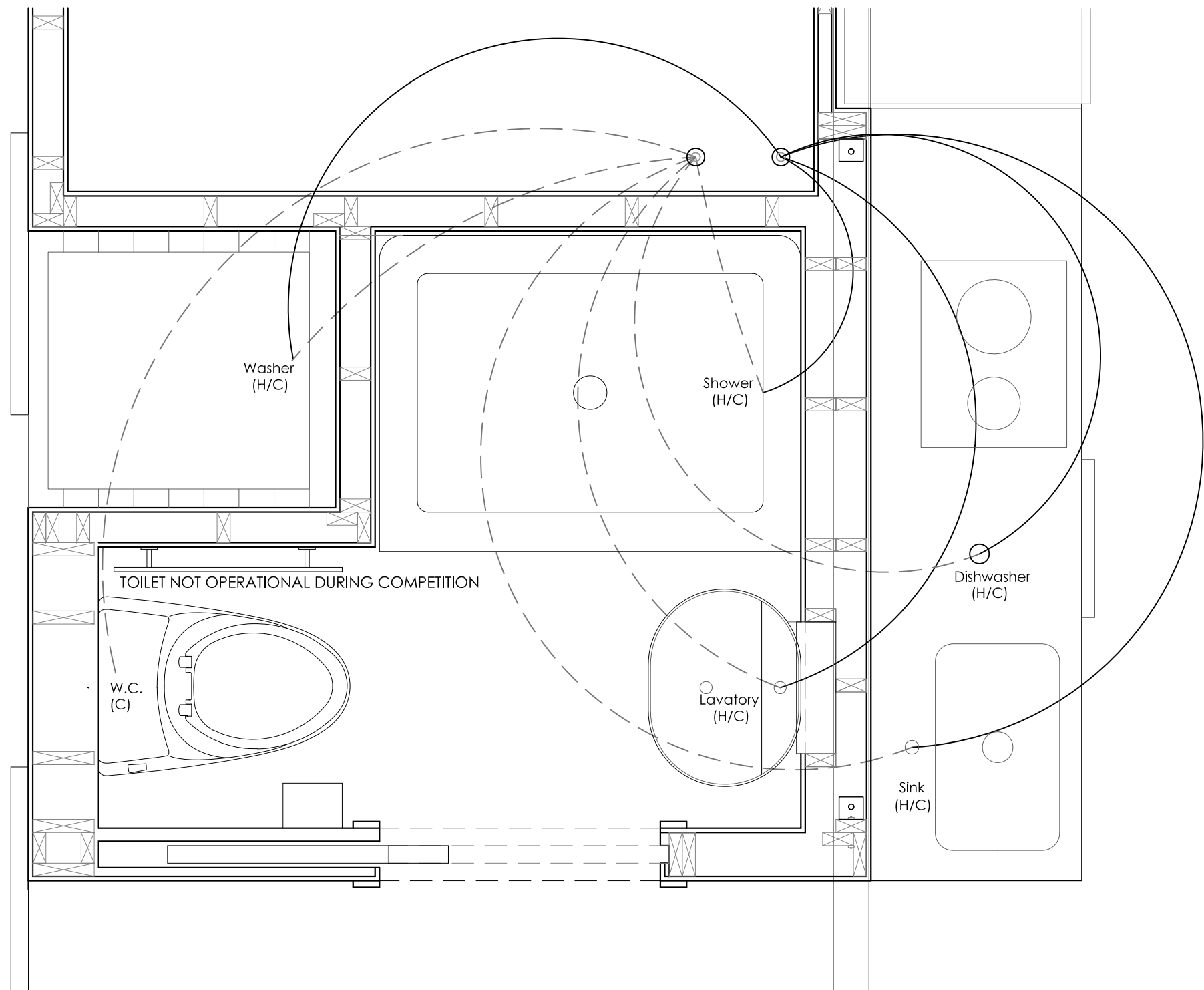
5 WEST ELEVATION
1/2"=1'-0"

Revisions:
05.26.2009 RTS

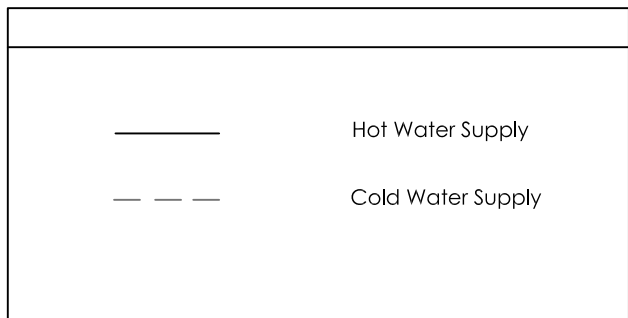
Date: 06.02.2009
Drawn by: RTS
Checked by: xx
Approved by: xx

Scale: 1/2"=1'
TANK
OUTBUILDING
DETAILS

P1.03



1 Water Distribution Diagram
1/2"=1'



Revisions:

12.11.2008 SWS
12.15.2008 RTS
6.1.2009 RTS

Date: 06.02.2009
Drawn by: RTS
Checked by: DS
Approved by: xx

Scale: 1/2"=1'0"
WATER
DISTRIBUTION
DIAGRAM