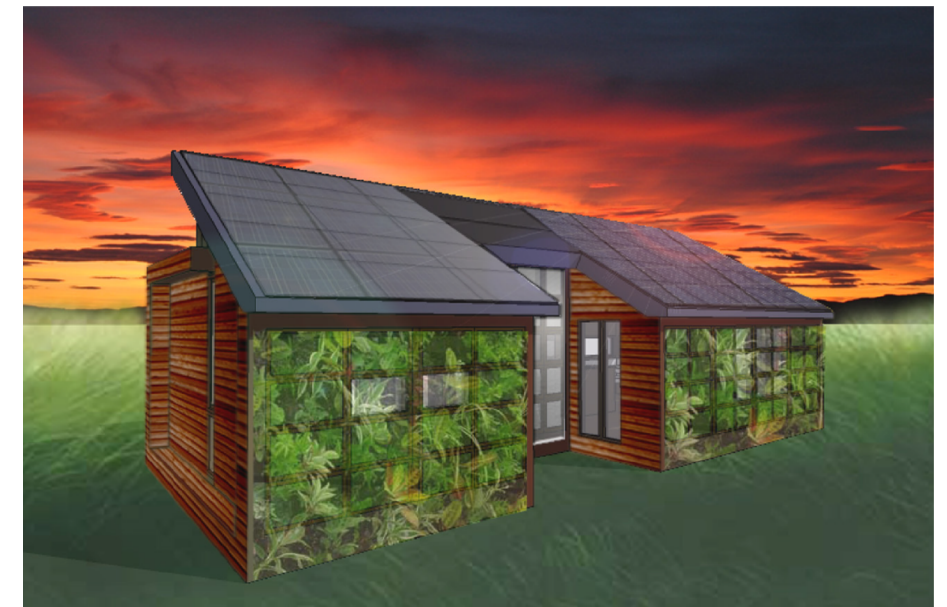


LUMEN
ESSENCE

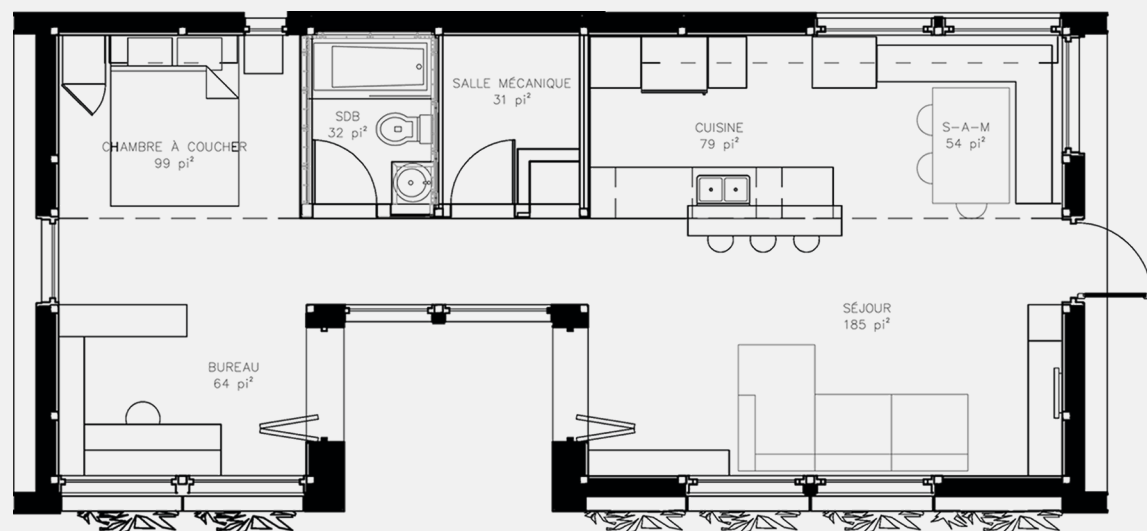


The Team proudly represents its country with the goal of promoting innovation through the creation of buildings that are entirely autonomous and employ advanced solar energy technologies. To reach their goal, the Team has adopted a unique design method based on a multidisciplinary approach.

This approach generates a productive synergy that ensures a maximal communication between the diverse groups of people participating in the project. This integration brings together the students specializing in construction, electricity, mechanics, as well as architecture, landscape architecture, industrial design, interior design and urban planning. With this effective integration, each individual actively brings fourth their expertise and knowledge.

AS-BUILT CONSTRUCTION DRAWINGS AND SPECIFICATIONS

January 7, 2008



École de technologie supérieure
Université de Montréal
Université de McGill



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NOTES

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STAMP:

PROJECT:

SOLAR DECATHLON 2007
TEAM MONTREAL

TITLE:

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| SCALE : 1/2" - 1' | VERIFIED BY : A. LABERGE | |
| PROJECT No. : SD-07 | REVISION : 4 | DRAWING No. : IND - 001 |

COVER SHEETS

| | |
|-----------|--|
| SLE - 000 | SITE PLAN (LOCALISATION AT THE BIOSPHERE) |
| SLE - 001 | SITE PLAN (EXT. TOUR ROUTE / EXT. TRAFFIC MANAGEMENT / LOCATION INFO. AND SIGNAGE) |
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| SLE - 003 | SOLAR ENVELOPE EAST |
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| | |
|-----------|-------------------|
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| LSA - 002 | EVACUATION PLAN 2 |
| LSA - 003 | EVACUATION PLAN 3 |
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| ARC - 202 | ELEVATION SOUTH |
| ARC - 203 | ELEVATION WEST |
| ARC - 204 | ELEVATION NORTH |
| ARC - 205 | CROSS-SECTION / ELEVATION EAST / WEST MECHANICAL BLOCK |
| ARC - 206 | CROSS-SECTION / ELEVATION EAST / COURTYARD |
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ELEVATION - ENLARGED PLANS

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| ARC - 303 | INTERIOR ELEVATION |
| ARC - 304 | INTERIOR ELEVATION |
| ARC - 305 | INTERIOR ELEVATION |
| ARC - 306 | INTERIOR ELEVATION |
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| ARC - 308 | INTERIOR ELEVATION |
| ARC - 309 | INTERIOR ELEVATION |
| ARC - 310 | INTERIOR ELEVATION |
| ARC - 311 | INTERIOR ELEVATION - BATHROOM |

PLAN - DETAILS

| | |
|-----------|---|
| ARC - 401 | DETAILS - EAST ELEVATION |
| ARC - 402 | DETAILS - SOUTH ELEVATION |
| ARC - 403 | DETAILS - COURTYARD |
| ARC - 404 | DETAILS - NORTH ELEVATION - MECH. BLOCK |
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STRUCTURAL

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| STR - 500 | SECTION A-A & B-B |
| STR - 501 | SECTION C-C & D-D |
| STR - 502 | SECTION E-E |
| STR - 600 | MECHANICAL ROOM |

ASSEMBLY

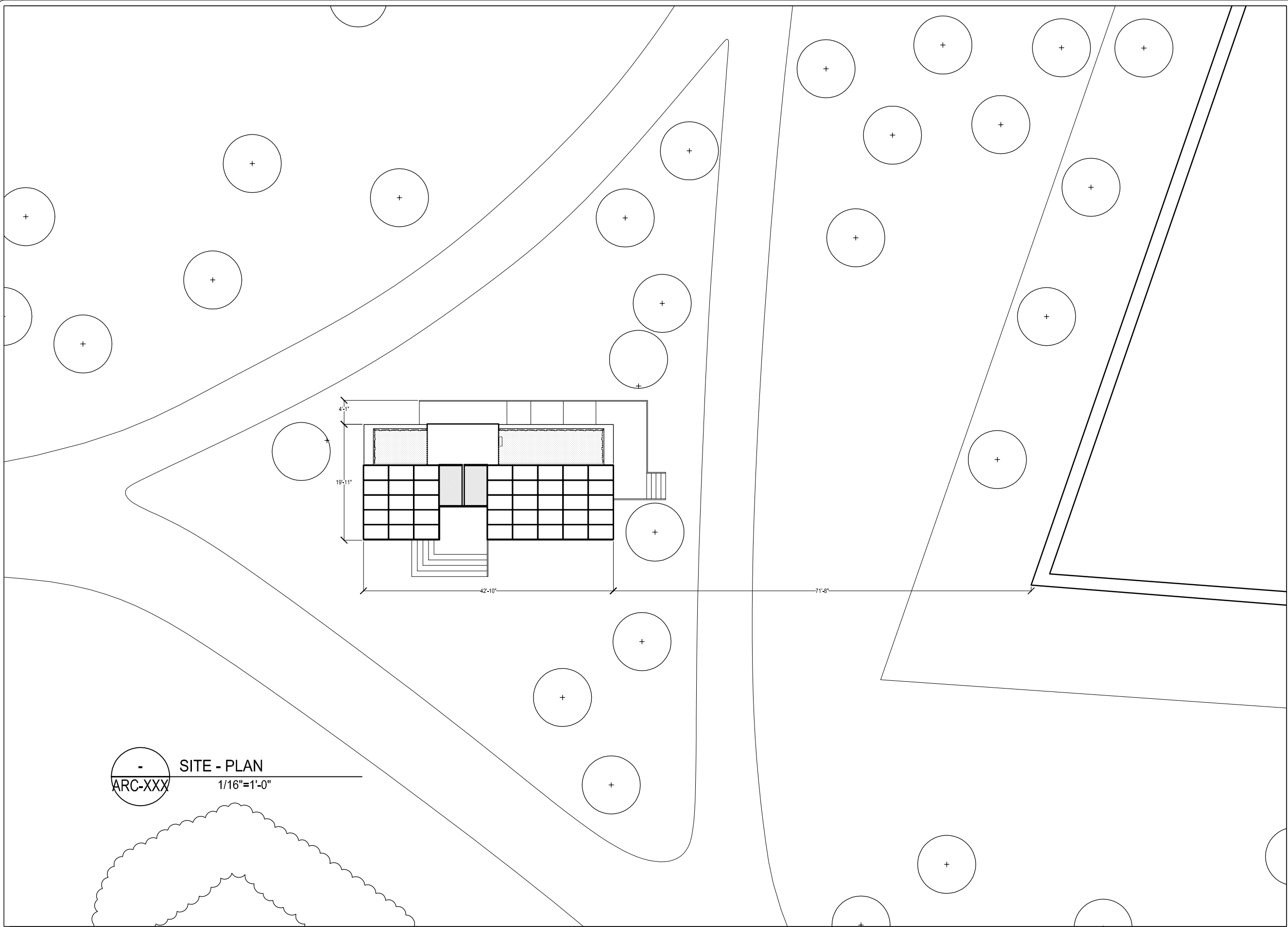
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| ASS - 001 | ASSEMBLY 1 @ 4 |
| ASS - 002 | ASSEMBLY 5 @ 8 |
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| MEC - 003 | VENTILATION DISTRIBUTION & EVACUATION |
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STAMP:

PROJECT:

SOLAR DECATHLON 2007
TEAM MONTREAL

TITLE:

SITE - PLAN

| | | | |
|---------------|------------|---------------|--------------|
| DATE: | 07-01-08 | DRAWN BY : | S. COUSINEAU |
| SCALE : | 1/16" - 1' | VERIFIED BY : | A. LABERGE |
| PROJECT No. : | SD-07 | REVISION : | 4 |
| | | DRAWING No. : | SLE-000 |

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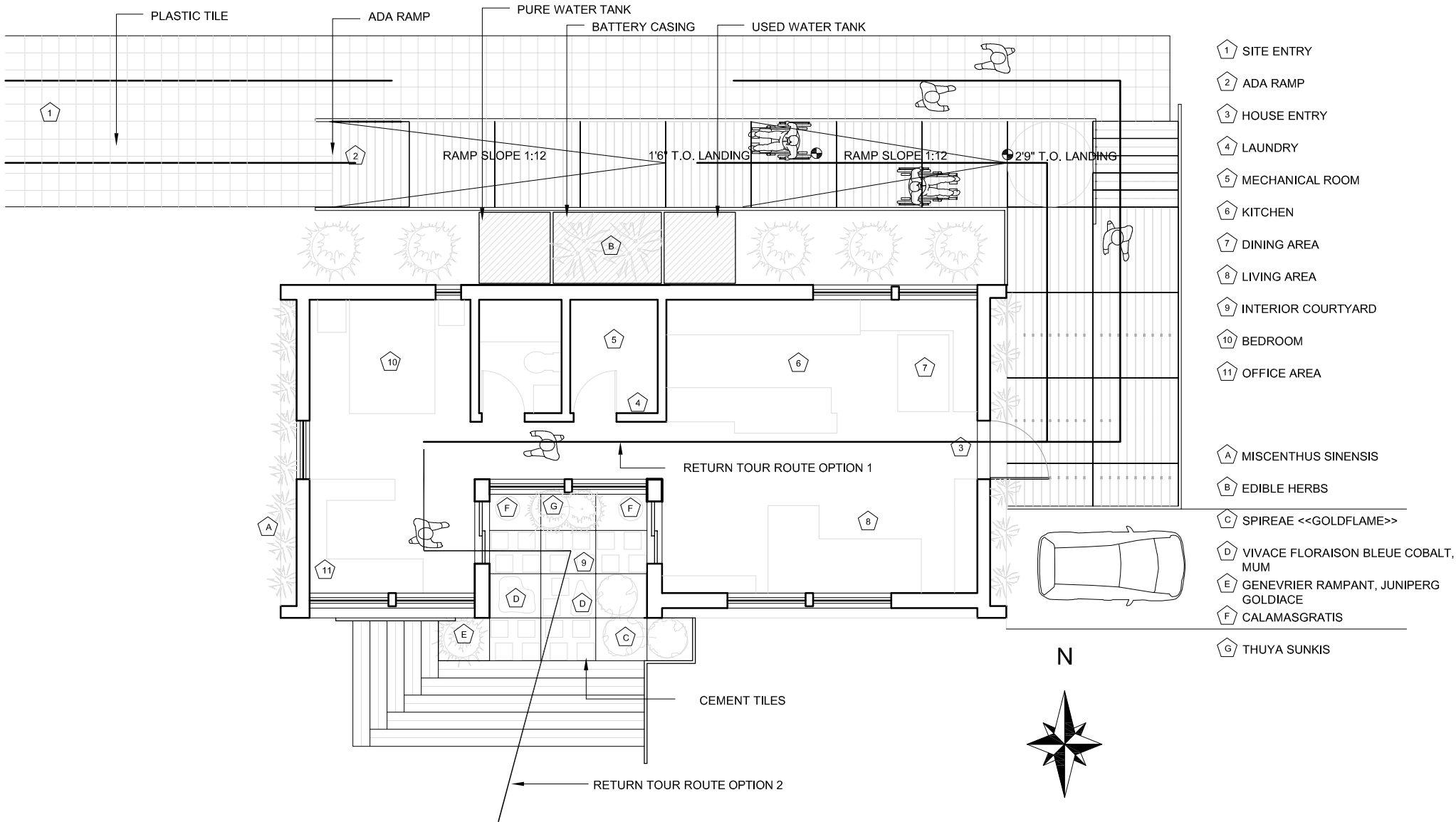
PROJECT:

SOLAR DECATHLON 2007
TEAM MONTREAL

TITLE:

SITE PLAN

| | | | |
|---------------|-----------|---------------|---------------|
| DATE: | 07-01-08 | DRAWN BY : | JOANNA ROSVAL |
| SCALE : | 1/8" = 1' | VERIFIED BY : | A. LABERGE |
| PROJECT No. : | SD-07 | REVISION : | 4 |
| | | DRAWING No. : | SLE - 001 |

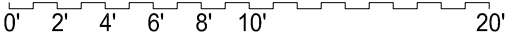


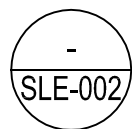
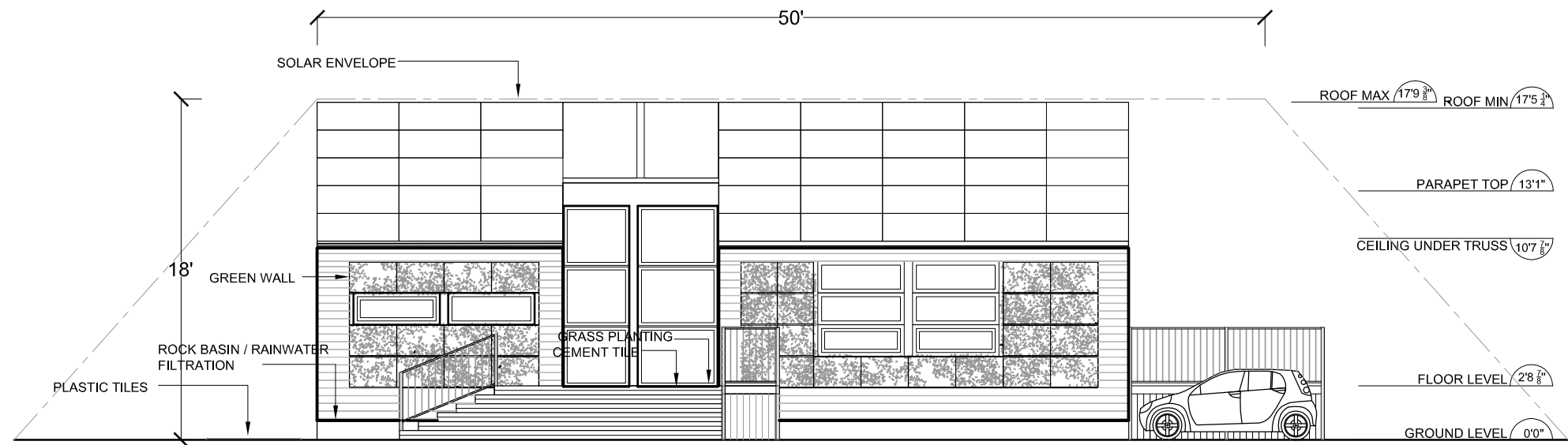
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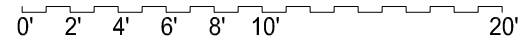
SITE PLAN

1/8"=1'-0"





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



| No. | REVISIONS | DATE |
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STAMP:

PROJECT:

SOLAR DECATHLON 2007
TEAM MONTREAL

TITLE:

SOLAR ENVELOPE SOUTH

DATE:

07-01-08

DRAWN BY :

JOANNA ROSVAL

SCALE :

1/8" - 1'

VERIFIED BY :

A. LABERGE

APPROVED BY :

PROJECT No. :

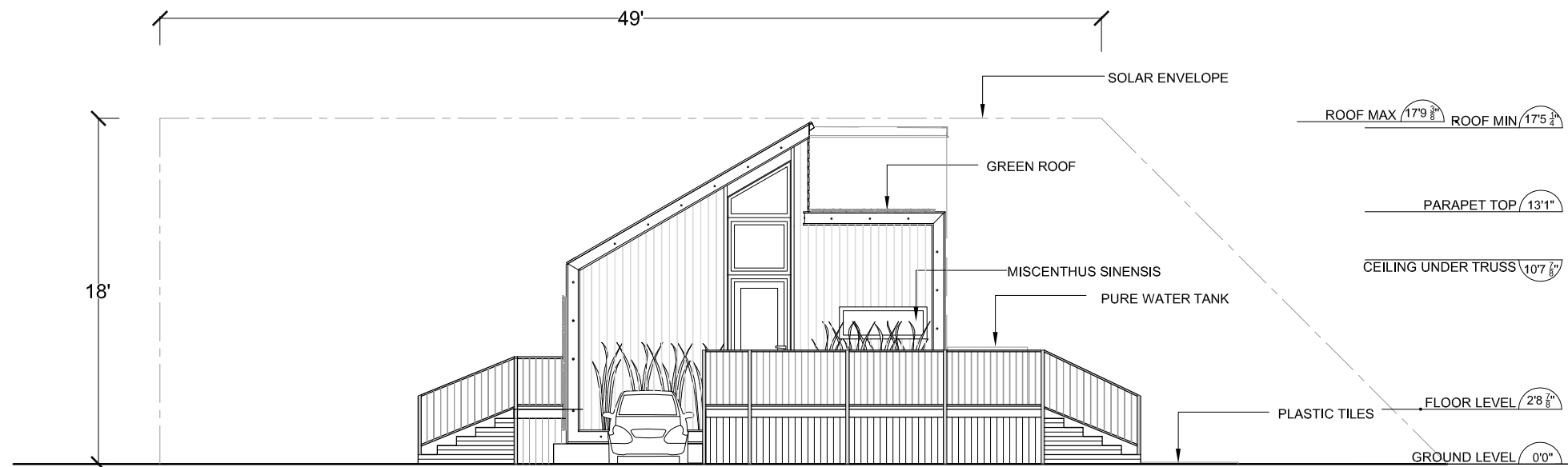
SD-07

REVISION :

4

DRAWING No. :

SLE - 002



- SOLAR ENVELOPE EAST
SLE-003 1/8"=1'-0"

0' 2' 4' 6' 8' 10' 20'

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STAMP:

PROJECT:

SOLAR DECATHLON 2007
TEAM MONTREAL

TITLE:

SOLAR ENVELOPE EAST

| | |
|------------------------|-----------------------------|
| DATE: 07-01-08 | DRAWN BY : JOANNA ROSVAL |
| SCALE : 1/8" - 1' | VERIFIED BY : A. LABERGE |
| PROJECT No. : SD-07 | REVISION : 4 |
| | DRAWING No. : SLE - 003 |

| No. | REVISIONS | DATE |
|-----|------------------------------|----------|
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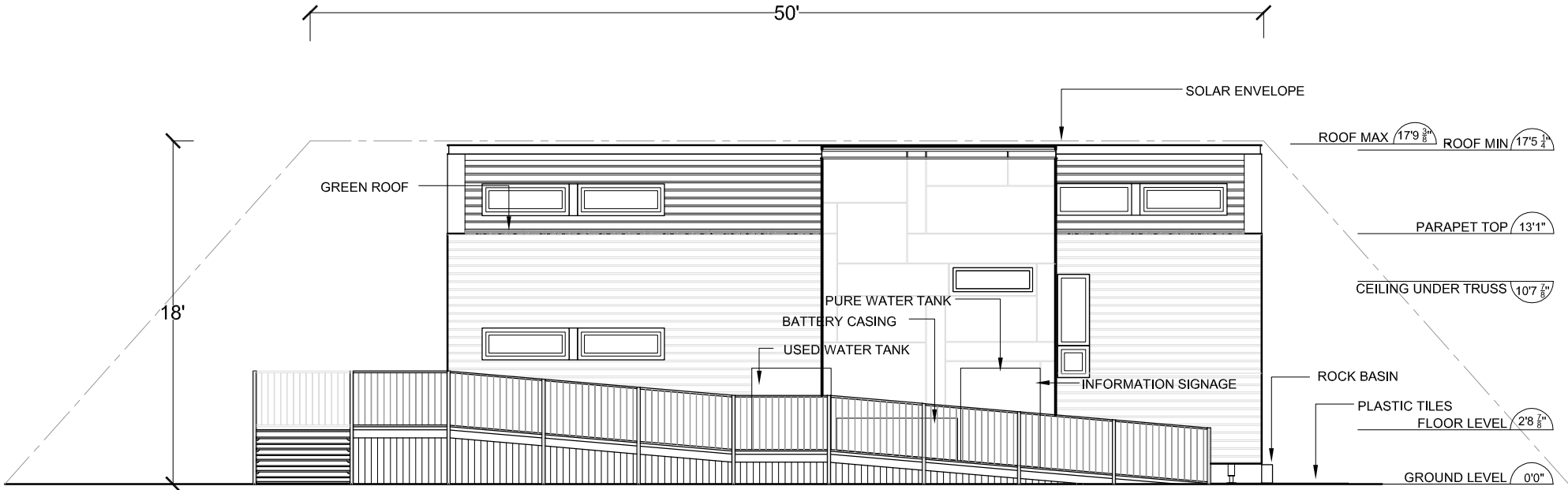
PROJECT:

SOLAR DECATHLON 2007
 TEAM MONTREAL

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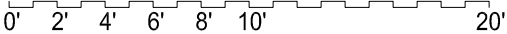
SOLAR ENVELOPE NORTH

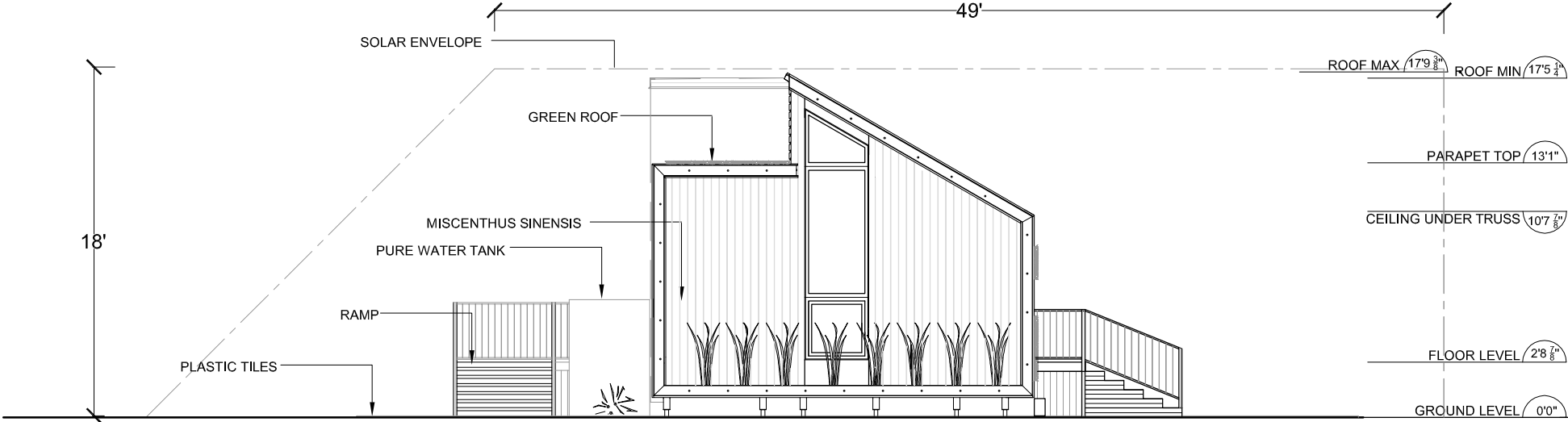
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| DATE: 07-01-08 | DRAWN BY : JOANNA ROSVAL | |
| SCALE : 1/8" - 1' | VERIFIED BY : A. LABERGE | |
| PROJECT No. : SD-07 | REVISION : 4 | DRAWING No. : SLE - 004 |



SOLAR ENVELOPE NORTH

1/8"=1'-0"





-
SLE-005

SOLAR ENVELOPE WEST

1/8"=1'-0"

0' 2' 4' 6' 8' 10' 20'

| No. | REVISIONS | DATE |
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STAMP:

PROJECT:

SOLAR DECATHLON 2007
TEAM MONTREAL

TITLE:

SOLAR ENVELOPE WEST

| | | |
|------------------------|-----------------------------|----------------------------|
| DATE: 07-01-08 | DRAWN BY : JOANNA ROSVAL | |
| SCALE : 1/8" - 1' | VERIFIED BY : A. LABERGE | |
| PROJECT No. : SD-07 | REVISION : 4 | DRAWING No. : SLE - 005 |

| No. | REVISIONS | DATE |
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| 4 | UPDATE CONSTRUCTION DRAWINGS | 07-01-08 |

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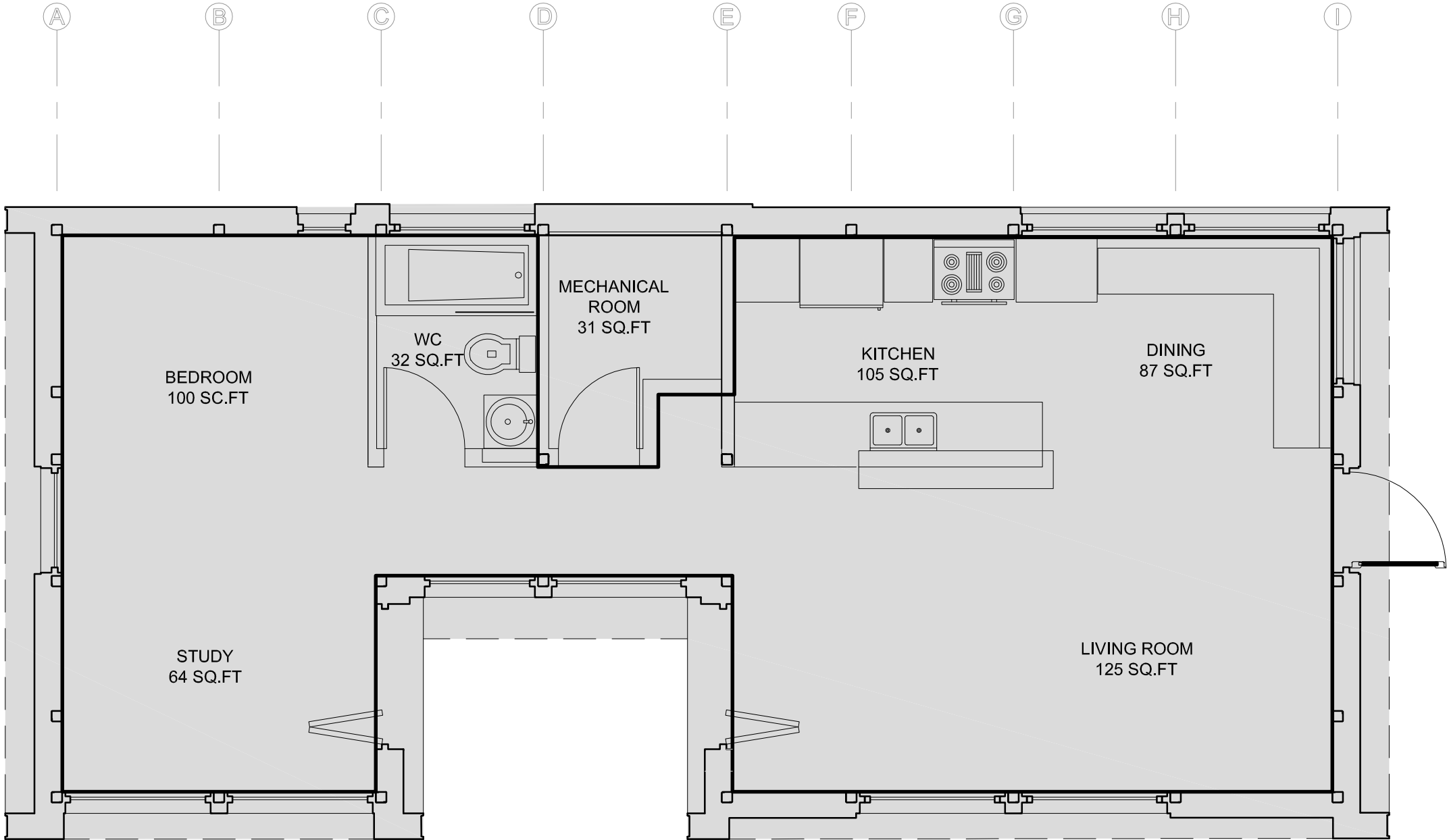
PROJECT:

SOLAR DECATHLON 2007
 TEAM MONTREAL

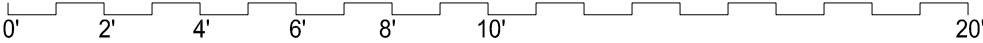
TITLE:

FOOTPRINT PLAN

| | |
|------------------------|-----------------------------|
| DATE: 07-01-08 | DRAWN BY : M-E. LACHANCE |
| SCALE : 1/4" = 1' | VERIFIED BY : A. LABERGE |
| PROJECT No. : SD-07 | DRAWING No. : SLE - 006 |



- FOOTPRINT PLAN
 SLE-006 1/4"=1'-0"



NOTE:

THE SHADED AREA REPRESENTS
 THE FOOTPRINT AREA
 THE AREA IS 782,5 SQ.FT
 BY AUTOCAD 2007
 LESS THAN 800 SQ.FT. MAXIMUM

| No. | REVISIONS | DATE |
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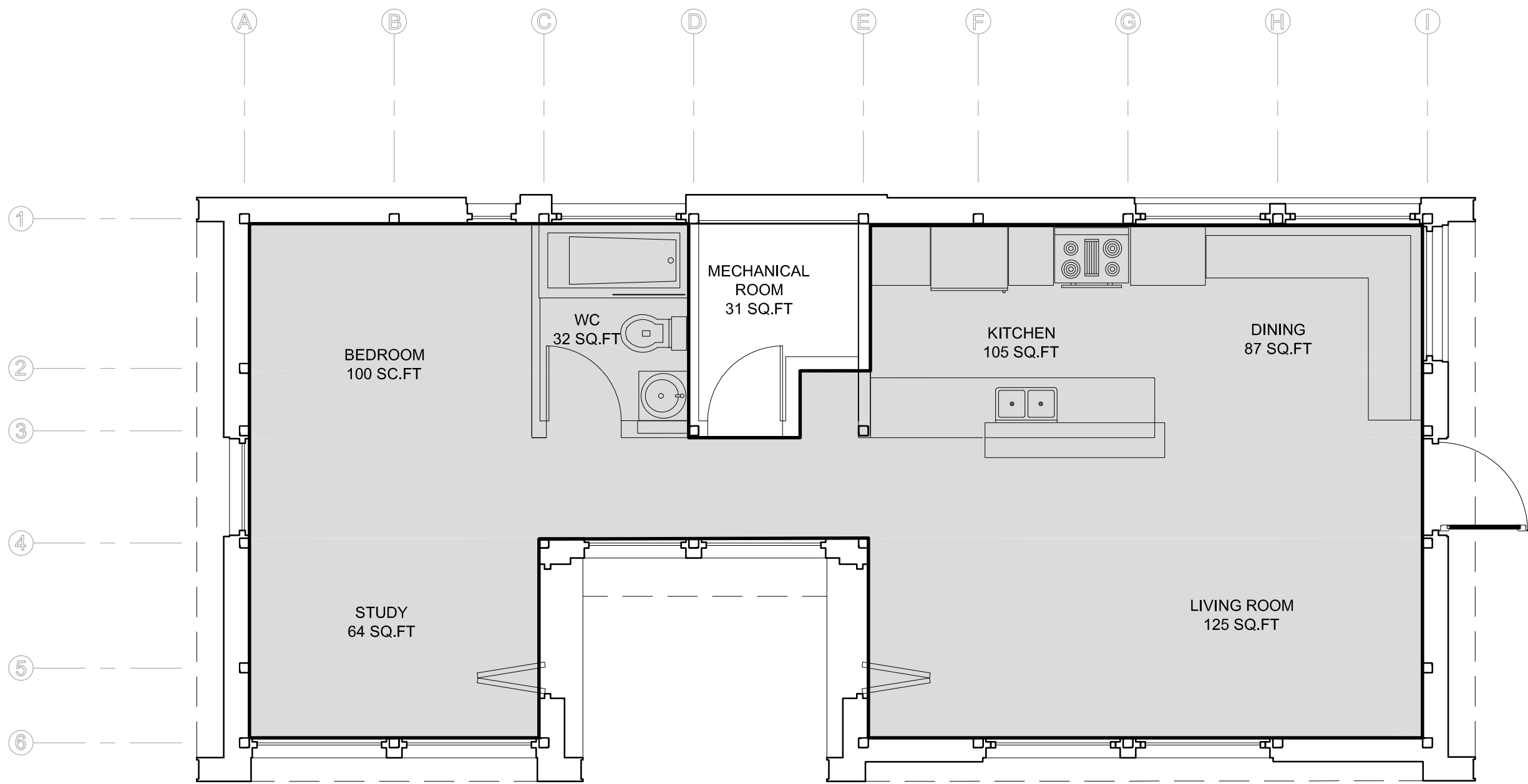
PROJECT:

SOLAR DECATHLON 2007
TEAM MONTREAL

TITLE:

CONDITIONED AREA PLAN

| | | | |
|---------------|-----------|---------------|---------------|
| DATE: | 07-01-08 | DRAWN BY : | M-E. LACHANCE |
| SCALE : | 1/4" = 1' | VERIFIED BY : | A. LABERGE |
| PROJECT No. : | SD-07 | REVISION : | 4 |
| | | DRAWING No. : | SLE - 007 |



NOTE:

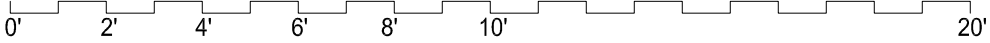
THE SHADED AREA REPRESENTS
THE CONDITIONED AREA
THE AREA IS 580 SQ.FT
BY AUTOCAD 2007
MORE THAN 450 SQ.FT. MINIMUM

-


SLE-007


CONDITIONED AREA PLAN

1/4"=1'-0"



LEGEND

PORTABLE FIRE EXTINGUISHER

SMOKE DETECTOR

IN CASE OF FIRE

1. STAY CALM

2. EVACUATE BY THE CLOSEST EXIT

3. CALL 911

| No. | REVISIONS | DATE |
|-----|------------------------------|----------|
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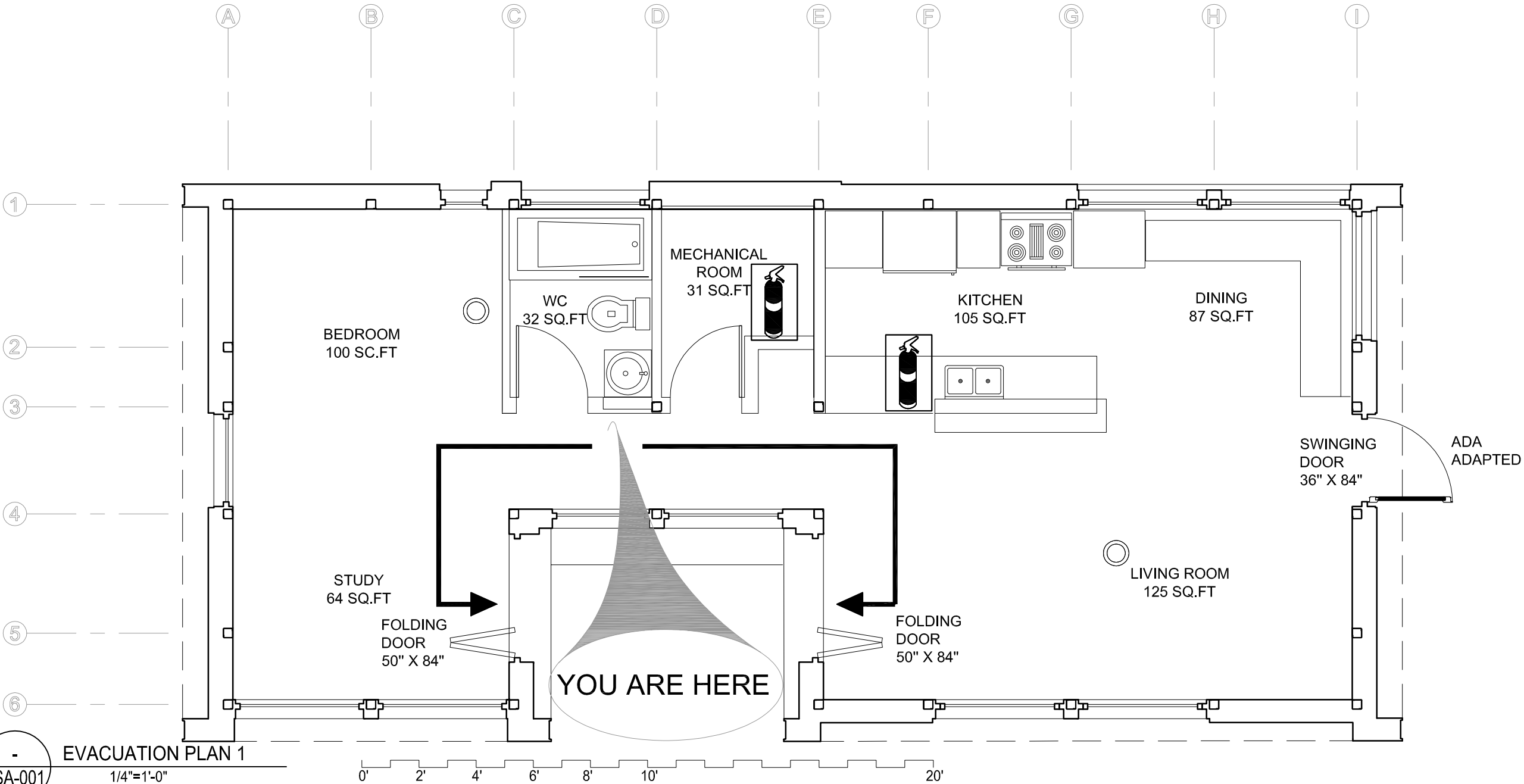
PROJECT:

SOLAR DECATHLON 2007
TEAM MONTREAL


TITLE:

EVACUATION PLAN 1


| | |
|------------------------|-----------------------------|
| DATE: 07-01-08 | DRAWN BY : TEAM MONTREAL |
| SCALE : 1/4" = 1' | VERIFIED BY : A. LABERGE |
| PROJECT No. : SD-07 | DRAWING No. : LSA - 001 |



LEGEND



PORTABLE FIRE EXTINGUISHER



SMOKE DETECTOR

IN CASE OF FIRE

1. STAY CALM

2. EVACUATE BY THE CLOSEST EXIT

3. CALL 911

| No. | REVISIONS | DATE |
|--|------------------------------|----------|
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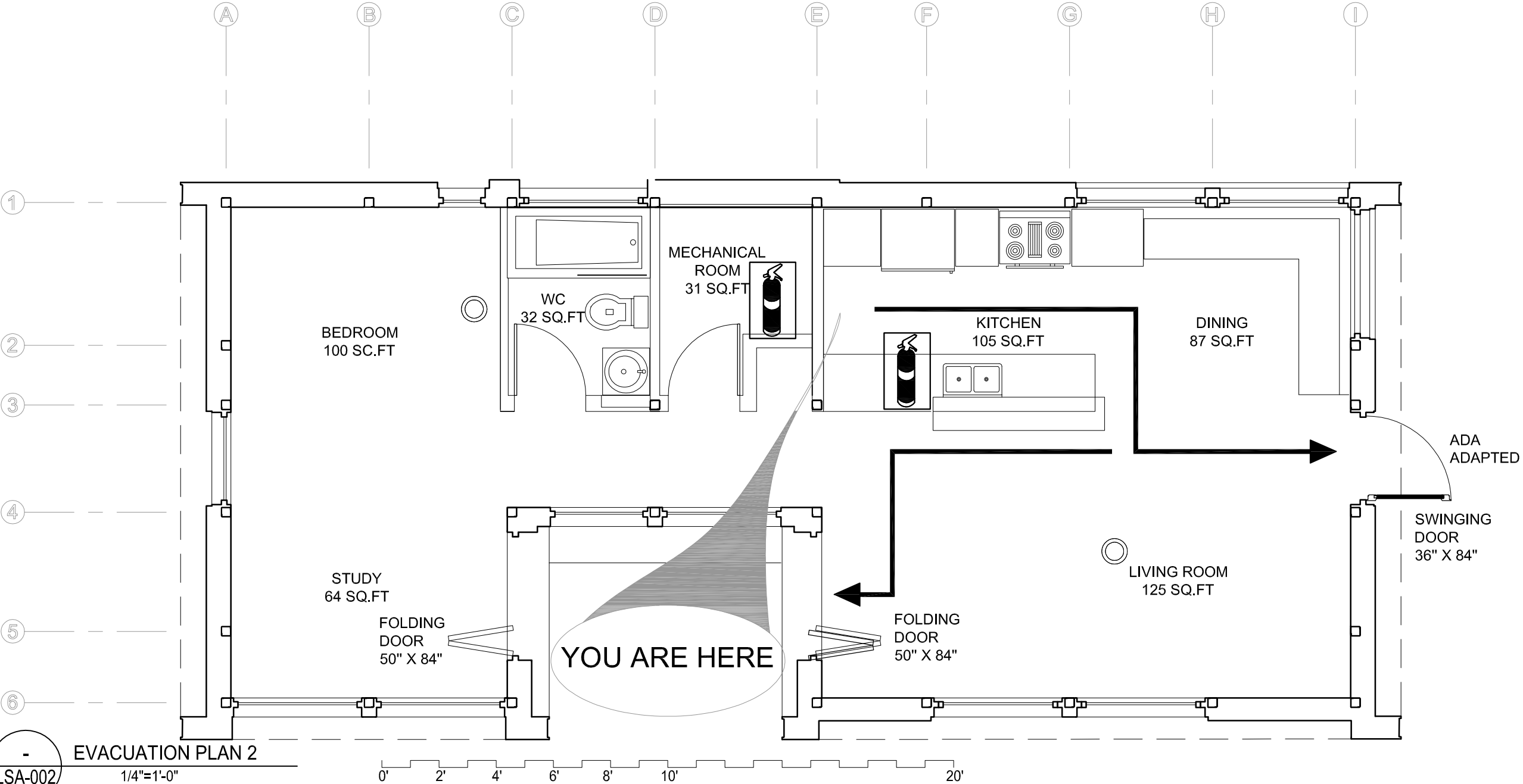
PROJECT:

SOLAR DECATHLON 2007
TEAM MONTREAL

TITLE:

EVACUATION PLAN 2

| | |
|----------------------------|-----------------------------|
| DATE: 07-01-08 | DRAWN BY : TEAM MONTREAL |
| SCALE : 1/4" - 1' | VERIFIED BY : A. LABERGE |
| PROJECT No. : SD-07 | REVISION : 4 |
| DRAWING No. : LSA - 002 | |





-

EVACUATION PLAN 2

LSA-002

LEGEND

PORTABLE FIRE EXTINGUISHER

SMOKE DETECTOR

IN CASE OF FIRE

1. STAY CALM

2. EVACUATE BY THE CLOSEST EXIT

3. CALL 911

| No. | REVISIONS | DATE |
|-----|------------------------------|----------|
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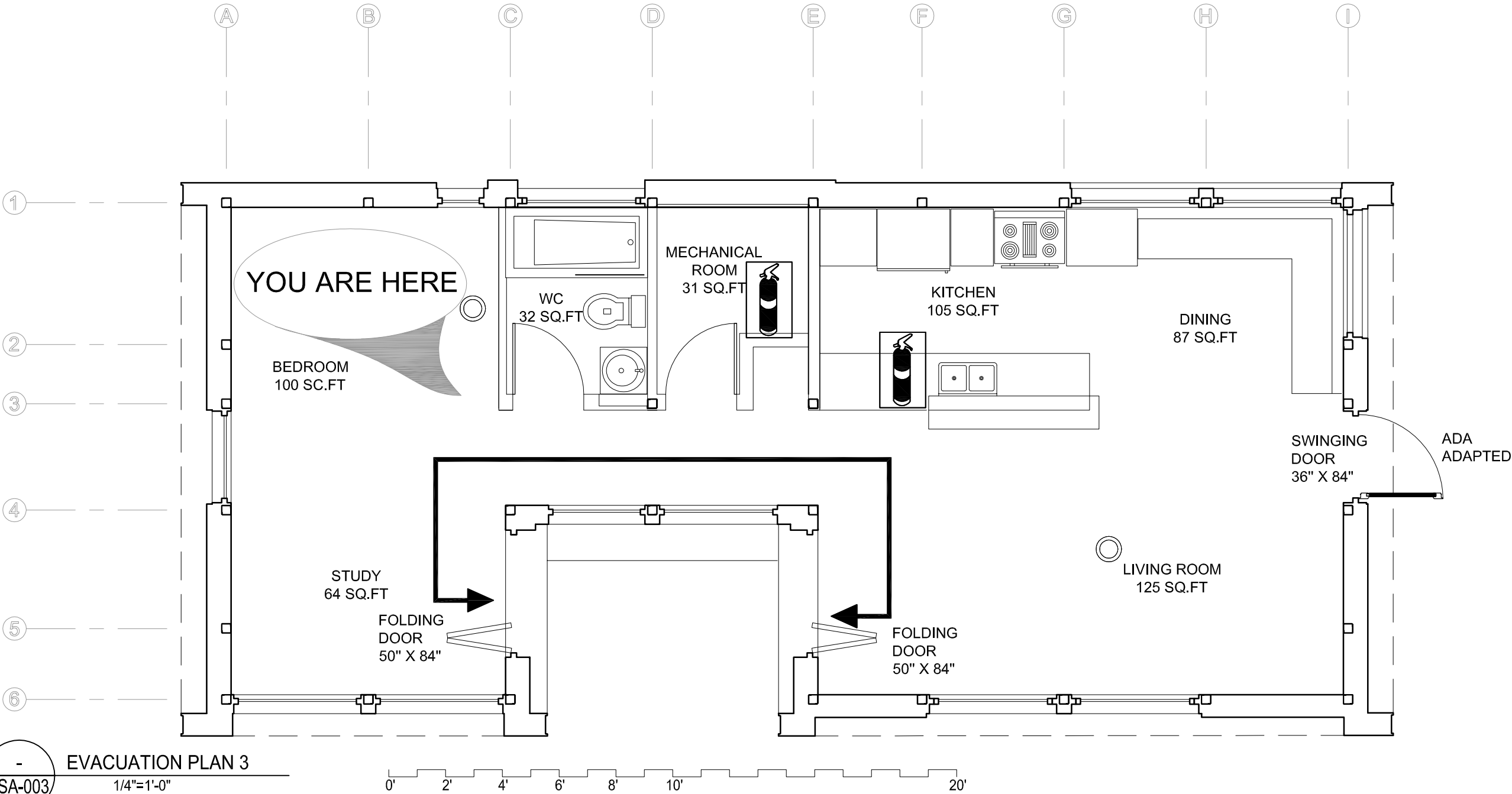
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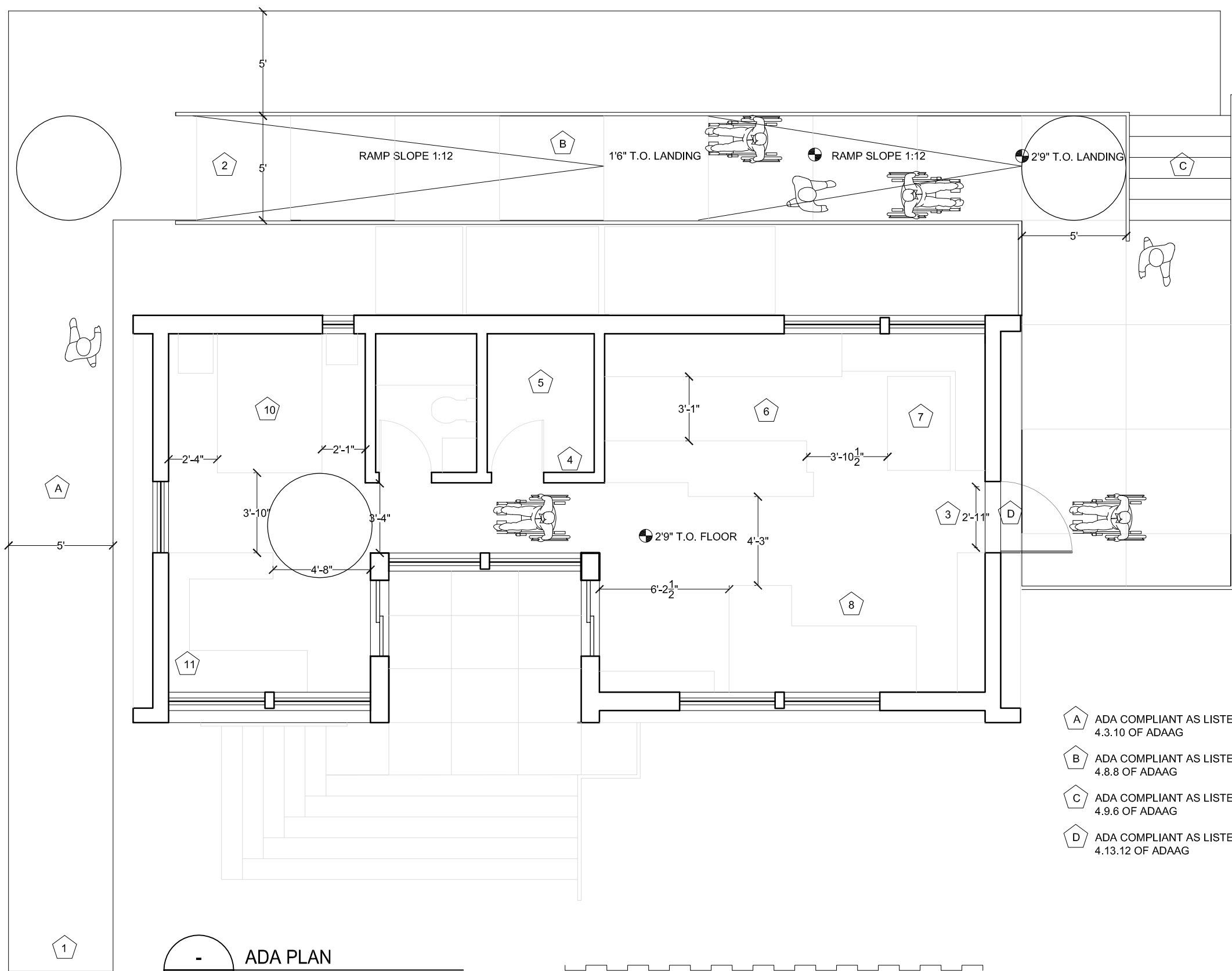
SOLAR DECATHLON 2007
TEAM MONTREAL

TITLE:

EVACUATION PLAN 3

| | |
|------------------------|-----------------------------|
| DATE: 07-01-08 | DRAWN BY : TEAM MONTREAL |
| SCALE : 1/4" = 1' | VERIFIED BY : A. LABERGE |
| PROJECT No. : SD-07 | REVISION : 4 |
| | DRAWING No. : LSA - 003 |





- 1 SITE ENTRY
- 2 ADA RAMP
- 3 HOUSE ENTRY
- 4 LAUNDRY
- 5 MECHANICAL ROOM
- 6 KITCHEN
- 7 DINING AREA
- 8 LIVING AREA
- 9 INTERIOR COURTYARD
- 10 BEDROOM
- 11 OFFICE AREA

- A ADA COMPLIANT AS LISTED IN SECTION 4.3.1 TO 4.3.10 OF ADAAG
- B ADA COMPLIANT AS LISTED IN SECTION 4.8.1 TO 4.8.8 OF ADAAG
- C ADA COMPLIANT AS LISTED IN SECTION 4.9.1 TO 4.9.6 OF ADAAG
- D ADA COMPLIANT AS LISTED IN SECTION 4.13.1 TO 4.13.12 OF ADAAG

- ADA PLAN
LSA-004 3/16"=1'-0"

0' 2' 4' 6' 8' 10' 20'

| No. | REVISIONS | DATE |
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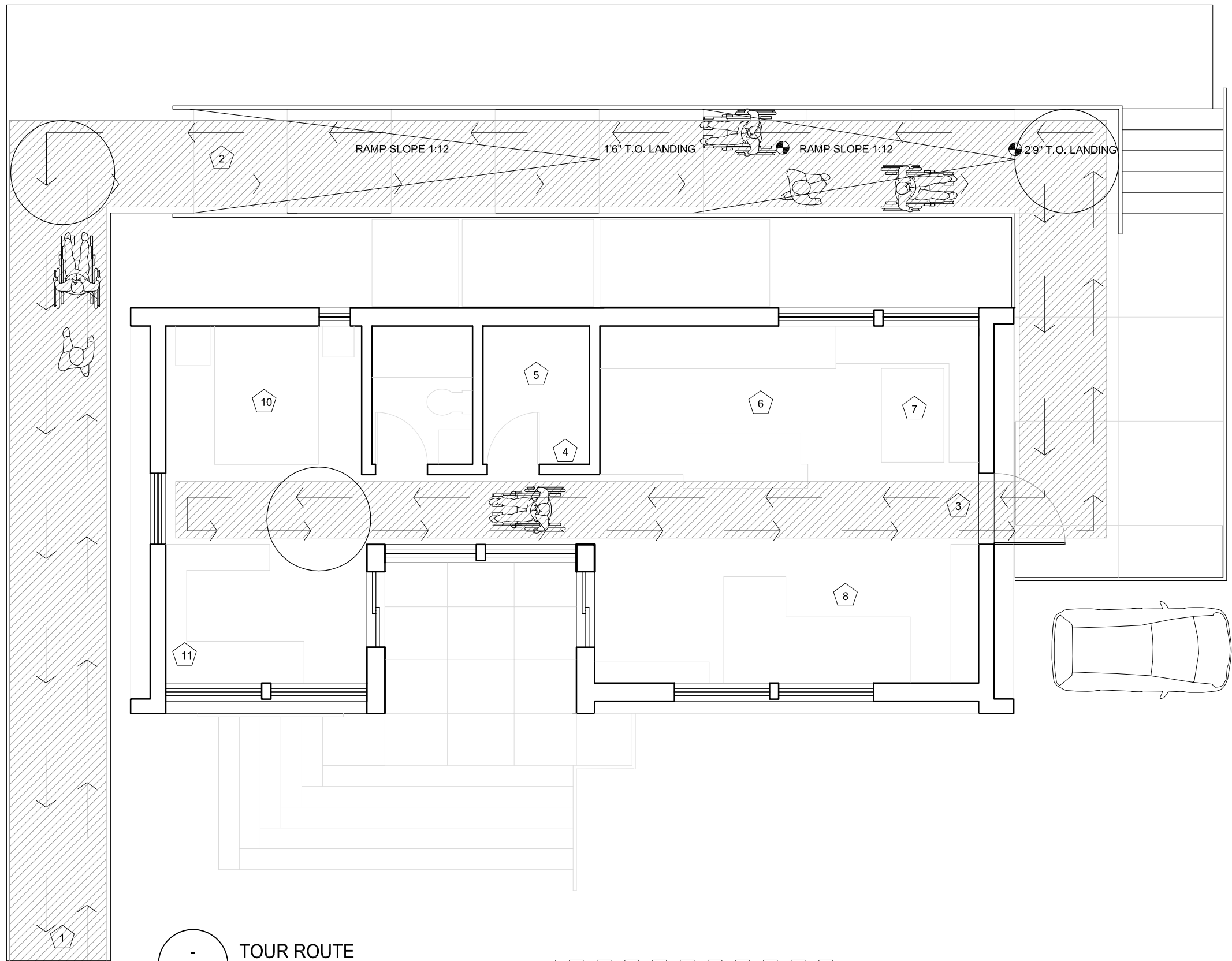
PROJECT:

SOLAR DECATHLON 2007
TEAM MONTREAL

TITLE:

ADA PLAN

| | |
|------------------------|-----------------------------|
| DATE: 07-01-08 | DRAWN BY : JOANNA ROSVAL |
| SCALE : 3/16" - 1' | VERIFIED BY : A. LABERGE |
| PROJECT No. : SD-07 | REVISION : 4 |
| | DRAWING No. : LSA - 004 |



- 1 SITE ENTRY
- 2 ADA RAMP
- 3 HOUSE ENTRY
- 4 LAUNDRY
- 5 MECHANICAL ROOM
- 6 KITCHEN
- 7 DINING AREA
- 8 LIVING AREA
- 9 INTERIOR COURTYARD
- 10 BEDROOM
- 11 OFFICE AREA

- TOUR ROUTE
LSA-005 3/16"=1'-0"

0' 2' 4' 6' 8' 10' 20'

| No. | REVISIONS | DATE |
|-----|------------------------------|----------|
| 1 | DESIGN DEVELOPMENT DRAWINGS | 13-06-06 |
| 2 | CONSTRUCTION DRAWINGS | 06-03-07 |
| 3 | UPDATE CONSTRUCTION DRAWINGS | 07-08-07 |
| 4 | UPDATE CONSTRUCTION DRAWINGS | 07-01-08 |

NOTES

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INT=INTERIORS AND FINISH
LSA=LIFE SAFETY AND ADA
MEC=MECHANICAL
STR=STRUCTURAL
SLE=SOLAR ENVELOPE



STAMP:

PROJECT:

SOLAR DECATHLON 2007
TEAM MONTREAL

TITLE:

TOUR ROUTE

| | |
|------------------------|-----------------------------|
| DATE: 07-01-08 | DRAWN BY : JOANNA ROSVAL |
| SCALE : 3/16" - 1' | VERIFIED BY : A. LABERGE |
| PROJECT No. : SD-07 | REVISION : 4 |
| | DRAWING No. : LSA - 005 |

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| LSA - 002 | EVACUATION PLAN 2 |
| LSA - 003 | EVACUATION PLAN 3 |
| LSA - 004 | ADA PLAN |
| LSA - 005 | TOUR ROUTE |

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| ARC - 102 | PLAN - CEILING PLAN |
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| ARC - 202 | ELEVATION SOUTH |
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| ARC - 205 | CROSS-SECTION / ELEVATION EAST / WEST MECHANICAL BLOCK |
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| ARC - 302 | INTERIOR ELEVATION |
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| ARC - 304 | INTERIOR ELEVATION |
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| ARC - 309 | INTERIOR ELEVATION |
| ARC - 310 | INTERIOR ELEVATION |
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| | |
|-----------|---------------------------|
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| No. | REVISIONS | DATE |
|-----|------------------------------|----------|
| 1 | DESIGN DEVELOPMENT DRAWINGS | 13-06-06 |
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STAMP:

PROJECT:

SOLAR DECATHLON 2007
TEAM MONTREAL

TITLE:

TABLE OF CONTENTS
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| | | |
|------------------------|-----------------------------|----------------------------|
| DATE: 07-01-08 | DRAWN BY : TEAM MONTREAL | |
| SCALE : | VERIFIED BY : A. LABERGE | |
| PROJECT No. : SD-07 | REVISION : 4 | DRAWING No. : ARC - 000 |

| No. | REVISIONS | DATE |
|-----|------------------------------|----------|
| 1 | DESIGN DEVELOPMENT DRAWINGS | 13-06-06 |
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STAMP:

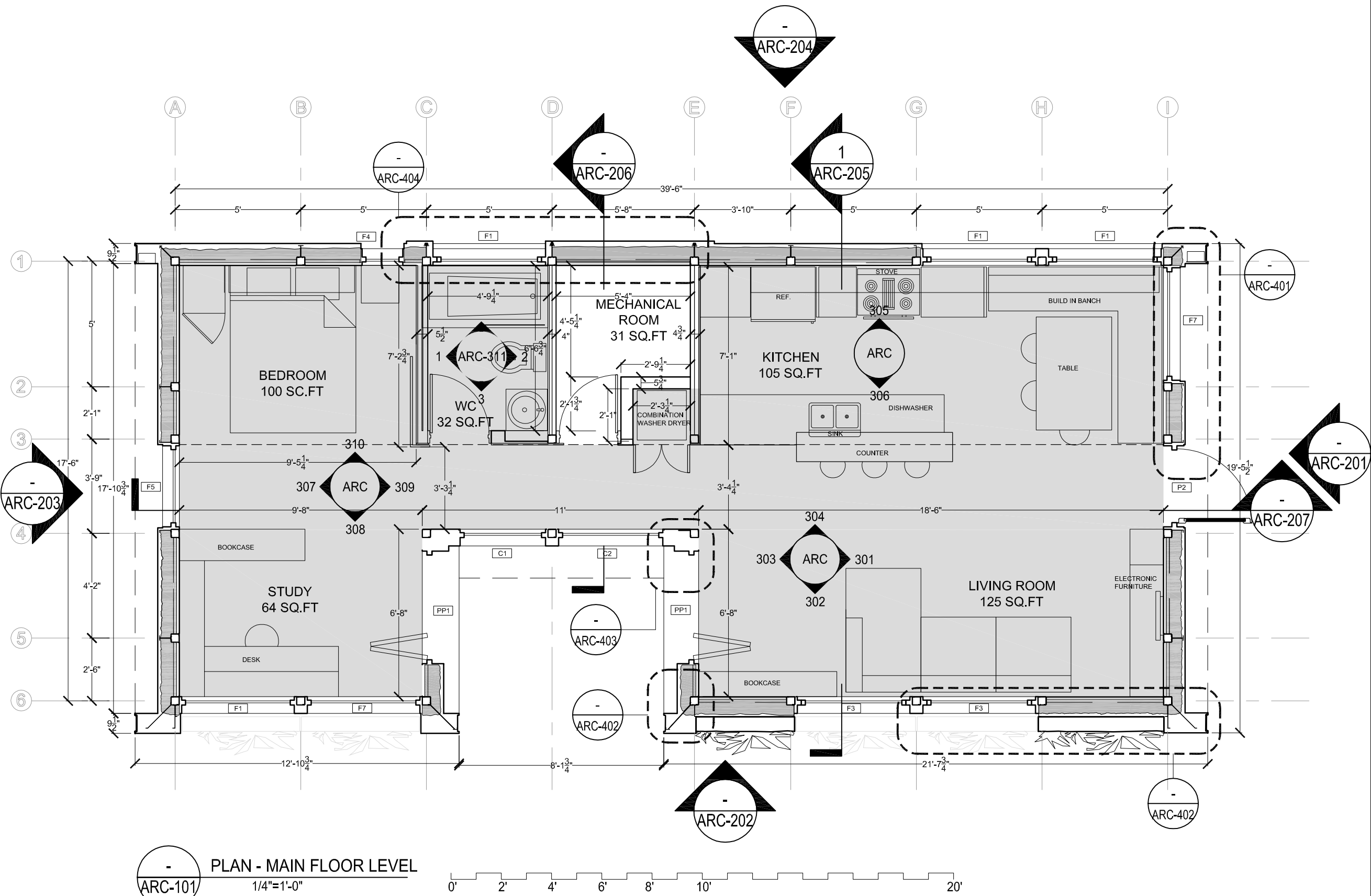
PROJECT:

SOLAR DECATHLON 2007
 TEAM MONTREAL

TITLE:

PLAN - MAIN FLOOR LEVEL

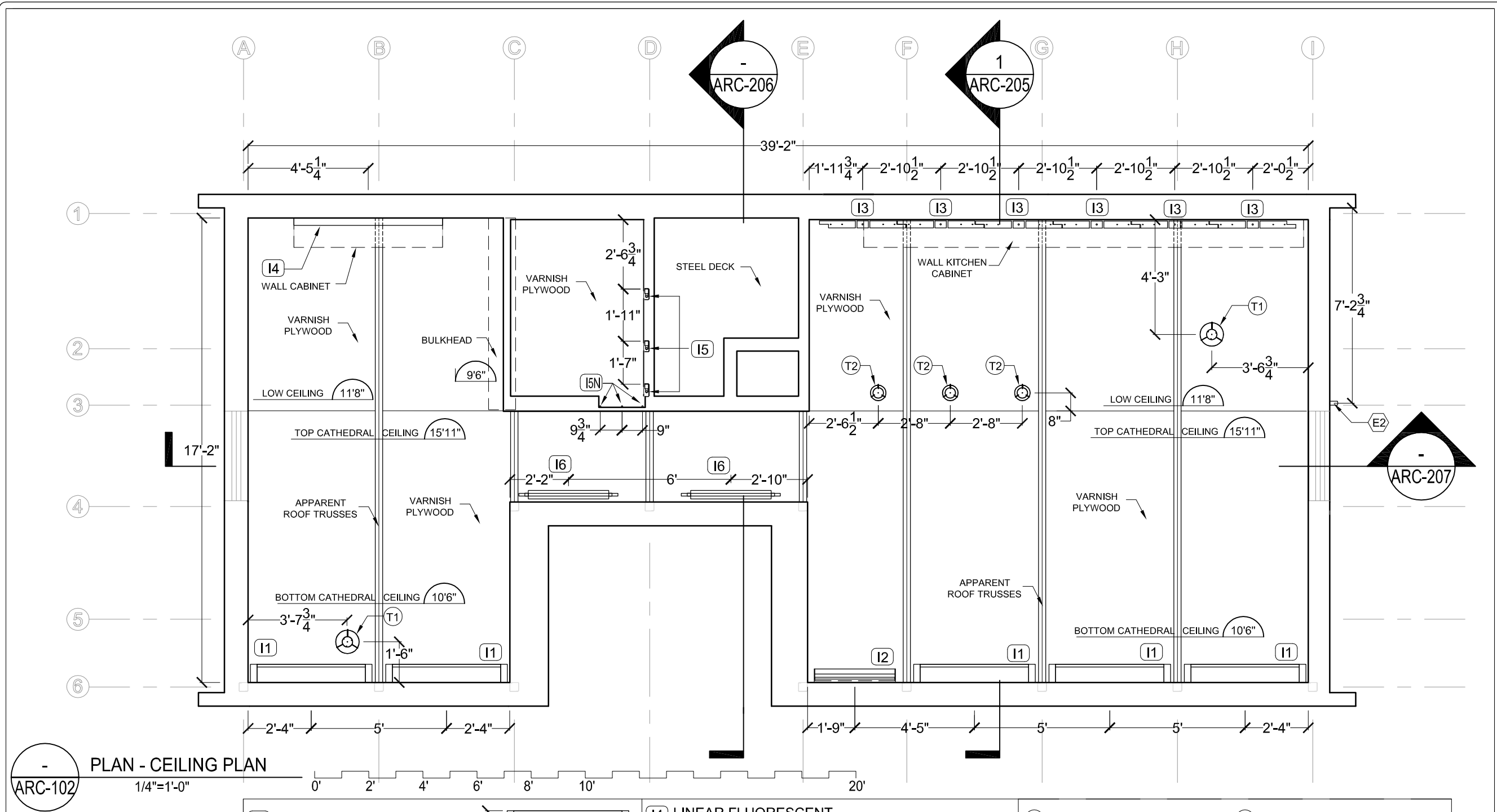
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|---------------|-----------|---------------|---------------|
| DATE: | 07-01-08 | DRAWN BY : | TEAM MONTREAL |
| SCALE : | 1/4" = 1' | VERIFIED BY : | A. LABERGE |
| PROJECT No. : | SD-07 | REVISION : | 4 |
| | | DRAWING No. : | ARC - 101 |



PLAN - MAIN FLOOR LEVEL

1/4"=1'-0"

NOTE: FOR FINISHES, COLORS AND TEXTURE SEE
 ARC-301 TO ARC-311



| No. | REVISIONS | DATE |
|-----|------------------------------|----------|
| 1 | DESIGN DEVELOPMENT DRAWINGS | 13-06-06 |
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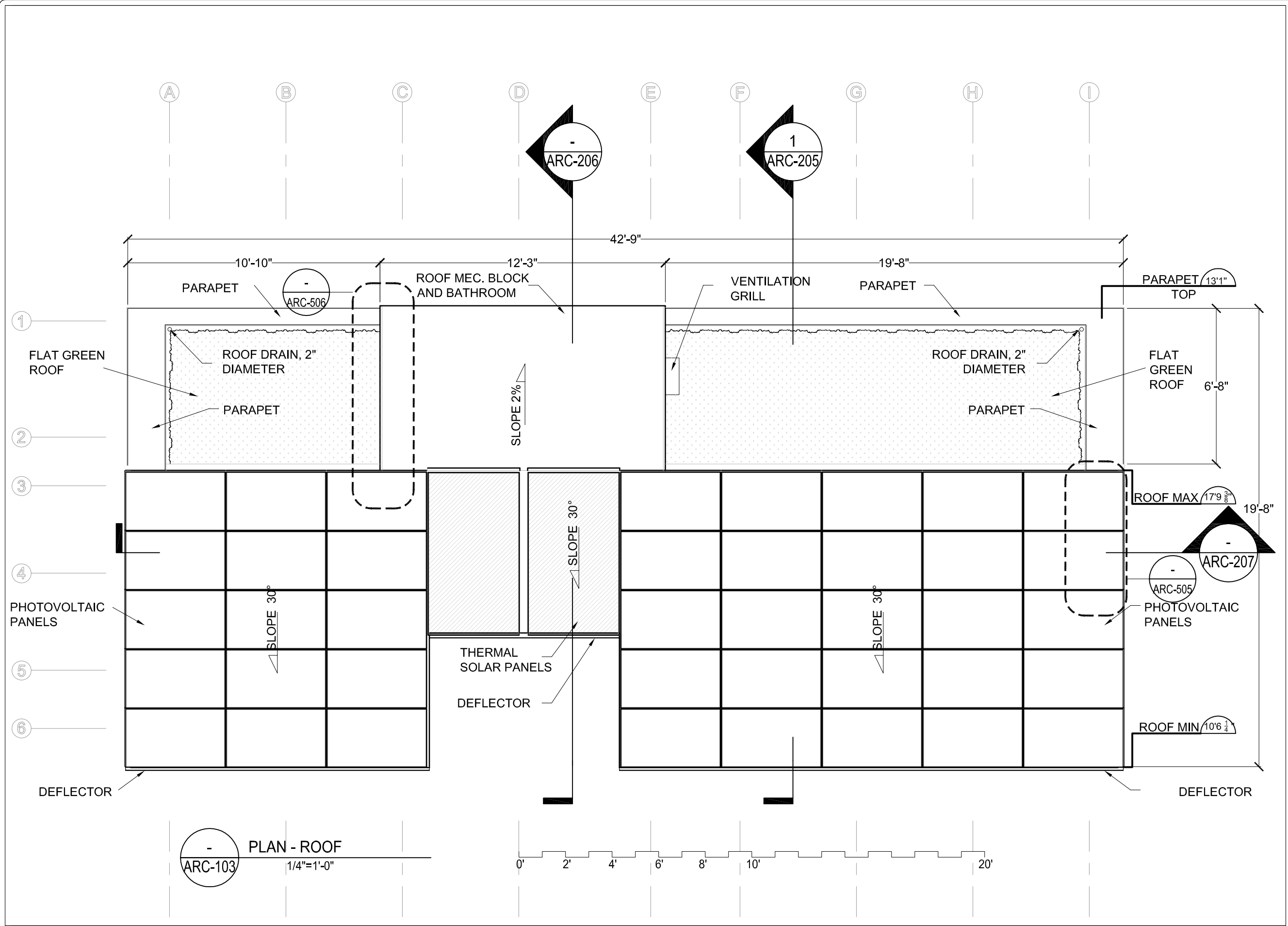
PROJECT:

SOLAR DECATHLON 2007
TEAM MONTREAL

TITLE:

PLAN - CEILING PLAN

| | |
|------------------------|-----------------------------|
| DATE: 07-01-08 | DRAWN BY : TEAM MONTREAL |
| SCALE : 1/4" - 1' | VERIFIED BY : A.LABERGE |
| PROJECT No. : SD-07 | REVISION : 4 |
| | DRAWING No. : ARC - 102 |



| REVISIONS | | DATE |
|-----------|------------------------------|----------|
| 1 | DESIGN DEVELOPMENT DRAWINGS | 13-06-06 |
| 2 | CONSTRUCTION DRAWINGS | 06-03-07 |
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 **MONTREAL**
www.solarmontreal.ca

STAMP:

PROJECT:

SOLAR DECATHLON 2007
TEAM MONTREAL

TITLE:

PLAN - ROOF

| | | | |
|---------------|-----------|---------------|-------------|
| DATE: | 07-01-08 | DRAWN BY : | I. VALLIÈRE |
| SCALE : | 1/4" - 1' | VERIFIED BY : | A. LABERGE |
| PROJECT No. : | SD-07 | REVISION : | 4 |
| | | DRAWING No. : | ARC - 103 |

| No. | REVISIONS | DATE |
|-----|------------------------------|----------|
| 1 | DESIGN DEVELOPMENT DRAWINGS | 13-06-06 |
| 2 | CONSTRUCTION DRAWINGS | 06-03-07 |
| 3 | UPDATE CONSTRUCTION DRAWINGS | 07-08-07 |
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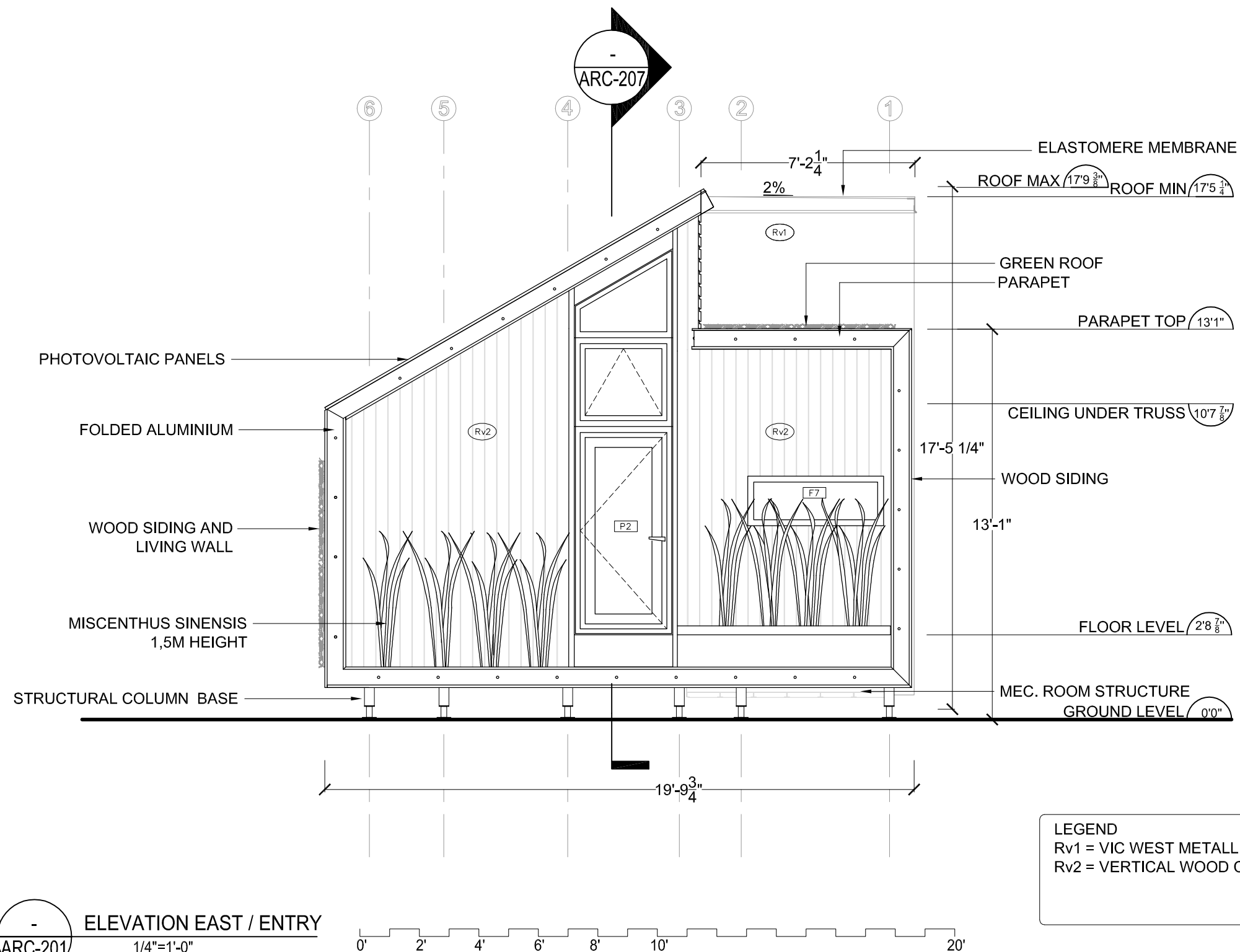
PROJECT:

SOLAR DECATHLON 2007
 TEAM MONTREAL

TITLE:

ELEVATION EAST / ENTRY

| | |
|------------------------|--------------------------------|
| DATE: 07-01-08 | DRAWN BY : A. LABERGE |
| SCALE : 1/4" = 1' | VERIFIED BY : TEAM MONTREAL |
| PROJECT No. : SD-07 | REVISION : 4 |
| | DRAWING No. : ARC - 201 |



| No. | REVISIONS | DATE |
|-----|------------------------------|----------|
| 1 | DESIGN DEVELOPMENT DRAWINGS | 13-06-06 |
| 2 | CONSTRUCTION DRAWINGS | 06-03-07 |
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STAMP:

PROJECT:

SOLAR DECATHLON 2007
TEAM MONTREAL

TITLE:

ELEVATION SOUTH

DATE:

07-01-08

SCALE :

1/4" = 1'

PROJECT No. :

SD-07

DRAWN BY :

I. VALLIÈRE

VERIFIED BY :

TEAM MONTREAL

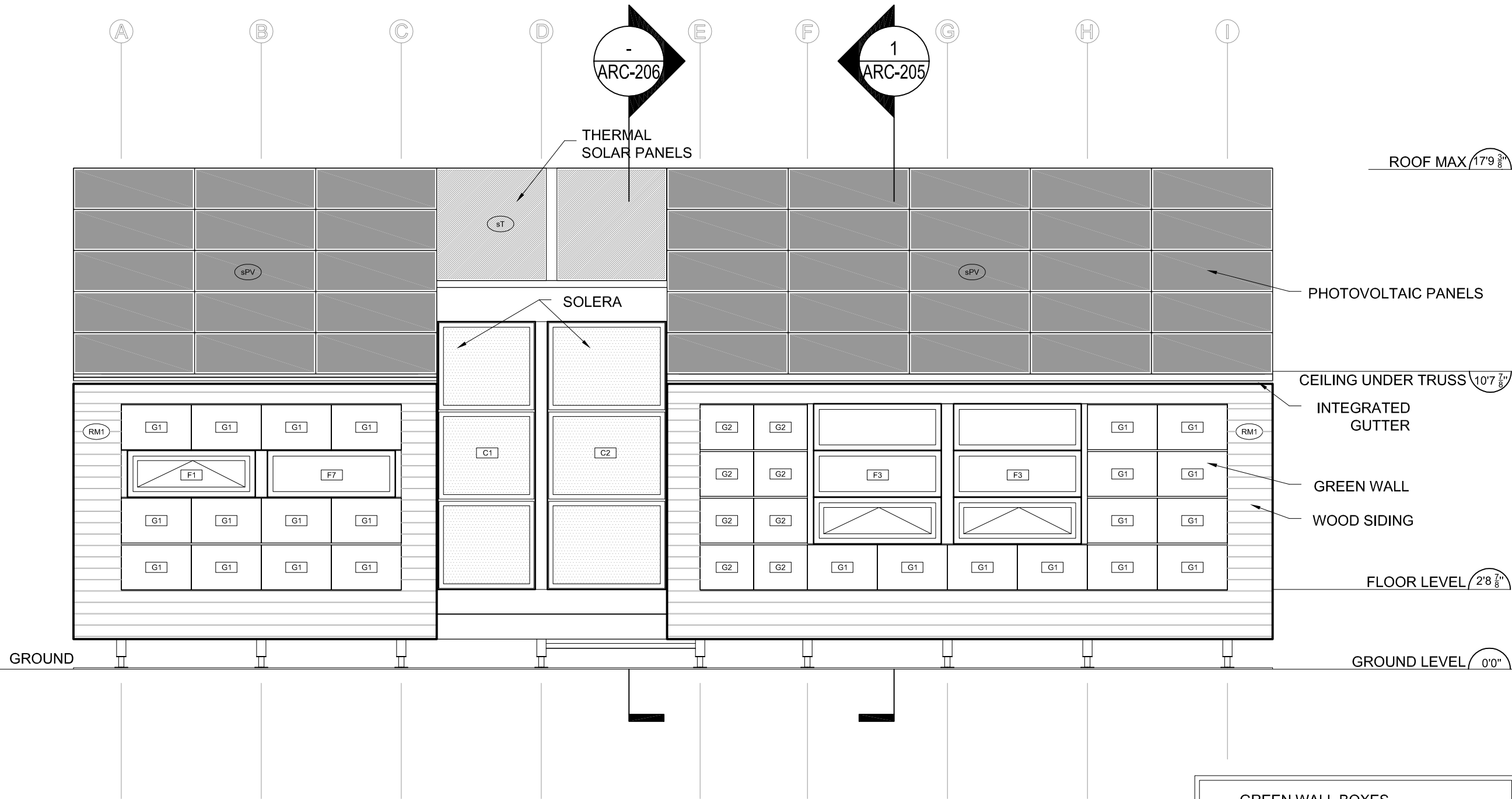
APPROVED BY :

REVISION :

4

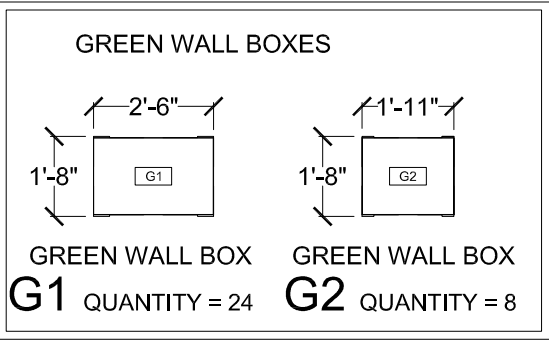
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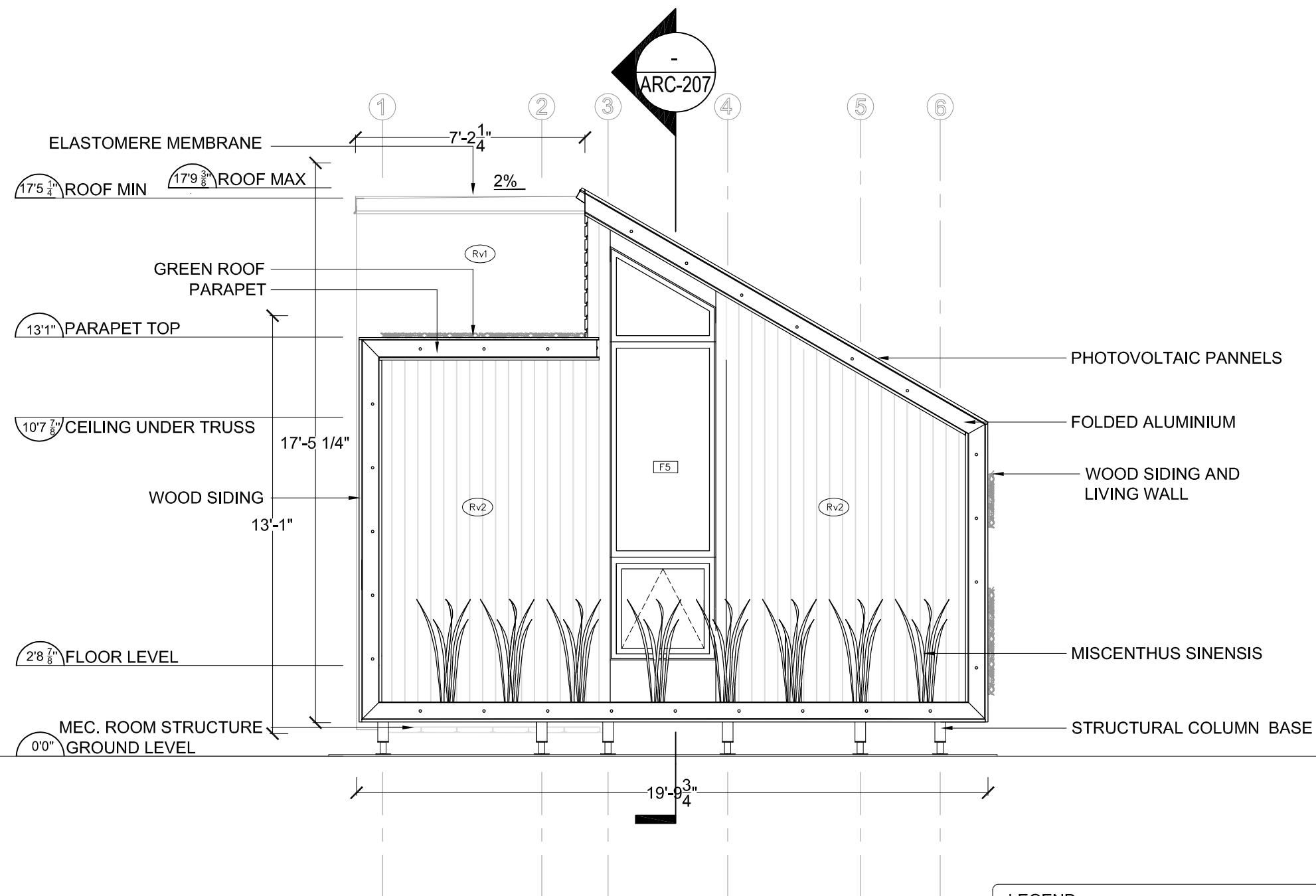
ARC -202



WOOD CLADDING AREA = 135 sq. ft.
SOUTH FACADE & LATERAL INT. COURTYARD FACADE

0' 2' 4' 6' 8' 10' 20'



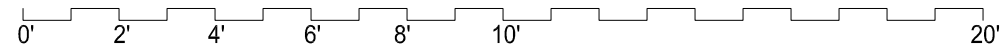


LEGEND
Rv1 = VICWEST METALLIC CLADDING
Rv2 = VERTICAL WOOD CLADDING



ELEVATION WEST

1/4"=1'-0"



| No. | REVISIONS | DATE |
|-----|------------------------------|----------|
| 1 | DESIGN DEVELOPMENT DRAWINGS | 13-06-06 |
| 2 | CONSTRUCTION DRAWINGS | 06-03-07 |
| 3 | UPDATE CONSTRUCTION DRAWINGS | 07-08-07 |
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STAMP:

PROJECT:

SOLAR DECATHLON 2007
TEAM MONTREAL

TITLE:

ELEVATION WEST

DATE:

07-01-08

DRAWN BY :

A. LABERGE

SCALE :

1/4" - 1'

VERIFIED BY :

TEAM MONTREAL

APPROVED BY :

PROJECT No. :

SD-07

REVISION :

4

DRAWING No. :

ARC -203

| No. | REVISIONS | DATE |
|-----|------------------------------|----------|
| 1 | DESIGN DEVELOPMENT DRAWINGS | 13-06-06 |
| 2 | CONSTRUCTION DRAWINGS | 06-03-07 |
| 3 | UPDATE CONSTRUCTION DRAWINGS | 07-08-07 |
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STAMP:

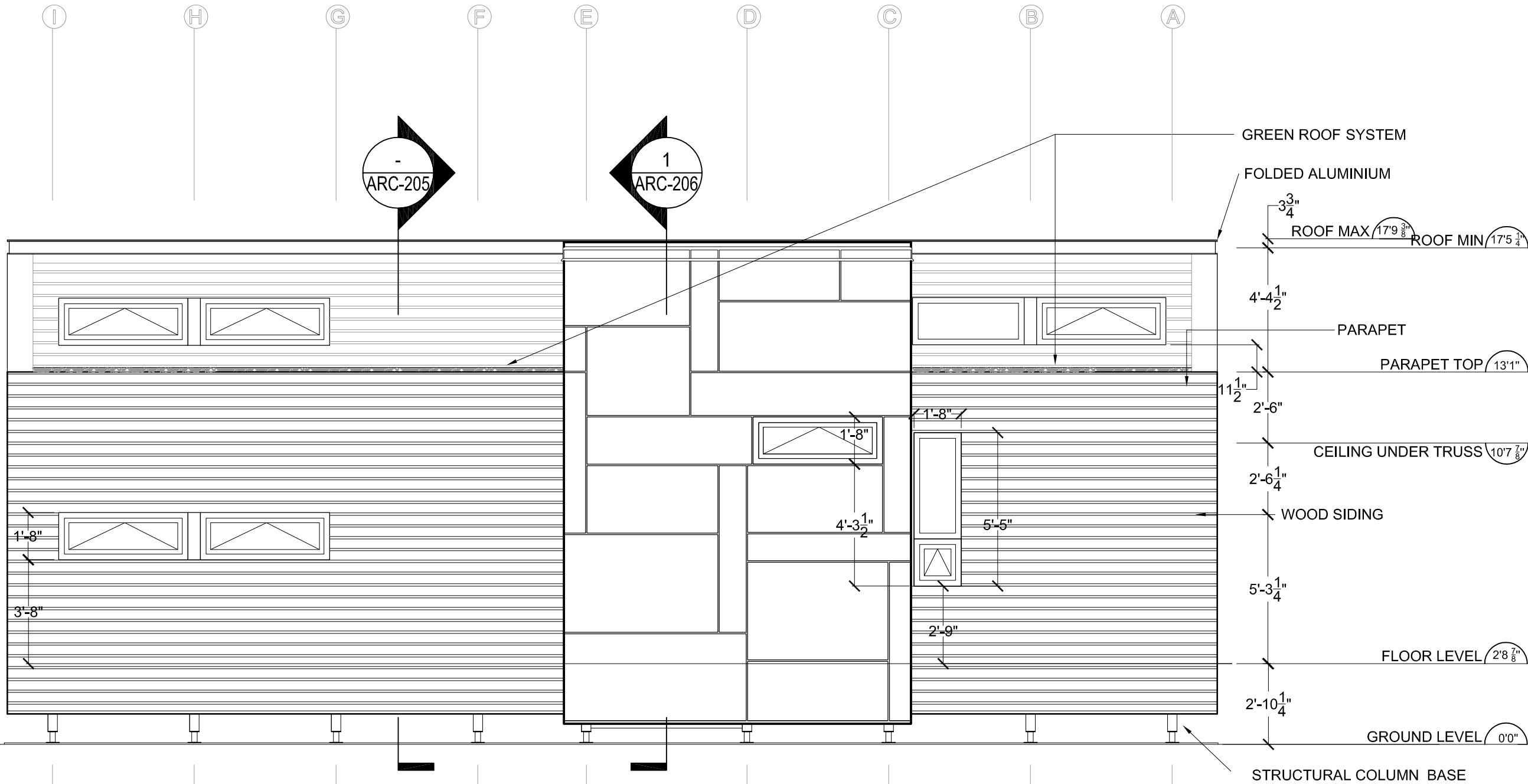
PROJECT:

SOLAR DECATHLON 2007
TEAM MONTREAL

TITLE:

ELEVATION NORTH

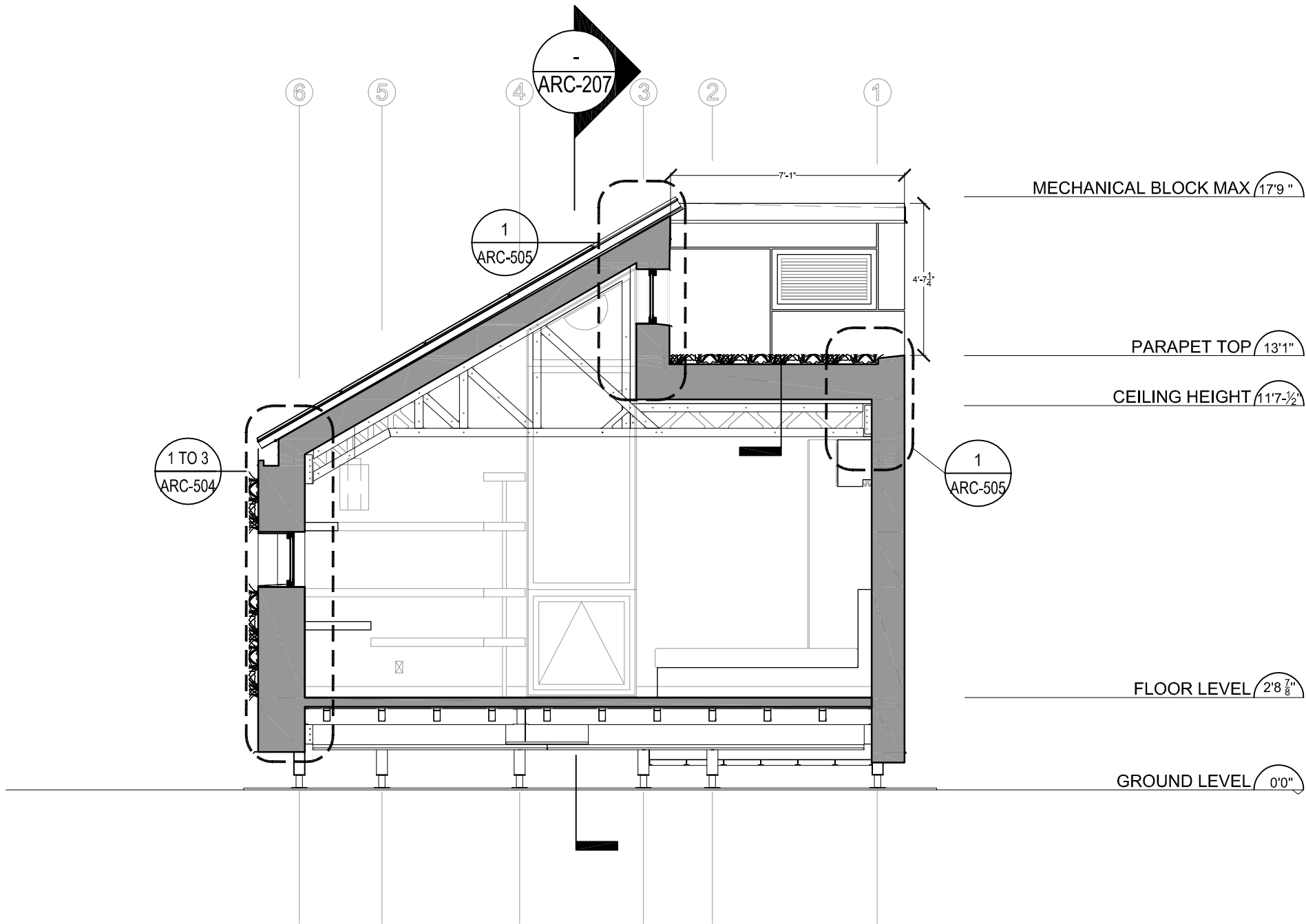
| | |
|------------------------|--------------------------------|
| DATE: 07-01-08 | DRAWN BY : L.DROR |
| SCALE : 1/4" - 1' | VERIFIED BY : TEAM MONTREAL |
| PROJECT No. : SD-07 | REVISION : 4 |
| | DRAWING No. : ARC - 204 |



ELEVATION NORTH

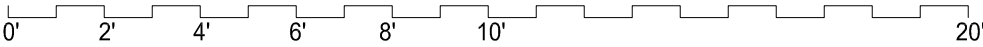
1/4"=1'-0"

0' 2' 4' 6' 8' 10' 20'



-
ARC-205

CROSS-SECTION - ELEVATION EAST / MECH. BLOCK
1/4"=1'-0"



| No. | REVISIONS | DATE |
|-----|------------------------------|----------|
| 1 | DESIGN DEVELOPMENT DRAWINGS | 13-06-06 |
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| 3 | UPDATE CONSTRUCTION DRAWINGS | 07-08-07 |
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STAMP:

PROJECT:

SOLAR DECATHLON 2007
TEAM MONTREAL

TITLE:

CROSS-SECTION ELEVATION

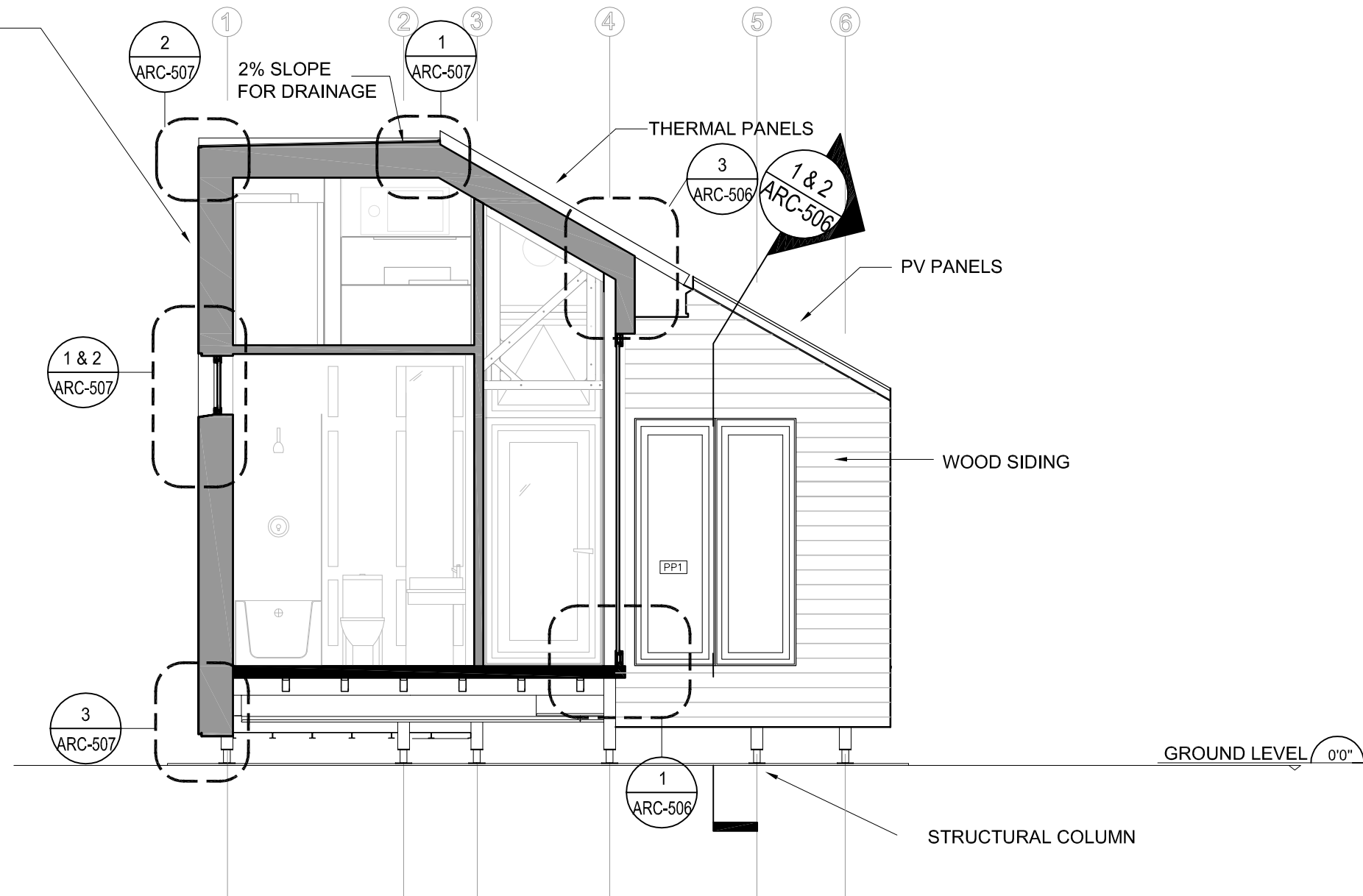
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|------------------------|--------------------------------|----------------------------|
| DATE: 07-01-08 | DRAWN BY : L. DROR | |
| SCALE : 1/4" - 1' | VERIFIED BY : TEAM MONTREAL | |
| PROJECT No. : SD-07 | REVISION : 4 | DRAWING No. : ARC - 205 |

| No. | REVISIONS | DATE |
|-----|------------------------------|----------|
| 1 | DESIGN DEVELOPMENT DRAWINGS | 13-06-06 |
| 2 | CONSTRUCTION DRAWINGS | 06-03-07 |
| 3 | UPDATE CONSTRUCTION DRAWINGS | 07-08-07 |
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ALPOLIC WALL CLADDING
 BY VICWEST



1 CROSS-SECTION ELEVATION EAST / COURTYARD
 ARC-206 1/4"=1'-0"

0' 2' 4' 6' 8' 10' 20'

STAMP:

PROJECT:

SOLAR DECATHLON 2007
 TEAM MONTREAL

TITLE:

CROSS-SECTION ELEVATION
 EAST COURTYARD

| | |
|------------------------|--------------------------------|
| DATE: 07-01-08 | DRAWN BY : L. DROR |
| SCALE : 1/4" - 1' | VERIFIED BY : TEAM MONTREAL |
| PROJECT No. : SD-07 | REVISION : 4 |
| | DRAWING No. : ARC - 206 |



| No. | REVISIONS | DATE |
|-----|------------------------------|----------|
| 1 | DESIGN DEVELOPMENT DRAWINGS | 13-06-06 |
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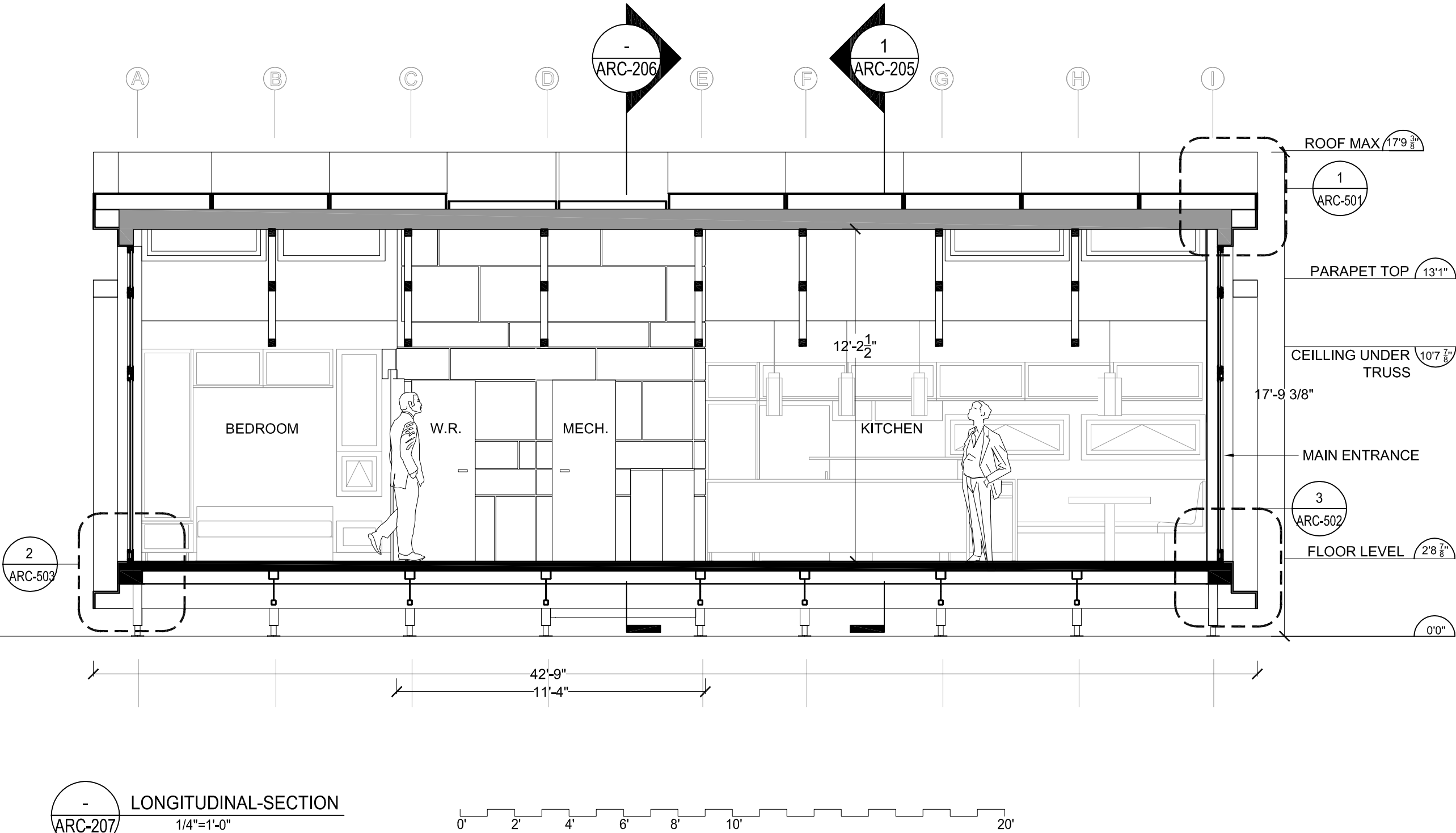
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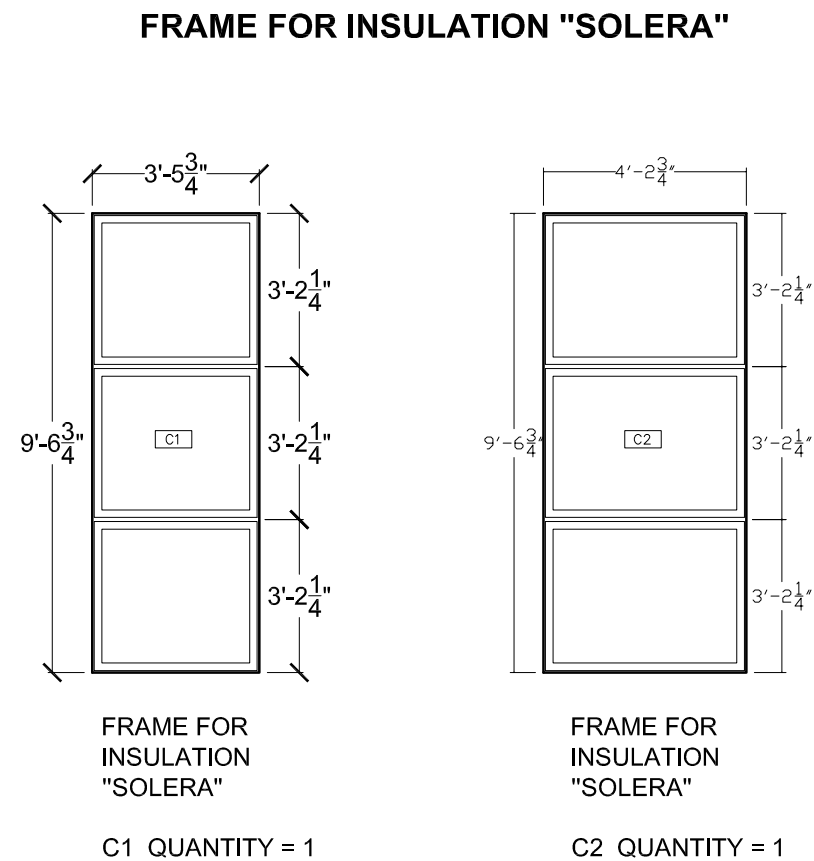
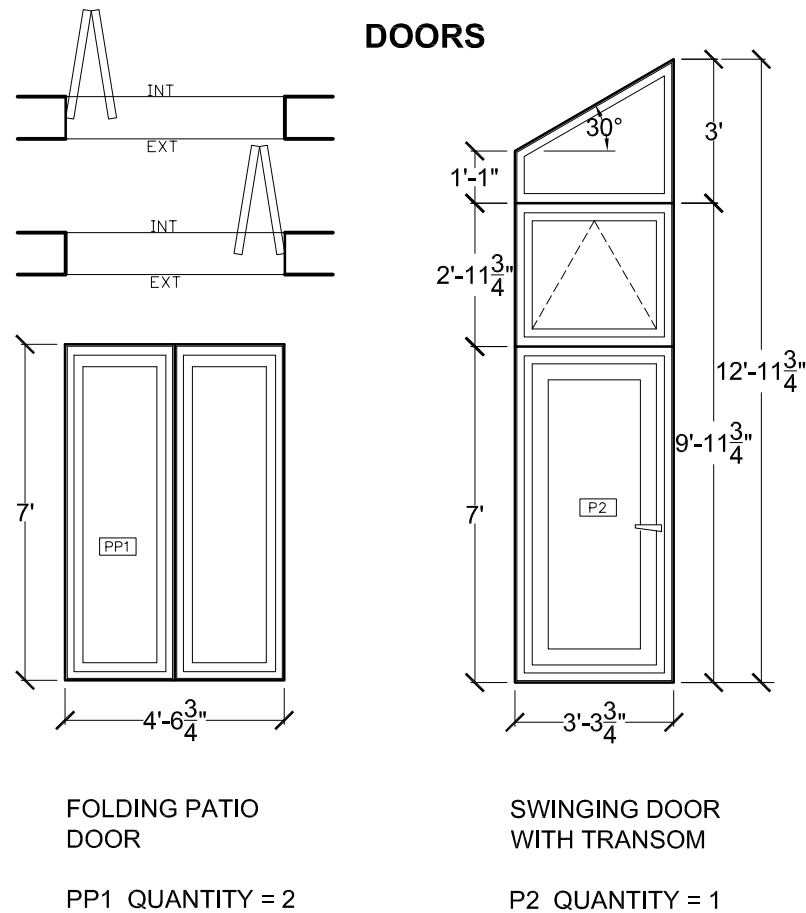
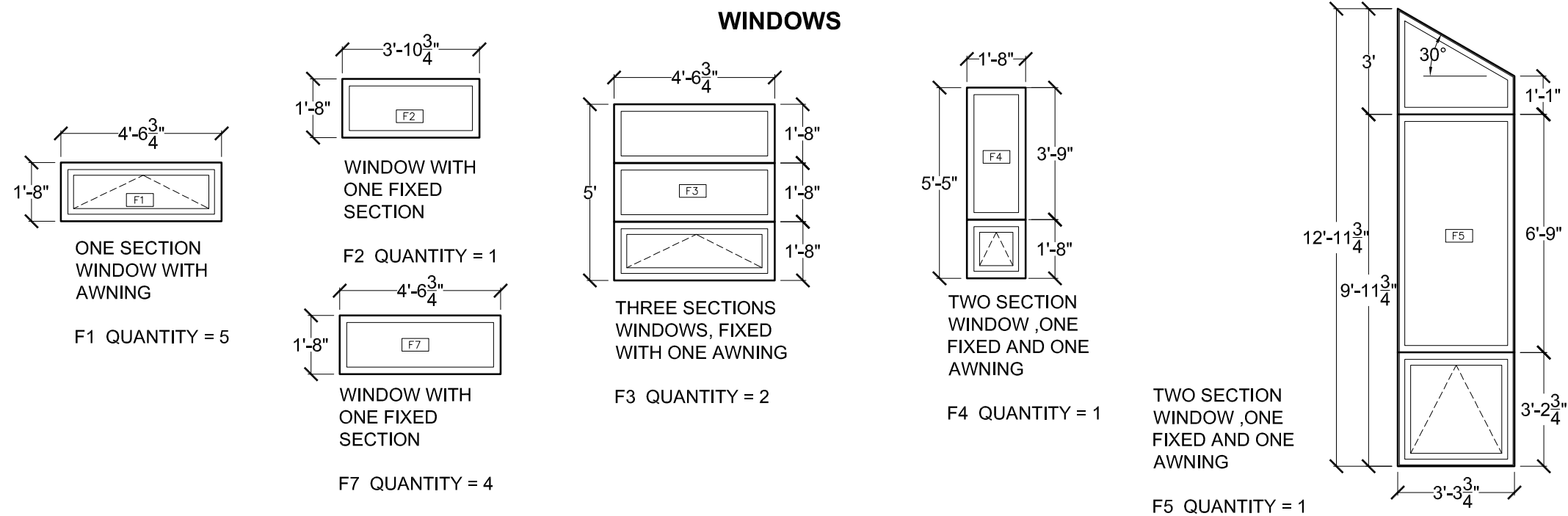
SOLAR DECATHLON 2007
TEAM MONTREAL

TITLE:

ELEVATION
LONGITUDINAL-SECTION

| | |
|------------------------|--------------------------------|
| DATE: 07-01-08 | DRAWN BY : A. LABERGE |
| SCALE : 1/4" = 1' | VERIFIED BY : TEAM MONTREAL |
| PROJECT No. : SD-07 | REVISION : 4 |
| | DRAWING No. : ARC - 207 |





| No. | REVISIONS | DATE |
|-----|------------------------------|----------|
| 1 | DESIGN DEVELOPMENT DRAWINGS | 13-06-06 |
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STAMP:

PROJECT:

SOLAR DECATHLON 2007
TEAM MONTREAL

TITLE:

DOOR AND WINDOW
SCHEDULE

DATE:

07-01-08

SCALE :

1/4" = 1'

PROJECT No. :

SD-07

DRAWN BY :

TEAM MONTREAL

VERIFIED BY :

TEAM MONTREAL

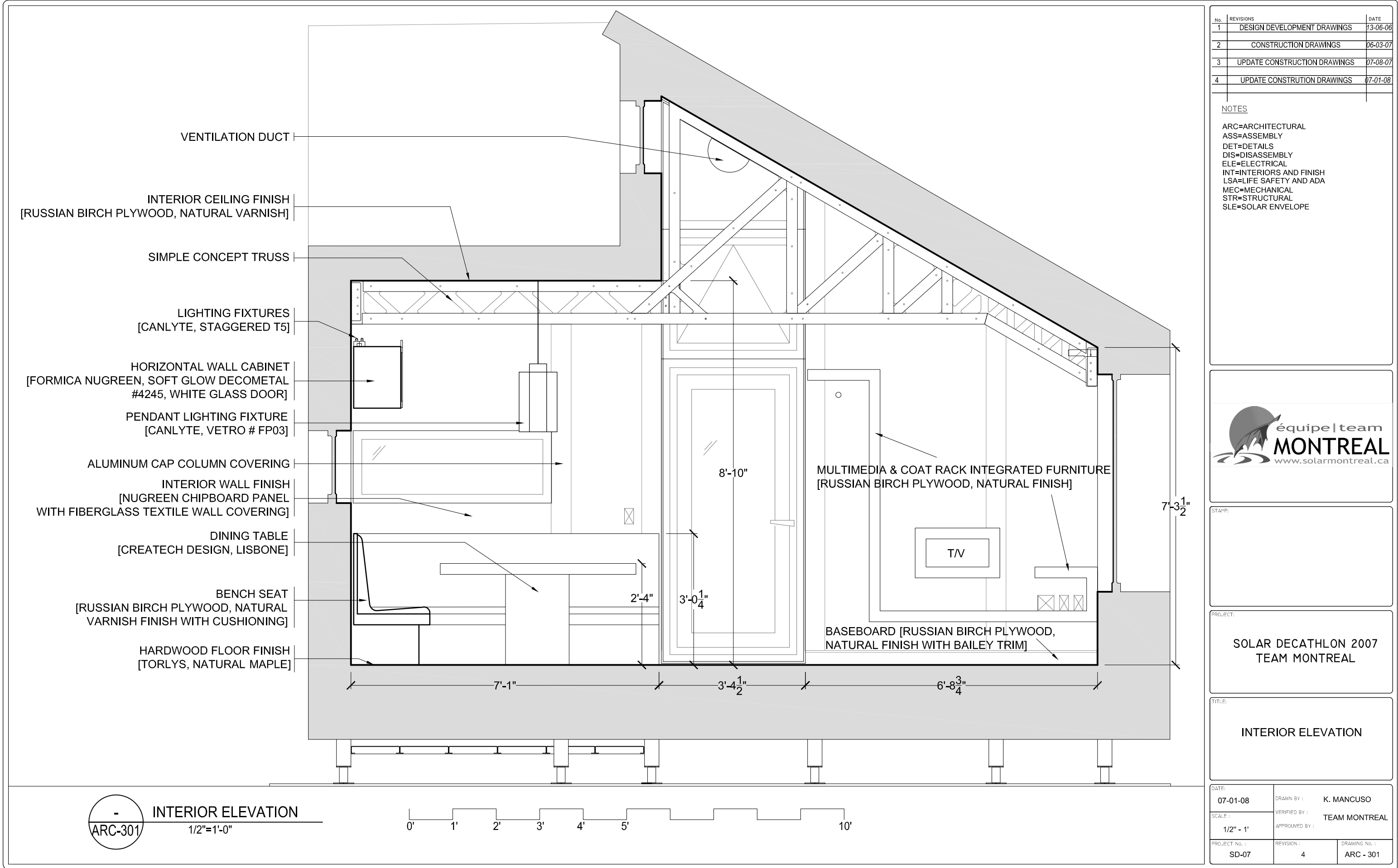
APPROVED BY :

REVISION :

4

DRAWING No. :

ARC - 299



| No. | REVISIONS | DATE |
|-----|------------------------------|----------|
| 1 | DESIGN DEVELOPMENT DRAWINGS | 13-06-06 |
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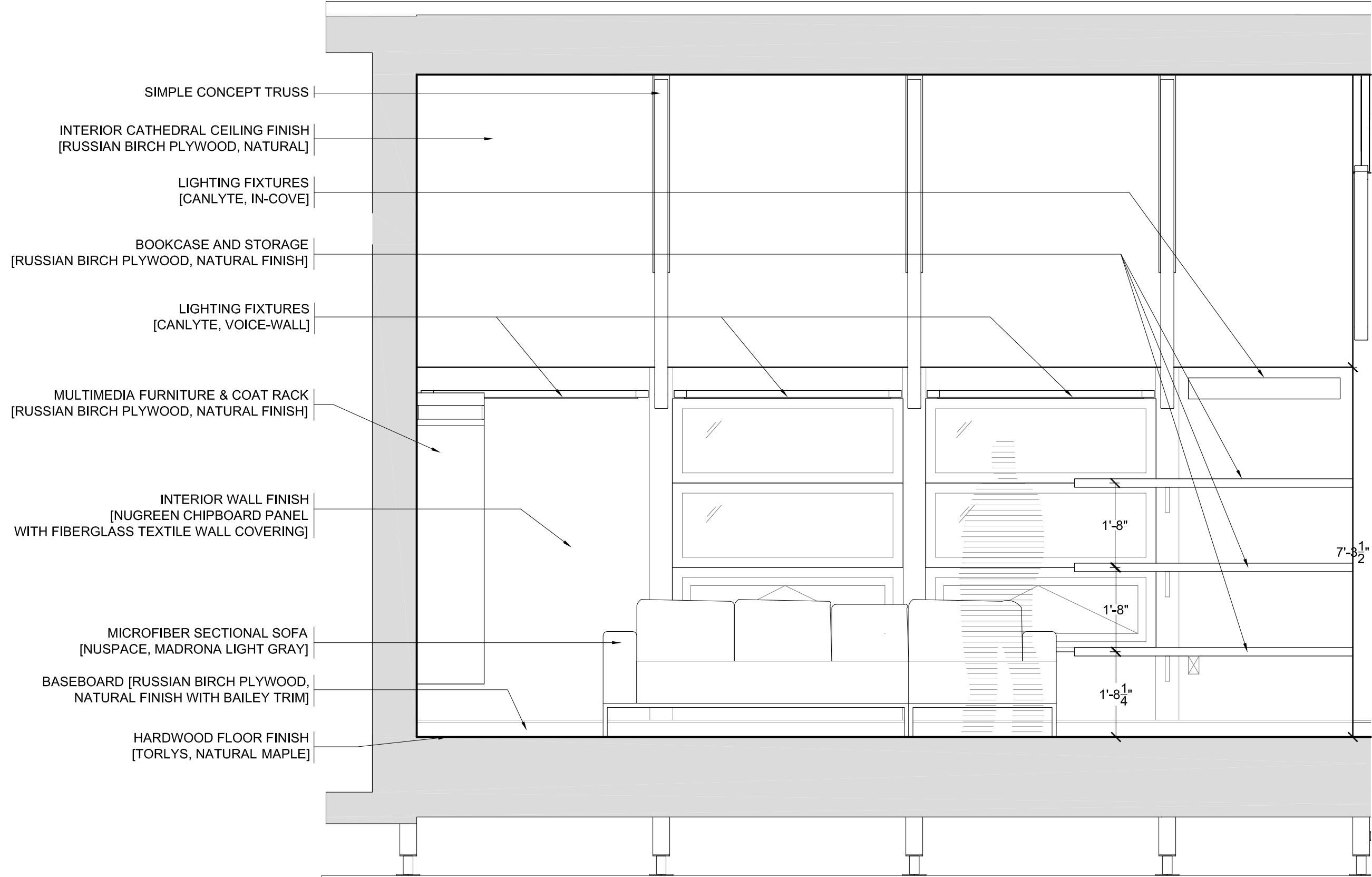
PROJECT:

SOLAR DECATHLON 2007
TEAM MONTREAL

TITLE:

INTERIOR ELEVATION

| | |
|------------------------|--------------------------------|
| DATE: 07-01-08 | DRAWN BY : K. MANCUSO |
| SCALE : 1/2" - 1' | VERIFIED BY : TEAM MONTREAL |
| PROJECT No. : SD-07 | REVISION : 4 |
| | DRAWING No. : ARC - 301 |



| No. | REVISIONS | DATE |
|-----|------------------------------|----------|
| 1 | DESIGN DEVELOPMENT DRAWINGS | 13-06-06 |
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STAMP:

PROJECT:

SOLAR DECATHLON 2007
TEAM MONTREAL

TITLE:

INTERIOR ELEVATION

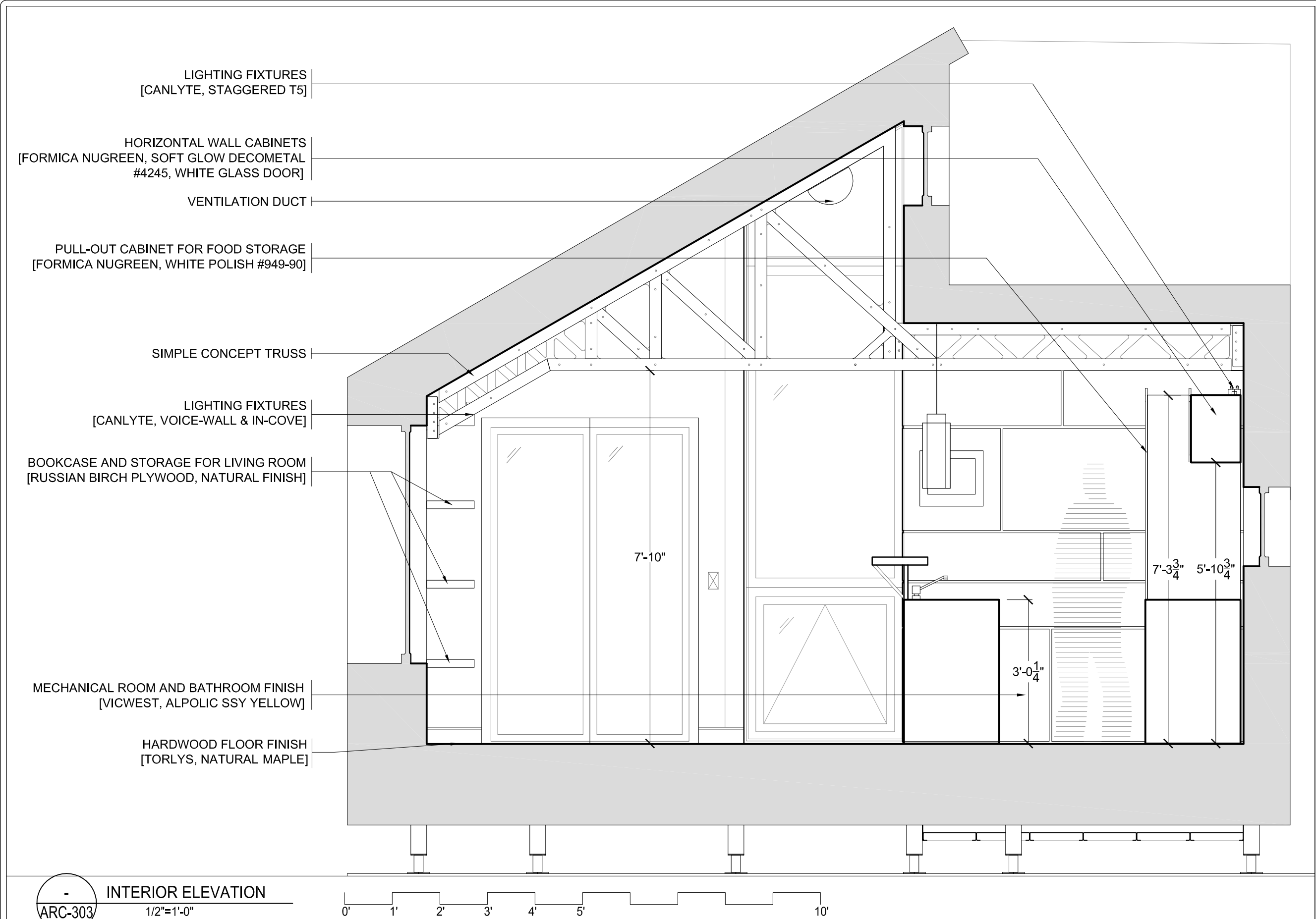
-
ARC-302

INTERIOR ELEVATION

1/2"=1'-0"

0' 1' 2' 3' 4' 5' 10'

| | |
|------------------------|--------------------------------|
| DATE: 07-01-08 | DRAWN BY : K.MANCUSO |
| SCALE : 1/2" = 1' | VERIFIED BY : TEAM MONTREAL |
| PROJECT No. : SD-07 | REVISION : 4 |
| | DRAWING No. : ARC - 302 |



| No. | REVISIONS | DATE |
|-----|------------------------------|----------|
| 1 | DESIGN DEVELOPMENT DRAWINGS | 13-06-06 |
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SLE=SOLAR ENVELOPE



STAMP:

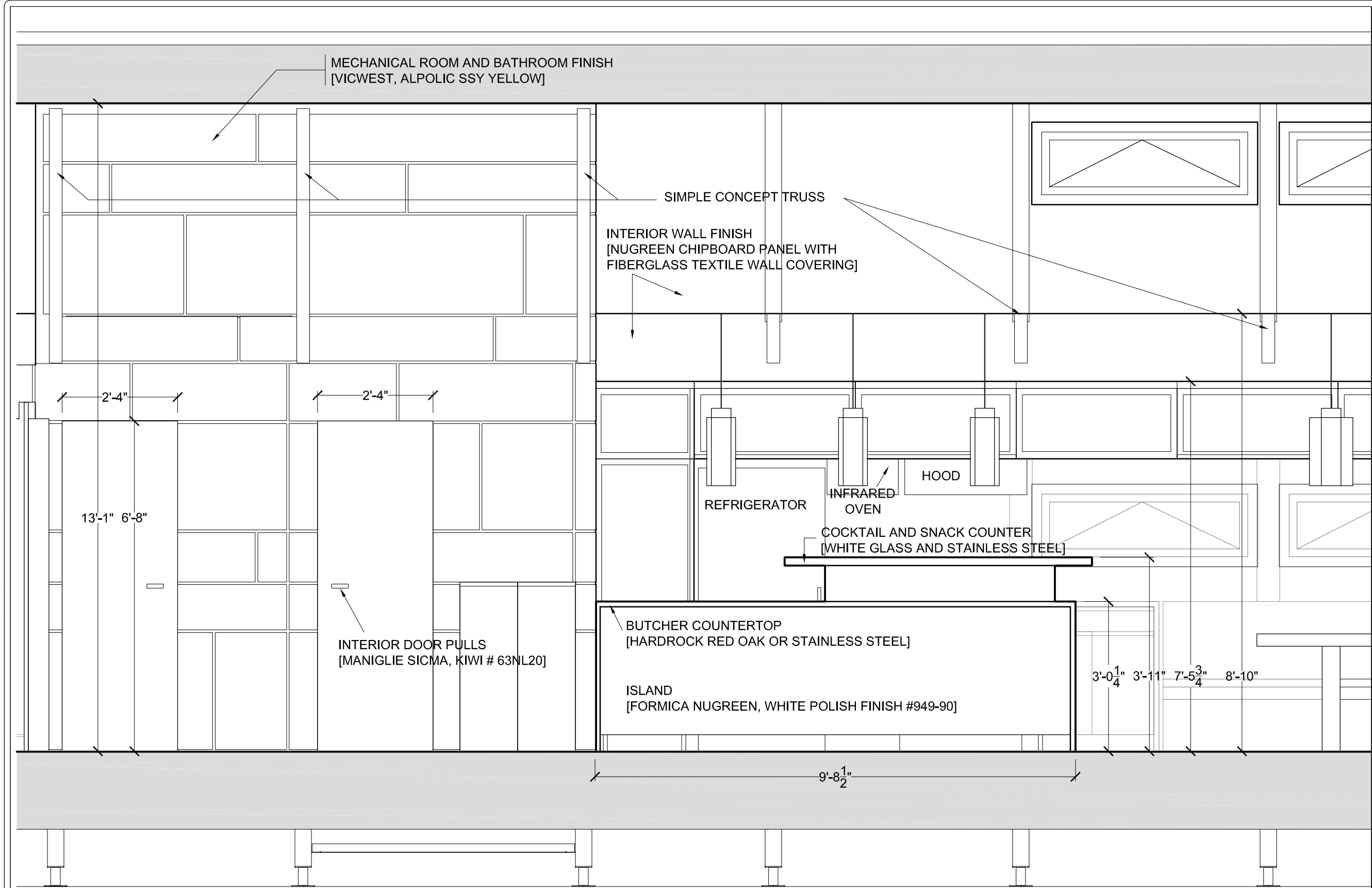
PROJECT:

SOLAR DECATHLON 2007
TEAM MONTREAL

TITLE:

INTERIOR ELEVATION

| | | | |
|---------------|-----------|---------------|---------------|
| DATE: | 07-01-08 | DRAWN BY : | K.MANSUCO |
| SCALE : | 1/2" = 1' | VERIFIED BY : | TEAM MONTREAL |
| PROJECT No. : | SD-07 | REVISION : | 4 |
| | | DRAWING No. : | ARC - 303 |



| No. | REVISIONS | DATE |
|-----|------------------------------|----------|
| 1 | DESIGN DEVELOPMENT DRAWINGS | 13-06-06 |
| 2 | CONSTRUCTION DRAWINGS | 06-03-07 |
| 3 | UPDATE CONSTRUCTION DRAWINGS | 07-08-07 |
| 4 | UPDATE CONSTRUCTION DRAWINGS | 07-01-08 |

NOTES

ARC=ARCHITECTURAL
ASS=ASSEMBLY
DET=DETAILS
DIS=DISASSEMBLY
ELE=ELECTRICAL
INT=INTERIORS AND FINISH
LSA=LIFE SAFETY AND ADA
MEC=MECHANICAL
STR=STRUCTURAL
SLE=SOLAR ENVELOPE


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STAMP:

PROJECT:

SOLAR DECATHLON 2007
TEAM MONTREAL

TITLE:

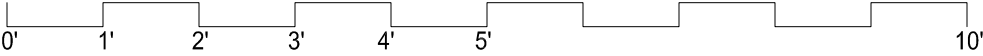
INTERIOR ELEVATION

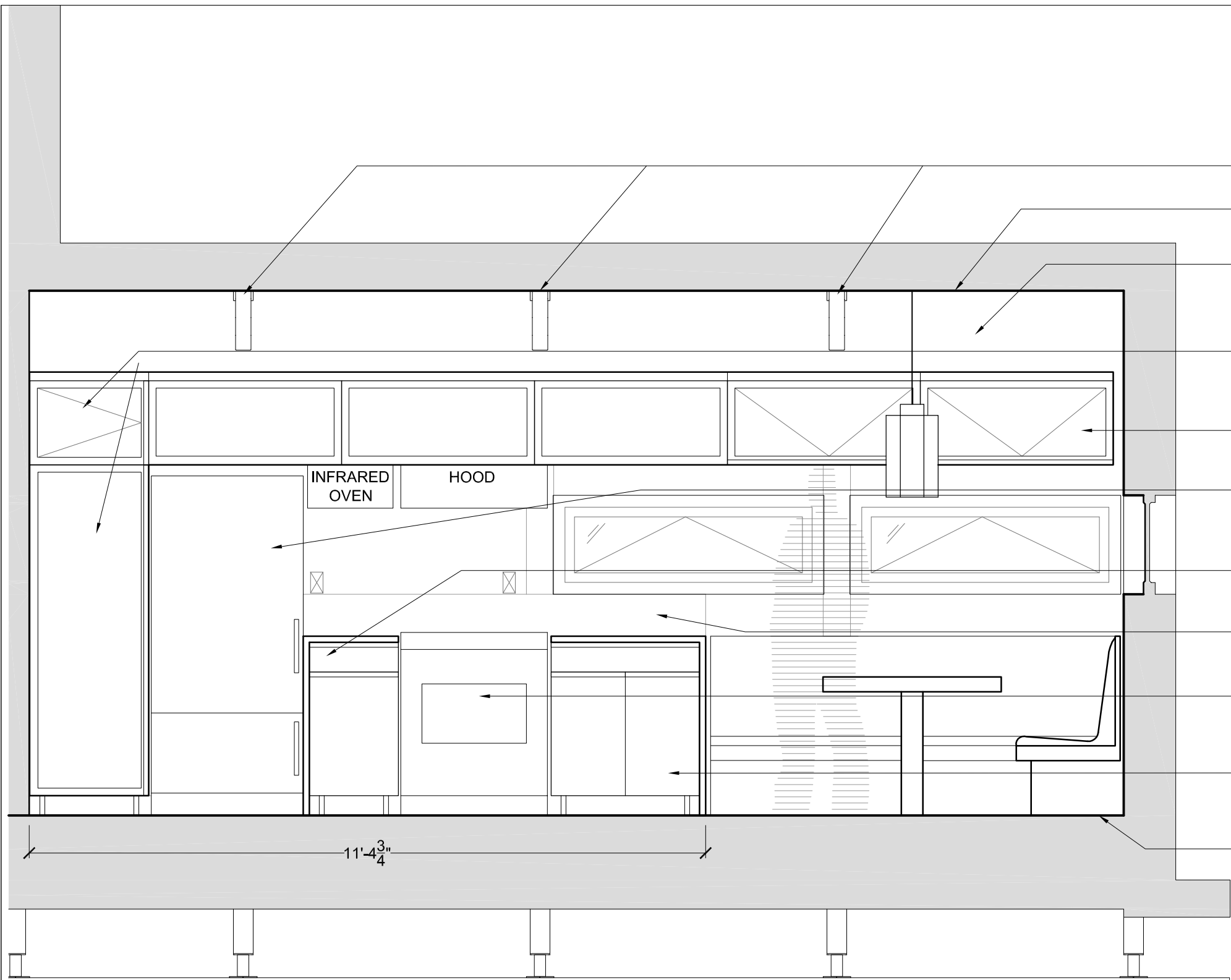
| | |
|----------------------------|--------------------------------|
| DATE: 07-01-08 | DRAWN BY : K.MANSUCO |
| SCALE : 1/2" = 1'-0" | VERIFIED BY : TEAM MONTREAL |
| PROJECT No. : SD-07 | REVISION : 4 |
| DRAWING No. : ARC - 304 | |



INTERIOR ELEVATION

1/2"=1'-0"





- SIMPLE CONCEPT TRUSS
- INTERIOR CEILING FINISH
[RUSSIAN BIRCH PLYWOOD, NATURAL VARNISH]
- INTERIOR WALL FINISH
[NUGREEN CHIPBOARD PANEL
WITH FIBERGLASS TEXTILE WALL COVERING]
- PULL-OUT CABINET FOR FOOD STORAGE,
24" X 24" X 84"
[FORMICA NUGREEN, WHITE POLISH #949-90]
- 5 HORIZONTAL WALL CABINETS, 39" X 13" X 17"
[FORMICA NUGREEN, SOFT GLOW DECOMETAL
#4245, WHITE GLASS DOOR]
- REFRIGERATOR, BOTTOM MOUNTED FREEZER
[MAYTAG, # MB1956KE, STAINLESS STEEL]
- BASE CABINET 1 DOOR, 1 DRAWER,
18" X 24" X 31"
[FORMICA NUGREEN, WHITE POLISH #949-90]
- KITCHEN BACKSPLASH
[FORMICA, BRUSHED ALUMINUM #605]
- CONVECTION OVEN WITH INDUCTION
HEATING PLATE [STAINLESS STEEL]
- BASE CABINET 2 DOORS, 2 DRAWERS,
30" X 24" X 31"
[FORMICA NUGREEN, WHITE POLISH #949-90]
- HARDWOOD FLOOR FINISH
[TORLYS, NATURAL MAPLE]

| No. | REVISIONS | DATE |
|-----|------------------------------|----------|
| 1 | DESIGN DEVELOPMENT DRAWINGS | 13-06-06 |
| 2 | CONSTRUCTION DRAWINGS | 06-03-07 |
| 3 | UPDATE CONSTRUCTION DRAWINGS | 07-08-07 |
| 4 | UPDATE CONSTRUCTION DRAWINGS | 07-01-08 |

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STAMP:

PROJECT:

SOLAR DECATHLON 2007
TEAM MONTREAL

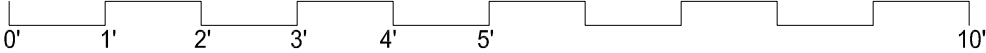
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INTERIOR ELEVATION

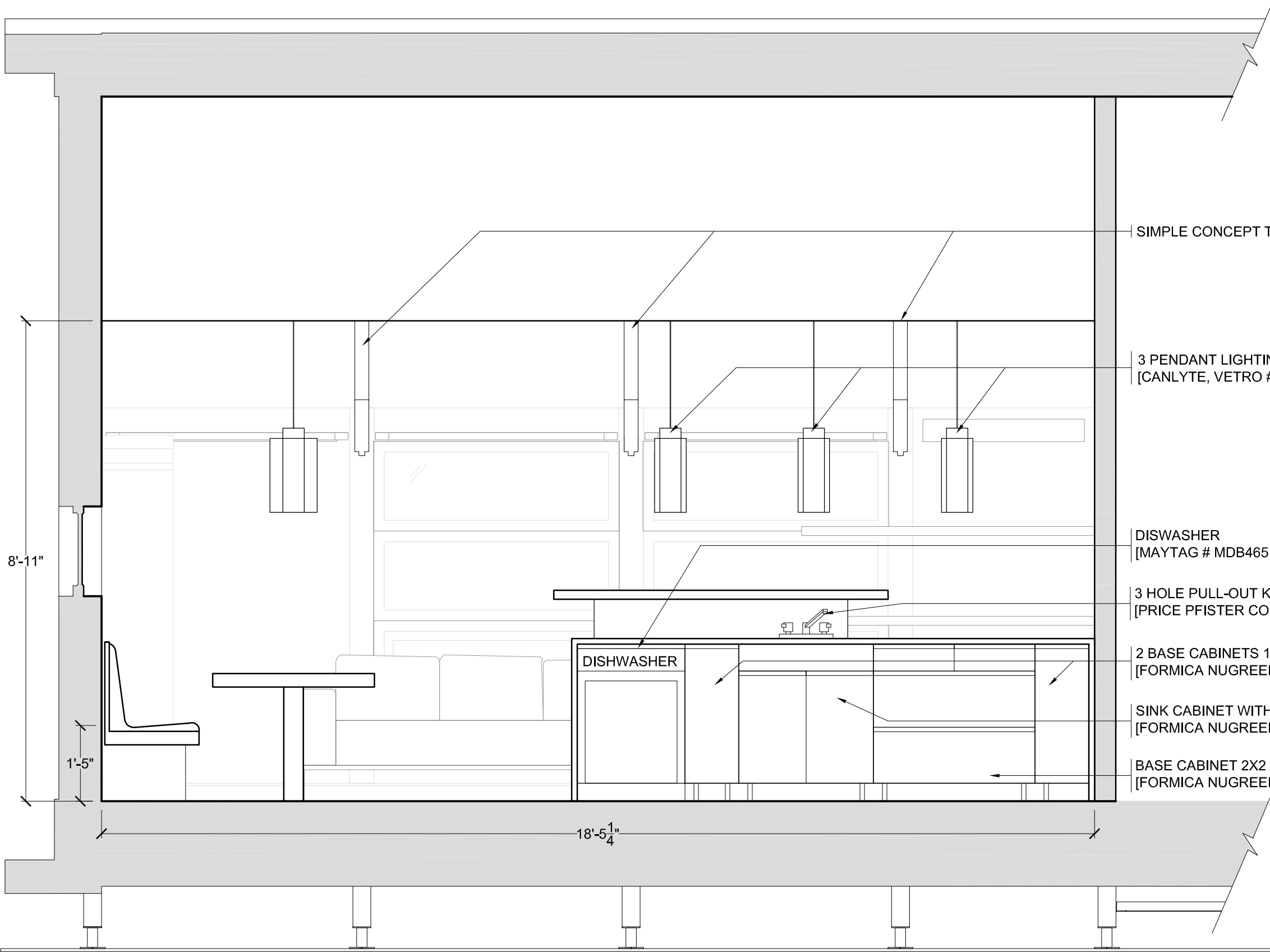
-
ARC-305

INTERIOR ELEVATION

1/2"=1'-0"



| | |
|------------------------|--------------------------------|
| DATE: 07-01-08 | DRAWN BY : K.MANCUSO |
| SCALE : 1/2" - 1' | VERIFIED BY : TEAM MONTREAL |
| PROJECT No. : SD-07 | REVISION : 4 |
| | DRAWING No. : ARC - 305 |



| No. | REVISIONS | DATE |
|-----|------------------------------|----------|
| 1 | DESIGN DEVELOPMENT DRAWINGS | 13-06-06 |
| 2 | CONSTRUCTION DRAWINGS | 06-03-07 |
| 3 | UPDATE CONSTRUCTION DRAWINGS | 07-08-07 |
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STR=STRUCTURAL
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STAMP:

PROJECT:

SOLAR DECATHLON 2007
TEAM MONTREAL

TITLE:

INTERIOR ELEVATION

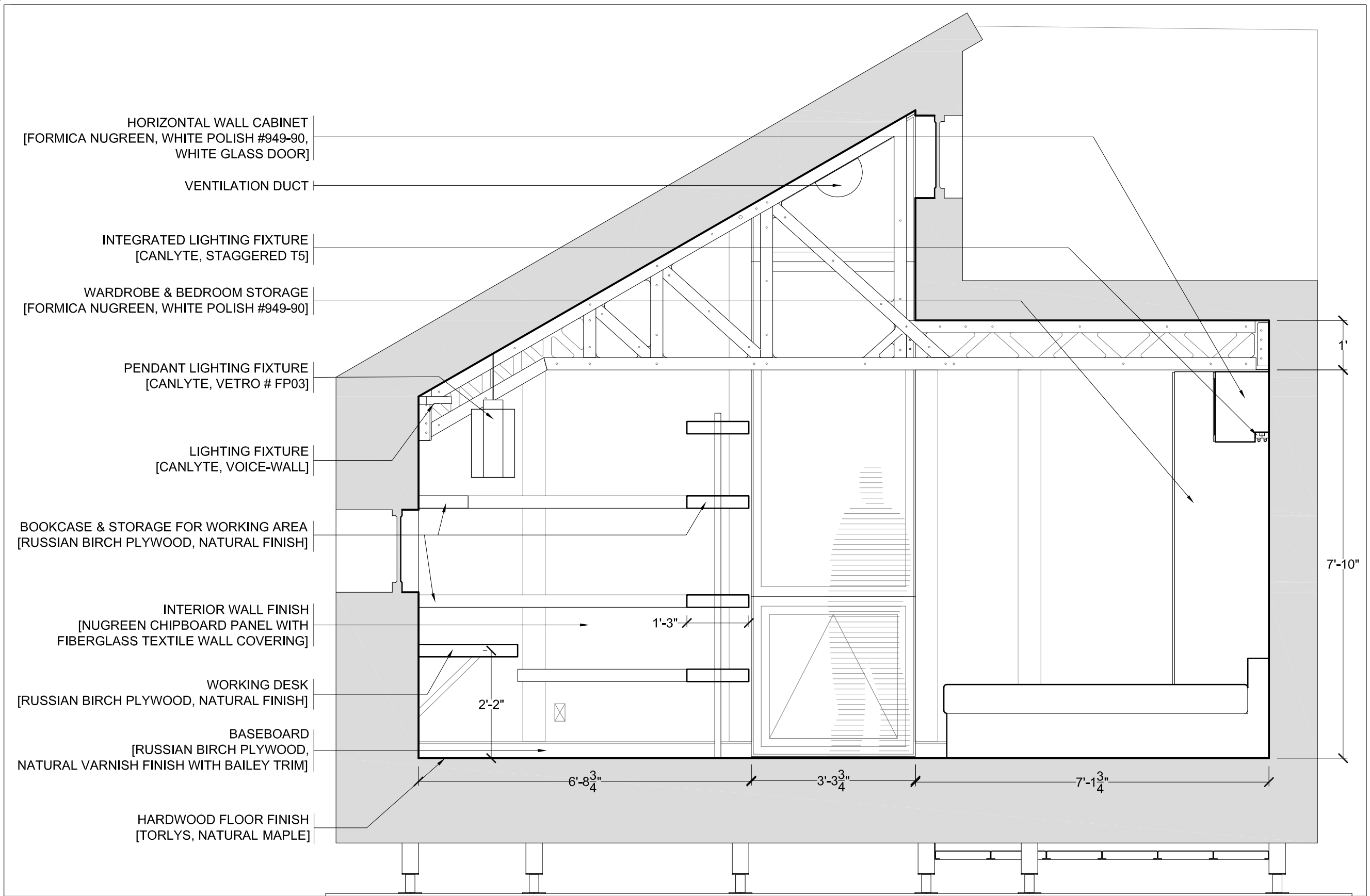
-
ARC-306

INTERIOR ELEVATION

1/2"=1'-0"

0' 1' 2' 3' 4' 5' 10'

| | |
|------------------------|--------------------------------|
| DATE: 07-01-08 | DRAWN BY : K.MANCUSO |
| SCALE : 1/2" - 1' | VERIFIED BY : TEAM MONTREAL |
| PROJECT No. : SD-07 | REVISION : 4 |
| | DRAWING No. : ARC - 306 |



| No. | REVISIONS | DATE |
|-----|------------------------------|----------|
| 1 | DESIGN DEVELOPMENT DRAWINGS | 13-06-06 |
| 2 | CONSTRUCTION DRAWINGS | 06-03-07 |
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STAMP:

PROJECT:

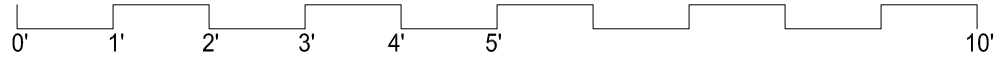
SOLAR DECATHLON 2007
TEAM MONTREAL

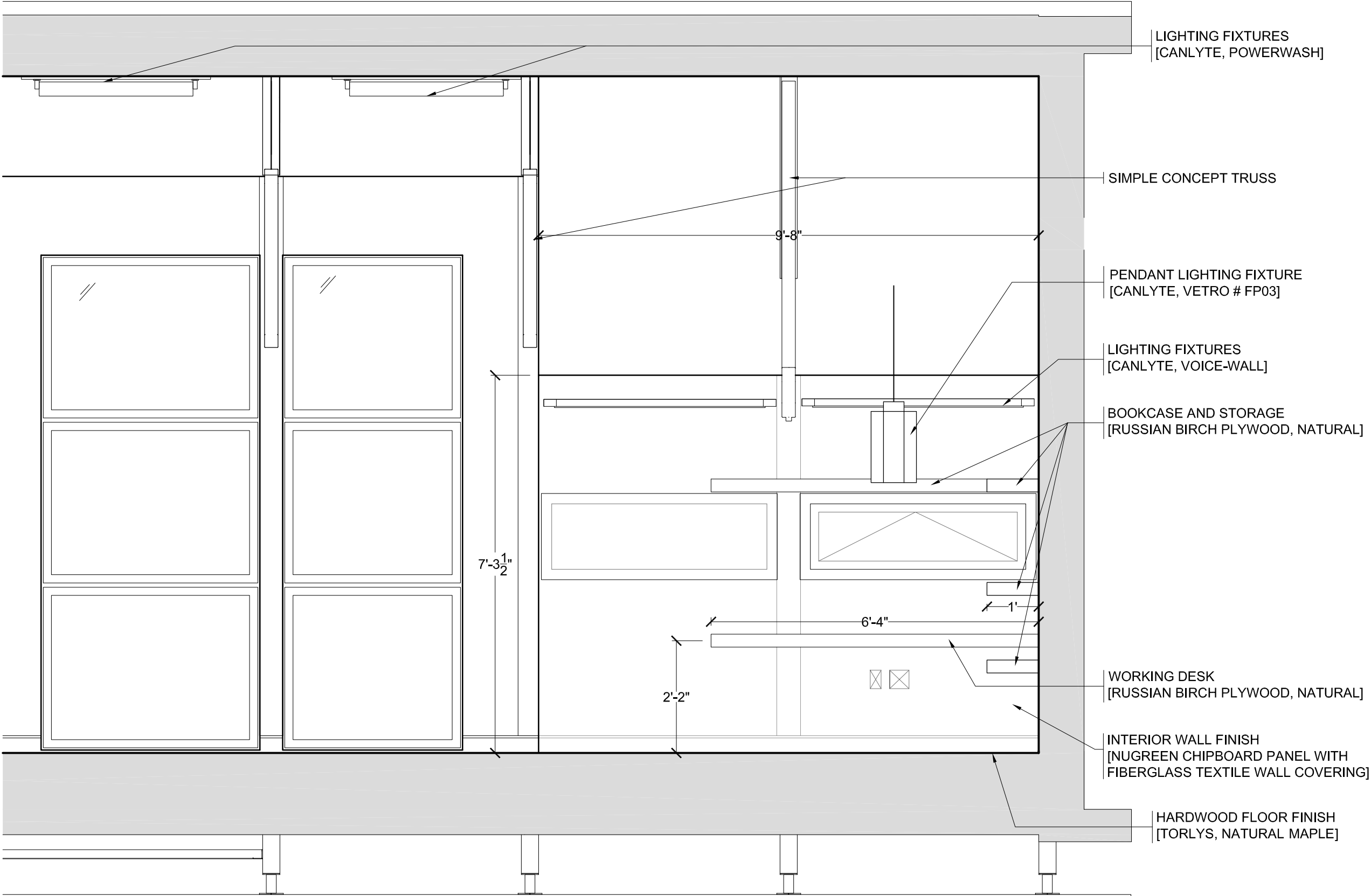
TITLE:

INTERIOR ELEVATION

| | | | |
|---------------|-----------|---------------|---------------|
| DATE: | 07-01-08 | DRAWN BY : | K.MANCUSO |
| SCALE : | 1/2" = 1' | VERIFIED BY : | TEAM MONTREAL |
| PROJECT No. : | SD-07 | REVISION : | 4 |
| | | DRAWING No. : | ARC - 307 |

- INTERIOR ELEVATION
ARC-307 1/2"=1'-0"





| No. | REVISIONS | DATE |
|-----|------------------------------|----------|
| 1 | DESIGN DEVELOPMENT DRAWINGS | 13-06-06 |
| 2 | CONSTRUCTION DRAWINGS | 06-03-07 |
| 3 | UPDATE CONSTRUCTION DRAWINGS | 07-08-07 |
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STAMP:

PROJECT:

SOLAR DECATHLON 2007
TEAM MONTREAL

TITLE:

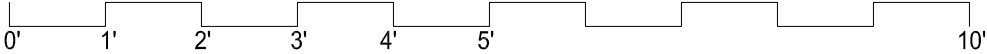
INTERIOR ELEVATION

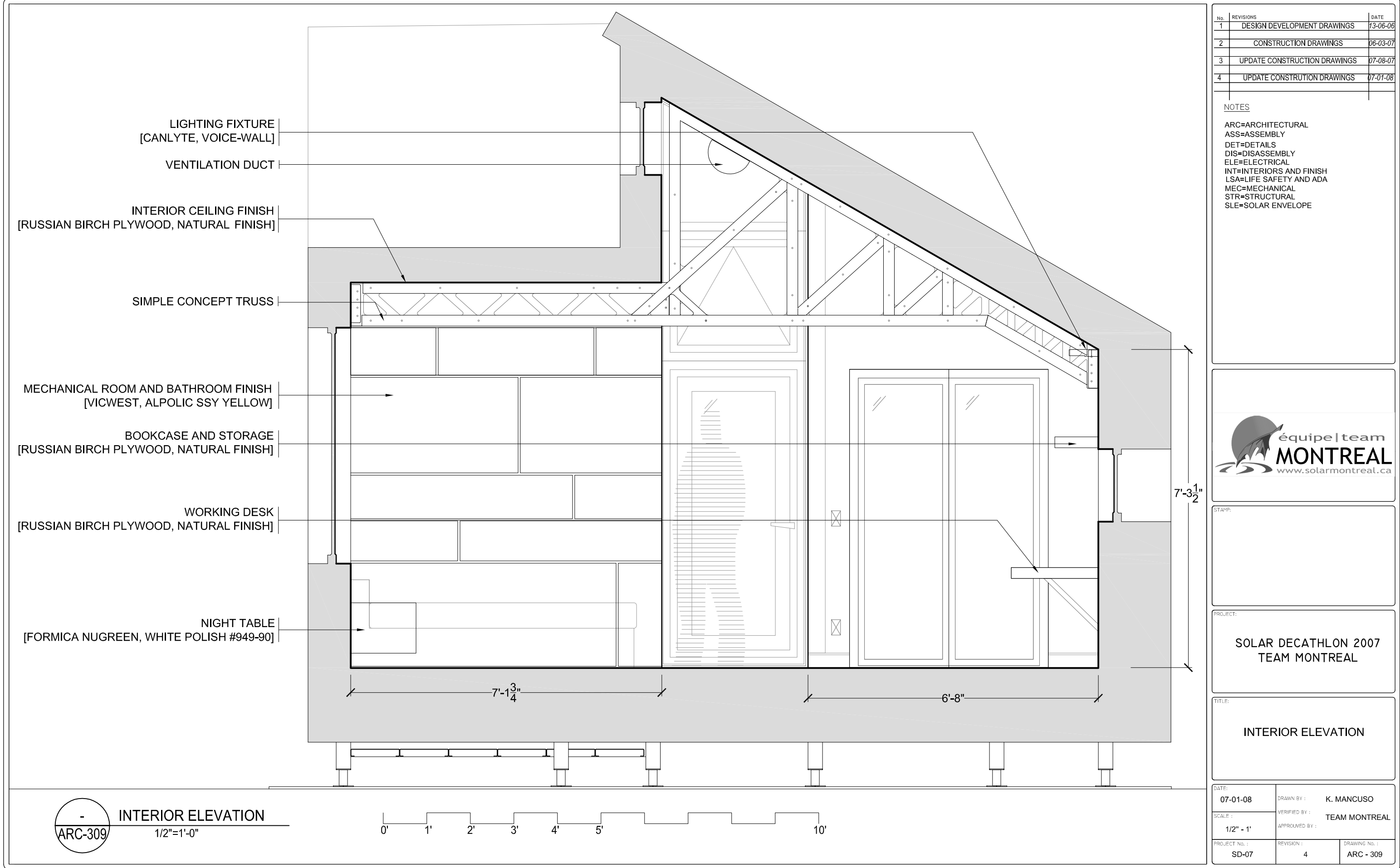
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|------------------------|--------------------------------|
| DATE: 07-01-08 | DRAWN BY : K.MANCUSO |
| SCALE : 1/2" - 1' | VERIFIED BY : TEAM MONTREAL |
| PROJECT No. : SD-07 | REVISION : 4 |
| | DRAWING No. : ARC - 308 |

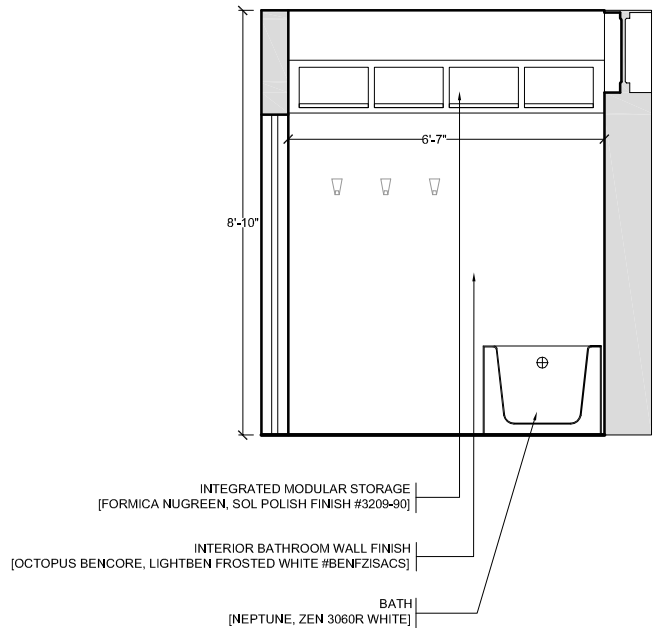
-
ARC-308

INTERIOR ELEVATION

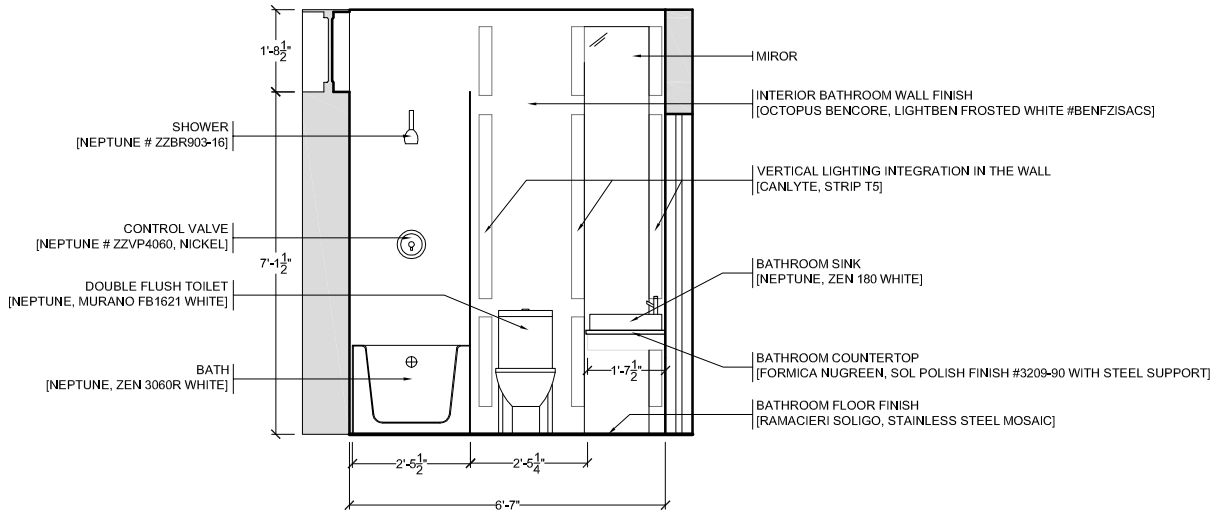
1/2"=1'-0"



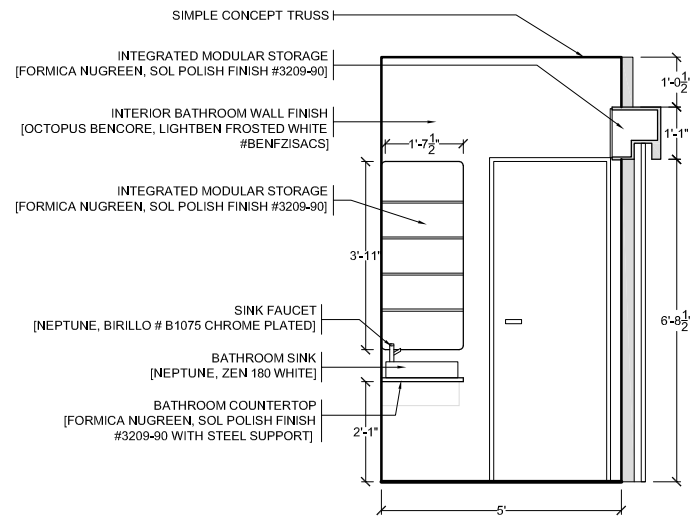




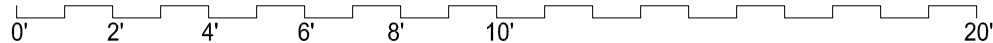
1
ARC-311
INTERIOR ELEVATION
1/4"=1'-0"



2
ARC-311
INTERIOR ELEVATION
1/4"=1'-0"



3
ARC-311
INTERIOR ELEVATION
1/4"=1'-0"



| No. | REVISIONS | DATE |
|-----|------------------------------|----------|
| 1 | DESIGN DEVELOPMENT DRAWINGS | 13-06-06 |
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STAMP:

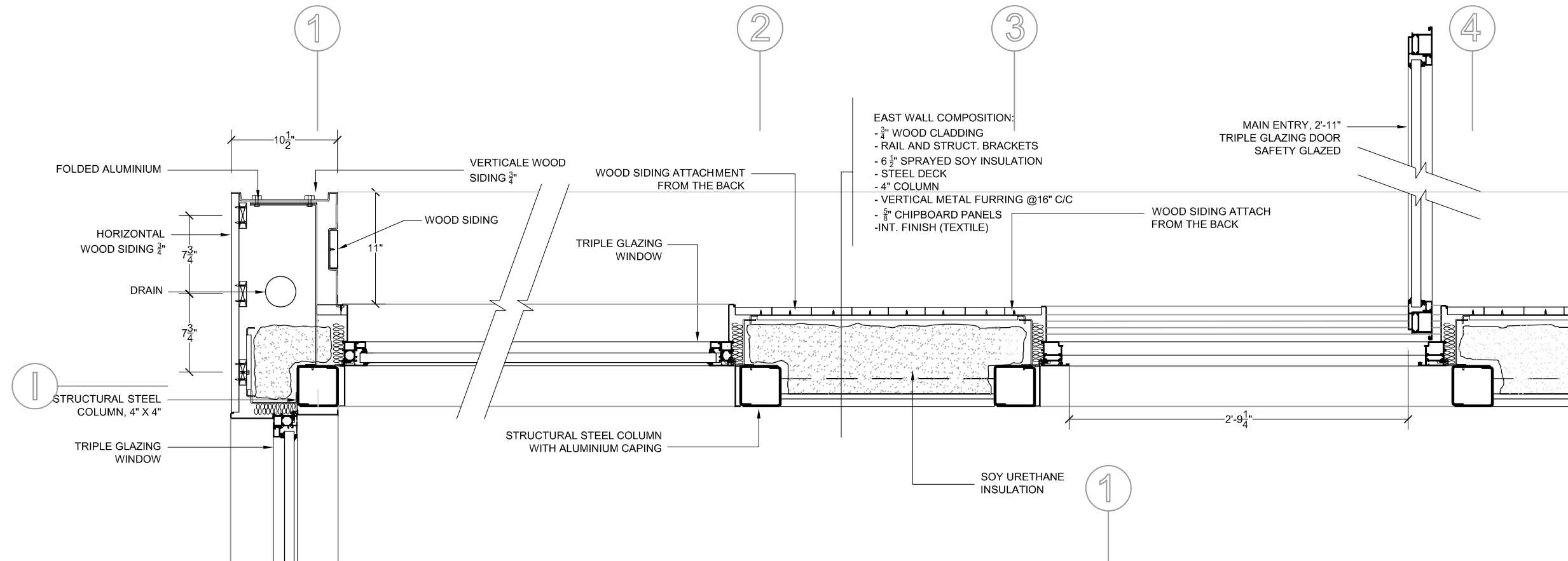
PROJECT:

SOLAR DECATHLON 2007
TEAM MONTREAL

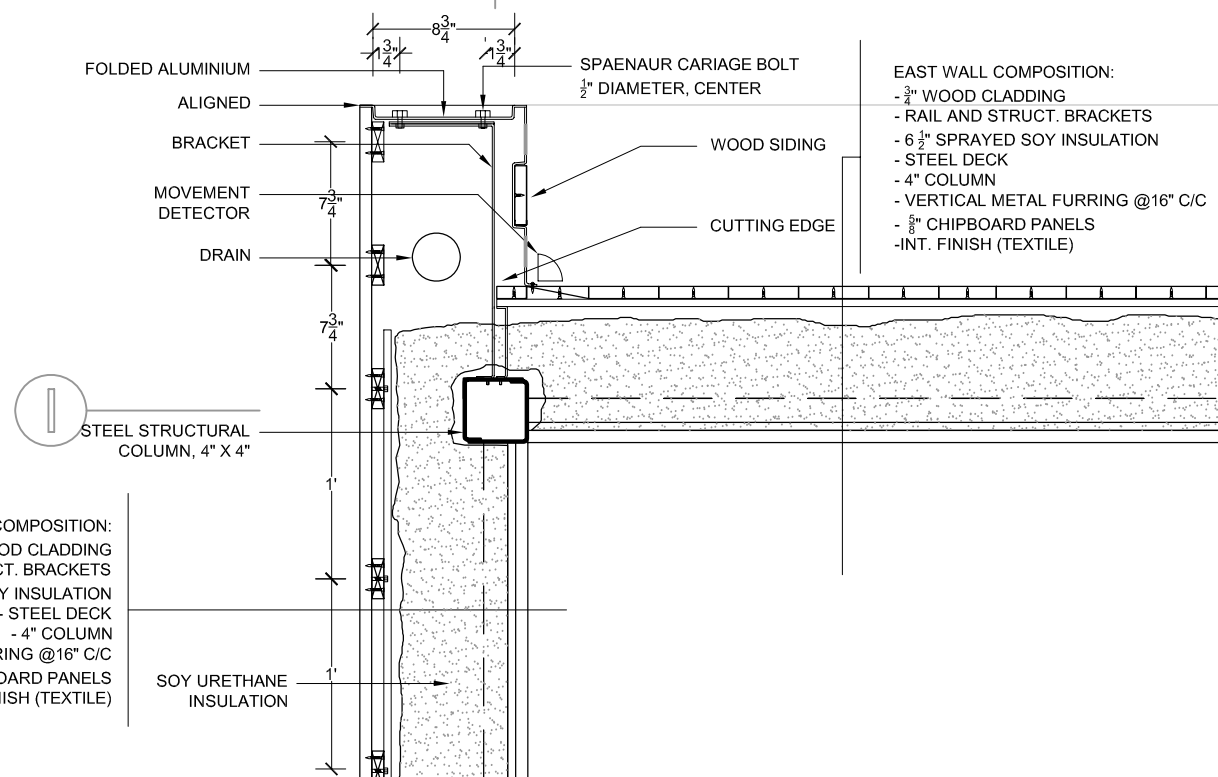
TITLE:

INTERIOR ELEVATION
BATHROOM

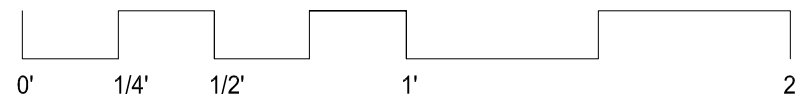
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|------------------------|--------------------------------|----------------------------|
| DATE: 07-01-08 | DRAWN BY : K. MANCUSO | |
| SCALE : 1/2" = 1' | VERIFIED BY : TEAM MONTREAL | |
| PROJECT No. : SD-07 | REVISION : 4 | DRAWING No. : ARC - 311 |



1
ARC-401
DETAIL - AXES I & 1 TO 4
1"=1'-0"



2
ARC-401
DETAIL - AXES I & 1 (WITHOUT WINDOW)
1"=1'-0"



| No. | REVISIONS | DATE |
|-----|------------------------------|----------|
| 1 | DESIGN DEVELOPMENT DRAWINGS | 13-06-06 |
| 2 | CONSTRUCTION DRAWINGS | 06-03-07 |
| 3 | UPDATE CONSTRUCTION DRAWINGS | 07-08-07 |
| 4 | UPDATE CONSTRUCTION DRAWINGS | 07-01-08 |

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ALL DIMENSIONS SHOULD BE
VERIFIED ON CONSTRUCTION SITE



STAMP:

PROJECT:

**SOLAR DECATHLON 2007
TEAM MONTREAL**

TITLE:

DETAILS - EAST ELEVATION

| | |
|-------------------------------|---------------------------------------|
| DATE: 07-01-08 | DRAWN BY : A. LABERGE |
| SCALE : 1 1/2" - 1' | VERIFIED BY : TEAM MONTREAL |
| PROJECT No. : SD-07 | REVISION : 4 |
| | DRAWING No. : ARC - 401 |

| No. | REVISIONS | DATE |
|-----|------------------------------|----------|
| 1 | DESIGN DEVELOPMENT DRAWINGS | 13-06-06 |
| 2 | CONSTRUCTION DRAWINGS | 06-03-07 |
| 3 | UPDATE CONSTRUCTION DRAWINGS | 07-08-07 |
| 4 | UPDATE CONSTRUCTION DRAWINGS | 07-01-08 |

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ALL DIMENSIONS SHOULD BE
VERIFIED ON CONSTRUCTION SITE



STAMP:

PROJECT:

SOLAR DECATHLON 2007
TEAM MONTREAL

TITLE:

DETAILS - SOUTH ELEVATION

DATE:
07-01-08

DRAWN BY :
A. LABERGE

SCALE :

1" = 1'

VERIFIED BY :

TEAM MONTREAL

APPROVED BY :

PROJECT No. :

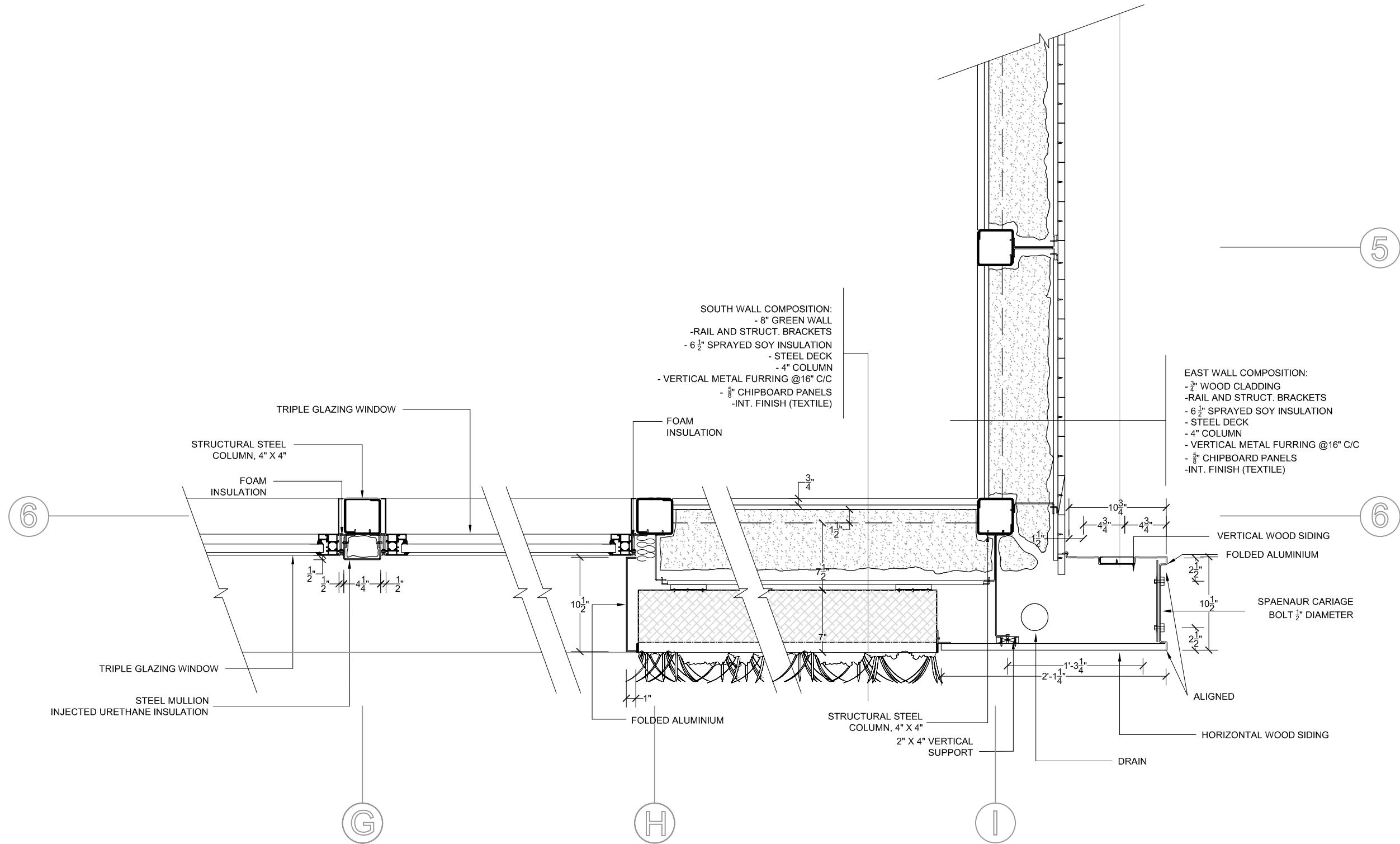
SD-07

REVISION :

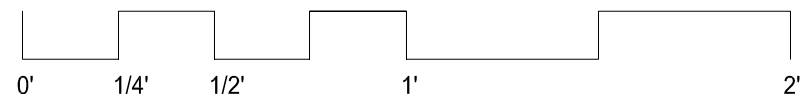
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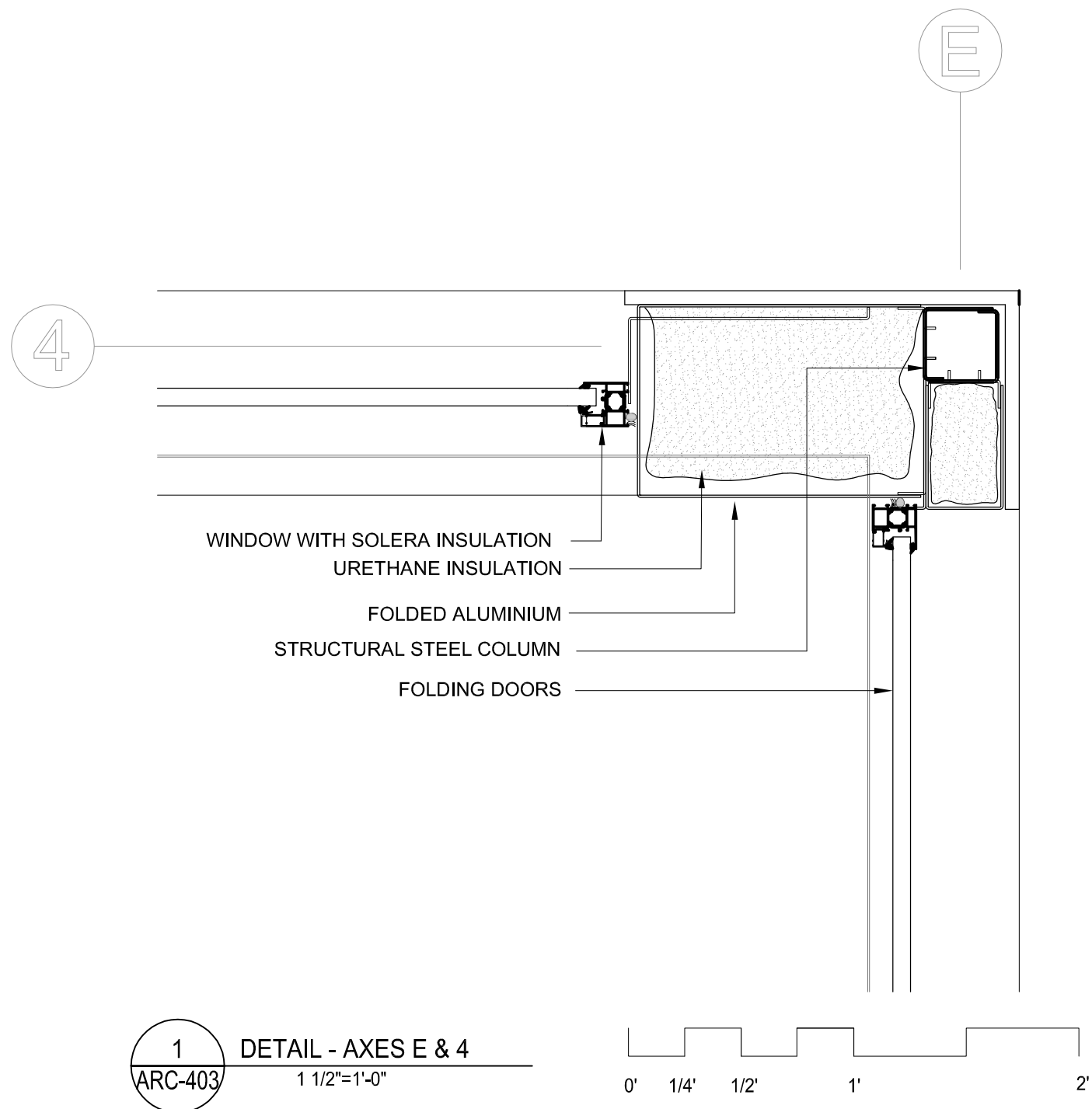
DRAWING No. :

ARC -402



1
ARC-402
DETAIL - AXES G TO I & 6
1"=1'-0"





| No. | REVISIONS | DATE |
|-----|------------------------------|----------|
| | DESIGN DEVELOPMENT DRAWINGS | 13-06-06 |
| 2 | CONSTRUCTION DRAWINGS | 06-03-07 |
| 3 | UPDATE CONSTRUCTION DRAWINGS | 07-08-07 |
| 4 | UPDATE CONSTRUCTION DRAWINGS | 07-01-08 |

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ALL DIMENSIONS SHOULD BE
VERIFIED ON CONSTRUCTION SITE



STAMP:

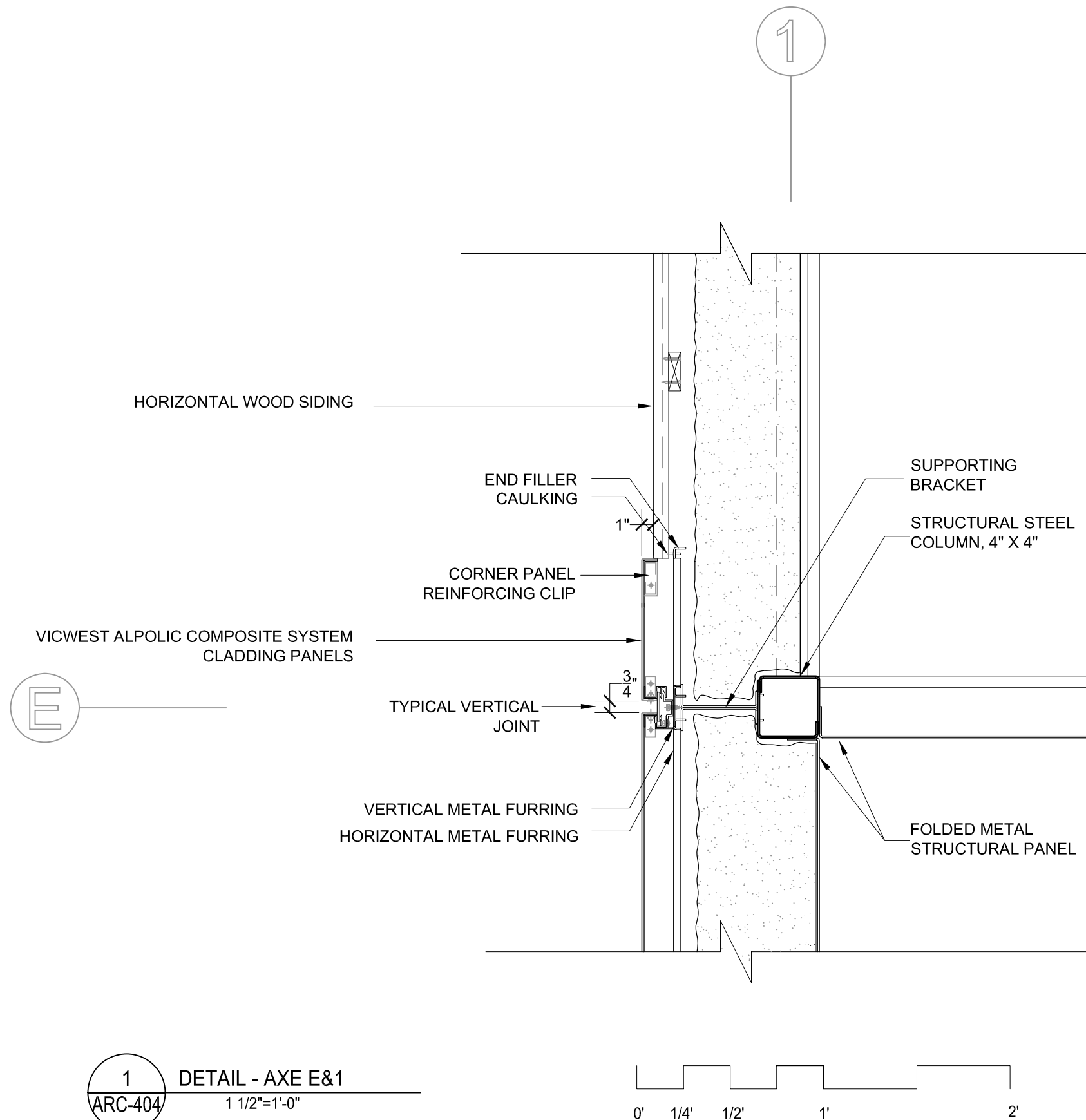
PROJECT:

SOLAR DECATHLON 2007
TEAM MONTREAL

TITLE:

DETAILS- COURTYARD

| | |
|------------------------|--------------------------------|
| DATE: 07-01-08 | DRAWN BY : S. COUSINEAU |
| SCALE : 1 1/2" - 1' | VERIFIED BY : TEAM MONTREAL |
| PROJECT No. : SD-07 | REVISION : 4 |
| | DRAWING No. : ARC -403 |



1
ARC-404

DETAIL - AXE E&1
1 1/2"=1'-0"

| No. | REVISIONS | DATE |
|-----|------------------------------|----------|
| 1 | DESIGN DEVELOPMENT DRAWINGS | 13-06-06 |
| 2 | CONSTRUCTION DRAWINGS | 06-03-07 |
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 SLE=SOLAR ENVELOPE

ALL DIMENSIONS SHOULD BE
 VERIFIED ON CONSTRUCTION SITE



STAMP:

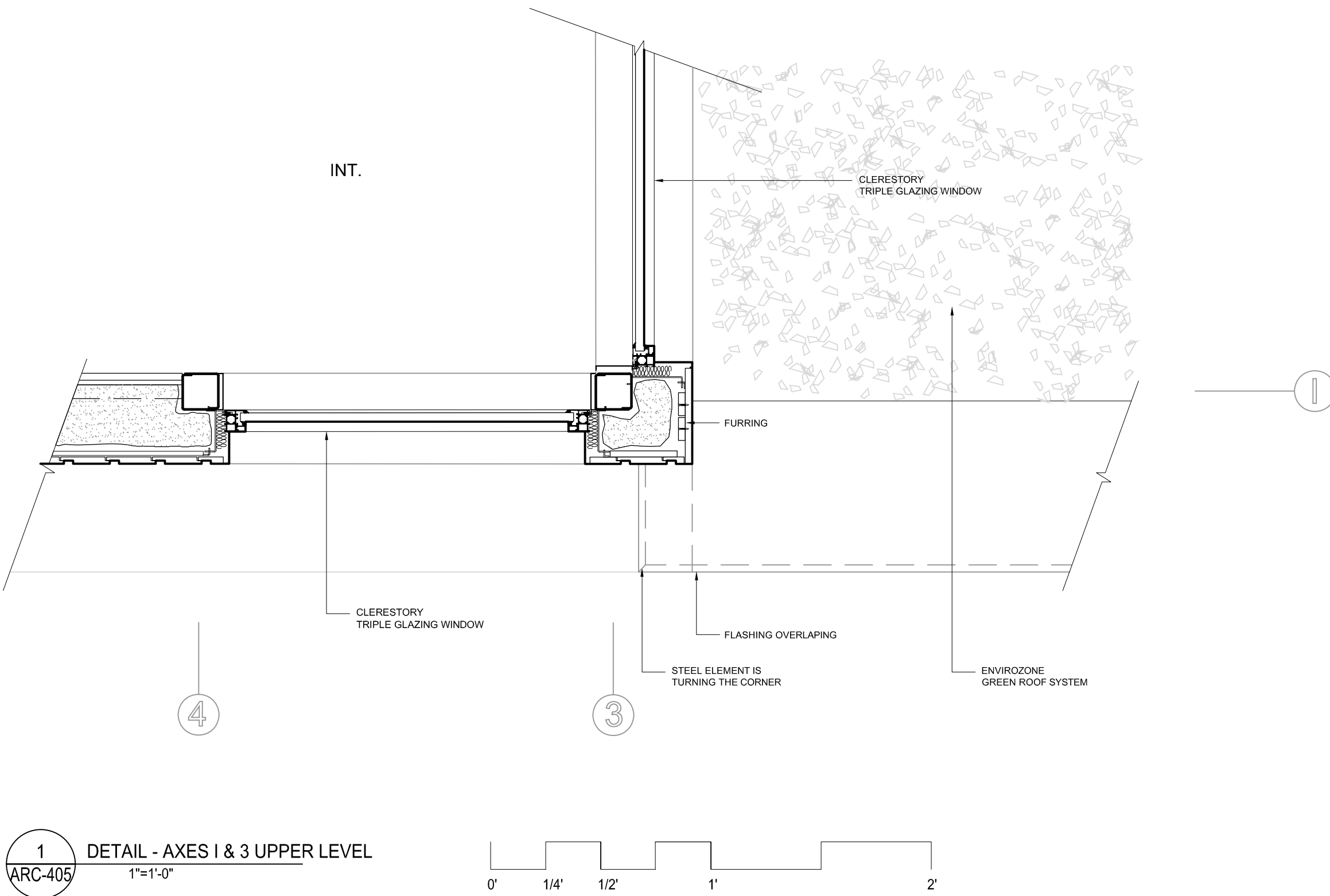
PROJECT:

SOLAR DECATHLON 2007
 TEAM MONTREAL

TITLE:

DETAILS - NORTH ELEVATION
 MECHANICAL BLOCK

| | | |
|------------------------|--------------------------------|----------------------------|
| DATE: 07-01-08 | DRAWN BY : TEAM MONTREAL | |
| SCALE : 1/4" = 1' | VERIFIED BY : TEAM MONTREAL | |
| PROJECT No. : SD-07 | REVISION : 4 | DRAWING No. : ARC - 404 |



| No. | REVISIONS | DATE |
|-----|------------------------------|----------|
| 1 | DESIGN DEVELOPMENT DRAWINGS | 13-06-06 |
| 2 | CONSTRUCTION DRAWINGS | 06-03-07 |
| 3 | UPDATE CONSTRUCTION DRAWINGS | 07-08-07 |
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ALL DIMENSIONS SHOULD BE VERIFIED ON CONSTRUCTION SITE



STAMP:

PROJECT:

SOLAR DECATHLON 2007
TEAM MONTREAL

TITLE:

DETAILS - NORTH ELEVATION
GREENROOF LEVEL

| | |
|----------------------------|--------------------------------|
| DATE: 07-01-08 | DRAWN BY : A. LABERGE |
| SCALE : 1" - 1' | VERIFIED BY : TEAM MONTREAL |
| PROJECT No. : SD-07 | REVISION : 4 |
| DRAWING No. : ARC - 405 | |

STRUCTURAL & ASSEMBLY TABLE OF CONTENTS

STRUCTURAL

| | |
|-----------|--|
| STR - 000 | STRUCTURAL & ASSEMBLY TABLE OF CONTENTS |
| STR - 100 | SPECIFICATIONS |
| STR - 200 | FOUNDATIONS |
| STR - 300 | FLOOR STRUCTURE |
| STR - 400 | ROOF STRUCTURE |
| STR - 500 | SECTION A-A & B-B |
| STR - 501 | SECTION C-C & D-D |
| STR - 502 | SECTION E-E |
| STR - 600 | MECHANICAL ROOM |

ASSEMBLY

| | |
|-----------|------------------|
| ASS - 001 | ASSEMBLY 1 @ 4 |
| ASS - 002 | ASSEMBLY 5 @ 8 |
| ASS - 003 | ASSEMBLY 9 @ 12 |
| ASS - 004 | ASSEMBLY 13 @ 16 |
| ASS - 005 | ASSEMBLY 17 @ 20 |
| ASS - 006 | ASSEMBLY 21 @ 23 |

| No. | REVISIONS | DATE |
|-----|------------------------------|----------|
| 1 | DESIGN DEVELOPMENT DRAWINGS | 13-06-06 |
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STAMP:

PROJECT:

SOLAR DECATHLON 2007
TEAM MONTREAL

TITLE:

STRUCTURAL & ASSEMBLY
TABLE OF CONTENTS

| | |
|------------------------|----------------------------------|
| DATE: 07-01-08 | DRAWN BY : ERIC DUBE |
| SCALE : NONE | VERIFIED BY : PHILIPPE BOUTIN |
| PROJECT No. : SD-07 | APPROVED BY : PIERRE BONNIER |
| REVISION : 4 | DRAWING No. : STR -000 |

| PART LIST | | | |
|-----------|------|--------------------|-------------------------------|
| TYPE | QTY. | PART NUMBER | DESCRIPTION |
| 01 | 8 | 000-0302-01-138-01 | POST 4"x4" (138 in.) |
| 02 | 5 | 000-0302-01-192-01 | POST 4"x4" (192 in.) |
| 03 | 2 | 000-0302-01-174-01 | POST 4"x4" (174 in.) |
| 04 | 2 | 000-0302-01-132-01 | POST 4"x4" (132 in.) |
| 05 | 8 | 000-0302-01-120-01 | POST 4"x4" (120 in.) |
| 06 | 3 | 000-0302-01-162-01 | POST 4"x4" (162 in.) |
| 07 | 2 | 000-0302-01-198-01 | POST 4"x4" (198 in.) |
| | | | PRIMARY JOIST (210 in.) |
| 08 | 4 | 007-0404-01-210-01 | PRIMARY JOIST (126 in.) |
| 09 | 1 | 007-0404-01-126-01 | PRIMARY JOIST (41 in.) |
| 10 | 2 | 007-0404-01-041-01 | SECONDARY JOIST (60 in.) |
| 11 | 52 | 000-0405-01-060-01 | SECONDARY JOIST (46 in.) |
| 12 | 10 | 000-0405-01-046-01 | SECONDARY JOIST (68 in.) |
| 13 | 2 | 000-0405-01-068-01 | PERIMETER JOIST (60 in.) |
| 14 | 6 | 007-0409-01-060-01 | PERIMETER JOIST (70 in.) |
| 15 | 1 | 007-0409-01-070-02 | PERIMETER JOIST (80 in.) |
| 16 | 2 | 007-0409-01-080-02 | PERIMETER JOIST (60 in.) |
| 17 | 8 | 007-0409-01-060-02 | PERIMETER JOIST (70 in.) |
| 18 | 1 | 007-0409-01-070-01 | PERIMETER JOIST (80 in.) |
| 19 | 2 | 007-0409-01-080-01 | PERIMETER JOIST (46 in.) |
| 20 | 2 | 007-0409-01-046-01 | PERIMETER JOIST (68 in.) |
| 21 | 1 | 007-0409-01-068-02 | PERIMETER JOIST (85 in.) |
| 22 | 1 | 007-0409-00-085-01 | PERIMETER JOIST (85 in.) |
| 23 | 1 | 007-0409-00-085-02 | ROOF TRUSS |
| 24 | 4 | 007-0501-000-01 | ROOF TRUSS |
| 25 | 1 | 007-0501-000-03 | ROOF TRUSS |
| 26 | 2 | 007-0501-000-02 | JOIST ROOF PERIMETER (60 in.) |
| 27 | 2 | 007-0411-01-060-03 | JOIST ROOF PERIMETER (25 in.) |
| 28 | 2 | 007-0411-01-025-01 | JOIST ROOF PERIMETER (45 in.) |
| 29 | 1 | 007-0411-01-045-02 | JOIST ROOF PERIMETER (80 in.) |
| 30 | 2 | 007-0411-01-080-03 | JOIST ROOF PERIMETER (45 in.) |
| 31 | 1 | 007-0411-01-045-01 | JOIST ROOF PERIMETER (80 in.) |
| 32 | 2 | 007-0411-01-080-01 | |

ALLOWABLE LOADS

FLOOR:

D = 30.71 lbs/sqft
L = 50.0 lbs/sqft

MECHANICAL ROOM:
L = 50.0 lbs/sqft
P_o = 7812.64 lbs

ROOF:

SLOPED:
D = 14.97 lbs/sqft
L = 58.5 lbs/sqft

FLAT:
D = 49.36 lbs/sqft
L = 108.6 lbs/sqft

CONSTRUCTION STEPS

1- LIFTING OPERATION OF MECHANICAL MODULE.
2- ASSEMBLY OF THE STRUCTURE, POST S & JOISTS.
3- LIFTING OPERATION OF FLOOR PANELS.
4- LIFTING OPERATION OF THE TRUSSES.
5- LIFTING OPERATION OF ROOF PANELS (SLOPE D AND FLAT ROOF).
6- ASSEMBLY OF THE EXTERIOR WALL PANELS.
7- ASSEMBLY OF THE INTERIOR WALL PANELS.

STEEL PROPERTIES

COMPRESSION YIELD STRESS = 36 259.45 psi
POISSON COEFFICIENT = 0.3
DENSITY = 0.28 lbm/in³
TRACTION YIELD STRESS = 36 259.45 psi
TENSILE STRENGTH= 66 717.38 psi
YOUNG MODULUS = 29 000 000 psi

WOOD PROPERTIES

COMPRESSION YIELD STRESS = 841 psi
POISSON COEFFICIENT = 0.35
DENSITY = 0.0020255 lbm/in³
TRACTION YIELD STRESS = 841 psi
TENSILE STRENGTH= 2084 psi
YOUNG MODULUS = 1 500 000 psi

LEGEND:

L: LIVE LOAD
D: DEAD LOAD
P_o: POINT DEAD LOAD

THE BUILDING IS BRACED WITH STEEL DECK (CANAM: P3606 - TYPE 22 - 0,03" THICK) BETWEEN EACH POST, EXCEPT AT THE LOCATIONS OF THE WINDOWS AND DOORS. FOR THE LOCATIONS OF THE WINDOWS AND DOORS SEE THE ARCHITECTURAL DRAWINGS.

No.

REVISIONS

DATE

1

DESIGN DEVELOPMENT DRAWINGS

13-06-06

2

CONSTRUCTION DRAWINGS

06-03-07

3

UPDATE CONSTRUCTION DRAWINGS

07-08-07

4

UPDATE CONSTRUCTION DRAWINGS

07-01-08

NOTES

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ELE=ELECTRICAL
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LSA=LIFE SAFETY AND ADA
MEC=MECHANICAL
STR=STRUCTURAL
SLE=SOLAR ENVELOPE



STAMP:

PROJECT:

SOLAR DECATHLON 2007
TEAM MONTREAL

TITLE:

SPECIFICATIONS

DATE:
07-01-08

DRAWN BY :
ERIC DUBE

SCALE :
NONE

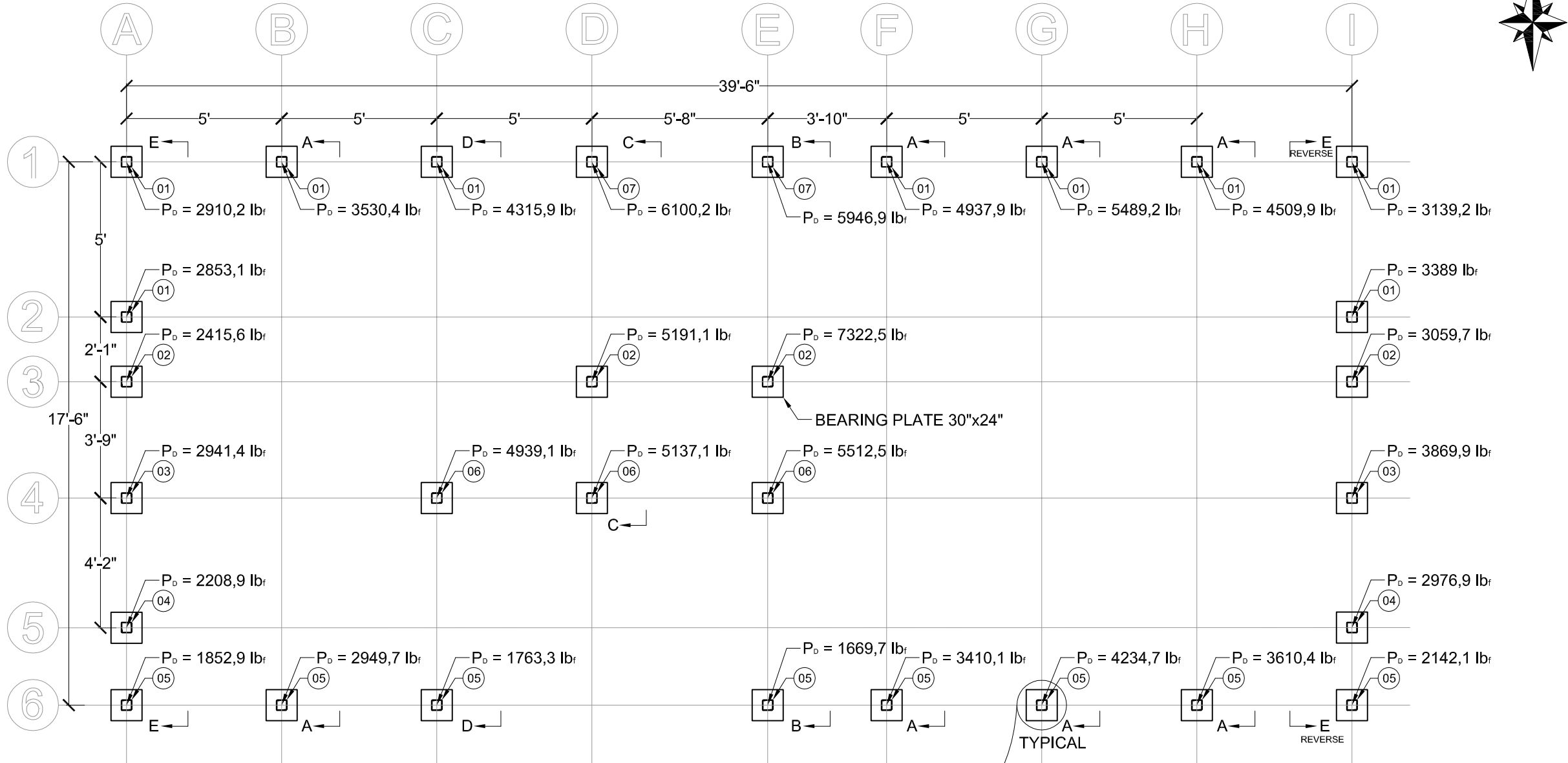
VERIFIED BY :
PHILIPPE BOUTIN

APPROVED BY :
PIERRE BONNIER

PROJECT No. :
SD-07

REVISION :
4

DRAWING No. :
STR -100



1 FOUNDATIONS
STR-200 1/4"=1'-0"

| QTY. | L | I |
|------|-----|-----|
| 29 | 24" | 24" |
| 1 | 30" | 24" |

BEARING PLATE

| PART LIST | | | |
|-----------|------|--------------------|----------------------|
| TYPE | QTY. | PART NUMBER | DESCRIPTION |
| 01 | 8 | 000-0302-01-138-01 | POST 4"x4" (138 in.) |
| 02 | 5 | 000-0302-01-192-01 | POST 4"x4" (192 in.) |
| 03 | 2 | 000-0302-01-174-01 | POST 4"x4" (174 in.) |
| 04 | 2 | 000-0302-01-132-01 | POST 4"x4" (132 in.) |
| 05 | 8 | 000-0302-01-120-01 | POST 4"x4" (120 in.) |
| 06 | 3 | 000-0302-01-162-01 | POST 4"x4" (162 in.) |
| 07 | 2 | 000-0302-01-198-01 | POST 4"x4" (198 in.) |

| No. | REVISIONS | DATE |
|-----|------------------------------|----------|
| 1 | DESIGN DEVELOPMENT DRAWINGS | 13-06-06 |
| 2 | CONSTRUCTION DRAWINGS | 06-03-07 |
| 3 | UPDATE CONSTRUCTION DRAWINGS | 07-08-07 |
| 4 | UPDATE CONSTRUCTION DRAWINGS | 07-01-08 |

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STAMP:

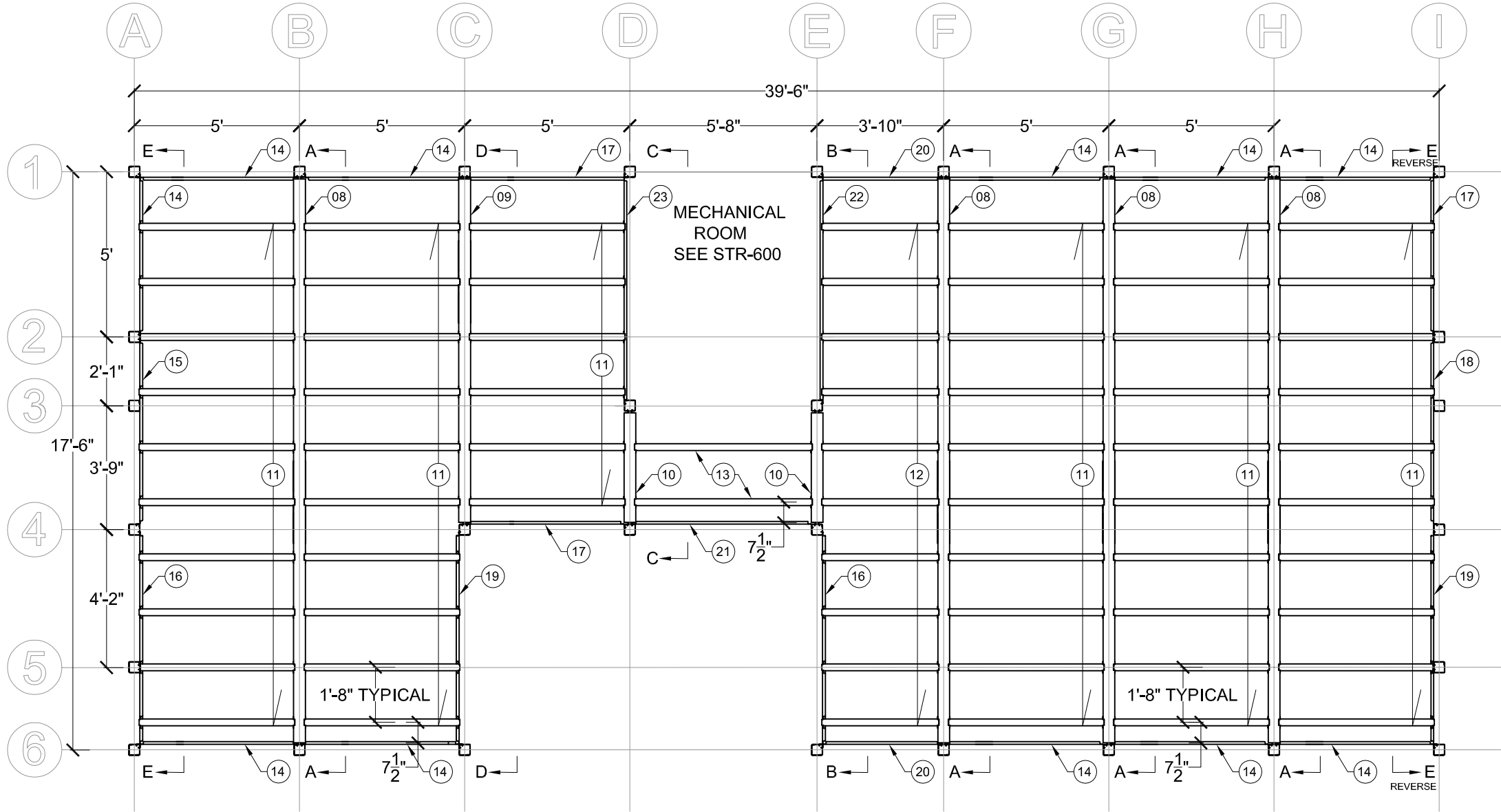
PROJECT:

SOLAR DECATHLON 2007
TEAM MONTREAL

TITLE:

FOUNDATIONS

| | |
|-------------------------|----------------------------------|
| DATE: 07-01-08 | DRAWN BY : ERIC DUBE |
| SCALE : 1/4" - 1'-0" | VERIFIED BY : PHILIPPE BOUTIN |
| PROJECT No. : SD-07 | APPROVED BY : PIERRE BONNIER |
| REVISION : 4 | DRAWING No. : STR -200 |



| No. | REVISIONS | DATE |
|-----|------------------------------|----------|
| 1 | DESIGN DEVELOPMENT DRAWINGS | 13-06-06 |
| 2 | CONSTRUCTION DRAWINGS | 06-03-07 |
| 3 | UPDATE CONSTRUCTION DRAWINGS | 07-08-07 |
| 4 | UPDATE CONSTRUCTION DRAWINGS | 07-01-08 |

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SLE=SOLAR ENVELOPE



STAMP:

PROJECT:

SOLAR DECATHLON 2007
TEAM MONTREAL

TITLE:

FLOOR STRUCTURE

DATE:

07-01-08

SCALE :

1/4" - 1'-0"

PROJECT No. :

SD-07

DRAWN BY :

ERIC DUBE

VERIFIED BY :

PHILIPPE BOUTIN

APPROVED BY :

PIERRE BONNIER

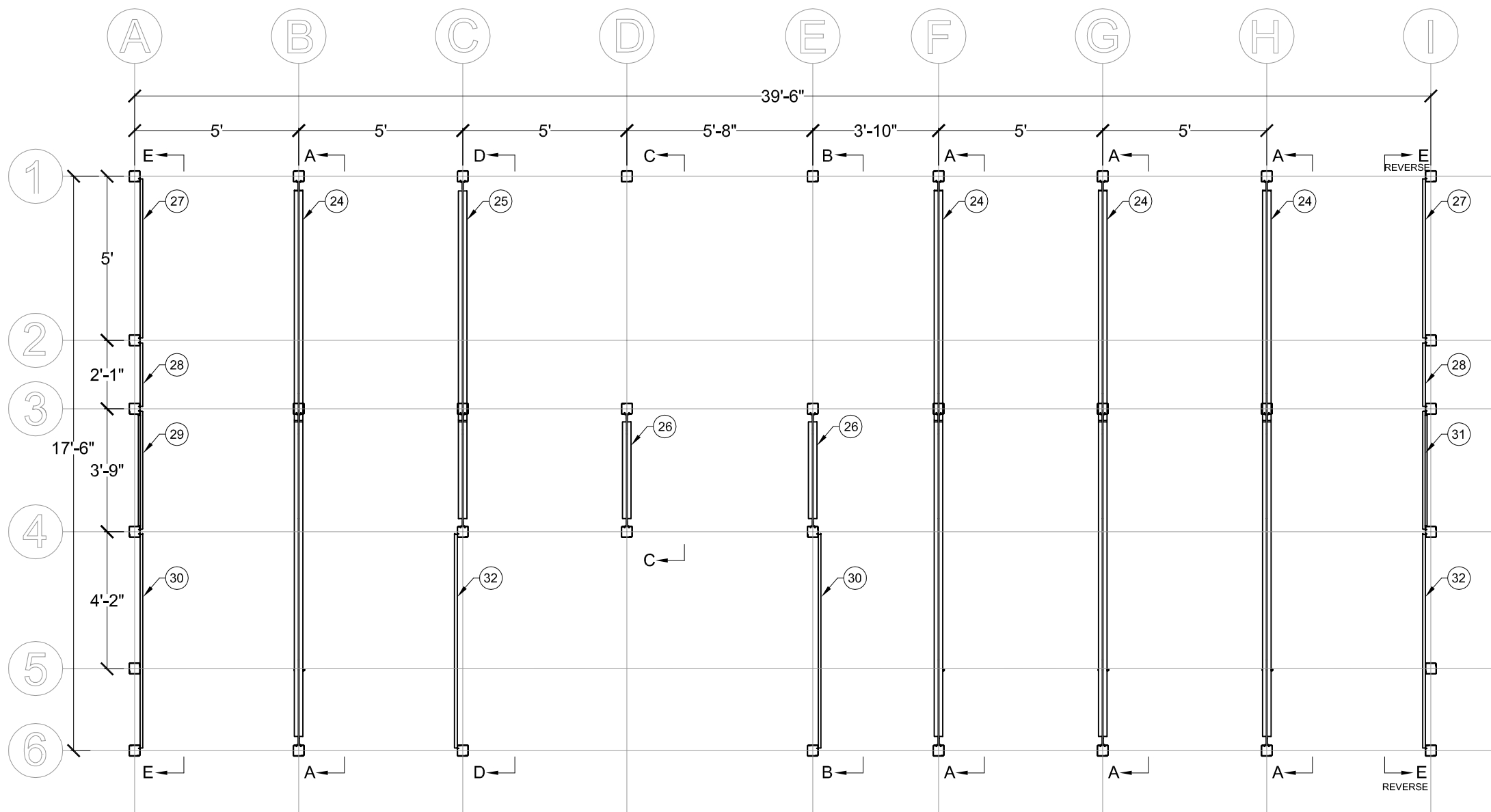
REVISION :

4

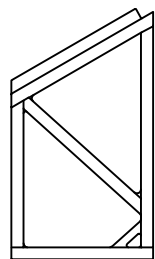
DRAWING No. :

STR -300

| PART LIST | | | |
|-----------|------|--------------------|--------------------------|
| TYPE | QTY. | PART NUMBER | DESCRIPTION |
| 08 | 4 | 007-0404-01-210-01 | PRIMARY JOIST (210 in.) |
| 09 | 1 | 007-0404-01-126-01 | PRIMARY JOIST (126 in.) |
| 10 | 2 | 007-0404-01-041-01 | PRIMARY JOIST (41 in.) |
| 11 | 52 | 000-0405-01-060-01 | SECONDARY JOIST (60 in.) |
| 12 | 10 | 000-0405-01-046-01 | SECONDARY JOIST (46 in.) |
| 13 | 2 | 000-0405-01-068-01 | SECONDARY JOIST (68 in.) |
| 14 | 6 | 007-0409-01-060-01 | PERIMETER JOIST (60 in.) |
| 15 | 1 | 007-0409-01-070-02 | PERIMETER JOIST (70 in.) |
| 16 | 2 | 007-0409-01-080-02 | PERIMETER JOIST (80 in.) |
| 17 | 8 | 007-0409-01-060-02 | PERIMETER JOIST (60 in.) |
| 18 | 1 | 007-0409-01-070-01 | PERIMETER JOIST (70 in.) |
| 19 | 2 | 007-0409-01-080-01 | PERIMETER JOIST (80 in.) |
| 20 | 2 | 007-0409-01-046-01 | PERIMETER JOIST (46 in.) |
| 21 | 1 | 007-0409-01-068-02 | PERIMETER JOIST (68 in.) |
| 22 | 1 | 007-0409-00-085-01 | PERIMETER JOIST (85 in.) |
| 23 | 1 | 007-0409-00-085-02 | PERIMETER JOIST (85 in.) |

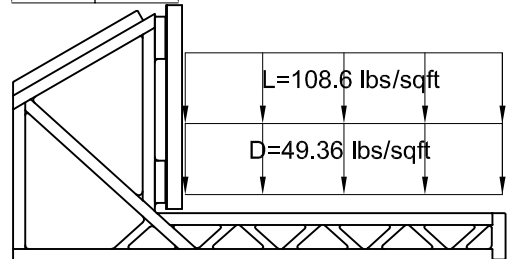


L=58.5 lbs/sqft
D=14.97 lbs/sqft



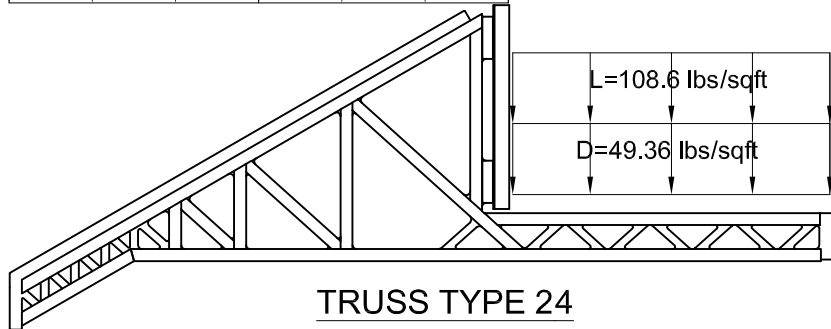
TRUSS TYPE 26

L=58.5 lbs/sqft
D=14.97 lbs/sqft



TRUSS TYPE 25

L=58.5 lbs/sqft
D=14.97 lbs/sqft



TRUSS TYPE 24

| PART LIST | | | |
|-----------|------|--------------------|-------------------------------|
| TYPE | QTY. | PART NUMBER | DESCRIPTION |
| 24 | 4 | 007-0501-000-01 | ROOF TRUSS |
| 25 | 1 | 007-0501-000-03 | ROOF TRUSS |
| 26 | 2 | 007-0501-000-02 | ROOF TRUSS |
| 27 | 2 | 007-0411-01-060-03 | JOIST ROOF PERIMETER (60 in.) |
| 28 | 2 | 007-0411-01-025-01 | JOIST ROOF PERIMETER (25 in.) |
| 29 | 1 | 007-0411-01-045-02 | JOIST ROOF PERIMETER (45 in.) |
| 30 | 2 | 007-0411-01-080-03 | JOIST ROOF PERIMETER (80 in.) |
| 31 | 1 | 007-0411-01-045-01 | JOIST ROOF PERIMETER (45 in.) |
| 32 | 2 | 007-0411-01-080-01 | JOIST ROOF PERIMETER (80 in.) |

1 ROOF STRUCTURE
STR-400 1/4"=1'-0"

| No. | REVISIONS | DATE |
|-----|------------------------------|----------|
| 1 | DESIGN DEVELOPMENT DRAWINGS | 13-06-06 |
| 2 | CONSTRUCTION DRAWINGS | 06-03-07 |
| 3 | UPDATE CONSTRUCTION DRAWINGS | 07-08-07 |
| 4 | UPDATE CONSTRUCTION DRAWINGS | 07-01-08 |

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STAMP:

PROJECT:

SOLAR DECATHLON 2007
TEAM MONTREAL

TITLE:

ROOF STRUCTURE

| | |
|-------------------------|----------------------------------|
| DATE: 07-01-08 | DRAWN BY : ERIC DUBE |
| SCALE : 1/4" = 1'-0" | VERIFIED BY : PHILIPPE BOUTIN |
| PROJECT No. : SD-07 | APPROVED BY : PIERRE BONNIER |
| REVISION : 4 | DRAWING No. : STR -400 |

| No. | REVISIONS | DATE |
|-----|------------------------------|----------|
| 1 | DESIGN DEVELOPMENT DRAWINGS | 13-06-06 |
| 2 | CONSTRUCTION DRAWINGS | 06-03-07 |
| 3 | UPDATE CONSTRUCTION DRAWINGS | 07-08-07 |
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STAMP:

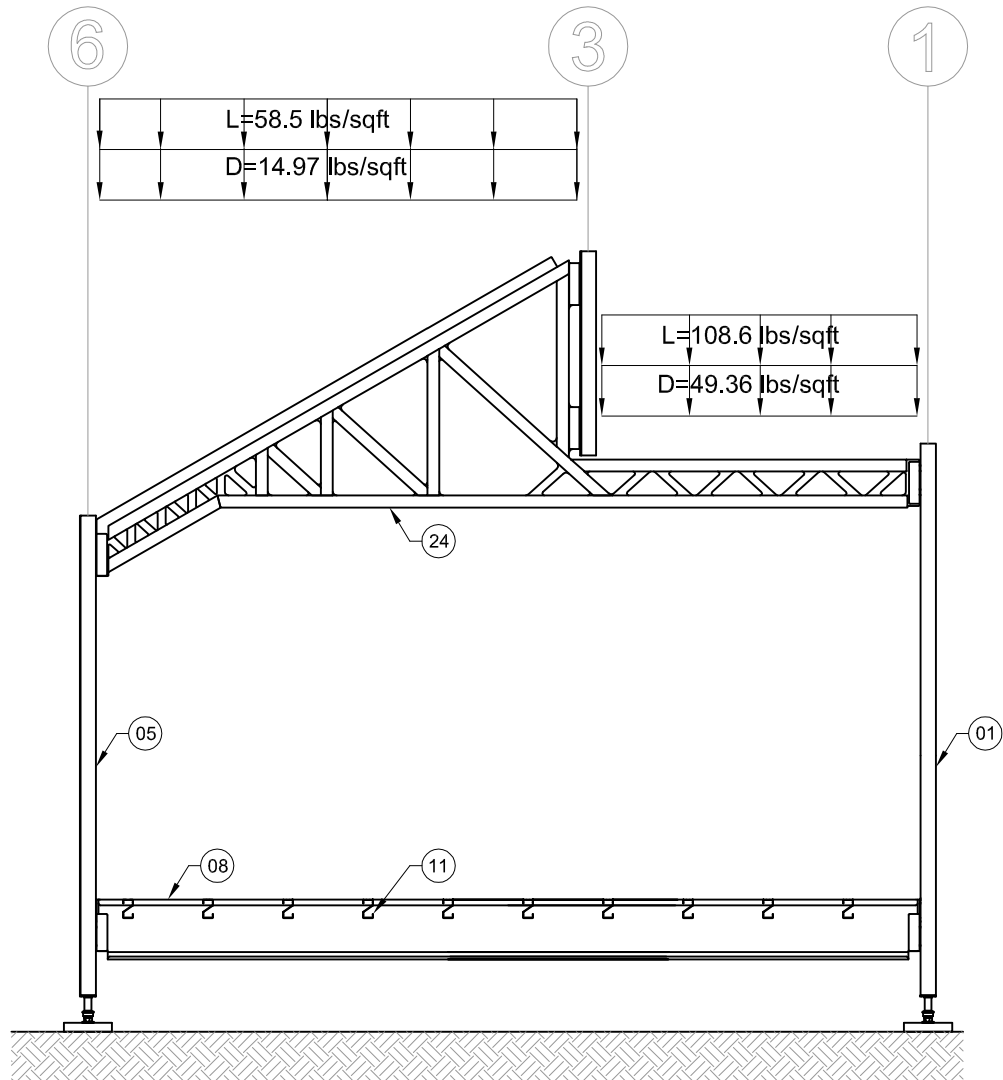
PROJECT:

SOLAR DECATHLON 2007
TEAM MONTREAL

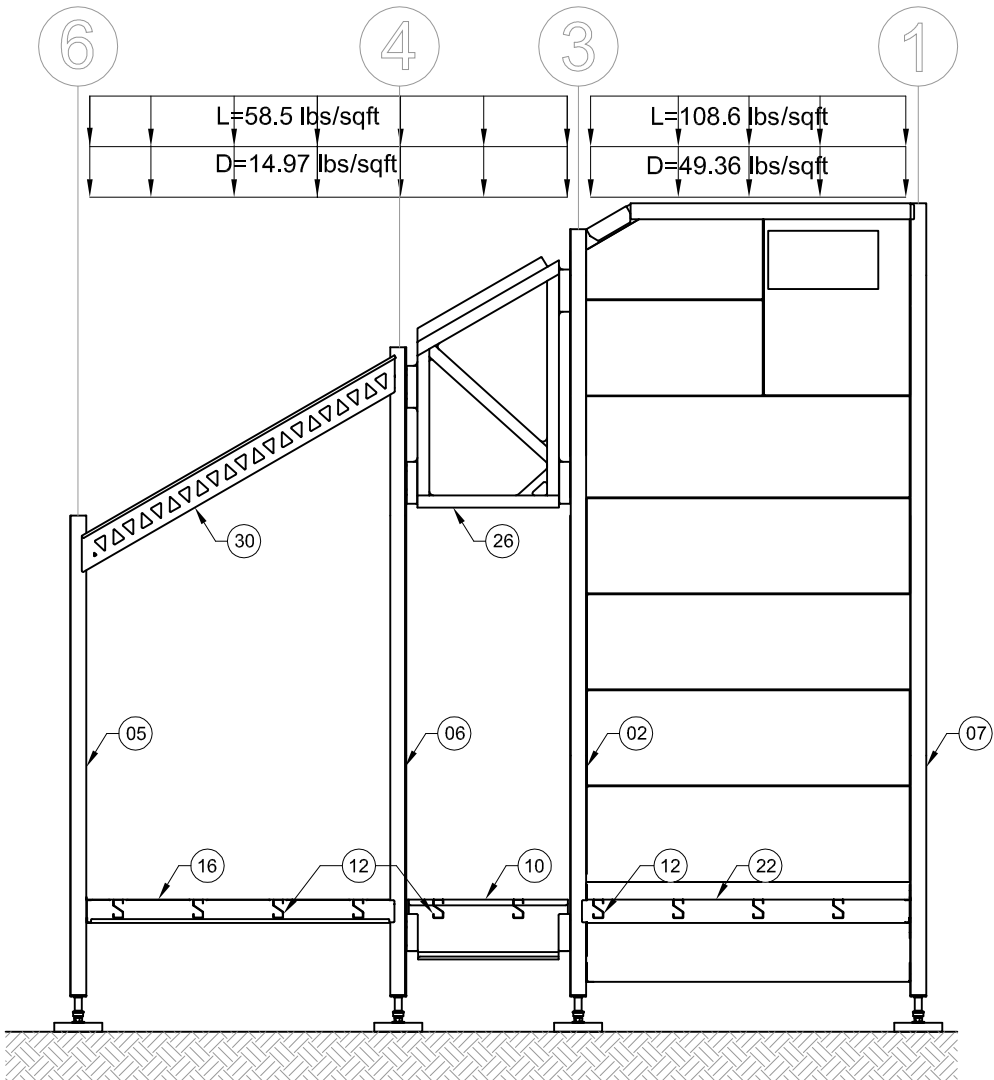
TITLE:

SECTION AA & BB

| | |
|-------------------------|----------------------------------|
| DATE: 07-01-08 | DRAWN BY : ERIC DUBE |
| SCALE : 1/4" - 1'-0" | VERIFIED BY : PHILIPPE BOUTIN |
| PROJECT No. : SD-07 | APPROVED BY : PIERRE BONNIER |
| REVISION : 4 | DRAWING No. : STR -500 |



SECTION A-A



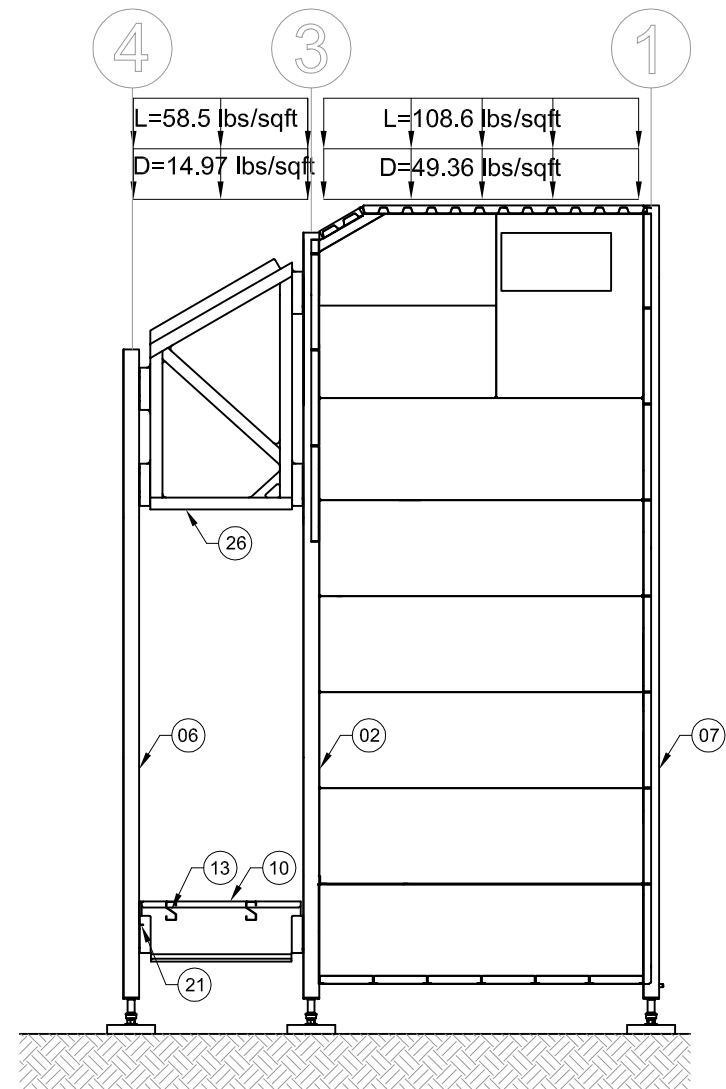
SECTION B-B

1

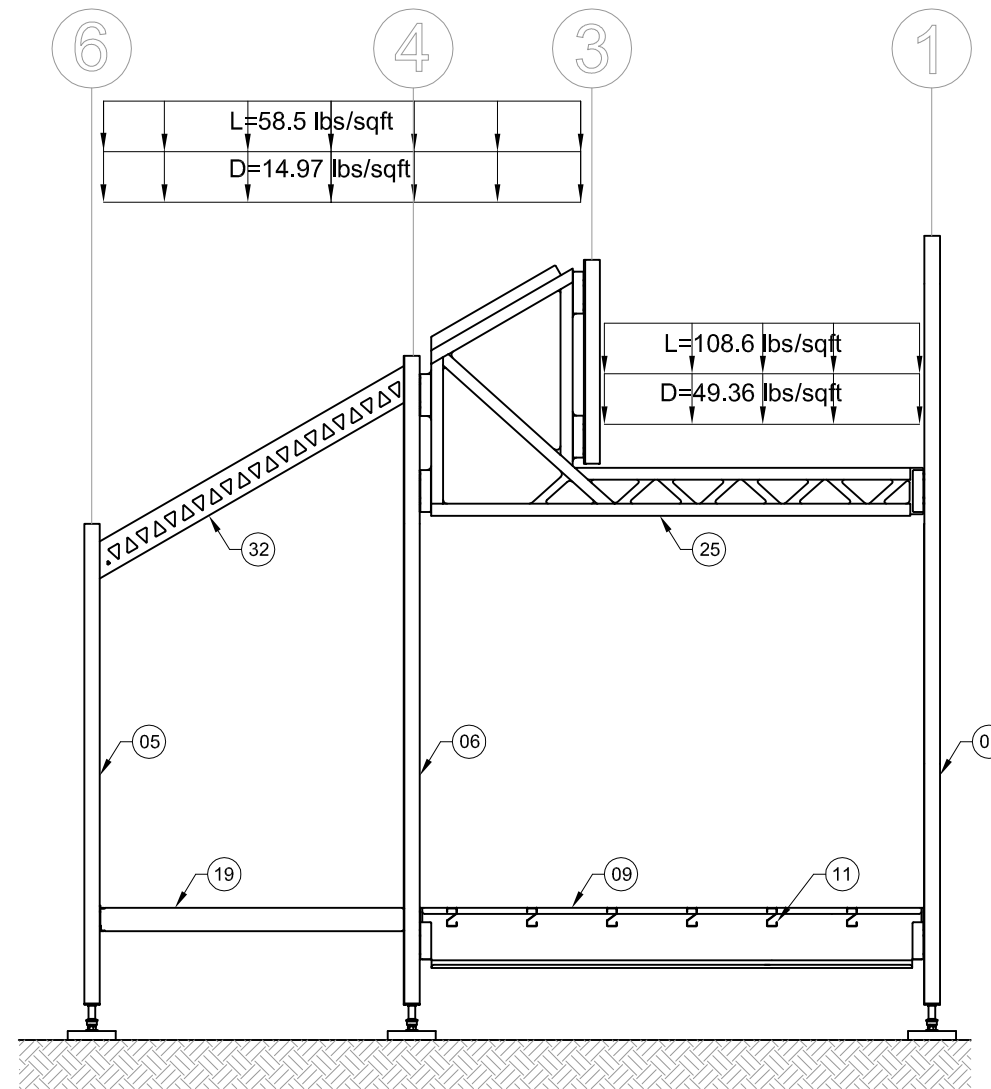
SECTION AA & BB

STR-500

1/4"=1'-0"



SECTION C-C



SECTION D-D

1 SECTION CC & DD
STR-501 1/4"=1'-0"

| No. | REVISIONS | DATE |
|-----|------------------------------|----------|
| 1 | DESIGN DEVELOPMENT DRAWINGS | 13-06-06 |
| 2 | CONSTRUCTION DRAWINGS | 06-03-07 |
| 3 | UPDATE CONSTRUCTION DRAWINGS | 07-08-07 |
| 4 | UPDATE CONSTRUCTION DRAWINGS | 07-01-08 |

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STAMP:

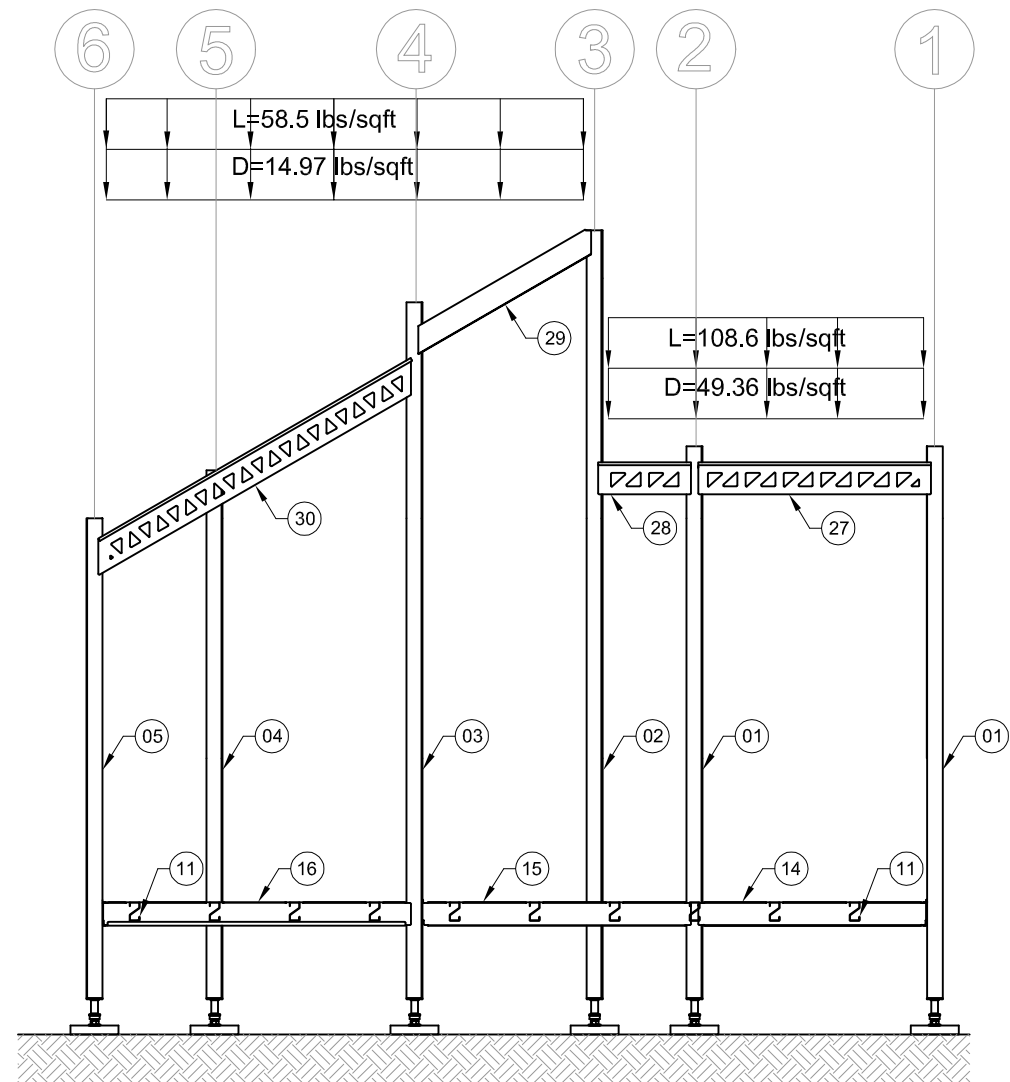
PROJECT:

SOLAR DECATHLON 2007
TEAM MONTREAL

TITLE:

SECTION CC & DD

| | |
|-------------------------|----------------------------------|
| DATE: 07-01-08 | DRAWN BY : ERIC DUBE |
| SCALE : 1/4" - 1'-0" | VERIFIED BY : PHILIPPE BOUTIN |
| PROJECT No. : SD-07 | APPROVED BY : PIERRE BONNIER |
| REVISION : 4 | DRAWING No. : STR -501 |



SECTION E-E

1

STR-502

SECTION EE

1/4"=1'-0"

| No. | REVISIONS | DATE |
|-----|------------------------------|----------|
| 1 | DESIGN DEVELOPMENT DRAWINGS | 13-06-06 |
| 2 | CONSTRUCTION DRAWINGS | 06-03-07 |
| 3 | UPDATE CONSTRUCTION DRAWINGS | 07-08-07 |
| 4 | UPDATE CONSTRUCTION DRAWINGS | 07-01-08 |

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STAMP:

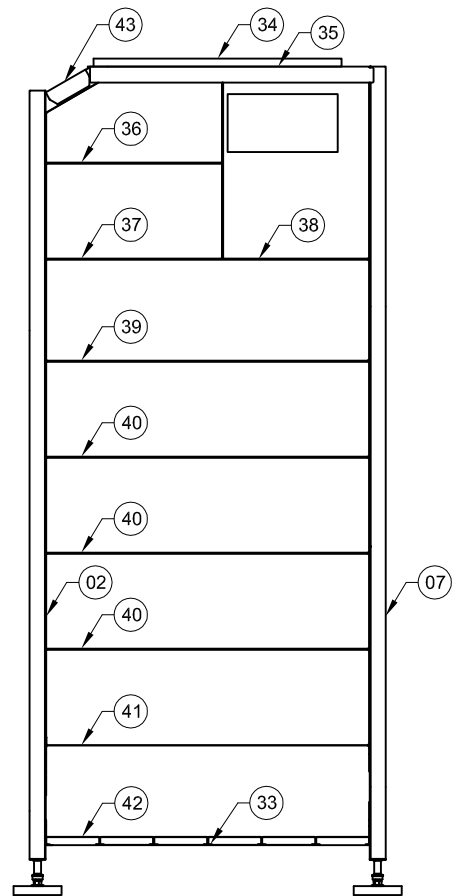
PROJECT:

SOLAR DECATHLON 2007
TEAM MONTREAL

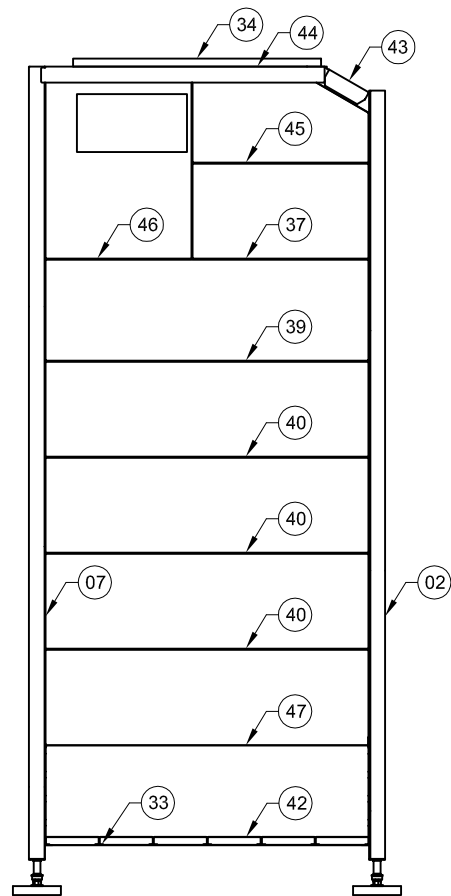
TITLE:

SECTION EE

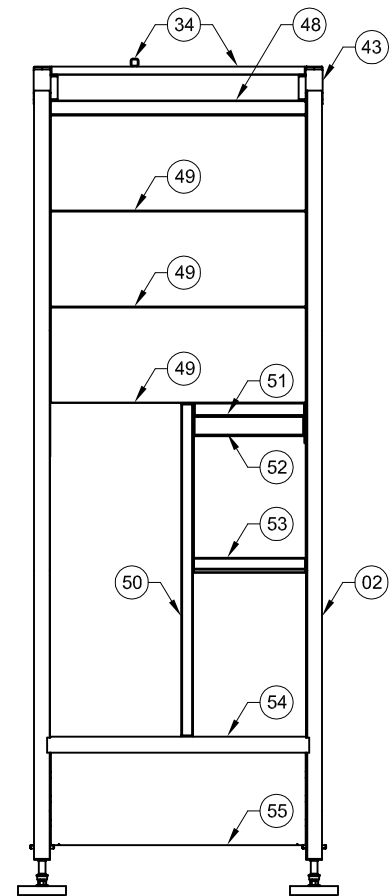
| | | | |
|---------------|--------------|---------------|-----------------|
| DATE: | 07-01-08 | DRAWN BY : | ERIC DUBE |
| SCALE : | 1/4" - 1'-0" | VERIFIED BY : | PHILIPPE BOUTIN |
| | | APPROVED BY : | PIERRE BONNIER |
| PROJECT No. : | SD-07 | REVISION : | 4 |
| | | DRAWING No. : | STR -502 |



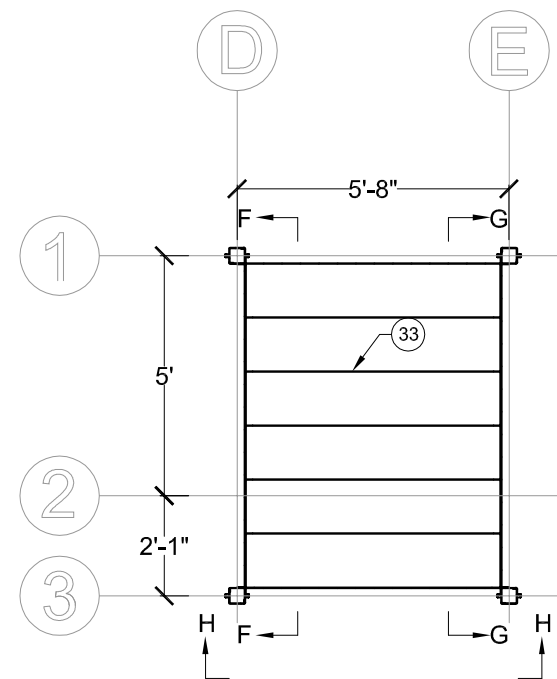
SECTION F-F



SECTION G-G



SECTION H-H



PLAN

| PART LIST | | | |
|-----------|------|--------------------|---------------------|
| TYPE | QTY. | PART NUMBER | DESCRIPTION |
| 33 | 6 | 007-2002-02 | DECK FLOOR (64 in.) |
| 34 | 6 | iSquareTube-ASTM | 2 x 2 x 1/4 in. |
| 35 | 1 | 007-0409-03-085-02 | M-BOX JOIST |
| 36 | 1 | 007-2001-00-000-16 | M-BOX PANEL |
| 37 | 2 | 007-2001-00-000-13 | M-BOX PANEL |
| 38 | 1 | 007-2001-00-000-24 | M-BOX PANEL |
| 39 | 2 | 007-2001-00-000-22 | M-BOX PANEL |
| 40 | 6 | 007-2001-00-000-03 | M-BOX PANEL |
| 41 | 1 | 007-2001-00-000-27 | M-BOX PANEL |
| 42 | 2 | 007-2001-00-000-02 | M-BOX PANEL |
| 43 | 2 | 007-0409-00-000-03 | M-BOX JOIST |
| 44 | 1 | 007-0409-03-085-03 | M-BOX JOIST |
| 45 | 1 | 007-2001-00-000-17 | M-BOX PANEL |
| 46 | 1 | 007-2001-00-000-23 | M-BOX PANEL |
| 47 | 1 | 007-2001-00-000-20 | M-BOX PANEL |
| 48 | 1 | 007-2001-00-000-14 | M-BOX PANEL |
| 49 | 8 | 007-2001-00-000-09 | M-BOX PANEL |
| 50 | 1 | 007-9008-02 | CROSS-BRACE |
| 51 | 1 | 007-2001-00-000-26 | M-BOX PANEL |
| 52 | 1 | 007-9008-03 | CROSS-BRACE |
| 53 | 1 | 007-9008-18 | CROSS-BRACE |
| 54 | 1 | 007-0409-03-068-01 | M-BOX JOIST |
| 55 | 2 | 007-2001-00-000-04 | M-BOX PANEL |

| No. | REVISIONS | DATE |
|-----|------------------------------|----------|
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STAMP:

PROJECT:

SOLAR DECATHLON 2007
TEAM MONTREAL

TITLE:

MECHANICAL ROOM

| | |
|-------------------------|----------------------------------|
| DATE: 07-01-08 | DRAWN BY : ERIC DUBE |
| SCALE : 1/4" = 1'-0" | VERIFIED BY : PHILIPPE BOUTIN |
| PROJECT No. : SD-07 | REVISION : 4 |
| | DRAWING No. : STR -600 |

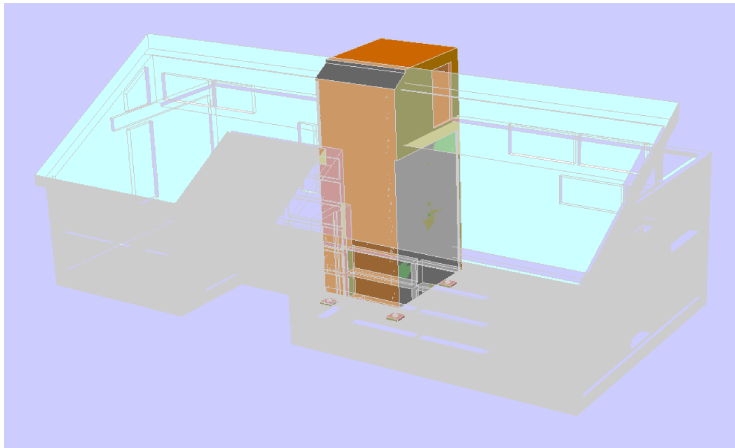


FIGURE 1
THE MECHANICAL AND THE BATHROOM MODULE WILL BE LIFTED INTO PLACE BY THE CRANE.

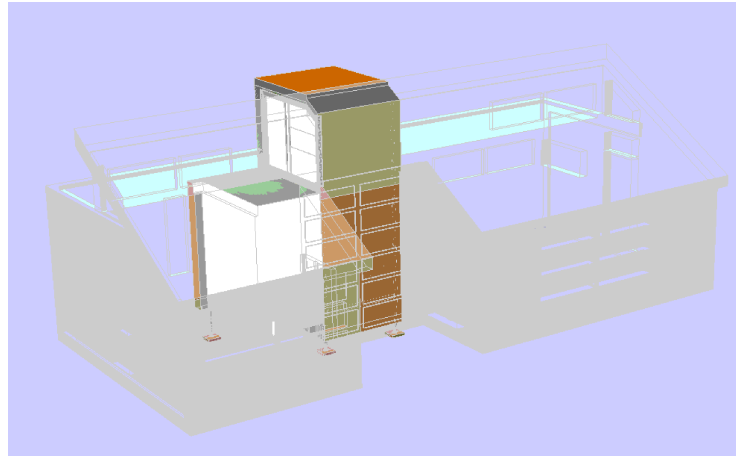


FIGURE 2

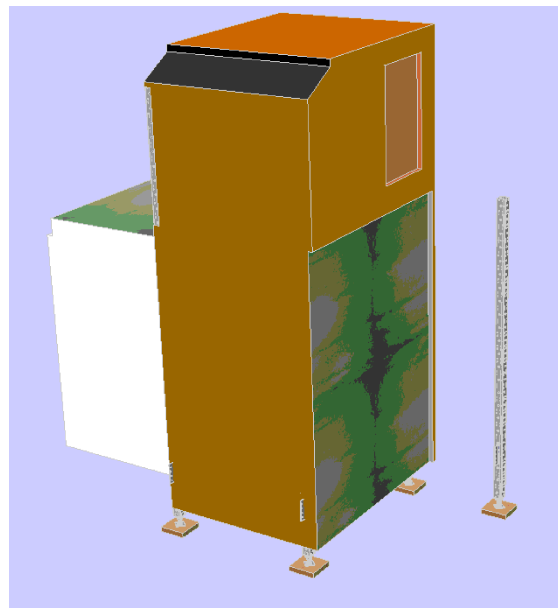


FIGURE 3
INSTALLATION OF THE FIRST COLUMN AND THE STRUCTURAL ELEMENTS CONNECTING IT TO THE MECHANICAL MODULE.



FIGURE 4
INSTALLATION OF THE FIRST COLUMN AND THE STRUCTURAL ELEMENTS CONNECTING IT TO THE MECHANICAL MODULE.

- ASS-001 ASSEMBLY 1 @ 4

| No. | REVISIONS | DATE |
|-----|------------------------------|----------|
| 1 | DESIGN DEVELOPMENT DRAWINGS | 13-06-06 |
| 2 | CONSTRUCTION DRAWINGS | 06-03-07 |
| 3 | UPDATE CONSTRUCTION DRAWINGS | 07-08-07 |
| | | |
| | | |

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STAMP:

PROJECT:

SOLAR DECATHLON 2007
TEAM MONTREAL

TITLE:

ASSEMBLY 1 @ 4

| | | | |
|---------------|----------|---------------|---------------|
| DATE: | 07-01-08 | DRAWN BY : | TEAM MONTREAL |
| SCALE : | -- | VERIFIED BY : | TEAM MONTREAL |
| PROJECT No. : | SD-07 | APPROVED BY : | |
| REVISION : | 4 | DRAWING No. : | ASS - 001 |

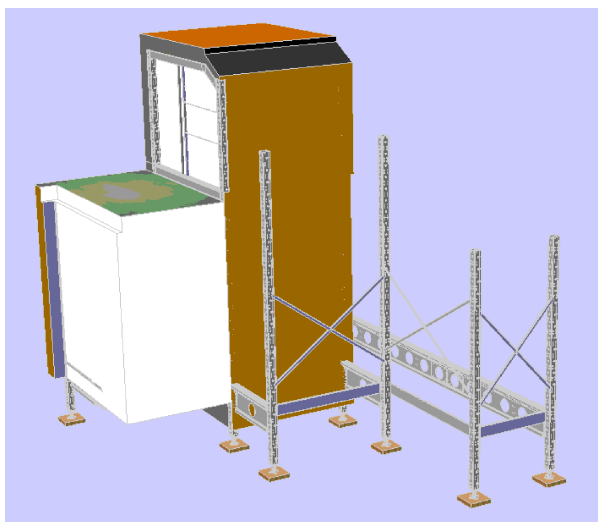


FIGURE 5
THE SNAP-IN FLOOR JOIST AND THE TEMPORARY BRACING CROSSES ARE USED TO HOLD THE COLOMNS VERTICALLY. FINAL CONFIGURATION OF THE STRUCTURAL FRAME IS ILLUSTRATED IN FIGURE 6.

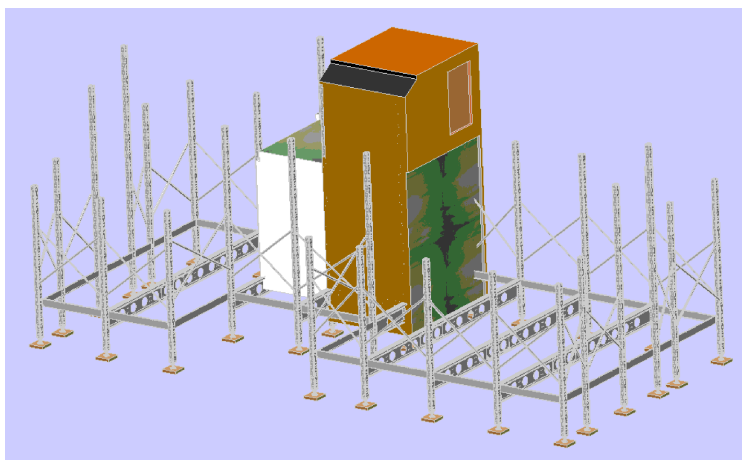


FIGURE 6

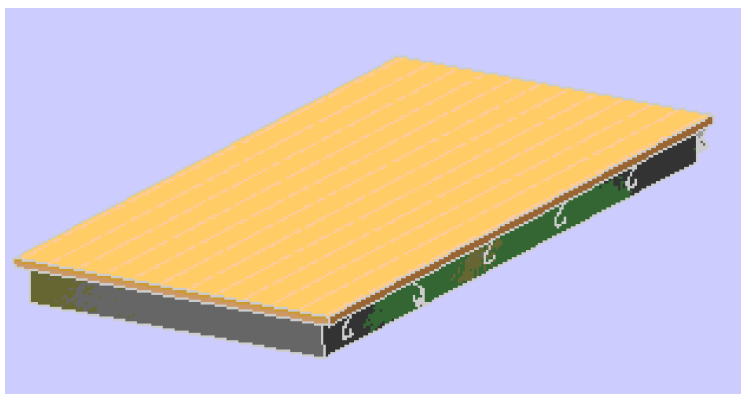


FIGURE 7
THE POSITIONNING OF THE FLOOR PANELS FOLLOWS AUTOMATICALLY FROM THE CORRELATION TO THE CORRESPONDING SUPPORTS AND SEVERAL OTHER POINTS OF REFERENCE.

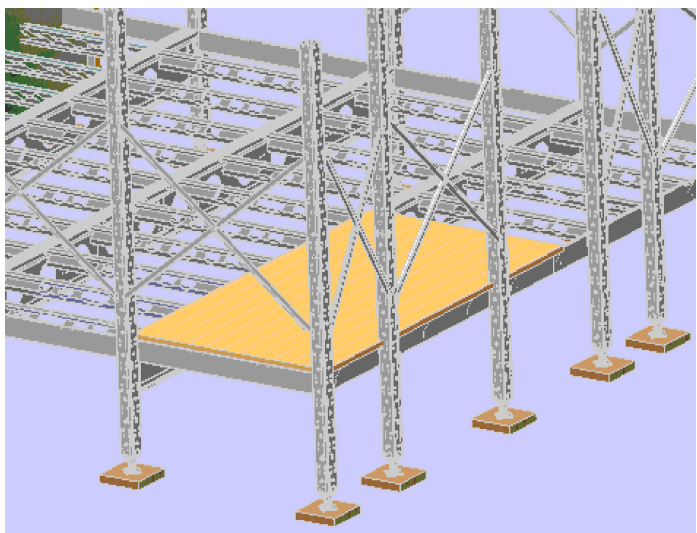


FIGURE 8

| No. | REVISIONS | DATE |
|--|------------------------------|---------------|
| 1 | DESIGN DEVELOPMENT DRAWINGS | 13-06-06 |
| 2 | CONSTRUCTION DRAWINGS | 06-03-07 |
| 3 | UPDATE CONSTRUCTION DRAWINGS | 07-08-07 |
| | | |
| | | |
| <p>NOTES</p> <p>ARC=ARCHITECTURAL ASS=ASSEMBLY DET=DETAILS DIS=DISASSEMBLY ELE=ELECTRICAL INT=INTERIORS AND FINISH LSA=LIFE SAFETY AND ADA MEC=MECHANICAL STR=STRUCTURAL SLE=SOLAR ENVELOPE</p> | | |
| | | |
| STAMP: | | |
| PROJECT: | | |
| SOLAR DECATHLON 2007 TEAM MONTREAL | | |
| TITLE: | | |
| ASSEMBLY 5 @ 8 | | |
| DATE: | DRAWN BY : | |
| 07-01-08 | TEAM MONTREAL | |
| SCALE : | VERIFIED BY : | |
| -- | TEAM MONTREAL | |
| | APPROVED BY : | |
| PROJECT No. : | REVISION : | DRAWING No. : |
| SD-07 | 4 | ASS - 002 |

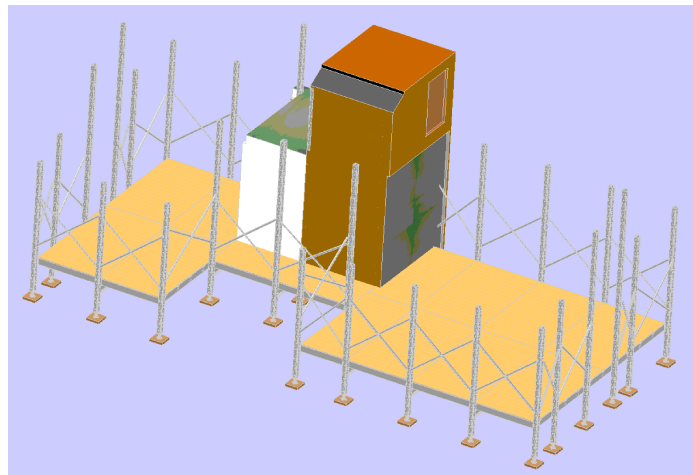


FIGURE 9
FINAL CONFIGURATION OF THE FLOOR IS ILLUSTRATED IN FIGURE 9.



FIGURE 10
THE ROOF TRUSSES WILL ARRIVE AT THE COMPETITION SITE IN THE CONFIGURATION SHOWN IN FIGURE 10.

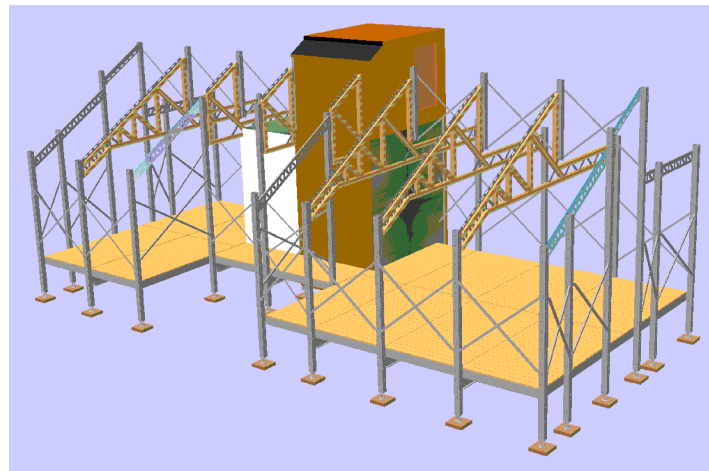


FIGURE 11
THE MOUNTING OF THE TRUSSES WILL BE PERFORMED BY AN ELECTRONIC DEVICE MOUNTED ON A MOBILE BASE. AFTER WE ENSURE A RAPID AND PRECISE ASSEMBLY OF THE ROOF.

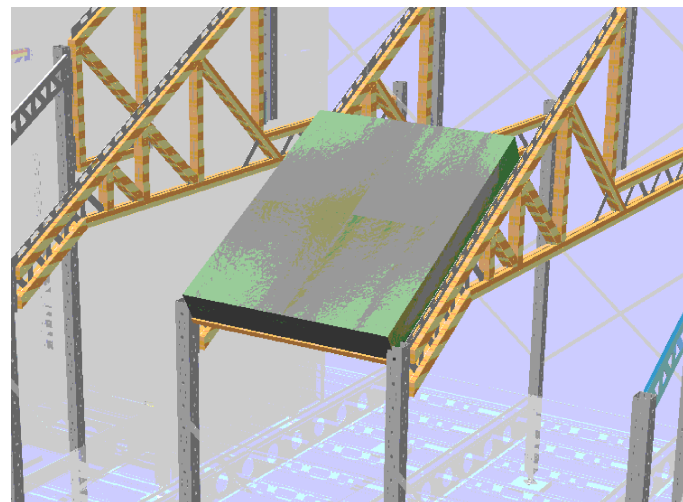


FIGURE 12

| No. | REVISIONS | DATE |
|-----|------------------------------|----------|
| 1 | DESIGN DEVELOPMENT DRAWINGS | 13-06-06 |
| 2 | CONSTRUCTION DRAWINGS | 06-03-07 |
| 3 | UPDATE CONSTRUCTION DRAWINGS | 07-08-07 |
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NOTES

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MEC=MECHANICAL
STR=STRUCTURAL
SLE=SOLAR ENVELOPE



STAMP:

PROJECT:

SOLAR DECATHLON 2007
TEAM MONTREAL

TITLE:

ASSEMBLY 9 @ 12

DATE:

07-01-08

SCALE :

--

PROJECT No. :

SD-07

DRAWN BY :

TEAM MONTREAL

VERIFIED BY :

TEAM MONTREAL

APPROVED BY :

REVISION :

4

DRAWING No. :

ASS - 003



ASSEMBLY 9 @12

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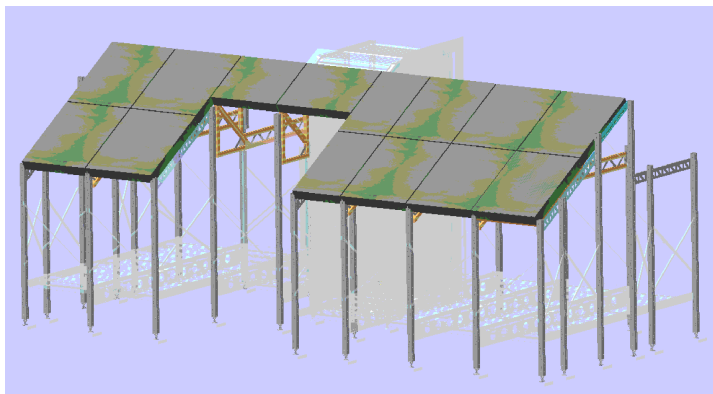


FIGURE 13
ONCE THE PANELS ARE INSTALLED, THE JOINTS WILL BE FILLED BY A PORTABLE URETHANE PISTOL. THE WALL PANEL WILL BE FIXED BY BRACKETS THAT SERVE TO POSITION AND SECURE THE PANELS ON THE COLOMNS.

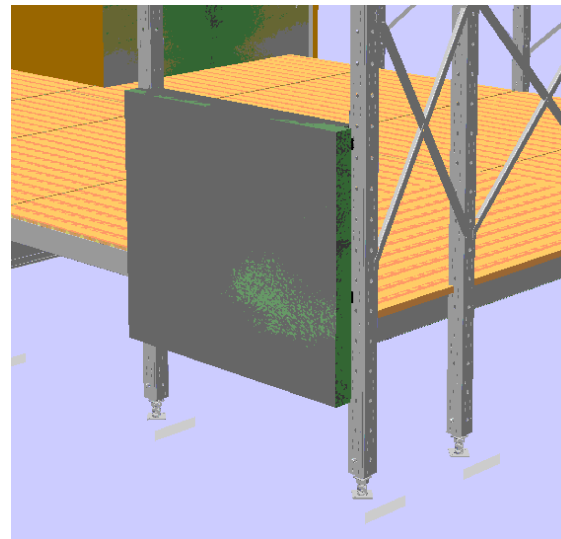


FIGURE 14

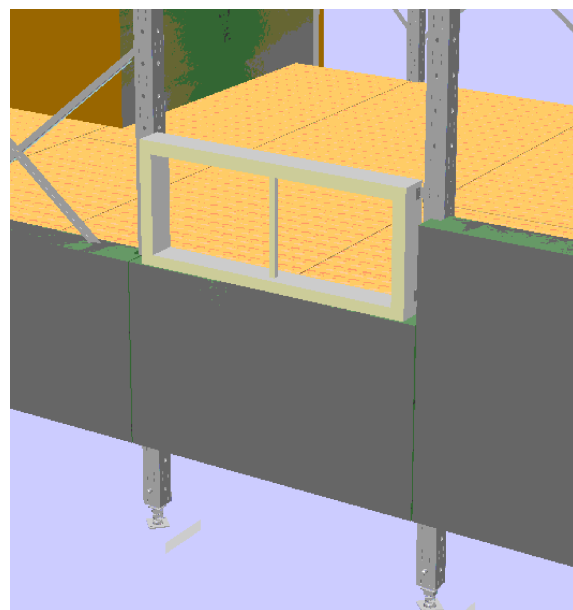


FIGURE 15
THE WINDOWS WILL BE INSTALLED EXACTLY LIKE THE WALL PANEL.

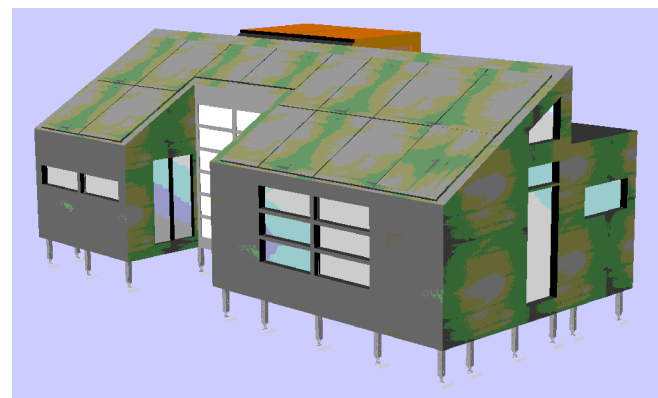


FIGURE 16
SIMILAR TO THE ROOF, THE JOINTS BETWEEN EACH PANEL WILL BE SEALED BY A PORTABLE URETHENE PISTOL.

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TEAM MONTREAL

TITLE:

ASSEMBLY 13 @ 16

| | |
|------------------------|--------------------------------|
| DATE: 07-01-08 | DRAWN BY : TEAM MONTREAL |
| SCALE : -- | VERIFIED BY : TEAM MONTREAL |
| PROJECT No. : SD-07 | REVISION : 4 |
| | DRAWING No. : ASS - 004 |

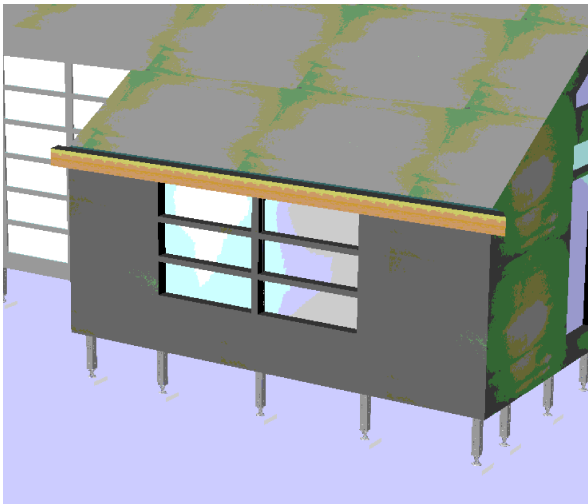


FIGURE 17
ONCE THE OVERHANGS ARE INSTALLED, THE PROTECTIVE IMPERMEABLE MEMBRANE CAN BE SEALED ON.

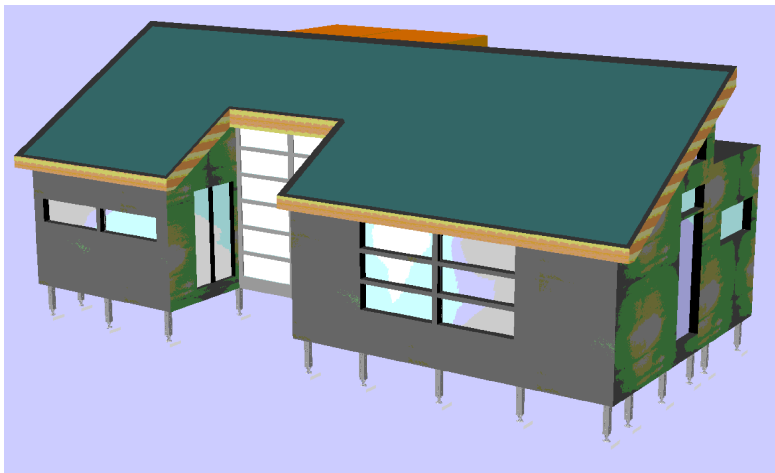


FIGURE 18
ONCE THE OVERHANGS ARE INSTALLED, THE PROTECTIVE IMPERMEABLE MEMBRANE CAN BE SEALED ON.

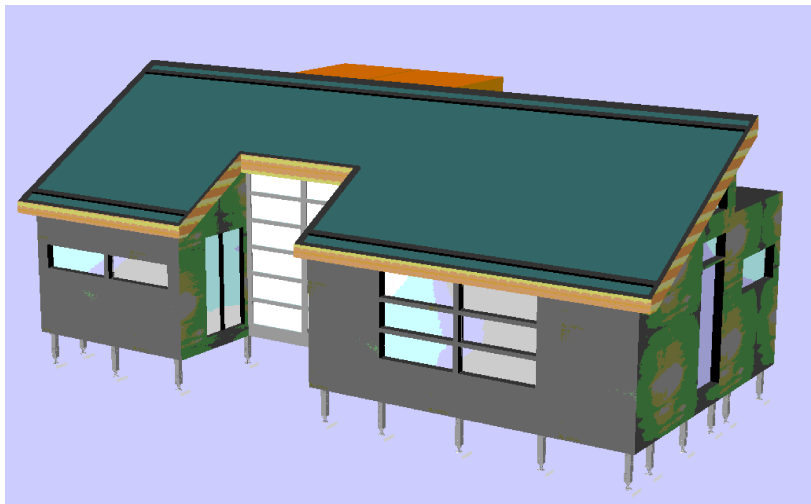


FIGURE 19
THE PHOTOVOLTAÏC PANELS ARE SUPPORTED BY A FRAME THAT IS PLACED ON THE IMPERMEABLE MEMBRANE.

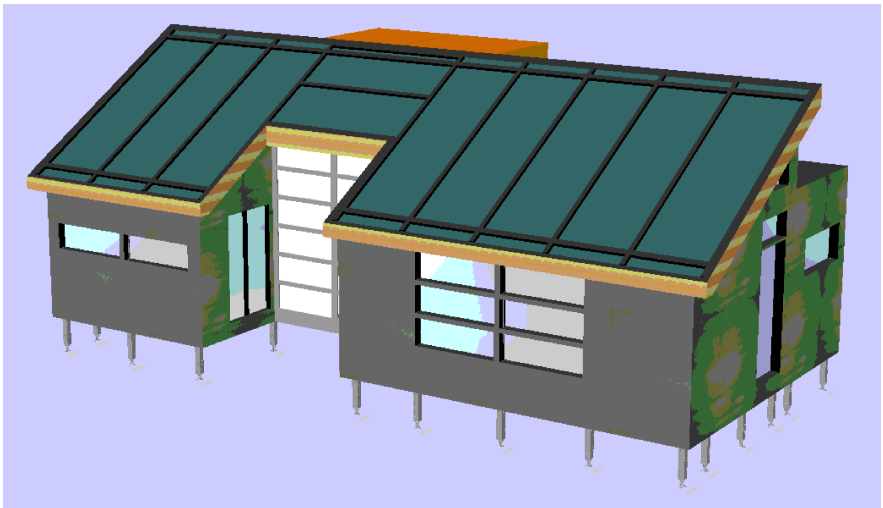


FIGURE 20
THE PHOTOVOLTAÏC PANELS ARE SUPPORTED BY A FRAME THAT IS PLACED ON THE IMPERMEABLE MEMBRANE.

| No. | REVISIONS | DATE |
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PROJECT:

SOLAR DECATHLON 2007
TEAM MONTREAL

TITLE:

ASSEMBLY 17 @ 20

| | |
|------------------------|--------------------------------|
| DATE: 07-01-08 | DRAWN BY : TEAM MONTREAL |
| SCALE : -- | VERIFIED BY : TEAM MONTREAL |
| PROJECT No. : SD-07 | REVISION : 4 |
| | DRAWING No. : ASS - 005 |

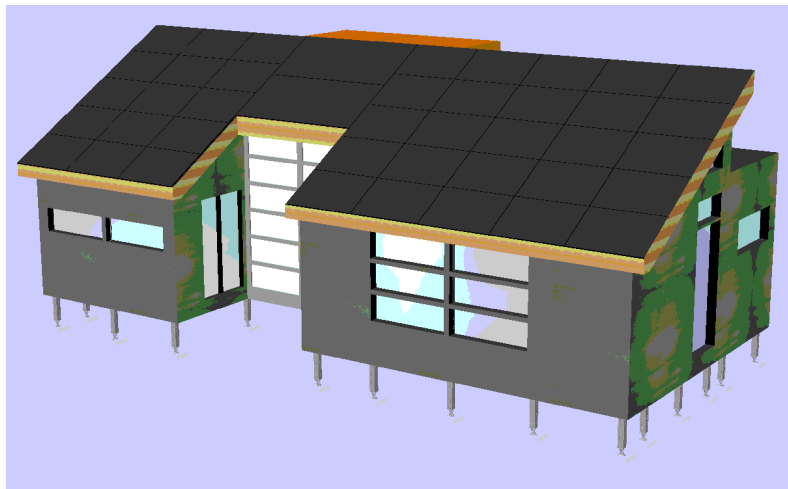


FIGURE 21
 FINALLY EACH PANEL WILL BE INSTALLED AND CONNECTED TO EACH OTHERS.

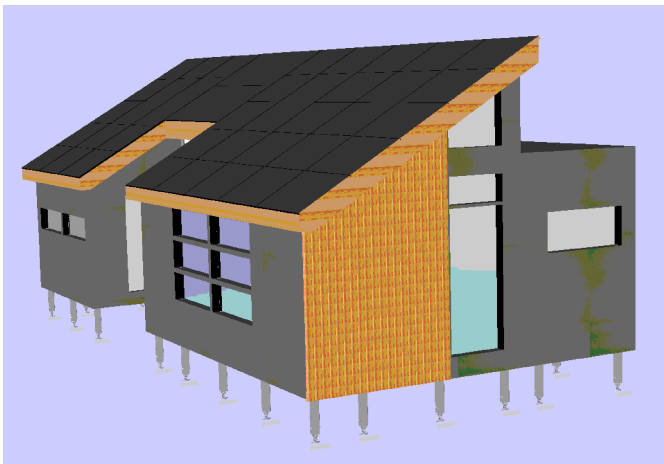


FIGURE 22
 THE EXTERIOR FINISHING PANELS ARE POSITIONED VERTCALLY AND CROSSED IN THE BACK BY HORIZONTAL PLANKS.

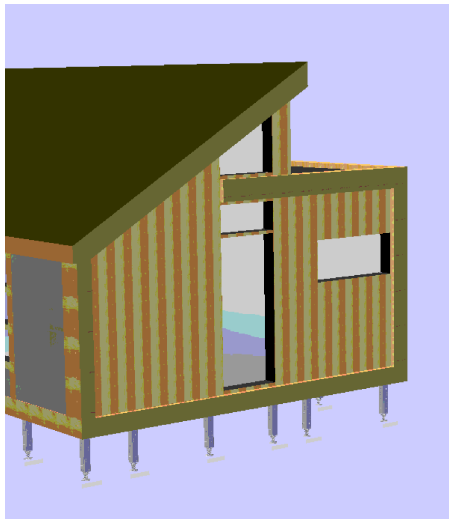


FIGURE 21
 THE SAME PRINCIPLE FOR ATTACHING THE LARGE WOODEN DECORATIVE PIECES.

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| | | |
| NOTES | | |
| ARC=ARCHITECTURAL ASS=ASSEMBLY DET=DETAILS DIS=DISASSEMBLY ELE=ELECTRICAL INT=INTERIORS AND FINISH LSA=LIFE SAFETY AND ADA MEC=MECHANICAL STR=STRUCTURAL SLE=SOLAR ENVELOPE | | |
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| STAMP: | | |
| PROJECT: | | |
| SOLAR DECATHLON 2007 TEAM MONTREAL | | |
| TITLE: | | |
| ASSEMBLY 21 @ 23 | | |
| DATE: | DRAWN BY : | |
| 07-01-08 | TEAM MONTREAL | |
| SCALE : | VERIFIED BY : | |
| -- | TEAM MONTREAL | |
| | APPROVED BY : | |
| PROJECT No. : | REVISION : | DRAWING No. : |
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| MEC - 002 | MECHANICAL SYSTEMS DIAGRAM |
| MEC - 003 | VENTILATION DISTRIBUTION & EVACUATION |
| MEC - 004 | RADIANT FLOOR |
| MEC - 005 | PLUMBING DIAGRAM |
| MEC - 006 | PLUMBING SUPPLY |
| MEC - 007 | PLUMBING DRAINAGE |

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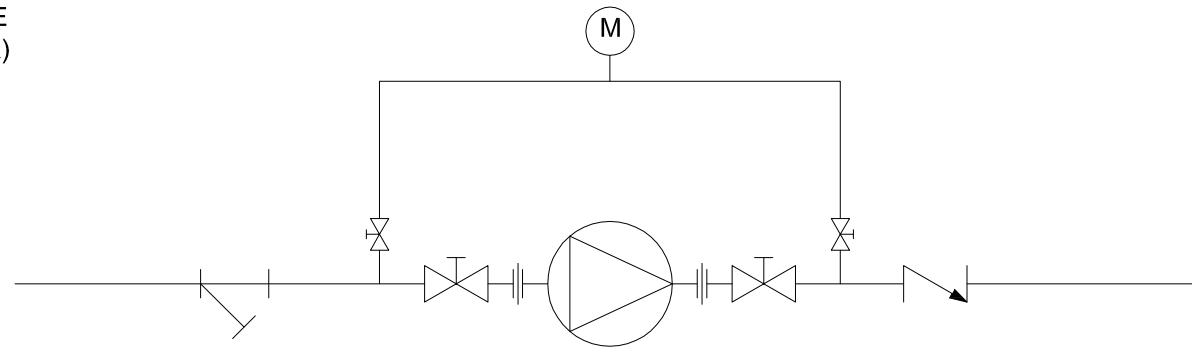
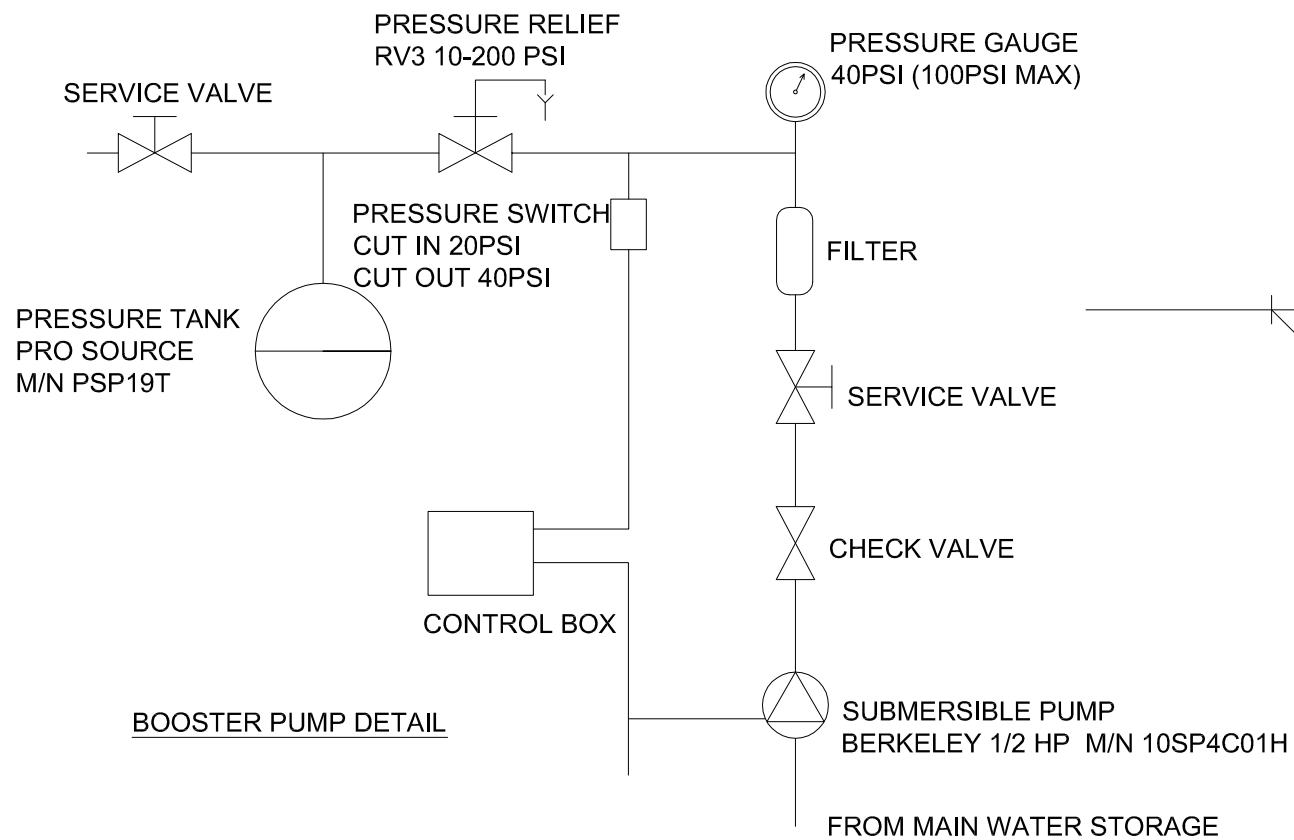
PROJECT:

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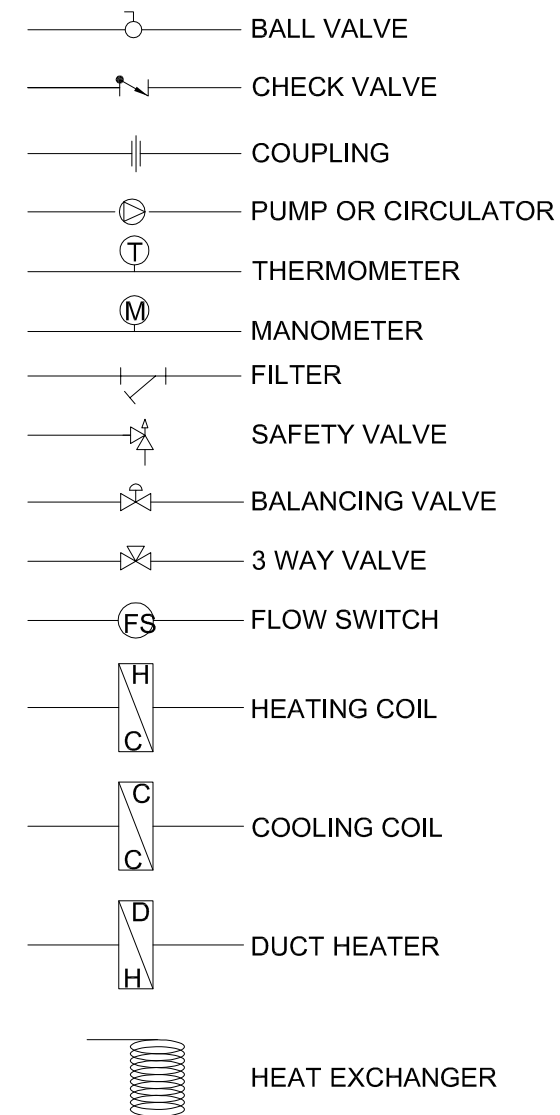
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| SCALE : | VERIFIED BY : TEAM MONTREAL | |
| | APPROVED BY : | |
| PROJECT No. : SD-07 | REVISION : 4 | DRAWING No. : MEC - 000 |



TYPICAL PUMP INSTALLATION



| No. | REVISIONS | DATE |
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PROJECT:

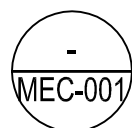
SOLAR DECATHLON 2007
TEAM MONTREAL

TITLE:

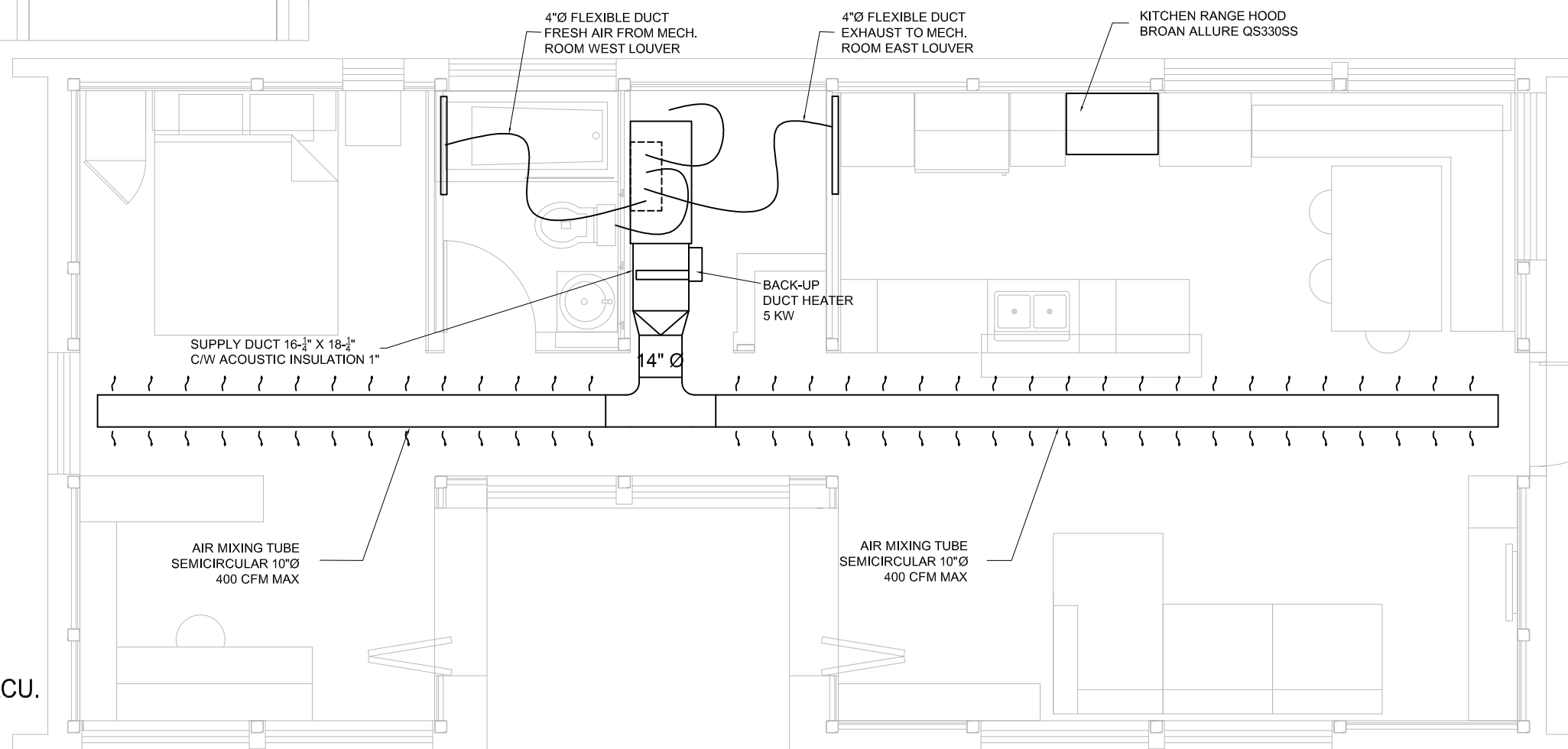
MECHANICAL LEGEND &
EQUIPMENT LIST

| | | |
|------------------------|--------------------------|----------------------------|
| DATE: 07-01-08 | DRAWN BY : G. D-R. | |
| SCALE : - | VERIFIED BY : G. D-R. | |
| PROJECT No. : SD-07 | REVISION : 4 | DRAWING No. : MEC - 001 |

| SD07 - Team Montreal - Mechanical Equipments | | | | | | |
|--|-------------------------------|---------|-----------------------|----------------|------------------|------------|
| Qty. | Description | TAG | Max Capacity / Power | Brand | Model No. | Location |
| 2 | Solar thermal collectors | STC | 21 000 BTU/day | Stiebel Eltron | Sol 25 plus | Roof |
| 1 | Solar pump | P1 | 8 gpm | Stiebel Eltron | WILO star ST20/6 | Mech. Room |
| 1 | Solar tank | ST | 119 US Gal. | Thermo2000 | Turbomax109 | Mech. Room |
| 1 | Expansion tank | SET | 2 Gal. | Armtrol | Extrol #15 | Mech. Room |
| 1 | Instant water heater | IWH | 3.3 kW | Stiebel Eltron | DHC-3-2 | Mech. Room |
| 1 | Waste water tank | WWT | 500 US Gal. | Norwesco | 40148 | Outside |
| 1 | Potable water tank | PWT | 500 US Gal. | Norwesco | 40148 | Outside |
| 1 | Radiant floor panel | RFP | 6 loops | IPEX | 489953 | Mech. Room |
| 1 | Air handling unit | AHU | 800 CFM | First Co. | 8MB-3HW | Mech. Room |
| 1 | Heat recovery ventilator | HRV | 70 CFM | Fantech | VHR 704 | Mech. Room |
| 1 | Fluid cooler | FC | 2 tons | I.E.C. | HPY-08 | Mech. Room |
| 1 | Heat pump | HP | 1.5 ton | Geoernegy | GE-R020 | Mech. Room |
| 1 | Cold storage tank | CST | 48 US GAL | Thermo2000 | Turbomax44 | Mech. Room |
| 1 | Hot storage Tank | HST | 48 US GAL | Thermo2000 | Turbomax44 | Mech. Room |
| 1 | Heating expansion tank | HET | 2 Gal. | Armtrol | Extrol #15 | Mech. Room |
| 1 | Domestic pressure pump | P5 | 10 gpm / 1/2 HP | Berkeley | 10SP4C01H | Outside |
| 1 | Domestic water expansion tank | DET | 19 Gal. | Pro Source | PSP19T | Mech. Room |
| 2 | Water pumps | P3 ; P4 | 30 gpm / 35 ft. water | Grundfos | UP26-116F | Mech. Room |

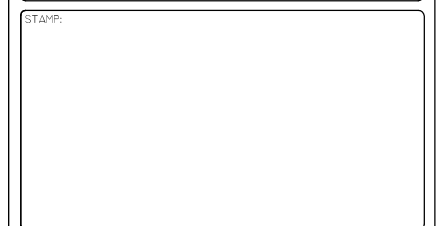


MECH. LEGEND & EQUIP. LIST



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TITLE:

VENTILATION
DISTRIBUTION & EVACUATION

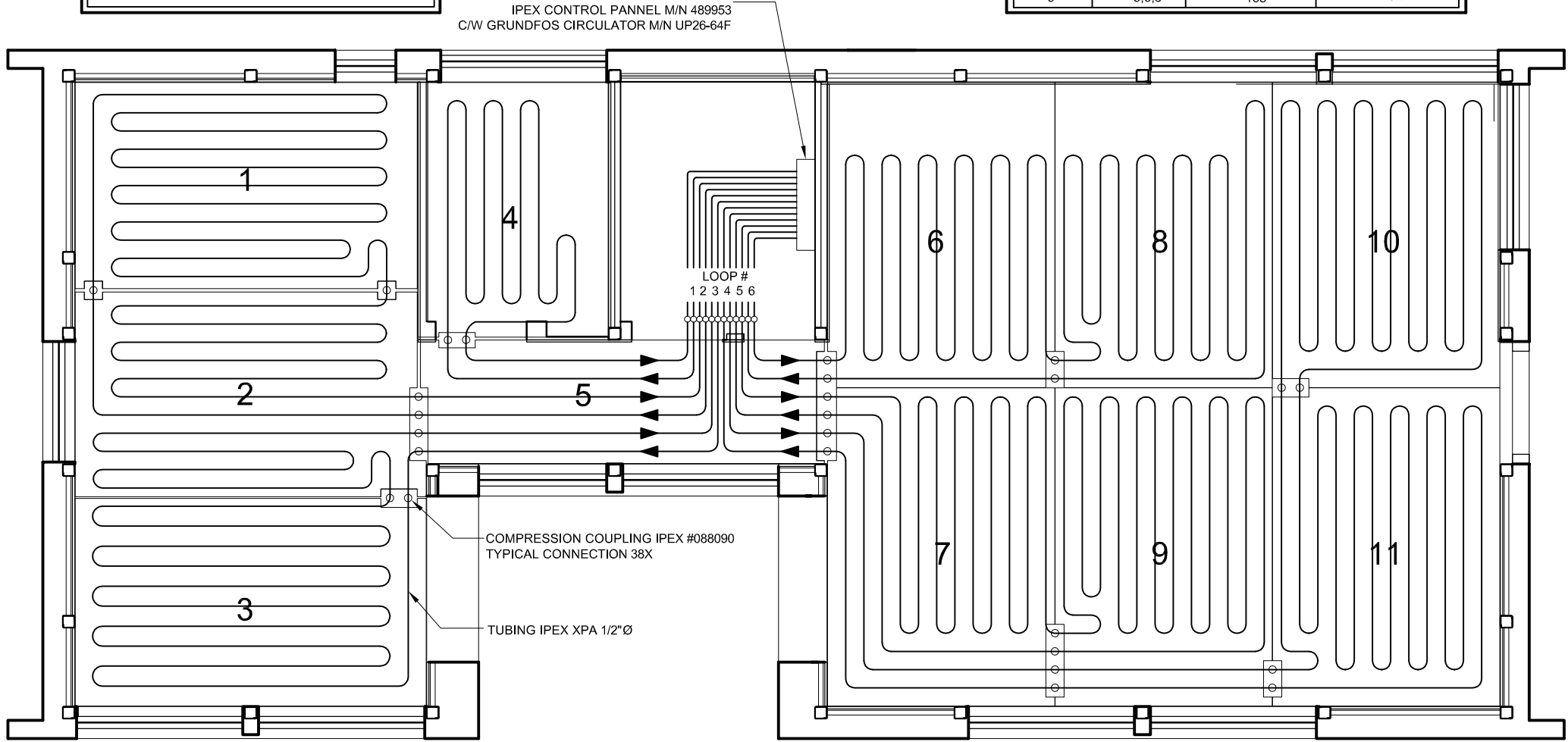
| | | |
|------------------------------|---------------|----------------------------------|
| DATE: 07-01-08 | | DRAWN BY : G. D-R. |
| SCALE : 1/4" = 1' | VERIFIED BY : | G. D-R. |
| PROJECT No.: SD-07 | | REVISION : 4 |
| | | DRAWING No.: MEC - 003 |

MEC-003 VENTILATION DISTR. & EVACU.
1/4"=1'-0"

GENERAL INSTALLATION NOTE

- PROTECT AND MARK THE PIPES WHEN THEY PASS THROUGH THE INSIDE DIVISIONS.
- START THE INSTALLATION AT 6" OF THE COLD WALLS
- OPERATE THE SYSTEM IN CONTINUOUS FLOW.
- INSTAL A RIGID INSULATION UNDER THE KITCHEN CUPBOARD AND COUNTERS.
- IF POSSIBLE, IT WOULD BE PREFERABLE TO INSTAL THE PIPING IN NUMERICAL ORDER OF THE LOOPS.

| PIPING DESCRIPTION | | | |
|--------------------|-----------------|-----------------------|-------------------|
| LOOP # | FLOOR SECTION # | LENGHT IN FT AS DRAWN | DIAMETER IN INCHE |
| 1 | 4;5 | 62 | 1/2 |
| 2 | 1;2;5 | 173 | 1/2 |
| 3 | 2;3;5 | 150 | 1/2 |
| 4 | 5;7;9;10;11 | 240 | 1/2 |
| 5 | 5;7;9 | 172 | 1/2 |
| 6 | 5;6;8 | 165 | 1/2 |



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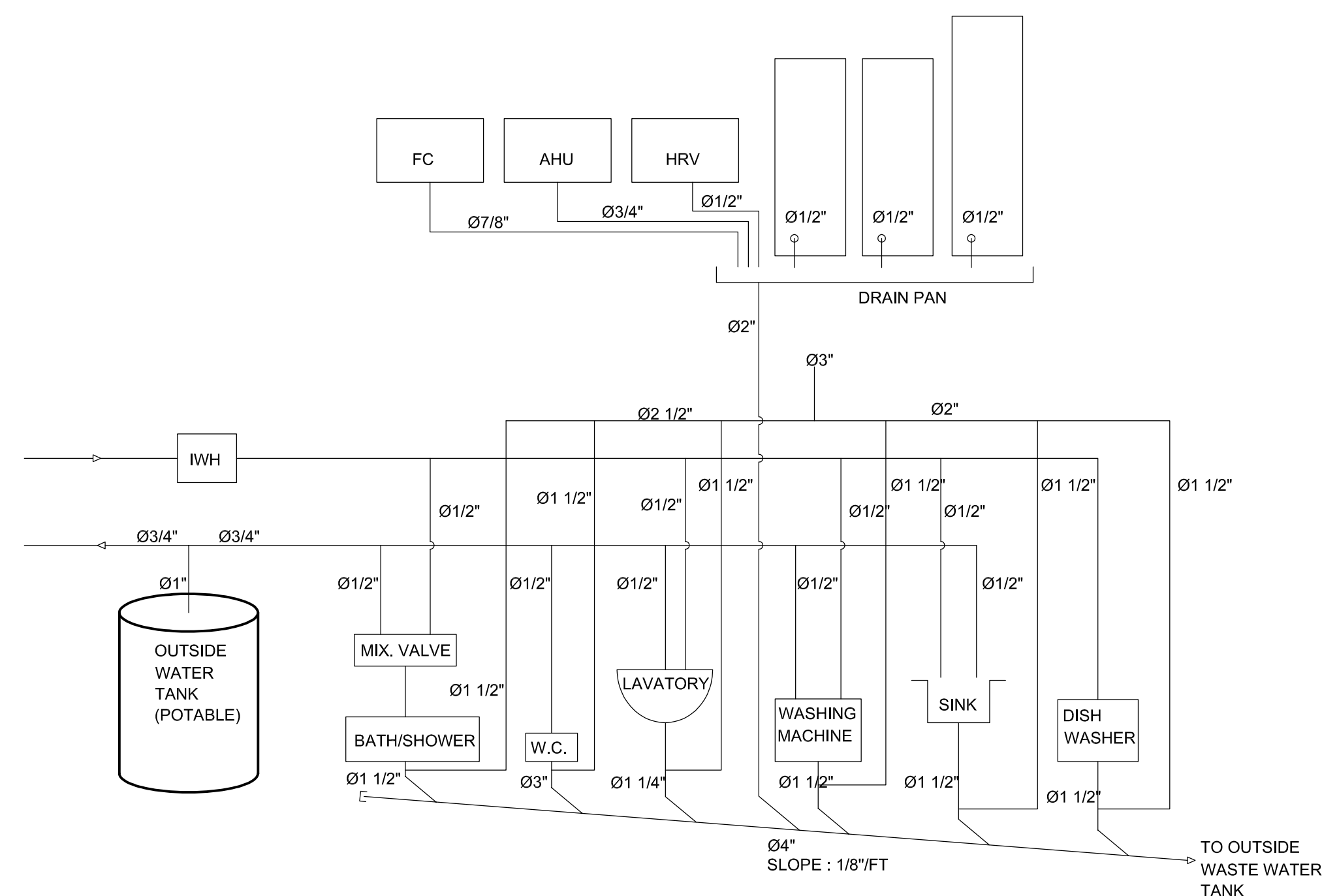
PROJECT:

SOLAR DECATHLON 2007
TEAM MONTREAL

TITLE:

RADIANT FLOOR

| | | |
|------------------------|--------------------------|----------------------------|
| DATE: 07-01-08 | DRAWN BY : S.C | |
| SCALE : 1/4" = 1' | VERIFIED BY : G. D-R. | |
| PROJECT No. : SD-07 | REVISION : 4 | DRAWING No. : MEC - 004 |



PLUMBING DIAGRAM

MEC-005

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STAMP:

PROJECT:

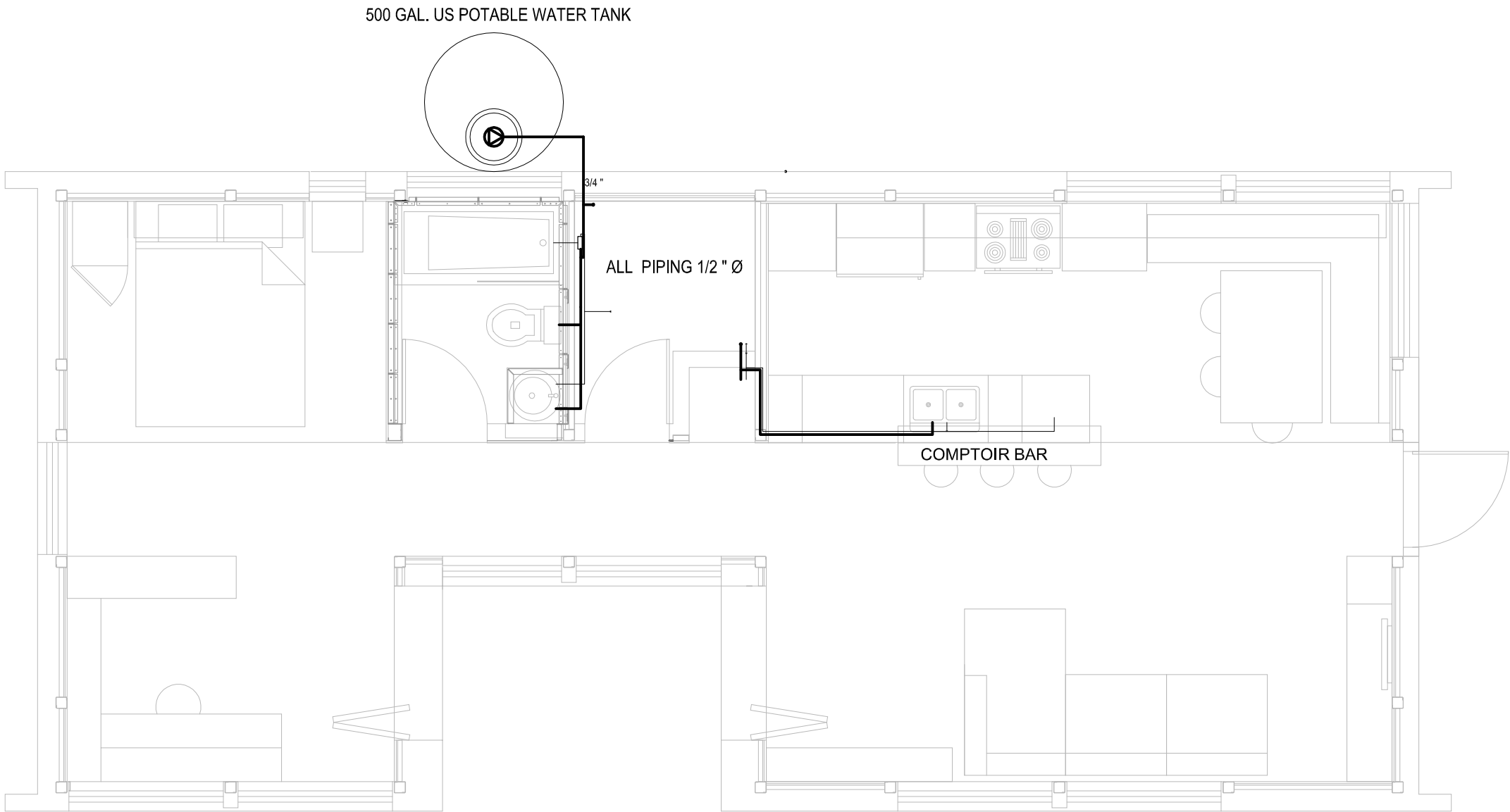
SOLAR DECATHLON 2007
TEAM MONTREAL

TITLE:

PLUMBING DIAGRAM

| DATE: | DRAWN BY : | VERIFIED BY : | APPROVED BY : |
|----------|------------|---------------|---------------|
| 07-01-08 | C. SAVARD | G. D-R. | |

| PROJECT No. : | REVISION : | DRAWING No. : |
|---------------|------------|---------------|
| SD-07 | 4 | MEC - 005 |



PLUMBING SUPPLY

1/4"=1'-0"

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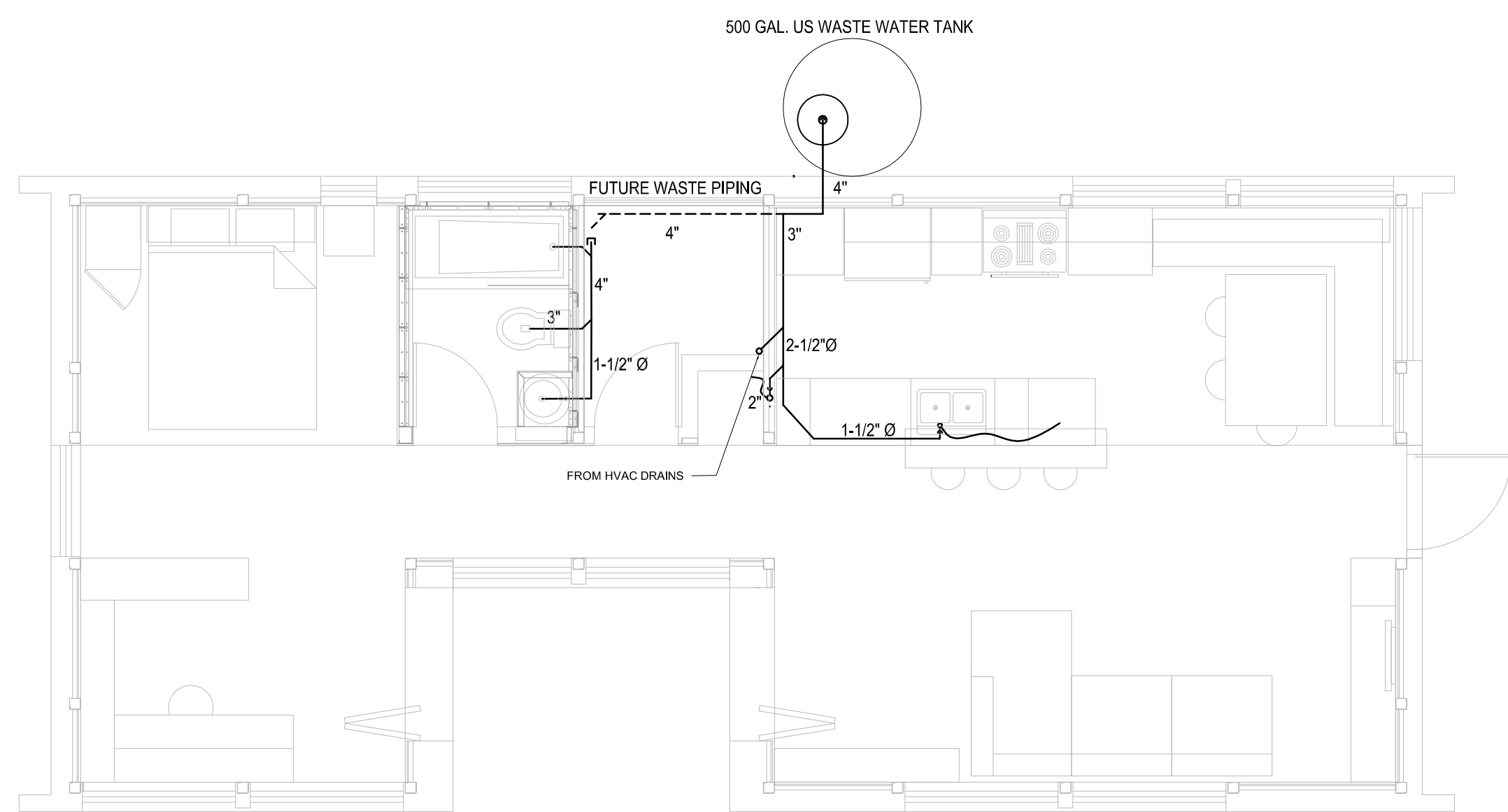
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PLUMBING SUPPLY

| | | |
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| DATE: 07-01-08 | DRAWN BY : C. SAVARD | |
| SCALE : 1/4" = 1' | VERIFIED BY : G. D-R. | |
| PROJECT No. : SD-07 | REVISION : 4 | DRAWING No. : MEC - 006 |



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STAMP:

PROJECT:

SOLAR DECATHLON 2007
TEAM MONTREAL

TITLE:

PLUMBING DRAINAGE

| | | |
|------------------------|--------------------------|----------------------------|
| DATE: 07-01-08 | DRAWN BY : C. SAVARD | |
| SCALE : 1/4" = 1' | VERIFIED BY : G. D-R. | |
| PROJECT No. : SD-07 | REVISION : 4 | DRAWING No. : MEC - 007 |

-

MEC-007

PLUMBING DRAINAGE

1/4"=1'-0"

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| ELE - 002 | COMBINER BOX |
| ELE - 003 | TRANSFORMATION |
| ELE - 004 | BATTERIES |
| ELE - 005 | DISTRIBUTION |
| ELE - 006 | MECH. ROOM SECOND FLOOR PLAN |

ELECTRIC LEGEND

LIGHTING

| | |
|-----|--|
| 13a | ALL LIGHTING WILL BE CONNECTED TO THE 24V PANEL EXEPT THE EXTERIOR LIGHT, WHICH WILL BE CONNECTED TO THE NRA PANEL |
| | 1: CIRCUIT NUMBER a: SWITCH REFERENCE LETTER A: FIXTURE TYPE |
| | ROUND LIGHTING DEVICE |
| | PROJECTOR TYPE LIGHTING DEVICE |
| | WALL FIXTURE |
| | SWITCH 15A, 120V OR 347V |
| | LOW VOLTAGE SWITCH, 24 VOLTS. |
| | LOW VOLTAGE SYSTEM RELAY PANEL |

FIRE-ALARM

| | |
|--|---|
| | STANDALONE SMOKE DETECTOR, 120V BY NOTIFIER, MODEL #4919 |
|--|---|

TELECOM-INTERCOM

| | |
|--|--|
| | AC PLATE PHONE OUTLET FEMALE RJ11 CONNECTOR INSTALLED 450mm ABOVE FLOOR AC 3/4" CONDUCTS FINISH AND 4 PAIRS WIRING #22AWG TYPE FT4 CATEGORY 5E TYPE RJ11 TO "BELL" BUILDING INPUT. |
| | UHF DISTRIBUTION AC PLATE WALL OUTLET FEMALE RG6 INSTALLED 450mm ABOVE FLOOR 3/4" AC CONDUCT FINISH AND WIRING TYPE FT4 CATEGORY 5E TYPE RG6 TO "BELL" BUILDING INPUT. |

LIGHTING DEVICES

| | |
|-----|---|
| I1- | LINEAR FLUORESCENT, CONCEALED, DOUBLE PERFORMANCE |
| I2- | LINEAR FLUORESCENT, CONCEALED, DOUBLE PERFORMANCE |
| I3- | LINEAR FLUORESCENT |
| I4- | LINEAR FLUORESCENT |
| I5- | LINEAR FLUORESCENT |
| I6- | LINEAR FLUORESCENT |
| T1- | COMPACT FLUORESCENT |
| T2- | COMPACT FLUORESCENT |
| T3- | CUSTOM LED FIXTURE |
| E1- | XXXX |
| E2- | XXXX |
| E3- | XXXX |

SERVICES

| | |
|--|---|
| | DOUBLE OUTLET 15 AMPERES 120 VOLTS |
| | DOUBLE OUTLET 15 AMPERES 120 VOLTS INSTALLED 200mm OVER THE COUNTER |
| | DOUBLE OUTLET 15 AMPERES 120 VOLTS AC DIFFERENTIAL BREAKER "A" LEVITON #6599-W |
| | DRYER OUTLET 30 AMPERES 120 VOLTS AC |
| | JUNCTION BOX MOTOR 120V, 240V 1Ø. PROVIDE BY DIV.15, CONNECTED BY DIV.16 |
| | MANUAL STARTER |
| | 24VDC PANEL |
| | 120/240V PANEL, 1Ø, 3F |
| | DOOR BELL BUTTON BY NUTONE, MODEL #PB12NWH |
| | DOOR BELL C/A TRANSO 120/10V BY NUTONE, MODEL #LA131WH |

IDENTIFICATIONS

| | |
|------|--|
| WP | WATERPROOF |
| H.M. | MOUNTING HEIGHT |
| H | RANGE HOOD |
| M.O. | MICROWAVE OVEN MOUNTING HEIGHT TO BE DETERMINED |
| L.V. | DISH-WASHER |
| PF | CEILING MOUNTED TYPE FS AC BOX |
| CL | COOLING UNIT |
| x2 | QUANTITY OF EQUIPMENT |

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SOLAR DECATHLON 2007
TEAM MONTREAL

TITLE:

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| PROJECT No. : SD-07 | REVISION : DRAWING No. : ELE - 000 |

| No. | REVISIONS | DATE |
|-----|------------------------------|----------|
| 1 | DESIGN DEVELOPMENT DRAWINGS | 13-06-06 |
| 2 | CONSTRUCTION DRAWINGS | 06-03-07 |
| 3 | UPDATE CONSTRUCTION DRAWINGS | 07-08-07 |
| | | |
| | | |

NOTES

ARC=ARCHITECTURAL
ASS=ASSEMBLY
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ELE=ELECTRICAL
INT=INTERIORS AND FINISH
LSA=LIFE SAFETY AND ADA
MEC=MECHANICAL
STR=STRUCTURAL
SLE=SOLAR ENVELOPE



STAMP:

PROJECT:

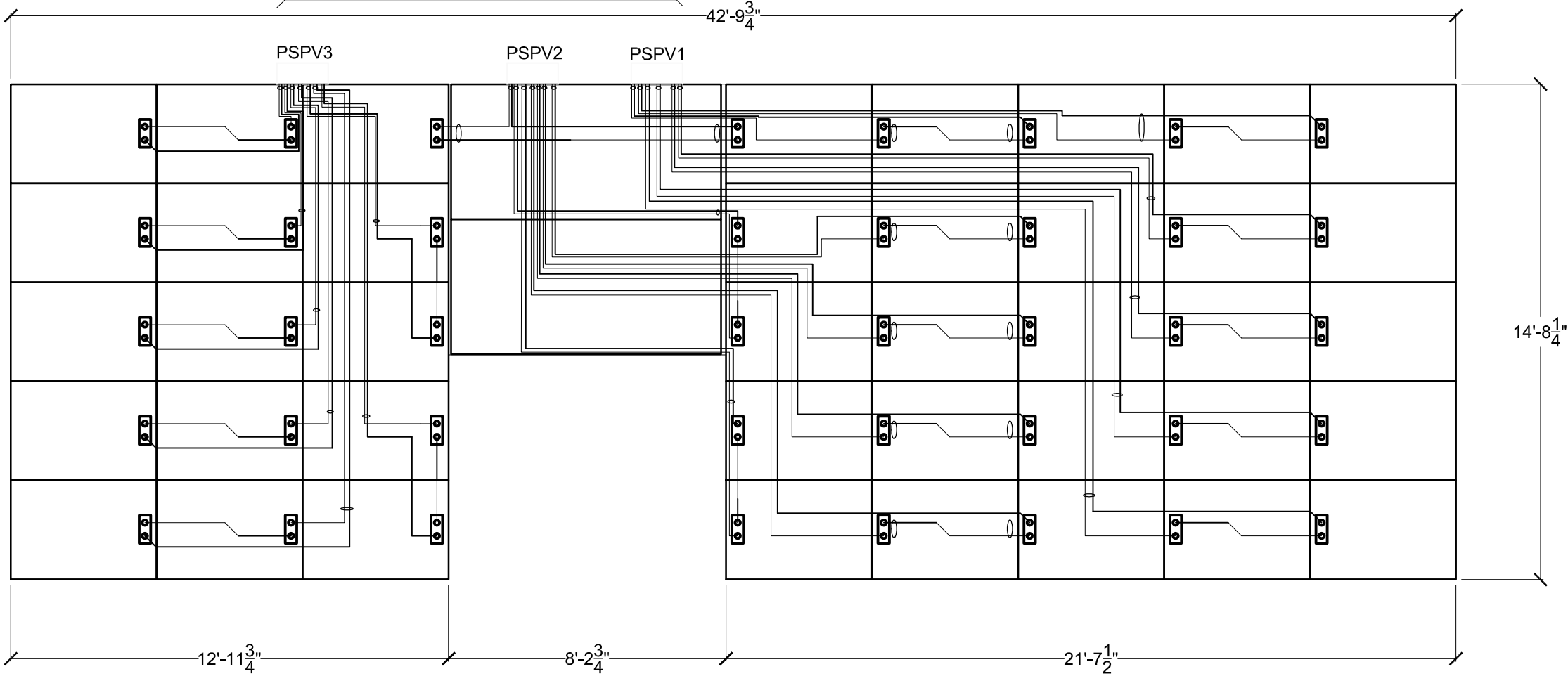
SOLAR DECATHLON 2007
TEAM MONTREAL

TITLE:

PV PANELS WIRING DIAGRAM

| | | |
|------------------------|--------------------------|----------------------------|
| DATE: 07-01-08 | DRAWN BY : M.CARON | |
| SCALE : 1/4" = 1' | VERIFIED BY : J.JOBIN | |
| | APPROVED BY : J.JOBIN | |
| PROJECT No. : SD-07 | REVISION : 4 | DRAWING No. : ELE - 001 |

ALL WIRES TO
COMBINER BOXES:
GAUGE: #10AWG
MATERIAL: COPPER
INSULATION: USE-2



PV PANELS WIRING DIAGRAM

1/4"=1'-0"

| No. | REVISIONS | DATE |
|-----|------------------------------|----------|
| 1 | DESIGN DEVELOPMENT DRAWINGS | 13-06-06 |
| 2 | CONSTRUCTION DRAWINGS | 06-03-07 |
| 3 | UPDATE CONSTRUCTION DRAWINGS | 07-08-07 |
| | | |
| | | |

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STAMP:

PROJECT:

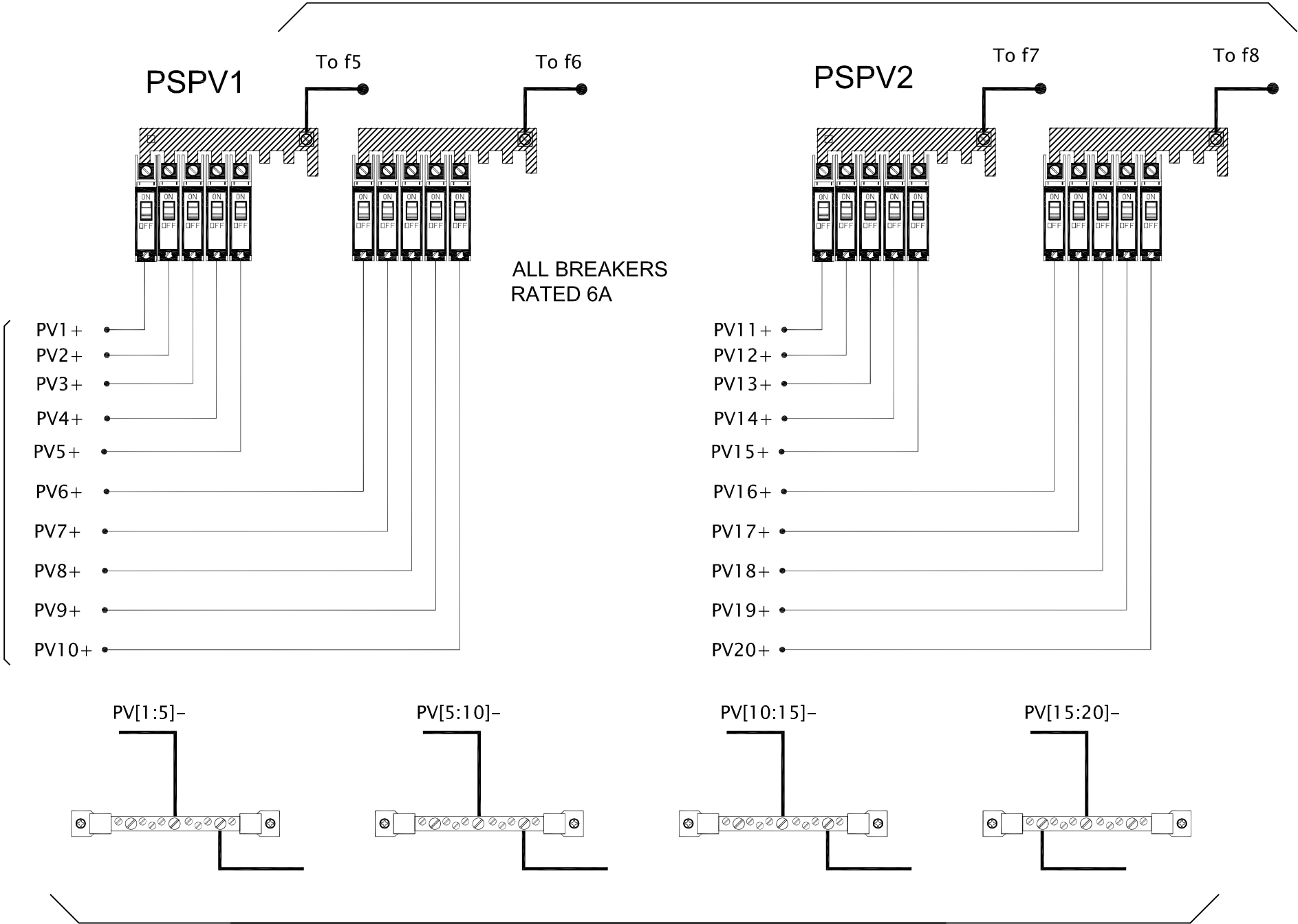
SOLAR DECATHLON 2007
TEAM MONTREAL

TITLE:

COMBINER BOX

| | |
|------------------------|----------------------------|
| DATE: 07-01-08 | DRAWN BY : M.CARON |
| SCALE : 3" = 1' | VERIFIED BY : J.JOBIN |
| PROJECT No. : SD-07 | APPROVED BY : J.JOBIN |
| REVISION : 4 | DRAWING No. : ELE - 002 |

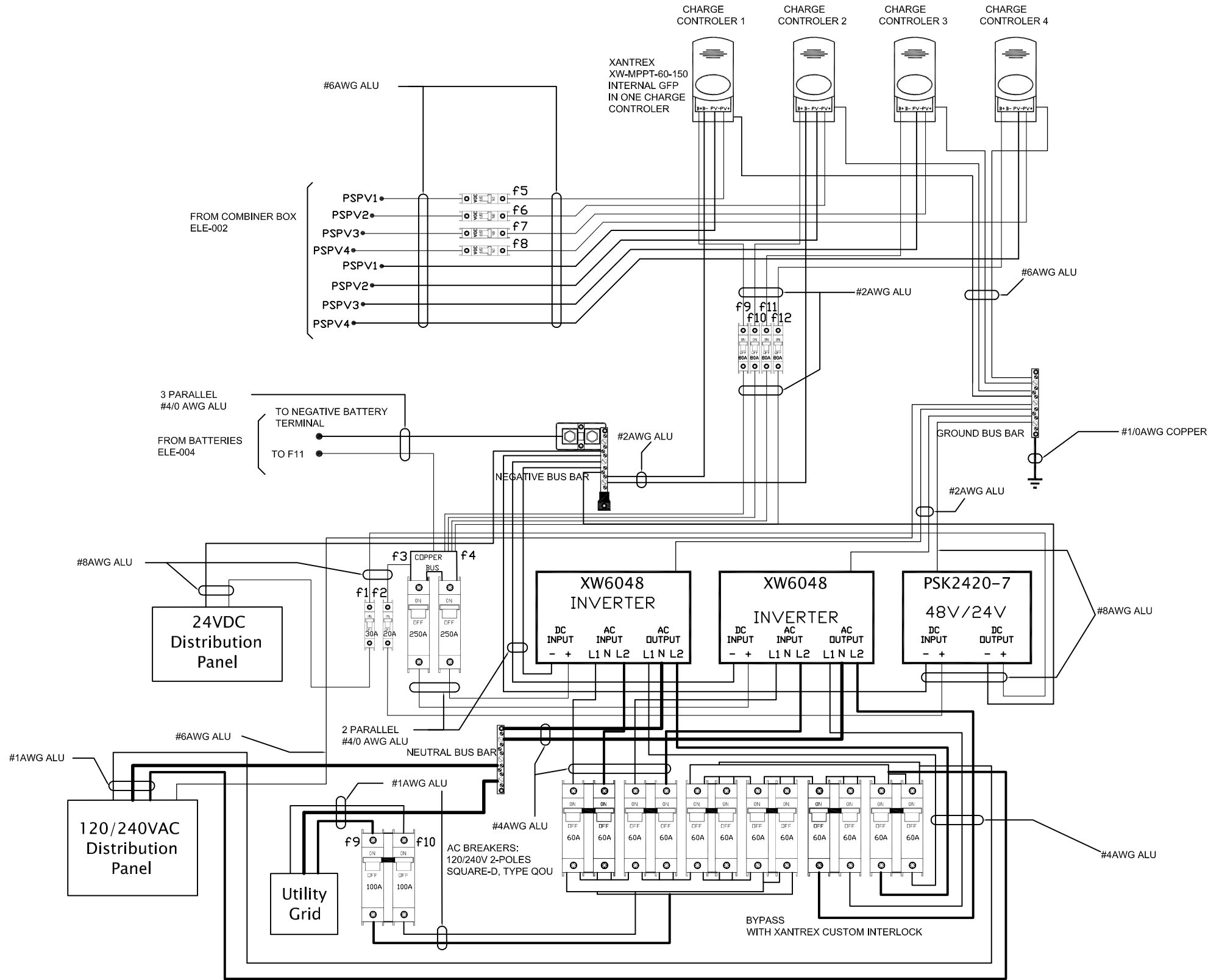
TO CHARGE CONTROLLER
ELE-002
ALL WIRES TO CHARGE CONTROLLERS: #6 AWG



FROM
SOLAR PANELS
ELE-001

-
ELE-002
COMBINER BOX
3"=1'-0"

TO CHARGE CONTROLLER
ELE-002
ALL WIRES TO CHARGE
CONTROLLERS: #6 AWG



| No. | REVISIONS | DATE |
|-----|------------------------------|----------|
| 1 | DESIGN DEVELOPMENT DRAWINGS | 13-06-06 |
| 2 | CONSTRUCTION DRAWINGS | 06-03-07 |
| 3 | UPDATE CONSTRUCTION DRAWINGS | 07-08-07 |
| | | |
| | | |

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STAMP:

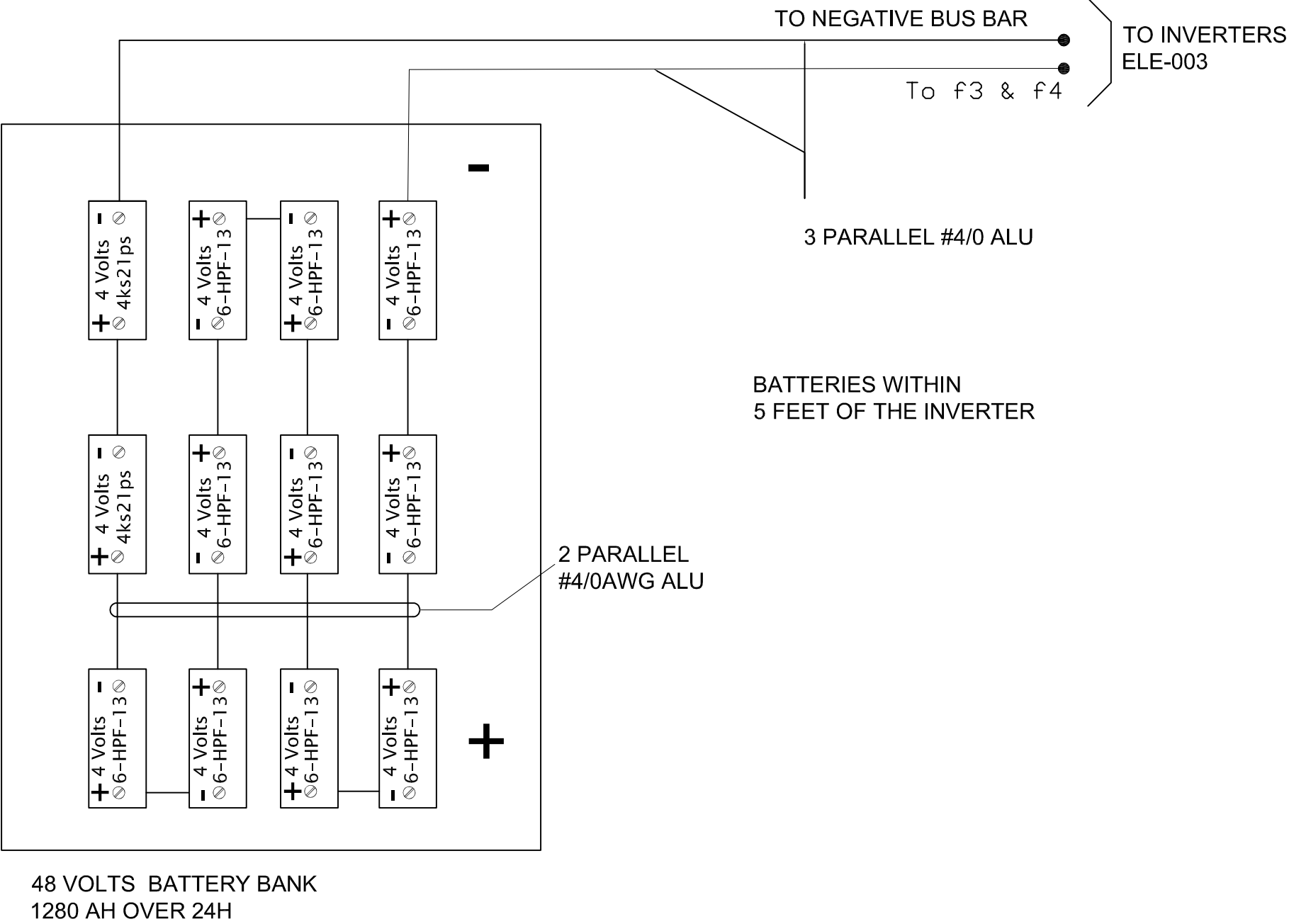
PROJECT:

SOLAR DECATHLON 2007
TEAM MONTREAL

TITLE:

TRANSFORMATION

| | |
|------------------------|----------------------------|
| DATE: 07-01-08 | DRAWN BY : M.CARON |
| SCALE : 3/4" = 1' | VERIFIED BY : J.JOBIN |
| PROJECT No. : SD-07 | APPROVED BY : J.JOBIN |
| REVISION : 4 | DRAWING No. : ELE - 003 |



-

ELE-004

BATTERIES

3/4"=1'-0"

| No. | REVISIONS | DATE |
|-----|------------------------------|----------|
| 1 | DESIGN DEVELOPMENT DRAWINGS | 13-06-06 |
| 2 | CONSTRUCTION DRAWINGS | 06-03-07 |
| 3 | UPDATE CONSTRUCTION DRAWINGS | 07-08-07 |
| | | |
| | | |

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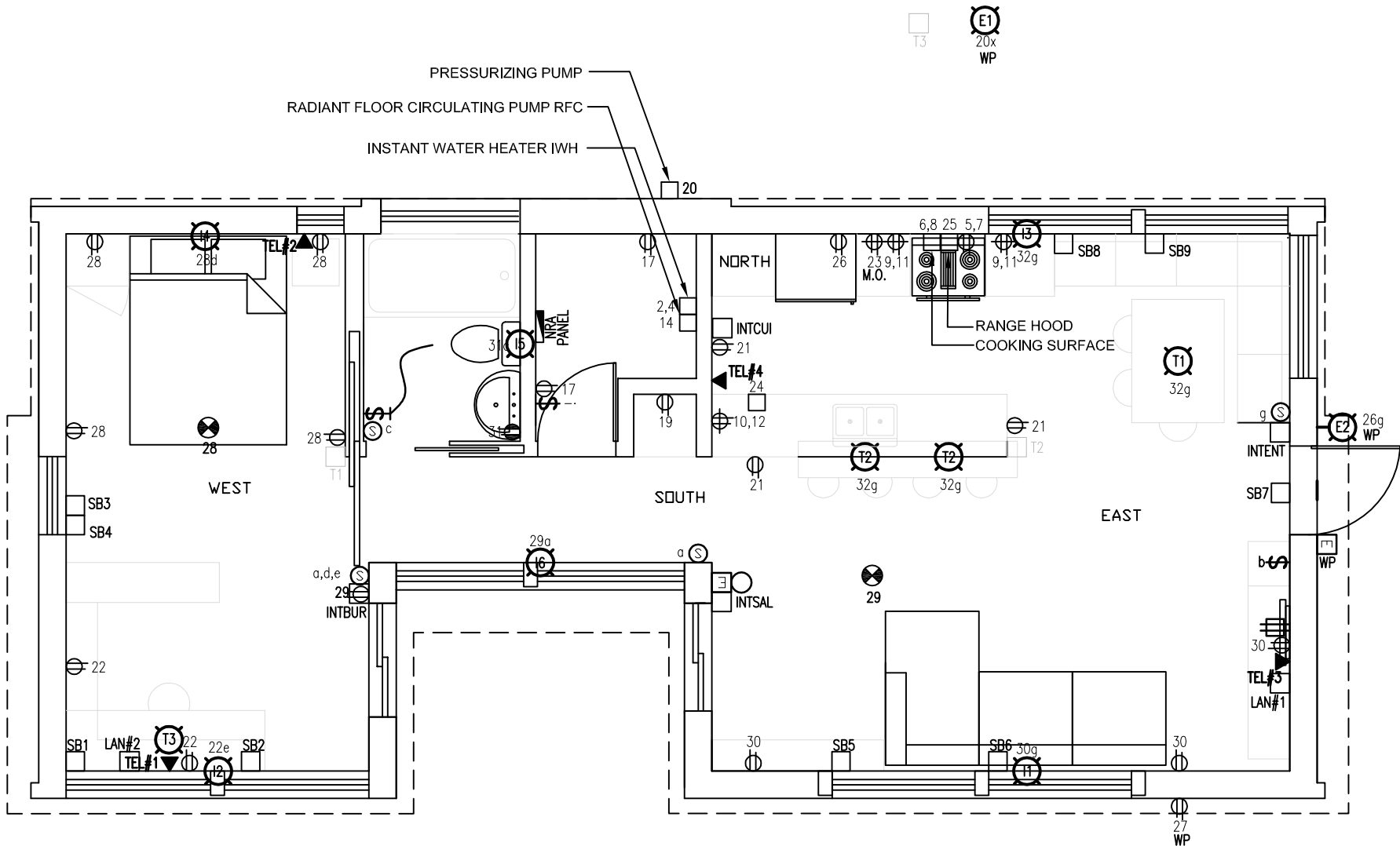
PROJECT:

SOLAR DECATHLON 2007
TEAM MONTREAL

TITLE:

BATTERIES

| | | |
|------------------------|--------------------------|----------------------------|
| DATE: 07-01-08 | DRAWN BY : M.CARON | |
| SCALE : 3/4" = 1' | VERIFIED BY : J.JOBIN | |
| PROJECT No. : SD-07 | APPROVED BY : J.JOBIN | DRAWING No. : ELE - 004 |



E1
XX
WP

- DISTRIBUTION
ELE-005 3/16"=1'-0"

| PIPES WIRING DISTRIBUTION | |
|---------------------------|--|
| DIRECT | 1,2,3,4,10,12,13,14,15,16,17,18,19,20,21,24,31 |
| NORTH | 5,6,7,8,9,11,23,25,26,32 |
| EAST | 27,30 |
| WEST | 22,28 |
| SOUTH | 29 |

| NRA PANEL | | | | | | | | | |
|---|-------|----|--|----|-------|-------------|-------|--|--|
| VOLTAGE 120/240V, 1Ø, 3F PROTECTION :100A (Double Pole) | | | | | | | | | |
| DESCRIPTION | BRK | NO | | NO | BRK | DESCRIPTION | | | |
| 2900W (P) | 30 2P | 1 | | 2 | 30 2P | (P) | 3300W | | |
| | | 3 | | 4 | | | | | |
| 1200W (P) | 15 2P | 5 | | 6 | 30 2P | (P) | 3600W | | |
| | | 7 | | 8 | | | | | |
| 500W (P) | 15 2P | 9 | | 10 | 15 2P | (P) | 500W | | |
| 500W (P) | | 11 | | 12 | | (P) | 500W | | |
| 540W (P) | 15 | 13 | | 14 | 15 | (P) | 65W | | |
| 0W (P)(E) | X | X | | 16 | 15 | (P) | 475W | | |
| 50W (P)(E) | 15 | 17 | | 18 | 15 | (P) | 385W | | |
| 1200W (P) | 30 | 19 | | 20 | 15 | (P) | 350W | | |
| 360W (P)(E) | 30 | 21 | | 22 | 30 | (P)(E) | 500W | | |
| 1200W (P) | 15 | 23 | | 24 | 30 | (P) | 1200W | | |
| 360W (M) | 15 | 25 | | 26 | 15 | (P) | 800W | | |
| 1000W (P) | 15 | 27 | | 28 | 15 | (P)(E) | 360W | | |
| 240W (P)(E) | 15 | 29 | | 30 | 15 | (P)(E) | 800W | | |
| 120W (P) | 15 | 31 | | 32 | 15 | (P)(E) | 240W | | |
| X | X | 33 | | 34 | X | | X | | |
| X | X | 35 | | 36 | X | | X | | |
| (P) SERVICES (PA) ANTI-SPARK OUTLET (E) LIGHTING (M) FAN | | | | | | | | | |

| 24 VDC PANEL | | | | | | | | | |
|------------------------------------|-----|----|--|----|-----|-------------|--|--|--|
| VOLTAGE : 24 VDC PROTECTION 20A | | | | | | | | | |
| DESCRIPTION | BRK | NO | | NO | BRK | DESCRIPTION | | | |
| (E) | 5 | 1 | | 2 | 5 | (E) | | | |
| (E) | 5 | 3 | | 4 | 5 | (E) | | | |
| (P) | 5 | 5 | | 6 | 5 | (P) | | | |
| (P) | 5 | 7 | | 8 | 5 | (P) | | | |
| (P) | 5 | 9 | | 10 | 5 | | | | |
| (P) | 5 | 11 | | 12 | 5 | (P) | | | |
| (P) | 5 | 13 | | 14 | 5 | (P) | | | |
| (P) | 5 | 15 | | 16 | 5 | (P) | | | |
| | 5 | 17 | | 18 | 5 | (P) | | | |
| | 5 | 19 | | 20 | | | | | |
| | | 21 | | 22 | | | | | |
| | | 23 | | 24 | | | | | |
| (P) SERVICES (E) LIGHTING | | | | | | | | | |

| No. | REVISIONS | DATE |
|-----|------------------------------|----------|
| 1 | DESIGN DEVELOPMENT DRAWINGS | 13-06-06 |
| 2 | CONSTRUCTION DRAWINGS | 06-03-07 |
| 3 | UPDATE CONSTRUCTION DRAWINGS | 07-08-07 |

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STAMP:

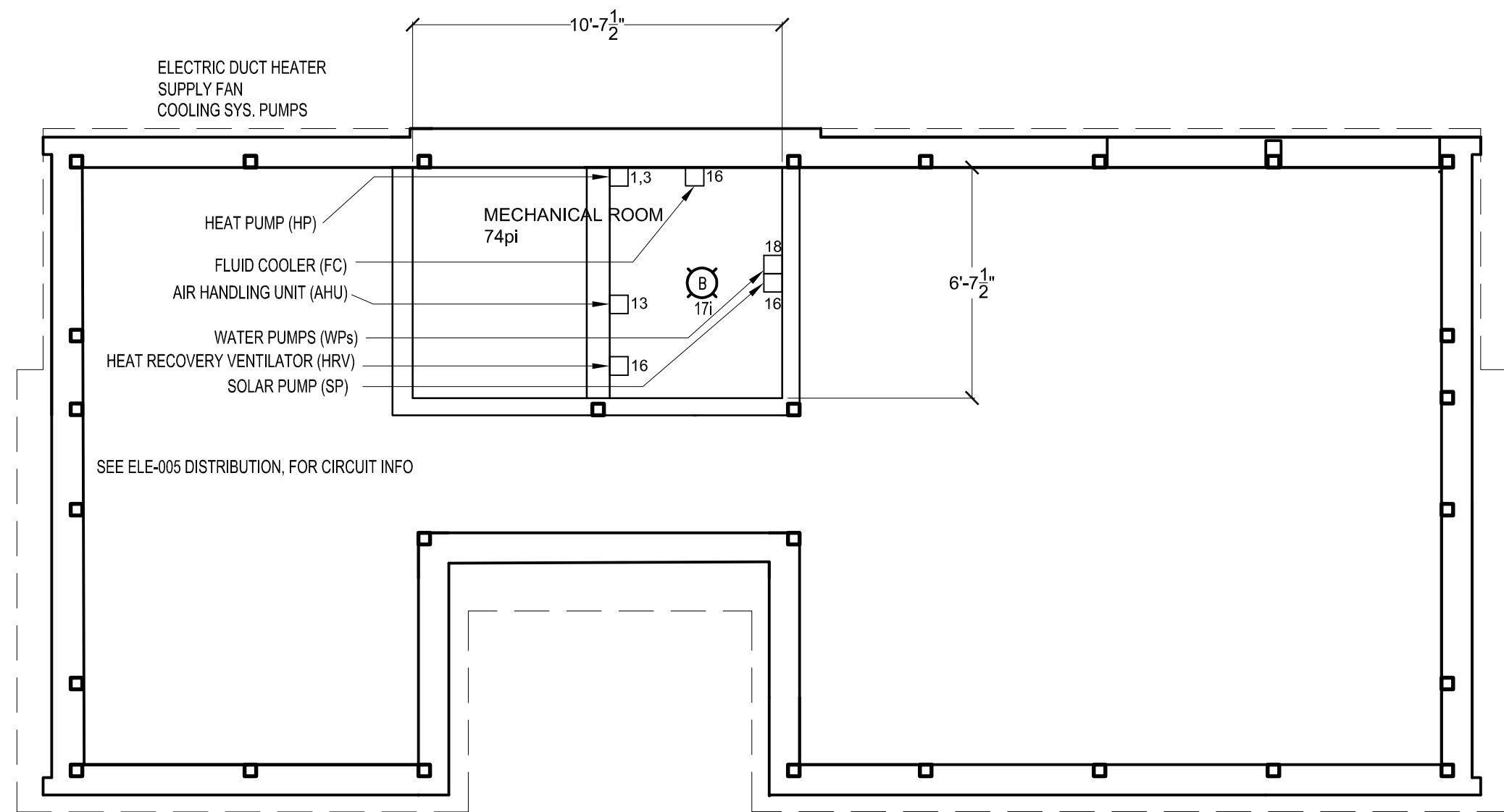
PROJECT:

SOLAR DECATHLON 2007
TEAM MONTREAL

TITLE:

DISTRIBUTION

| | |
|------------------------|----------------------------|
| DATE: 07-01-08 | DRAWN BY : M.CARON |
| SCALE : | VERIFIED BY : J.JOBIN |
| PROJECT No. : SD-07 | APPROVED BY : J.JOBIN |
| REVISION : 4 | DRAWING No. : ELE - 005 |



MECH. ROOM SECOND FLOOR PLAN

1/4"=1'-0"

| No. | REVISIONS | DATE |
|-----|------------------------------|----------|
| 1 | DESIGN DEVELOPMENT DRAWINGS | 13-06-06 |
| 2 | CONSTRUCTION DRAWINGS | 06-03-07 |
| 3 | UPDATE CONSTRUCTION DRAWINGS | 07-08-07 |
| | | |
| | | |

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STR=STRUCTURAL
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STAMP:

PROJECT:

SOLAR DECATHLON 2007
TEAM MONTREAL

TITLE:

MECH. ROOM SECOND
FLOOR PLAN

| | | |
|------------------------|--------------------------|----------------------------|
| DATE: 07-01-08 | DRAWN BY : M.CARON | |
| SCALE : 1/4" = 1' | VERIFIED BY : J.JOBIN | |
| | APPROVED BY : J.JOBIN | |
| PROJECT No. : SD-07 | REVISION : 4 | DRAWING No. : ELE - 006 |

STRUCTURAL & ASSEMBLY TABLE OF CONTENTS

STRUCTURAL

| | |
|-----------|--|
| STR - 000 | STRUCTURAL & ASSEMBLY TABLE OF CONTENTS |
| STR - 100 | SPECIFICATIONS |
| STR - 200 | FOUNDATIONS |
| STR - 300 | FLOOR STRUCTURE |
| STR - 400 | ROOF STRUCTURE |
| STR - 500 | SECTION A-A & B-B |
| STR - 501 | SECTION C-C & D-D |
| STR - 502 | SECTION E-E |
| STR - 600 | MECHANICAL ROOM |

ASSEMBLY

| | |
|-----------|------------------|
| ASS - 001 | ASSEMBLY 1 @ 4 |
| ASS - 002 | ASSEMBLY 5 @ 8 |
| ASS - 003 | ASSEMBLY 9 @ 12 |
| ASS - 004 | ASSEMBLY 13 @ 16 |
| ASS - 005 | ASSEMBLY 17 @ 20 |
| ASS - 006 | ASSEMBLY 21 @ 23 |

| No. | REVISIONS | DATE |
|-----|-------------------------------|----------|
| 1 | DESIGN DEVELOPMENT DRAWINGS | 13-06-06 |
| 2 | CONSTRUCTION DRAWINGS | 06-03-07 |
| 3 | UPDATE CONSTRUCTION DRAWINGS | 07-08-07 |
| 4 | UPDATED CONSTRUCTION DRAWINGS | 07-01-08 |

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STAMP:

PROJECT:

SOLAR DECATHLON 2007
TEAM MONTREAL

TITLE:

STRUCTURAL & ASSEMBLY
TABLE OF CONTENTS

| | |
|------------------------|----------------------------------|
| DATE: 07-01-08 | DRAWN BY : ERIC DUBE |
| SCALE : NONE | VERIFIED BY : PHILIPPE BOUTIN |
| PROJECT No. : SD-07 | APPROVED BY : PIERRE BONNIER |
| REVISION : 4 | DRAWING No. : STR -000 |

| PART LIST | | | |
|-----------|------|--------------------|-------------------------------|
| TYPE | QTY. | PART NUMBER | DESCRIPTION |
| 01 | 8 | 000-0302-01-138-01 | POST 4"x4" (138 in.) |
| 02 | 5 | 000-0302-01-192-01 | POST 4"x4" (192 in.) |
| 03 | 2 | 000-0302-01-174-01 | POST 4"x4" (174 in.) |
| 04 | 2 | 000-0302-01-132-01 | POST 4"x4" (132 in.) |
| 05 | 8 | 000-0302-01-120-01 | POST 4"x4" (120 in.) |
| 06 | 3 | 000-0302-01-162-01 | POST 4"x4" (162 in.) |
| 07 | 2 | 000-0302-01-198-01 | POST 4"x4" (198 in.) |
| | | | PRIMARY JOIST (210 in.) |
| 08 | 4 | 007-0404-01-210-01 | PRIMARY JOIST (126 in.) |
| 09 | 1 | 007-0404-01-126-01 | PRIMARY JOIST (41 in.) |
| 10 | 2 | 007-0404-01-041-01 | SECONDARY JOIST (60 in.) |
| 11 | 52 | 000-0405-01-060-01 | SECONDARY JOIST (46 in.) |
| 12 | 10 | 000-0405-01-046-01 | SECONDARY JOIST (68 in.) |
| 13 | 2 | 000-0405-01-068-01 | PERIMETER JOIST (60 in.) |
| 14 | 6 | 007-0409-01-060-01 | PERIMETER JOIST (70 in.) |
| 15 | 1 | 007-0409-01-070-02 | PERIMETER JOIST (80 in.) |
| 16 | 2 | 007-0409-01-080-02 | PERIMETER JOIST (60 in.) |
| 17 | 8 | 007-0409-01-060-02 | PERIMETER JOIST (70 in.) |
| 18 | 1 | 007-0409-01-070-01 | PERIMETER JOIST (80 in.) |
| 19 | 2 | 007-0409-01-080-01 | PERIMETER JOIST (46 in.) |
| 20 | 2 | 007-0409-01-046-01 | PERIMETER JOIST (68 in.) |
| 21 | 1 | 007-0409-01-068-02 | PERIMETER JOIST (85 in.) |
| 22 | 1 | 007-0409-00-085-01 | PERIMETER JOIST (85 in.) |
| 23 | 1 | 007-0409-00-085-02 | ROOF TRUSS |
| 24 | 4 | 007-0501-000-01 | ROOF TRUSS |
| 25 | 1 | 007-0501-000-03 | ROOF TRUSS |
| 26 | 2 | 007-0501-000-02 | JOIST ROOF PERIMETER (60 in.) |
| 27 | 2 | 007-0411-01-060-03 | JOIST ROOF PERIMETER (25 in.) |
| 28 | 2 | 007-0411-01-025-01 | JOIST ROOF PERIMETER (45 in.) |
| 29 | 1 | 007-0411-01-045-02 | JOIST ROOF PERIMETER (80 in.) |
| 30 | 2 | 007-0411-01-080-03 | JOIST ROOF PERIMETER (45 in.) |
| 31 | 1 | 007-0411-01-045-01 | JOIST ROOF PERIMETER (80 in.) |
| 32 | 2 | 007-0411-01-080-01 | |

ALLOWABLE LOADS

FLOOR:

D = 30.71 lbs/sqft
L = 50.0 lbs/sqft

MECHANICAL ROOM:
L = 50.0 lbs/sqft
P_o = 7812.64 lbs

ROOF:

SLOPED:
D = 14.97 lbs/sqft
L = 58.5 lbs/sqft

FLAT:
D = 49.36 lbs/sqft
L = 108.6 lbs/sqft

CONSTRUCTION STEPS

1- LIFTING OPERATION OF MECHANICAL MODULE.
2- ASSEMBLY OF THE STRUCTURE, POST S & JOISTS.
3- LIFTING OPERATION OF FLOOR PANELS.
4- LIFTING OPERATION OF THE TRUSSES.
5- LIFTING OPERATION OF ROOF PANELS (SLOPE D AND FLAT ROOF).
6- ASSEMBLY OF THE EXTERIOR WALL PANELS.
7- ASSEMBLY OF THE INTERIOR WALL PANELS.

STEEL PROPERTIES

COMPRESSION YIELD STRESS = 36 259.45 psi
POISSON COEFFICIENT = 0.3
DENSITY = 0.28 lbm/in³
TRACTION YIELD STRESS = 36 259.45 psi
TENSILE STRENGTH= 66 717.38 psi
YOUNG MODULUS = 29 000 000 psi

WOOD PROPERTIES

COMPRESSION YIELD STRESS = 841 psi
POISSON COEFFICIENT = 0.35
DENSITY = 0.0020255 lbm/in³
TRACTION YIELD STRESS = 841 psi
TENSILE STRENGTH= 2084 psi
YOUNG MODULUS = 1 500 000 psi

LEGEND:

L: LIVE LOAD
D: DEAD LOAD
P_o: POINT DEAD LOAD

THE BUILDING IS BRACED WITH STEEL DECK (CANAM: P3606 - TYPE 22 - 0,03" THICK) BETWEEN EACH POST, EXCEPT AT THE LOCATIONS OF THE WINDOWS AND DOORS. FOR THE LOCATIONS OF THE WINDOWS AND DOORS SEE THE ARCHITECTURAL DRAWINGS.

No.

REVISIONS

DATE

1

DESIGN DEVELOPMENT DRAWINGS

13-06-06

2

CONSTRUCTION DRAWINGS

06-03-07

3

UPDATE CONSTRUCTION DRAWINGS

07-08-07

4

UPDATED CONSTRUCTION DRAWINGS

07-01-08

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STAMP:

PROJECT:

SOLAR DECATHLON 2007
TEAM MONTREAL

TITLE:

SPECIFICATIONS

DATE:
07-01-08

DRAWN BY :
ERIC DUBE

SCALE :
NONE

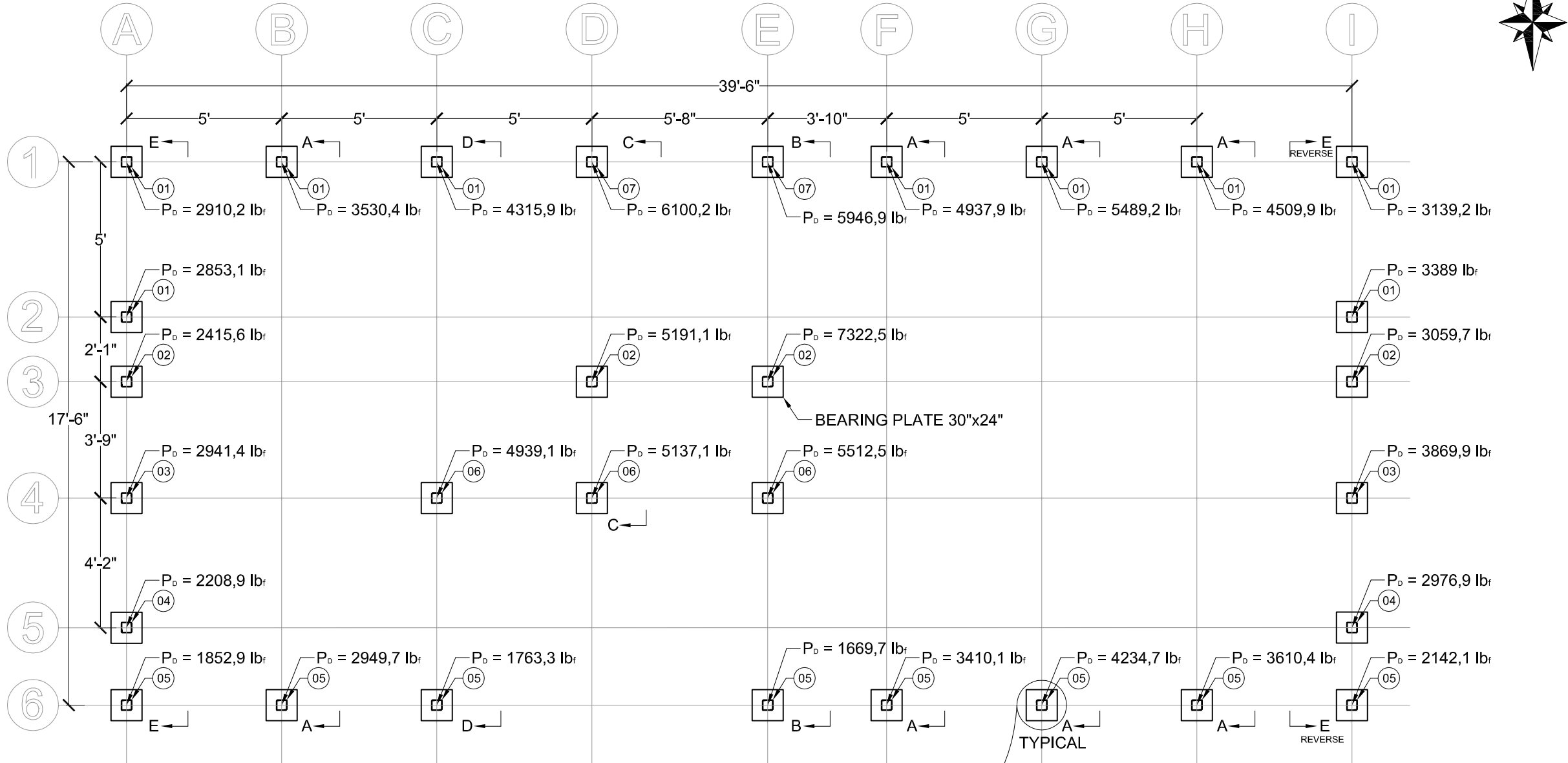
VERIFIED BY :
PHILIPPE BOUTIN

APPROVED BY :
PIERRE BONNIER

PROJECT No. :
SD-07

REVISION :
4

DRAWING No. :
STR -100



| QTY. | L | I |
|------|-----|-----|
| 29 | 24" | 24" |
| 1 | 30" | 24" |

BEARING PLATE

| PART LIST | | | |
|-----------|------|--------------------|----------------------|
| TYPE | QTY. | PART NUMBER | DESCRIPTION |
| 01 | 8 | 000-0302-01-138-01 | POST 4"x4" (138 in.) |
| 02 | 5 | 000-0302-01-192-01 | POST 4"x4" (192 in.) |
| 03 | 2 | 000-0302-01-174-01 | POST 4"x4" (174 in.) |
| 04 | 2 | 000-0302-01-132-01 | POST 4"x4" (132 in.) |
| 05 | 8 | 000-0302-01-120-01 | POST 4"x4" (120 in.) |
| 06 | 3 | 000-0302-01-162-01 | POST 4"x4" (162 in.) |
| 07 | 2 | 000-0302-01-198-01 | POST 4"x4" (198 in.) |

1 FOUNDATIONS
STR-200 1/4"=1'-0"

| No. | REVISIONS | DATE |
|-----|-------------------------------|----------|
| 1 | DESIGN DEVELOPMENT DRAWINGS | 13-06-06 |
| 2 | CONSTRUCTION DRAWINGS | 06-03-07 |
| 3 | UPDATE CONSTRUCTION DRAWINGS | 07-08-07 |
| 4 | UPDATED CONSTRUCTION DRAWINGS | 07-01-08 |

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STAMP:

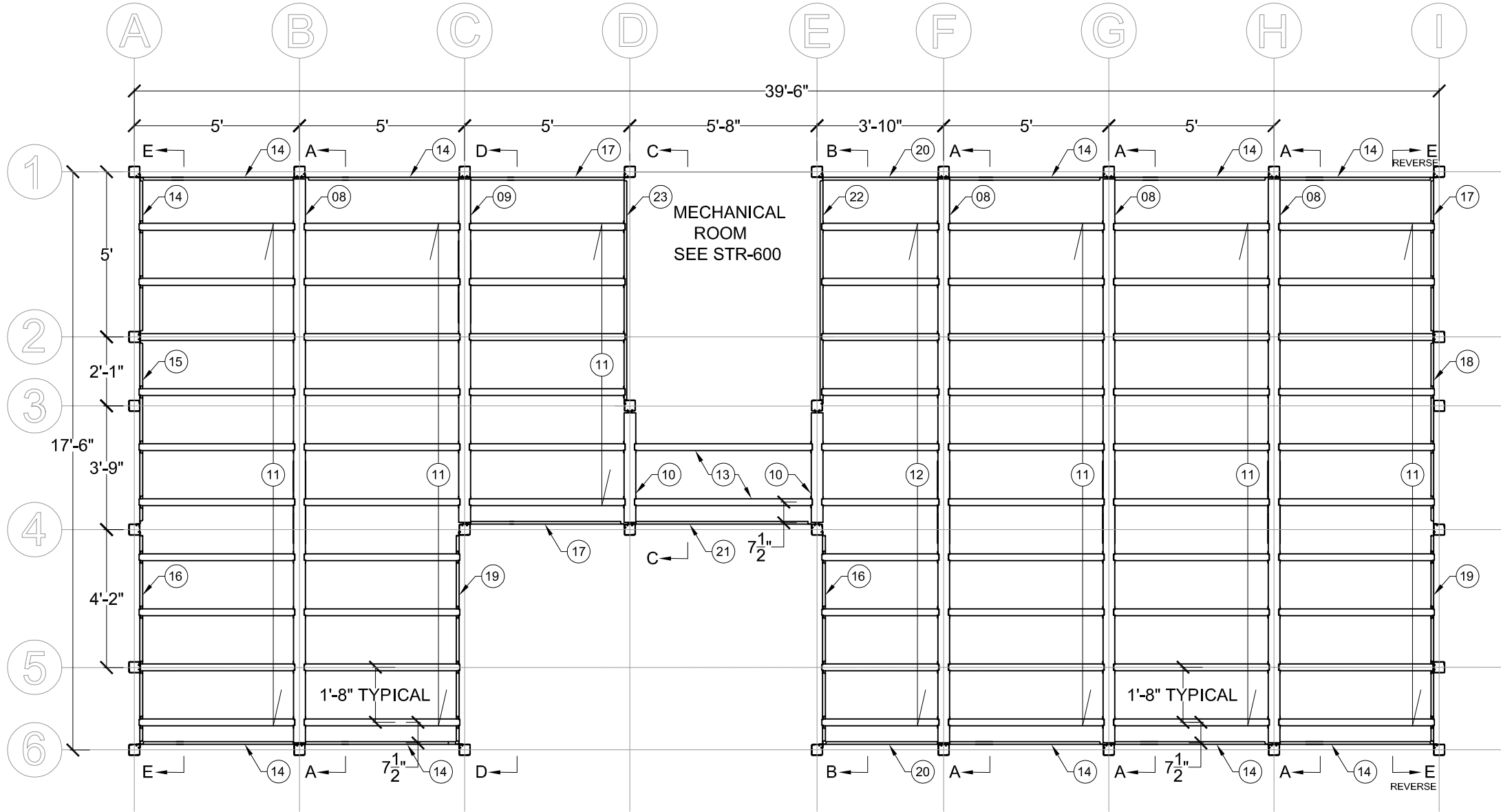
PROJECT:

SOLAR DECATHLON 2007
TEAM MONTREAL

TITLE:

FOUNDATIONS

| | |
|-------------------------|----------------------------------|
| DATE: 07-01-08 | DRAWN BY : ERIC DUBE |
| SCALE : 1/4" - 1'-0" | VERIFIED BY : PHILIPPE BOUTIN |
| PROJECT No. : SD-07 | APPROVED BY : PIERRE BONNIER |
| REVISION : 4 | DRAWING No. : STR -200 |



| No. | REVISIONS | DATE |
|-----|-------------------------------|----------|
| 1 | DESIGN DEVELOPMENT DRAWINGS | 13-06-06 |
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| 3 | UPDATE CONSTRUCTION DRAWINGS | 07-08-07 |
| 4 | UPDATED CONSTRUCTION DRAWINGS | 07-01-08 |

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STAMP:

PROJECT:

SOLAR DECATHLON 2007
TEAM MONTREAL

TITLE:

FLOOR STRUCTURE

DATE:
07-01-08

DRAWN BY :
ERIC DUBE

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

VERIFIED BY :
PHILIPPE BOUTIN

APPROVED BY :
PIERRE BONNIER

PROJECT No. :
SD-07

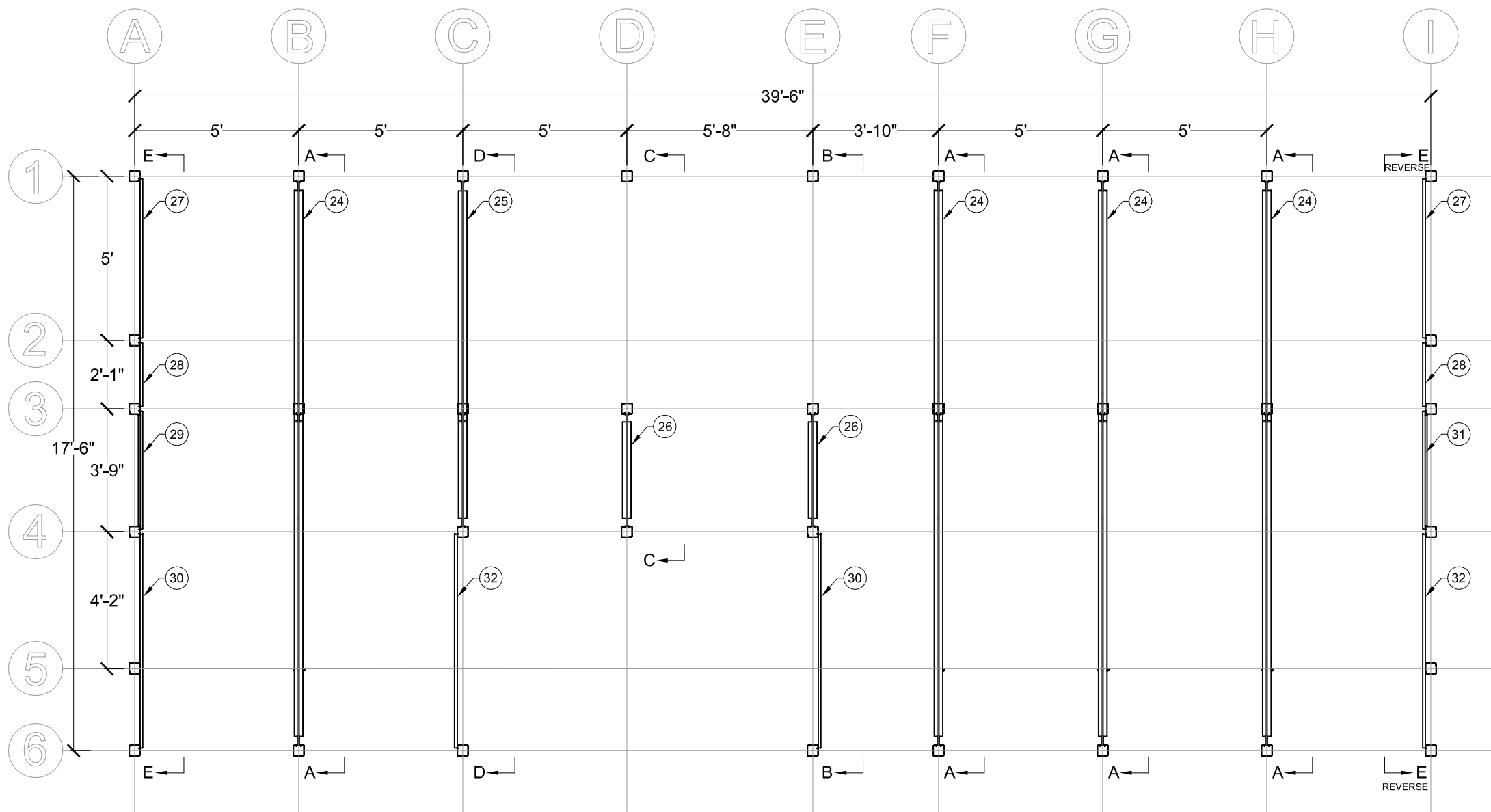
REVISION :
4

DRAWING No. :
STR -300

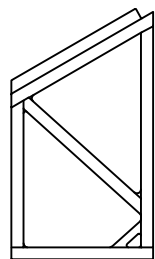
PART LIST

| TYPE | QTY. | PART NUMBER | DESCRIPTION |
|------|------|--------------------|--------------------------|
| 08 | 4 | 007-0404-01-210-01 | PRIMARY JOIST (210 in.) |
| 09 | 1 | 007-0404-01-126-01 | PRIMARY JOIST (126 in.) |
| 10 | 2 | 007-0404-01-041-01 | PRIMARY JOIST (41 in.) |
| 11 | 52 | 000-0405-01-060-01 | SECONDARY JOIST (60 in.) |
| 12 | 10 | 000-0405-01-046-01 | SECONDARY JOIST (46 in.) |
| 13 | 2 | 000-0405-01-068-01 | SECONDARY JOIST (68 in.) |
| 14 | 6 | 007-0409-01-060-01 | PERIMETER JOIST (60 in.) |
| 15 | 1 | 007-0409-01-070-02 | PERIMETER JOIST (70 in.) |
| 16 | 2 | 007-0409-01-080-02 | PERIMETER JOIST (80 in.) |
| 17 | 8 | 007-0409-01-060-02 | PERIMETER JOIST (60 in.) |
| 18 | 1 | 007-0409-01-070-01 | PERIMETER JOIST (70 in.) |
| 19 | 2 | 007-0409-01-080-01 | PERIMETER JOIST (80 in.) |
| 20 | 2 | 007-0409-01-046-01 | PERIMETER JOIST (46 in.) |
| 21 | 1 | 007-0409-01-068-02 | PERIMETER JOIST (68 in.) |
| 22 | 1 | 007-0409-00-085-01 | PERIMETER JOIST (85 in.) |
| 23 | 1 | 007-0409-00-085-02 | PERIMETER JOIST (85 in.) |

1 FLOOR STRUCTURE
STR-300 1/4"=1'-0"

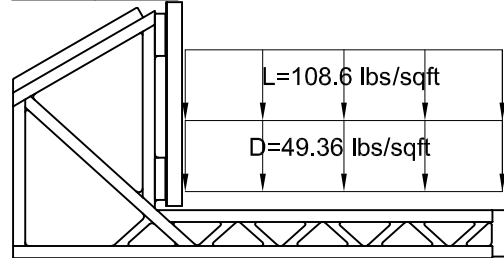


L=58.5 lbs/sqft
D=14.97 lbs/sqft



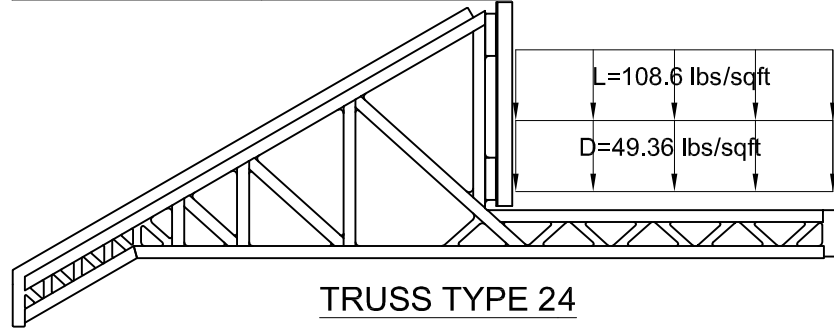
TRUSS TYPE 26

L=58.5 lbs/sqft
D=14.97 lbs/sqft



TRUSS TYPE 25

L=58.5 lbs/sqft
D=14.97 lbs/sqft



TRUSS TYPE 24

| PART LIST | | | |
|-----------|------|--------------------|-------------------------------|
| TYPE | QTY. | PART NUMBER | DESCRIPTION |
| 24 | 4 | 007-0501-000-01 | ROOF TRUSS |
| 25 | 1 | 007-0501-000-03 | ROOF TRUSS |
| 26 | 2 | 007-0501-000-02 | ROOF TRUSS |
| 27 | 2 | 007-0411-01-060-03 | JOIST ROOF PERIMETER (60 in.) |
| 28 | 2 | 007-0411-01-025-01 | JOIST ROOF PERIMETER (25 in.) |
| 29 | 1 | 007-0411-01-045-02 | JOIST ROOF PERIMETER (45 in.) |
| 30 | 2 | 007-0411-01-080-03 | JOIST ROOF PERIMETER (80 in.) |
| 31 | 1 | 007-0411-01-045-01 | JOIST ROOF PERIMETER (45 in.) |
| 32 | 2 | 007-0411-01-080-01 | JOIST ROOF PERIMETER (80 in.) |

| No. | REVISIONS | DATE |
|-----|-------------------------------|----------|
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| 2 | CONSTRUCTION DRAWINGS | 06-03-07 |
| 3 | UPDATE CONSTRUCTION DRAWINGS | 07-08-07 |
| 4 | UPDATED CONSTRUCTION DRAWINGS | 07-01-08 |

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ELE=ELECTRICAL
INT=INTERIORS AND FINISH
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MEC=MECHANICAL
STR=STRUCTURAL
SLE=SOLAR ENVELOPE



STAMP:

PROJECT:

SOLAR DECATHLON 2007
TEAM MONTREAL

TITLE:

ROOF STRUCTURE

DATE:

07-01-08

DRAWN BY :

ERIC DUBE

SCALE :

1/4" - 1'-0"

VERIFIED BY :

PHILIPPE BOUTIN

APPROVED BY :

PIERRE BONNIER

PROJECT No. :

SD-07

REVISION :

4

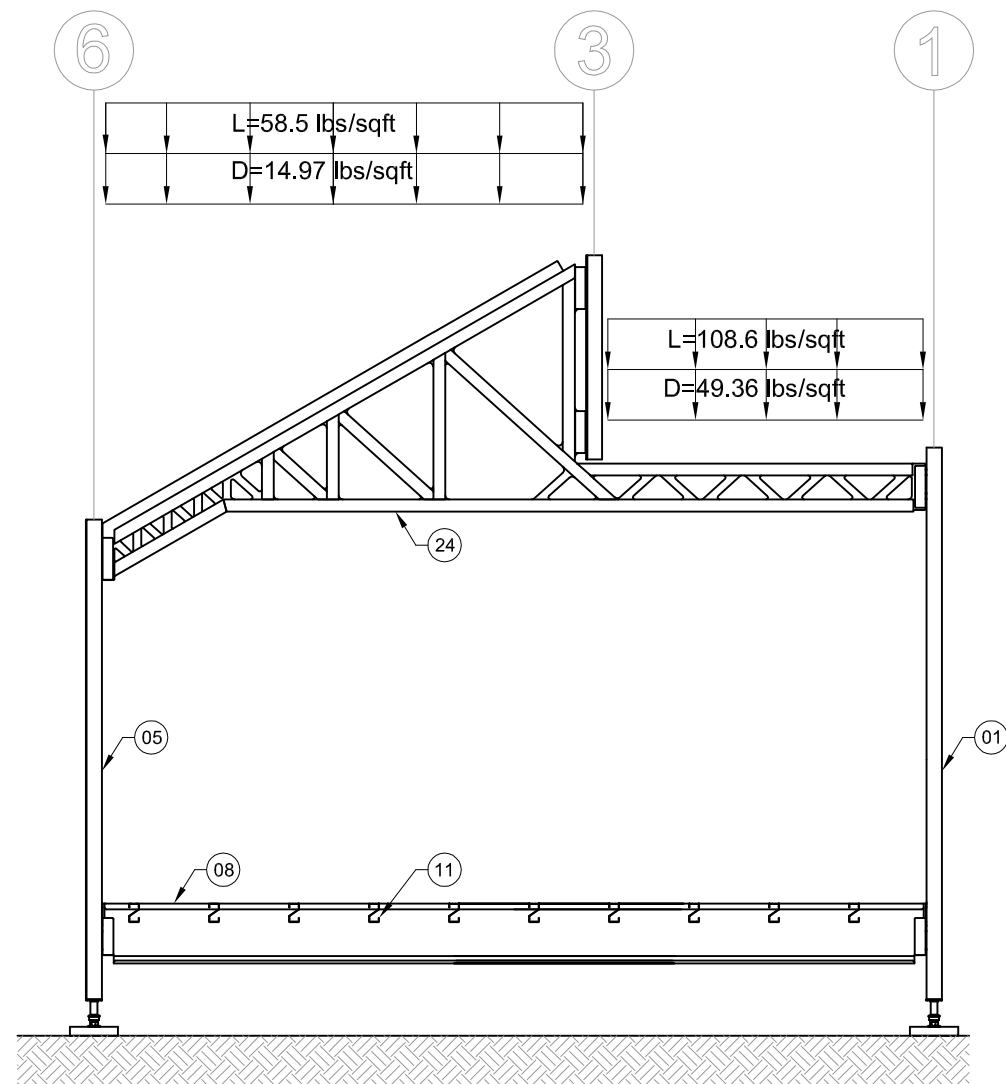
DRAWING No. :

STR -400

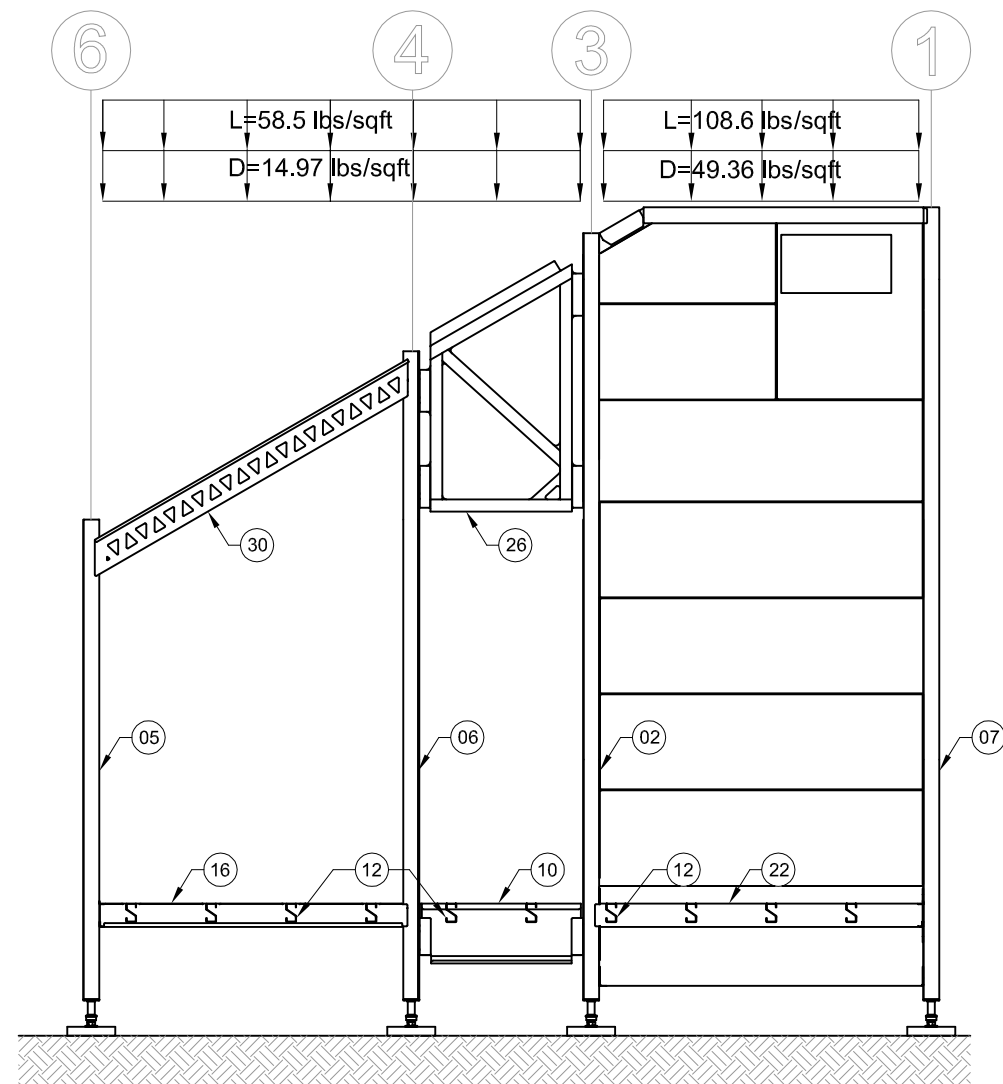
1
STR-400

ROOF STRUCTURE

1/4"=1'-0"



SECTION A-A



SECTION B-B

1 SECTION AA & BB
STR-500 1/4"=1'-0"

| No. | REVISIONS | DATE |
|-----|-------------------------------|----------|
| 1 | DESIGN DEVELOPMENT DRAWINGS | 13-06-06 |
| 2 | CONSTRUCTION DRAWINGS | 06-03-07 |
| 3 | UPDATE CONSTRUCTION DRAWINGS | 07-08-07 |
| 4 | UPDATED CONSTRUCTION DRAWINGS | 07-01-08 |

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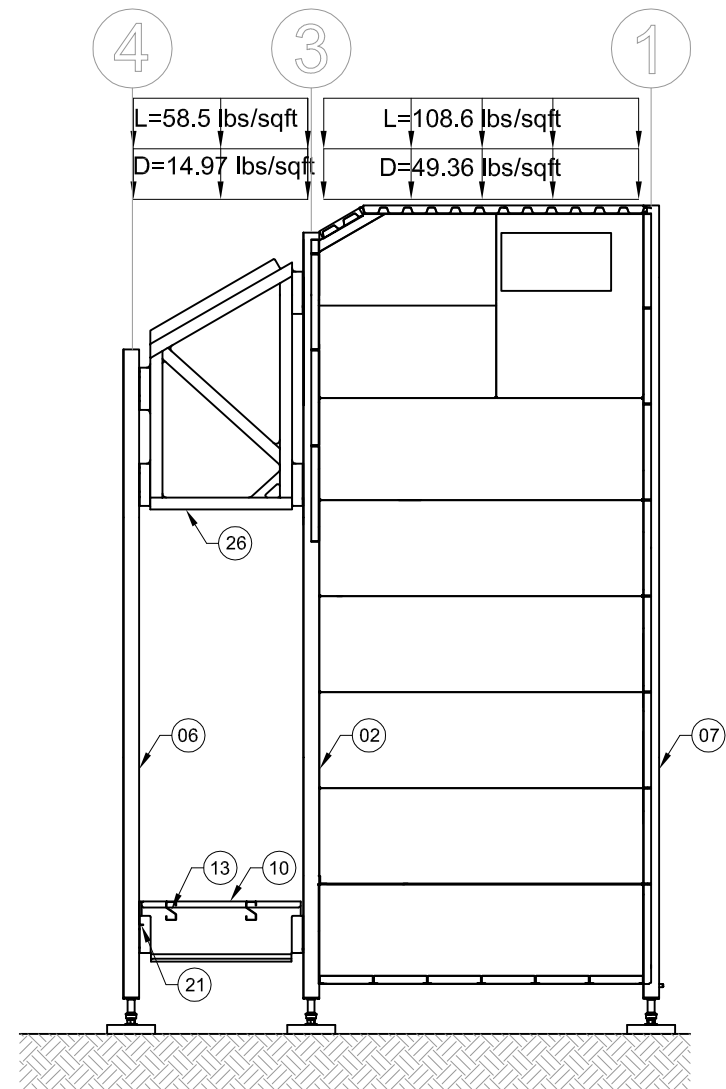
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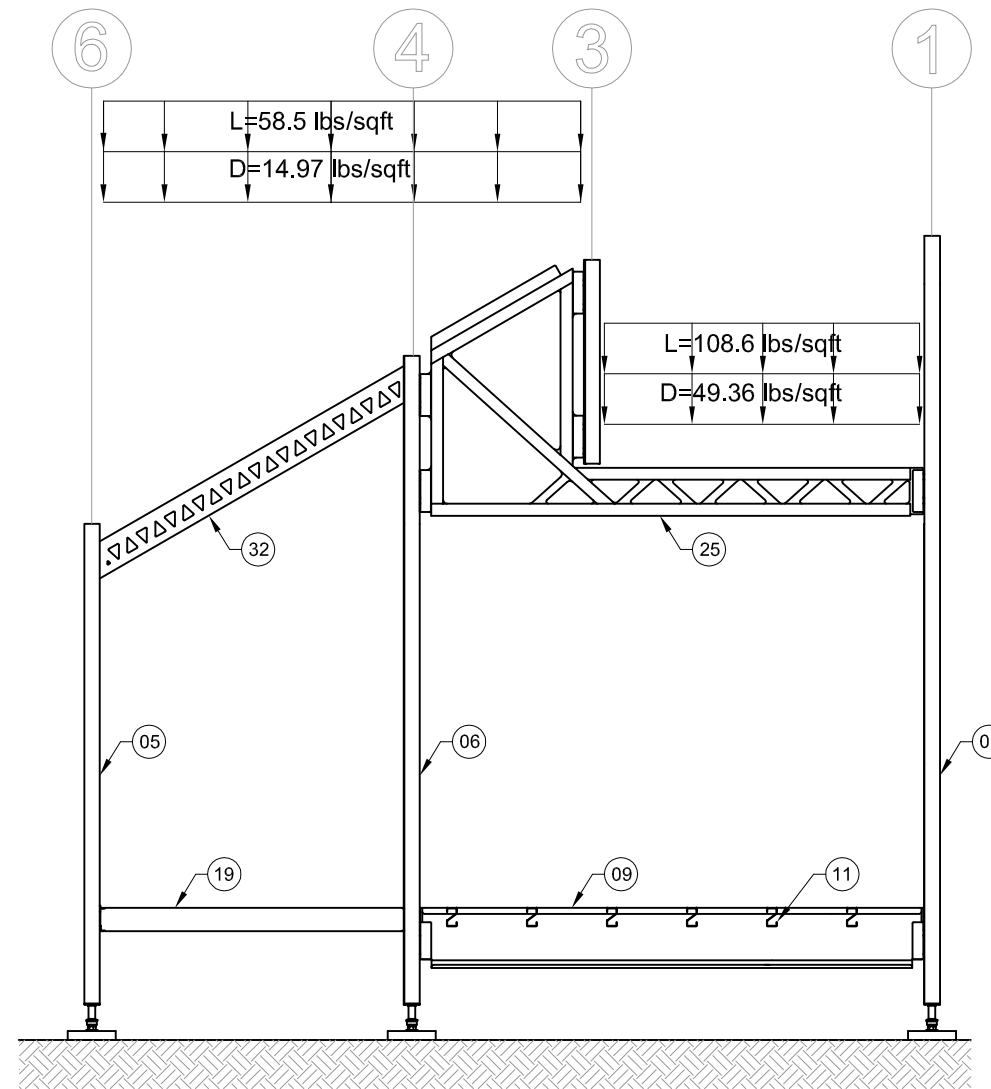
TITLE:

SECTION AA & BB

| | |
|-------------------------|----------------------------------|
| DATE: 07-01-08 | DRAWN BY : ERIC DUBE |
| SCALE : 1/4" - 1'-0" | VERIFIED BY : PHILIPPE BOUTIN |
| PROJECT No. : SD-07 | APPROVED BY : PIERRE BONNIER |
| REVISION : 4 | DRAWING No. : STR -500 |



SECTION C-C



SECTION D-D

1 SECTION CC & DD
STR-501 1/4"=1'-0"

| No. | REVISIONS | DATE |
|-----|-------------------------------|----------|
| 1 | DESIGN DEVELOPMENT DRAWINGS | 13-06-06 |
| 2 | CONSTRUCTION DRAWINGS | 06-03-07 |
| 3 | UPDATE CONSTRUCTION DRAWINGS | 07-08-07 |
| 4 | UPDATED CONSTRUCTION DRAWINGS | 07-01-08 |

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STAMP:

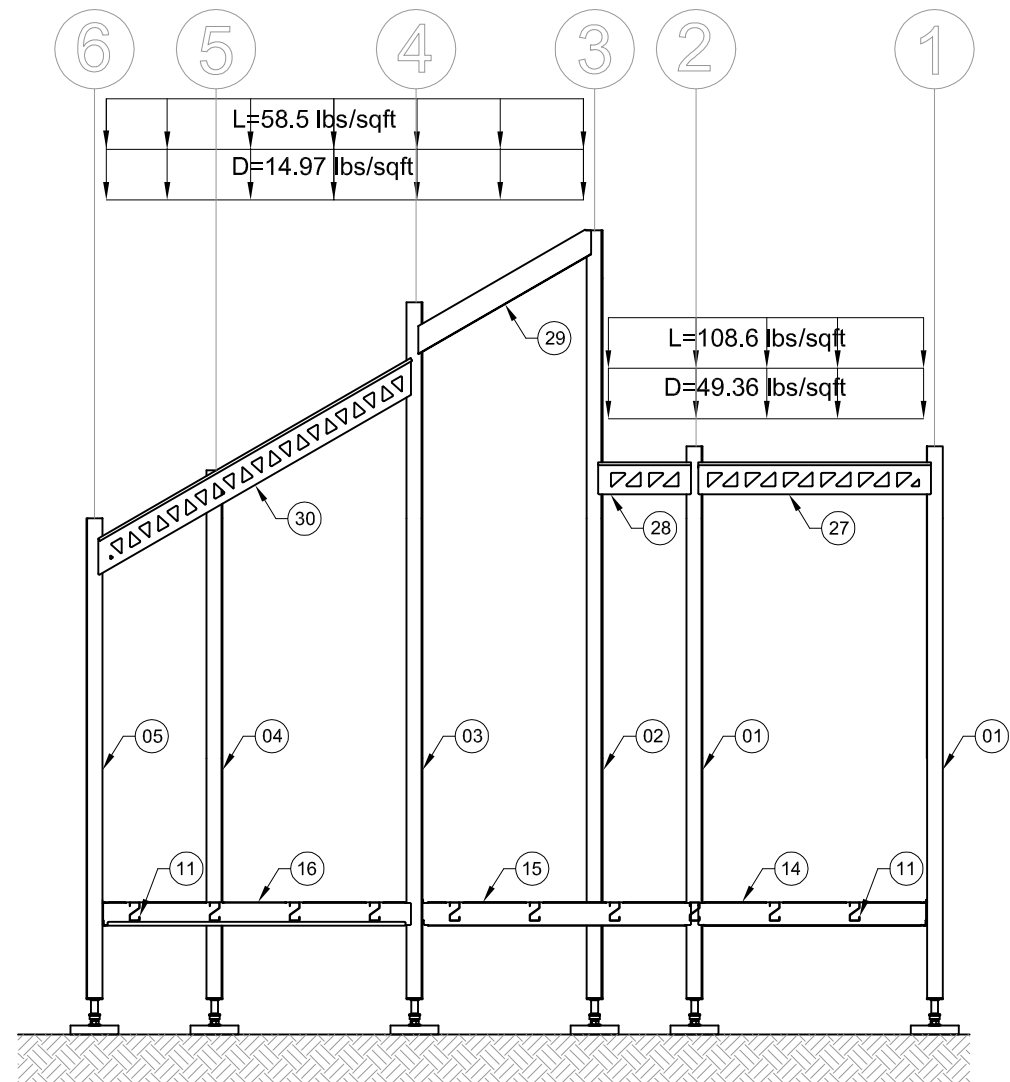
PROJECT:

SOLAR DECATHLON 2007
TEAM MONTREAL

TITLE:

SECTION CC & DD

| | |
|-------------------------|----------------------------------|
| DATE: 07-01-08 | DRAWN BY : ERIC DUBE |
| SCALE : 1/4" - 1'-0" | VERIFIED BY : PHILIPPE BOUTIN |
| PROJECT No. : SD-07 | APPROVED BY : PIERRE BONNIER |
| REVISION : 4 | DRAWING No. : STR -501 |



SECTION E-E

1

STR-502

SECTION EE

1/4"=1'-0"

| No. | REVISIONS | DATE |
|-----|-------------------------------|----------|
| 1 | DESIGN DEVELOPMENT DRAWINGS | 13-06-06 |
| 2 | CONSTRUCTION DRAWINGS | 06-03-07 |
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STAMP:

PROJECT:

SOLAR DECATHLON 2007
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TITLE:

SECTION EE

| | | |
|-------------------------|----------------------------------|---------------------------|
| DATE: 07-01-08 | DRAWN BY : ERIC DUBE | |
| SCALE : 1/4" - 1'-0" | VERIFIED BY : PHILIPPE BOUTIN | |
| PROJECT No. : SD-07 | APPROVED BY : PIERRE BONNIER | |
| | REVISION : 4 | DRAWING No. : STR -502 |

| No. | REVISIONS | DATE |
|-----|-------------------------------|----------|
| 1 | DESIGN DEVELOPMENT DRAWINGS | 13-06-06 |
| 2 | CONSTRUCTION DRAWINGS | 06-03-07 |
| 3 | UPDATE CONSTRUCTION DRAWINGS | 07-08-07 |
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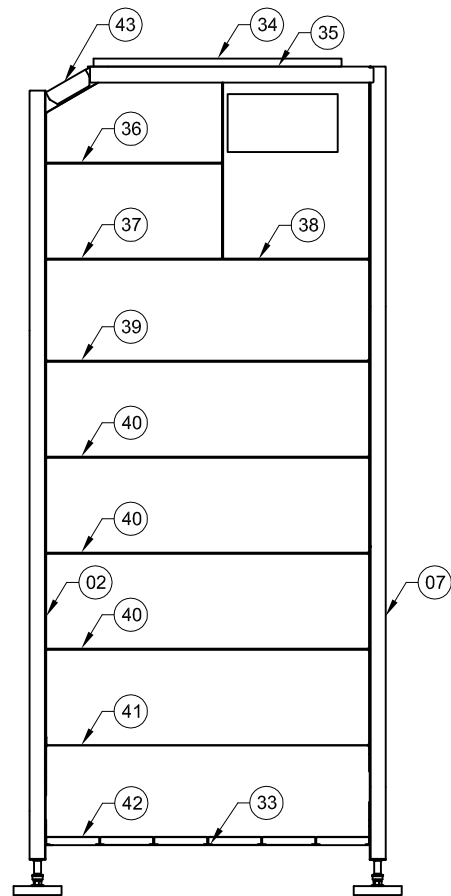
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TEAM MONTREAL

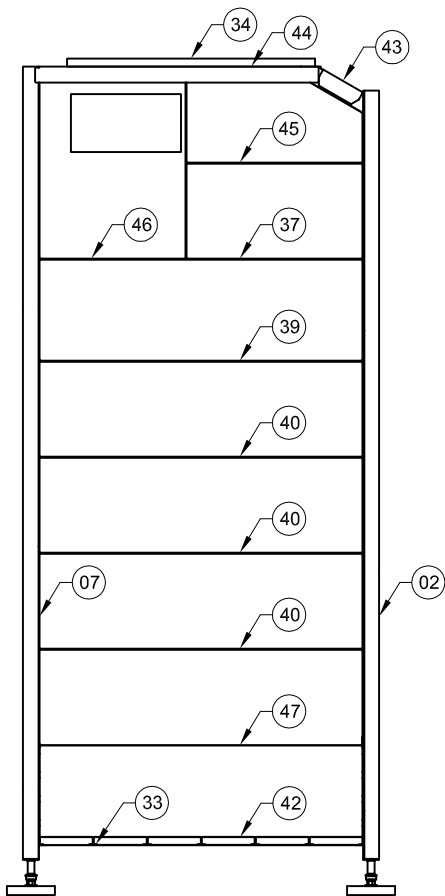
TITLE:

MECHANICAL ROOM

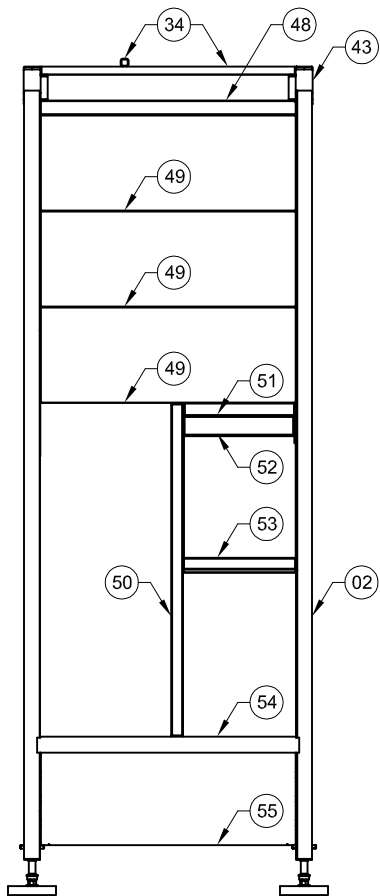
| | |
|-------------------------|----------------------------------|
| DATE: 07-01-08 | DRAWN BY : ERIC DUBE |
| SCALE : 1/4" = 1'-0" | VERIFIED BY : PHILIPPE BOUTIN |
| PROJECT No. : SD-07 | APPROVED BY : PIERRE BONNIER |
| REVISION : 4 | DRAWING No. : STR -600 |



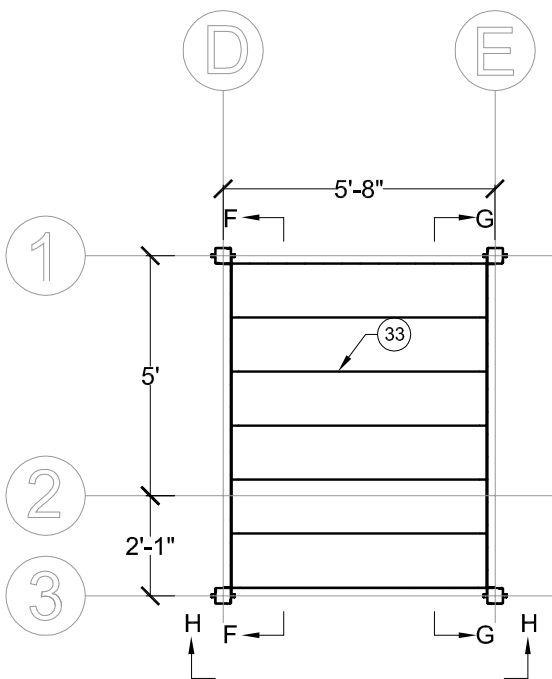
SECTION F-F



SECTION G-G



SECTION H-H



PLAN

| PART LIST | | | |
|-----------|------|--------------------|---------------------|
| TYPE | QTY. | PART NUMBER | DESCRIPTION |
| 33 | 6 | 007-2002-02 | DECK FLOOR (64 in.) |
| 34 | 6 | iSquareTube-ASTM | 2 x 2 x 1/4 in. |
| 35 | 1 | 007-0409-03-085-02 | M-BOX JOIST |
| 36 | 1 | 007-2001-00-000-16 | M-BOX PANEL |
| 37 | 2 | 007-2001-00-000-13 | M-BOX PANEL |
| 38 | 1 | 007-2001-00-000-24 | M-BOX PANEL |
| 39 | 2 | 007-2001-00-000-22 | M-BOX PANEL |
| 40 | 6 | 007-2001-00-000-03 | M-BOX PANEL |
| 41 | 1 | 007-2001-00-000-27 | M-BOX PANEL |
| 42 | 2 | 007-2001-00-000-02 | M-BOX PANEL |
| 43 | 2 | 007-0409-00-000-03 | M-BOX JOIST |
| 44 | 1 | 007-0409-03-085-03 | M-BOX JOIST |
| 45 | 1 | 007-2001-00-000-17 | M-BOX PANEL |
| 46 | 1 | 007-2001-00-000-23 | M-BOX PANEL |
| 47 | 1 | 007-2001-00-000-20 | M-BOX PANEL |
| 48 | 1 | 007-2001-00-000-14 | M-BOX PANEL |
| 49 | 8 | 007-2001-00-000-09 | M-BOX PANEL |
| 50 | 1 | 007-9008-02 | CROSS-BRACE |
| 51 | 1 | 007-2001-00-000-26 | M-BOX PANEL |
| 52 | 1 | 007-9008-03 | CROSS-BRACE |
| 53 | 1 | 007-9008-18 | CROSS-BRACE |
| 54 | 1 | 007-0409-03-068-01 | M-BOX JOIST |
| 55 | 2 | 007-2001-00-000-04 | M-BOX PANEL |

1

STR-600

MECHANICAL ROOM

1/4"=1'-0"

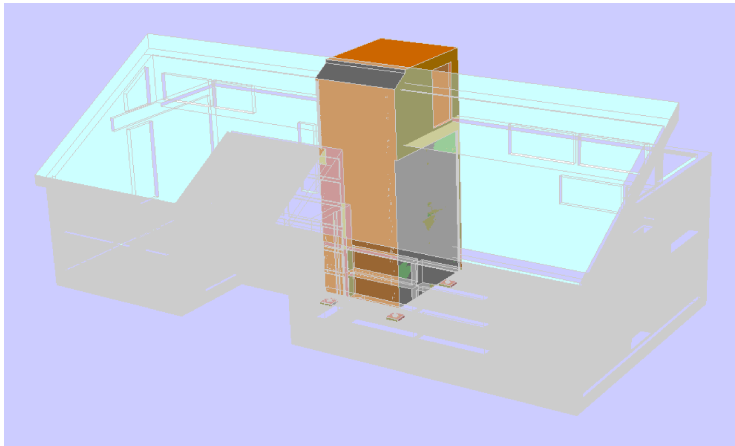


FIGURE 1
THE MECHANICAL AND THE BATHROOM MODULE WILL BE LIFTED INTO PLACE BY THE CRANE.

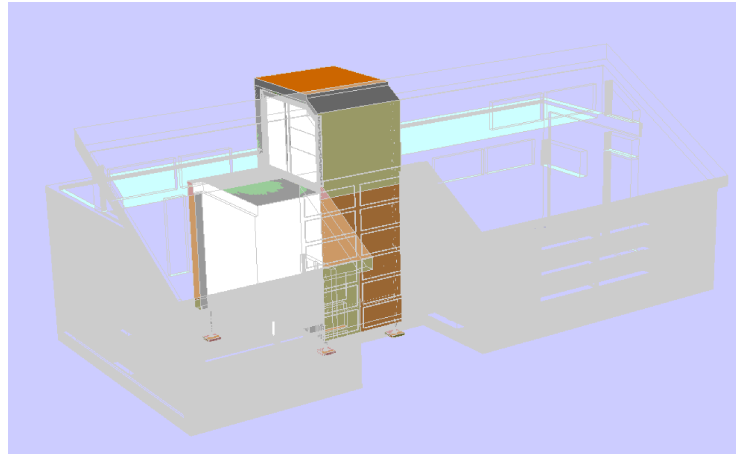


FIGURE 2

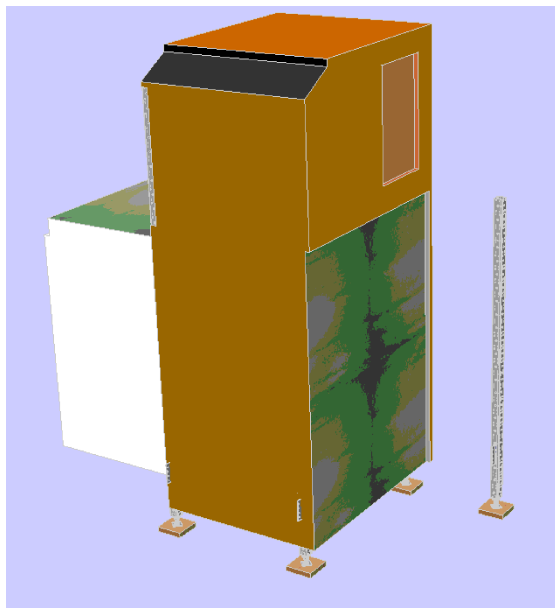


FIGURE 3
INSTALLATION OF THE FIRST COLUMN AND THE STRUCTURAL ELEMENTS CONNECTING IT TO THE MECHANICAL MODULE.



FIGURE 4
INSTALLATION OF THE FIRST COLUMN AND THE STRUCTURAL ELEMENTS CONNECTING IT TO THE MECHANICAL MODULE.



ASSEMBLY 1 @ 4

| No. | REVISIONS | DATE |
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| 1 | DESIGN DEVELOPMENT DRAWINGS | 13-06-06 |
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SOLAR DECATHLON 2007
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ASSEMBLY 1 @ 4

| | |
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| DATE: 07-01-08 | DRAWN BY : TEAM MONTREAL |
| SCALE : -- | VERIFIED BY : A. LABERGE |
| PROJECT No. : SD-07 | REVISION : 4 |
| | DRAWING No. : ASS - 001 |

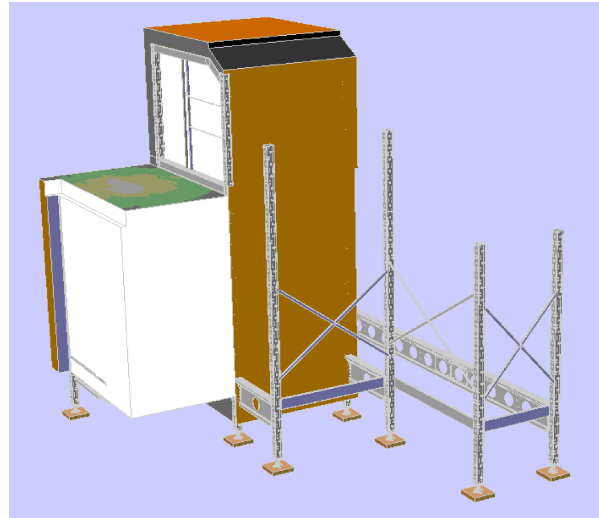


FIGURE 5
THE SNAP-IN FLOOR JOIST AND THE TEMPORARY BRACING CROSSES ARE USED TO HOLD THE COLOMNS VERTICALLY. FINAL CONFIGURATION OF THE STRUCTURAL FRAME IS ILLUSTRATED IN FIGURE 6.

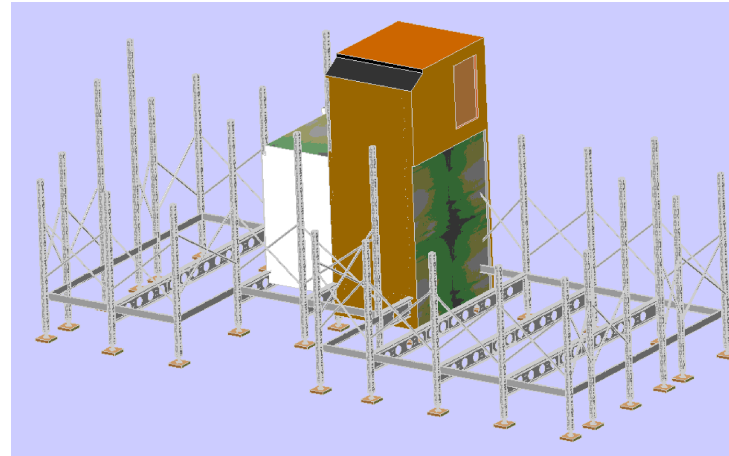


FIGURE 6

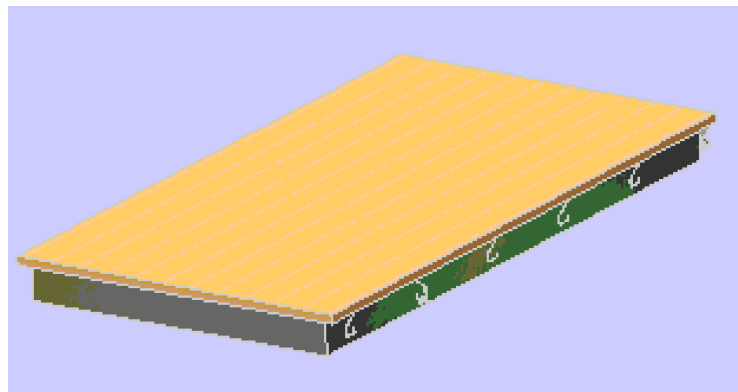


FIGURE 7
THE POSITIONNING OF THE FLOOR PANELS FOLLOWS AUTOMATICALLY FROM THE CORRELATION TO THE CORRESPONDING SUPPORTS AND SEVERAL OTHER POINTS OF REFERENCE.

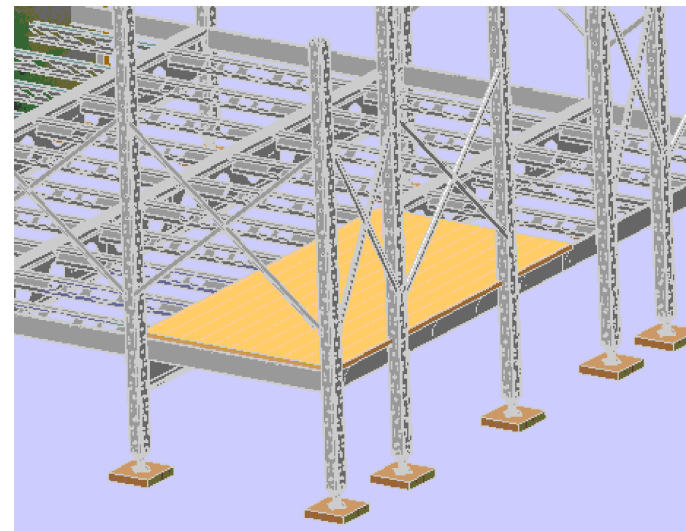


FIGURE 8

| No. | REVISIONS | DATE |
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ASSEMBLY 5 @ 8

| | |
|------------------------|-----------------------------|
| DATE: 07-01-08 | DRAWN BY : TEAM MONTREAL |
| SCALE : -- | VERIFIED BY : A. LABERGE |
| PROJECT No. : SD-07 | REVISION : 4 |
| | DRAWING No. : ASS - 002 |

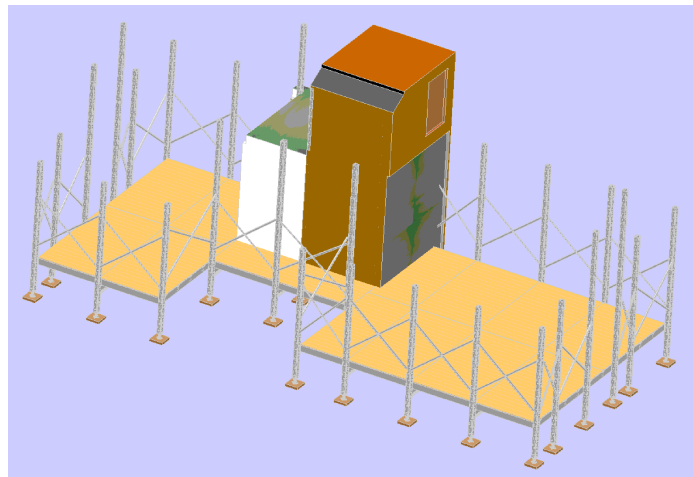


FIGURE 9
FINAL CONFIGURATION OF THE FLOOR IS ILLUSTRATED IN FIGURE 9.



FIGURE 10
THE ROOF TRUSSES WILL ARRIVE AT THE COMPETITION SITE IN THE CONFIGURATION SHOWN IN FIGURE 10.

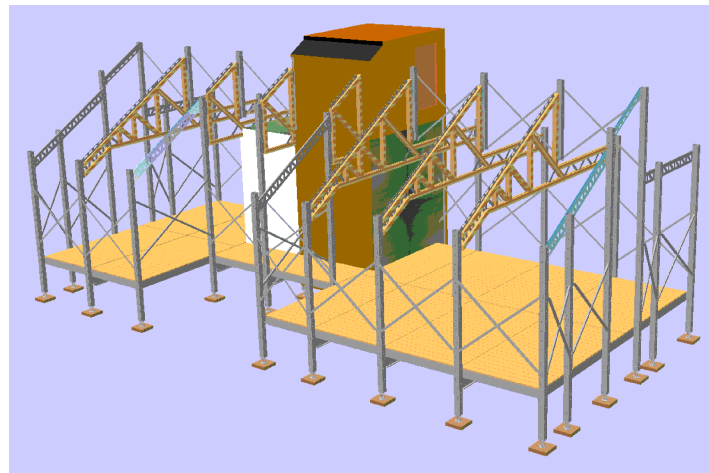


FIGURE 11
THE MOUNTING OF THE TRUSSES WILL BE PERFORMED BY AN ELECTRONIC DEVICE MOUNTED ON A MOBILE BASE. AFTER WE ENSURE A RAPID AND PRECISE ASSEMBLY OF THE ROOF.

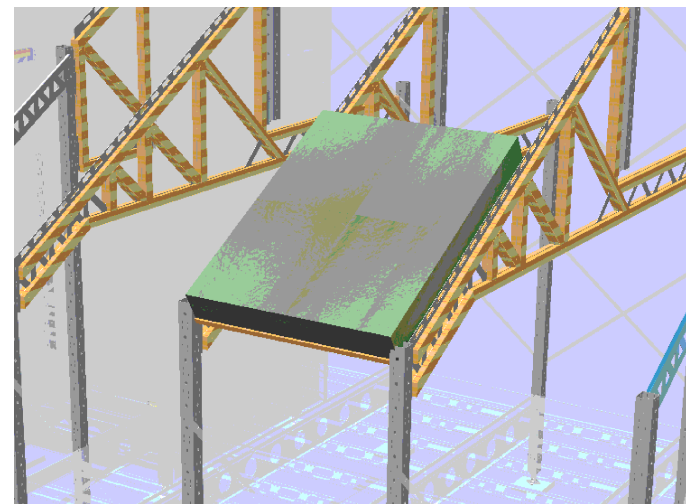


FIGURE 12

| No. | REVISIONS | DATE |
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TEAM MONTREAL

TITLE:

ASSEMBLY 9 @ 12

DATE:

07-01-08

SCALE :

--

PROJECT No. :

SD-07

DRAWN BY :

TEAM MONTREAL

VERIFIED BY :

A. LABERGE

APPROVED BY :

REVISION :

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DRAWING No. :

ASS - 003



ASSEMBLY 9 @12

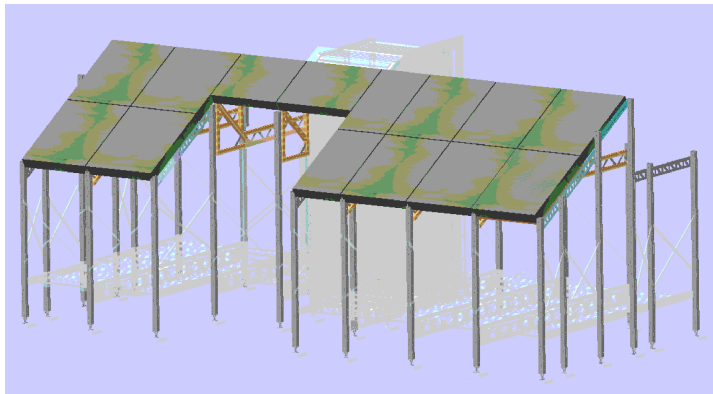


FIGURE 13
ONCE THE PANELS ARE INSTALLED, THE JOINTS WILL BE FILLED BY A PORTABLE URETHANE PISTOL. THE WALL PANEL WILL BE FIXED BY BRACKETS THAT SERVE TO POSITION AND SECURE THE PANELS ON THE COLOMNS.

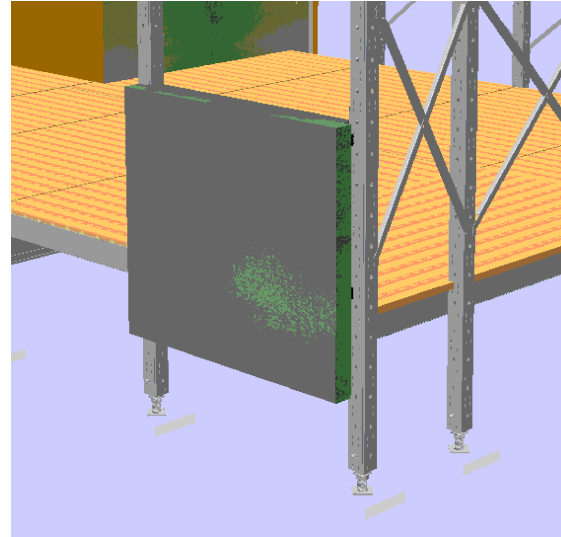


FIGURE 14

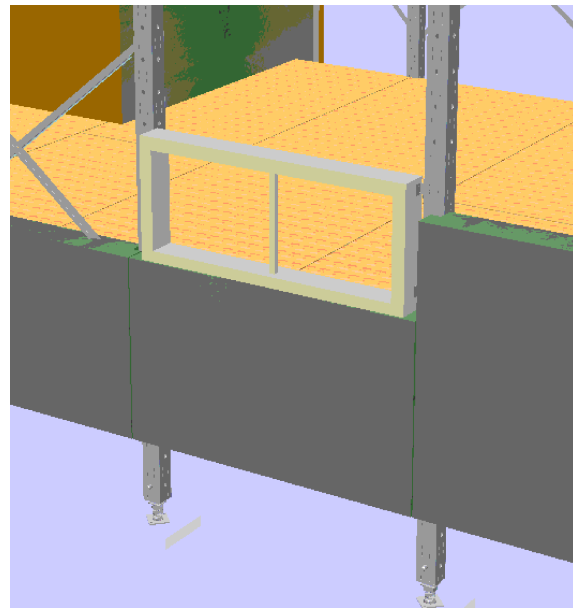


FIGURE 15
THE WINDOWS WILL BE INSTALLED EXACTLY LIKE THE WALL PANEL.

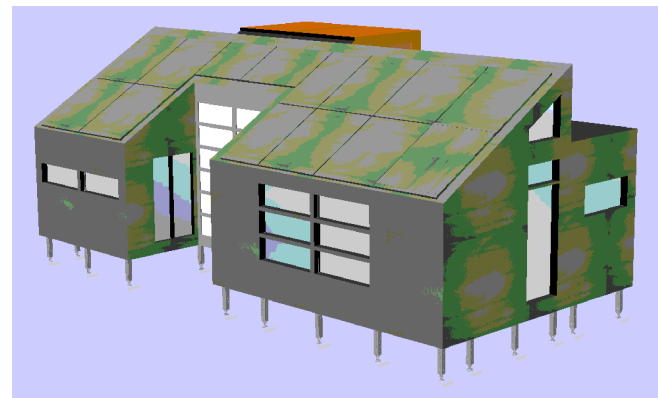


FIGURE 16
SIMILAR TO THE ROOF, THE JOINTS BETWEEN EACH PANEL WILL BE SEALED BY A PORTABLE URETHENE PISTOL.

| No. | REVISIONS | DATE |
|-----|------------------------------|----------|
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TITLE:

ASSEMBLY 13 @ 16

| | |
|------------------------|-----------------------------|
| DATE: 07-01-08 | DRAWN BY : TEAM MONTREAL |
| SCALE : -- | VERIFIED BY : A. LABERGE |
| PROJECT No. : SD-07 | REVISION : 4 |
| | DRAWING No. : ASS - 004 |

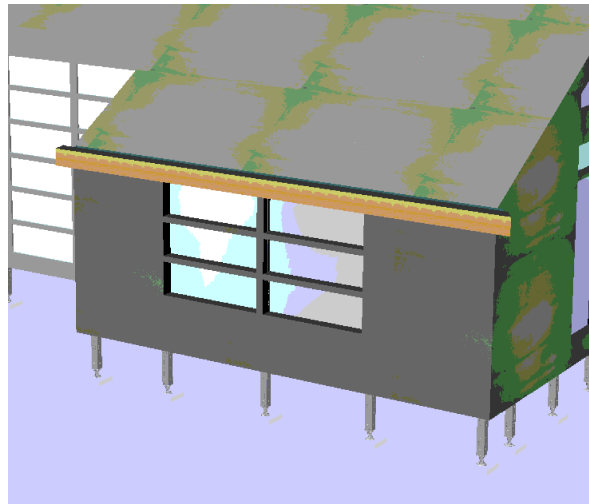


FIGURE 17
ONCE THE OVERHANGS ARE INSTALLED, THE PROTECTIVE IMPERMEABLE MEMBRANE CAN BE SEALED ON.

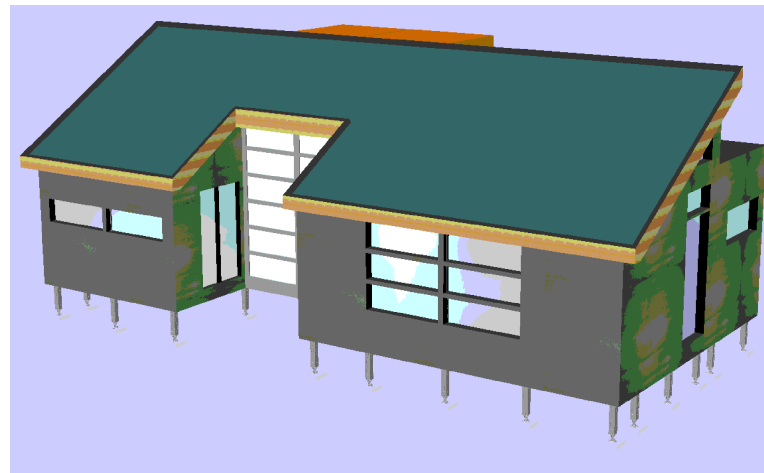


FIGURE 18

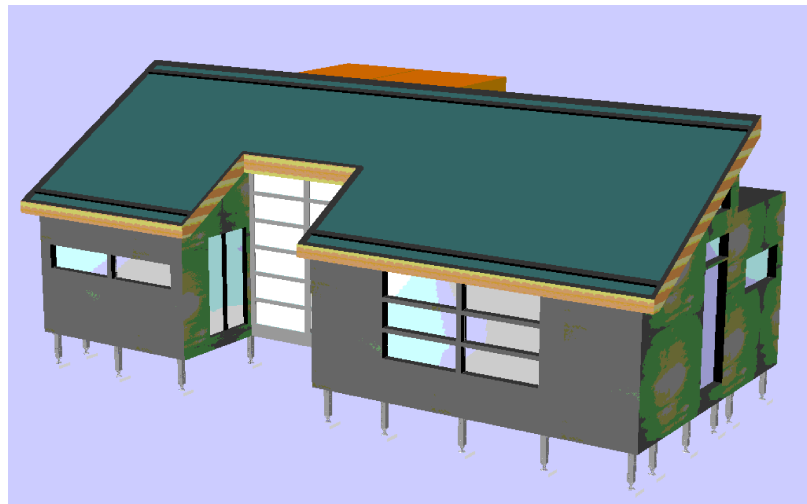


FIGURE 19
THE PHOTOVOLTAÏC PANELS ARE SUPPORTED BY A FRAME THAT IS PLACED ON THE IMPERMEABLE MEMBRANE.

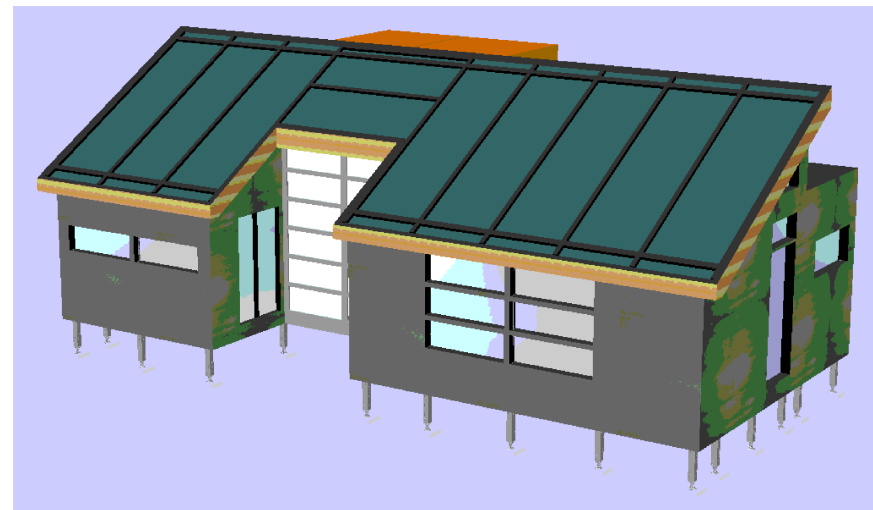


FIGURE 20



ASSEMBLY 17 @ 20

| No. | REVISIONS | DATE |
|-----|------------------------------|----------|
| 1 | DESIGN DEVELOPMENT DRAWINGS | 13-06-06 |
| 2 | CONSTRUCTION DRAWINGS | 06-03-07 |
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TEAM MONTREAL

TITLE:

ASSEMBLY 17 @ 20

| | |
|------------------------|-----------------------------|
| DATE: 07-01-08 | DRAWN BY : TEAM MONTREAL |
| SCALE : --- | VERIFIED BY : A. LABERGE |
| PROJECT No. : SD-07 | REVISION : 4 |
| | DRAWING No. : ASS - 005 |

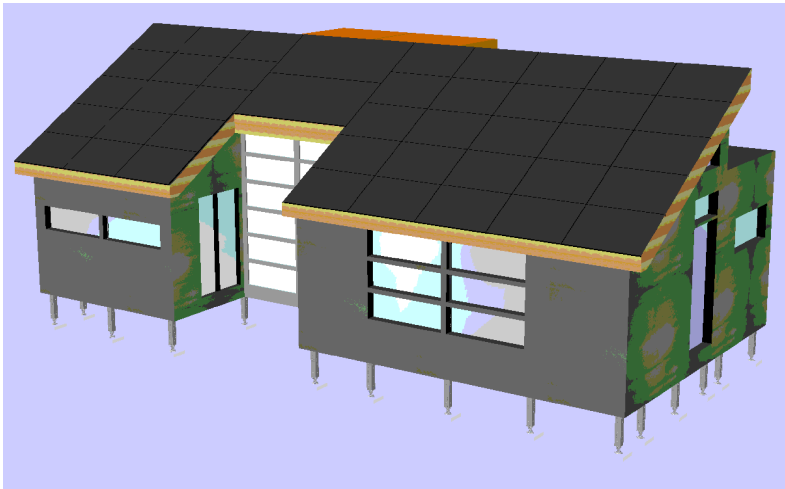


FIGURE 21
FINALLY EACH PANEL WILL BE INSTALLED AND CONNECTED TO EACH OTHERS.

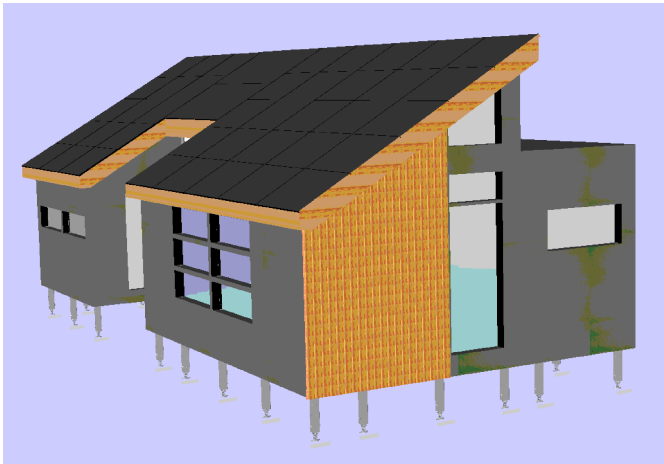


FIGURE 22
THE EXTERIOR FINISHING PANELS ARE POSITIONED VERTCALLY AND CROSSED IN THE BACK BY HORIZONTAL PLANKS.

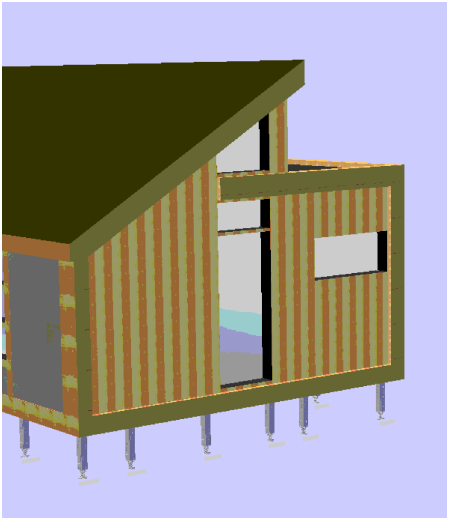


FIGURE 21
THE SAME PRINCIPLE FOR ATTACHING THE LARGE WOODEN DECORATIVE PIECES.

| No. | REVISIONS | DATE |
|-----|------------------------------|----------|
| 1 | DESIGN DEVELOPMENT DRAWINGS | 13-06-06 |
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STAMP:

PROJECT:

SOLAR DECATHLON 2007
TEAM MONTREAL

TITLE:

ASSEMBLY 21 @ 23

| | | | |
|---------------|----------|---------------|---------------|
| DATE: | 07-01-08 | DRAWN BY : | TEAM MONTREAL |
| SCALE : | -- | VERIFIED BY : | A. LABERGE |
| | | APPROVED BY : | |
| PROJECT No. : | SD-07 | REVISION : | 4 |
| | | DRAWING No. : | ASS - 006 |

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| MEC - 002 | MECHANICAL SYSTEMS DIAGRAM |
| MEC - 003 | VENTILATION DISTRIBUTION & EVACUATION |
| MEC - 004 | RADIANT FLOOR |
| MEC - 005 | PLUMBING DIAGRAM |
| MEC - 006 | PLUMBING SUPPLY |
| MEC - 007 | PLUMBING DRAINAGE |

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| 2 | CONSTRUCTION DRAWINGS | 06-03-07 |
| 3 | UPDATE CONSTRUCTION DRAWINGS | 07-08-07 |
| 4 | UPDATED CONSTRUCTION DRAWINGS | 07-01-08 |

NOTES

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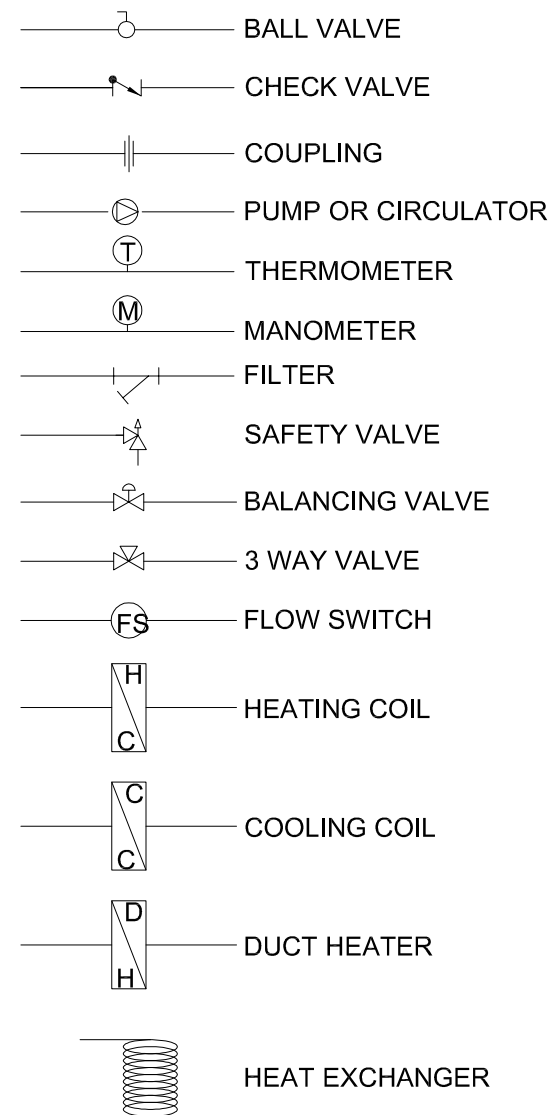
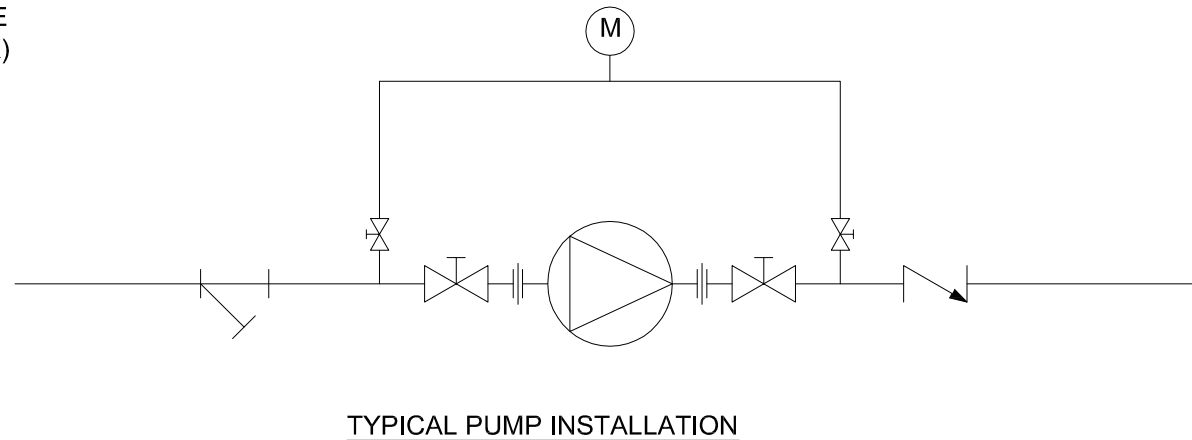
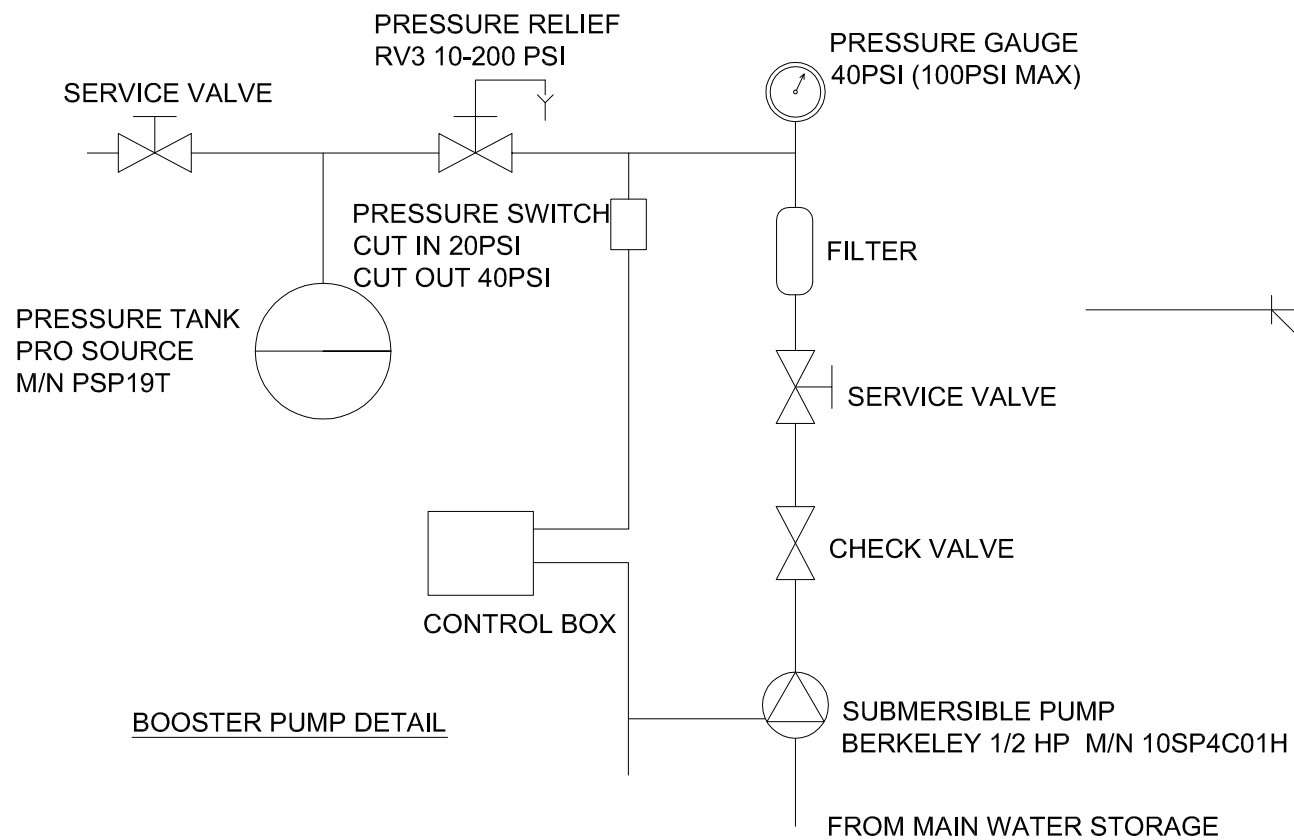
PROJECT:

SOLAR DECATHLON 2007
TEAM MONTREAL

TITLE:

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| DATE: 07-01-08 | DRAWN BY : TEAM MONTREAL | |
| SCALE : | VERIFIED BY : TEAM MONTREAL | |
| | APPROVED BY : | |
| PROJECT No. : SD-07 | REVISION : 4 | DRAWING No. : MEC - 000 |



| SD07 - Team Montreal - Mechanical Equipments | | | | | | |
|--|-------------------------------|---------|-----------------------|----------------|------------------|------------|
| Qty. | Description | TAG | Max Capacity / Power | Brand | Model No. | Location |
| 2 | Solar thermal collectors | STC | 21 000 BTU/day | Stiebel Eltron | Sol 25 plus | Roof |
| 1 | Solar pump | P1 | 8 gpm | Stiebel Eltron | WILO star ST20/6 | Mech. Room |
| 1 | Solar tank | ST | 119 US Gal. | Thermo2000 | Turbomax109 | Mech. Room |
| 1 | Expansion tank | SET | 2 Gal. | Armtrol | Extrol #15 | Mech. Room |
| 1 | Instant water heater | IWH | 3.3 kW | Stiebel Eltron | DHC-3-2 | Mech. Room |
| 1 | Waste water tank | WWT | 500 US Gal. | Norwesco | 40148 | Outside |
| 1 | Potable water tank | PWT | 500 US Gal. | Norwesco | 40148 | Outside |
| 1 | Radiant floor panel | RFP | 6 loops | IPEX | 489953 | Mech. Room |
| 1 | Air handling unit | AHU | 800 CFM | First Co. | 8MB-3HW | Mech. Room |
| 1 | Heat recovery ventilator | HRV | 70 CFM | Fantech | VHR 704 | Mech. Room |
| 1 | Fluid cooler | FC | 2 tons | I.E.C. | HPY-08 | Mech. Room |
| 1 | Heat pump | HP | 1.5 ton | Geoernegy | GE-R020 | Mech. Room |
| 1 | Cold storage tank | CST | 48 US GAL | Thermo2000 | Turbomax44 | Mech. Room |
| 1 | Hot storage Tank | HST | 48 US GAL | Thermo2000 | Turbomax44 | Mech. Room |
| 1 | Heating expansion tank | HET | 2 Gal. | Armtrol | Extrol #15 | Mech. Room |
| 1 | Domestic pressure pump | P5 | 10 gpm / 1/2 HP | Berkeley | 10SP4C01H | Outside |
| 1 | Domestic water expansion tank | DET | 19 Gal. | Pro Source | PSP19T | Mech. Room |
| 2 | Water pumps | P3 ; P4 | 30 gpm / 35 ft. water | Grundfos | UP26-116F | Mech. Room |

MECH. LEGEND & EQUIP. LIST
MEC-001

| No. | REVISIONS | DATE |
|-----|-------------------------------|----------|
| 1 | DESIGN DEVELOPMENT DRAWINGS | 13-06-06 |
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STAMP:

PROJECT:

SOLAR DECATHLON 2007
TEAM MONTREAL

TITLE:

MECHANICAL LEGEND &
EQUIPMENT LIST

| | | |
|------------------------|--------------------------|----------------------------|
| DATE: 07-01-08 | DRAWN BY : G. D-R. | |
| SCALE : - | VERIFIED BY : G. D-R. | |
| PROJECT No. : SD-07 | REVISION : 4 | DRAWING No. : MEC - 001 |

| No. | REVISIONS | DATE |
|-----|-------------------------------|----------|
| 1 | DESIGN DEVELOPMENT DRAWINGS | 13-06-06 |
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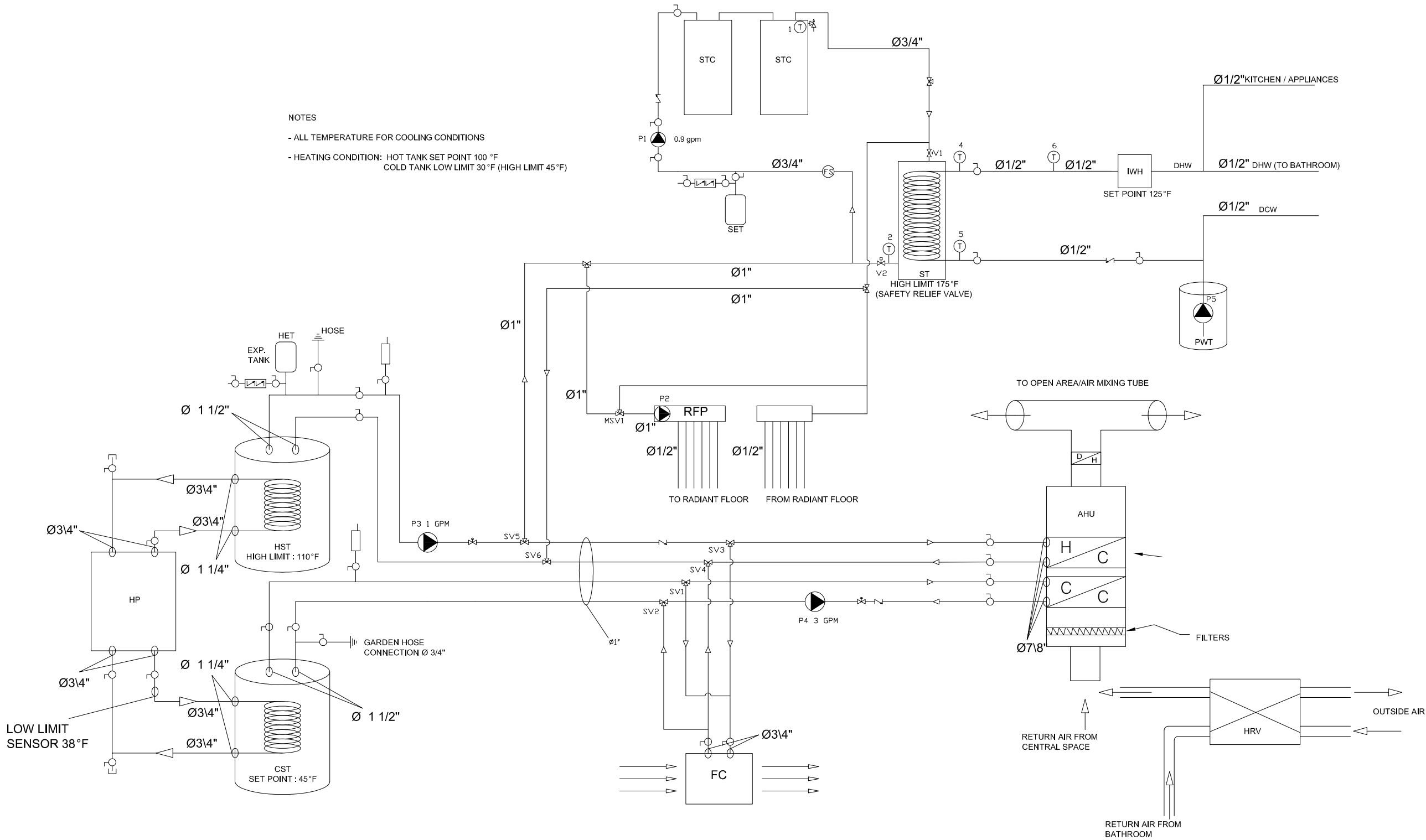
PROJECT:

SOLAR DECATHLON 2007
 TEAM MONTREAL

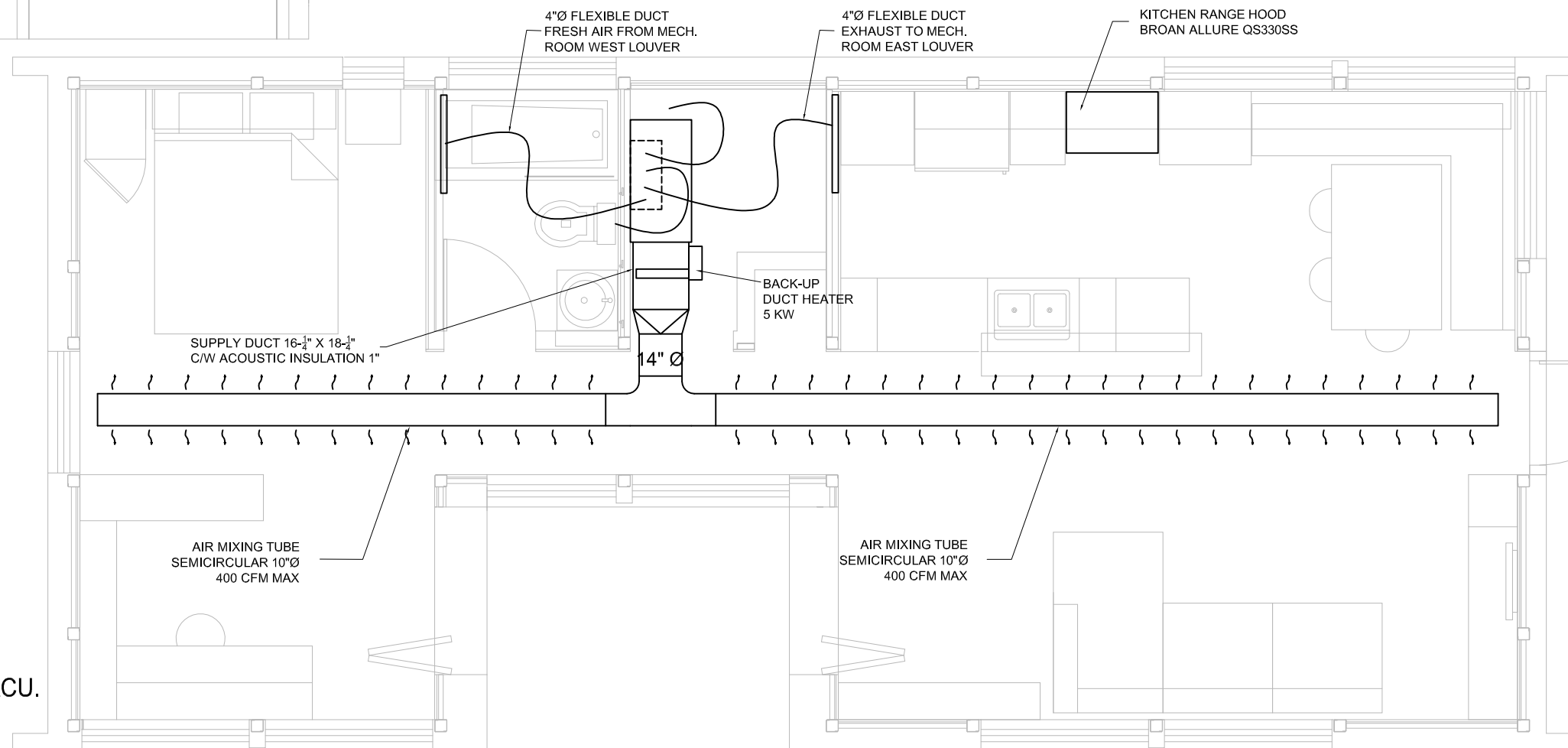
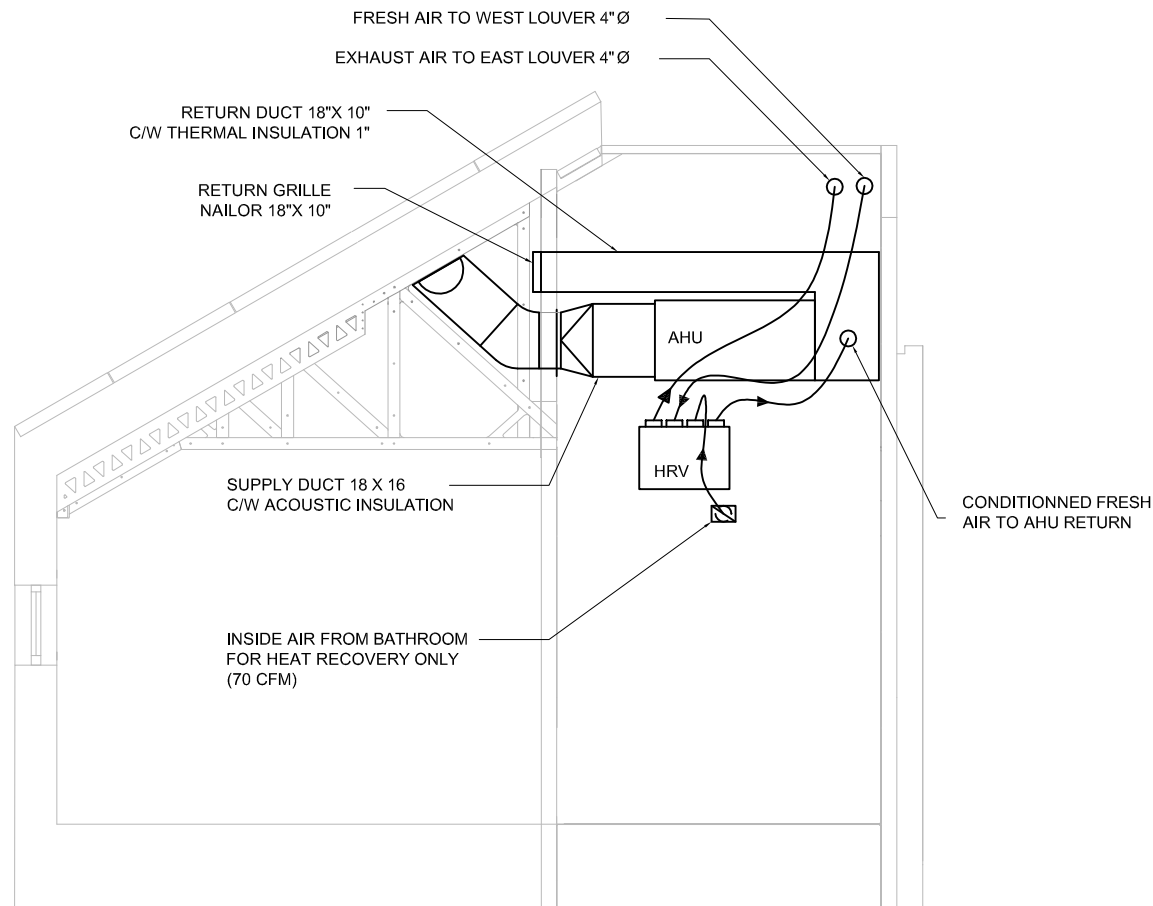
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MECHANICAL
 SYSTEMS DIAGRAM

| | | |
|------------------------|--------------------------|----------------------------|
| DATE: 07-01-08 | DRAWN BY : C.SAVARD | |
| SCALE : -- | VERIFIED BY : G. D-R. | |
| PROJECT No. : SD-07 | REVISION : 4 | DRAWING No. : MEC - 002 |



- MECH. SYSTEMS DIAGRAM
 MEC-002



-

MEC-003

VENTILATION DISTR. & EVACU.

1/4"=1'-0"

| No. | REVISIONS | DATE |
|-----|-------------------------------|----------|
| 1 | DESIGN DEVELOPMENT DRAWINGS | 13-06-06 |
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STAMP:

PROJECT:

SOLAR DECATHLON 2007
TEAM MONTREAL

TITLE:

VENTILATION
DISTRIBUTION & EVACUATION

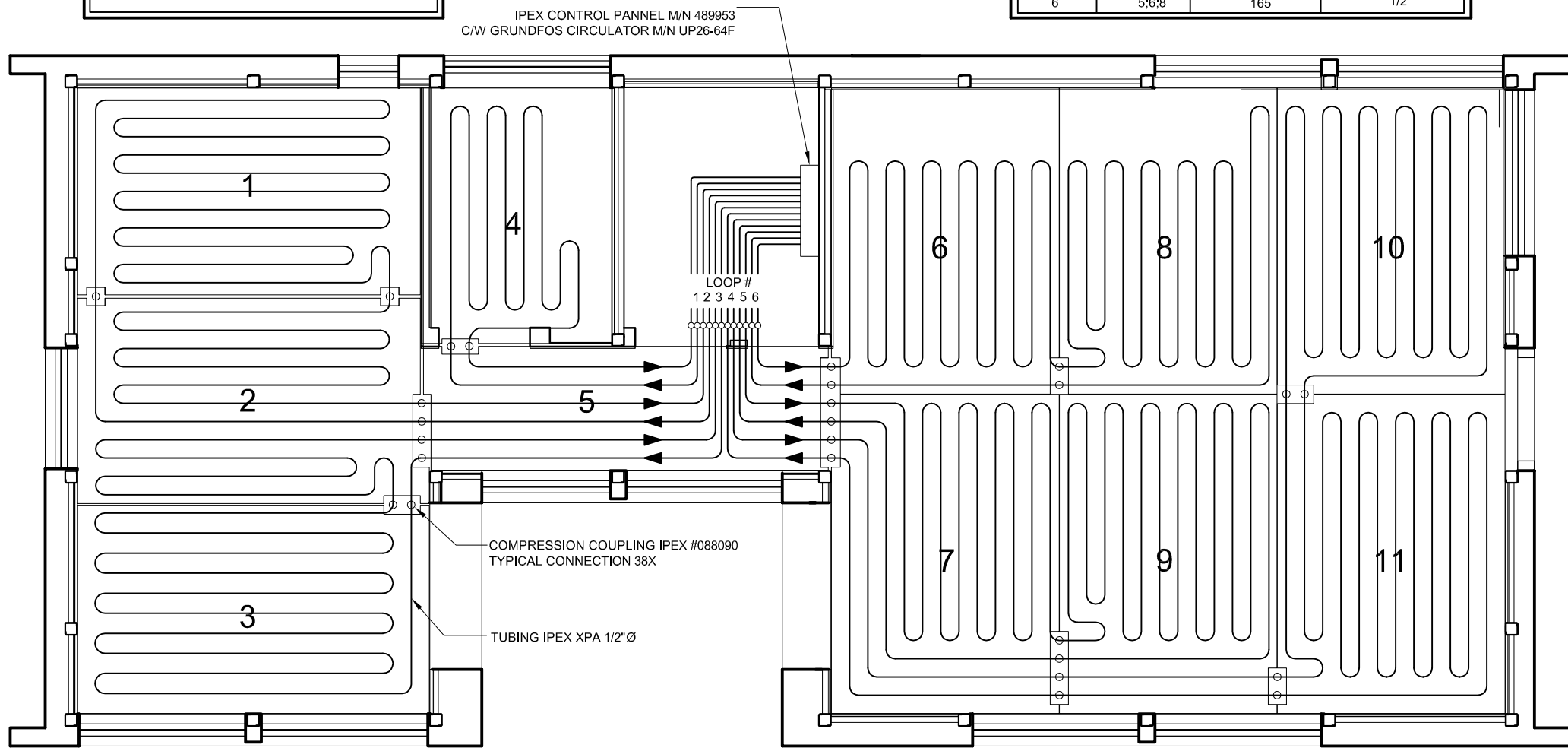
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| DATE: 07-01-08 | DRAWN BY : G. D-R. | |
| SCALE : 1/4" = 1' | VERIFIED BY : G. D-R. | |
| PROJECT No. : SD-07 | REVISION : 4 | DRAWING No. : MEC - 003 |

GENERAL INSTALLATION NOTE

- PROTECT AND MARK THE PIPES WHEN THEY PASS THROUGH THE INSIDE DIVISIONS.
- START THE INSTALLATION AT 6" OF THE COLD WALLS
- OPERATE THE SYSTEM IN CONTINUOUS FLOW.
- INSTAL A RIGID INSULATION UNDER THE KITCHEN CUPBOARD AND COUNTERS.
- IF POSSIBLE, IT WOULD BE PREFERABLE TO INSTAL THE PIPING IN NUMERICAL ORDER OF THE LOOPS.

PIPING DESCRIPTION

| LOOP # | FLOOR SECTION # | LENGHT IN FT AS DRAWN | DIAMETER IN INCHE |
|--------|-----------------|-----------------------|-------------------|
| 1 | 4;5 | 62 | 1/2 |
| 2 | 1;2;5 | 173 | 1/2 |
| 3 | 2;3;5 | 150 | 1/2 |
| 4 | 5;7;9;10;11 | 240 | 1/2 |
| 5 | 5;7;9 | 172 | 1/2 |
| 6 | 5;6;8 | 165 | 1/2 |



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PROJECT:

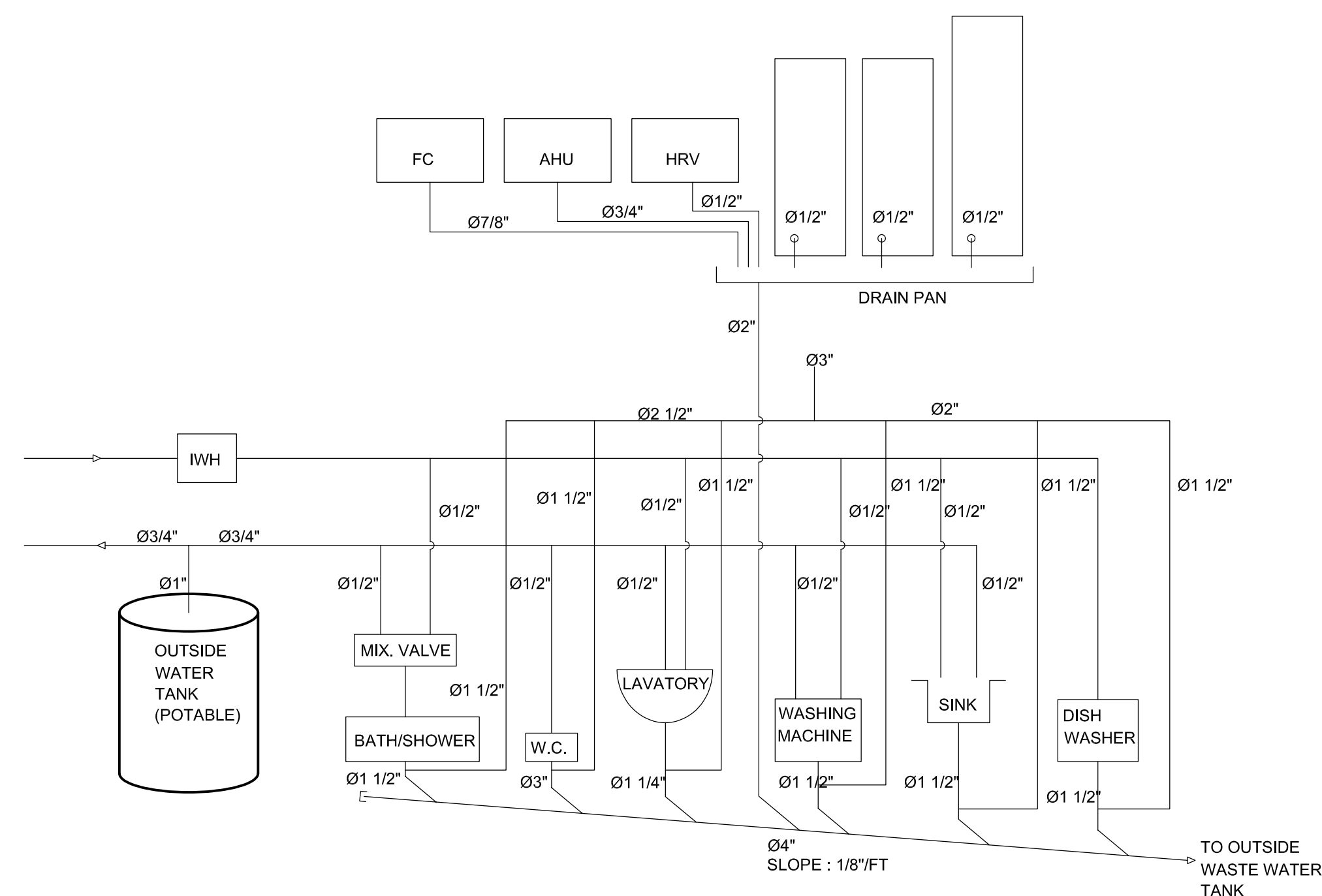
SOLAR DECATHLON 2007
TEAM MONTREAL

TITLE:

RADIANT FLOOR

| | | |
|------------------------|--------------------------|----------------------------|
| DATE: 07-01-08 | DRAWN BY : S.C | |
| SCALE : 1/4" = 1' | VERIFIED BY : G. D-R. | |
| PROJECT No. : SD-07 | REVISION : 4 | DRAWING No. : MEC - 004 |

- RADIANT FLOOR
MEC-004 1/4"=1'-0"



PLUMBING DIAGRAM
MEC-005

| No. | REVISIONS | DATE |
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| 1 | DESIGN DEVELOPMENT DRAWINGS | 13-06-06 |
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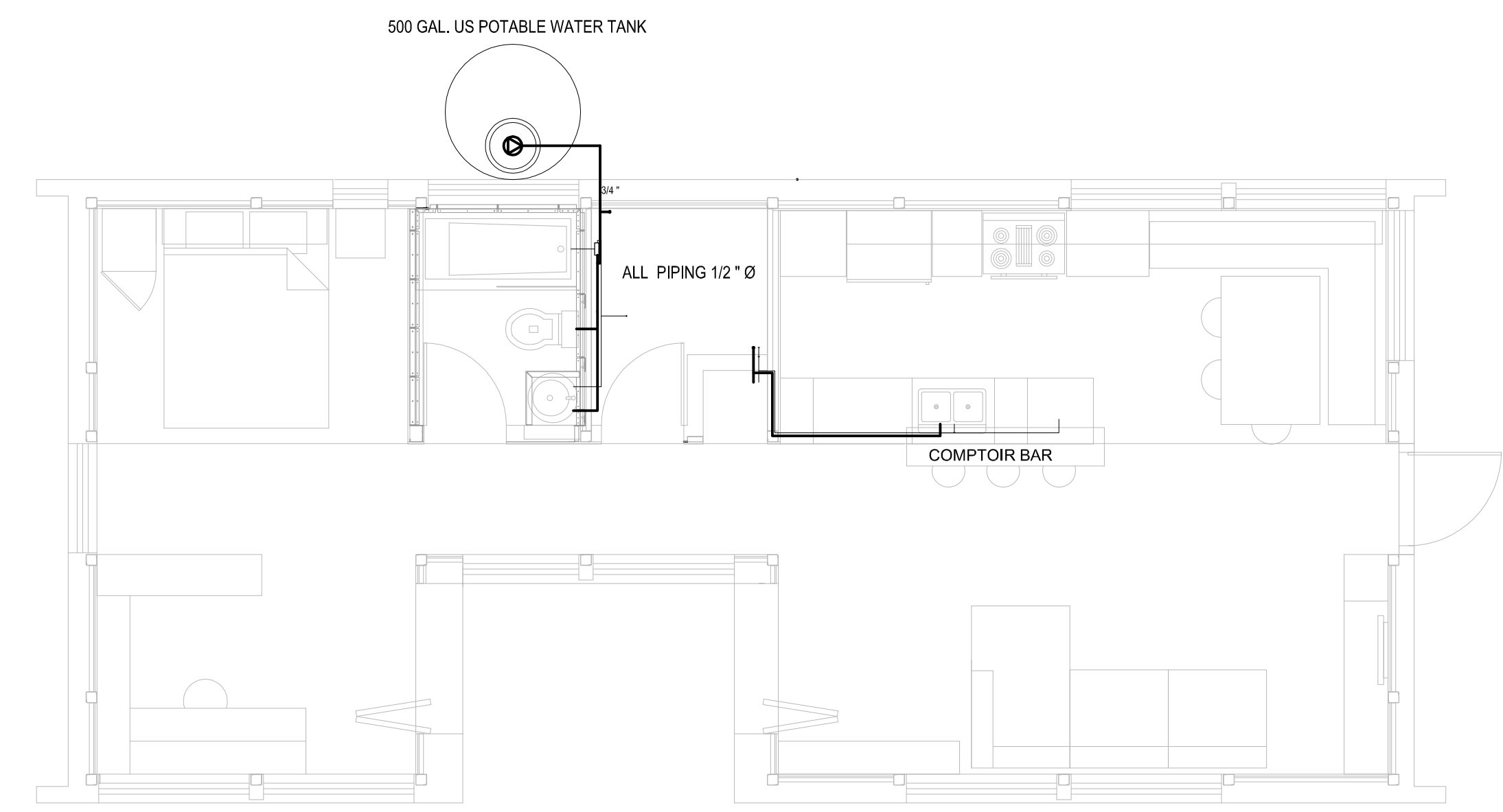
PROJECT:

SOLAR DECATHLON 2007
TEAM MONTREAL

TITLE:

PLUMBING DIAGRAM

| | |
|----------------------------|--------------------------|
| DATE: 07-01-08 | DRAWN BY : C. SAVARD |
| SCALE : -- | VERIFIED BY : G. D-R. |
| PROJECT No. : SD-07 | REVISION : 4 |
| DRAWING No. : MEC - 005 | |



| No. | REVISIONS | DATE |
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STAMP:

PROJECT:

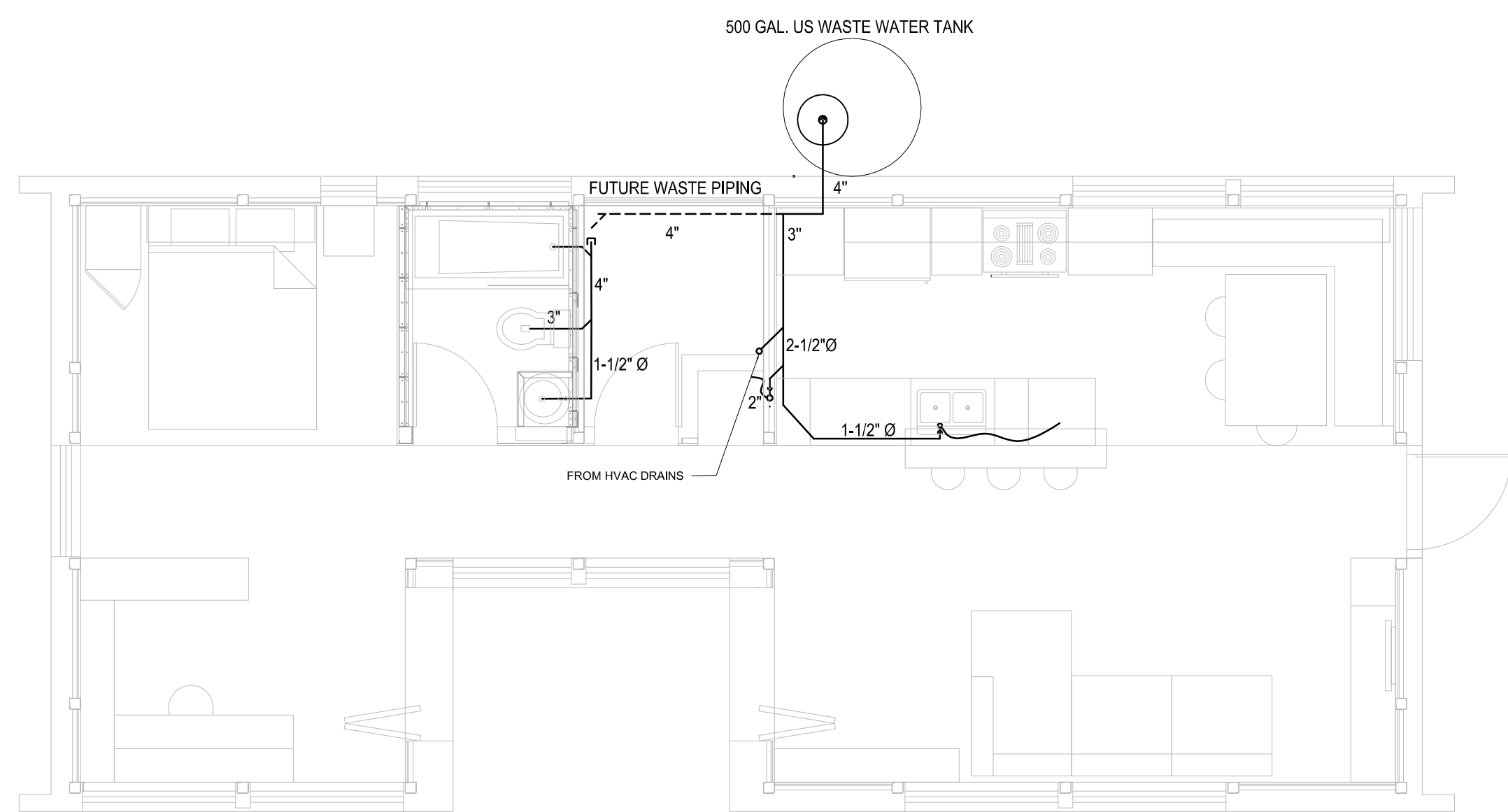
SOLAR DECATHLON 2007
TEAM MONTREAL

TITLE:

PLUMBING SUPPLY

| | | |
|------------------------|--------------------------|----------------------------|
| DATE: 07-01-08 | DRAWN BY : C. SAVARD | |
| SCALE : 1/4" = 1' | VERIFIED BY : G. D-R. | |
| PROJECT No. : SD-07 | REVISION : 4 | DRAWING No. : MEC - 006 |

- PLUMBING SUPPLY
MEC-006 1/4"=1'-0"



| No. | REVISIONS | DATE |
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STAMP:

PROJECT:

SOLAR DECATHLON 2007
TEAM MONTREAL

TITLE:

PLUMBING DRAINAGE

| | | |
|------------------------|--------------------------|----------------------------|
| DATE: 07-01-08 | DRAWN BY : C. SAVARD | |
| SCALE : 1/4" = 1' | VERIFIED BY : G. D-R. | |
| PROJECT No. : SD-07 | REVISION : 4 | DRAWING No. : MEC - 007 |

- PLUMBING DRAINAGE
MEC-007 1/4"=1'-0"








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ELECTRICAL


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| ELE - 002 | COMBINER BOX |
| ELE - 003 | TRANSFORMATION |
| ELE - 004 | BATTERIES |
| ELE - 005 | DISTRIBUTION |
| ELE - 006 | MECH. ROOM SECOND FLOOR PLAN |

ELECTRIC LEGEND



LIGHTING

| | |
|---|--|
| 13a | ALL LIGHTING WILL BE CONNECTED TO THE 24V PANEL EXEPT THE EXTERIOR LIGHT, WHICH WILL BE CONNECTED TO THE NRA PANEL |
|  | 1: CIRCUIT NUMBER a: SWITCH REFERENCE LETTER A: FIXTURE TYPE |
|  | ROUND LIGHTING DEVICE |
|  | PROJECTOR TYPE LIGHTING DEVICE |
|  | WALL FIXTURE |
|  | SWITCH 15A, 120V OR 347V |
|  | LOW VOLTAGE SWITCH, 24 VOLTS. |
|  | LOW VOLTAGE SYSTEM RELAY PANEL |

FIRE-ALARM

| | |
|---|---|
|  | STANDALONE SMOKE DETECTOR, 120V BY NOTIFIER, MODEL #4919 |
|---|---|











TELECOM-INTERCOM

| | |
|---|--|
|  | AC PLATE PHONE OUTLET FEMALE RJ11 CONNECTOR INSTALLED 450mm ABOVE FLOOR AC 3/4" CONDUCTS FINISH AND 4 PAIRS WIRING #22AWG TYPE FT4 CATEGORY 5E TYPE RJ11 TO "BELL" BUILDING INPUT. |
|  | UHF DISTRIBUTION AC PLATE WALL OUTLET FEMALE RG6 INSTALLED 450mm ABOVE FLOOR 3/4" AC CONDUCT FINISH AND WIRING TYPE FT4 CATEGORY 5E TYPE RG6 TO "BELL" BUILDING INPUT. |

LIGHTING DEVICES

| | |
|-----|---|
| I1- | LINEAR FLUORESCENT, CONCEALED, DOUBLE PERFORMANCE |
| I2- | LINEAR FLUORESCENT, CONCEALED, DOUBLE PERFORMANCE |
| I3- | LINEAR FLUORESCENT |
| I4- | LINEAR FLUORESCENT |
| I5- | LINEAR FLUORESCENT |
| I6- | LINEAR FLUORESCENT |
| T1- | COMPACT FLUORESCENT |
| T2- | COMPACT FLUORESCENT |
| T3- | CUSTOM LED FIXTURE |
| E1- | XXXX |
| E2- | XXXX |
| E3- | XXXX |

SERVICES

| | |
|---|---|
|  | DOUBLE OUTLET 15 AMPERES 120 VOLTS |
|  | DOUBLE OUTLET 15 AMPERES 120 VOLTS INSTALLED 200mm OVER THE COUNTER |
|  | DOUBLE OUTLET 15 AMPERES 120 VOLTS AC DIFFERENTIAL BREAKER "A" LEVITON #6599-W |
|  | DRYER OUTLET 30 AMPERES 120 VOLTS AC |
|  | JUNCTION BOX MOTOR 120V, 240V 1Ø. PROVIDE BY DIV.15, CONNECTED BY DIV.16 |
|  | MANUAL STARTER |
|  | 24VDC PANEL |
|  | 120/240V PANEL, 1Ø, 3F |
|  | DOOR BELL BUTTON BY NUTONE, MODEL #PB12NWH |
|  | DOOR BELL C/A TRANSO 120/10V BY NUTONE, MODEL #LA131WH |

IDENTIFICATIONS

| | |
|------|--|
| WP | WATERPROOF |
| H.M. | MOUNTING HEIGHT |
| H | RANGE HOOD |
| M.O. | MICROWAVE OVEN MOUNTING HEIGHT TO BE DETERMINED |
| L.V. | DISH-WASHER |
| PF | CEILING MOUNTED TYPE FS AC BOX |
| CL | COOLING UNIT |
| x2 | QUANTITY OF EQUIPMENT |

| No. | REVISIONS | DATE |
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PROJECT:

SOLAR DECATHLON 2007
TEAM MONTREAL

TITLE:

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| PROJECT No. : SD-07 | REVISION : DRAWING No. : ELE - 000 |

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| 1 | DESIGN DEVELOPMENT DRAWINGS | 13-06-06 |
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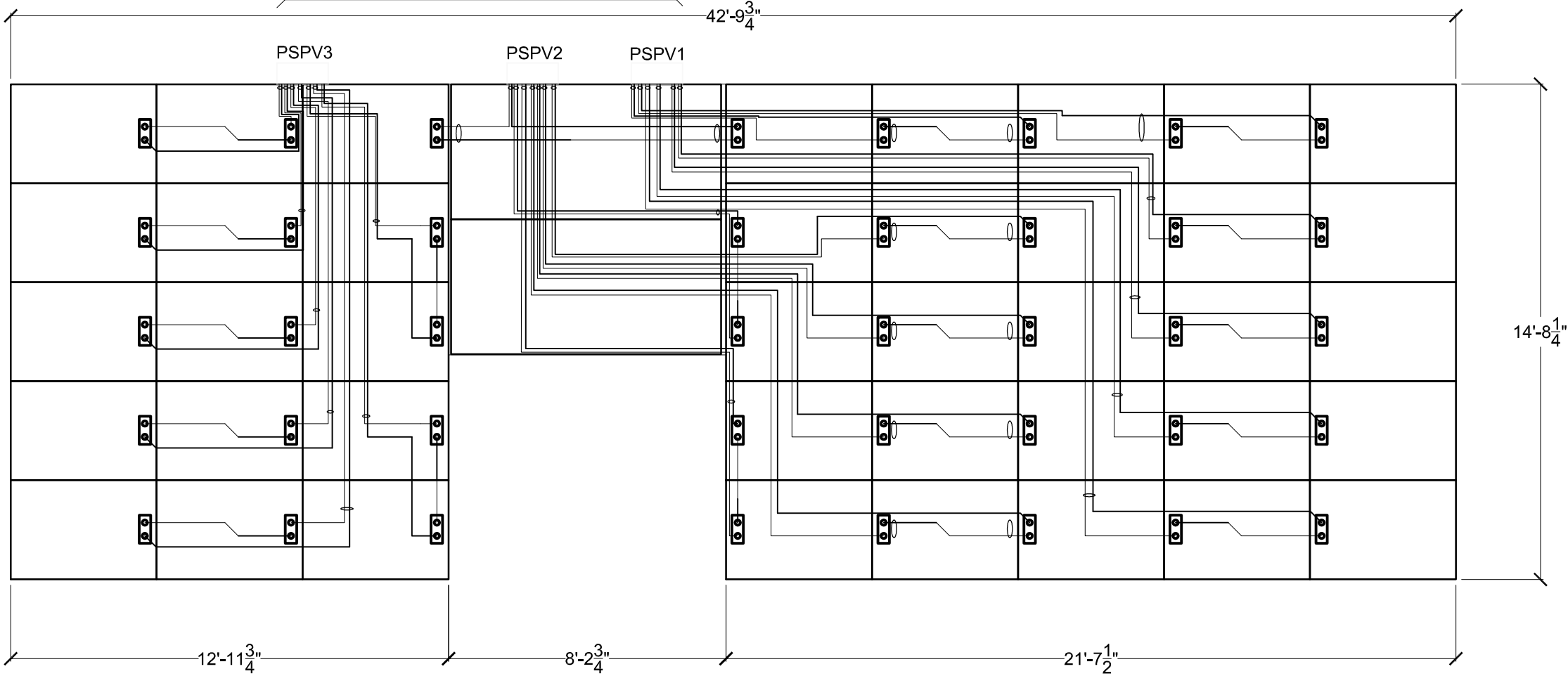
SOLAR DECATHLON 2007
TEAM MONTREAL

TITLE:

PV PANELS WIRING DIAGRAM

| | | |
|------------------------|--------------------------|----------------------------|
| DATE: 07-01-08 | DRAWN BY : M.CARON | |
| SCALE : 1/4" = 1' | VERIFIED BY : J.JOBIN | |
| | APPROVED BY : J.JOBIN | |
| PROJECT No. : SD-07 | REVISION : 4 | DRAWING No. : ELE - 001 |

ALL WIRES TO
COMBINER BOXES:
GAUGE: #10AWG
MATERIAL: COPPER
INSULATION: USE-2



PV PANELS WIRING DIAGRAM

1/4"=1'-0"

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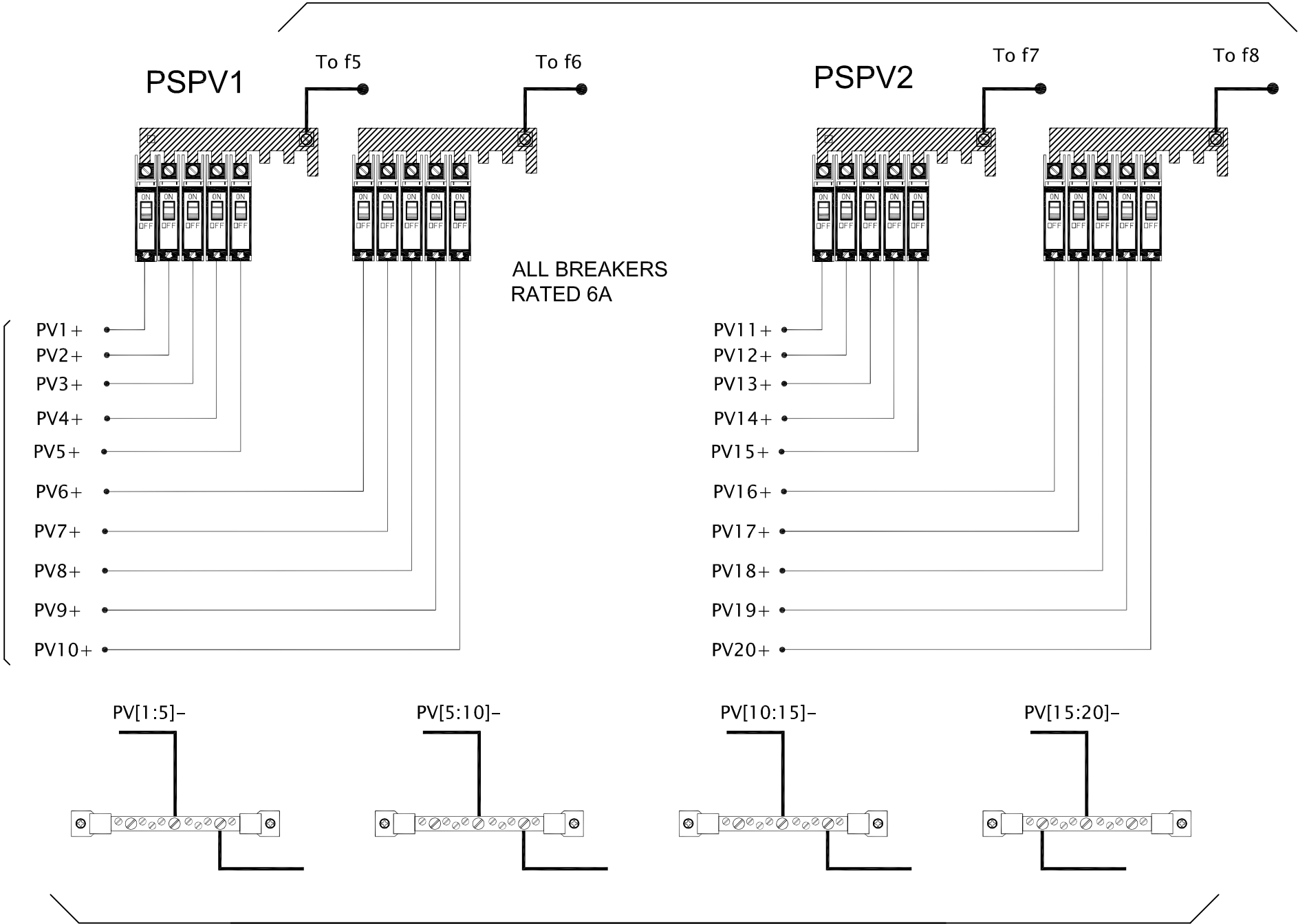
SOLAR DECATHLON 2007
TEAM MONTREAL

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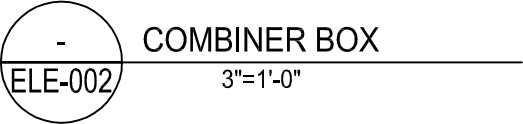
COMBINER BOX

| | | | |
|---------------|----------|---------------|-----------|
| DATE: | 07-01-08 | DRAWN BY : | M.CARON |
| SCALE : | 3" = 1' | VERIFIED BY : | J.JOBIN |
| PROJECT No. : | SD-07 | APPROVED BY : | J.JOBIN |
| | | REVISION : | 4 |
| | | DRAWING No. : | ELE - 002 |

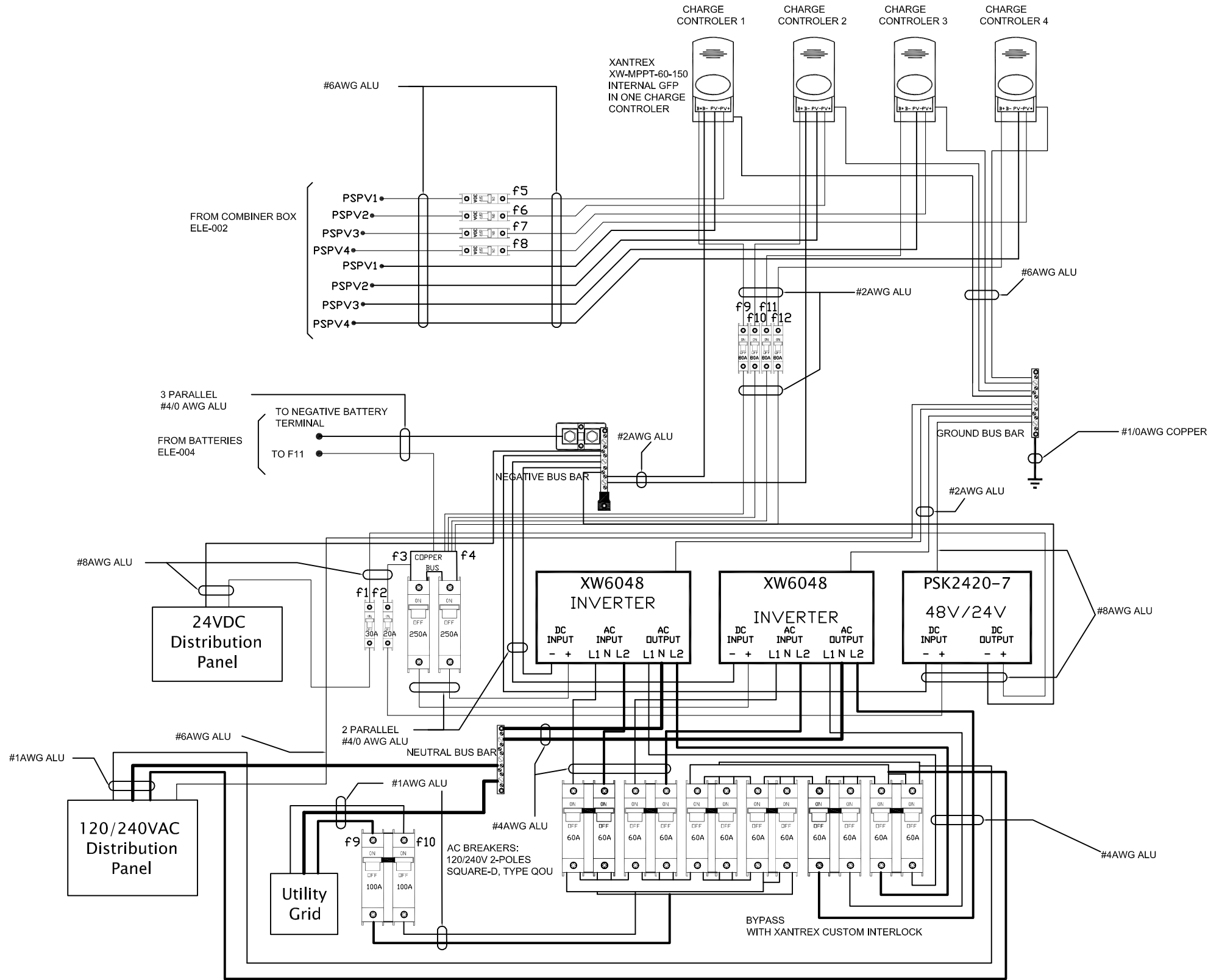
TO CHARGE CONTROLLER
ELE-002
ALL WIRES TO CHARGE CONTROLLERS: #6 AWG



FROM
SOLAR PANELS
ELE-001



TO CHARGE CONTROLLER
ELE-002
ALL WIRES TO CHARGE
CONTROLLERS: #6 AWG



| No. | REVISIONS | DATE |
|-----|-------------------------------|----------|
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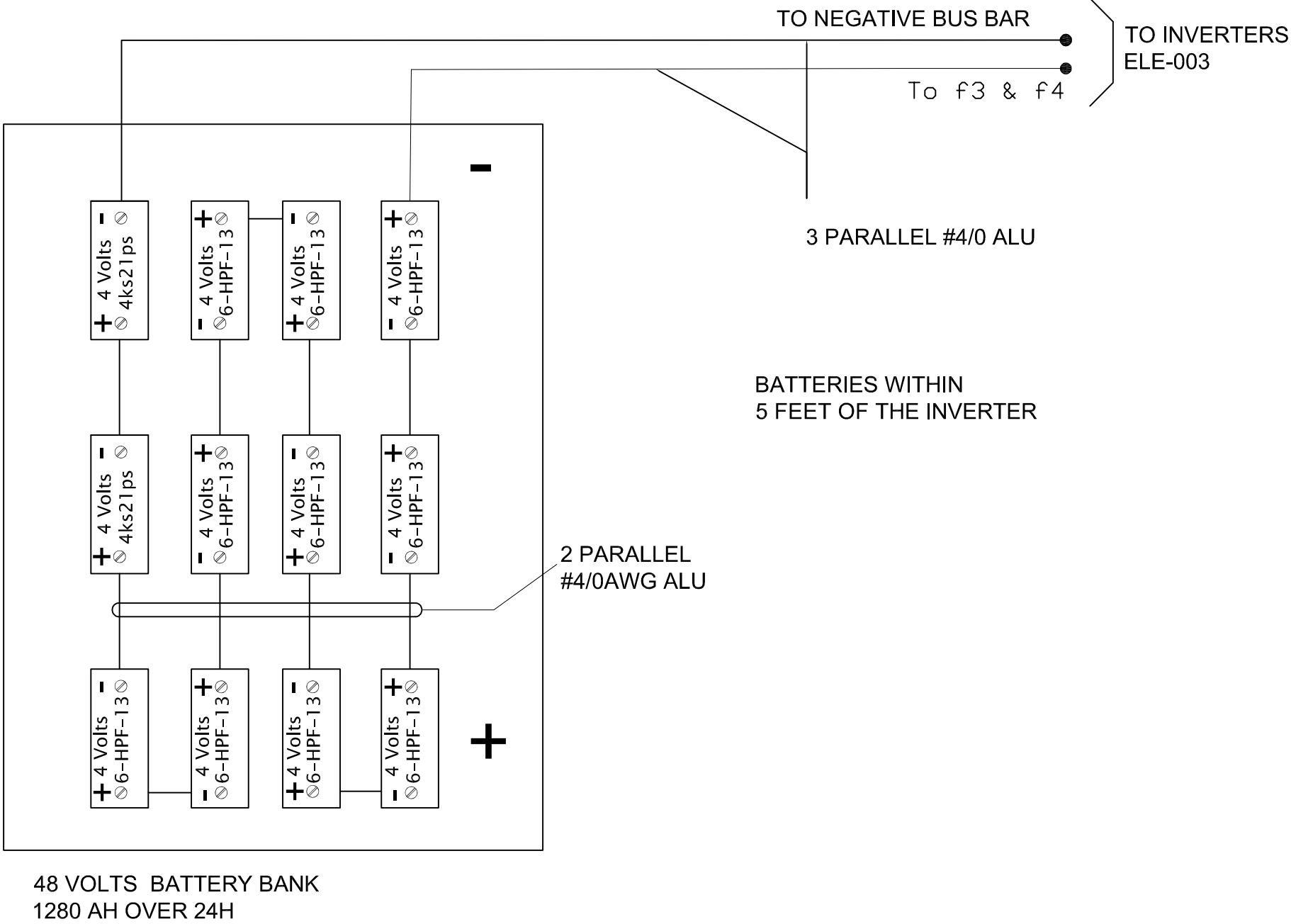
PROJECT:

SOLAR DECATHLON 2007
TEAM MONTREAL

TITLE:

TRANSFORMATION

| | |
|------------------------|----------------------------|
| DATE: 07-01-08 | DRAWN BY : M.CARON |
| SCALE : 3/4" = 1' | VERIFIED BY : J.JOBIN |
| PROJECT No. : SD-07 | APPROVED BY : J.JOBIN |
| REVISION : 4 | DRAWING No. : ELE - 003 |



-
ELE-004

BATTERIES

3/4"=1'-0"

| No. | REVISIONS | DATE |
|-----|-------------------------------|----------|
| 1 | DESIGN DEVELOPMENT DRAWINGS | 13-06-06 |
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NOTES

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ASS=ASSEMBLY
DET=DETAILS
DIS=DISASSEMBLY
ELE=ELECTRICAL
INT=INTERIORS AND FINISH
LSA=LIFE SAFETY AND ADA
MEC=MECHANICAL
STR=STRUCTURAL
SLE=SOLAR ENVELOPE



STAMP:

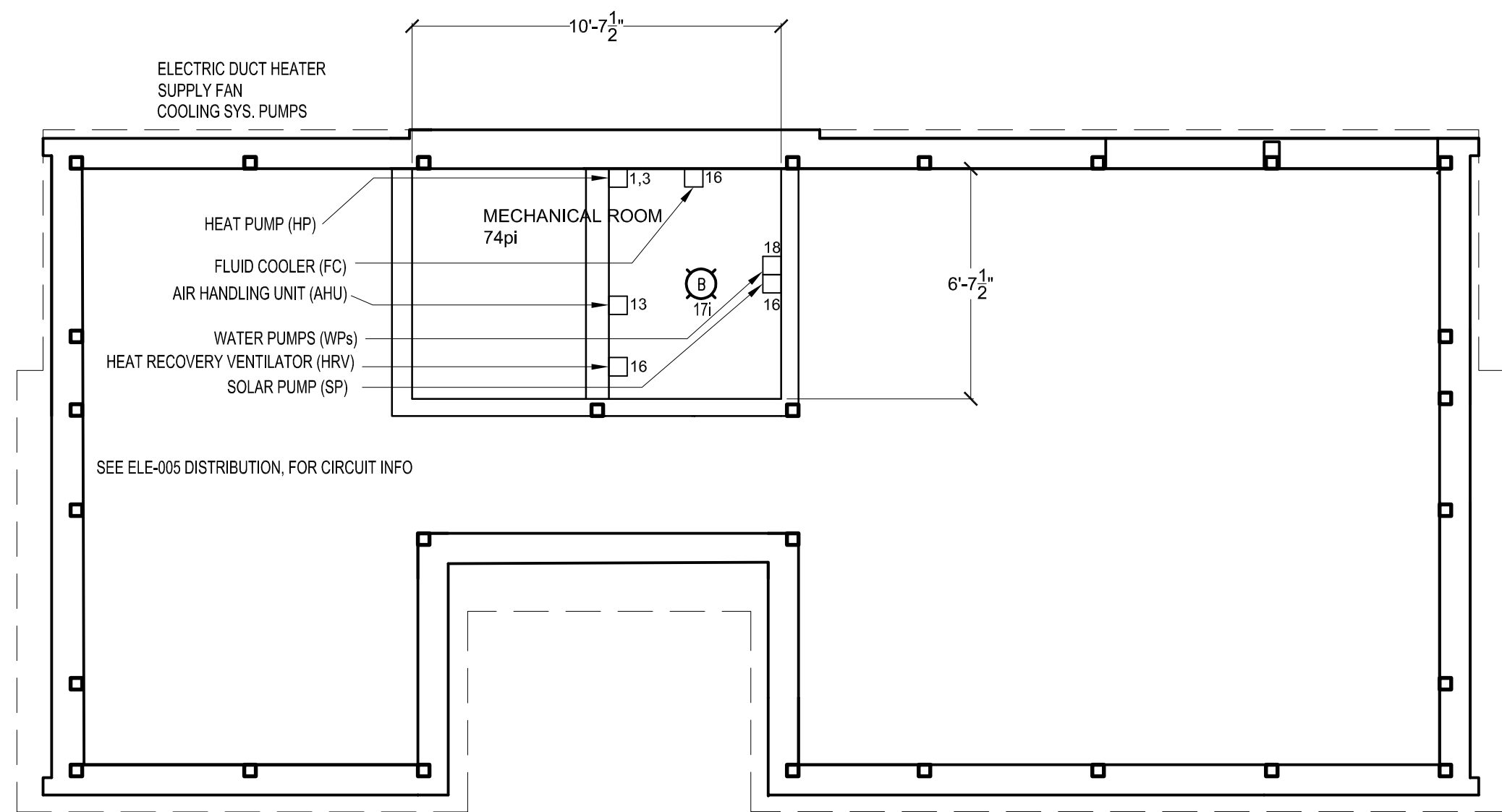
PROJECT:

SOLAR DECATHLON 2007
TEAM MONTREAL

TITLE:

BATTERIES

| | | |
|------------------------|--------------------------|----------------------------|
| DATE: 07-01-08 | DRAWN BY : M.CARON | |
| SCALE : 3/4" = 1' | VERIFIED BY : J.JOBIN | |
| PROJECT No. : SD-07 | APPROVED BY : J.JOBIN | DRAWING No. : ELE - 004 |



MECH. ROOM SECOND FLOOR PLAN

1/4"=1'-0"

| No. | REVISIONS | DATE |
|-----|-------------------------------|----------|
| 1 | DESIGN DEVELOPMENT DRAWINGS | 13-06-06 |
| 2 | CONSTRUCTION DRAWINGS | 06-03-07 |
| 3 | UPDATE CONSTRUCTION DRAWINGS | 07-08-07 |
| 4 | UPDATED CONSTRUCTION DRAWINGS | 07-01-08 |

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STAMP:

PROJECT:

SOLAR DECATHLON 2007
TEAM MONTREAL

TITLE:

MECH. ROOM SECOND
FLOOR PLAN

| | | | |
|---------------|-----------|---------------|-----------|
| DATE: | 07-01-08 | DRAWN BY : | M.CARON |
| SCALE : | 1/4" = 1' | VERIFIED BY : | J.JOBIN |
| PROJECT No. : | SD-07 | APPROVED BY : | J.JOBIN |
| REVISION : | 4 | DRAWING No. : | ELE - 006 |