

Southern Nuclear Operating Company

ND-09-0831

Enclosure 3

Publicly Available

AP1000 Module Status Presentation Slides

NOTE: The information deleted from this enclosure denoted by brackets is considered proprietary information. The justification for claiming the information so designated as proprietary is indicated by means of lower case letters (a) through (f) located as a superscript immediately following the brackets enclosing each item of deleted information being identified as proprietary or in the margin opposite such deleted information. These lower case letters refer to the types of information S&W customarily holds in confidence in Items (4)(ii)(a) through (4)(ii)(f) of the Enclosure 1 affidavit pursuant to 10 CFR 2.390(b)(1).

This enclosure is 52 pages in length.

AP1000 Module Status NRC Region II / SNC Meeting

May 5, 2009

Birmingham, AL

**Keyes Niemer
Modules Program Manager
Shaw Nuclear
Charlotte, NC**

**Jack Martin
Senior Vice President
Shaw Modular Solutions, L.L.C.
Lake Charles, LA**

AP1000 Module Status

- Module Design Status
- China
- SMS Fabrication Facility
- On-site Assembly
- Prototype/Mockup
- Key Dates
- Q&A

DESIGN STATUS

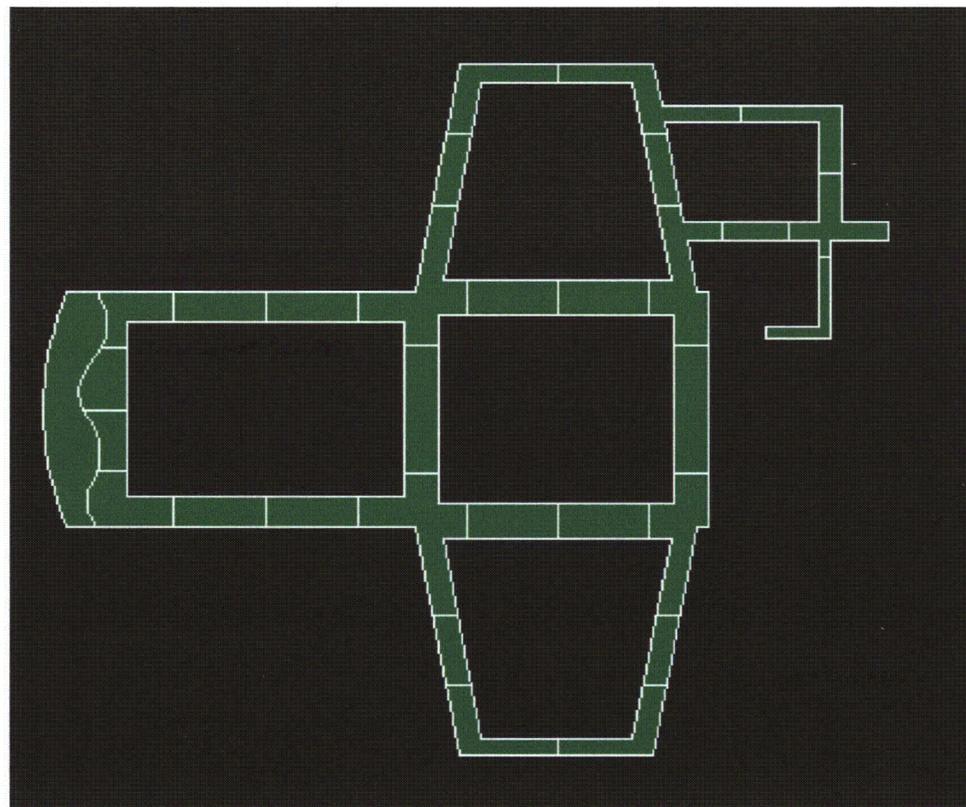
NI Module Count

| Module Type | Total Modules | Completed | % Completed | Total Dwgs | Dwgs Cmplt |
|----------------------------|---------------|-----------|-------------|------------|------------|
| CA | 24 | 7 | 29% | | |
| CB | 37 | 36 | 97% | | |
| CH | 32 | 10 | 31% | | |
| Subtotal Structural | 93 | 53 | 57% | | |
| Equipment | 39 | 24 | 62% | | |
| Piping / Commodities | 23 | 7 | 30% | | |
| Subtotal Mechanical | 62 | 31 | 50% | | |
| Total Modules | 155 | 84 | 54% | | |

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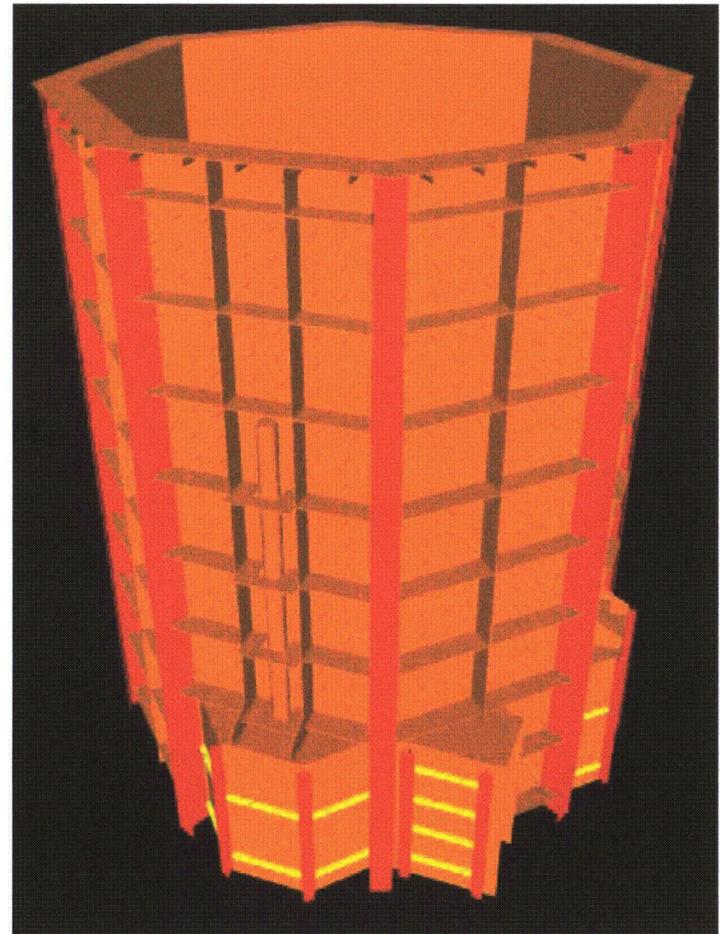
CA01 Book1 – Containment Major Structure Drawing Update

- CA01 Book 1 is 100% complete and delivered.
- CA01 Book 2 is 100% complete and delivered
- CA01 Book 3 has been split into two deliverables:
 - Drawings required to do work prior to lift – June 20th
 - Drawings required after lift prior to concrete (walls) – June 30th



CA04

- Book 1 due w/ holds delivered
 - Book 1 to be delivered without holds 5/11
 - Book 2 to be delivered 5/18
 - Book 3 delivered (4/28)
- * Fabrication holds do not affect the structure. Holds are on ex-core detector tube material and configuration.



Modules Design Status

| 2011 | | | | | | | | 2012 | | | | | | | | | | | |
|------|------|-----|-----|----------------|------|------|------|---------|---------|------|-----------|------|------|---------|------|-----------|------|------|------|
| May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
| -02 | -1 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 |
| KB20 | KB10 | | | CA20 | KQ11 | CA04 | CA05 | CA01 | KB21 | CA03 | CS24 | CS32 | CA02 | CH31 | CA32 | CH59 | CA41 | CA42 | CA44 |
| KB22 | KB13 | | | Bottom CV Head | R106 | | CB11 | CA22 | R161 | CB21 | CS31 | CS61 | CA56 | CH32 | CA33 | CS26 | CS11 | CS12 | |
| KB23 | | | | | | | CB12 | KU20CV4 | KU21SFA | CB22 | CV Ring 1 | CS62 | CH21 | CH33 | CA34 | CV Ring 2 | CS34 | | |
| KB27 | | | | | | | CB51 | R151 | KU21SFB | CB23 | | CS71 | CH22 | CH34 | CA35 | | | CS63 | |
| KB28 | | | | | | | CB52 | R155 | KU21WL6 | CB24 | | CS72 | CH23 | CH35 | CA36 | | | CS64 | |
| KB37 | | | | | | | CB53 | R216 | KU21WL7 | CB25 | | | CH24 | CS15 | CA37 | | | KB47 | |
| KB38 | | | | | | | CB54 | R219 | | CB26 | | | CH25 | CS17 | CA55 | | | R451 | |
| R104 | | | | | | | CB61 | R261 | | CB27 | | | CH27 | CS22 | CA57 | | | R474 | |
| R365 | | | | | | | CB62 | | | CB28 | | | CS33 | CS25 | CA58 | | | | |
| | | | | | | | CB63 | | | CB31 | | | | CS66 | CS68 | | | | |
| | | | | | | | CB64 | | | CB32 | | | | CS67 | CS69 | | | | |
| | | | | | | | KB04 | | | CB33 | | | | KQ22 | KB33 | | | | |
| | | | | | | | KB11 | | | CB34 | | | | KQ23 | KB36 | | | | |
| | | | | | | | KB12 | | | CB35 | | | | KT04 | KB56 | | | | |
| | | | | | | | KB14 | | | CB36 | | | | KT05 | | | | | |
| | | | | | | | KB15 | | | CB37 | | | | KT40 | | | | | |
| | | | | | | | KB16 | | | CB38 | | | | KT48 | | | | | |
| | | | | | | | KQ10 | | | CB39 | | | | KU20CVA | | | | | |
| | | | | | | | | | | CB41 | | | | KU20CVB | | | | | |
| | | | | | | | | | | CB42 | | | | Q223 | | | | | |
| | | | | | | | | | | CB43 | | | | Q233 | | | | | |
| | | | | | | | | | | CB44 | | | | Q240 | | | | | |
| | | | | | | | | | | CB45 | | | | | | | | | |
| | | | | | | | | | | CB46 | | | | | | | | | |
| | | | | | | | | | | CB47 | | | | | | | | | |
| | | | | | | | | | | CS21 | | | | | | | | | |
| | | | | | | | | | | KB25 | | | | | | | | | |
| | | | | | | | | | | KB26 | | | | | | | | | |
| | | | | | | | | | | R251 | | | | | | | | | |

IN RELATION TO FIRST CONCRETE

Color Key:

- Design Completed
- In process - not complete
- In design - by Shaw
- Design Not Yet started

CHINA UPDATE



Shaw a world of Solutions



Westinghouse

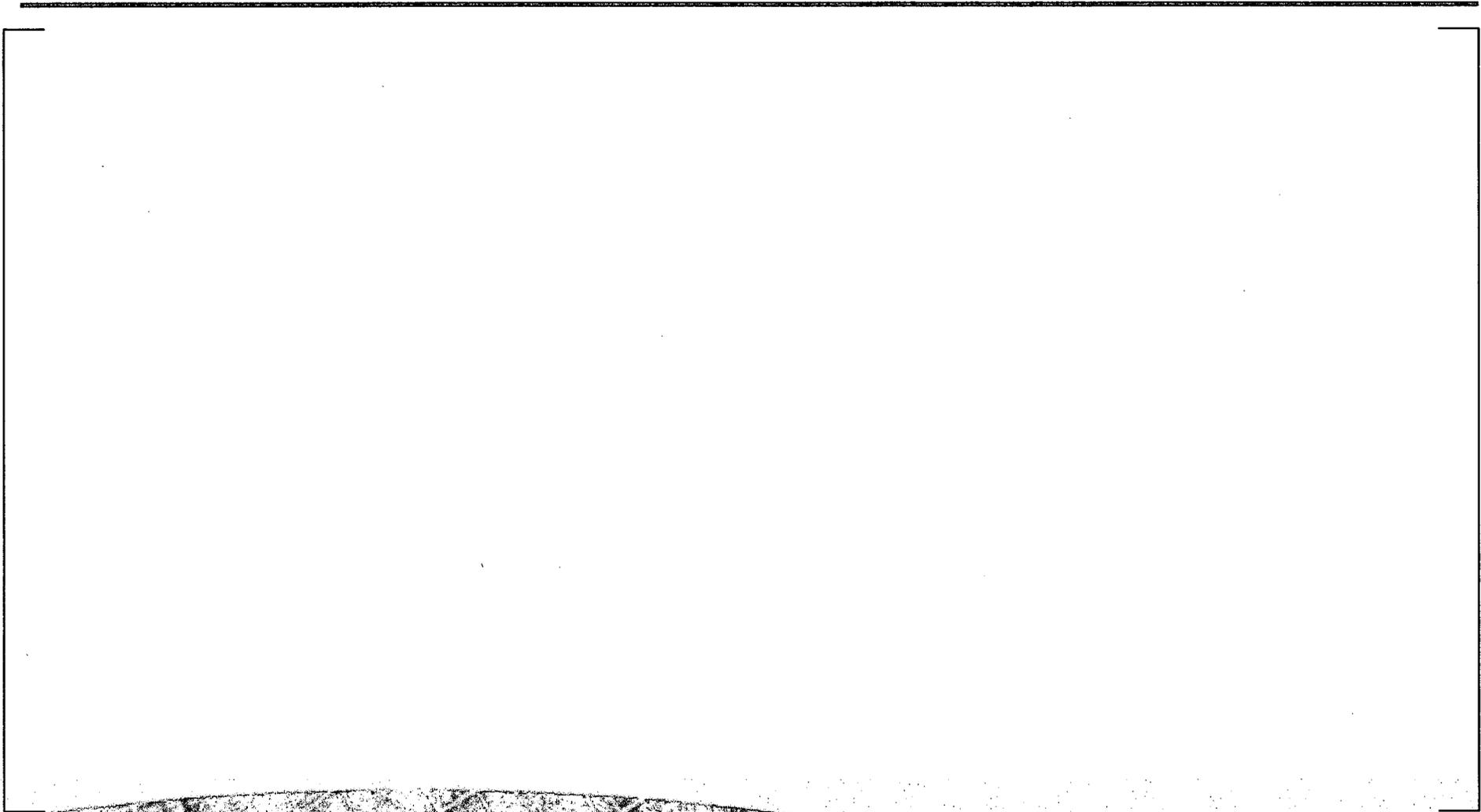
China Module Fabrication Update

C

Lifting of CA20 Submodules

C

Fit-up of CA20 Submodules



C

CA20 Subassembly

C

CA20 Weather Protection

C

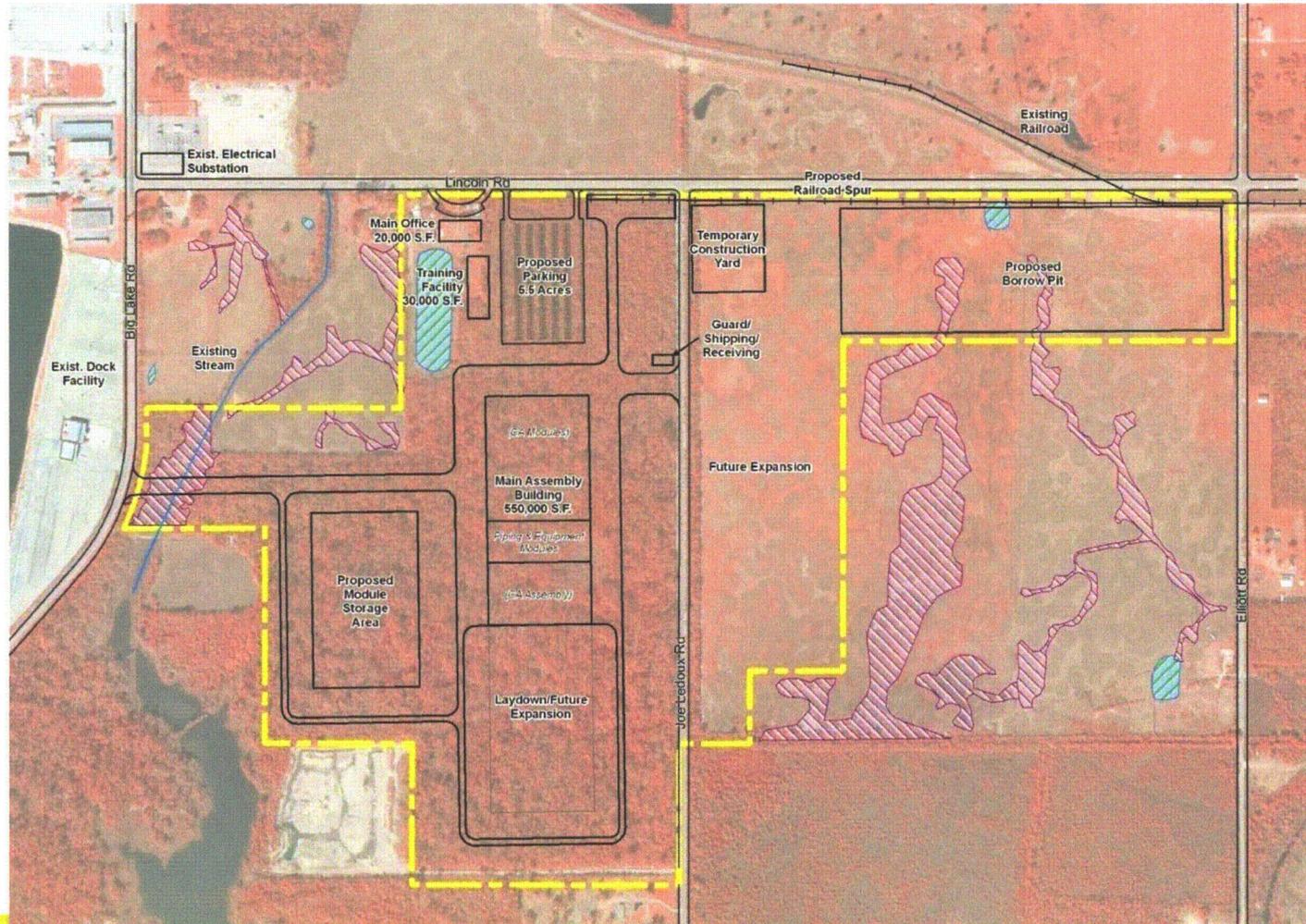
FABRICATION

Shaw Modular Solutions, LLC (SMS)
Lake Charles, LA

SMS Overview

- Located in Lake Charles, Louisiana
- 410,000 square feet under roof for fabrication, assembly and inspection
- 7 production bays
- 8,200 square foot administrative building
- 10,000 square foot training facility
- Truck, barge and rail access
- NQA-1 program
- Located on 120 acres of land with an option for 180 more acres

SMS Overview



SMS Overview



SMS Overview



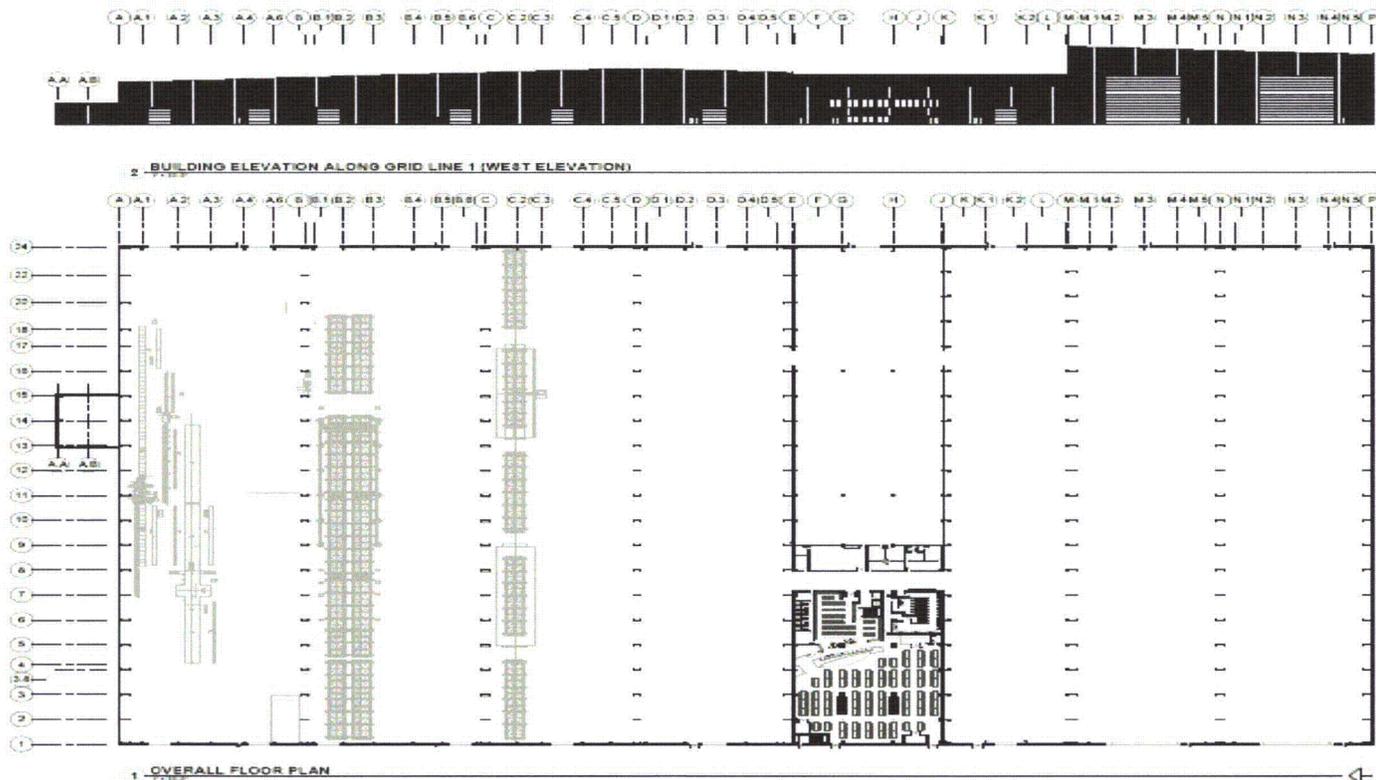
SMS Overview



SMS Overview



SMS Layout



SHAW MODULAR SOLUTIONS
 PERCUTAN BUILDING SUPPORT SPACES
 086 421 0000

PROGRESS SET - NOT FOR CONSTRUCTION OR RECORDING

REVISIONS

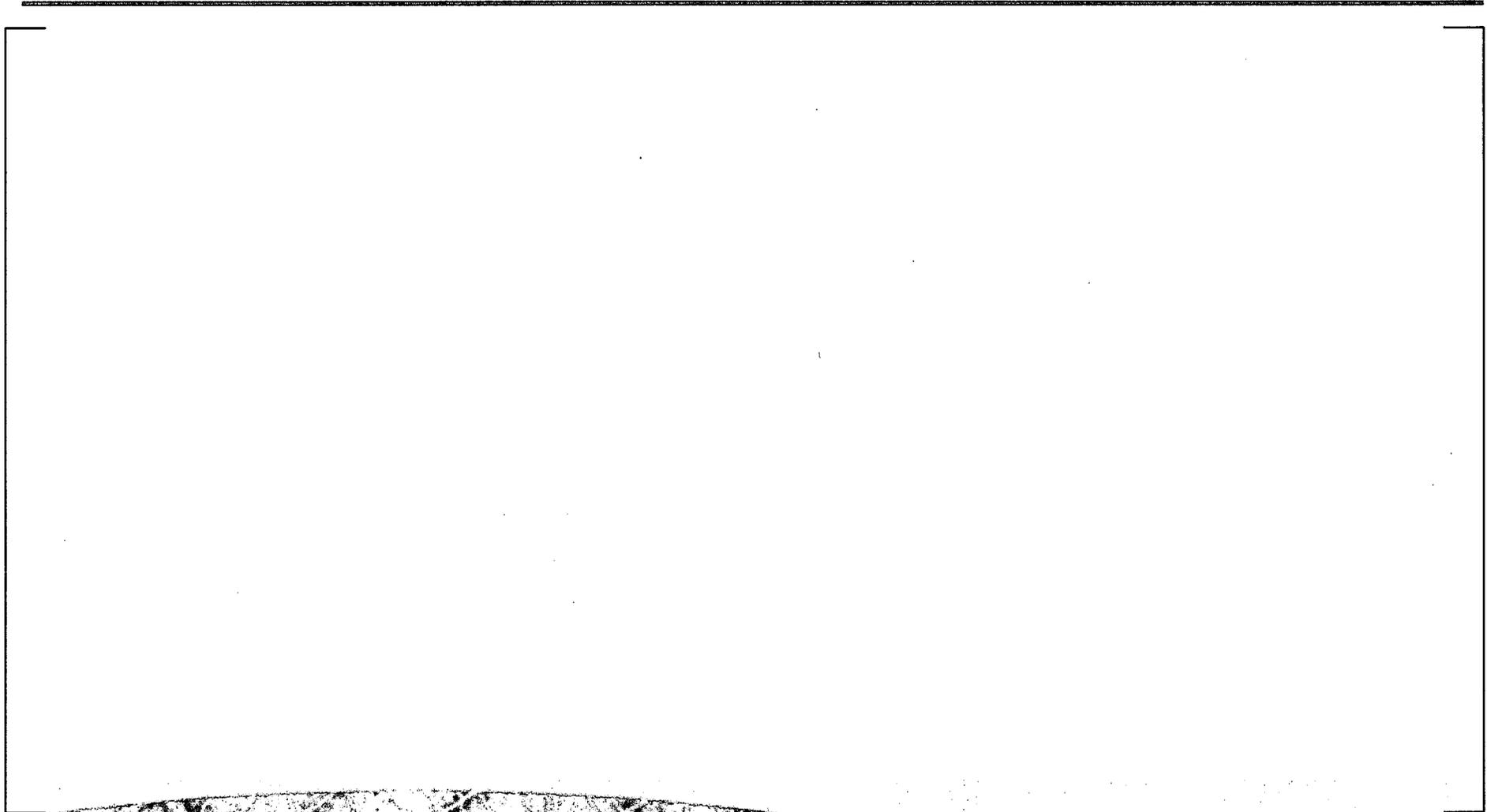
| NO. | DESCRIPTION | DATE |
|-----|------------------------|------|
| 1 | OVERALL PLAN ELEVATION | |

A

SMS Layout

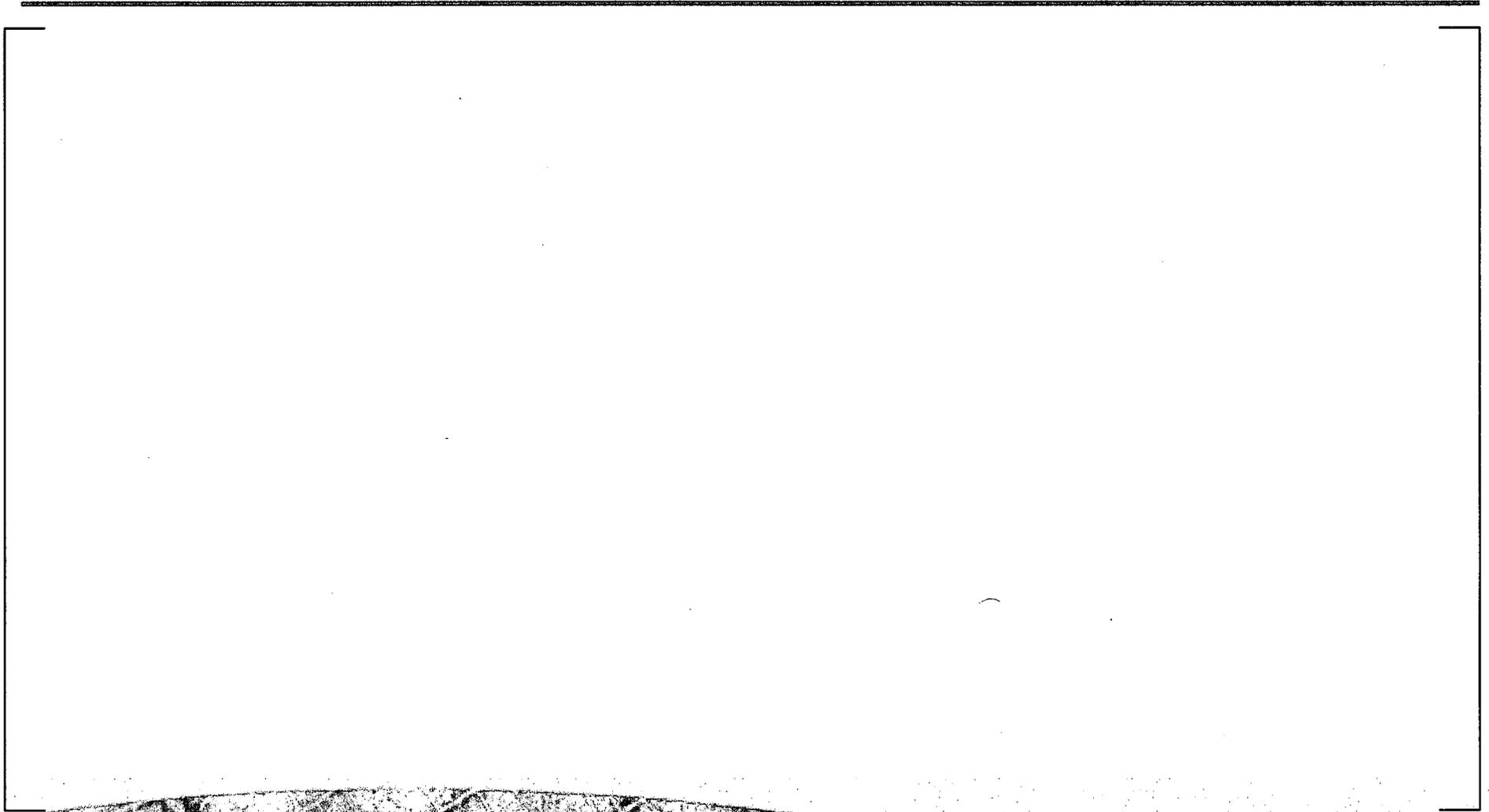
- 7 Production bays
- One bay for warehouse, offices and employee break area
- 4 bays will focus primarily on structural modules
- 3 bays for mechanical and piping modules
- Bays range from 70 to 100 feet wide and are 500 feet long
- Eave heights range from 40 to 70 feet high

SMS Layout



a

SMS Layout

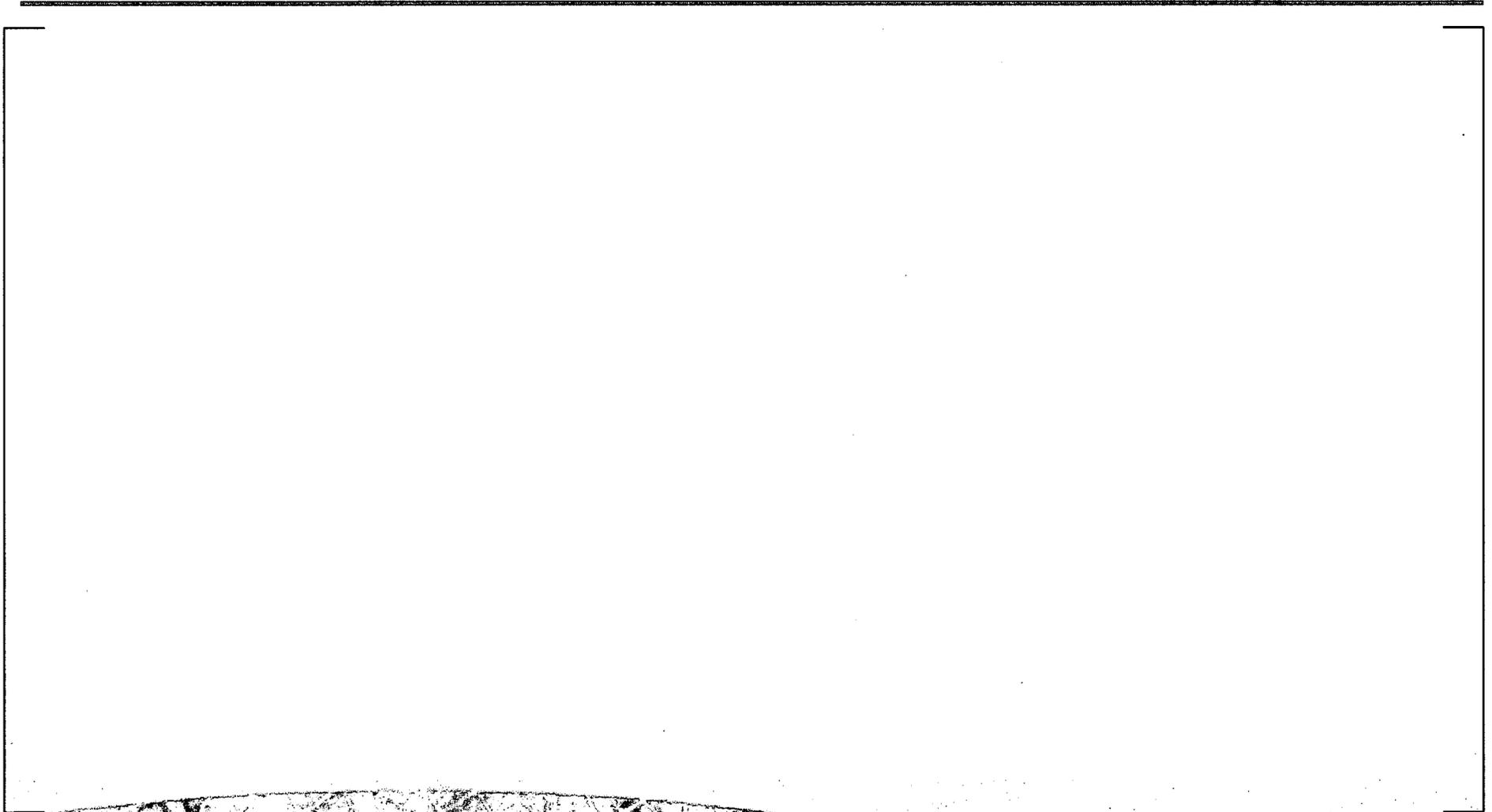


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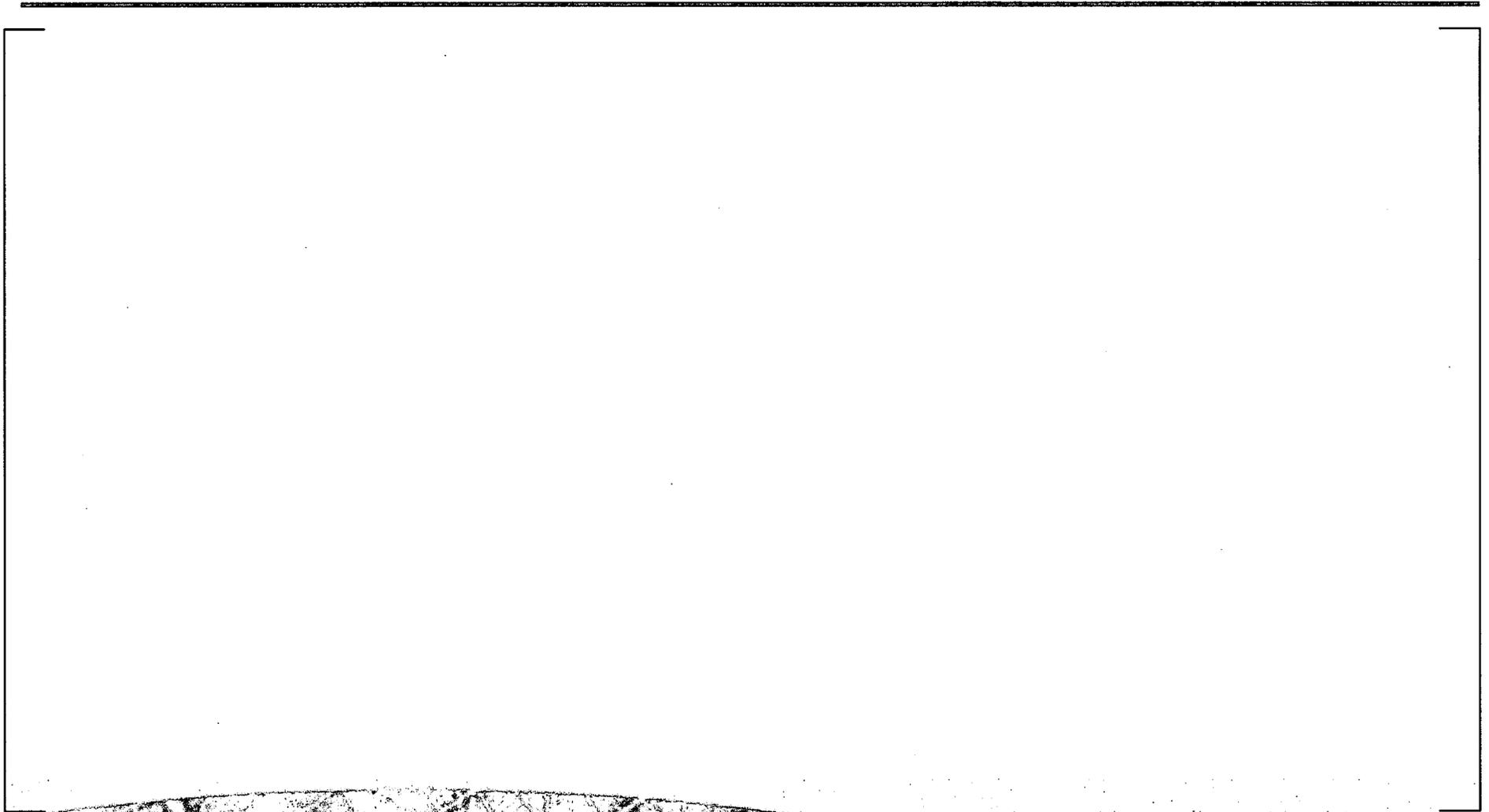
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SMS Layout



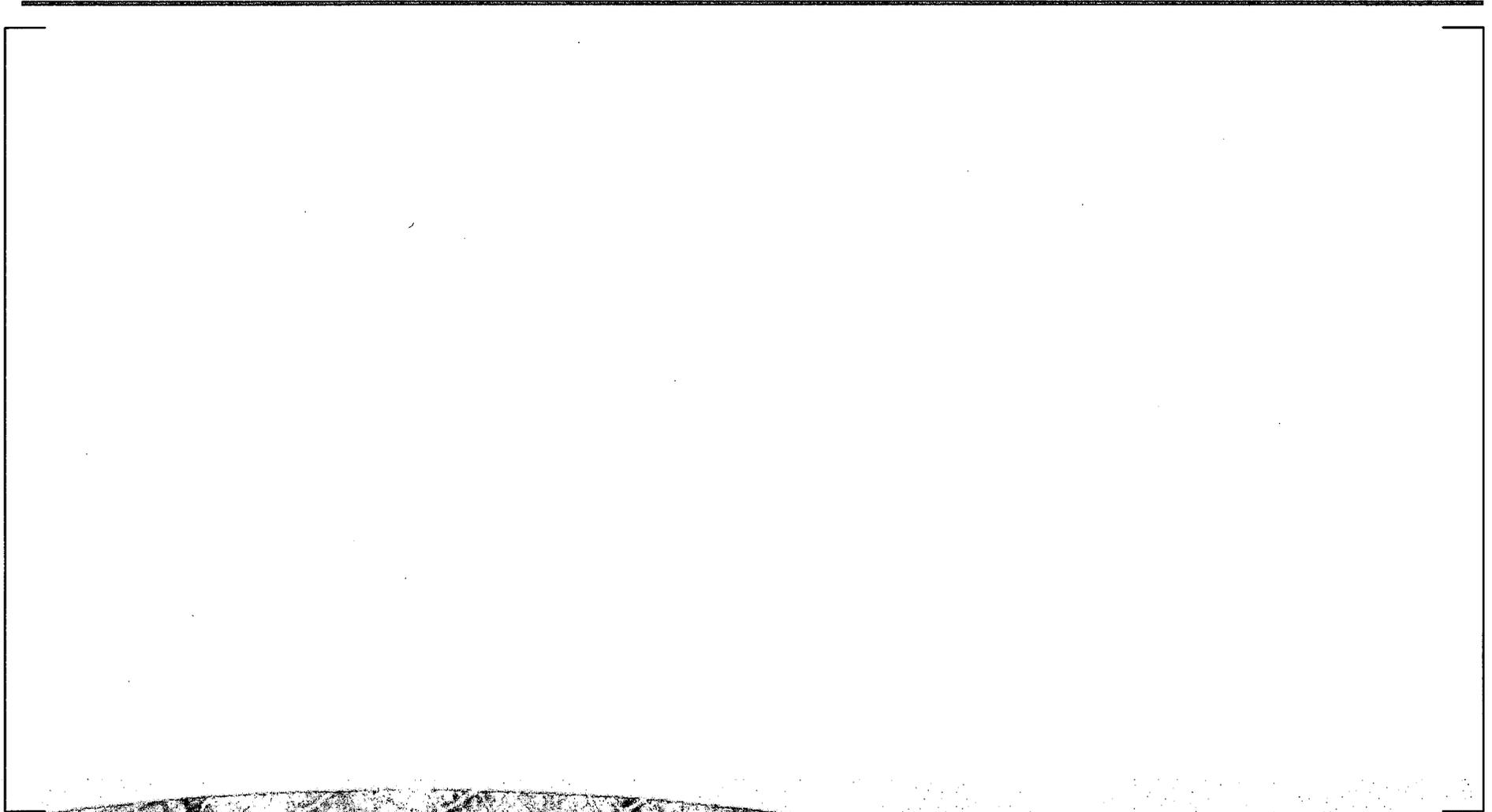
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SMS Layout



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SMS Layout



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SMS Construction

- Broke ground November 21, 2008
- Target to begin production October 1, 2009
- Building being constructed in phases
- Phase 1 will be turned over to the operations side August 17, 2009
- Phase 2 will finish 6 months later

SMS Construction

Key milestones

- Building erection phase 1 begins May 11, 2009
- Overhead crane installation phase begins June 1, 2009
- Plate and steel processing equipment completes July 15, 2009
- Phase 1 electrical completes August 15, 2009

SMS Operations

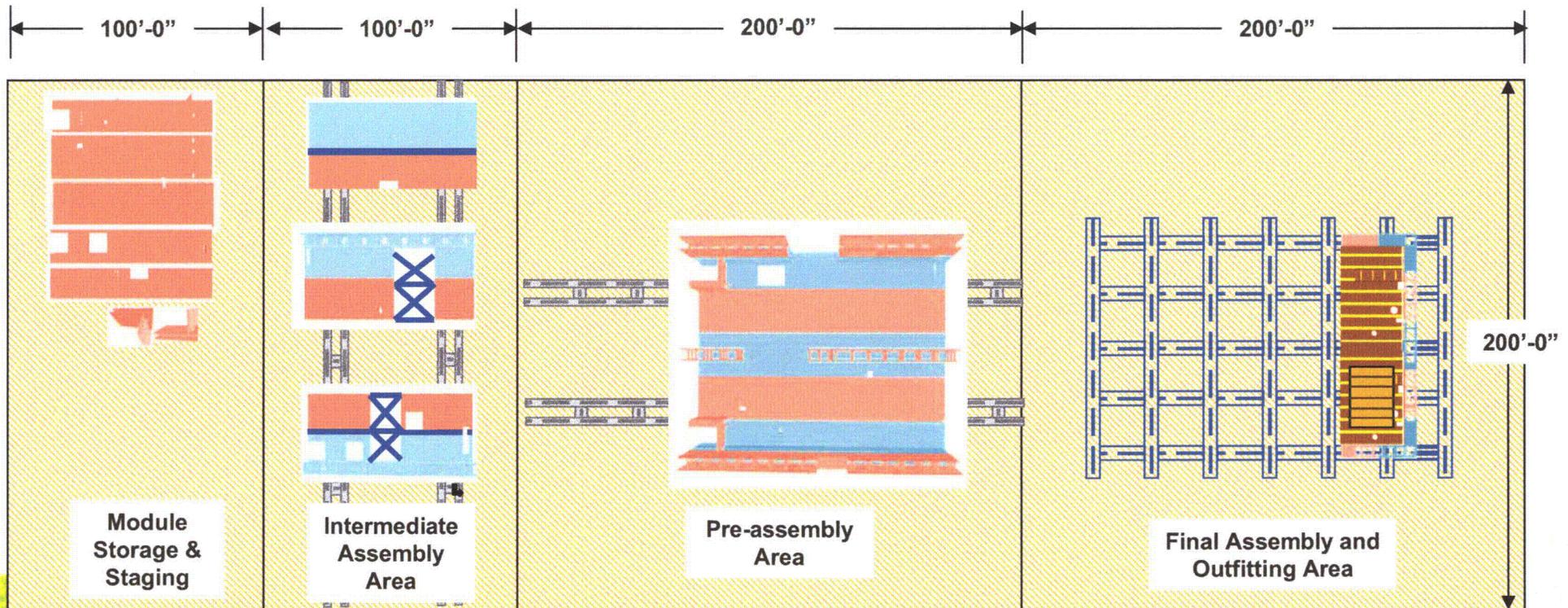
Key milestones

- Long lead material purchase order to be issued by June 15, 2009
- Craft employee hiring to begin late July 2009
- Occupy phase 1 August 17, 2009
- Administrative offices permanently relocated to site September 21, 2009
- First modules to begin fabrication October 1, 2009

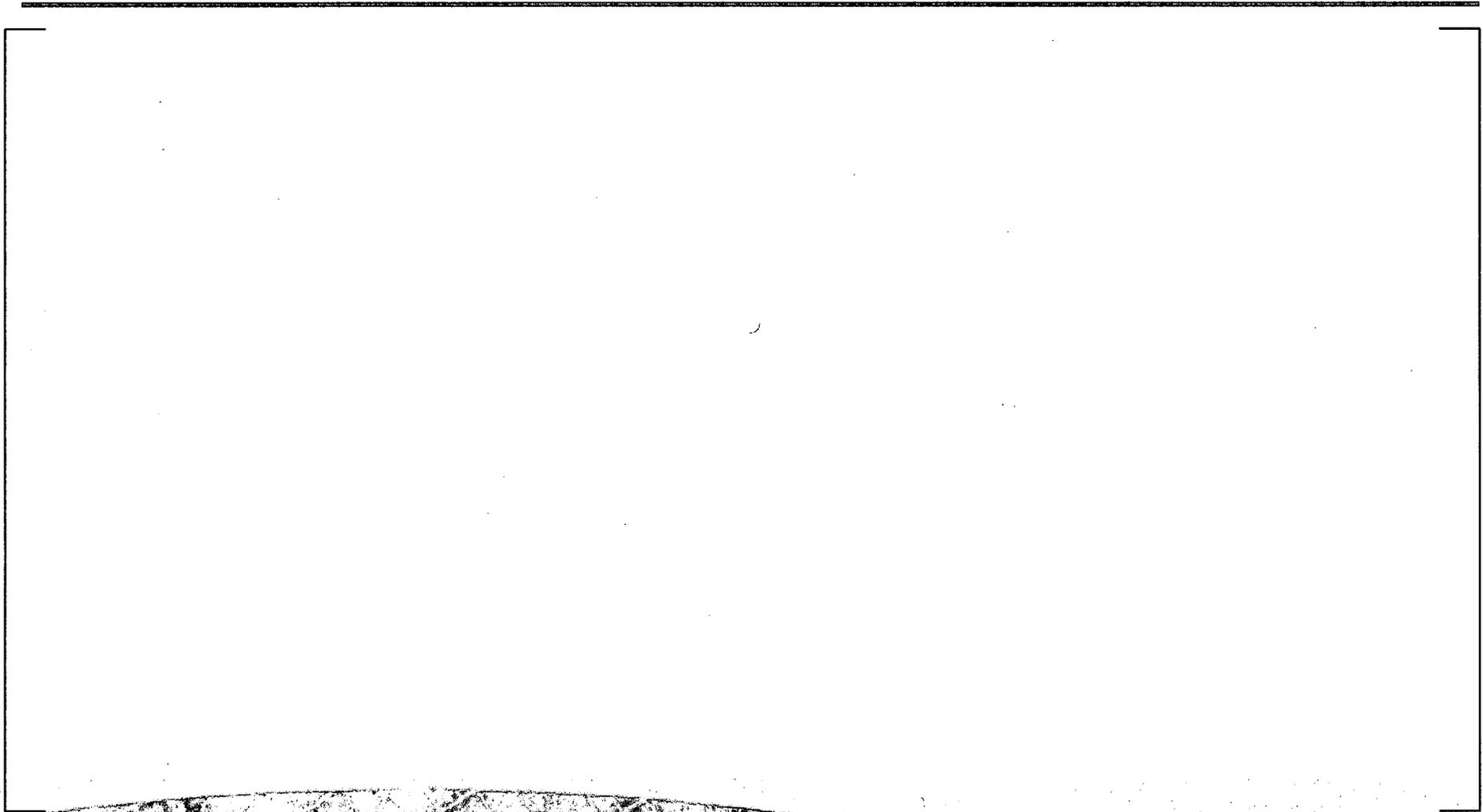
ONSITE ASSEMBLY

Original Assembly Methodology

- 200' X 600' Concrete Assembly Area with Tables
- Join Submodules on Tables and Lift to Vertical on Platen
- Assembly Line Approach

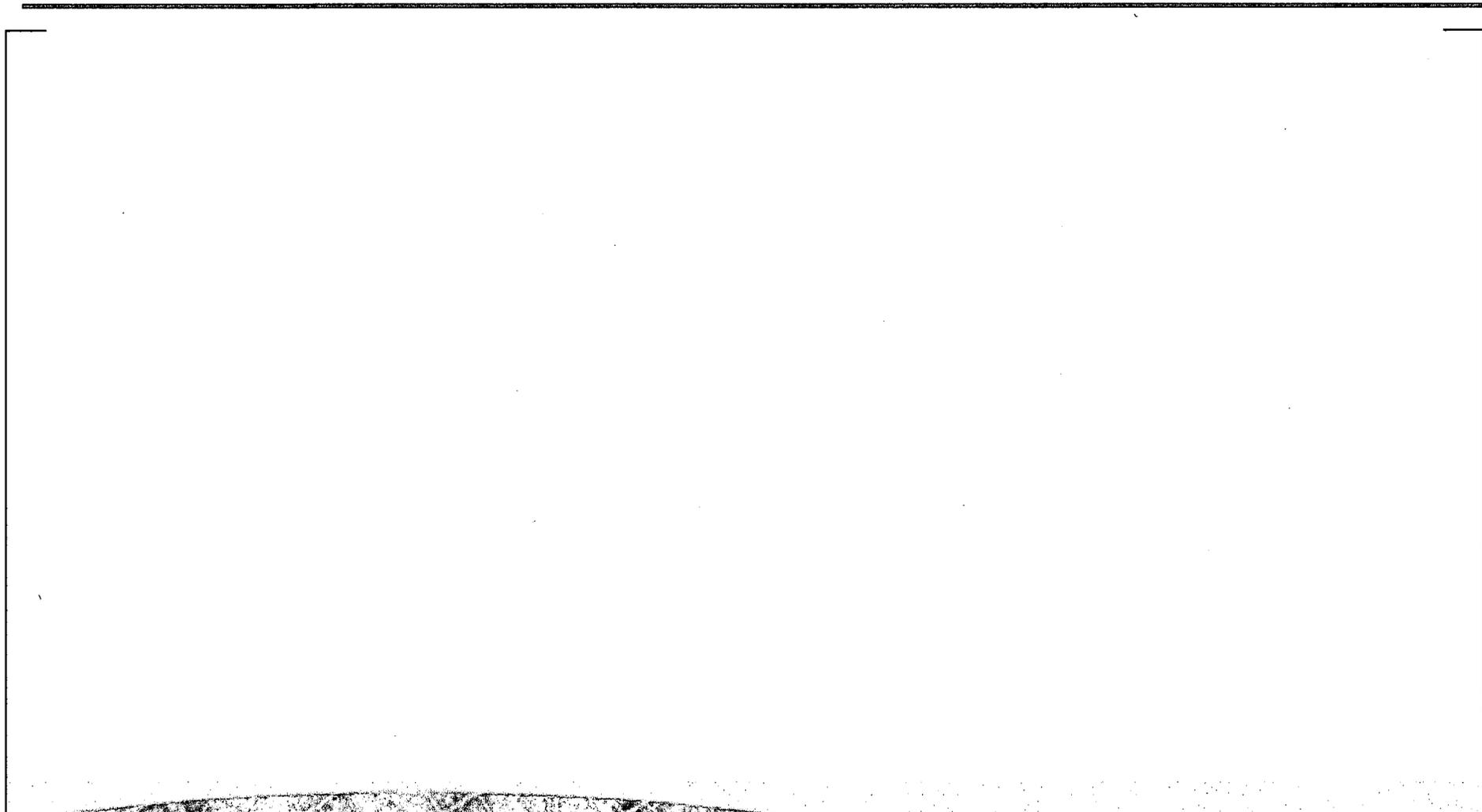


Joining Two Submodules



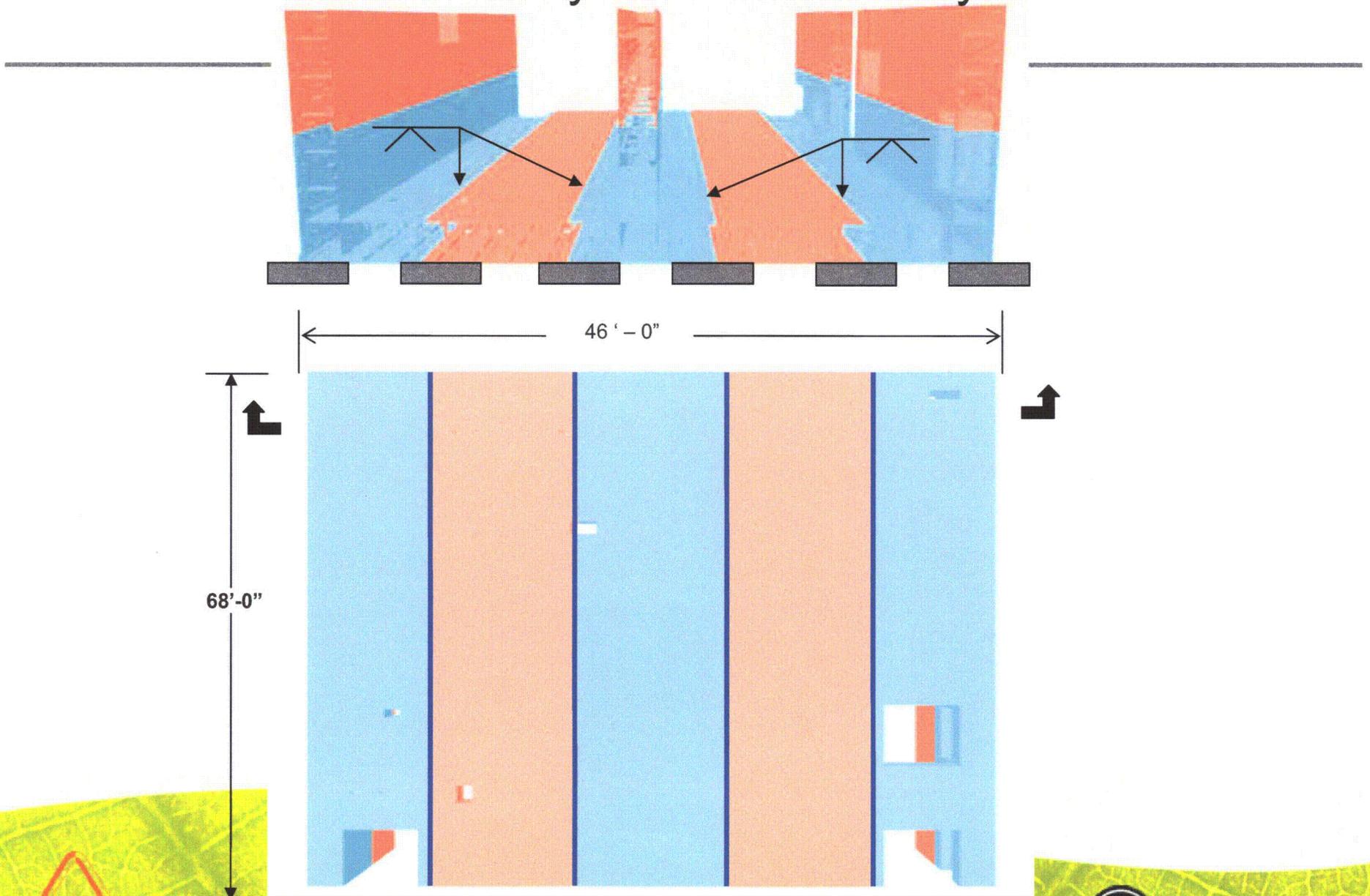
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Assembly of Sub-Assembly



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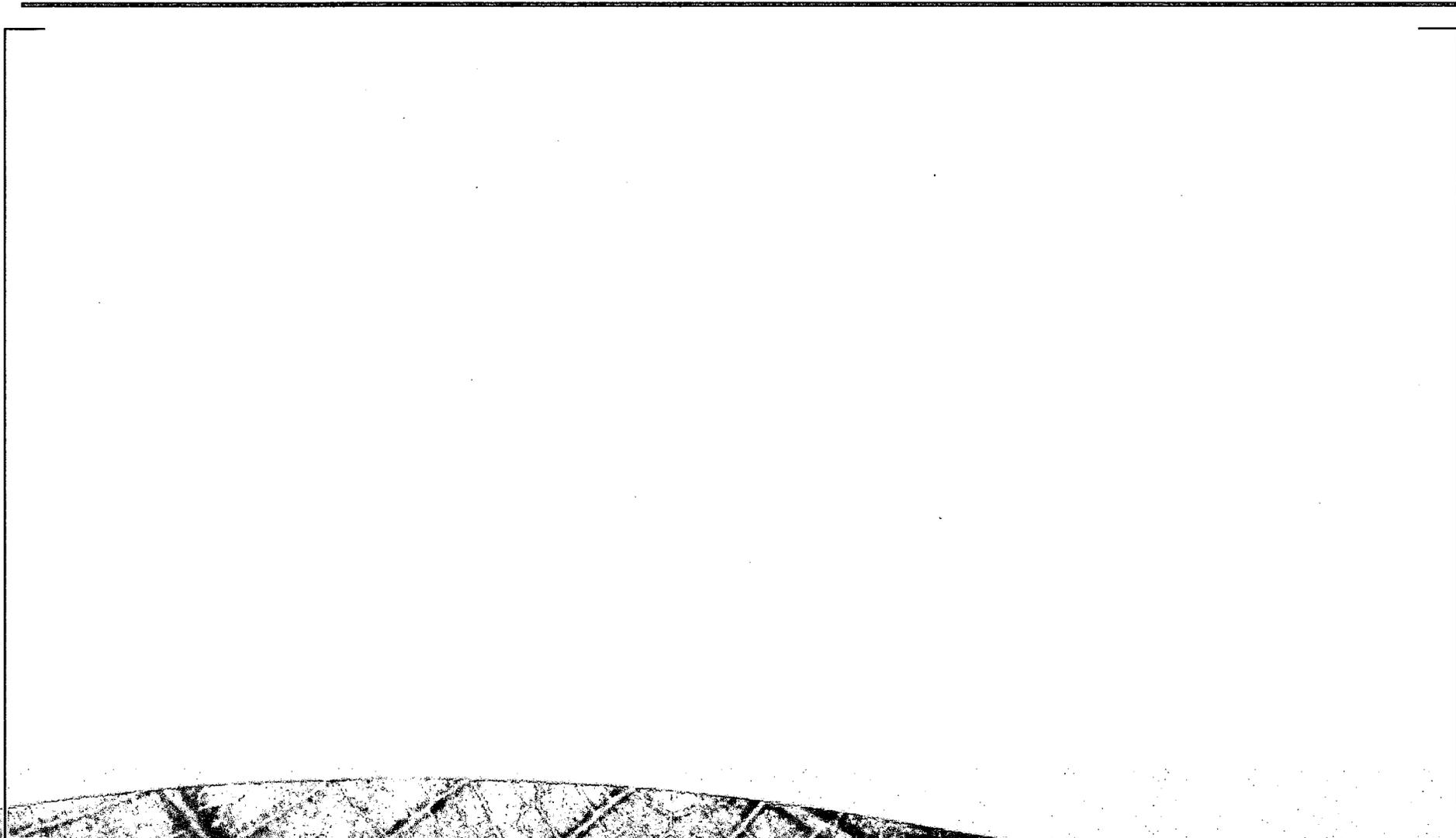
Assembly of Sub-Assembly



Vertical Assembly Methodology

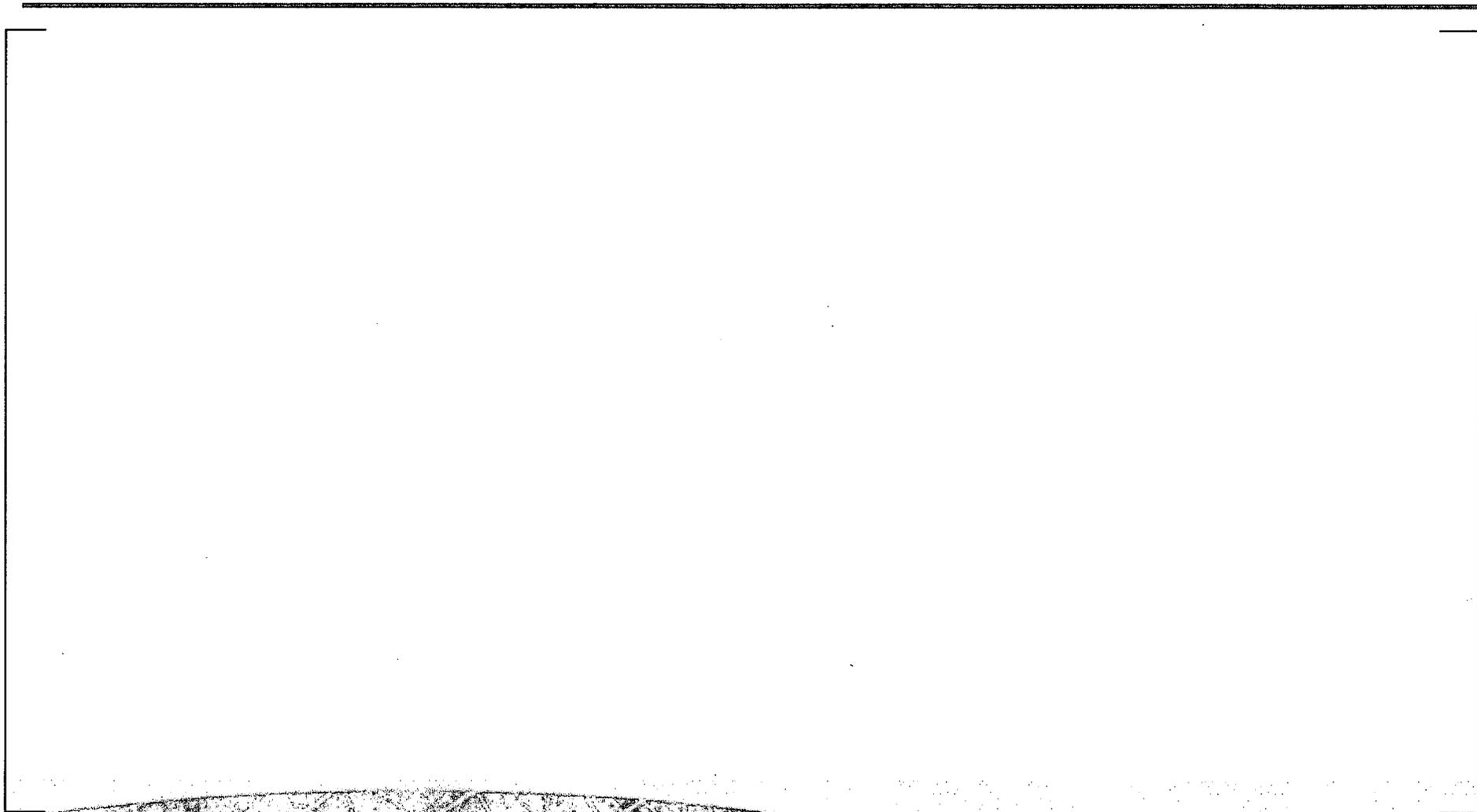
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Building Layout



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Vertical Assembly CA20

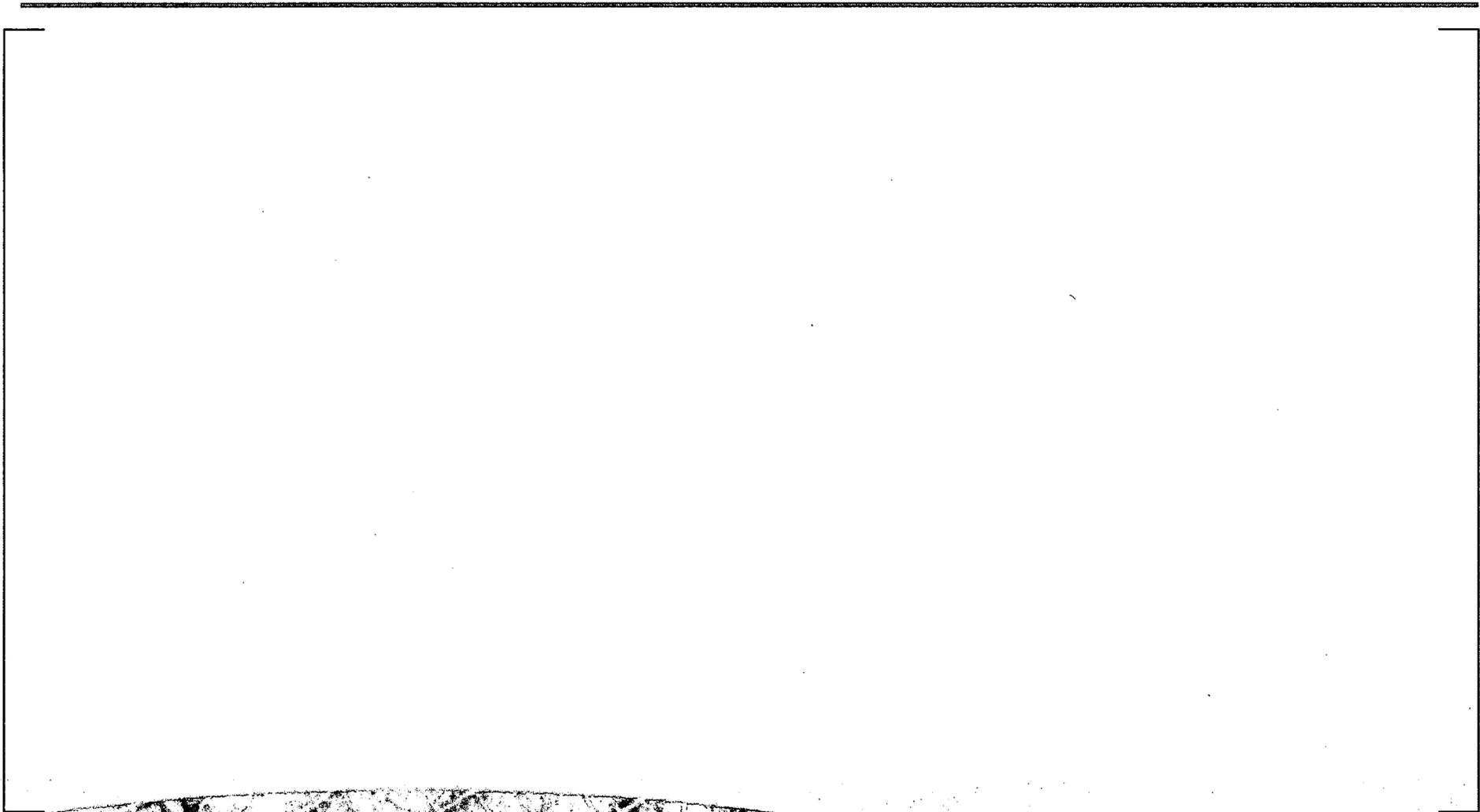


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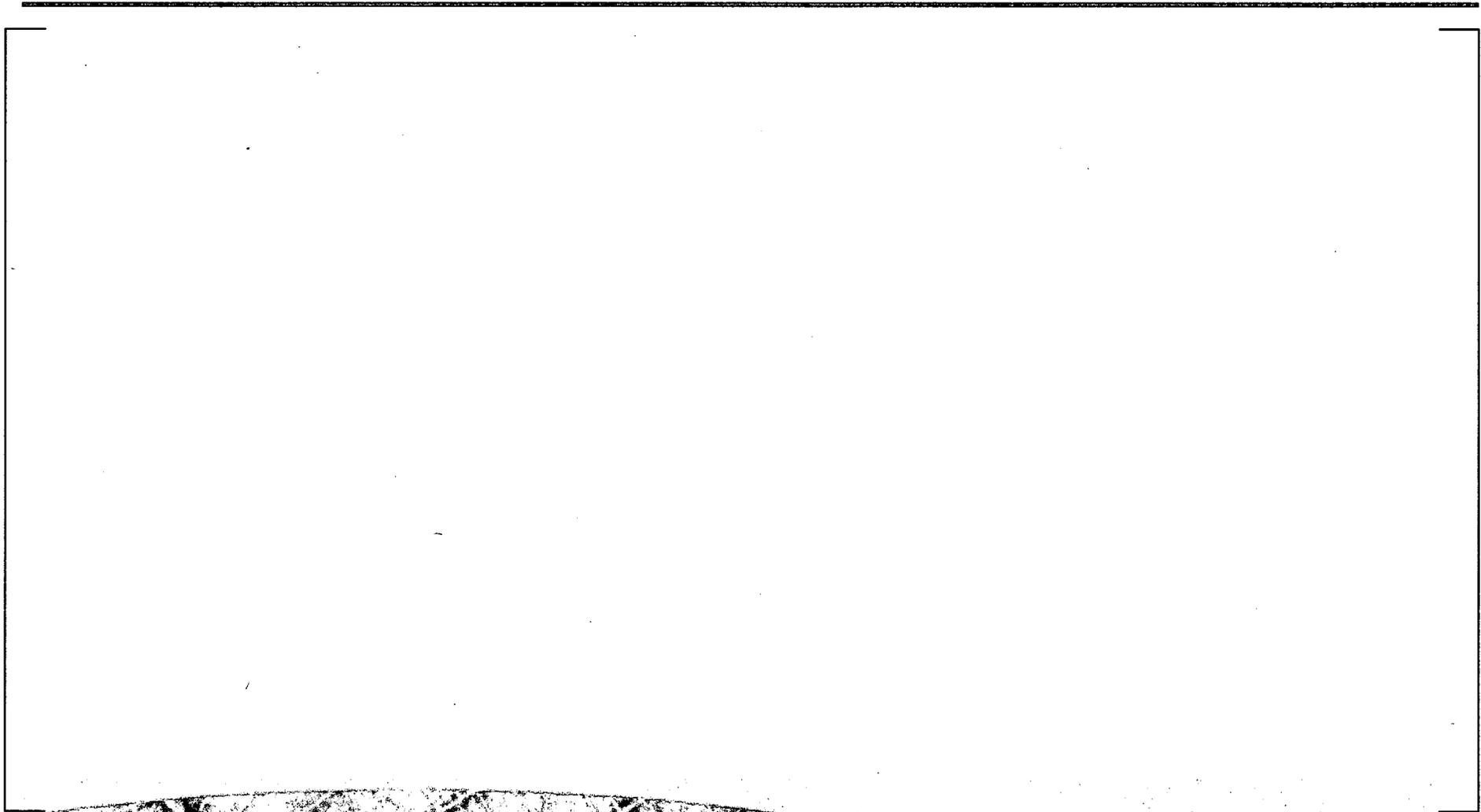


Benefits to Vertical Assembly

a



Structural Module Assembly



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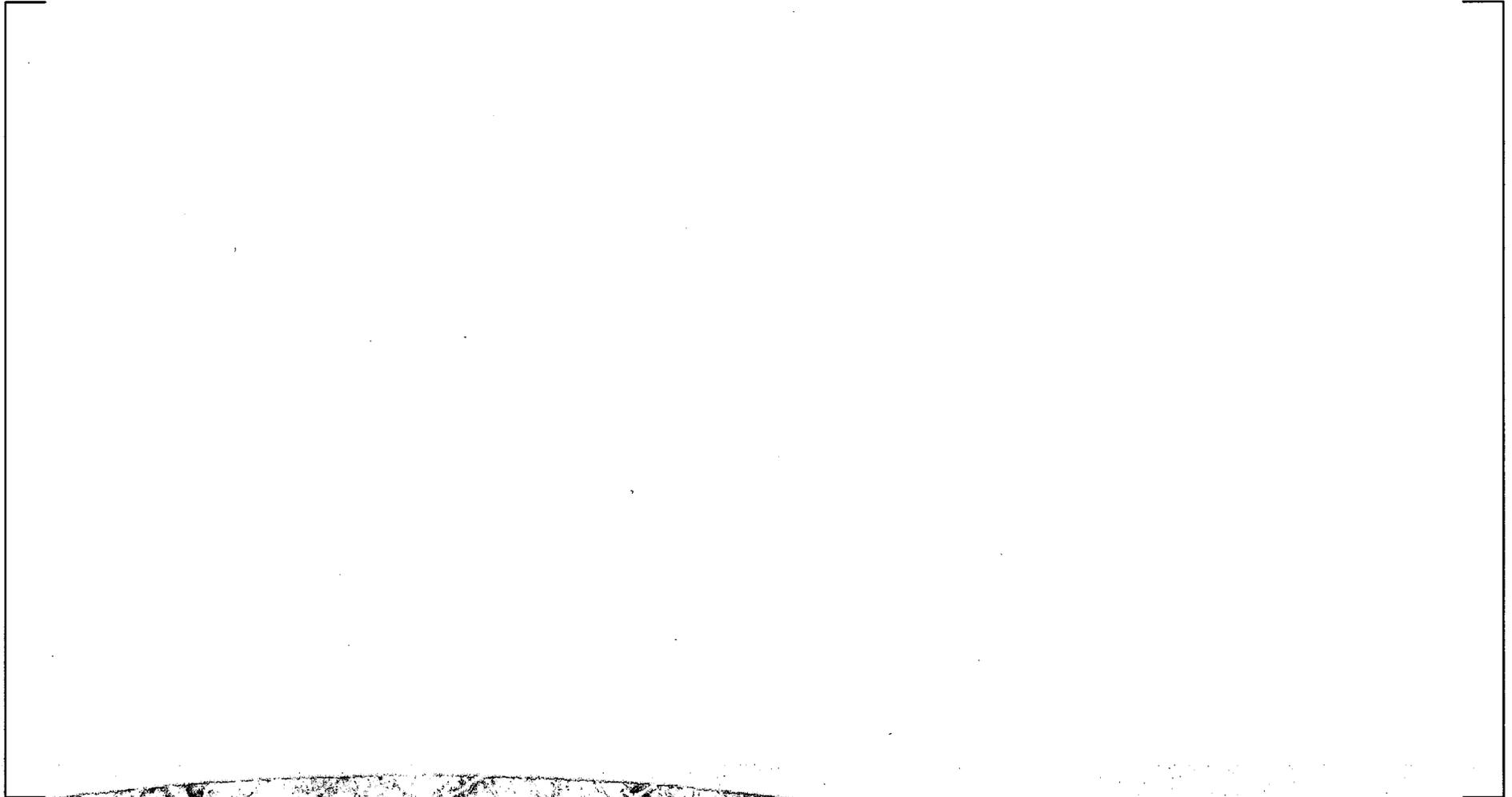


PROTOTYPE/MOCK-UP PROGRAM

Prototype and Mock-Up Program

- Develop, evaluate, and demonstrate best practices for module fabrication, assembly, and erection processes
- Test and validate selected materials and technologies
- Ensure modules will meet or exceed regulatory and quality requirements
- Provide an opportunity for all vested parties to observe and experience real time challenges, processes and investigation of field conditions.

Prototype and Mock-up Program

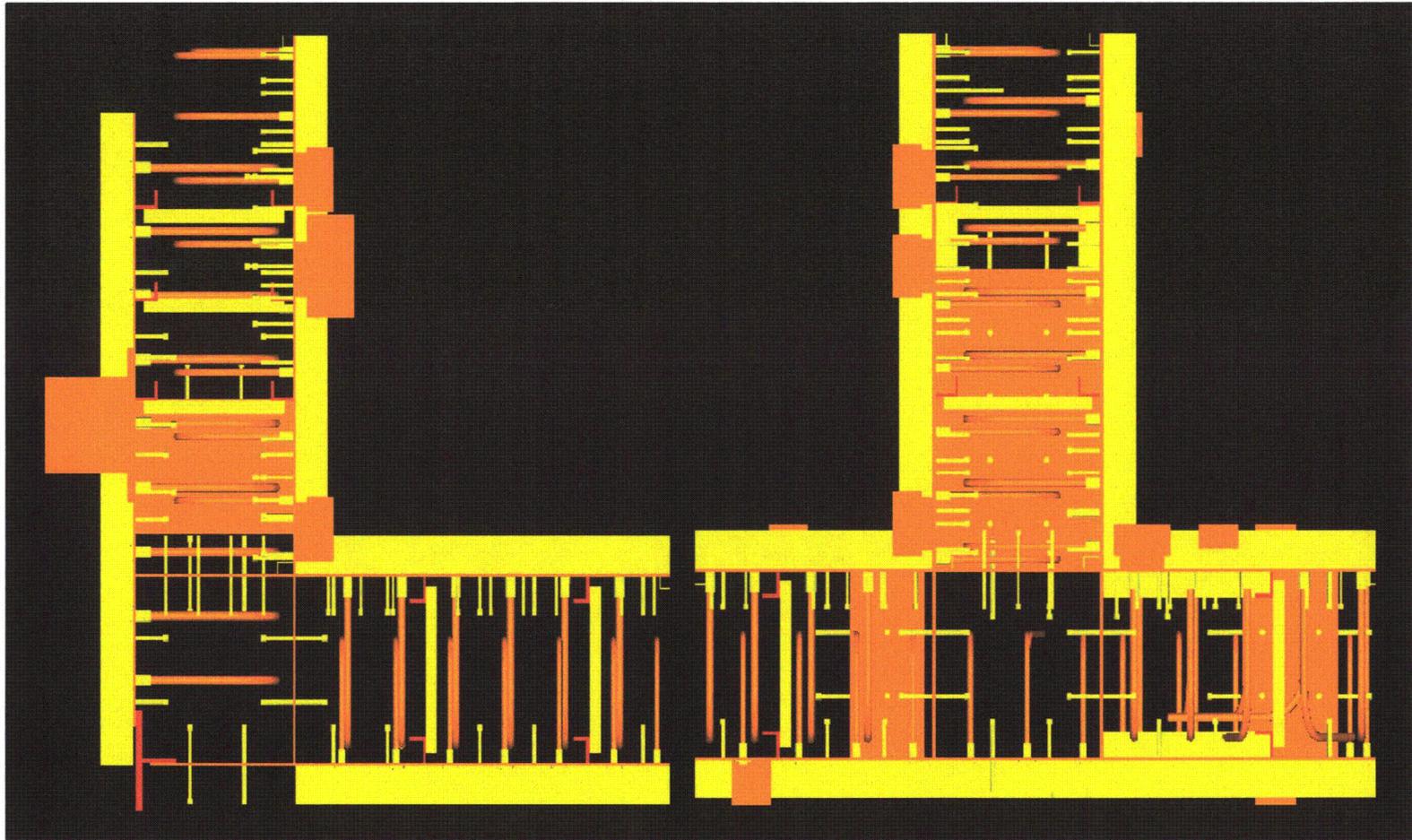


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Phase I – Design Testing

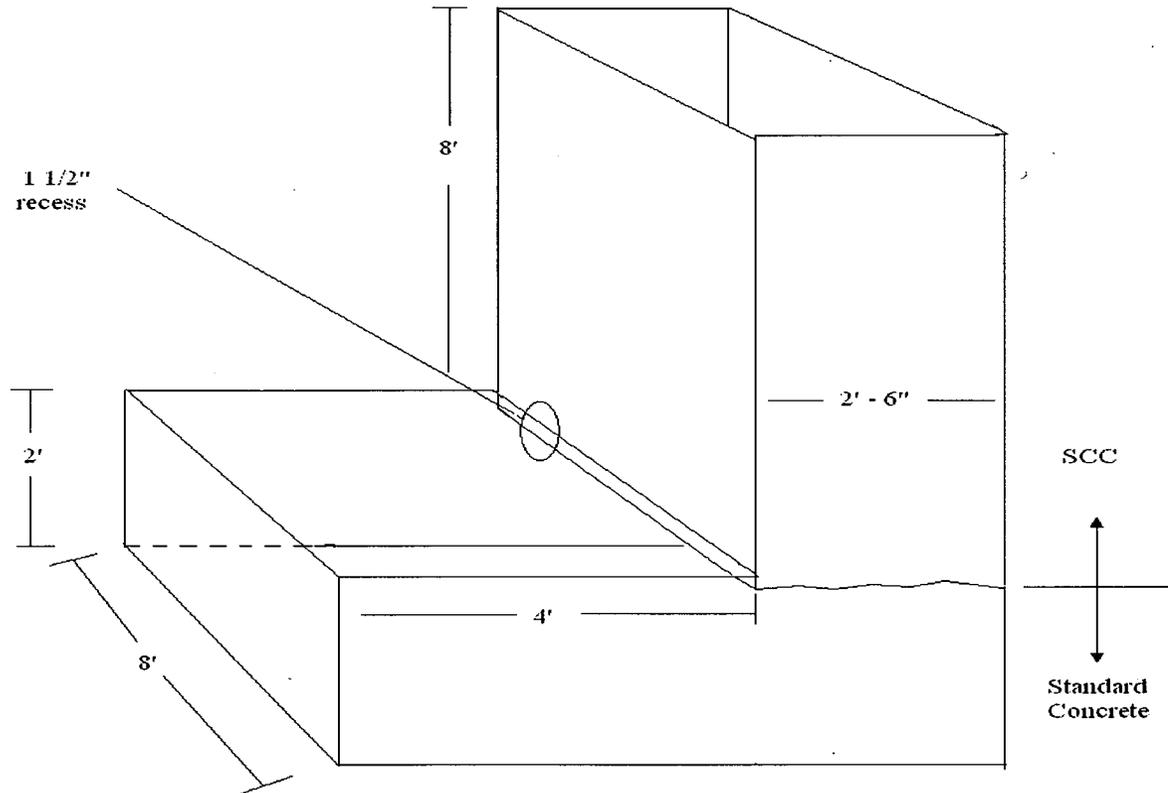
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Phase II - Module Mock Up Selections

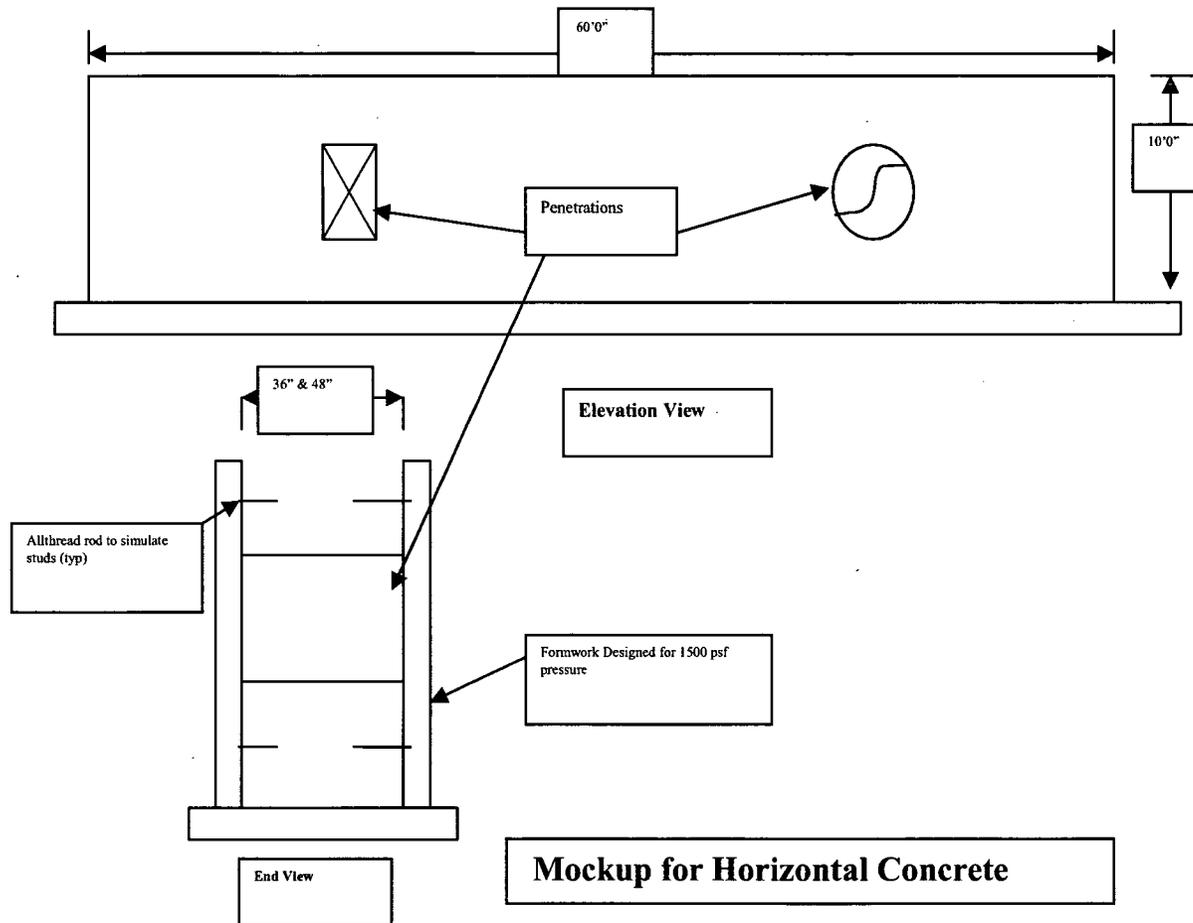


Phase III - Self Consolidating Concrete

Mock-up – Plywood Construction



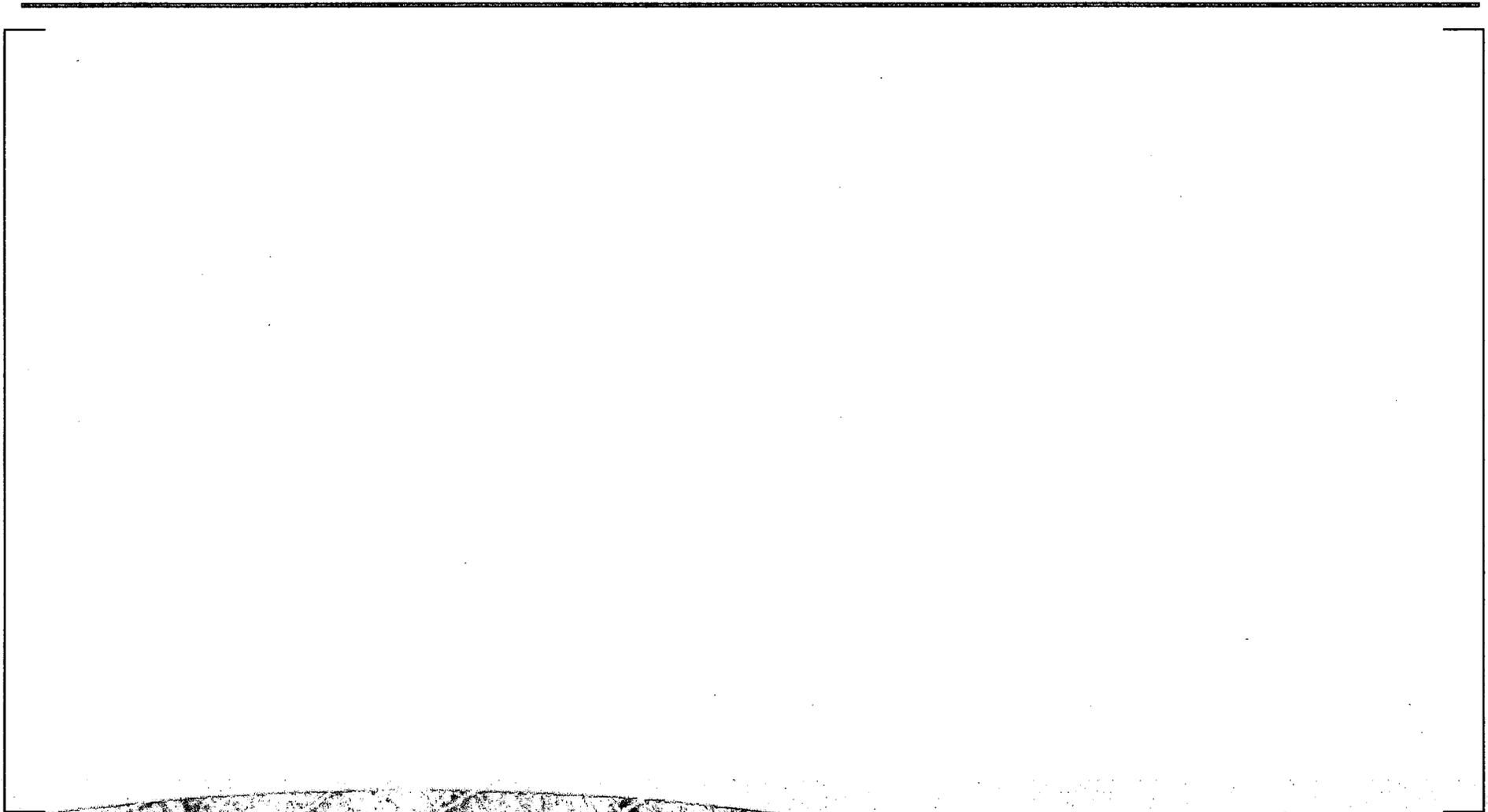
Multiple SCC Test Vessels for Flow, Vertical Lift Rate, Voids, Mixes and Destructive Testing



Welding Development

- Prototype plan includes welding development
- Preferred welding processes GMAW inside and FCAW outside
- Develop processes for vertical assembly
- Develop optimum joint design for joining submodules
- Test and design automated equipment

AP1000 Module Status



C

AP1000 Modules

Questions?