Project Case Studies

- Epler Hall - Portland
- Sitka Apartments - Portland
- Thornton Place - Seattle
- Pearl Family Housing - Portland

Stephen Epler Hall

Portland State University

Epler Hall (PSU) – 2002

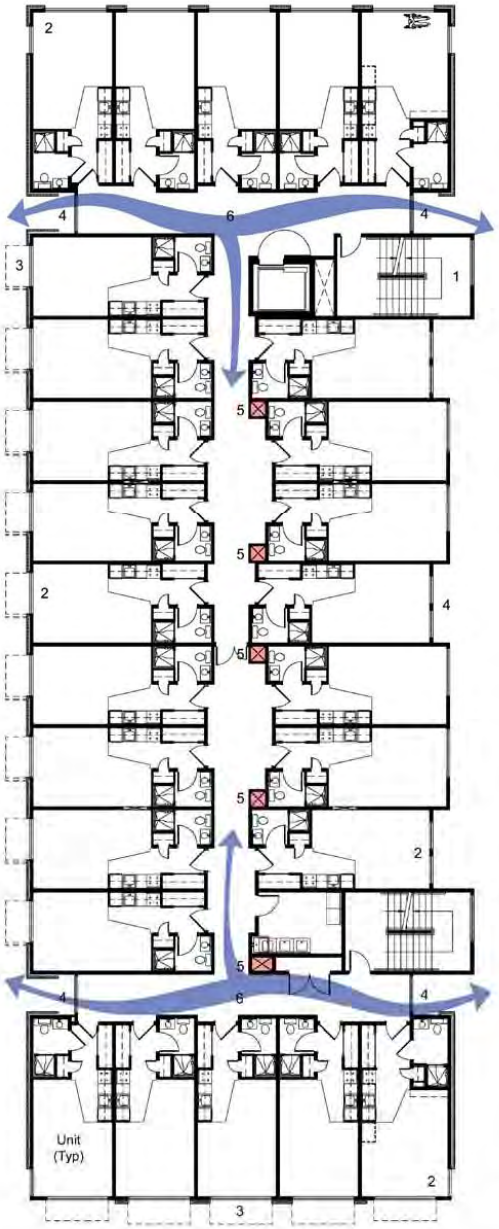
- Five-story wood frame student housing above one-story concrete frame classroom / office space

- Enclosure measures included:
  - Advanced framing
  - R-21 fiberglass batt cavity insulation at walls
  - R-30 polyisocyanurate rigid board insulation at roof
  - Air barrier (exterior sheathing approach)
  - Moderate performance vinyl windows
  - Rainscreen cladding (brick veneer, metal siding)
  - Kraft paper vapor barrier (variable perm rating)

THE DESIGN STRATEGIES (CONTINUED)

Ron van der Veen AIA, the lead designer from Mithun notes, "The simple rectangular building was refined into a "smart structure" that responds to the micro-climate of each building facade." Each facade takes advantage of its orientation by addressing its unique solar aspects, wind, noise and views. Operable windows naturally remove heat and provide cooling and daylight to over 98% of the internal spaces. Additional energy-saving techniques, including natural lighting, exhaust-heat recovery, stack ventilation, and low-flow fixtures, dramatically increase building performance and reduce resource consumption well beyond code requirements.

The building is oriented north-south to maximize its development potential and preserve major trees within the site. Fronting an urban sidewalk to the west, it reinforces the city and allows for a cool urban plaza that provides fresh air for the building. The plaza is shielded from highway noise and the western sun which creates cool air that is then drawn into the naturally ventilated spaces.



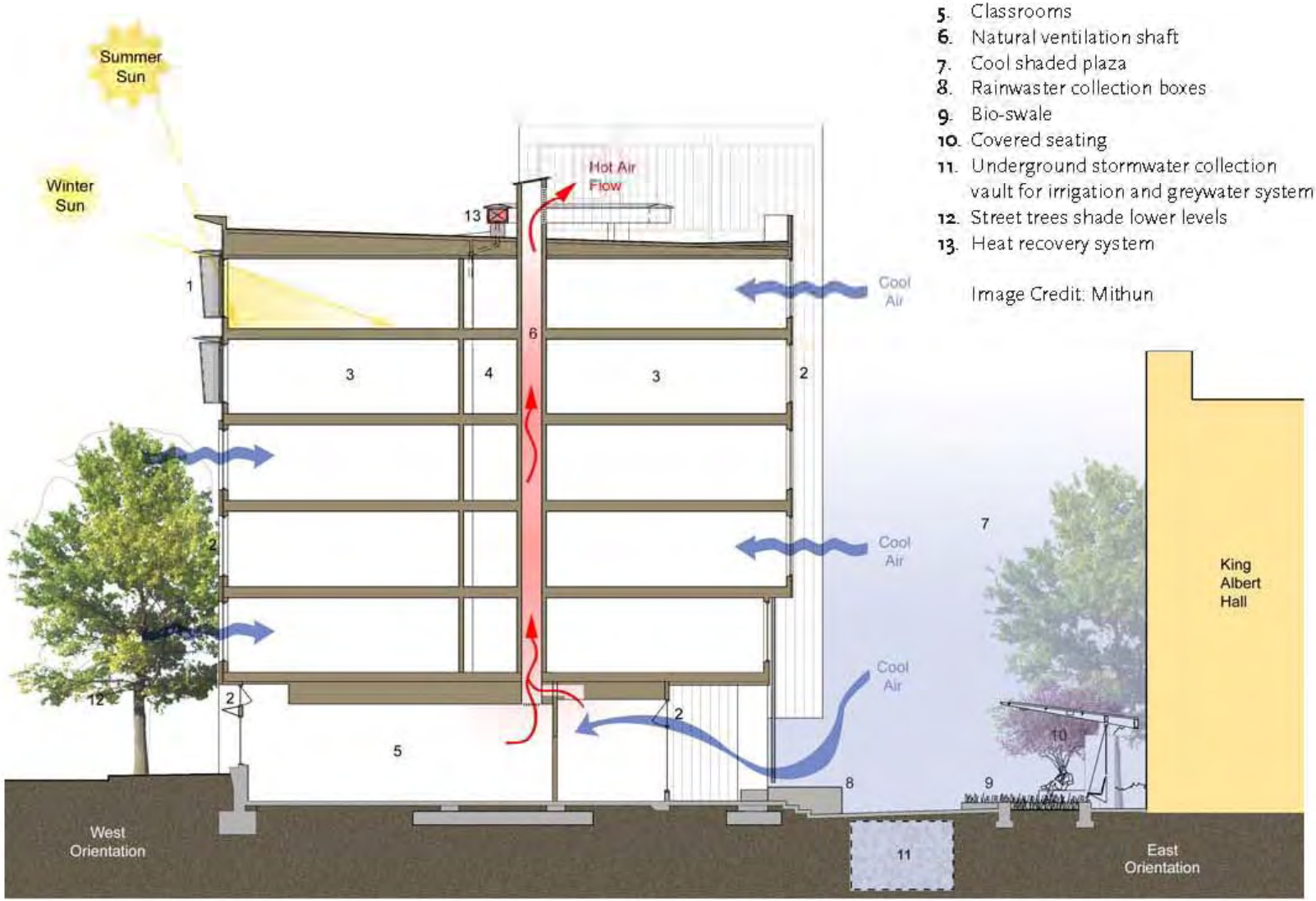
1. Oversized stair to encourage pedestrian travel
2. Windows correspond to solar orientation
3. Sunshades on south & west elevations
4. Operable windows (typ)
5. Natural ventilation shafts
6. Thru ventilation

Image Credit: Mithun

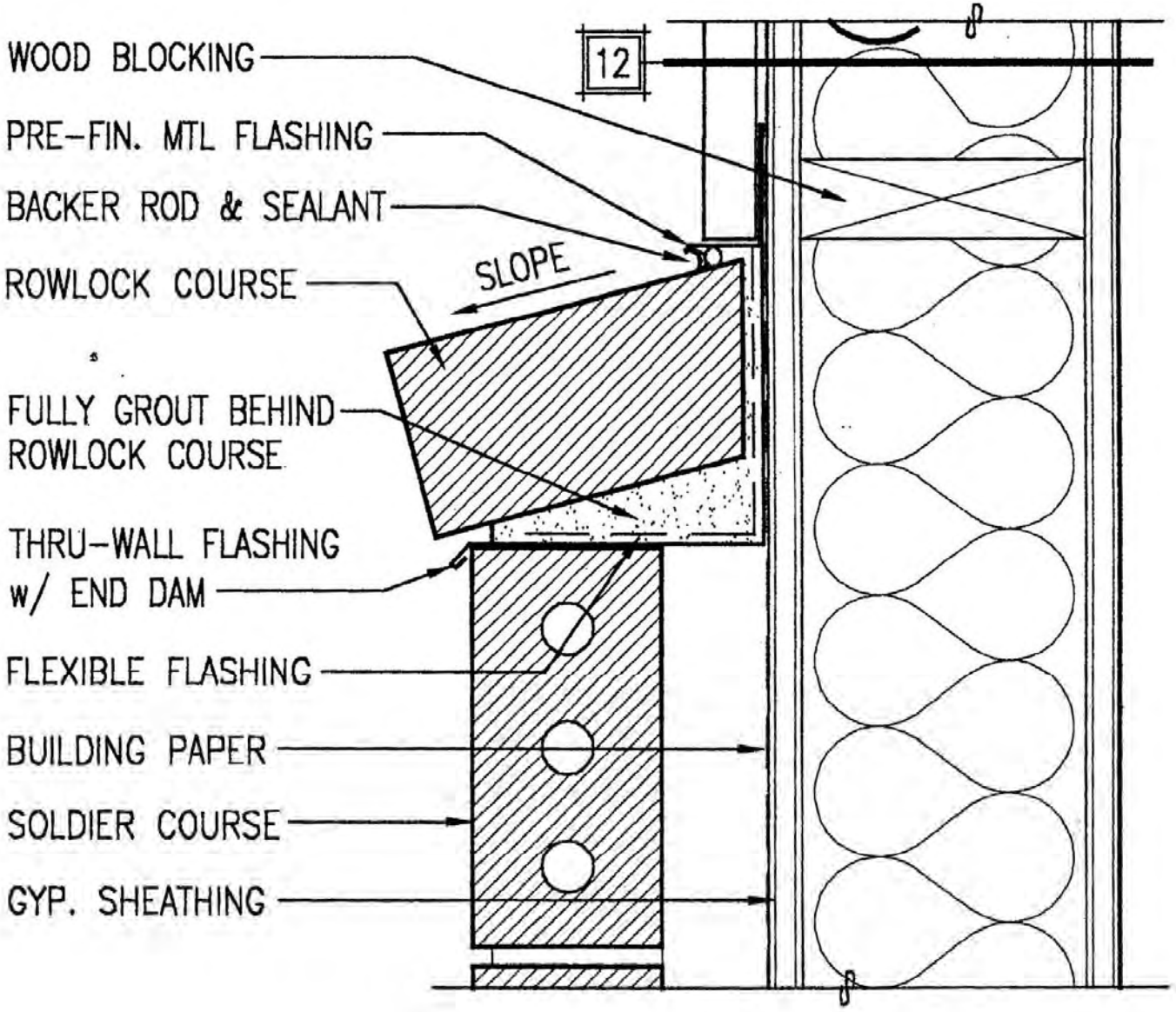
MITHŪN

1. Solar shades
2. Operable windows (typ)
3. Units
4. Halls
5. Classrooms
6. Natural ventilation shaft
7. Cool shaded plaza
8. Rainwaster collection boxes
9. Bio-swale
10. Covered seating
11. Underground stormwater collection vault for irrigation and greywater system
12. Street trees shade lower levels
13. Heat recovery system

Image Credit: Mithun

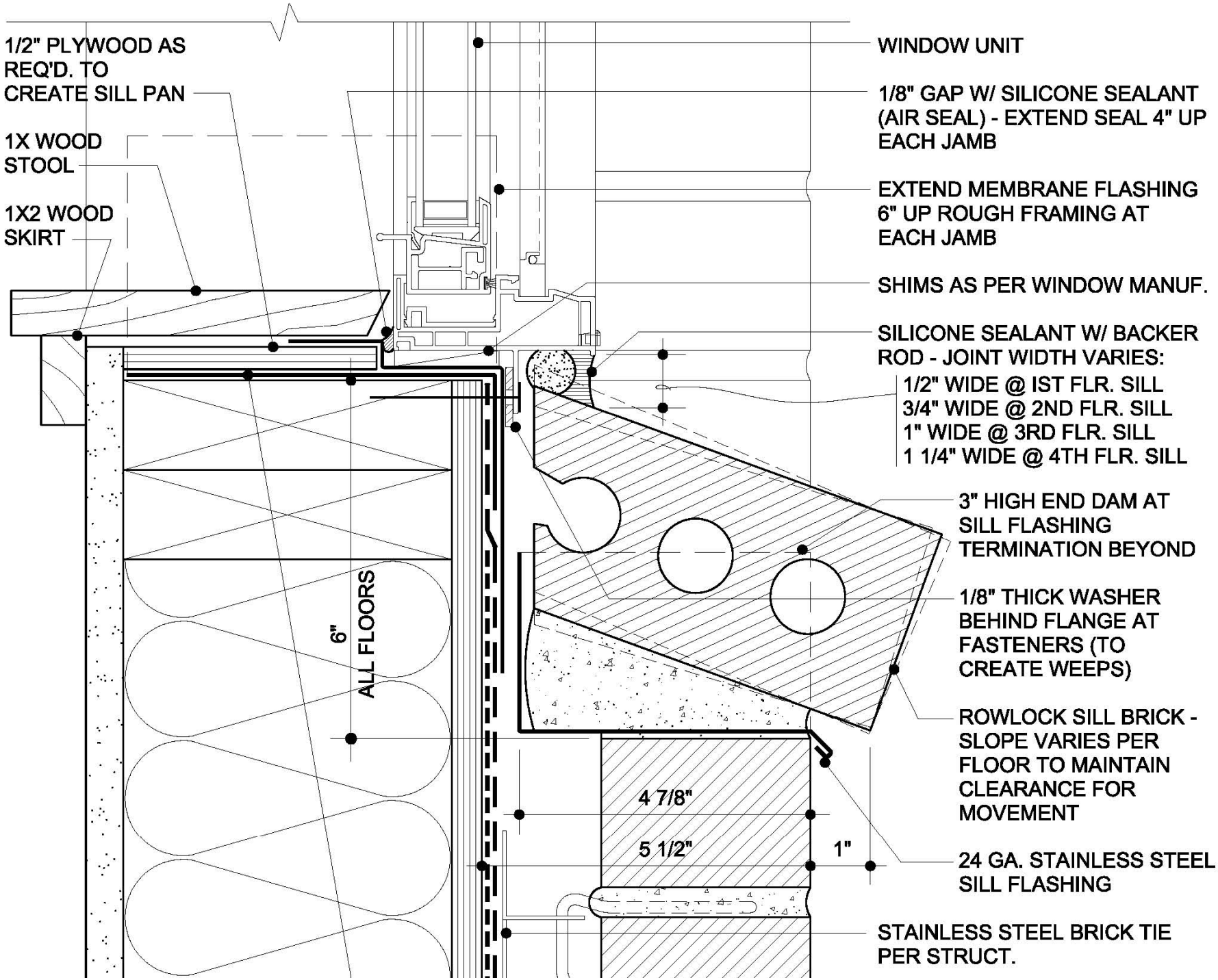


MITHUN



17 MTL PANEL TO BRICK TRANSITION

3" = 1'-0"


1/2" PLYWOOD AS REQ'D. TO CREATE SILL PAN
1X WOOD STOOL
1X2 WOOD SKIRT
WINDOW UNIT
1/8" GAP W/ SILICONE SEALANT (AIR SEAL) - EXTEND SEAL 4" UP EACH JAMB
EXTEND MEMBRANE FLASHING 6" UP ROUGH FRAMING AT EACH JAMB
SHIMS AS PER WINDOW MANUF.
SILICONE SEALANT W/ BACKER ROD - JOINT WIDTH VARIES:
1/2" WIDE @ IST FLR. SILL
3/4" WIDE @ 2ND FLR. SILL
1" WIDE @ 3RD FLR. SILL
1 1/4" WIDE @ 4TH FLR. SILL
3" HIGH END DAM AT SILL FLASHING TERMINATION BEYOND
1/8" THICK WASHER BEHIND FLANGE AT FASTENERS (TO CREATE WEEPS)
ROWLOCK SILL BRICK - SLOPE VARIES PER FLOOR TO MAINTAIN CLEARANCE FOR MOVEMENT
24 GA. STAINLESS STEEL SILL FLASHING
STAINLESS STEEL BRICK TIE PER STRUCT.
6" ALL FLOORS
4 7/8"
5 1/2"
1"


SPEED
20

Sitka Apartments

Portland

Sitka Apartments – 2004

- Five-story wood frame workforce housing above one-story concrete frame retail above one-story below grade parking garage

- Enclosure measures included:
  - Advanced framing
  - R-21 fiberglass batt cavity insulation at walls
  - R-30 polyisocyanurate rigid board insulation at roof
  - Air barrier (exterior sheathing approach)
  - High performance aluminum windows
  - Rainscreen cladding (brick veneer, metal siding)
  - “Smart” vapor barrier (variable perm rating)


NOV 25 2005

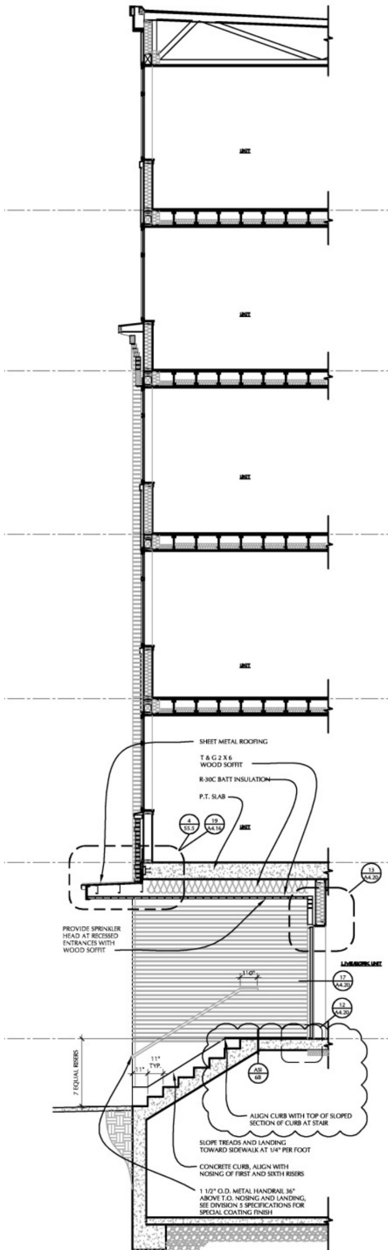

APA
2004
CADET
OTHER UNITS


GP
GP GLASS GOLD

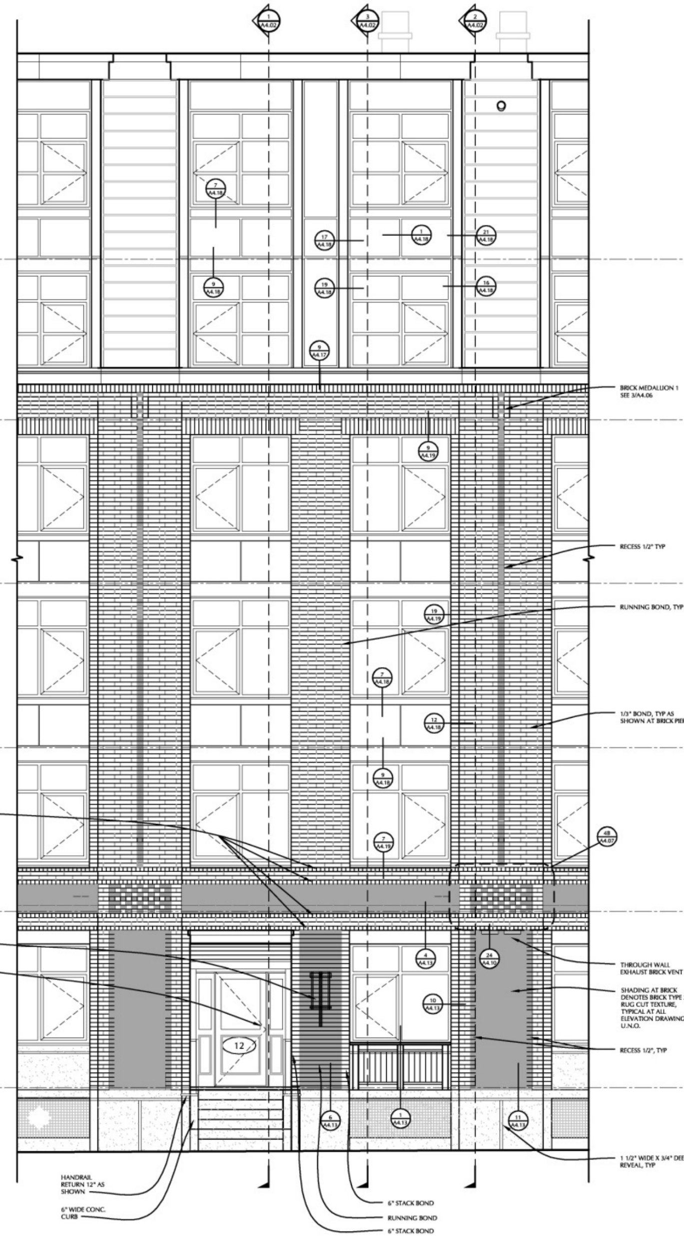

Tyvek
RIVER CITY

Airtightness Testing

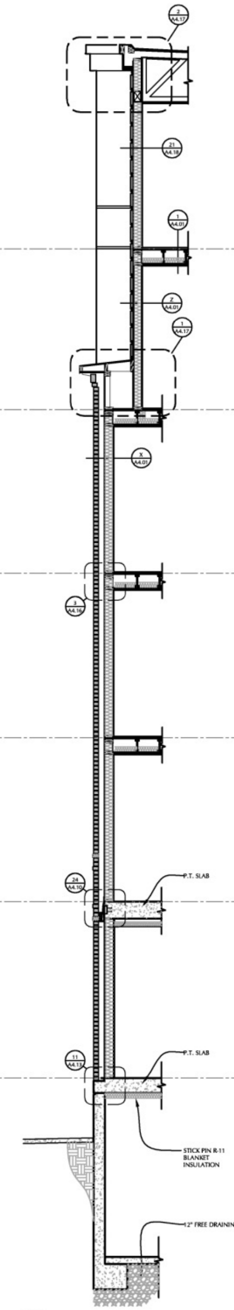
- Blower door tests at 20 units
- Air leakage rates 50% to 70% lower than other tested apartment buildings in Portland area (0.16 ACH avg.)



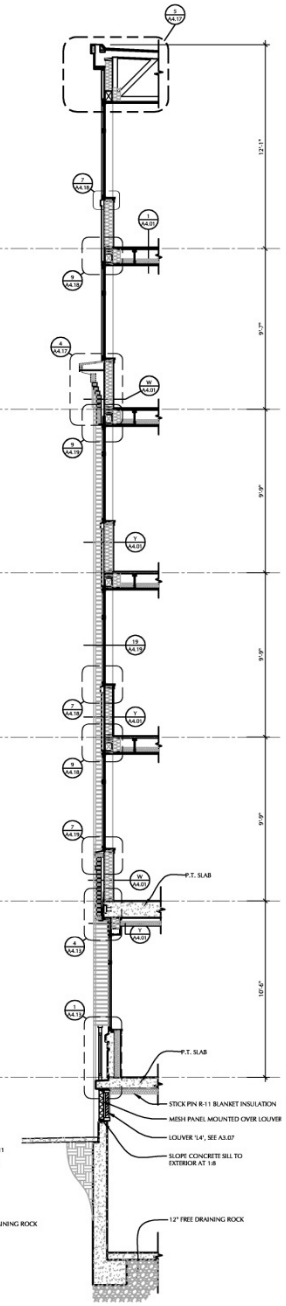
1 A4.02 WALL SECTION @ WALK-UP ENTRY
3/8" = 1'-0"



4 A4.02 TYPICAL BAY @ WALK-UP ENTRY
3/8" = 1'-0"



2 A4.02 WALL SECTION @ PIER
3/8" = 1'-0"



3 A4.02 WALL SECTION @ WALK-UP
3/8" = 1'-0"

REGISTERED ARCHITECT · STATE OF OREGON · THOMAS MOISAN · PORTLAND, OREGON · 1940

ANKROM MOISAN
ARCHITECTURE INTERIORS PLANNING
6720 SW MACADAM, SUITE 100, PORTLAND, OREGON 97219
PHONE 503-245-7100 | FAX 503-245-7710 | WWW.AMAA.COM

THE SITKA APARTMENTS

1221 NW 11th Avenue
1230 NW 12th Avenue
Portland, Oregon 97209
BLOCK 14 LIMITED PARTNERSHIP

MARK	DATE

DATE:	5.25.05
JOB:	031650
FILE:	a4.02
DRAWN:	MB
CHECKED:	

WALL SECTIONS


NOT
GWB