

2009 SENIOR THESIS FINAL REPORT



MCKINSTRY OREGON HEADQUARTERS

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PREPARED FOR

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project team

owner mckinstry
general contractor hoffman
construction manager ts
architect mildred design group
mechanical mckinstry
electrical mckinstry
structural tm rippey

architecture

simple rectangular grid. warehouse attaches at a rotated angle. flat, tilt-up concrete walls have vertical and horizontal lines to break the façade. 30% window area. built-up roof with 3" rigid insulation and 1.5" metal deck. anticipating a LEED Gold rating.

structure

6" reinforce concrete slab-on-grade on strip footing. 7" concrete walls and 8x8 concrete columns. w 12x19 joists spanning 25' and w18x35 girders also spanning 25' hold up the second floor. open web joists (32lh375/208) spanning 50' and 48g6n18.8k girders spanning 50' keep the roof up.

project information

size 50,590 sf
cost \$15.5 million
construction mar 08 - mar 09
method design - build

mechanical

the central plant is a heat recovery chiller used for both heating and cooling. open loop ground source heat pump. single rooftop ahu (with vfd) distributes air via ducts to the office section of the building. series vav boxes with hot water reheats

electric

powered by 480/277 v 3 phase 4 wire stepped down to 208/120 v. lights are all fluorescent and there are 4 skylights above the second floor

construction

type iiib construction and design-build delivery. one interesting feature of construction is the tilt up walls. all the exterior walls will be poured on site and tilted up after curing.

alex wyczalkowski . mechanical . 2009 senior thesis



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2**ACKNOWLEDGEMENTS****2.1 DISCLAIMER**

Changes and discrepancies in no way imply that the original design contained errors or was flawed. Differing assumptions, code references, requirements, and methodologies have been incorporated into this thesis project; therefore, investigation results may vary from the original design.

2.2. CREDITS

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