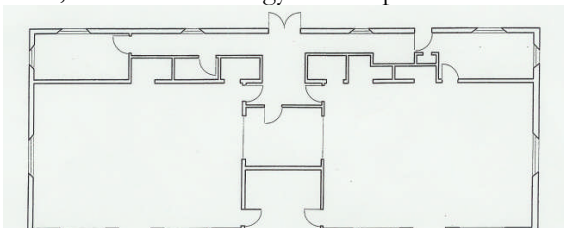


Head Start of Yamhill County has established an innovative program to construct "healthy" Head Start facilities within each of the communities it serves. As a whole, Yamhill County serves more than 200 of the neediest children and their families every year. Each facility averages 3500 to 4000 square feet and is one-story with 2 large child development areas, and six to eight smaller rooms e.g., kitchen, teacher and conference rooms.

Energy efficiency and healthy internal air quality were the two key reasons that led Head Start of Yamhill County to evaluate the cost-benefits of moving from their rented modular unit to one which is owned and operated by Head Start. Sustainable building practices, such as energy efficiency and good indoor air quality are not just good cost-effective programs for Head Start but are also good for the environment, the economy, and the social good. Head Start developed strategies and designed solutions using super-insulated building systems. By efficiently using materials such as solid insulation, conditioned basements and attics, and positioning facilities for solar gain, we expect to achieve a very tight envelope and reduce operating costs by nearly 30%, similar to the cost savings seen at facilities in Dayton and Sheridan. We also expect to meet our budget goal of about \$180 per square foot, similar to the cost of a traditionally constructed building. The other benefits of using "healthy" building standards include increased productivity, fewer health-related problems, more uniform heating, improved lighting use, more affordable operating costs, and reduced energy consumption.



## Head Start Facility

Newberg, Oregon

2007

### Specifications

#### Energy

- Super insulation resulting in walls as high as R42
- No studs therefore no thermal bridging
- Conditioned mini-basement and attic
- Super-insulated windows with no thermal break
- Compact fluorescent lights
- High density insulation under footings
- Completely encapsulated building envelope
- HVAC, water heaters located in conditioned space
- Tight ductwork with less than 1% leakage
- Solar gain optimized to supplement HVAC
- Warm un-insulated floor with captured radiant heat
- Minimal day-to night time temperature change

#### Ventilation

- Most important component - Heat Recovery Ventilation system
- Return air ducts in every room
- No pressure imbalances or heat stratification

#### Indoor Air Quality

- High indoor air quality
- No molds because of super-ventilation of building
- No off-gases from floor and wall finishes

#### Water Savings

- Reduced flow plumbing fixtures

#### Cost Savings

- Reduced size of HVAC equipment
- Reduced energy use
- Reduced water use