OPPD’s goals for site

- All functions consolidated in one building with expansion
- Equivalent storage and parking
- LEED certification
- Include state of the art renewable energy features
OPPD additions

- 10,921 square feet
- 7-1/2 ton bridge cranes
- Storeroom racks
- Upgraded perimeter fence
- Barrier gates
- Green features
LEED - Leadership in Energy & Environmental Design

- A building certification program that provides standards for environmentally sustainable construction.
- OPPD goal – get the highest certification possible using standard building techniques
- Concentrates on improving performance in five key areas of environment and human health
  - Sustainable site development
  - Water efficiency
  - Energy and Atmosphere
  - Materials and Resources
  - Indoor environmental quality
Sustainable Sites

- Bicycle Storage and Changing Room
- Low Emitting and Fuel Efficient Vehicles
- Stormwater design
  - Quantity control
  - Quality control
  - Pervious Paving
  - Permeable Pavers
  - Detention ponds
- Heat Island Effect
  - Portland cement concrete pavement
  - White Thermoplastic polyolefin (TPO) single-ply roofing
Stormwater detention pond (one of two)

White (TPO) roof
Water Efficiency

• Water Efficient Landscaping
  – No irrigation

• Water use reduction inside building
  – Low flow faucets and toilets
Energy and Atmosphere

- Fundamental and enhanced commissioning
- Whole Building Energy Simulation
- Refrigeration management
- Measurement and Verification
- Green Power 35% of Building’s electricity
  - Roof Mounted photovoltaic (44.8kW)
  - Laminate Panels (10.8kW)
  - Photovoltaic tracker (2.1kW)
  - Windspire (1.2kW)
Water-to-water heat pumps, solar tank
Solar thermal system – 10 panels x 3,850 Btuh each
Photovoltaic panels, Sharp polycrystalline
100 summer position, 100 winter position
224 watts each panel
Total 44.8kW

Photovoltaic panels, Uni-Solar laminate
136 watts, 80 panels
Total 10.8kW
Photovoltaic tracker: 12 Andalay panels 175 watts each Total 2.1kW

Windspire – 1.2 kW

All exterior lighting is LED
Materials and Resources

• Construction Waste Management
  – Divert 75% from landfill
• Recycled content
  – 10% by cost
• Regional materials
  – 20% by cost within 500 miles
• Certified wood
  – 50% by cost certified by Forest Stewardship Council
Indoor Environmental Quality

- Outdoor air delivery monitoring
- Increased Ventilation
- Construction IAQ Plan
- Low emitting material
  - Eliminated floor coverings where possible
    - Corridors, Multipurpose, Locker rooms, Transportation office & Storeroom office
- Controllability of systems
  - Operable windows
- Daylight and views
QUESTIONS?