

**Why is it innovative?**

Ford Motor Company provided vision and direction to revitalize the Ford Rouge Industrial Complex with a major sustainable initiative that required a shift of paradigm within the construction management delivery system. Per Tim O'Brien; Ford Motor Company: "The Heritage Project has been an outstanding demonstration of a collaborative partnership between a design architect, the architect of record, and a general contractor. Each of the principles brought subject matter experts to provide insight into their area of expertise and the ability to explore the possible. Walbridge Aldinger brought these designs and engineering to fruition and delivered results that were faithful to the original vision. I believe the Ford Team and our collaborative partners have produced a truly inspiring vision of the future manufacturing." Walbridge's role included the active participation of facilitating the sustainable ideals into reality. The new product facilities were situated within a 1,100 acre brown-field site. Adding to the complexity was the requirement to provide strategic sequencing of construction operations that would not interrupt the current production of product on site. Walbridge facilitated a constant review of better ways to engineer, purchase, and construct sustainable systems. While sustainability is relatively new to the industrial development community, it is achieving greater momentum and attention with every successful demonstration of success.

**What it changed or replaced**

The industrial development process and its participants have evolved from a set of standards that were based on years of manufacturing experience. The implementation of sustainable innovations required a cultural change in the way of thinking for the team that provided a positive and proactive environment towards accepting change. The sustainable development model placed higher emphasis of understanding value in terms of operating efficiencies and life cycle cost analysis. A new open minded approach viewed the development process in a more global sense in terms of ecological systems. The success of sustainable systems was built upon the appropriate utilization of the tool box of sustainable elements. It is true that the success of a project is based on the ability to satisfy the standard industrial program scope, come in on budget, and to be delivered on time. When implemented effectively, sustainability truly enhances each aspect of the projects success in a manner that achieves responsible environmental stewardship within the construction industry.

**Where and when it originated, has been used, and is expected to be used in the future**

In 1999 the sustainable vision for the Ford Rouge Industrial Complex was provided by William Clay Ford and William McDonough of William McDonough & Partners. The encouragement towards changing standard industrial development inspired out of the box thinking regarding every facet of the development process. Sustainable initiatives were identified, developed, & continuously improved upon throughout the course of the project. Every sustainable system that was reviewed provided lessons learned, new standard operating procedures, and an experience from which improvements could be based for the future. The four year sustainable endeavor has enriched the industries understanding of the once unfamiliar "sustainability" through an exponential learning curve that may help in realizing the standards of tomorrow.

**If the nomination is for an innovative project, specifically identify its innovations.**

The Ford Rouge Industrial Complex includes an unprecedented implementation of innovative sustainable initiatives. The project recognizes over thirty sustainable systems that address air, water, energy, land, waste and resource management. This AIA and ASLA award winning project provides environmental achievement without compromising to the business perspective. The construction innovation is of facilitation as a program manager. Unusual sustainable construction responsibilities included... assisting in sustainable design review; research of sustainable manufacturers and suppliers; developing warranty programs for new sustainable systems; developing and estimating environmental building systems; recycling pro-grams; establishment of test models; monitoring and reporting of test results; staging of sedum farm for green roof vegetation; LEED documentation process; participation in educational programs; planning of newly developed sustainable building systems; owner agent regarding permitting and plan review; etc... A listing of the sustainable initiatives may be found on the Innovation Illustration sheet. The sustainable shift of paradigm in the construction management delivery system that was experienced at the Ford Rouge Industrial Complex has been a monumental team accomplishment.

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2004 NOVA Awards Program  
Ford Rouge Industrial Complex Revitalization  
Sustainable Shift of Paradigm w/in Construction Management Delivery System



McDONOUGH



- Multi-Level Lot Porous Pavement Storage Stormwater System
- Mustang Lot Porous Pavement Stormwater System
- East of Final Piping Storage Stormwater System
- Miller Road Vegetated Swale Stormwater System
- Phytoremediation
- Final Assembly Extensive Green Roof
- Various Landscape Green Initiatives
- Mini-Central Thermal Storage Chiller Plant
- Various Reduced Consumption Potable Water Systems
- Mill Water Irrigation
- Stabilization of Site Construction
- Big Foot Mechanical Systems
- Heat Recovery Wheel System
- Natural Day Lighting Systems
- Various Reduced Energy Artificial Lighting Systems
- Site Employee Busing Network
- Various Reduced Light Pollution Systems
- Creation of Wildlife Habitat
- Reduction of Impervious Surfaces
- Balancing of Total Site Earthwork
- Reuse of Crushed Concrete
- Sorting and Recycling of Construction Debris
- Various Selections of Green and Recycled Materials
- Facility Management and Operational Recycling Program
- Roof Top and Canopy Photovoltaics
- Solar Thermal Heating of Potable Water
- Geothermal Well Heating Systems
- Environmentally Conscious Roofing Membrane
- Various Indoor Air Quality Initiatives
- Adaptive Reuse of Historic Glass & Glass Annex Buildings
- Visitor Center Commissioning
- Fuel Cell Studies