



It's About Giving Back – The Adaptive Reuse of the East Tennessee Technology Park

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Reindustrialization is Adaptive Reuse

Reindustrialization *is* Adaptive Reuse

Vision

By 2012, the Oak Ridge Reindustrialization Program will be recognized as the national leader in the beneficial reuse of Department of Energy assets.

Mission

Accelerate clean-up and promote economic development by making DOE underutilized assets (e.g., buildings, land, equipment) available to the private sector for the establishment of self sustaining businesses on the Oak Ridge Reservation.

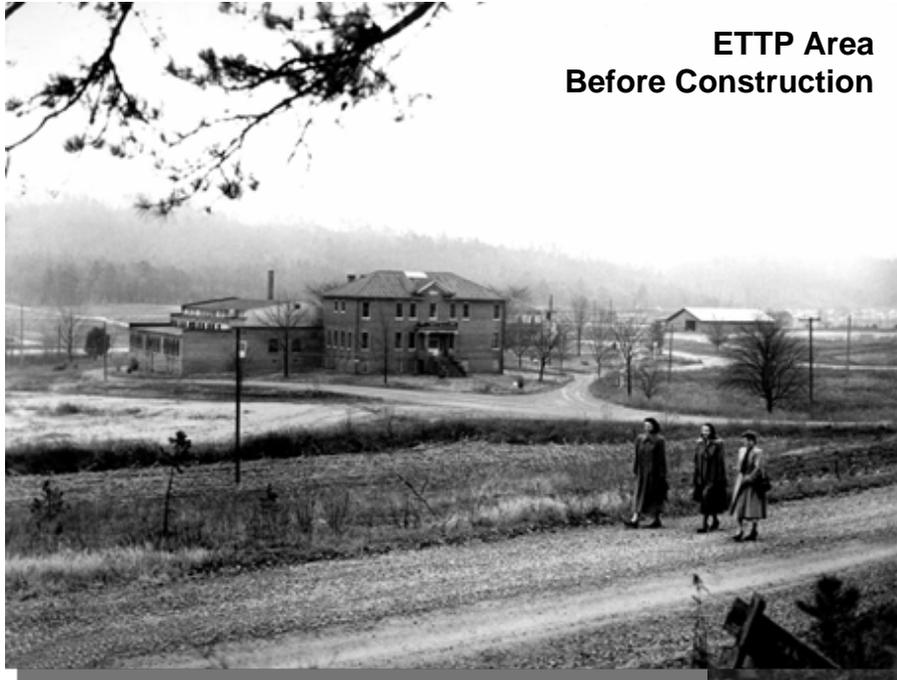
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Background

- The Reindustrialization Program started in 1996 as a method to leverage private-sector companies to perform mission-related cleanup work in exchange for DOE underutilized assets.
- Initially leasing of real property under section 161(g) of the Atomic Energy Act was the only available tool.
- 2000's 10 CFR 770 legislation provided DOE with a means to enable the title transfer of ownership of real property to the private sector.
- Transfer of real property has facilitated the establishment of the East Tennessee Technology Park - Heritage Center by the Community Reuse Organization of East Tennessee, as a private-sector mixed-use business and industrial park.

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ETTP History



ETTP Area
Before Construction



ETTP Area
During Construction

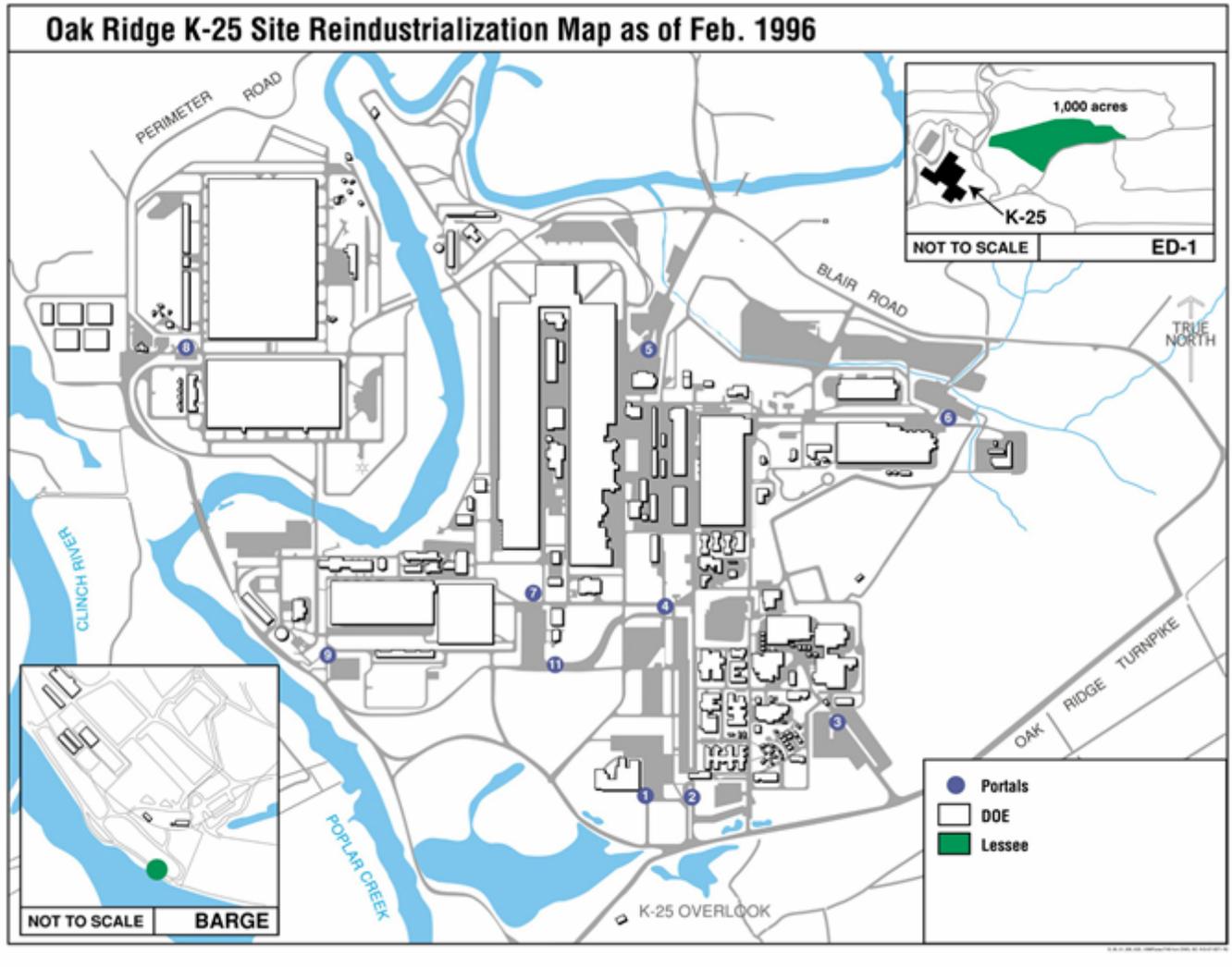
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ETTP Circa 1996



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Early Lease Map (From 1996)



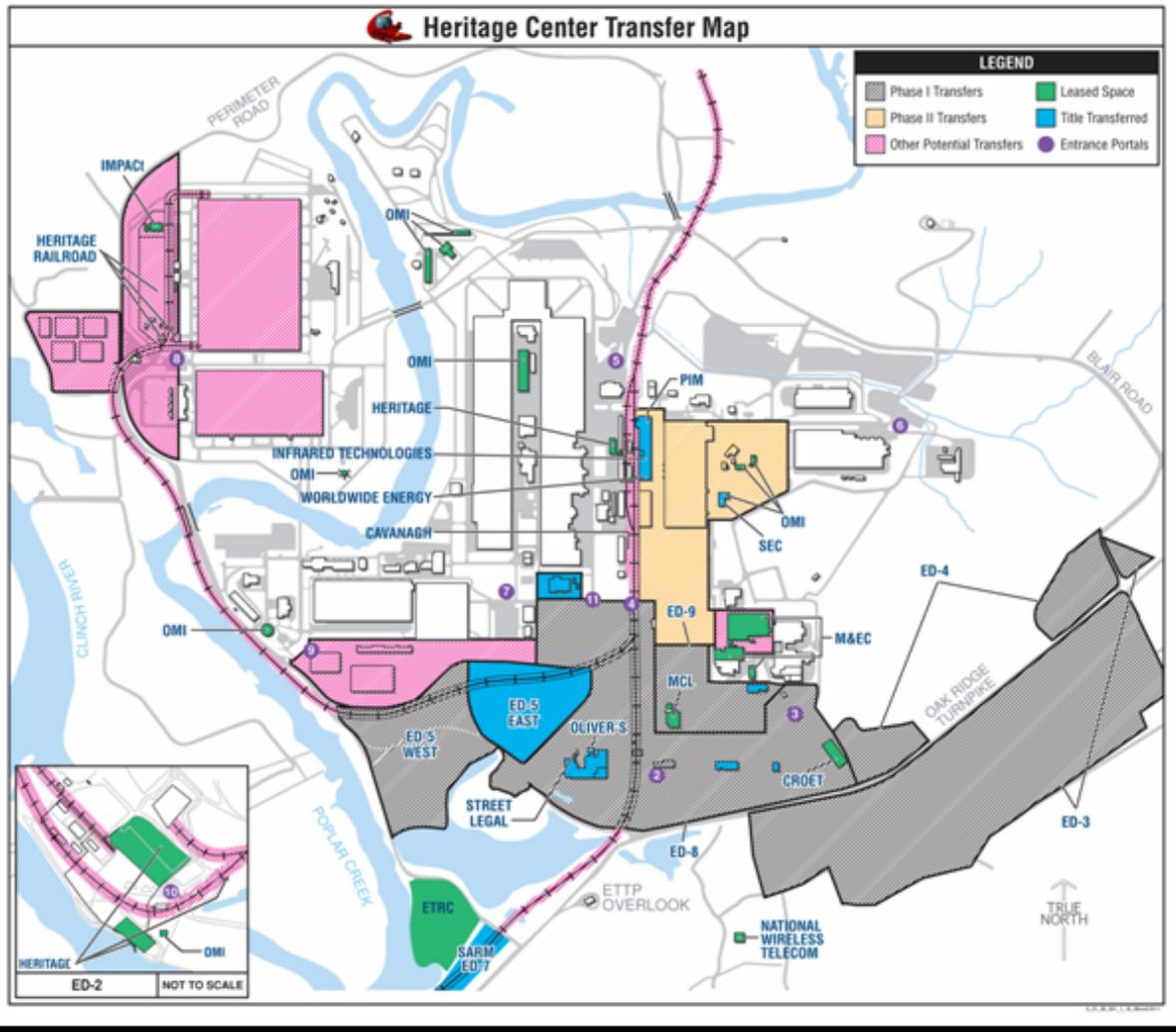
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ETTP Today



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Property Transfers



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How Do We Do It?



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By 2006, Six Buildings Totaling Approximately 283,000 ft² Were Transferred



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In 2007, the Site Fire Station was Transferred to the City of Oak Ridge



This transfer benefits the citizens of Oak Ridge via the provision of fire protection and emergency services to the growing West End area of Oak Ridge.

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Transfer = Disposal Avoidance



K-1007 Office Building

Environmental Management Waste Management Facility



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Transfers Result in Significant Pollution Prevention Benefits

Building Transfers save valuable landfill space, emissions and fuel used in disposal, labor, and replacement costs and materials.

Building Facility	Landfill Space Saved (cubic yards)	D&D Savings	Replacement Cost ¹	Transportation Emission Savings (grams of regulated pollutants) ²	Resource Savings on New Construction (tons of materials) ³
K-1007	7,957	\$4,900,000	\$10,000,000	187,000	89,000
K-1036	4,742	\$3,500,000	\$5,180,000	111,300	6,400
K-1225	2,227	\$700,000	\$3,200,000	52,000	2,440
K-1330	1,155	\$300,000	\$1,740,000	27,000	1,140
K-1400	769	\$300,000	\$1,660,000	18,000	1,100
K-1580	2,261	\$500,000	\$4,000,000	53,000	3,000
K-1515	1,000	\$534,000	\$5,000,000	23,500	930
K-1652	3,500	\$1,000,000	\$6,000,000	82,000	1,850
TOTAL	23,611	\$11,734,000	\$36,780,000	553,800	105,860

¹ <http://www.rsmeans.com/estimator>.

² DOE 2003, On-Road Development of the C-Gas Engine in Heavy Duty Vehicles, NREL/FS-540-32871.

³ EPA 1998, Characterization of Building-Related Construction and Demolition Debris in the United States, Report No. EPA-530-R-98-010.

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Future Transfers Result in More Significant Pollution Prevention Benefits

Building Facility	Landfill Space Saved (cubic yards)	D&D Savings	Replacement Cost ¹	Transportation Emission Savings (grams of regulated pollutants) ²	Resource Savings on New Construction (tons of materials) ³
K-1000	79	\$275,000	\$275,000	1,800	44
K-1008-F	113	\$612,000	\$612,000	2,700	500
K-1501 H&L	130	\$400,000	\$400,000	2,900	213
K-1065	9658	\$13,400,000	\$13,400,000	215,000	17,800
K-1600	1500	\$2,700,000	\$2,700,000	33,400	3,150
TOTAL	11,480	\$17,387,000	\$17,387,000	255,800	21,707

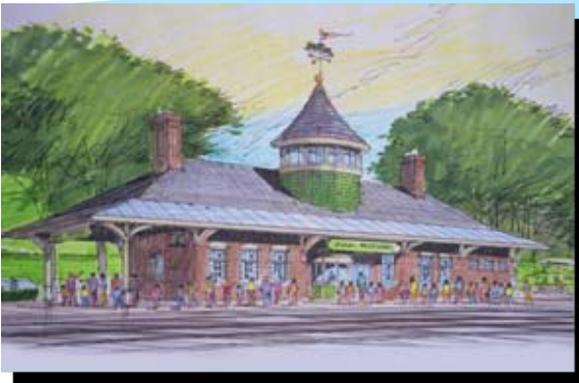
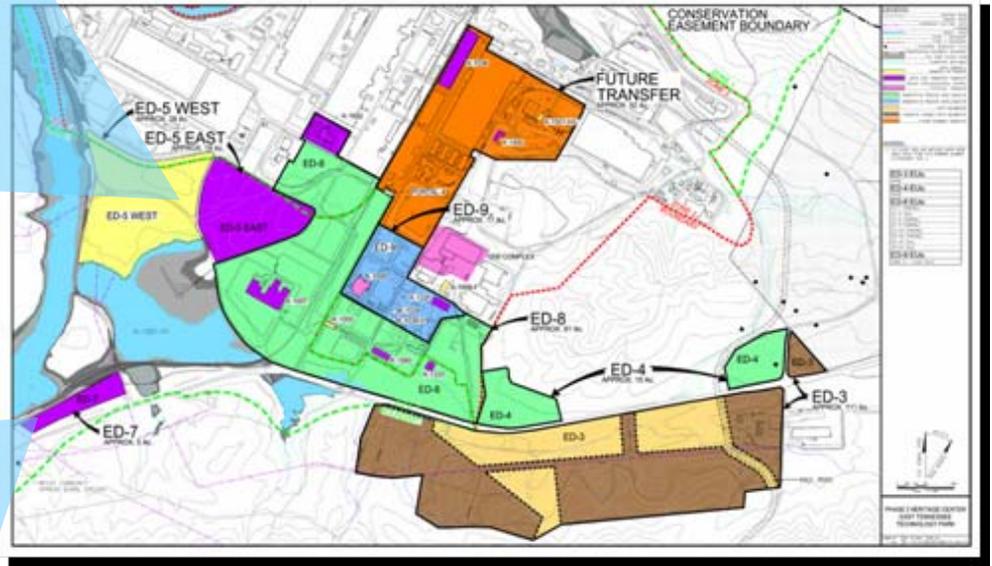
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Heritage Center Land Transfers



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Heritage Center 2012

- Productive reuse
- Sustainable development initiatives including switchgrass production
- Compatible with nearby commercial and residential development



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Adaptive Reuse Includes Planting Alternative Fuel Feedstocks



ETTP will save on mowing costs and emissions by planting meadow grasses and switchgrass. Switchgrass is an alternative fuel source that is being trialed at ETTP as part of the Tennessee Biofuels Initiative.

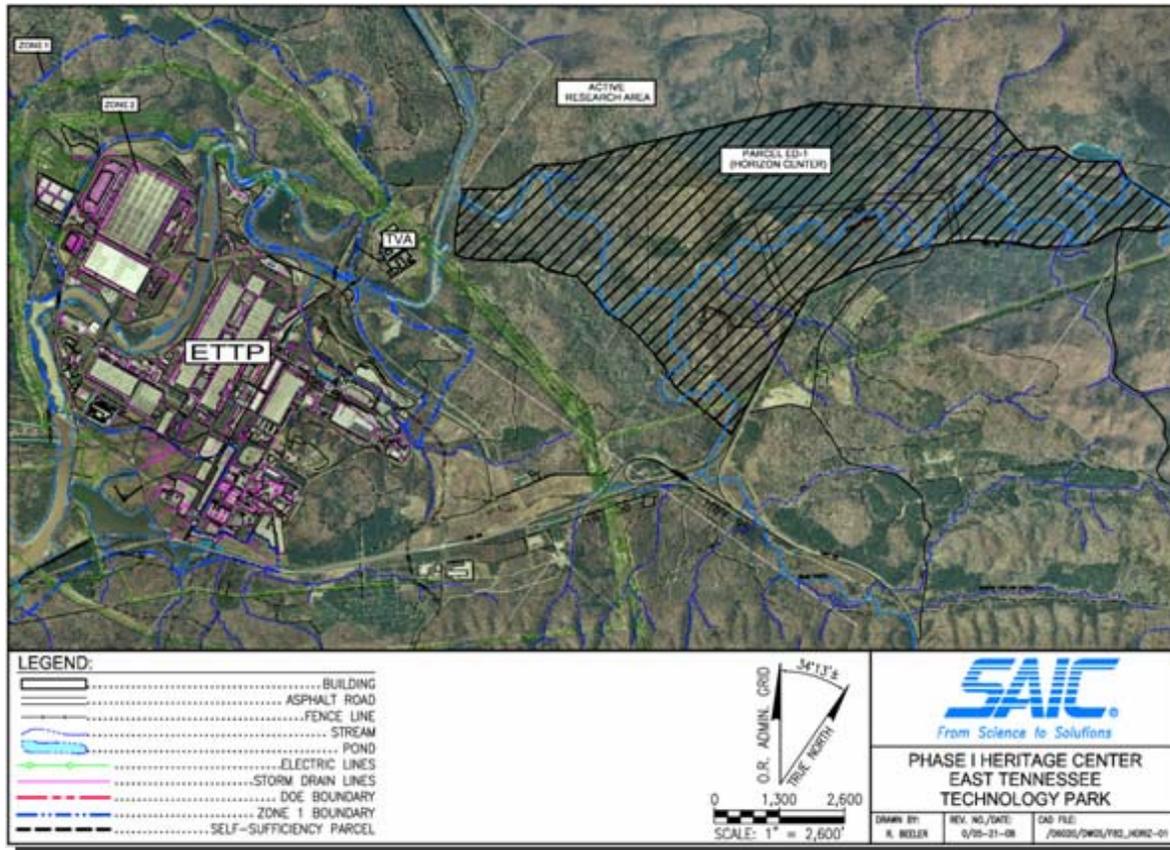
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Horizon Center



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Horizon Center



Horizon Center is a 1,000-acre greenfield site, designed to provide building sites and amenities desired by high-tech companies while still preserving the area's scenic beauty. Horizon Center is ideal for R&D, medical technology, manufacturing, and headquarters development.

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Unique Challenges



- Integrating the Department's clean-up mission with the community's needs



- Overcoming negative perceptions of transforming a former nuclear facility to a mixed-use business and industrial park



- Meeting regulatory requirements

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Recognition



- EPA Phoenix Award for excellence in Brownfield Development
- Two DOE HQ Best in Class Awards for Pollution Prevention and Environmental Sustainability
- Business Facilities Economic Development Silver Award - Reindustrialization at the East Tennessee Technology Park -2004
- International Economic Development Council's IDRC 2001 Global Innovator



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What About Some Lessons Learned?

- Do your NEPA early and spend time thinking through what really *could* happen. Dream.
- Work early and often with your regulators.
- If you have to sample, sample with failure *and* success in mind – sample for waste disposal purposes as well as delisting purposes.
- If you are designing and developing clean-up scenarios, don't forget options for recreational and/or residential uses on certain parcels. Don't limit yourself.
- Know your stakeholders, keep them informed, answer their questions, address their fears.
- Risk communication tools are critical. Keep them simple and pertinent to what your audience understands.

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What Does the Future Hold?

- Clean-up completion
- Seek delisting of certain parcels from the National Priorities List
- A new National Environmental Policy Act Environmental Assessment for expanded land uses at ETTP
- Additional acreage planted in switchgrass, and its use in a nearby planned biofuel refinery
- Speculative buildings on Heritage and Horizon Center properties
- Road transfers

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