Brownfields Prevention Transformed

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EPA Region 5
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Region 5 Message

- Municipalities can take **easy** steps toward preventing Brownfields by being proactive.
- By helping companies in your community, it is possible to identify potential problems and intervene before sites develop into Brownfields.
- Prevention partners activities lead to project benefits.

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Steps Local Governments can consider:

- Incorporate Brownfields Prevention into inspections;
- Incorporate Brownfields Prevention into your assessment of properties;
- Consider using ordinances;
- Work with your State agency; and
- Incorporate Brownfields Prevention in your Comprehensive Plan

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Desired Results

- **Local governments will be exposed to ideas that can be used to help manufactures and commercial enterprises leave a cleaner footprint on their cities, counties and villages.**
- **This can be accomplished by building on lessons learned from peers**

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Region 5 Challenge

- Embrace this initiative
- Add to the dialogue
- Become a partner

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Speakers

- Reggie Greenwood, Director, Economic Development, South Suburban Mayors and Managers Association, Illinois
- David Chandler, Senior Business Analyst, Center for Neighborhood Technology, Illinois

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Market-Oriented Brownfields Prevention

"Working Ourselves Out of a Job"

Brownfields 2008 Conference

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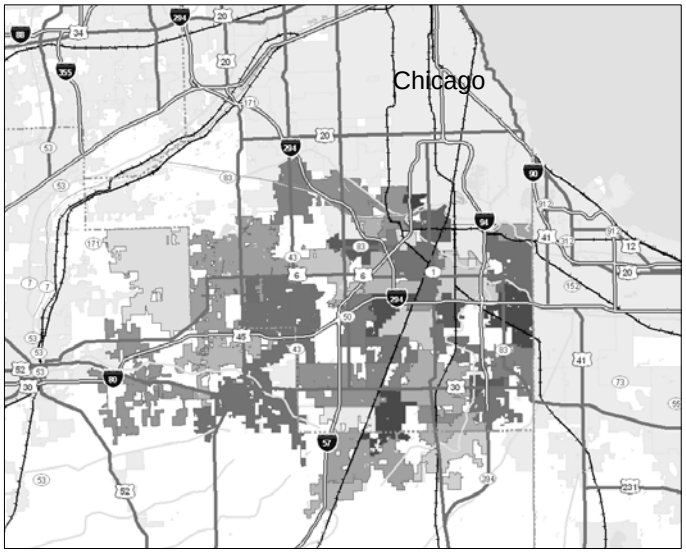
Chicago's South Suburbs



- 44 suburbs in southern metropolitan Chicago
- Older industrial suburbs: 1,000s of brownfield acres

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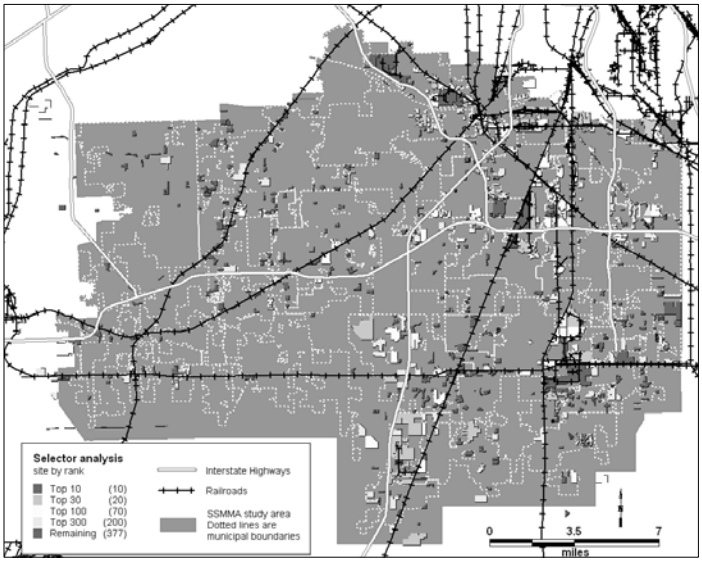
Assets for Redevelopment



- 187 sites with >20 acres of developable land
- Enhanced by freight infrastructure, workforce, established industry

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Model Brownfield Prevention Ordinance

- All facilities dealing with hazardous materials or reprocessing construction/demolition materials
- Required to submit a pollution prevention plan and pay a brownfield prevention fee, or pay larger fees and not submit a plan in some cases
- Required to have adequate pollution insurance

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Model Ordinance Implementation

Ordinance has not been adopted by any municipalities

- Additional disincentive to investment
- Administrative task for strapped municipalities
- Need for larger applicable jurisdiction

Elements of an Effective Program

- Frame in the popular context of sustainable\'green' development
- Link prevention to development & management standards
- Begin compliance in the approval process
- Offer incentives to participate in state & local programs
- Plan to sustain prevention practices

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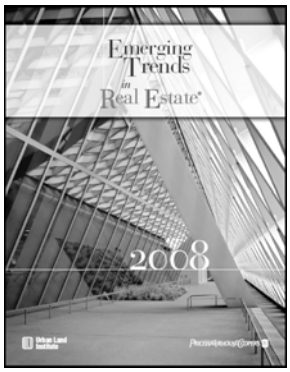
Build on the 'Green' Movement

- Green is "here to stay"
- "Large industrial users 'demand green'



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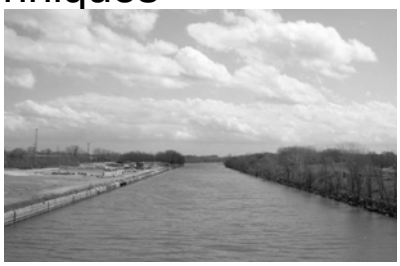
Calumet River Corridor
Green River Pattern Book

- Develop a Pattern Book to shape future development along the Calumet River Corridor.
- Illustrate example applications that highlight different pattern book techniques
  - Mixed Use Downtown
  - Industrial / River
  - Commercial
  - Residential
  - Recreation / Open Space



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Calumet River Corridor

Green River Pattern Book

- The development should follow sustainable best practices and should focus on:
  - Urban Planning and Design Principals
  - Environmental Design
  - Alternative Energy
  - Development Techniques for Brownfield Sites

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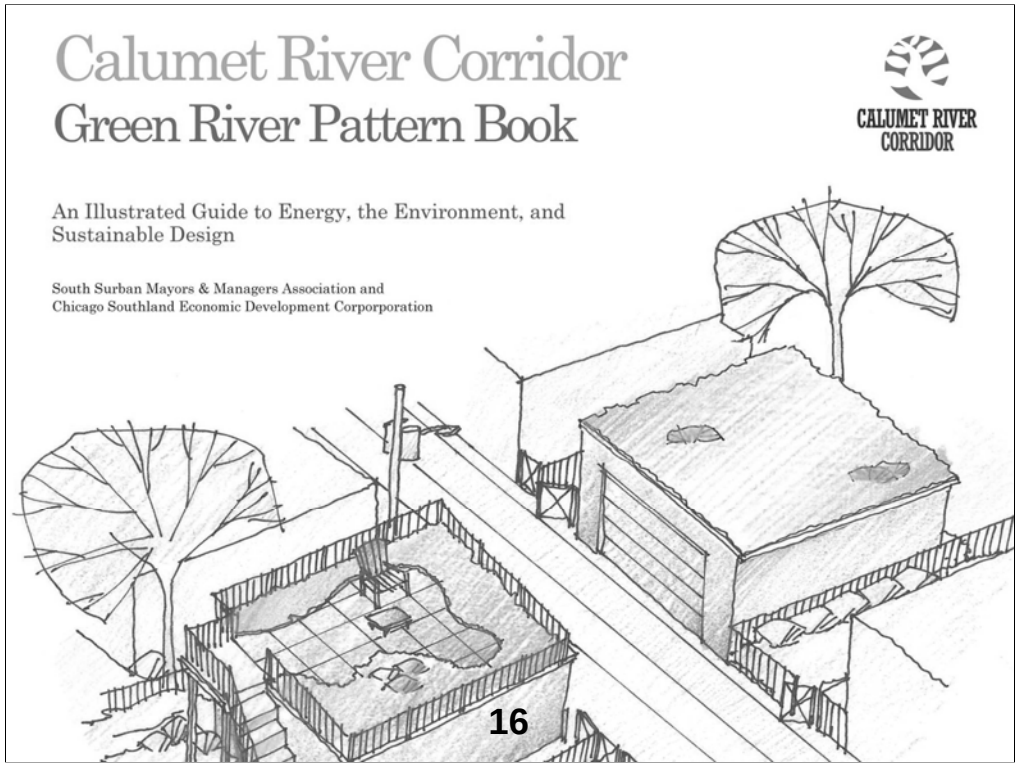

Calumet River Corridor

Green River Pattern Book

Location efficiency evaluation in site selection

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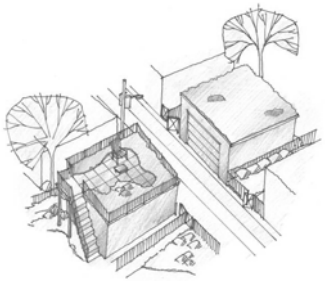
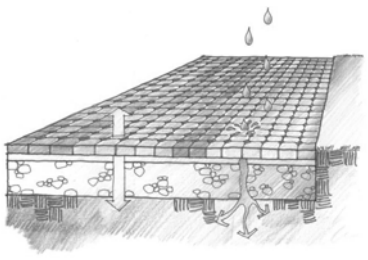
Environmental Design

Calumet River Corridor Green River Pattern Book

- Permeable Paving
- High Albedo Paving
- Green Roof
- Native Landscaping
- Dark Sky Lighting
- Bio Swale
- Irrigation Efficiency
- River Edge Buffers





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Brownfield Prevention Techniques
Site Development

Site Cleanup

Benefit

☐ Air ☐ Water ☐ Sun ☑ Land ☐ Recycling ☐ Energy

Cost

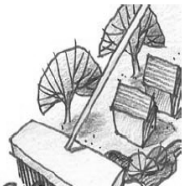
$Cost TBA

Description:

Site clean-up is often required for properties contaminated by previous uses before new development can occur. Three approaches considered are to leave the contamination in place and monitor the site, treat the contamination in place and monitor the cleanup or completely remove the contamination.

Potential Benefits:

- Eliminates health and safety hazards
- Reduces the risk of contaminating adjacent properties
- Increased property value derived from investment in contaminated site clean up and reduced potential for fines by Federal, State or Local regulatory agencies



Sustainable Site Design

Benefit

☐ Air ☐ Water ☐ Sun ☑ Land ☐ Recycling ☐ Energy

Cost

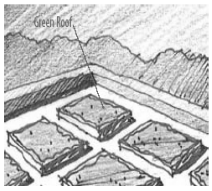
$Cost TBA

Description:

Sustainable site design encourages building development and site design that reduces negative environment impacts. Sustainable design approaches not only consider environmental benefits but also considers factors that enhance worker productivity and wellness. A variety of techniques can be used to reduce the use of power and water, reduce waste, recycle on-site materials, provide healthy indoor environments and incorporate sustainable / low-toxicity building materials.

Potential Benefits:

- Sustainable site design minimizes environmental impacts,
- Increases worker productivity / wellness and provides opportunities for long term cost savings. Small businesses may benefit from loan programs or other financial incentives that support sustainable site design



Wetlands and Green Space

Benefit

☐ Air ☐ Water ☐ Sun ☑ Land ☑ Recycling ☐ Energy

Cost

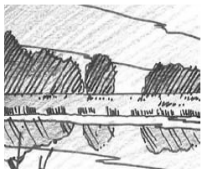
$Cost TBA

Description:

Wetlands provide opportunities to incorporate on-site active ground water treatment strategies that can decrease or even eliminate discharges into water treatment facilities. Including green space in site development improves the property and also enhances surrounding properties. Resources to support the creation of green spaces are available through a variety of community partners, organizations and / or local governments.

Potential Benefits:

- Wetland decreases discharge into water treatment facilities
- Filter water naturally to decrease pollution entering the Calumet River and help recharge underground water reserves
- Green spaces create natural habitat, enhance the quality of life
- Help control on-site storm water
- Enhance property values by revitalizing degraded areas



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Brownfield Prevention Techniques
Site Development

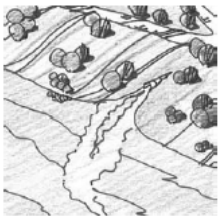
Control Point and Non-point Stormwater Pollution

Benefit
☐ Air ☑ Water ☐ Sun ☐ Land ☐ Recycling ☐ Energy

Cost
$Cost TBA

Description:
Oil and grease from parking lots and roads, leaking petroleum storage tanks, pesticides, cleaning solvents and other toxic chemicals all contribute to point and non-point stormwater pollution. To reduce / eliminate storm water pollution from point and non-point sources, minimize impervious surfaces, maximize natural areas and incorporate prevention strategies that eliminate contact between storm water and pollutants.

Potential Benefits:
- Saves costs though reduction of storm water infrastructure requirements
- Eliminates sediment and contaminants entering water system / Calumet River
- Can apply to new / existing development able to sustain necessary infiltration / retention, provides stormwater control of and dispersement over entire site and eliminates costs of unnecessary chemicals / pesticides



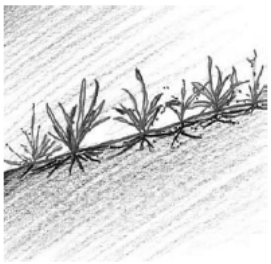
Erosion and Dust Control

Benefit
☑ Air ☐ Water ☐ Sun ☐ Land ☐ Recycling ☐ Energy

Cost
$Cost TBA

Description:
Many construction activities create dust and erosion problems that can cause health hazardous and have other negative impacts on businesses. Use vegetative covers / barriers, water sprays and street sweepers to control dust and erosion.

Potential Benefits:
- Reduces the surface and air transport of dust and minimizes pollutants entering stormwater
- Erosion and dust control strategies and techniques are inexpensive, non-intrusive, easy to install, easy to maintain and promote the use of natural vegetation



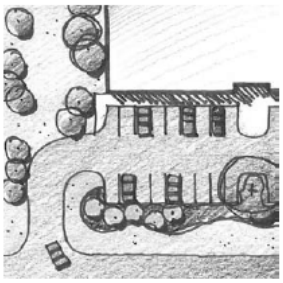
Minimal Pavement

Benefit
☐ Air ☐ Water ☐ Sun ☑ Land ☐ Recycling ☐ Energy

Cost
$Cost TBA

Description:
Efficient site plans can reduce the amount of land used for paved roads and parking facilities. Compact, mixed use, transit oriented development that provides shared parking facilities and is located in close proximity to alternative modes of transportation is strongly recommended. Use of structural or underground parking facilities to help reduce the overall footprint of impervious paved surfaces is also encouraged.

Potential Benefits:
- Generates additional opportunities for water infiltration
- Creates locations for new green spaces
- Reduces pavement costs



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Brownfield Prevention Techniques
Building Design

Environmentally-friendly Building Design and Construction

Benefit

☐ Air ☐ Water ☐ Sun ☑ Land ☑ Recycling ☐ Energy

Cost

$Cost TBA

Description:

The use of repairable / recycled building materials and / or materials that can be acquired from sources that reduce transport distances is strongly encouraged. Construction practices that reduce construction costs, conserve resources and generate less construction waste are also encouraged.

Potential Benefits:

- Lowers operating costs
- Encourages water conservation
- Decreases fuel consumption of employees and businesses
- Small business environmental loan program or other financial incentives are available to support of environmentally friendly building design and construction practices

Spill Prevention

Benefit

☐ Air ☑ Water ☐ Sun ☐ Land ☐ Recycling ☐ Energy

Cost

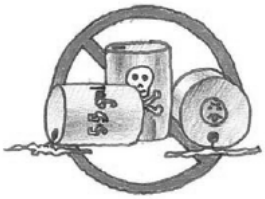
$Cost TBA

Description:

Spills can have a cumulative effect that quickly increase the number of pollutants in storm water systems. Prevent spills and leaks through regular inspection and use of correct clean-up procedures, outdoor materials, storage / waste handling techniques and waste disposal methods.

Potential Benefits:

- Decreases the probability of chemicals entering the storm water system
- Decreases the company's liability for employee injury from toxic chemicals
- Reduces environmental impacts to natural water resources



Responsible Manufacturing

Benefit

☐ Air ☐ Water ☐ Sun ☐ Land ☑ Recycling ☐ Energy

Cost

$Cost TBA

Description:

Responsible manufacturing processes can decrease harmful environmental impacts and provide cost savings for businesses.

Potential Benefits:

- Reduces manufacturing and customer costs
- Improves products and reduces negative regulatory / legal impacts on businesses

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Brownfield Prevention Techniques
Management

Operation Manual and Monitoring

Benefit

☐ Air ☐ Water ☐ Sun ☑ Land ☐ Recycling ☑ Energy

Description:

An Operation Manual and Monitoring Plan includes an outline for the environmental management of a brownfield site. The manual outlines smart manufacturing processes that do not adversely contribute to the contamination of the site and various annual monitoring plans including:

Stormwater Pollution Prevention Plan (SWPPP):

The SWPPP outlines a step-by-step process for ensuring that pollutant from industrial activities are not polluting stormwater discharges on a site and requires that Best Management Practices (BMP) be selected and implemented. BMPs include schedules of activities, prohibition of practices, maintenance procedures and other management process to prevent or reduce stormwater pollution.

Waste Prevention and Recycling Plan:

This annual plan outline strategies to prevent waste and establishes a recycling Plan.

Environmental Management Systems (EMS)

Benefit

☐ Air ☐ Water ☐ Sun ☑ Land ☐ Recycling ☐ Energy

Description:

Environmental Management Systems (EMS) use a systematic approach to understand the relationship between businesses and the environment and to promote continual improvement in a company's environmental management performance. The basic approach for EMS is to review internal policies, analyze environmental effects and requirements, establish goals and appropriate objectives and review business management.

Potential Benefits:

- Reduces negative environmental impacts,
- Can be customized to meet specific business goals and objectives and qualifies businesses for incentives available through the International Organization for Standardization (ISO).

Federal and State Programs

Benefit

☐ Air ☐ Water ☐ Sun ☑ Land ☐ Recycling ☐ Energy

Cost

$Cost TBA

Description:

There are numerous Federal and State programs available for Brownfield cleanup and prevention. Many of these program offer grants and financial assistance, and are administered through the Environmental Protection Agency (EPA).

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Sustainable Industrial Development Strategies
Dolton

Industrial development can provide many opportunities to incorporate sustainable elements. This example site is located in Dolton, along the banks of the Calumet River. Industrial developments in this corridor will serve as example industrial development for Chicago and the Midwest.

Components of this sustainable design focus on site design and stormwater managment but also incorporate responsible manufacturing. A range of tools relating to sustainable design and management can be accomodated on any idustrial site. A range of tools have been applied to this site an an example of sustainable techniwues that can be applied but there are many combination of techniques that can ab used on similar site throughout the Calument River Corridor.

1. Responsible Manufacturing
2. Operational Manual and Monitoring
3. Wetlands and Greenspace
4. River Edge Buffers
5. Minimal Site Disturbance
6. Rain Barrels / Cistern / Grey Water
7. Naturalized Detention
8. Wind Energy
9. High Albedo Paving
10. Shared Parking Facilities
11. Facilities for Alternative Transportation Options

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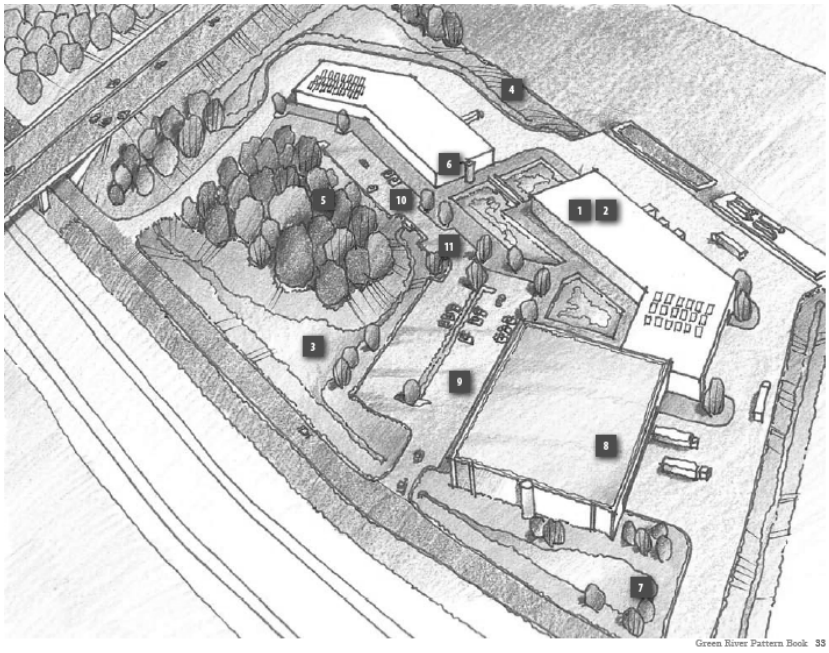

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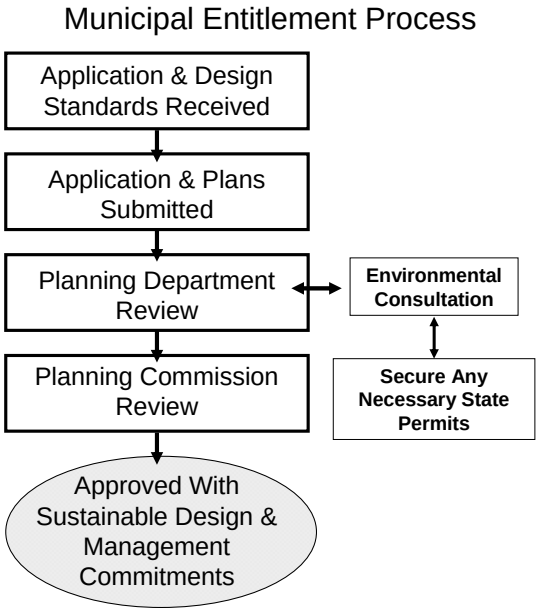
Begin Compliance in the Approval Process

- Provide Green River Handbook with entitlement process package
- Offer consulting on sustainable development with project review



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Environmental Consultation Team

- SSMMA (as liaison)
- Illinois EPA, Office of Pollution Prevention (P2)
- Illinois Waste Material Recycling Center (IL WMRC)
- Energy Utility Consultants

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Local Incentives for Handbook Compliance

- Streamlined approval process
- Savings through technical assistance
- Access to special funds
- Tax benefits

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Sustain Prevention Practices

Periodic monitoring visits linked to:

- Ongoing technical assistance
- New incentive programs
- Industrial retention programs
- Renewal of tax benefits

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Ford Supplier Park, Chicago

Almost a model for market-driven sustainable redevelopment

For more information
CenterPoint Properties
www.centerpoint-prop.com

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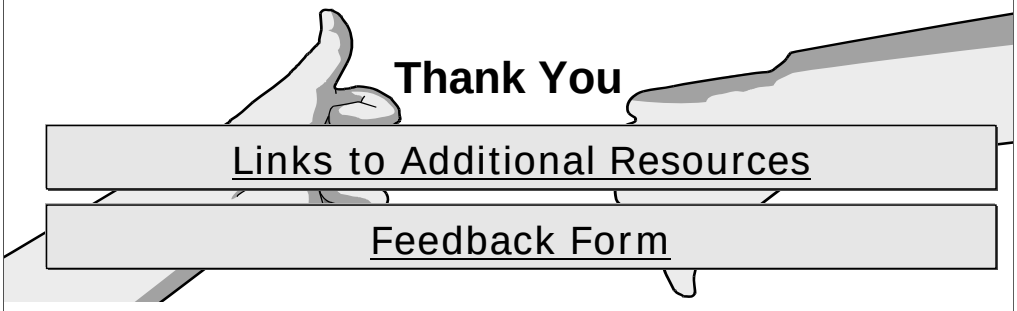
Thank You

After viewing the links to additional resources, please complete our online feedback form.



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