



Senior Capstone Fox-Wisconsin Rivers Heritage Parkway Design Development

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***Data & Support By: East Central Wisconsin Regional Planning Commission &
Friends of the Fox River Advocacy Group***



Fox - Wisconsin Rivers Heritage Parkway

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Parkway Context & Concepts

3 separate segments:

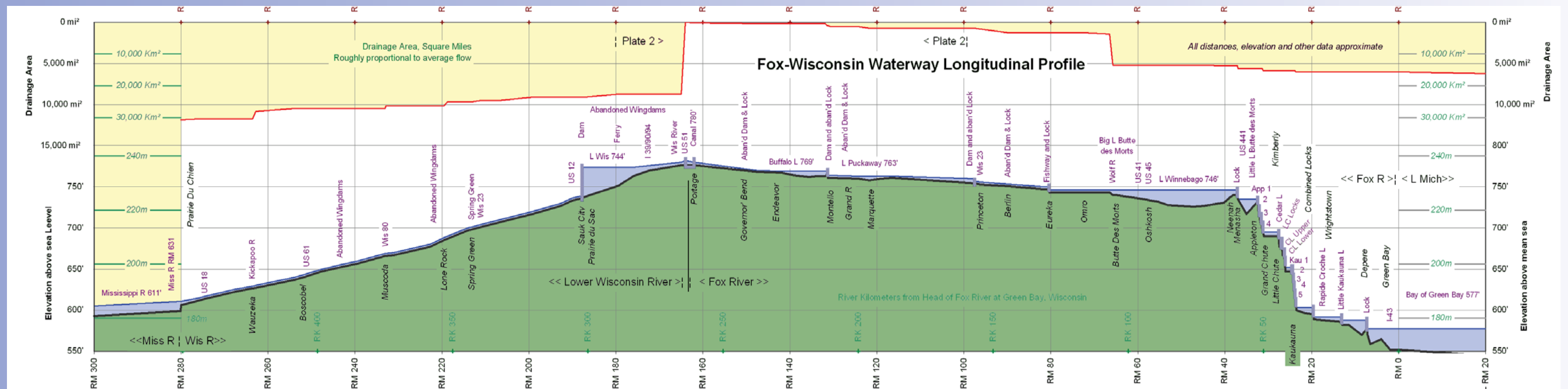
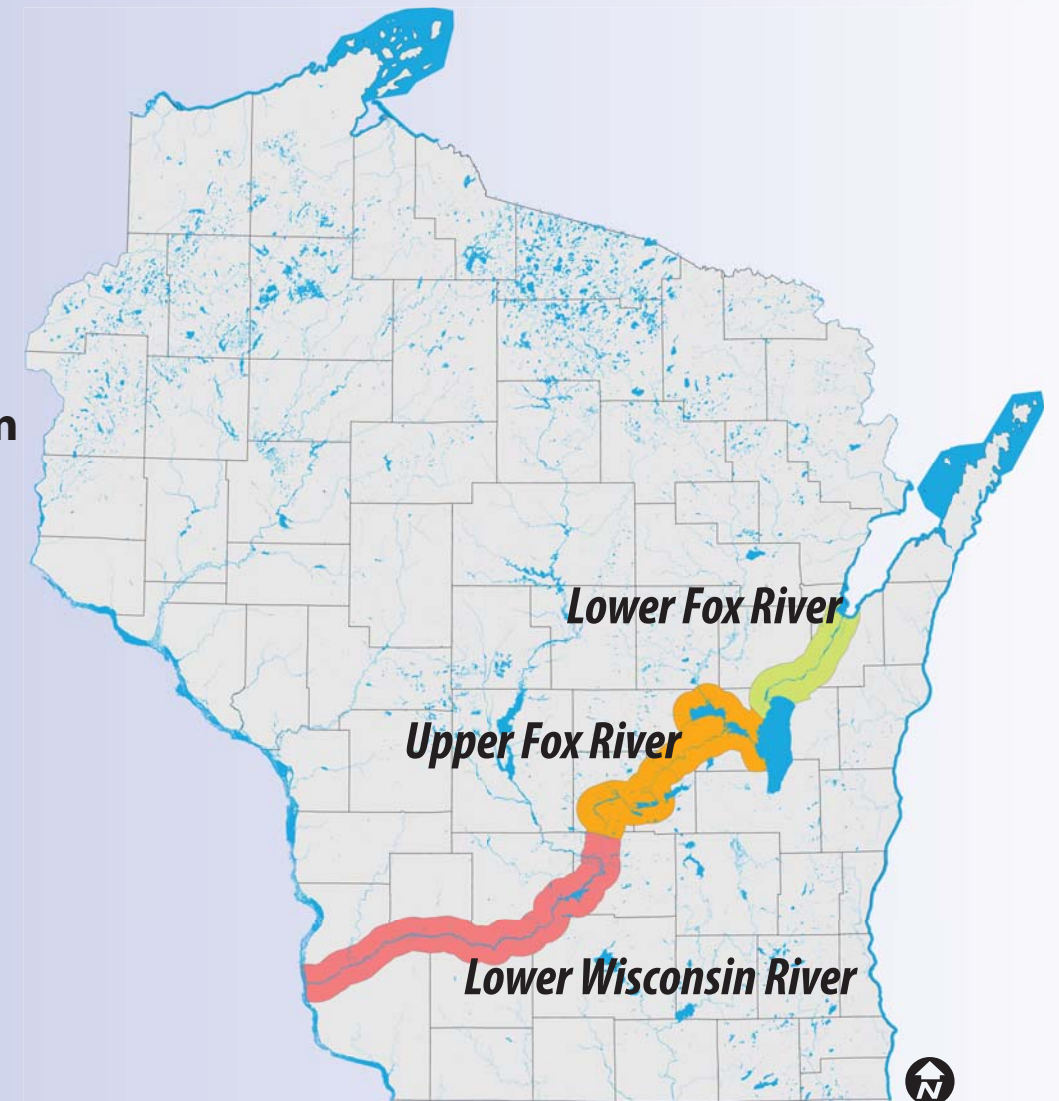
- Lower Fox-Lake Winnebago Pool
- Upper Fox-Wolf-Lake Winnebago Pool
- Lower Wisconsin River

Stretches approximately 275 miles from Green Bay southwest to Prairie du Chien

Fox and Wisconsin Rivers connected by historic Portage Canal

Multiple historic eras covered through interpretive themes:

- Native Peoples and the Trail of the Serpent
- Route of Discovery-Marquette and Joliet
- Waves of Immigration
- The Hardest Working River Highway (Transforming the Environment)
- Industry of Abundance (Developing American Economy)
- Currents of Conservation: Theory and Practice





Regional Analysis - Lower Fox River



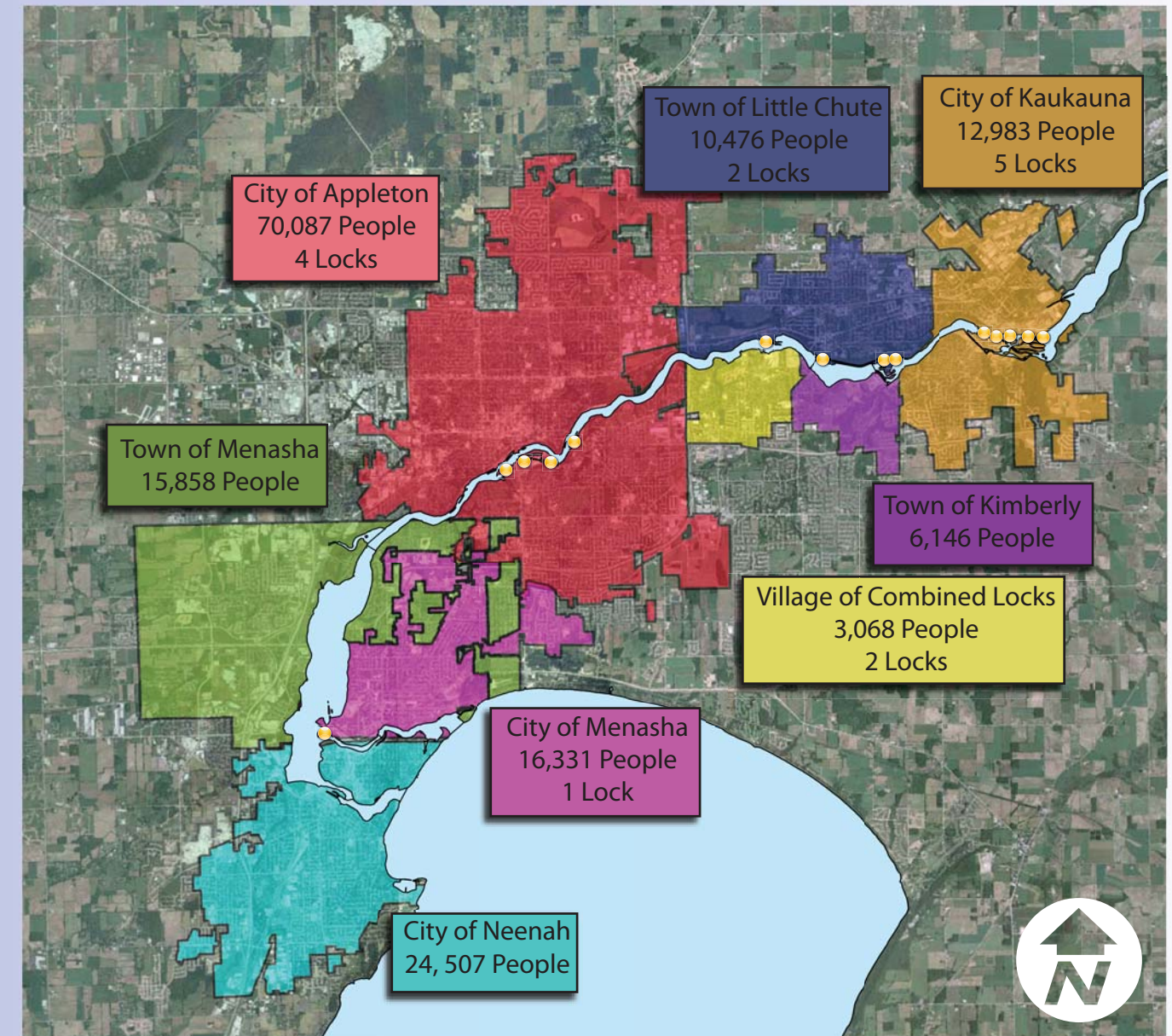
1) Economic & Development Opportunities Analysis



2) Regional Parks & Recreation Inventory & Analysis



3) Historic Development & Preservation Opportunities & Constraints Analysis



Fox Cities Parkway Development Potential

- **Largest City** in the Fox Valley: **Appleton** – 70, 087 people
- **Highest concentration** of **Navigational Locks Systems** along the parkway
- **Total # of Locks** in the Fox Valley: **14 Locks**
- City with **most locks**: **Kaukauna - 5 Locks**



Fox Valley Locks Suggested Program Development

Portage Trails around all Lock Sites

Connect multiple **Lock sites** through **walking trails** where feasible

Visitor Center with history of locks and parkway information

Small Inn or hotel setting along river

River Heath **Multi-Use Development**

Native American History and Interpretive site

Outdoor, Cultural, and **Settlement** Heritage site

Industrial Heritage Site

Lock construction and **Lock History site**

Nature Ecology Center and interpretive sites

Native landscape education

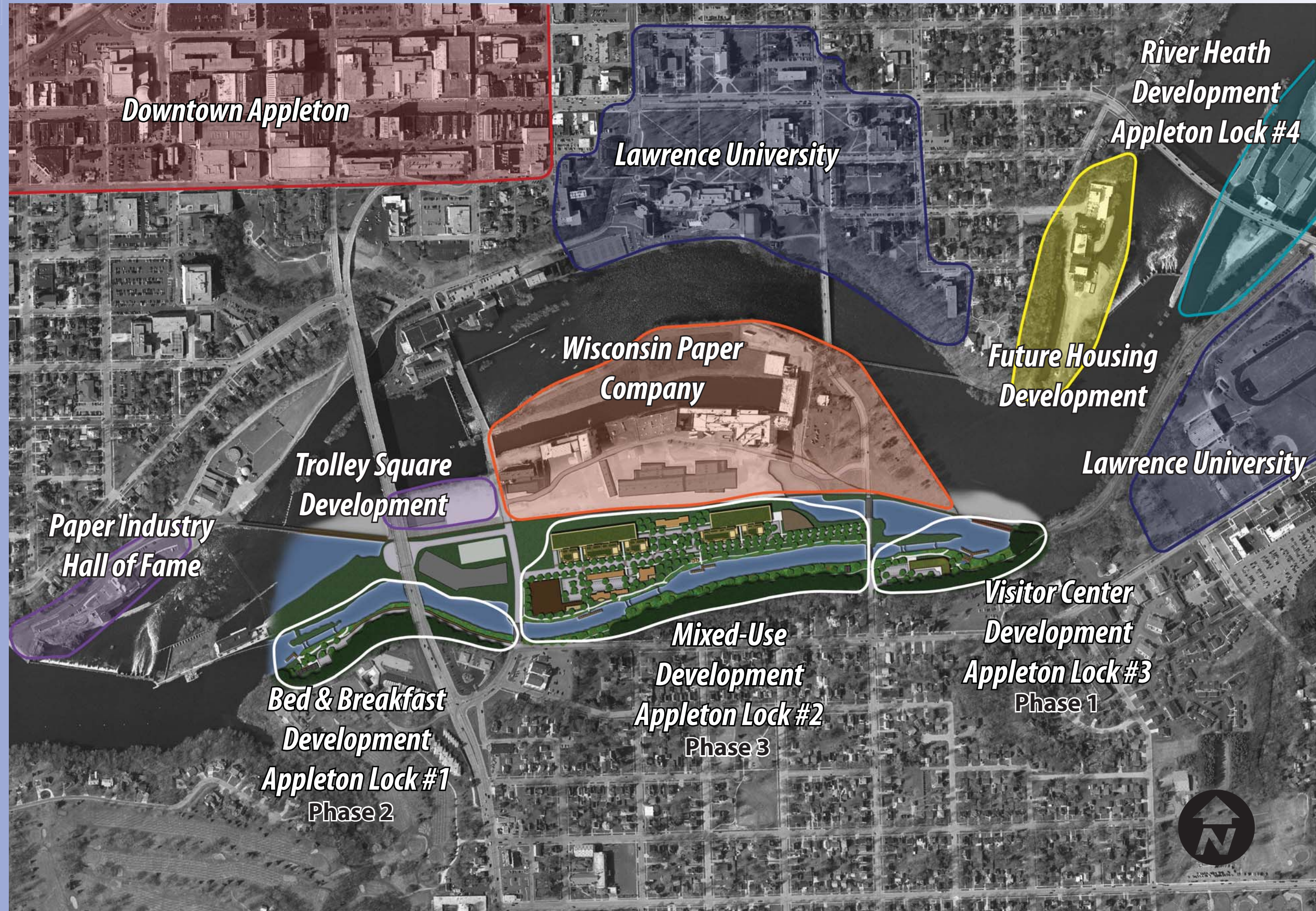
Exotic and Invasive species of river

Wildlife and marine life of river





Appleton Riverfront Development

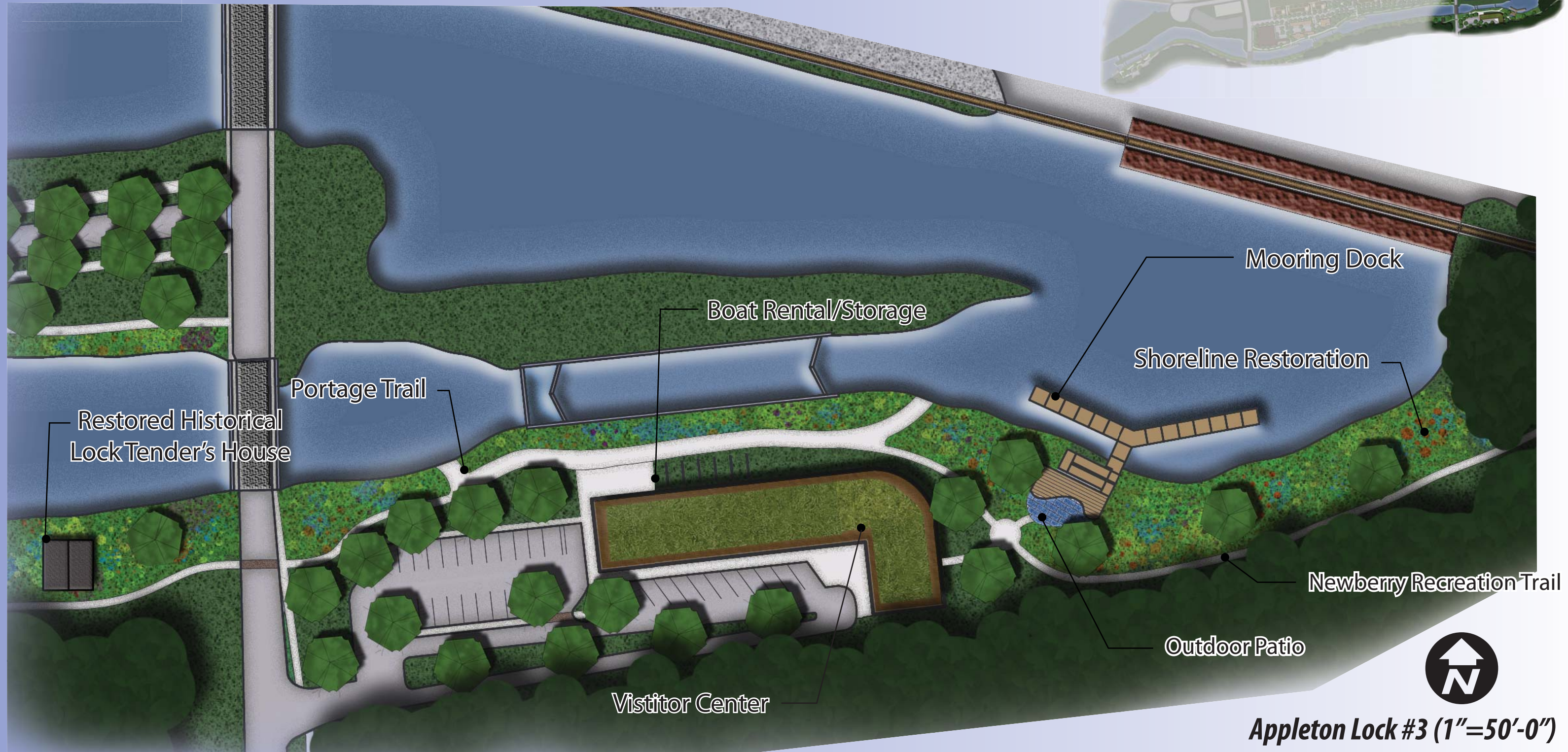




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Heritage Parkway Visitor Center (Phase 1)



Establishing a Parkway Visitor Center

- Establish Parkway - Headquarters and Offices
- Provide Support for further Parkway development
- Adjacent to restored Lock Tender's House
- Public Space - Develop connection with local community
- Parkway info, Boat Rental, Event Space, Small Cafe
- Develop public/private partnerships



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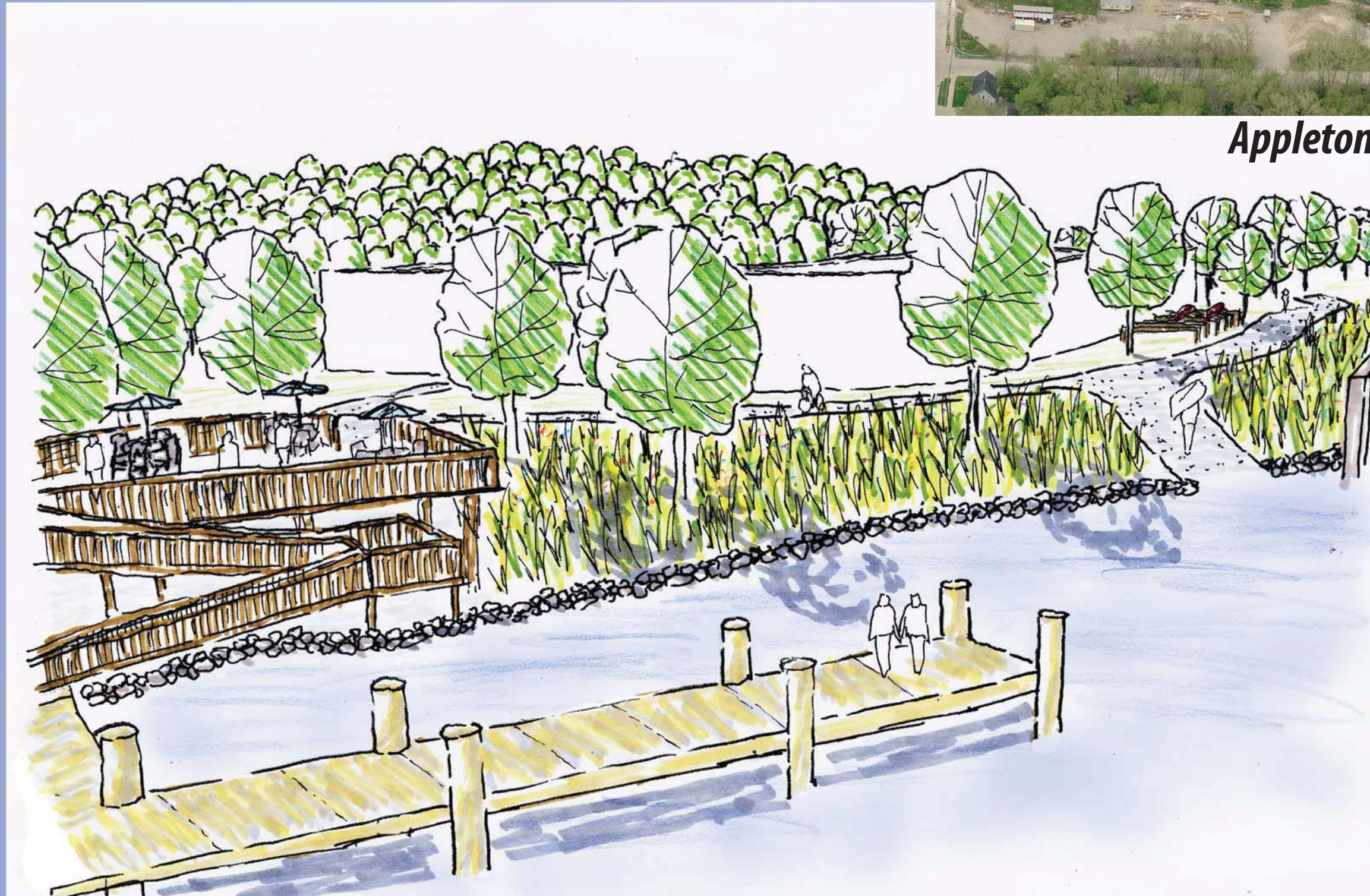
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Patio, Dock, & Portage Trail

Looking west from water

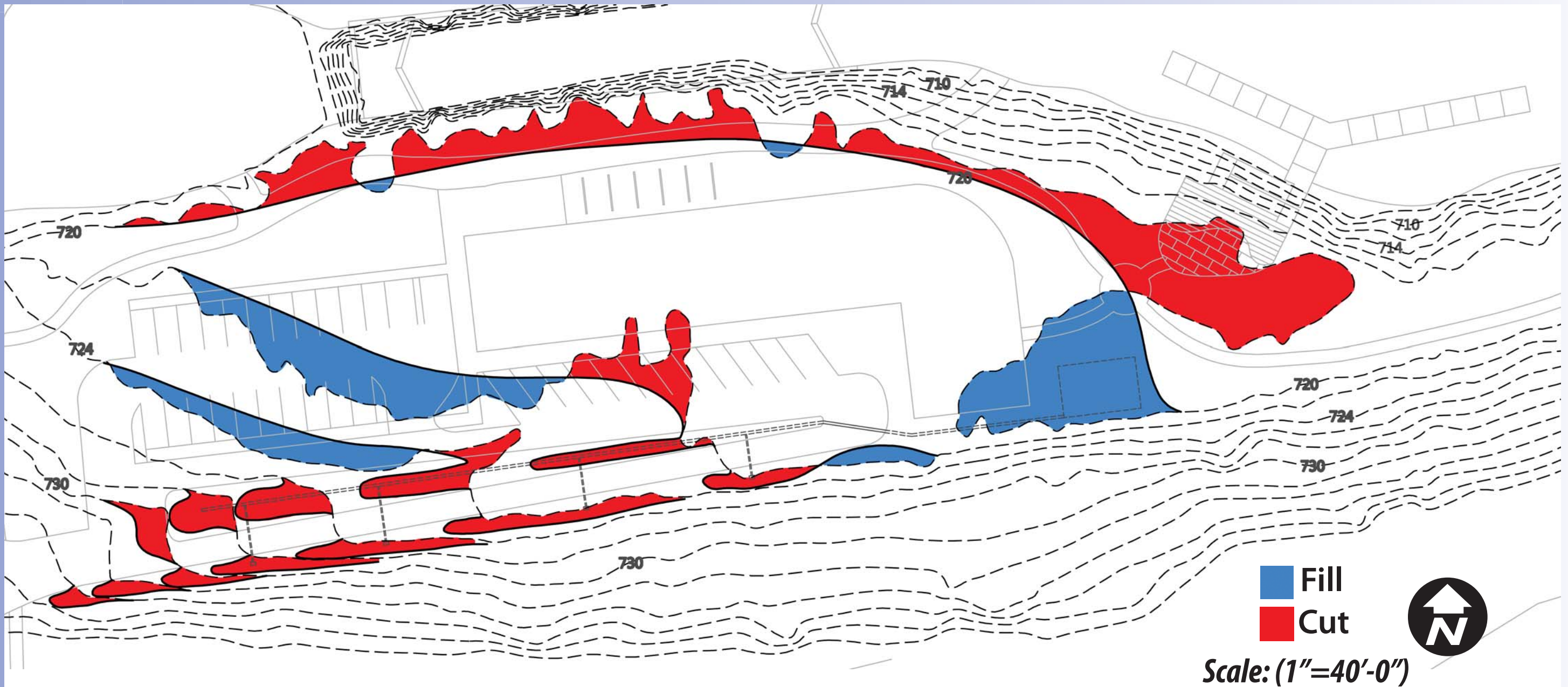


Appleton Lock #3 Currently





Visitor Center Site Grading



Cut & Fill Calculations

Total Cut: 20,347 cubic feet

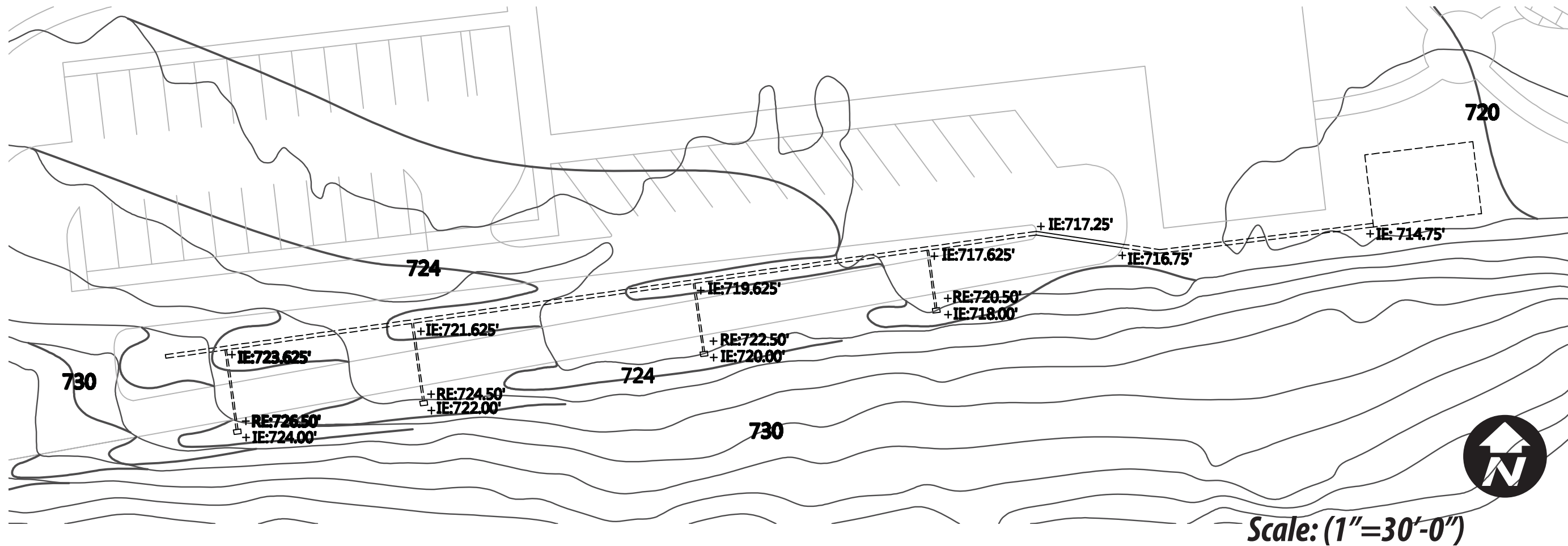
$20,347 \text{ cu.ft.} - 16,075 \text{ cu. ft.} = 4,272 \text{ cubic feet of extra fill}$

Total Fill: 12, 860 cubic feet
(x 1.25 = 16,075 cubic feet)

$4,272 \text{ cu.ft} / 27 \text{ cu.ft/cubic yards} = 158.22 \text{ cubic yards of extra fill}$



Visitor Center Stormwater Management



Stormwater Calculations ($\Delta Q = -3.5603$)

Total Watershed = 194,718 square feet or 4.47 acres

100 year storm Pre-Q = 7.7967 cubic feet per second
(Impervious & Vegetated Surfaces)

100 year storm Post-Q = 4.2364 cubic feet per second
(Impervious, Green Roof, Planted, Permeable, Vegetated Surfaces)

$\Delta Q: 4.2364 - 7.7967 = -3.5603$ cubic feet per second

Subsurface Storage Calculations (Total Storage = 7,825 cubic feet of storage)

30' x 20' Storage Basin

1'-0" of #6 Stone / 2'-0" of 3" Stone / 3'-0" of 8" Stone

Total Storage = 1,290 cubic feet of storage

Perforated Spreaders

1,455 cubic feet of 3" Stone

Total Storage = 509 cubic feet of storage

Pervious Trailways (4,726 square feet)

6" of #6 Stone / 1'-0" of 3" Stone / 2'-0" of 8" Stone

Total Storage = 6,026 cubic feet of storage



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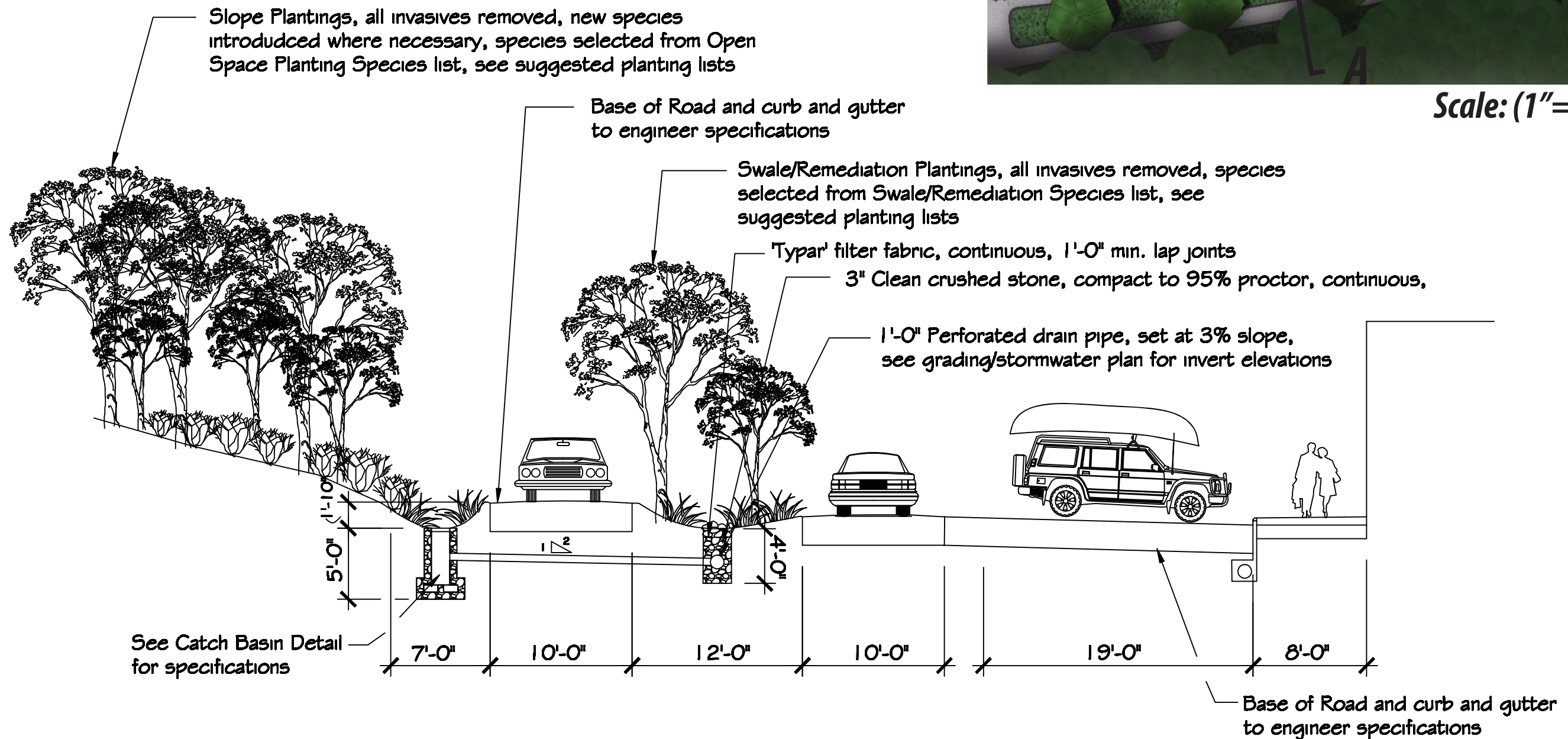
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Visitor Center Swale Section

Scale (1 1/2"=1'-0")



Scale: (1"=50'-0")





Bed & Breakfast Site Plan Phase 2



Appleton Lock #1 Scale (1"=70'-0") 

Bed & Breakfast Development

- Allow for longer visits to parkway boosting local economy
- Help economic development along riverfront - Trolley Square, Paper Hall of Fame, & Future Mixed-Use Development
- Establish a public/private partnership to develop
- Newberry Recreational Trail Head
- Tucked into nice wooded site along River with magnificent views
- Relaxed passive recreational opportunities

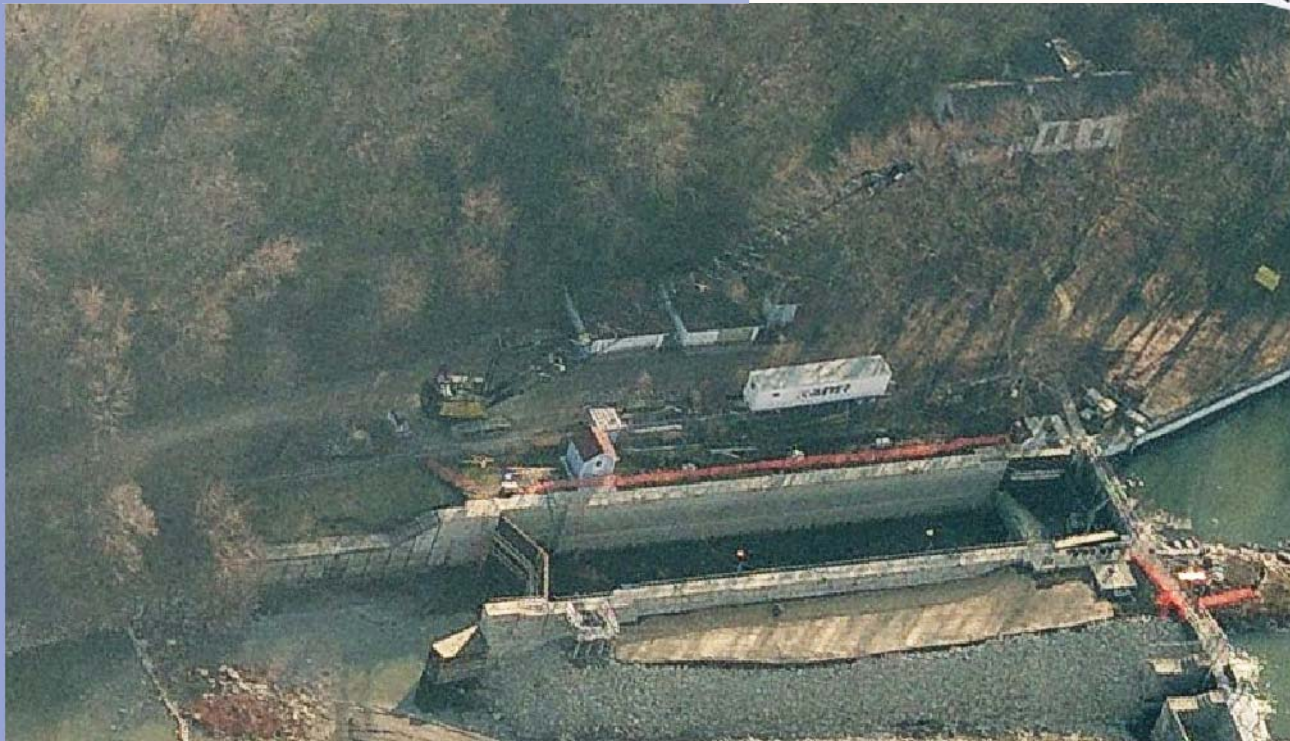
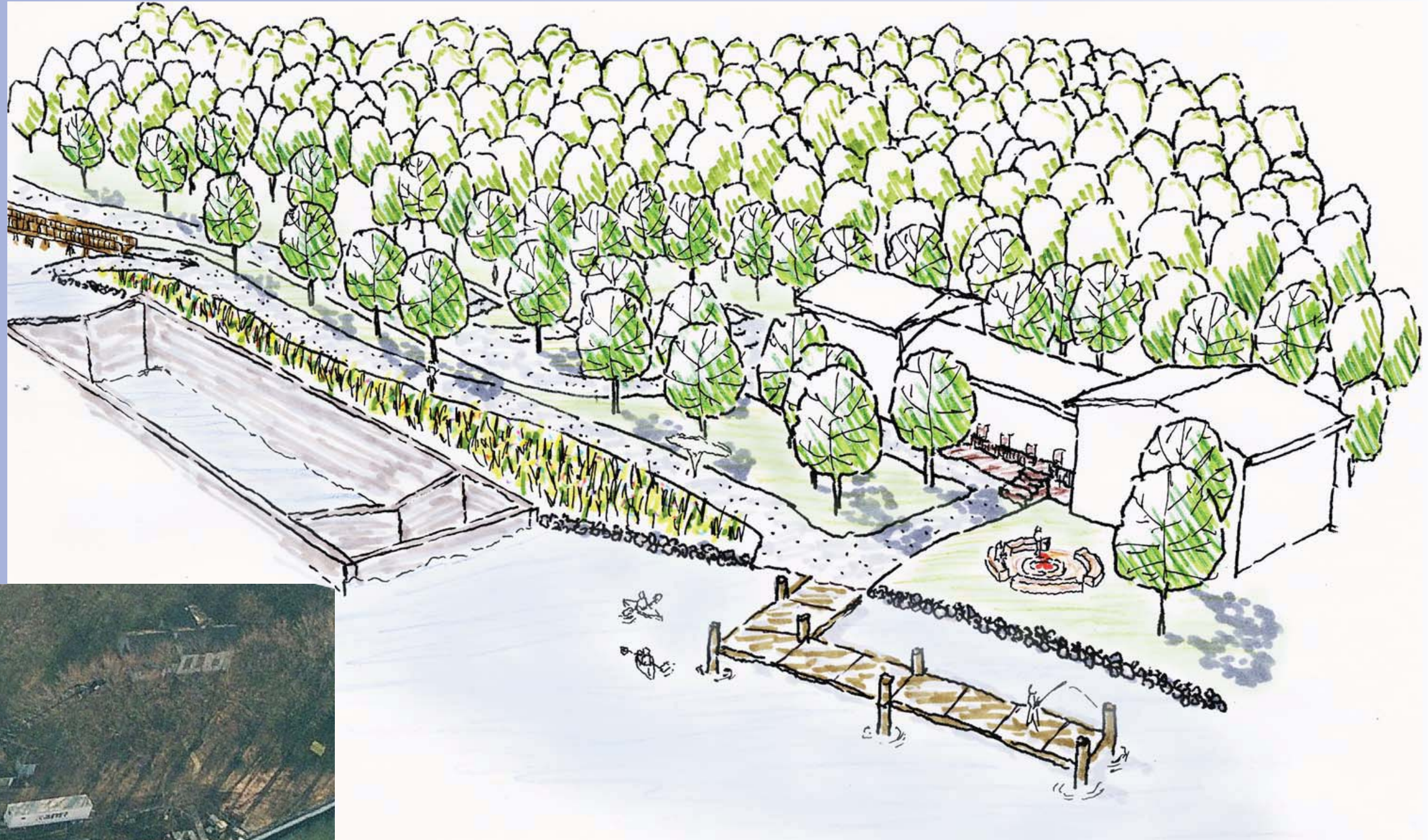


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Bed and Breakfast Aerial

Looking east from water



Appleton Lock #1 During Lock Restoration



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Mixed-Use Development Master Plan Phase 3



Appleton Lock #2 Scale(1:120)



Vacant Riverside Paper Company (Appleton Lock #2)



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Mixed-Use Development Aerial *Looking east*





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Pedestrian Trail & Mooring Dock

Looking east from water





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Pedestrian Trail, Mooring Dock, & Harbor Rest House

Looking west from water





Planting Plan - Shoreline Species



Shoreline Species

Emergent Species

Iris versicolor
Scirpus fluvalitis
Scirpus validus

Wet Soil

Asclepias incarnata
Carex crinita
Carex stricta
Carex vulpinoida
Juncus effusus
Lobelia cardinalis
Lobelia siphilitica
Varonicastrum virginicastrum

Wild Iris
River Bulrush
Softstem Bulrush

Marsh Milkweed
Caterpillar Sedge
Tussock Sedge
Fox Sedge
Soft Rush
Cardinal Flower
Great Blue Lobelia
Culver's Root

Drier Soil

Aquilegia canadensis
Echinacea purpurea
Elymus canadensis
Panicum virgatum
Rudbeckia subtomentosa
Schizachyrum scoparium
Solidago speciosa

Shrubs

Amelachier x grandiflora
Cornus stolonifera
Viburnum trilobum

Trees

Betula nigra
Betula papyrifera
Quercus bicolor

Columbine
Purple Coneflower
Canada Wild Rye
Switchgrass
Sweet Black-Eyed Susan
Little Bluestem
Showy Goldenrod

Apple Serviceberry
Red-Twig Dogwood
Highbush Cranberry

River Birch
Paper Birch
Swamp White Oak



Planting Plan - Open Space & Street and Parking Species



Open Space Plantings

Grasses

Chasmanthium latifolium
Sorghastrum nutans
Sporobolus heterolepias

Medium to Small Trees

Amelanchier laevis
Betula allegheniensis
Betula nigra
Cornus alternifolia
Crataegus viridis 'Winter King'
Hammamelis virginiana

Large Trees

Quercus alba
Quercus rubra

Evergreen Trees

Picea glauca
Pinus strobus

Northern Sea Oats
Indiangrass Plant
Prairie Dropseed

Allegheny Serviceberry
Yellow Birch
River Birch
Pagoda Dogwood
Winter King' Hawthorne
Common Witchazel

White Oak
Red Oak

White Spruce
Eastern White Cedar

Street & Parking Plantings

Grasses

Sorghastrum nutans
Sporobolus heterolepias

Large Trees

Acer x freemanii
Acer miyabei 'State street'
Celtis occidentalis
Gleditsia triacanthos var. *inermis*

Indiangrass Plant
Prairie Dropseed

Freeman Maple
State Street Maple
Common Hackberry
Thornless Honeylocust



Planting Plan - Green Roof & Swale/Remediation Species



Green Roof Species (extensive)

Groundcovers

<i>Apocynum androsaemifolium</i>	Spreading Dogbane
<i>Asclepias tuberosa</i>	Butterfly Weed
<i>Lupinus sp.</i>	Wild Lupine
<i>Petalostemum purpureum</i>	Purple Prairie Cover
<i>Phlox divaricata</i>	Wild Blue Phlox
<i>Polygala incarnata</i>	Pink Milkwort
<i>Sedum var.</i>	<i>Sedum var.</i>
<i>Soldiago sp.</i>	Goldenrod

Swale / Remediation Species

Trees

Betula nigra
Crataegus viridis 'Winter King'
Ostrya virginiana

River Birch
Winter King' Hawthorne
Ironwood

Shrubs

Aronia melanocarpa
Cornus stolonifera
Corylus americana

Black Chokeberry
Red-Twig Dogwood
American Hazelnut

Groundcovers

Convallaris majalis
Echinacea sp.
Eupatorium maculatum
Matteuccia struthiopteris pensylvanica
Panicum virgatum
Rudbeckia hirta
Sedum sp.

Lily-of-the-Valley
Conflower sp.
Joe-Pye Weed
Ostrich Fern
Switch Grass
Black-Eyed Susan
Sedum sp.



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Questions?

