

# Dredging the Hudson River

April 13, 2006



# Where We Are

- > EPA chose dredging for the Hudson in 2002
- > GE commits to cooperate
- > Three landmark GE/EPA agreements to perform work
  - Sediment sampling
  - Engineering design
  - Performance of project
- > GE completes sediment sampling
- > GE completes Phase 1 design

# Progress to Date

- > Phase 1 Final Design provided to EPA
- > Contracting underway; solicited bids
- > Working on agreements for property use, rail transport and landfill disposal
- > 50,000 sediment samples collected
- > Inventoried wetlands
- > Inventoried cultural resources
- > Water and fish monitoring
- > Hudsonworks program; 425 local companies participate
- > Emergency response planning
- > Developed Community Health and Safety Plan

# Design Changes Respond to Public Comments

- > New access road reduces traffic through the village
- > Better boat access to FE Yacht Basin
- > Construct facility during the day
- > Operate rail yard during the day
- > Frees up planned public marina in Moreau
- > Move facility fence line to maintain natural buffer
- > Soil berm reduces noise and visual impacts
- > Improves traffic at Lock 7

# Project Phases

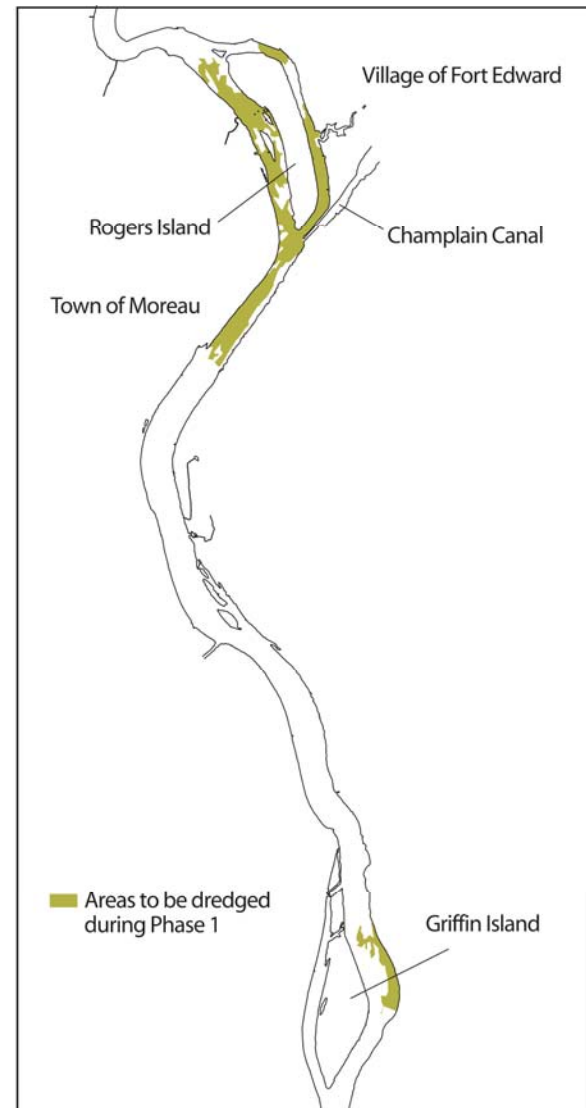
- > Dredging along 40 miles of river
- > Phase 1:
  - 1<sup>st</sup> year dredging (May - November)
  - Test equipment/processing facility at peak performance
  - Test of EPA's performance standards
- > Review of Phase 1:
  - Independent peer review panel
  - EPA decision on changes to project
- > Phase 2:
  - Remaining dredging

# Phase 1 Overview

- > Major facilities must be built before Phase 1 dredging
  - Dewatering
  - Rail yard
  - Wharf
  - Project marina
  - Built now to support both phases
- > Mechanical dredges remove sediments
- > Sediments loaded onto barges
- > Barges pushed by tugs transport sediments to processing facility
- > Sediments unloaded, dewatered and staged
- > Sediments loaded to railcars
- > Transported to landfill outside New York State

# Phase 1 Dredging

- > May-November; operate 24/6
- > 265,000 cubic yards from 90 acres in Thompson Island Pool
- > Need 6 months to complete
- > Up to 8 mechanical clamshell dredges working at same time
- > Estimated 14 barges, 30 one-way lock trips daily
- > Constant monitoring to measure performance
- > Backfill after dredging
- > Habitat replacement



# Facility Construction

## Today

110 acres of vacant land

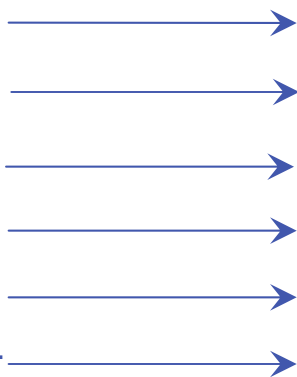
No access road

No river access

No rail infrastructure

No utilities

No processing equipment



## What's Needed

Major industrial

facility  
Access roads

Wharf

Rail yard, 5 miles of track

Power, sanitary,

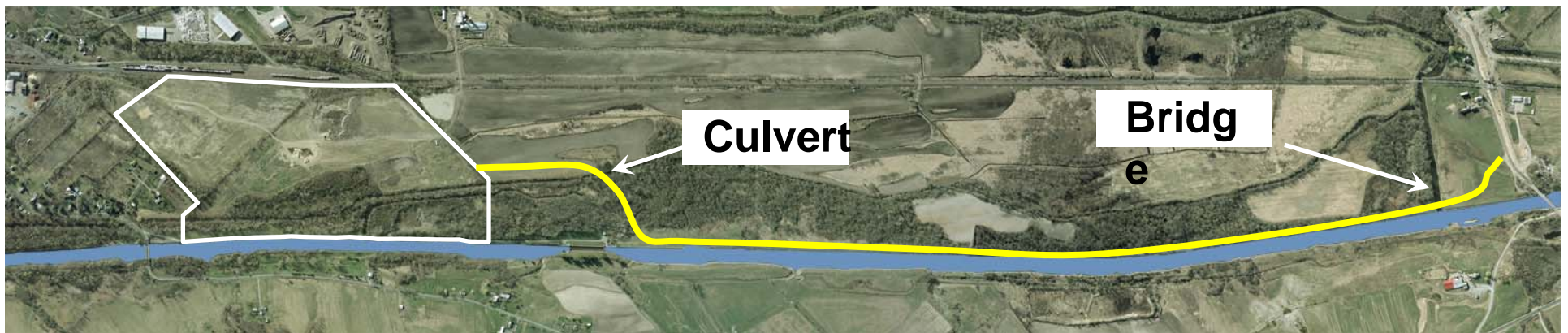
Watering and treatment plants



# Sediment Processing Facility

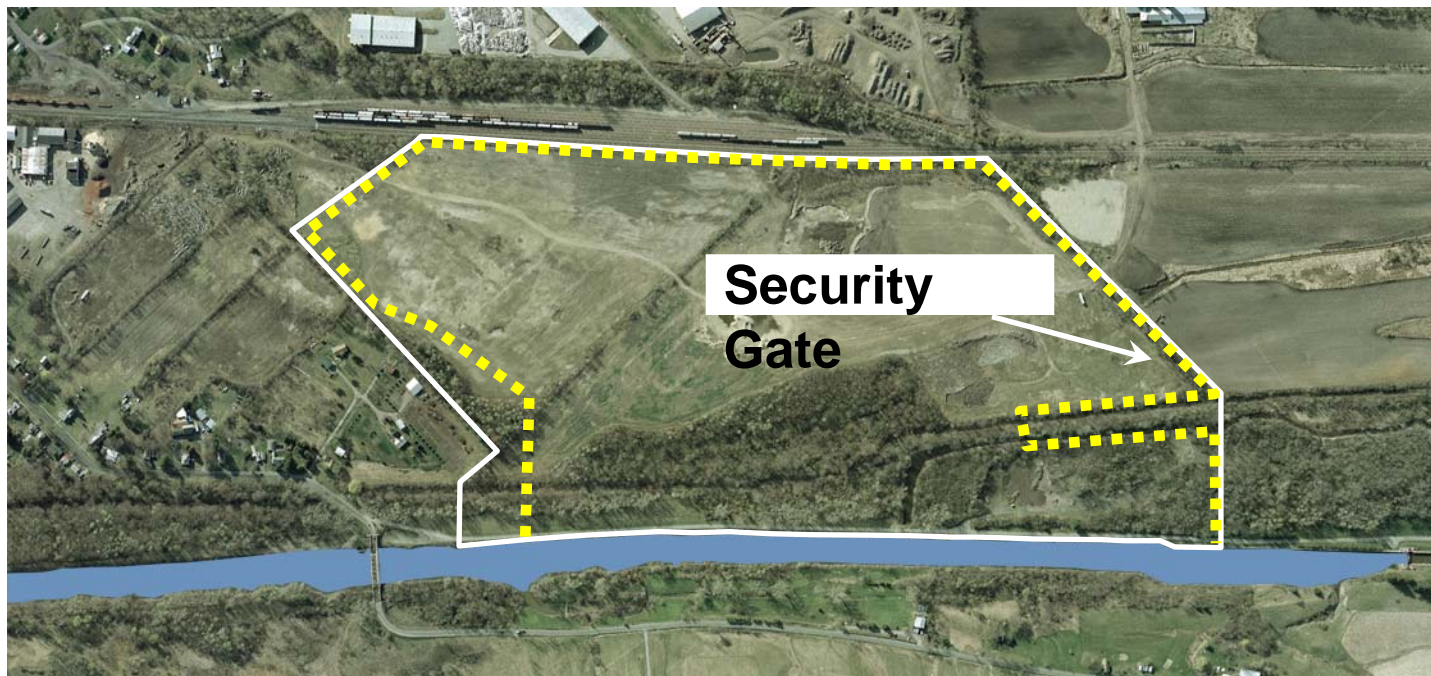


# Construct Road to Access Site



- > Two-mile paved road
- > Build bridge over Feeder Canal and culvert to cross Bond Creek

# Site Security



- > Install 3 miles of perimeter and interior fence

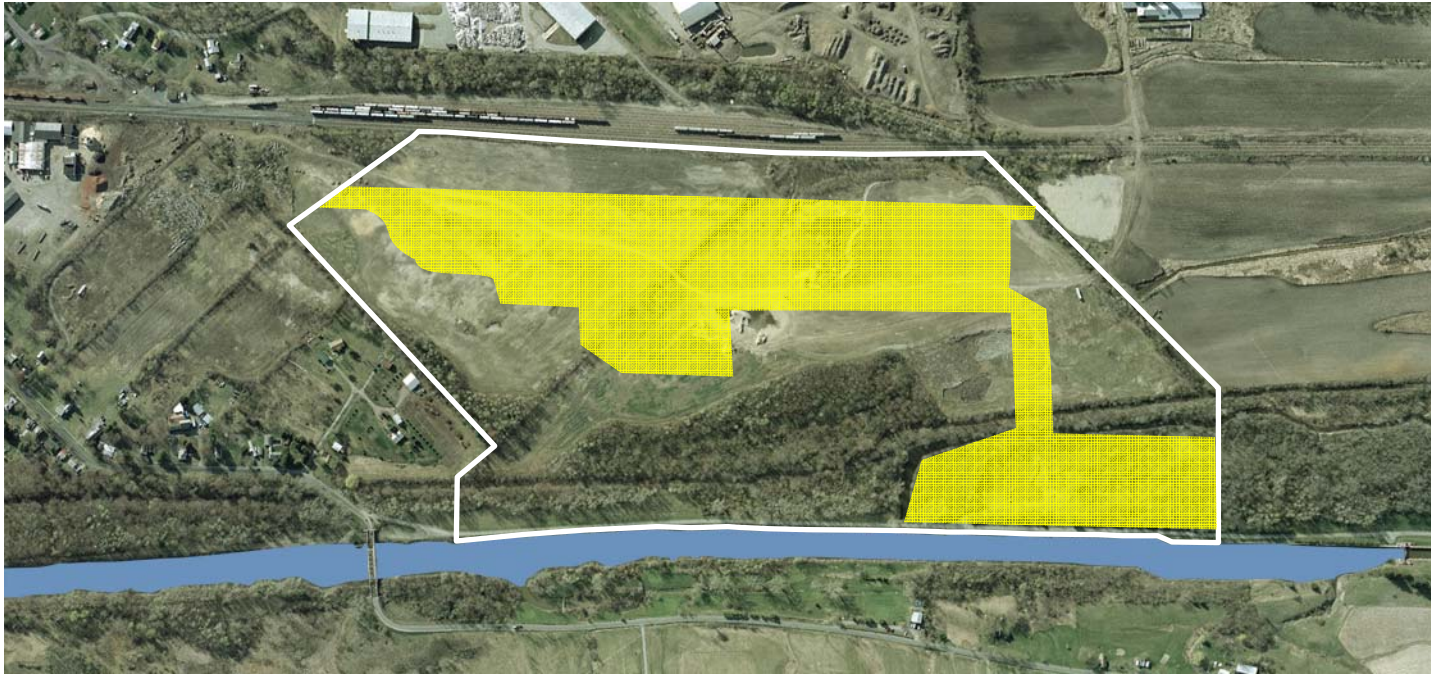


# Excavation and Grading



- > Excavate 150,000 cubic yards of soil;  
use on site for regrading
- > Bring in 90,000 cubic yards of structural fill

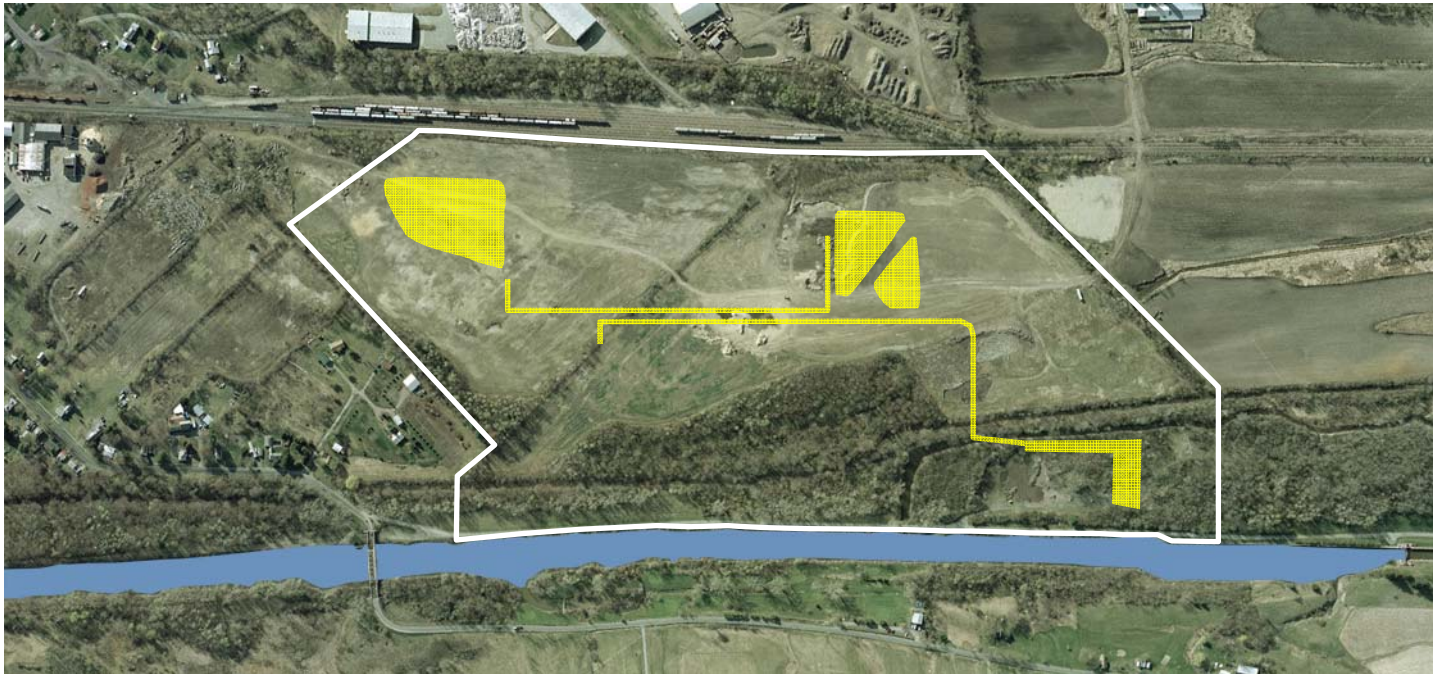
# Site Liner/Collection System



- > Install 300,000 square yards of geomembrane liner
- > Liner under all work areas
- > Enables return of property to pre-project conditions

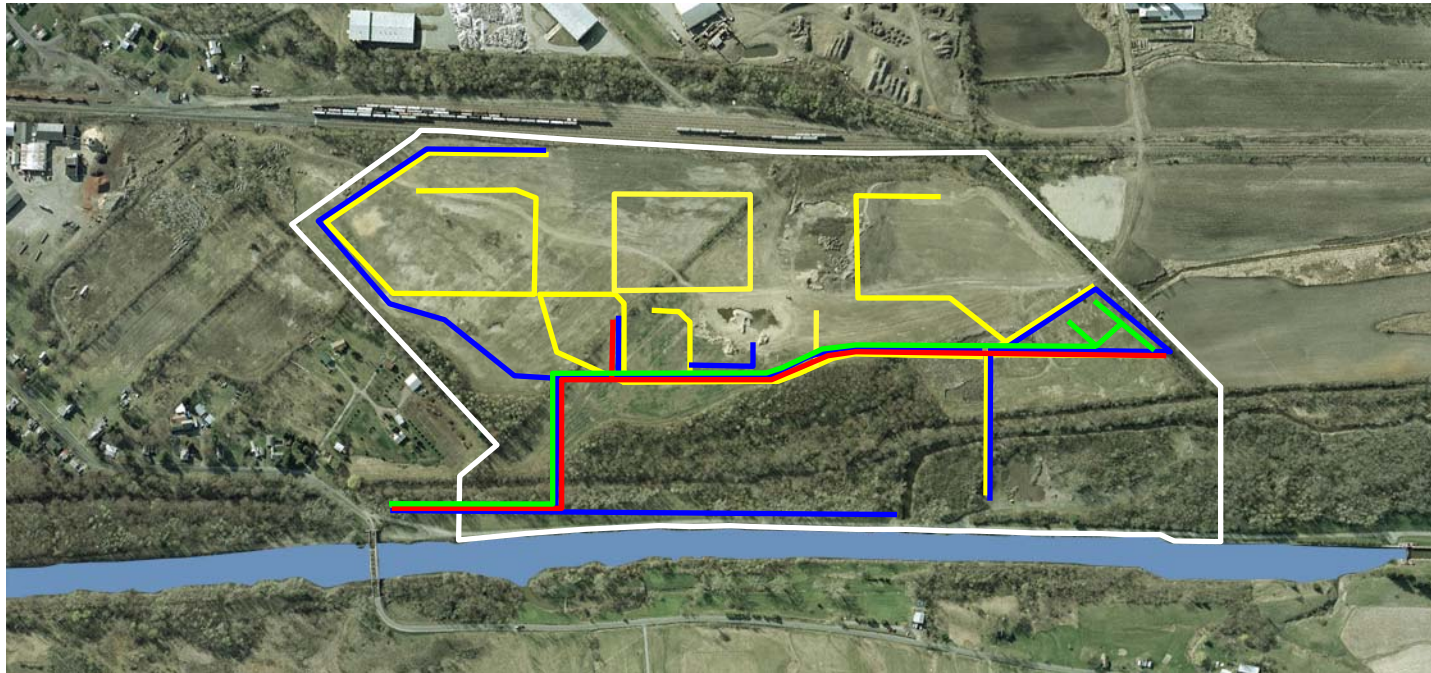


# Stormwater Collection



- > 7 acres of stormwater basins; 14,500 feet of drainage pipe
- > Capacity to handle 100-year storm
- > Any water falling on work areas is collected and routed to treatment plant

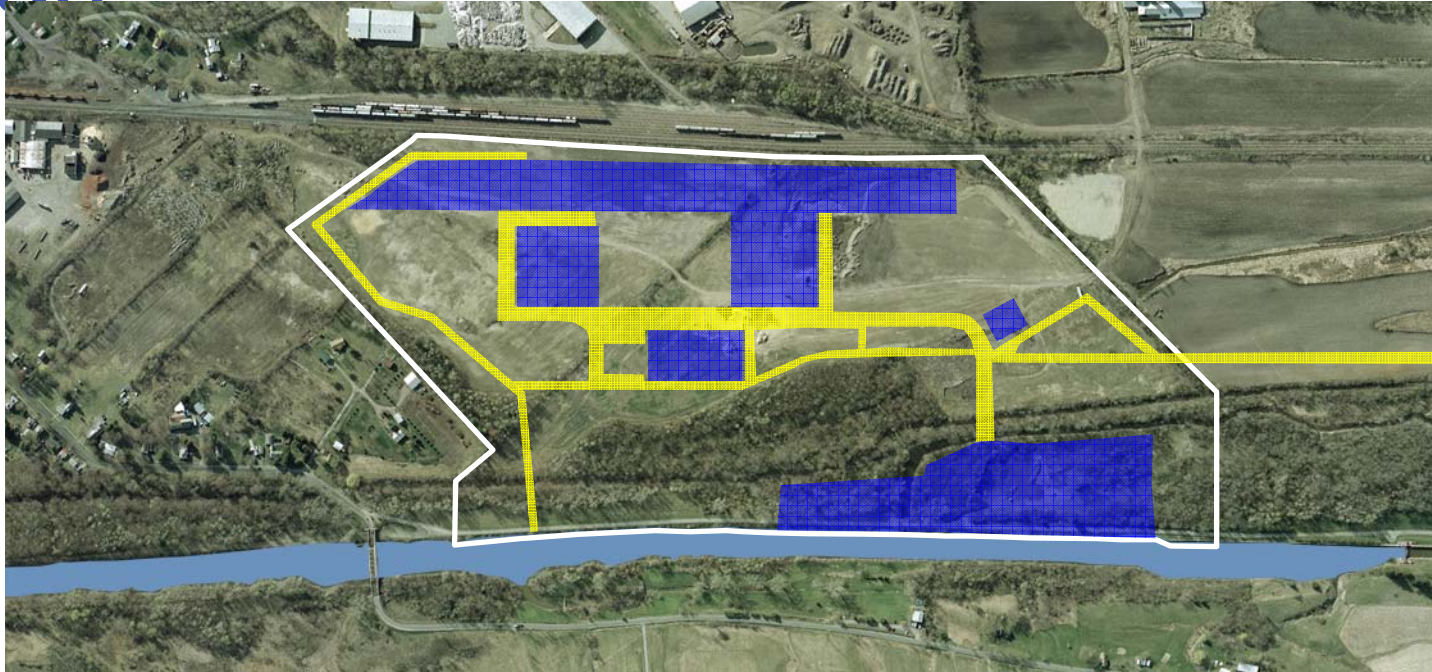
# Site Utilities



- > Water, sanitary, electric and fire water
- > 7 sub-stations; 5,000 feet electric distribution
- > 8,000 feet of potable water
- > 6,500 feet of fire water; three
- > 4,000 feet of sanitary sewer line



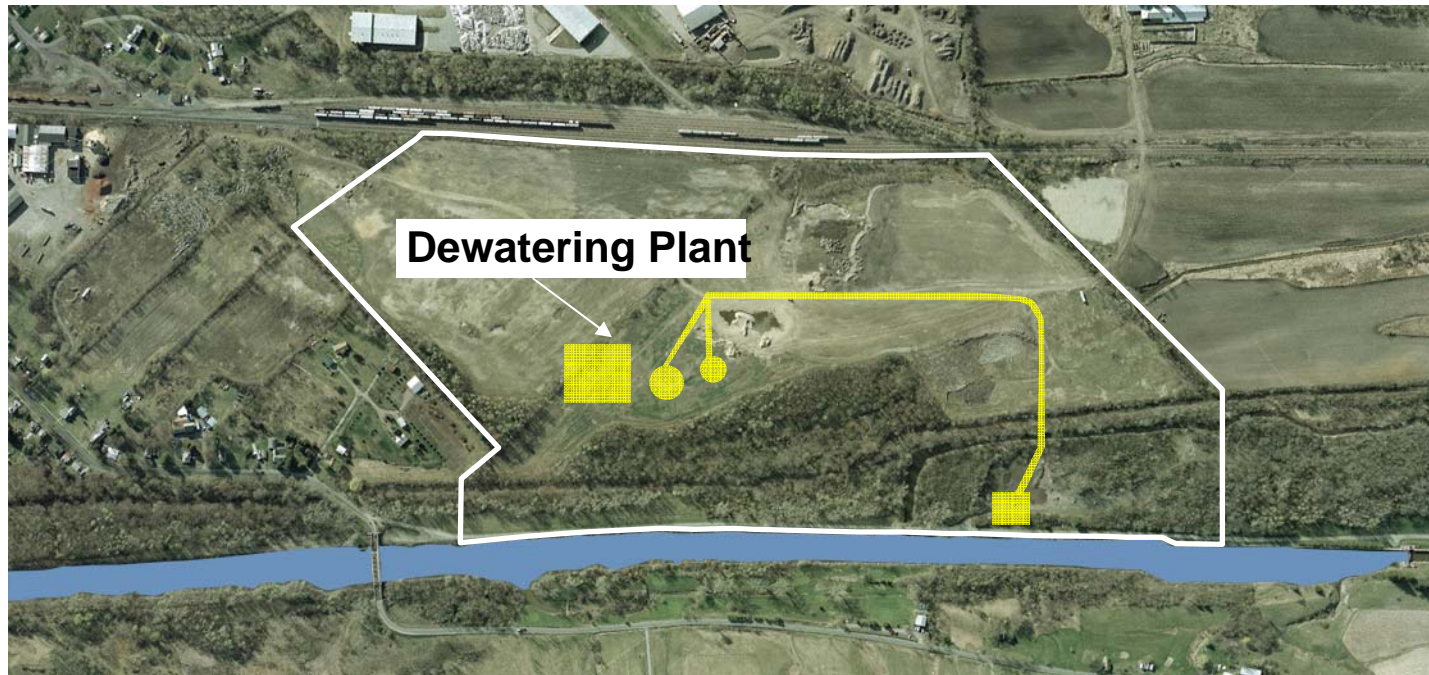
# Paving Internal Roads and Work Areas



> 55,000 square yards of paved surfaces  
(haul roads and work areas)

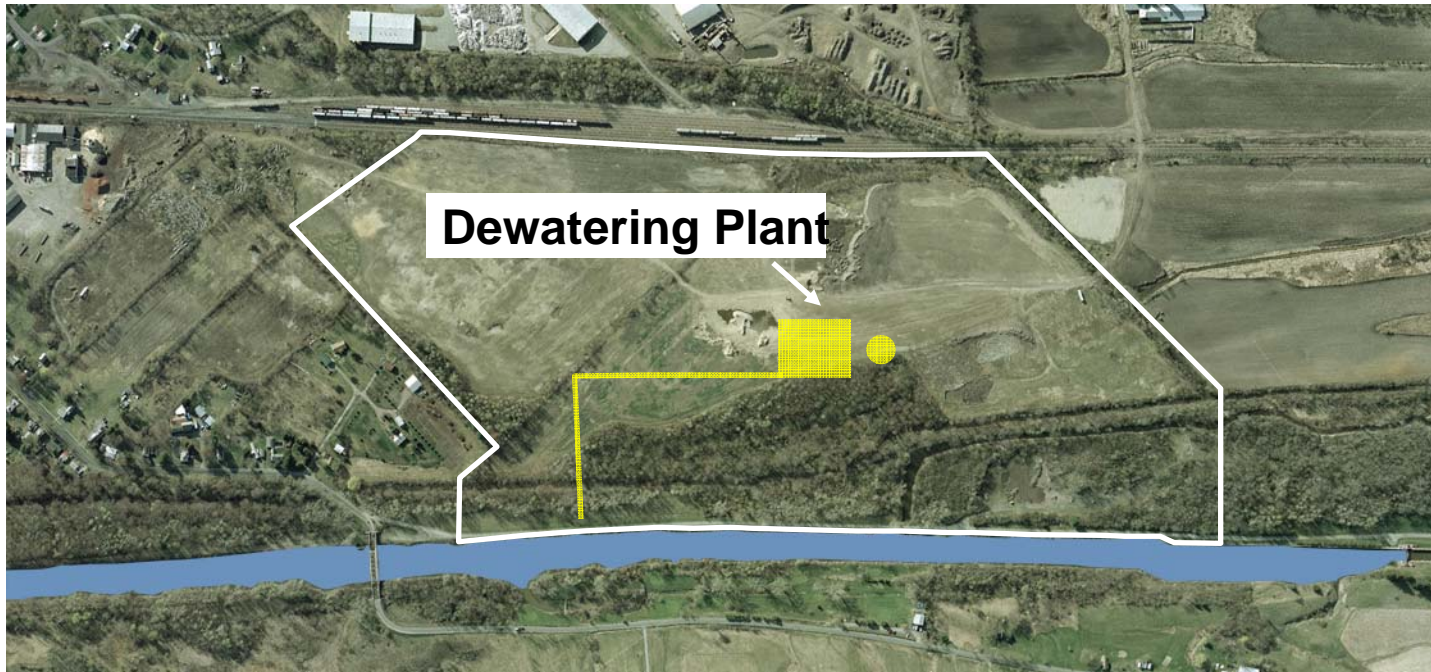


# Sediment Dewatering Plant



- > 17,500 feet of process piping
- > 80-foot-diameter, 12-foot-high gravity thickener
- > 41,000-square-foot building; 40-feet high
- > 12 filter presses custom sized for project

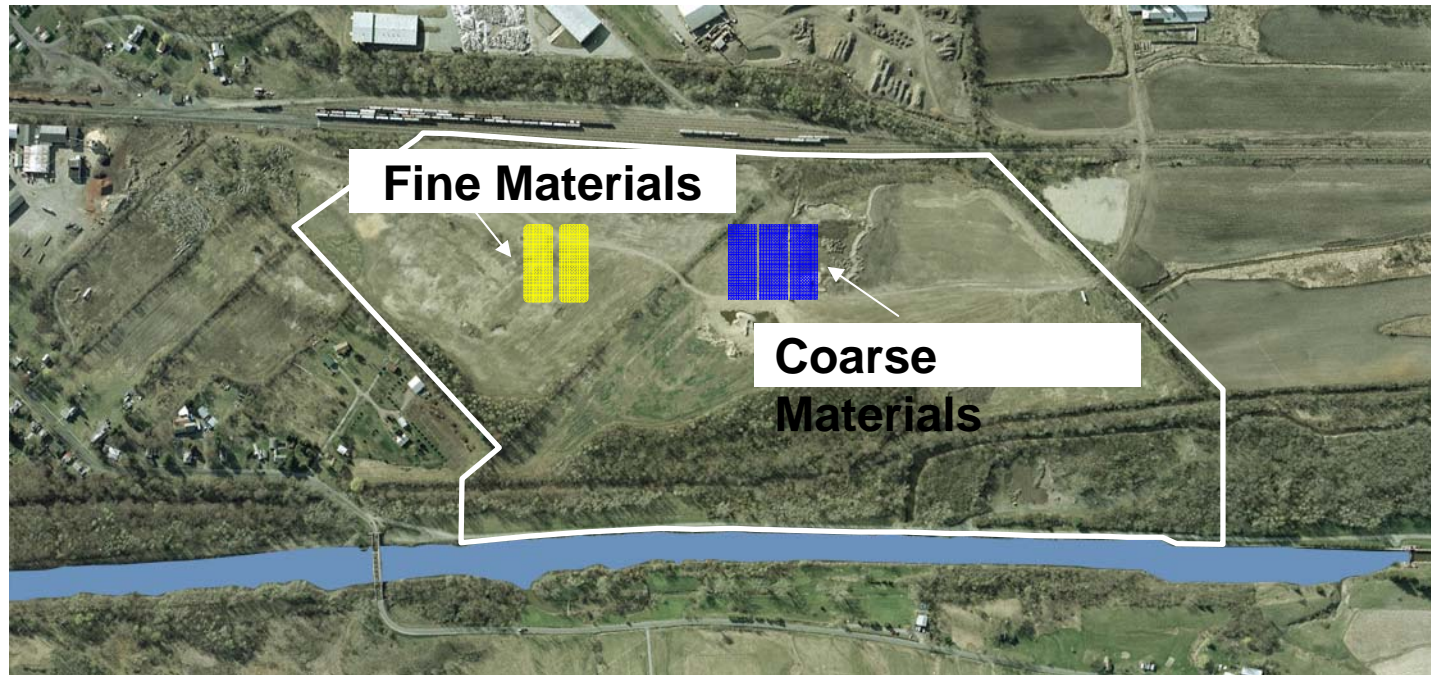
# Water Treatment Plant



- > Handles process water and water from the stormwater basins
- > 25,500-square-foot building; 40-feet high
- > 2 million-gallon-a-day capacity

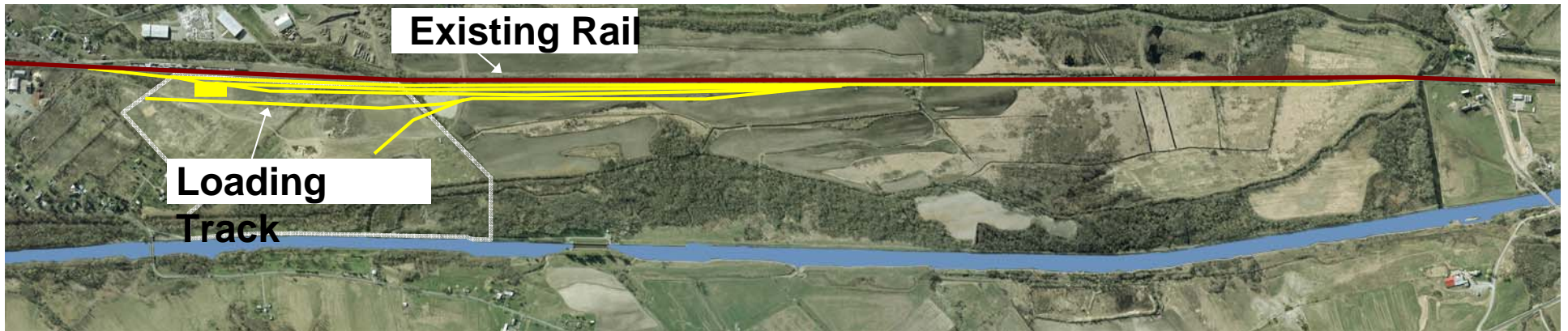


# Temporary Staging Areas



- > Fine materials staged in enclosed structures
- > Each structure 19,000 cubic yard capacity
- > 3 staging areas for debris and coarse material

# Rail Yard

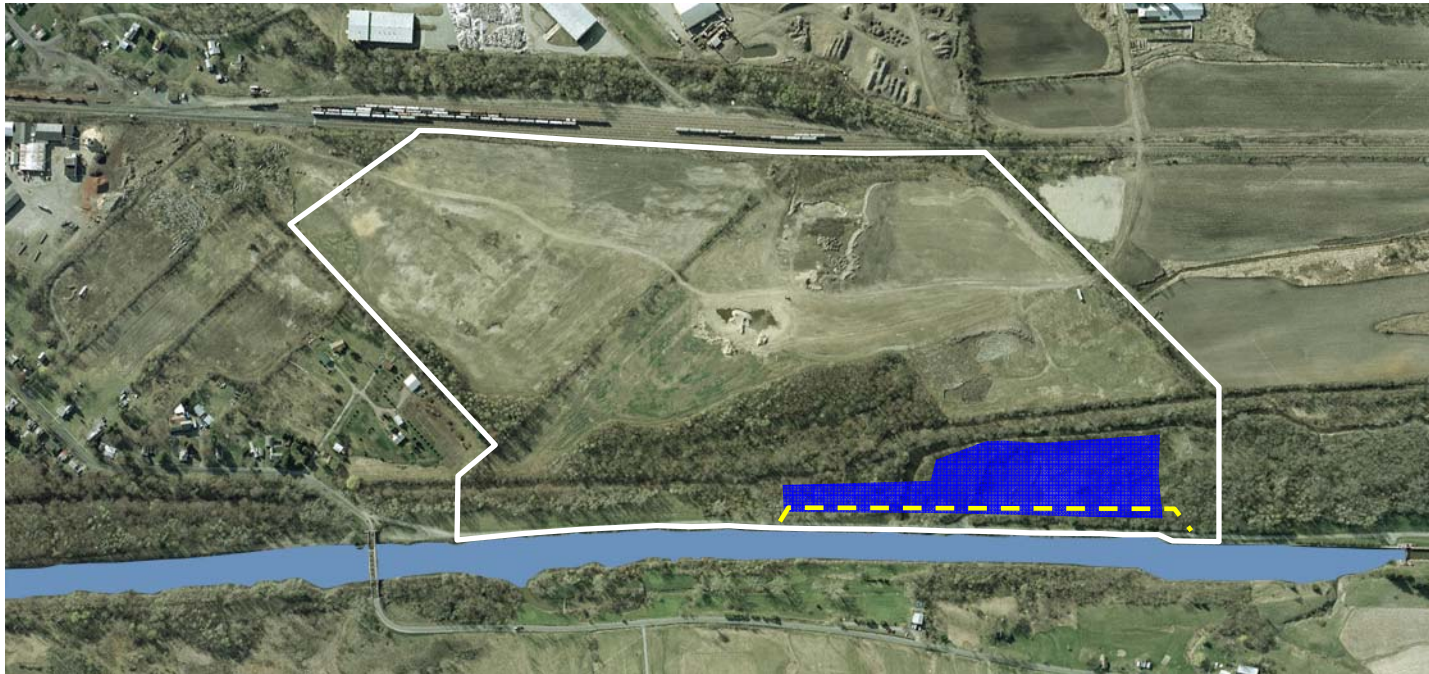


- > Install 5 miles of rail track
- > CP to design/install 2 switches with signal controls
- > Build 7,000-square-foot rail support service building
- > 2 miles of rail yard service roads
- > Track capacity for 450 gondola cars
  - Each 57' long and carries 110 tons
  - 81 cars per train



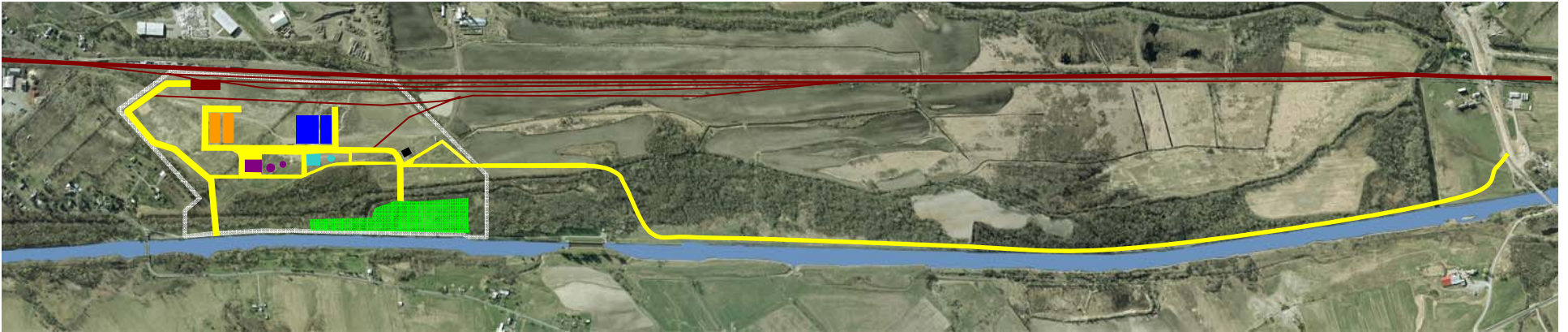


# Wharf



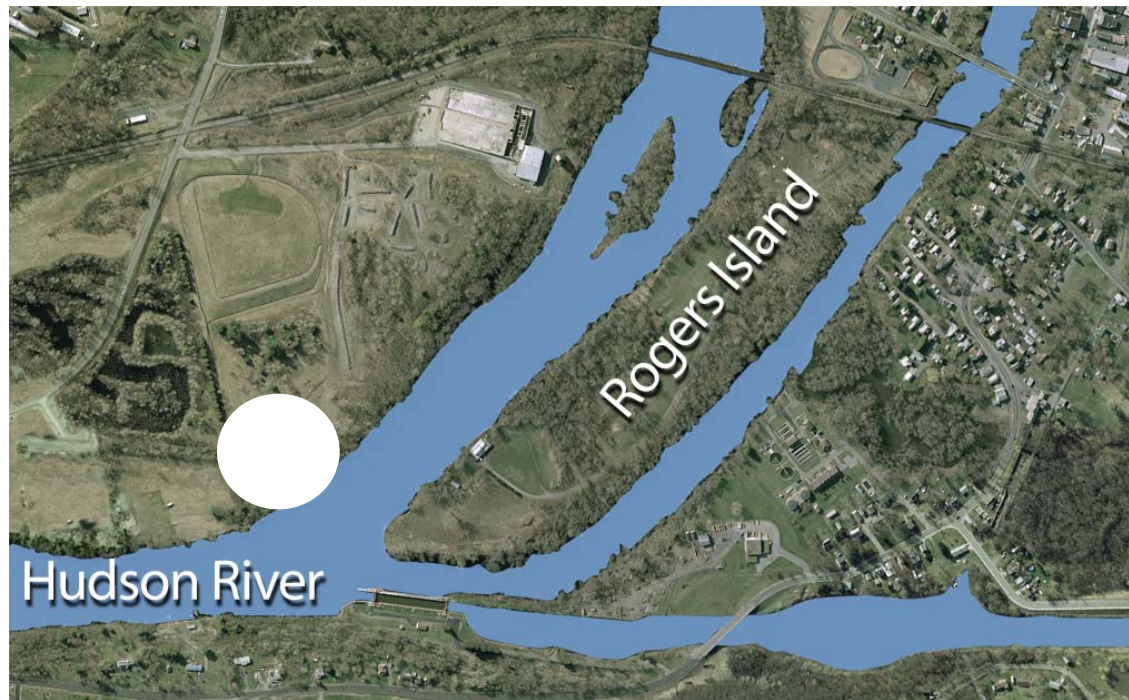
- > Widen canal by 65 feet; 1,500 feet of shoreline; 1,200 square yards of elevated deck
- > 28,000 square yards of unloading wharf
- > 5,000 square yards of work wharf

# Fully-Constructed Facility





# Project Marina



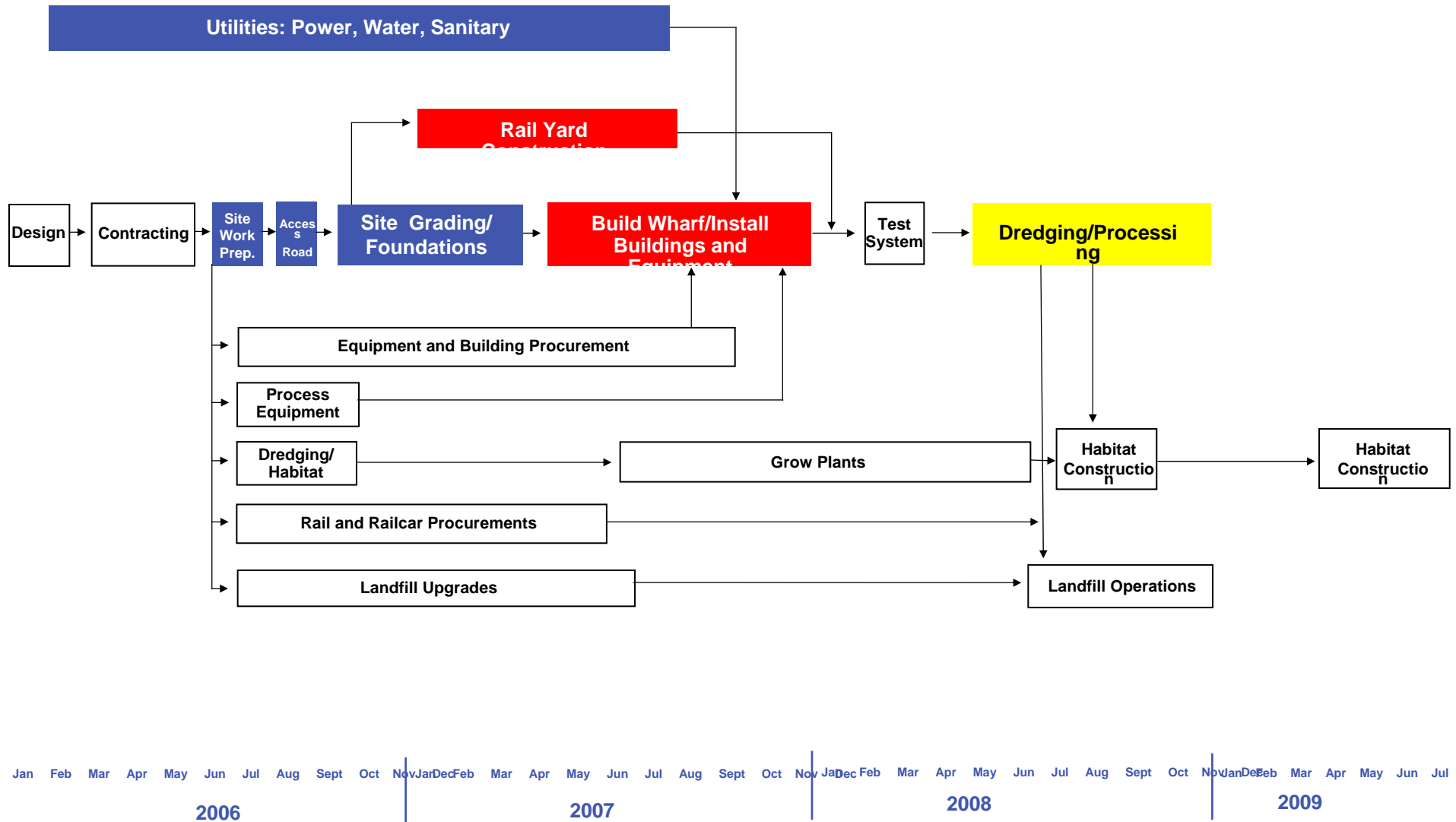
- > Shifted from proposed NYSDEC boat launch property
- > 550 feet shoreline
- > Dockage for 30 support boats
- > No dredged sediments handled at site
- > 4 mooring posts and turning dolphin in river

# What's Ahead

- > Time to construct facilities
- > Consent Decree approval
- > Final Design approval
- > Agreements with property owners, landfill and rail operators
- > Contractor work plan approvals
- > Manufacture of specialized equipment



# Project Sequence



# Public Safety

- > Focus on prevention
  - Evaluated more than 30 hypothetical scenarios
  - Developed response for each scenario
- > Coordination with local responders
- > Emergency service needs being addressed
- > Additional planning/analysis to occur
  - Table top drills
  - Periodic drills (simulated fire, medical, water-based)
  - Orientation tour(s) for emergency responders

# Keeping the Public Informed

- > Monthly progress reports
- > Community liaison
- > 24/7 hotline
- > Project Web site
- > Listserv/mailing list
- > E-mail
- > Notices to mariners

# Responding to the Public

- > 24/7 hotline
- > Mariner feedback forms
- > All inquiries investigated
- > Report back to public
  - Short-term and after investigation

# Next Steps

- > Work with EPA to respond to comments on Final Design
- > Select contractors
- > Reach agreements with property owners, landfill and rail operators
- > Upon approval of Consent Decree and Final Design
  - Award contracts
  - Order equipment
  - Begin construction