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# *County Project Of The Year*

## **Central Landfill Cell 4 Redevelopment**

### **Cecil County**



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## **Central Landfill Cell 4 Redevelopment**

**County: Cecil County**

**Engineer: Blazosky Associates Inc.**

**Contractor: Severson Environmental**



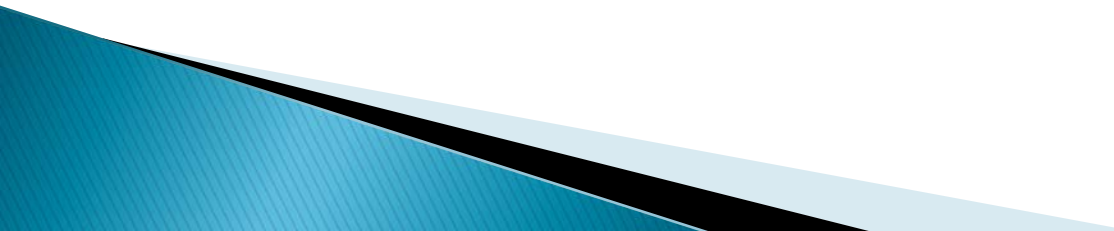
# CECIL COUNTY CENTRAL LANDFILL CELL 4 REDEVELOPMENT PROJECT



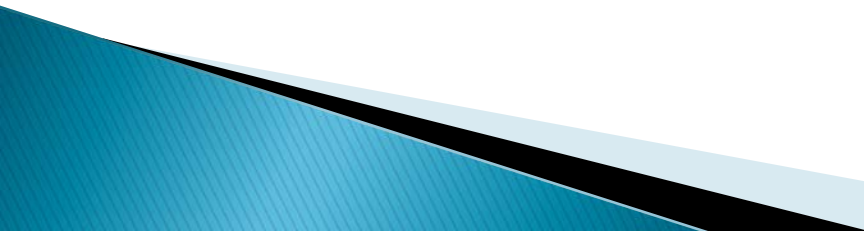
Design & Construction Management provided by  
BAI Group Inc. & Roman Consulting, Inc.



# PROJECT SETTING

- ▶ Cecil County Central Landfill – Elkton, MD
  - ▶ Began operation in 1978
  - ▶ 400 Acre Facility
  - ▶ Three existing MSW disposal cells (cells 1, 4, and 5) – 65 acres
  - ▶ Landfill receives 300–500 tons per day
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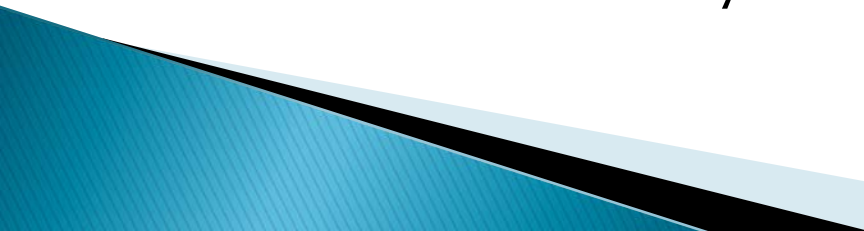
# PROJECT BACKGROUND

- ▶ Disposal Cell 4 constructed late 1980s
  - ▶ Operated into early 1990s
  - ▶ Temporarily ceased operation in 1994 and began operation in adjacent cell 5
  - ▶ Cell 4 closed with an intermediate soil cover leaving approx. 10 yrs. capacity
  - ▶ Planned to fill over top both cells 4/5 in future
  - ▶ In 2006 it was estimated the landfill had less than 5 years capacity unless Cell 4 was re-opened
  - ▶ However, an engineering study expressed concern about the liner and leachate collection system integrity
  - ▶ To avoid lengthy expansion permitting the County considered redevelopment of Cell 4 with MDE approval.
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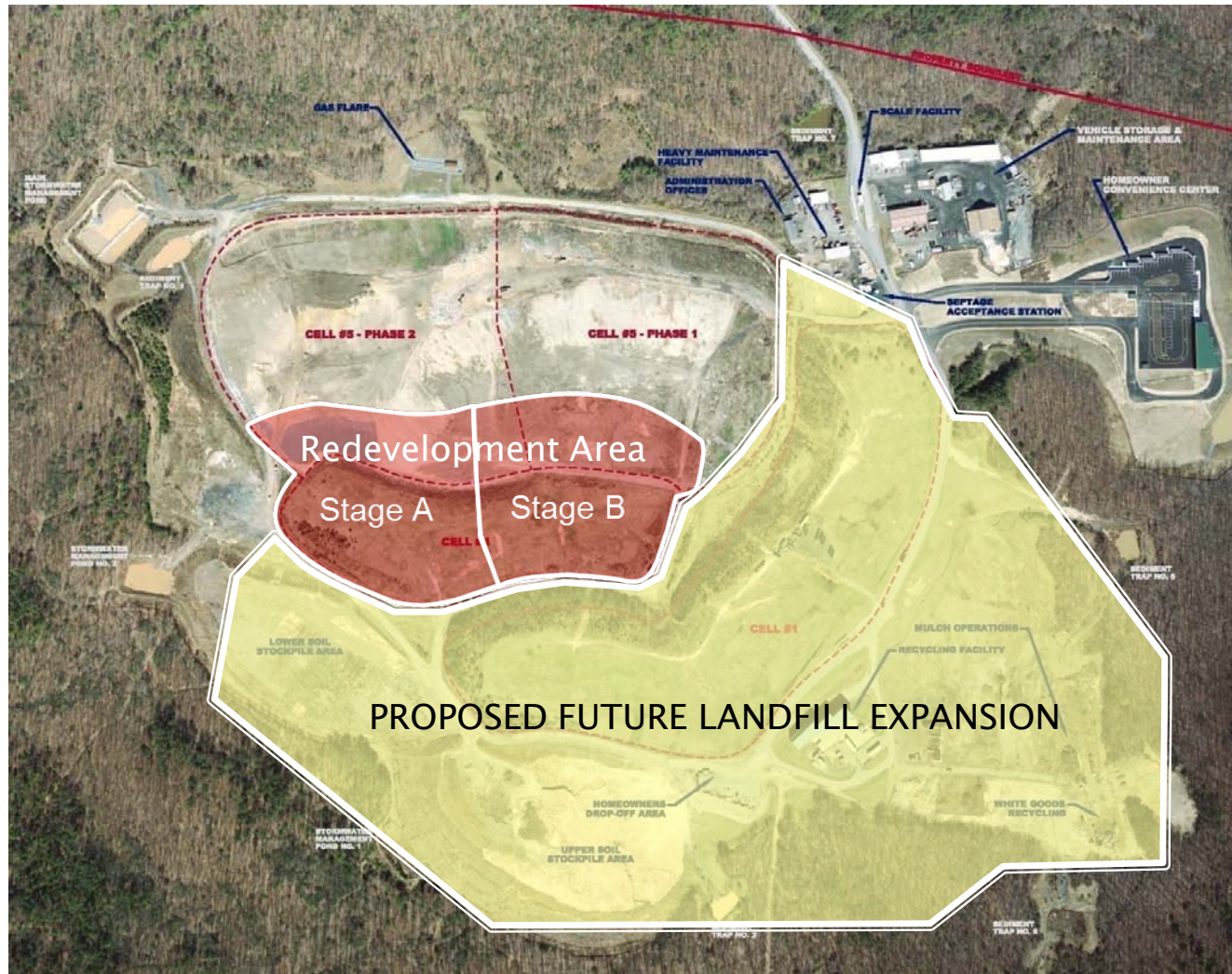
# PROJECT PURPOSE

- ▶ Cell 4 Redevelopment initiated in November 2009 to:
  - Gain landfill life lost by premature closure of Cell 4
  - Preserve long term environmental protection at the landfill
  - Facilitate future expansion of the landfill (over the Cell 4 disposal area)

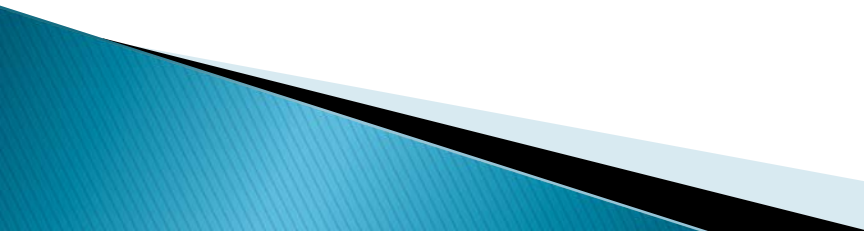
# PROJECT SCOPE

- ▶ Relocation of 1 million CY of MSW
  - ▶ Removal of existing liner/leachate collection system
  - ▶ Regrading and preparation of landfill cell subbase (including removal of inner cell berm between Cells 4/5)
  - ▶ Installation of 16 acres of new composite liner system and leachate collection system
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# PROJECT LOCATION



# CONSTRUCTION SEQUENCE

- ▶ Project performed in two stages over a two year period (i.e., Stage A and B)
  - ▶ Waste relocation in winter/spring
  - ▶ Cell construction summer/fall
  - ▶ Allowed landfill to remain open during redevelopment
  - ▶ Avoided the need to redirect/transport waste offsite – saving \$20–30 million
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# PROJECT PROGRESSION



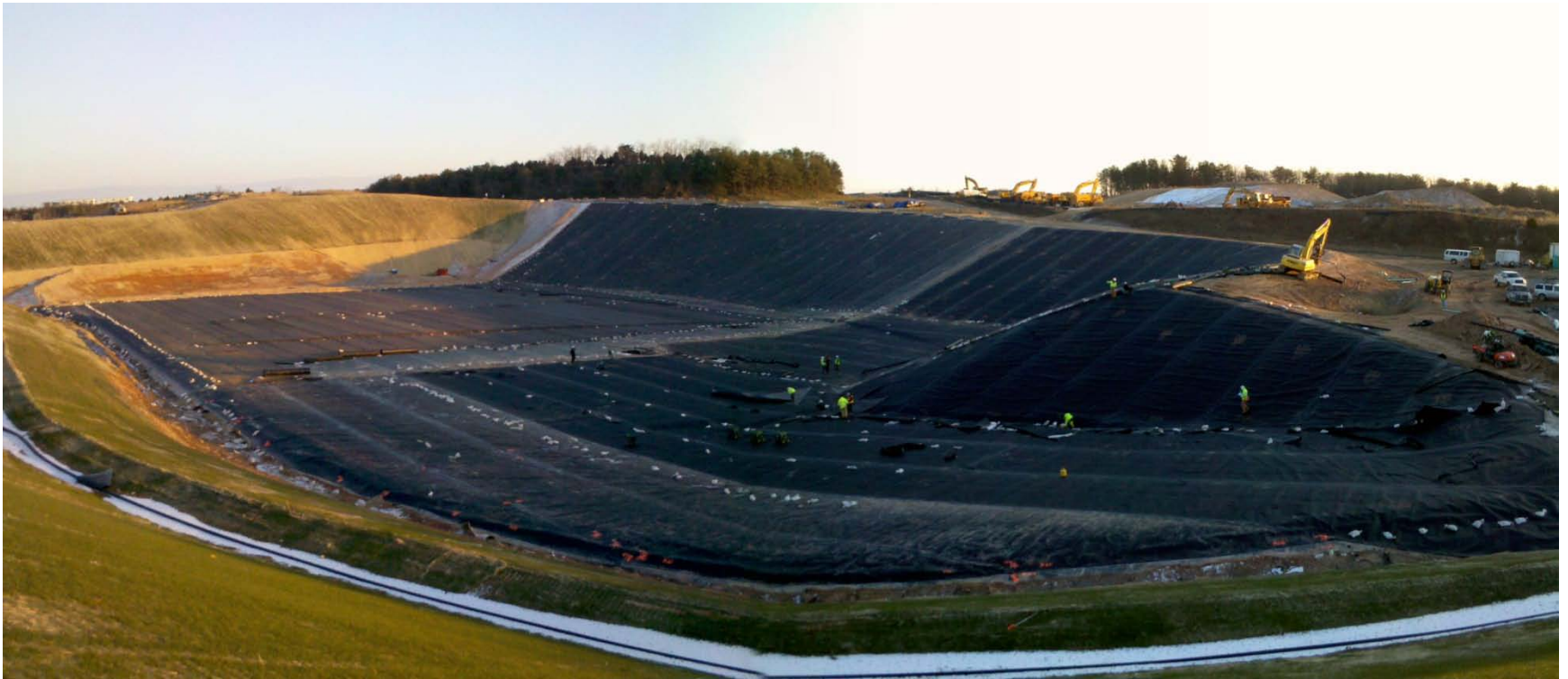
# Stage A Waste Excavation



# Stage A Cell Reconstruction



# Stage A Liner Completed



# Stage B Waste Excavation



# Stage B Subbase Preparation



# Stage B Completed



# PROJECT OUTCOME

- ▶ Project completed for a total cost of \$14.4 million and 3% under budget
  - ▶ More than 90,000 work hours without a lost work day incident
  - ▶ Completed without environmental violations or public complaint
  - ▶ Will provide an additional 12+ yrs. of landfill disposal life
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