skeo SOLUTIONS

Allied Landfill Site Reuse Suitability Analysis

Kalamazoo, Michigan

Prepared for EPA Region 5, MDEQ and City of Kalamazoo

(Interim Draft) February 2015

Purpose

Support the City of Kalamazoo and EPA Region 5 in evaluating reuse suitability of the proposed remedial alternatives.

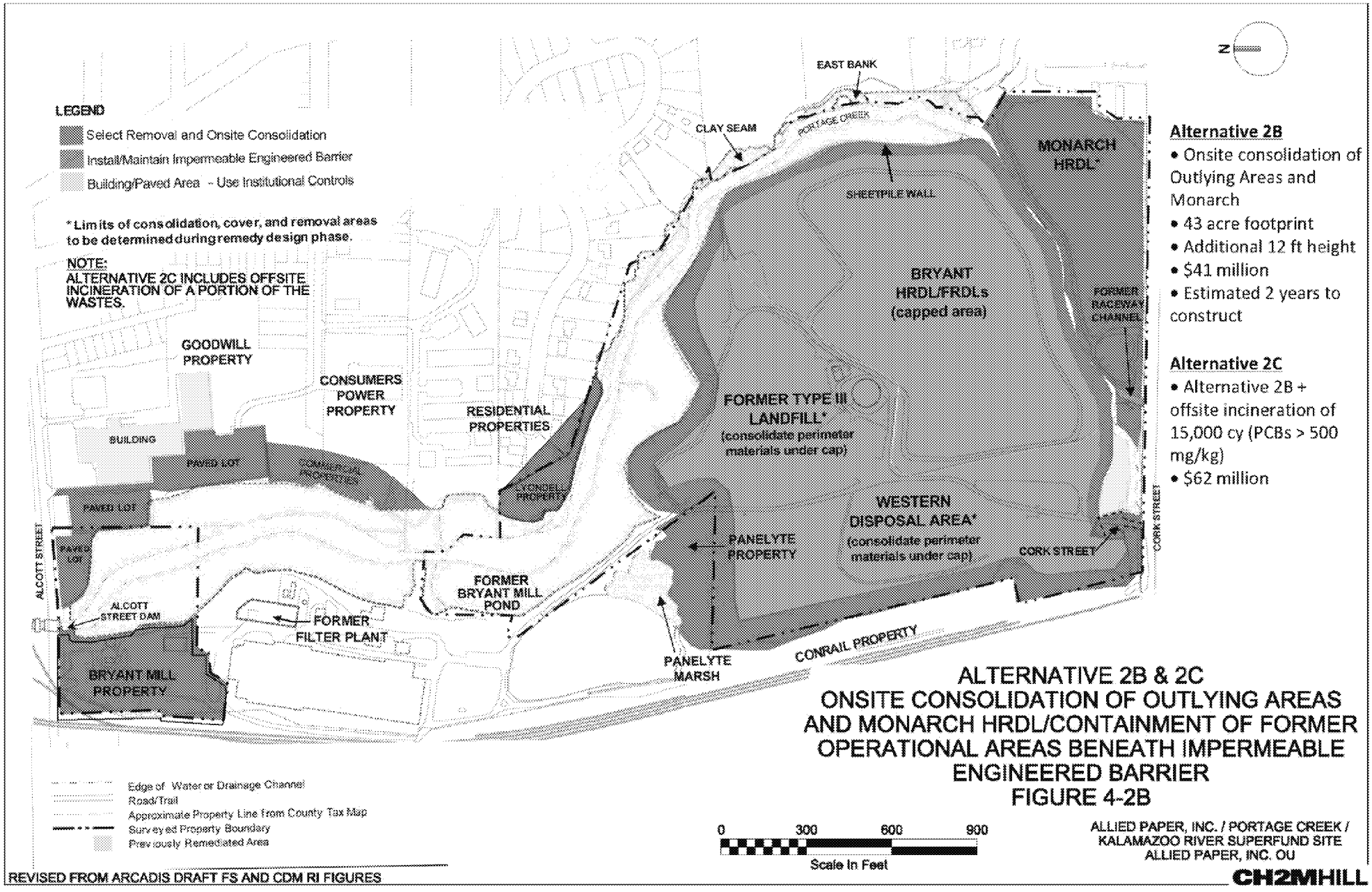
Overview

- Site Background
- Reuse Suitability
- Reuse Considerations
- Next Steps

Site Background

- The 2013 Allied Landfill Feasibility Study identifies a potential consolidation and capping remedy for the site.
- EPA, MDEQ and the City of Kalamazoo have been evaluating alternative consolidating and capping options to create larger areas suitable for commercial, light industrial and recreational reuse.
- Alternative remedial options are expected to be refined through a public engagement process before EPA selects a preferred alternative.

2013 FS Consolidation Alternative – 2b

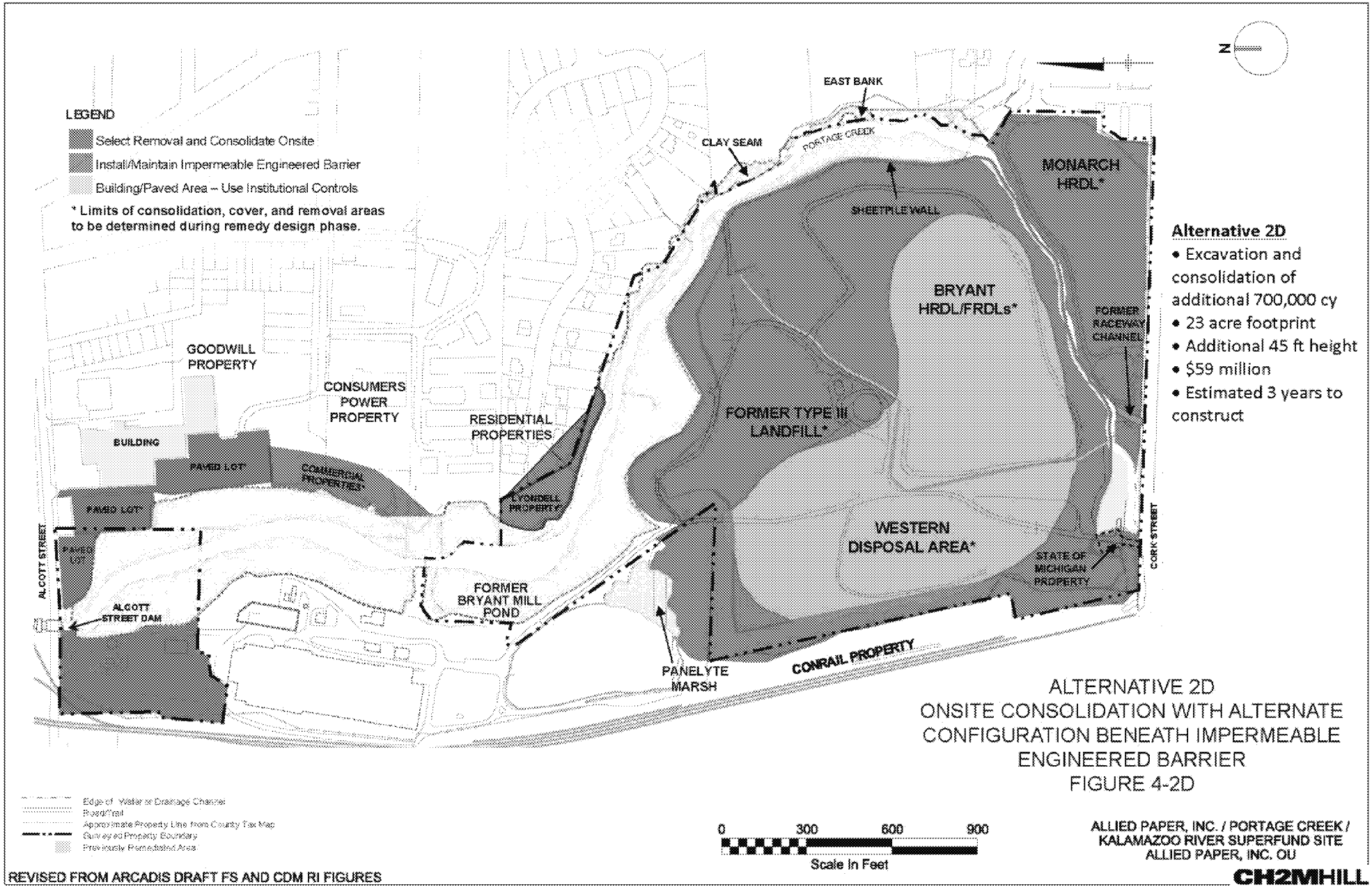


ALTERNATIVE 2B & 2C
ONSITE CONSOLIDATION OF OUTLYING AREAS AND MONARCH HRDL/CONTAINMENT OF FORMER OPERATIONAL AREAS BENEATH IMPERMEABLE ENGINEERED BARRIER
FIGURE 4-2B

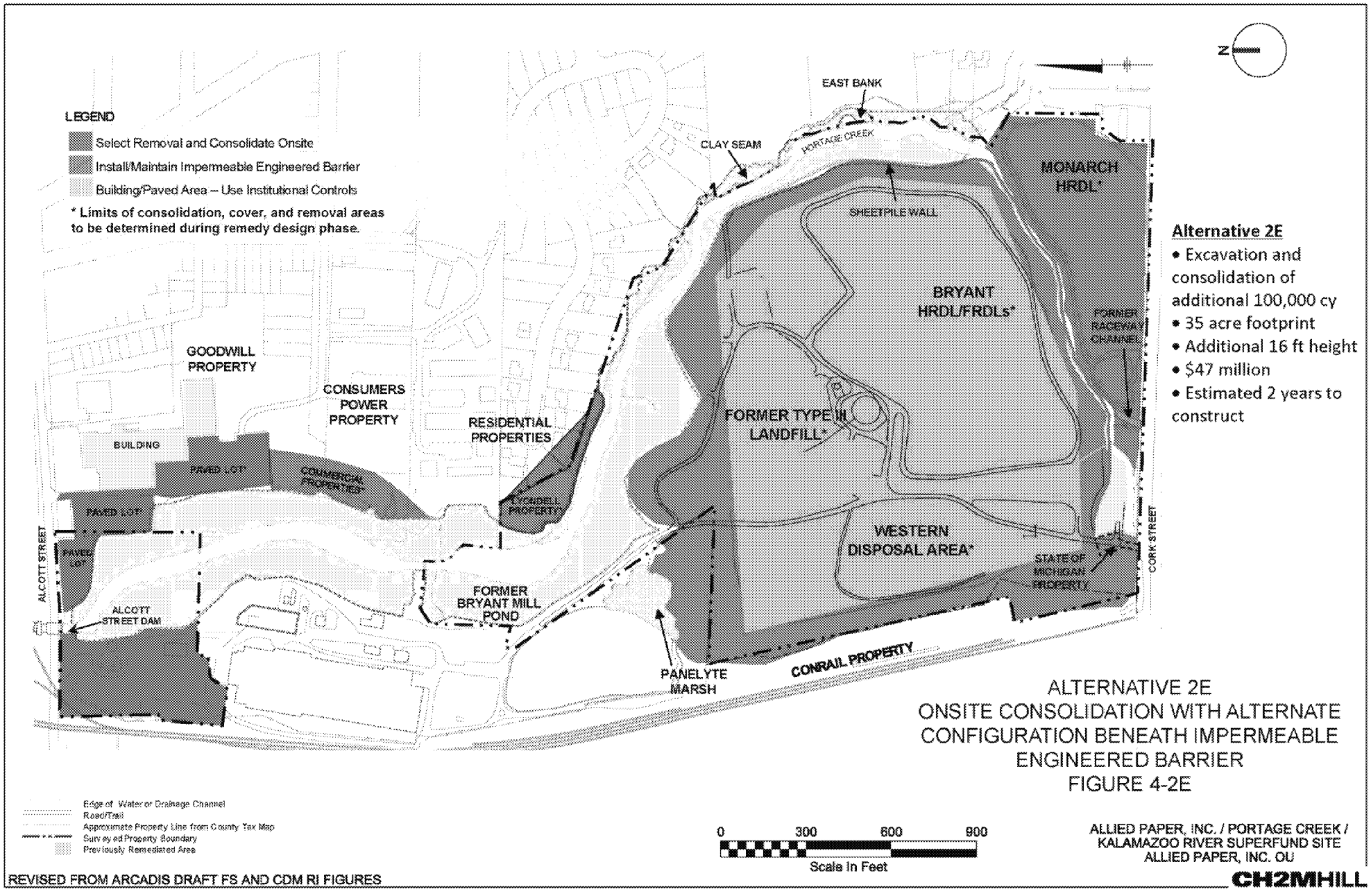
Alternative 2B
- Onsite consolidation of Outlying Areas and Monarch
- 43 acre footprint
- Additional 12 ft height
- $41 million
- Estimated 2 years to construct

Alternative 2C
- Alternative 2B + offsite incineration of 15,000 cy (PCBs > 500 mg/kg)
- $62 million

2014 Alternative – 2D



2014 Alternative – 2E



Alternative 2E

- Excavation and consolidation of additional 100,000 cy
- 35 acre footprint
- Additional 16 ft height
- $47 million
- Estimated 2 years to construct

ALTERNATIVE 2E
ONSITE CONSOLIDATION WITH ALTERNATE CONFIGURATION BENEATH IMPERMEABLE ENGINEERED BARRIER
FIGURE 4-2E

City of Kalamazoo Proposed Concept

The City of Kalamazoo has identified a potential redevelopment concept.

- Modified version of Alternative 2b
- Maximizes acreage between Portage Creek and consolidation area.
- Integrates North-South access road Cork to Alcott with additional access to Burdick.
- Greenway trail along Creek.

City of Kalamazoo Redevelopment Concept

Source: Draft Redevelopment Concept provided by City of Kalamazoo (February 2015)

Reuse Suitability

Reuse Considerations – Alternative 2B

Reuse Considerations
Alternative 2B

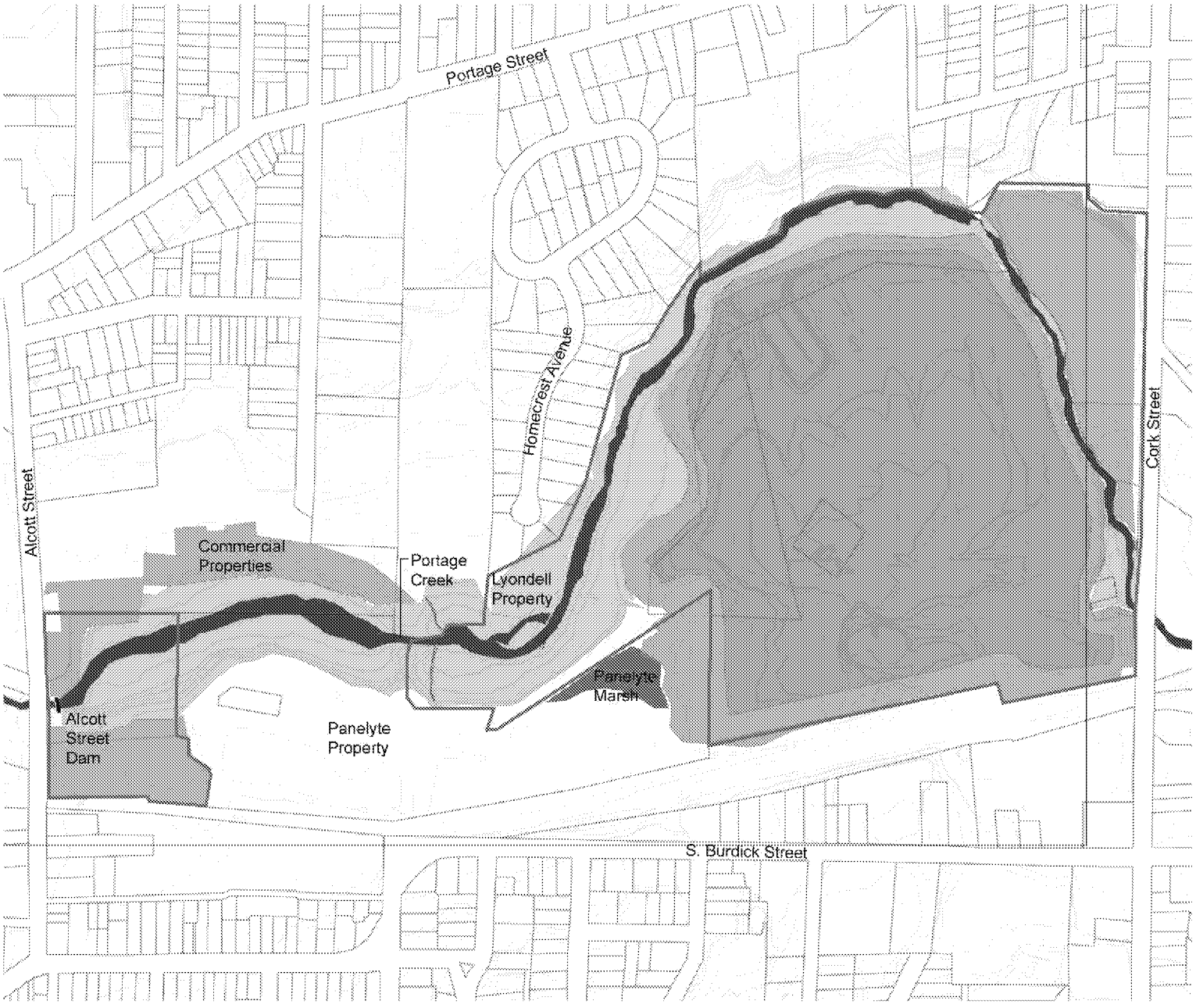
Commercial/Industrial/ Recreational (29 acres)
- Few limitations
- Contaminant excavation
- Backfilled and re-graded
- Institutional controls limit future use to commercial/industrial or recreational uses.

Recreation/Open Space (43 acres)
- Remedial considerations
- Consolidation and capping
- Sloped areas and elevated grade (12 feet above existing grade)
- Institutional controls prevent disturbance of cap and remedial features.

Recreation/Open Space (20 acres)
- Flood zone limitations
- Previously remediated areas (Bryant Mill Pond Removal Action)
- Portage Creek 100-Year Flood Plain
- Institutional controls limit future use to recreation/open space

Allied Landfill Site Areas

Note: This map is for planning purposes only; all locations and boundaries are approximate.



0 250 500 1,000 1,500 Feet

Reuse Considerations – Alternative 2D

Reuse Suitability
Alternative 2D

Commercial/Industrial/ Recreational (46 acres)
- Few limitations
- Contaminant excavation
- Backfilled and re-graded
- Institutional controls limit future use to commercial/industrial or recreational uses.

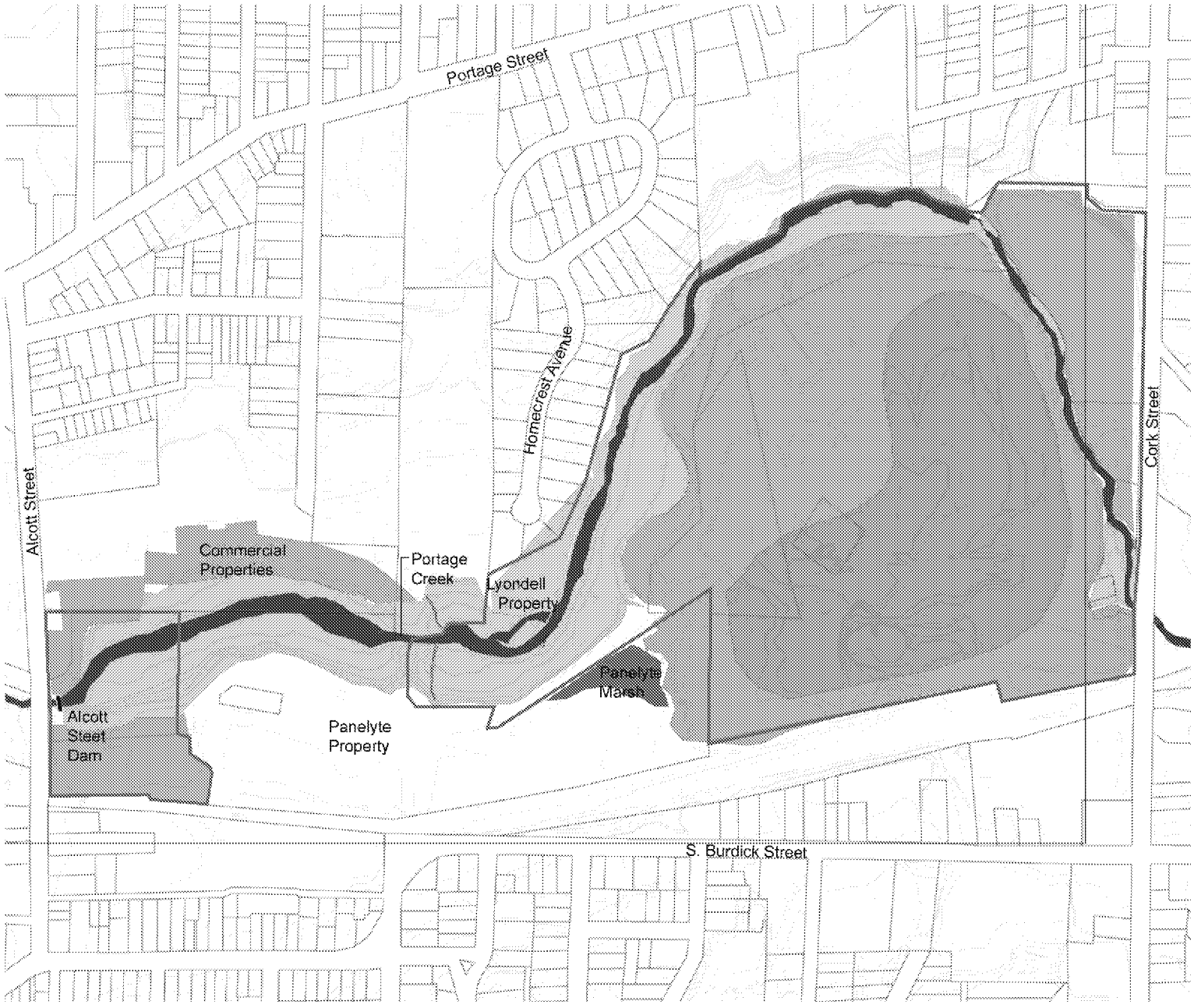
Recreation/Open Space (23 acres)
- Remedial Considerations
- Consolidation and capping
- Sloped areas and elevated grade (45 feet above existing grade)
- Institutional controls prevent disturbance of cap and remedial features.

Recreation/Open Space (20 acres)
- Flood zone limitations
- Previously remediated areas (Bryant Mill Pond Removal Action)
- Portage Creek 100-Year Flood Plain
- Institutional controls limit future use to recreation/open space

Allied Landfill Site Areas

Note: This map is for planning purposes only; all locations and boundaries are approximate.

0 250 500 1,000 1,500 Feet



Reuse Considerations – Alternative 2E

Reuse Considerations
Alternative 2E

Commercial/Industrial/ Recreational (32 acres)
- Few limitations
- Contaminant excavation
- Backfilled and re-graded
- Institutional controls limit future use to commercial/industrial or recreational uses.

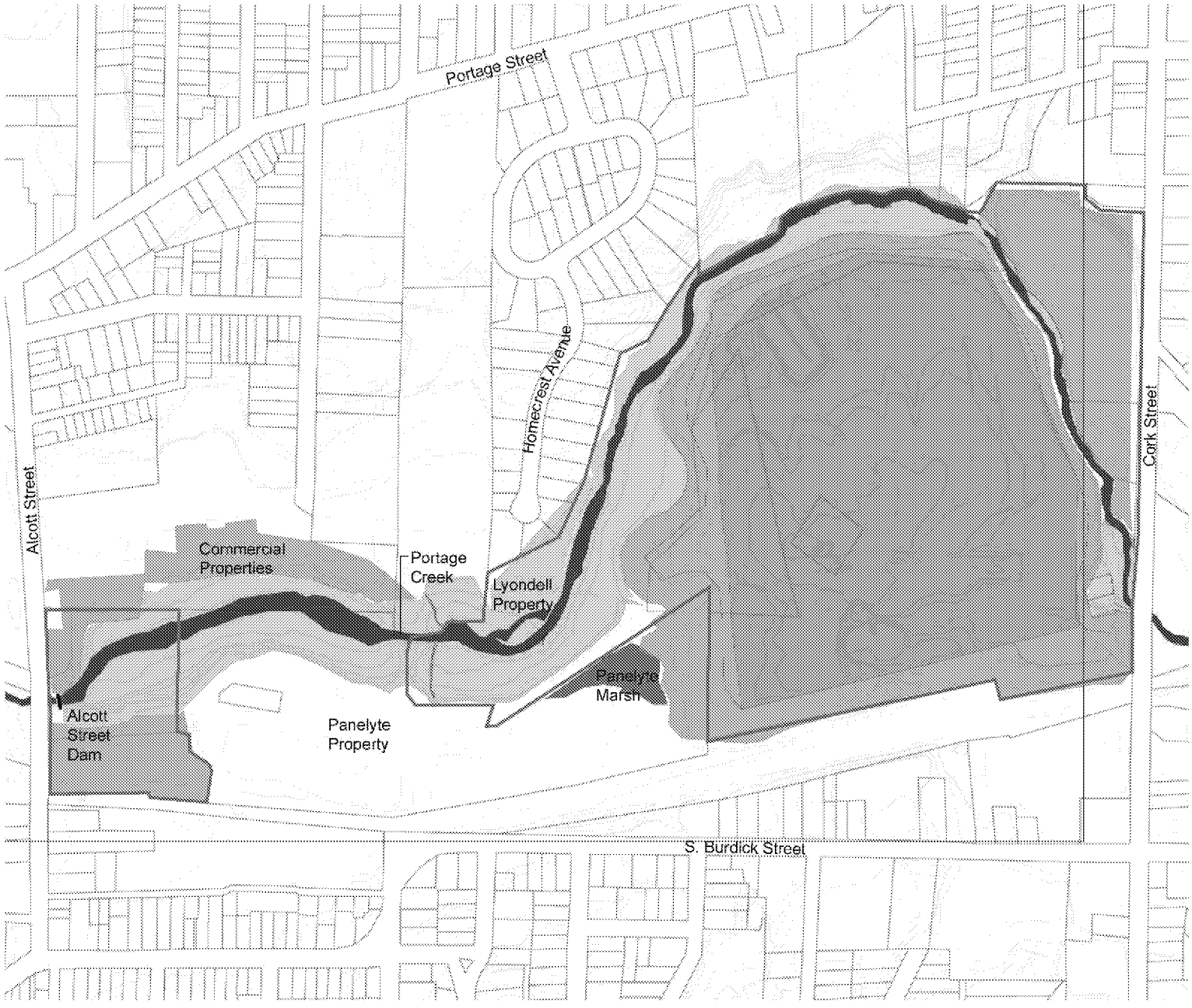
Recreation/Open Space (35 acres)
- Remedial Considerations
- Consolidation and capping
- Sloped areas and elevated grade (15 feet above existing grade)
- Institutional controls prevent disturbance of cap and remedial features.

Recreation/Open Space (20 acres)
- Flood zone limitations
- Previously remediated areas (Bryant Mill Pond Removal Action)
- Portage Creek 100-Year Flood Plain
- Institutional controls limit future use to recreation/open space

Allied Landfill Site Areas

Note: This map is for planning purposes only; all locations and boundaries are approximate.

0 250 500 1,000 1,500 Feet



Reuse Considerations – City's Concept

Reuse Suitability
City of Kalamazoo Alternative

Commercial/Industrial/ Recreational (48 acres)
- Few limitations
- Contaminant excavation
- Backfilled and re-graded
- Institutional controls limit future use to commercial/industrial or recreational uses.

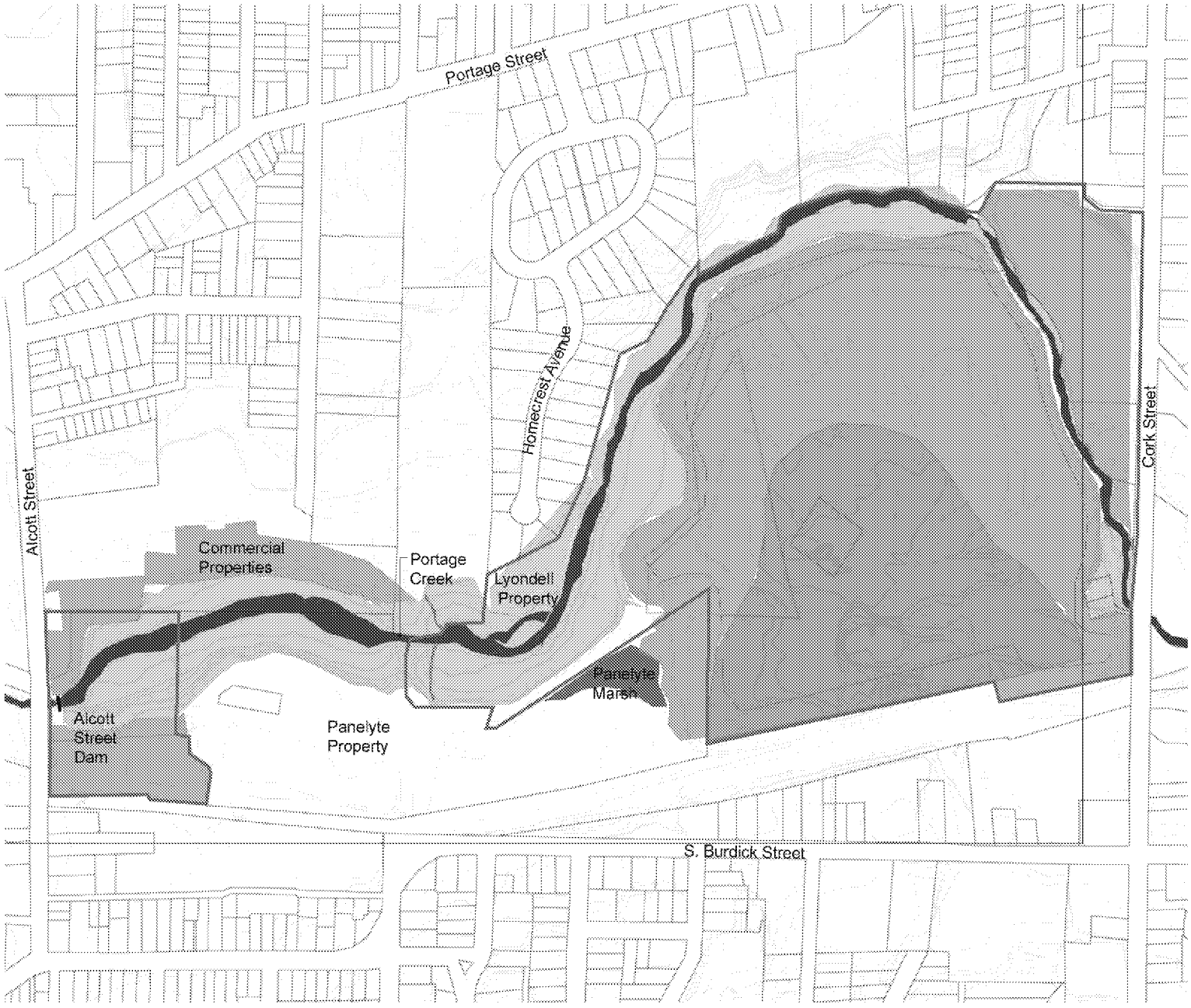
Recreation/Open Space (20 acres)
- Remedial Considerations
- Consolidation and capping
- Sloped areas and elevated grade (>45 feet above existing grade)
- Institutional controls prevent disturbance of cap and remedial features.

Recreation/Open Space (20 acres)
- Flood zone limitations
- Previously remediated areas (Bryant Mill Pond Removal Action)
- Portage Creek 100-Year Flood Plain
- Institutional controls limit future use to recreation/open space

Allied Landfill Site Areas

Note: This map is for planning purposes only; all locations and boundaries are approximate.

0 250 500 1,000 1,500 Feet



Reuse Suitability Considerations

Reuse Suitability	Restrictions	Alt. 2B	Alt. 2D	Alt. 2E	City Alt.
Cap Height Above Grade		**12'**	**45'**	**16'**	**>45'**
A. Commercial/Industrial/Recreational	**Few Limitations**	**29 acres**	**46 acres**	**32 acres**	**48 acres**
B. Recreation / Open Space	**Remedial Limitations**	**43 acres**	**23 acres**	**35 acres**	**20 acres**
C. Recreation / Open Space	**Flood Zone Limitations**	**20 acres**	**20 acres**	**20 acres**	**20 acres**

Next Steps

- Share reuse suitability considerations with EPA and City of Kalamazoo for discussion.
- Refine reuse suitability maps and considerations based on discussion and public input during City's February 2015 Reuse Meeting.
- Prepare materials for EPA Public Availability Session in April 2015.

Contact Information

For additional information regarding the Allied Landfill site remedial process, please contact:

Michael Berkoff

Remedial Project Manager, EPA Region 5

Berkoff.michael@epa.gov / 312-353-8983