

# PLAYBOOK

## Decommissioning & Redevelopment Playbook for the Cromby Generation Station

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# 1

# EXECUTIVE SUMMARY

Decommissioning &  
Redevelopment Playbook  
for the Cromby  
Generation Station



## 1.0 INTRODUCTION

The primary purpose of this Playbook and associated Appendices is to provide a menu of redevelopment "Plays" for consideration by industrial site selectors and the development community as they seek new sites for development in the Southeastern, Pennsylvania region.

While this Playbook recommends a preferred redevelopment strategy, the Playbook is also designed to provide a variety of useful data and information that can be utilized in the due diligence efforts of interested parties. Recognizing that different investors have different priorities and goals, the information contained in this Playbook and associated Appendices is intended to provide a wide range of data and ideas organized and located in one place as a means to stimulate further creative thought by development professionals.

### 1.1 PROJECT INTRODUCTION & SCOPE

The genesis of this project is a US Federal Government program known as "The Partnerships for Opportunity and Workforce and Economic Revitalization (POWER) Initiative". Supported by the US Department of Commerce Economic Development Administration (EDA), the goal of POWER is to "align and leverage complementary

Federal economic and workforce development resources, targeting Federal assistance through competitively awarded grants to partnerships anchored in communities impacted by changes in the coal economy."

Supported by the POWER program, the Pennsylvania Department of Community and Economic Development (DCED) selected the "Cromby" Generation Station (Site) as the second site in Pennsylvania to be addressed under this program. One of a number of closed or closing coal-fired power plants across the Commonwealth, successful redevelopment of the Site will serve as a model for other sites going forward.

In mid-2018, DCED selected a consulting team led by AMO Environmental Decisions, Inc. (AMO) to prepare this Playbook and associated Appendices. In collaboration with DCED and former plant owners and operators (Exelon Corporation), AMO has conducted a comprehensive process of redevelopment planning for the Site, including preparation of Site and market analyses, redevelopment strategy options, financial and economic impact analyses, and recommendations for actions to move the process forward.

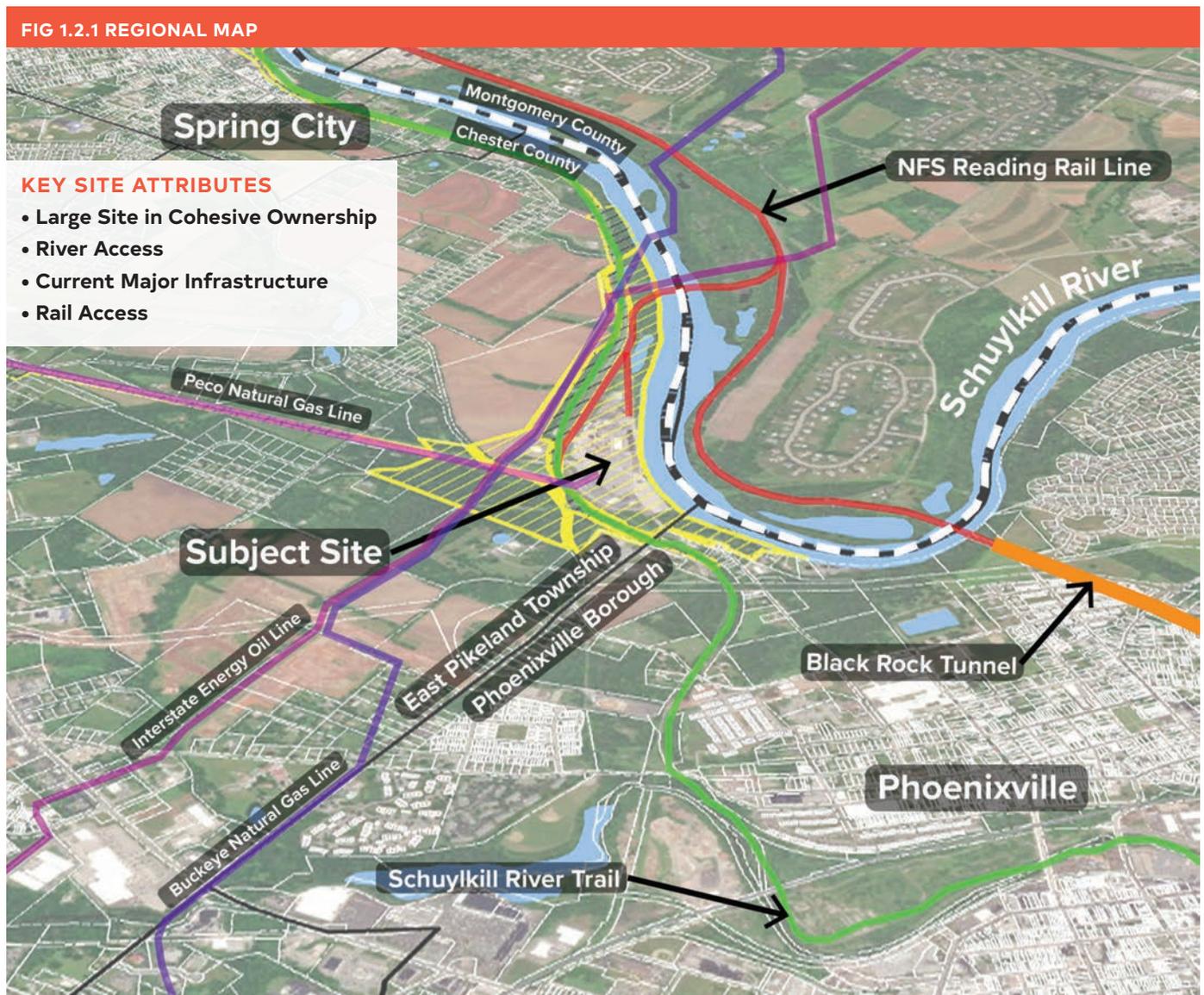
The remainder of this section summarizes key findings of the Playbook.

## 1.2 SITE ATTRIBUTES & ASSETS SUMMARY

Exelon's Cromby Generating Station (Site) totals 147.47 acres of land and is comprised of two distinct separate components consisting of W.P.Cromby, LLC owned Parcel – 115.69 acres (western side of property, closet to the Schuylkill River) and PECO Energy owned Parcel – 31.78 acres (eastern side of property). The two parcels are separated by the PECO property, which bisects the subject property in a primarily north-south direction. The facility is located approximately 28 miles northwest of center city Philadelphia, in Chester County, East Pikeland Township and the Borough of Phoenixville,

Pennsylvania. Figure 1.2.1 provides a regional map of the area, and illustrates some key Site features.

The original Site was developed as a hydroelectric power plant that was built in 1904. In 1918 and 1922, the two coal-fired steam units were built and in the 1950's, two larger coal units with a total of 385 Megawatts (MW) were constructed. One unit (Unit 2) was converted to an oil-fired power generating boiler in 1969. The fuel oil source for Unit 2 was No. 6 fuel oil. Unit 2 was converted again in the early 1990s to a natural gas combined cycle unit. Natural gas was brought to the Site from the nearby Buckeye Pipeline ("Buckeye"). The Cromby generation plant was retired from service in 2011 and



decommissioned in 2012. The Site, originally part of PECO Energy Company's ("PECO") generation fleet, was transferred to PECO's unregulated affiliate, Exelon Energy ("Exelon"), in 2001 when the State of Pennsylvania deregulated its electric utility industry. The Site was sold again to its current owner, W.P. Cromby, LLC, in 2018. W.P. Cromby, LLC plans to initially demolish unusable sections of the property, such as former coal handling structures and considering the interest from developers, reposition the site for resale.

The plant entrance and southern portions of the property are located in the Borough of Phoenixville, while the balance of the property is located in East Pikeland Township. The plant property consists of two parcels comprising approximately 147.47 acres situated along the eastern bank of the Schuylkill River. The Site is accessible by rail serviced by Norfolk Southern railroad and water access on the Schuylkill River.

**The Site has the following key site attributes:**

- **Large Site in Cohesive Ownership:** Site ownership is held by W.P. Cromby, LLC along with the substations and associated right-of-ways owned by PECO Energy.
- **River Access:** In total, the Site has approximately 6,450 linear feet of direct frontage along the Schuylkill River.
- **Highway Access:** The Site is located just west of downtown Phoenixville and is 5 miles from Route 422 and 7 miles from I-76 the PA Turnpike, entrance # 320.
- **Rail Access:** Approximately 3,600 linear feet of Norfolk Southern (NS Line) mainline track lies within the Site. The tracks cross a bridge over the Schuylkill River, approximately 2,900 ft. downstream of the plant.

PECO Energy (PECO) operates four substations on the Site which have remained operational following the cessation of electrical generation activities at Cromby Generating Station. These are the 33 kV,

**LARGE SITE IN COHESIVE OWNERSHIP**



**RIVER ACCESS**



**HIGHWAY ACCESS**



**RAIL ACCESS**



220 kV, and 66 kV substations in the southern portion of the Site, and the 132 kV substation in the northern portion of the Site. The three substations on the southern portion of the Site are surrounded by a single fence and make-up 6.6 acres; the northern substation stands on its own and is also surrounded by a fence and is just over one-half acre. PECO's substations are situated on land owned by Exelon Generation and leased to PECO. Refer to Figure 1.2.2, providing labeling of the key components of the Site including the location of the substations.

Petrochemical, natural gas, domestic water and telecom services to the Site have been investigated. The utility infrastructure for these services remain intact but have been closed off or disconnected. There is no sanitary sewer service to the Site. The storm sewer infrastructure throughout the Site is extensive but was largely sealed off when the plant ceased generation; however, key drainage structures are intact and operational. Discharge permits with the Pennsylvania Department of

Environmental Protection (DEP) remain. We have found no information on river withdrawal piping and pumps. The plant cooling water discharge pipes, which is separate from the storm sewer system is also intact.

Mariner East 1&2 Pipelines: Approximately 2,400 linear feet of two major natural gas liquids (NGL) pipelines is located just south of the Site to provide additional fuel, chemical feedstock, or to transfer product.

The Site has a diversity of recreational uses created from the property owned dam and associated fish ladder. Hiking/biking trails run on both sides of the Schuylkill River, with terminus points in Philadelphia. A boat ramp allows for access to the river with fishing and boating options.

Downtown Phoenixville has experienced major redevelopment with new restaurants, brewery's and entertainment. This is only 1 mile from the Site and is connected through the trail system.

**FIG 1.2.2  
SITE ASSESTS**



STRUCTURE	USAGE
<b>A</b> 2 MILLION GALLON FUEL OIL AST (DECOMMISSIONED)	# 6 FUEL OIL USED IN BOILER #2
<b>B</b> COAL (CRUSHER HOUSE)	PROCESSED COAL CONVEYED TO THE BOILER
<b>C</b> "COAL OFF-LOADING BUILDING (DUMPER HOUSE)"	COAL WAS DELIVERED FROM C TO BE CRUSHED AND CONVEYED TO PLANT
<b>D</b> SPENT SULFURIC ACID TANK	WASHOUT FROM CLEANING BOILERS
<b>E</b> AUXILIARY BOILER BUILDING	SMALL BOILER HOUSE
<b>F</b> "WASTE PRODUCTS ASH MANAGEMENT – SO2 BLDG. (SCRUBBER BUILDING)"	NEUTRALIZATION TANKS (FLY ASH TREATMENT)
<b>G</b> "WASTE PRODUCTS ASH MANAGEMENT – SO2 BLDG. (SCRUBBER BUILDING)"	NEUTRALIZATION TANKS (FLY ASH TREATMENT)
<b>H</b> MAIN BOILER HOUSE	10 STORY BOILER HOUSE
<b>I</b> MGO & MGSO3 SILOS	AIR EMISSIONS TREATMENT
<b>J</b> EMISSION STACKS	TOWERS HEIGHT OF ~300'
<b>K</b> CONDENSATE ASTS	BOILER MOISTURE STORAGE
<b>L</b> WASTEWATER TREATMENT PLANT	PROCESS WASTEWATER TREATMENT
<b>M</b> SUBSTATION #2 (SECONDARY PECO)	POWER REDUCTION
<b>N</b> TURBINE HALL	POWER TURBINES
<b>O</b> INTAKE SCREEN HOUSE	SCHUYLKILL RIVER WATER INTAKE
<b>P</b> MAINTENANCE SHOP	EQUIPMENT MAINTENANCE
<b>Q</b> PUMP HOUSE	CIRCULATING WATER INTAKE
<b>R</b> SUBSTATION #1 ( MAIN PECO)	STEPUP VOLTAGE
<b>S</b> FORMER COAL STORAGE YARD	CLOSED COAL STORAGE AREA (REPORTEDLY REMEDIATED)
<b>T</b> MAINTENANCE EQUIPMENT STORAGE BUILDING	LOADING AND OFF-LOADING EQUIPMENT STORAGE & FORMER FLYASH STORAGE. (NOT SHOWN IN PICTURE 100YARDS TO THE SOUTH).
<b>U</b> NORFOLK SOUTHERN RAIL LINE	COAL TRANSPORTATION, FORMER LARGE RAILROAD SWITCHYARD
<b>V</b> BLACKROCK DAM & FISH LADDER ON SCHUYLKILL RIVER	DOWN-RIVER FROM THE SITE, FOR WATER STORAGE FOR PUMPING AND FISH PASSAGE. (NOT SHOWN IN THE PICTURE 1 MILE FROM THE SITE).
<b>W</b> NATURAL GAS HEATING UNIT	NATURAL GAS HEATING OFF THE 16" PIPELINE BEFORE ENTERING THE PLANT
<b>X</b> #2 OIL & #6 OIL PUMP HOUSE	MOVING OIL TO #2 BOILER
<b>Y</b> BUCKEYE PIPELINE	16" GAS LINE INTO BOILER
<b>Z</b> TWO 20,000 GALLON #2 FUEL OIL ASTS	IGNITION FUEL FOR BOILERS (NOT VISIBLE IN THE PICTURE, NORTH OF PUMP HOUSE BUILDING (X))
<b>AA</b> CAUSTIC TANK 20,000 GALLON	FLY ASH TREATMENT
<b>BB</b> COAL PILE RUNOFF TREATMENT BUILDING	FORMER NORTH POND PUMP HOUSE
<b>CC</b> FORMER SEWAGE TREATMENT PLANT	SEWAGE TREATMENT (NOT SHOWN; LOCATED EAST OF THE MGO SILOS)

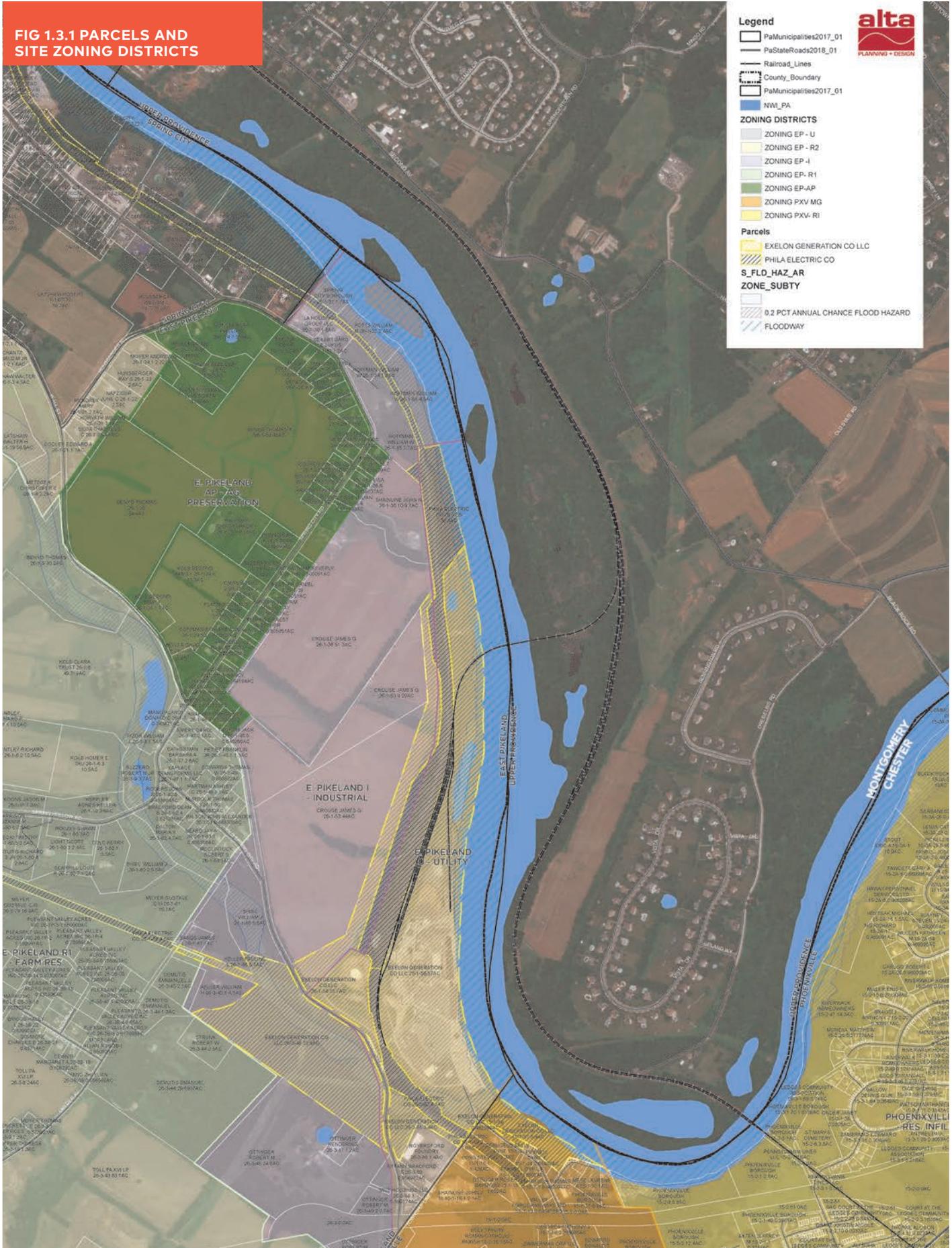
### 1.3 MARKET ANALYSIS SUMMARY

The location of the Site relative to the regions commerce and population growth presents a variety of redevelopment opportunities from a market demand perspective. These include light industrial, transportation center, life science center, agriculture, office park, headquarters building and energy generation facility.

Some issues that affect the usable space for development include the presence of floodways and floodplains, highway access for transportation, and current zoning. The flood zones prevent development on the Site until the floodplain is addressed by either receiving a variance for new development or raising the existing grade so the elevation is out of the flood zone. A lack of access to major highways limits some of the potential end uses of the Site. The current plans for Route 422 will address traffic congestion and highway access issues. Current land-use restrictions may also limit the ability to redevelop the Site depending on the preferred reuse options. Figure 1.3.1 shows the parcels and Site zoning districts that make up the Site and surrounding properties.

Reusing the Site for energy production is possible; however, interviews with stakeholders in the surrounding municipalities led to the conclusion that they are more focused on redevelopment efforts outside of heavy industrial uses. Current growth within the life sciences industry for the Philadelphia region presents opportunities for new business incubator facilities. The Site also provides options for the largest employment sector in Chester County, agriculture, as the Site features make it appropriate for indoor commercial produce farming through the deployment of hydroponic systems. Through our stakeholder interviews, some members of the community also expressed their interest in potentially using the Site as a recreational asset as it already sits adjacent to the Schuylkill River Trail, in addition to its primary use to promote a live, work, and play philosophy. The theme of enhancing recreational assets is presented in both Chester County's and Phoenixville's regional economic development plans.

FIG 1.3.1 PARCELS AND SITE ZONING DISTRICTS



## 1.4 REUSE STRATEGY ALTERNATIVES SUMMARY

In response to the aforementioned characteristics, four strategic alternatives for developing the Site have been prepared. These include:

- Light Industrial
- Septa Rail Station and or Rail Car Storage
- Executive Office Park
- Energy Generation Facility

These are presented in ranked order based on factors presented in Sections 3 and 4. Each alternative responds to market forces in a different way, thus providing a menu of “plays” designed to appeal to a range of differing investor/developer goals.

### REUSE STRATEGY A

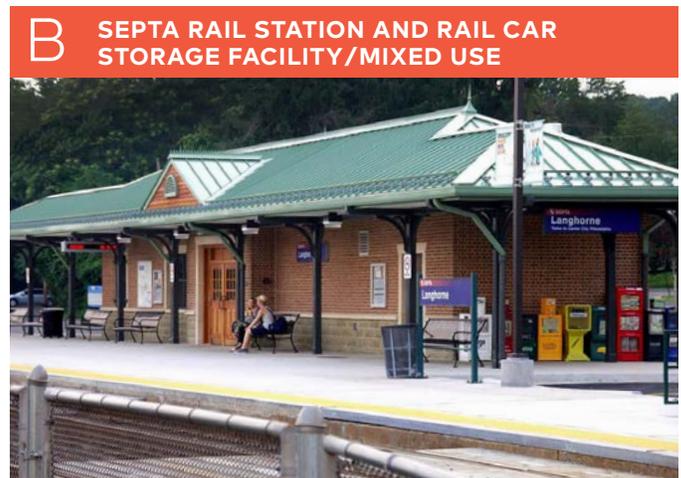
#### Light Industrial Park/Mixed Use (Residential)

Use of the former power generation area as light industrial to accommodate life science, agriculture, and incubator facilities utilizing laboratory and research facilities, as well as light manufacturing. This accounts for nearly 55 of the 147 acres of the Site. The strategy also incorporates residential development on areas of the property adjoining with planned or current residential use, accounting for 22 acres. Renewable energy is included in the form of rooftop solar to be built onto the planned structures.

### REUSE STRATEGY B

#### Southeastern Pennsylvania Transportation Authority (SEPTA) Rail Station and Rail Car Storage Facility/Mixed Use

The region would be supported by adding a SEPTA rail station, thus extending the light passenger rail system up to Phoenixville. The current rail line, Reading Main Line, owned by Norfolk Southern has a connection into the SEPTA system. We have also incorporated residential development on areas of the property adjoining with planned or current residential use and retail which will complement the commuters. Renewable energy in the form of rooftop solar will be constructed onto the planned structures. The Site will serve as a needed rail car storage area for a very limited number of cars.



## REUSE STRATEGY C

### Executive Office Park/Mixed Use

Use of the former power generation area as executive office park/mixed use can accommodate various headquarters and executive office space—approximately 490,00 sq. ft. of office space and 90,000 sq. ft. of commercial mixed use space. We have also incorporated residential development on areas of the property adjoining with planned or current residential use and retail which will complement the employees of the office park. Renewable energy in the form of rooftop solar to be built onto the planned structures.

## REUSE STRATEGY D

### Power Generation Plant

Use of the majority of the former power generation area as a combined-cycle natural gas-fired power plant. This accounts for nearly 55 of the 147 acres of the Site. The remaining acreage will be used for linear development and remaining buffer zones creating further recreational and ecological uses. This option utilizes the current infrastructure from the former power plant including substations and transmission lines.

A second energy option considers the Site for ground mount solar. This will utilize nearly 30 acres of the Site and account for 5 MW of energy production. The ground mount solar is proposed only as a future option as currently the finances do not work with the PA market. Residential units will still be constructed within the 22 acres that adjoin properties with current or planned residential use.

### C EXECUTIVE OFFICE PARK/ MIXED USE



### D POWER GENERATION PLANT



## 1.5 RECOMMENDED ACTIONS & SCHEDULE SUMMARY

The Site is best suited for reuse as a light industrial site with many options supporting the strong industries located in Chester County. The Site could support Life Sciences start-ups and potential incubator parks, to facilities supporting Chester County's largest employment sector, Agricultural.

Of the four redevelopment strategies presented, the financial feasibility analysis indicates that three reuse strategies — light industrial park/residential, executive office/headquarters, and the power plant site — are financially viable without the need for public subsidy, while Reuse Strategy B, Transportation, would require public subsidies in the range of \$25-50 million for rail improvements. The public dollars would support rail improvements including upgrades to the Black Rock Tunnel.

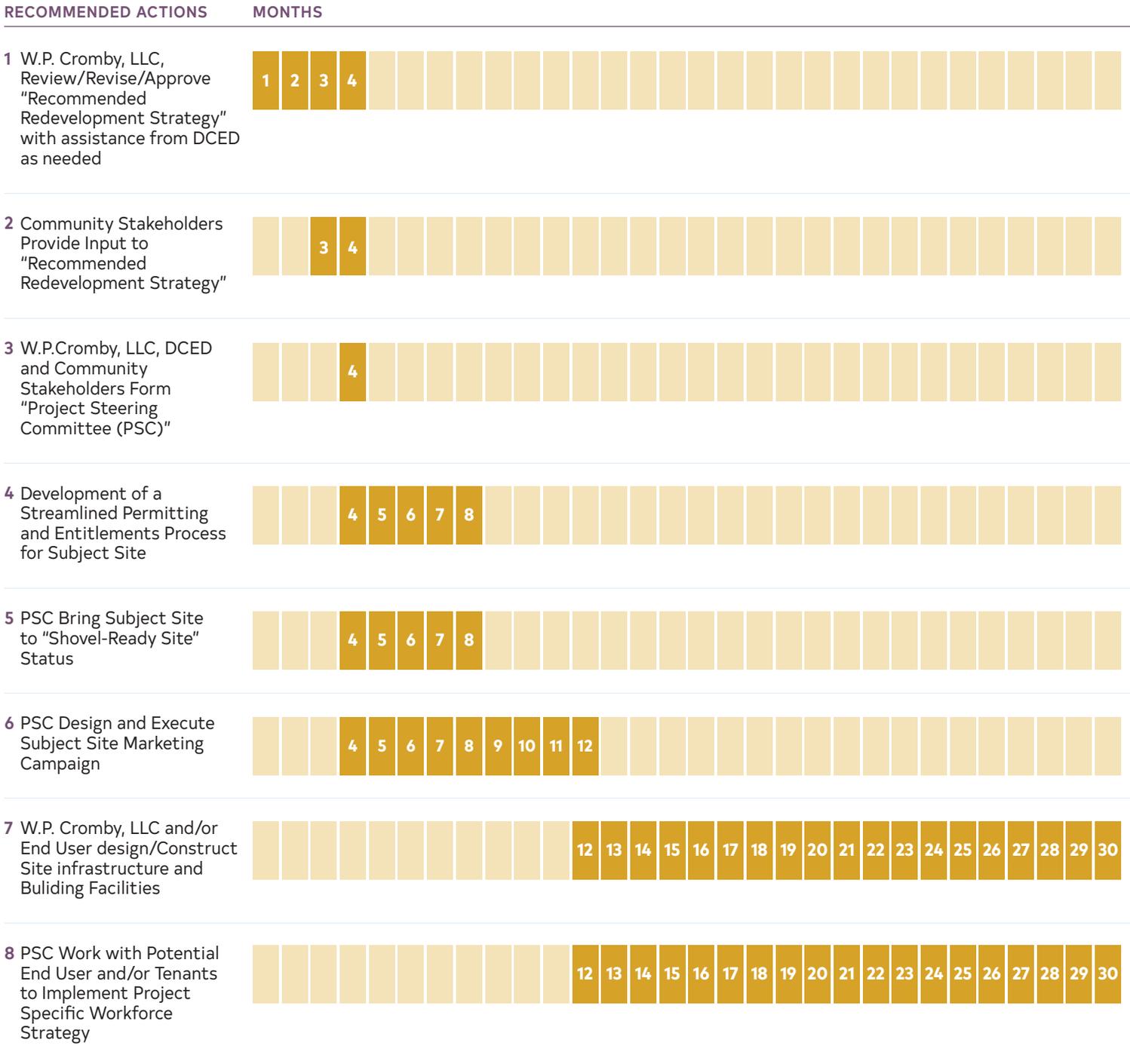
During construction, Reuse Strategy D could yield over 1,200 new jobs over an estimated two-year period and over \$2.4 million in new annual tax revenue. Once constructed, the power generation facility would employ 20 full time positions and yield annual revenues of \$200,000,000.00. While Reuse Strategies A and C would create hundreds of new jobs and \$1.8-2.4 million millage revenue, permitting could take 2-3 years to complete before construction would begin.

Assuming the existing power plant is demolished the existing infrastructure will enable Reuse Strategy A and C to be started quickly. Reuse Strategy B, Transportation, will require infrastructure investments to bring the light rail beyond the site and possibly improvements to the Black Rock Tunnel that may take more time.

**The Potential Redevelopment Implementation Schedule shown on the following page identifies recommended actions and a timeline.**

FIG 1.5.1

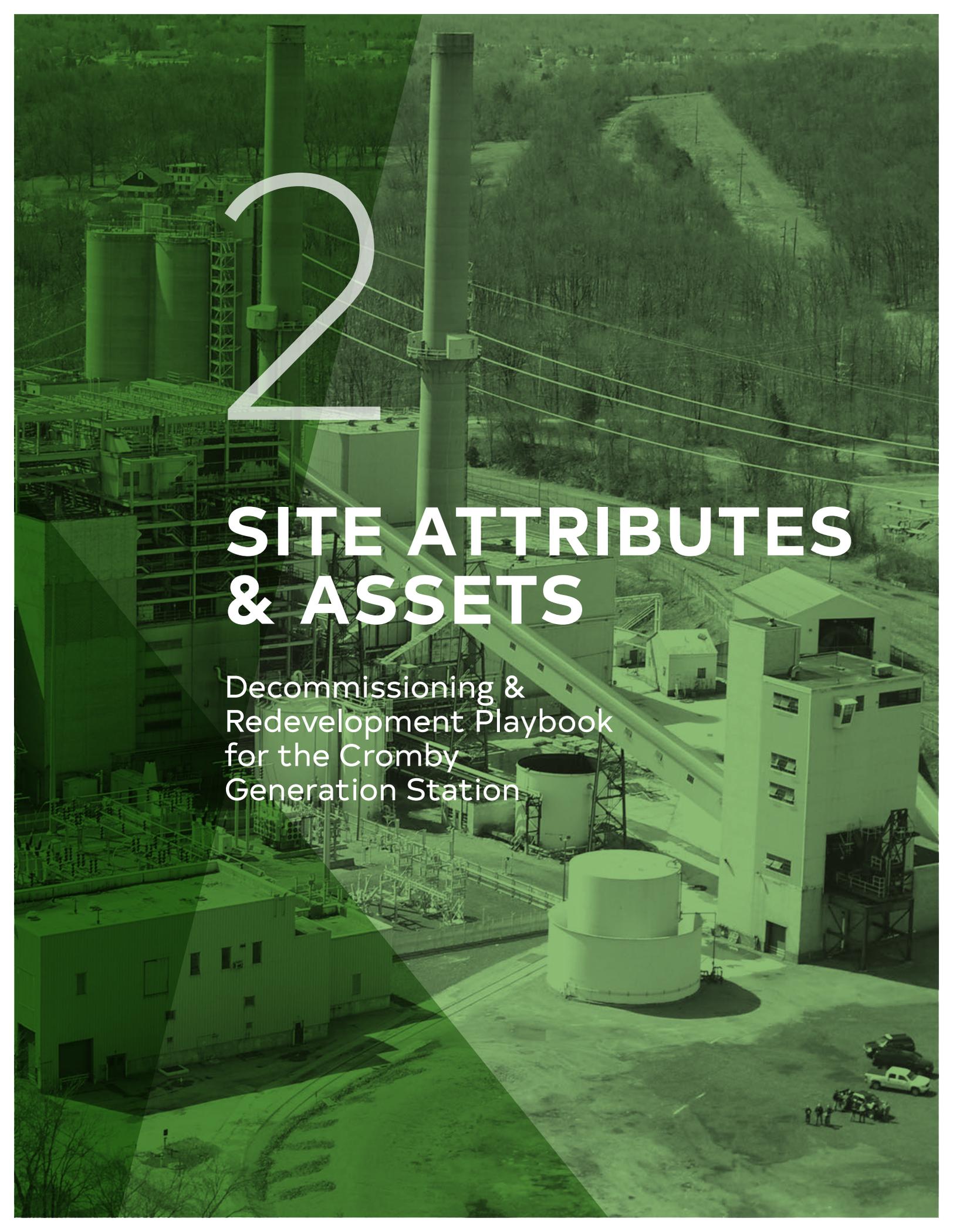
# Potential Redevelopment Implementation Schedule



# 2

## SITE ATTRIBUTES & ASSETS

Decommissioning &  
Redevelopment Playbook  
for the Cromby  
Generation Station



## 2.0 SITE ATTRIBUTES & ASSETS

The purpose of this section is to summarize existing site conditions related to redevelopment of the Cromby Generating Station Property (Site).

For more detail related to the content of this section, see the following appendices this Playbook document:

- Appendix A – Phase I Environmental Site Assessments
- Appendix B – PA Brownfield Sites Information
- Appendix C – Abatement & Demolition Narrative & Cost Estimates
- Appendix D – Permit Documents Analysis
- Appendix E – Utility Infrastructure Assessment
- Appendix H – Energy Options Assessment

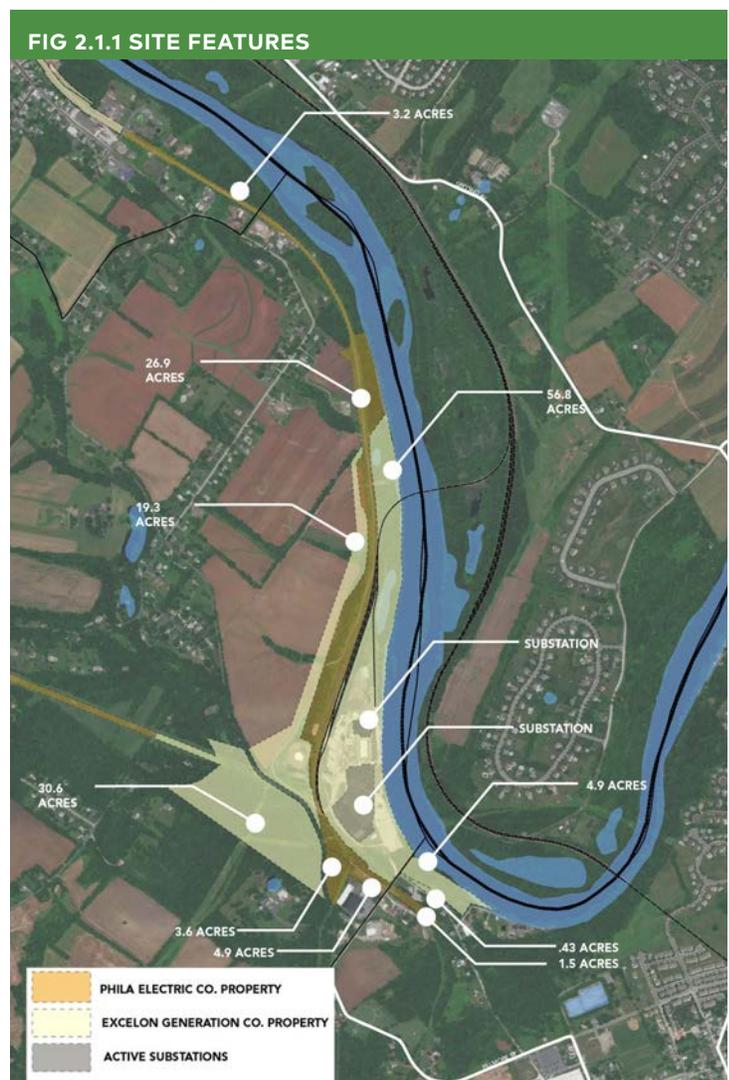
## 2.1 SITE ATTRIBUTES & ASSETS HIGHLIGHTS

The Site is located approximately 27 miles northwest of Philadelphia, in Chester County Pennsylvania. Most of the Site is located in East Pikeland Township, with a small portion located in Phoenixville Borough. Figure 2.1.1 illustrates the Site features.

The Site is comprised of the following key site attributes:

- **Ownership:** The Site is currently owned by W.P. Cromby, LLC who is actively pursuing redevelopment opportunities.
- **Size and Zoning:** The Site is a large property consisting of 147.47 acres with zoning sections including utility, industrial, and residential.
- **River Access:** The Site has approximately 6,450 linear feet of frontage along the Schuylkill River, renowned for its recreational uses.
- **Major Road access:** The Site is within a 10 minute drive of US 422, a major trucking and commuter highway, and the PA Turnpike. However, access to the Site can only be achieved on local roads that provide an average of 21' of cartway width.

- **Multimodal Transportation Access:** The Site is currently served by the Schuylkill River Trail that extends north to East Coventry Township, and South to Philadelphia.
- **Rail Access:** Over 12,000 linear feet of track, including the bridge over the Schuylkill River, lies within the Site and has the potential to connect with the Southeastern Pennsylvania Transportation Authority (SEPTA) commuter service.
- **Pipelines:** Natural Gas – Philadelphia Electric Company, Hazardous Liquid Pipeline – Laurel Pipeline Co./Buckeye Partners, Hazardous Liquid Pipeline – Interstate Energy Company.
- **Existing Utilities:** Two operating Philadelphia Electric Company substations are located within the Site. The utilities serving the Cromby Power Plant are largely in place.



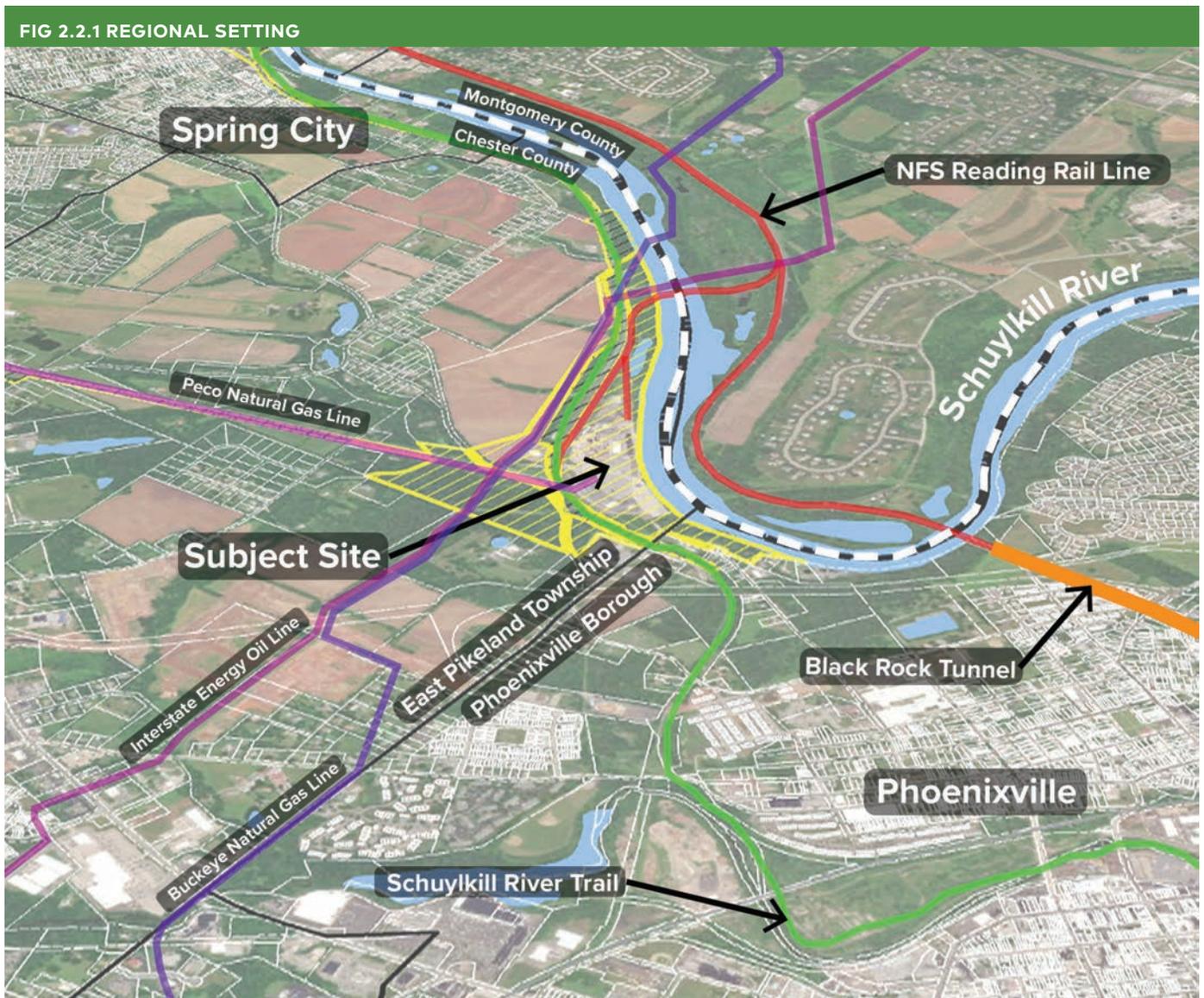
## 2.2 REGIONAL SETTING

The Site is located approximately 24 miles northwest of Center City Philadelphia along the Schuylkill River. The closest major employment center is King of Prussia located just 8.5 miles southeast of the Site. The closest major town is Phoenixville located just 1.0 mile southeast of the Site. The region is home to mostly residential properties with small urban town centers and a few industrial properties.

Roadway access to the Site is provided by local roads including Township Line Road, which intersects with PA Route 23. There is limited highway access to the

Site. The PA Turnpike entrance #320 is 7 miles from the Site and Route #422 can be accessed at the Oaks exit approximately 5 miles away. The Schuylkill River Trail, a multi-use trail which runs through the Site, provides a pedestrian and non-vehicular transportation connection to the Site. The Schuylkill River Trail stretches from Philadelphia to Phoenixville and when complete will connect Philadelphia to Pottsville, Pennsylvania. Figure 2.2.1 illustrates.

The Site is adjacent to residential properties to the south and farmland to the west. The Site is bounded by the Schuylkill River to the east.



The Site is comprised of six separate, cohesive land units adjacent to one another, as shown in the aerial view (Figure 2.2.2):

- **Power Generating Station (Parcel 26-1-56):** ± 57 acres bounded by Schuylkill River, Cromby Road, a railroad corridor, and agricultural land.
- **Bulk Fuel Oil Parcel (Parcel 26-1-54):** ± 18 acres bounded by a railroad corridor, agricultural land, Spring City Road, and wooded land.
- **Undeveloped Parcel (Parcel 26-3-46):** ± 32 acres bounded by Spring City Road, light commercial facilities, Bulk Fuel Oil Parcel, undeveloped wooded land, and residential parcels.

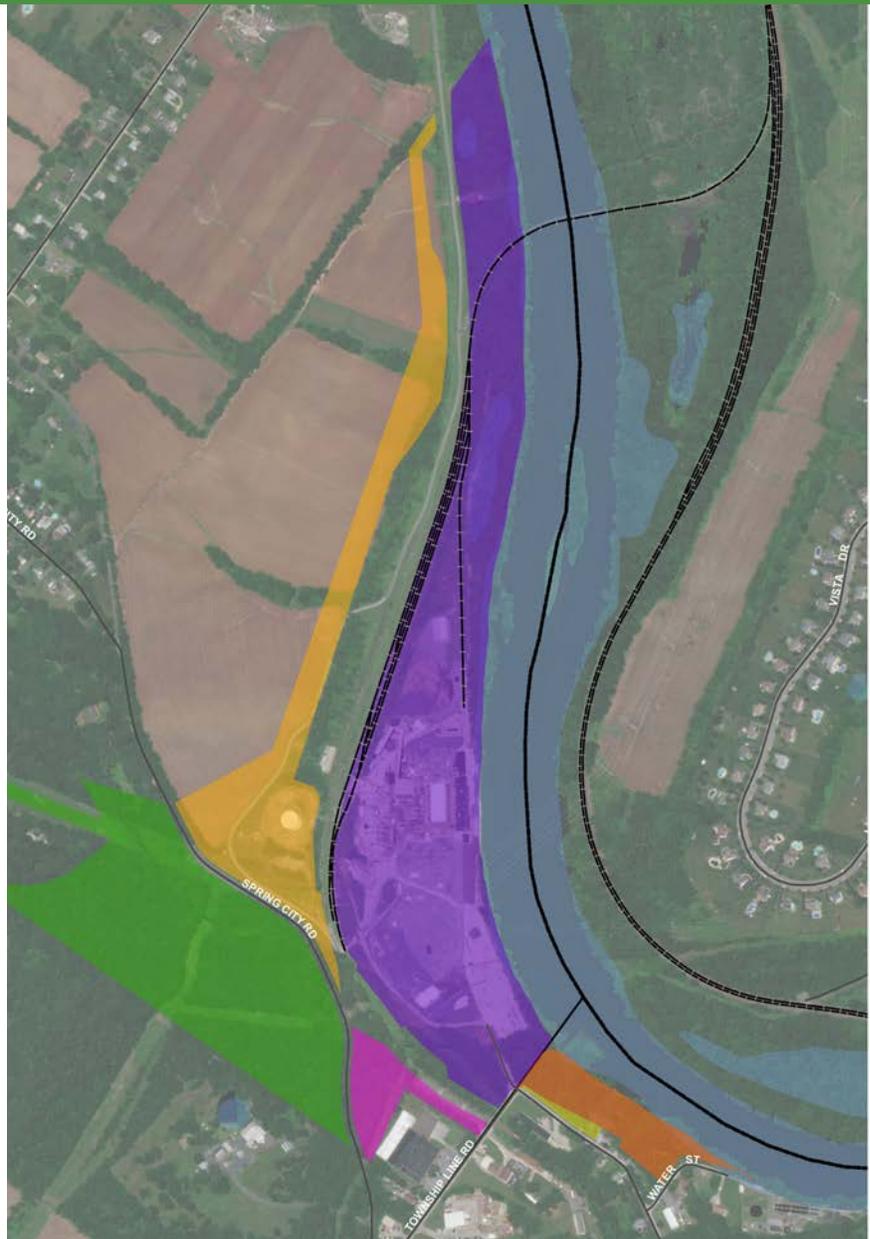
- **Undeveloped Parcel (Parcel 26-3-88):** ± 3.4 acres bounded by Spring City Road, former railroad corridor, light commercial facilities, and undeveloped wooded land.
- **Undeveloped Parcel (Parcel 15-1-31):** ± 5.9 acres bounded by the Schuylkill River, Power Generating Station Parcel, residential parcels, and Phoenixville Borough Water Plant.
- **Undeveloped Parcel (Parcel 15-1-19):** ± 0.5 acres bounded the Schuylkill River, Power Generating Station Parcel, residential parcels, Cromby Road, and Phoenixville Borough Water Plant.

FIG 2.2.2 PRIMARY LOTS AND ZONING DESIGNATIONS

### Legend

Parcels

-  Power Generating Station (26-1-56)
-  Bulk Fuel Oil Parcel (26-1-54)
-  Undeveloped Parcel (26-3-46)
-  Undeveloped Parcel (26-3-88)
-  Undeveloped Parcel (15-1-31)
-  Undeveloped Parcel (15-1-19)



## 2.3 EXISTING LAND USE

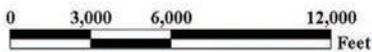
As shown by the Existing Land Use diagram, Figure 2.3.1, the Site is located within East Pikeland Township and Phoenixville Borough. Lands within East Pikeland Township are categorized within the Utility, Industrial, and Farm Residential districts. Lands within Phoenixville Borough are part of the Mixed-Use Growth district. Several large parcels surrounding the Site within East Pikeland Township include Farm, Residential and Agricultural preservation lands. A strip of property, owned by the

Philadelphia Electric Company, includes the Schuylkill River Trail that cuts through the Site providing pedestrian and non-motorized vehicle access to the Site. Hundreds of acres of land surrounding the Site are owned by or are under agreement by Residential development agencies. The Borough operates a water treatment plant just downstream from the Cromby Power Plant. The water treatment plant has intakes upstream and downstream from the power plant outfalls. The plant also depends on the slack water created from the Black Rock Dam.

FIG 2.3.1 EXISTING LAND USE

### LEGEND

-  Study Area Boundary
-  Municipal Boundaries
-  State Highway
-  Commercial
-  Low - Density Residential (>1 acre lot)
-  Medium - Density Residential (0.25 - 1 acre lot)
-  High - Density Residential (< 0.25 acre lot)
-  Non - Preserved Agriculture
-  Preserved Agriculture
-  Open Space (homeowner associations, etc.)
-  Recreation (public and private parks, golf courses, etc.)
-  Community Services (hospitals, nursing homes, etc.)
-  Institutional (schools, churches, etc.)
-  Industrial
-  Mining
-  Utility and Transportation
-  Vacant

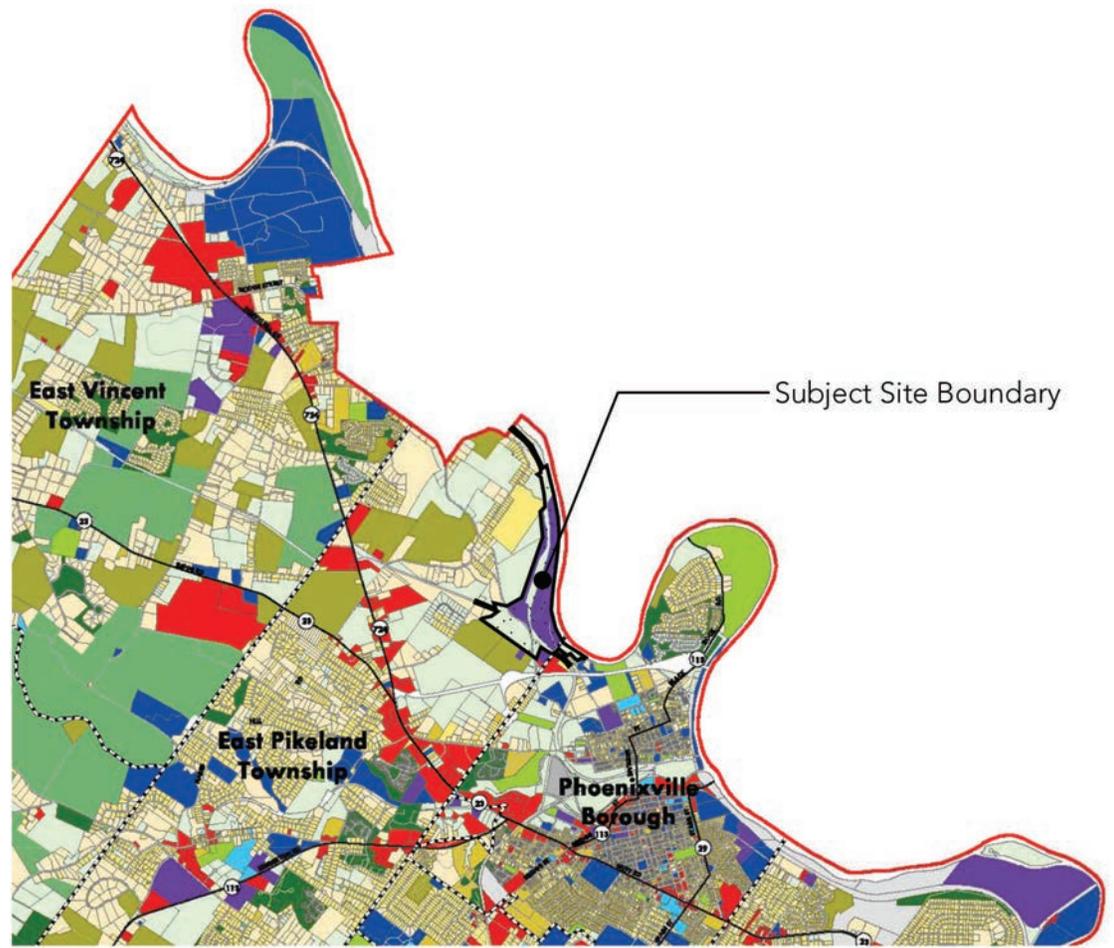


**Kise Straw and Kolodner**

in association with:

Urban Partners  
Cahill Associates  
Smith & McMaster  
Traffic Planning & Design

Note : GIS Land Use Data provided by  
Chester County Bureau of Land Records

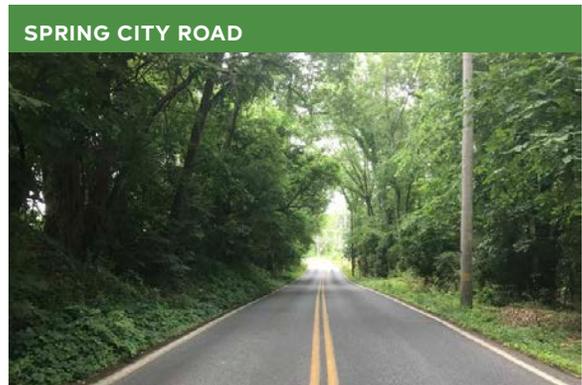


PARTIAL MAP FROM PHOENIXVILLE REGIONAL COMPREHENSIVE PLAN, ADOPTED 2008

### Roadway Perimeters Observations

- **SPRING CITY ROAD** cuts through the Site and provides views into the Site when looking northeast. Typical cartway width of Spring City Road in the vicinity of the Site is 21'
- **TOWNSHIP LINE ROAD** separates Phoenixville Borough with East Pikeland Township. It provides access to the Site from the southwest and connects with PA Route 23 after 1.2 miles. Typical cartway width of Spring City Road in the vicinity of the Site is 20'
- **CROMBY ROAD** is a local residential road that provides access to the Site from the southeast and connects with the town of Phoenixville. Typical cartway width of Spring City Road in the vicinity of the Site is 23'
- **WATER STREET** briefly abuts the Site to the southeast and is the access road to the Phoenixville Borough Water Plant. Typical cartway width of streets like Water Street in the vicinity of the Site are typically 21'
- **SNYDER AVENUE** for a very short distance abuts a small section for the Site to the west. Typical cartway width of Snyder Avenue in the vicinity of the Site is 9'-18'.

The photos illustrate the local streets connecting the Site.





## EAST PIKELAND TOWNSHIP

As indicated, current Site zoning is a mix of the following:

### I – Industrial District

The Industrial District is designed to provide for the full range of industrial uses that are a proper complement to other land uses in the Township and to encourage the development of larger tracts for industrial use in industrial park settings. Certain residential, office, and commercial uses that are compatible with industrial uses are also permitted in the I District. All uses permitted by Right, Special Exception or as a Conditional Use shall comply with established performance standards to mitigate potential impacts on adjacent uses and districts.

**PERMITTED USES:** A building may be erected, altered or used and a lot may be used or occupied for any one or more of the following purposes and no other.

- a) Research, Engineering or Testing Laboratory
- b) Printing, Publishing, Binding and similar operation
- c) Wholesale and Distribution Center, Warehousing, Trucking Terminal
- d) Manufacturing, Assembly, Cleaning, Testing or Repair of Materials, Goods, Foodstuffs or Products except for those manufacturing activities expressly permitted only by Special Exception in Section 1301.2
- e) Contractor's Establishment
- f) Business or Professional Office
- g) Passenger Station for Public Transportation
- h) Trade or Industrial School or similar use.
- i) "Big Box" Retail Establishments over forty thousand (40,000) square feet gross floor area
- j) Greenhouse
- k) Forestry in accordance with the provisions of Section 1823
- l) Township Municipal Use.

- m) Uses customarily accessory to the above permitted uses, but not including retail sales
- n) Agriculture in accordance with Section 1809

## U — Utility District

The Utility district is designed to provide for Electric Utility Facilities that generate, produce, collect, supply, manufacture or deliver electricity to the Pennsylvania-Jersey-Maryland Interconnection (PJM) Power Grid, or other electric transmission operator, distributor, or reseller, and to encourage the development and redevelopment of areas zoned U for such use whether owned by a private entity or public utility. All uses permitted by Right, Special Exception, or as a Conditional Use shall comply with established performance standards to mitigate potential impacts on adjacent uses and districts. PJM is a regional transmission organization (RTO) that coordinates the movement of wholesale electricity in all parts of Delaware, Illinois, Indiana, Kentucky, Maryland, Michigan, New Jersey, North Carolina, Ohio, Pennsylvania, Tennessee, Virginia, West Virginia and the District of Columbia. PJM would coordinate any new generation being added from this Site onto the transmission grid.

**PERMITTED USES:** A building may be erected, altered or used and a lot may be used or occupied for anyone or more of the following purposes and no other.

- a) Any use permitted in the I Industrial District

## R1 — Farm Residential

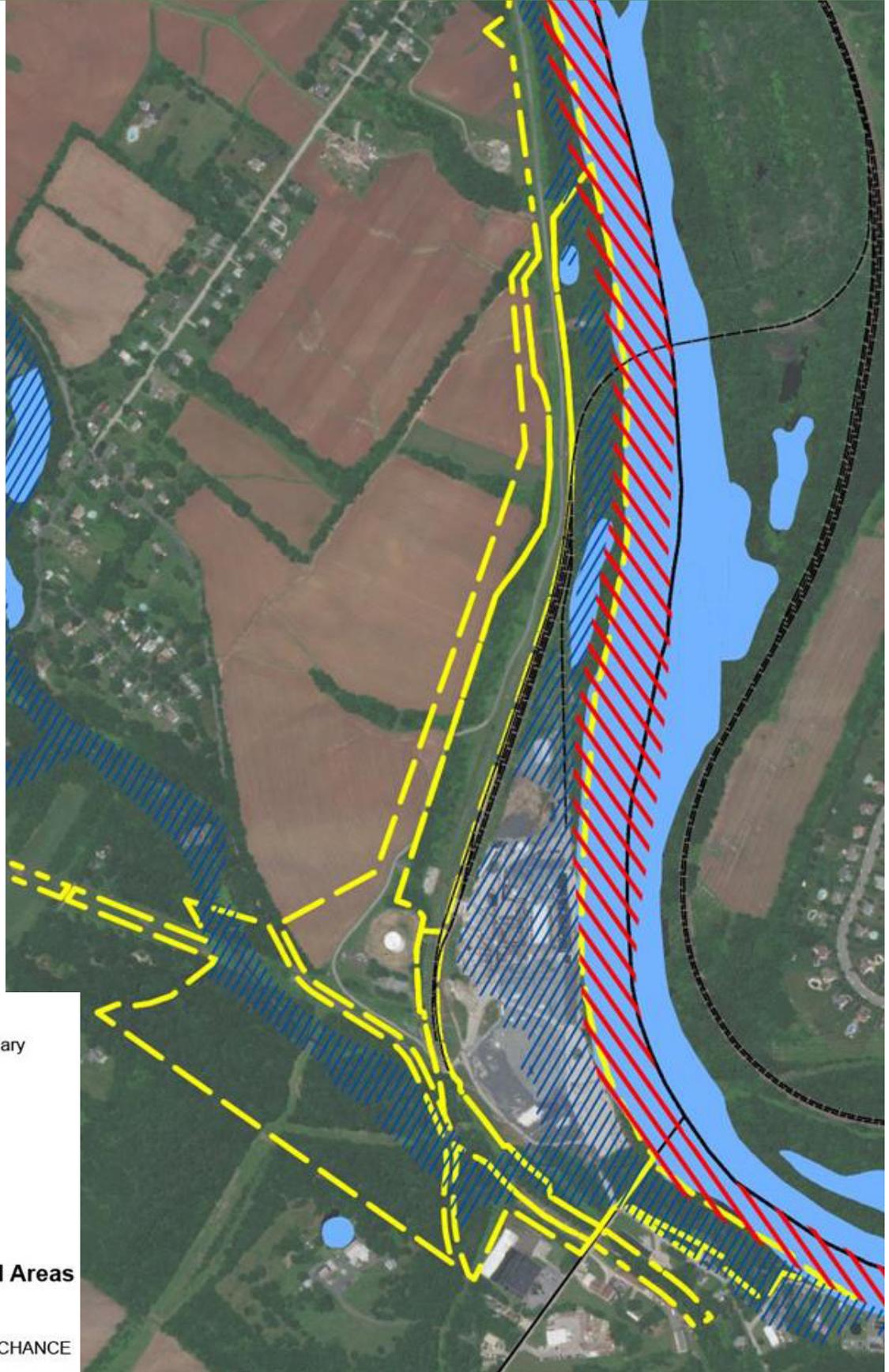
It is the purpose of the R-1 District to: foster the protection of critical natural resources, such as streams, floodplains, wetlands, wet soils, steep slopes, woodland, wildlife habitat areas, very low or variable groundwater yield areas and areas of the scenic and historic Pickering Creek Valley;

encourage and promote continued agriculture, open space, recreation and conservation uses while also permitting low density residential development that will be consistent with the existing residential development and perpetuate the rural character of the area; and also, by providing a Reduction in Lot Size Option to enable landowners within the R-1 District to develop in a manner other than lot by lot which will provide a greater variety of type, design and layout of dwellings, reductions in development and improvement costs and preservation of open space, agriculture and environmentally sensitive areas. In addition, the R-1 District, is intended to maintain areas of low population density compatible with the existing patterns of land use and lack of public sewage or road capacities (both existing and planned) within the District. Residential densities and design configurations, as well as non-residential use opportunities are established as a means to achieve this land conservation objective and as appropriate components of the overall pattern of land use that is provided throughout the Township.

**PERMITTED USES:** A building may be erected, altered or used and a lot may be used or occupied for any of the following purposes and no other:

- a) Agriculture, in accordance with the provisions of Section 1809 and Section 1818
- b) Single-family detached dwelling
- c) Township Municipal Use
- d) No-Impact Home-Based Business, in accordance with the provisions of Section 1806
- e) Forestry in accordance with the provisions of Section 1823
- f) Accessory use on the same lot with and customarily incidental to any of the foregoing permitted uses including, but not limited to, those described in Section 1803 and Section 1804.

FIG 2.3.2 FLOODWAY AND FLOODPLAINS



**Legend**

-  Municipality Boundary
-  County Boundary
-  Railroad Lines
-  Pa State Roads
-  Water
-  Site Boundary

**Floodzone Harzard Areas**

-  FLOODWAY
-  0.2 PCT ANNUAL CHANCE FLOOD HAZARD

### Flood Protection Zone Description:

The identified floodplain area shall be those areas of East Pikeland Township, Chester County, which are subject to the one hundred (100) year flood, as identified in the Flood Insurance Study (FIS) dated September 29, 2006 and the accompanying maps as prepared for the Federal Emergency Management Agency (FEMA), or the most recent revision thereof (Including all digital data developed as part of the Flood Insurance Study). Figure 2.3.2 illustrates the floodway and floodplains for the Site.

**A. Floodway (F1).** That portion of the Floodplain District required to carry and discharge the waters of the Base Flood Elevation without increasing the water surface elevation at any point more than one (1) foot above existing conditions, as demonstrated in the Flood Insurance Study referenced above and shown on the Flood Insurance Rate Map.

**B. Flood-fringe (F2).** Those portions of land within the Base Flood Elevation not included in the Floodway. The basis for the outermost boundary of this District shall be the Base Flood Elevation in the flood profiles of the above-referenced Flood Insurance Study and as shown on the Flood Insurance Rate Map.

**C. Approximated Floodplain (F3).** Those portions of land within the Floodplain District subject to inundation by the Base Flood Elevation, where a detailed study has not been performed, but where a Base Flood Elevation Boundary has been approximated by the Flood Insurance Study and Flood Insurance Rate Map referenced above. Where the specific Base Flood Elevation cannot be determined for this area using other sources of data such as the U. S. Army Corps of Engineers, Floodplain Information Reports, U.S. Geological Survey Flood-Prone Quadrangles, etc., then the Applicant for the proposed use, development and/or activity shall determine this elevation in accordance with hydrologic and

hydraulic engineering techniques. Hydrologic and hydraulic analyses shall be undertaken only by professional engineers or others of demonstrated qualifications, who shall certify that the technical concepts, studies, analyses, computations, etc., shall be submitted in sufficient detail to allow a thorough technical review by the Township.

The delineation of the Floodplain District may be revised, amended and modified by the Board of Supervisors in compliance with the National Flood Insurance Program when:

- 1) There are changes through natural or other causes;
- 2) Changes are indicated by future detailed hydrologic and hydraulic studies.

Property owners and/or developers shall provide the Township a letter from the Flood Insurance Administrator stating the modification to the floodplain is accepted. The property owners and/or developers are responsible for submitting all information and fees to the Flood Insurance Administrator to provide for the Flood Insurance Administrator approval. This includes but is not limited to Flood Insurance Administrator application forms, preview fees, hydrologic and hydraulic data and maps.

### BOROUGH OF PHOENIXVILLE:

As indicated, current Site zoning is the following:

#### **MG – Mixed Use Growth**

The Mixed Use Growth District includes the Cromby Road Uses and French Creek Valley Neighborhoods. These are areas that will accommodate most of the Borough's future growth and new zoning will require more detailed specifications to insure this development complements the Borough's development patterns and economic and housing needs.

## Permitted Uses

The uses listed below are permitted by right in the Mixed Use Growth zoning district. Such uses must specifically fall under the definition for potential development under the Zoning Ordinance and may also be subject to additional permitting requirements as established by the Borough's Codes Department.

[Amended by Ord. 2235, 7/8/2014]

- a) Accessory building
- b) Accessory building, residential
- c) Adaptive reuse
- d) Community gardens
- e) Group home
- f) Health and fitness club
- g) Home occupation, no-impact
- h) Hotel/motel
- i) Institutional
- j) Municipal uses
- k) Office use
- l) Outdoor café
- m) Outdoor market
- n) Parking garage, multilevel
- o) Residential uses
- p) Restaurant
- q) Retail goods and services
- r) Tavern/bar
- s) Temporary outside display
- t) Temporary structure
- u) Theater and entertainment center

## 2.4 EXISTING TRANSPORTATION

### a) Local Transportation Infrastructure

Roadway access to the Cromby Generation Plant Site is available via several local roads, all of which approach the south side of the plant. Cromby Road enters the main Site gate itself on the very southern edge of the Site; and it tees into Filmore Street. Both Comby Road and Filmore Street are under the jurisdiction of the Borough of Phoenixville (hereafter, Phoenixville). Township Line Road approaches the Site from the southwest and tees into Cromby Road just south of the Site; it is under the shared jurisdiction of East Pikeland Township and Phoenixville. Spring City Road, which is under the jurisdiction of East Pikeland Township, approaches the Site from the southwest. There is an abandoned and blocked dirt access road from Spring City Road to the Site, and this blocked road could be reopened to improve roadway access to the Site. Local roads, their jurisdictional status, and other local transportation assets are shown in Figure 2.4.1.

The Site is bordered to the west and north by the Schuylkill River Trail (SRT), a limited access hiking and bicycling trail that follows an abandoned railroad alignment. The SRT is owned, managed, maintained and developed by several organizations that form the Schuylkill River Trail Council. The Trail Council plans to close several gaps in connectivity to extend the trail from Philadelphia to Schuylkill County.

There are currently six miles of the Schuylkill River Trail in Chester County, running from Phoenixville to Parker Ford. Plans call for extending the trail from Parker Ford to Pottstown, which, when completed, will enable trail users to travel from Philadelphia to Reading, a distance of more than 60 miles. Details about the planned route and schedule can be found on Chester County's website.

A railroad spur owned by PECO bisects the property but lies generally to the west of the generation building and electrical substations. The spur divides into four tracks with switch-overs for railroad car storage and marshalling as shown in Figure 2.4.2. The railroad spur crosses the Schuylkill River approximately 0.5 miles north of the Site and joins the Norfolk Southern Railroad Company tracks approximately 0.75 miles northeast of the Site.

FIG 2.4.1 BASE ROADS

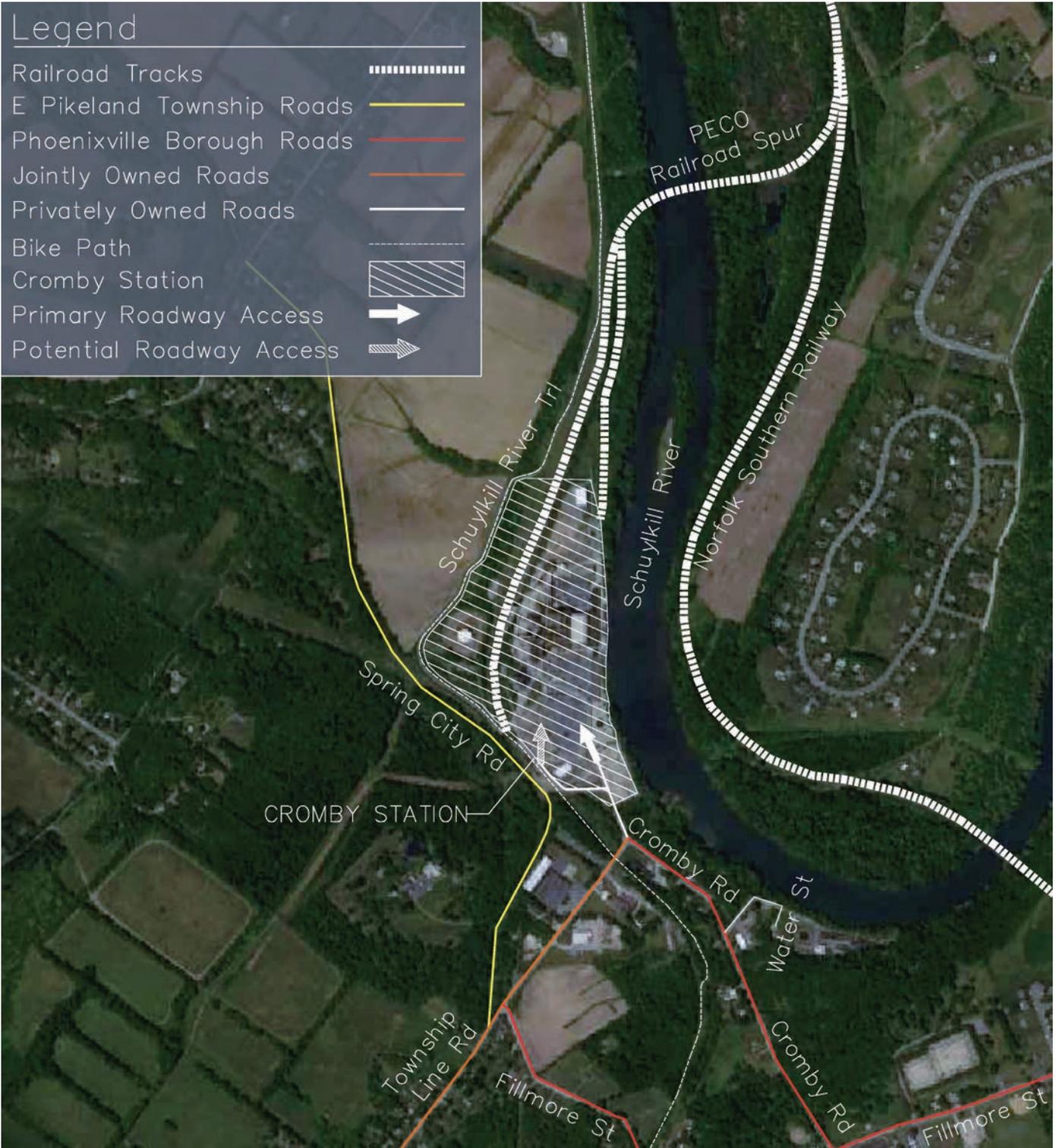
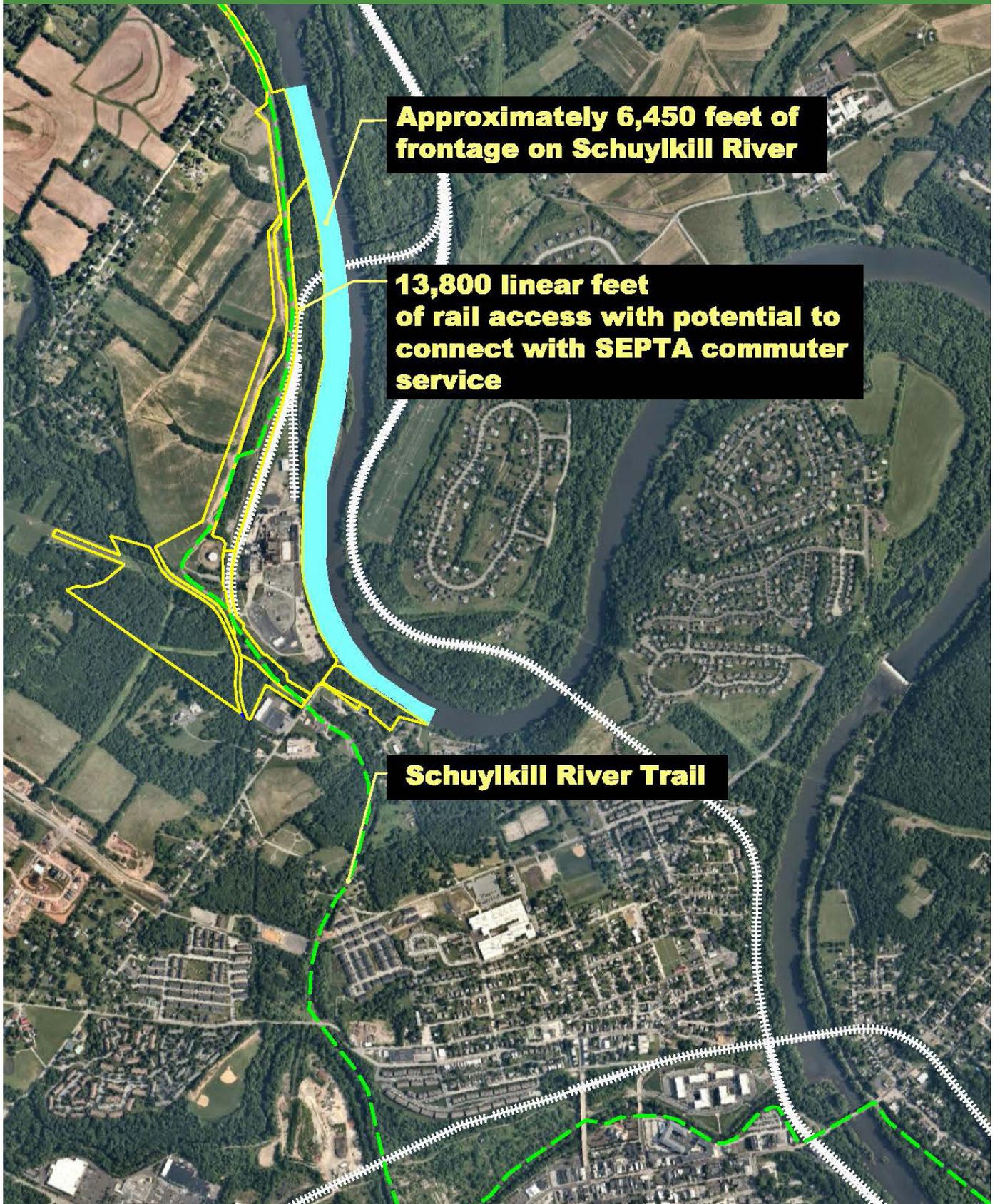


FIG 2.4.2 RAILROAD SPURS AND SITE FEATURES



The Site is bordered to the east by the Schuylkill River. The Black Rock Dam, a low-head dam, is located approximately 2.8 river-miles downstream. Locks in the dam are not operational, thus river transportation to and from the Site is severely limited. However, the dam does create a relatively consistent upstream pool which may be useful under some water withdrawal scenarios.

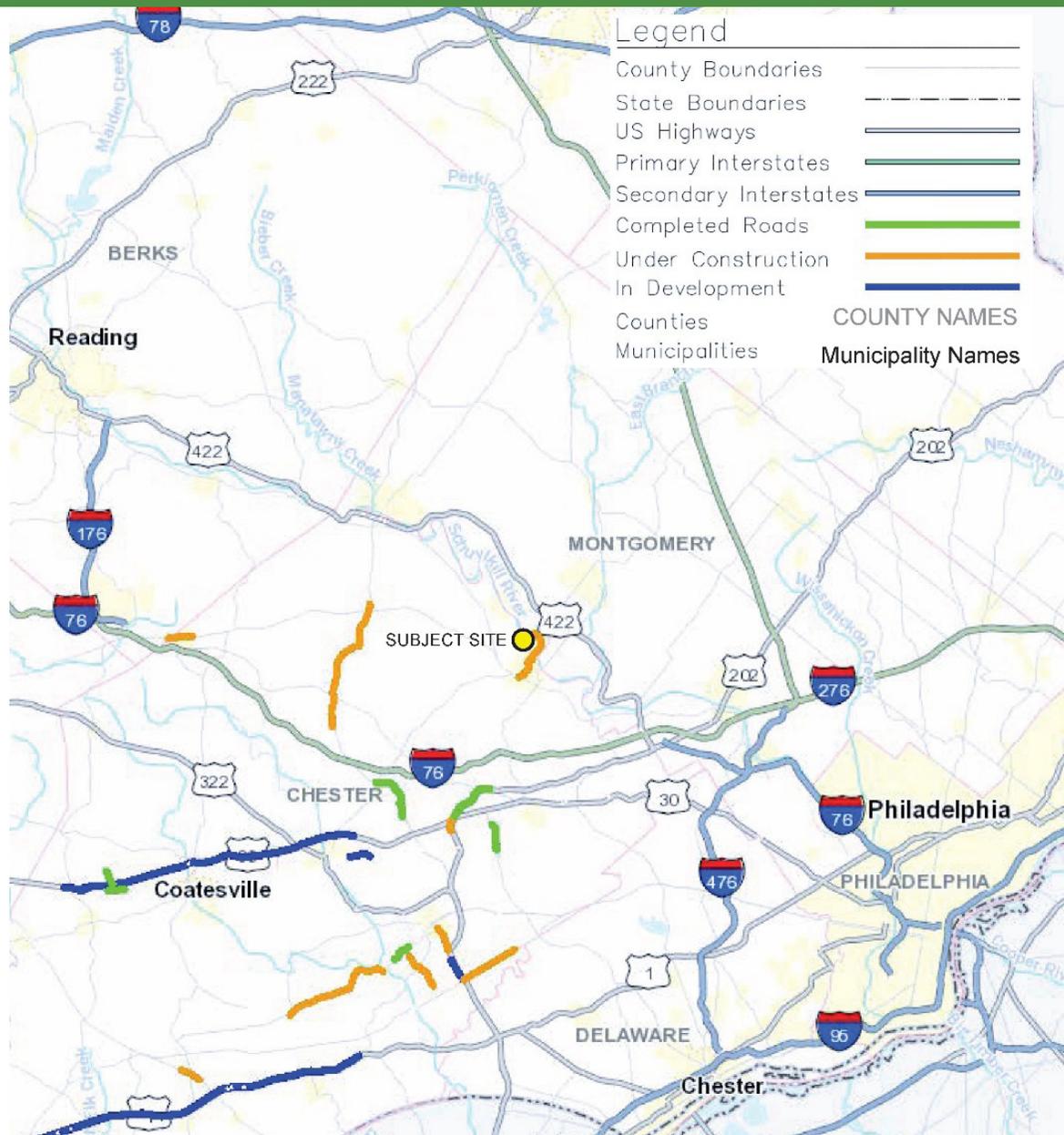
**b) Regional Transportation Infrastructure**

The Site has access to multiple limited-access highways, including the Pottstown Expressway and Interstate 76/East-West Turnpike.

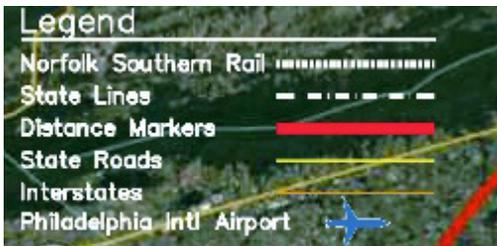
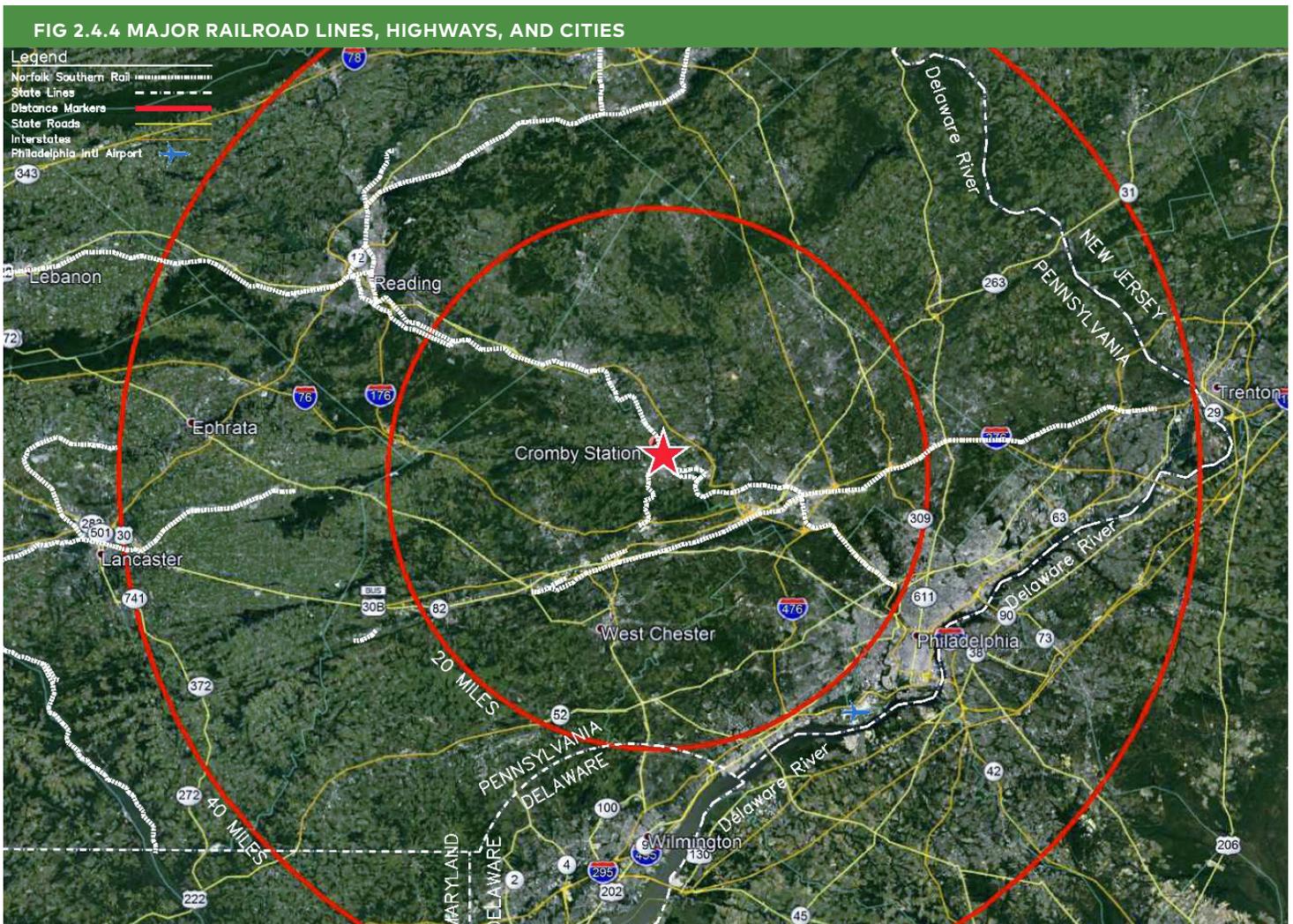
The Pottstown Expressway is located approximately 3 miles to the northeast of the Site or 4.25 miles by road. Interstate 76/East-West Turnpike is located approximately 5 miles to the south of the Site or 7 miles by road.

Information available from the Pennsylvania Department of Transportation (PennDOT) shows few major infrastructure improvements in the area, but there are minor projects for bridge rehabilitation and sidewalk and ADA work. Figure 2.4.3 shows regional highway infrastructure with current and proposed improvements.

**FIG 2.4.3 REGIONAL HIGHWAY INFRASTRUCTURE**



The Site is located in a region with well developed intermodal transportation infrastructure. As noted previously, a PECO-owned railroad spur connects to a Norfolk Southern Railroad line located 0.75 miles from the Site. This is a dual track main line extending from Philadelphia to Reading. The City of Philadelphia with an international airport and well developed deep water harbor is 22 miles southwest of the Site. The City of Wilmington, DE, is 24 miles directly south of the Site. Figure 2.4.4 shows the location of the Site with respect to major railroad lines, highways, and cities.



## 2.5 EXISTING UTILITIES

Information on existing utilities serving the Site was obtained through a variety of sources, including Pennsylvania One Call, direct contact with utility providers, and site observations. Utility findings are summarized below and depicted in Figure 2.5.1.

### 2.5.1 Power

PECO Energy (“PECO”) operates two primary substations on the Site which will remain operational following the cessation of electrical generation activities at the Site. The primary substation is subdivided into three smaller substations, these include the 33 kV, 220 kV, and 66 kV substations in the southern portion of the Site, and the 132 kV substation in the northern portion of the Site. The

three substations on the southern portion of the Site are surrounded by a single fence; the northern substation stands on its own and is also surrounded by a fence. PECO’s substations are situated on land owned by W.P. Cromby, LLC and leased to PECO. Refer to Figure 2.5.1 for the location of the substations.

Distribution voltage power for local use is transformed at the 33 kV substation, which is the southern-most of the 3 substations on the southern portion of the Site. This power is carried toward Phoenixville and the surrounding area via overhead power distribution lines emanating from the Site. On site power is provided by overhead distribution lines emanating from the southern substations and connecting to a pad mounted transformer and meter on the south side of the Turbine Building.

FIG 2.5.1 EXISTING UTILITIES



Transmission voltage power lines enter the Site from the west, north, northeast and east and connect to the PECO regional transmission grid. This direct connection to the transmission grid and the presence of operating substations indicates that power should be available at the Site for future uses at the 138 kV level.

### 2.5.2 Natural Gas

Natural gas is provided to the Site by PECO. A 16-inch PECO pipeline enters the Site from the west and terminates at a valve and metering station (a "gate station") on the northwest side of the Site. From the gate station, the gas pipeline transitions from overhead to underground, crosses under the railroad spur, and enters the generation building. Gas service to the Site has been discontinued, as a portion of the piping, possibly where a meter was placed, has been removed and sealed with blind flanges. Refer to photo #12 in Appendix D.

The PECO gas line is connected to an Enbridge natural gas transmission line via a gate station on Ridge Road, approximately 2.2 miles due west of the Site.

### 2.5.3 Water

The Borough of Phoenixville operates a local water treatment plant approximately ¼ mile to the southeast of the Site and the local water distribution system. Department staff have confirmed that there is an 8-inch domestic water supply line with a 2-inch bypass line that enters the Site from the south. However, according to department staff, an isolation valve for the plant has been closed for several years. Staff indicated that a private well had been dug on the Site and the station is currently fed only by that well. However, this could not be verified by site visit or inspection of aerial photos.

Domestic water supply to the Site may be possible via the existing but closed 8-inch line. The 2016 Borough of Phoenixville Water Quality Report is attached in Appendix D.

### 2.5.4 Telecommunications

Verizon has confirmed that they have overhead and underground facilities serving the Site from the south and located along Cromby Road. The capacity or bandwidth of these services is unknown at this time.

### 2.5.5 Sanitary Sewer

The One Call report included no sanitary sewer information. East Pikeland Township, where the station is located, was contacted but deferred to the Valley Forge Sewer Authority (VFSA). The VFSA informed us that they do not service the Site, and provided contact info for Phoenixville. Phoenixville staff confirmed that there is no known sanitary sewer service to the Site, and that they believe that when operational it relied on a pump-and-haul system. In discussion with the VFSA there are no equivalent dwelling units (EDU) available to connect to their plant.

The Borough of Phoenixville operates a wastewater treatment plant located approximately 2 miles southeast of the Site along the Schuylkill River. The waste water treatment plant is rated at a capacity of 4 million gallons per day (mgd), and currently the plant treats an average of 1.5 mgd. In the past several years, the plant has undergone process upgrades including a switch from chlorine to ultra-violet (UV) disinfection of the treated water that is discharged to the Schuylkill River. Additional capacity at this plant may be available for future customers depending on flowrate and wastewater constituents. The Phoenixville plant operators could not be reached to determine available capacity limitations.

Visual reconnaissance of the Site and review of site plans revealed the presence of a small sewage treatment plant on the south portion of the Site, very close to the MgO and MgSO<sub>3</sub> silos. Based on the plants size and configuration, it is highly likely that it was intended for treatment of sanitary sewage at the Site, with discharge of treated water to the Schuylkill River.

### 2.5.6 Petrochemical Pipelines

Two petrochemical pipelines pass adjacent to the Site. Interstate Energy Company owns an 18-inch diameter pipeline, and Laurel Pipeline Company/Buckeye Partners (natural gas) owns an 8-inch diameter pipeline; both are located immediately to the west of the Site and roughly parallel the Schuylkill River Trail. Both pipelines are capable of transmitting a variety of petrochemical products.

Petrochemical products can be provided to the Site from the Interstate Energy Company, as there is a gate station on that pipeline adjacent to the Site. An above-ground pipeline from the gate station to a 2.0 million gallon oil storage tank on the west side of the Site is present; however, inspection of aerial photos indicates that this pipe may be disconnected.

There is no known connection to the Buckeye Partners pipeline, and Buckeye indicated via the Pennsylvania One Call System that they have no facilities on site.

### 2.6 SITE DRAINAGE

Currently, W.P. Cromby, LLC holds an NPDES permit and is responsible for all liability and maintenance issues associated with drainage outfalls to the Schuylkill River on the east side of the station. The outfalls discharge into the Schuylkill River which is dammed downstream of the Site owned by W.P. Cromby, LLC (See photo). Upon cessation of electrical generation activities, Exelon Generation closed and abandoned many of the 19 original permitted outfalls in order to limit their commitments and exposure as dictated by their NPDES permit. Outfalls 002, 004, 008, and 009 remained open to address the remaining operational needs of the facility.

As part of the outfall closure process, many of the stormwater catch basins on site were sealed with steel plates. During the Site observation it was noted that several of the 4-inch plugs in the sealed catch basins were removed. Any new development will need to review stormwater discharge requirements for the specified use.



Field observations and topographic information for the southern portion of the Site, the area around the 33 kV station and the 220 kV substations, indicate that stormwater will flow to the southeast via overland sheet flow and into catch basins on the west side of Cromby Road. Stormwater will then flow via storm sewers to outfalls to the Schuylkill River. These outfalls are labeled as Outfalls 016 and 017 on the Site drainage plan in Appendix D.

Field observations and topographic information for the area in the vicinity of the 66 kV substation, the south side of the boiler and turbine building, and site areas to the west, indicate that stormwater collected in this area will sheet flow to a number of catch basins and via storm sewers to the river to Outfall 004.

Field observations and topographic information for the areas north of the boiler and turbine building, in the vicinity of the 132 kV substation, and in the northwest area of the Site, indicate that stormwater generally flows to the east and enters various catch basins in the area. However, many of these catch basins and associated pipes were sealed when the plant ceased operations. This results in standing water in some areas and sheet flow into the river. Stormwater that cannot enter sealed catch basins will flow northeast along the existing roadway. This water will then turn east and sheet flow over the west bank of the Schuylkill River. The stormwater flowing from the western and northern boundaries will initially flow towards the surrounding driveways to the west and north, and subsequently flow along the driveways; ending at the Schuylkill riverbank just east of the industrial wastewater treatment plant. Many of the observed catch basins in this area were sealed, and its outfalls to the river were reported to have been sealed as well.

It should be noted that there are two large diameter pipelines on the Site that were used to convey spent cooling water back to the Schuylkill River. These 72-inch and 84-inch pipes are shown on many of the site plans and drainage plans. They converge in a trapezoidal structure on the southeast side of the Site, and a single 10-foot diameter pipe continues to Outfall 006 on the far southeastern side of the Site.

## 2.7 EXISTING ENVIRONMENTAL CONDITIONS

The property on which the Site is situated has been an electricity generating facility (hydro-electric, coal, fuel oil and/or natural gas) since the beginning of the 20th century. The operation of an electric generating facility for this period of time has the potential for on-site environmental impacts. Historic operational procedures and practices, especially prior to environmental regulations, cannot be evaluated.

Common environmental impacts associated with power plants include fuel sources (coal, oil, natural gas), by-products, oil-filled equipment, and operational procedures/"housekeeping". Large amounts of coal and oil are needed to fuel power generating equipment. Impurities in coal and its by-product, coal ash (fly ash), that could affect soil and groundwater include heavy metals, more specifically mercury, arsenic, and cadmium, as well as the potential for radioactive impurities. Releases of oil to the environment from bulk storage facilities, resulting in both soil and groundwater contamination, are well documented.

Large capacity oil-filled equipment are normally associated with electricity generation. Historically, the oil-filled equipment are staged on pervious surface and could contain oil with polychlorinated biphenyls (PCBs). Leaks from this equipment could affect soil and groundwater with PCBs.

It is well documented that operational practices and "housekeeping" have improved with respect to protection of the environment since advent of environmental regulations. However historic operations and maintenance activities at power generating facilities could have adverse effects to the environment.

In addition to the aforementioned potential environmental hazards, power plant sites potentially have natural resource hazards, limiting usage areas of the property. These hazards include flood plains, wetlands, endangered species, easements, topographic relief, and surface water encroachment boundaries.

The Site riverfront is comprised of several differing conditions at water's edge:

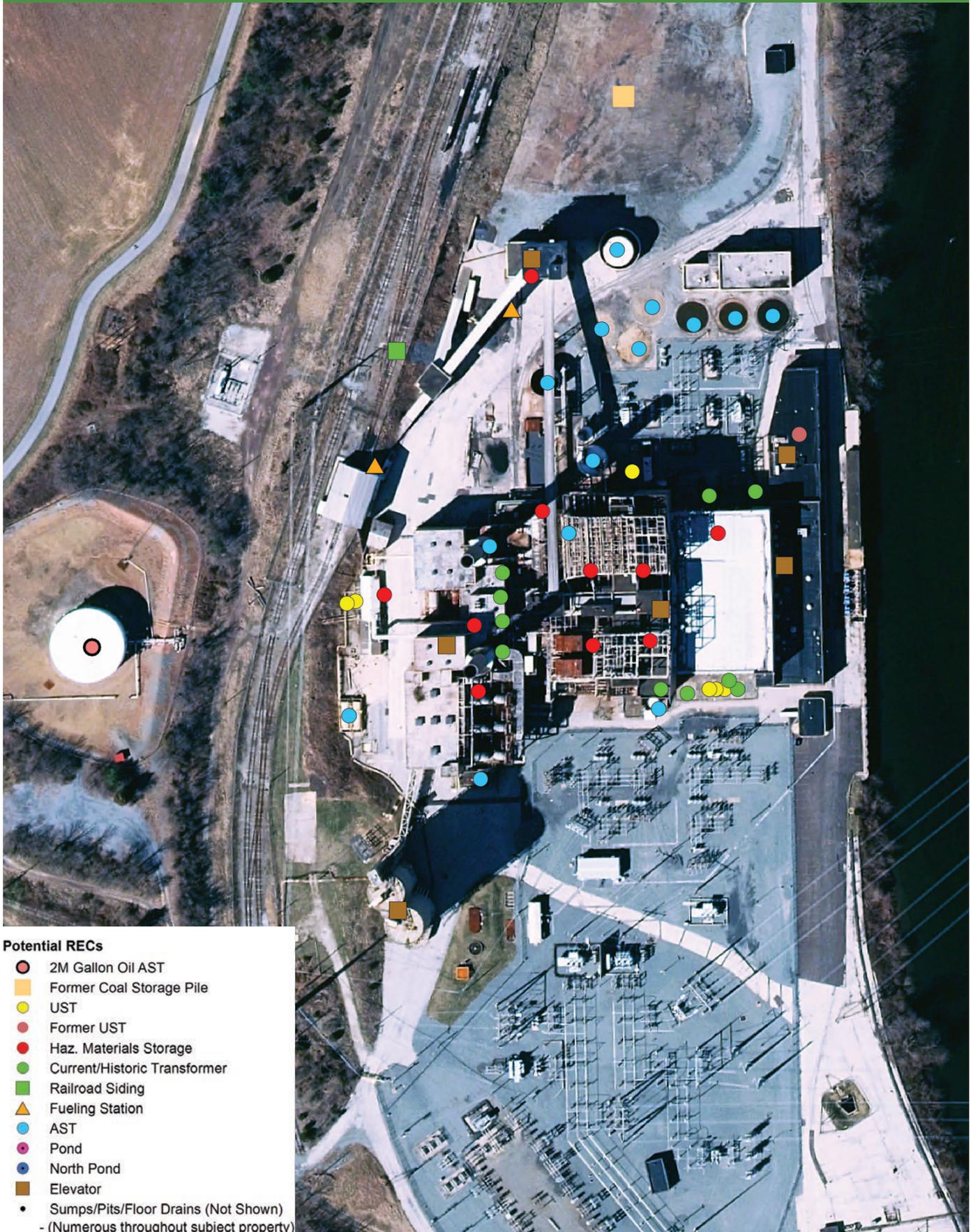
- **Reach 1:** Downstream Natural Vegetated Earth Slope
- **Reach 2:** Reinforced Concrete Flood Wall
- **Reach 3:** Upstream Natural Vegetated Earth Slope

A Phase I Environmental Site Assessment (ESA) was performed in support of this project and is included as Appendix A to this Playbook.

**Key findings for the Site Phase I ESA revealed the following Recognized Environmental Conditions (RECs):**

- **The station has been in operation as a coal-fired generating station since the 1940s.** Historic operations pose a low to moderate potential to significantly impact the Site.
- **The station historically operated up to seven Underground Storage Tanks (USTs) during its operational history.** This REC appears to have a low to moderate potential to significantly impact the environmental condition of the Site, as State of PA records indicate the USTs were removed.
- **There are six elevators on the subject property, which have reportedly been decommissioned.** These RECs appear to have a low potential to significantly impact the environmental condition of the Site.
- **The ASTs and associated piping have reportedly all been decommissioned and their contents removed.** However, no environmental investigations have been completed to evaluate subsurface conditions. The presence of the storage tanks and piping has a low to moderate potential to significantly impact the Site.
- **Small reportable spills/releases occurred during its operating life.** This REC appears to have a low potential to significantly impact the environmental condition of the Site.
- **The Site reportedly had ten hazardous material/hazardous waste or oil drum storage areas throughout the facility.** Drums were reportedly stored on or within secondary containment. However, historic hazardous material/hazardous waste drum storage methods are not known. This REC appears to have a low potential to significantly impact the environmental condition of the Site.
- **The subject property utilized numerous pad-mounted transformers when the facility was operational.** Based on the age of the subject property, these transformers could have contained PCBs fluid. The presence of the transformers has a low to moderate potential to significantly impact the Site.
- **The subject property has numerous sump/pits, oil-water separators, and drain systems.** The age and nature of material processed through these structures and equipment have a low to moderate potential to significantly impact the Site.
- **The former Coal Storage Pile was reportedly remediated during decommissioning activities.** However, no documentation pertaining to soil remediation was provided. The former Coal Storage Pile has a low to moderate potential to significantly impact the Site.
- **Coal had been delivered to the subject property via railcars since operations began.** A locomotive fueling station is located near the Dumper House. This area has had reported historic releases with soil remediation. The railroad tracks and fueling station have a low to moderate potential to significantly impact the Site.
- **A heavy equipment fueling station is located adjacent to the Coal Crusher House.** Surficial staining was observed around this dispenser during previous Phase I ESAs as well as during AMO's site visit. This REC appears to have a low potential to significantly impact the environmental condition of the Site.
- **The former North Pond received runoff from the Coal Storage Pile.** The pond construction is unknown and no documentation was provided pertaining to pond decommissioning. This REC appears to have a low to moderate potential to significantly impact the environmental condition of the Site.

FIG 2.7.1 ENVIRONMENTAL REC MAP



- **A pond is located northeast of the Coal Storage Pile, adjacent to the Schuylkill River.** Historic aerial photographs show this pond dating back to 1958. Prior to 1958, the ponds appeared to be part of the Schuylkill River canal. A discharge pipe was observed extending from the northeastern corner of the property and extending to a Schuylkill River outfall. The use of this pond is unknown. This REC appears to have a low potential to significantly impact the environmental condition of the Site.

- **The northern-most portion of the subject property (north of the railroad bridge) showed evidence of earthwork as well as a potential secondary coal pile in historic aerials dating between 1968 and 1992.** The use of this area could not be ascertained. The unknown use of this area has a low to moderate potential to significantly impact the Site.

The REC's discussed above are shown on Figure 2.7.1, located on the previous page.

**IT SHOULD BE NOTED that the RECs on the Site are common for PA Brownfield Sites associated with coal fired generation plants. These typically can be managed by developers as part of construction following the Pennsylvania Department of Environmental Protection's Act 2 Program. Please refer to Appendix B for further information on brownfields redevelopment.**

The information includes:

1. What is a Brownfield
2. Overview of Brownfields in Chester County
3. EPA Brownfield Designations
4. Purpose of the Brownfield Designation

An aerial photograph of the Cromby Generation Station, showing various industrial buildings, large cylindrical storage tanks, and tall smokestacks. The image is overlaid with a semi-transparent orange and white geometric design. A large, white, stylized number '3' is prominently displayed in the upper left quadrant.

# 3

# MARKET ANALYSIS

Decommissioning &  
Redevelopment Playbook  
for the Cromby  
Generation Station

### 3.0 MARKET ANALYSIS

The purpose of this section is to summarize market demand, potential redevelopment scenarios, financial feasibility, and economic impacts related to redevelopment of the Cromby Generation Station (Site). The market information that was researched for this project was collected from and compared to the Chester County Planning Commission's Comprehensive Plan, (Landscapes 2 and Draft 3), of 2009/2018, and the Counties 2025 Vista Planning Document, and East Pikeland Township and the Borough of Phoenixville's Comprehensive Plans.

For more detail related to the content of this section, see the following Appendix to this Playbook document:

- Appendix F – Highest & Best Use Analysis

### 3.1 MARKET ANALYSIS HIGHLIGHTS

The location of the Site relative to the regions commerce and population growth presents a variety of opportunities for the Site from a market demand perspective. It is important to note that even though a majority of the Site is located in East Pikeland Township it will likely have an equal or greater impact on the Borough of Phoenixville due to the proximity to the population. Future planning for Chester County, East Pikeland Township, and Phoenixville Borough has indicated a need for light industry, energy production or generation, and commercial development.

#### Flood Protection Zone

Due to the Site being located within the 100-year floodplain, development is potentially restricted as per the East Pikeland zoning ordinance. In order for new development to occur one of the following must occur:

1. A variance is obtained for the Site
2. The Site is raised out of the floodplain
3. A new map revision reveals a new floodplain area permitting development on the Site as it exists

#### Zoning

The Site lands within four zoning districts between East Pikeland Township and Phoenixville Borough. These zoning districts include Utility (East Pikeland Township), Industrial (East Pikeland Township), Farm Residential (East Pikeland Township) and Mixed Use Growth (Phoenixville Borough). Rezoning is necessary if Residential development is to occur. There is an area of approximately 24 acres that is suitable for residential use towards the southwest side of the Site. Several large tracts of farmland surround the Cromby Power Plant. Some of these tracts are slated for residential development. However, the smokestacks that exist on the Site tend to be a detractor to the residential real estate market. Properties that do not have a view of the existing smokestacks are able to sell for more than properties that do have a view of the smokestacks. Phoenixville Borough is also not interested in developing the part of the Site that lands within their zoning district since it currently creates a buffer for their existing water treatment plant.

#### Life Sciences

The growing life sciences industry for the Philadelphia region presents opportunities for incubator facilities to accommodate these businesses on the Site. A low industrial vacancy rate in Chester County also represents a need for more industrial space. There are also opportunities for agro-technologies such as hydroponics for vegetable growing or medical marijuana, which is also a growing part of the state's Agricultural sector. Opportunities for reusing the Site as an energy plant are possible through lower emission energy facilities, such as those using natural gas as a feedstock, renewable natural gas, and/or solar panels. The possibility of a commuter line connecting to or near the Site also provides opportunities for attracting potential talent from Philadelphia to the Phoenixville and Collegeville area.

The Sites connection with the Schuylkill River Trail (regional trail system) enhances it as a potential recreational asset to the community.

## Transportation Center

As part of a separate effort, a contingent of business owners, real estate professionals and community leaders are exploring the opportunity to restore SEPTA Regional Rail commuter service to Phoenixville. The current feasibility study involves bringing hybrid diesel-electric and catenary electric locomotives to this line. The study assumes that train cars and locomotives would be stored at the 30th Street Station Yard, however the Site offers potential for a rail yard to serve as train storage and might also offer an opportunity for a large parking lot and train station in addition to the train storage. The Site is 1.3 miles from Phoenixville's downtown and is also connected to the downtown by the Schuylkill River Trail, a regional multi-use trail that extends from Philadelphia to East Coventry Township, PA. Improvements to the Black Rock tunnel are necessary to allow safe commuter travel to and from the Site.

## 3.2 REGIONAL ECONOMIC CONTEXT

Chester County is approximately 28 miles northwest of Philadelphia, Pennsylvania. East Pikeland is mostly a residential township with some commercial business but limited industrial sites. Phoenixville has a long industrial history with numerous mills and factories supporting its early development. However, as these facilities closed, and heavy industry departed, it left a legacy of blight that Phoenixville has endeavored to manage through thoughtful and inclusive redevelopment projects, most notably the French Creek Center. The decommissioned Cromby Generating Station is another site long viewed as a revitalization opportunity, operated continuously from the mid-1950s through closure in 2012, eventually succumbing to the economics and environmental pressures associated with aging coal- and oil-burning power facilities. Residents of Phoenixville and East Pikeland have been attentive and highly participatory with respect to redevelopment projects and have steadily resisted redevelopment of former industrial parcels into heavy industrial use. Consequently, the rehabilitation of these properties has centered on mixed use and the establishment of a village-type of community with an emphasis on walkability and preservation

of historic features, as reflected in Phoenixville's "Regional Comprehensive Plan." This Plan best reflects the area's view of redevelopment, especially with respect to the French Creek Center, the location of a former large-scale steel mill which was transformed into approximately one million square feet of Class A office space, 85,000 SF of village retailing, and 642 units of housing in a variety of housing types. While the Site is not reviewed in that plan, given the waterfront location of the property, it is likely that the region will apply the same standards and aspirations for the planned revitalization of that property, encouraging mixed use, retail, office and recreational uses, while discouraging heavy industry uses that detract from the region's view of their area as a residential and cultural hub.

## Life Science Industry

In evaluating the Site for future industrial use, potential developers should understand the Life Science Industry within the state of Pennsylvania and the greater Philadelphia region, which includes but is not limited to: biotechnology, medical and diagnosis, pharmaceuticals, and research institutions. The growth of these life science industries has propelled Pennsylvania into a leading role nationally. In 2016, Life Science industries brought in an approximated 112,000 jobs for the state. The industry also generated a total (direct and indirect) state economic output of \$88.5 billion. Life Sciences PA, a leading organization for life sciences industries in the state has indicated that there is an opportunity for the Site, to serve as an incubator for new life science facilities, even though the Region has experienced a recent industry consolidation and downsizing. There are many executives of the industry living within the area and are establishing startup companies that utilize small labs and research facilities which fits the light industrial park concept. Due to the location of this industry in Southeastern Pennsylvania, incubator facilities to accommodate these businesses could be a leading option for the Site.

Discussions with the Chester County Economic Development Council confirmed a need for Industrial space. The CCEDC concurred that industries such as health care, bio-tech, and IT Technologies are coming

to and from the Philadelphia area and are looking for space within the county. Currently there is only a 5.7% Vacancy Rate for Industrial Use.

### Agriculture

Other attractive industries to the region include agro-industries relating to existing traditional local agriculture. This includes hydroponics and urban farming, which is becoming more popular in the Philadelphia region. Chester County being mostly agricultural land and providing 50% of the employment in the County, has the potential to see benefits in local agro-technology facilities. For instance, a new emphasis on local dairy farming has propelled the county into studying the international need for dry powder dairy products. Hydroponics has also proved to be an efficient alternative way to grow plants. Hydroponics is a way to grow plants using a mineral nutrient solution in water which eliminates the need for soil. Hydroponic facilities are usually operated all season long, providing a larger yield in areas where there is winter weather. The medical marijuana industry also uses hydroponics to grow marijuana for medicinal and research use. According to state officials, Pennsylvania's commercial medical

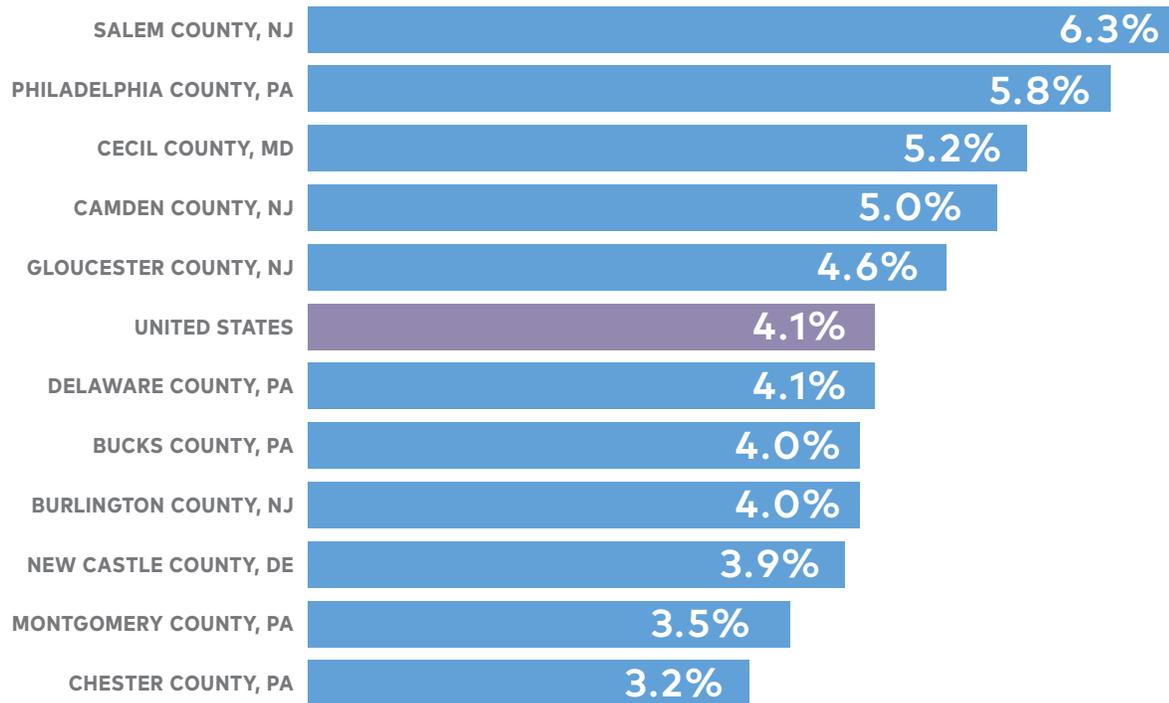
marijuana program is set to more than double in size, as they add unique research at Philadelphia medical schools and increase cannabis producers from 12 to 25. The Chester County Agricultural Department said they are supporting a surge of companies looking to site agriculture facilities in Chester County.

### Energy Redevelopment

In evaluating the Site for future potential energy use, reviewers should be aware that the surrounding municipalities have focused redevelopment efforts on uses that do not constitute heavy industrial use or those that may emit significant emissions. The property is located within a non-attainment zone for ozone under the Clean Air Act, and thus sources that contemplate facilities generating power from combustion processes will undergo particularly stringent regulatory review at both the local and Commonwealth levels, and it is likely such development would run contrary to the intent of the Regional Comprehensive Plan. However, the property could benefit from lower emission energy facilities, such as those operating off of natural gas, to renewable energy options, like solar energy generation, and wind generation.



**FIG 3.2.1 UNEMPLOYMENT RATES FOR COUNTIES IN THE PHILADELPHIA-CAMDEN-WILMINGTON, PA-NJ-DE-MD METRO STATISTICAL AREA, MARCH 2018 (NOT SEASONALLY ADJUSTED)**



SOURCE: U.S. BUREAU OF LABOR STATISTICS

Energy options were reviewed including economic data from the region with key takeaways including:

- With an unemployment rate of 3.2 percent, (See Figure 3.2.1) Chester County has the lowest rate in the Philadelphia-Camden-Wilmington, PA-NJ-DE-MD Metropolitan Statistical area. That is a decrease of 0.06 percent since the same month in 2016 and a decrease of 3.7 percent since the height of the Great Recession in 2009.
- Unemployment rates for East Pikeland and Phoenixville are slightly higher, but similar to the overall Chester County unemployment rates.
- According to the Bureau of Labor Statistics, the Montgomery, Bucks, and Chester counties experienced a 3.17% growth in employment from April 2008 to April 2018, and an even stronger 6.83% growth rate from 2013 to 2018. Since the recession, the fastest growing industries include Education and Health Services (+28%), Leisure and Hospitality (+14%), and Professional/Business Services (+10%). The industries experiencing the greatest labor outflow include Information (-24%), Manufacturing (-15%), and Mining, Logging and Construction (-12%).

- The population of East Pikeland and Phoenixville has increased approximately by 3.3 percent and 3.1 percent since 2010, respectively, compared to the overall United States population growth of 6.1 percent over that same timeframe. But, as noted above, in recent years, the area has seen an incredible revitalization as restaurants, bars, local wineries and craft distilleries have flourished and brought about an uptick in the overall local economies of the region.

### Regional Commuter Transportation

SEPTA operates a regional rail line up to the City of Malvern which is 8.1 miles by road to Phoenixville. The on-site Norfolk Southern line does connect with the existing SEPTA system. Due to SEPTA changing over to catenary electric trains, there is an opportunity for the rail line to connect with Phoenixville and other towns near the Site. The Phoenixville feasibility study will determine if the passage through the Black Rock Tunnel is possible. This tunnel will restrict operations for passenger cars since it may not be suitable at this time. However, improvements would need to be made to the tunnel to enhance safety and allow for

commuter use. Using the Site as a rail station would potentially extend the commuter service to northern towns from Philadelphia, such as Spring City or Pottstown, PA. Private developers and financiers are currently studying the best alternatives to extend the mass transit to this region. The Site has been reviewed favorably for aspects of this expansion.

### Recreational Context

Regional economic drivers such as trails and parks also provide a unique set of amenities to the Site. The existing Schuylkill River Trail runs through the Site, which connects users to and from Philadelphia and East Coventry Township. An economic impact study revealed the trail generated more than \$589.9 million in economic impact for the Schuylkill River Region. It also supports 6,134 jobs and generates \$37.7 million in tax revenue from tourist related activities. The Schuylkill River is also regularly used by paddlers, and boaters. This presents an opportunity for a dock or launching area for paddlers to enjoy. Nearby a former canal that runs alongside the Schuylkill river still exists with its former towpath which offers riverside trail opportunities. The Schuylkill River also offers other activities such as jet skiing, bird watching and fishing. Located near the Site are recreational assets such as the Chester County Black Rock Nature Center.

## FUTURE REGIONAL PLANNING

Comprehensive plans have also forecasted future planning for the Site and the region. The following comprehensive plans have been considered for future planning efforts.

### Chester County Regional Comprehensive Plan:

The Chester County Regional Comprehensive Plan envisions the area a suitable location for economic redevelopment opportunities. The draft identifies potential Light Industrial use, with opportunities to take advantage of existing rail and power.

### Phoenixville Borough Comprehensive Plan:

The Phoenixville Borough Comprehensive Plan (2008) cites a need for increased industrial and

commercial development due to the acceleration of housing development. New commercial and industrial development is planned to be community-servicing goods and services. New residents will demand growth in retail goods and services. For some retail categories, nearby King of Prussia, PA may be sufficient to meet the needs of new residents.

### East Pikeland Township Comprehensive Plan:

East Pikeland's Township Comprehensive Plan (2001) is focused on maintaining a healthy business climate to ensure economic growth but also recognizes that a majority of residents within the township will most likely commute to Phoenixville and greater Philadelphia areas for employment. The Agricultural industry plays the largest economic role within East Pikeland Township, with professional and support services second.

VISTA 2025 is a Chester County public-private partnership effort that is focused on creating and implementing an economic development strategy for the county. Its fundamental premise is that progress and preservation are complementary elements of a strategy that will support economic health while maintaining the "sense of place" that makes Chester County so attractive to residents and businesses.

### KPMG Pennsylvania Life Sciences Industry Economic Impact Report

This research was commissioned in 2017 by the Life Sciences of Pennsylvania and was conducted by KPMG. The results indicated the following key aspects of this industry;

- More than 112,000 directly employed by life sciences establishments with an overall employment impact of 342,000
- Direct annual economic impact of \$48.8 billion and a total impact of \$88.5 billion
- More than half of the life sciences establishments employ fewer than 10 people

This report reinforces our optimism about the future of the life sciences in Pennsylvania and reflects what we intrinsically knew about its potential.

### 3.3 MARKET ANALYSIS INTERVIEWS – KEY/RECURRING THEMES

In order to gain real-time industry perspective on market demand and redevelopment potential for the Site, interviews were conducted with a range of leading regional professionals in mid-June 2018. Interviewees included:

**Kim Moretti**, Township Manager,  
East Pikeland Township

**E. Jean Krack**, Phoenixville Borough  
Manager

**Mary Frances McGarrity**, Senior Vice  
President, Business Development  
Services, Chester County Economic  
Development Council

**Brian O’Leary**, Executive Director,  
Chester County Planning  
Commission

**Richard Heaney**, Southeast Regional  
Director, Pennsylvania Department  
of Community and Economic  
Development

**Lance Chimka**, Southwest Regional  
Director, Pennsylvania Department  
of Community and Economic  
Development

**Chris Molineaux**, President of Life  
Sciences PA

**Bradley Molotsky, Esq.**, Law Firm of  
Duane Morris, Former Sr. Council,  
Brandywine Realty Trust

**Hillary Krumrich**, Director, Chester  
County Agricultural Development  
Council

Over the course of the interviews, a number of “Key/Recurring Themes” emerged. These key issues, observations, and trends are summarized below. Given the diversity of interest represented by the nine interviews, the themes identified are important factors to consider and address in a successful strategy for the Site.

#### WHAT WE HEARD:

Redevelopment of the Site as a light industrial park could create a diverse and successful work space for incubator offices and advanced technological businesses. There is a need for this type of space for the industrial market in Chester County, Pennsylvania.

- **Light Industrial Opportunities could take advantage of the existing infrastructure**

The Site is unique in that it already possesses a rail line, power supply, water intake structures, permitted stormwater system and outfalls, buildings on site (operational in 2012), recreational corridors (trail, river), and link to the City of Phoenixville.

- **Minimal Proposals for Land Development or Redevelopment**

The Borough of Phoenixville indicated that the Site was proposed for reuse as a scrap yard, but East Pikeland Township declined the use and the developer did not pursue.

East Pikeland Township has not received any “serious” proposals for land development or redevelopment of this Site in recent years, opening the door for new potential uses.

- **Limited Road Access limits future potential uses**

The Site depends on local roads for direct access, and there is limited access to the road network. The lack of direct highway access may hinder some re-use opportunities. However, rail access and access to the Norfolk Southern Reading Main rail corridor offers some potential for future uses that involve large or heavy freight and materials movement.

- **Very Little Industrial Vacancy**

Chester County has a very low industrial vacancy rate, and developing additional industrial sites is currently seen as a need for the county.

- **Gas is an Option for Chemical Industry**

Due to the new gas pipelines being constructed across the state (from the southwest region of Pennsylvania), it is important to understand the ways in which gas could be utilized in the southeast region of Pennsylvania.

- **Life Sciences is up and coming within the Philadelphia region**

The Life Sciences Industry continues to increase within the Philadelphia region. Many executives of this industry reside in the area and are establishing startup companies that are utilizing small labs and research facilities.

## WHAT WE HEARD:

Interest in redevelopment of the Site as a light industrial center with mixed use options, as well as focused growth in Chester County's already strong Life Sciences industry. There was also support for Indoor Agricultural facilities that would create new employment opportunities for this part of the county.

- **Large "Footer-Ready" Industrial Sites Develop Quickly**

"Ready-to-Go" land with infrastructure and regulatory efficiencies in place is attractive to the market.

- **Retail/Commercial/Residential Mixed Uses a Good Fit**

Commercial/Residential mixed use could work for this site, creating a link to the growth of these markets within Phoenixville.

- **Extending the passenger rail system using the Sites infrastructure to improve transportation in the Region**

The region has progressed to obtain developers and financiers to bring SEPTA's passenger rails into the region and the Sites features fits several options for rail station or rail car storage and repair facility.

- **Supporting Chester County's Strong Life Sciences industry**

As more startup life sciences companies look for incubator facilities local to SE PA this Site provides options to fit incubator facilities with room for expansion.

- **Workforce Within 30 Miles**

Site selectors will look at the laborshed within a 30-mile radius of the Site and will realize a highly educated and skilled labor force within the Philadelphia region.

- **Agriculture Expansion**

With Chester Counties largest employer being within the agricultural sector the Sites features offers developers indoor agricultural options for with water for hydroponics, mushroom growers, and herb farmers.

- **Renewable Energy**

With existing infrastructure from the Site's power generation history, developers can utilize space to develop solar and other renewable energy sources.

### 3.4 POTENTIAL USES

Based on the recurring themes identified from our stakeholder interviews and a preliminary evaluation of site selection factors for the Site, the pool of potential uses was narrowed. The location of the Site near Phoenixville Borough, close proximity to the region’s commerce, education and population centers, higher than average education levels of the community and spending power in the vicinity of the Site, affords numerous options for the Site including residential and commercial. The challenge

is to determine the reuse options which lead to the most sustainable and Highest and Best Use value to the developer and surrounding community.

The Potential Use table below summarizes these findings. We have compared these findings to Chester County’s Vista 2025 (developed in 2014) and Chester County’s Community Redevelopment Plan of 2017, The findings are very similar and in many ways match the county’s plans.

POTENTIAL USE FEASIBILITY		
POTENTIAL USE	LIMITED MARKET FEASIBILITY	POTENTIALLY MARKET FEASIBLE
Retail & Restaurant	X	
Heavy Industrial	X	
Hotel	X	
Office	X	
Medical Office	X	
R&D		X
Light Industrial Manufacturing		X
Warehousing, Distribution, Cold Storage		X
Agricultural Industry Use		X
Power Generation/Distribution		X
Single Family Residential & Commercial Mixed-Use		X
Life Sciences		X
Executive Office/Headquarters		X

**DETAILED ASSESSMENT OF FOCUSED POTENTIAL USE**

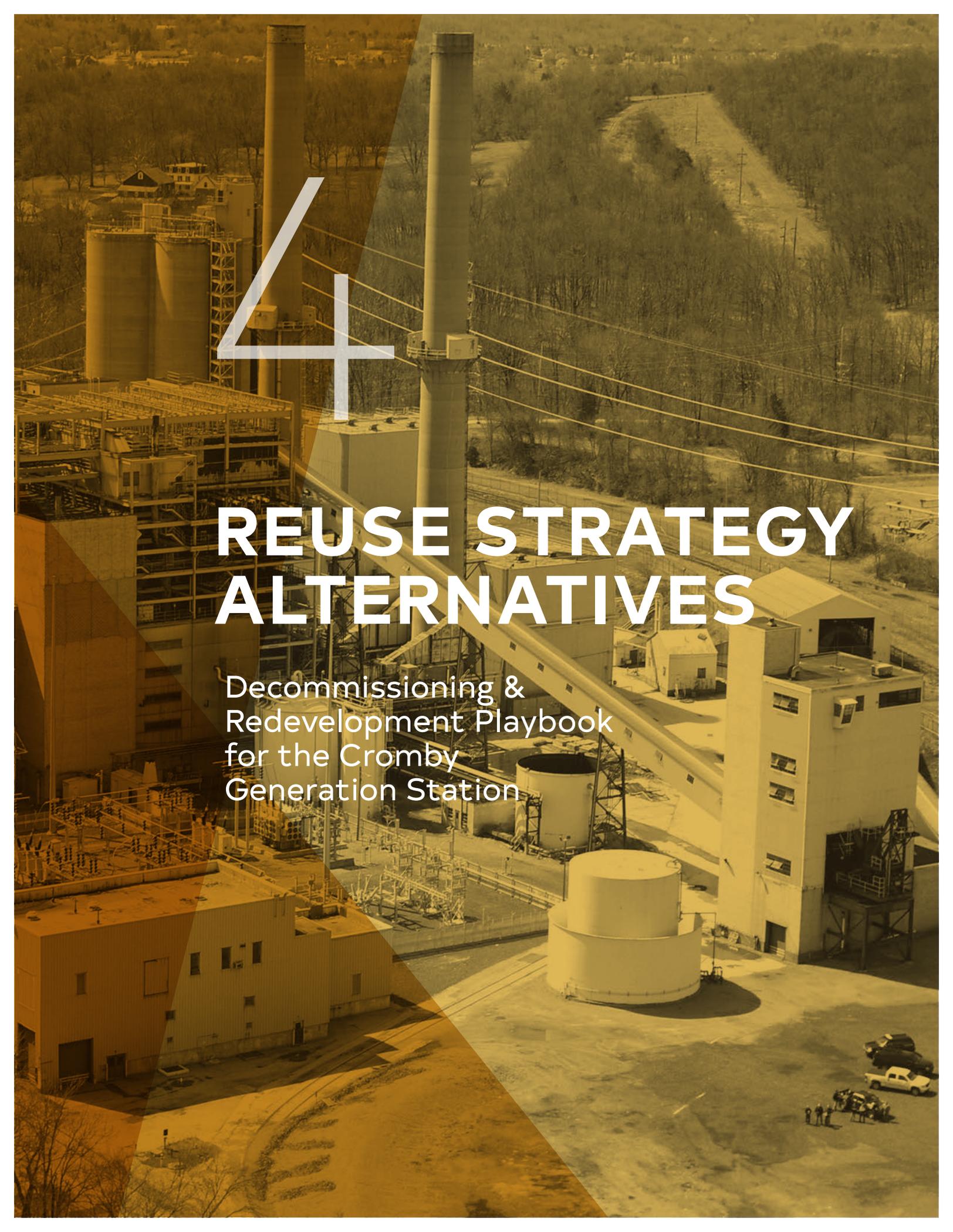
1 MINOR APPLICABILITY	2 SOME APPLICABILITY	3 APPLICABLE	4 GOOD APPLICABILITY	5 VERY APPLICABLE
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POTENTIAL USE	LOCATION/ MARKET	SITE FEATURES	TRANSPORTATION	UTILITIES	LABOR/ JOBS	TOTAL
<b>LIGHT INDUSTRIAL</b>						
Light Manufacturing & Assembly	4	4	2	4	3	17
Logistics, Warehouse, Supply Chain	2	3	1	3	2	11
Life Science/Pharmaceutical	4	4	2	3	4	17
Agricultural Production	4	4	2	3	4	17
Petro-Chemical Feedstock mfg from NGLs (ethane, propane, butane, natural gasoline, isobutane)	2	3	2	3	2	12
<b>TRANSPORTATION CENTER</b>						
Transit Center Septa Rail Station	5	3	5	3	2	18
Train Car and Locomotive Storage & Repair Center	3	3	4	4	2	16
<b>EXECUTIVE OFFICE/MIXED USE</b>						
Office Space/Headquarters	4	3	3	3	4	17
<b>POWER GENERATION</b>						
Natural Gas-Fired Power Generation To Support Adjacent Manufacturing	3	3	3	4	2	15
Solar Plant – Grid Connected	4	3	3	3	1	14

**3.5 PRIMARY INDUSTRY TARGETS FOR ATTRACTION**

The Site offers a diverse listing of potential light industrial uses. This industry based on the rankings and financial analyses offers the "Best Re-use for the Site". This creates jobs and jobs forecasted to offer higher salary and benefits for the employees. Here are specific industry sectors for targeting by NAICS code.

- 33911 Medical Devices Manufacturing
- 541712 Medical Research
- 325412 Pharmaceutical
- 423450 Medical Diagnostic Equipment
- 621511 Medical Laboratories
- 111411 Agricultural (Mushroom Production)
- 111419 Agricultural (Hydroponics)
- 111419 Herb Growing
- 111419 Medical Marijuana
- 311514 Dry Milk Condensation
- 221118 Energy Generation
- 651202 Office Building & Office Park
- 485112 Commuter Rail Support
- 485119 Commuter Rail System



# 4

# REUSE STRATEGY ALTERNATIVES

Decommissioning &  
Redevelopment Playbook  
for the Cromby  
Generation Station

## 4.0 REUSE STRATEGY ALTERNATIVES

The purpose of this section is to present four potential redevelopment scenarios for the Site, along with financial feasibility and economic impacts associated with the four scenarios.

For more detail related to the content of this section, see the following attachments to this Playbook document:

- Appendix F – Highest & Best Use Analysis
- Appendix G – Concept Grading Plans & Earthwork Estimates
- Appendix H – Energy Options Assessment

## 4.1 REUSE STRATEGY ALTERNATIVES SUMMARY

In response to the regional market dynamics and physical site characteristics identified earlier in this document, four strategic alternatives for reuse of the Site have been prepared. Based on the findings in Section 3.4 that highlight the strengths of multiple potential uses, the following provides a menu of distinct “plays” that could meet the goals of a variety of investors/developers. While each “play” avails to market dynamics differently, residential use and unique energy opportunities are explored conceptually in each strategy.



**A** LIGHT INDUSTRIAL PARK/  
MIXED USE (RESIDENTIAL)

### REUSE STRATEGY A

#### Light Industrial Park/Mixed Use (Residential)

Use of the majority of the former power generation area as light industrial to accommodate life science, agriculture, and incubator facilities utilizing laboratory and research facilities, as well as light manufacturing. This accounts for nearly 55 acres of the 147 Site.



**B** SEPTA RAIL STATION AND RAIL CAR  
STORAGE FACILITY/MIXED USE

### REUSE STRATEGY B

#### SEPTA Rail Station and Rail Car Storage Facility/Mixed Use

Use of the Site as a SEPTA rail station, thus extending the light passenger rail system up to Phoenixville. This strategy would also take advantage of the current rail line owned by Norfolk Southern that connects into the SEPTA system. The Site could also serve as a needed rail car storage area for a very limited number of cars.

C

**EXECUTIVE OFFICE PARK/  
MIXED USE**



**REUSE STRATEGY C**

**Executive Office Park/Mixed Use**

Use of the Site as an executive office park to accommodate corporate or research and development headquarters. This strategy could also incorporate mixed use retail.

D

**POWER GENERATION  
OPPORTUNITIES**



**REUSE STRATEGY D**

**Power Generation Opportunities**

Use of the majority of the former power generation area as combined cycle natural gas fired power plant. This accounts for nearly 55 acres of the 147 Site. The remaining acreage will be used for linear development and remaining buffer zones creating further recreational and ecological uses. This option utilizes the current infrastructure from the former power plant including substations and transmission lines.

The second energy option considers the Site for ground mount solar. This will utilize nearly 30 acres of the Site and account for 5 MW of energy production. The ground mount solar is proposed only as a future option. The PA legislation, included in the Administrative Code (Act 40), includes key provisions that will enhance the solar energy market in Pennsylvania.

## 4.2 REUSE STRATEGY A LIGHT INDUSTRIAL PARK/MIXED USE (RESIDENTIAL)

Strategy A is designed for a variety of light industrial facilities collocated in a cohesive industrial park setting, with potential to connect to an existing active railroad and provide space for residential use. This Site may need to be rezoned based on the proposed uses within the Site boundary.

**Targeted industry sectors under this strategy could include light manufacturing, research, engineering, testing laboratory, and residential.**

As shown in the Strategy A Concept Plan (Figure 4.2.1), this reuse strategy develops a centralized area, utilizing open space and residential space as buffers. Two substations located within the centralized industrial park must remain. A road loop is provided to link the industrial buildings together and to connect to the proposed parking areas. Access to the Schuylkill river trail will provide employees with a valued recreational asset and a regional trail connection to Philadelphia. Open space areas provide opportunities to develop recreational facilities as well as provide access to the river for boating and fishing.

FIG 4.2.1 REUSE STRATEGY A CONCEPT PLAN



### SUMMARY

**Gross Site Area**  
147.5 Acres

**Buffer Areas (Residential Development)**  
24.2 Acres

**Buffer Areas (Open Space)**  
6.7 Acres

**Substations**  
7.2 Acres

**Total Developable Site Area**  
109.4 Acres | 74.2% of gross site area

**Light Industrial**  
410,000.00 Sq Ft

**Total Potential Building Gross Floor Area (GFA)** 410,000.00 Sq Ft

### 4.3 REUSE STRATEGY B TRANSPORTATION CENTER/MIXED USE

Reuse Strategy B is designed to accommodate the return of passenger rail transportation infrastructure that was removed from the area in the 1980's. Such infrastructure would serve communities upstream from the Site including Spring City, Royersford and Pottstown in addition to Phoenixville. Based on key person interviews, the single track Black Rock (rail) Tunnel just east of the Site would need to be improved to allow for passenger rail service to continue to Philadelphia. The Site also affords space for a variety of mixed uses. This Site may need to be rezoned based on the proposed use as a transportation center.

**Beyond transportation, targeted industry sectors under this strategy could include, light manufacturing, research, engineering, testing laboratory, businesses or professional offices, and residential.**

As shown in the Strategy B Concept Plan, this reuse strategy develops a centralized area, utilizing residential space as a buffer. Two substations located within the centralized industrial park must remain. A road loop is provided to link the residential, and mixed-use buildings together and to connect to proposed parking areas. Mixed use buildings could accommodate varied light industrial uses, flex space, incubator facilities, as well as retail. Retail should serve the needs of the employees, which could include restaurants, convenience retail and related uses. Access to the Schuylkill River Trail will provide employees with a valued recreational asset and a regional trail connection to Philadelphia. Open space areas provide opportunities to develop recreational facilities as well as provide access to the river for boating and fishing.

#### SUMMARY

Gross Site Area  
147.5 Acres

Buffer Areas (Residential Development)  
24.2 Acres

Buffer Areas (Open Space)  
6.7 Acres

Substations  
7.2 Acres

Total Developable Site Area  
109.4 Acres | 74.2% of gross site area

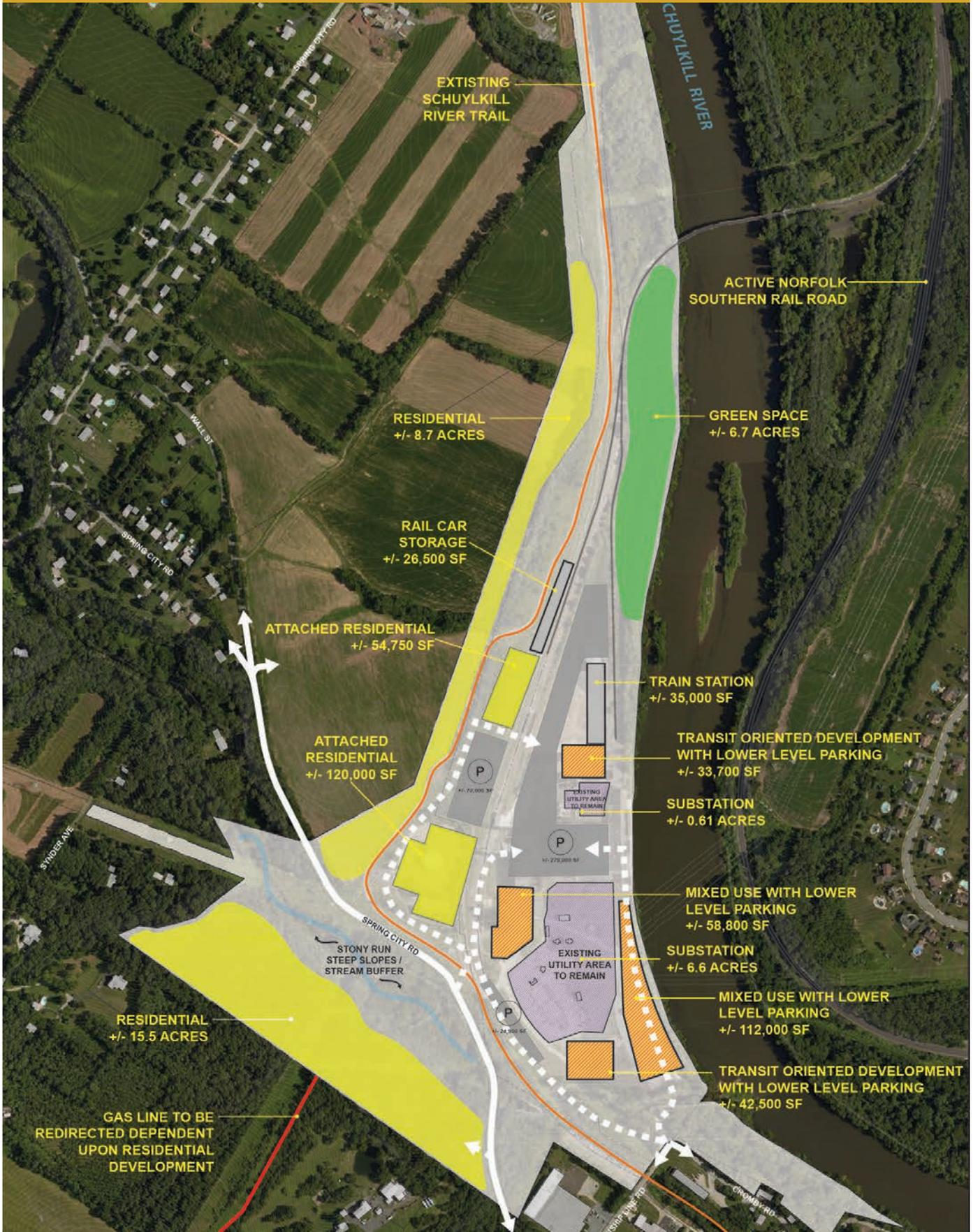
Mixed Use  
247,000.00 Sq Ft

Residential  
174,750.00 Sq Ft

Transportation  
61,500.00 Sq Ft

Total Potential Building Gross Floor Area (GFA) 483,250.00 Sq Ft

FIG 4.3.1 REUSE STRATEGY B CONCEPT PLAN



## 4.4 REUSE STRATEGY C EXECUTIVE OFFICE/HEADQUARTERS/ MIXED USE

Reuse Strategy C is designed to accommodate offices, but also provide options for companies to locate their regional headquarters. This option also incorporates residential space and mixed use retail. The Site may need to be rezoned based on the proposed uses within the Site boundary.

**Targeted uses under this strategy could include retail businesses, professional offices, and residential.**

As shown in the Strategy C Concept Plan, this reuse strategy develops a centralized area, utilizing residential space and open space as buffers. Two substations located within the centralized industrial park must remain. A road is provided to connect proposed office buildings while also providing access to proposed parking areas. A waterfront trail connects to the central commercial space as well as the Schuylkill River Trail. The centralized commercial space should serve the needs of the employees, which could include restaurants, convenience retail and related uses. Access to the existing Schuylkill River Trail will provide employees with a valued recreational asset and a regional trail connection to Philadelphia. Open space areas provide opportunities to develop recreational facilities as well as provide access to the river for boating and fishing.

### SUMMARY

**Gross Site Area**  
147.5 Acres

**Buffer Areas (Residential Development)**  
24.2 Acres

**Buffer Areas (Open Space)**  
6.7 Acres

**Substations**  
7.2 Acres

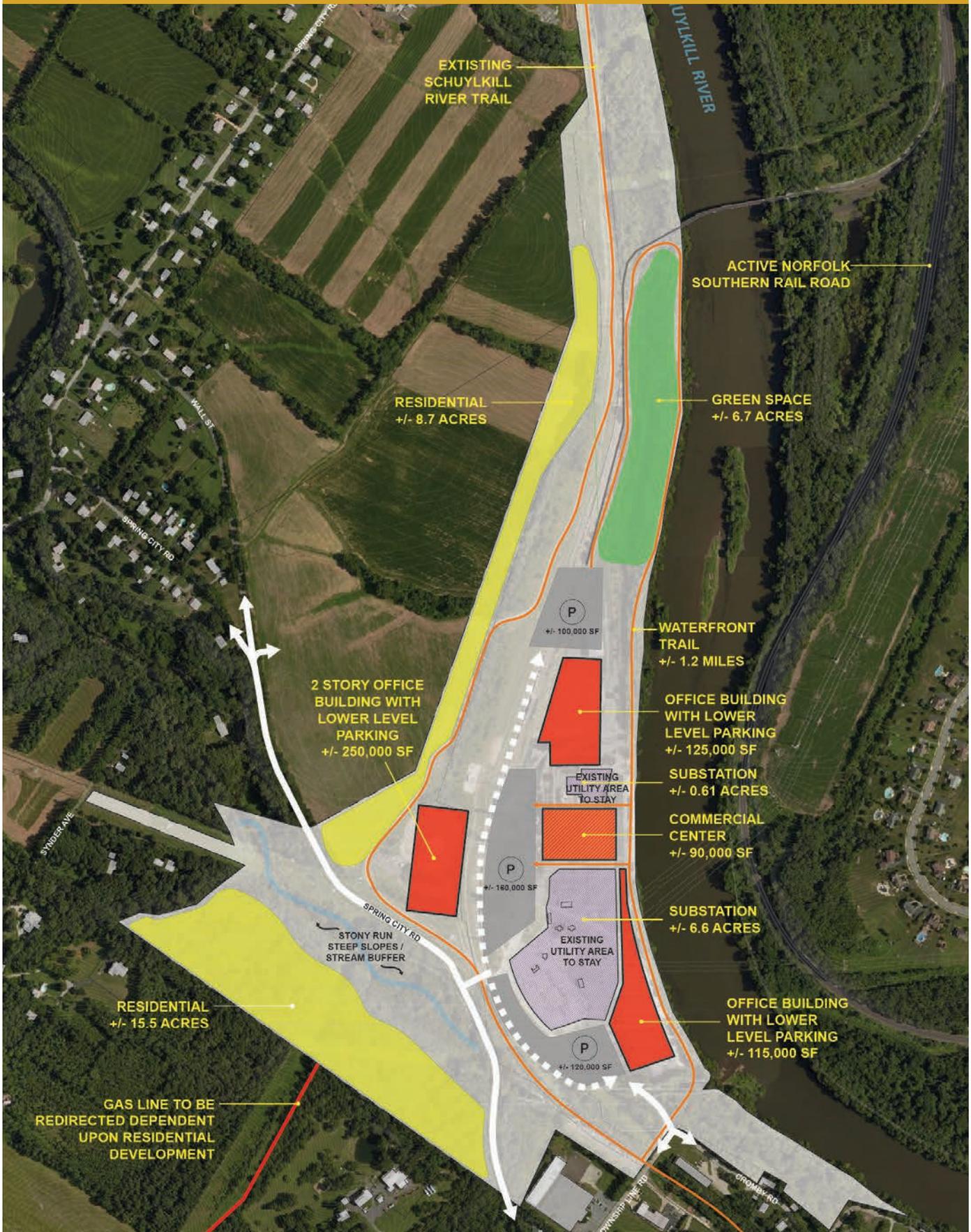
**Total Developable Site Area**  
109.4 Acres | 74.2% of gross site area

**Office Space**  
490,000.00 Sq Ft

**Commercial**  
90,000.00 Sq Ft

**Total Potential Building Gross Floor Area (GFA)** 80,000.00 Sq Ft

FIG 4.4.1 REUSE STRATEGY C CONCEPT PLAN



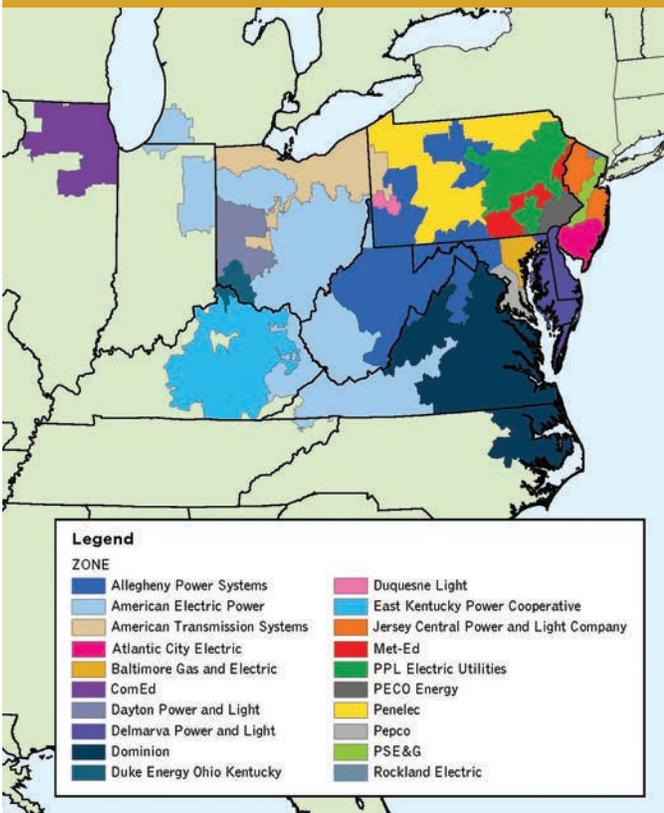


## 4.5 REUSE STRATEGY D POWER GENERATION

### NATURAL GAS FIRED POWER PLANT AND RENEWABLE ENERGY IN THE FORM OF ROOFTOP SOLAR

Reuse Strategy D contemplates the development of a combined cycle natural gas facility, a stand-alone solar facility and rooftop solar, totaling ± 115 acres. Because the Cromby Generating Station has been shut-down since 2011, use of the existing facilities and structures is not possible. Assuming that the Site has been appropriately decommissioned, demolished and environmentally remediated, the financial feasibility of developing either a natural gas combined cycle power plant or a solar energy facility was studied. Another possible energy option is a battery storage facility coupled with a solar power installation. Based on current market analysis, this option is not economically viable at this time. However, it is worth noting the economics of this technology are expected to become more favorable in the next three to five years.

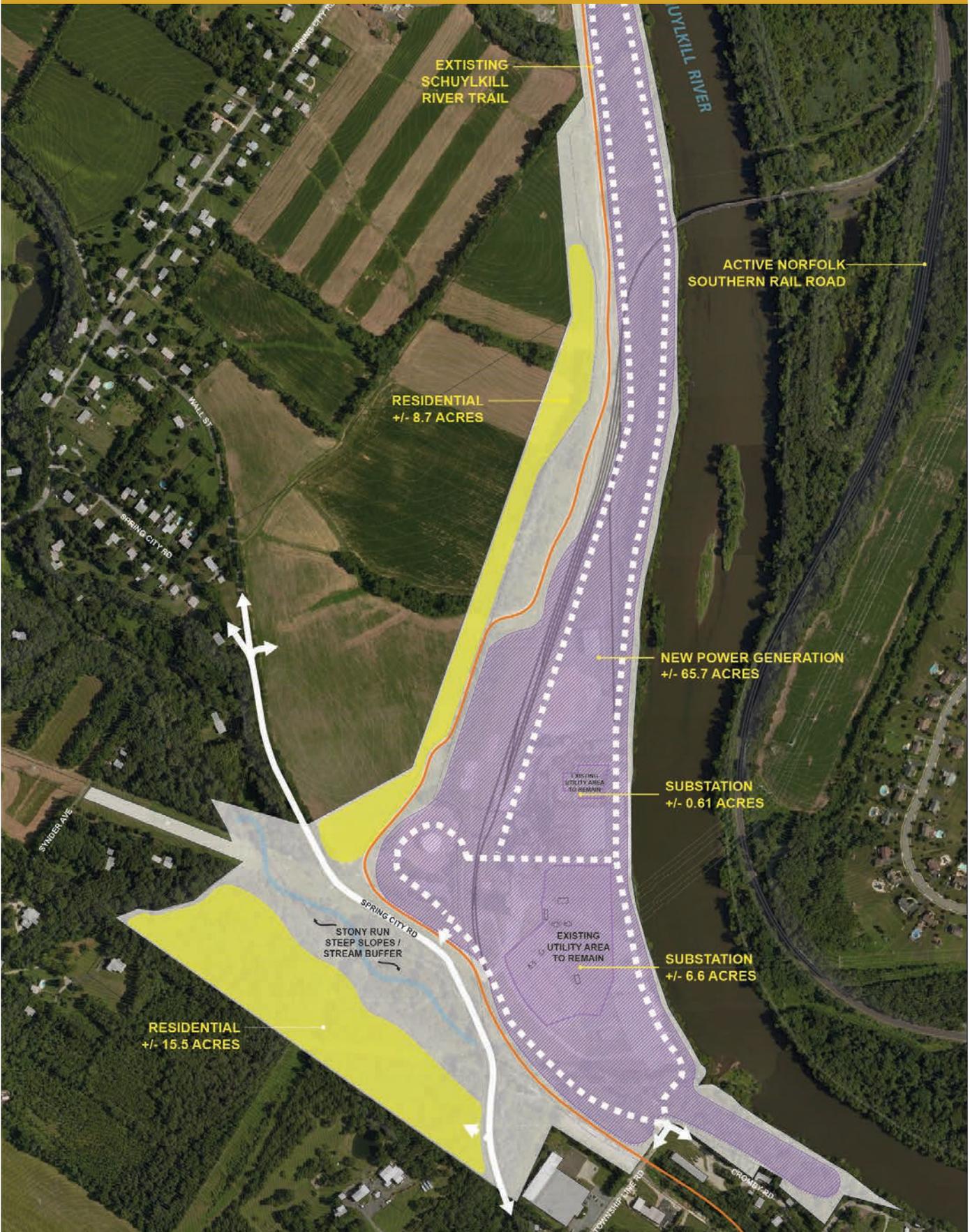
FIG 4.5.1 PJM ELECTRIC POWER MARKET



### OVERVIEW OF THE ELECTRIC GENERATION MARKET IN PENNSYLVANIA

The electric utility generation industry in Pennsylvania has transitioned from being a highly regulated environment to one where prices are set by the mechanics of an unregulated, competitive market. The PJM Interconnection is a regional transmission organization that coordinates the movement of wholesale electricity in all or parts of Delaware, Illinois, Indiana, Kentucky, Maryland, Michigan, New Jersey, North Carolina, Ohio, Pennsylvania, Tennessee, Virginia, West Virginia and the District of Columbia. Acting as a neutral, independent party, PJM operates a competitive wholesale electricity market and manages the high-voltage electricity grid to ensure reliability for more than 65 million people. The PJM wholesale electric marketplace consists of three basic markets: energy, capacity, and ancillary services.

FIG 4.5.2 REUSE STRATEGY D CONCEPT PLAN



## **GAS COMBINED CYCLE ASSUMPTIONS**

**Location**  
PECO Electric Service Territory,  
EMAAC PJM Zone

**Facility Life – Book Basis**  
20 Years

**Facility Life – Tax Basis**  
15 Years

**Nameplate Capacity**  
345 MW

**Qualified Capacity**  
345 MW

**Capacity Factor**  
50.0%

**Heat Rate**  
6,653 Btu/kWh

**Total Overnight Capital Cost**  
\$873/kW

**First Year Variable O&M**  
\$3.50/MWh

**First Year Fixed O&M**  
\$23.00/kW-year

**O&M Escalation Rate**  
2.2%

## **FINANCIAL FEASIBILITY**

To determine the financial feasibility of energy options, a high level Discounted Cash Flow (“DCF”) model was developed from publicly available information to analyze their profitability. The DCF model analyzes the revenues, expenses and capital expenditures for each type of electric generation facility. The revenue stream includes energy revenues, capacity revenues and any other revenues that the Site may generate. The expenses include fuel costs and fixed and variable operations and maintenance (O&M) costs as applicable to the type of facility analyzed. Finally, the model includes maintenance and environmental capital expenditures. A 65/35 percent debt to equity ratio was applied with a 12.0 percent equity cost and a 6.0 percent cost of debt for an after-tax weighted annual cost of capital of 6.97 percent.

## **NATURAL GAS COMBINED CYCLE GENERATING PLANT**

Publicly available information from several sources was used to develop a high level DCF model that analyzes the financial feasibility of a natural gas combined cycle generating station at the Site. Using this information, a generic natural gas combined cycle power plant of approximately 345 MW would be financially feasible. The model assumes the development of an approximately 345 MW generic combined cycle unit with a heat rate of 6,553 and a capacity factor of 50 percent. For this type of generation facility the total overnight cost of \$873/kw with first year variable O&M of \$3.50/MWh and first year fixed O&M of \$23.00/kW-year were assumed. All O&M was escalated at 2.2 percent inflation rate. Energy revenues for the DCF model utilized Energy Information Administration (EIA) energy prices from the 2018 Annual Energy Outlook for the Reliability First Corporation East (RFC East) region. Likewise, natural gas fuel prices in the DCF model came from the EIA 2018 Annual Energy Outlook report. Capacity revenues were calculated using forecasted capacity prices developed by Concentric Energy Advisors (Concentric). Concentric also assumed one percent of energy and capacity revenues for “other” ancillary service revenues. A summary of assumptions is shown on this page.

## SOLAR ENERGY

Publicly available information from several sources was used to develop a high level DCF model that analyzes the financial feasibility of rooftop solar for reuse Options A-C and a standalone 10 MW solar energy facility at the Site. From this approach, a solar energy facility of approximately 10 MW would be financially feasible at the Site. Additionally, supporting solar mounted on the rooftop structures presented with Reuse Options A-C (see Sections 4.2-4.4 for the building footprints) is also being incorporated into our design layout. The following provides further detail for Concepts A-C.

### ROOFTOP SOLAR ON OPTION A Light Industrial Park/Mixed Use

To arrive at this determination, Concentric assumed the development of an approximately 4.1 MW solar energy installation with a capacity factor of 19.0 percent. Total overnight cost of \$1,350/kW with first year first year fixed O&M of \$10.00/kW-year escalated at 2.2%. As noted above, Concentric utilized EIA energy prices from the 2018 Annual Energy Outlook for the RFC East region to calculate energy revenues. Capacity revenues were calculated from the capacity prices developed by Concentric and a summary of the assumptions is shown to the right.

### ROOFTOP SOLAR ON OPTION B Transportation Center/Mixed Use

To arrive at this determination, Concentric assumed the development of an approximately 4.8 MW solar energy installation with a capacity factor of 19.0 percent. Total overnight cost of \$1,350/kW with first year first year fixed O&M of \$10.00/kW-year escalated at 2.2%. As noted above, Concentric utilized EIA energy prices from the 2018 Annual Energy Outlook for the RFC East region to calculate energy revenues. Capacity revenues were calculated from capacity prices developed by Concentric and a summary of the assumptions is shown to the right.

#### ROOFTOP SOLAR ON LIGHT INDUSTRIAL PARK/MIXED USE ASSUMPTIONS

**Location**  
PECO Electric Service Territory,  
EMAAC PJM Zone

**Facility Life – Tax Basis**  
20 Years

**Nameplate Capacity**  
4.1 MW

**Qualified Capacity**  
0.78 MW

**Total Overnight Capital Cost**  
\$1,350/kW

**First Year Variable O&M**  
\$0.00/MWh

**First Year Fixed O&M**  
\$10.00/kW-year

**O&M Escalation Rate**  
2.2%

#### ROOFTOP SOLAR ON TRANSPORTATION CENTER/MIXED USE ASSUMPTIONS

**Location**  
PECO Electric Service Territory,  
EMAAC PJM Zone

**Facility Life – Tax Basis**  
20 Years

**Nameplate Capacity**  
4.8 MW

**Qualified Capacity**  
0.91 MW

**Total Overnight Capital Cost**  
\$1,350/kW

**First Year Variable O&M**  
\$0.00/MWh

**First Year Fixed O&M**  
\$10.00/kW-year

**O&M Escalation Rate**  
2.2%

**ROOFTOP SOLAR ON EXECUTIVE OFFICE/HQ/MIXED USE ASSUMPTIONS**

<b>Location</b> PECO Electric Service Territory, EMAAC PJM Zone
<b>Facility Life – Tax Basis</b> 20 Years
<b>Nameplate Capacity</b> 4.5 MW
<b>Qualified Capacity</b> 0.86 MW
<b>Total Overnight Capital Cost</b> \$1,350/kW
<b>First Year Variable O&amp;M</b> \$0.00/MWh
<b>First Year Fixed O&amp;M</b> \$10.00/kW-year
<b>O&amp;M Escalation Rate</b> 2.2%

**UTILITY SOLAR PV ASSUMPTIONS**

<b>Location</b> PECO Electric Service Territory, EMAAC PJM Zone
<b>Facility Life – Tax Basis</b> 20 Years
<b>Nameplate Capacity</b> 10 MW
<b>Qualified Capacity</b> 1.90 MW
<b>Total Overnight Capital Cost</b> \$1,350/kW
<b>First Year Variable O&amp;M</b> \$0.00/MWh
<b>First Year Fixed O&amp;M</b> \$10.00/kW-year
<b>O&amp;M Escalation Rate</b> 2.2%

**ROOFTOP SOLAR ON OPTION C  
Executive Office/Headquarters/Mixed Use**

To arrive at this determination, Concentric assumed the development of an approximately 4.5 MW solar energy installation with a capacity factor of 26.5 percent. Total overnight cost of \$1,350/kW with first year first year fixed O&M of \$10.00/kW-year escalated at 2.2%. As noted above, Concentric utilized EIA energy prices from the 2018 Annual Energy Outlook for the RFC East region to calculate energy revenues. Capacity revenues were calculated from capacity prices developed by Concentric and a summary of the assumptions is shown to the left.

**Utility Scale Solar Photovoltaics**

To arrive at this determination, Concentric assumed the development of an approximately 10 MW solar energy installation with a capacity factor of 19.0 percent. Total overnight cost of \$1,350/kW with first year first year fixed O&M of \$6.00/kW-year escalated at 2.2%. As noted above, Concentric utilized EIA energy prices from the 2018 Annual Energy Outlook for the RFC East region to calculate energy revenues. Capacity revenues were calculated from capacity prices developed by Concentric and a summary of the assumptions is shown to the left.

**4.6 ECONOMIC & FISCAL IMPACTS  
ANALYSIS SUMMARY**

Economic impacts of the four concepts include jobs created by new businesses operating on the redeveloped Site. To estimate the number of new jobs created for Concepts A and D, the total building area of each concept was divided by an industry average jobs-per-square-foot ratio. Jobs per square foot can vary significantly depending on the type of facility and industry. A conservative ratio of one job per 1,000 SF for manufacturing and light industrial space for Concept A and one job per 151 SF for Concept D, executive office was assumed. Concept B, the Transport Center, assumes approximately 309 jobs created, while Concept C assumes approximately 20 full time jobs for a natural gas combined cycle facility. Construction of a 10MW solar farm would create two permanent jobs.

In addition to employment impacts, the redevelopment will generate property tax revenues for the county and its municipalities. These revenues were derived by multiplying estimated assessed values for new development at full buildout of each concept by 2018 millage rates.

Total economic impacts for each concept are summarized in Figure 4.6.1. Concept C-Executive Offices/Headquarters would result in the highest number of new jobs (1,873). Concept B would also add the highest amount of revenue. Concept D, would create the largest in real estate tax by generating approximately \$10,000,000 annually.

Annual tax revenues to each jurisdiction are summarized in Estimated Annual Tax Revenue at Full Buildout. Table 4.6.1, summarizes for each concept the expected cost of development, number of the jobs created, and expected real estate and school taxes for the community. Acknowledging the likelihood of great variation among salaries and product offerings within each development alternative, this study did not calculate the impact of tax revenues from employee salaries or sales. For example, Concept A Light Industrial uses could range from farming to research and development within the life sciences space. The potentially wide variation of outputs between these uses makes it unlikely that any single estimate of salary and sales impacts would be accurate.

## 4.7 UNIT RATE COSTING INFORMATION

Information to obtain square foot pricing for construction of the developments proposed for the Cromby Generation Station were provided through RSMMeans ([www.rsmeans.com/info/contact/about-us.aspx](http://www.rsmeans.com/info/contact/about-us.aspx)).

### ABOUT RSMEANS DATA

RSMMeans data from Gordian is North America's leading construction cost database. It is a dynamic collection of data points actively monitored by experienced Cost Engineers. RSMMeans data is used by construction professionals to create budgets, estimate projects, validate their own cost data, and plan for ongoing facilities maintenance. RSMMeans data is the construction industry standard, providing localized, accurate and complete data. The costs per square foot include architectural design, construction, and construction management fees.

Cost estimates for residential single family housing construction were obtained through the Craftsman Book Company (<https://www.craftsman-book.com/content/contact/company/>).

Tens of thousands of contractors, remodelers, custom builders, appraisers, adjusters, estimators, architects, engineers and other construction professionals in the United States and Canada rely on Craftsman's software products and annual estimating cost data publications.

**FIG 4.6.1 DEVELOPMENT COSTS, JOBS CREATED AND YEARLY TAX REVENUE**

DEVELOPMENT ALTERNATIVE	COST OF DEVELOPMENT	JOBS CREATED	YEARLY TAX REVENUE
A Light Industrial	\$45,771,000	657	\$1,864,000
B Transportation Center	\$51,762,000	309	\$2,111,000
C Executive Offices/HQ	\$58,972,000	1873	\$2,406,000
D Gas Fired Power Plant	\$448,821,000	20	\$10,184,000
Solar Farm	\$8,820,000	2	\$480,000

All cost estimates below include an 11% markup factor for the Philadelphia region, as the costs provided were national averages. The cost estimates that were utilized for the Cromby Generation Station construction are as follows for each type of development;

- Residential** \$138.75 per square foot
- Industrial** \$136.40 per square foot
- Retail** \$135.90 per square foot
- Transit** \$159.97 per square foot\*
- Office** \$205.73 per square foot

For this discussion, we will consider the costs of building a 2,470 square foot, two-story structure with footprint of 24'x50' single family house, which averages \$295,000 including labor and materials.

**UNIT RATE COSTING**

<b>LIGHT INDUSTRIAL DEVELOPMENT</b>	<b>SQUARE FEET</b>	<b>LINEAR FEET</b>	<b>COST</b>
Outside Parking	220,000		2,640,000
Lower Level Parking	332,300		6,646,000
Roads		6,161	110,898
Utilities (water, sewer, stormwater, gas, electric, communications)		8,369	1,439,468
Additional Costs (manholes, lift stations, curbing)			300,000
<b>TRANSPORTATION CENTER DEVELOPMENT</b>	<b>SQUARE FEET</b>	<b>LINEAR FEET</b>	<b>COST</b>
Outside Parking	364,900		4,378,800
Lower Level Parking	247,000		6,175,000
Roads		5,582	100,476
Utilities (water, sewer, stormwater, gas, electric, communications)		15,551	2,674,772
Additional Costs (manholes, lift stations, curbing)			300,000
<b>EXECUTIVE OFFICES HQ DEVELOPMENT</b>	<b>SQUARE FEET</b>	<b>LINEAR FEET</b>	<b>COST</b>
Outside Parking	380,000		4,560,000
Lower Level Parking	365,000		9,125,000
Roads		2,939	52,902
Utilities (water, sewer, stormwater, gas, electric, communications)		7,228	1,243,216
Additional Costs (manholes, lift stations, curbing)			300,000

\*Transit facility costs were compared to a bus terminal costing



**CONSTRUCTION COST ESTIMATES FOR FACTORY, 1 STORY IN NATIONAL, US**

The following analysis estimates the cost to build a factory (1 story) using US National Average costs from 2013 RSMeans cost data. Costs are derived from a building model that assumes basic components, using the average from union and open shop labor rates for a 30,000 square foot building. The estimate assumes a concrete block and concrete bearing walls. This cost is a basic estimate and does not factor in 2018 cost data.

AVERAGE COST ESTIMATE	% OF TOTAL	COST PER SF	COST
<b>Total</b>		<b>\$88.18</b>	<b>\$2,645,500</b>
<b>Contractor Fees (GC,Overhead,Profit)</b>	<b>25%</b>	<b>\$22.05</b>	<b>\$661,350</b>
<b>Architectural Fees</b>	<b>7%</b>	<b>\$7.72</b>	<b>\$231,500</b>
<b>Total Building Cost</b>		<b>\$117.95</b>	<b>\$3,538,350</b>



**CONSTRUCTION COST ESTIMATES FOR OFFICE, 1 STORY IN NATIONAL, US**

The following analysis estimates the cost to build an office (1 story) using US National Average costs from 2013 RSMeans cost data. Costs are derived from a building model that assumes basic components, using the average from union and open shop labor rates for a 7,000 square foot building. The estimate assumes a brick on block and steel roof deck. This cost is a basic estimate and does not factor in 2018 cost data.

AVERAGE COST ESTIMATE	% OF TOTAL	COST PER SF	COST
<b>Total</b>		<b>\$133.47</b>	<b>\$934,250</b>
<b>Contractor Fees (GC,Overhead,Profit)</b>	<b>25%</b>	<b>\$33.37</b>	<b>\$233,550</b>
<b>Architectural Fees</b>	<b>7%</b>	<b>\$11.68</b>	<b>\$81,750</b>
<b>Total Building Cost</b>		<b>\$178.52</b>	<b>\$1,249,550</b>



**CONSTRUCTION COST ESTIMATES FOR RETAIL STORE IN NATIONAL, US**

The following analysis estimates the cost to build a retail store using US National Average costs from 2013 RSMeans cost data. Costs are derived from a building model that assumes basic components, using the average from union and open shop labor rates for a 8,000 square foot building. This estimate assumes that metal studs and steel joists are used in construction. This cost is a basic estimate and does not factor in 2018 cost data.

AVERAGE COST ESTIMATE	% OF TOTAL	COST PER SF	COST
<b>Total</b>		<b>\$90.69</b>	<b>\$725,500</b>
<b>Contractor Fees (GC,Overhead,Profit)</b>	<b>25%</b>	<b>\$22.67</b>	<b>\$181,400</b>
<b>Architectural Fees</b>	<b>8%</b>	<b>\$9.07</b>	<b>\$72,600</b>
<b>Total Building Cost</b>		<b>\$122.43</b>	<b>\$979,400</b>



**CONSTRUCTION COST ESTIMATES FOR TRANSPORTATION CENTER IN NATIONAL, US**

The following analysis estimates the cost to build a bus terminal using US National Average costs from 2013 RSMeans cost data. Costs are derived from a building model that assumes basic components, using the average from union and open shop labor rates for a 12,000 square foot building. This estimate assumes that concrete blocks and bearing walls are used.

AVERAGE COST ESTIMATE	% OF TOTAL	COST PER SF	COST
<b>Total</b>		<b>\$112.32</b>	<b>\$1,347,250</b>
<b>Contractor Fees (GC,Overhead,Profit)</b>	<b>25%</b>	<b>\$28.08</b>	<b>\$336,950</b>
<b>Architectural Fees</b>	<b>7%</b>	<b>\$9.83</b>	<b>\$117,900</b>
<b>Total Building Cost</b>		<b>\$150.23</b>	<b>\$1,802,600</b>

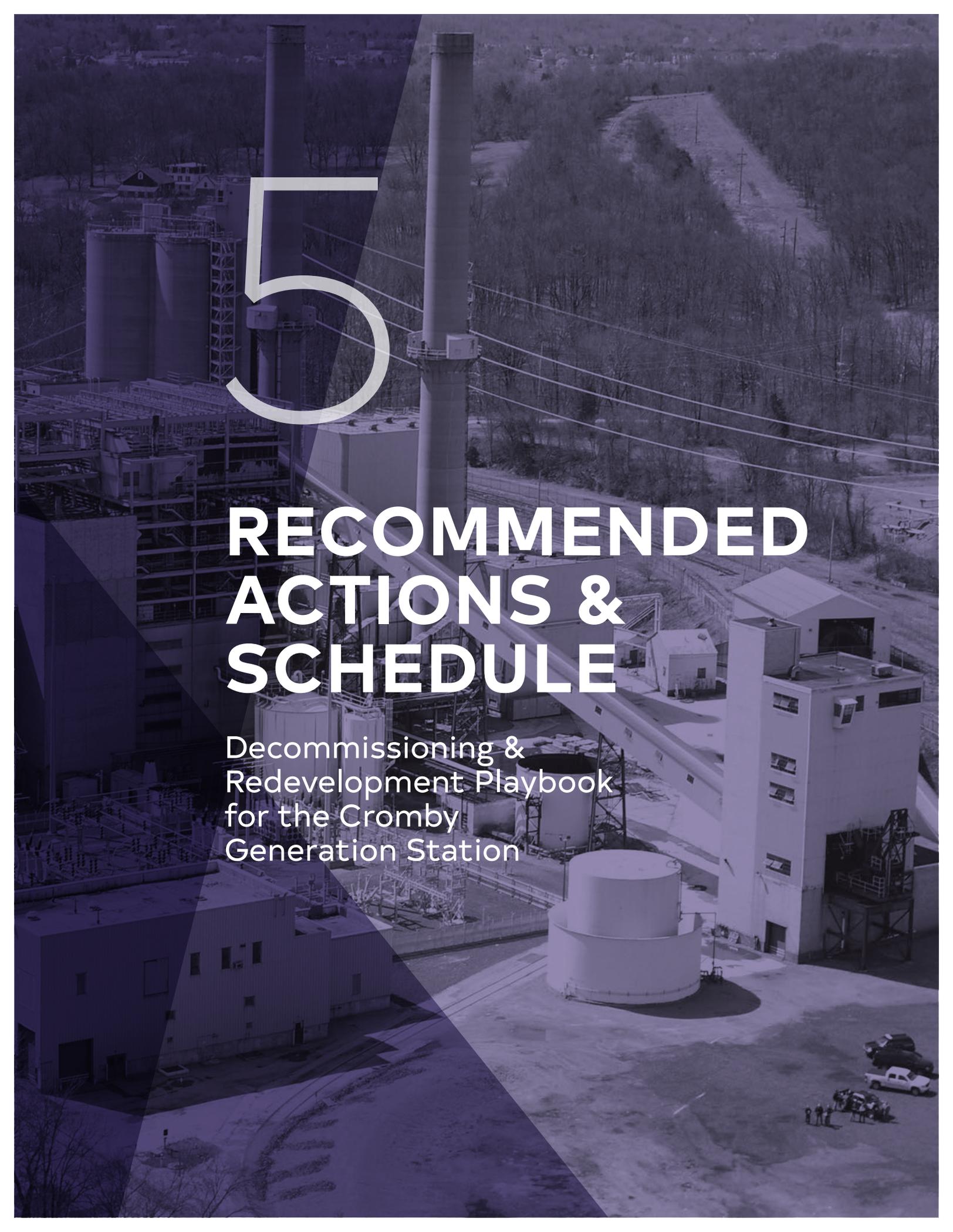


### COST TO BUILD A SINGLE-FAMILY HOME

The building of such a home is never viewed in terms of a "DIY" project and usually requires a knowledgeable contractor, an architect, a team of subcontractors, and cooperative homeowners to get the job done in under a calendar year.

For the building of a single family home, the typical costs include:

- According to the Craftsman Book Company a home as described above, with mid-range materials, a normal foundation with full basement, efficient doors and windows, all appliances, and "turnkey" finishing would run at an average of \$295,000 to complete. This does not include acquisition of the acreage or any furnishings.
- The above figures place this construction at a \$117 per square foot cost, though national average stands at \$125. This pricing structure assumes that carpenters, masons and excavators charge an average of \$70 per hour, electricians between \$65 to \$85 per hour, painters between \$20 and \$35 per hour and plumbers between \$45 and \$65 per hour.
- This home has \$146,454 in materials, \$144,819 in labor, and also works in a budget of roughly \$5200 for machine costs as well.

An aerial photograph of the Cromby Generation Station, showing various industrial buildings, large cylindrical tanks, and tall smokestacks. The image is overlaid with a semi-transparent blue geometric shape. A large, white, stylized number '5' is positioned in the upper left quadrant of the image.

5

# RECOMMENDED ACTIONS & SCHEDULE

Decommissioning &  
Redevelopment Playbook  
for the Cromby  
Generation Station

## 5.0 RECOMMENDED ACTIONS & SCHEDULE

The purpose of this section is to recommend a market-responsive path forward as a means to move the Site towards successful redevelopment as a viable business enterprise and employment center.

### 5.1 RECOMMENDED REDEVELOPMENT STRATEGY

As presented previously, the Site is best suited for reuse as a light industrial park serving various facilities that could support either the region's Life Science or Agricultural sector.

Further, of the four redevelopment strategies presented, the financial feasibility analysis indicates that Concepts A, C, & D – Light Industrial Manufacturing, Executive Office/Headquarters, and Power Generation, respectively, are financially viable without the need for major public subsidy, while Concept B (Transportation Center) would require public subsidies in the range of \$50-75 million. Much of this cost could be off-site to support tunnel upgrades from freight to passenger rail. As a result these three strategies could potentially move forward at a faster pace than Concept B.

During buildout, Concept D could yield over 1,200 new jobs and over \$2.4 million in new annual tax revenue, while yields for Concepts A, B, & C could be in the range of 80-1,000 new jobs and \$12-13 million in new annual tax revenue. It should be noted that the 1,200 jobs generated by Concept D are temporary over a two year construction period. Concept D would then create 20 full time positions to operate the plant.

**Additionally, there are two key items that must be considered for any of the aforementioned re-use scenarios including:**

**KEY ITEM 1–** Site issues related to floodplain designation need to be addressed. This could be elevating the site or obtaining a variance to allow for site development given the floodplain restrictions. For our study we estimate that

negotiations with the affected communities for a zoning variance is more desirable than negotiating with both the US Army Corp of Engineers and the community to fill and raise the site above the floodplain. This recommended approach of maintaining current elevation levels was made based on the 100 year history of the site at the current elevation that enables the site infrastructure to remain.

**KEY ITEM 2–** Access to the Site is limited to the two lane streets of Cromby and Township Line Roads. Depending on the reuse strategy pursued will determine expected increases in traffic volumes. Improved access for employees, trucking and transportation will need to be addressed. Certain road improvements could be considered even before a development strategy is realized as a long term improvement to enhancing access to the site.

Each reuse strategy will invariably place different demands on both on-site and regional infrastructure. In many cases the existing water, gas, electric, and stormwater infrastructure enable the Site to be developed with less permitting and infrastructure investment. Further, new infrastructure investments could be addressed by the developer.

The current zoning is favorable to the proposed light industrial and other proposed uses. The zoning mix of utility, industrial, residential, and agricultural also offers the developer the potential for mixed use, meaning that the 147 acre site could be used for more than one use. This is seen from the selected Concepts A-C, where mixed residential and retail have been incorporated into the development.

The regional demand for startup life science facilities and agricultural expansion within the County, make the site ideal based on perfect geography and following in the County theme of work, play and live. Downtown Phoenixville provides this option with extensive expansion of new housing, restaurants, and entertainment.

## 5.2 PROPOSED ACTIONS TO ENABLE REDEVELOPMENT

To move forward in an efficient manner that yields the greatest chance for success, it is important for the parties involved in the redevelopment initiative to band together and present a unified face to the marketplace.

Industrial site selectors and developers looking at opportunities do not like uncertainty. Conversely, industrial site selectors and developers often gravitate to those opportunities that are packaged, coordinated, prepared for action, and "Ready-to-Go".

These nine actions are designed to achieve a "Ready-to-Go" posture for effective presentation of the Site to the marketplace:

### 1. W.P. Cromby, LLC and PECO Review/Revise/Approve "Redevelopment Strategy"

Support and approval of the redevelopment strategy by the current property owners are basic to any further actions. The parties will need to discuss, review, revise if needed, and ultimately approve moving forward with a strategy supported by all. DCED can provide assistance as needed.

### 2. Community Stakeholders Review/Revise/Approve "Recommended Redevelopment Strategy"

For the redevelopment initiative to succeed, it is critical that key community stakeholders support the initiative and are part of the process early. Industrial site selectors and developers consider community support for a project a strong positive in decision-making. The community stakeholders group should include local and state elected representatives, community organizations, community residents, economic development agencies, and others.

### 3. W.P. Cromby, LLC, DCED and Community Stakeholders Form "Project Steering Committee (PSC)"

Formation of a "Project Steering Committee (PSC)" or something similar will provide a forum for

discussion and cohesive decision-making, and will enable the redevelopment initiative to speak with one voice in the marketplace. The PSC could be more or less formal as is comfortable and productive for the participants. A key goal of the PSC is to present a unified face to the marketplace.

### 4. Development of a Streamlined Permitting and Entitlements Process

A key selling point to the redevelopment strategy will be a transparent, cohesive process for regulatory approvals and permitting. A key function of the PSC should be to work collaboratively with federal, state and local regulators to create a process that is efficient, visible, and readily accessible to the due diligence efforts of industrial site selectors and developers.

### 5. PSC Bring Site to "Shovel-Ready" Status

Another key consideration for industrial site selectors and developers is "Time-to-Market". The concept of "Shovel-Ready" identifies any needed improvements to the site, design improvements, a construction timeline, and a funding mechanism to pay for construction, basically doing everything short of actually commencing construction. The pitch to a prospect can then be "These improvements can be in place by the time you open your doors".

### 6. PSC Design and Execute Marketing Campaign

Soft marketing, such as word-of-mouth, can begin as soon as the parties are in agreement on a strategy. A more formal marketing campaign would be most effective once items 3 through 6 above have been addressed and incorporated into it, thus allowing presentation of the site as "Ready-to-Go". The marketing campaign should start with identifying strategic prospects that are in growth mode. Once done, a game plan for effectively reaching out to them can be prepared.

### 7. W.P. Cromby, LLC and/or End User Design/Construct Site Infrastructure and Building Facilities (Estimated Timeline)

Once development deals are struck, site infrastructure and facility design can take place on a variety of timelines ranging from a fast-track process with separate design/construction packages or as a single design/construction package. Depending on the project's complexity, and assuming a streamlined regulatory process, a design/construction time period could range from 3-6 months for aspects of Options A & C, in comparison to Options B & D which could take 24-36 months for financing and permitting approvals.

### 8. Work with End Users and/or Tenants to Design and Implement Project-Specific Workforce Strategy

The ability to attract a focused and robust workforce is top-of-mind for industrial site selectors and developers. A strong workforce strategy will be a significant selling point for the redevelopment initiative. It should consider which segments of the workforce will be needed for the targeted Phase 1 development in particular; take stock of existing workforce assets, and work with local educational institutions to create programs to address shortfalls.

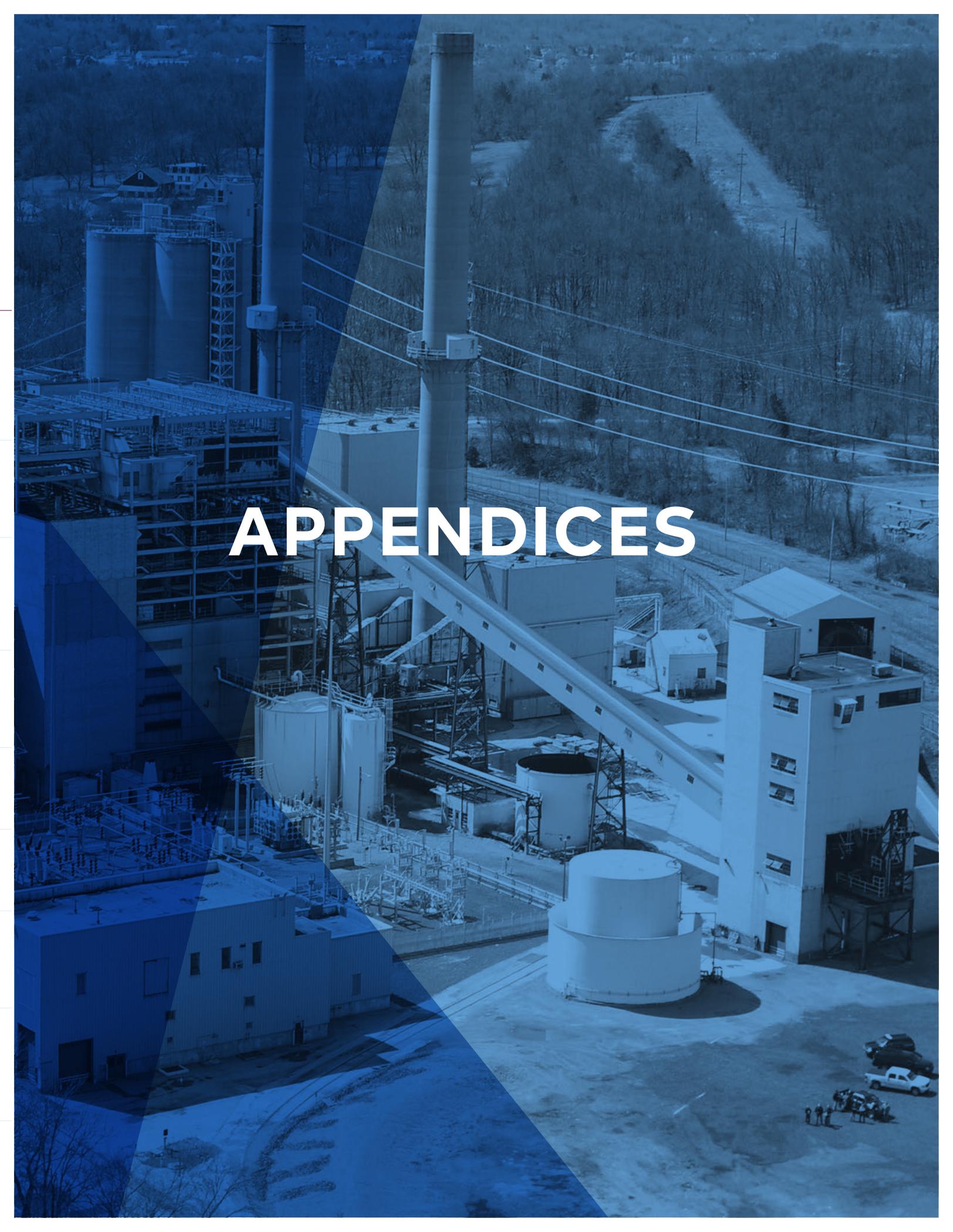
FIG 5.2.1 DETAILED ASSESSMENT OF FOCUSED POTENTIAL USE

	1 MINOR APPLICABILITY	2 SOME APPLICABILITY	3 APPLICABLE	4 GOOD APPLICABILITY	5 VERY APPLICABLE	
POTENTIAL USE	LOCATION/ MARKET	SITE FEATURES	TRANSPORTATION	UTILITIES	LABOR/ JOBS	TOTAL
<b>LIGHT INDUSTRIAL</b>						
Light Manufacturing & Assembly	4	4	2	4	3	17
Logistics, Warehouse, Supply Chain	2	3	1	3	2	11
Life Science/Pharmaceutical	4	4	2	3	4	17
Agricultural Production	4	4	2	3	4	17
Petro-Chemical Feedstock mfg from NGLs (ethane, propane, butane, natural gasoline, isobutane)	2	3	2	3	2	12
<b>TRANSPORTATION CENTER</b>						
Transit Center Septa Rail Station	5	3	5	3	2	18
Train Car and Locomotive Storage & Repair Center	3	3	4	4	2	16
<b>EXECUTIVE OFFICE/MIXED USE</b>						
Office Space/Headquarters	4	3	3	3	4	17
<b>POWER GENERATION</b>						
Natural Gas-Fired Power Generation To Support Adjacent Manufacturing	3	3	3	4	2	15
Solar Plant – Grid Connected	4	3	3	3	1	14

## 5.3 Potential Redevelopment Implementation Schedule

The Potential Redevelopment Implementation Schedule indicates how Phase 1 redevelopment could unfold. The schedule sets forth aggressive actions for the first 4 months culminating in formation of a PSC to coordinate and move the process forward. The next 6 months are spent preparing and marketing the site, while the remaining 18 months are allocated to design and construction of a new manufacturing facility and development of workforce initiatives to support new end users/tenants.

RECOMMENDED ACTIONS	MONTHS
1 W.P. Cromby, LLC, Review/Revise/Approve "Recommended Redevelopment Strategy" with assistance from DCED as needed	1 2 3 4
2 Community Stakeholders Provide Input to "Recommended Redevelopment Strategy"	3 4
3 W.P.Cromby, LLC, DCED and Community Stakeholders Form "Project Steering Committee (PSC)"	4
4 Development of a Streamlined Permitting and Entitlements Process for Subject Site	4 5 6 7 8
5 PSC Bring Subject Site to "Shovel-Ready Site" Status	4 5 6 7 8
6 PSC Design and Execute Subject Site Marketing Campaign	4 5 6 7 8 9 10 11 12
7 W.P. Cromby, LLC and/or End User design/Construct Site infrastructure and Bulding Facilities	12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
8 PSC Work with Potential End User and/or Tenants to Implement Project Specific Workforce Strategy	12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30



# APPENDICES

# PLAYBOOK

Decommissioning & Redevelopment Playbook  
for the Cromby Generation Station