ROCK CREEK DEVELOPMENT PARK

STRATEGIC PLANNING AND MARKETING ANALYSIS

WEST VIRGINIA DEPARTMENT of COMMERCE

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Characterization of Rare Earth Elements in West Virginia Coal Measures - Jessica Moore, WVGES

Molecular Recognition Technology: A Green Chemistry Process for Separation of Individual Race Earth Elements - UCORE and IBC Advanced Technologies

Proposed Concept for Water Supply and Sanitary Wastewater Service, Initial Section of Hobet Mine Development Site - Phase I - Terry Moran, P.E., Potesta & Associates Inc.

TABLE OF CONTENTS

INTRODUCTION

Rock Creek Development Park is an opportunity to diversify and expand the economy of southern West Virginia by providing a platform for new industries, technology and jobs, while leveraging its existing strengths of natural resources, skilled labor force, and proximity to customer markets. Rock Creek Development Park is conceived as a mixed-use development that will drive innovation and high quality jobs for generations.

> *"For nearly a century the nation and world depended on southern West Virginia to fuel its power plants and light its cities. For years other parts of West Virginia and the region diversified and modernized their economies on the backs of the coal industry. Well now the time has come to pay back southern West Virginia by the repurposing of a former coal mine site that will bring southern coalfields into the 21st century"*
> Keith Burdette, Cabinet Secretary, West Virginia Department of Commerce

This strategic plan is intended to explore the issues, opportunities and potential for developing the new Rock Creek Development Park, and is part of a broader strategy to enhance economic development and job creation within southern West Virginia. The subject site is comprised of approximately 25,500 acres of former coal surface mining land along the Boone and Lincoln County line along U.S. Route 119 (Corridor G) near the town of Danville.

GAI's Community Solutions Group was commissioned in the fall of 2016 to review factors affecting the viability of a long range plan for the Rock Creek Site. The plan provides a high level review of Infrastructure, economic and master planning factors inherent to the site. This document focuses on envisioned early phase concepts as well as a long range vision for how to organize the property, including the suitability of candidate areas for potential development types.

The site provides specific opportunities and challenges:

Assets: A large area of relatively "flat" land in southern West Virginia with regional highway and rail access; Access to utility infrastructure and a system of on-site large industrial road beds; Access to a regional workforce with manufacturing and industrial experience.
Challenges: Infrastructure distribution and site preparation will be expensive and complex. Ongoing and continued infrastructure master planning will be necessary to activate any particular site.
Opportunities presented by the Plan: A flexible view of land use; Organizing the property to maximize the opportunity to support a wide mix of land uses; Accommodate early 'starter' projects while preserving opportunities for both large parcel / manufacturing users as well as 'place based' community uses, including areas for on-site residential neighborhoods.

Rock Creek Development Park is unique. It offers vast areas of developable property in the Appalachian region where property is often topographically challenged and availability of level sites is severely limited. This strategic plan creates a model for mixed-use development that prioritize public private partnerships, research and development, commercialization of new technologies, emphasize high-technology employment and innovative sustainable development in agricultural operations.

VISION

This report represents the vision and input of many professionals, partners and state leaders that proceeds well before GAI's Community Solutions Group was commissioned for this report. There is a significant and growing body of knowledge and interested stakeholders associated with Rock Creek. Any development plan requires ongoing leadership and recalibration in order to capitalize on near term opportunities while

preserving and pursing its long term potential. Over time, the implementation of such an endeavor requires the ongoing stewardship of the planning and development process by a governing authority that can provide the necessary continuity of the leadership and vision.

Taken together, we believe this plan represents a moment in time, with some helpful organizational ideas which can inform the ongoing pursuit of the vision: A livable, sustainable and economically vibrant contribution to the future of southern West Virginia.

West Virginia's Rock Creek Development Park is envisioned as a mixed-use campus that provides a multitude of property configurations that can meet the needs of virtually any corporate client. The reuse strategy for this site is to take advantage the vast amount of useable acreage and the natural attributes of the property; its access to a large, skilled workforce; and its proximity to major interstate highways, railway, and an airport to create a unique development community that can provide a world class setting for any manufacturing, agriculture, distribution or service business.

The property has access to extensive underground water reserves, high capacity electric support, substantial natural gas and one of the largest concentrations of rare earth elements in this region of the country.

Rock Creek creates valuable development opportunities in an otherwise rugged but picturesque area of West Virginia that is geographically situated within an eight hour trucking shift of two-thirds of the population of the United States and one third of the population of Canada.

VISION: A global location for private, technology-based development in a high-quality, collaborative environment to support job creation.

DESIGN MOTIVATION

The design of this feasibility study is supported by the motivation to create diversification in the quality and type of industry in the southern coalfields, utilizing mixed-use design principles, policies, and practices in a development form tailored to cutting edge manufacturing, development, innovation, and commercialization.

ECONOMIC OPPORTUNITY

The Rock Creek Development Park has the potential to become the most significant and comprehensive National center for rare earth elements (REE) extraction, refining, production research and development, and workforce talent concentration in the region. The Rock Creek Development has the potential to become the focal point for REE's development for the State, region and country, while catalyzing job creation and talent development in southern West Virginia.

The integrated master planning process being undertaken will allow the physical development and research commercialization potential of the Rock Creek Development to support each other. To this end, workshop discussion focused on critical-path issues that should be addressed in order to fully realize the economic opportunities that will follow from Rock Creek's success in establishing national and international industry partnerships as anchor tenants. Factors in this discussion include workforce education and development, opportunities for related manufacturing businesses, environmental quality of life factors, and place-making qualities.

GLOBAL CONTEXT & LOCATION

The Rock Creek Development Park will compete in the global market of international advanced manufacturing and rare earth elements technology and the site is located within one of the largest known deposits of REE's in the nation. The Rock Creek Development Park is a premier 25,500-acre master planned campus that will serve as a global center of advanced refining, pilot manufacturing, design and commercialization of REE's related technologies from:

- National and International partners for REE refining and manufacture
- Big data centers & computer server focused corporate partners
- DOD, NGB and Homeland Security partnerships
- Agriculture research, development and production

Located in southern West Virginia, twenty minutes from downtown Charleston and Yeager Airport, Rock Creek Development Park has strategic highway connections along U.S. 119 that allows quick access to three major Interstate highways (I-77, I-79 and I-64). The site has adjacent rail service, large capacity electrical service, and the capacity to be fully equipped with all essential infrastructure to meet the needs of any business client. Site planning is being configured to provide the greatest level of flexibility in order to ensure maximum utilization by a corporate partner.

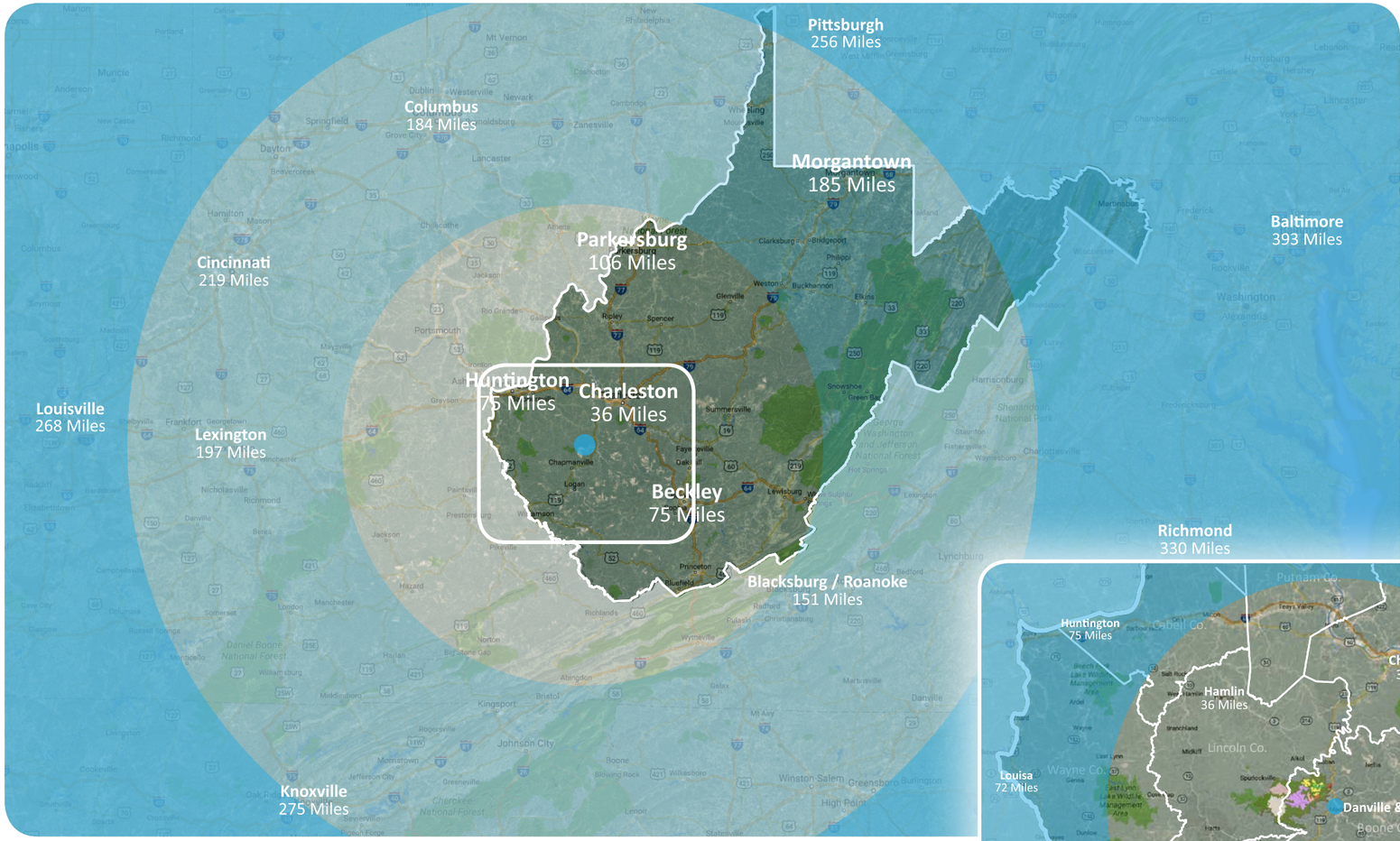

FIGURE 1.1

Travel distances from proposed Rock Creek Development to near by metro areas.

FIGURE 1.2

Travel distances from proposed Rock Creek Development to near by regional metro areas.


Rock Creek
PHASE 1
DANVILLE
119
119
119
119
119
160
ACRES
40
N
0'
2000'
4000'
8000'

UNDERSTANDING SCALE
THE ROCK CREEK / HOBET MINE FOOTPRINT

25,500 Acre Mining Facility
- Reclaimed Land
- Utility Capacity
- Transportation Access

The three following figures highlight the sheer magnitude of the Rock Creek Development's size. Selected for graphic comparison are West Virginia's two largest urban centers of Charleston and Huntington, and on a national scale, the District of Columbia.

FIGURE 1.4
Scale Comparison: Huntington, West Virginia

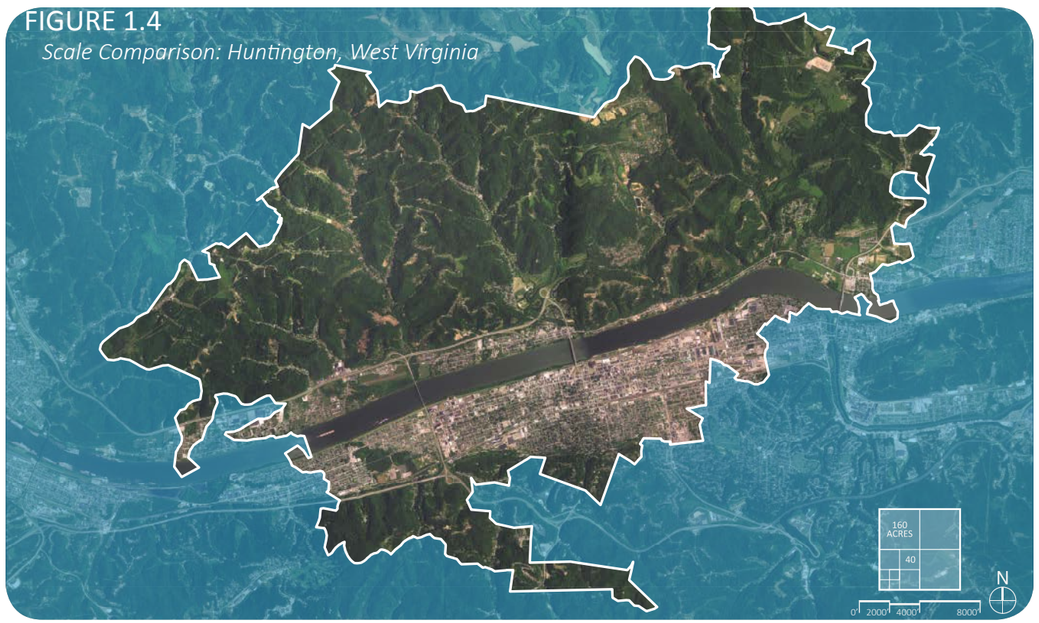

FIGURE 1.3
Scale Comparison: Charleston, West Virginia

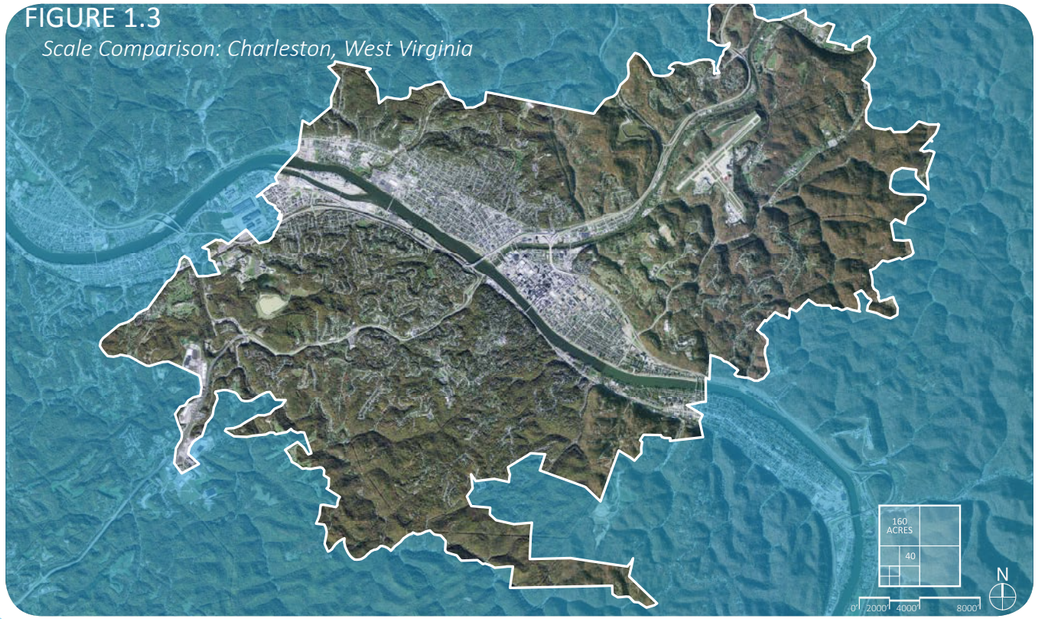

FIGURE 1.5
Scale Comparison: District of Columbia

DESIGN CHARRETTE WORKSHOPS

The “Design Charrette” workshops were two highly-orchestrated and intensive work sessions held in October and November 2016, demonstrating the West Virginia Development Office’s commitment to advance the Rock Creek Development Park project.

The first charrette was held from October 17th through the 19th at GAI’s Charleston office, and focused on an extensive inventory of the existing base mapping, topography/slopes, utilities, infrastructure and other attributes within and around the site. Comparisons of the Rock Creek site were made to other commercial/industrial sites of a similar nature to illustrate the vastness of the developable land. Considerations were made for commercial development, industrial development, residential stock, and recreation/green space opportunities the site may present.

The second design charrette/workshop took place from November 7th to the 10th to further conceptualizing the potential development of the site, and to begin developing scenarios for development. Further considerations were made for commercial development, industrial development, residential stock, and recreation/green space opportunities, and transportation connectivity for the site. Aerial oblique perspective sketches, on watercolor media, were developed to further illustrate the potential of the site. A slide presentation was prepared, capturing the design graphics and some of the comparable national commercial/industrial parks to be used by the West Virginia Development Office (WVDO) and the Governor’s Office. The slideshow was presented to the WVDO via Skype remotely on November 21st.

PARTICIPATING ENTITIES

Governor’s Office of West Virginia
West Virginia Department of Commerce
West Virginia Department of Transportation
West Virginia Economic Development Authority
West Virginia Development Office
West Virginia Department of Environmental Protection
West Virginia University
Marshall University
West Virginia National Guard

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PROJECT SITE OVERVIEW

UTILITIES INVENTORY

GAI has developed an inventory of existing utilities in the area of the proposed Rock Creek Development Park (Rock Creek) with respect to availability, condition, and capacity/loads. Projected future demand loads for the proposed site development have been considered, with recommendations for necessary utility expansion improvements.

POTABLE WATER

In April, the West Virginia Development Office (WVDO) asked several engineering firms to prepare conceptual plans for extending potable water and sanitary sewer to the Development. GAI combined these plans with input from the Boone County Community and Economic Development Corporation (BCCEDC), to assist with the inventory of potable water and sanitary sewer discussed below.

Water is supplied to the areas surrounding the Development through a partnership between Boone County Public Service District (BCPSD) and West Virginia American Water (WVAW). BCPSD constructs waterline extensions and WVAW operates and maintains the system. BCPSD's source of water for this area is the Kanawha Valley Water Treatment Plant located in Charleston. This plant has a capacity of 50 million gallons per day (MGD) and currently operates at about 26 to 28 MGD. Water lines existing near Rock Creek include an 8-inch diameter pipe along Little Horse Creek to the east (constructed in the early 2000s), a line along Middle Horse Creek to the north, and along Lick Creek to the southeast. In addition, BCPSD's proposed Morrisvale/Cameo waterline extension project will extend water to the north and west of the Development.

Water can be extended to the site from the line along Horse Creek Road to the north. This line was constructed in the early 2000s with 8-inch piping in anticipation of extending water to the Hobet site. A 525 –gallon-per-minute (GPM) booster station will be required along Horse Creek Road and a 625,000 gallon water storage tank will be required at the high point in the system. This will allow an initial 250,000 gallon per day (GPD) water supply to the Development.

As buildout progresses on the site and water demand increases beyond 250,000 GPD, water can be extended to Rock Creek from the southeast along Lick Creek. Due to the age and capacity of the existing water lines along Lick Creek, upgrades to the system will be required to extend water to Rock Creek. A booster station would be required to pump water from Lick Creek to the water storage tank(s) at the site. Upgrading these existing lines and extending water from Lick Creek would allow for redundancy in the water supply.

As buildout progresses on the site and the water demand increases beyond 500,000 GPD, water can be extended to the site from BCPSD's proposed Morrisvale/Cameo waterline extension project.

SANITARY SEWER

BCPSD operates a wastewater collection system that generally collects sanitary sewer from the Danville and Madison area and pumps it to the Danville Wastewater Treatment Plant (WWTP), north of Danville. The existing force main from the main pump station to the WWTP is near capacity and cannot accept the anticipated flows from Rock Creek. For the sanitary sewer to be sent to the Danville WWTP, a new forcemain will need to be installed directly to the WWTP, or substantial upgrades are needed to the existing forcemain.

Sanitary sewer can be provided to the site by constructing a wastewater collection system onsite and then conveying the sewer offsite through a new gravity line constructed along Lick Branch to a new pump station that will pump the sewage to the Danville WWTP through a new forcemain paralleling the existing forcemain from the existing main pump station.

The BCPSD Danville WWTP currently has a capacity of 0.5 MGD, and is required to upgrade to upgrade to 0.7 MGD by December 31, 2018, as part of the Long Term Control Plan in their National Pollutant Discharge Elimination System (NPDES) permit. Further, the WWTP was constructed in the early 1990's and is need of rehabilitation of some components. BCPSD is considering upgrading the Danville WWTP to 1.0 MGD. Because the existing WWTP is of limited capacity and many of the components would need replaced due to their age, upgrades to the WWTP will be required to accept the anticipated sanitary sewer flows from the site.

In May 2016, Potesta and Associates also considered the option to construct a 0.5 MGD WWTP on the Hobet Site, which could possibly be less costly than extending the collection system to the Danville WWTP and upgrading the Danville WWTP. With this option, a large diameter effluent line would be required from the new WWTP, extending approximately 1.4 miles to the Little Coal River.

GAS

Numerous natural gas facilities are present along the project site. Many natural gas production wells are currently active while others have historically produced gas but are since abandoned. Gas production wells are operated by Cabot Oil and Gas Corporation (Cabot), Columbia Natural Resources, LLC (Columbia), Mahue Construction Company, Chesapeake Appalachia, LLC, and others. These gas production wells feed into a collection system consisting of numerous pipelines located throughout the site. In addition to the lower-pressure gas collection piping, there are several high-pressure gas transmission pipelines that traverse the development.

GAI contacted Dominion Hope regarding available capacities of existing natural gas infrastructure near the Development. Dominion Hope is a natural gas distribution company and is one of the primary natural gas providers for the area. Dominion Hope indicated that natural gas distribution pipelines are currently extended to the site, and that gas could be made available to Rock Creek for whatever demand is anticipated, based on the future design and plans for the site. Dominion Hope indicated

that after future customers request their gas needs (including maximum hourly requirements and pressures), upgrades can be made to the distribution infrastructure as required to serve the development.

GAI also contacted Cabot. Cabot is a natural gas production company and does not typically sell gas to individual customers. However, Cabot indicated that often times they do supply gas to larger customers, such as industrial developments. Like Dominion Hope, Cabot indicated that future customers need to request their gas needs to assess the availability of gas and work out contractual agreements and to further establish the gas infrastructure.

Based on GAI's review of the natural gas infrastructure at the site, adequate quantities of gas can be made available to support future developments at the site. Sizes and locations of the future gas distribution piping can be established as the design of the site progresses.

ELECTRIC

Electric power is provided to the Rock Creek site by American Electric Power (AEP). The primary infrastructure to the site begins at the AEP Hopkins Substation, from there it is conveyed to the site through a 1.5-mile, dual circuit, three-phase, 138 Kilovolt (KV) electric transmission line. The power enters the site at a 138 KV meter station near the east boundary of the site. A secondary AEP power line enters the west side of the development from Berry Branch. This is a single-phase 12 KV line, so its contribution to supplying power to the development would be minimal. AEP also maintains a 765 KV high-voltage transmission line that passes through the site but does not currently have a service drop to the site.

During discussions between GAI and AEP, AEP indicated the current infrastructure that transmits electric power to the site is capable to provide enough electric power to service nearly any type of commercial and/or industrial developments that are proposed for the project. Power to the individual development sites would need to be supplied through a distribution system from the AEP meter station.

An existing power distribution system exists over portions of Rock Creek that has previously supplied power from the AEP meter station to various points along the site, including to offices, maintenance shops, conveyor switches, and other equipment historically needed to support mining operations. The former Hobet Mine also utilized a large dragline known as "Big John" to excavate overburden during mining operations. This dragline was powered by electric power transmitted through the AEP meter station. AEP indicated the existing power distribution system on the site was privately owned by the mining companies and therefore is not maintained by AEP. Much of this distribution system is reported to be in good condition and can likely be used and retrofitted as needed to make up portions of the distribution system for the future development sites.

COMMUNICATIONS

The availability of broadband telecommunication service will be critical for future development of the site. Having a good broadband infrastructure should provide reliable and high-speed internet service to the site, which is important in a technology driven society and will make the site more attractive to potential developers, especially those in the technology industry.

GAI has contacted two different broadband internet and telephone providers for the area. Fiber optic cable is not currently available at the development site, however it is located in the vicinity and can be extended to the site. Fiber optic cable is generally installed along Corridor G (U.S. Route 119) and two remote terminals are in the vicinity; one located about 2.8 miles east of the site, and one about 1.8 miles southeast of the site. Both of these remote terminals have available capacity and broadband telecommunication can be provided to the site by extending fiber optic cable from either, or both of these remote terminals.

FIGURE 2.1

Estimate of Probable Utility Construction Cost

UTILITY	INITIAL COST	FUTURE PHASE COST
POTABLE WATER	$5,200,000 (1)	$10,800,000(2)
SANITARY SEWER	$28,200,000(3)	---
GAS	N/A(4)	---
ELECTRIC	N/A(5)	---
COMMUNICATIONS	$370,000(6)	$160,000(7)

Notes:

1. *Assumes an initial demand of 250,000 GPD.*
2. *Assumes an additional demand of 250,000 GPD (500,000 GPD total).*
3. *Assumes constructing a collection system and upgrading the existing Danville WWTP.*
4. *Assumes that gas utility provider will construct the required gas line extension once customers are in contract to purchase gas.*
5. *Electric infrastructure exists to the site.*
6. *Assumes extending fiber optic line to the property boundary.*
7. *Assumes extending fiber optic line from the property line to the approximate center of the development.*

~ LEGEND ~

- PHASE 1
- ABANDONED GAS WELL
- ACTIVE GAS WELL
- FUTURE USE
- NEVER DRILLED GAS WELL
- PLUGGED GAS WELL
- ELECTRIC SUBSTATION
- DISTRIBUTION POWERLINE
- TRACED GASLINES
- EXISTING BCPSD WATER LINE
- PROPOSED BCPSD WATER LINE
- PROPOSED FORCE MAIN SEWER LINE
- PROPOSED FORCE MAIN/GRAVITY SEWER LINE
- PROPOSED GRAVITY SEWER LINE
- PROPOSED HOBET SITE WATER LINE
- EXISTING MAIN PUMP STATION
- PROPOSED BOOSTER STATION
- PROPOSED WASTE WATER PUMP STATION
- PROPOSED WATER STORAGE TANKS
- TREATMENT PLANT

6" GAS

6" GAS

PROPOSED BOOSTER STATION

10" GAS

DANVILLE WASTE WATER TREATMENT PLANT

119

12" GAS

4" GAS

10" GAS

12" GAS

EXISTING MAIN PUMP STATION

DANVILLE

160 ACRES

40

N

0' 2000' 4000' 8000'

SITE STRENGTHS AND WEAKNESSES

STRENGTHS

- The site provides access to rail and U.S. 119 with connections to 1-64, 1-79, and I-77.
- The site offers large contiguous blocks of flat land controlled by the West Virginia Economic Development Authority, which is unavailable in most other parts of the state.
- A readily available skilled labor force is located in the region.
- The state has committed to constructing a new 2.6-mile access road to the site.
- The National Guard has committed to operations at the site, including operation of a HMMWV maintenance facility.
- An internal road network exists as a result of the former surface mining operations.
- The site is within 30 miles of Yeager Airport in Charleston.
- A unique electric capacity is available on-site for massive power users.
- Access to abundant low cost energy.

WEAKNESSES

- There have been few Fortune 500 companies which have located in the area, and the industrial market has been relatively soft over the past few years.
- Access within the site is challenging given topography constraints.
- U.S. 119 South from Charleston is not a preferred trucking route due to multiple traffic singles.
- The energy sector remains uncertain, although, based on forecasts by the WVU College of Business and Economic Research, conditions in the natural gas industry are expected to improve in 2017, in part due to new pipeline capacity and expanded use of natural gas in electricity generation. Production is expected to increase at a rate of 10% annually through 2020, with employment forecast to grow at a rate of 3%.
- While the Marcellus Shale industry is important in the region, most of the activity related to shale has occurred further to the north.
- There is currently almost 1.2 million square feet of vacant industrial space in two major buildings (on flat sites with close proximity to an interchange) – Coldwater Creek distribution center (Parkersburg Industrial Park along I-77 with about 950,000 square feet of space), and a 287,000 square foot Rite Aid Distribution Center in Nitro (a 35-year old facility).

~ LEGEND ~

PHASE 1

ROUTE 119 (CORRIDOR G)

STATE / LOCAL ROUTES

RAIL

FUTURE ACCESS ROADS

SMITH RUN

MUD RIVER

FUTURE I-64 ACCESS

NEW ENTRANCE ROAD

FUTURE I-64
TO CHELYAN

DANVILLE

119

85

3

160
ACRES

40

N

0’ 2000’ 4000’ 8000’

PROJECT SITE OVERVIEW | SLOPE ANALYSIS

A slope analysis of the existing terrain identifies portions of the property most suited for development. This map was generated using LiDAR received from the West Virginia Department of Environmental Protection (WVDEP) that was conducted between April 9-18, 2010 by Natural Resources Analysis Center at West Virginia University under contract with the WVDEP, Division of Mining and Reclamation. The green areas indicate slopes from 0%-10% (suitable), the yellow and red shaded areas indicate steeper, less suitable, slopes.

~ LEGEND ~

PHASE 1

SLOPE ANALYSIS

0 - 10%

10 - 20%

20% & GREATER

119

119

119

119

119

DANVILLE

160 ACRES

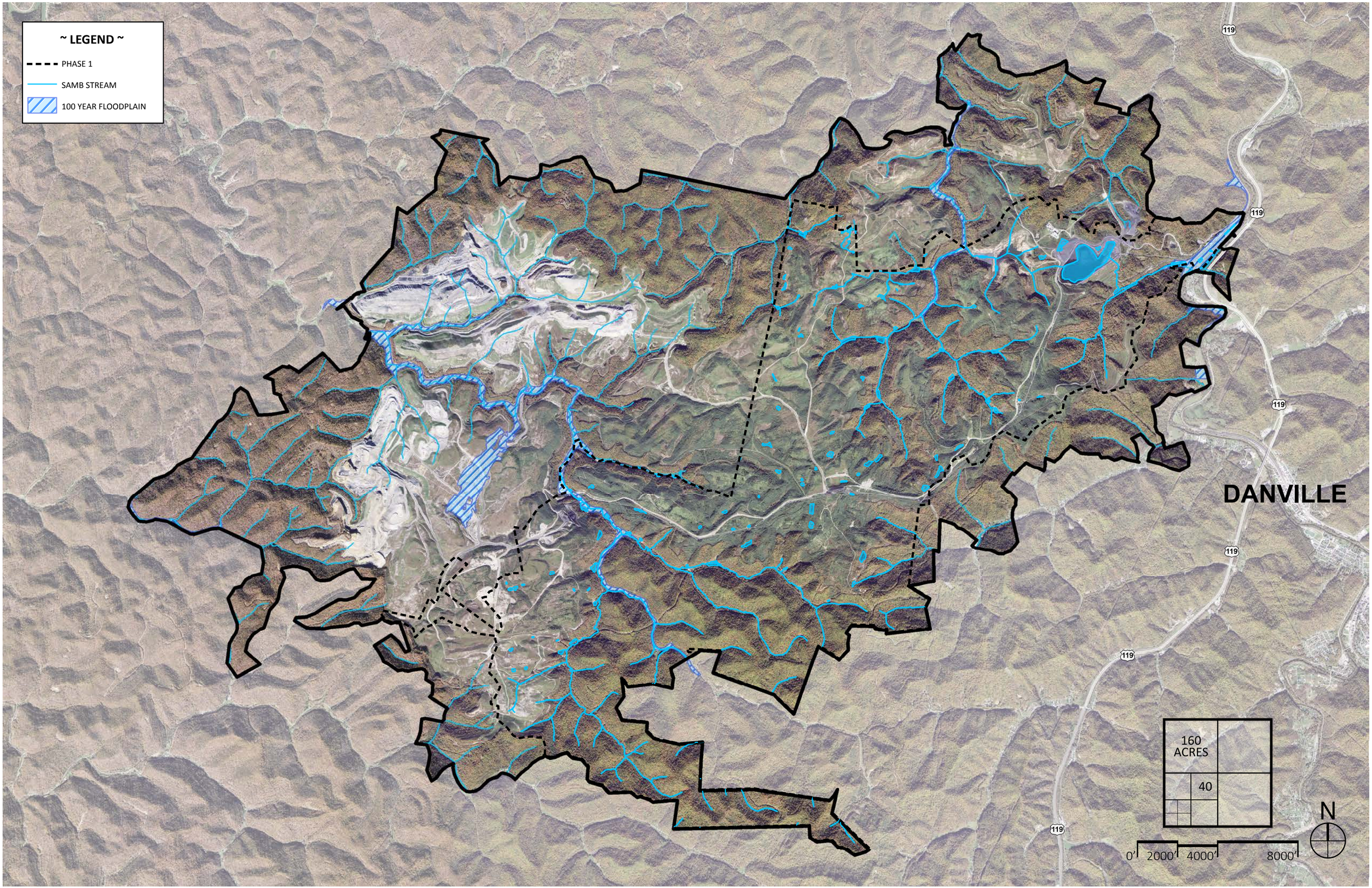
40

N

0’ 2000’ 4000’ 8000’

PROJECT SITE OVERVIEW | HYDROLOGY

The proposed site has several hydrologic features, the most significant is the headwater of the Mud River. Two thirds of the site drains into the Mud River and the eastern one third drains into the Little Coal River. Horse Creek, Berry Branch and Mud River have 100 year floodplains associated with the stream valleys. The site has a large network of streams that has been effected by mining operations. In addition to the streams, there are two large impoundments on the eastern side of the site. Site hydrology was analyzed using WV State Addressing and Mapping Board (SAMB) Stream data and FEMA 100 year floodplain data.


~ LEGEND ~
PHASE 1
SAMB STREAM
100 YEAR FLOODPLAIN
119
119
119
119
119
DANVILLE
160
ACRES
40
N
0'
2000'
4000'
8000'

PROJECT SITE OVERVIEW | SOILS ANALYSIS

The project site is located in areas where surface mining operations were performed removing the overburden above the coal reserves and placing in adjacent valleys. It is anticipated that the material placed in the fills was placed in a controlled manner in general accordance with the permitted mining practices. However, the density and condition of the fills is variable due to method of placement of the fill materials. Cut areas will tend to have a more consistent subsurface profile. Due to the potential inconsistent surface conditions, it is recommended that a geotechnical investigation be performed prior to development of the sites.

The Soil Survey of Boone and Lincoln Counties (USDA-NRCS, 2016) indicates 30 soil mapping units are mapped within the site area:

AgB: Allegheny loam, 2 to 6 percent slopes. Stream Terraces. Well Drained. Prime farmland
BSF: Berks-Shelocta association, very steep, extremely stony. Ridges/Mountain Slopes. Well Drained. Not prime farmland
CeF: Cedarcreek-Rock outcrop complex, very steep, extremely stony. Mountain slopes. Well Drained. Not prime farmland
CgF: Cedarcreek-Rock outcrop complex, very steep, extremely stony. Mountain slopes. Well Drained. Not prime farmland
Ch: Chagrin loam, 0 to 3 percent slopes, frequently flooded. Floodplain areas. Well drained. Surface runoff is slow and permeability is moderate. Prime farmland
GmE: Gilpin-Matewan complex, 25 to 35 percent slopes, very stony. Ridges. Well Drained. Not prime farmland
GrE: Gilpin-Wharton complex, 15 to 35 percent slopes. Ridges. Well drained. Not prime farmland
Gs: Grigsby fine sandy loam, 0 to 3 percent slopes, frequently flooded. Floodplain areas. Well drained. Prime farmland
GwE: Gilpin-Wharton silt loams, 15 to 35 percent slopes. Ridges. Well drained. Farmland of local importance.
HMF: Highsplint-Matewan-Cloverlick association, very steep, extremely stony. Mountain slopes. Well drained. Not prime farmland.
ImE: Itmann channery loam, steep. Mountain slope. Somewhat excessively drained. Not prime farmland
ItF: Itmann extremely channery sandy loam, very steep. Mountain slope. Somewhat excessively drained. Not prime farmland
Ka: Kanawha loam, 0 to 3 percent slopes, rarely flooded. Flooplains/stream terraces. Well drained. Prime farmland
KeB: Kaymine very channery loam, 3 to 8 percent slopes, very stony. Mountain slope. Well drained. Not prime farmland.
KfF: Kaymine and Fiveblock soils, 35 to 65 percent slopes, extremely stony. Hillsides. Well drained. Not prime farmland.
KmF: Kaymine-Cedarcreek-Matewan complex, 35 to 65 percent slopes, extremely stony. Mountain slopes/ridges. Well drained. Not prime farmland.
KrF: Kaymine-Rock outcrop complex, very steep, extremely stony. Mountain slopes. Well Drained. Not prime farmland.
LgD: Latham-Gilpin complex, 15 to 25 percent slopes. Ridges. Moderately well drained. Farmland of statewide importance.
LiE: Lily sandy loam, 25 to 35 percent slopes, very stony. Ridges. Well drained. Not prime farmland.
Mr: Middlebury loam, frequently flooded. Floodplain areas. Moderately well drained. Farmland of local importance.
PnE: Pineville-Lily complex, 15 to 35 percent slopes. Mountain slope. Well drained. Not prime farmland.
Po: Potomac sandy loam. Floodplain areas. Somewhat excessively drained. Farmland of local importance.
SeB: Sensabaugh-Lobdell loams, 2 to 8 percent slopes. Floodplain areas. Well drained. Prime farmland.
SfB: Sensabaugh loam, 3 to 8 percent slopes, rarely flooded. Floodplain areas. Well drained. Prime farmland.
ShF: Sharpcrest-Hazleton complex, 35 to 75 percent slopes, extremely boulder. Hillside. Well Drained. Not prime farmland.
SlE: Shelocta-Beech complex, 25 to 35 percent slopes, very stony. Hill slope. Well drained. Not prime farmland.
Ud: Udorthents, smoothed. Not prime farmland.
UuB: Udorthents-Urban land complex, 0 to 8 percent slopes, rarely flooded. Floodplain areas. Well drain. Not prime farmland.
W: Water
Yg: Yeager fine sandy loam, frequently flooded. Floodplain areas. Well drained. Farmland of local importance.

~ LEGEND ~

PHASE 1

AgB	ItF	SeB
BSF	Ka	SfB
CeF	KeB	ShF
CgF	KfF	SkC
Ch	KmF	SlE
GmE	KrF	Ud
GrE	LgD	UuB
Gs	LiE	W
GwE	Mr	Yg
HMF	PnE	
ImE	Po	

DANVILLE

119

160 ACRES

40

N

0’ 2000’ 4000’ 8000’

ECONOMIC & REAL ESTATE INFLUENCES

ECONOMIC & REAL ESTATE INFLUENCES

Economic indicators for the State of West Virginia are mixed, in part due to the growth in the Marcellus Shale industry in central and northern West Virginia and the decline in the coal industry in the southern part of the state. A total of about 5,000 coal industry jobs were lost in the state between 2011 and early 2014. Overall state coal production declined by 28 percent between 2008 and 2013.

EMPLOYMENT INDICATORS

In July 2015, the seasonally adjusted unemployment rate in West Virginia increased to 7.5 percent, the highest rate in the nation. There is some concern that the state of West Virginia is not providing jobs for younger generations that do not want to work in the traditional energy sector (e.g. coal and gas).

FIGURE 3.1

Employment by Industry, State of West Virginia

	2015	2014	2013	2012	2011	2010	2009	2008	2007
AGRICULTURE/FORESTRY/FISHING/HUNTING	0.7%	0.2%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%
MINING/QUARRYING/OIL & GAS EXTRACTION	3.3%	4.4%	4.6%	4.9%	4.9%	4.4%	4.7%	4.3%	4.0%
CONSTRUCTION	5.0%	5.3%	5.0%	5.1%	1.2%	4.9%	5.2%	5.8%	5.8%
MANUFACTURING	7.5%	6.9%	6.8%	7.4%	7.8%	7.6%	8.2%	8.8%	10.6%
WHOLESALE TRADE	2.1%	3.4%	3.5%	3.5%	3.7%	3.5%	3.6%	3.7%	3.7%
RETAIL TRADE	13.8%	12.1%	12.1%	12.1%	12.7%	12.2%	12.5%	12.6%	12.6%
TRANSPORTATION/WAREHOUSING	3.6%	3.0%	3.0%	2.8%	2.9%	2.8%	2.9%	3.0%	2.9%
UTILITIES	2.1%	1.1%	1.1%	1.0%	1.2%	1.2%	1.3%	1.3%	1.3%
INFORMATION	1.1%	1.6%	1.6%	1.6%	1.8%	1.7%	1.9%	1.9%	1.9%
FINANCE/INSURANCE	3.2%	2.8%	2.8%	2.8%	3.0%	3.0%	3.1%	3.2%	3.1%
REAL ESTATE/RENTAL/LEASING	0.9%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.1%	1.1%
PROFESSIONAL/SCIENTIFIC/TECH SRVCS	4.1%	3.9%	3.9%	3.8%	4.0%	3.7%	3.7%	3.7%	3.6%
MANAGEMENT OF COMPANIES/ENTERPRISES	0.0%	1.0%	1.0%	1.0%	0.9%	0.8%	0.8%	0.8%	0.7%
ADMIN/SUPPORT/WASTE MANAGEMENT SRVCS	3.1%	4.9%	4.7%	4.7%	4.9%	4.6%	4.4%	4.7%	4.7%
EDUCATIONAL SRVCS	10.1%	9.8%	9.9%	10.0%	10.4%	10.2%	10.2%	9.9%	10.0%
HEALTH CARE/SOCIAL ASSISTANCE	17.0%	19.1%	19.1%	18.6%	19.2%	18.5%	17.9%	16.9%	16.1%
ARTS/ENTERTAINMENT/RECREATION	1.7%	1.0%	0.9%	1.0%	0.9%	1.2%	1.2%	1.1%	1.4%
ACCOMMODATION/FOOD SERVICES	9.1%	9.4%	9.4%	9.2%	9.7%	9.1%	9.2%	9.2%	8.5%
OTHER SRVCS (EXCL PUBLIC ADMINISTRATION)	4.4%	2.8%	3.1%	3.0%	3.0%	2.9%	3.0%	2.9%	2.9%
PUBLIC ADMINISTRATION	7.1%	6.4%	6.4%	6.3%	6.6%	6.5%	5.1%	4.9%	4.8%

The State of West Virginia has experienced an increase in employment within 60% of the employment categories since 2007. A few of the employment categories increased by great than 1% since 2007, specifically Public Administration (2.3%), Other Services, excluding public administration (1.4%), and Retail (1.3%). The same number of employment categories decreased by greater than 1% since 2007, specifically Manufacturing (-3.0%), Wholesale (-1.6%), Administration/Support/Waste Management Services (-1.6%).

Other concerns include a relatively low percentage of population with a college degree and an aging population. Importantly, only 53 percent of West Virginia's adult population is either working or looking for work – the lowest rate of labor force participation among all 50 states.

As might be expected, much of the job loss recorded in the state is attributable to the downturn in the coal industry. The losses in the coal industry have not been entirely offset by gains in the oil and gas industry (as well as increases in some service industries).

Economists at West Virginia University forecast that the unemployment rate for the state should level off at roughly six percent for the next few years, with an expected loss of 20,000 residents over the next two decades.

FIGURE 3.2

Employment by Industry, Boone County

	2015	2014	2013	2012	2011	2010	2009	2008	2007
AGRICULTURE/FORESTRY/FISHING/HUNTING	0.4%	0.1%	0.0%	0.1%	0.1%	0.5%	0.0%	0.1%	0.1%
MINING/QUARRYING/OIL & GAS EXTRACTION	18.9%	36.6%	38.7%	41.1%	41.8%	41.7%	45.6%	45.4%	44.2%
CONSTRUCTION	1.0%	0.6%	0.7%	0.6%	0.6%	0.4%	0.6%	0.4%	0.4%
MANUFACTURING	3.1%	2.8%	2.5%	2.9%	2.6%	3.4%	3.9%	4.0%	3.5%
WHOLESALE TRADE	1.6%	2.4%	0.7%	2.2%	2.2%	2.7%	0.4%	0.9%	1.0%
RETAIL TRADE	2.0%	1.2%	3.1%	1.4%	1.0%	1.3%	1.2%	1.1%	1.3%
TRANSPORTATION/WAREHOUSING	13.0%	8.9%	9.3%	8.8%	8.2%	7.8%	8.1%	8.6%	8.2%
UTILITIES	3.5%	3.5%	3.9%	4.0%	4.0%	4.4%	3.7%	3.8%	4.8%
INFORMATION	0.2%	0.5%	0.6%	0.6%	0.5%	0.3%	0.3%	0.5%	0.5%
FINANCE/INSURANCE	2.2%	2.2%	2.2%	1.8%	2.1%	1.4%	1.5%	1.5%	1.5%
REAL ESTATE/RENTAL/LEASING	0.5%	0.2%	0.1%	0.2%	0.2%	0.2%	0.1%	0.1%	0.2%
PROFESSIONAL/SCIENTIFIC/TECH SRVCS	2.6%	4.6%	3.5%	2.0%	1.8%	2.0%	1.9%	1.7%	1.9%
MANAGEMENT OF COMPANIES/ENTERPRISES	0.0%	0.4%	0.4%	0.4%	0.5%	0.5%	0.5%	0.6%	0.6%
ADMIN/SUPPORT/WASTE MANAGEMENT SRVCS	3.1%	2.4%	1.1%	4.0%	5.8%	5.1%	5.6%	4.5%	3.7%
EDUCATIONAL SRVCS	10.8%	9.8%	9.9%	8.6%	8.7%	8.8%	8.9%	9.2%	9.4%
HEALTH CARE/SOCIAL ASSISTANCE	19.2%	12.4%	12.0%	10.8%	10.4%	9.5%	8.5%	8.5%	8.8%
ARTS/ENTERTAINMENT/RECREATION	1.0%	0.2%	0.2%	0.2%	0.3%	0.3%	0.3%	0.4%	0.5%
ACCOMMODATION/FOOD SERVICES	7.7%	3.5%	3.3%	3.6%	3.1%	3.3%	2.9%	3.2%	3.2%
OTHER SRVCS (EXCL PUBLIC ADMINISTRATION)	3.4%	2.5%	2.6%	2.3%	2.2%	2.3%	2.3%	2.3%	2.7%
PUBLIC ADMINISTRATION	5.5%	5.2%	5.1%	4.6%	4.0%	3.9%	3.5%	3.3%	3.4%

Boone County experienced increased employment from 2007-2015 in 70% of the employment categories. Significant change was seen in two employment categories since 2007; Mining/Quarrying/Oil & Gas Extraction saw a decrease of 25.3% while Health Care/Social Assistance saw an increase of 10.5%. Four employment categories saw increases in employment in excess of 1.0% since 2007, specifically Retail (4.8%), Education (1.5%), Accommodation & Food Services (4.5%), and Public Administration (2.1%). Only one employment category experienced a decline in employment that exceeded 1.0%, Transportation & Warehousing which declined 1.3% from 2007-2015.

ECONOMIC & REAL ESTATE INFLUENCES

FIGURE 3.3

Employment by Industry, Logan County

	2015	2014	2013	2012	2011	2010	2009	2008	2007
AGRICULTURE/FORESTRY/FISHING/HUNTING	0.5%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
MINING/QUARRYING/OIL & GAS EXTRACTION	13.2%	15.2%	16.2%	16.8%	16.7%	13.9%	13.9%	12.8%	12.7%
CONSTRUCTION	1.3%	1.1%	1.5%	1.3%	1.0%	1.1%	1.1%	1.1%	1.2%
MANUFACTURING	3.7%	2.9%	2.8%	2.7%	2.2%	1.6%	2.7%	2.0%	2.0%
WHOLESALE TRADE	3.3%	6.3%	5.1%	5.3%	6.8%	7.0%	6.7%	8.0%	7.6%
RETAIL TRADE	2.3%	3.5%	3.7%	3.9%	4.2%	3.9%	4.4%	3.7%	3.7%
TRANSPORTATION/WAREHOUSING	12.6%	14.4%	14.2%	14.1%	14.2%	15.3%	15.4%	15.8%	15.9%
UTILITIES	4.0%	2.2%	2.0%	2.1%	2.2%	2.9%	3.2%	3.9%	3.7%
INFORMATION	1.2%	1.1%	1.0%	1.3%	1.3%	1.2%	1.1%	1.2%	1.4%
FINANCE/INSURANCE	3.0%	1.6%	1.7%	1.7%	1.7%	1.8%	2.0%	2.1%	2.0%
REAL ESTATE/RENTAL/LEASING	0.6%	0.6%	0.7%	0.8%	0.9%	0.7%	0.7%	0.8%	0.7%
PROFESSIONAL/SCIENTIFIC/TECH SRVCS	3.4%	2.9%	3.0%	3.2%	2.8%	2.7%	3.0%	2.8%	2.9%
MANAGEMENT OF COMPANIES/ENTERPRISES	0.1%	0.6%	0.7%	0.7%	0.8%	0.4%	0.6%	0.2%	0.2%
ADMIN/SUPPORT/WASTE MANAGEMENT SRVCS	3.0%	2.0%	2.2%	2.0%	2.2%	2.5%	2.3%	2.2%	2.4%
EDUCATIONAL SRVCS	11.2%	11.3%	10.4%	10.0%	10.4%	10.8%	10.4%	10.7%	10.8%
HEALTH CARE/SOCIAL ASSISTANCE	15.8%	15.9%	16.4%	15.9%	15.4%	15.8%	14.8%	15.4%	15.4%
ARTS/ENTERTAINMENT/RECREATION	0.6%	0.6%	0.6%	0.6%	0.5%	0.4%	0.5%	0.5%	0.5%
ACCOMMODATION/FOOD SERVICES	8.1%	7.9%	8.0%	8.1%	8.0%	8.7%	8.6%	8.1%	8.2%
OTHER SRVCS (EXCL PUBLIC ADMINISTRATION)	7.1%	4.5%	4.3%	4.3%	4.1%	3.8%	3.7%	3.6%	3.7%
PUBLIC ADMINISTRATION	4.9%	5.3%	5.7%	5.3%	4.5%	5.6%	5.0%	5.2%	5.2%

Logan County experienced increased employment from 2007-2015 in 65% of the employment categories. Three employment categories saw increases in employment in excess of 1.0% since 2007, specifically Construction (1.7%), Finance & Insurance (1.1%), and Other Services excluding public administration (2.4%). Also, three employment categories experienced decline in employment that exceeded 1.0% from 2007-2015, specifically Manufacturing (-4.3%), Retail (-3.3%), and Wholesale (-1.4%).

FIGURE 3.4

Employment by Industry, Lincoln County

	2015	2014	2013	2012	2011	2010	2009	2008	2007
AGRICULTURE/FORESTRY/FISHING/HUNTING	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.3%
MINING/QUARRYING/OIL & GAS EXTRACTION	8.7%	15.7%	22.0%	20.3%	19.6%	19.8%	22.0%	16.1%	15.9%
CONSTRUCTION	2.6%	0.8%	0.8%	0.7%	0.9%	0.7%	0.5%	0.5%	0.7%
MANUFACTURING	6.3%	7.9%	8.8%	9.2%	10.2%	7.9%	9.9%	10.3%	12.1%
WHOLESALE TRADE	5.2%	0.6%	0.7%	0.6%	0.5%	1.0%	0.7%	1.0%	1.0%
RETAIL TRADE	2.0%	2.0%	1.3%	2.3%	1.7%	2.0%	1.2%	1.5%	1.5%
TRANSPORTATION/WAREHOUSING	14.5%	11.6%	10.4%	10.0%	10.8%	11.2%	11.5%	10.2%	11.1%
UTILITIES	3.6%	4.7%	4.2%	4.2%	4.5%	5.3%	6.3%	9.0%	9.7%
INFORMATION	0.7%	1.8%	1.5%	1.5%	1.4%	1.5%	1.4%	2.5%	2.1%
FINANCE/INSURANCE	3.2%	1.9%	1.5%	1.4%	1.5%	1.2%	1.1%	1.1%	1.1%
REAL ESTATE/RENTAL/LEASING	0.5%	0.3%	0.2%	0.5%	0.1%	0.4%	0.4%	0.7%	0.4%
PROFESSIONAL/SCIENTIFIC/TECH SRVCS	2.4%	2.2%	2.2%	2.1%	0.9%	1.2%	0.8%	1.2%	0.8%
MANAGEMENT OF COMPANIES/ENTERPRISES	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%	0.1%	0.1%
ADMIN/SUPPORT/WASTE MANAGEMENT SRVCS	3.4%	2.2%	2.6%	2.3%	2.4%	2.0%	1.7%	2.8%	1.9%
EDUCATIONAL SRVCS	10.0%	20.5%	18.8%	20.0%	19.4%	19.6%	18.5%	18.6%	18.9%
HEALTH CARE/SOCIAL ASSISTANCE	14.4%	16.5%	15.0%	14.8%	14.3%	16.0%	14.4%	14.8%	13.2%
ARTS/ENTERTAINMENT/RECREATION	0.5%	0.6%	0.5%	0.4%	0.3%	0.2%	0.2%	0.1%	0.2%
ACCOMMODATION/FOOD SERVICES	7.8%	4.1%	3.8%	4.0%	4.4%	3.1%	3.1%	3.1%	3.6%
OTHER SRVCS (EXCL PUBLIC ADMINISTRATION)	7.4%	2.3%	2.3%	2.2%	3.7%	3.9%	3.7%	3.2%	2.7%
PUBLIC ADMINISTRATION	7.0%	4.2%	3.4%	3.3%	3.5%	2.9%	2.5%	2.8%	2.5%

Lincoln County experienced increased employment from 2007-2015 in 65% of the employment categories. Ten employment categories saw increases in employment in excess of 1.0% since 2007, specifically Utilities (1.9%), Manufacturing (4.1%), Retail (3.3%), Finance & Insurance (2.1%), Professional, Scientific & Technical Services (1.7%), Administration, Support & Waste Management (1.5%), Healthcare & Social Assistance (1.2%), Accommodation & Food Services (4.2%), Public Administration (4.5%), and Other Services excluding public administration (4.7%). Also, five employment categories experienced decline in employment that exceeded 1.0% from 2007-2015, specifically Mining/Quarrying/Oil & Gas Extraction (-7.3%), Construction (-5.9%), Transportation & Warehousing (-6.1%), Information (-1.5%), and Education services (-8.9%).

ECONOMIC & REAL ESTATE INFLUENCES

FIGURE 3.5

Employment by Industry, Kanawha County

	2015	2014	2013	2012	2011	2010	2009	2008	2007
AGRICULTURE/FORESTRY/FISHING/HUNTING	0.2%	0.0%	0.1%	0.1%	0.1%	0.0%	0.1%	0.1%	0.1%
MINING/QUARRYING/OIL & GAS EXTRACTION	1.9%	2.2%	2.0%	2.4%	2.6%	2.5%	3.0%	2.6%	2.8%
CONSTRUCTION	2.0%	0.9%	0.9%	0.9%	0.9%	0.9%	1.1%	1.1%	1.0%
MANUFACTURING	3.8%	4.8%	4.3%	4.4%	4.6%	4.5%	4.6%	4.6%	4.8%
WHOLESALE TRADE	4.3%	3.1%	4.0%	4.3%	4.4%	4.5%	4.7%	4.1%	4.3%
RETAIL TRADE	2.7%	4.0%	4.3%	4.3%	4.4%	4.4%	4.6%	4.8%	5.1%
TRANSPORTATION/WAREHOUSING	12.9%	11.3%	11.3%	11.3%	11.2%	11.4%	11.4%	11.9%	12.0%
UTILITIES	3.8%	3.1%	3.0%	3.1%	3.2%	3.2%	3.3%	3.6%	3.5%
INFORMATION	1.6%	1.9%	1.9%	1.7%	2.3%	2.1%	2.4%	2.5%	2.6%
FINANCE/INSURANCE	5.1%	4.8%	4.9%	4.9%	4.8%	5.2%	5.4%	5.4%	5.3%
REAL ESTATE/RENTAL/LEASING	1.3%	1.2%	1.2%	1.3%	1.1%	1.2%	1.2%	1.4%	1.4%
PROFESSIONAL/SCIENTIFIC/TECH SRVCS	5.9%	5.3%	5.2%	5.2%	5.3%	5.2%	5.2%	5.5%	5.6%
MANAGEMENT OF COMPANIES/ENTERPRISES	0.0%	1.5%	1.7%	1.8%	1.3%	1.2%	1.1%	1.1%	0.8%
ADMIN/SUPPORT/WASTE MANAGEMENT SRVCS	3.5%	6.4%	6.2%	6.3%	5.9%	6.2%	5.7%	5.8%	5.8%
EDUCATIONAL SRVCS	8.2%	6.5%	6.0%	6.0%	5.9%	6.3%	6.0%	6.1%	6.0%
HEALTH CARE/SOCIAL ASSISTANCE	16.8%	19.1%	19.0%	18.7%	18.4%	18.2%	18.1%	17.2%	17.0%
ARTS/ENTERTAINMENT/RECREATION	1.7%	0.9%	0.8%	0.8%	0.8%	1.4%	1.4%	1.1%	1.2%
ACCOMMODATION/FOOD SERVICES	9.6%	8.4%	8.2%	8.1%	8.0%	7.3%	7.4%	7.8%	7.7%
OTHER SRVCS (EXCL PUBLIC ADMINISTRATION)	4.6%	2.9%	3.2%	3.2%	3.0%	3.0%	3.1%	3.1%	3.1%
PUBLIC ADMINISTRATION	10.1%	11.7%	11.6%	11.4%	11.6%	11.3%	10.3%	10.2%	10.0%

Kanawha County experienced increased employment from 2007-2015 in 50% of the employment categories. Five employment categories saw increases in employment in of 1.0% or greater since 2007, specifically Utilities (1.0%), Retail (1.0%), Education Services (1.2%), Accommodation & Food Services (1.9%), and Other Services excluding public administration (1.4%). Four employment categories experienced decline in employment of 1.0% or greater from 2007-2015, specifically Construction (-1.1%), Wholesale (-2.4%), Information (-1.0%), and Administration/Support/Waste Management (-2.4%).

REAL ESTATE INDICATORS

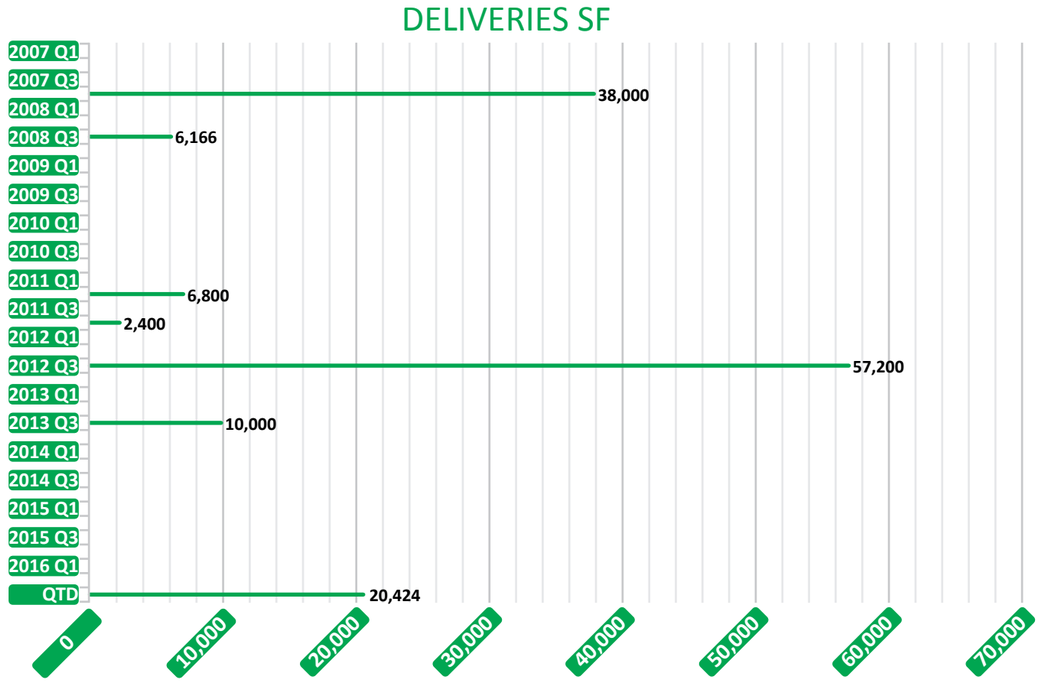
GAI also looked at real estate indicators (new construction, absorption, lease rates, and occupancy) for industrial (including distribution and warehouse) space in the Charleston, West Virginia market over the past nine years. Some of the key findings include the following:

INDUSTRIAL SPACE

- Looking at just the industrial space market in the Charleston area (reflected in the map on the following pages), **a total of only 141,000 square feet of industrial space has been added to the market since 2007.**
- There is reportedly almost 100,000 square feet of additional space currently under construction.
- While vacancy rates have increased over the past few years, they remain a relatively low 3.6%.
- However, this represents about 670,000 square feet of vacant space in the Charleston area.
- Asking rents peaked in 2013, and have generally stabilized since then at $5.21 per square foot.
- Net absorption of industrial space was negative from 2013 to 2015, but trended positive during the first two quarters of 2016
- While the economic indicators for industrial space remain relatively positive, new construction has been minimal over the past several years. It is difficult to say if this is due to a lack of available flat parcels with infrastructure in place or due to weak market conditions, or some combination of the two.

FIGURE 3.6

Employment by Industry, Boone County



ECONOMIC & REAL ESTATE INFLUENCES

FIGURE 3.7

Industrial Space Real Estate Market Indicators, Charleston, WV

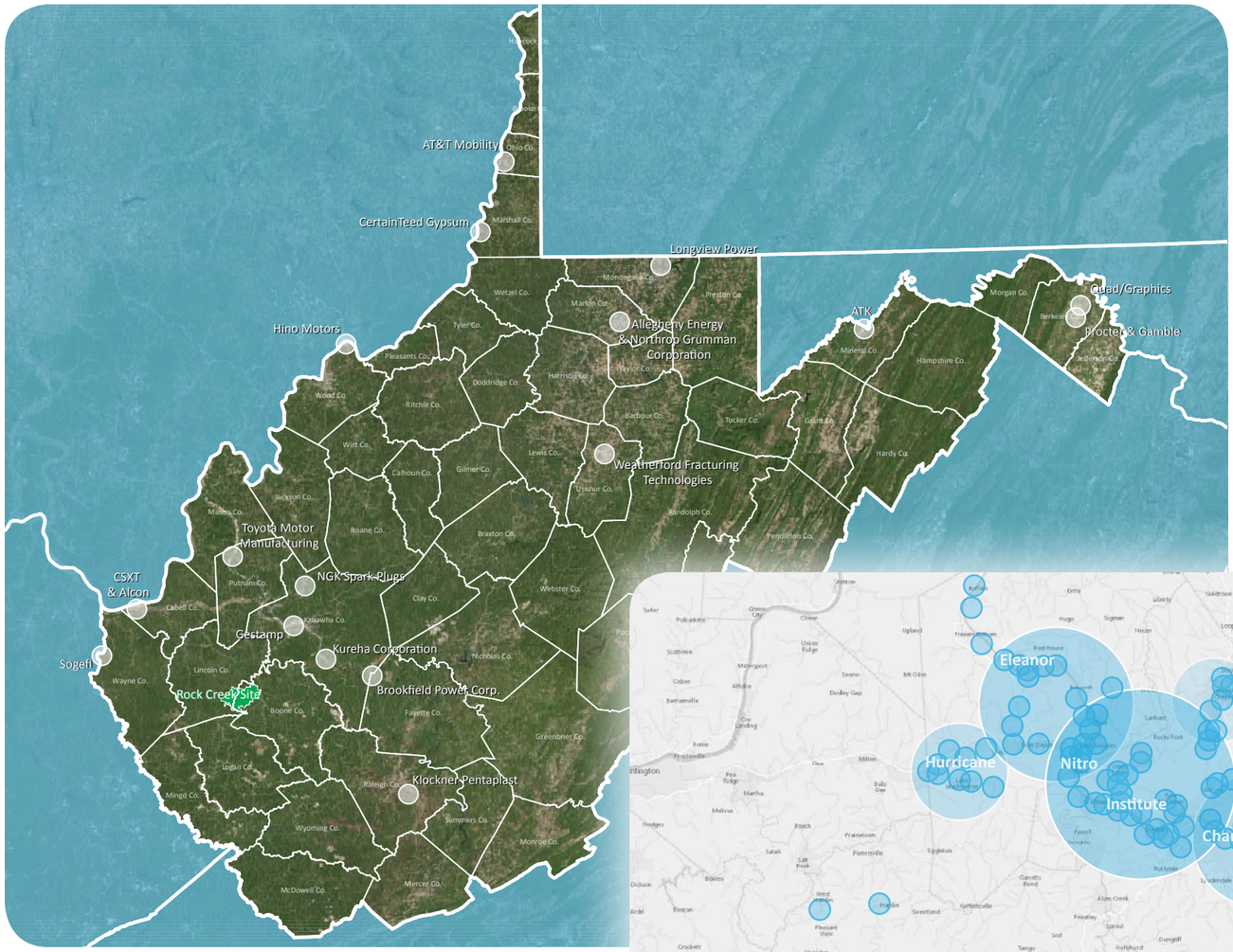
QUARTER	INVENTORY BLDGS	INVENTORY SF	VACANT SF TOTAL	VACANT PERCENT TOTAL	OCCUPANCY SF	OCCUPANCY PERCENT	NET ABSORPTION SF TL	DELIVERIES BLDGS	DELIVERIES SF	UNDER CONTRACT BLDGS	UNDER CONSTRUCTION SF	NNN RENT OVERALL
QTD	590	18,772,895	668,625	3.60%	18,104,270	96.40%	-61,815	1	20,424	3	38,000	$5.25
2016 Q2	589	18,752,471	586,386	3.10%	18,166,085	96.90%	131,959	0		4	58,424	$5.21
2016 Q1	589	18,752,471	718,345	3.80%	18,034,126	96.20%	-48,010	0	0	4	58,424	$5.18
2015 Q4	589	18,752,471	670,335	3.60%	18,082,136	96.40%	12,700	0	0	2	18,000	$5.26
2015 Q3	589	18,752,471	683,035	3.60%	18,069,436	96.40%	-54,431	0	0	0	0	$5.73
2015 Q2	589	18,752,471	628,604	3.40%	18,123,867	96.60%	-63,206	0	0	0	0	$5.82
2015 Q1	589	18,752,471	565,398	3.00%	18,187,073	97.00%	-64,945	0	0	0	0	$5.87
2014 Q4	589	18,752,471	500,453	2.70%	18,252,018	97.30%	-3,938	0	0	0	0	$5.97
2014 Q3	589	18,752,471	496,515	2.60%	18,255,956	97.40%	-126,698	0	0	0	0	$6.00
2014 Q2	589	18,752,471	369,817	2.00%	18,382,654	98.00%	-51,485	0	0	0	0	$6.00
2014 Q1	589	18,752,471	318,332	1.70%	18,434,139	98.30%	-8,230	0	0	0	0	$6.26
2013 Q4	589	18,752,471	310,102	1.70%	18,442,369	98.30%	-23,011	0	0	0	0	$6.24
2013 Q3	589	18,752,471	287,091	1.50%	18,465,380	98.50%	-30,513	1	10,000	0	0	$6.30
2013 Q2	588	18,742,471	246,578	1.30%	18,495,893	98.70%	-14,800	0	0	1	10,000	$4.61
2013 Q1	588	18,742,471	231,778	1.20%	18,510,693	98.80%	-14,664	0	0	1	10,000	$4.87
2012 Q4	588	18,742,471	217,114	1.20%	18,525,357	98.80%	34,094	0	0	1	10,000	$4.82
2012 Q3	589	18,849,471	358,208	1.90%	18,491,263	98.10%	-10,244	1	57,200	0	0	$4.45
2012 Q2	588	18,792,271	290,764	1.50%	18,501,507	98.50%	75,783	0	0	1	57,200	$4.50
2012 Q1	588	18,792,271	366,547	2.00%	18,425,724	98.00%	104,153	0	0	1	57,200	$4.59
2011 Q4	588	18,792,271	470,700	2.50%	18,321,571	97.50%	-3,000	1	2,400	1	57,200	$4.74
2011 Q3	587	18,789,871	465,300	2.50%	18,324,571	97.50%	191,917	0	0	1	2,400	$4.61
2011 Q2	587	18,789,871	657,217	3.50%	18,132,654	96.50%	12,042	3	6,800	1	2,400	$4.49
2011 Q1	584	18,783,071	662,459	3.50%	18,120,612	96.50%	-47,168	0	0	4	9,200	$4.51
2010 Q4	584	18,783,071	615,291	3.30%	18,167,780	96.70%	-81,100	0	0	3	6,800	$5.00
2010 Q3	584	18,783,071	534,191	2.80%	18,248,880	97.20%	-18,096	0	0	0	0	$4.96
2010 Q2	584	18,783,071	516,095	2.70%	18,266,976	97.30%	15,336	0	0	0	0	$4.85
2010 Q1	584	18,783,071	531,431	2.80%	18,251,640	97.20%	-33,625	0	0	0	0	$4.95
2009 Q4	584	18,783,071	497,806	2.70%	18,285,265	97.30%	15,015	0	0	0	0	$5.05
2009 Q3	585	18,788,071	517,821	2.80%	18,270,250	97.20%	-6,450	0	0	0	0	$5.06
2009 Q2	585	18,788,071	511,371	2.70%	18,276,700	97.30%	-61,687	0	0	0	0	$5.06
2009 Q1	585	18,788,071	449,684	2.40%	18,338,387	97.60%	-3,900	0	0	0	0	$6.03
2008 Q4	585	18,788,071	445,784	2.40%	18,342,287	97.60%	22,506	0	0	0	0	$5.23
2008 Q3	585	18,788,071	468,290	2.50%	18,319,781	97.50%	63,181	2	6,166	0	0	$5.23
2008 Q2	583	18,781,905	525,305	2.80%	18,256,600	97.20%	-53,293	0	0	2	6,166	$5.15
2008 Q1	583	18,781,905	472,012	2.50%	18,309,893	97.50%	33,360	0	0	1	2,816	$4.62
2007 Q4	583	18,781,905	505,372	2.70%	18,276,533	97.30%	229,355	1	38,000	0	0	$5.42
2007 Q3	582	18,743,905	696,727	3.70%	18,047,178	96.30%	58,813	0	0	1	38,000	$5.42
2007 Q2	582	18,743,905	755,540	4.00%	17,988,365	96.00%	75,761	0	0	1	38,000	$5.34
2007 Q1	583	18,760,433	847,829	4.50%	17,912,604	95.50%	-272,828	0	0	0	0	$5.39

ECONOMIC & REAL ESTATE INFLUENCES

TARGETED INDUSTRIES

The following industries have been identified as key growing industry sectors by the state of West Virginia: Energy, Aerospace, Biometrics, Automotive Suppliers, Biotechnology, Business Services, Chemicals & Polymers, Specialty Metals, Tourism, and Wood Products. Focused efforts have lead to a number of major industries locating in the area, including those enumerated in the figure to the right. Since these industries have found a locational advantage to operating in West Virginia, they may represent some likely candidate industries for the Rock Creek Development Park.

Current trends are shown as highlighted clusters of industrial properties throughout the southern part of West Virginia. Displayed here, a majority of properties are currently located within the Kanawha Valley, however a prominent cluster in the Danville Madison area has been identified.



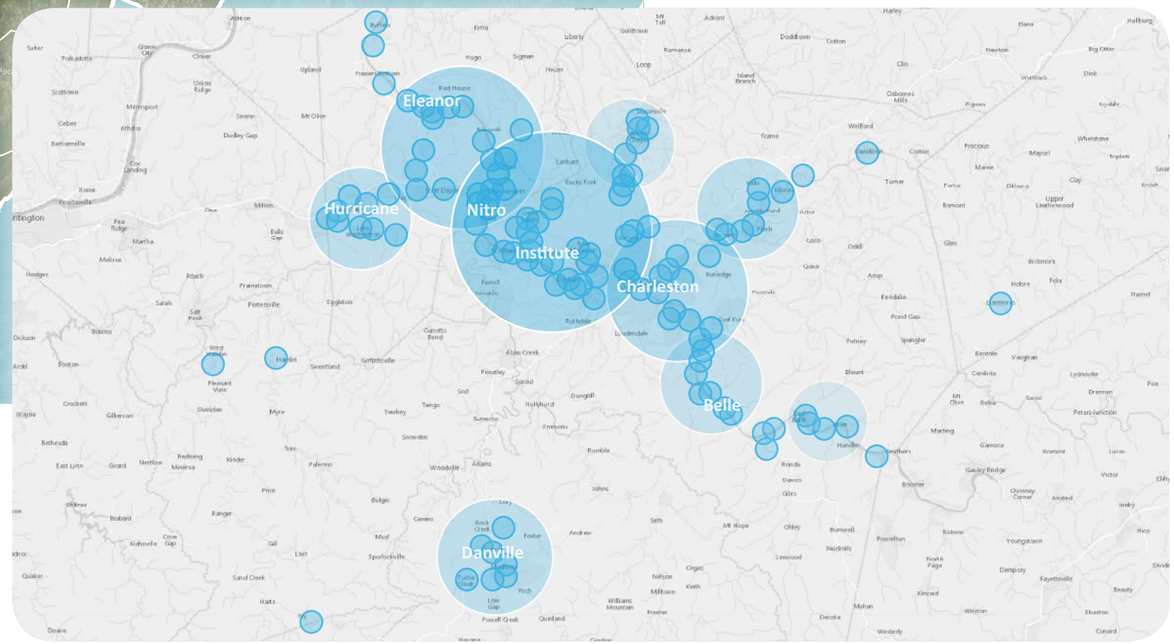


FIGURE 3.8 - *top*

Selected Companies Locating in West Virginia

FIGURE 3.9 - *right*

Existing Industrial Properties, Charleston, WV

ECONOMIC & REAL ESTATE INFLUENCES

2016

- Procter & Gamble recently announced a new manufacturing facility in the Tabler Station Business Park in Martinsburg. The plant will encompass at least one million square feet of space and will be the company's second new plant built in the US since 1971.

2011

- Kureha Corporation, headquartered in Japan, opened in 2011 and produces PGA, a polymer used as a gas barrier for plastic soft drink bottles. The plan cost an estimate $100 million to construct. The plant is located in Belle, WV at the DuPont site.

- Alcon opened a new 74,000-square-foot building in 2011, allowing Alcon's Huntington area operations to remain the world's largest intraocular lens manufacturing site. Once completed, the expansion ultimately will provide more than 350 jobs over the next 10 to 15 years (21 acre site, with option to purchase an additional eight acres in the future). The company has invested $65 million since 2005.

2008

- AT&T Mobility opened a call center in the Highlands Development complex in Wheeling, West Virginia. The company has invested $8 million and created 249 new jobs.

2007

- Hino Motors opened a 200,000-square-foot plant in Williamstown. The plant is the first commercial truck assembly plant in the United States. In 2015, Hino announced a 30,000-square-foot addition.

2005

- Nippon Thermostat has been doing business in West Virginia for ten years. Its 32,000-square-foot facility in the Putnam Business Park in Fraziers Bottom produces thermostats for the automotive industry. In 2012, the company announced a $4 million expansion at the Putnam County site. The company produces thermostats used in Toyota engines.

2000

- Klockner Pentaplast (Raleigh County) produces rigid plastic films for pharmaceutical, medical devices, food, electronics and other packaging applications. The company was founded in Germany in 1965.

1999

- Okuno International established its operations in Wayne County in 1999. The plant, located in Prichard, manufactures hydraulic cylinders used in industrial equipment.

1996

- Toyota Motor Manufacturing, West Virginia, Inc., in Putnam County has invested $1.2 billion in the state and created 1,300 jobs since 1996. The company recently announced the investment of an additional $500 million to keep its operations competitive.

1994

- NGK Spark Plugs first located in Sissonville in 1994 and has expanded four times since it first opened. The company is a subsidiary of the Japan-based manufacturer.

OTHER SELECTED FIRMS LOCATING IN WEST VIRGINIA

- Quad/Graphics has invested more than $14 million at the Berkeley County plant.

- ATK, an aerospace company in Mineral County, has created more than 400 new jobs

- Brookfield Power Corp., a Canadian-based owner and operator of hydroelectric plants, has established a production center in Montgomery.

- Certain Teed Gypsum is located in Proctor, West Virginia and recycles synthetic gypsum from American Electric Power for use in wallboard. The company's invested $150 million in the facility.

ECONOMIC & REAL ESTATE INFLUENCES

MOVING FORWARD

INFRASTRUCTURE FUNDING

It is anticipated that the new 2.6 mile access road for the Hobet site can be largely funded through federal funds, with an anticipated increase in funding through the Federal Highway Bill, or through a funding approach whereby bonds for the new road are secured through future federal highway funds.

In order to induce industries to locate at the site, it will be important to provide sites with ready access to needed infrastructure, including water, sewer, fiber lines, and an internal street network.

Although related, there are important distinctions between funding and financing. Funding refers to specific unencumbered monetary resources made, or becoming, available. Financing refers to the means used to acquire a future cash value, typically a very large sum, today. Financing is not atypically a debt instrument of some kind and is linked to the unencumbered or dedicated funding options available. Bond indebtedness [financing] secured by gas taxes [funding] is a common example of the oft realized connection between funding and financing.

In most cases, funding refers to the monetary resources made available periodically [an occasional entitlement], regularly [dedicated taxes], or on a one-time basis [grant]. Sometimes these resources take the form of cash, and a single application of that cash resource is sufficient to meet the cost of an obligation. As a result, many governmental needs are satisfied on a cash only basis. This method could involve the accumulation of cash from a source over a term but there is no debt and the application of the cash typically occurs in a single period. Often, the expense or application of the cash, is for non-recurring items.

Regardless, the cash accrues from a specific and identifiable source. If a dedicated and recurring source, such as certain taxes, it can be used to secure debt such that larger levels of cash can be made available immediately on a present value basis. It is not uncommon for small repairs to be made on a cash basis while major road construction or other infrastructure is financed, often with the sale of debt.

We must assume that, whatever the market opportunities for these holdings, raising capital for infrastructure improvements will be difficult.

TAX INCREMENT FINANCING

One of the most effective ways of assisting with project feasibility is through public assistance for infrastructure improvements; one of the principal funding options available for financing infrastructure improvements is tax increment financing (TIF). Tax increment districts acknowledge growth in the existing tax base and reallocates all (or in some cases, a portion) of the property tax revenue associated with that growth. Revenue generated from the increment must be used within the district where it was generated. Base tax collections will still accrue to the general fund while incremental revenues are applied to projects within the district. Part of the new tax revenue generated by development is usually used to pay off bonds to finance site improvements and infrastructure. A tax increment district is typically approved by the local jurisdiction.

The real challenge is the immediate need for site specific infrastructure improvements which must be made in conjunction with the sale of a parcel. In the immediate case, the improvements will likely need to be made prior to the sale or transfer of the property because they may be the required inducement to facilitate the transaction.

Since improved property is needed to generate improved TIF collections, a certain level of cash must be introduced initially. It is not uncommon in these circumstances for the parent jurisdiction [state or county] to provide this initial cash in the form of a loan repaid as the property taxes accrue. In effect, the loaned cash supports the initial activity subject to a longer term flow of tax dollars dedicated specifically for area improvements. The cash then is not a further investment in the property but rather a loan to be recovered albeit the allocated funds may be perceived as a higher risk activity.

ASSESSMENT DISTRICT

This risk could be mitigated further by the creation of an assessment program which aligns with the boundaries of the properties benefiting from any planned infrastructure improvements. This is not an uncommon approach to funding and financing such improvements. These assessments constitute a direct pass through to the property. Therefore, while the state would sell the property in question at below market prices, it would endeavor to secure nominal assessments which would add power to the tax increment by providing further security for any indebtedness. In many cases, the value of the property could increase sufficiently to virtually retire the assessment.

Should the state or some other obligating party assume the assessments immediately, the assessments themselves could secure any debt rather than the potential tax increment. This strategy would create more favorable financing terms.

OTHER FUNDING OPTIONS

We don’t know what the federal landscape looks like in terms of money that may become available. In the last few years, federal dollars have been limited and restricted to specific activities. New market tax credits for job creation efforts are an obvious resource but they require extensive lead time and other committed funds to be truly viable. What is very different for the next few years is the change in governing party and the ostensible commitments to the major coal producing states. While campaign pledges are hardly the basis of a funding strategy, a “promise” was not even an option several months ago.

Infrastructure financing is oftentimes a local concern, with some exceptions (environmental and transportation). At the federal level, new forms of public aid may be available as part of initiatives

developed and administered under the new administration. Grants of various forms are typically used to fund specific project components and typically originate at the state level. Grants are typically used to fund components of a project that are likely to produce benefits to the public as well as to the specific project (e.g. parking, infrastructure).

Another option is a payment-in-lieu-of-taxes (PILOT) agreement between the locality and the developer. Typically, a PILOT agreement will require the developer to make payments in accordance with a graduated scale over a specified period of time based on the percentage of taxes that might otherwise be due on the value-added portion of the assessment.

ISSUES SPECIFIC TO WATER AND SEWER IMPROVEMENTS

The larger area and property do have water and sewer provided by an adjacent jurisdiction but the existing facilities are not sufficient to accommodate extensive on-site development. Because clean water is a major life/safety consideration and water and sewer systems typically generate a reliable and estimable stream of revenue, the funding and financing these improvement can be distinguished from the critical path applied to transportation infrastructure.

While it might be premature to speculate how water and water systems would be financed in this case, some of the comments above describing loans and the creation of a special district are relevant. Water and wastewater systems are well understood by lenders and can be the source of significant revenues to support a substantial loan, regardless of its form. In most cases, where local governments own their utilities, they are the producers of net positive receipts which, with proper legal structure, can flow back to the related parent. Whether the existing system is expanded or new district created in its place is dependent upon many factors, including state law, currently delineated service area boundaries, and health safety considerations.

Historically, there are several federal sources which have been a source of money for selected water and sewer initiative's which are probably known to West Virginia economic development staff. Among others these include for example:

- Congress has authorized the Army Corps of Engineers since 1992 to assist communities, particularly rural and small communities, with design and construction of drinking water and wastewater infrastructure and surface water protection and development project.

- Rural Utilities Service [Water and Waste Disposal Programs] administered by the Rural Utilities Service of the Department of Agriculture, is intended to provide basic human amenities, alleviate health hazards and promote growth of nation's rural areas by meeting needs for new and improved rural water and/or waste disposal facilities (including costs of distribution lines and well-pumping.

- The Clean Water Act manged by EPA sets standards for performance levels of municipal sewage treatment plants to prevent the release of harmful waste into surface waters. Financial assistance is also provided to enable communities to construct treatment facilities which comply with EPA's standards.

These programs were active and making commitments as late as 2015.

HOUSING AND RELATED SITE IMPROVEMENTS

The housing market and potential financial resources must consider the developer, builder and possible users simultaneously. As with key industrial and commercial sites, any properties allocated to residential purposes will require infrastructure to facilitate development. The need for site specific infrastructure to support housing construction arguably could be a greater hurdle than it might be for non-residential construction. Regardless we envision land being made available to both intermediary parties and end users at or below cost. To launch a residential development effort, the basic approaches described above in which assessments and TIF proceeds are combined will likely be necessary.

If there is a difference, it is that the market is not well tested for this as a residential location. The regional need for more physically supportive site notwithstanding, it remains unclear what level of incentives will be necessary to induce residential activity initially. That said, the debt markets have historically been willing to invest in residential infrastructure applying moderate debt to equity ratios. We cannot project how that approach will function here but residential property assessments are a more accepted practice than commercial assessments. In that regard, they are well understood tools of residential development.

We believe that some thought should be given to the idea of a lottery to launch residential development, a kind of homesteading program. In the variation envisioned, the obligations incurred would require a commitment to support the assessments but otherwise the land itself would be titled and transferred at no cost, subject to a time certain performance.

For housing at least there are obvious and identifiable agencies and programs which might be invoked. The relevant programs will become clearer as the concept and approach to marketing specific parcels are settled. Historically, housing finance programs have had a separate treatment and allocation process at the federal level, and many of the dollars are in the form of credits or state allowed tax exempt debt. The Appalachian Regional Commission, in particular, has been very alert to housing initiatives. Again, given the unusual political climate, it is not clear how the ARC could lend support.

GOVERNANCE

What has been largely unspoken is the need to establish a system of governance and controls for the Hobet property to ascertain the priorities among competing investment needs, the sequencing of development, coordination among affected state, local and federal agencies, ownership of

infrastructure assets, interim property control, priorities of use, affiliated locational criteria, general land use controls, and ultimate ownership of land based real estate assets. This is an illustrative and partial list of the complex and often conflicting responsibilities best handled by a quasi-public entity that might be identified as a land development authority or its equivalent allowed under West Virginia statute. The authority and its board would be empaneled by representatives of differing groups with interest in Hobet, but the organization has a specific series of objectives and codified mandates.

If such a legal option does not currently exist, it should be given some legislative urgency because the needs and controls envisioned involve powers and tasks which should not vest in the typical governmental agency where many of the aforementioned decisions easily conflict with others and are subject to choices which may not extend from economic efficiency.

ECONOMIC IMPACT

INTRODUCTION

The following analysis addresses the employment and revenue benefits associated with the proposed initial stage development at the Rock Creek site. The analysis includes an assessment of both temporary (construction) and permanent (ongoing) economic impacts. The analysis addresses both job and revenue creation as a result of construction and operation of a new mixed-use development.

We have assumed the following primary components as it relates to initial stage development, assuming that development will begin in the designated Seeds and Starters and Community Gateway areas, as designated on the site plan. It is estimated that each designated block in the Seeds and Starters area could support about 3 to 4 industrial buildings (sized at about 50,000 to 75,000 square feet each). It should be noted that the assumed initial development plan accounts for only a small portion of the entire Rock Creek site, and that potential long-term build-out impacts will be substantially greater. While it is difficult to predict the number of years required to fulfill any development plan, we believe that the following projections conservatively estimate potential development during the initial stages.

- We have assumed approximately 600,000 square feet of industrial space, or approximately eight to ten industrial firms/buildings.
- We have conservatively estimated approximately 450 new housing units to support new employment in the area.
- We have further assumed about 200,000 square feet of supporting community retail space.

SUMMARY FINDINGS

TEMPORARY CONSTRUCTION IMPACTS

- The primary economic benefits that will accrue to local government during the development of the mixed-use project are employment, earnings, and material sales. In addition to these impacts that occur on-site, there are ripple effects of economic activity on other businesses in the neighboring counties and the state. This analysis does not include the spin-off or indirect and induced impacts, but it is important to note that these additional impacts can be substantial, possibly 2-3 times the direct benefits.
- Analysis of the construction costs of the mixed-use project is used to determine amounts likely to be paid in wages and salaries to labor during construction. Direct labor costs of about $64.7 million are projected, resulting in a total of 1,438 full-time equivalent jobs (based on average construction wages). Since construction progresses in stages, the total number of employees involved in the development of the project at any one time will likely vary.
- Based on the construction costs enumerated above, total material purchases of $86.3 million are projected.
- A significant portion of tax revenues are attributable to the purchase of construction materials, which is estimated to generate a total of $5.2 million in total sales tax revenues. State income tax revenues attributable to construction employment total approximately $2.9 million.

OPERATIONAL IMPACTS – ROCK CREEK SITE

- Permanent benefits are those that will be achieved once the mixed-use development has been built, the space is fully occupied, and stabilized sales and occupancy levels have been achieved. A transition time will be required to achieve stabilization.
- Total on-site employment is estimated at 1,950 full-time equivalent jobs. As with employment during construction, on-site operations will also generate indirect employment (e.g. those establishments providing goods and services to the on-site facilities). Again, these impacts have not been calculated, but will be substantial.
- At this time, it is assumed that all of the components of the mixed-use development will be subject to property tax. The market value estimates for the proposed project components reflect current operating income parameters (rents and average sales for for-sale units) for similar or comparable properties in the region. Based on the analysis of market value, annual property tax revenues are estimated at $2.2 million.
- On-site retail sales result in an estimated $3.1 million in annual sales tax revenues.
- Total annual state income tax revenues as a result of new on-site employment are estimated at about $3.0 million annually.

ECONOMIC & REAL ESTATE INFLUENCES

Figure 3.10: *Summary of Construction Impacts*

ECONOMIC IMPACT - CONSTRUCTION PERIOD

	DIRECT
JOBS (FTE)	1,438
PAYROLL	$64,687,765
MATERIAL PURCHASES	$86,250,353

FISCAL IMPACTS - CONSTRUCTION PERIOD

	BOONE COUNTY	STATE OF WEST VIRGINIA
RETAIL SALES TAX	$5,175,021	
EARNED INCOME TAX		$2,910,949
TOTAL	**$5,175,021**	**$2,910,949**

Source: GAI

Figure 3.11: *Summary of Ongoing Impacts*

ANNUAL REVENUES FROM ONGOING OPERATIONS

	DIRECT
JOBS (FTE)	1,950
PAYROLL	$67,185,000

FISCAL IMPACTS - ONGOING OPERATIONS

	BOONE COUNTY	STATE OF WEST VIRGINIA
RETAIL SALES TAX	$2,157,711	$-
EARNED INCOME TAX	$-	$3,078,000
EARNED INCOME TAX	$-	$2,951,325
TOTAL	**$2,157,711**	**$6,029,325**

Source: GAI

ECONOMIC AND FISCAL IMPACT

The estimates of fiscal and economic benefits presented below are based on proposed initial stage build-out at the Rock Creek site. Construction benefits, commonly referred to as temporary impacts since they occur only during the construction phase of the project, are analyzed as are ongoing permanent, or annually recurring, impacts.

Fiscal and economic benefits occur on two levels – direct / indirect and induced. Direct impacts are those that are directly attributable to the project (e.g. on-site construction and retail sales). Indirect benefits are those that occur as purchases and spending cycle through the local and regional economies. Induced impacts measure the effects of household and institutional spending (e.g. spending by construction workers in the area as a result of wages earned on-site). Purchase of construction materials will have "ripple effects" throughout the local and regional economy as material vendors in turn purchase goods and services needed in their business from other suppliers throughout the region. Similarly, employee earnings will be spent within the local economy, in turn generating successive rounds of spending in the area. Only direct impacts have been calculated as part of this analysis.

TEMPORARY CONSTRUCTION IMPACTS

Temporary benefits are those that accrue to local and state governments during the construction phase. The primary economic benefits that will accrue to local government during the development of the mixed-use project are employment, earnings, and material sales.

DEVELOPMENT COSTS

Based on cost estimates from RS Means and Marshall & Swift, total construction costs are estimated at $180 million (excluding soft costs). A construction project of this magnitude will generate notable economic activity in Boone County and the surrounding region, due primarily to the purchase of materials and the employment of workers.

Figure 3.12: *Summary of Ongoing Impacts*

	UNIT COST BEFORE CONTINGENCY	CONTINGENCY COST	TOTAL UNIT COSTS INCLUDING CONTINGENCY
RENTAL HOUSING	$125,000 PER UNIT	$12,500 PER UNIT	$137,500 PER UNIT
SINGLE FAMILY HOME	$169,000 PER UNIT	$16,900 PER UNIT	$185,900 PER UNIT
NEIGHBORHOOD/ COMMUNITY RETAIL	$169 PER SF	$16.90 PER SF	$185.90 PER SF
INDUSTRIAL SPACE	$63 PER SF	$6.30 PER SF	$69.30 PER SF

Source: RS Means, Marshall & Swift, GAI

CONSTRUCTION EMPLOYMENT AND MATERIAL PURCHASES

Analysis of the construction costs of the mixed-use project is used to determine the amounts that are likely to be paid in wages and salaries to labor during construction. Labor costs of about $64.7 million are projected (assuming that 90% of the labor will be generated from the region), resulting in a total of 1,438 full-time equivalent jobs. Since construction progresses in stages, the total number of employees involved in the development of the project at any one time will likely vary.

Based on the construction costs enumerated above, material purchases of $107.8 million are projected (assuming 60% of purchases will be sourced from the region).

ECONOMIC & REAL ESTATE INFLUENCES

Figure 3.13: *Summary of Ongoing Impacts*

	UNIT COST	UNITS	NUMBER / SF	CONSTR. COST	LABOR COST AT 40%	LOCAL SHARE OF LABOR AT 90%	MATERIALS COST AT 60%	LOCAL SHARE OF MATERIALS AT 80%
RENTAL HOUSING	$137,500	PER UNIT	200	$27,500,000	$11,000,000	$9,900,000	$16,500,000	$13,200,000
SINGLE FAMILY HOME	$185,900	PER UNIT	250	$46,475,000	$18,590,000	$16,731,000	$27,885,000	$22,308,000
NBHD. RETAIL	$186	PER UNIT	200,000	$37,180,000	$14,872,000	$13,384,800	$22,308,000	$17,846,400
INDUSTRIAL	$69	PER UNIT	600,000	$41,580,000	$16,632,000	$14,968,800	$24,948,000	$19,958,400
INFRA COSTS (ASSUMED AT 15% OF TOTAL)		TOTAL		$26,953,235	$10,781,294	$9,703,165	$16,171,941	$12,937,553
PROJECT TOTAL				**$179,688,235**	**$71,875,294**	**$64,687,765**	**$107,812,941**	**$86,250,353**

Source:
RS Means, Marshall & Swift, GAI

DIRECT EMPLOYMENT GENERATION MIXED USED DEVELOPMENT

	OVERALL PROJECT	LOCAL SHARE
TOTAL CONSTRUCTION LABOR	$71,875,294	$64,687,765
AVERAGE ANNUAL CONSTRUCTION WAGE (1)	$45,000	$45,000
PERSON YEAR CONSTRUCTION JOBS	**1,597**	**1,438**

Note:
1/ Average construction wage based on wage survey from Workforce West Virginia.

FISCAL IMPACT

A significant portion of tax revenues are attributable to the purchase of construction materials, which is estimated to generate a total of $5.2 million in total sales tax revenues. State income tax revenues attributable to construction employment total approximately $2.9 million.

Figure 3.14: *Summary of One-Time Fiscal and Economic Benefits - Construction Phase*

SUMMARY OF CONSTRUCTION PHASE IMPACTS

TOTAL HARD COST		**$179,688,235**
BREAKOUT OF CONSTRUCTION MATERIALS AND WAGES		
CONSTRUCTION MATERIALS	60% OF HARD COSTS	$107,812,941
CONSTRUCTION WAGES	40% OF HARD COSTS	$71,875,294
		$179,688,235
LOCAL SHARE OF LABOR	90%	**$64,687,765**
LOCAL SHARE OF MATERIALS	80%	**$86,250,353**
CONSTRUCTION EMPLOYMENT		
	CONSTRUCTION WAGES	**$64,687,765**
	/ MEAN ANNUAL CONSTRUCTION WAGE 1/	**$45,000**
	= PERSON YEARS OF EMPLOYMENT	**$1,438**
	/ ESTIMATED CONSTRUCTION TIMEFRAME (YEARS)	**2**
	/ ESTIMATED CONSTRUCTION TIMEFRAME (YEARS)	**719**

Note:
(1) Average wage for construction occupations for Pittsburgh MSA from Pennsylvania Department of Labor and Industry.
Source:
Pennsylvania Department of Labor and Industry; Bureau of Economic Analysis; AECOM

SUMMARY OF CONSTRUCTION PHASE IMPACTS

BREAKOUT OF CONSTRUCTION MATERIALS AND WAGES	
CONSTRUCTION MATERIALS (PURCHASED LOCALLY)	$86,250,353
DIRECT CONSTRUCTION WAGES (LOCAL)	$64,687,765
TOTAL	**$150,938,118**

SALES TAX REVENUES	**STATE**
STATE EARNED INCOME TAX	4.50%
STATE EARNED INCOME TAX REVENUES	**$2,910,949**

Source:
GAI

ECONOMIC & REAL ESTATE INFLUENCES

ONGOING OPERATION OF THE ROCK CREEK DEVELOPMENT – PROPOSED INITIAL STAGE DEVELOPMENT

Permanent benefits are those that will be achieved once the mixed-use development has been built, the space is fully occupied, and stabilized sales and occupancy levels have been achieved. It is assumed that a short transition time will be required to achieve stabilization. The benefits covered in the analysis include property taxes, retail sales, and employment and earnings.

EMPLOYMENT AND EARNINGS

Total employment benefits attributable to the ongoing operations at the proposed development are based on commonly accepted employment ratios by land use type. Total on-site employment is estimated at 1,950 full-time equivalent jobs. Total wages for on-site employment is estimated at approximately $67.2 million. Wages are based on a wage and salary survey by Workforce West Virginia (and reflect averages across each land use type).

Figure 3.15: *Total Payroll*

	TOTAL SQUARE FEET	OCCUPIED SQUARE FEET	SQUARE FEET PER EMPLOYEE	EMPLOYMENT	AVERAGE ANNUAL SALARY / WAGES 1/	TOTAL PAYROLL
COMMUNITY RETAIL	200,000	180,000	300	600	$24,000	$17,280,000
INDUSTRIAL	600,000	540,000	400	1,350	$39,100	$52,785,000
TOTAL	**800,000**			**1,950**		**$70,065,000**

Note:

1/ Wages based on Workforce West Virginia occupational wages data. Neighborhood Serving Retail based on retail sales persons. Industrial based on average for production occupations.

Source:

Pennsylvania Department of Labor and Industry; Bureau of Economic Analysis; AECOM

FISCAL IMPACTS

Following is a summary of the projected fiscal impacts associated with ongoing operation of the initial stage of development at Rock Creek. Inputs for the various tax benefits were obtained from Boone County, the State of West Virginia, and other applicable published sources.

At this time, it is assumed that all of the components of the mixed-use project will be subject to Boone County property tax rates. Boone County taxes property at 60% of the assessed value, with a current rate of 2.534/$100 for commercial and multi-family rental property and 1.267/$100 for for-sale residential property.

The market value estimates reflect current operating income parameters (rents and average sales for for-sale units) for similar or comparable properties in the region. Based on the analysis of market value, annual property tax revenues are estimated at $2.2 million annually.

Figure 3.16: *Market Value*

						NET OPERATING INCOME			
	SIZE UNITS	AMOUNT	INCOME UNITS	AMOUNT	OCCUPANCY	AS PERCENT OF TOTAL INCOME	NET OPER. INCOME	CAPITALIZATION RATE	MARKET VALUE
COMMUNITY RETAIL	SQ. FT.	200,000	RENT/SF/YEAR	$18	90%	70%	$2,268,000	6.5%	**$34,892,308**
INDUSTRIAL	SQ. FT.	600,000	RENT/SF/YEAR	$7	90%	80%	$3,024,000	6.0%	**$50,400,000**
RENTAL UNITS									
MARKET RATE	UNITS	200	RENT/UNIT/ MONTH	$1,000	95%	75%	$1,710,000	6.0%	**$28,500,000**
SALE UNITS									
MARKET RATE	UNITS	250	SALES/SF	$125	100%	NA	NA	NA	**$56,250,000**

Note:

Rental Assumptions -

Market Rate Rental: Average rent per square foot of $1.00 and average size of 1,000 square feet
Market Rate Sales: Average sales price per square foot of $125 and average size of 1,800 square feet.

			TAX RATE	ANNUAL PROPERTY TAX REVENUES
	MARKET VALUE	SCHOOL DISTRICT (PER $1,000)	BOONE COUNTY (PER $1,000)	BOONE COUNTY
COMMUNITY RETAIL	$34,892,308	$20,935,385	2.534	$530,503
INDUSTRIAL	$50,400,000	$30,240,000	2.534	$766,282
RESIDENTIAL				
RENTAL	$28,500,000	$17,100,000	1.267	$433,314
FOR SALE	$56,250,000	$33,750,000	1.267	$427,613
TOTAL				**$2,157,711**

Source:

Boone County, GAI

ECONOMIC & REAL ESTATE INFLUENCES

PROPERTY TAX BENEFITS

No attempt has been made in this study to estimate the real increases in off-site property taxes from permanent impacts from the new mixed-use development. It is difficult to determine where such impacts would occur as well as the appropriate property values to apply. However, it can be assumed that the off-site property tax impact would be positive.

OTHER QUANTIFIABLE TAX BENEFITS

In addition to property tax benefits, we also looked at potential tax benefits accruing as a result of the existing sales tax and personal income tax.

Sales tax revenues have been estimated based on average store sales for retail centers and restaurants. As such, the estimated sales are not the result of a detailed market analysis of existing supply and potential market demand. Total sales volume is based on an average sales productivity of $300 per square foot for retail space; with total annual retail sales of $51.3 million estimated. On-site retail sales result in an estimated $3.1 million in annual sales tax revenues.

Figure 3.17: *Retail Sales*

	SQUARE FEET	ESTIMATED ANNUAL SALES PSF	ESTIMATED OCCUPANCY	GROSS SALES	ESTIMATED PERCENT TAXABLE	TAXABLE SALES
NEIGHBORHOOD/ COMMUNITY RETAIL	200,000	$300	90.00%	$54,000,000	95%	$51,300,000

RETAIL SALES & USE TAX	TAXABLE SALES	STATE TAX RATE	STATE OF WV SALES TAX REVENUES
NEIGHBORHOOD/ COMMUNITY RETAIL	$51,300,000	6.00%	$3,078,000

GAI also looked at the potential fiscal impacts accruing as a result of personal income tax. As reflected below, we have estimated annual state personal income tax revenues of approximately $3 million based on estimated average household incomes for retail and industrial employment (based on data provided by Workforce West Virginia).

			STATE PERSONAL INCOME TAX	
	TOTAL EMPLOYMENT	TOTAL PAYROLL	RATE	TOTAL REVENUE
COMMUNITY RETAIL	720	$17,280,000	4.0%	$691,200
INDUSTRIAL	1,350	$52,785,000	4.5%	$2,375,325
TOTAL	**2,070**	**$70,065,000**		**$3,066,525**

Source:
Pennsylvania Department of Labor and Industry; Bureau of Economic Analysis; AECOM

SUMMARY OF FISCAL BENEFITS

As reflected in the following table, total annual tax revenues attributable to ongoing operations are estimated at a total of about $8.2 million. Of this amount, a total of $2.2 million are allocated to Boone County (in the form of real estate taxes) and $6.0 million are apportioned to the State of West Virginia (as retail sales tax and earned income tax revenues).

Figure 3.18: *Summary of Ongoing Operational Impacts - Fiscal Impacts*

	BOONE COUNTY	STATE OF WEST VIRGINIA
RETAIL ESTATE TAX	$2,157,711	
RETAIL SALES TAX		$3,078,000
EARNED INCOME TAX		$2,951,325
TOTAL	**$2,157,711**	**$6,029,325**

Source:
GAI

CASE STUDIES

CASE STUDIES

The GAI team looked at five case studies in order to better understand the overall feasibility of potential development options at the Hobet site. Two major types of case studies were examined:

Opportunistic Site- Meets a market or economic need, at the right place at the right time – takes advantage of site, existing resources

Deliberate Site Selection- Economic modeling to fit need of industry – difficult to predict/forecast – tipping point may be random The GAI team selected case studies that were also large in terms of scale, oftentimes requiring decades to develop. The Honey Branch Regional Industrial Park is somewhat of an aberration and was included as an example of a relatively remote site with immediate access to a small general aviation airport and runway.

ALLIANCE TEXAS

Today, AllianceTexas ™ (http://www.alliancetexas.com/) represents an 18,000 acre planned community that began with the development of the world's first "industrial" airport. And what appears to be the catalyst for what has been hailed as the most successful Public-Private Partnership (PPP) was the convenient timing of a private owner with 10,000 acres of undeveloped land and the Federal Aviation Administration (FAA) needing and looking for a place to build a new airport. Clearly, we don't want to minimize the complexity that may have been involved with developing the vision for the United State's largest inland port and busiest free-trade zone and creating the overall master plan that exists. But, hindsight suggests that the outcome would have been significantly different if not for the two events generally coinciding.

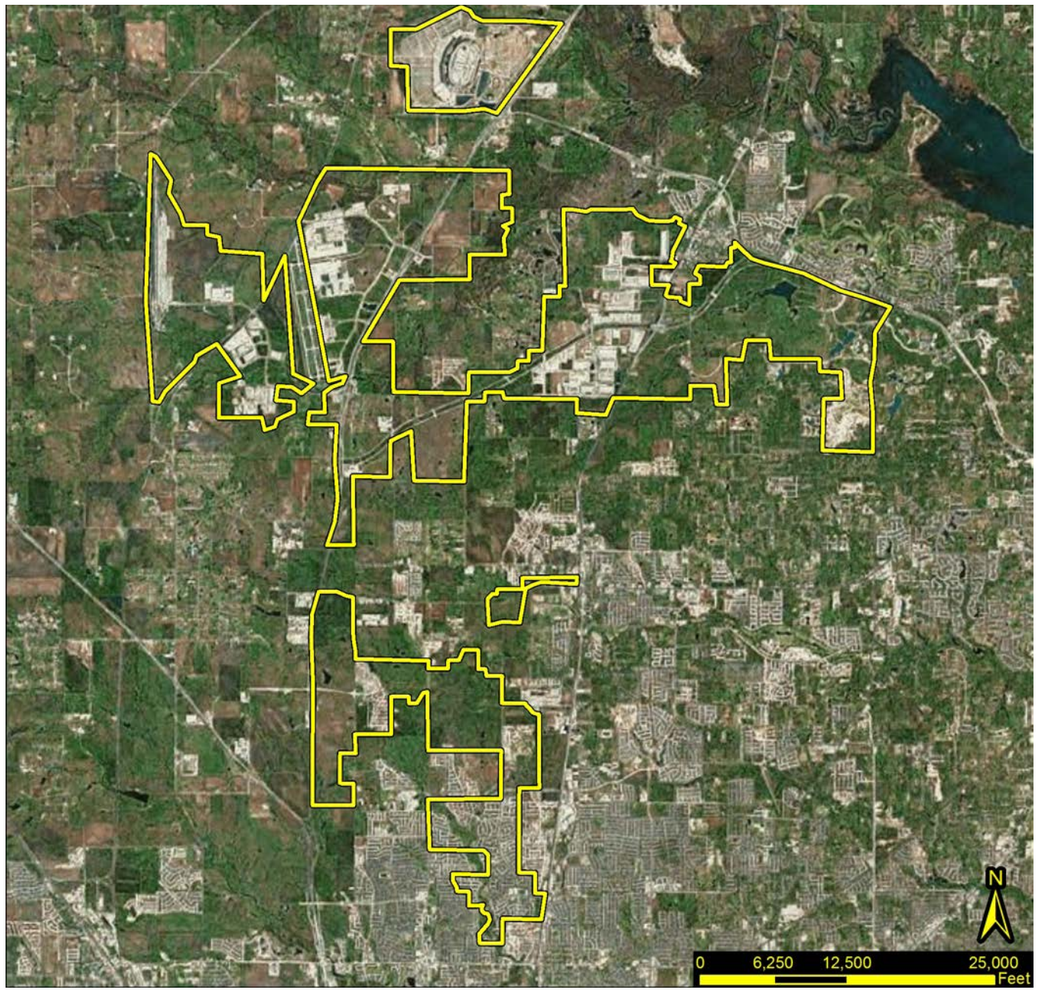
The private ownership of 10,000 acres was pure speculation. Part of the reason land north of Fort Worth was so readily available at lower rates was that in the past the prevailing winds from the south brought the smell of the stockyards north, making living in the area very unpleasant. The general perception of the area seems to have remained even though the stockyards had been closed in the early 1980's. In any event, the Perot family perceived an opportunity to buy into an underdeveloped area of the Dallas-Fort Worth Metroplex. And that speculation paid off when the FAA began looking for site for reliever airports based on a 1964 study. Many more elements – economic and market – had to coalesce in order to make the project a success, but this is a case study more about the natural evolution of economic development.

LESSONS LEARNED:

- A reliever airport was a key catalyst for leveraging development in an underdeveloped area near Dallas-Forth Worth, Texas.
- The first major tenants locating at the airport were attributable to the presence of the airport – American Airlines Maintenance and FedEX Regional Sort Hub.
- The presence of an industrial airport has also attracted major warehouse distribution centers such as Food Lion, Nestle Distribution, and Nokia Mobile Phones Trading.

FIGURE 4.1

AllianceTexas ™ (http://www.alliancetexas.com/)



Location: Fort Worth, TX
Established: 1989
Sit Scale: 10,000 Acres (2016 expansion to 18k)
Rail Access: Yes
Airport Access: Yes
Interstate Access: 2 miles
40 Mile Labor Pool: 5,217,044
Key Uses: Mixed Use including Office, Industrial, Flex, and Retail

CASE STUDIES

SATURN

A more planned and deliberate economic development initiative is illustrated with the selection of a location in Spring Hill, Tennessee for the construction of a new General Motors (GM) manufacturing facility for Saturn in 1985. On January 8, 1985, GM formed the Saturn Corporation as an attempt to replicate the success of Japanese auto manufacturing. GM announced its intent to locate a new manufacturing facility and within 7 months had selected Spring Hill out of 1,000 possible locations in the US. Creating the Saturn division and locating a new manufacturing facility away from Detroit was seen as an opportunity to recreate the typical labor-management model, improve worker commitment, develop automation and "just-in-time" approaches to inventory, and renegotiate a United Auto Workers (UAW) labor contract. All of which was seen as needed to overcome the $2000-per-car cost advantage enjoyed by the Japanese.

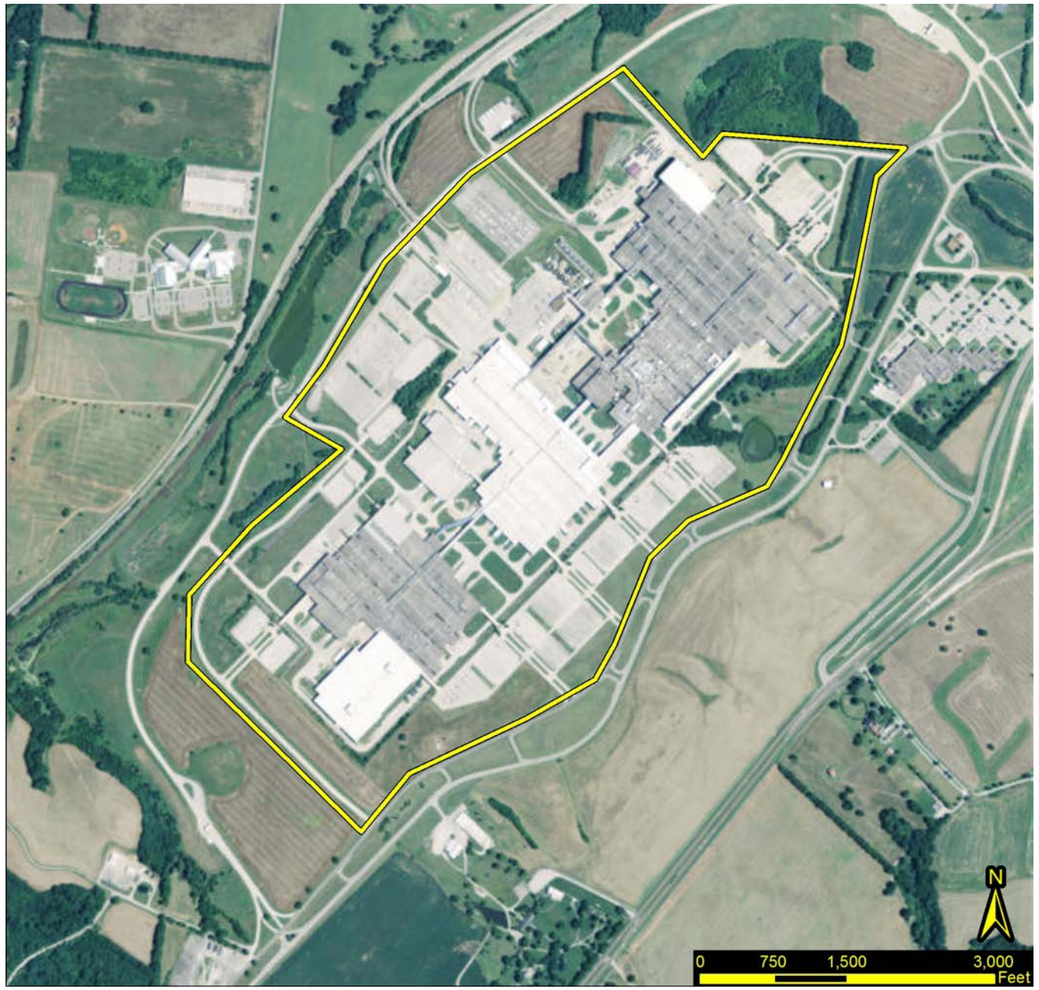
While the state and local governments provided measurable incentives to locate the plant in Spring Hill, these concessions were made after the fact. Unlike the Nissan experience where the decision and announcement of locating a new plant in Smyrna, Tennessee was done after negotiating with State and local officials, GM made the announcement of its choice of Spring Hill without any notification. The perception was that GM would use the major economic significance of the $3.5B investment and 6,000 jobs as incentive for the state and local governments to negotiate in GMs favor. In any event, nearly 30 states made appeals with GM for locating the Saturn plant in their area and offered significantly more than what was ultimately provided by Tennessee. All of which suggest that economic incentives were not the most important factor to GMs decision. What does appear to be the main factor includes low transport costs, a new GM-UAW agreement providing concessions on union labor (80% of the average salaries at GM, Ford, Chrysler, and Mazda), low wage rates available to suppliers, and location of the plant relative to consumer markets (within 500 miles of 75% of all Americans). Along with creating a "new" way to manufacture cars in the US, the decision to locate in Tennessee was clearly a business model decision. However, since the benefits described could have logically happened anywhere along an interstate in other areas of the South, other factors such as land availability (GM had existing purchase option in the area) and quality of life – proximity to Nashville, job opportunities for spouses, cost of living, diversity of housing, etc – tipped the decision for Spring Hill.

LESSONS LEARNED:

- It is difficult to forecast the addition of a major employer at a specific site; site locator's often look at hundreds of factors when deciding upon a site. In the case of the Saturn Plant, over 1,000 sites were initially evaluated.
- The tipping point for selection of this site was proximity to Nashville and an existing option on the land. Each industry considers unique factors which may sway a site location decision.
- Concessions did not make a difference in terms of the decision to locate at the site – in fact, concessions were made after the fact.

FIGURE 4.2

General Motors (GM) manufacturing facility for Saturn



Location: Spring Hill, TN
Established: 1990
Sit Scale: 2,000 Acres
Rail Access: Yes
Airport Access: No
Interstate Access: 5 miles
40 Mile Labor Pool: 1,371,629
Key Uses: Auto Manufacturing

CASE STUDIES

HONEY BRANCH REGIONAL INDUSTRIAL BUSINESS PARK

The Honey Branch Regional Industrial Business Park was master planned in the late 1990s through The Big Sandy Regional Industrial Development Authority (BSRIDA). BSRIDA was organized as a nonprofit entity in 1997 and amended in 1999 to include membership as a regional industrial authority with representation from the eastern Kentucky counties of Floyd, Johnson, Magoffin, Martin, and Pike. Members are appointed by the judge-executives from each of the member counties and serve with the authority to conduct business involving the acquisition, financing, and development of regional economic development including industrial park projects.

Development of the 330 acre Honey Branch Regional Industrial Business Park was instigated by the request of a local business owner who needed to expand their business operation to stay within the community, however adequate industrial/warehouse space was not available at that time. Land development began in 2003 and the first building completed for occupancy in 2004. To date, 6 industrial/warehouse buildings, ranging from 15,000 SF to 50,000 SF, have been constructed with a total of 180 acres remaining for future development. The last building to be constructed within the park was completed in 2011.

Of the 6 existing industrial/warehouse buildings, 4 are currently unoccupied. There are 3 privately owned buildings within the park and 3 publicly owned buildings. Two of the buildings which are privately owned are occupied, one by Consolidated Pipe & Supply, the other by Chesapeake Energy & MidCon Compression. There is currently a 15,000 SF privately owned building for sale, and the 3 publicly owned buildings (total 120,000 SF) are currently available.

Lack of funding for marketing of the site has been cited as a major issue preventing the recruitment of new businesses into the park. However, new funding was allocated to marketing of the site in 2015, which has led to some leads for prospective tenants, so far the new marketing initiative has produced no new leases or investment into the site.

Some other impediments to the site include its lack of direct interstate and rail access. Honey Branch Regional Industrial Business Park is located adjacent to 4-Lane State HWY 3 connecting to U.S. HWY 23 (4-Lane). U.S. HWY 23 connects to Interstate 64, fifty-five miles north of the facility. Though there is an active CSX Main Line 12 miles west of the site, there is no direct rail accessible at the site.

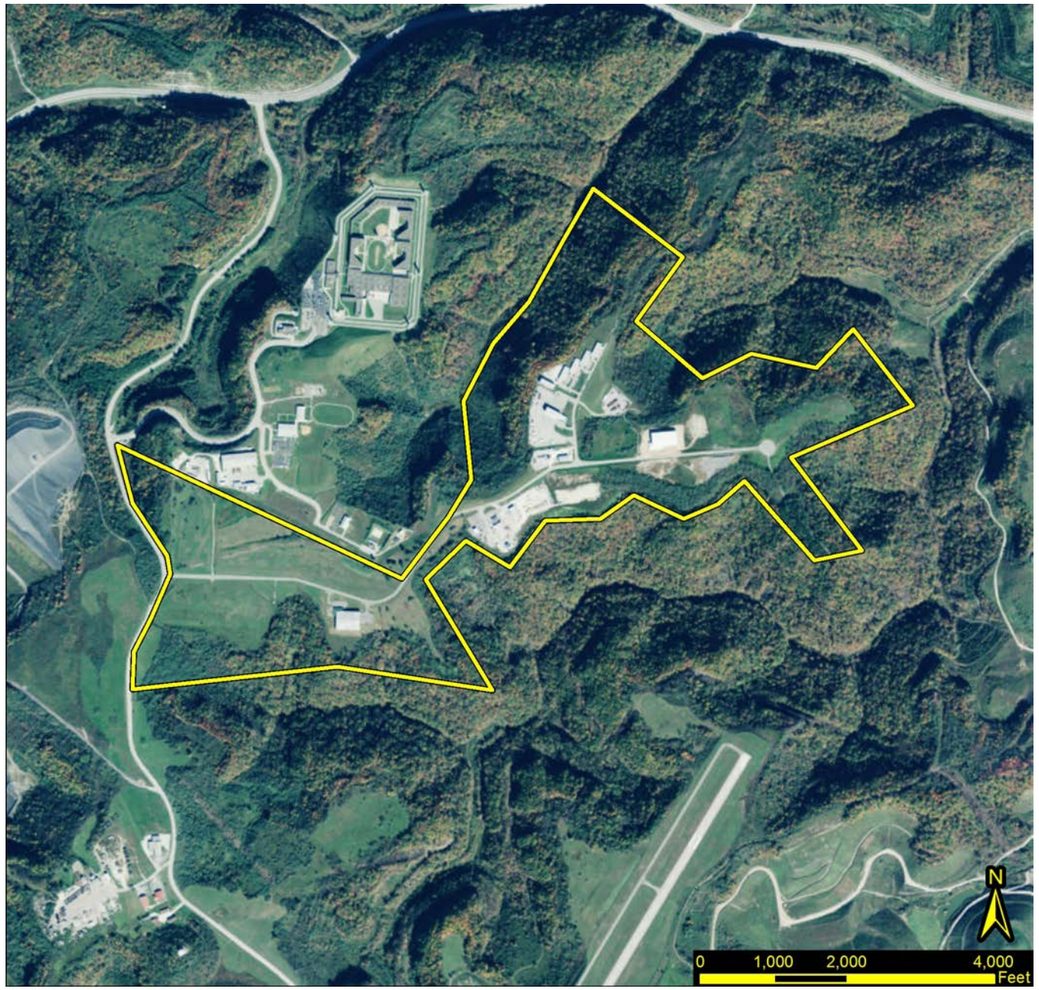
The Honey Branch Regional Industrial Business Park does have access to a small airport, Big Sandy Regional Airport, which is located immediately adjacent to the site. Big Sandy Regional Airport is open to the public and has a single asphalt paved runway which measures 5,000 ft X 100 ft. Primary use of the airport is local general aviation (48%) and transient general aviation (37%), with an average of 21 aircraft operations per day. The airport is the recent recipient of $2.4 million dollars, a portion of a $20 million dollar initiative by the Governor of Kentucky to improve airport infrastructure throughout the State. Big Sandy Regional Airport will use the funds to repave and extend their single runway in addition to other improvements.

LESSONS LEARNED:

- While the Honey Branch Regional Industrial Park is much smaller in scale than the Hobet site and also relatively remote in terms of proximity to a city or metropolitan area, it was selected as an example of reuse of a former mining site, as well as it's proximity to a small general aviation airport. The site does point to the challenges of an extremely remote site with limited access – poor interstate access and lack of rail connectivity have made investment at the site challenging.

FIGURE 4.3

Honey Branch Regional Industrial Business Park



Location: Near Inez, KY
Established: 2004
Sit Scale: 330 Acres
Rail Access: No
Airport Access: Yes
Interstate Access: 39 miles
40 Mile Labor Pool: 150,775
Key Uses: Light Industrial

CASE STUDIES

FORMER SONY PLANT

The former Sony Plant, located in Westmoreland County, PA, includes approximately 2.8 million square feet of industrial space. The facility was originally constructed by Chrysler for automotive manufacturing, however, they never completed the building and subsequently Volkswagen moved in and invested $250 million for manufacture of its Rabbit. Volkswagen left the facility in 1988, and Sony Corporation subsequently used the facility for the manufacture of their large screen tube televisions. Conversion to digital technology was one of the reasons that Sony ultimately vacated the facility in 2010. The Partnership Agreement with the Pennsylvania Industrial Development Authority acquired the site and the Regional Industrial Development Corporation (RIDC) has a long-term lease for the facility. The site is served by rail and located within a Foreign Trade Zone designation. Highway links include the Pennsylvania Turnpike, I-70, and US 119.

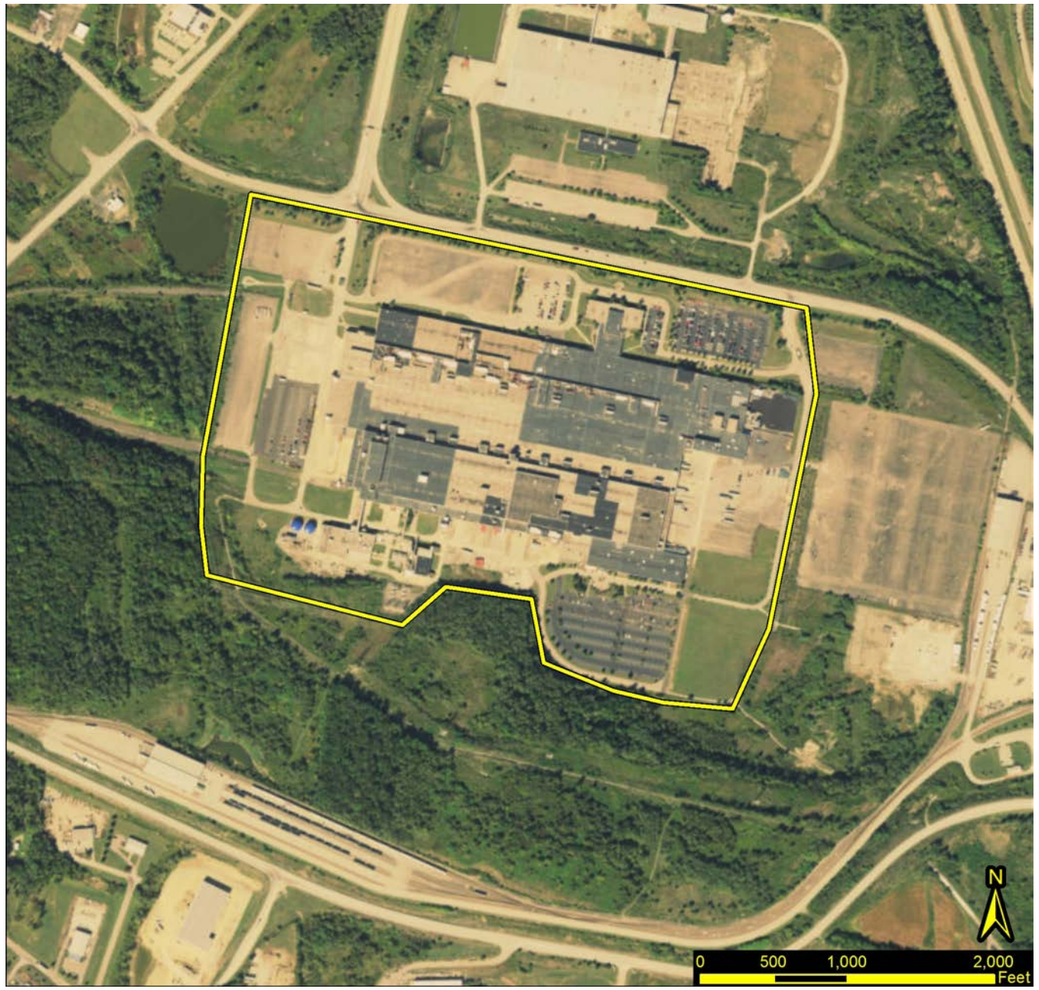
A master plan has been developed for the site which included engaging the RIDC, their counterparts from Westmoreland County and representatives from SONY. The planning team developed multiple alternative concepts exploring a variety of uses for the building and ways in which the building could be "reinvented". This included plans to diversify the users of the building, while at the same time not pre-empting the use of the facility by a few major/large users. Current tenants at the facility include Dai Nippon Printing (produces bar codes), Aquion Energy, and Cenveo (provider of printing materials). Additionally, Westmoreland County Community College is leasing 70,000 square feet of space for its Technology Training Center (which includes, for example, training for welding, robotics, crane and forklift training, and welding). The tech training center broke ground in 2013 and was introduced as an anchor for the site, hoping to leverage new tenants with access to customized training.

LESSONS LEARNED:

- Diversification is the number one priority for leasing the space; the region has experienced the impact of two major single users vacating the site – local stakeholders would like to lease the space to a number of varied users in order to prevent the significant economic impact of losing one major tenant. However, economic development officials also realize the importance of holding a portion of the space for potential future large-scale users.
- A technical training facility has functioned as an important early anchor in terms of attracting new users to the facility.
- Alternative energy companies have filled a portion of the building, including Aquion Energy Inc. – the company manufactures sodium-ion batteries capable of storing power for later use. It should also be noted that a solar manufacturer (Solar Power) was located at the site, but closed its facility at the Sony Plant in 2012 after facing stiff competition from Chinese companies.

FIGURE 4.4

Former Sony Plant



Location: Mt. Pleasant, PA
Established: 1976
Sit Scale: 9,000 Acres
Rail Access: Yes
Airport Access: No
Interstate Access: 2 miles
40 Mile Labor Pool: 1,066,400
Key Uses: Manufacturing and Education

CASE STUDIES

MID AMERICAN INDUSTRIAL PARK

The Mid American Industrial Park opened in 1960 as an economic development initiative to support local area employment. There are currently 80+ companies located at the industrial park; the park encompasses approximately 9,000 acres.

The park is located at the geographic center of the United States, 40 miles east of Tulsa, Oklahoma, and near the intersection of three major interstates. The location allows for next-day delivery to 23% of the United States population. The park is owned and operated by a public trust, enabling expedited permitting and construction. The industrial park owns both the water system and wastewater system, providing some of the lowest rates in the region.

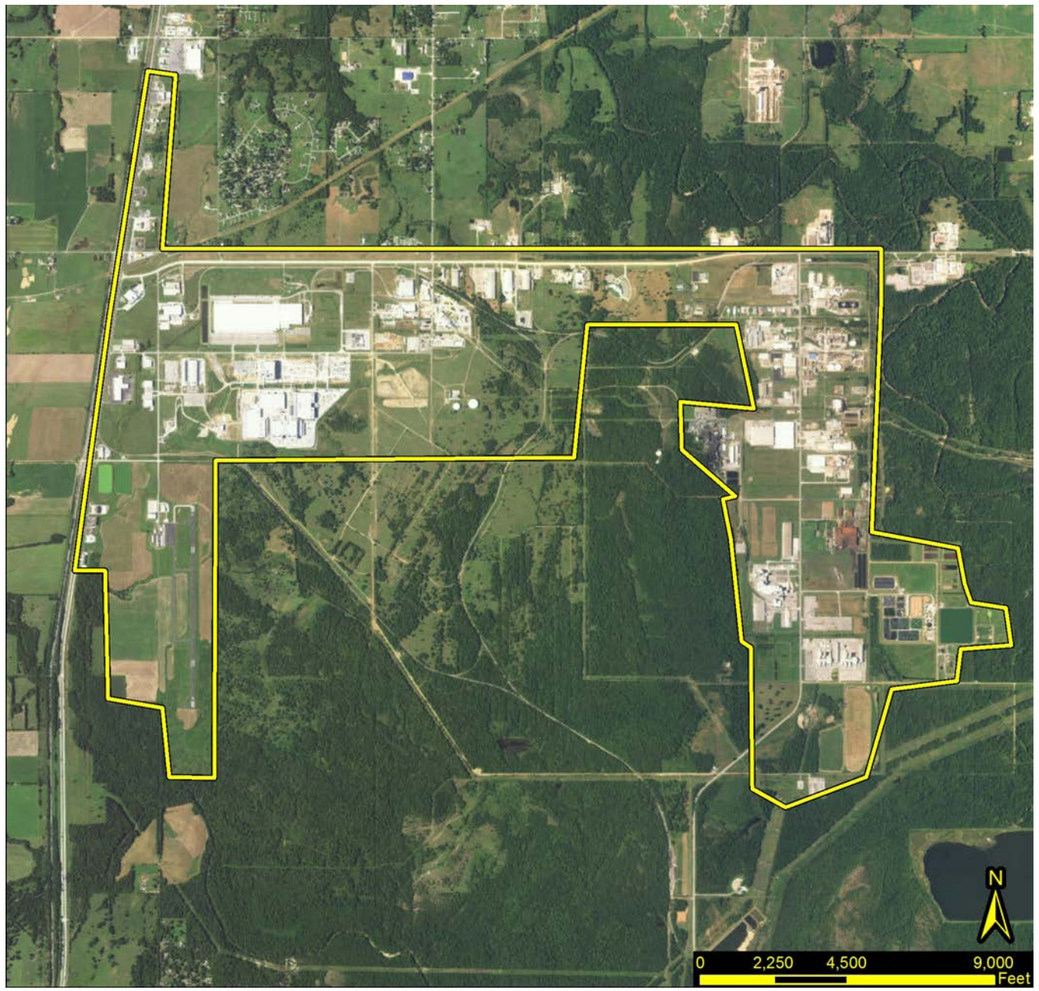
Other transportation advantages include the proximity of 70 trucking companies, with two companies located on-site. There are also three inland ports located within 30 minutes of the site, as well as on-site rail service. Other on-site amenities include a 20,000 square foot Expo Center, an occupational Medical Center, and the OSU-Okmulgee/Mid America Innovation & Incubation Entrepreneurial Center.

LESSONS LEARNED:

- Speed to market is important for most manufacturers and warehouse operations. Since the Mid America Industrial Park offers next day delivery to almost ¼ of the nation, they have been able to leverage their central location to a number of large firms.
- A park owned water and wastewater system provides some of the lowest utility costs in the United States and offers incentive for firms to locate at the park. The ownership by a public trust also allows for a streamlined permitting process, allowing industry to construct and occupy facilities quickly.
- The park provides a number of key strategic, linked uses, including custom training on-site, an Expo Center, and an occupational medical center.

FIGURE 4.5

Mid American Industrial Park



Location: Near Tulsa, OK
Established: 1960
Sit Scale: 9,000 Acres
Rail Access: Yes
Airport Access: Yes
Interstate Access: 15 miles - 3 Interstates
40 Mile Labor Pool: 849,459
Key Uses: Manufacturing, Distribution, and Processing

CASE STUDIES

PROCTER & GAMBLE TABLER STATION

Currently under construction, the brand new Procter & Gamble facility will be the companies first investment made in America in over 30 years. P&G purchased approximately 450 acres in 2014 and once the site is completed and running will host about 700 full time employees under its more than one-million square foot roof.

Because of the eastern panhandle of West Virginia's Mid-Atlantic location this site will allow the company to reach 80% of its retail customers and consumers along the east cost. This will allow P&G to reduce its inventory and cost associated to improve their overall efficiency.

The first product to be manufactured at their Tabler Station will be Bounce fabric enhancers, and other major products will follow in 2018, such as:

Shampoos and conditioners:

- Pantene
- Head & Shoulders
- Aussie
- Herbal Essences
- Vidal Sassoon

Personal cleansing (body wash) products:

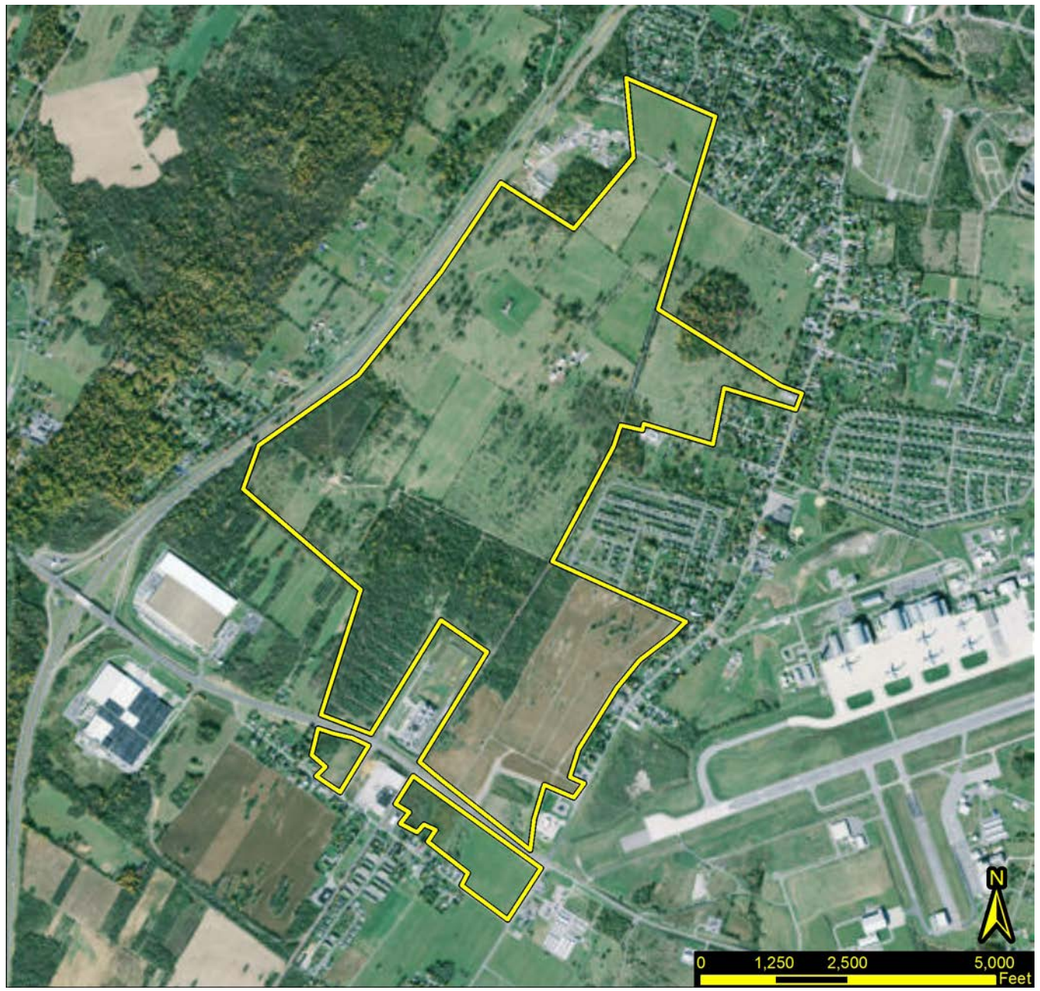
- Olay
- Old Spice

LESSONS LEARNED:

- Difficult to plan for – numerous sites initially evaluated
- Worked effectively with local community to address concerns
- Distribution network is key – also includes facilities in Georgia, Ohio, and Pennsylvania – can serve eastern U.S.

FIGURE 4.6

Procter & Gamble Tabler Station



Location: Martinsburg, WV
Established: In Construction (Late 2017)
Sit Scale: 450 Acres
Rail Access: Yes
Airport Access: Yes
Interstate Access: Less than 1 Mile
40 Mile Labor Pool: 615,522
Key Uses: Manufacturing

CASE STUDIES

SOUTH CHARLESTON INDUSTRIAL PARK

Original opened as the Charleston Ordnance Center was a U.S. Naval Ordnance Plant built in preparation for World War I, but was completed too late and was later closed. The plant was later used for World War II in 1939 and served as a center for wartime production. The industrial park continued its life as a production center for wars, such as the Vietnam War until it was later leased to American Motors Corporation. Prepped for vehicle production, its changed hands to Volkswagen as a stamping plant.

After Volkswagen's departure in 1988, the employees formed the South Charleston Stamping and Manufacturing Company which lasted until 1997. Afterwards, it was purchased by yet another vehicle producer, Mayflower Vehicle Systems, which occupied the southern most of the largest building. This allowed for the remainder of the buildings to be occupied by several small and medium-sized enterprises.

In 2006, the plant was purchased by Ray Park and the site received an investment of state-of-the-art robots for stamping production estimated in the millions. After production ended at the South Charleston Industrial Park and sat vacant for several years Gestamp North America leased the equipment in 2012, and brought new life to the facility.

Because the successful public private partnership invested millions into the industrial facility, Gestamp chose this location from many others under consideration. Other contributing factors were its proximity to a regional airport, and interstate access provided a more appealing investment to Gestamp than those with no B&O tax in other states. Now, the South Charleston Industrial Park hosts jobs for up to 400 employees continuing to stamp parts for a variety of vehicles.

LESSONS LEARNED:

- Ability to diversify and take advantage of existing resources
- Investment in existing facilities paid off

FIGURE 4.7

South Charleston Industrial Park

Location: South Charleston, WV
Established: 1939
Sit Scale: 82 Acres
Rail Access: Yes
Airport Access: Yes
Interstate Access: Less than 1 Mile
40 Mile Labor Pool: 213,011
Key Uses: Industrial and Manufacturing

CASE STUDIES

KEY FINDINGS

Based on the study of these economic development initiatives, we reasonably conclude that the following economic and market issues be addressed:

- An existing market issue, need, or problem should reasonably exist that can be addressed or solved with economic or market developments;
- Some identifiable market driver (market condition, needs analysis, etc.) should exist and be recognized by the majority of market participants that would be impacted with economic or market developments; and,
- Economic and financial incentives may not be the main driver of attracting specific markets and industries. In other words, if the critical site, access and labor force assets are not in place, subsidies cannot make a bad site good.

Other key findings with respect to potential tenants and strategies include the following:

- Diversification is key. While it is important to identify large / catalysts users, officials should also plan for a multitude of different industries, support businesses, and training facilities.
- Access and logistics are oftentimes one of the most critical site location factors. At Mid-America, 70 trucking companies are located nearby, with 2 located onsite. In addition, a regional business jet airport is available onsite and there are 3 inland ports located within 30 miles.
  As reflected in the following table, when compared with the other case studies, the Rock Creek site reflects lower overall densities within 40 miles of the site. And, while the site does provide rail access and proximity to three interstates within 20 miles, other sites offer more immediate access to the interstate system.
- Research facilities as well as educational institutions are locating in technology parks and can be a catalyst in attracting other companies to a site.
- Master planning efforts and infrastructure investment can improve the overall marketability of a site.
- Labor cost, not necessarily labor availability, can be a major factor in attracting industry.
- Many factors are difficult to control, with different industries requiring unique business needs. However, it is possible to establish a framework to compete. Factors that are typically important include an affordable supply of key inputs (including labor) and proximity to suppliers and customers (access).

SITE	ACREAGE	RAIL	AIRPORT	INTERSTATE ACCESS	40 MILE LABOR POOL
ROCK CREEK	12,000/8,000* Account for valleys & uplands	Yes	No	20 Miles* 3 Interstates	244,640
MID AMERICAN INDUSTRIAL PLANT	9,000	Yes	Yes	15 Miles* 3 Interstates	849,459
SATURN PLANT RE-USE	2,000	Yes	No	5 Miles	1,371,629
ALLIANCE	10,000/18,000	Yes	Yes	2 Miles	5,217,044
SONY PLANT	2M sf Plant	Yes	No	2 Miles	1,066,400
HONEY BRANCH	330 acres	No	Yes	39 Miles	150,775
P&G TABLER STATION	450 acres	Yes	Yes	1 Miles	615,522
SOUTH CHARLESTON INDUSTRIAL	82 acres	Yes	Yes	1 Miles	213,011

CASE STUDIES

	HONEY BRANCH	SATURN	FORT WORTH ALLIANCE	SONY PLANT
YEAR	2003 (2004 OPENED)	1985 (1988 OPENED)	1985 (1989 OPENED)	1976 (FIRST OPENED)
LAND AREA	330 ACRES	2,000 ACRES	10,000 ACRES (18,000 ACRES 2016)	2.8 M SF OF INDUSTRIAL SPACE
USES	MANUFACTURING INDUSTRIAL AND DISTRIBUTION BUSINESS PARK	MANUFACTURING	AIRPORT MANUFACTURING INDUSTRIAL AND DISTRIBUTION BUSINESS PARK RETAIL/ENTERTAINMENT RESIDENTIAL	MANUFACTURING AND INDUSTRIAL, TECH TRAINING CENTER
INVESTMENT	UNKNOWN	$3.5B (1985 DOLLARS) $7.2B (2016 DOLLARS)	AIRPORT: $50M (1985 DOLLARS) $150M (2016 DOLLARS) TOTAL: $8.0B INVESTED TO DATE	$350 M- VOLKSWAGEN
ECONOMIC SIGNIFICANCE	• KENTUCKY IS THE 7TH LOWEST COST STATE IN OVERALL COST OF DOING BUSINESS.	• FIRST NEW DIVISION ESTABLISHED BY ANY OF THE "BIG THREE" AUTOMAKERS SINCE 1958 • LARGEST SINGLE CORPORATION INVESTMENT IN US HISTORY AT THE TIME	• WORLD'S FIRST "INDUSTRIAL" AIRPORT AND LARGEST INLAND PORT IN US • LARGEST PPP IN THE US AT THE TIME • FREE-TRADE ZONE • ON-SITE US CUSTOMS FACILITY	• VW – NATION'S FIRST FOREIGN-OWNED AUTO ASSEMBLY PLANT • SUBSEQUENT USE BY SONY AFTER VW VACATED – 3,000 JOBS
EXISTING MARKET ISSUE/ PROBLEM	SMALL AIRPORT, LACK OF RAIL CONNECTIVITY, POOR INTERSTATE ACCESS, INADEQUATE FUNDING FOR MARKETING	TWO DECADES OF JAPANESE SUCCESS AGAINST US AUTO MANUFACTURING	CAPACITY ISSUES AND CONGESTION AT DFW AIRPORT	NEED TO LEASE LARGE VACATED INDUSTRIAL SPACE AFTER MAJOR USERS LEFT AREA.
MAJOR MARKET DRIVER	REUSE OF COAL MINING SITE.	$2,000-PER-CAR COST ADVANTAGE OF JAPANESE' MANUFACTURING PLANTS	1964 FAA STUDY IDENTIFYING NEED FOR FOUR RELIEVER AIRPORTS IN EACH OF THE CORNERS OF THE DALLAS-FORT WORTH METROPLEX	AUTOMOTIVE PLANT SITE SELECTION
ECONOMIC DEVELOPMENT INCENTIVES	• HONEY BRANCH WAS DEVELOPED THROUGH THE PARTNERSHIP OF 5 LOCAL COUNTIES, PLANNING FOR ECONOMIC DEVELOPMENT THROUGH THE BIG SANDY REGIONAL INDUSTRIAL DEVELOPMENT AUTHORITY.	• CAP ON TENNESSEE REALTY TRANSFER AND MORTGAGE TAXES (SAVED $3M) • $30M (1985 DOLLARS) PROVIDED BY STATE TO TRAIN NEW EMPLOYEES • $50M (1985 DOLLARS) FOR TRANSPORTATION IMPROVEMENTS ("SATURN PARKWAY" CONNECTING PLANT WITH I65) • IN-LIEU OF PROPERTY TAX PAYMENT – POTENTIALLY WITH $70-100M DOLLARS	• $400-500M FEDERAL, STATE, AND LOCAL INVESTMENTS • STATE DOT IMPROVED TRANSPORTATION ACCESS	• $100 M IN GOVN ASSISTANCE, HIGHWAY AND RAIL IMPROVEMENT, PROPERTY TAX EXEMPTION
KEYS TO LOCATION / DEVELOPMENT	• RECLAIMED COAL MINE LAND • DIVERSIFICATION OF LOCAL ECONOMY • DEMAND FOR INDUSTRIAL SQUARE FOOTAGE FROM EXPANDING LOCAL BUSINESSES. • PARTNERSHIP BETWEEN FLOYD, JOHNSON, MAGOFFIN, MARTIN & PIKE COUNTIES	• TRANSPORTATION COSTS • COST OF ELECTRICITY • WAGE RATES • POPULATION SHIFT TO THE SUNBELT • "GREENFIELD" OPPORTUNITY VS. RETROFITTING EXISTING PLANT • AVAILABILITY OF LAND (GM HAD A LEASE-OPTION ON THE SPRING HILL SITE PRIOR TO SELECTION) • QUALITY OF LIFE (NASHVILLE) • DIVERSITY OF HOUSING OPTIONS	• PEROT FAMILY ACCUMULATION OF 10,000 UNDEVELOPED ACRES IN THE NORTHWEST CORNER OF DALLAS-FORT WORTH METROPLEX BY 1980 • 1985 FAA INITIATIVE TO LOCATE 4 RELIEVER AIRPORTS • COOPERATIVE EFFORT BETWEEN HILLWOOD (PEROT), FAA, AND CITY OF FORT WORTH • LOGISTICS COST: DFW REGION IS 3RD LOWEST DISTRIBUTION COST OF TOP 50 CONSUMER MARKETS	• HIGHWAY AND RAIL ACCESS • EARLY INVESTMENT BY CHRYSLER IN SHELL OF PLANT • VW ATTRACTED SINCE SHELL OF BUILDING ALREADY IN PLACE. ACCESS TO 5,700 EMPLOYEES AT PEAK EMPLOYMENT. • SONY LOCATED AT SITE SINCE BUILDING AND INFRASTRUCTURE ALREADY IN PLACE FOR QUICK PRODUCTION.
KEY FACTS / OBSERVATIONS	• MASTER PLANNED IN THE LATE 1990S AND DEVELOPED IN THE EARLY 2000S. • CONTAINS 3 PUBLICLY OWNED BUILDINGS (TOTAL 120,000 SF) AND 3 PRIVATELY OWNED BUILDINGS (ONE 15,000SF BUILDING CURRENTLY FOR SALE)	• IN THE MID-1980'S, TENNESSEE HAD RECEIVED 10% OF ALL JAPANESE INVESTMENT IN THE US • NASHVILLE (30 MILES NORTH OF SPRING HILL) IS ONLY ONE OF FOUR CITIES IN THE US WHERE THREE INTERSTATE HIGHWAYS INTERSECT • THE SPRING HILL AREA IS WITHIN 500 MILES OF 75% OF ALL AMERICANS	• LOGISTICS COST MAKE UP 50-60% OF COST OF GOODS SOLD (COGS) FOR TENANTS LOCATED IN ALLIANCETEXAS TM • FIRST MAJOR TENANTS WERE SANTA FE RAILROAD INTERMODAL YARD (NOW BNSF), AMERICAN AIRLINES MAINTENANCE, AND FEDEX REGIONAL SORT HUB	• TECH TRAINING CENTER INTRODUCED AS ANCHOR AND TO LEVERAGE NEW TENANTS • DIVERSIFICATION IS KEY TO ECONOMIC DEVELOPMENT EFFORTS– SINGLE USERS CHALLENGING WHEN VACATE

CASE STUDIES

	MID AMERICAN	P&G TABLER STATION	SOUTH CHARLESTON INDUSTRIAL PARK
YEAR	1960	LATE 2017	1939
LAND AREA	9,000 ACRES	450 ACRES	82 ACRES
USES	MANUFACTURING EXPO CENTER REGIONAL BUSINESS JET AIRPORT OCCUPATIONAL MEDICAL CENTER	MANUFACTURING	INDUSTRIAL MANUFACTURING
INVESTMENT	RECENT ANNOUNCEMENT OF $20 M INVESTMENT FOR UPGRADES	$30 M INVESTMENT FOR CONSTRUCTION	PUBLIC PRIVATE PARTNERSHIP WORTH $30 MILLION + THE 2006 INVESTMENT OF SEVERAL MILLION
ECONOMIC SIGNIFICANCE	• ONE OF THE LARGEST EMPLOYERS IN THE REGION. • NEXT-DAY DELIVERY TO 23% OF US POPULATION.	• GEOGRAPHICALLY PLACES P&G NEAR COSTUMER BASE AND HELPS TO REDUCE INVENTORY COST AND IMPROVE EFFICIENCY. • FIRST P&G MANUFACTURING PLANT BUILT IN THE U.S. IN MORE THAN 30 YEARS.	• AFTER SITTING IDLE FOR SEVERAL YEARS THE GLOBAL COMPANY, GESTAMP WAS ABLE TO ADAPTIVELY REUSE THE 900,000 SF BUILDING CREATING JOBS FOR UP TO 400 PEOPLE.
EXISTING MARKET ISSUE/ PROBLEM	DESIRE TO INCREASE EMPLOYMENT OPTIONS IN AREA.	WILL HELP REACH 80% OF RETAIL COSTUMERS AND CONSUMERS ALONG THE EAST COAST WITHIN ONE DAY.	DESIRE TO UTILIZE AN IDLED INDUSTRIAL SPACE
MAJOR MARKET DRIVER	SALE OF GOVERNMENT OWNED, CONTRACTOR OPERATED FACILITY TO A PUBLIC TRUST (OKLAHOMA ORDNANCE WORKS AUTHORITY).	HEALTH AND BEAUTY PRODUCTS	AUTO MANUFACTURING
ECONOMIC DEVELOPMENT INCENTIVES	• UNKNOWN	• UNKNOWN	• $30 M IN GOVN ASSISTANCE TO SITE IMPROVEMENTS
KEYS TO LOCATION / DEVELOPMENT	• LOW COST UTILITIES PROVIDED THROUGH PUBLIC TRUST • GEOGRAPHIC CENTER OF US • PROXIMITY TO INLAND PORTS, RAIL, AIR • ON-SITE COAL-FIRE ELECTRIC POWER COMPLEX	• WORKED EFFECTIVELY WITH LOCAL COMMUNITY TO ADDRESS CONCERNS • DISTRIBUTION NETWORK IS KEY – ALSO INCLUDES FACILITIES IN GEORGIA, OHIO, AND PENNSYLVANIA – CAN SERVE EASTERN U.S.	• THE QUALITY OF THE SPACE CREATED BY THE PUBLIC PRIVATE PARTNERSHIP. • PROXIMITY TO A REGIONAL AIRPORT AND INTERSTATE ACCESS, AS WELL AS RAIL.
KEY FACTS / OBSERVATIONS	• NEXT-DAY DELIVERY TO ALMOST ¼ OF THE US POPULATION IS KEY • OWNERSHIP BY A PUBLIC TRUST IS UNIQUE, AND HAS ALLOWED FOR RELATIVELY LOW UTILITY COSTS	• WILL HELP REACH 80% OF RETAIL COSTUMERS AND CONSUMERS ALONG THE EAST COAST WITHIN ONE DAY.	• ABILITY TO DIVERSIFY AND TAKE ADVANTAGE OF EXISTING RESOURCES • INVESTMENT IN EXISTING FACILITIES PAID OFF

SCENARIOS & DEVELOPMENT POTENTIAL

SCENARIOS & DEVELOPMENT POTENTIAL

ORGANIZING LARGE LAND FOR FUTURE DEVELOPMENT

The balance of this conceptual master planning report document explores an organizational structure for the potential use of land. The objective is to connect the characteristics of the site with generalized suitability for certain types of targeted uses, recognizing that the full potential of the site and potential users will take shape over many years. The site also includes many technical challenges that are understood generally, but will not be solved for specifically without substantial additional study, some of which will be driven by the needs of future users.

Yet, while this is an initial look at a long range effort, there are a number of guiding factors that can inform preliminary ideas about the property. These include leveraging the assets of the existing site, linking potential uses with suitable development areas, flexibility to meet future opportunities and connective infrastructure + circulation. The following pages explore these topics in order to develop a new vision for a place of employment, environment and community – in Southern West Virginia as well as regionally.

TAKING ADVANTAGE OF SITE FEATURES

Today, Rock Creek Development Park site is a place of dramatic and wildly different places. As a reclaimed mine site, there are places of natural and renewed environment juxtaposed against areas which are designed to support heavy industry on a monumental scale. This reality provides numerous opportunities. Rock Creek contains many areas with scenic views. The legacy of mining provides an initial framework of existing utility infrastructure and materials circulation that follows the developable land and traverses the areas of steep slopes. On-site review quickly reveals the potential for an initial infrastructure that links properties that can be further prepared for development and put back into action.

PLANNING FOR DIVERSE DEVELOPMENT TYPES

A development master plan as large as Rock Creek will very likely contain the full spectrum of land uses. Large industrial, manufacturing and agricultural land uses will be supported by smaller complementary businesses. A full range of employment will create the opportunity for proximate new residential construction, not only in the nearby communities, but on-site at Rock Creek. Residential will bring with it the need for support services such as daily needs shopping, schools, parks & trails.

Presuming that there is an eventual mix of uses on the site, the geography of ridgelines, flat land and valleys provide many different settings for development. Certain areas lend themselves to smaller format uses such as residential or corporate campus, nestled within a winding ridgeline that is in a character driven relationship to the valleys and the associated streams and local roadway networks. Other areas provide large plateaus which can be reserved for large users and the associated support uses they require. Fortunately, a site as large as Rock Creek can comfortably support all these development forms in a coordinated way.

PRESERVING FLEXIBILITY FOR FUTURE OPPORTUNITIES

Over time, there will be opportunities for development at Rock Creek which cannot be anticipated. It is therefore critical to think of the entire property as one development venue, even though different partners may be involved in specific aspects of development. The organization of land should be considered in generally simply, ‘modular’ units of land which can be subdivided into smaller units, or assembled into larger pieces without changing the overall organizational structure of the site. Similarly, it is important that an early phase use not ‘cut off’ access to future land areas to the west, even though initial development to the east is most naturally accessible.

CONNECTIVE INFRASTRUCTURE + CIRCULATION

Rock Creek contains an initial system of utility service and circulation access which can be the distribution system for future infrastructure investment. Over time, a well-connected system will support many development forms and must be supportive of specific needs. Synonymous with modular development sites, is a simple connected system of primary infrastructure that support master utility distribution and multi-modal, livable circulation, able to be broken down into a finer grain network serving sites and places.

CREATING PLACES

It is difficult to think of a place as large as the Hobet site at ‘build out’, however that is the purpose of a master plan. This means insuring that incremental decisions can be made and opportunities met, while moving towards a long term vision of economic success, environmental sustainability, and livable community – regardless of the land uses. The initial conceptual master planning should take advantage of the character of the site to facilitate each form of development within a well-connected whole. A simplified general plan, managed under the guidance of an ongoing advisory committee can insure that incremental decisions meet emergent opportunities while building towards a longer term vision that is on the scale of an entire new city.

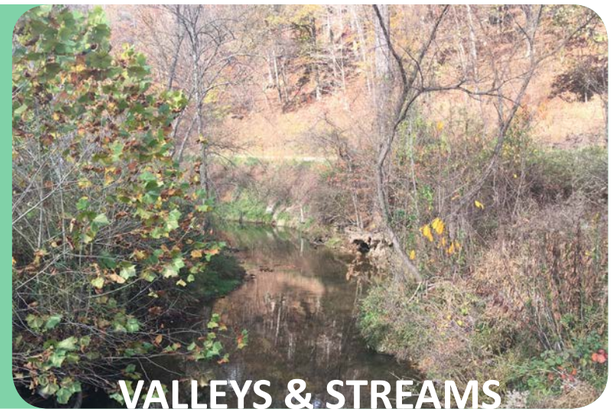
For decades, the people and communities of southern West Virginia have demonstrated that they will come to this site and work, driving their local economy and contributing to the larger fabric of Appalachia. As a reimagined place, Rock Creek should fit within southern West Virginia. The opportunity is a new, forward-looking place that provides the venue for large employers and new economic opportunity, while capitalizing on the natural beauty of the site to provide new locations for people to live, learn and grow.

SCENARIOS & DEVELOPMENT POTENTIAL

CHARACTER PLACES


SPECIAL PLACES


SCENIC VIEWS


VALLEYS & STREAMS

FUTURE ASSETS


POND AREA


RECLAMATION AREA


ACCESS ROADS

INFRASTRUCTURE


HAUL ROADS


UTILITIES


FACILITIES

ENVIRONMENT AND RECLAMATION

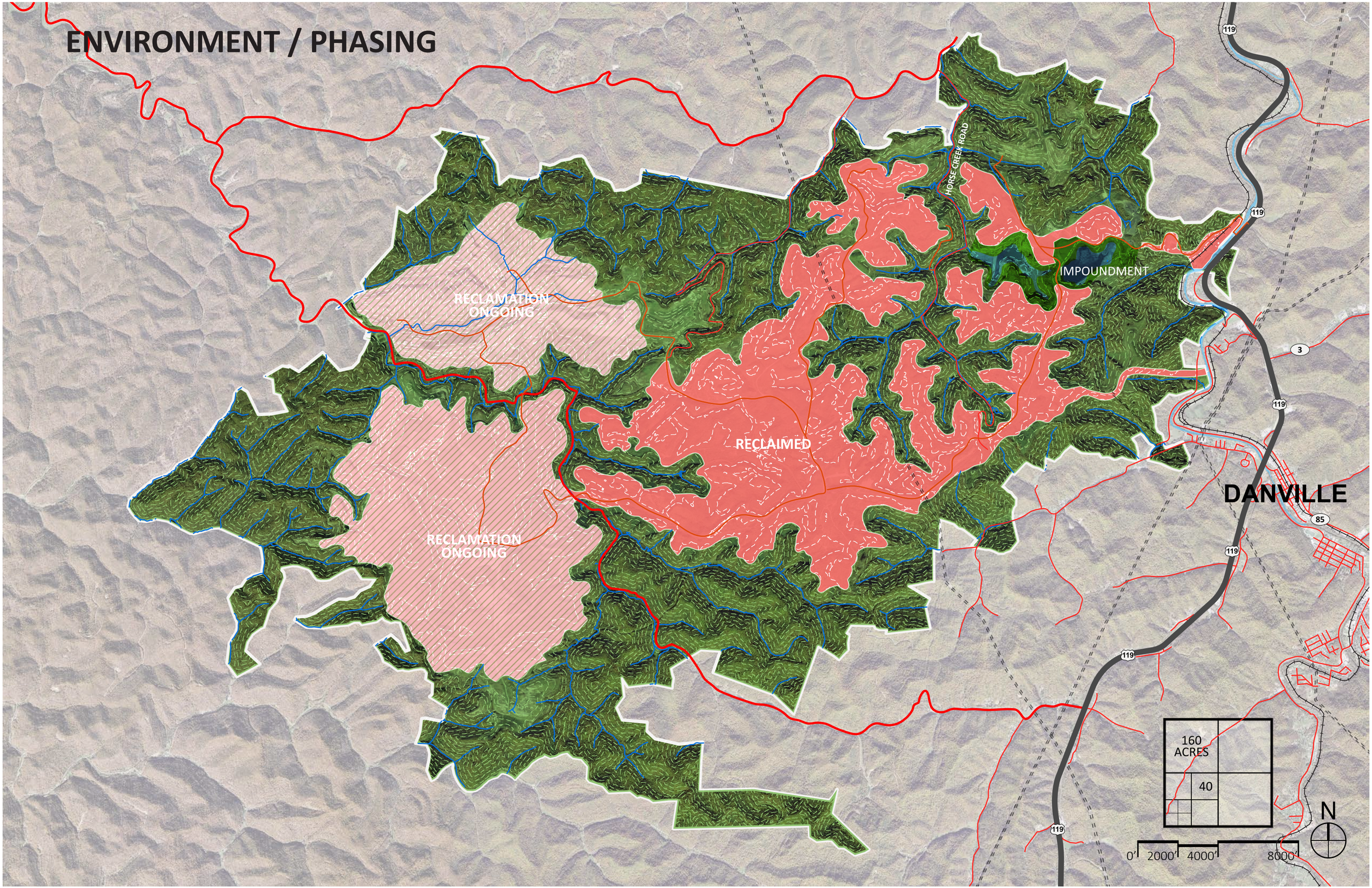
Organization of the development site begins with an environmental framework. The site contains a significant portion of land that was not surface mined, comprising a system of steep valleys and minor drainageways totaling almost 16,000 acres. This land, while not suitable for large-scale development, provides amenity potential for future residents and workforce in the form of environmental open space, the location of trails and parks, and small-scale, dispersed residential communities. The environmental framework also includes land utilized for impoundments in the form of man-made lakes. The land surrounding these lakes can include park space attractive to residents and workers.

The potential development footprint of the site includes roughly 9,500 acres made up of the portion of the site that was mined and has been either reclaimed or is in the process of reclamation. Some 4,800 acres have been reclaimed, with another 4,700 acres in some form of current reclamation. This previous and ongoing reclamation has led to the creation of rolling to flat landforms suitable for development. It is this critical mass of developable land that presents the great opportunity for the site - opportunity for the development of large-scale industrial, commercial, and supporting residential uses that can create a forward-looking model of catalytic growth for Southern West Virginia.

Image showing reclaimed land and undisturbed slopes, ridges, and valleys

Portion of site where reclamation activities are ongoing

ENVIRONMENT / PHASING



DEVELOPMENT FRAMEWORK

The development framework for Rock Creek is organized to support ongoing development of multiple scales of development ranging from large catalytic uses to small supporting uses. The structure recognizes the need for flexibility within an organizing framework of industrial districts, mixed/multi-use centers, and, in the long term, even residential neighborhoods that can be a model for integrated place-based development in southern West Virginia.

CATALYST SITES

More than 3,000 acres in the plan is set aside for development opportunities that require large tracts of land. This represents the central core of Rock Creek, and is intended to provide flexibility in site configurations to allow for sites as large as 1,000 or more acres in size while maintaining linkage to the remainder of the site and proximity to other similar large-scale uses.

SEEDS AND STARTERS

Initial development opportunities may have smaller land needs than those envisioned for the catalyst sites. About 350 acres of the site have been set aside for these smaller uses in two to ten acre tracts within a supporting block structure. This area, located closer to the initial roadway infrastructure investment, can provide an initial spark of development for Rock Creek.

COMMUNITY GATEWAY

With an initial roadway access from Corridor G, a multi-use center is envisioned to anchor the community and provide a gateway focal point to development. This area, totaling some 115 acres, is envisioned as the place for commercial support services for other uses within Rock Creek. Because of this supporting nature, it may take longer for this element of the community to develop, so it is important to steer other uses toward more appropriate locations to maintain this land for the future.

NEIGHBORHOODS

As Rock Creek grows, it is likely to attract large employers and drive the need for new housing in the area. The master plan sets aside approximately 1,150 acres of land for neighborhood residential uses. While the neighborhoods are located to be proximate to employment uses, they are intended to have a close relationship to their surrounding environmental areas, including a park system ringing the impoundments on the northeast portion of the site and a 75 acre community park to serve the broader area around Rock Creek.

RAIL HUB

The rail access point on the far eastern edge of the site provides a location for rail-oriented business opportunities. The area is limited to around 50 acres due to slopes and other environmental constraints, so it will be important as development progresses to maintain these sites for uses that require rail access.

FUTURE DEVELOPMENT

The land plan for Rock Creek identifies 4,800 acres of initial development opportunities as described above. However, an additional 4,700 acres of future development is also shown on the plan. This area should be maintained for future growth as the initial development is built out in order to both allow for the creation of a critical mass of development on the eastern and central portions of the site and to allow for future megasite development in the future.

TRANSPORTATION NETWORK

The intensity of development envisioned in the master plan is supported by a robust network of new roadways. The current roadway access is limited, particularly with respect to east-west access through the site and access to U.S. 119. The master plan recommendations look to build off of an initial roadway from U.S. 119 into the site and continuing west to Mud River. This forms the main spine for the community and is envisioned as an ultimate four-lane section for its length. As development progresses, a parallel road to the north, connecting to the current bridge over the creek and rail line at U.S. 119, should be provided to allow for secondary access and to distribute traffic efficiently. Two north-south roads connect the east-west spines to form a loop and connect the community. Internal to development areas, a roadway grid should be provided consistent with the needs of each user. This network approach focuses industrial traffic onto larger new roads and provides a direct connection to U.S. 119 to improve the attractiveness of sites internal to Rock Creek.

TRANSPORTATION DRIVEN INITIATIVES

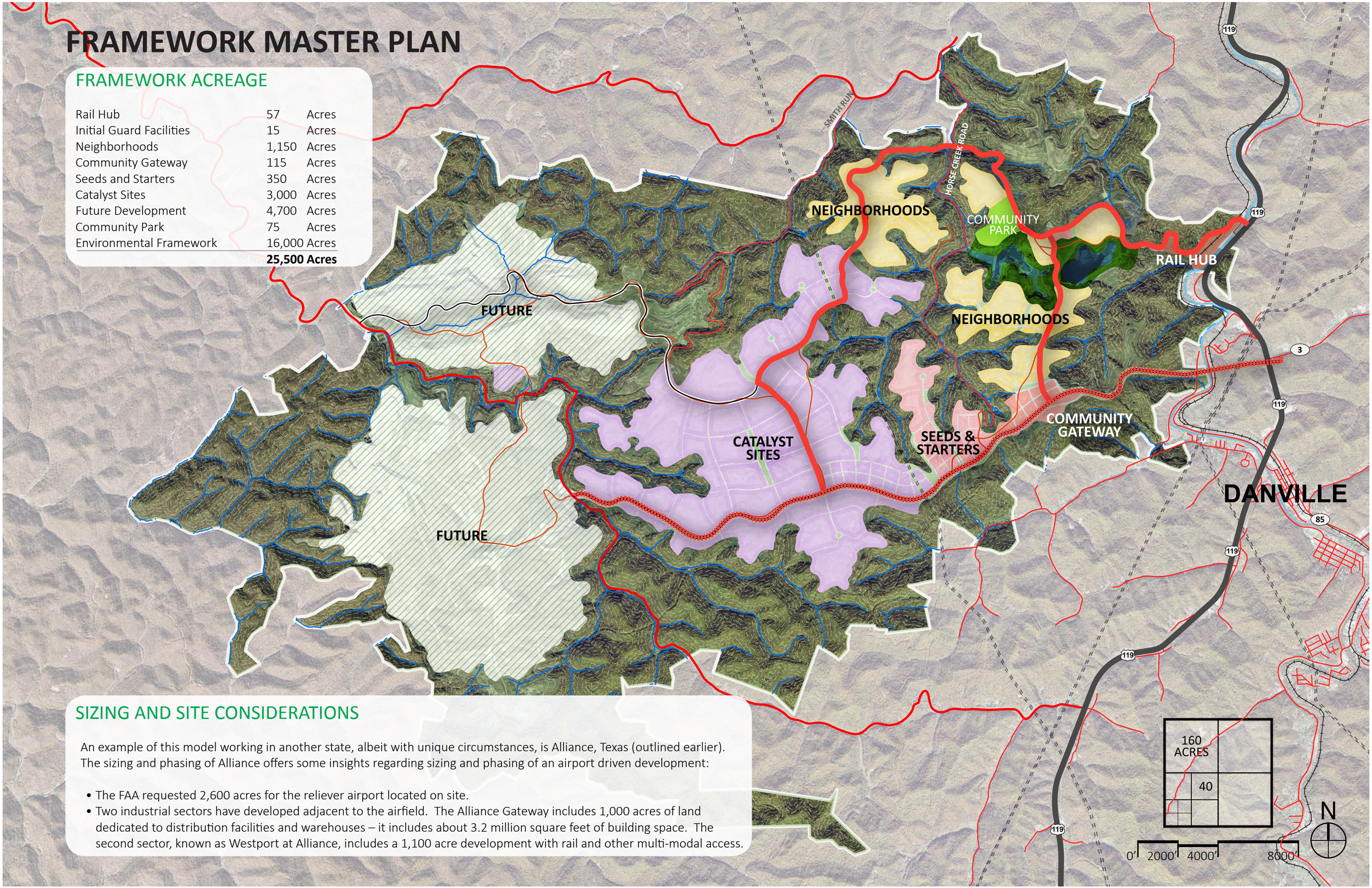
As a potential longer term initiative, a regional cargo airport would likely help leverage new industrial and distribution uses at the Hobet site. This could include a designation as a free trade or foreign trade zone in order to induce new development.

Other transportation driven initiatives include enhanced interstate connections at the site. It is our understanding that an alignment which connects the Hobet site to I-64 has already been studied. However, given the distance from the site to I-64, the cost of a new alignment/connection would be significant.

FRAMEWORK MASTER PLAN

FRAMEWORK ACREAGE

Rail Hub	57	Acres
Initial Guard Facilities	15	Acres
Neighborhoods	1,150	Acres
Community Gateway	115	Acres
Seeds and Starters	350	Acres
Catalyst Sites	3,000	Acres
Future Development	4,700	Acres
Community Park	75	Acres
Environmental Framework	16,000	Acres
	25,500	**Acres**

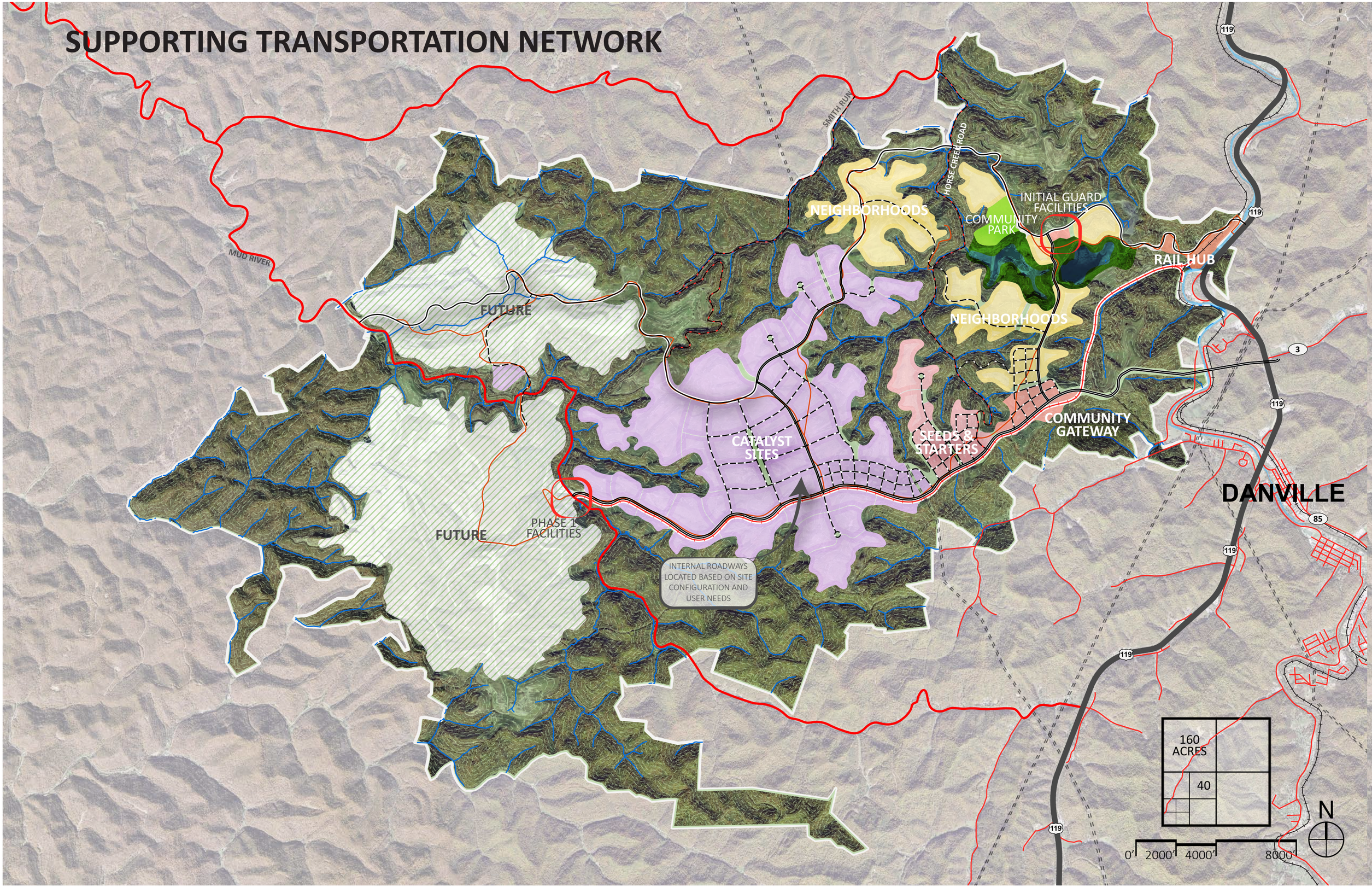


SIZING AND SITE CONSIDERATIONS

An example of this model working in another state, albeit with unique circumstances, is Alliance, Texas (outlined earlier). The sizing and phasing of Alliance offers some insights regarding sizing and phasing of an airport driven development:

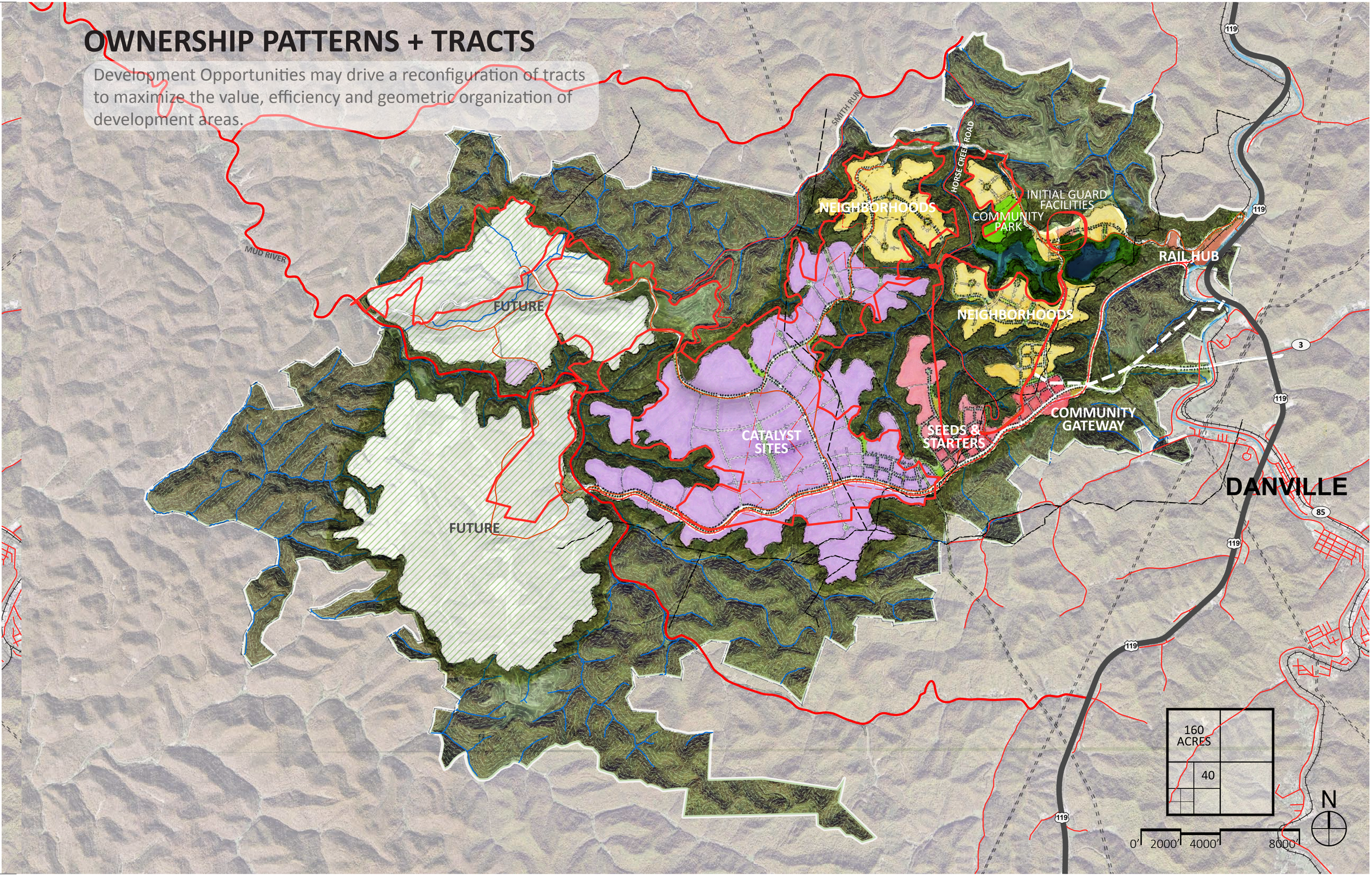
- The FAA requested 2,600 acres for the reliever airport located on site.
- Two industrial sectors have developed adjacent to the airfield. The Alliance Gateway includes 1,000 acres of land dedicated to distribution facilities and warehouses – it includes about 3.2 million square feet of building space. The second sector, known as Westport at Alliance, includes a 1,100 acre development with rail and other multi-modal access.

SUPPORTING TRANSPORTATION NETWORK



OWNERSHIP PATTERNS + TRACTS

Development Opportunities may drive a reconfiguration of tracts to maximize the value, efficiency and geometric organization of development areas.



FIRST PHASE OF DEVELOPMENT/LIKELY PROJECTS:

The first phase of development at the site is likely to include smaller scale incremental projects, with the following commitment to the site:

- The National Guard will locate a High Mobility Multipurpose Wheeled Vehicle (HMMWV) maintenance facility at an existing building at the Hobet site. The existing building, which is located at he northeast corner of the site, is already fenced and available immediately. Military vehicles from the Logan Armory are currently serviced in the Kenova maintenance shop. Some jobs may be transferred from the other maintenance shops, and additional jobs will also be added at the new facility at Rock Creek. The national maintenance program is currently located in Point Pleasant, West Virginia. It is estimated that the maintenance facility will employ 6 to 10 people in the early stages, and could potentially grow to employ 30 to 50 individuals. Moving forward, a larger facility could be used (potentially 100,000 square feet) for maintenance; a larger building currently exists near the area of the site which has been actively mined. The National Guard also has an interest in locating a potential drop zone training area at the site. The drop zone could also be used for driver and maneuver training. A drop zone would require a dedicated zone that is one mile wide and two miles long. The drop zone could include rolling hills, but should be clear of utility lines and forested areas. It was also mentioned that the drop zone area could be moved if needed for other development opportunities.

  Other opportunities mentioned by the National Guard include hosting the Philip Connelly competition, a food service competition that would attract units from the entire east coast. Ultimately, the National Guard may need a Training Support Facility, similar to the Center for National Response located at the West Virginia Memorial Tunnel of the West Virginia Turnpike. The support facility encompasses about ten acres and includes temporary housing (four to five double wide homes), a conference room, and gym.

- The National Guard is also interested in planting apple orchards on the Hobet site as a way to filter out selenium and iron from on-site mining-influenced water, potentially eliminating the need for the treatment plants (biochemical reactors). There may be an opportunity for the coal companies to help finance a portion of the project since the orchards will help reduce the need for water treatment plants.

  The “tipping point” for growing enough apples to substantiate food product manufacturing, such as a processing plant, is 100,000 trees. The apple orchards might also be used to promote agricultural tourism in the area. The trees will take five years to mature, with the interim years potentially being supplemented with other green house crops that are not locally produced. It is estimated that 1 acre can support 400 trees, so at a minimum, the site would need to accommodate 250 acres for the orchards in order to be economically viable for production.

ILLUSTRATIVE MASTER PLAN

NEIGHBORHOODS
RESIDENTIAL
VERIETY OF HOUSING TYPES AND SIZES FOR WIDE RANGE OF RESIDENTS

RAIL HUB
RAIL - ORIENTED BUSINESS
MATERIALS IN / PRODUCTS OUT

INITIAL GUARD FACILITIES

COMMUNITY PARK

COMMUNITY GATEWAY
MULTI-USE TOWN CENTER
COMMERCIAL, NEIGHBORHOOD OFFICE, HIGHER DENSITY RESIDENTIAL

SEEDS & STARTERS
FLEXIBLE SITES
INDUSTRIAL, DISTRIBUTION, TECH; JOB TRAINING + UNIVERSITY SATELLITE

CATALYST SITES
LARGE SITES
INDUSTRIAL MANUFACTURING + WAREHOUSE

FUTURE

FUTURE

MUD RIVER

SMITH RUN

HORSE CREEK ROAD

DANVILLE

119

3

85

160 ACRES

40

N

0’ 2000’ 4000’ 8000’

COMMUNITY GATEWAY AND NEIGHBORHOODS

In order to attract high-quality, knowledge-based employers, a variety of neighborhoods should be considered for the Rock Creek site. The sketch on the right shows a development character concept for one of these neighborhood areas. It is intended to be connected, compact, and walkable residential neighborhoods able to support a variety of types of housing. The neighborhood contains park space and is well-connected via sidewalks to a trail system that connects through the valleys throughout Rock Creek. Other amenities, including schools and a community gateway, are within close proximity by car, bike, or even on foot, from the bulk of this neighborhood.

FIGURE 6.1

Displays the existing site, the overlay concept and finally the proposed concept rendering.

CATALYST SITES LARGE FUNCTION AREAS

The land base of Rock Creek is extremely large, and it offers opportunities unlike anywhere else in the region. To illustrate this, the artist's rendition on the following page shows the core of Rock Creek in a built-out condition, with millions of square feet of new development. The intent of the catalyst site area within the master plan is to allow for flexibility to accommodate users of all sizes within a framework that allows growth throughout time. As shown in the sketch, the users could be manufacturing, research, or back office uses that require large footprints, with allowances for infill development between sites.

SIGNIFICANT EMPLOYER/SINGLE USER CATALYST

While difficult to predict, it is possible that a significant large scale employer could locate at the Hobet site.

Several organizations have been looking into the potential for rare earth element (REE) extraction in the region. REEs include 17 elements from the 118 that make up the periodic table. These elements have unique properties (e.g. magnetic, luminescent) that make them critical components of a variety of applications, including TV screens, MRI machines, wind turbines, and missile guidance systems.

The West Virginia Geological and Economic Survey (WVGES) is currently researching the extraction potential for REEs in the Northern Appalachian region. Based in part on discussions with WVGES, co-production of rare earth elements is critical in order to be economically viable (large volumes of raw material need to be removed in order to extract the rare earth materials).

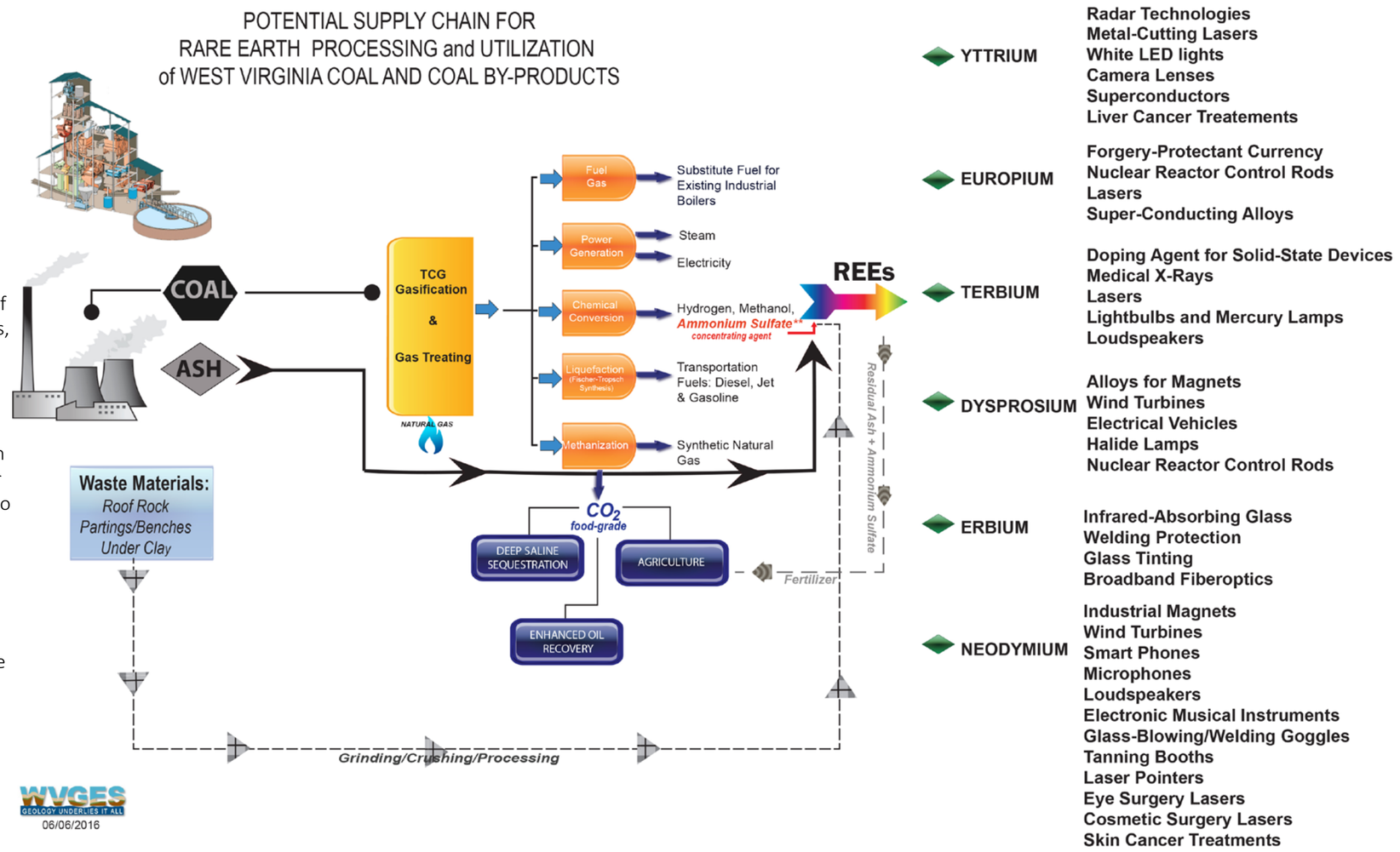
SIZING AND SITE CONSIDERATIONS

Sizing needs for a REEs processing facility are based on existing site considerations at other plant locations. While the technology continues to evolve, these other facilities provide an indication of potential land needs.

A Lynas refinery for rare earth metals was constructed in 2011 in Malaysia, next to the industrial port of Kuantan. The refinery includes almost two dozen buildings which are interconnected and include 50 acres of floor space. The facility also includes a 12-acre interim storage pool area to hold slightly radioactive byproducts. Ucore has developed a pilot plant, with an initial footprint which is the equivalent of a few tractor trailers. The plant is dedicated to the separation and refining of REE's. The facility is modular and can be expanded as needed. Ucore has developed a new extraction technology that significantly simplifies the process. Ucore recently announced the development of a US based Strategic Metals Complex. The facility will capitalize on the pilot facility technology (located near Salt Lake City, Utah).

FIGURE 6.2

Displays a possible supply chain for Rare Earth Elements processing.



COMBINATION OF CATALYSTS

E.G. INSTITUTION ANCHOR, LINKED INDUSTRIES

A group of like-minded industries makes sense for building off of natural linkages between industries (e.g. supply chain). This could include building an opportunity to focus on those industries with a strong presence in the state **(e.g. chemical manufacturing, biometrics, energy, wood products)**, since these industries presumably have the resources in place to operate in the state.

Other potential industries that have been discussed: home manufacturing, automotive parts, carbon fiber manufacturing, natural gas downstream industries (e.g. plastic packaging), industry related to Rogersville Shale.

An example of a development which supplies the energy sector is Horseheads Industrial Center. Horseheads Industrial Center in upstate New York provides support industries for Marcellus Shale drilling operations. The park includes 206 acres in 11 buildings (2,095,000 square feet). Industries located in the park include rental equipment for gas and oil operations, such as power swivels, ATV's, welders, backhoes, chainsaws, water pumps, frac tanks, etc. (GFS Energy Rentals LLC), gas transmission products (McJunkin Red Man), centrifuge service (office and service space) used in gas drilling (Kayden Industries), equipment and chemical supplies for gas drilling (store chemicals and sand used in fracking – Schlumberger Tech), drilling fluids (Newpark Drilling Fluids).

The Hobet site would benefit from the presence of a local or regional institution such as a university satellite campus and/or a technical training college/institute. There may be an opportunity to tap into the existing community and technical college system (e.g. Bridge Valley Community and Technical College, Southern West Virginia Community Technical College) to provide on-site specialized training for employers locating at the Hobet site. The Bridge Valley Technology Center currently provides workforce focused training for a variety of industries located in the Charleston area, developing a pipeline of employees for sectors such as manufacturing, energy, and IT; Toyota has been a significant partner with the center (offering advanced manufacturing training).

Another possibility includes the introduction of a satellite campus for one of the West Virginia universities (e.g. Marshall University, West Virginia University). This might include, for example, engineering training through a Marshall University satellite facility at the Hobet site or an arm of an area medical center (e.g. Charleston Area Medical Center).

FIGURE 6.3

Displays the existing site, the overlay concept and finally the proposed concept rendering.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APPENDIX

APPENDIX | DEMOGRAPHIC INDICATORS

According to the US Census, the state of West Virginia is the only state in the United States to lose population between 2010 and 2014. The statistics show that more people are leaving the state than entering the state and the rate of deaths exceeded the number of births.

FIGURE 7.1

Population Trends, Selected West Virginia Counties, Charleston MSA, West Virginia, and United States

	USA	WEST VIRGINIA	CHARLESTON MSA	BOONE COUNTY	KANAWHA COUNTY	LINCOLN COUNTY	LOGAN COUNTY	PUTNAM COUNTY	CLAY COUNTY
POPULATION									
2010	308,745,538	1,852,994	227,078	24,629	193,063	21,720	36,743	55,486	9,386
2016	323,580,626	1,914,436	228,257	25,119	193,393	22,714	37,104	58,959	9,745
2021	337,326,118	1,959,308	227,696	25,136	192,743	23,515	36,639	61,487	9,817
2016 POPULATION BY AGE									
0-9	12.5%	10.8%	10.9%	12.2%	10.7%	11.8%	10.1%	11.8%	11.7%
10-19	13.0%	11.5%	11.2%	11.9%	11.1%	11.5%	10.7%	12.7%	12.1%
20-29	14.0%	12.3%	11.0%	10.1%	11.1%	10.5%	10.5%	9.6%	10.4%
30-39	13.0%	12.1%	12.5%	12.4%	12.5%	12.6%	13.0%	12.5%	11.6%
40-49	12.7%	12.7%	12.5%	13.8%	12.3%	13.2%	13.3%	14.0%	13.3%
50-59	13.7%	14.6%	15.0%	14.7%	15.1%	15.3%	15.5%	15.2%	14.6%
60-69	11.1%	13.7%	14.2%	14.4%	14.2%	13.9%	15.3%	13.2%	14.6%
70-79	6.2%	7.8%	7.9%	7.1%	8.0%	7.7%	7.5%	7.4%	7.6%
80+	3.7%	4.3%	4.8%	3.4%	5.0%	3.4%	4.0%	3.6%	4.1%
MEDIAN AGE	38.0	42.6	43.5	42.4	43.7	42.7	44.1	42.4	43.3

The age of the population within West Virginia, the Charleston, WV MSA and the counties profiled are very similar, with approximately 33% of the population being under 30 years old, 40% of the population being 30-59 years old, and roughly 26% of the population being over 60 years old. This differs slightly from national figures which reflect the under 30 population representing closer to 40% of the population and the over 60 population representing about 21% of the population. Median age follows a trend very similar to age, the median age for the nation is younger than that of West Virginia and the geographies profiled.

FIGURE 7.2

Household Trends, Selected West Virginia Counties, Charleston MSA, West Virginia, and United States

	USA	WEST VIRGINIA	CHARLESTON MSA	BOONE COUNTY	KANAWHA COUNTY	LINCOLN COUNTY	LOGAN COUNTY	PUTNAM COUNTY	CLAY COUNTY
TOTAL HOUSEHOLDS									
2010	131,704,730	881,917	97,857	9,928	84,201	8,783	14,907	21,981	3,728
2016	137,928,754	915,872	98,626	9,992	84,802	9,096	15,013	23,406	3,832
2021	143,620,503	942,417	98,544	9,953	84,751	9,370	14,842	24,442	3,840
TOTAL FAMILY HOUSEHOLDS									
2016	80,307,260	511,092	61,352	6,980	51,766	6,418	10,467	17,044	2,606
2021	83,243,260	519,280	60,860	6,914	51,351	6,576	10,286	17,706	2,595
AVERAGE HOUSEHOLD SIZE									
2016	2.59	2.36	2.28	2.50	2.24	2.49	2.43	2.51	2.52
2021	2.60	2.37	2.28	2.51	2.24	2.50	2.42	2.51	2.54
AVERAGE FAMILY SIZE									
2016	3.16	2.89	2.86	2.98	2.83	2.95	2.90	2.93	3.04
2021	3.18	2.89	2.86	3.00	2.83	2.97	2.90	2.93	3.06
2010 HOUSING UNITS									
OWNER OCC'D	65%	73%	70%	78%	69%	79%	75%	83%	79%
RENTER OCC'D	35%	27%	30%	22%	31%	21%	25%	17%	21%
2016 HOUSING UNITS									
OWNER OCC'D	63%	70%	66%	75%	65%	76%	72%	80%	76%
RENTER OCC'D	37%	30%	34%	25%	35%	24%	28%	20%	24%
2021 HOUSING UNITS									
OWNER OCC'D	63%	70%	66%	75%	65%	76%	72%	80%	76%
RENTER OCC'D	37%	30%	34%	25%	35%	24%	28%	20%	24%

Housing trends within the geographies profiled indicate average household sizes smaller than the national average. Specifically the Charleston MSA and Kanawha County where household sizes are 2.28 and 2.24 persons per household respectively, with the national average at 2.59 persons per household. Owner occupied housing is substantially higher in West Virginia as a whole that the United States, this trend is driven by significantly high percentages of owner occupancy in Boone County (75%), Lincoln County (76%), Putnam County (80%), and Clay County (76%). Though owner occupied housing percentages fell from 2010-2016 in all geographies profiled, they are projected to stabilize through 2021.

FIGURE 7.3

Household Income and Education Trends, Selected West Virginia Counties, Charleston MSA, West Virginia, and United States

	USA	WEST VIRGINIA	CHARLESTON MSA	BOONE COUNTY	KANAWHA COUNTY	LINCOLN COUNTY	LOGAN COUNTY	PUTNAM COUNTY	CLAY COUNTY
2016 HOUSEHOLDS INCOME									
less than $14,999	12.5%	16.74%	14.38%	14.97%	13.76%	22.71%	18.89%	8.39%	26.54%
$15,000-$24,999	10.09%	14.20%	13.38%	14.05%	13.31%	14.52%	14.03%	9.96%	13.15%
$25,000-$34,999	10.06%	12.27%	11.91%	11.35%	12.01%	11.98%	13.65%	10.82%	11.22%
$35,000-$49,999	13.31%	14.78%	15.63%	14.09%	15.82%	15.38%	13.59%	14.13%	15.42%
$50,000-$79,999	17.68%	17.98%	18.76%	20.74%	18.65%	19.57%	17.44%	19.74%	16.08%
$75,000-$99,999	12.28%	10.46%	11.10%	10.13%	11.33%	7.26%	9.47%	14.24%	8.43%
$100,000-$149,999	13.44%	9.22%	9.66%	10.87%	9.63%	6.08%	8.71%	15.32%	7.20%
$150,000-$199,999	5.29%	2.59%	2.78%	2.54%	2.87%	1.20%	2.76%	4.60%	1.38%
greater than $200,000	5.36%	1.76%	2.39%	1.26%	2.61%	1.30%	1.47%	2.79%	0.57%
MEDIAN HOUSEHOLD INCOME	$59,476	$41,087	$43,759	$43,484	$44,240	$35,540	$37,937	$60,214	$31,492
AVERAGE HOUSEHOLD INCOME	$84,021	$58,260	$59,281	$58,641	$60,329	$46,610	$52,715	$76,148	$46,302
PER CAPITA INCOME	$32,025	$24,363	$25,852	$23,305	$26,717	$18,712	$21,642	$30,336	$18,234
PER CAPITA INCOME									
SOME HS NO DIPLOMA	7.71%	10.27%	9.41%	14.82%	8.43%	12.43%	13.51%	5.99%	16.76%
HIGH SCHOOL DIPLOMA	24.99%	36.07%	34.45%	42.51%	32.96%	39.72%	39.98%	34.06%	45.68%
GED / ALTERNATIVE CREDENTIAL	4.25%	7.33%	6.19%	9.53%	5.77%	9.83%	7.40%	4.83%	6.46%
SOME COLLEGE NO DEGREE	22.09%	19.28%	19.41%	16.62%	19.92%	22.73%	20.49%	21.04%	15.49%
ASSOCIATE'S DEGREE	8.73%	6.85%	6.37%	6.31%	6.47%	4.61%	8.94%	8.87%	4.29%
BACHELOR'S DEGREE	19.95%	12.38%	14.13%	6.08%	15.44%	5.94%	6.08%	15.28%	6.61%
GRADUATE / PROFESSIONAL DEGREE	12.29%	7.81%	10.05%	4.15%	11.01%	4.73%	3.60%	9.94%	4.70%

Roughly 54% of the national population lives at or above the national median household income, this is similar to the geographies analyzed in West Virginia where 50%-60% of the population within each geography live at or above the median household income for the respective geography. Median household incomes are similar across many of the geographies within West Virginia with the exception of Logan County ($37,937), Lincoln County ($35,540), and Clay County ($31,492) where the median incomes are significantly lower than the $47,900 average median income within the other West Virginia regions analyzed.

Within the United States, 41% of the population has at least an Associate's Degree. West Virginia is notably lower, with 27% of the state's population having an Associate's Degree or higher. While the Charleston MSA, Kanawha County, and Putnam County are significantly higher than the state with 30.5%, 32.9%, and 34% respectively having an Associate's Degree or higher, Boone County, Lincoln County, Logan County and Clay County are significantly lower than the state with 16.5%, 15.3%, 18.62%, and 15.6% having an Associate's Degree or higher.

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