



A. PUBLIC OUTREACH PROGRAM

The Public Outreach Program was conducted by the Cousins/LNR Team member and the program report is divided into two sections. The first section summarizes the specific public involvement techniques utilized to create an open and flowing community dialogue that will help shape the future of Fort Gillem. The second section provides detailed documentation of the results of the individual public outreach efforts.

Public Involvement Techniques

After identifying key stakeholder groups, including the general public, the following public outreach techniques and venues were utilized throughout this process.

Local Redevelopment Authority

The Forest Park/Fort Gillem Local Redevelopment Authority (LRA) was formed to serve as the sole representative of the community to the Department of the Army, the Department of Defense and the State of Georgia for redevelopment and reuse planning for property on Fort Gillem. The LRA has spent the last several months gathering and analyzing data about Fort Gillem with the important goal of developing a Reuse Plan that is consistent with the City of Forest Park's vision for future comprehensive development. The LRA meets monthly to review planning documents and provide comment on development concepts and the Homeless Accommodation recommendations.

Local Redevelopment Agency Sub-Committees

The LRA Sub-Committees (Healthy Community and Quality of Life, Reuse and Design, and Finance and Economic Development) are responsible for providing oversight to the redevelopment planning process for the purpose of establishing a baseline for analysis, evaluation and discussion for base redevelopment. Consisting of community residents, leaders, City and County staff and stakeholders, these committees met with the planning team for an all day working session to develop three preliminary concept plans for the reuse and redevelopment of Fort Gillem. In addition, the Sub-Committees attended the scheduled LRA Board meetings to provide input and to help build consensus on plan goals and issues.

For each Sub-Committee meeting, the Cousins/LNR Team assisted the LRA staff in developing the agenda, attended and facilitated the meeting (through consensus-building and decision-making exercises), and provide meeting minutes and action items.

Public Notices and Newsletter

Public notices announcing public meetings were widely distributed to the project mailing list and made available for pickup at local designated areas including churches, restaurants, schools, community facilities and government offices. The Team produced a newsletter of no more than 4 pages long at key project milestones. The newsletter contained up-to-date project information and helped citizens understand how decisions are being made through concise narratives and renderings, simplified diagrams, and other visual tools. The newsletter was widely distributed to the project mailing list and contain information on what to do to respond, comment, and get more involved in the planning process.



Project Mailing List

From the public meetings, interviews, existing mailing lists and other points of contact, the Team compiled a project mailing list in Excel format. The list includes individuals, communities, businesses, faith-based and homeless service providers, and other interested parties for the Fort Gillem Reuse and Redevelopment Plan.

Automated Phone Message System

An automated phone message system was utilized to announce upcoming public meetings to all residents and business owners with a listed phone number within the City of Forest Park.

Resource Center

A Resource Center was established to house up-to-date planning materials for pickup and viewing by the general public. The resource center is located at the Forest Park Branch Library 696 Main Street, Forest Park GA 30297 and information can be obtained during normal business hours.

Press Releases

The Team developed press releases up to 1-page in length announcing major accomplishments and project events. The press releases were distributed to a list of media contacts via fax and email. A list of media resources is listed below:

- Atlanta Business Chronicle
- Atlanta Journal Constitution
- Clayton News Daily
- Clayton Neighbor
- TV23 Clayton County Public TV
- WAGA TV 5 (FOX)
- WATL TV 36 (MYTV)
- WGCL TV 46 (CBS)
- WGTW TV 8 (PBS)
- WPBA TV 30 (PBS)
- WSB TV 2 (ABC)
- WTBS TV 17 (IND)
- WUPA TV 69 (CW)
- WXIA TV 11 (NBC)



Public Meetings and Meeting Summaries

The Team coordinated a series of public meetings to:

- Inform interested stakeholders within the City of Forest Park and surrounding area of the purpose, schedule, and major tasks of the project
- Gather and document reactions and concerns about the various issues and recommendations for the development concepts

The Team worked in conjunction with the LRA staff to develop a meeting plan prior to the public meeting that provides details on the meeting date, time, locations, purpose, format, agenda, layout, supporting materials, and staffing. A meeting agenda, press release announcing the meetings, meeting materials (name tags, sign-in sheets, agenda, handouts, comment sheets and displays) were made available at all public meetings.

Public comment forms were distributed and collected at each of the public meetings. Since comment forms did not require participants to include names, comments are arranged by event and grouped by individual with an anonymous letter designation.

The consultants facilitated the meetings and documented the attendance and outcomes as follows, beginning on the next page:



Fort Gillem Public Outreach -- Public Meeting I Forest Park Recreation Center March 29, 2007

Agenda

- Process Overview
- Site Development Strategies
- Conceptual Alternatives
- Public Comment and Feedback

Meeting Summary

Contente Terry, with the Cousins/LNR Planning Team, opened the meeting with a welcome to all participants, briefly reviewed the agenda items and initiated the PowerPoint presentation.

Fred Bryant, with the Local Redevelopment Agency, provided an overview of the BRAC process and Schedule and the LRA board, mission and role.

Forrest Robinson, with the Cousins/LNR Planning Team, followed with an overview of the Public Outreach Process and Master Planning Process. In addition, Forrest explained that the Goals and Guiding Principles for the Reuse Plan were developed last fall during the first phase of work. The Goals include:

- Economic Growth ...attract new business, industry and investment through an aggressive and targeted marketing campaign that improves the community's economic profile
- Redevelopment Plan ...establish the land-use structure for a sustainable community that attracts new industries and businesses as well as creates an environment whereby existing businesses can flourish and the area will be perceived as an attractive and prosperous location.
- Education Improvement ...energize the public school system, various technical training facilities and selected institutions of higher learning to meet the educational needs of the workforce for the redevelopment and increase the basic education, life skills and technical skills of the community.
- Quality of Life ...provide living conditions, wage levels, amenities and an environment that will encourage new workers and their families to remain in community.
- Perception of Area ...leverage existing governmental and non-governmental structures to enhance stakeholder relations and optimize future management resources that strengthen a positive reputation for the community.
- One-Community ...create a neighborhood that is a recognizable part of Forest Park and will transition seamlessly from neighborhood to neighborhood and community to community.

The Concept Alternatives were presented by Herb Smetheram with the Cousins/LNR Planning Team. These concept plans were developed on March 25th, 2007 at an LRA Sub-Committee working session. The groups developed three (3) different concepts with the following themes:



- Concept 1: Quality of Life - The cornerstone of this plan is to enhance the quality of life of citizens. The reigning theme of lush tree canopies and buffers assures that future development is seamless with “Forest Park.” Land is provided for recreational activities, education and faith based providers. Recreation areas are focused around the lakes so that everyone may enjoy them. Multi-use trails tie together the recreation areas and promote an alternative travel path for people that live, work and play in the community. Main Street extends into the development and connects it with downtown Forest Park. Light clean industrial and mixed-use development serves as the economic engine of the community. Ample space is set aside for future growth, allowing the development to grow in conjunction with the market.
- Concept 2: Business Development - The focus of this plan is business development and job growth. Light clean industrial development has easy access to the surrounding roadways, freight lines and air transportation network. Main Street is connected to Hood Avenue, with transit and multi-use trails within the same corridor. New commercial office space, a conference center and hotel can support existing uses such as the Army and attract new development.
- Concept 3: Regional Attractor - The regional attractor plan includes uses that will attract new development and people to the area. Light clean industrial businesses, an arena and potential cultural village will bring people to Forest Park. Commercial, retail and mixed-use development along Hood Avenue provides services to future residents and workers.

Public Comment and Feedback at the Meeting

Following the presentation, the participants and planners engaged in a dialogue regarding the concepts and planning process.

- Consider extending Main Street through the site and maintaining the “Main Street” character.
- A participant questioned if the general public will be able to vote on the preferred concept. The LRA responded the LRA Board will make the final decision on the preferred alternative and encourage the community to comment and provide feedback to the consultants throughout the planning process.
- The name of the new development site has not been determined.
- There was a concern that public safety services and utilities will be compromised as a result of the new development. The LRA assured the participants that these departments are at the table.
- There was a discussion regarding the environmental issues on site and who will be responsible for the cleanup. The planning team is assessing the contamination and remediation cost estimates will be submitted with this plan. Who will be responsible for the remediation will be determined at a later date?
- There was a concern regarding how the City will attract new businesses to the development area. The LRA has been approached by businesses looking to move in the area. The Cousins/LNR Team will assist the City in identifying potential businesses. Clayton County is also at the table to ensure that the plan is consistent with the County’s vision.



Public Comment Provided on Forms

A

- I was satisfied and liked the explanation of the reuse of Fort Gillem
- Entertainment should be taken into consideration which also brings revenue into the City.
- Consider sports arenas (specifically soccer to provide options for the diverse citizens in Forest Park).
- Also consider developing outdoor soccer fields and a sports equipment store.

B

- Plan for adequate green space.
- Include new infrastructure in the concepts.
- Be mindful of educational growth.
- Social services, health and safety complexes should be included.
- Consider rapid transit and transportation connections to main arterials.
- Include commercial complexes.

C

- The City of Forest Park is on a decline.
- There is a lack of options for entertainment and fine dining. Main Street exists in name only; Jonesboro Road offers business alternatives but is known for its blighted storefronts and perception of crime.
- The Airport noise, truck warehousing, vacant car lots, grungy motels and trailer parks contribute to the decline of the City.
- Although job creation appears to be the theme of the plan, please consider attracting non-industrial jobs such as corporate headquarters, law firms, and educational institutions.
- The Department of Agriculture should consider relocating some offices to Fort Gillem.
- The redevelopment of fort Gillem along with the renovation of the Farmers Market may be the last chance to create a place where people chose to live.

D

- New Schools should be considered on the site and the old schools redeveloped for public parks.
- Limit the development of apartments.
- Limit new residential, the City has too many for sale unoccupied homes.

E

- The city needs higher end residential development similar to Lake Spivey.
- The City has too many affordable townhomes and single family.



- An Atlantic Station type development is warranted.
- Include a signature golf course on the site.
- No more industrial, only develop residential, retail and commercial.
- Bring improvements to Main Street.
- Include a grocery store and hotels (Marriott, Hyatt, etc.).
- Possibly consider a casino.

F

- Clean up the contaminants on the site.

G

- Forest Park has too many truck lines and warehouses.

H

- Marketing is essential to the redevelopment of Forest Park.
- Consider a new marketing campaign that will attract businesses and upper middle class residents.
- No residential development needed on the site, the surrounding residential will be desirable if quality development occurs on the site.

I

- Need a people mover.
- Need more residential.
- Need a senior center.
- Make the project pollution free.
- Pedestrian oriented development plan.

Attendance

First Name	Last Name	Address	City	State
Morea	Ayers	1140 Shieldcrest Way	Forest Park	GA
Lodis	Bates	1011 Pine Mtn. Drive	Forest Park	GA
Grace	Bates	1011 Pine Mtn. Drive	Forest Park	GA
Frances M.	Bian	525 Albert Drive	Forest Park	GA
Margaret T.	Brown	648 Barksdale Drive	Forest Park	GA
Clyde	Burkett	4417 Currie Court	Forest Park	GA
Ruth	Coates	6060 Pine Creek Road	Forest Park	GA
Jerry	Coates	6060 Pine Creek Road	Forest Park	GA
Reed	Crumbliss	1241 Tsali Trail	Forest Park	GA
Judith	Davis	5658 Alder Drive	Forest Park	GA
Glenn L.	Densley	4461 Burks Road	Forest Park	GA
Gwen	Ellison	402 Webb Drive	Forest Park	GA
Hope	Ellsion	402 Webb Drive	Forest Park	GA
Chuck	Ferry	396 Plasters Avenue	Forest Park	GA
Willie	Finch	5268 Albert Drive	Forest Park	GA
William	Folds	4643 Burks Road	Forest Park	GA
Virginia	Freeman Ford	5303 West Street	Forest Park	GA
Charles W.	Grant	304 First Street	Forest Park	GA
Rose	Greene	260 Forest Parkway	Forest Park	GA



First Name	Last Name	Address	City	State
Dorothy	Harris	225 Banks Road	Fayetteville	GA
Mattie	Hartsfield	5128 Middlebrooks Drive	Forest Park	GA
Justin	Heizer	396 Plasters Avenue	Forest Park	GA
Steven	Hunt	5571 Sequoia Drive	Forest Park	GA
Olga	Inestoza	829 Main Street	Forest Park	GA
Rody	Inestoza	829 Main Street	Forest Park	GA
Zonnie	Jones	556 Lamar Drive	Fores Park	GA
James	Jones	1166 Ponderosa Park Drive	Forest Park	GA
Mike	Judd	12409 Kingsgate Drive	Okla City	OK
Donald E.	Judson	702 Virginia Circle	Forest Park	GA
Rob	Kelly	303 Tskwood Drive	Woodstock	GA
Martha L.	Lawson	787 Catherine Street	Forest Park	GA
Sandra S.	Lewis	4568 Mirchell Street	Forest Park	GA
Shirley E.	Mason	872 Kennesaw Drive	Forest Park	GA
Bevjan	McAfee	694 Lookout Drive	Forest Park	GA
Barbara	McFell	694 Lookout Drive	Forest Park	GA
Hal & Sheryl	McGinnis	1690 Forest Parkway	Lake City	GA
Yvonne	Moore	4323 Sierra Drive	Forest Park	GA
Ralph & Linda	MsDuffin	1085 Main Street	Forest Park	GA
Kim Hang	Nguyen	858 White Oak Drive	Forest Park	GA
Shay	Nichols	1460 Ashley Way	East Point	GA
Willie	Oswalt		Lake City	GA
Ken	Parker	775 SpringValley Drive	Forest Park	GA
Steve	Peangow	City of Forest Park	Forest Park	GA
Alfonso	Pena	448 North Avenue	Forest Park	GA
Joann	Poston	910 Longleaf Drive	Forest Park	GA
Kevin	Quick	371 Cynthia Lane	Forest Park	GA
David	Rashmn	747 Scott Road	Forest Park	GA
Chris	Rigby	307 Georgia Ave SE	Atlanta	GA
Pat	Roberson	570 Conley Road	Forest Park	GA
Robin	Roberts	Clayton County Economic Dev.	Forest Park	GA
A. Tom	Sath	2908 Players Drive	Jonesboro	GA
Orlando	Scott	1970 Newton Estates	Ellenwood	GA
Steve	Shannonhouse	4738 City View Drive	Forest Park	GA
Robin	Shannonhouse	4738 City View Drive	Forest Park	GA
Nguyen	Thanh-D.	960 Tamarack Trl.	Forest Park	GA
Wylene	Townley	4199 Gunter Drive	Forest Park	GA
Fannie	Wane	5226 Albert Drive	Forest Park	GA
Nellie	Ward	1661 Joylake Road	Lake City	GA
Earl & Betty	Wiggins	711 Virginia Circle	Forest Park	GA
Anne	Willis	5118 Middlebrooks	Forest Park	GA
Joe	Wimberly	740 Patricia Drive	Forest Park	GA
Herb	Wolverton	USAG Fort Gillem	Forest Park	GA
Clare	Woodside	2309 Doven Drive	Edmond	OK



Fort Gillem Public Outreach -- Public Meeting II Forest Park Recreation Center April 26, 2007

- Process Overview
- Site Development Strategies
- Revised Concept Alternatives
- Public Comment and Feedback

Contente Terry, with the Cousins/LNR Planning Team, opened the meeting with a welcome to all participants and briefly reviewed the agenda items.

Fred Bryant, with the Forest Park/ Fort Gillem LRA, proceeded to review the BRAC process, making note that the Reuse Plan will be submitted to the Army and HUD on June 22, 2007. He briefly identified the LRA organization structure and role in this process while describing the general outcomes of the plan: proposed land uses, supporting infrastructure, phased schedule and a capital improvement program for the redevelopment site.

Forrest Robinson, with Cousins Planning Team, explained the strategies used to develop the conceptual alternatives:

- The LRA Sub-Committees met to develop three (3) draft alternatives.
- The planning team has developed several iterations of the alternatives based on feedback received from the community and the LRA, environmental constraints and infrastructure issues.
- The alternatives will be further refined and modified as additional data is collected and a preferred alternative will be presented in late May.

Forrest then described the three alternatives as presented on large format boards. He also identified the common themes articulated by the community: job creation, a catalytic development, shopping, institutional uses, non-competing uses to Main Street, improvements to Main Street. All concepts will continue to evolve over the next weeks to identify a preferred alternative.

- Alternative 1: Job generator and tax base concept that focuses less on residential and more office and industrial uses.
- Alternative 2: Town Center concept designed to house a mixed-use community with a diversity of land uses.
- Alternative 3: Mixed-use concept that includes institutional, residential, retail and industrial and office.

Public Comment and Feedback at the Meeting

Following the presentation, the participants and planners engaged in an informal dialog regarding the process and the alternatives.

- There was concern that crime in Forest Park will prohibit new development.
- In order to attract new business in the area, residents should become more involved.
- Senior housing is needed in the area.



- There was a concern regarding how much Fort Gillem will cost to purchase and its disposition process. The planning team assured the meeting participants that this has not been decided and will be determined by negotiations with the Army in the coming months.

Public Comment Forms

A

- Homelessness equals crime
- The City has too many warehouses and trucking
- Why are there no Forest Park officials at the meeting?

B

- It appears that Fort Gillem will be given to the City, is this accurate?
- How will it be disposed of and who is the competition?
- How much money has been spent on this planning process to date?
- Has the Homeless Area been defined?
- Why doesn't the LRA Chairman attend the meetings?

Attendance

First Name	Last Name	Address	City	State
Knox	Bates	820 Tupel Trail	Forest Park	GA
Frances	Boyce	5695 Dorsey Drive	Forest Park	GA
Lorenzo	Boyce	5695 Dorsey Drive	Forest Park	GA
Paul	Bunch, Jr.	7008 Ledgewood Drive	Forest Park	GA
Virgina	Ford	5303 West Street	Forest Park	GA
Stacia	Holleman	4758 Bartlett Road	Forest Park	GA
Richard	Jenkins	148 Andrew Young Intl. Blvd.	Atlanta	GA
Doris	Jones	556 Lamar Road	Forest Park	GA
Zonnie	Jones	556 Lamar Road	Forest Park	GA
David	Rashmir	747 Scott Road	Forest Park	GA
JB	Reeves	4810 Bartlett Road	Forest Park	GA
Betty	Reeves	4810 Bartlett Road	Forest Park	GA
Joe	Wimberly	740 Patricia Drive	Forest Park	GA



Fort Gillem Public Outreach -- Open House Forest Park Recreation Center April 26, 2007

Public Comment Forms

A

- It is important to retain some of the military buildings to maintain a military presence in Forest Park which is important to veterans.
- Buildings to keep are the Gym, PX, Club, the MEPS, Airfield and the Army Reserve Units.

B

- The preferred concepts include a mix of housing, not too much multi-family.
- Industrial mix with residential is not preferred.

Attendance

First Name	Last Name	Address	City	State
Bob	Abernathy	170 Chaparral Trace	Forest Park	GA
Knox	Bates	820 Tupel Trail	Forest Park	GA
Brent	Benson	155 Green Castle Road	Tyrone	GA
Reed	Crumbliss	1241 Tsali Trail	Forest Park	GA
Suzanne	Hurtado	730 Blueridge Drive	Forest Park	GA
S	Jones	5577 Greenwood Way	Forest Park	GA
Harry	Joy	3225 S. Bay Drive	Jonesboro	GA
Robert	Keskonis	1235 Vintage Club Drive	Duluth	GA
Gerold	Morris	617 Oakdale Drive	Forest Park	GA
Chris	Riglay	307 Georgia Ave	Atlanta	GA
Stephen	Shannonhouse	4738 City View Drive	Forest Park	GA
Robin	Shannonhouse	4738 City View Drive	Forest Park	GA
Daniel	Silliman	138 Church Street	Jonesboro	GA
Chris	Taylor	7297 Amanda Court	Riverdale	GA



B. ECONOMIC ANALYSIS EXHIBITS

- 1. Summary of Supply and Demand Conditions
- 2. Summary of Acreage Allocation
- 3. Recommended Product Program
 - a. Alternative A
 - b. Alternative B
 - c. Alternative C
- 4. Product Segmentation and Positioning Strategy
 - a. Industrial
 - b. Residential (For-Sale)
 - c. Apartment
 - d. Retail
 - e. Office
- 5. Land Residual Analysis
 - a. Industrial
 - b. Residential (For-Sale)
 - c. Apartment
 - d. Retail
 - e. Office
- 6. Projected Revenue Flows
 - a. Alternative A
 - b. Alternative B
 - c. Alternative C
- 7. Land Price Summary



1. Summary of Supply & Demand Conditions May 2007

<u>INDUSTRIAL</u>	<u>RESIDENTIAL</u>	<u>RETAIL</u>	<u>OFFICE</u>
<u>Market Area</u> Airport/ South Atlanta	<u>Market Area</u> Clayton/Henry Counties	<u>Market Area</u> Retail Trade Area	<u>Market Area</u> Clayton/Henry Counties
<u>Demand Base</u> 3,900,488 sq ft per year	<u>Demand Base</u> 5,203 units per year	<u>Demand Base</u> 72,932 sq ft per year	<u>Demand Base</u> 44,672 sq ft per year
<u>Currently Under Construction</u> 2,996,429 sq ft	<u>LTM Permits</u> 5,396 units	<u>Currently Under Construction</u> 50,000 sq ft (approx.)	<u>Currently Under Construction</u> 0 sq ft
<u>Under/(Over) Supply</u> 904,059 sq ft	<u>Under/(Over) Supply</u> (193) units	<u>Under/(Over) Supply</u> 22,932 sq ft	<u>Under/(Over) Supply</u> 44,672 sq ft



2. Summary of Acreage Allocation

Land Use Category	Plan Designation	Indicative Density/ FAR	Land Use Allocation and Mix					
			Scenario A		Scenario B		Scenario C	
			Acres	Mix	Acres	Mix	Acres	Mix
Industrial/Warehousing	HQ-Assembly	0.25	194	14%	200	14%	183	13%
	Bulk Warehouse	0.40	231	16%	123	9%	123	9%
	Logistics	0.34	42	3%	95	7%	69	5%
	Light Industrial	0.34	106	7%	50	4%	67	5%
	Total:	0.33	573	40%	468	33%	442	31%
Business Park	BP 1	0.25	69	5%	34	2%	42	3%
	BP 2	0.25	0	0%	11	1%	29	2%
	BP 3	0.25	0	0%	9	1%	72	5%
	BP 4	0.25	0	0%	31	2%	0	0%
	BP 5	0.25	0	0%	74	5%	0	0%
Total:	0.25	69	5%	159	11%	143	10%	
Industrial/Business Park Total:		0.32	642	45%	627	44%	585	41%
Residential	For-Sale	SF 1	37	3%	39	3%	18	1%
		SF 2	42	3%	64	4%	71	5%
		SF 3	34	2%	0	0%	41	3%
		SF 4	19	1%	0	0%	0	0%
	Total:	4.0	132	9%	103	7%	130	9%
For-Rent	MF 1	10.0	21	1%	21	1%	17	1%
Residential Total:		5.0	153	11%	124	9%	147	10%
Retail	CR 1	0.40	25	2%	25	2%	25	2%
	CR 2	0.40	0	0%	8	1%	17	1%
	CR 3	0.40	0	0%	9	1%	0	0%
	Retail Total:	0.40	25	2%	42	3%	42	3%
Office	CO1	0.38	17	1%	0	0%	0	0%
Non Revenue Producing Uses								
	Public/Institutional	NA	106	7%	61	4%	64	4%
	Northern Green Space/Buffer	NA	23	2%	23	2%	23	2%
	Roads/Transportation R.O.W.	NA	111	8%	88	6%	104	7%
	Parks/Green Space	NA	166	12%	278	19%	279	20%
	U.S. Army	NA	183	13%	183	13%	182	13%
Total Non-Revenue Producing:		NA	589	41%	633	44%	652	46%
FORT GILLEM TOTAL			1,426	100%	1,426	100%	1,426	100%



3.a. Recommended Product Program – Alternative A

Product Category Planning Area	Gross Acres (1)	Indicative Density/ FAR	Recommended Product Program					Total Units/ Square Feet	Price Positioning (2)	Acreage Absorption Potential(3)	
			Product Type	Acreage	Mix of Planning Area	Density/ FAR	Lot Size			Yrs 1-5	Yrs 5-10
ALTERNATIVE A											
Industrial/Warehousing											
HQ-Assembly	194	0.25	HQ-Assembly	194	100%	0.25	NA	2,112,660	\$4.70	194	
Bulk Warehouse	231	0.40	Bulk Warehouse	231	100%	0.40	NA	4,024,944	\$3.50	130	101
Logistics	42	0.34	Logistics	42	100%	0.34	NA	622,037	\$4.50	42	
Light Industrial	106	0.34	Light Industrial	106	100%	0.34	NA	1,569,902	\$4.00		106
Business Park											
BP 1	69	0.25	R&D/Service	69	100%	0.25	NA	751,410	\$7.50	41	28
BP 2	0	0.25	-	-	-	-	-	-	-	-	-
BP 3	0	0.25	-	-	-	-	-	-	-	-	-
BP 4	0	0.25	-	-	-	-	-	-	-	-	-
BP 5	0	0.25	-	-	-	-	-	-	-	-	-
Single Family Residential											
SF 1	37	NA	Low Density I	22	59%	2.5	12,000	55	\$307,100	22	
			Low Density II	15	41%	3.0	10,000	45	\$280,450	15	
SF 2	42	NA	Low Density I	20	48%	2.5	12,000	50	\$307,100	20	
			Low Density II	14	33%	3.0	10,000	42	\$280,450	14	
			Medium Density I	8	19%	4.3	7,000	34	\$255,450	8	
SF 3	34	NA	Medium Density I	13	38%	4.3	7,000	56	\$255,450		13
			Medium Density II	11	32%	5.0	6,000	55	\$233,550		11
			Med.-High Density	5	15%	6.0	5,000	30	\$210,000		5
			High Density	5	15%	8.6	3,500	43	\$184,500		5
SF 4	19	NA	Medium Density I	10	53%	4.3	7,000	43	\$255,450		10
			Med.-High Density	9	47%	6.0	5,000	54	\$210,000		9
SFD Total:				132	100%	3.8	7,815	507	\$254,533		
MF 1	21	10.00	Apartments	21.00	100%	10.00	-	210	\$1,025	21	
Commercial Retail											
CR 1	25	0.40	Neighborhood Center	25	100%	0.40	NA	435,600	\$18.00	25	
CR 2	0	0.40	-	-	-	-	-	-	-	-	-
CR 3	0	0.40	-	-	-	-	-	-	-	-	-
Commercial Office											
CO1	17	0.38	Neighborhood Office	17	100%	0.38	NA	281,398	\$24.50	12	5



3.b. Recommended Product Program – Alternative B

Product Category Planning Area	Gross Acres (1)	Indicative Density/ FAR	Recommended Product Program							Acreage Absorption Potential (3)	
			Product Type	Acreage	Mix of Planning Area	Density/ FAR	Lot Size	Total Units/ Square Feet	Price Positioning (2)	Yrs 1-5	Yrs 5-10
ALTERNATIVE B											
Industrial/Warehousing											
HQ-Assembly	200	0.25	HQ-Assembly	200	100%	0.25	NA	2,178,000	\$4.70	200	
Bulk Warehouse	123	0.40	Bulk Warehouse	123	100%	0.40	NA	2,143,152	\$3.50	60	63
Logistics	95	0.34	Logistics	95	100%	0.34	NA	1,406,988	\$4.50	95	
Light Industrial	50	0.34	Light Industrial	50	100%	0.34	NA	740,520	\$4.00		50
Business Park											
BP 1	34	0.25	R&D/Service	34	100%	0.25	NA	370,260	\$7.50		34
BP 2	11	0.25	R&D/Service	11	100%	0.25	NA	119,790	\$7.50		
BP 3	9	0.25	R&D/Service	9	100%	0.25	NA	98,010	\$7.50		
BP 4	31	0.25	R&D/Service	31	100%	0.25	NA	337,590	\$7.50		31
BP 5	74	0.25	R&D/Service	74	100%	0.25	NA	805,860	\$7.50	74	
Single Family Residential											
SF 1	39	NA	Low Density II	39	100%	3.0	10,000	117	\$280,450	39	
SF 2	64	NA	Low Density II	30	47%	3.0	10,000	90	\$280,450		30
			Medium Density I	34	53%	4.3	7,000	146	\$255,450		34
SF 3	0	NA	-	-	-	-	-	-	-		
SF 4	0	NA	-	-	-	-	-	-	-		
SFD Total:				103	100%	3.4	8,761	353	\$270,122		
MF 1	21	10.00	Apartments	21.00	100%	10.00	-	210	\$1,025		
Commercial Retail											
CR 1	25	0.40	Neighborhood Center	25	100%	0.40	NA	435,600	\$18.00		25
CR 2	8	0.40	Neighborhood Center	8	100%	0.40	NA	139,392	\$18.00		8
CR 3	9	0.40	Neighborhood Center	9	100%	0.40	NA	156,816	\$18.00		9
Commercial Office											
CO1	0	0.38	-	-	-	-	-	-	-		

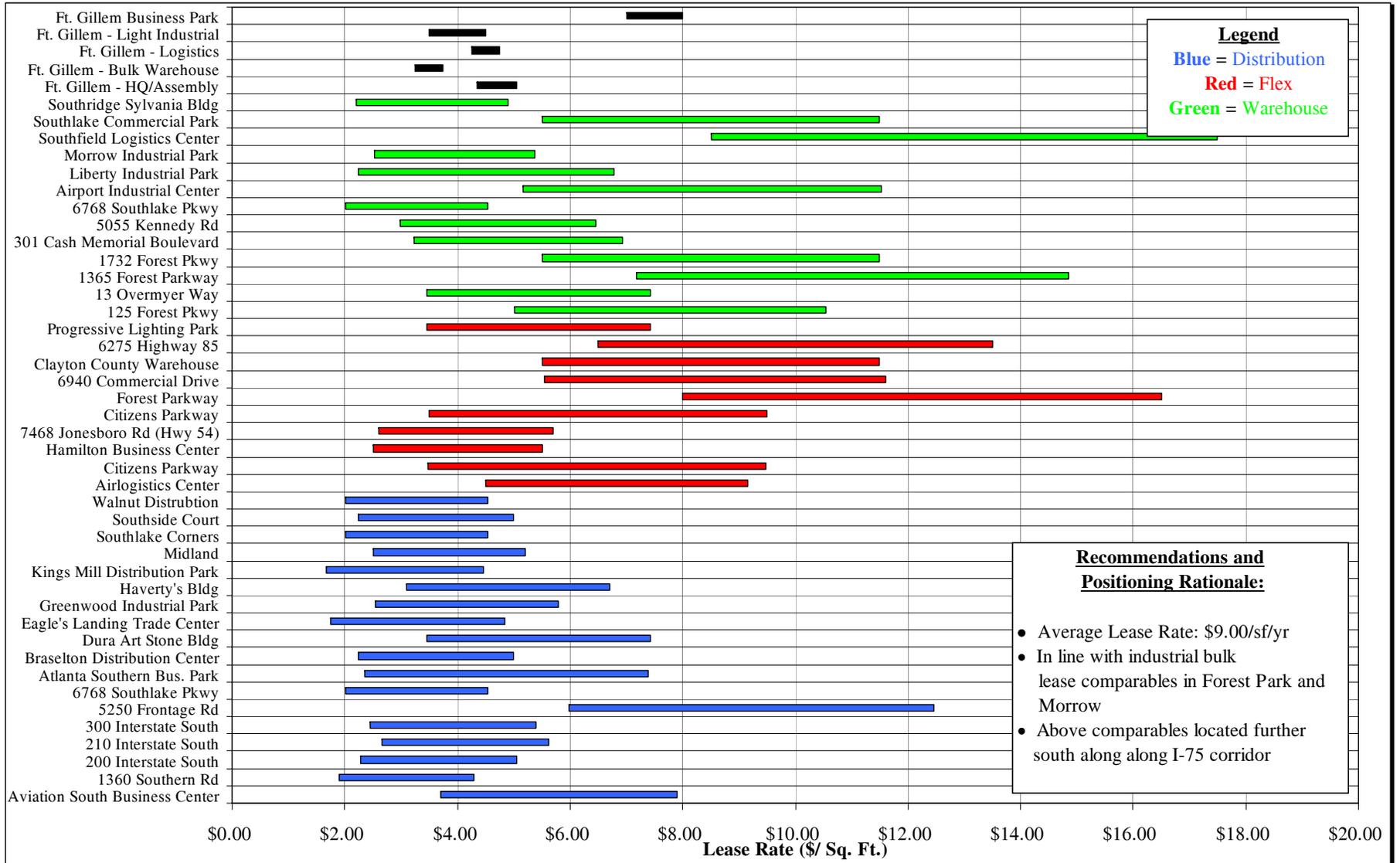


3.c. Recommended Product Program – Alternative C

Product Category Planning Area	Gross Acres (1)	Indicative Density/ FAR	Recommended Product Program							Acreage Absorption Potential (3)		
			Product Type	Acreage	Mix of Planning Area	Density/ FAR	Lot Size	Total Units/ Square Feet	Price Positioning (2)	Yrs 1-5	Yrs 5-10	Yrs 10-15
ALTERNATIVE C												
Industrial/Warehousing												
HQ-Assembly	183	0.25	HQ-Assembly	183	100%	0.25	NA	1,992,870	\$4.70	183		
Bulk Warehouse	123	0.40	Bulk Warehouse	123	100%	0.40	NA	2,143,152	\$3.50	60	63	
Logistics	69	0.34	Logistics	69	100%	0.34	NA	1,021,918	\$4.50	69		
Light Industrial	67	0.34	Light Industrial	67	100%	0.34	NA	992,297	\$4.00		67	
Business Park												
BP 1	42	0.25	R&D/Service	42	100%	0.25	NA	457,380	\$7.50	42		
BP 2	29	0.25	R&D/Service	29	100%	0.25	NA	315,810	\$7.50	29		
BP 3	72	0.25	R&D/Service	72	100%	0.25	NA	784,080	\$7.50	15	57	
BP 4	0	0.25	-	-	-	-	-	-	-			
BP 5	0	0.25	-	-	-	-	-	-	-			
Single Family Residential												
SF 1	18	NA	Low Density II	18	100%	3.0	10,000	54	\$280,450	18		
SF 2	71	NA	Low Density II	35	49%	3.0	10,000	105	\$280,450	20	15	
			Medium Density I	36	51%	4.3	7,000	154	\$255,450	34		
SF 3	41	NA	Medium Density I	14	34%	4.3	7,000	60	\$255,450			14
			Medium Density II	14	34%	5.0	6,000	70	\$233,550			14
			Med.-High Density	13	32%	6.0	5,000	78	\$210,000			13
SF 4	0	NA	-	-	-	-	-	-	-			
SFD Total:				130	100%	4.0	7,482	521	\$253,334			
MF 1	17	10.00	Apartments	17.00	100%	10.00	-	170	\$1,025	17		
Commercial Retail												
CR 1	25	0.40	Neighborhood Center	25	100%	0.40	NA	435,600	\$18.00			25
CR 2	17	0.40	Neighborhood Center	17	100%	0.40	NA	296,208	\$18.00	17		
CR 3	0	0.40	-	-	-	-	-	-	-			
Commercial Office												
CO1	0	0.38	-	-	-	-	-	-	-			

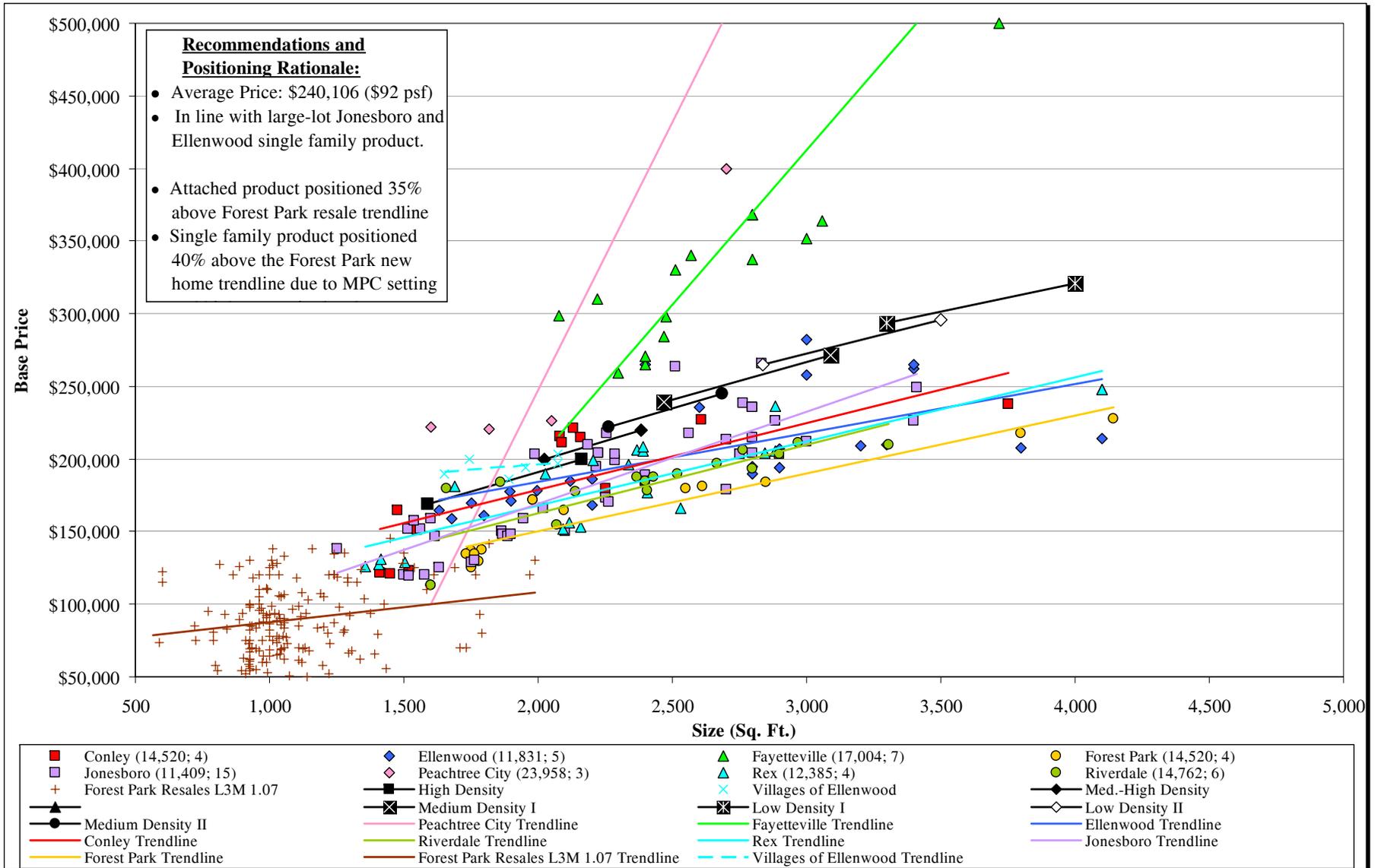


4.a. Product Segmentation & Positioning Strategy – Industrial





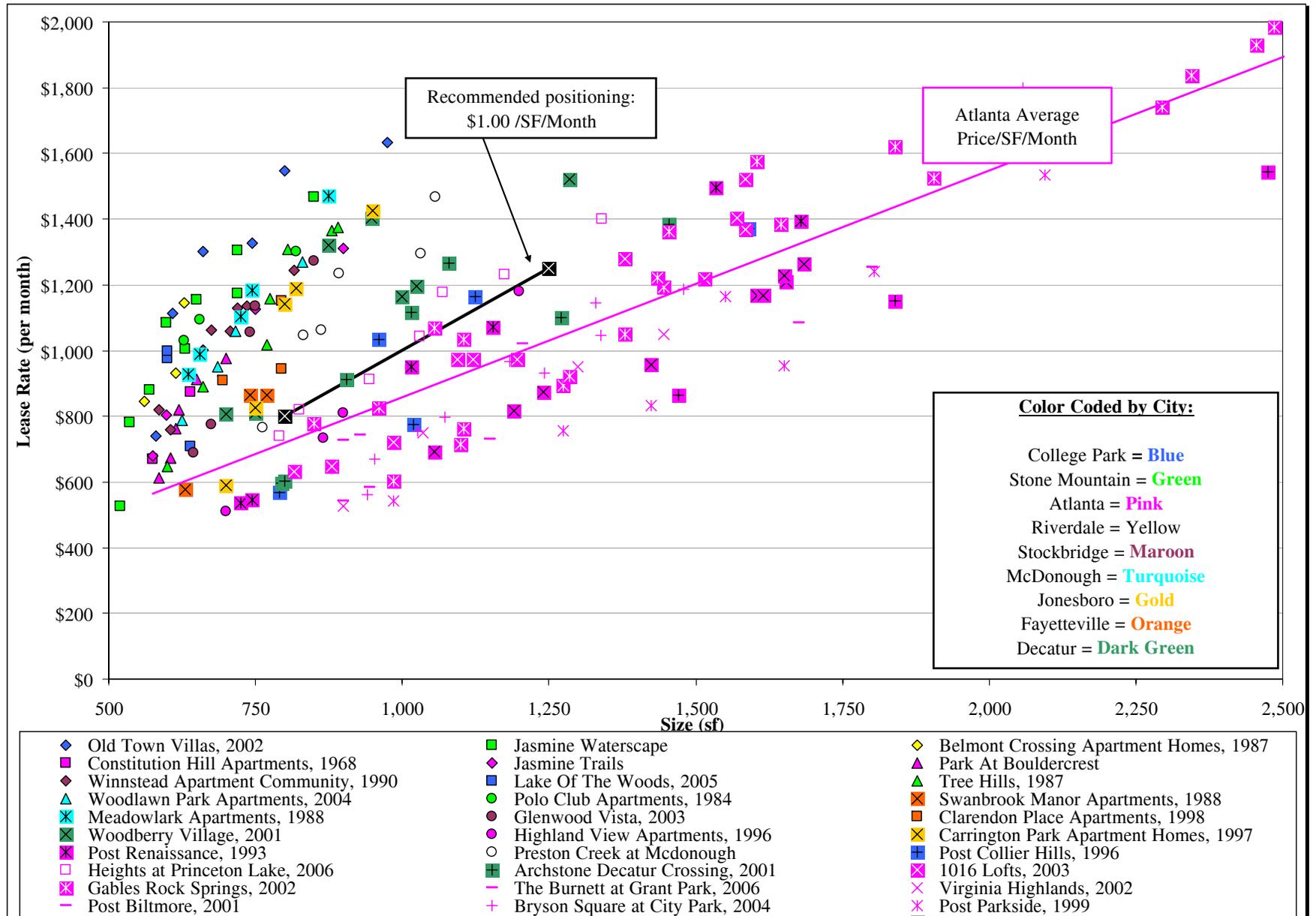
4.b. Product Segmentation & Positioning Strategy – Residential (For Sale)



Note: The numbers in parentheses represent average lot size and number of projects in sample set, respectively.

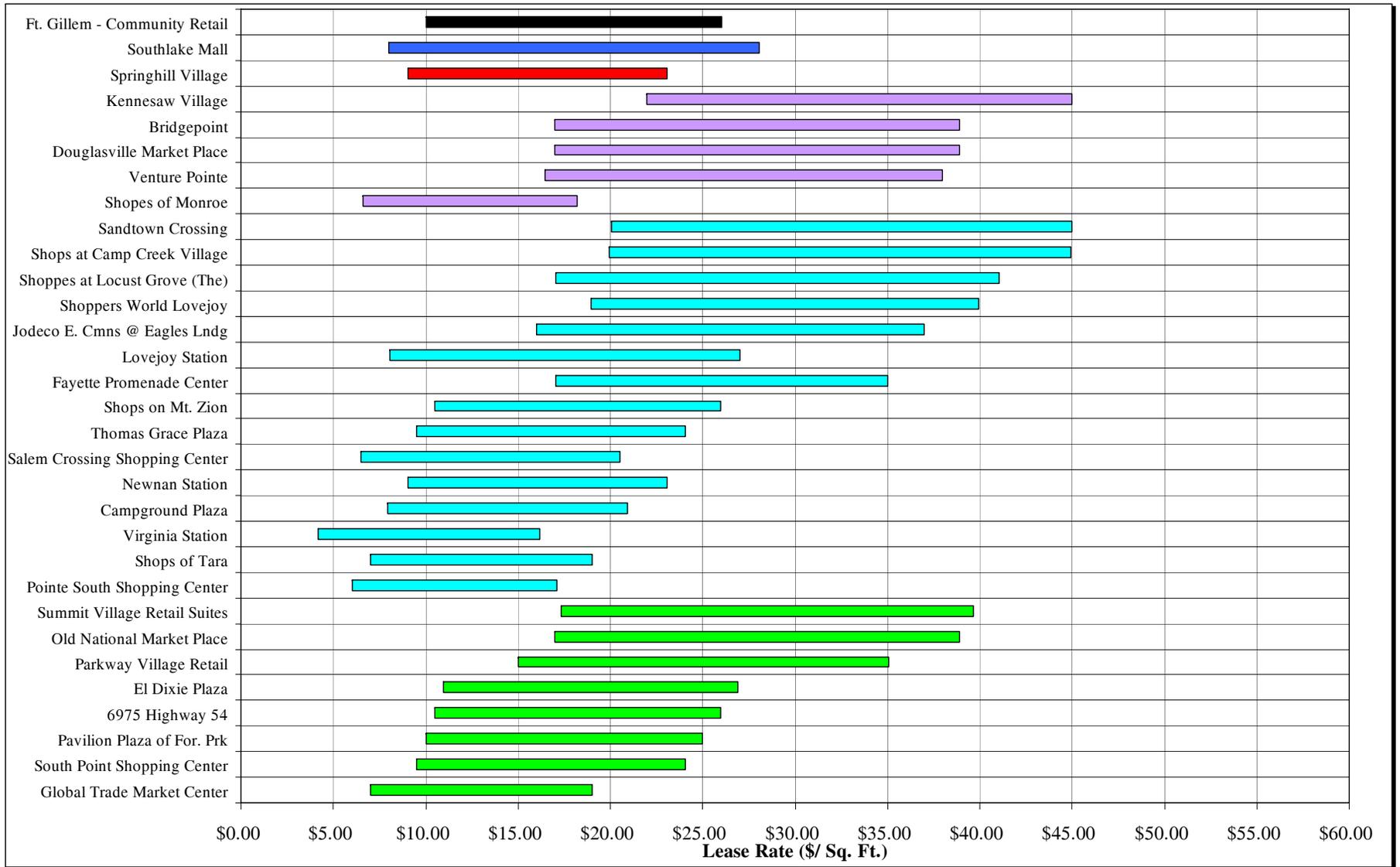


4.c. Product Segmentation & Positioning Strategy – Residential (Apartment)



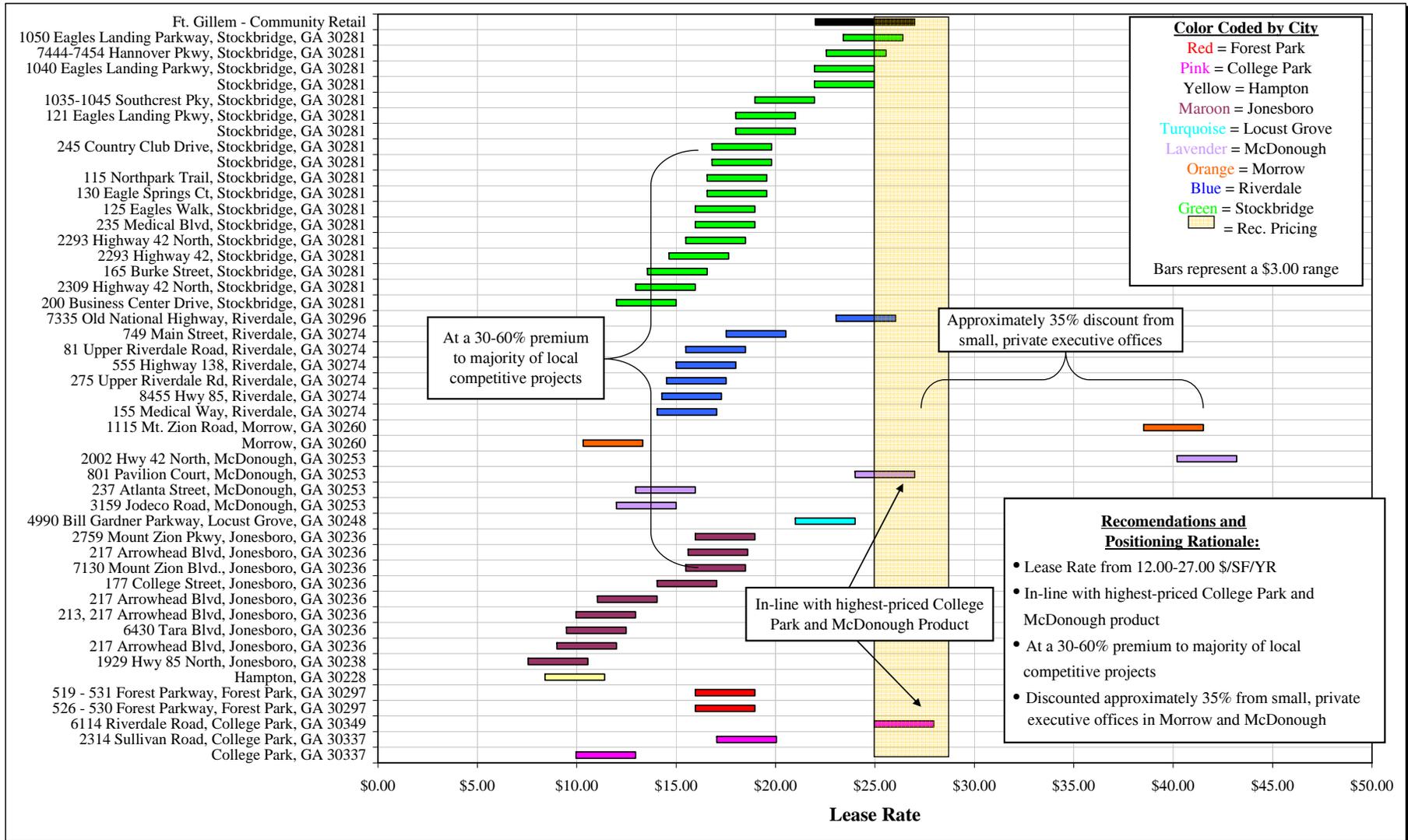


4.d. Product Segmentation & Positioning Strategy – Retail





4.e. Product Segmentation & Positioning Strategy – Office





5.a. Land Residual Analysis – Industrial

Item	Ratios	Industrial/Warehousing				Business Park
		HQ-Assembly	Bulk Warehouse	Logistics	Light Industrial	R&D/Service
RESIDUAL TO DEVELOPER						
INCOME						
Base Rental Income						
Income per Square Foot		\$4.50	\$2.75	\$4.25	\$3.75	\$8.00
Planned Square Footage per Acre		10,890	17,424	14,810	14,810	10,890
Potential Gross Income per Acre		\$49,005	\$47,916	\$62,944	\$55,539	\$87,120
Less Vacancy	7% of PGI	(3,430)	(3,354)	(4,406)	(3,888)	(6,098)
Gross Income less Vacancy per Acre		\$45,575	\$44,562	\$58,538	\$51,651	\$81,022
EXPENSES						
Taxes	\$0.00 psf	\$0	\$0	\$0	\$0	\$0
Operating expenses per SF		\$0.00	\$0.00	\$0.00	\$0.00	\$0.65
Operating Expenses		0	0	0	0	7,079
Total Operating Expenses		\$0	\$0	\$0	\$0	\$7,079
Marketing	0.10 psf	\$1,089	\$1,742	\$1,481	\$1,481	\$1,089
Total Marketing		\$1,089	\$1,742	\$1,481	\$1,481	\$1,089
Total Expenses		\$1,089	\$1,742	\$1,481	\$1,481	\$8,168
PSF		\$0.10	\$0.10	\$0.10	\$0.10	\$0.75
NOI per Acre		\$44,486	\$42,819	\$57,057	\$50,170	\$72,854
Capitalized Value per Acre	7.00%	\$636,000	\$612,000	\$815,000	\$717,000	\$1,041,000
Discount to Current Value		0.00	0.00	0.00	0.00	0.00
Discounted Capitalized Value per Acre		\$636,000	\$612,000	\$815,000	\$717,000	\$1,041,000
		\$58	\$35	\$55		\$96
BUILDING CONSTRUCTION COSTS						
Hard Costs						
Lot Finishing Costs	per acre	\$50,000	\$50,000	\$50,000	\$50,000	\$75,000
Construction Costs/square foot		\$25	\$15	\$24	\$21	\$25
Total Direct Costs		\$272,250	\$261,360	\$355,450	\$311,018	\$272,250
Tenant Improvements/square foot		\$5	\$2	\$5	\$5	\$20
Total Tenant Improvements		\$54,450	\$34,848	\$74,052	\$74,052	\$217,800
Parking Costs	1.2 spaces per 1,000sf	2.0				4.0
Surface Parking	\$2,500 per space	\$54,450	\$52,272	\$44,431	\$44,431	\$108,900
Total Parking Costs		\$54,450	\$52,272	\$44,431	\$44,431	\$108,900
Total Hard Costs		\$431,150	\$398,480	\$523,933	\$479,502	\$673,950
Soft Costs						
Contractor Fee	3% of costs	\$11,435	\$10,454	\$14,218	\$12,885	\$17,969
General & Administrative/Permits	3% of costs	11,435	10,454	14,218	12,885	17,969
Insurance	1% of costs	3,812	3,485	4,739	4,295	5,990
Marketing/Leasing	1% of costs	3,812	3,485	4,739	4,295	5,990
Other (Legal, Architect, Engineering, Impact Fees)	3% of costs	11,435	10,454	14,218	12,885	17,969
Contingency	3% of costs	11,435	10,454	14,218	12,885	17,969
		\$53,361	\$48,787	\$66,351	\$60,130	\$83,853
Finance Costs (as % of total costs)	7% (3)	\$22,635	\$20,920	\$27,506	\$25,174	\$35,382
Total Soft Costs	18%	\$75,996	\$69,707	\$93,857	\$85,304	\$119,235
Lease Up Costs						
Leasing Commissions	5% (2)	\$22,787	\$22,281	\$29,269	\$25,826	\$40,511
Total Lease Up Costs		\$22,787	\$22,281	\$29,269	\$25,826	\$40,511
Builder Profit	10% cap. Value	\$63,600	\$61,200	\$81,500	\$71,700	\$104,100
Total Costs (not including Loan Repayment) per Acre		\$593,534	\$551,668	\$728,559	\$662,331	\$937,796
		\$55	\$32	\$49	\$45	\$86
LAND RESIDUAL - SUPER PAD						
Discounted Capitalized Value per Acre		\$636,000	\$612,000	\$815,000	\$717,000	\$1,041,000
Total Costs (not including Loan Repayment) per Acre		593,534	551,668	728,559	662,331	937,796
Land Residual - Super Pad per Acre		\$42,466	\$60,332	\$86,441	\$54,669	\$103,204
Per Acre		\$42,466	\$60,332	\$86,441	\$54,669	\$103,204
Per FAR Square Foot (Building)		\$3.90	\$3.46	\$5.84	\$3.69	\$9.48



5.b. Land Residual Analysis – Residential (For Sale)

Item	Ratios	Product Type					
		Low Density I	Low Density II	Medium Density I	Medium Density II	Med.-High Density	High Density
RESIDUAL TO DEVELOPER							
Revenues							
Average Base Price		\$307,100	\$280,450	\$255,450	\$233,550	\$210,000	\$184,500
% Units with Premium		25%	20%	15%	15%	15%	15%
% Average Premium		10%	7%	5%	5%	5%	5%
Premium		\$7,678	\$3,926	\$1,916	\$1,752	\$1,575	\$1,384
% Units with Upgrades		95%	95%	95%	85%	85%	85%
% Average Upgrade		10%	7%	5%	5%	5%	5%
Options/Upgrades		\$29,175	\$18,650	\$12,134	\$9,926	\$8,925	\$7,841
Total Revenues From Residential Sales		\$343,953	\$303,028	\$269,501	\$245,229	\$220,501	\$193,726
Commissions	3.0% of revenues	10,319	9,091	8,085	7,357	6,615	5,812
Net Revenues From Residential Sales		\$333,635	\$293,937	\$261,416	\$237,872	\$213,886	\$187,914
Non-Financing Costs							
Lot Finishing Costs	\$12,500 per Unit	\$12,500	\$12,500	\$12,500	\$12,500	\$12,500	\$12,500
Construction Costs/square foot		\$50	\$53	\$55	\$55	\$55	\$55
Average Unit Size (square feet):		3,650	3,169	2,779	2,475	2,204	1,875
Construction Costs		\$182,500	\$167,931	\$152,845	\$136,125	\$121,220	\$103,098
Other Costs							
Common Area	1.0% of revenues	3,440	3,030	2,695	2,452	2,205	1,937
Options and Upgrades	60.0% of options revenue	17,505	11,190	7,280	5,956	5,355	4,705
Marketing and Sales	3.0% of base price	9,213	8,414	7,664	7,007	6,300	5,535
G & A	3.0% of base price	9,213	8,414	7,664	7,007	6,300	5,535
Property Taxes	0.8% of base price	2,457	2,244	2,044	1,868	1,680	1,476
Other Soft Costs/Contingency	5.0% of base price	15,355	14,023	12,773	11,678	10,500	9,225
Total Other Costs		\$57,182	\$47,313	\$40,118	\$35,967	\$32,340	\$28,413
Total Non-Financing Costs		\$252,182	\$227,744	\$205,463	\$184,592	\$166,060	\$144,011
Financing Costs							
Loan Draw (including finished lots)	75% of hard costs	\$189,137	\$170,808	\$154,098	\$138,444	\$124,545	\$108,008
Construction Interest (6 mos)	7.0% of loan draw	6,620	5,978	5,393	4,846	4,359	3,780
Loan Fee	1.5% of loan draw	2,837	2,562	2,311	2,077	1,868	1,620
Total Financing		\$9,457	\$8,540	\$7,705	\$6,922	\$6,227	\$5,400
Total Costs (Excluding Land)		\$261,639	\$236,284	\$213,168	\$191,514	\$172,287	\$149,411
Total Costs per Square Foot		72	75	77	77	78	80
Builder Profit	8.0% of revenue	\$27,516	\$24,242	\$21,560	\$19,618	\$17,640	\$15,498
Land Residual							
Revenues		\$333,635	\$293,937	\$261,416	\$237,872	\$213,886	\$187,914
Total Costs (including Builder Profit)		289,155	260,526	234,728	211,132	189,927	164,909
Land Residual -- Super Pad		\$44,480	\$33,410	\$26,688	\$26,740	\$23,959	\$23,005
As % of Base Home Price		14%	12%	10%	11%	11%	12%
As % of Total Home Price		13%	11%	10%	11%	11%	12%
Super Pad Value per Acre							
Density		2.5	3.0	4.3	5.0	6.0	8.6
Super Pad Value per Residential Acre		\$111,199	\$100,231	\$114,375	\$133,698	\$143,752	\$197,188



5.c. Land Residual Analysis – Residential (Apartment)

	<u>Apartments</u>
PRODUCT PROGRAM	
Total Units per Acre	10.00
Average Base Rent	\$1,025
Average Premium	\$0
Average Unit Size (square feet)	1,025
Average Value Ratio	\$1.00
Average Gross Size Per Unit (95% Efficiency)	1,080
Construction Costs (per square foot)	\$55
ANNUAL INCOME/EXPENSES PER UNIT	
REVENUES:	
Rental Income	
Base Rental Income	Per Year \$12,300
Unit Premium Income	0% Premium \$0
Potential Gross Income from Rentals	Total \$12,300
Vacancy and Collection	
(Less) Vacancy and Collection	5.0% of PGI (\$600)
Effective Gross Income From Rentals	\$11,700
Total Revenue	\$11,700
EXPENSES:	
Operating Expenses	30% of PGI \$3,690
Total Expenses	\$3,690
Percent of PGI	30%
Net Operating Income	\$8,010
Percent of PGI	65%
CAPITALIZED VALUE	7.5% Capitalization Rate \$106,800

DEVELOPMENT & CONSTRUCTION COSTS		
Lot Finishing Costs	\$5,000 per unit	\$5,000
Construction Costs		
Hard Costs	\$55 Per Square Foot	\$56,375
On & Off Site	\$3,333 Per Unit	\$3,333
Contingency	5% of Cost	\$2,985
Total Lot/Construction Costs (excluding Financing)		\$67,693
Soft Costs		
Architecture/Engineering	\$2,083 per unit	\$2,083
3rd Party Reports	\$500 per unit	\$500
Permits/Fees/Utilities	\$3,750 per unit	\$3,750
Marketing/Startup	\$333 per unit	\$333
Property Tax	\$52 per unit	\$52
Insurance	\$417 per unit	\$417
Overhead	\$1,333 per unit	\$1,333
Legal/Title/Closing	\$417 per unit	\$417
Contingency	\$333 per unit	\$333
Total Project Costs (excluding Financing)		\$9,218
Total Costs (excluding Financing)		\$76,912
FINANCING		
Total Construction Loan Draw	75% of Costs	\$57,700
Interest Expense	7% of Loan Draw	\$2,706
Loan Fee	2% of Loan Draw	\$900
Total Costs (including Financing)		\$80,518
LAND RESIDUAL		
Total Capitalized Value (Sales Price)		\$106,800
(Less) Total Costs (including financing)		(\$80,518)
(Less) Developer Profit	10.0% of Value	(\$10,700)
(Less) Costs of Sale	3.0% of Value	(\$3,200)
Land Residual -- Per Unit		\$12,382
As a % of Capitalized Value		11.6%
Land Value Per Acre		\$123,821
Land Value Per Square Foot		\$12.08



5.d. Land Residual Analysis – Retail

Item	Ratios	Retail
RESIDUAL TO DEVELOPER INCOME		
Base Rental Income		
Income per Square Foot		\$18.00
Planned Square Footage per Acre		9,500
Potential Gross Income per Acre		\$171,000
Less Vacancy	10% of PGI	(17,100)
Gross Income less Vacancy per Acre		\$153,900
EXPENSES		
Operating Expenses		
	15% of Gross Income	\$23,085
		\$23,085
Marketing	0.25 psf	\$2,375
Total Marketing	\$0.25 psf	\$2,375
Total Expenses		\$25,460
EBITDA		\$128,440
Capitalized Value	7.25%	\$1,772,000
Discount to Current Value		0.00
Discounted Capitalized Value per Acre		\$1,772,000
BUILDING CONSTRUCTION COSTS		
Lot Finishing Costs	\$50,000 per acre	\$50,000
Hard Costs		
Construction Costs/square foot		\$50
Total Direct Costs		\$475,000
Total Tenant Improvements	\$35 psf	\$332,500
Parking Costs		
Surface Parking	4 spaces per 1,000sf \$2,500 per space	\$95,000
Total Parking Costs		\$95,000
Total Hard Costs		952,500
Soft Costs		
Contractor Fee	4% of costs	\$51,400
General & Administrative/Permits	4% of costs	51,400
Insurance	2% of costs	25,700
Marketing/Leasing	1% of costs	12,850
Other (Legal, Architect, Engineering, Impact Fees)	7% of costs	89,950
Contingency	5% of costs	64,250
		\$295,550
Finance Costs (as % of total costs)	7% (3)	\$56,674
Total Soft Costs	34%	\$352,224
Lease Up Costs		
Leasing Commissions	5% (2)	76,950
Total Lease Up Costs		\$76,950
Builder Profit	10% capitalized value	\$177,200
Total Costs (not including Loan Repayment) per Acre		\$1,558,874

LAND RESIDUAL - SUPER PAD	
Discounted Capitalized Value per Acre	\$1,772,000
Total Costs (not including Loan Repayment) per Acre	1,558,874
Land Residual - Super Pad per Acre	\$213,126
Per Acre	\$213,126
Per Square Foot	\$22



5.e. Land Residual Analysis – Office

Item	Ratios	Office
RESIDUAL TO DEVELOPER		
INCOME		
Base Rental Income		
Income per Square Foot		\$24.50
Planned Square Footage		16,553
Potential Gross Income		\$405,544
Less Vacancy	10% of PGI	(40,554)
Gross Income less Vacancy		\$364,989
EXPENSES		
Taxes	\$2.50 psf	\$41,382
Operating expenses per SF		\$4.00
Operating Expenses		66,211
Total Operating Expenses		\$107,593
Marketing	0.50 psf	\$8,276
Total Marketing		\$8,276
Total Expenses		\$115,870
PSF		\$7.00
NOI		\$249,120
Capitalized Value	7.25%	\$3,436,000
Discount to Current Value		0.00
Discounted Capitalized Value		\$3,436,000
BUILDING CONSTRUCTION COSTS		
Lot Finishing Costs	\$50,000 per acre	\$50,000
Hard Costs		
Construction Costs/square foot		\$90
Total Direct Costs		\$1,489,752
Total Tenant Improvements	\$25 psf	\$413,820
Parking Costs	4 spaces per 1,000sf	
Surface Parking	\$2,500 per space	\$165,528
Total Parking Costs		\$165,528
Total Hard Costs		\$2,119,100
Soft Costs		
Contractor Fee	4% of costs	\$82,764
General & Administrative/Permits	3% of costs	62,073
Insurance	2% of costs	41,382
Marketing/Leasing	1% of costs	20,691
Other (Legal, Architect, Engineering, Impact Fees)	4% of costs	82,764
Contingency	4% of costs	82,764
		\$372,438
Finance Costs (as % of total costs)	7% (3)	\$126,086
Total Soft Costs	24%	\$498,524
Lease Up Costs		
Leasing Commissions	5% (2)	\$182,495
Total Lease Up Costs		\$182,495
Builder Profit	10% cap. Value	\$343,600
Total Costs (not including Loan Repayment)		\$3,143,719

LAND RESIDUAL - SUPER PAD	
Discounted Capitalized Value	\$3,436,000
Total Costs (not including Loan Repayment)	3,143,719
Land Residual - Super Pad	\$292,281
Per Acre	\$292,281
Per Square Foot	\$18



6.a. Projected Revenue Flows – Alternative A

	<u>Years 0-5</u>	<u>Years 5-10</u>	<u>Years 10-15</u>	<u>Total Revenue</u>
Land Sales Revenue				
HQ-Assembly	\$8,238,462	\$0	\$0	\$8,238,462
Bulk Warehouse	7,843,116	6,093,498	0	13,936,613
Logistics	3,630,525	0	0	3,630,525
Light Industrial	0	5,794,883	0	5,794,883
Business Park	\$4,272,638	\$2,848,426	\$0	\$7,121,064
High Density	\$0	\$985,942	\$0	\$985,942
Med.-High Density	0	2,012,532	0	2,012,532
Medium Density II	0	1,470,675	0	1,470,675
Medium Density I	915,001	2,630,628	0	3,545,629
Low Density II	2,906,693	0	0	2,906,693
Low Density I	4,670,365	0	0	4,670,365
Apartments	\$2,600,249	\$0	\$0	\$2,600,249
Neighborhood Retail	\$5,328,156	\$0	\$0	\$5,328,156
Neighborhood Office	\$3,478,143	\$1,490,633	\$0	\$4,968,776
Total Finished Lot/Pad Sales Revenue	\$43,883,349	\$23,327,217	\$0	\$67,210,566
Net Present Value 20% Discount Rate	\$31,854,825			



6.b. Projected Revenue Flows – Alternative B

	<u>Years 0-5</u>	<u>Years 5-10</u>	<u>Years 10-15</u>	<u>Total Revenue</u>
Land Sales Revenue				
HQ-Assembly	\$8,493,260	\$0	\$0	\$8,493,260
Bulk Warehouse	3,619,900	3,800,895	0	7,420,794
Logistics	8,211,903	0	0	8,211,903
Light Industrial	0	2,733,435	0	2,733,435
Business Park	\$7,637,083	\$6,708,249	\$2,064,077	\$16,409,408
High Density	\$0	\$0	\$0	\$0
Med.-High Density	0	0	0	0
Medium Density II	0	0	0	0
Medium Density I	0	3,888,755	0	3,888,755
Low Density II	3,909,001	3,006,924	0	6,915,925
Low Density I	0	0	0	0
Apartments	\$0	\$0	\$2,600,249	\$2,600,249
Neighborhood Retail	\$0	\$8,951,303	\$0	\$8,951,303
Neighborhood Office	\$0	\$0	\$0	\$0
Total Finished Lot/Pad Sales Revenue	\$31,871,146	\$29,089,560	\$4,664,325	\$65,625,031
Net Present Value 20% Discount Rate	\$26,055,163			



6.c. Projected Revenue Flows – Alternative C

	<u>Years 0-5</u>	<u>Years 5-10</u>	<u>Years 10-15</u>	<u>Total Revenue</u>
Land Sales Revenue				
HQ-Assembly	\$2,547,978	\$2,675,377	\$0	\$5,223,355
Bulk Warehouse	4,162,885	0	0	4,162,885
Logistics	0	5,791,553	0	5,791,553
Light Industrial	0	0	0	0
Business Park	\$4,540,968	\$5,882,618	\$0	\$10,423,586
High Density	\$0	\$0	\$0	\$0
Med.-High Density	0	1,868,780	0	1,868,780
Medium Density II	0	1,871,769	0	1,871,769
Medium Density I	3,888,755	1,601,252	0	5,490,007
Low Density II	3,808,770	1,503,462	0	5,312,232
Low Density I	0	0	0	0
Apartments	\$2,104,963	\$0	\$0	\$2,104,963
Neighborhood Retail	\$3,623,146	\$5,328,156	\$0	\$8,951,303
Neighborhood Office	\$0	\$0	\$0	\$0
Total Finished Lot/Pad Sales Revenue	<u>\$24,677,465</u>	<u>\$26,522,966</u>	<u>\$0</u>	<u>\$51,200,431</u>
Net Present Value	20% Discount Rate	<u>\$21,135,524</u>		



7. Land Price Summary

Land Sales Revenue	<u>Super Pad Price per Acre</u>
HQ-Assembly	\$42,466
Bulk Warehouse	60,332
Logistics	86,441
Light Industrial	54,669
Business Park	\$103,204
High Density	\$197,188
Med.-High Density	143,752
Medium Density II	133,698
Medium Density I	114,375
Low Density II	100,231
Low Density I	111,199
Apartments	\$123,821
Neighborhood Retail	\$213,126
Neighborhood Office	\$292,281



C. EXISTING BUILDINGS EVALUATION

The information contained in table beginning on page C-3 was obtained from the BRAC Personal Property Coordinator and provides a building-by-building summary of the facilities with age of construction, building size, current use, occupancy category and availability of utilities. The Building Suitability Map shown at the end of Appendix C identifies the buildings within the facility as:

- Significant – having potential for redevelopment;
- Not Significant – lacks potential for reuse;
- Possible Relocations – structures that may be reused if relocated.

Getaway House (Club) Building 133

Behind Building 133 are five brick 2-story duplex residence buildings. These appear to be in good condition. There are mostly officers housed in these residences. There are detached brick garages across the street from the residences.

Bldg. 516

This building is a fairly new warehouse built around 1997 that has about 420,000 sq. ft. It is a modern high bay warehouse with sophisticated conveying systems. It has a fire suppression sprinkler system. There are two story office structures inside the building, one of which has an elevator. It has approximately 4-foot high loading docks on both the front and back of the building. It appears well constructed and is very impressive. The building appears to have been constructed on the site of two old warehouses that were demolished. It is connected to old warehouse buildings 508 and 507 on one side and 513 and 514 on the other. The walls between the new warehouse and old warehouses appear to be true firewalls such that the old warehouses could be demolished leaving the wall of the newer warehouse intact and with little disturbance to the new warehouse.

The warehouses adjacent to Bldg. 516 are about 1942 vintage. They have a steel structure and brick exterior walls. The finish floors are about 4 feet above grade. It is our understanding that the roofs were replaced with modified bitumen about 10 years ago. They have a fire sprinkler system in them. Radiant heating was recently installed. They seem structurally sound, but old. We were told that the windows on these old buildings were glazed (caulked) with asbestos caulking and painted with paint containing lead. It was unclear whether any of the asbestos and lead paint had been abated.

It is our understanding that these warehouses, adjacent to 516, were fairly typical of all the warehouses in the 200, 300 and 500 building number series on Fort Gillem.

Bldg 505

The building was built about 1942. It is a steel framed, brick masonry walled warehouse with the primary floor about 4 feet above grade typical of the 500 series buildings. The area toured had been remodeled into office spaces built into the old warehouse. The typical construction was gypsum board / metal stud walls and lay-in ceilings. JR later told us that there was a secure vault under Bldg. 500 that had the biggest AAFES diamonds in it. He said there was a



lot of security around it, but we never saw it, and wouldn't have been allowed to take photos if we did see it.

400 Series Warehouses

These are about 1942 vintage. A couple of the other 400 series buildings appear to have been old hangers of some sort. These were about 1953 vintage. We were provided access to building 400. The building is in poor condition and has little potential for reuse. We were told that this building was typical of the 400 series.

600 Series Warehouses

These are about 1942 vintage and are wood framed construction. They mostly are exposed open bay exterior with some masonry exterior walls in places.

There is a Military Dog Area (service dog cemetery) behind 605. There are about a dozen graves there and a nice sign with words, entitled "Guardians of the Night". There are a couple of benches under a tree near the graves.

Building 101

This building was built in 1942 and is a Headquarters Building. It is fairly prominent and monumental as seen from the road by the east gate entrance. It is a three-story structure that has had the attic remodeled and turned into a command center (fourth floor). No photos were allowed to be taken. The building has a concrete structure, columns about 20 feet on center, and solid brick exterior walls. Floor to floor height appeared to be about 12 feet. The original interior corridor walls were clay tile with plaster with high operable windows for ventilation. Some of these original walls still exist. Others have been changed in past remodels. There was some indication of plaster ceilings above the lay in ceilings in the corridors. There are fire sprinklers on the 4th floor only. The other 3 floors have fire and smoke alarm systems, but no sprinklers. There is one elevator in the building. The toilets have their original marble toilet stalls but wouldn't meet today's ADA standards without remodeling. The fourth floor is a control center and has obviously contained considerable amounts of classified and sophisticated devices and materials.

Credit Union, Building 220

This building was constructed about 1998 and is a functioning credit union in good shape.

Building 205

This building is referred to as the Mini Mart. It was built recently and has a Burger King, Mini Mart and a car wash.

Building 217

This building was recently constructed and is used as a fiber optics building.



Building Inventory

BLDG. NO.	HISTORICAL	STREET ADDRESS	PRIMARY USE	BUILT	CONDITIO N CODE	WALL MATERIAL CODE	OCCUPANCY CATEGORY	BLDG. FLR. AREA	% SPRINK- LERED	GAS METER	ELECTRIC METER	WATER METER
101	P	4705 N. WHEELER DR.	ADMIN	1942	B	B	LIGHT	109,701	25%			
102	P	2341 S. WHEELER DR.	ADMIN	1942	B	B	ORD2	28,123	100%			
103	P	2336 HOOD AVE.	COMM	1942	B	B	ORD1	9,344	0%			
104	P	2327 HOOD AVE	MP	1942	B	C	LIGHT	2,024	0%			
106	N	ASIDE BLDG P-103	GARAGE	1996	A	B	ORD1	3,250	0%			
107	P	FRONT BLDG P-110	MAINT (Motor Pool)	1942	B	B	ORD2	7,617	0%			
108	P	FRONT BLDG P-110	MAINT (Paint & Oil-Lube)	1942	B	L	ORD1	6,740	0%			
110	P	2291 S. 1ST ST	ADMIN	1942	B	B	ORD1	15,006	0%			
111	N	ASIDE BLDG P-110	UTILITY	1942	B	C	LIGHT	48	0%			
113	N	FRONT BLDG P-110	STORAGE	1944	B	C	ORD1	800	0%			
114	P	ASIDE BLDG P-102	UTILITY	1942	B	B	ORD2	786	0%			
115	N	REAR BLDG P-101	STORAGE	1981	B	B	LIGHT	576	0%			
117	N	2321 S. 1ST ST	STORAGE	1942	B	C	ORD1	5,857	0%			
122	N	2400 HOOD AVE	MP	1991	B	C	LIGHT	240	0%			
129	N	ASIDE BLDG P-113	STORAGE		B	L	LIGHT	120	0%			
131	N	2276 MURRAY DR	HOUSING	1941	B	A	LIGHT	1,330	0%			
132	N	REAR BLDG P-133	COMM	1953	B	C	LIGHT	100	0%			
133	N	4619 CLUB DR.	COMM	1945	B	C	ORD1	25,220	100%	X		X
134	N	4630 MURRAY DR.	HOUSING	1945	B	C	LIGHT	4,063	0%			
135	N	4586/4590 STAFF CIR	HOUSING	1947	B	B	LIGHT	4,072	0%	X	X	X
136	N	4574/4578 STAFF CIR	HOUSING	1947	B	B	LIGHT	4,072	0%	X	X	X
137	N	4566/4568 STAFF CIR	HOUSING	1947	B	B	LIGHT	4,072	0%	X	X	X
138	N	4550/4552 STAFF CIR	HOUSING	1947	B	B	LIGHT	4,072	0%	X	X	X
139	N	4538/4540 STAFF CIR	HOUSING	1947	B	B	LIGHT	4,072	0%	X	X	X
140	N	FRONT QTRS P-135	PARKING	1995	A	B	ORD1	1,200	0%			
141	N	FRONT QTRS P-136	PARKING	1995	A	B	ORD1	1,200	0%			
142	N	FRONT QTRS P-137	PARKING	1995	A	B	ORD1	1,200	0%			
145	N	REAR BLDG 135-A	STORAGE	1978	B	L	LIGHT	70	0%			
146	N	REAR BLDG 135-B	STORAGE	1978	B	L	LIGHT	70	0%			
147	N	FRONT QTRS P-138	PARKING	1995	A	B	ORD1	1,200	0%			
148	N	REAR BLDG 136A	STORAGE	1978	B	L	LIGHT	70	0%			
149	N	FRONT QTRS P-139	PARKING	1995	A	B	ORD1	1,200	0%			
150	N	REAR BLDG 136B	STORAGE	1978	B	L	LIGHT	70	0%			
151	N	REAR BLDG 137A	STORAGE	1993	B	L	LIGHT	70	0%			
152	N	REAR BLDG 137B	STORAGE	1978	B	L	LIGHT	70	0%			
153	N	REAR BLDG 138A	STORAGE	1993	B	L	LIGHT	70	0%			
154	N	REAR BLDG 138B	STORAGE	1993	B	L	LIGHT	70	0%			
155	N	REAR BLDG 139A	STORAGE	1993	B	L	LIGHT	70	0%			
156	N	REAR BLDG 139B	STORAGE	1993	B	L	LIGHT	70	0%			
201	P	ASIDE WATER TWR I	UTILITY	1942	B	B	LIGHT	1,059	0%			
202		WATER TOWERS							0%			
203		WATER TOWERS							0%			
204		WATER TOWERS							0%			
205	N	2119 N. 3RD ST.	COMM (Postal)	1942	B	A	ORD2	15,060	0%	X	X	X
206	N	2125 HOOD AVE	COMM (Mini-mart)	1998	B	G	EXTRA	1,528	0%	X	X	X
207A	P	4699 N. 1ST ST.	STORAGE	1942	B	B	ORD2	97,771	100%	X		
207B	P	4653 N. 1ST ST	STORAGE	1942	B	B	LIGHT	77,033	100%	X		
208A	P	4698 N. 2ND ST	STORAGE	1942	B	B	LIGHT	74,889	100%			
208B	P	2120 N. 3RD ST.	COMM	1943	B	B	ORD3	74,889	100%	X		
209A	P	4699 N. 2ND ST	STORAGE	1943	B	B	LIGHT	80,400	100%		X	
209B	P	4653 N. 2ND ST	STORAGE	1943	B	B	EXTRA	75,423	100%			
210A	P	4698 N. 3RD ST	STORAGE	1943	B	B	LIGHT	66,000	100%	X	X	X
210B	P	4652 N. 3RD ST	COMM	1943	B	B	ORD2	95,646	100%	X	X	
211A	P	4599 N. 1ST ST	STORAGE	1943	B	B	LIGHT	66,700	100%	X	X	
211B	P	4553 N. 1ST ST	STORAGE	1943	B	B	ORD1	90,000	100%	X		
212A	P	4998 N. 2ND ST	STORAGE	1942	B	B	LIGHT	78,350	100%		X	X
212B	P	4552 N. 2ND ST	STORAGE	1942	B	B	LIGHT	78,350	100%	X	X	X
213A	P	4599 N. 2ND ST	STORAGE	1942	B	B	LIGHT	105,621	100%			7
213B	P	4553 N. 2ND ST	OPNS	1942	B	B	EXTRA	53,194	100%	X		
214A	P	4598 N. 3RD ST	COMM	1942	B	B	ORD2	113,864	100%	X	X	X



Building Inventory (con't)

BLDG. NO.	HISTORICAL	STREET ADDRESS	PRIMARY USE	BUILT	CONDITIO N CODE	WALL MATERIAL CODE	OCCUPANCY CATEGORY	BLDG. FLR. AREA	% SPRINK- LERED	GAS METER	ELECTRIC METER	WATER METER
214B	P	4552 N. 3RD ST	STORAGE	1942	B	B	LIGHT	45000	100%		X	
217			FIBER OPTICS	NEW			LIGHT					
220	N	4545 N. 4TH ST	COMM (Credit Union-M)	1998	B	B	LIGHT	3730	0%		X	X
224	P	2063 N. 'GB" AVE	STORAGE	1942	B	B	ORD2	12,035	0%		X	X
226	N	NW OF BLDG 224	UTILITY	1942	B	B	LIGHT	340	0%			
301	P	2309 HOOD AVE	OPNS	1942	B	B	LIGHT	1,295	0%			
304A	P	4841 S. 1ST ST	STORAGE	1942	B	B	ORD1	69,324	100%		X	
304B	P	4871 S. 1ST ST	STORAGE	1942	B	B	ORD1	69,324	100%	X	X	
305A	P	4864 S. 2ND ST	STORAGE	1942	B	B	ORD2	122,145	100%	X	X	
305B	P	4900 S. 2ND ST	STORAGE	1942	B	B	LIGHT	21,000	100%		X	
306A	P	4921 S. 1ST ST	STORAGE	1942	B	B	ORD1	74,365	100%		X	
306B	P	4961 S. 1ST ST	STORAGE	1942	B	B	ORD1	74,365	100%		X	
307A	P	4950 S. 2ND ST	STORAGE	1942	B	B	EXTRA	129,408	100%			
307B	P	4988 S. 2ND ST	STORAGE	1942	B	B	EXTRA	68,115	100%			X
308A	N	5003 S. 1ST ST	STORAGE	1942	B	B	ORD2	72,922	100%	X	X	X
308B	N	5045 S. 1ST ST	STORAGE	1942	B	B	ORD2	72,919	100%		X	X
309A	P	2206 S. "7" AVE	STORAGE	1942	B	B	ORD1	95,850	100%		X	X
309B	P	2170 S. "Z" AVE	STORAGE	1942	B	B	ORD1	95,845	100%		X	X
310A	P	2171 S. "V" AVE	STORAGE	1942	B	B	LIGHT	98,715	100%		X	X
310B	P	21358. "V" AVE	STORAGE	1942	B	B	LIGHT	90,898	100%	X	X	X
312	P	2152 S. "Y" AVE	MAINT (Round House)	1942	B	B	ORD2	10,125	0%			
317	N	HOOD.EAST OF 3RD	COMMO		B	L	LIGHT	46	0%			
321	P	AMMO COMPLEX	STORAGE	1942	B	G	XTRA	1,813	0%			
322	P	AMMO COMPLEX	STORAGE	1942	B	G	EXTRA	1,813	0%			
323	P	AMMO COMPLEX	STORAGE	1942	B	G	EXTRA	1,813	0%			
324	P	AMMO COMPLEX	STORAGE	1942	B	G	EXTRA	1,813	0%			
325	P	AMMO COMPLEX	STORAGE	1942	B	G	EXTRA	813	0%			
326	P	AMMO COMPLEX	STORAGE	1942	B	G	EXTRA	1813	0%			
327	P	21035. "Z" AVE	STORAGE	1942	B	B	LIGHT	2,550	0%		X	
328	N	AMMO COMPLEX	STORAGE	1993	B	A	EXTRA	120	0%			
335	N	STEPHENS LAKE	COMM	1942	B	D	LIGHT	450	0%			
400	N	2053 N. "D" AVE	MAINT (J.R.'s Bldg.)	1952	B	B	ORD2	76,623	100%			
401	N	4790 N. 5TH ST	MAINT	1953	B	C	ORD2	27,455	100%		X	
406	P	4751 N. 6TH ST	STORAGE	1943	C	C	LIGHT	34,202	0%			
407	P	4741 N. 8TH ST	MAINT	1942	B	B	ORD2	34,202	100%		X	X
408	P	4741 N. 10TH ST	STORAGE	1942	B	B	LIGHT	34,202	100%			
409	P	4819 N. 6TH ST	STORAGE	1942	C	B	LIGHT	28,080	100%		X	
410	P	4809 N. 8TH ST	STORAGE	1942	C	B	LIGHT	28,080	100%		X	
411	P	4809 N. 10TH ST	STORAGE	1942	C	B	LIGHT	28,080	100%		X	
424	N	MIDDLE BLDG 406	UTILITY	194	C	D	LIGHT	64	0%			
434	N	MIDDLE BLDG 407	UTILITY	1942	B	B	LIGHT	64	0%			
443	N	MIDDLE13LDG408	UTILITY	1942	B	D	LIGHT	64	0%			
454	N	MIDDLE BLDG 409	UTILITY	1942	C	D	LIGHT	64	0%			
464	N	MIDDLE BLDG 410	UTILITY	1942	C	D	LIGHT	64	0%			
473	N	MIDDLE BLDG 411	UTILITY	1942	C	D	LIGHT	64	0%			
499	N	2070 N "E" AVE	MAINT	1960	B	G	LIGHT	6,000	0%			
501	N	1859 HOOD AVE	STORAGE	1943	B	F	LIGHT	2,240	0%			
505	P	4899 N. 11TH ST	STORAGE	1942	B	B	ORD2	125,020	100%	X	X	
506	P	4872 N. 13TH ST	STORAGE	1942	B	B	ORD2	117,964	100%	X	X	
507	P	4871 N. 3TH ST	STORAGE	1942	B	B	ORD2	117,964	100%	X	X	
508	P	4856 N. 15TH ST	STORAGE	1942	B	B	ORD2	117,964	100%	X	X	
509	P	4829 N. 11TH ST	STORAGE	1942	B	B	EXTRA	117,964	100%	X	X	
510	P	4802 N. 13TH ST	STORAGE	1942	B	B	EXTRA	117,964	100%	X	X	
511	P	4761 N. 11TH ST	STORAGE	1942	B	B	ORD1	118,921	100%	X	X	
512	P	4742 N. 13TH ST	STORAGE	1942	B	B	ORD2	118,921	100%	X	X	
513	P	4741 N. 13TH ST	STORAGE	1942	B	B	EXTRA	117,964	100%	X	X	
514	P	4716 N. 15TH ST	STORAGE	1942	B	B	ORD2	117,964	100%	X	X	
515	P	4656 N. 15TH ST	STORAGE	1942	B	B	LIGHT	8,500	0%			
516	N	4700 N. 115TH ST	STORAGE	1997	A	B	ORD2	420,000	100%	X	X	
517	N	1914 N. "E" AVE	STORAGE	1971	B	D	LIGHT	455	0%			
518	N	REAR BLDG P517	UTILITY	1989	B	L	ORD2	120	0%			



D. DETAILED ENVIRONMENTAL REPORT

I. Introduction

The Fort Gillem installation is being closed under the 2005 Base Realignment and Closure (BRAC) process. Environmental considerations are an integral part of effective reuse of the Fort Gillem site in order to ensure that redevelopment plans address the risk to human health and the environment. Environmental issues will affect redevelopment decisions at the Fort Gillem site throughout the planning, design and implementation process. This Environmental Summary has been prepared as part of a preliminary plan to manage the environmental liabilities associated with the site.

On environmental issues, the Cousins/LNR Team undertook to:

- Compile and analyze new and existing data and plans
- Interview installation staff and perform a site visit
- Submit an Environmental Summary
- Assist with a Strategic Reuse Plan

The Cousins/LNR Team performed site visits on March 22, 2007, and April 9, 2007. Team members interviewed Victor Bonilla, BRAC Environmental Coordinator, and Owen Nuttall, Chief of Environmental Division, on April 9, 2007.

This Environmental Summary describes the environmental evaluation which has focused primarily on soil and groundwater impacts, as well as the presence of hazardous building materials.

Site Description

Fort Gillem is located in Forest Park, Georgia, a suburb south of Atlanta in Clayton County, between Georgia Highway 54 (Jonesboro Road) and U.S. Highway 23 (Moreland Avenue). It occupies 1,427 acres and its dimensions are approximately 2.5 miles east to west and approximately 1.5 miles north to south. The geographic location is latitude 33 degrees, 35.5 minutes north and longitude 84 degrees, 19.7 minutes west.

Historical Site Use

Fort Gillem dates to late 1930s when Congress appropriated funding for the construction of two installations, the Atlanta Quartermaster Depot and the Atlanta Quartermaster Motor Base, and selected a site near Conley, Georgia. Construction started in 1941 and both installations were completed in 1942. On April 1, 1948, the depot and motor base were merged and renamed the Atlanta General Depot.

In 1962, the installation name was changed to the Atlanta Army Depot. On July 18, 1973, responsibility for the Atlanta Army Depot was transferred from the Army Material Command to U.S. Army Forces Command (FORSCOM). The Atlanta Army Depot was deactivated in 1974 and renamed Fort Gillem in honor of Lieutenant General Alvan C. Gillem Jr., who began his career as a private at Fort McPherson in 1910 and retired 40 years later as commanding general of the Third U.S. Army. Administrative control of the Installation was transferred to Fort McPherson.



Fort Gillem's primary missions were training and material supply through World War II, the Korean War, the Berlin Airlift, the Cuban Crisis, the Vietnam War, and the Persian Gulf conflict. Fort Gillem supports FORSCOM readiness missions and is home for many FORSCOM and Fort McPherson activities. Fort Gillem provides warehouse and office space to the Army and Air Force Exchange Service (AAFES) and to the Federal Emergency Management Agency.

II. Environmental Concerns

Environmental concerns associated with site development can generally be separated into three categories: 1) soil and water impacts, which will affect the land development process; 2) existing facilities impacts, which will affect facility reuse and demolition activities; and 3) other environmental considerations, which could restrict redevelopment including natural, cultural, and historical impacts. The known environmental conditions are summarized in the sections below according to a review of general property information, research of available historical information, interviews with knowledgeable parties, an environmental record search, and a site reconnaissance.

Historical Environmental Investigations

Environmental investigations at Fort Gillem started in the late 1970s with preparation of an environmental impact statement. The 1979 installation assessment, conducted by the U.S. Army Toxic and Hazardous Materials Agency (USATHAMA), was the first systematic evaluation of environmental quality at Fort Gillem. This assessment identified the potential for contamination from historical waste burial at the installation but did not include the collection and analysis of samples. A hydrogeologic study was completed in 1980 and 1981 to characterize the groundwater flow system and to determine if past disposal operations had caused or had the potential to cause groundwater contaminants to migrate in the subsurface. The study included the installation of 36 monitoring wells (Geraghty & Miller, Inc., 1982). Additional investigations and ongoing groundwater and surface-water sampling followed the hydrogeologic study.

The Georgia Environmental Protection Division (GA EPD) issued an administrative order in 1993 requesting investigation of the North Landfill Area (NLA), which comprises approximately 300 acres along the northern boundary of Fort Gillem. The NLA is the largest waste site at Fort Gillem and was used from 1941 until about 1980 (Foster Wheeler Corporation, 1996). After issuance of the administrative order, the Army completed a remedial investigation (RI) and feasibility study (FS) of the NLA. The FS included an initial evaluation and identification of regulatory requirements.

Additional work has since been completed at the NLA, including investigations to provide full definition of the nature and extent of contamination, implementation of interim remedial actions, pilot testing, completion of risk assessments, and sampling of groundwater, surface water, and sediment. In addition to the NLA, the Army has also completed numerous investigations on other sites at Fort Gillem, including the Southeast Burial Sites (SEBS), the 900 Area (Army Enclave), the Western Sewage Treatment Plant, and the Eastern Sewage Treatment Plant. The Army initiated investigation of the extent of off-site contamination north and south of the installation in 2000. These investigations provide a significant body of data that characterizes the hydrogeology, contaminant occurrence, and contaminant distribution at Fort Gillem.



Soil and Groundwater Impacts

Refer to Figure 1 – Environmental Concerns – Soil and Groundwater Impacts included at the end of Appendix D, along with the following discussion.

Hazardous and Petroleum Substances: The site is regulated as a Resource Conservation and Recovery Act (RCRA) Large Quantity and Small Quantity Generator of hazardous waste, but there are no RCRA regulated units. Waste materials are currently stored at Fort Gillem in a 90-day yard and at various satellite accumulation points prior to off-site disposal.

Various buildings operate as waste collection points that regularly use and dispose of oils, lubricants, solvents, acids, paints, toxins, aerosols, metals, mercury and other hazardous and petroleum substances. Victor Bonilla and Owen Nuttall stated that these collection points may have been a small area of waste handling within a building or could have been a satellite accumulation area – for example, a motor pool maintenance area or container storage area. Mr. Nuttall stated that there are two employees who are currently responsible for inspecting the satellite accumulation areas and have been trained to handle hazardous materials related issues.

Historically, waste was disposed of in burial pits on site. Consequently, Fort Gillem is listed in the CERCLIS database (site identification number 0401865, U.S. Environmental Protection Agency (USEPA) Facility Identification Number GA0210020046) based on a preliminary assessment completed on August 15, 1988. The database also indicates that Fort Gillem is in the No Further Remedial Action Planned status.

The Army, however, voluntarily initiated and continues to implement an Installation Restoration Program (IRP) for hazardous waste sites identified in the installation assessment document (USATHAMA, 1980). The IRP follows the guidelines of the Defense Environmental Restoration Program (DERP), which substantially follows the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). Fort Gillem has an ongoing IRP for six sites including:

- FTG-01, NLA
- FTG-04, 900 Area Solvent Disposal Pit
- FTG-07, SEBS, Burial Site No. 1
- FTG-09, SEBS, Burial Site No. 3
- FTG-10, SEBS, Burial Site No. 4
- FTG-13, Western Sewage Treatment Plant

Previous environmental investigations have documented off-installation surface water and groundwater contamination by volatile organic compounds (VOCs), particularly trichloroethene (TCE) and 1,1,2,2-tetrachloroethane (TeCA), originating from five of the six IRP sites. Relatively large and concentrated (maximum concentrations exceeding 100 times the drinking water level) off-installation groundwater plumes have originated from the FTG-01 and FTG-09 sites. TCE in groundwater has also migrated off the installation from the FTG-04, FTG-07, and FTG-13 sites, but at concentrations less than the FTG-01 and FTG-09 sites. There is little evidence to suggest the FTG-10 site is a source of VOC contamination detected in the off-site areas south of Fort Gillem.



Figure 1 depicts only the major groundwater plumes located on the installation. Remedial action is ongoing under the IRP for the FTG areas. There is no current corrective action for contaminated groundwater on site or off site.

Landfills and Dumps: Seven landfills and dumps (depicted as FTG-01, FTG-02, FTG-04, FTG-07, FTG-08, FTG-09, and FTG-10 in Figure 1) on record were investigated under the IRP. The landfills and dumps consist of various types of debris. The 1980 installation assessment (USATHAMA) states that some buried wastes were disposed of in flood plain areas in close proximity to perennial streams. Problems have arisen in the past with the materials; some materials exposed by erosion have washed off the installation, prompting complaints from citizens in surrounding residential areas. Construction of coffer dams and erosion control structures in the floodplains completed in the 1990s stabilized the areas of the landfills prone to erosion along these perennial streams. In the future, however, the erosion control structures must be adequately maintained to prevent buried wastes from entering the streams.

USTs/ASTs: Twelve underground storage tanks (USTs) and 16 registered above-ground storage tanks (ASTs) are present on site. There are also historical UST and AST locations on the site. According to the GA EPD, five sites are currently listed in the leaking UST database. Remedial action is ongoing at seven of the UST sites.

Adjacent Properties: There are no known releases from off-site facilities that are suspected of impacting the site.

Sanitary and Storm Water Utilities and Outfalls: Some industrial operations have historically discharged wastewater to sanitary and storm utilities without permits. This could have deposited recalcitrant, or slowly degrading, contaminants along sanitary lines and at storm sewer outfalls. The status of these sanitary and storm-water utilities and outfall impacts is unknown at this time.

Vapors: Buried putrescible waste, such as garbage and sludge, can generate methane gas and contaminated soil and groundwater can emanate volatile organic vapors. In addition, naturally occurring radon gas can be generated by the decay of natural elements in the underlying soils and rock.

Existing Facilities Impacts

Refer to Figure 2 – Environmental Concerns – Facilities Impacts included at the end of Appendix D, along with the following discussion.

Lead-Based Paint: Many of the facilities and buildings at Fort Gillem were constructed before 1978, when the Department of Defense (DoD) banned the use of lead-based paint (LBP), and are likely to contain one or more coats of LBP. Although 10 past assessments have been conducted at the site, a comprehensive or programmatic report for Fort Gillem identifying current quantities of LBP does not exist. There were no records found indicating lead remediation or abatement projects.

Asbestos Containing Materials: Current records indicate there have been limited installation-wide remediation or abatement projects. There are currently 20 structures with documented asbestos surveys. Of the 20 structures surveyed, 15 were found to have friable asbestos and 19 were found to have non-friable asbestos. Each of these structures has an asbestos Operations and Maintenance Plan in place.



Radiological Materials: Cabrera Services reported (2007) that 36 buildings and the NLA at Fort Gillem were impacted from historical use of radiological materials. According to Mr. Bonilla, a building was listed as “impacted” if radioactive materials had been stored there and does not necessarily mean that an entire building or any part of it was affected by radiation. No sampling has been conducted, but sampling might occur in the future.

Radon: A radon survey was conducted during 1990. All detections for radon were below the USEPA’s action level of 4 pico-Curies per Liter (pCi/L), with the exception of one family housing unit which had a level of 4.8 pCi/L.

Operational Ranges: There are 11 active or inactive operational ranges/training areas at Fort Gillem with possible munitions and explosives. There does not appear to have been any investigations for lead bullets shot at any of the ranges to date. According to Mr. Bonilla and Mr. Nuttall (2007), investigations of lead in the soil are planned for two small arms firing ranges in the NLA.

There is one area of possible unexploded ordinances (FTG-11). Previous limited investigation in this area did not identify any unexploded ordinances. The site is believed to be too small to have had large ordinances fired on it. Mr. Bonilla stated that a mustard gas bomb may have been buried in the area of FTG-09.

Polychlorinated Biphenyls (PCBs): All transformers at Fort Gillem have been surveyed and those containing PCBs were removed in 1987. There is no known record or documentation of PCB leaks or spills at the base.

Other Environmental Considerations

The National Environmental Policy Act Environmental Assessment (EA) process is being conducted through a separate effort for the U.S. Army Corps of Engineers by their consultant, the Marstel-Day Team. Cousins/LNR contacted a representative of the Marstel-Day Team as part of this effort. Natural, cultural, and historical issues within the site boundaries will be addressed as part of a document to be issued in the near future by that team.

III. Surface and Subsurface Conditions

In support of BRAC 2005, a Phase I Environmental Condition of the Property (ECP) Report dated January 5, 2007, and a Community Environmental Response Facilitation Act (CERFA) Report dated January 12, 2007, were prepared by the Army’s consultants. The purpose of the ECP Report was to collect reliable information regarding the existing ECP and to determine the property’s suitability for out grant or transfer. The CERFA report documents general areas of contaminated and uncontaminated property at Fort Gillem.

The CERFA categories range from Category 1, which designates areas where there is no suspected release or disposal of hazardous or petroleum products, to Category 7, which designates areas that have not been evaluated or require additional evaluation. The status of the site is graphically depicted in Figure 3 – Environmental Status, included at the end of this Appendix D, based on the ECP Report. Of the site’s 1,427 acres, 238 acres are being retained by the Army as a Reserve Enclave and will not be transferred, approximately 629 acres are considered “uncontaminated,” and approximately 560 acres require additional evaluation. There are no areas on site classified as areas where removal or remedial action is complete or where remedial action is underway. These categories were assigned by the Army and provide a general status based on available information.



The sections below describe in more detail the environmental surface and subsurface conditions at the non-Enclave portion of the site.

Topography and Geology

Understanding the geologic setting is important since it provides an indication of drainage and contaminant transport. As determined by boring data collected by others (Geraghty & Miller, Inc., 1982), Fort Gillem is underlain by metamorphic bedrock principally granitic gneiss. The bedrock has weathered into residual soils consisting of varying amounts of silt, sand, clay, and gravel. Sediments deposited by flowing water (alluvium) overly the residual soil and bedrock at some locations. Bedrock has been detected at depths ranging from 1 to 88 feet (ft) below ground surface (bgs). Shallow rock is known to be located erratically throughout the site, along with some rock outcroppings. Such shallow rock can affect groundwater flow and contaminant transport mechanisms.

Numerous investigations have included installation of groundwater monitoring wells at Fort Gillem. Figure 4, included at the end of this Appendix D, depicts the groundwater monitoring well locations based on available documents. The current existence or condition of these monitoring wells has not been verified for this report.

Groundwater generally ranges from 2 to 32 ft bgs at the site. Groundwater exists under water table conditions. Groundwater flows from upland areas toward the valleys. An upward groundwater flow occurs beneath the steam valleys, such that groundwater from the installation discharges or upwells into surface-water bodies in the area. Therefore, groundwater impacts typically create associated surface-water contamination.

Hood Avenue roughly bisects the installation and runs along a topographic ridgeline that trends northeast to southwest. The ridgeline forms a hydrologic divide such that surface water and groundwater tend to flow toward the north on the north side of Hood Avenue and toward the south on the south side of Hood Avenue.

Due to environmental concerns, the Army converted 18 residences using off-installation domestic groundwater wells to the municipal water supply in the 1990s. However, the groundwater wells were reportedly not abandoned in place and may remain potential receptors.

Installation Restoration Plan - Corrective Action Sites

The section below discusses the active IRP sites and the major operable areas (MOUs) that are located on the property to be transferred by the Army.

Southeast Burial Site including FTG 07 and 10

Surface Soil

Environmental investigations have been conducted at the SEBS since the late 1970s. Surface soil samples from the FTG-07/FTG-10 Study Area were collected from soil borings, direct push sampling, and as grab samples. Surface soils are considered to be from the 0 to 2 ft bgs interval. Overall, surface soil has few detections of organic chemicals and few detections of inorganic analytes at concentrations that indicate they may not be naturally occurring. Surface soil data from FTG-07/FTG-10 are located in these areas: clustered around FTG-10 north of Stephens Lake, in the center of FTG-07 east of Stephens Lake and north of Joy Lake, and in the southeastern corner of the watershed.



VOCs: Ten VOCs (1,1,2,2-TeCA, 2-butanone, acetone, benzene, methylene chloride, styrene, PCE, toluene, TCE, and cis-1,2-dichloroethene [DCE]) were detected in the surface soil samples from the FTG-07/FTG-10 Study Area. Of these 10 compounds, TCE was detected at one location, FTG-10, above the residential and industrial preliminary remediation goals (PRGs).

Semi-Volatile Organic Compounds (SVOCs): Four SVOCs (dibutylphthalate, fluoranthene, pyrene, and bis[2-Ethylhexyl]phthalate) were detected in surface soil at FTG-07/FTG-10. None of the samples exceeded the residential or industrial PRGs for any of these compounds.

Pesticides and PCBs: Nine pesticides (4,4-dichlorodiphenyltrichloroethane; 4,4-dichlorodiphenyldichloroethane; 4,4-dichlorodiphenyldichloroethene; dieldrin; endosulfan II; heptachlor; methoxychlor; gamma-benzene hexachloride [lindane]; and gamma-chlordane) were detected in the surface soil samples from the site. No detections exceeded the industrial or residential PRGs for surface soils, and all of the results were at low concentrations. PCBs were not detected in the surface soils from this area.

Herbicides: One herbicide, 2,4-Dichlorophenoxyacetic acid, was detected at one location at an estimated concentration of 0.92 milligrams per kilogram (mg/kg). This concentration is lower than both the residential and industrial PRGs.

Metals: The following data is based on the 2005 draft background study. GA EPD reviewed the draft background study and determined revisions are necessary. Thus, the following data is provided only as a historical discussion.

Twenty-three metals were detected in the surface soil samples from the FTG-07/FTG-10 Study Area. Of these detections, comparison criteria were exceeded at one or more locations as follows:

- The background value was exceeded for aluminum, antimony, arsenic, barium, cadmium, calcium, copper, iron, lead, manganese, nickel, selenium, silver, thallium, vanadium, and zinc.
- The residential PRG was exceeded for aluminum, antimony, arsenic, barium, cadmium, copper, iron, lead, manganese, and vanadium.
- The industrial PRG was exceeded for arsenic, iron, and lead.

Subsurface Soil

Subsurface soil samples have been collected from soil borings, monitoring well borings, and direct push technology sampling locations, and include soils collected from depths greater than 2 ft bgs.

VOCs: The VOC data set contains analyses from an on-site screening-level laboratory as well as analyses from an off-site fixed-base laboratory. Analyses performed at the on-site laboratory detected only two compounds (TCE and vinyl chloride). Data from samples shipped to the off-site fixed-base laboratory detected 15 VOCs (1,1,2,2-TeCA, 2 butanone, acetone, benzene, carbon disulfide, chloromethane, methyl isobutyl, ketone, methylene chloride, PCE, toluene, TCE, vinyl chloride, xylene, cis-1,2-DCE, and trans 1,2-DCE). All of the VOCs were detected at low concentrations with low frequencies of occurrence. None of the VOCs were detected at concentrations in excess of the industrial or residential PRGs.

SVOCs: One SVOC, pyrene, was detected at a concentration of 0.0443 J mg/kg in a sample collected from the 12 to 14 ft bgs interval. This concentration is lower than the industrial and residential PRGs for this compound.



Pesticides and PCBs: Only three pesticides and no PCBs were detected in the subsurface samples from the FTG-01/FTG-10 Study Area. All three pesticide detections were below the industrial and residential PRGs for these compounds.

Metals: The following data is based on the 2005 draft background study. GA EPD reviewed the draft background study and determined revisions are necessary. Thus, the following data is provided only as a historical discussion.

Twenty-three metals were detected in the subsurface soil samples collected within the FTG-07/FTG-10 Study Area. Chromium, mercury, and vanadium were found at unusually high concentrations.

Groundwater

VOCs have consistently been the primary group of constituents detected in groundwater in this area. Soil sample results have not identified the source area for groundwater contamination, but due to no detections of VOCs in groundwater north of this area, it appears that activities in buildings 309 and 310 might be the source of the groundwater contamination in the FTGs-7 and 10. Building 310 is listed in the ECP Report as an area requiring further evaluation.

VOCs: Twenty-nine VOCs were detected in the groundwater samples collected in the Study Area (Table 4-5). Of these, seven chlorinated solvents (1,1,2,2-TeCA, methylene chloride, PCE, TCE, cis-1,2-DCE, trans-1,2-DCE, and vinyl chloride) were detected at levels above their respective maximum contamination levels (MCLs).

Southeast Burial Site including FTG-09:

Surface soil

VOCs: The primary VOCs detected in surface soils that exceeded comparison criteria were 1,1,2,2-TeCA and TCE.

Subsurface Soil

VOCs: There were several VOCs detected in historical subsurface soil locations. The primary VOCs detected in historical samples that exceeded comparison criteria were 1,1,2,2 TeCA and TCE. Other VOCs detected did not exceed comparison criteria. The greatest concentrations for 1,1,2,2-TeCA and TCE were 57,000 mg/kg and 680 mg/kg, respectively, at the depth of 15 to 16 ft bgs. The highest concentrations of 1,1,2,2-TeCA and TCE detected in soil sample locations within the area all occur between 15 and 20 ft bgs. Vertical delineation of the contaminants 1,1,2,2-TeCA and TCE in subsurface soils was not achieved; the greatest depths from which soil samples were collected (23 to 24 ft bgs) showed concentrations of 1,1,2,2-TeCA and TCE that exceeded the residential PRGs.

Groundwater

VOCs: The primary VOCs that exceed MCLs are 1,1,2,2-TeCA and TCE. The highest concentrations of 1,1,2,2-TeCA and TCE from groundwater samples are 370,000 micrograms per Liter ($\mu\text{g/L}$) and 7,800 $\mu\text{g/L}$ respectively.



Northern Landfill Area including FTG-01 and Major Operable Units 100 through 800

Surface and Subsurface Soil

Subsurface soil in this area is impacted with VOCs, SVOCs, metals, and pesticides. The area is subdivided into MOUs as described below.

MOU-200: Defined as subsurface soil contaminated with VOCs.

MOU-400: Defined as subsurface soil impacted with metals.

MOU-500: Defined as subsurface soil impacted with SVOCs, primarily benzo(a)pyrene.

MOU-600: Defined as surface soil contaminated with lead. A soil removal was completed in 2001 that resulted in the excavation and disposal of approximately 28,000 tons of soil.

MOU-800: Defined as partially buried drums and containers. The drums and containers were removed from the NLA and disposed of in 1999 and 2001. Additional burial areas may exist and completely buried drum and containers may be encountered during intrusive work.

Groundwater and Surface Water

Sixteen VOCs exceeding groundwater MCLs were reportedly detected in the 1996 RI. TCE is the most prevalent and at the highest concentration. The following MOUs are associated with water impacts:

MOU-100: Defined as on-site and off-site groundwater impacted with VOCs.

MOU-300: Defined as groundwater impacted with metals.

MOU-700: Defined as metals and VOCs in surface water.

Installation Restoration Plan – Corrective Action Complete Sites

Site Investigation Reports for the “closed” IRP sites (FTGs- 2, 3, 5, 6, 8, 11 and 14) are under review by the GA EPD. The term closed means that the Army has deemed them complete but the GA EPD is in the process of determining if these sites require additional investigation or no further action.

Underground Storage Tank Sites Requiring Further Action

According to information provided by Mr. Bonilla, the following UST sites require further action by the Army:

- 504 J Avenue
- 401 North 5th Street
- 106 Wheeler Drive
- Building 403 North D. Drive
- 606 North D Drive – groundwater plume with gasoline impacts
- 610 20th Street AAFES Warehouse – groundwater plume with petroleum impacts
- 406 North D Drive



Army's Planned Remediation

The following information regarding the remedial activities at Fort Gillem's active IRP sites (FTGs - 1, 4, 7, 9, 10, and 13) is based on information publicly available in annual Installation Action Plans (IAPs) for the facility. The seven UST areas at the installation requiring further action are not included in these estimates. These estimates are provided merely for informational purposes.

Fort Gillem has developed an ongoing IRP, including schedules, for the following five areas within the site:

FTG-01, NLA

- Interim Remedial Actions: 1993 to 2007
- Remedial Action Operations (RAOs): 2007 to 2014
- Long-Term Monitoring: 2014 to 2034

FTG-07, SEBS, Burial Site No. 1

- Additional groundwater monitoring for FTG-07 will be funded under FTG-09

FTG-09, SEBS, Burial Site No. 3

- Remedial Design: 2006 to 2007
- Interim Remedial Actions: 2000 to 2007
- RAOs: 2007 to 2011
- Long-Term Monitoring: 2011 to 2034

FTG-10, SEBS, Burial Site No. 4

- Additional groundwater monitoring for FTG-10 will be funded under FTG-09

FTG-13, Western Sewage Treatment Plant

- Remedial Design: 2006 to 2007
- RAOs: 2007 to 2011
- Long-Term Monitoring: 2011 to 2034

The Army is planning on retaining the southwest portion of the site for a "Reserve Enclave." FTGs-3,4,5, and 6 are located on the Reserve Enclave and would not be a part of the property acquisition.

At this time, the Army is only required to clean up the remaining "active" IRP sites (FTGs-1,4,7,9,10, and 13). The Army asserts that it is only required to clean up to current use standards (mostly based on undeveloped or industrial land use). The clean-up standards will be determined in the baseline risk assessments reviewed by GA EPD, and will be revised based on their comments. Clean up to more stringent standards, such as residential land use, may be necessary in relation to site redevelopment. Clean up, monitoring, and other corrective actions at some of these sites could take decades, even with aggressive methodologies. Also, deed restrictions (covenants) on these properties could include no use of groundwater and limitations on excavation.



The total future funding requirements for these IRP areas has been estimated by the Army at \$7,790,000. However, the Army states that the estimates should not be considered exact, and reflect the minimum amount of activity necessary in order to meet regulatory compliance. In addition, there are other known sites which require corrective action (such as MOU and UST sites). Redevelopment activities also will necessitate remediation activities of pre-existing unknown conditions that are not now contemplated. Also, clean up criteria related to redevelopment of the site will increase costs.

IV. Regulatory Framework Overview

Federal environmental statutes and regulations apply to active military bases and are implemented through the DERP. The goal is to affect “site closeout” whereby the DoD no longer actively manages or monitors an environmental restoration site. The DERP process can occur through three primary federal frameworks:

- CERCLA or “Federal Superfund”
- National Contingency Plan
- RCRA

There are no RCRA regulated units at Fort Gillem. Therefore, corrective actions at Fort Gillem will follow accepted CERCLA guidance with DoD as the agency responsible for administration of the investigation of past releases of harmful or hazardous chemicals. In addition, state regulators from the GA EPD will play a significant role since Fort Gillem is not on the National Priorities List (NPL) of the Federal Superfund. A GA EPD Administrative Order has been in effect for the NLA since 1993.

The approach proposed for use by DoD at Fort Gillem involves assessing new sites under the following state statute:

- Hazardous Site Response Act (HSRA) or “State Superfund.”

A transferee may elect to involve the following state Brownfield statute on a voluntary basis:

- Georgia Hazardous Site Reuse and Redevelopment Act or Voluntary Brownfield Program (VBP).

The following discussion summarizes the applicable federal and state regulatory framework.

Defense Environmental Restoration Program

The following information is provided from: 1) The Environmental Site Closeout Process Guide, dated September 1999 (USEPA, 2007); and 2) Regulatory Framework For Implementing CERCLA Through the DERP at Fort Gillem, Georgia, dated November 2, 2002.

Fundamentally, regulatory requirements must be “applicable or relevant and appropriate” (ARAR) under the CERCLA process as implemented through the DERP at the Fort Gillem installation.

ARARs are typically categorized into three different groupings: chemical-specific, action-specific, and location-specific. These categories are described as follows:



- Chemical-specific requirements are those based on health- or risk-based values that establish an acceptable amount or concentration of a chemical that may be found in, or discharged to, the ambient environment.
- Action-specific requirements are technology- or activity-based requirements or limitations on actions taken with respect to the hazardous substances.
- Location-specific requirements are limitations on the use of the specific locations such as wetlands.

Under the CERCLA structure, which is incorporated within DERP, ARAR development starts with discovery of an environmental condition, progresses through various investigation stages, and continues until a remedy is successfully completed within the context of the ARAR regulation(s).

Fort Gillem will pursue a final remedy for each site based on establishing Remedial Action Operations (RAO) as defined under CERCLA. These RAOs will be modified to incorporate HSRA ARARs. It is critical that, prior to developing the RAOs, the site conceptual model be fully developed to the extent practical. RAOs are the objectives for the remedy and include a statement of the contaminants, media of concern, potential exposure pathways, and remediation goals, which establish an acceptable level of exposure that is protective of human health and the environment.

Georgia Hazardous Sites Response Program

Portions of the Georgia HSRA are considered ARARs and are important at Fort Gillem because it potentially influences all future investigation activities conducted. The approach proposed at Fort Gillem involves assessing new sites using the HSRA screening process. For those hazardous constituents addressed under HSRA, concentrations of contaminants will be compared to the GA EPD notification concentrations for soil and GA EPD target concentrations for groundwater. For chemicals not covered under HSRA or where CERCLA guidance provides a more conservative result, CERCLA screening guidance will be used in conjunction with the HSRA site screening process. If the initial screening indicates that a site requires further action, future site activities, including risk assessments, will be conducted in accordance with CERCLA and DERP. Under CERCLA, certain HSRA risk reduction requirements will be considered ARARs.

The HSRA public relations requirements are considered administrative and are not ARARs. Public relations activities will be conducted in accordance with DERP guidance.

The HSRA also addresses property notices which are necessary to assure that the site legacy is properly recorded. It is anticipated that a list of sites will be provided in the Army's installation master plan with their legal description (e.g., survey coordinates) and status.

Compliance with HSRA is demonstrated when all of the following items are true:

- Free product has been removed to the extent practicable.
- Soil remaining in place does not exhibit hazardous waste characteristics of toxicity, ignitability, corrosivity, or reactivity.
- Residues do not damage soil, soil biota, vegetation, or wildlife; do not impair the use of soil for agriculture or silviculture; do not cause food chain contamination that would pose a threat to human health; and do not permit accumulation of vapors in buildings that pose a threat to human health.



- Residues do not impact surface water systems.
- Chemical concentrations remaining comply with certain risk reduction standards (RRS) in soil and groundwater.

HSRA describes five different types of RRS, summarized as follows:

- Type 1. RRSs for groundwater and soil that pose no significant risk under a standard residential exposure scenario.
- Type 2. RRSs for groundwater and soil that pose no significant risk under a site-specific residential exposure scenario.
- Type 3. RRSs for groundwater and soil that pose no significant risk under a standard non-residential (e.g., occupational site use) exposure scenario.
- Type 4. RRSs for groundwater and soil that pose no significant risk under a site-specific non-residential exposure scenario.
- Type 5. The use of measures (e.g., engineering or institutional controls) in conjunction with Types 1 through 4 RRSs to limit exposure to hazardous substances on the site if removal is impractical.

Voluntary Brownfields Program

Based on the Cousins/LNR Team's experience with similar sites and a review of data from the site, the Fort Gillem property is eligible for inclusion into the Georgia VBP. The criteria for a property to be included in the program are:

- Has had a pre-existing release
- Does not have liens filed against it under subsection (e) of Code Section 12-8-96
- Is not listed on the federal National Priority List,
- Is not undergoing response activities by an order of USEPA
- Is not a hazardous waste facility as defined in Code Section 12-8-62

The Georgia VBP requires eligible prospective purchasers to apply to the program prior to purchasing the site. The prospective purchaser must complete and submit an application which includes a preliminary corrective action plan (CAP) along with a \$3,000 fee. In addition the prospective purchaser must meet the following criteria:

- Is not a person who has contributed or who is contributing to a release at the property
- Is not related, has not had a business relationship, or is not otherwise affiliated with the current owner of the subject property or any person who has contributed or is contributing to a release at the site
- Has not found evidence of liens filed against the property under subsection (e) of Code Section 12-8-96
- Is not in violation of any order, judgment, statute, rule, or regulation subject to the enforcement authority of the director



Under the VBP, a prospective purchaser is responsible for any soil or source remediation. These costs can be recovered under the Tax Incentive Act of 2003 (H.B. No 531, Act No. 28) over a 10-year period. The environmental liability for any pre-existing groundwater contamination and the responsibility for groundwater remediation, if required, remain with the seller.

A conditional limitation of liability is provided to the prospective purchaser at the time the GA EPD concurs with the CAP. Once the prospective purchaser satisfactorily completes the soil and source remediation described in the CAP, the conditional aspect of the limitation of the liability is removed. This limitation is transferable to future buyers.

A prospective purchaser can develop a CAP for the soil and source remediation that reflects the intended use of the property. This potentially allows cost savings to the purchaser by using developmental features (e.g., parking lots) to minimize or reduce soil removal. Site specific risk based remediation levels for contaminants at the site can be developed, further minimizing the cost. These can be engineered solutions or institutional controls.

The first step in the Brownfield process would be to develop a prospective purchaser (i.e., transferee) corrective action plan (PPCAP) and application to enroll in the Georgia VBP.

V. Transferee Environmental Strategy Options

An environmental strategy will be an integral part of formulating an overall redevelopment strategy and a Strategic Reuse Plan. An environmental regulatory strategy should take into account the transfer schedule and consider the implications of the various land use alternatives along with regulatory requirements of the remediation process.

According to the “Finding of Suitability for Early Transfer” (FOSET) guidance contained in the Manual for the Preparation of Environmental Suitability Documents, which was developed by the Army BRAC Office, a determination will need to be made as to the schedule for transfer of the property. The options include either Early Transfer or Late (“clean”) Transfer.

In the case of an Early Transfer, the Early Transfer Authority (ETA), from Section 120(h)(3) of 42 U.S. Code 9620, authorizes the deferral of the CERCLA covenant that requires all remedial actions to be completed before federal property is transferred. Essentially, the site would be transferred before site remediation is complete. For non-NPL facilities, such as Ft. Gillem, the state governor must concur with the deferral request and it must be approved by the GA EPD. The prospective transferee must identify the intended use of the property, prior to remediation. The intended land use will determine whether the ETA will be possible. The Army must prepare the FOSET and the Base Transition Coordinator must notify the governor of the intent to request a deferral of the CERCLA covenant.

If the transferee is performing the clean up, the Army has to notify the Office of the Deputy Under Secretary of Defense for Environmental Security/Clean up. The notice to this office must provide assurances that the transferee has the financial and technical capabilities for conducting the required remedial actions. The FOSET analysis of the intended use during the deferral period must determine whether the anticipated reuse is reasonably expected to result in exposure to CERCLA hazardous substances. If it is determined that exposure is likely, the analysis must discuss possible restrictions on use (i.e., institutional and engineering controls) to prevent exposure during the clean up of the property.



If the transferee performs the clean up, they must notify the Army that all remedial activities have been completed, allow the Army to enter the property and inspect the site, and give the Army access to all remedial action reports and sampling data.

After the Army has reviewed the available documentation from the transferee, inspected the site, and concurs with the transferee's assessment, the deed to the property will be amended by inserting the CERCLA remedial action warranty as required by Section 120(h)(3)(A)(ii)(I).

A Late Transfer includes the Army entering into an enforcement agreement with schedules and penalties for non-compliance. The Army would be required to clean up the site and then transfer the property with institutional controls upon completion of the remediation, which would possibly restrict site use. The Army would then have responsibility in perpetuity to review active remedies to determine if they are working as designed. This option seems impractical in relation to the preferred Comprehensive Reuse Plan.

For either the Early Transfer or Late Transfer process, if environmental issues are encountered that were the result of the Army's actions (refer to above DERP guidance clean up criteria) the Army could be responsible for the clean up.

The general steps outlined below constitute one of the many optional environmental regulatory strategies which consist of identifying and managing potential environmental liabilities using the GA EPD VBP.

Step 1 – Transferee identifies the intended reuse of the property

Step 2 – Army performs a FOSET

Step 3 – Transferee decides to perform clean up of soil conditions

Step 4 – Transferee develops sampling plan based on identified recognized environmental conditions

Step 5 – Transferee evaluates sampling results and known conditions in relation to the HSRA criteria and prepare a Notification Package

Step 6 – Transferee prepares a PPCAP and VBP Application

VI. Unidentified or Unknown Environmental Conditions

Regardless of the thoroughness of prior EAs at Fort Gillem, there is a significant potential that previously unidentified or unknown environmental conditions will be discovered through further investigation or at the time of redevelopment during ground-disturbing activities. In addition to the investigated burial areas, known to be located mostly in the NLA and SEBS area, there were potentially many other burial sites that were not investigated, and will not be investigated by the Army.

The Early Transfer process will involve monetary and liability negotiations. The Army would be liable for future clean up if, for example, the area is found to exceed the clean up criteria outlined in the DERP guidance.

Although, additional assessment to close data gaps is warranted, a site specific Environmental Management Plan (EMP) will ultimately be necessary to guide informed environmental decision making during the site redevelopment. This plan will be protective of human health and the environment and address pre-existing environmental conditions that remain undiscovered after the transfer and during subsequent phases of the project.



The EMP will take into account the available environmental assessment data on the site and the uncertainties involved. In coordination with and approval of the lead regulatory agency, the EMP will consist of the following components:

- Approved environmental assessment and remediation work plan (e.g., Brownfield Corrective Action Plan)
- Overall environmental health and safety plan
- Quality assurance project plan
- Construction worker precautions during site redevelopment
- End user protection through institutional and engineering controls
- Contingency planning for addressing unknown or unforeseen conditions
- Site security

VII. References

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