REGIONAL REVIEW FINDING

Atlanta Regional Commission • 40 Courtland Street NE, Atlanta, Georgia 30303 • ph: 404.463.3100 • fax:404.463.3105 • www.atlantaregional.com

DATE: 7/30/2005 **ARC REVIEW CODE**: R506301

TO: Chairman Jason Harper
ATTN TO: Cheri Hobson-Matthews, Chief Planner
FROM: Charles Krautler, Director

NOTE: This is digital signature. Original on file.

The Atlanta Regional Commission (ARC) has completed regional review of the following Development of Regional Impact (DRI). Below is the ARC finding. The Atlanta Regional Commission reviewed the DRI with regard to conflicts to regional plans, goals, and policies and impacts it might have on the activities, plans, goals, and policies of other local jurisdictions and state, federal, and other agencies. The finding does not address whether the DRI is or is not in the best interest of the local government.

Submitting Local Government: Henry County
Name of Proposal: **Kingston Village**

Review Type: Development of Regional Impact	**Date Opened:** 6/30/2005	**Date Closed:** 7/30/2005

FINDING: After reviewing the information submitted for the review, and the comments received from affected agencies, the Atlanta Regional Commission finding is that the DRI is in the best interest of the Region, and therefore, of the State.

Additional Comments: ARC reviewed the site plan and had several concerns about the revisions that had been made since the Form 1 meeting in May. The developer submitted two memos to ARC, attached at the end of this report, which needed to be revised to reflect the current site plan that was submitted for review. The attached July 21, 2005 memorandum at the end of this report clarifies and addresses the changes made to the site plan. The project property is crossed by Long Branch Creek and one of its tributaries. The property is entirely within the Long Branch Creek Water Supply Watershed, which is a small (less than 100-square mile) water supply watershed serving Henry County. The County has developed watershed districts for each of its water supply watersheds, including Long Branch Creek. All development on the property must conform to Henry County's Long Branch Water Supply Watershed District requirements, including buffers, water quality controls and impervious surface limits. The project plans show buffers on both streams that appear to meet the Henry County requirements and that exceed the small water supply watershed buffer requirements of State's Part 5 Minimum Environmental Planning Criteria. The proposed project also appears to meet Watershed District impervious surface requirements.

THE FOLLOWING LOCAL GOVERNMENTS AND AGENCIES RECEIVED NOTICE OF THIS REVIEW:

ARC LAND USE PLANNING	ARC TRANSPORTATION PLANNING	ARC ENVIRONMENTAL PLANNING
ARC DATA RESEARCH	ARC AGING DIVISION	GEORGIA DEPARTMENT OF COMMUNITY AFFAIRS
GEORGIA DEPARTMENT OF NATURAL RESOURCES	GEORGIA DEPARTMENT OF TRANSPORTATION	GEORGIA REGIONAL TRANSPORTATION AUTHORITY
CITY OF LOCUST GROVE	CITY OF MCDONOUGH	HENRY COUNTY SCHOOLS
CITY OF HAMPTON	SPALDING COUNTY	MCINTOSH TRAIL RDC

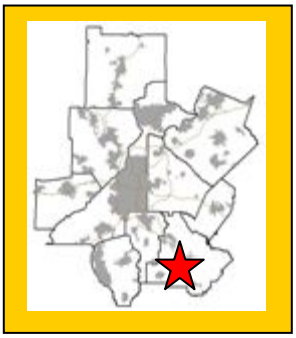
If you have any questions regarding this review, Please call Mike Alexander, Review Coordinator, at (404) 463-3302. This finding will be published to the ARC website.

The ARC review website is located at: http://www.atlantaregional.com/qualitygrowth/reviews.html .

Preliminary Report:	June 30, 2005	**DEVELOPMENT OF REGIONAL IMPACT REVIEW REPORT**	Project:	Kingston Village #788
Final Report Due:	July 30, 2005		Comments Due By:	July 14, 2005

FINAL REPORT SUMMARY

PROPOSED DEVELOPMENT:



Kingston Village is a proposed residential and village office development on 130.4 acres in Henry County that will include 148 single family homes, 47 townhouse, and 36,000 square feet of village office. The site for the proposed development is located along the south side of Bill Gardner Parkway, approximately 2.0 miles east of SR 155. Access to the site will occur at 2 locations along Bill Gardner Parkway and both are proposed full movements driveways.

PROJECT PHASING:

The project is being proposed in one phase with a project build out date for 2008.

GENERAL

According to information on the review form or comments received from potentially affected governments:

Is the proposed project consistent with the host-local government's comprehensive plan? If not, identify inconsistencies.

The project site is currently zoned RA (Residential-Agricultural). The proposed zoning for the site is PD (Planned Development). Information submitted for the review states that the proposed development is not consistent with the Henry's County's Future Land Use Plan, which designates the area as low density residential (1.25-2.5 dwelling units per acre, if on county water and sewer. However, based on the Water Quality Ordinance, the limit is 1.75 units/net acre). The revised site plan submitted for review states a net density of 1.75 units/acre. As further explained in the attached memorandum date July 21, 2005, the revised site plan brings the plan into compliance with the density threshold of the Water Quality Ordinance for Henry County.

Is the proposed project consistent with any potentially affected local government's comprehensive plan? If not, identify inconsistencies.

No comments were received identifying any inconsistencies with any potentially affected local government's comprehensive plan.

Will the proposed project impact the implementation of any local government's short-term work program? If so, how?

No comments were received concerning the implementation of any local government's short term work program.

Will the proposed project generate population and/or employment increases in the Region?

If yes, what would be the major infrastructure and facilities improvements needed to support the increase?

Yes, the proposed development is estimated to generate a site population of approximately

What other major development projects are planned near the proposed project?

The ARC has reviewed other major development projects, known as Area Plan (1984 to1991) or as a DRI (1991 to present), within three miles radius of the proposed project.

2005	**Walker Drive**
2003	**Prologis Park @Greenwood**
2003	**Greenwood Industrial Park**
2003	**DSC Logistics**
2001	**White Oak Business Park**
2000	**Minerva Cole Tract**
1999	**Eagle Creek Country Club**
1996	**Southgate**
1993	**Gone With the Wind Country**

Will the proposed project displace housing units or community facilities? If yes, identify and give number of units, facilities, etc.

Based on information submitted for the review, the site is currently occupied by three houses. These houses will be relocated.

Will the development cause a loss in jobs? If yes, how many?

No.

Is the proposed development consistent with regional plans and policies?

ARC reviewed the site plan and had several concerns about the revisions that had been made since the Form 1 meeting in May. The developer submitted two memos to ARC, attached at the end of this report, which needed to be revised to reflect the current site plan that was submitted for review. The attached July 21, 2005 memorandum at the end of this report clarifies and addresses the changes made to the site plan.

The project property is crossed by Long Branch Creek and one of its tributaries. The property is entirely within the Long Branch Creek Water Supply Watershed, which is a small (less than 100-square mile) water supply watershed serving Henry County. The County has developed watershed districts for each of its water supply watersheds, including Long Branch Creek. All development on the property must conform to Henry County's Long Branch Water Supply Watershed District requirements, including buffers, water quality controls and impervious surface limits. The project plans show buffers on both streams that appear to meet the Henry County requirements and that exceed the small water supply watershed buffer requirements of State's Part 5 Minimum

Environmental Planning Criteria. The proposed project also appears to meet Watershed District impervious surface requirements.

The site plan submitted for the review notes several locations where gates into the single family residences would be put in place. The gated entrances into the single family were a result site plan changes to comply with the density threshold established by the Water Quality Ordinance. However, gating both the street entrances and the pedestrian entrances to the single family residences will discourage connectivity throughout the development, especially pedestrian connectivity. It certainly deters the residents of the townhomes to use the amenity center located in the single family residences neighborhood. ARC's development policies encourage connectivity between uses and pedestrian friendly environments. The policies also promote street patterns, multiple access points, sidewalks and trails, and community design that encourage pedestrian trips that links to parks, community facilities, and other public places. It is strongly recommended that, should the single family portion of the development be gated, that consideration is given to access and alternative routes for the residents of both the single family residential and the townhomes to the village office district as well as the amenity center and the trails proposed throughout the development.

FINAL REPORT

Regional Development Plan Policies

1. Provide development strategies and infrastructure investments to accommodate forecasted population and employment growth more efficiently.

2. Guide an increased share of new development to the Central Business District, transportation corridors, activity centers and town centers.

3. Increase opportunities for mixed-use development, infill and redevelopment.

4. Increase transportation choices and transit-oriented development (TOD).

5. Provide a variety of housing choices throughout the region to ensure housing for individuals and families of diverse incomes and age groups.

6. Preserve and enhance existing residential neighborhoods.

7. Advance sustainable greenfield development.

8. Protect environmentally sensitive areas.

9. Create a regional network of greenspace that connects across jurisdictional boundaries.

10. Preserve existing rural character.

11. Preserve historic resources.

12. Inform and involve the public in planning at regional, local and neighborhood levels.

13. Coordinate local policies and regulations to support the RDP.

14. Support growth management at the state level.

BEST LAND USE PRACTICES

Practice 1: Keep vehicle miles of travel (VMT) below the area average. Infill developments are the best at accomplishing this. The more remote a development the more self contained it must be to stay below the area average VMT.
Practice 2: Contribute to the area's jobs-housing balance. Strive for a job-housing balance with a three to five mile area around a development site.
Practice 3: Mix land uses at the finest grain the market will bear and include civic uses in the mix.
Practice 4: Develop in clusters and keep the clusters small. This will result in more open space preservation.
Practice 5: Place higher-density housing near commercial centers, transit lines and parks. This will enable more walking, biking and transit use.
Practice 6: Phase convenience shopping and recreational opportunities to keep pace with housing. These are valued amenities and translate into less external travel by residents if located conveniently to housing.
Practice 7: Make subdivisions into neighborhoods with well-defined centers and edges. This is traditional development.
Practice 8: Reserve school sites and donate them if necessary to attract new schools. This will result in neighborhood schools which provide a more supportive learning environment than larger ones.
Practice 9: Concentrate commercial development in compact centers or districts, rather than letting it spread out in strips.

Practice 10: Make shopping centers and business parks into all-purpose activity centers. Suburban shopping centers and their environs could be improved by mixing uses and designing them with the pedestrian amenities of downtowns.
Practice 11: Tame auto-oriented land uses, or at least separate them from pedestrian-oriented uses. Relegate "big box" stores to areas where they will do the least harm to the community fabric.

BEST TRANSPORTATION PRACTICES

Practice 1: Design the street network with multiple connections and relatively direct routes.
Practice 2: Space through-streets no more than a half-mile apart or the equivalent route density in a curvilinear network.
Practice 3: Use traffic-calming measures liberally. Use short streets, sharp curves, center islands, traffic circles, textured pavements, speed bumps and raised crosswalks.
Practice 4: Keep speeds on local streets down to 20 mph.
Practice 5: Keep speeds on arterials and collectors down to 35 mph (at least inside communities).
Practice 6: Keep all streets as narrow as possible and never more than four traffic lanes wide. Florida suggests access streets 18 feet, subcollectors 26 feet, and collectors from 28 feet to 36 feet depending on lanes and parking.
Practice 7: Align streets to give buildings energy-efficient orientations. Allow building sites to benefit from sun angles, natural shading and prevailing breezes.
Practice 8: Avoid using traffic signals wherever possible and always space them for good traffic progression.
Practice 9: Provide networks for pedestrians and bicyclists as good as the network for motorists.
Practice 10: Provide pedestrians and bicyclists with shortcuts and alternatives to travel along high-volume streets.
Practice 11: Incorporate transit-oriented design features.
Practice 12: Establish TDM programs for local employees. Ridesharing, modified work hours, telecommuting and others.

BEST ENVIRONMENTAL PRACTICES

Practice 1: Use a systems approach to environmental planning. Shift from development orientation to basins or ecosystems planning.
Practice 2: Channel development into areas that are already disturbed.
Practice 3: Preserve patches of high-quality habitat, as large and circular as possible, feathered at the edges and connected by wildlife corridors. Stream corridors offer great potential.
Practice 4: Design around significant wetlands.
Practice 5: Establish upland buffers around all retained wetlands and natural water bodies.
Practice 6: Preserve significant uplands, too.
Practice 7: Restore and enhance ecological functions damaged by prior site activities.
Practice 8: Detain runoff with open, natural drainage systems. The more natural the system the more valuable it will be for wildlife and water quality.
Practice 9: Design man-made lakes and stormwater ponds for maximum environmental value. Recreation, stormwater management, wildlife habitat and others.
Practice 10: Use reclaimed water and integrated pest management on large landscaped areas. Integrated pest management involves controlling pests by introducing their natural enemies and cultivating disease and insect resistant grasses.
Practice 11: Use and require the use of Xeriscape™ landscaping. Xeriscaping™ is water conserving landscape methods and materials.

BEST HOUSING PRACTICES

Practice 1: Offer "life cycle" housing. Providing integrated housing for every part of the "life cycle."
Practice 2: Achieve an average net residential density of six to seven units per acre without the appearance of crowding. Cluster housing to achieve open space.

Practice 3: Use cost-effective site development and construction practices. Small frontages and setbacks; rolled curbs or no curbs; shared driveways.
Practice 4: Design of energy-saving features. Natural shading and solar access.
Practice 5: Supply affordable single-family homes for moderate-income households.
Practice 6: Supply affordable multi-family and accessory housing for low-income households.
Practice 7: Tap government housing programs to broaden and deepen the housing/income mix.
Practice 8: Mix housing to the extent the market will bear.

LOCATION

Where is the proposed project located within the host-local government's boundaries?

The project is located in south central Henry County. The proposed development is 130.4 acres on Walker Drive, west of Highway 155.

Will the proposed project be located close to the host-local government's boundary with another local government? If yes, identify the other local government.

The proposed development is entirely within Henry County. The proposed development is approximately 2.5 miles from the City of Locust Grove.

Will the proposed project be located close to land uses in other jurisdictions that would benefit, or be negatively impacted, by the project? Identify those land uses which would benefit and those which would be negatively affected and describe impacts.

None were determined during the review.

ECONOMY OF THE REGION

According to information on the review form or comments received from potentially affected governments:

What new taxes will be generated by the proposed project?

Estimated value of the development is $75 million. Estimated annual local tax revenue likely to be generated by the proposed development is $2 million.

How many short-term jobs will the development generate in the Region?

Short-term jobs will depend upon construction schedule.

Is the regional work force sufficient to fill the demand created by the proposed project?

Yes.

In what ways could the proposed development have a positive or negative impact on existing industry or business in the Region?

The proposed development is adding residential and village office uses in an area of Henry County that is reasonably anticipated for development of these uses.

NATURAL RESOURCES

Water Supply Watersheds

The project property is crossed by Long Branch Creek and one of its tributaries. The property is entirely within the Long Branch Creek Water Supply Watershed, which is a small (less than 100-square mile) water supply watershed serving Henry County. The County has developed watershed districts for each of its water supply watersheds, including Long Branch Creek. All development on the property must conform to Henry County's Long Branch Water Supply Watershed District requirements, including buffers, water quality controls and impervious surface limits. The project plans show buffers on both streams that appear to meet the Henry County requirements and that exceed the small water supply watershed buffer requirements of State's Part 5 Minimum Environmental Planning Criteria. The proposed project also appears to meet Watershed District impervious surface requirements.

For all state waters on the property, the State 25-foot erosion and sedimentation buffer is required. Any work in those buffers must conform to the state E & S requirements and must be approved by the appropriate agency.

Storm Water/Water Quality

The project should adequately address the impacts of the proposed development on stormwater runoff and downstream water quality. During construction, the project should conform to the relevant state and federal erosion and sedimentation control requirements. After construction, water quality will be impacted due to polluted stormwater runoff. ARC has estimated the amount of pollutants that will be produced after construction of the proposed development, using impervious areas for each use based on estimated averages for land uses in the Atlanta Region. These estimates do not include the open space that is part of the single-family acreage on the property. The breakdown for the single-family lots is based on the percentage of lots in each zoning category (R-2 and R-3), as no acreage for each use was given. Actual loadings will vary with the actual land use and the actual amount of impervious coverage. The following table summarizes the results of the analysis:

Pollutant loads (lb./yr.)

Land Use	Land Area (acres)	TP	TN	BOD	TSS	Zinc	Lead
Low-Med. SF (0.5-1.0 ac)	48.90	52.81	230.81	1662.60	31247.10	13.20	2.93
Med. SF (0.25-0.5 ac)	67.60	91.26	399.52	2906.80	54147.60	22.98	5.41
Office/Light Industrial	6.90	8.90	118.20	786.60	4885.20	10.21	1.31
Townhouse/Apartment	7.00	7.35	74.97	469.00	4235.00	5.32	0.98
TOTAL	130.40	160.32	823.49	5825.00	94514.90	51.72	10.63

Total Estimated Impervious: 27% in this analysis

The current site plan does not indicate how stormwater runoff will be managed. In order to address post-construction stormwater runoff quality, the project should implement stormwater management controls (structural and/or nonstructural) as found in the Georgia Stormwater Management Manual

(www.georgiastormwater.com) and meet the stormwater management quantity and quality criteria outlined in the Manual. Were possible, the project should utilize the stormwater better site design concepts included in the Manual. Stormwater runoff from the site must be treated to remove at least 80% of the average annual total suspended solids (TSS) loading. A design tool (GSMM Site Development Review Tool) is available at www.northgeorgiawater.org that can be used to evaluate the site for meeting this requirement.

HISTORIC RESOURCES

Will the proposed project be located near a national register site? If yes, identify site.

None have been identified.

In what ways could the proposed project create impacts that would damage the resource?

Not applicable.

In what ways could the proposed project have a positive influence on efforts to preserve or promote the historic resource?

Not applicable.

INFRASTRUCTURE

Transportation

How many site access points will be associated with the proposed development? What are their locations?

Access to Kingston Village is proposed at two locations along Bill Gardner Parkway. The eastern driveway will provide full-movement access and the western driveway will provide right-in/right-out access.

How much traffic (both average daily and peak am/pm) will be generated by the proposed project?

URS performed the transportation analysis. GRTA and ARC review staff agreed with the methodology and assumptions used in the analysis. The net trip generation is based on the rates published in the 7th edition of the Institute of Transportation Engineers (ITE) Trip Generation report; they are listed in the following table:

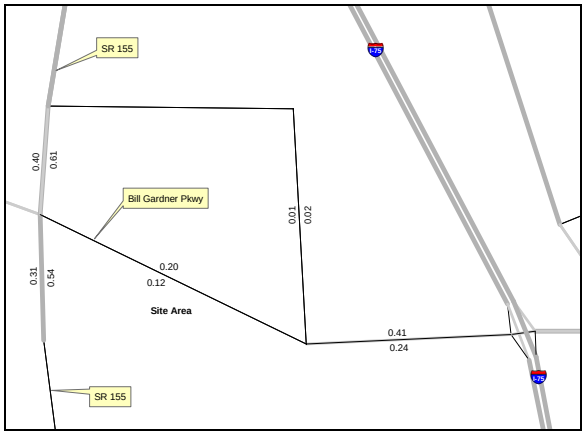
Land Use	A.M. Peak Hour			P.M. Peak Hour			24-Hour
	Enter	Exit	2-Way	Enter	Exit	2-Way	2-Way
Single-Family Homes	28	84	112	96	55	151	1485
Town-Homes	5	23	28	22	10	32	333
Office	72	10	82	20	97	117	596
TOTAL NEW TRIPS	**105**	**117**	**222**	**138**	**167**	**305**	**2414**

What are the existing traffic patterns and volumes on the local, county, state and interstate roads that serve the site?

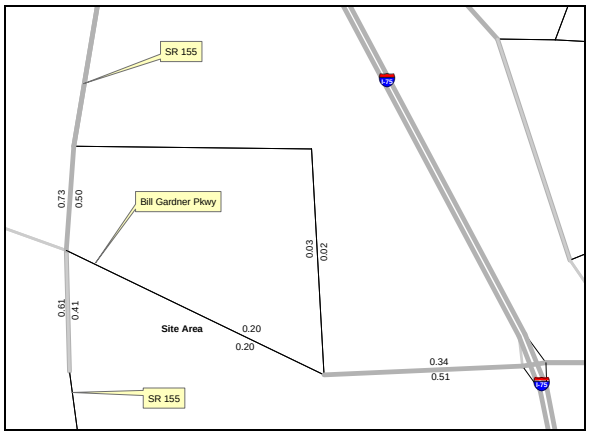
Incorporating the trip generation results, the transportation consultant distributed the traffic on the current roadway network. An assessment of the existing Level of Service (LOS) and projected LOS based on the trip distribution findings helps to determine the study network. The results of this exercise determined the study network, which has been approved by ARC and GRTA. If analysis of an intersection or roadway results in a substandard LOS "D", then the consultant recommends improvements.

Projected traffic volumes from the Regional Travel Demand Model are compared to the assigned capacity of facilities within the study network. This data is used to calculate a volume to capacity (V/C) ratio. The V/C ratio values that define the LOS thresholds vary depending on factors such as the type of terrain traversed and the percent of the road where passing is prohibited. LOS A is free-flow traffic from 0 to 0.3, LOS B is decreased free-flow from 0.31 to 0.5, LOS C is limited mobility from 0.51 to 0.75, LOS D is restricted mobility from 0.76 to 0.9, LOS E is at or near capacity from 0.91 to 1.00, and LOS F is breakdown flow with a V/C ratio of 1.01 or above. As a V/C ratio reaches 0.8, congestion increases. The V/C ratios for traffic in various network years are presented in the following table. Any facilities that have a V/C ratio of 1.0 or above are considered congested.

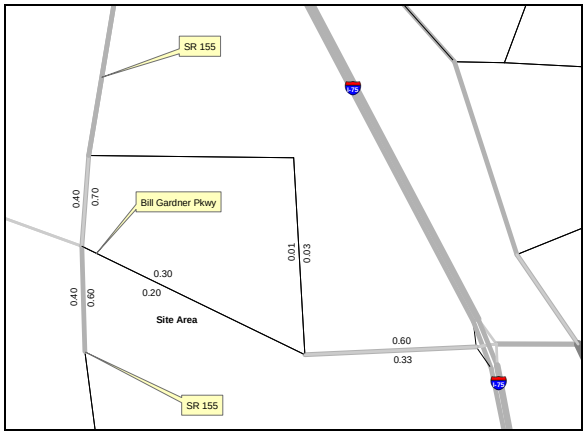
V/C Ratios



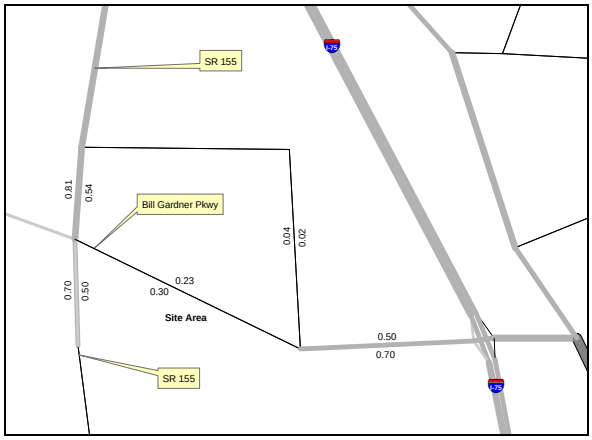
2005 AM Peak



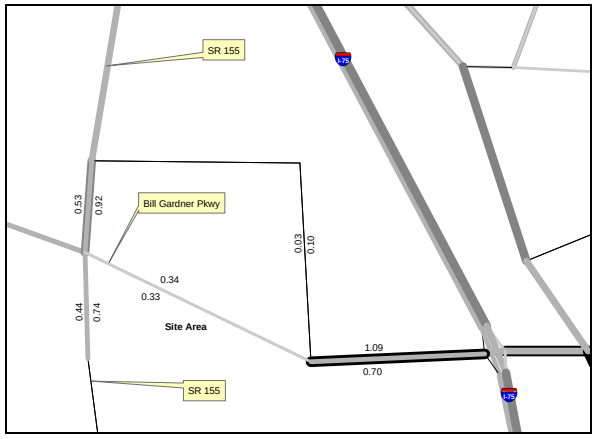
2005 PM Peak



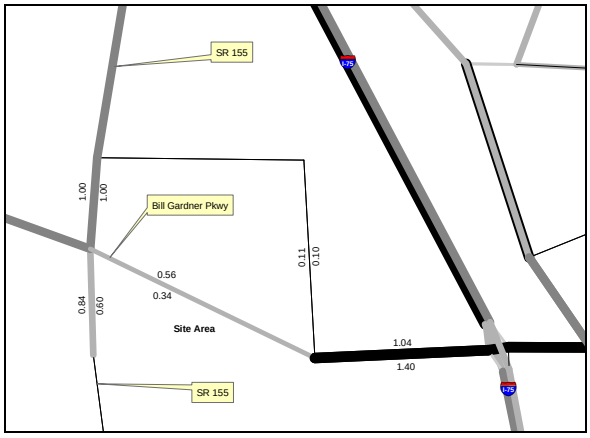
2010 AM Peak



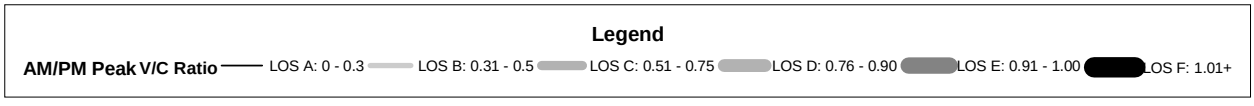
2010 PM Peak



2030 AM Peak



2030 PM Peak



For the V/C ratio graphic, the data is based on 2005, 2010 and 2030 A.M./P.M. peak volume data generated from ARC's travel demand model for Mobility 2030, the 2030 RTP and the FY 2005-2010 TIP, adopted in December 2004. The travel

demand model incorporates lane addition improvements and updates to the network as appropriate. As the life of the RTP progresses, volume and/or V/C ratio data may appear inconsistent due to (1) effect of implementation of nearby new or expanded facilities or (2) impact of socio-economic data on facility types.

List the transportation improvements that would affect or be affected by the proposed project.

2005-2010 TIP*

ARC Number	Route	Type of Improvement	Scheduled Completion Year
HE-126B1, B2	HAMPTON LOCUST GROVE ROAD: SEGMENT 2	Roadway Operations	2008

2030 RTP*

ARC Number	Route	Type of Improvement	Scheduled Completion Year
SP-048	SR 155 (From Henry County Line to North 2nd Street)	Roadway Capacity	2020

The ARC Board adopted the 2030 RTP and FY 2005-2010 TIP in December 2004.* ***USDOT approved in December 2004.*

Summarize the transportation improvements as recommended by consultant in the traffic study for Kingston Village Mixed-Use Development.

According to the findings, there will be some capacity deficiencies as a result of future year **background** traffic. The transportation consultant has made recommendations for improvements to be carried out in order to upgrade the existing level of service.

Bill Gardner Parkway at State Route 155

- Add an eastbound left-turn lane from Bill Gardner Parkway onto northbound S.R. 155
- Add an eastbound right-turn lane on Bill Gardner Parkway
- Modify signal to include protected-permissive left-turn phasing for eastbound Bill Gardner Parkway
- Add westbound left-turn lane on Bill Gardner Parkway with protected-permissive phasing
- Add westbound right-turn lane on Bill Gardner Parkway
- Add southbound right-turn lane on S.R. 155
- Add a second westbound through lane on Bill Gardner Parkway
- Add an exclusive westbound left-turn lane on Bill Gardner Parkway with protected-permissive phasing
- Add an exclusive westbound right-turn lane on Bill Gardner Parkway
- Add an exclusive eastbound right-turn lane on Bill Gardner Parkway

Bill Gardner Parkway at State Route 155 continued

- Add an exclusive northbound right-turn lane on S.R. 155
- Add an exclusive southbound right-turn lane on S.R. 155

According to the findings, there will be some capacity deficiencies as a result of future year **total** traffic. The transportation consultant has made recommendations for improvements to be carried

out in order to upgrade the existing level of service. The recommendations stated in the no-build condition are also applicable to the build condition.

Bill Gardner Parkway at State Route 155

- Widen Bill Gardner Parkway to a four-lane divided facility
- Add westbound left-turn lane on Bill Gardner Parkway with protected-permissive phasing
- Add westbound right-turn lane on Bill Gardner Parkway
- Add southbound right-turn lane on S.R. 155

Is the site served by transit? If so, describe type and level of service and how it will enhance or be enhanced by the presence of transit? Are there plans to provide or expand transit service in the vicinity of the proposed project?

GRTA Xpress Route 430 serves the McDonough park and ride lot during the weekdays, in the morning from 5:45am till 7:45am with headways every 30 minutes. This route provides evening service from 3:30pm till 6pm with headways every 30 minutes. This route provides a direct connection to Downtown Atlanta via the Peachtree Center and Civic Center MARTA stations.

What transportation demand management strategies does the developer propose (carpool, flex-time, transit subsidy, etc.)?

None proposed

The development **DOES NOT PASS t**he ARC's Air Quality Benchmark test.

Air Quality Impacts/Mitigation (based on ARC strategies)	Credits	Total
Where Residential is dominant, 10% Retail or 10% Office		4%
Bike/ped networks that meet Mixed Use or Density target and connect to adjoining uses		5%
Total		**9%**

Although the proposed development does not pass the Air Quality Benchmark test, the site plan reflects a compact plan that incorporates a mix of uses and housing types that is compatible with other developments in the area. The site plan also emphasizes preservation of greenspace and stream/water quality while minimizing impervious surface.

What are the conclusions of this review? Is the transportation system (existing and planned) capable of accommodating these trips?

The area surrounding this development is experiencing rapid growth and will experience an increase in traffic congestion over the next 25 years. The traffic consultant has identified the intersection of S.R. 155 and Bill Gardner Parkway to be operating at a level of F in the future total traffic operations evaluation. In order to minimize the impact this development will have on the surrounding roadway network, it is recommended that all suggested improvements be implemented.

INFRASTRUCTURE

Wastewater and Sewage

Based on regional averages, wastewater is estimated at 0.0427 MGD.

Which facility will treat wastewater from the project?

Information submitted with the review states that the Indian Creek plant will provide wastewater treatment for the proposed development.

What is the current permitted capacity and average annual flow to this facility?

The capacity of Indian Creek is listed below

PERMITTED CAPACITY MMF, MGD [1]	DESIGN CAPACITY MMF, MGD	2001 MMF, MGD	2008 MMF, MGD	2008 CAPACITY AVAILABLE +/-, MGD	PLANNED EXPANSION	REMARKS
1.5	1.5	0.0	4	-2.5	Expansion to 3.0 mgd by 2005 and 6.0 mgd by 2008.	Implementable plan in place to satisfy short term capacity needs.

MMF: Maximum Monthly Flow. Mgd: million of gallons per day.
[1] *Source: Metropolitan North Georgia Water Planning District* ***SHORT-TERM WASTEWATER CAPACITY PLAN****, August 2002.*

What other major developments will be served by the plant serving this project?

ARC has reviewed a number of major developments that will be served by this plant.

INFRASTRUCTURE
Water Supply and Treatment

How much water will the proposed project demand?

Water demand also is estimated at 0.0427 MGD based on regional averages.

How will the proposed project's demand for water impact the water supply or treatment facilities of the jurisdiction providing the service?

Information submitted with the review suggests that there is sufficient water supply capacity available for the proposed project.

INFRASTRUCTURE
Solid Waste

How much solid waste will be generated by the project? Where will this waste be disposed?

Information submitted with the review 356.35 tons of solid waste per year.

Other than adding to a serious regional solid waste disposal problem, will the project create any unusual waste handling or disposal problems?

No.

Are there any provisions for recycling this project's solid waste?

None stated.

INFRASTRUCTURE

Other facilities

According to information gained in the review process, will there be any unusual intergovernmental impacts on:

- **Levels of governmental services?**
- **Administrative facilities?**
- **Schools?**
- **Libraries or cultural facilities?**
- **Fire, police, or EMS?**
- **Other government facilities?**
- **Other community services/resources (day care, health care, low income, non-English speaking, elderly, etc.)?**

Comments received by Henry County School Board of Education, attached at the end of this report, state that the proposed development will have a significant site population and that it can be assumed that a significant number of the residents will be between the ages of 5-16 and will attend the surrounding public schools. Therefore, the proposed development will further impede the likelihood of the Henry County Board of Education's ability to house all students in the area in permanent classroom structures.

HOUSING

Will the proposed project create a demand for additional housing?

No. The proposed development will add an additional 194 housing units to the area.

Will the proposed project provide housing opportunities close to existing employment centers?

No.

Is there housing accessible to the project in all price ranges demanded?

The site proposed for the development is located in Census Tract 704.01. This tract had a 25.5 percent increase in number of housing units from 2000 to 2003 according to ARC's Population and Housing Report. The report shows that 82 percent of the housing units are single-family, compared to 69 percent for the region; thus indicating a lack of housing options around the development area.

Is it likely or unlikely that potential employees of the proposed project will be able to find affordable* housing?

Likely, assuming the development is approved with multiple price ranges of housing.

* Defined as 30 percent of the income of a family making 80 percent of the median income of the Region – FY 2000 median income of $51,649 for family of 4 in Georgia.

Memorandum:
Date: July 21, 2005
From: Michael Browning / Greenleaf Development
To: Mike Alexander / ARC

Re: Kingston Village DRI # 788
Subj: Explanation of Plan Revisions Exhibited by Site Development Plan dated June 22, 2005
By DWSmith Design Group, Inc.

Historical basis for revised Plan:

When the original site plan was submitted with Form 2 in April, Greenleaf was in the process of several plan iterations that were attempting to bring the plan totally in compliance with the Henry county codes. With the one exception of a non-compliance with the density threshold, it appeared that the plan was in compliance with local and state codes in every other way.
After Form 2 was submitted, Greenleaf and their land planner developed a solution to bring the plan in compliance with the density threshold. This solution did not seem to compromise compliance in any of the other code areas and overall, the design team, in conjunction with county review and comment, felt the solution was viable and capable of being permitted. Therefore, the decision was made to submit a new plan to ARC/GRTA for review.

Primary Changes to Site Development Plan:

1. Essentially, if the single family detached home sites were to be developed as a gated, private community, then the roads associated with that area are not to be dedicated to the public. Therefore, under Henry County code, that single family component ROW acreage previously deducted from the overall *gross* acreage to determine *net* acreage, would now be less. The result would be an overall higher project net acreage, giving legitimacy to our efforts to come into compliance with the overall 1.75 DU/acre threshold.
2. New Emergency Services Ingress/Egress off Long Branch: A point was established on Long Branch, (an existing gravel road with 60' ROW) that would allow emergency services if needed.
3. On the Single Family Detached component another street was added, creating a more transected street/blocked arrangement, which we felt created a more intimate and interested series of streetscapes. Additionally the previous greenspace through the middle of the center section was re-allocated to the outer edges of the center section. This outer green space will accommodate a multi-purpose trail that will connect the green space and amenity areas to all other areas of the project, including the O&I up front.

Internal Circulation:
Sidewalks would still be developed along both sides of the street. All residents in all areas of the side would be able to freely interact with the 'Work' element of the 'Live, Work, Play' arrangement. The gated community concept is essential to density compliance, and is consistent with other development in the area. Greenleaf has no problem with arrangements to create opportunities to interconnect our site from the pulic space on the north end, with adjacent sites, as the county deems appropriate.

Greenleaf Development, Inc

1200 Pennsylvania Avenue – McDonough, Georgia 30253
P.678.610-6511 F 678.610.6510

Memo:
Date: May 19, 2005
To: Haley Fleming
From: Michael Browning
Re: Kingston Village DRI

Subj: Green space Covenants

In our meeting last week, Mike Alexander suggested to me that I write something of an outline of how Greenleaf would commit to Greenspace preservation. The following is what we had in mind:

Greenspace Program

1. From Bill Gardner Parkway, the lineal open space would begin in a center courtyard between four buildings and directly connect to the commons area around which town homes are planned. This commons area would directly connect to the center commons area of the single family lots. All open spaces is connected by pedestrian walks. As you move south through the lineal park the open area connects with the fitness amenity area. This amenity faces the opening of a pedestrian easement to the bird sanctuary across the stream to the south. From there, one would be able to circle back up to the east and circulate up to the pond, from which pedestrians can access sidewalks on both sides of the street.

   Maintenance and preservation of all of the above commons areas would be set forth and protected by covenants, with the Kingston Homeowner's Association responsible for the ultimate administration of the covenants.

2. Rear building setbacks will have covenants restricting cutting and clearing of vegetation.

3. All floodplain area will be in restrictive convenants to prevent tree clearing and grading.

4. Cul-de-sacs will have landscaped interiors.

Greenleaf Development, Inc

1200 Pennsylvania Avenue – McDonough, Georgia 30253
P.678.610-6511 F 678.610.6510

MEMO:
DATE: May 16, 2005
TO: Haley Fleming
FROM: Michael Browning / Greenleaf Development
RE: Kingston Village DRI

SUBJ: Overall Residential Density in sensitive Watershed areas, particularly Henry County's 'Water Quality Critical Area" (WQCA)

We spoke a little in the meeting last week about the one area of local code in which Kingston was not in compliance and that was the overall residential density cap of 1.75, found in the water quality ordinance. It was also explained that our plan had evolved a little since we formally submitted to the county. The density for single family residential exhibited by the plan is now at 1.86 units per acre. Coupled with the town home component, our overall net density is now at 2.0 units per acre. Please accept the following elaboration:

Kingston's net acreage, and related net density have changed over the last couple of months since the master plan development report was submitted to Henry County, as our engineer finalized study of the flood plain. Initially, Greenleaf utilized FEMA flood plain maps as a basis for design, and so a conservative acreage of flood plain was depicted. Now that detailed analysis is complete, we know the area of the flood plain is equal to a little less than 15 acres. Because this is less area of flood plain than we originally calculated, we now have more useable (net) acreage. If we do not change the quantity of residential units, our net density would go down, and that is the basis for the current calculation of net density in the paragraph above.

Because the concept site plan provides a exceptional response to the basic intent of the water quality ordinance, it is our wish to apply for a variance (per the variance process outlined in the water quality ordinance) that would allow us to build 169 single family homes at the 1.86 density, plus the townhomes. Conceivably, Greenleaf could have given the county a significantly worse plan related to water quality. How? By laying out a plan that pushed the amount of oily, impervious road surface to the maximum allowable 20% in the water quality critical area. The 1.75 cap is a number that has a practical effect on residential septic system density, but makes little sense on public sewer projects. It is Greenleaf's contention that a public sewer project which pushes the density cap a little, while providing an overall excellent response to the impervious surface thresholds should be rewarded. However, there are no set provisions in the water quality ordinance for density bonuses, should a sensitive environmental plan response be received by the county. *Note that our impervious surface percentage in the Water Quality Critical Area is 2.7%. compared to what the ordinance allows which is 20%, Based on the acreage involved, the difference between 2.7% and 20% amounts to 7.74 acres of impervious surface!*

With a favorable recommendation from ARC we will take our project to the Henry Water & Sewer Authority and state our case there. We hope the good science exhibited by our planning efforts is convincing. If so, this plan may be something the county could use as a basis for establishing density bonuses to encourage better storm water management planning in sensitive areas.

July 14, 2005

Mike Alexander, Review Coordinator
Atlanta Regional Commission
40 Courtland Street, NE
Atlanta, Georgia 30303

RE: ARC Review Code R%06301
Proposal Name: Kingston Village

Dear Mr. Alexander:

The purpose of this correspondence is to respond to your request for information related to the above referenced development. I received your memorandum regarding the above referenced project on July 8, 2005. Your memorandum requests information relating to this project by July 14, 2005.

Please find attached requested data relating to this development.

Sincerely,

Preston Malcom, Ed.D.
Assistant Superintendent,
Administrative Services

KINGSTON VILLAGE
ARC REVIEW CODE R506301

The location of this development is within the current enrollment zones of Luella Elementary (K-5), Luella Middle (6-8) and Luella High School (9-12).

Luella Elementary is a 97,000 square foot school with 44 instructional units. This facility opened for the 2004 school year with 930 students. In addition to the main structure, nine portable classrooms will be used to house an expected enrollment of 1045 students for the upcoming school year. Enrollment is expected to peak at 1225 students in 2007 and then will be decreased with the opening of elementary schools in 2008 and 2010 in areas adjacent to this enrollment zone. Enrollment will again exceed 900 students by the 2014 school year.

Luella Middle School (opened in 2000) is a 144,00 square foot facility with 51 instructional units. In addition to the main structure, 42 portable classrooms will be used to house an expected enrollment of 1,785 students for the upcoming school year. Luella Middle School is the most overcrowded facility in the Henry County School System. Enrollment will decrease for the 2006-07 school year with the opening of a middle school adjacent to this enrollment area. Enrollment will then continue to increase, peaking at slightly less than 2000 students for the 2010-11 school year. Enrollment will again decrease with the opening of two additional middle schools (2011 and 2013) in areas adjacent to this enrollment zone.. Enrollment for the 2014-15 school year is expected to be 1,565. Portable classrooms will be utilized at this school for the foreseeable future.

Luella High School (opened in 2003) is a 255,000 square foot facility with 81 instructional units. In addition to the main structure, 20 portable classrooms will be used to house an expected enrollment of 1,970 students for the upcoming school year. Enrollment is expected to continue to increase through the 2010 school year when 2,600 students are expected to enroll. Enrollment will then be decreased with the opening of two additional high schools (2011 and 2013) in areas adjacent to this enrollment zone. Enrollment is expected to be 2,450 for the 2014-15 school year. Portable classrooms will be utilized at this school for the foreseeable future.

Information provided by your office is incomplete regarding a site population projection. As this proposed development is for 148 single-family homes and 47 townhouses, one would expect this development to house a significant site population. It is assumed that a significant number of the residents of this proposed development will be between the ages of 5-16 and will enroll in these public schools.

This proposed development will further impede the likelihood of the Henry County Board of Education housing all students in this area in permanent classroom structures.

Preston Malcom
Assistant Superintendent,
Administrative Services

07-14-2005

Your DRI ID NUMBER for this submission is: 788
Use this number when filling out a DRI REVIEW REQUEST.
Submitted on: 4/29/2005 1:58:00 PM

DEVELOPMENT OF REGIONAL IMPACT
Henry County Initial DRI Information (Form1b)

This form is intended for use by local governments within the Metropolitan Region Tier that are also within the jurisdiction of the Georgia Regional Transportation Authority (GRTA). The form is to be completed by the city or county government for submission to your Regional Development Center (RDC), GRTA and DCA. This form provides basic project information that will allow the RDC to determine if the project appears to meet or exceed applicable DRI thresholds. Local governments should refer to both the Rules for the DRI Process 110-12-3 and the DRI Tiers and Thresholds established by DCA.

Local Government Information

Submitting Local Government:	Henry County
*Individual completing form and Mailing Address:	Cheri Hobson-Matthews, Chief Planner 140 Henry Parkway McDonough, GA 30253
Telephone:	770-954-2457
Fax:	770-954-2958
E-mail **(only one)**:	cmatthews@co.henry.ga.us

*Note: The local government representative completing this form is responsible for the accuracy of the information contained herein. If a project is to be located in more than one jurisdiction and, in total, the project meets or exceeds a DRI threshold, the local government in which the largest portion of the project is to be located is responsible for initiating the DRI review process.

Proposed Project Information

Name of Proposed Project:	Kingston Village

Development Type	Description of Project	Thresholds
Mixed Use	The applicant is proposing a mixed use planned development. The development is approximately 130.4+/- acres and consist of the following: single-family residential uses (169 units); multi-family townhomes (36 units); and a village office component (31250 square feet)	View Thresholds

Developer / Applicant and Mailing Address:	Greenleaf Development, Inc. Attn: Mike Browning 2318 Lochiver Lane Conyers, GA 30094
Telephone:	770-922-3713
Fax:	770-506-3925
Email:	mbrowning@greenleafdevelopment.com,bmcfarland@swblawfirm.com
Name of property owner(s) if different from developer/applicant:	
Provide Land-Lot-District Number:	180 & 205 of the 2nd District
What are the principal streets or roads providing vehicular access to the site?	Bill Gardner Parkway and Long Branch Road
Provide name of nearest street(s) or intersection:	Long Branch Road
Provide geographic coordinates (latitude/longitude) of the center of the proposed project (optional):	/

If available, provide a link to a website providing a general location map of the proposed project (optional). (http://www.mapquest.com or http://www.mapblast.com are helpful sites to use.):	HTTP://www.mapquest.com
Is the proposed project entirely located within your local government's jurisdiction?	Y
If yes, how close is the boundary of the nearest other local government?	
If no, provide the following information:	
In what additional jurisdictions is the project located?	
In which jurisdiction is the majority of the project located? (give percent of project)	Name: Henry County (NOTE: This local government is responsible for initiating the DRI review process.)
	Percent of Project: 100%
Is the current proposal a continuation or expansion of a previous DRI?	N
If yes, provide the following information (where applicable):	Name:
	Project ID:
	App #:
The initial action being requested of the local government by the applicant is:	Rezoning
What is the name of the water supplier for this site?	Henry County Water and Sewerage Authority
What is the name of the wastewater treatment supplier for this site?	Henry County Water and Sewerage Authority
Is this project a phase or part of a larger overall project?	N
If yes, what percent of the overall project does this project/phase represent?	
Estimated Completion Dates:	This project/phase: Overall project:

Local Government Comprehensive Plan

Is the development consistent with the local government's comprehensive plan, including the Future Land Use Map?	N
If no, does the local government intend to amend the plan/map to account for this development?	N
If amendments are needed, when will the plan/map be amended?	Pending approval of the rezoning request

Service Delivery Strategy

Is all local service provision consistent with the countywide Service Delivery Strategy?	Y
If no, when will required amendments to the countywide Service Delivery Strategy be complete?	

Land Transportation Improvements

Are land transportation or access improvements planned or needed to support the proposed project?	Y
If yes, how have these improvements been identified:	
Included in local government Comprehensive Plan or Short Term Work Program?	Y
Included in other local government plans (e.g. SPLOST/LOST Projects, etc.)?	Y
Included in an official Transportation Improvement Plan (TIP)?	N
Developer/Applicant has identified needed improvements?	Y
Other (Please Describe):	

Submitted on: 6/14/2005 6:42:57 PM

DEVELOPMENT OF REGIONAL IMPACT
DRI Review Initiation Request (Form2a)

Local Government Information

Submitting Local Government:	Henry County
Individual completing form:	Cheri Hobson-Matthews, Chief Planner
Telephone:	770-954-2457
Fax:	770-954-2958
Email (**only one**):	cmatthews@co.henry.ga.us

Proposed Project Information

Name of Proposed Project:	Kingston Village
DRI ID Number:	788
Developer/Applicant:	Greenleaf Development, Inc.-1200 Pennsylvania Avenue-McDonough, GA 30253
Telephone:	678-610-6511
Fax:	678-610-6510
Email(s):	mbrowning@greenleafdevelopment.com

DRI Review Process

Has the RDC identified any additional information required in order to proceed with the official regional review process? (If no, proceed to Economic Impacts.)	Y
If yes, has that additional information been provided to your RDC and, if applicable, GRTA?	Y
If no, the official review process can not start until this additional information is provided.	

Economic Impacts

Estimated Value at Build-Out:	75,000,000.00
Estimated annual local tax revenues (i.e., property tax, sales tax) likely to be generated by the proposed development:	2,00,000.00
Is the regional work force sufficient to fill the demand created by the proposed project?	Y
If the development will displace any existing uses, please describe (using number of units, square feet., etc): Three (3) single-family homes averaging about 1800 s.f. will be relocated from the site to other sites in the county.	

Community Facilities Impacts

Water Supply

Name of water supply provider for this site:	Henry County Water and Sewer Authority
What is the estimated water supply demand to be generated by the project, measured in Millions of Gallons Per Day (MGD)?	0.0427 MGD
Is sufficient water supply capacity available to serve the proposed project?	Y
If no, are there any current plans to expand existing water supply capacity?	N
If there are plans to expand the existing water supply capacity, briefly describe below:	
If water line extension is required to serve this project, how much additional line (in miles) will be required?	

Wastewater Disposal

Name of wastewater treatment provider for this site:	Henry County Water and Sewer Authority
What is the estimated sewage flow to be generated by the project, measured in Millions of Gallons Per Day (MGD)?	0.0427 MGD
Is sufficient wastewater treatment capacity available to serve this proposed project?	Y
If no, are there any current plans to expand existing wastewater treatment capacity?	N
If there are plans to expand existing wastewater treatment capacity, briefly describe below:	
If sewer line extension is required to serve this project, how much additional line (in miles) will be required?	2,150 l.f.

Land Transportation

How much traffic volume is expected to be generated by the proposed development, in peak hour vehicle trips per day? (If only an alternative measure of volume is available, please provide.)	2,537 (daily); 225 (am peak hours); 312 (pm peak hours)
Has a traffic study been performed to determine whether or not transportation or access improvements will be needed to serve this project?	Y
If yes, has a copy of the study been provided to the local government?	Y
If transportation improvements are needed to serve this project, please describe below: See traffic impact study	

Solid Waste Disposal

How much solid waste is the project expected to generate annually (in tons)?	356.35 tpy
Is sufficient landfill capacity available to serve this proposed project?	Y
If no, are there any current plans to expand existing landfill capacity?	N
If there are plans to expand existing landfill capacity, briefly describe below:	
Will any hazardous waste be generated by the development? If yes, please explain below:	N

Stormwater Management

What percentage of the site is projected to be impervious surface once the proposed development has been constructed?	Eighteen percent (18%)
Is the site located in a water supply watershed?	Y
If yes, list the watershed(s) name(s) below: Indian Creek/Long Branch	
Describe any measures proposed (such as buffers, detention or retention ponds, pervious parking areas) to mitigate the project's impacts on stormwater management: Kingston Village will implement a comprehensive, integrated storm water and water quality management plan. This plan will be consistent with the goals of the MNGWPD by including several features: First, clearing will be minimized during grading to reduce runoff. Second, when runoff occurs it will be conveyed inefficiently to more closely mimic the existing condition of the site, and to provide initial BMP's for water quality. Third, some of the initial BMPs for storm water/water quality management will be in place with the initial erosion and sedimentation measures, and remain in place after project completion, as durable site investments providing multiple storm water and water quality benefits. For example, micro-pooling water for a limited drawn-down period. Fourth, the site will be re-vegetated in excess of the required plantings, and in a phased manner, to further reduce increases to the post-development runoff speeds, protect againsts erosion, and protect water quality. This comprehensive plan will be implemented from the first day of construction, maintained during the construction process, and turned over to the Homeowner's Association in good working order.	

Environmental Quality

Is the development located within, or likely to affect any of the following:	
1. Water supply watersheds?	Y
2. Significant groundwater recharge areas?	Y
3. Wetlands?	Y
4. Protected mountains?	N
5. Protected river corridors?	N

If you answered yes to any question 1-5 above, describe how the identified resource(s) may be affected below:
The entire project is located within the Water Quality Critical Area (WQCA)or a Limited Development Area (LDA) within the watershed, with the WQCA being the most sensitive. The county's Water Quality Ordinance sets a limit of 20% impervious surface within the WQCA and a 25% limit in the LDA. The current plan exhibits less than 2% impervious in the WQCA, and less than the threshold allowed in the LDA. We anticipate no unusual issues with stormwater mangement. Furthermore, the project will be on public sewer, therefore, there will be no significant discharge of effluent into a sensitive groundwater recharge area. Wetlands presently delineated on the project are related to the perennial stream and man-made pond that exists on the project. No significant amount of disturbance is planned to impact those areas.

Has the local government implemented environmental regulations consistent with the Department of Natural Resources' Rules for Environmental Planning Criteria?	Y

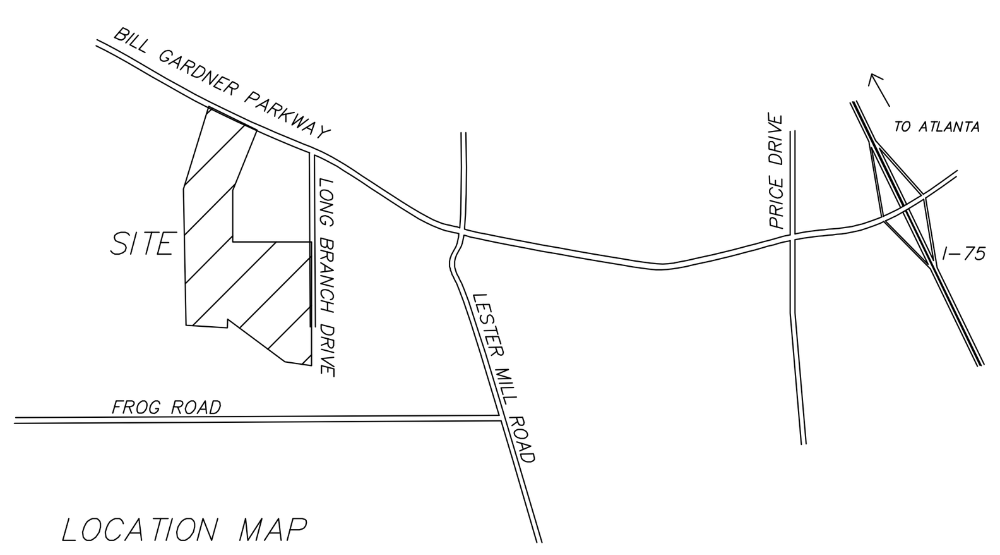
Is the development located within, or likely to affect any of the following:	
1. Floodplains?	Y
2. Historic resources?	N
3. Other environmentally sensitive resources?	N

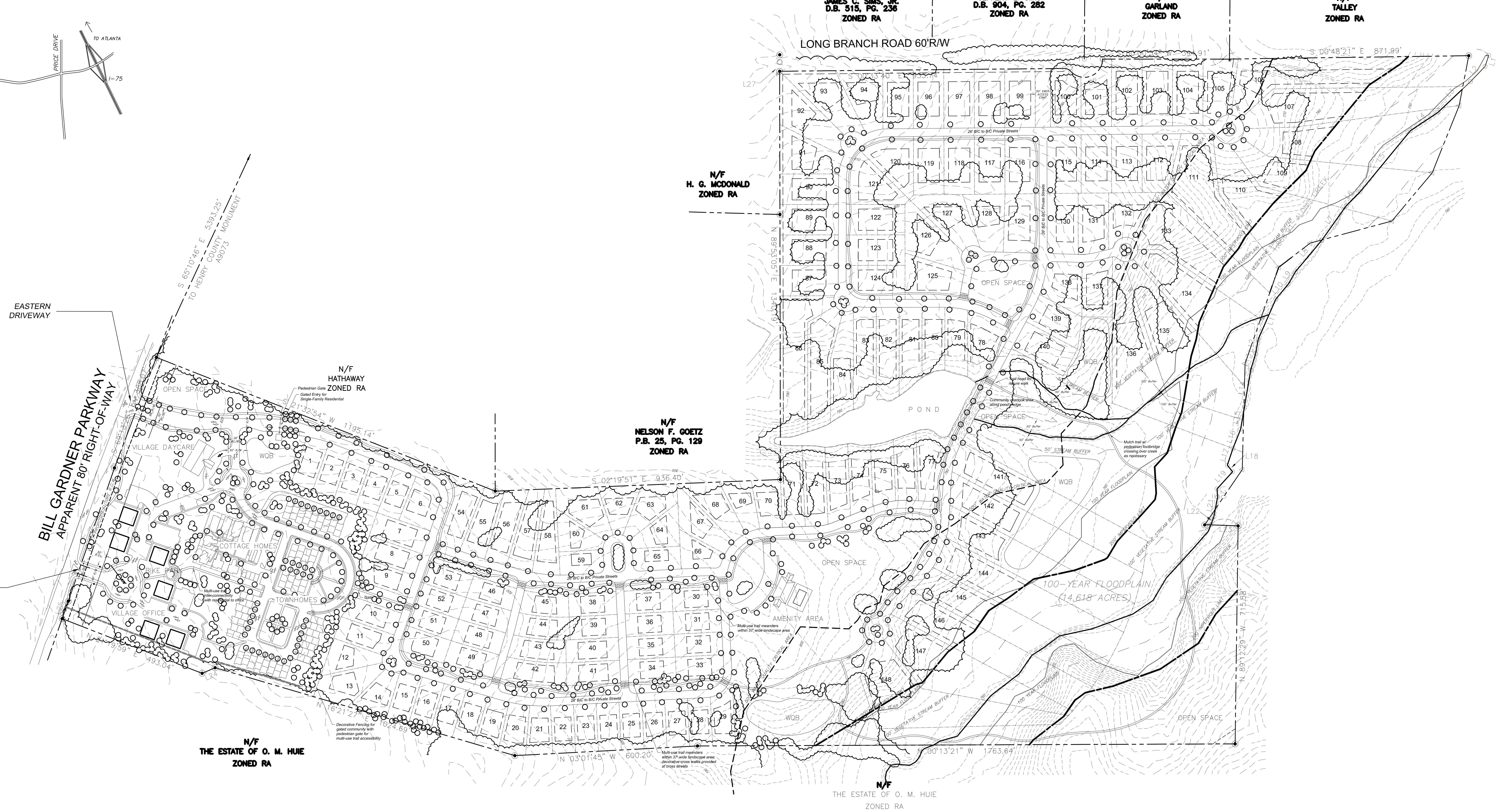
If you answered yes to any question 1-3 above, describe how the identified resource(s) may be affected below:
There is approximately 15 acres of floodplain (100 year)on the property, but there will be no development in the floodplain except for pedestrian trails, constructed on pervious materials.

Conceptual Site Plan

Kingston Village

Henry County, Georgia





KINGSTON				
DEVELOPMENT SUMMARY				
TOWNHOMES	47	UNITS		
SINGLE-FAMILY LOTS				
R-2 LOTS	62	LOTS	42%	
R-3 LOTS	86	LOTS	58%	
TOTAL LOTS	148	LOTS	100%	
VILLAGE OFFICE	36,000	S.F.	(6)2-story @ 5000s.f. ea./(1)1-story @ 6000s.f.)	
	ACRES	S.F.		
TOTAL ACREAGE	130.4	5,680,224	100.0%	
GREENSPACE	27.0	1,176,120	20.7%	
FLOODPLAIN	14.6	635,976	11.2%	
STREAM BUFFER 100'	10.8	470,448	8.3%	
WATER QUALITY CRITICAL AREA	44.7	1,945,390	34.2%	
IMPERVIOUS IN WQCA	1.2	52,708	0.9%	
LIMITED DEVELOPMENT AREA	85.7	3,733,092	65.7%	
WATER QUALITY DETENTION	3.0	130,680	2.3%	
PROPOSED R.O.W.	1.4	60,984	1.1%	
PROPOSED ROADS	0.5	21,780	0.4%	
IMPERVIOUS AREA				
R-2, R-3 RESIDENTIAL*	8.6	374,616		
TOWNHOMES	2.8	121,968		
TRAILS, PRIVATE ROADS, MISC.	8.2	357,192		
OFFICE	2.0	87,120		
TOTAL IMPERVIOUS*	21.6	940,896	16.6%	
*assumes 2,000 s.f. footprint per unit w/ 40' length drive)				

OPEN SPACE CALCULATIONS

		FACTOR	ACRES	
CATEGORY A				
STREAM BUFFER	2.7	1.0	2.7	
100-YEAR FLOODPLAIN	4.8	1.0	4.8	
DEVELOPMENT BUFFERS	8.1	1.0	8.1	
CATEGORY B				
PASSIVE OPEN SPACE	14.5	0.7	10.2	
CATEGORY C				
AMENITY AREA / POOL AREA	1.5	0.2	0.3	
CATEGORY D				
PONDS	1.7	0.5	0.9	
		TOTAL OPEN SPACE	26.9	20.6%
NET ACREAGE	111.4	4,852,584	85.4%	
total acreage - (r.o.w.+ floodplain + detention ponds)				

DENSITY

GROSS	1.50 UNITS/130.4 GROSS AC)				
NET	1.75 UNITS/111.4 NET AC)				

	LOTS / UNITS / S.F.	GROSS ACRES	GROSS DENSITY	NET ACRES	NET DENSITY
SINGLE-FAMILY	148	116.5	1.3	98.9	1.5
TOWNHOMES	47	7.0	6.7	6.6	7.1
	195	123.50	1.58	111.40	1.75
VILLAGE OFFICE	36,000	6.9	5,217.4		5,217.4

Legal Description

All that tract or parcel of land lying and being located in land lot 180 and 205 of the 2nd land district, Henry County, Georgia and being more particularly described as follows:

To reach the true point of beginning commence at a ½" re-bar set at the common land lot corner of land lots 180, 181, 204 and 205; Thence N 89°32'25" W a distance of 30.05' to a ½" re-bar found and the point of beginning; Thence along the western right-of-way of Long Branch Road (60'r/w) S 00°33'40" E a distance of 933.74' to a point; Thence along a curve to the right having a radius of 28.00', an arc length of 23.76' and being subtended by a chord bearing of S 23°44'59" W and chord length of 23.05'; Thence along a curve to the left having a radius of 60.00', an arc length of 144.38' and being subtended by a chord bearing of S 20°52'45" W and chord length of 111.98'; Thence leaving said right-of-way S 00°00'54" W a distance of 394.91' to the center of a 38" Oak tree; Thence S 00°48'21" E a distance of 871.99' to a point at the center line of creek. A 1/2" re-bar was found on line 65.53' from center line of creek; Thence along the center line of creek N 71°38'15" W a distance of 37.92' to a point; Thence N 46°08'09" W a distance of 68.93' to a point; Thence N 43°24'44" W a distance of 147.37' to a point; Thence N 33°37'32" W a distance of 107.94' to a point; Thence N 50°33'28" W a distance of 260.12' to a point; Thence N 45°11'47" W a distance of 65.35' to a point; Thence N 54°42'15" W a distance of 138.43' to a point; Thence N 50°13'05" W a distance of 134.73' to a point; Thence N 59°50'40" W a distance of 46.11' to a point; Thence N 50°10'54" W a distance of 64.60' to a point; Thence N 66°27'02" W a distance of 144.86' to a point; Thence N 79°58'22" W a distance of 45.89' to a point; Thence N 73°15'57" W a distance of 57.17' to a point; Thence N 80°28'09" W a distance of 123.58' to a point; Thence N 80°11'16" W a distance of 73.52' to a point; Thence N 68°16'25" W a distance of 68.17' to a point; Thence N 71°35'32" W a distance of 57.65' to a point; Thence S 51°37'38" W a distance of 27.66' to a point; Thence N 47°38'44" W a distance of 75.71' to a point; Thence S 86°41'37" W a distance of 27.29' to a point; Thence N 79°29'45" W a distance of 64.55' to a point; Thence N 69°47'36" W a distance of 29.37' to a point; Thence leaving said creek S 02°10'04" W a distance of 89.51' to a ½" open top pipe; Thence N 89°12'29" W a distance of 715.58' to a ½" re-bar found; Thence N 00°13'21" W a distance of 1,763.64' to a ½" re-bar found; Thence N 03°01'45" W a distance of 600.20' to a ½" re-bar found; Thence N 16°21'27" E a distance of 1,024.69' to a 5/8" re-bar found; Thence N 23°28'17" W a distance of 46.39' to a ½" re-bar found; Thence N 21°19'59" E a distance of 493.04' to a ½" re-bar found at the right-of-way of Bill Gardner Parkway (80'r/w); Thence along said right-of-way S 70°34'35" E a distance of 60.79' to a ½" re-bar found; Thence leaving said right-of-way S 21°25'53" W a distance of 494.54' to a ½" re-bar found; Thence S 73°50'06" E a distance of 465.32' to a ½" re-bar found; Thence N 21°20'34" E a distance of 470.77' to a ½" open top pipe found at the right-of-way of Bill Gardner Parkway (80'r/w); Thence along said right-of-way S 69°13'26" E a distance of 388.07' to a ½" open top pipe; Thence leaving said right-of-way S 21°32'54" a distance of 1,195.14' to a 5/8" re-bar found; Thence S 02°19'51" E a distance of 936.40' to a ½" re-bar found located on the northern land lot line of 180 and the southern land lot line of 205; Thence N 89°53'05" E along said land lot line a distance of 1,340.19' to a ½" re-bar found and the point of beginning.

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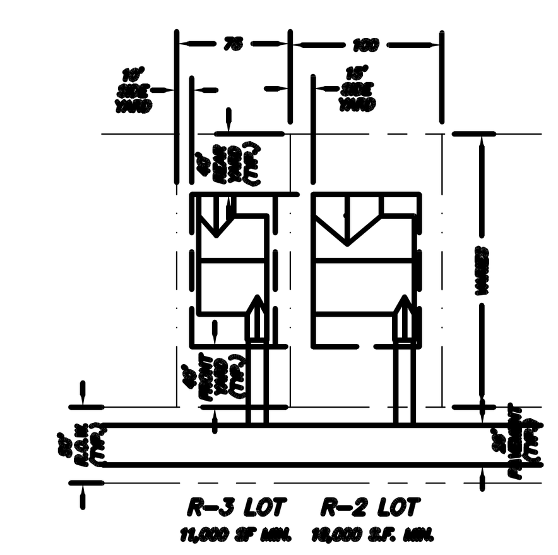

TYPICAL LOT DIMENSIONS
N.T.S.

NORTH

SCALE: 1"=200'

0 100 200 400 800