

**Atlanta Regional Commission**  
200 Northcreek, Suite 300  
3715 Northside Parkway  
Atlanta, Georgia 30327-2809

**50 YEARS 1947-1997**  
*of Regional Cooperation, Leadership & Planning*

**Harry West**  
Director

**December 4, 1997**



Honorable Charles E. Martin, Jr., Mayor  
City of Alpharetta  
2 South Main Street  
Alpharetta, GA. 30201

**RE: Development of Regional Impact--North Point Commons**

Dear Chuck:

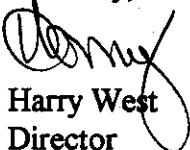
I am writing to officially transmit the resolution which the Commission adopted yesterday concerning the North Point Commons Development of Regional Impact (DRI). Since you were at the meeting, you are aware that the Commission found that this DRI is not in the best interest of the State at this time due to potential impact on traffic and air quality.

Enclosed is a copy of our final report along with a copy of comments received from MARTA during the review. We also are enclosing a copy of the letter from Jamestown concerning their agreement on the 25 percent impervious surface issue.

We appreciate the opportunity to review this DRI and the cooperation we received from Jamestown and Retail Planning Corporation.

Please let us know if you have any questions concerning our review.

Sincerely,

  
Harry West  
Director

Enclosures

c Ms. Diana Wheeler, City of Alpharetta  
Mr. Stephen Zoukas, Jamestown  
Mr. Joe Alverson, Retail Planning Corporation  
Mr. Richard Simonetta, MARTA  
Mr. Wayne Shackelford, GDOT  
Mr. Paul Radford, GDCA  
Mr. Harold Reheis, GEPD

**RESOLUTION BY THE ATLANTA REGIONAL COMMISSION CONCERNING THE  
NORTH POINT COMMONS DEVELOPMENT OF REGIONAL IMPACT**

**WHEREAS**, pursuant to the Georgia Planning Act of 1989 and Georgia Department of Community Affairs Rules for the Review of Developments of Regional Impact (DRI), the Atlanta Regional Commission has reviewed the North Point Commons Development of Regional Impact proposed on 128.63 acres on the east side of Haynes Bridge Road across from North Point Mall in the City of Alpharetta; and

**WHEREAS** the proposed development would consist of 1,190,280 square feet of office space; 242,880 square feet of retail space, and hotel(s) totaling 254 rooms (190,000 square feet); and

**WHEREAS** key regional roadways in the vicinity of the proposed development operate under congested conditions, the traffic impacts of this large-scale development would place excessive burden on such roadways; and

**WHEREAS**, based on trip generation estimates, the emissions resulting from the development would be as follows:

**TONS PER YEAR**

Nitrogen Oxides	72.454
Hydrocarbons	66.278

**WHEREAS**, in an effort to reduce emissions, the developer has agreed to certain measures such as bicycle and pedestrian trails and walkways, provisions for MARTA bus stops and shelters, pedestrian walkway to North Point Mall area, and volunteering to spearhead an effort to organize a transportation management association in the North Point district in order to provide alternatives to single-occupant vehicle trips;

**WHEREAS**, these commute options would reduce the projected emissions resulting from the development to the following amounts:

**TONS PER YEAR**

Nitrogen Oxides	68.711
Hydrocarbons	63.196

**WHEREAS**, even with the commute options the projected emissions would still exceed the Commission's threshold of 50 tons per year of nitrogen oxides;

**NOW THEREFORE BE IT RESOLVED** that the Commission finds that the North Point Commons Development of Regional Impact is not in the best interest of the State at this time due to potential impact on traffic and air quality.

**NORTH POINT COMMONS  
DEVELOPMENT OF REGIONAL IMPACT**

**PROPOSED DEVELOPMENT**      1,190,280 SQ.FT. OFFICE  
242,880 SQ.FT. RETAIL  
190,000 SQ.FT. HOTEL (254 ROOMS)

**LOCATION**      EAST SIDE HAYNES BR. RD.  
ACROSS FROM NORTH POINT MALL  
CITY OF ALPHARETTA

**DEVELOPER**      RETAIL PLANNING CORPORATION

**POTENTIAL IMPACT**

**JOBS**      4,708

**TAXES**      NA

**TRAFFIC**      29,154 WEEKDAY TRIPS

**AIR QUALITY IMPACT**      GA. 400 & HAYNES BRIDGE ROAD  
72.454 TONS NITROGEN OXIDE/YR

*with commute options*      66.278 TONS HYDROCARBONS/YR  
68.711 TONS NITROGEN OXIDE/YR

**WATER DEMAND**      63.196 TONS HYDROCARBONS/YR  
0.33 MGD

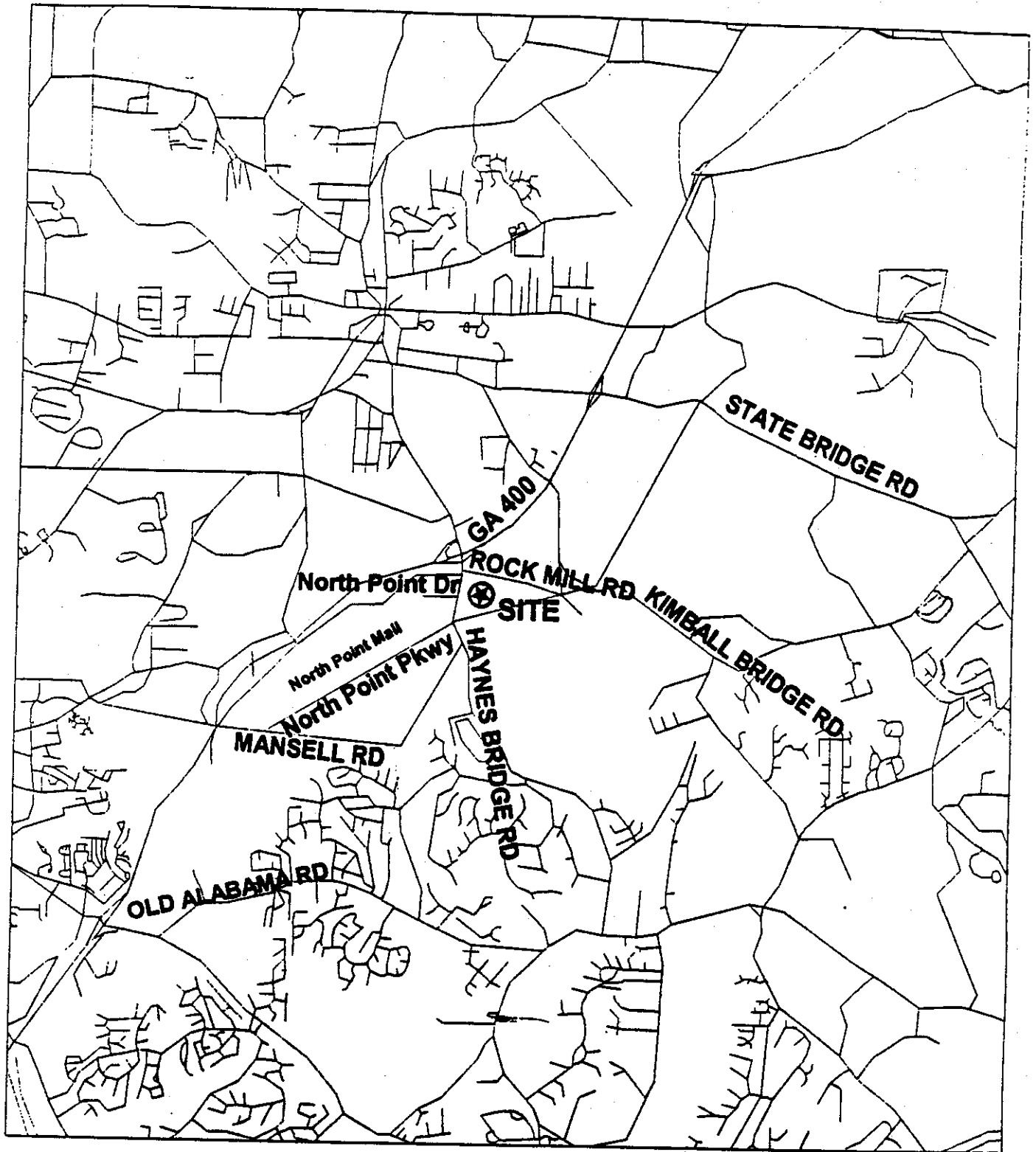
**WASTEWATER GENERATION**      0.29 MGD

**BIG CREEK WWTP**      24 MGD PERMIT, 13+/- FLOW

**SOLID WASTE GENERATION**      3,373 TONS PER YR

**BIG CREEK SMALL WATER  
SUPPLY WATERSHED**      43% IMPERVIOUS SURFACE

**STAFF RECOMMENDATION**      NOT IN BEST INTEREST OF STATE DUE  
TO POTENTIAL IMPACT ON  
TRAFFIC & AIR QUALITY



**Figure 1. Site Location**



**marta.**

2424 Piedmont Road  
Atlanta, Georgia 30324-3330  
(404) 848-5000

July 31, 1997

Ms. Beverly Rhea  
Review Coordinator  
Atlanta Regional Commission  
200 Northcreek, Suite 300  
Atlanta, Georgia 30327-2809

Subject: Development of Regional Impact  
North Point Commons - Haynes Bridge Road

Dear Ms. Rhea:

The Metropolitan Atlanta Rapid Transit Authority has reviewed the documentation for a Development of Regional Impact for North Point Commons on Haynes Bridge Road in North Fulton County. MARTA provides bus service currently to North Point Mall but does not currently provide bus service to this site. As this project develops, MARTA would be pleased to review the routing of the existing bus route to better serve this project. Additionally the developer could offer a shuttle service to the Mansell Park/Ride lot for the early phases of the development and to the North Springs Rail Station for the later phases. Our feeder bus system will be modified to provide improved service in general when that station opens in 2000. MARTA would like to discuss how we could provide improved service to this major project.

Thank you for the opportunity to review this proposal.

Sincerely,

*James P. Brown Jr. amb*  
James P. Brown Jr.  
Director Transportation Planning  
and Scheduling

cc: Gloria Gaines, Vice President of Planning and Analysis

**JAMESTOWN**

Two Paces West  
Suite 1600

770 805-1000  
Fax: 770 805-1085

Stephen J. Zoukias  
Partner

2727  
Paces Ferry Road

Direct Line  
770 805-1005

Atlanta, Georgia  
30339

USA

September 12, 1997

**VIA FACSIMILE**

**404.364.2599**

Ms. Beverly Ray  
Atlanta Regional Commission  
3715 Northside Parkway, NE  
200 North Creek, Suite 300  
Atlanta, GA 30327

Re: North Point Commons Project  
Alpharetta, Georgia

Dear Beverly:

Thank you for the time which you and your staff devoted to this project this morning. For the purposes of clarity and convenience, I want to repeat what we discussed and proposed as possible solutions to the two separate problems encountered by this project.

First, in regard to the impervious surface issue, we proposed dividing the property into three segments. The first segment would be the park land to be donated to the City of Alpharetta. The second segment would be the portion of the property (almost entirely north of North Point Parkway) which can be developed to an overall 25% impervious surface ratio at the present time, under ARC's guidelines. The third segment would be a swath of land between the other two segments. We propose to encumber this third component of the property with a covenant prohibiting hard surface development until one of several exit criteria is achieved. We have not yet formulated these exit criteria with precision, but in general terms, the two biggest exits would be (a) a change of factual circumstances, for example, resulting from conclusion by the ARC either that the 25% standard is changed to some higher figure or that the standard may be calculated taking account of mitigation or (b) the developer's acquisition of land within the Big Creek drainage basin and the transfer of its development rights to bring this project into compliance with the overall hard surface ratios then in effect.

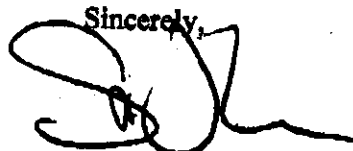
Ms. Beverly Ray  
September 12, 1997  
Page -2-

Second, we discussed the emissions problem, which we confessed are considerably harder for us to understand and solve. Because we also own the Mansell Crossing Shopping Center, we volunteered to spearhead an effort to organize a transportation management association in this district. We cannot guarantee success in this effort. However, in return for the ARC's approval of the project, we will launch a good faith effort to organize a TMA encompassing some or all of the North Point area. While the models relating to our project show emissions above the 50 ton level even with the institution of a TMA, it is conceivable that much of our remaining excess emission level might be reduced elsewhere in the North Point area by instituting such a TMA.

If proceeding along these lines is acceptable to the ARC, we will be pleased to document our understandings in a way which is acceptable to you and your staff. Please let me know if I can provide any additional information.

Assuming we can overcome these hurdles, we would be most appreciative of anything which can be done to conclude the ARC's review process during the month of October. Unfortunately, the Alpharetta City Council meeting cycle is such that it always precedes ARC meetings by two days. If we do not have a decision by the ARC in October, we slip to the December review cycle in Alpharetta. That meeting is often canceled because of the holiday season, which means we face a delay into January. We would like to avoid so long a delay if we can do so without causing too much inconvenience to the ARC and its staff. Your consideration in this regard will be most appreciated.

Sincerely,



Stephen J. Zoukis

SJZ/sfw

c: Mr. Joe Alverson



Facility: North Point Commons  
Preliminary Report: July 21, 1997  
Final Report: December 4, 1997

## DEVELOPMENTS OF REGIONAL IMPACT

### REVIEW REPORT

#### 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 City of Alpharetta Comprehensive Plan identifies the area as office center. Retail is not allowed under Alpharetta's office classification.

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

No inconsistencies were determined in the review process.

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

No impacts identified.

**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?**

The development could accommodate 4,708 jobs according to regional averages. This along with other growth in the area will necessitate infrastructure improvements.

**What other major development projects are planned in the vicinity of the proposed project?**

ARC has reviewed numerous major developments in the vicinity of North Point Commons, including North Point Mall and associated development and a previous review of this site for a different development proposal.

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

No.

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

No.

### **LOCATION**

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

The site is south of Georgia 400 and Rock Mill Road, east of Haynes Bridge Road and across Haynes Bridge from North Point Mall. 34 33' / 84 17'.

**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 site is near portions of unincorporated Fulton County and the City of Roswell.

**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.**

No.

### **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?**

Not available.

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

Not available.

**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 development will compete with the existing retail and office space in the vicinity.

## **NATURAL RESOURCES**

**Will the proposed project be located in or near wetlands, groundwater recharge area, water supply watershed, protected river corridor or other environmentally sensitive area of the Region? If yes, identify those areas.**

**In what ways could the proposed project create impacts that would damage or help to preserve the resource?**

### **Watershed Protection**

The proposed project site is located within the Big Creek watershed, a small water supply watershed, and is located within seven miles of the City of Roswell's water supply intake. Portions of Big Creek, a perennial stream as indicated by a solid blue line on U.S.G.S quad sheets, are located within the proposed development site. The following DNR minimum protection criteria shall apply:

1. A buffer shall be maintained for a distance of 100 feet on both sides of perennial streams as measured from the stream banks.
2. No impervious surface shall be constructed within a 150 foot setback on both sides of the perennial streams as measured from the stream banks.
3. Septic tanks and septic tank drainfields are prohibited in the setback area of (2) above.
4. The impervious surface area, including all public and private structures, utilities, or facilities, of the entire water supply watershed shall be limited to twenty-five (25) percent, or existing use, whichever is greater.
5. New facilities which handle hazardous materials of the types and amount determined by the Department of Natural Resources, shall perform their operations on impermeable surfaces having spill and leak collection systems as prescribed by the Department of Natural Resources.

### **Floodplains**

Areas within the proposed project site are located within the 100 year floodplain. Steps should be taken by the City of Alpharetta to mitigate potential impacts on these floodplains. The Atlanta Regional Commission's Regional Development Plan notes that "all structures that can be damaged or land uses that can impede flood waters or reduce storage volume must be built outside the intermediate region (one percent) flood limits (i.e., outside the 100-year flood limit), with the exception that a stream crossing may vary from this policy, if

constructed so as to permit passage of a 100-year flood with minimum feasible flow impedance, storage volume reduction, and upstream or downstream erosion or deposition."

#### Georgia Erosion and Sedimentation Act / Stream Buffer Requirements

This act requires that a 25 ft. wide natural vegetated buffer be maintained on both sides of streams designated as "State waters." ARC noted that the developer proposes to provide extensive buffers to Big Creek within the proposed site.

#### Storm Water / Water Quality

Steps should be taken to limit the amount of pollutants that will be produced during and after construction. During construction, the project should conform to the City's erosion and sediment control requirements. After construction, water quality can be impacted without storm water pollution controls. The amount of pollutants that will be produced after construction of the proposed North Point Commons Development was estimated by ARC. These estimates are based on some simplifying assumptions for typical pollutant loading factors (lbs\ac\year). The loading factors are based on the results of regional storm water monitoring data from the Atlanta Region. The following table summarizes the results of the analysis.

**Estimated Pounds Of Pollutants Per Year**

<u>Land Coverage</u>	<u>Total Phosphorus</u>	<u>Total Nitrogen</u>	<u>BOD</u>	<u>TSS</u>	<u>Zinc</u>	<u>Lead</u>
Open Space (56.88 ac.)	4.6	34.1	511.9	13,366.8	0.0	0.0
Commercial (71.75 ac)	122.7	1,248.5	7,749	70,530.3	88.3	15.8
<b>Total (128.63 ac.)</b>	<b>127.3</b>	<b>1,282.6</b>	<b>8,260.9</b>	<b>83,897.3</b>	<b>88.3</b>	<b>15.8</b>

If the development is approved, the City of Alpharetta should take steps to mitigate potential impacts. The Interim Regional Storm Water Quality Management Guidelines, adopted by the Atlanta Region, provide suggestions for addressing storm water quality. These guidelines offer general guidance for the control of post-development pollution in storm water (find attached).

The proposed site includes both wetlands and a perennial stream. Site design features such as incorporating wetlands into landscaping and maintaining natural buffers adjacent to streams have been included in the development plan. Both of these approaches are suggested in the Interim Regional Storm Water Quality Management Guidelines.

#### Structural Storm Water Pollution Controls

The City of Alpharetta should require that the developer submit a storm water management plan as a key component of the Plan of Development. The storm water plan should include location, construction and design details and all engineering calculations for all storm water quality control measures. Atlanta Regional Commission staff recommends that the City require that any structural controls be maintained at an 80% - 90% total suspended solids removal efficiency.

The Plan should also include a monitoring program to ensure storm water pollution control facilities function properly. Atlanta Regional Commission recommends that structural controls be designed to accommodate the installation, operation and maintenance of automatic equipment at inlet and outlet locations for the monitoring of flow rates and water quality. It is recommended that the monitoring program consists of the following minimum elements:

- ◆ monitoring of four storms per year (1 per quarter);
- ◆ collection of a flow weighted composite of the inflow to the structure during the entire storm event;
- ◆ collection of a flow weighted composite of the outflow from the structure - the sampling period should include the peak outflow resulting from the storm event;
- ◆ analysis of inflow and outflow flow weighted composite samples for biochemical oxygen demand (BOD), total suspended solids (TSS), zinc, lead, total phosphorus (TP) and total nitrogen (TKN & NO<sub>3</sub>); and,
- ◆ collection of grab samples at the inlet and outlet locations during the periods of peak inflow and outflow for pH, dissolved oxygen (D.O.) and fecal coliform bacteria.

The City's Engineering Department should finalize the number and size of storms to be monitored as well as who should be responsible for conducting the monitoring. Monitoring should be conducted at the developer's and owner's expense. Analysis should conform to EPA standards. Specific monitoring procedures and parameters analyzed may change in the future based on continuing storm water runoff and water quality studies.

The storm water plan should require the developer to submit a detailed, long-term schedule for inspection and maintenance of the storm facilities. This schedule should describe all maintenance and inspection requirements and persons responsible for performing maintenance and inspection activities. These provisions and the monitoring program should be included in a formal, legally binding maintenance agreement between the City and the responsible party.

In addition to inspections required in the storm water management plan, the formal maintenance agreement between the developer and City of Alpharetta should allow for periodic inspections of the storm water facilities to be conducted by appropriate City personnel. If inadequate maintenance is observed, the responsible party should be notified and given a period of time to correct any deficiencies. If the party fails to respond, the City should be given the right to make necessary repairs and bill the responsible party.

The City should not release the site plans for development or issue any grading or construction permits until a storm water management plan has been approved, and a fully executed maintenance/monitoring agreement is in place.

## HISTORIC RESOURCES

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

No.

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

N/A.

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

N/A.

## INFRASTRUCTURE

### Transportation

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

Land Use	Acres Sq. Feet Units	Weekday	AM Peak Hour		PM Peak Hour	
			Enter	Exit	Enter	Exit
General Office Building	1,190,280	9,108	1,165	143	196	957
Hotel	254 units	2,177	101	68	101	86
Shopping Center	185,680	10,405	147	87	486	486
Shopping Center*	57,200	7,464	111	65	345	345
Total	1,433,160 sq. feet and 254 hotel rooms	29,154	1,524	363	1128	1874

\* This represents the retail space planned for Pod B, which includes a gas station, three restaurants, and an unspecified retail use. The shopping center category was used because insufficient information was available to calculate estimates for the individual uses. To reflect the higher trip generation rates of these freestanding retail uses, the estimate was increased by a factor of 50%.

The above trip generation figures were calculated using the Institute of Traffic Engineers Trip Generation (5th Edition) manual.

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

The following volumes are based on 1995 GDOT coverage counts from area facilities that will likely provide the primary routes for traveling to the proposed development. 2010 volumes for these facilities were obtained from the ARC transportation model.

Facility	1995 Number of Lanes	1995 Volume	1995 V/C Ratio	2010 Number of Lanes	Forecast 2010 volume	2010 V/C Ratio
Haynes Bridge Road from GA 400 to Mansell Road	2	23,986	1.15	4	39,100	.94
Haynes Bridge Road from SR 120 to GA 400	2	17,269	.83	4	33,000	.79
GA 400 from Haynes Bridge Road to Mansell Road	6	75,558	.64	6	123,500	1.05
GA 400 from Haynes Bridge Road to State Bridge Road	4	73,063	.93	4	97,100	1.24
Mansell Road from GA 400 to Old Alabama Road Connector	4	15,289	.47	4	n/a*	n/a*
Mansell Road from GA 400 to Old Roswell Road	4	38,099	1.12	4	n/a*	n/a*
State Bridge Road from GA 400 to Jones Bridge Road	4	22,907	.40	4	40,200	.71
State Bridge Road from GA 400 to Kimbell Bridge Road	4	11,851	.21	6	31,100	.37

\*Future year volume forecasts were unavailable for this road segment.

The above table indicates that the selected roads currently operate and are forecast to operate within capacity except for GA 400, Haynes Bridge Road, and Mansell Road, which are generally approaching or above capacity.

**What transportation improvements are under construction or planned for the Region that would affect or be affected by the proposed project? What is the status of those improvements (long or short range or other)?**

The ARC's adopted Atlanta Regional Transportation Improvement Program FY 1996 - FY 2001 (TIP), as amended September 25, 1996, includes the following proposed projects in the vicinity of this site:

FN 016 SR 120 from Georgia 400 to SR 9. Widen from two to six lanes. Preliminary engineering, right-of-way acquisition, and construction scheduled for FY 1996.

FN 048B SR 120 at State Bridge Road. Turn lanes. Preliminary engineering, right-of-way acquisition, and construction scheduled for FY 1996.

FN 015 State Bridge Road from Alpha Court to Park Bridge Parkway. Widen from two to four lanes. Preliminary engineering and right-of-way acquisition scheduled for FY 1996, construction for FY 1997.

FN 031 Haynes Bridge Road from Big Creek to Old Alabama Road. Widen from two to four lanes. Right-of way acquisition scheduled for FY 1997, construction for FY 1998.

FN 048A Ph. 1 State Bridge Road from Park Bridge Parkway to Jones Bridge Road. Widen from two to four lanes. Right-of-way acquisition scheduled for FY 1999, construction for sometime after FY 2002.

FN 067B SR 9 from Upper Hembree Road to Academy Street. Widen from two to four lanes. Preliminary engineering scheduled for FY 1996, construction for sometime after FY 2002.

FN 095 Grimes Bridge Road at Big Creek. Bridge improvement. Right-of-way acquisition scheduled for FY 1998, construction for sometime after FY 2002.

FN ARC 177C Bicycle/ Pedestrian facilities: Old Alabama Road lane and sidewalk.

The long range element of ARC's Regional Transportation Plan: 2010 includes the following projects in the vicinity of this site. The RTP scheduled no work to begin on these projects until FY 2002 or later.

FN 031 Haynes Bridge Road from Big Creek to Old Holcomb Road. Widen from two to four lanes.

FN 067 SR 9 from Upper Hembree Road to Academy Street. Widen from two to four lanes.

FN 003 SR 120 from State Bridge Road to Peachtree Industrial Boulevard. Widen from two to four lanes.

FN 007 SR 9 from SR 120 to Hill Street. Improve from existing four lane to four lane upgrade.

FN 0026 Riverside Road from Old Alabama Road Extension to SR 9. Widen from two to four lanes.

FN 029 Belcourt Parkway Connector from Mansell Road Extension (E) to Old Alabama Road. New four lane street.



FN 038 Cummings Street/ Union Hill Road from SR 9 to SR 400. Improve from existing two lane to two lane upgrade.

The Atlanta Region Bicycle and Pedestrian Walkways Plan, 1995 Update includes the long term projects. These projects have not been scheduled for construction.

Haynes Bridge Road from Old Alabama Road to State Bridge Road. Class I separated bicycle facility.

Old Alabama Road from Holcomb Bridge Road to Medlock Bridge Road. Class I separated bicycle facility.

State Bridge Road/ SR 120 from Cumming Highway to Gwinnett County. Class I separated bicycle facility.

Woodstock/ Crossville Road/ SR 92 from Cobb County to Roswell Road. Class I separated bicycle facility.

**Will the proposed project be located in a rapid transit station area? If yes, how will the proposed project enhance or be enhanced by the rapid transit system?**

No.

**Is the site served by transit? If so, describe type and level of service.**

The area is served by one MARTA Bus line (Route 141) which stops at the North Point Mall between the hours of 7:30 AM and 11:30 PM.

**Are there plans to provide or expand transit service in the vicinity of the proposed project?**

No.

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

None.

**What is the cumulative generation of this and other DRIs or major developments? Is the transportation system (existing and planned) capable of accommodating these trips?**

Five other Major Development Area Plans have been reviewed in this area. The table below lists traffic generation estimates for North Point Commons and these five developments.

<b>Name</b>	<b>Weekday</b>
<b>North Point Commons</b>	29,154
North Point Mall	101,000
Mansell Crossing	29,400
Northwind	49,000
Brookside	25,752
Hines Mixed Use	34,513
<b>Total</b>	<b>268,819</b>

The North Point Mall, located adjacent to the North Point Commons site, has the most direct impact on the facilities which will serve the project site. This project was expected to generate about 101,000 daily vehicle trips. The high growth rate along the GA 400 corridor will result in congested facilities despite recent and planned improvements to the transportation system. A comparison of GDOT counts from 1991 to 1995 shows the impact of increased commercial and residential development on transportation facilities in the area. The 1991 GDOT daily vehicle count for GA 400 north of Haynes Bridge Road was 48,360, which grew to 73,063 by 1995, a 51% increase. South of Haynes Bridge Road, GA 400 daily traffic grew from 59,690 in 1991 to 75,556 by 1995, a 33% increase.

Competition for the limited federal funding available to the Atlanta Region and the federal air quality regulations will make it difficult to fund and provide additional road capacity in the North Fulton area. Currently, no improvements are identified to improve GA 400 in the project area. Therefore, all additional traffic generated by new development will result in increased congestion on local and regional facilities. The planned widenings and improvements to SR 120/ State Bridge Road, and the planned widening of a segment of Haynes Bridge Road, will not be sufficient to absorb likely future increases in traffic volume in the area. It is increasingly important to effectively manage the existing transportation system and pursue alternative travel modes in this fast growing area of the ARC region.

The site should be designed to maximize pedestrian and bicycle access both to the site and within the development, including an adequate sidewalk system. It is also important that pedestrian access to the adjacent North Point Mall be provided across Haynes Bridge Road, and connections be made to North Fulton's planned pedestrian and bicycle system. The developer has agreed to these measures.

Currently, the closest MARTA service is at North Point Mall. MARTA will be open to considering serving the site in the future, so the parking and circulation facilities within the development should be designed to provide bus turn-around areas and the developer has agreed to this. MARTA's conceptual proposal to extend rail service northward should be carefully considered in light of this development and others along the SR 400 corridor.

A shuttle service between North Point Commons, North Point Mall, and possible nearby commercial and office development may offer substantial mobility and access benefits to the development and to the area. This could be pursued as part of a Transportation Management Association (TMA) and commute options program, both of which should actively be implemented in this area and include this site and others along the SR 400 corridor. Consideration should be given to developing traffic management plans at the site, which would include a commute options program and be managed by a future TMA. Again, this would apply to all developments along the SR 400 corridor. The North Point Commons developer has agreed to spearhead an effort to develop a TMA.

## **INFRASTRUCTURE**

### **Wastewater and Sewage**

**How much wastewater and sewage will be generated by the proposed project?**

According to regional averages, the proposed development could generate 0.29MGD of wastewater.

**Which facility will treat wastewater from the project?**

The development is located in the Big Creek Wastewater Treatment Plant sewer service area.

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

The Big Creek Plant has been expanded to 24MGD. Yet, ARC has reviewed many major developments which would exceed the plant's expanded capacity if all are built as proposed. Further expansion of the plant will be contingent upon EPD approval.

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

See above.

## **INFRASTRUCTURE**

### **Water Supply and Treatment**

**How much water will the proposed project demand?**

Again, according to regional averages, 0.33MGD.

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

The new Atlanta-Fulton County Water Plant will provide water to the development. However, it is important that water conserving measures be used in all phases.

## **INFRASTRUCTURE**

### **Solid Waste**

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

3,373 tons per year based on national averages. Private haulers will be required.

**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 service?
- 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.)?

The unprecedented rate of development proposed in this part of the region will severely strain the ability of governments to provide the needed infrastructure and services.

## **HOUSING**

**Will the proposed project create a demand for additional housing?**

Yes.

**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?**

Yes.

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

Likely.

\* Defined as 30 percent of the income of a family making 80 percent of the median income of the Region. 1996 median family income of \$52,100 for Atlanta MSA.

## ARC Storm Water Management Task Force INTERIM STORM WATER QUALITY MANAGEMENT GUIDELINES

### Introduction

The following are suggested interim guidelines for local governments that want to protect and improve water quality by minimizing the potential harmful impacts generated by pollution in storm water runoff from urban land uses. These guidelines are focused on practices to minimize long-term impacts of developed areas on water quality. In general, the objectives of these interim guidelines include minimizing imperviousness, providing areas to capture overland flow of storm water and allow it to infiltrate into the soil, treating other runoff that leaves a developed site and designing sites to protect water quality.

Although many pollutants in storm water runoff must be considered in storm water design, one of the primary pollutants used as a design parameter is total suspended solids, or TSS. The following table is provided as information on post-development characteristics of average annual TSS loads (pounds per acre per year) associated with various land uses and development types. The source of this information is based on storm water samples collected for the Atlanta Region Storm Water Characterization Study and is supplemented with national data for the non-urban land uses.

<u>Land Use</u>	<u>TSS (lbs/ac/yr.)</u>
Forest/Open	235
Agriculture/Pasture/Cropland	327
Large Lot Single Family (>2ac)	355
Low Density S.F. (1-2ac)	447
Low-Medium Density S.F. (0.5-1.0ac)	639
Medium Density S.F. (0.25-0.5ac)	801
Townhouse/Apartment	605
Commercial	983
Office/Light Industrial	708
Heavy Industrial	795

The Atlanta Region Storm Water Management Task Force is working to develop a detailed manual of Best Management Practices (BMPs) for reducing TSS and other pollutants in storm water runoff from urban areas. The Task Force generated the following protection measures as interim recommendations to be used until the BMP manual is completed. This guidance document includes a variety of recommended practices which are presented below as options for developers and engineers to consider in designing controls for storm water runoff quality from developed areas. These practices are options and may be used alone or in combination - selection of appropriate controls will be site-specific.

### Practice 1: Minimize Impervious Surface

This option may be most appropriately applied to larger sites. Minimizing the amount of impervious surface on a site allows for more infiltration of storm water into the ground, thereby reducing both pollutants and the runoff from the site. This approach to managing storm water runoff does not require extensive maintenance. Therefore, when possible, limiting impervious surface on a site should be encouraged. This basically involves leaving part of a site undeveloped to achieve lower percentages of impervious surface. It is recommended that impervious surface on a site be limited to the impervious surface equivalent to medium density, single family residential (approximately 1/4 - 1/2 acre average lot sizes) development. This type of development typically has 25% or less impervious surface. If a developer restricts impervious surface to these levels, construction of structural controls for water quality would probably not be necessary. Any development more dense than medium density single family residential should employ structural controls (see Practice 2 below).

The development site should be planned so that open space areas act as a pollutant filter and buffer for storm water flow from the site. Environmentally sensitive portions of a development site such as river and stream corridors and wetlands should be targeted for the undeveloped, "open space" or "greenbelt" areas. Local governments can encourage the concept of "cluster development," which allows higher levels of impervious (over 25%, for example) on portions of a site if sensitive areas are left undeveloped and maintained as undisturbed open space and they function to reduce the pollutant load in storm water runoff. Provisions should be made so that any open space areas are maintained in their natural state. If any development in these areas occurs in the future, the site would have to be re-reviewed, for storm water quality purposes, by the local government.

As a general guideline to local governments, several studies indicate that watershed-wide impervious surface amounts should not exceed 10-25% of the total land area in a water supply watershed.

## **Practice 2: Structural Controls**

If the developer selects storm water management options which involve structural controls, it is important for local governments to require that the developer submit a Storm Water Management Plan as a key component of the Plan of Development. The storm water plan should include the location, construction and design details and all engineering calculations for all storm water quality control measures.

### Wet Ponds

This practice recommends that structural controls be designed to control water quality in addition to the quantity controls typically required by local governments. At this time, the preferred approach to achieve water quality goals is construction of wet ponds. However, wet ponds may be more appropriately suited for larger developments or a group of developments. To develop an appropriate wet pond, additional storage provided above the permanent pool, combined with an appropriately designed outlet control structure, could give the necessary control for both storm water quality and quantity. Other structural control methods such as constructed wetlands could be explored as long as they were shown to achieve the desired pollutant removal.

As an example, the following design guidelines typically achieve a TSS reduction of 65%.

- Keep pond shape simple for good circulation.
- Inlets should be widely spaced from the outlets to avoid short-circuiting.
- Length should be three to five times the width.
- At least three, and preferably six to seven feet of permanent pool depth is needed for the majority of the pond.
- An underwater shelf (approximately 6"-12" deep and at least 3' wide) around the perimeter of the pond should be planted with rooted aquatic plant species.
- The pond should be designed with a sediment forebay which is easily accessible for maintenance and periodic cleaning. The forebay should be designed so as to minimize the resuspension of previously deposited sediments. The forebay storage capacity should be about 10% of the permanent pool storage to accommodate sediment accumulations over a 10- to 20-year period.
- The pond surface area should correspond to approximately 1% of the total drainage area. The minimum drainage area is 20-25 acres; the maximum is 100-300 acres depending on the level of imperviousness in the drainage basin.
- For water quality benefits, the pond should provide storage for runoff depths as listed below. The pond volume above the normal pool required for water quality may be calculated by multiplying the runoff depth by the contributing drainage area.

<u>Land Use</u>	<u>Inches of Runoff</u>	
	<u>Sandy Soil</u>	<u>Clayey Soil</u>
Freeways	0.35	0.40
Totally Paved Area	1.10	1.10
Industrial	0.85	0.90
Commercial	0.75	0.85
Schools	0.20	0.40
Low Density Res.	0.10	0.30
Medium Density Res.	0.15	0.35
High Density Res.	0.20	0.40
Developed Parks	0.50	0.60

- Storage for flood control should be provided above the level of storage provided for water quality benefits.
- The ratio of outlet flow rate to pond surface area for each stage value needs to be at the most 0.002 cfs/ft<sup>2</sup> for the water quality portion.

#### Extended Detention with Wetland Plantings

For smaller sites, with a drainage area less than 20-25 acres, it may be appropriate for the developer to use the option of a detention facility system established to provide water quality improvement through much longer detention times in contact with wetland plantings. Research has shown that storm water impounding areas which capture the first flush of runoff in a wetland setting for several days, in concert with an outlet control system for extending the detention times of larger storms, demonstrate measurable improvements in water quality. As an example, the following general design guidelines typically achieve a TSS reduction of between 45 and 80%.

If this type of system is desired, the pond area should follow the 1% of drainage basin rule presented above. The first flush capture should be at least 1/2 inch runoff from all impervious surfaces. The bottom of the pond should be cultivated with plantings indigenous to local wetlands. The first flush should be held so as to prevent its complete release in less than a 48 hour period. Each pond should provide the forebay sediment storage area already presented, as well as layout to prevent short circuit. Water velocity through the pond should be kept as low as possible with a maximum goal of 1/2 fps. Where possible, the outlet control system should be located adjacent to a public street to allow maximum access.

#### Maintenance of Structural Controls

If structural storm water controls are not maintained properly, they will provide no benefit. The developer's Storm Water Management Plan should require the developer to submit a detailed, long-term schedule for inspection and maintenance of any structural storm water facilities included. This schedule should be consistent with the maintenance policy of the local government and should describe all maintenance and inspection requirements and persons responsible for performing maintenance and inspection activities. Provisions should be made for the local government to inspect the facilities during and after construction.

#### **Practice 3: Other Controls**

Many of the following suggested controls are applicable to all developments. In general, the objectives of the following storm water runoff controls include minimizing imperviousness, providing areas to capture overland flow of storm water and allow it to infiltrate into the soil, reducing sediment flows, and avoiding directly connected impervious surface areas.



### **Building/Site Design**

- Direct roof downspouts away from direct connection with impervious surfaces.
- Use grassed swales/vegetative filter strips whenever feasible for the drainage collection system (eliminate curb and gutter). Because of decreased storm water runoff, a reduction in pollutant loads will also be realized.
- Landscape with terraces rather than aggressive slopes.
- Encourage the use of bioengineering practices to rehabilitate unstable stream channels resulting from impacts of urbanization.
- Protect and maintain natural, undisturbed buffers adjacent to streams.
- Keep development out of wetland and floodplain areas. Encourage incorporating wetlands into landscaping, upgrading wetlands where possible.
- Design and locate buildings, roads, parking and landscaping to conform with the natural terrain and to retain natural features.
- Minimize impervious surface in river and stream corridors.

### **Erosion and Sediment Controls**

- Leave generous buffers or natural areas between bare land areas.
- Regrass/landscape bare soil.
- Check for volume transfer and velocities of water downstream of project to protect downstream areas from increased erosion and to prevent streambank and natural area destruction.
- For controls during construction, refer to the State Erosion and Sediment Control Act and pending State construction permit.

### **Recommended References**

- United States Environmental Protection Agency, January 1993. Guidance Specifying Management Measures for Sources of Nonpoint Pollution in Coastal Waters.
- Schueler, Thomas R., Department of Environmental Programs, Metropolitan Washington Council of Governments, July 1987. Controlling Urban Runoff: A Practical Manual for Planning and Designing Urban BMPs.
- Georgia Soil & Water Conservation Commission, Metro Atlanta Association of Conservation Districts, USDA Soil Conservation Service and Georgia Environmental Protection Division, 1994. Guidelines for Streambank Restoration.
- Pitt, Dr. Robert E. Excerpts from Detention Pond Design to Control Quality and Quantity, University of Alabama, Birmingham Continuing Education Workshop. For more information, contact David Eckhoff, Director of Engineering Professional Development, (205)934-8268.
- Camp Dresser & McKee, prepared for the Atlanta Region Storm Water Task Force, Atlanta Region Storm Water Characterization Study, 1993.