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**Atlanta Regional Commission**
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Atlanta, Georgia 30327-2809

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

ARC

**Harry West**
Director

June 27, 1997

Honorable David Rogers, Mayor
City of Woodstock
103 Towne Lake Parkway
Woodstock, GA. 30188

RE: Development of Regional Impact
Rope Mill Subdivision

Dear David:

I am writing to let you know that the ARC staff has completed review of the proposed Rope Mill Development of Regional Impact (DRI). Our finding is that this DRI is in the best interest of the State.

I am enclosing a copy of our Review Report and a copy of comments we received from Cherokee County during the review.

We appreciate the opportunity to review and comment on this proposed development and ask that you call us if you have any questions concerning the review.

Sincerely,

Harry West
Director

Enclosures

c Mr. Richard Thompson, JCR/Towne Lake, Ltd.
Hon. Hollis Lathem, Cherokee County
Mr. Wayne Shackelford, GDOT
Mr. Harold Reheis, GDNR
Mr. Rick Brooks, GDCA

Facility: Rope Mill
Preliminary Report: May 12, 1997
Final Report: June 27, 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.**

No. According to information submitted with the review the City's plan and zoning project light industrial development for the site.

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

The County noted that the proposed development is inconsistent with the County's proposed new Comprehensive Plan.

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

No.

**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?**

According to regional averages, the proposed development could accommodate a population of 1,473, including 325-425 students.

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

ARC has not reviewed any other major developments in the nearby vicinity of Rope Mill.

**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 proposed for the subdivision is in northwest Woodstock, west of I-575, and on Rope Mill Road. 84 32'30"/34 07'30".

**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.**

Cherokee County and the U.S. Army Corps of Engineers Allatoona Reserve.

**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.**

With the exception of a school site and I-575 right-of-way, the property is totally surrounded by the Allatoona Reservation.

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?**

Exact amount is not available at this time as built-out value is not yet known and will depend upon the final mix of various priced houses. However, $330,000 is estimated.

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

500 according to information submitted.

**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?**

N/A.

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/Wetlands/Floodplains
The proposed project is located in the Allatoona Lake/Etowah River watershed, a large water supply watershed. Allatoona Lake is a U.S. Army Corps of Engineers operated reservoir, and as such, no minimum DNR watershed protection criteria apply. There are no wetlands located within the proposed project area. Further, the proposed project site is not located in areas of a 100 year floodplain.

Georgia Erosion and Sedimentation Act - Stream Buffer Requirements
This act requires that a 25ft. wide natural vegetated buffer be maintained on both sides of streams designated as "State waters". U.S.G.S. quad sheets indicate that two streams originate and flow from the site. ARC recommends that the developer work with the state to determine if these streams are considered "State Waters", and provide protection measures if appropriate.

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 Rope Mill 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**

| Land Coverage | Total Phosphorus | Total Nitrogen | BOD | TSS | Zinc | Lead |
|---|---|---|---|---|---|---|
| Low-Medium Density SF (286 ac) | 309 | 1,350 | 9,724 | 182,754 | 77.2 | 17.2 |

If the development is approved, the City of Woodstock 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 technical guidance for the control of post-development pollution in storm water (find attached).

Structural Storm Water Pollution Controls

The City of Woodstock 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;

## 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?**

| | Acres | | AM | | PM | |
|---|---|---|---|---|---|---|
| | Sq. Feet | | Peak Hour | | Peak Hour | |
| Land Use | Units | Weekday | Enter | Exit | Enter | Exit |
| | | | | | | |
| Single Family Residential | 589 | 5,284 | 98 | 277 | 348 | 187 |

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 |
|---|---|---|---|---|---|---|
| I-575 from Towne Lake Parkway to Sixes Road (STA 239) | 4 | 34,200 | 0.44 | 4 | 83,300 | 1.07 |
| I-575 from Towne Lake Parkway to SR 92 (STA 237) | 4 | 53,400 | 0.68 | 4 | 84,300 | 1.09 |
| Rope Mill Road from Main Street to Rope Mill Lane (STA 155) | 2 | 1,400 | 0.09 | 2 | n/a | n/a |
| Towne Lake Parkway from I-575 to Main Street (STA 291) | 2 | 14,000 | 0.70 | 4 | 28,700 | 0.52 |

The above table indicates that roads in the vicinity of the site operate either at capacity or greatly exceed 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)?**

In the Atlanta Regional Transportation Improvement Program FY 1996-FY 2001, the following two projects are in the immediate vicinity of the proposed development:

CH 021 Rope Mill Rd Extension from Old Highway 5 to I-575. This project entails building a 2 lane road. All project phases should be completed by 1999.

CH 027 I-575 Access Rd from West Mill Rd to Rope Mill Rd Ext. This project entails building a two lane road. All project phases should be completed by 1999.

There are no transportation projects contained Regional Transportation Plan: 2010 or the Atlanta Region Bicycle Transportation and Pedestrian Walkways Plan, 1995 Update in the immediate vicinity of the proposed development.

**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.**

No.

**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?**

There are two other DRI sites nearby, including Towne Lake, of which this development is a part, and Harborview. Both of these developments are proposed to have single family residential, commercial and some office development including a golf course. Towne Lake is approximately two-thirds complete. Harborview has not yet started construction. The total amount of traffic generated by these developments is shown in the following table.

| | | AM Peak Hour | | PM Peak Hour | |
|---|---|---|---|---|---|
| | Weekday | Enter | Exit | Enter | Exit |
| **Harborview** | 31,622 | 621 | 1,246 | 1,818 | 1,257 |
| **Rope Mill** | 5,284 | 98 | 277 | 348 | 187 |
| **Total** | **36,906** | **719** | **1,523** | **2,166** | **1,444** |

Future 2010 traffic projections indicate that roads in the vicinity of the site will be approaching or exceeding capacity. The additional estimated 5,300 daily trips generated by the development will impact roads and intersections adjacent to the site, resulting in deteriorating traffic conditions, especially during the evening peak hour. The greatest impact will be on Main Street in Woodstock, a narrow two-lane street.

Proposed improvements, including Rope Mill Road connector to Highway 5 and the realignment of Rope Mill Road should help redistribute local traffic, and help alleviate some impact to Main Street in Woodstock. The proposal to improve Towne Lake Parkway to four lanes from I-575 eastward to West Mill Road in Woodstock and signalization at that intersection will also help relieve congestion. However, continued growth in Cherokee County and traffic demand in the I-575 corridor will result in these roads becoming congested again, as evidenced by future traffic projections.

## AIR QUALITY ANALYSIS

### Methodology

The emissions analysis for the Rope Mill planned unit development was based on trip generation estimates for the facility. The estimated emissions are based on light duty gas vehicles (passenger automobiles) for a mix of peak and off-peak speeds.

### Results of Analysis

Estimates for both hydrocarbons and nitrogen oxides resulting from this development are presented in the following table.

| | TONS PER YEAR | TONS PER DAY | TONS PER ACRE |
|---|---|---|---|
| Nitrogen Oxides | 15.7 | 0.06 | 0.055 |
| Hydrocarbons | 18.3 | 0.07 | 0.064 |

As recommendations, the developer, City and County officials should work with the developer, ARC and the GA DOT to develop appropriate transportation projects and programs that will reduce single-occupant vehicle travel, encourage the use of alternative modes and be included in local and regional transportation plans. Local park and ride lots are needed to encourage carpooling and reduce the impact of work trips on the regional transportation system. The proposed subdivision should be developed for pedestrian and bicycle use, including sidewalks. Recreation amenities to serve the subdivision population should be considered. The City of Woodstock and Cherokee County should consider constructing sidewalks, a multi-use trail or bicycle lanes (or wide paved shoulders) on Rope Mill Road and the Rope Mill Road extension in order to facilitate short trips to nearby destinations by a mode other than the automobile. Nearby destinations would include, for example, Woodstock Elementary School, downtown Woodstock, the library, hospital, other neighborhoods and residences and the Little River to the north.

# DRI AIR QUALITY ANALYSIS - ROPE MILL AT TOWNELAKE

| | Total Trips | Peak Auto | Off-peak Auto | Peak VMT | Off-peak VMT | NOx G/D | HC G/D | NOx T/D | HC T/D | NOx T/Y | HC T/Y |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **OFFICE** | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 | 0.000 | 0.000 | 0.000 | 0.000 |
| **RETAIL/HOTEL** | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 | 0.000 | 0.000 | 0.000 | 0.000 |
| **APT/HOUSE** | 5,284 | 2,275 | 3,009 | 29,575 | 21,063 | 54,814.55 | 63,938.07 | 0.060 | 0.070 | 15.710 | 18.325 |
| **WAREHOUSE** | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 | 0.000 | 0.000 | 0.000 | 0.000 |
| **INDUSTRIAL** | 0 | 0 | 0 | 0 | 0 | 0.00 | 0.00 | 0.000 | 0.000 | 0.000 | 0.000 |
| **Impact of Total Development** | | | | | | | | **0.060** | **0.070** | **15.710** | **18.325** |
| | | | | | **Total Acres** | **287** | | | | | |
| | | | | | **Tons/Acre per year** | | | | | **0.055** | **0.064** |

* Reductions, if any, for passby trips based on ITE Trip Generation passby descriptions.

**Assumptions:**

1. Emissions factors based on 20% CS for LDGV for a mix of peak and off peak highway speeds for 1999.
2. Average commute trip length in region = 13 miles
3. Average Non-work trip length in region = 7 miles
4. Reasonableness threshold = 50 tons per year

**Calculations:**

Perform each of the following steps for each different type of development included in the proposed development

1. Total trips derived from Trip Generation Manual based upon development type and number of units and square footages.
2. Trip generation estimates are divided into AM and PM peak based on entries and exits.
   The total of peak (AM+PM)*2.5 entries and exits = total peak period auto trips
3. Reduce PM Peak trips to account for passby and internal trips as per percentages noted in ITE Trip Gen Manual
4. Peak VMT derived by multiplying peak trips by average commute distance in region
5. Off peak VMT derived by multiplying off-peak trips by average non-work trip in region
6. Derive Emissions totals for NOx in grams per day
   Multiply Peak VMT by MOBILE5A peak off hwy emissions factor (speed = 21.1 mph)
   Multiply Off-peak VMT by MOBILE5A off peak off hwy emissions factor (speed = 26.8 mph)
   Sum total of peak + off peak to get total NOx emissions in grams per day
7. Derive emissions totals for VOC in grams per day
   Multiply Peak VMT by MOBILE5A peak off hwy emissions factor (speed = 21.1 mph)
   Multiply Off-peak VMT by MOBILE5A off peak off hwy emissions factor (speed = 26.8mph)
   Sum total of peak + off peak to get total NOx emissions in grams per day
8. Convert to tons per day
   Divide total emissions derived from step 7 by 907180 for both VOC and NOx
9. Convert to tons per year
   Multiply total emissions derived from step 8 by 260 (number of weekdays in a year)
10. To obtain the impact of the total development sum the emissions generated by each different piece (e.g. office, retail, residential)

INFRASTRUCTURE
**Wastewater and Sewage**

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

According to regional averages, this subdivision could generate 0.235MGD of wastewater.

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

Rose Creek Treatment Plant.

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

Permitted capacity = 2.0MGD.
1993 Average Flow = 0.557MGD.

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

None reviewed by ARC.

INFRASTRUCTURE
**Water Supply and Treatment**

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

Again, according to regional averages, 0.27MGD.

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

The Cherokee County Water & Sewer Authority reports sufficient capacity available.

INFRASTRUCTURE
**Solid Waste**

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

Nationwide averages would suggest 672 tons 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 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 City reports that public safety services are not sufficient to meet the development's demand. Also, the elementary school is at capacity but the subdivision site adjoins a 20-acre site for a new school.

HOUSING

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

The development is housing.

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

Yes.

**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?**

N/A.

* 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.

May 22, 1995

# 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.

| Land Use | TSS (lbs/ac/yr.) |
|---|---|
| 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.

| | Inches of Runoff | |
|---|---|---|
| Land Use | Sandy Soil | Clayey Soil |
| 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 $cfs/ft^2$ 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.

# DRI–REQUEST FOR COMMENTS

**Instructions:** The project described below has been submitted to this Regional Development Center for review as a Development of Regional Impact (DRI). A DRI is a development project of sufficient scale or importance that it is likely to have impacts beyond the jurisdiction in which the project is actually located, such as adjoining cities or neighboring counties. We would like to consider your comments on this proposed development in our DRI review process. Therefore, please review the information about the project included on this form and give us your comments in the space provided. The completed form should be returned to the RDC on or before the specified return deadline.

Preliminary findings and comments of the RDC:

ROPE MILL - 589 Single-Family Houses & Amenities
I-575 & Rope Mill Road - Woodstock

Comments from affected party (attach additional sheets as needed):

1. Proposal is in conflict with Cherokee County's proposed new Comprehensive Plan
2. Cherokee County disagrees with comment that proposed Rope Mill Connector will provide traffic congestion relief.
3. Cherokee County disagrees with traffic information. Proposal is for 589 residential units. Traffic volume appears low. Cherokee County would recommend and request a complete traffic study.
4. Existing conditions on roads and streets in the area restrict public safety response.
5. Subject property is adjacent to the U.S. Corps of Engineer's protection zone for Lake Allatoona (Little River area)
6. The subject property contains environmentally sensitive areas (floodplain and wetlands).
7. The subject property contains steep slope areas.

Individual completing form: Ken Patton

Manager, Planning & Zoning

Local Government: Cherokee County

Department: Planning & Zoning

Telephone: (770) 479-0412

Signature: Ken Patton Date: 5-29-97

**Please return this form to:**
MRS. BEVERLY RHEA
ATLANTA REGIONAL COMMISSION
3715 NORTHSIDE PARKWAY
200 NORTHCREEK, SUITE 300
ATLANTA GA 30327-2809

**Return Deadline:** May 30, 1997