

6**MEMORANDUM**

TO: Mayor and Town Council

FROM: W. Calvin Horton, Town Manager

SUBJECT: Response to a Petition from Federal Realty Investment Trust Requesting Town Assistance with Drainage Improvements to Mitigate the Potential for Flooding at the Eastgate Shopping Center

DATE: February 26, 2001

The following report responds to a petition received by the Town Council at its January 22, 2001 regular meeting. The petition was presented by Ms. Jeanne Connor, representing Federal Realty Investment Trust, owner of the Eastgate Shopping Center in Chapel Hill. The petition requests that the Town assist with the implementation of drainage system improvements identified by Federal Realty Investment Trust's engineering consultant and intended to mitigate the potential for flooding in and around the Eastgate Shopping Center. A copy of the petition is attached for reference.

BACKGROUND

The Eastgate Shopping Center was constructed in the 1960's adjacent to the banks of Booker Creek (see attached Photo 1). Subsequently, the creek was covered by expanding development of the shopping center and placed underneath the parking lot in a closed conveyance system. The Eastgate Shopping Center was constructed prior to implementation of the Town's Resource Conservation District Ordinance in 1983 and before development in Chapel Hill was regulated by the Federal Emergency Management Agency (FEMA) regulations for floodplains and floodways (established in 1973) in association with the National Flood Insurance Program (NFIP). Current regulations would prohibit much of the existing Eastgate Shopping Center development now.

Because of the natural topography of the surrounding area and the physical location of the shopping center, stormwater runoff flows toward Eastgate Shopping Center from all directions, with the exception of the south side where the Booker Creek emerges from beneath the shopping center and continues south toward Elliot Road and Fordham Boulevard.

Flooding of varying magnitudes has occurred periodically at the Eastgate Shopping Center over the years (see attachment Photos 2 & 3), and will likely continue to do so. Based on current regulatory floodplain mapping (see Attachment 2 entitled Eastgate Shopping Center and Vicinity), the shopping center is entirely within the FEMA regulatory floodplain, and significant portions are within the regulatory floodway. The floodway is the most critical and strictly

regulated portion of the floodplain, in which flood flows are typically at the greatest velocities and depths, and thereby creating the highest risk of property damage.

The July 2000 flood event resulted in significant physical and financial damage to the shopping center owner and its tenants. All tenants of the Eastgate Shopping Center incurred some degree of physical flood damage during this event, varying from minor floor flooding to inundation of workplaces by several feet of moving water. Damages also included loss of business while repairs were accomplished and, to date, the permanent relocation of two businesses to other commercial sites.

The Town has participated in the areas of initial emergency response, recovery, and mitigation. Questions have been raised and issues discussed concerning the flooding of the Eastgate Shopping Center, including: NFIP flood insurance, warning systems, disaster response, flood proofing, and potential flood mitigation measures.

Federal Realty Investment Trust hired a consulting engineer to investigate the drainage system(s) within and around the shopping center following the flooding event associated with the rainstorm on the night of July 23-24, 2000. This study resulted in a set of recommendations regarding drainage system improvements which could potentially mitigate the potential for flooding of the Eastgate Shopping Center property. Based on that report, Federal Realty Investment Trust submitted a petition requesting Town assistance with four major improvements. These requests for assistance and the Manager's comments are included in the following discussion section of this report.

DISCUSSION

The Federal Realty Investment Trust consulting engineer identified several drainage facility improvements that could help mitigate the potential for future flooding of the Eastgate Shopping Center. The following information discusses each of Federal Realty's requests for assistance and our responses to those requests.

- 1) Federal Realty request: *Drainage improvements to accommodate the runoff from Franklin Street. More specifically, approximately 60 acres of offsite drainage enters the Eastgate property at the northwest corner. Approximately 350 linear feet of new 54" and 60" reinforced concrete pipe, junction boxes, and associated appurtenances are needed.*

Manager's Comment: The 60-acre watershed referred to above has always naturally drained toward the area where the Eastgate Shopping Center was built (see Attachment #6 entitled Topography adjacent to Eastgate). The existing storm sewer system within the State right-of-way and above the shopping center is owned by the NC Department of Transportation, and it is properly designed to intercept and convey stormwater runoff, consistent with natural drainage patterns and the roadway improvements the system is intended to protect. This pipe crosses out of the State right-of-way boundary and onto private property prior to entering the Federal Realty property.

The Federal Realty petition requests assistance with improvements to a portion of the system that is on private property and that was apparently installed to collect and redirect runoff water which went directly to Booker Creek before the creek was covered up by the Eastgate Shopping Center parking lots and buildings.

We do not think that it is the Town's responsibility to participate in improving private drainage facilities such as this, which are located on private property, and which function primarily to divert stormwater runoff around improvements on private property.

We will, however, continue to provide technical information and staff assistance to Federal Realty Investment Trust if it wishes to undertake these drainage system improvements to better protect its property.

- 2) Federal Realty request: *Drainage improvements to accommodate the runoff from the Staples property. A 30" reinforced concrete pipe drains 3.5 acres of offsite drainage onto Eastgate. The pipe was inappropriately constructed on Eastgate property perpendicular to natural drainage.*

Manager's Comment: We think that this is an issue between two private property owners and that the Town does not have a direct role in mitigating any problems that may exist between the owners. We agree that the outlet pipe from the Staple's property could have been designed and constructed to better and more efficiently direct stormwater into the existing ditch system between the two properties.

A review of the revised final plans, dated 3/24/99 indicates a "temporary construction easement by owner" for that portion of Staples' storm drain system discharging onto the Eastgate Shopping Center property. We have been unable to confirm whether or not a recorded drainage easement exists over the ditch system between the Eastgate Shopping Center and Staples properties.

We suggest that Federal Realty Investment Trust work with the Staple's property owner to modify the existing storm sewer system outlet to redirect the discharges exiting the Staple's property, and evaluate possible means to better utilize the provided underground detention in the existing Staples' pipe network.

Town staff will study the feasibility of accepting discharges from this modified drainage system into the linear park facility, for water quality improvement purposes. If it is found to be feasible, the Town could participate in some improvements to the existing ditch system as part of the linear park project. We will maintain open communications with both property owners regarding this issue.

- 3) Federal Realty request: *The hydraulic capacity of Elliott Road needs to be improved through relocation of the road or increasing the size of the Booker Creek crossing.*

Manager's Comment: Booker Creek crosses beneath Elliot Road via three elliptical metal pipes. The opening sizes are sufficient to pass most storm events without flooding the road or adjacent properties. The Federal Realty Investment Trust engineering study

indicates that flooding conditions in this area result primarily from Booker Creek backing up at the box culvert under Fordham Boulevard (US 15-501). If Federal Realty Investment Trust wishes to pursue this issue, we believe it would be appropriate for it to enter discussions with the NC Department of Transportation to determine the feasibility of improving the Fordham Boulevard crossing to increase its conveyance capacity without harmful effects to downstream properties.

We believe that the hydraulic capacity of the Booker Creek crossing under Elliott Road is not a primary cause of flooding upstream from Elliot Road, including the Eastgate Shopping Center property, as evidenced by the consulting engineer's study. Nevertheless, to ensure maximum flow efficiency, the Town Public Works Department has been directed to clear debris, sediment and undergrowth from the entrance and exit of the Elliot Road creek crossing, and will continue to routinely inspect and maintain the crossing.

- 4) Federal Realty request: *Drainage improvements to accommodate the runoff from the Ram's Head Plaza watershed. More specifically, approximately 30 acres of paved offsite drainage enter the Eastgate property at the northeast corner.*

Manager's Comment: We believe that this situation is another issue between two private property owners, in which the Town has no direct responsibility.

To the extent of our authority to do so, we will recommend stormwater management stipulations designed to reduce peak discharges and to provide water quality treatment as part of our review of any proposed improvements within this watershed, including the Ram's Head Plaza property.

We have met at this site with NC Department Of Transportation officials to request drainage maintenance in the State right-of-way. We have advised Federal Realty Investment Trust of maintenance needs on ditches and swales on their property, which we believe could mitigate some of the conveyance problems relating to offsite runoff entering the Eastgate Shopping Center property.

NEXT STEPS

There has been only limited discussion about developing a comprehensive flood damage prevention strategy for tenants, including flood insurance options, emergency response, and investigation of means for floodproofing workspaces. The Town and the Chapel Hill/Carrboro Chamber of Commerce have been assisting some Eastgate Shopping Center merchants with these issues since the July flood. In conjunction with that assistance, we think that Federal Realty Investment Trust should take a leadership role in engaging its Eastgate Shopping Center tenants in developing and implementing flood damage prevention strategies. We are prepared to continue assisting Federal Realty Investment Trust and the Eastgate Shopping Center tenants, to the extent possible, with identifying and developing possible strategies.

It is our opinion that one of the best solutions for flood damage reduction at the Eastgate Shopping Center would be to assume that periodic flooding events will occur, regardless of

drainage system improvements, and to implement innovative floodproofing measures to protect tenants' workspaces and inventory during those intermittent occasions when flooding occurs.

The Town of Chapel Hill and the Town of Carrboro have submitted a request to the Federal Emergency Management Agency (FEMA) to be included in the Cooperating Technical Community (CTC) program. This program would open lines of communication between the local governments and FEMA, which could result in improved opportunities for technical, program development, and financial assistance. We anticipate that this initiative program could ultimately assist businesses, citizens, and the community-at-large in identifying and implementing improved floodplain management and flood mitigation measures.

The Town is continuing its efforts to ensure that public drainage facilities are properly maintained and cleared of obstructions, including the Elliott Road culverts. We will also continue to bring drainage problems on State rights-of-way to the attention of the North Carolina Department of Transportation for repair and maintenance as needed.

We will make efforts in designing the Town's linear park (proposed for the area south of the Eastgate Shopping Center and intended to primarily address water quality issues) to incorporate elements which could mitigate some of the water quantity problems contributing to periodic flooding of the Eastgate Shopping Center.

CONCLUSION

The Town has been actively engaged in assisting and cooperating with Federal Realty Management Trust, its engineering consultant, and individual tenants of the Eastgate Shopping Center in the aftermath of the flood event of July 23-24, 2000.

Federal Realty Management Trust has performed a comprehensive engineering study to determine some of the cause and effect elements of the flooding which periodically occurs on the Eastgate property.

The identified problem areas reveal that stormwater runoff has historically flowed, and continues to flow, toward and through the Eastgate Shopping Center because it is located in a low area and lies directly in the regulatory floodway and floodplain of Booker Creek, one of the Town's three major streams. Our analysis of the engineering report, and our understanding of the historic and current conditions in the Eastgate area, suggest that the identified drainage problems and improvements involve private facilities on private properties. We do not believe that the Town is responsible for implementing or financially contributing to the identified drainage improvements that would principally benefit private properties.

ATTACHMENTS

1. Petition from Federal Realty Investment Trust (p. 6).
2. Vicinity Floodplain Map (p. 7).
3. Photo 1: Aerial photograph of Eastgate Shopping Center, dated 1961 (p. 8).
4. Photo 2: Photograph of Eastgate Shopping Center flooded, September 5, 1996 (p. 9).
5. Photo 3: Photograph of Eastgate Shopping Center flooded, 1972 (p. 10).
6. Topographic Map showing historical direction of flows (p.11).



11

FEDERAL REALTY INVESTMENT TRUST

RECEIVED &
REFERRED AT
1/22/01 MTS.

January 18, 2001

Mayor Rosemary Waldorf
And the Chapel Hill Town Council
306 North Columbia Street
Chapel Hill, North Carolina 27516

Dear Mayor Waldorf:

Federal Realty Investment Trust, the owner of Eastgate Shopping Center, has received its final recommendations from Geoscience Group regarding our major flooding incident on July 24, 2000. Their study demonstrates several major items which must be corrected, some of which appropriately belong to Federal Realty, but others which will require assistance from the Town of Chapel Hill.

Specific items Federal Realty would like assistance from the Town of Chapel Hill include the following:

1. Drainage improvements to accommodate the runoff from Franklin Street. More specifically, approximately 60 acres of offsite drainage enters the Eastgate property at the northwest corner. Approximately 350 linear feet of new 54" RCP and 60" RCP, junction boxes, and associated appurtenances are needed.
2. Drainage improvements to accommodate the runoff from the Staples property. A 30" RCP drains 3.5 acres of offsite drainage onto Eastgate. The pipe was inappropriately constructed on Eastgate property perpendicular to natural drainage.
3. The hydraulic capacity of Elliot Drive needs to be improved through relocation of the road or increasing the size of the Booker Creek Crossing.
4. Drainage improvements to accommodate the runoff from the Rams Head Plaza watershed. More specifically, approximately 30 acres of paved offsite drainage enters the Eastgate property at the northeast corner.

Our Eastgate tenants should be able to conduct business without fear of another major flood. If these corrective actions are taken by the town, water flow will be improved significantly. We appreciate your consideration of our request for help.

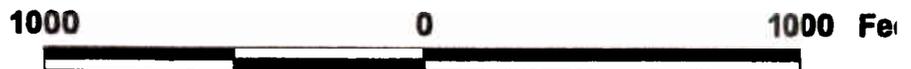
Very truly yours

Jeanne T. Connor
Jeanne T. Connor

Eastgate Shopping¹² Center and Vicinity Floodway and Floodplain Map



-  Eastgate Property
-  Building Footprints
-  Booker Creek
-  Lot Lines
- Floodway**
-  Floodway
-  100 Yr. Floodplain
-  500 Yr. Floodplain



EASTGATE SHOPPING CENTER

Route 15-501

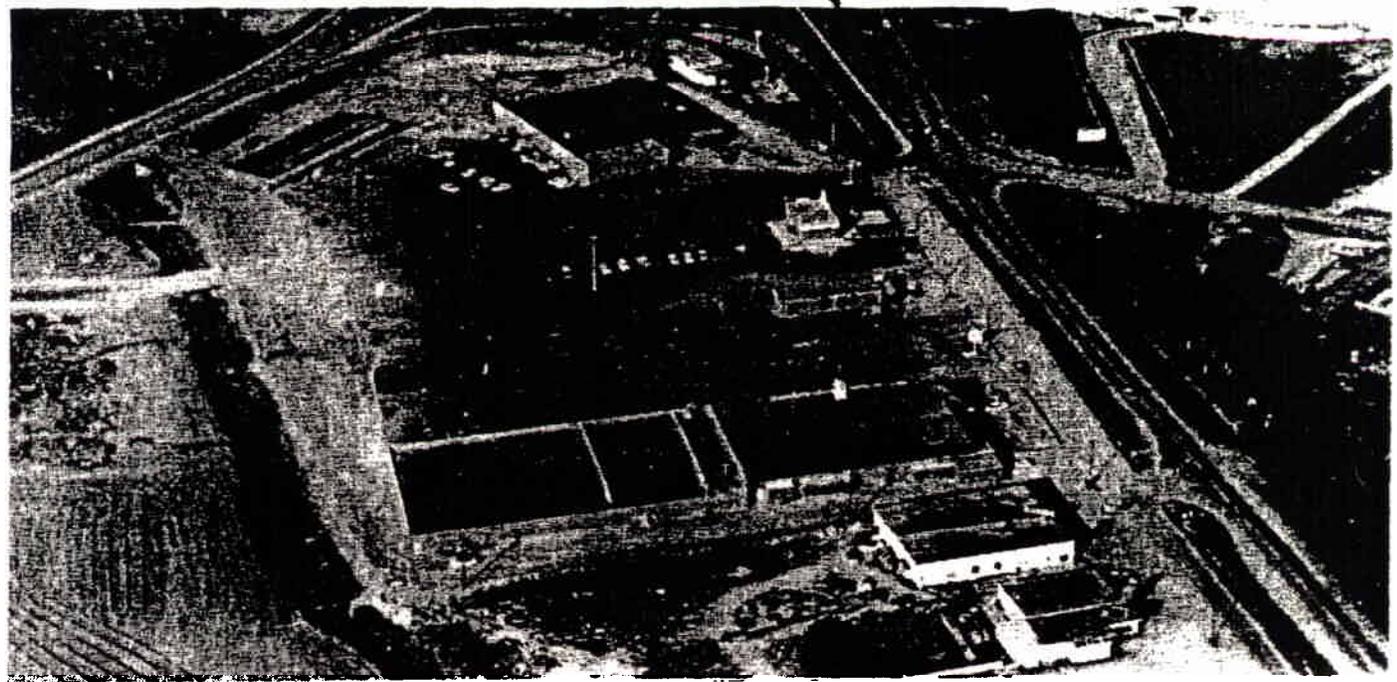


Photo 1

Aerial photograph, dated 1961, shows Booker Creek as an open channel prior to full development of shopping center. Photograph also reveals the drainage flowing from the left and discharging into Booker Creek.
(Franklin Street drainage as described in report)

Photo 2

**Eastgate Shopping Center flooded
during Hurricane Fran**

September 5, 1996

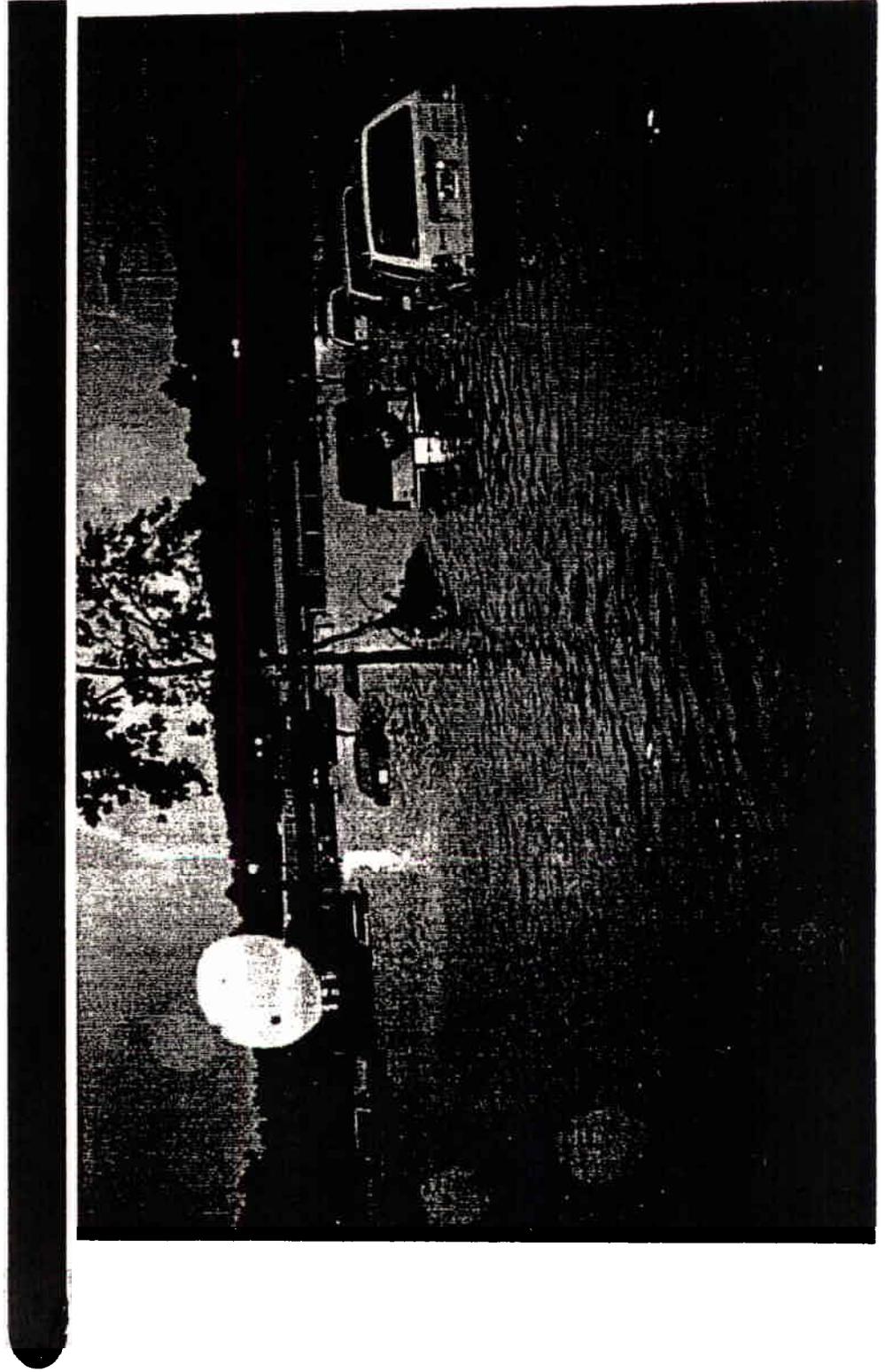
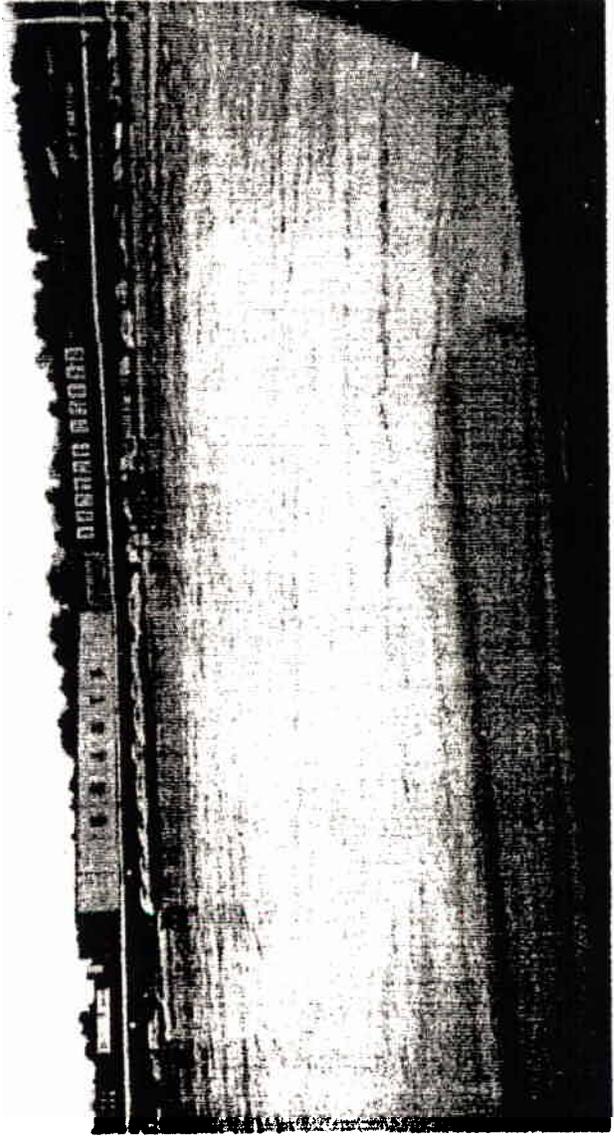


Photo 3
Eastgate Shopping Center
Flooding in 1972



16
Topography Adjacent to Eastgate

