



# MIAMI BEACH

OFFICE OF THE CITY MANAGER

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CITY CLERK'S OFFICE

## LETTER TO COMMISSION

TO: Mayor Matti Herrera Bower and Members of the City Commission

FROM: Jorge M. Gonzalez, City Manager

DATE: October 2, 2008

SUBJECT: Normandy Shores Flooding Conditions

The purpose of this Letter To Commission is to provide the Mayor and City Commission with an update on recent extraordinary flooding conditions experienced in the Normandy Shores neighborhood and Normandy Shores Golf Course, as well as the countermeasures implemented to address these conditions. The conditions of this event were such that Commissioner Libbin and I made a specific visit to the site to get a personal observation of the situation. An emergency plan to address the situation was in place however, I directed and authorized additional measures to be implemented to further ameliorate the condition as quickly as possible.

### **Normandy Shores Neighborhood ROW Improvement Project**

#### **Flooding Conditions and Countermeasures**

Flooding conditions have been experienced intermittently during construction in recent weeks, primarily as a result of extreme rain events and the unavailability of the existing storm drainage system due to the replacement system being constructed. This has been an added inconvenience to the residents and the contractor has been using vacuum trucks to pump out and dispose of the accumulated stormwater runoff. Unfortunately, a number of factors contributed to even worsening flooding conditions more recently; primarily centered at the intersection of South Shore Drive and Hagan Street and extending to the east and west.

These factors included super-saturated ground from last week's rain events, additional runoff from a high intensity rain storm on Sept. 30, as well as an extraordinarily high tide several inches above normal that has triggered local flooding conditions throughout various locations in the City and is expected to continue to peak in mid-October. High tides, in some cases, have overflowed over seawalls in some areas of the City.

The confluence of these conditions culminated on October 1<sup>st</sup> with the most extreme stormwater flooding conditions experienced at the South Shore Drive and Hagan Street location, and its mitigation required the partnering of both City and contractor resources, utilizing emergency discharge measures into the outfall system and directly into the bay to remove excess floodwaters at the most affected locations by late afternoon.

The emergency resources dedicated to implement the countermeasures include three City vacuum trucks and a 4-inch City pump, and a vacuum truck and 12-inch pump provided by the contractor. The 12-inch pump will be left on stand-by at the subject location in the event that future storm events trigger additional flooding. Once the new stormwater system is completed, the structures and piping will be cleaned to address any concerns from emergency countermeasures implemented.

In addition to the countermeasures mentioned above, two priority initiatives are underway to

reduce the impact of future extreme rain events prior to the completion of the neighborhood project. The first is the re-allocation of resources to fast track the completion of the Hagan

Street stormwater system (within five weeks); this will make it possible to relieve future flooding conditions by pumping into the new stormwater system if needed. The second priority initiative will be to explore alternate construction methods that may help to reduce construction time for South Shore Drive.

### **Construction Status**

Project construction with the replacement contractor commenced in January, 2008 with construction duration anticipated at 18 months. Initial construction has focused on the stormwater system, and to date, over 50% of the stormwater inlet structures and connecting piping for the entire project have been installed - primarily along South Shore Drive and the majority of Fairway Drive. All of the 10 gravity wells have been completed, and at the cross-streets to South Shore Drive, the following improvements have been completed (see attached map):

- **Ray Street:** The well has been completed, detention and well boxes installed, and the outfall completed.
- **Hagan Street:** The well has been completed, detention and well boxes installed, and it is anticipated that the new outfall and seawall will be constructed within five weeks, barring any major interruptions due to extreme weather conditions. In addition to the outfall, part of the seawall is being reconstructed. Once the outfall at this street end is completed, the contractor should be better able to relieve future flooding conditions by pumping into the new stormwater system at this location and at Ray Street.
- **Jones Street:** Only the well box has been installed. Once the Hagan Street stormwater installations are completed, work will proceed with installing the retention box and outfall at this location which will be used to mitigate flooding. Completion is expected by year end.

Construction completion of South Shore Drive, and its cross streets, will receive top priority. Once construction of the stormwater system, including valley gutter installation, is completed along South Shore Drive, then the contractor will proceed with the road construction work and apply the first level of asphalt paving. At that point, general site conditions and accessibility will have been greatly improved and, although the stormwater system will not have achieved final certification, it will be available to address any extraordinary flooding conditions that may arise. Presently, City staff, the consultant, and the contractor are exploring alternate construction methods that may help to reduce construction time for South Shore Drive and it is anticipated that a recommendation will be presented for review during the week of October 6<sup>th</sup>. Construction of the South Shore Drive section - through the first level of asphalt pavement – should be achieved by late fourth quarter of 2008.

Construction will then proceed to the completion of Fairway Drive, where the stormwater structures, connecting piping, and the first level of asphalt have been installed. The installation of the stormwater system along North Shore Drive will follow. Concurrent with this work will be the installation of the pending retention and well boxes, as well as reconstruction of pending outfalls along North Shore Drive. It is anticipated that construction of the North Shore and Fairway Drives section - through the first level of asphalt pavement – should be achieved by late second quarter of 2009.

The project is estimated to achieve substantial completion, including installation of landscaping and decorative lighting, by August, 2009.

### Normandy Shores Golf Course

Similar to the Normandy Shores neighborhood project, the Golf Course has experienced extensive flooding conditions as a result of recent extreme rainstorms, in combination with a number of factors that were previously described above. In addition, the flooding conditions are worse than would occur during normal circumstances due to fact that the operating permit for the stormwater injection well system has not been yet issued to the City by the regulatory agencies.

The reason for the operating permit delay is due to a requirement, from the regulatory agency, for the City to install an additional monitoring well to test and review regularly the waters at the golf course for chemical contents and is based on previous lake water sample results reviewed by the agency during construction. The regular testing and the possibility of a monitoring well installation was always a condition of the permit for the drainage wells system at the golf course.

Consequently, the City has resubmitted a permit modification package to address the monitoring well installation. Following approval of the submittal, the monitoring well will be installed to meet the requirement for the operating permit. Allowing for the typical thirty day agency processing time, the review process should be completed before the end of October. Assuming that no additional modifications are requested by the agency, construction of the monitoring well should be completed within two weeks after approval. The City and the consultant are making every effort to expedite the process. The operating permit would then be received following a final inspection by the agency.

In addition, as previously reported, the City and the consultant have worked with the regulatory agencies to add some modifications to the overall drainage of the golf course in order to alleviate the current flooding experienced. One of them is the lowering and enlarging of the drainage weir at the lake drainage structures that eventually direct flows to the pumps and drainage wells. This is being done in order to enhance the flows and speed with which the water is evacuated from the golf course and the lakes. These modifications have been submitted for approval and the City and consultant are also working with the agencies to expedite. As soon as approval is provided the installations will be made promptly.

Finally, the modifications to the swales at Fairway and behind the homes in South Shore Drive, which do not need approval from the agencies, will be commencing next week and expected to be completed within a few weeks. These modifications should alleviate the flooding of the swale behind the homes as soon as they are completed. The swale at Fairway will not fully alleviate conditions until the neighborhood drainage system is fully operational. The completion of the drainage system at Fairway and North Shore is expected sometime in the late spring or early summer of 2009.

Please let me know if you have any questions or concerns.

attachment

C: Tim Hemstreet, Assistant City Manager  
Robert C. Middaugh, Assistant City Manager  
Jorge E. Chartrand, CIP Director  
Fred H. Beckmann, P.E., Public Works Director  
JMG/TW/JECh/JCC

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1	DATE	BY	DESCRIPTION
1	12/15/2011	D. ALLEN	ISSUED FOR PERMIT
2	01/10/2012	D. ALLEN	ISSUED FOR PERMIT
3	01/10/2012	D. ALLEN	ISSUED FOR PERMIT
4	01/10/2012	D. ALLEN	ISSUED FOR PERMIT
5	01/10/2012	D. ALLEN	ISSUED FOR PERMIT
6	01/10/2012	D. ALLEN	ISSUED FOR PERMIT
7	01/10/2012	D. ALLEN	ISSUED FOR PERMIT
8	01/10/2012	D. ALLEN	ISSUED FOR PERMIT
9	01/10/2012	D. ALLEN	ISSUED FOR PERMIT
10	01/10/2012	D. ALLEN	ISSUED FOR PERMIT

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NORMANDY SHORES  
 NEIGHBORHOOD NO. 3  
 KEY MAP (EC)

DATE: 01/10/2012  
 TIME: 2:00 PM  
 DRAWN BY: J. WATKINS  
 CHECKED BY: J. WATKINS  
 SCALE: 1" = 200'

