DEVELOPMENT SERVICES DEPARTMENT
ENGINEERING DIVISION
6591 ORANGE DRIVE • DAVIE, FLORIDA 33314-3399
PHONE: 954.797.1113 • FAX: 954.797.1086 • WWW.DAVIE-FL.GOV

# Memorandum

TO: Mayor and Town Council

FROM: Larry A. Peters, P.E., Town Engineer

THROUGH: Mark Kutney, AICP, Development Services Director

SUBJECT: Orange Drive Road Closure

DATE: January 10, 2006

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In concert with the widening of Griffin Road and the construction of the new bridge, at approximately SW 145 Avenue, across the C-11 Canal from Griffin Road to Orange Drive, FDOT has requested to close Orange Drive for five weeks for pavement reconstruction for approximately 1000 feet around the bridge location (see the attached letter).

An option to the five week closure is to provide temporary bypass lanes, affecting the linear park, and to extend the time of disruption of traffic to fourteen weeks.

FDOT has requested to go before Town Council to explain the circumstances surrounding closure and request an approval from Town Council for their preferred method.

# Florida Department of Transportation

JEB BUSH
GOVERNOR

DISTRICT ROADWAY DESIGN — DISTRICT 4
3400 West Commercial Boulevard, Fort Lauderdale, Florida 33309-3421
Telephone: (954) 777-4400 Toll Free Number: 866-336-8435 Fax: (954) 777-4482

DENVER J. STUTLER, JR.
SECRETARY

October 18, 2005

Larry Peters
Town of Davie Engineer
6591 Orange Drive
Davie, Fl 33314

Dear Mr. Peters:

**Subject: Orange Drive Reconstruction & Road Closure**

As you are aware, the Department is finalizing plans for the widening and reconstruction of Griffin Road from Flamingo Road to I-75. This project will include construction of an additional bridge across the C-11 canal located approximately midway between Hancock and Volunteer Roads. One of the main benefits of this bridge will be to improve the accessibility of Griffin Road and the I-75 interchange for Davie residents living west of Flamingo Road. In order to construct a smooth transition from the bridge, Orange Drive must be elevated slightly, which will require pavement reconstruction for approximately 1000' around the bridge location.

The Department has studied several alternative maintenance of traffic plans for Orange Drive. After a careful analysis, we believe the best alternative is to close the road for a short time to allow for this reconstruction. Allowing the Contractor to close the road will result in construction that is faster, safer, cheaper, and have significantly less impacts to motorists, pedestrians, and equestrians. Although the total construction time for the Griffin Road project will be close to 2 years, the impacts to Orange drive will last only 5 weeks.

The Department is seeking the Town's review and approval of this road closure request. We are confident that the information provided in this letter clearly demonstrates that the closure is in the best interests of all affected parties. Please see the attached sheets for a more complete analysis of the information considered by the Department in reaching our conclusions.

Sincerely

Scott Peterson

Scott Peterson
Design Project Manager

# Analysis of Maintenance of Traffic Options & Justification for Closure of Orange Drive

A brief summary of the three MOT alternatives considered:

**Option 1 – Keep 2 lanes open at all times**

There is not sufficient space available to shift traffic any distance to the north. Therefore, temporary lanes would need to be constructed on the canal bank. Due to the drop-offs that will be created by the road construction, concrete barrier wall will be needed to separate the temporary lanes from the construction zone. Additionally, with the traffic shifted significantly closer to the canal, concrete barrier wall will also be needed between the temporary lanes and the canal.

The area that will be needed for the temporary lanes is currently occupied by the pedestrian/equestrian path and a significant amount of newly planted landscaping (see photo 1) which would both be impacted by the temporary lanes.

Photo 1

Although both the landscaping and the path would be restored upon completion of the roadway, there will not be sufficient space during construction to maintain the continuity of the equestrian/pedestrian path.

Since this option requires extensive MOT setup and construction of temporary lanes, it will add a significant amount of time to the disruption on Orange Drive.

**Option 2 – Keep 1 lane open at all times**

This option would require 1 temporary lane of traffic on the canal bank which would also require the removal of the landscaping surrounding the path. Again, concrete barrier wall would be need on both sides of the lanes to protect against hazards.

Most seriously, single lane operation is not suited for construction zones of this duration. Flaggers are normally used in this application to ensure that only one direction at a time is using the lane. This works best for closures of less than 1 day. Since this closure is expected to take several weeks, some type of 24 hour a day supervision, or enforcement, would be needed to maintain safe operation.

Since this option would require Orange Drive to be constructed in phases, it will add a significant amount of time to the road construction and will take the longest of the three options.

**Option 3 – Close Orange Drive Completely**

This option would close the road completely for 5 weeks and would require a small number of drivers to find alternate routes to/from the area west of the closure and east of I-75. The linear park would be the least affected by this option. The path, and existing landscaping would not be impacted. Further analysis of this option is as follows:

**Access Impacts:**

Due to the very limited number of destinations in this area, this segment of road is not heavily traveled compared to the surrounding streets. The closure of this segment of Orange Drive would not have a large impact on motorists as all areas can be reached nearly as easily, and in many cases more easily, by Weston Rd & SW 36 Street or Shotgun Road. Both Weston Road and Shotgun Road are accessible at several other locations through local streets.

**Safety:**

A total road closure is the safest of the three options discussed. If the Orange Drive is kept open in either the 1-lane, or 2 lane configurations, motorists will have to contend will MOT transitions and concrete barrier walls on an unlit roadway. Also, pedestrians and equestrians may be tempted to try and navigate the narrow area between the concrete barrier wall and the top of canal bank since the path will be disrupted.

**Construction Time:**

The estimated closure time that will be needed is 5 weeks. This is significantly shorter than the time that would be needed to reconstruct the road while maintaining open lanes. The Department will ensure that the contractor adheres to this maximum closure time by documenting this requirement in the plans. Also, the Department will offer the contactor a monetary incentive to minimize the closure time.

**Costs:**

The total closure is much less expensive than the other 2 alternatives due to the absence of MOT devices, temporary lanes, and the reconstruction of the existing path and landscaping.