



V I L L A G E O F K E Y B I S C A Y N E

Office of the Village Manager

MEMORANDUM

Village Council

Robert L. Vernon, *Mayor*
Enrique Garcia, *Vice Mayor*
Michael W. Davey
Robert Gusman
Michael E. Kelly
Jorge E. Mendia
Thomas Thornton

DATE: April 5, 2010

TO: Honorable Mayor and Members of the Village Council

FROM: Genaro "Chip" Iglesias, Village Manager

*AM for
Chip Iglesias*

Village Manager
Genaro "Chip" Iglesias

RE: WEST WOOD DRIVE TRAFFIC CALMING

RECOMMENDATION

It is recommended that the Village Council approve option two as recommended by Tetra Tech Engineering and Architecture Services. Option two satisfies the safety and traffic calming criteria, enhances neighborhood improvements and is the most cost effective. This option illustrates the following:

- Speed table between Curtiswood Road and Allendale Road
- Speed table between Warren Road and Hampton Lane
- Traffic Circle at Ridgewood Road
- Decorative Circle at Fernwood

BACKGROUND

At March 16th, 2010 Council Meeting, as part of the CIP projects approved by Council for FY 2010, West Wood Drive Traffic Calming was brought back for public discussion. Council directed (or requested) Tetra Tech to provide proposed plans (or to explore more options) depicting different combinations of traffic devices at four intersections.

Attached please find the corresponding estimates for Council's review:

Option 1	\$307,590.00
Option 2	\$298,557.00
Option 3	\$356,354.00

The estimated cost listed in the Capital Outlay Master Plan Initiatives is \$222,543.00.

WEST WOOD DRIVE TRAFFIC CALMING VILLAGE OF KEY BISCAYNE



TETRA TECH

April 2010

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BACKGROUND

- Tetra Tech has been providing consulting engineering services to Village for over 15 years.
- Experience:
 - Harbor Drive – Traffic Calming
 - East Enid – Traffic Calming
 - Island Drive – Traffic Calming
 - East Heather – Traffic calming & Stormwater Improvements
 - Woodcrest Road Sidewalks
 - Grapetree Drive – Stormwater Improvements
- Tetra Tech designed and constructed original West Heather Drive & West Wood Drive Sidewalk & Traffic Calming Improvement Project - 1998



PURPOSE OF TRAFFIC CALMING

- Slow down through traffic
- Calm traffic on remaining east-west corridor without treatment
- Improve pedestrian **safety**

LIMITATIONS

- Right-of-way constraints
 - Winding road
 - Poor visibility



LIMITATIONS

- Code & criteria changes - Since 1998, based on FDOT Florida Roundabout Guide
- Traffic Calming device dimensions

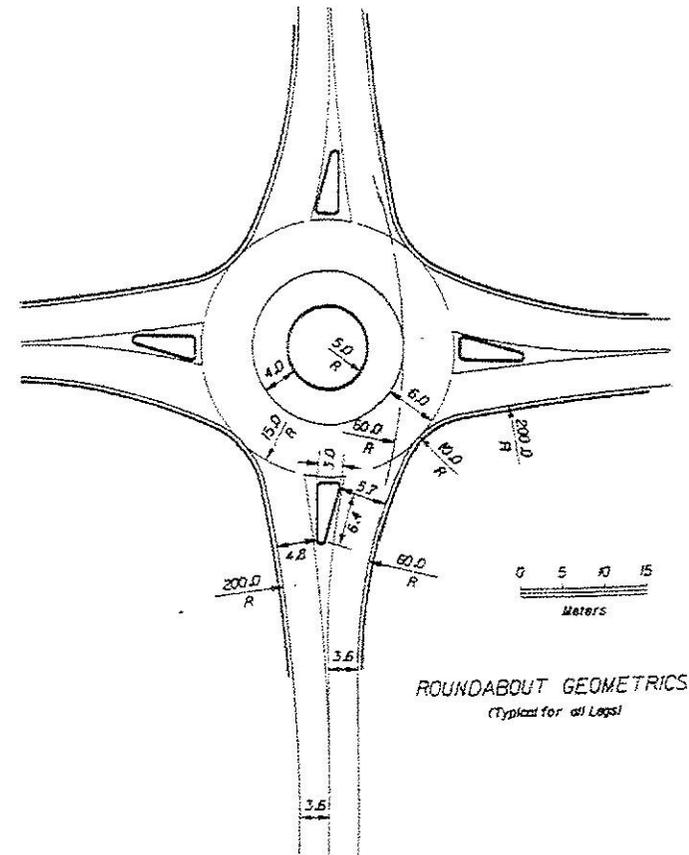
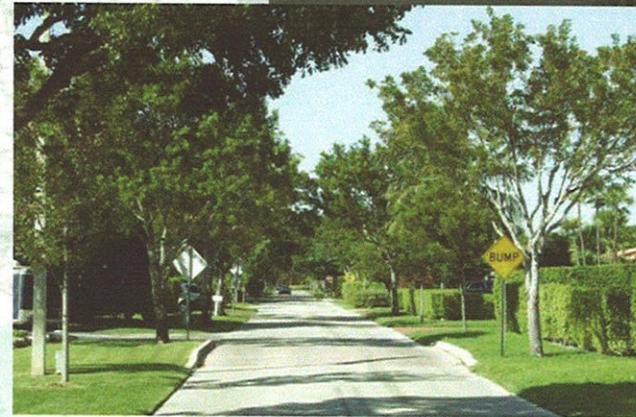


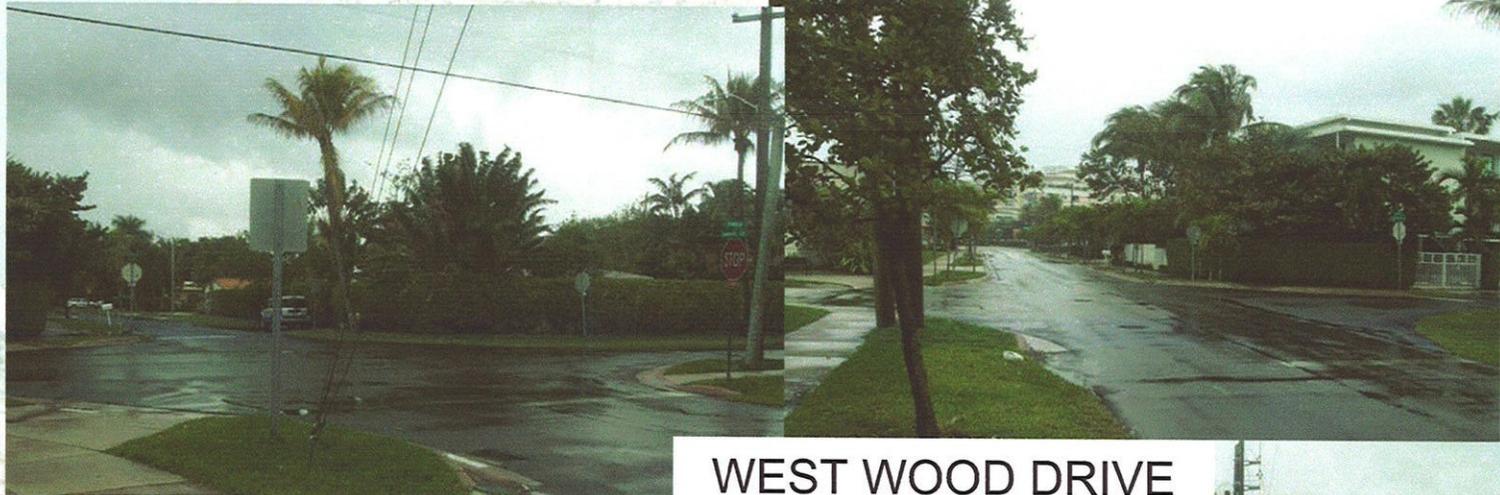
Figure C-1. Minimum configuration for a single-lane roundabout.

OVERVIEW OF DEVICE TYPES

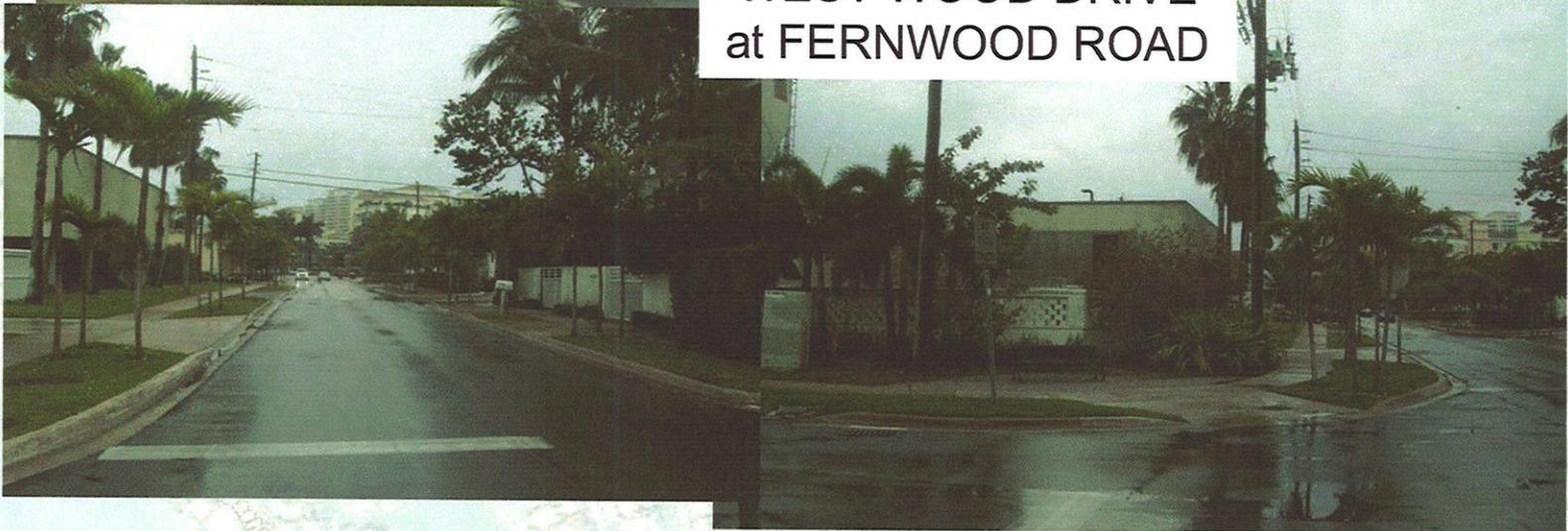
- Median Dividers
- Elevated T-Intersections
- Speed Tables
- Traffic Circles
- Choker T-Intersections
- Chicanes
- Speed bumps



EXISTING CONDITIONS



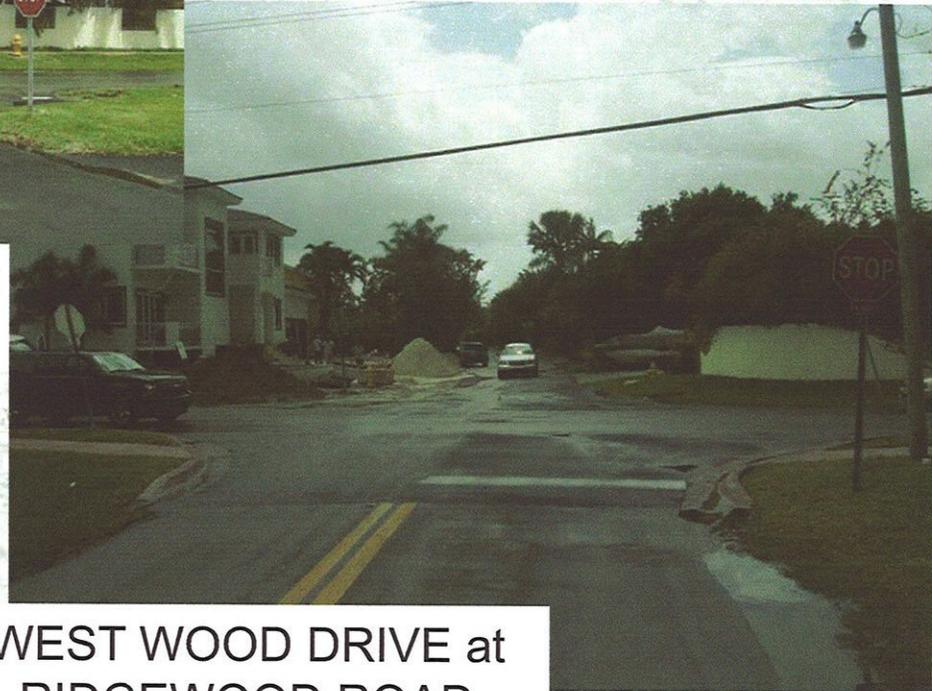
WEST WOOD DRIVE
at FERNWOOD ROAD



EXISTING CONDITIONS

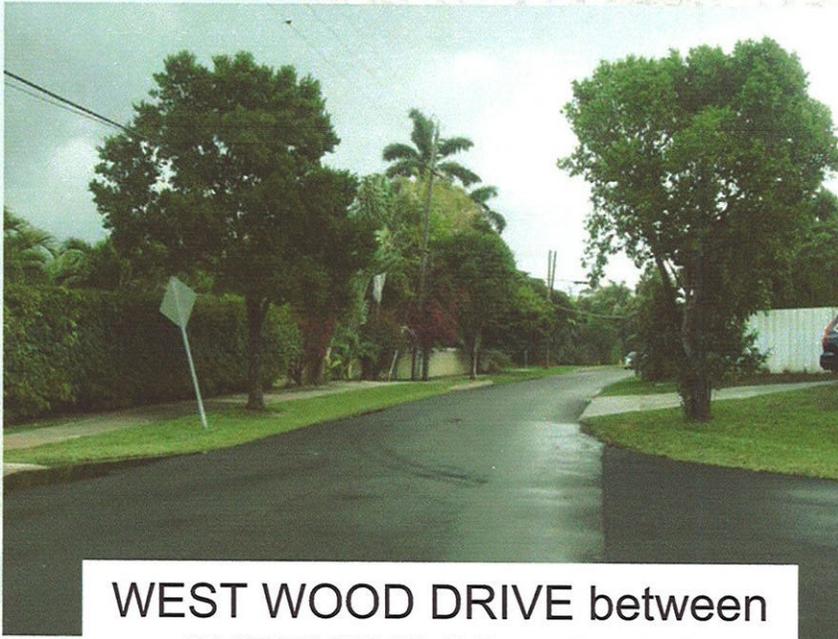


**WEST WOOD DRIVE at
WOODCREST ROAD**



**WEST WOOD DRIVE at
RIDGEWOOD ROAD**

EXISTING CONDITIONS



WEST WOOD DRIVE between
**CURTISWOOD ROAD &
ALLENDALE ROAD**



WEST WOOD DRIVE between
**WARREN LANE & HAMPTON
ROAD**

ORIGINAL DESIGN

- Median Divider – between Curtiswood Road and Allendale Road
- Elevated T-intersection – Hampton Road
- Traffic Circle – Woodcrest Road
- Traffic Circle – Fernwood Road

OPTION 1

- Speed Table – between Curtiswood Road and Allendale Road
- Speed Table – between Warren Lane and Hampton Road
- Traffic Circle – Ridgewood Road
- Traffic Circle – Fernwood Road

OPTION 2

- Speed Table – between Curtiswood Road and Allendale Road
- Speed Table – between Warren Lane and Hampton Road
- Traffic Circle – Ridgewood Road
- Decorative Circle – Fernwood Road

OPTION 3

- Speed Table – between Curtiswood Road and Allendale Road
- Elevated T-intersection – Hampton Road
- Traffic Circle – Woodcrest Road
- Traffic Circle – Fernwood Road

COST COMPARISON – ORIGINAL DESIGN

WEST WOOD AND	DEVICE DESCRIPTION	1998	2009
Allendale Rd to Curtiswood Rd	Median Divider	\$47,565.00	\$66,171.00
Hampton Rd	Elevated T-Intersection	\$44,249.00	\$62,125.00
Woodcrest Rd	Traffic Circle	\$78,659.00	\$117,611.00
Fernwood Rd	Traffic Circle	\$70,923.00	\$106,479.00
Construction Cost		\$241,396.00	\$352,386.00
Engineering Design		\$24,710.00	\$39,500.00
Construction Management		\$46,666.00	\$14,400.00
TOTAL		\$312,713.00	\$406,286.00

Note: All costs are the Engineer's Opinion of Probable Cost

COST – OPTION 1

WEST WOOD AND	DEVICE DESCRIPTION	2009
Allendale Road to Curtiswood Road	Speed Table	\$33,732.00
Warren Lane to Hampton Rd	Speed Table	\$33,732.00
Ridgewood Road	Traffic Circle	\$97,240.00
Fernwood Road	Traffic Circle	\$106,479.00
Construction Cost		\$271,183.00
Engineering Design		\$24,407.00
Construction Management		\$12,000.00
TOTAL		\$307,590.00

Note: All costs are the Engineer's Opinion of Probable Cost

COST – OPTION 2

WEST WOOD AND	DEVICE DESCRIPTION	2009
Allendale Road to Curtiswood Road	Speed Table	\$33,732.00
Warren Lane to Hampton Rd	Speed Table	\$33,732.00
Ridgewood Road	Traffic Circle	\$97,240.00
Fernwood Road	Decorative Circle	\$97,446.00
Construction Cost		\$262,150.00
Engineering Design		\$24,407.00
Construction Management		\$12,000.00
TOTAL		\$298,557.00

Note: All costs are the Engineer's Opinion of Probable Cost

COST – OPTION 3

WEST WOOD AND	DEVICE DESCRIPTION	2009
Allendale Road to Curtiswood Road	Speed Table	\$33,732.00
Hampton Rd	Elevated T-intersection	\$62,125.00
Woodcrest Road	Traffic Circle	\$117,611.00
Fernwood Road	Traffic Circle	\$106,479.00
Construction Cost		\$319,947.00
Engineering Design		\$24,407.00
Construction Management		\$12,000.00
TOTAL		\$356,354.00

Note: All costs are the Engineer's Opinion of Probable Cost

RECOMMENDATION

OPTION 2 –

- Most cost effective
- Satisfies safety and traffic calming criteria
- Enhances neighborhood improvements