

DRAFT

**S-512C-W
Ungated Round Culverts**

Revision 8 December 2000 - Original Submission

XY Coord 842930 603650

Location Western boundary of C-9 mitigation area on C-509, Miramar Parkway crossir

Purpose Provides seepage canal connection for north and south sides of the Parkway.

Notes 1. Riprap requirements have not been verified with Geotech.

Design Conditions

Discharge (CFS)	60 cfs
Headwater Elevation	5.20 ft,NGVD
Tailwater Elevation	5.00 ft,NGVD

Maximum Expected Stages

Headwater Elevation	8.00 ft,NGVD
Tailwater Elevation	8.00 ft,NGVD

Maximum Head Difference

Maximum Headwater Elevation	5.30 ft,NGVD
Minimum Tailwater Elevation	5.00 ft,NGVD

Culvert Data

Number of Barrels	2
Barrel Type	Concrete
Barrel Diameter	4.0 feet
Barrel Length	125.0 feet
Barrel Invert Elevation	-1.00 ft, NGVD
Type of Control	None

Canal Data

Side Slopes Cotangent	3
Upstream Bottom Width	10.00 feet
Upstream Bottom Elevation	-1.50 ft,NGVD
Downstream Bottom Width	10.00 feet
Downstream Bottom Elevation	-1.50 ft,NGVD

Riprap Requirements

Design Barrel Velocity	2.39 fps
Design Riprap Velocity	4.00 fps
Riprap Protected Area	400 sq-ft
Riprap Thickness	1.5 feet
Riprap Bedding Thickness	1.0 feet

Protection Elevation 9.00 ft,NGVD