

# **Public Works and Waste Management Department Public-Private Partnerships (P3) Potential Capital Projects**

County Infrastructure within the Public Right-of-Way

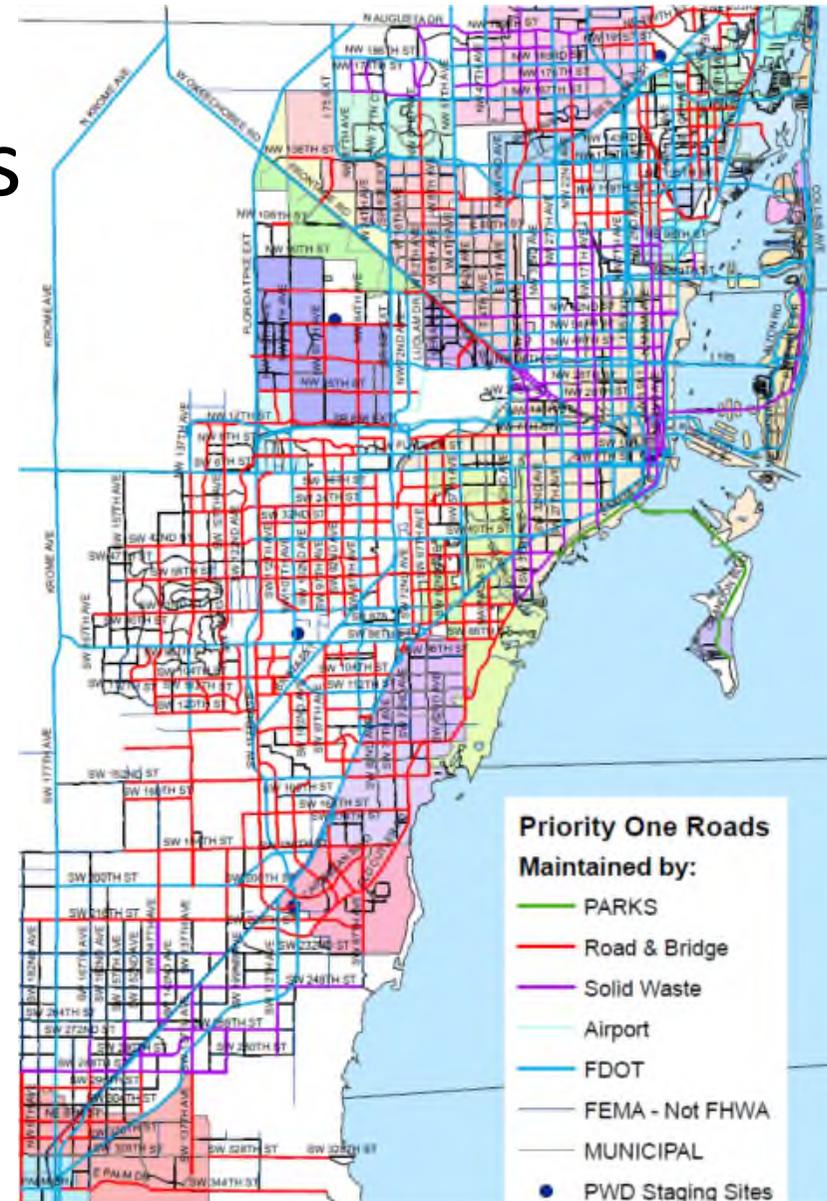


# Public Works functions

- Manage traffic County-wide through studies and related traffic designs for road safety and capacity improvements
- Maintain and manage 4,088 traffic control devices throughout Miami-Dade County including 2,870 Traffic Signals and over 872 School Zone Flashing Signals
- Maintain over 24,600 streetlights on the County's arterial road networks
- Manage over 750,000 traffic control signs and street name signs county-wide

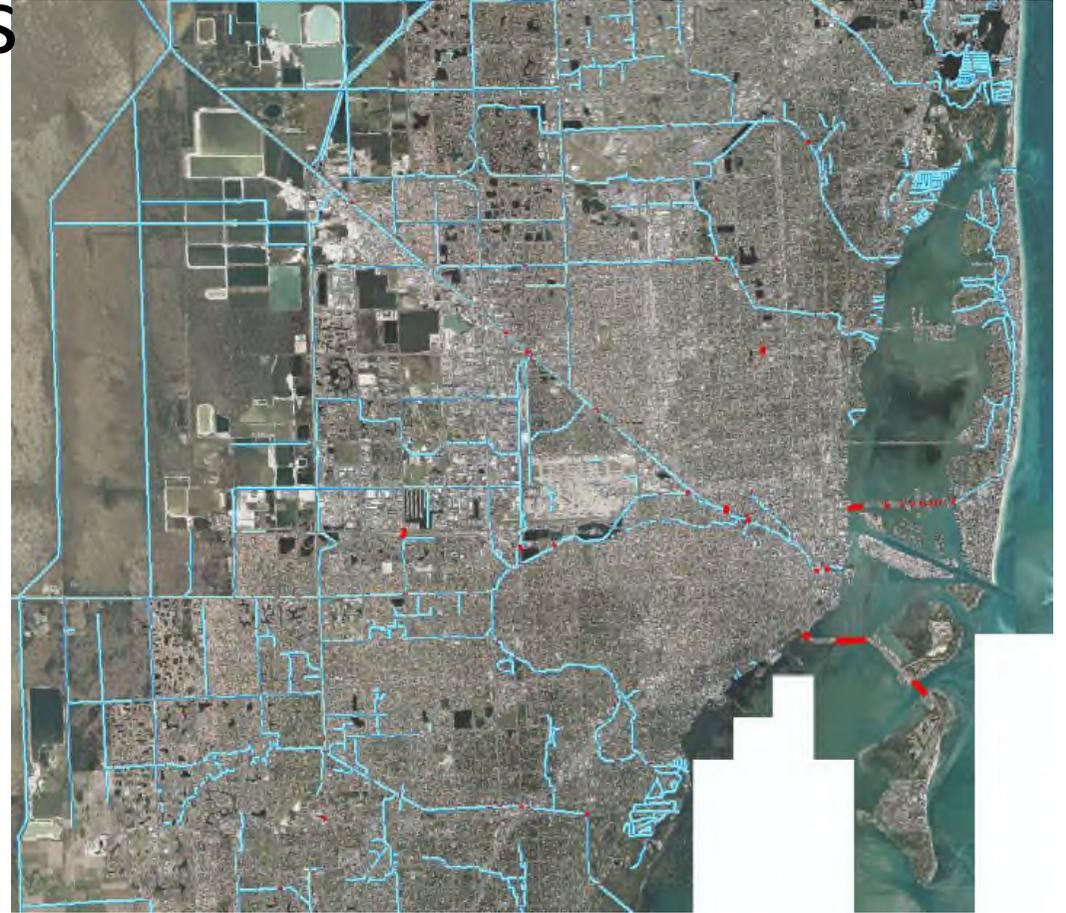
# Public Works functions

- Engineer, construct and maintain over 3,200 miles of paved County roads, bridges and canals, along with the traffic signals and signage that support them



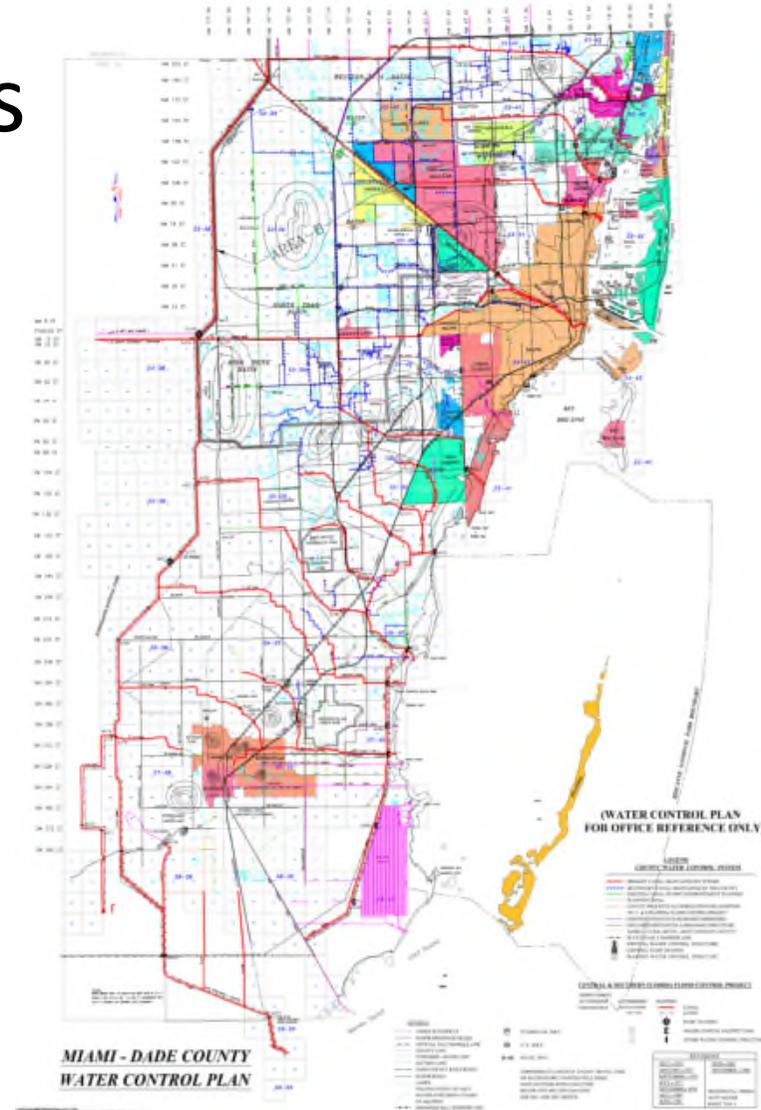
# Public Works functions

- Operate and maintain 209 bridges; 8 movable, 7 culvert, 14 pedestrian and 180 fixed



# Public Works functions

- Manage the County's Stormwater Utility including drainage for flood and water quality.
- Revenues over \$30 million per year
- Maintain approximately 230 miles of secondary canals and ditches
- Operate and maintain 16 stormwater pump stations with emergency generators
- Clean and maintain over 80,000 stormwater inlets and 5.3 million linear feet of exfiltration trenches



# POTENTIAL P3 BRIDGE/CAUSEWAY PROJECTS

# Venetian Causeway



# Venetian Causeway

- Estimated Cost: \$130 million
- Project consists of the replacement of the 12 existing bridges on the Venetian Causeway and the maintenance of the entire Causeway.



# Venetian Causeway

- The Florida Department of Transportation (FDOT) is currently conducting a Project Development and Environment Study which could potentially lead to Federal/State funding for the project.
- PD&E is estimated to be completed at the end of 2017



# Venetian Causeway

- Provides a link between the City of Miami and the City of Miami Beach across Biscayne Bay
- Historically designated Causeway
- First toll causeway in the state
- Originally built in 1914 as a wooden bridge
- Six islands with residential neighborhoods
- Single family homes, apartments, condominiums, and hotels



# Venetian Causeway

- The Causeway has one toll plaza which operates under the Sun Pass state wide tolling system (administered by the Miami-Dade County Public Works and Waste Management Department) on Biscayne Island, the westernmost Venetian Island



# Venetian Causeway

- The toll for an automobile is \$1.75 (US)
- Average traffic last five years: 2.9 million vehicles
- The Venetian Causeway generates yearly revenues of approximately \$3 million
- Yearly maintenance and operation cost is \$1.5 million
- 9 bridge operators and 2 maintenance workers



# Venetian Causeway

- Causeway is 2.8 miles (4.5km) long with scenic water views
- Popular with recreational users who utilize the area for jogging, bicycling, and other types of exercising



# Venetian Causeway

- PWWM is currently implementing the replacement of the westernmost 730' of the West Venetian Bascule Bridge.
- This project is scheduled to be completed by February of 2016 at a cost of \$13,158,000.
- There are no funds currently assigned to the balance of the Project.



# Convert Toll Plaza Office to Restaurant or other use - Venetian Causeway



# Convert Toll Plaza Office to Restaurant or other use - Venetian Causeway

- Estimated Cost: \$1 million to \$5 million
- Project consists of converting the existing surplus Venetian Toll Plaza Office to a restaurant or other facility.



# Convert Toll Plaza Office to Restaurant or other use - Venetian Causeway

- With the conversion to SunPass, the toll plaza office has little usage and can be converted to a restaurant or other facility.
- The property is waterfront and offers views of the Miami skyline



# Convert Toll Plaza Office to Restaurant or other use - Venetian Causeway

- Located at 800 Venetian Way, between Biscayne Bay and Venetian Way
- 1,998 square foot free standing building, may be too small for a restaurant
- Area of lot is approximately 63,000 square feet
- Additional cost may be required to convert into restaurant



# Convert Toll Plaza Office to Restaurant or other use - Venetian Causeway

- Other potential uses:
  - Church
  - Reception Hall
  - Museum
  - Art Gallery
- Project must preserve architectural features of original building



# Rickenbacker Causeway



# Rickenbacker Causeway

- Estimated Cost: \$95 million
- Project consists of replacing the existing Bear Cut and West Bridges along the Rickenbacker Causeway, and the maintenance of the entire Causeway
- The Rickenbacker Causeway connects the city of Miami to the barrier islands of Virginia Key and Key Biscayne across Biscayne Bay.



# Rickenbacker Causeway

- The Causeway is a toll road, owned and operated by Miami-Dade County.
- The causeway has one toll plaza which operates under the Sun Pass state wide tolling system (administered by the Miami-Dade County Public Works Department).
- Vehicles traveling eastbound from Miami pay a toll, returning traffic (westbound travel to the mainland) is not charged any toll.



# Rickenbacker Causeway

- The toll for an automobile is \$1.75 (US)
- Average traffic last five years: 7.1 million vehicles
- The Rickenbacker Causeway generates yearly revenues of approximately \$8 million
- Yearly maintenance and operation cost is \$3 million
- 20 operations and maintenance workers



# Rickenbacker Causeway

- Rickenbacker Causeway Toll Revenue Bonds - \$31,600,000
- Special limited obligations of the County
- Final Maturity: October 1, 2043
- Payable from and secured by a pledge of Net Revenues
- Proceeds from the Series 2014 Bonds are providing a portion of the funds to reimburse the County for costs of the acquisition, construction and equipping required to rehabilitate the Bear Cut and West Bridges on the Rickenbacker Causeway.



# Rickenbacker Causeway

- These bridges were recently rehabilitated by the County, providing a twenty year life span.
- There are no funds currently assigned to the project.

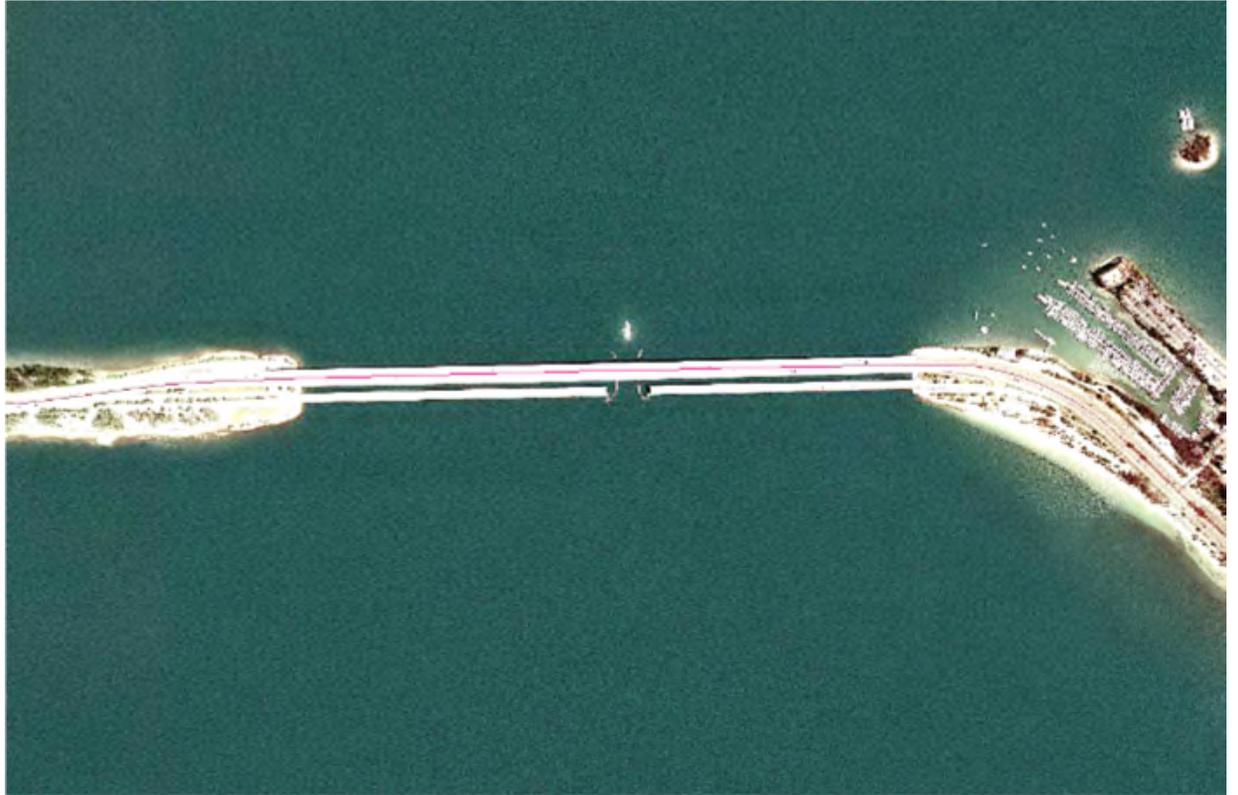


# East and West Fishing Piers - Rickenbacker Causeway



# East and West Fishing Pier - Rickenbacker Causeway

- Estimated Cost: \$10 to \$20 million
- At the time the William Powell Bridge was constructed, it was cost effective for the County to leave both the east and west sides of the Old Bay Bridge, removing the center bascule spans over the intercostal waterway.



# East and West Fishing Pier - Rickenbacker Causeway

- The old bridge served as a public fishing facility, with the West Fishing Pier located on the most easterly end of Hobie Island, and the East Fishing Pier located on the most westerly side of Virginia Key south side.
- The West Fishing Pier was demolished in April of 2011 due to deterioration caused by age, weather, and saltwater environment.



# East and West Fishing Pier - Rickenbacker Causeway

- Project consists of demolishing the remaining old Bay Bridge on the Rickenbacker Causeway currently being used as a Fishing pier.
- Potential improvements could include additional amenities (i.e., restaurant).



# East and West Fishing Pier - Rickenbacker Causeway

- Potential improvements could include additional amenities (i.e., restaurant)
- Footprint expansion potential problems
  - Environmental concerns
  - Navigable Waterway



# Repair and/or replacement of County maintained Sonovoid Bridges



# Repair and/or replacement of County maintained Sonovoid Bridges

- Estimated Cost: \$40 to \$50 million, depending on a rehabilitation versus replacement option
- Project consists of 84 sonovoid bridges throughout the County that are in need of structural repairs or replacement.



# Repair and/or replacement of County maintained Sonovoid Bridges

- Most are functionally obsolete and lack basic safety features.
- The bridges are located throughout the County.
- Currently, there is only minimal funding available.



# POTENTIAL P3 TRAFFIC RELATED PROJECTS

# New TSS Facility including new Traffic Control Center



# New TSS Facility including new Traffic Control Center

- Estimated Cost: \$45 million
- Project consists of the purchasing of land, or developing existing County land (>5 Acres), to design and construct a new building and traffic control center.
- Project should include office furniture, warehouse, work areas, IT equipment, backup power, storage yard, fiber optic communication infrastructure, fueling facility and the relocation of the existing operations.
- TSS is responsible for the operation and maintenance of all traffic control devices, traffic signs, and arterial roadway lights throughout the County.
- The Traffic Control Center monitors traffic operations and traffic signals on the surface roads throughout the County.

# Traffic Signal Support System Upgrades



# Traffic Signal Support System Upgrades

- Estimated Cost: \$73 million
- Project consists of upgrading 274 traffic signals from spanwire support systems to mast arm support systems.
- This project will require the surveying of the existing traffic signals, acquiring right-of-way, and the reconstruction of the intersection to meet all current and applicable standards.

# Upgrade of County Traffic Signage



# Upgrade of County Traffic Signage

- Estimated Cost: \$100 million
- Project consists of replacing all County maintained traffic signs with new decorative signage and hardware.
- There is currently no complete inventory of the traffic signs maintained by Miami-Dade County.
- Estimates on the number of signs to be replaced are over 1 million signs.

# Upgrade of Roadway Lighting to LED Smart Grid Lighting



# Upgrade of Roadway Lighting to LED Smart Grid Lighting

- Estimated Cost: \$50 million
- Project consists of replacing all 26,400 County maintained roadway lights with LED smart grid lighting fixtures.
- The project would include the upgrade of any lighting electrical circuits to current standards, integration of the smart grid technology with the Traffic Control Center, and the development of as-built surveys for all installations.

# POTENTIAL P3 INFRASTRUCTURE PROJECTS

# Secondary Canal Improvements



# Secondary Canal Improvements

- Estimated Cost: Approximately \$54 million of identified unfunded needs
- Projects consist of improvements to canals throughout the County, to improve the flood protection level of service in areas with chronic flooding and service areas where future development is under way or anticipated.
- The overall project list is a product of PWWM Stormwater Master Plan modeling and systematic field evaluations of the County's infrastructure.
- The actual need may be higher.

# Public Works functions

SWUPD ID	Project Description	Project Limits	Length in Feet (For Canal Projects Only)	MDC Master Plan Basin	MDC Master Plan Sub-Basin (Original)	BCC Commission District	% County-Wide	Total Estimated Cost	Project Funded/Unfunded	Project Readiness/Status	Regional/Local Impact	Master Plan Identified
Secondary Canal Improvement Projects												
2014-42	IMPROVEMENTS	GOLDEN GLADES DITCH X-SECTION IMPROVEMENTS (NW 176 ST, from NW 117 TO 137 AVE)	1.9	C-9WEST C-8	CS-N-2,CS-N-3,1789I-C-3,CS-N-4,1793I-C-4,1799I-C-5,1799I-N-1,1799I-C-1,CS-A-1799I-C-2,CS-S-1,CS-S-7,CS-S-10	12	100	\$2,408,315	Unfunded	Survey, Design, & Construction Needed	Regional	Yes
2014-43	IMPROVEMENTS	GOLDEN GLADES CANAL X-SECTION IMPROVEMENTS (From NW 77 CT to NW 82 AVE)	0.49242323	C-9WEST C-8	PP-C-1,CPPTO-W-1,PTTO-N-1,CS-1799I-C-12,1799I-C-11,795I-C-1	13	100	\$474,000	Unfunded	Survey, Design, & Construction Needed	Regional	Yes
2014-44	IMPROVEMENTS	GOLDEN GLADES CANAL X-SECTION IMPROVEMENTS (From NW 82 AVE to NW 87 AVE)	0.51136486	C-9WEST C-8	PTTO-W-1,1799I-C-10,1799I-C-11	13	100	\$702,000	Unfunded	Survey, Design, & Construction Needed	Regional	Yes
2014-45	IMPROVEMENTS	GOLDEN GLADES CANAL X-SECTION IMPROVEMENTS (From NW 67 AVE to NW 77 CT)	1.06378989	C-9WEST C-8	PTTO-N-2,PTTO-N-1,CS-1799I-C-12,795I-C-1,RR-W-1,CSW	13	100	\$1,378,000	Unfunded	Survey, Design, & Construction Needed	Regional	Yes
2014-46	NEW CANAL/FLOODWAY IMPROVEMENT (NO CANAL RESERVATION EXISTS LAND ACQUISITION MAY BE REQUIRED)	C-103N EXTENTEIN CANAL (From SW 240 ST to SW 248 ST)	3.4	C-103	C103N-C-8,C103N-S-3,C103N-C-7,C103N-C-4,C103N-C-5,C103N-S-2,C103N-C-4,C103N-N-3,C103N-N-1,C103N-N-2,CC103N-N-3	8	100	\$10,200,000	Unfunded	Survey, Design, & Construction Needed	Regional	Yes
2014-47	NEW CANAL/FLOODWAY IMPROVEMENT (NO CANAL RESERVATION EXISTS LAND ACQUISITION MAY BE REQUIRED)	C111 EXT NORTH, from SW 387 ST to SW 388 ST, following slough path	2.65724	C-111	CC111-13,CC111E-4,CC111E-C-2,CC111E-C-1,CC111E-4,CC111E-5	9	100	\$7,971,720	Unfunded	Survey, Design, & Construction Needed	Regional	Yes
2014-48	NEW CANAL/FLOODWAY IMPROVEMENT (NO CANAL RESERVATION EXISTS LAND ACQUISITION MAY BE REQUIRED)	SW 204 ST, from SW 152 AVE to SW 162 AVE	0.7	C-103	C102-C-7,C102-S-5,C102-S-4,C102-N-0	8	100	\$2,100,000	Unfunded	Survey, Design, & Construction Needed	Regional	Yes
2014-49	NEW CANAL (NO CANAL RESERVATION EXISTS LAND ACQUISITION MAY BE REQUIRED)	SW 149 AVE, from SW 248 ST to SW 258 ST	1.5	C-103	C103N-S-1,C103N-N-1,CC103N-N-1	8	100	\$2,640,000	Unfunded	Survey, Design, & Construction Needed	Regional	Yes
2014-50	NEW CANAL (NO CANAL RESERVATION EXISTS LAND ACQUISITION MAY BE REQUIRED)	SW 167 AVE CANAL ( 167 AVE, from SW 10 ST to SW 42 ST)	4.3	C-2	BD-C-1,BD-C-2,BD-N-1,BD-N-2,BD-C-N-1,BD-C-N-2	11	100	\$12,900,000	Unfunded	Survey, Design, & Construction Needed	Regional	Yes
2014-51	NEW CANAL (NO CANAL RESERVATION EXISTS LAND ACQUISITION MAY BE REQUIRED)	SW 63 ST CANAL, from SW 167 Ave, West for 0.2 miles)	0.17	C-2	648T-S-1,BOC-S-1,648T-N-1	11	100	\$010,000	Unfunded	Survey, Design, & Construction Needed	Regional	Yes
2014-52	NEW CANAL (NO CANAL RESERVATION EXISTS LAND ACQUISITION MAY BE REQUIRED)	C-1 EXT @ SW 152 ST, from SW 177 AVE to SW 157 AVE	2	C-1	CC1-S-4,CC1-S-4,C1-S-3,C1-S-4,CC1-S-3,CC1-S-2	11	100	\$6,900,000	Unfunded	Survey, Design, & Construction Needed	Regional	Yes
2014-53	NEW CANAL (NO CANAL RESERVATION EXISTS LAND ACQUISITION MAY BE REQUIRED)	C-113 EXTENSION ( in the area of SW 216 St and SW 226 St between SW 147 Ave and SW 187 Ave)	1.26	NO-CANAL C-103	C103S-S-2,C103S-C-1,NC-N-1,CC111-S-2,C103S-C-2,NC-N-2,NC-N-3,NC-N-4,C103S-C-3,C103S-S-3,C103S-S-4,C103S-C-4,C103S-N-1,CC103S-S-2	8,9	100	\$3,780,000	Unfunded	Survey, Design, & Construction Needed	Regional	Yes
2014-54	Replace the existing low level bridges at SW 206 202 St and 194 St and replace the existing slab covered canal from SW 208 Street to the C-1W with a pipe culvert.	Culvert and Canal Improvements along SW 122 Avenue from SW 202 ST to the C-1W		C-1	C1-C-10,122AVE-TR,C1-C-10,N-C1-C-5,N-C1-C-4,C1-N-9,C1-N-10	9	100	\$2,500,000	Unfunded	Survey, Design, & Construction Needed	Regional	Yes
2014-55	NEW CANAL/FLOODWAY IMPROVEMENT (NO CANAL RESERVATION EXISTS LAND ACQUISITION MAY BE REQUIRED)	Highland Oaks Ditch Improvements (In the area of NW 202 St and NE 26 Ave)	0.2	N Biscayne Bay- Oleta River	Various	4	100	\$268,000	Unfunded	Survey, Design, & Construction Needed	Regional	Yes
Sub-Total Stormwater Unfunded Secondary Canal Projects								\$54,326,035				

# QUESTIONS