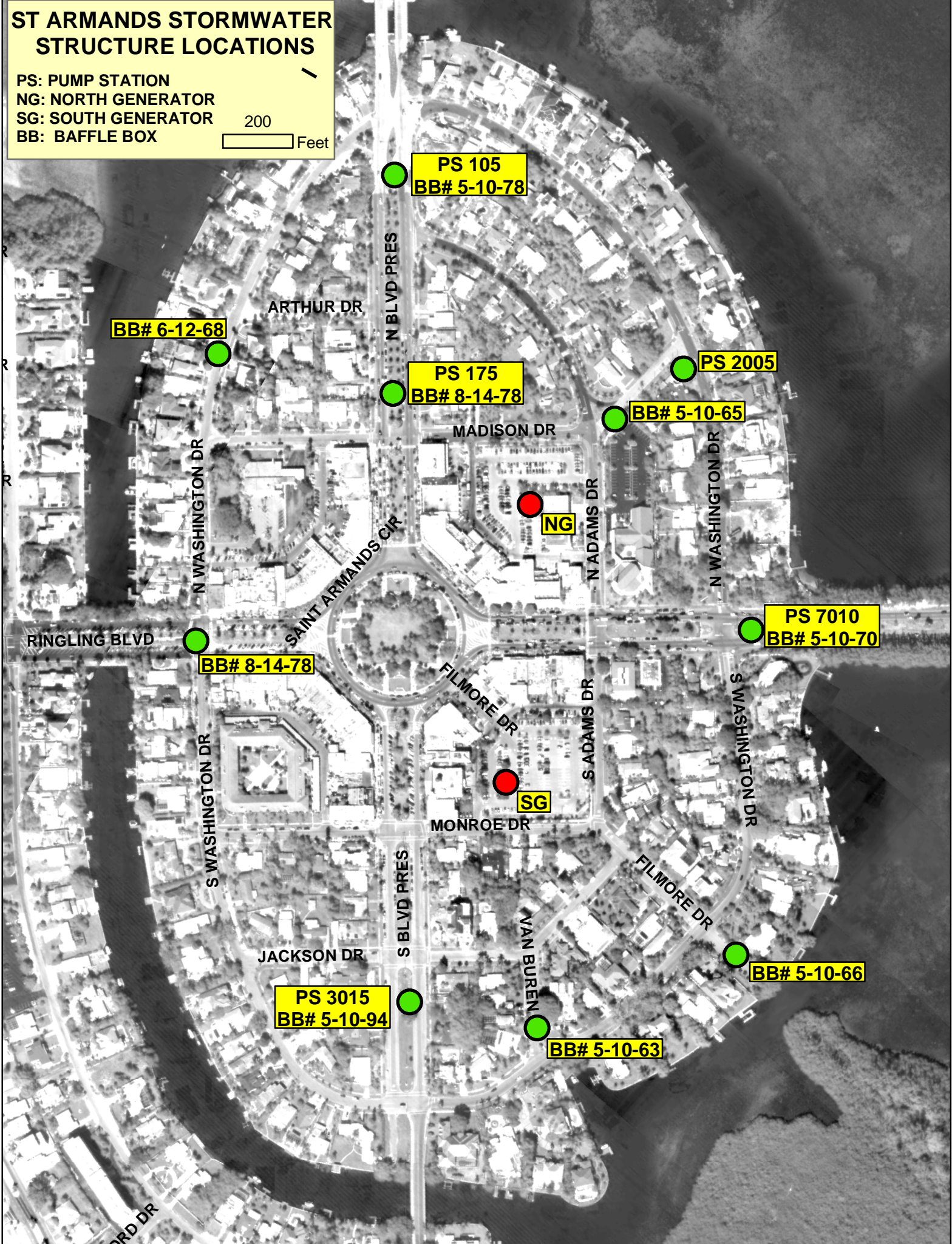


ST ARMANDS STORMWATER STRUCTURE LOCATIONS

PS: PUMP STATION
NG: NORTH GENERATOR
SG: SOUTH GENERATOR
BB: BAFFLE BOX

200
Feet



St Armands Key Stormwater Improvement Project

Pre-Construction Level of Service Deficiencies:

- 13 flooded structures
- Multiple flooded roadways

Design Level of Service:

- No flooded structures in 25-yr, 24 hr storm event (8 inches of rain in 24 hrs)
- No roadway flooding in the 3-yr, 1 hr storm event (2.55 inches of rain in 1 hr)
- Design in excess of the above is not feasible due to expected storm surge in storm events great than 25 yr, 24 hr that will overtop the island seawalls.

Improvements:

- 4 new pump stations, 1 rehabilitated pump station. 2 pumps per station that alternate in operation except during significant rain events when both pumps are needed.
- 9 new baffle boxes to collect suspended solids, yard debris, trash petroleum runoff prior to entering Sarasota Bay. Baffle boxes were funded by Florida Department of Environmental Protection (FDEP).
- 2 Emergency Generators and Control Centers.
- Multiple new stormwater structures and pipe lengths to increase and improve stormwater runoff conveyance to the pump stations.
- Valves installed at each outfall to the bay to prohibit the surcharge of stormwater structures and flooding of low elevations during high tides

Construction Cost:

- Original: \$4.7M,
- Final: \$5.3M. FDEP added \$60K for one additional baffle box.

Funding:

- Florida Department of Transportation/Sarasota Manatee MPO
- City of Sarasota
- Florida Department of Environmental Protection
- Sarasota County
- Town of Longboat Key

Schedule:

- Original: May 2005 – October 2006
- Final: May 2005 – June 2006

Operation:

- Pumps operate as necessary to evacuate groundwater infiltration through older stormwater pipe system.
- Pumps turn on/off as needed during rain events to evacuate runoff

- Generators automatically turn on in the event of a power outage and can support the pump system up to 48 hrs
- Generators have a test run every Tuesday morning for 20min
- Regular maintenance is required to clean debris from baffle boxes and pump station wet wells and to ensure system is operating as designed

Project Team

- Design: Boyle Engineering Corp
- Construction Contractor: DeJonge Excavating Contractors
- Construction Inspection: Reynolds, Smith & Hills, CS, Inc.
- Project Management: Sarasota County
- Critical Public Members: St Armands Key Merchants Association
St Armands Key Residents Association
St Armands Key Landowners Group



BEFORE AND AFTER OF REHABILITATED PUMP STATION AT N WASHINGTON DR AND MADISON DR (EAST)



BEFORE AND AFTER OF DUEL PUMP STATION OUTFALL ON N BLVD OF THE PRESIDENTS BRIDGE TO MOTE MARINE



TYPICAL PUMP STATION LAYOUT. 3 MANHOLE RINGS INDICATE BAFFLE BOX, LARGE SQUARE, PUMP WET WELL W/PUMPS AND SMALLER SQUARE IS VALVE VAULT. THIS PUMP STATION ON JOHN RINGLING BLVD JUST EAST OF N WASHINGTON DR.