

A.H. AT TURNPIKE SOUTH Community Development District

Engineering Report
Infrastructure Improvements

Prepared for
A.H AT TURNPIKE SOUTH Community Development District
Board of Supervisors
Miami-Dade County, Florida

Prepared by
American Services of Miami, Corp.

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November 05, 2013.

10/10/2013

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I. Introduction.

The A.H. at Turnpike South Community Development District (the District) was created for the purpose of managing and financing the planning, development, construction and maintenance of the infrastructure of A.H. at Turnpike South, a project containing two subdivisions with a total gross area of 82.51 acres of residential development located in Southwest Miami-Dade County, Florida. The development offers single family dwelling units.

See **Exhibit 1** for a graphical representation of the development.

The proposed infrastructure is a network of public roadway containing the required drainage, water and sanitary sewer systems that will serve and give access to 400 single family dwelling units.

As of the date of this report, construction of the development has begun on phase I under Tentative Plat name A.H. at Turnpike South. It is estimated that the infrastructure will be constructed according to the following schedule.

Phase 1 (30 homes)

Earthwork: Began in October, 2012 with an estimated end in Dec. 2013

Sanitary Sewer System: Began in December, 2012 with an estimated completion in Dec. 2013

Water Distribution System: Began in January, 2013 with an estimated completion in Dec. 2013

Stormwater Management: Began in January, 2013 with an estimated completion in Dec. 2013

Roadway Improvements: Began in March, 2013 with an estimated completion in Dec. 2013

Phase 2 (370 homes)

Earthwork: Begin in April 2014 with an estimated end in Dec. 2015

Sanitary Sewer System: Begin in May 2014 with an estimated completion in Nov. 2016

Water Distribution System: Begin in May, 2014 with an estimated completion in Nov. 2016

Stormwater Management: Begin in May, 2014 with an estimated completion in Nov. 2016

Roadway Improvements: Begin in June 2014 with an estimated completion in Nov. 2016

II. District Description.

The District was established under Ordinance No. 12-60 of the Miami-Dade County Commission. The Ordinance was passed and adopted on February 10, 2012. The boundaries were expanded by enactment of Ordinance No. 13-93, on October 1, 2013.

The District is located in Section 35, Township 56S, Range 39E, in Miami-Dade County, Florida and consist of two residential subdivisions, one with 30 homes (**A.H AT TURNPIKE SOUTH**) located on the west side of the Homestead extension of the Florida's Turnpike and abutting SW 137th Avenue and another subdivision with a total of 370 homes (**A.H AT TURNPIKE SOUTH FIRST ADDITION**) located on the east side of the Homestead extension of the Florida's Turnpike, between SW 272nd Street and SW 280th Street. See Exhibit 1.

III. Description of the Infrastructure.

1. Roadway Improvements.

A network of interior and exterior public roads is proposed to provide circulation and access to the subject site and to comply with the requirements of Miami-Dade County Public Works Department as part of the Platting and subdividing process.

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The 370 lots subdivision has access on the east side to SW 132ND Avenue, a public Right-of-Way, on the north side access will be provided through SW 272 Street a proposed public Right-of-Way, on the south side access is provided through SW 280th Street an existing public Right-of-Way.

The 30 lots subdivision has access on the east side through the Homestead extension of the Florida's Turnpike, on the north side access is provided by SW 272nd Street, an existing public Right-of-Way and on the west side, the site is abutting SW 137th Avenue, a major north-south corridor also a public Right-of-Way.

From these entrances a series of streets were designed in order to provide access to the dwelling units. The interior streets consist of crowned sections with 20 feet pavement, 10 feet parkways and 5 feet sidewalks on the front of each unit..

The typical section for all the interior streets consists of a 12 inch stabilized subgrade, an 8 inch lime rock base and a 1 inch asphalt course.

The roads within this development will be owned and maintained by Miami-Dade County Public Works.

See Exhibits 2A and 2B for a graphical representation of the roadway improvement.

2. Stormwater Management.

a. Onsite. The stormwater management facilities consist of 131 Catch Basin, storm pipes and approximately 4,585 Linear Feet (LF) of exfiltration trenches. The system will be designed to retain 100% of the storm runoff within the development at levels that provide flood protection for the road and residential dwelling units.

In accordance with the Federal Emergency Management Agency (FEMA, Map Number 120635, Panel 0593 Suffix L, dated September 11, 2009) this development falls within Zone Ah, Elevation 7 Ft above the National Geodetic Vertical Datum of 1929 (NGVD). In accordance with the Dade County Flood Criteria Map (Plat Book 120 Page 13), the minimum allowable elevation of the ground surface and crown grade of roads within this development is Elevation 6.0 Ft above the Mean Sea Level National Datum of 1929. The paving and drainage plans for the development call for the finish floor elevation of the residences to be set at a minimum Finished Floor elevation of 8.60 Ft above NGVD sea level, and for the crown of the roads to vary from elevation 7.0 to 8.0 Ft above NGVD.

b. Offsite. No special conditions were set under Environmental Resource Permit Number 13-05383-P from the Department of Regulatory and Economic Resources (Environmental Resources Management). No Offsite mitigation is required for this development due to the location and conditions set by the department.

See Exhibits 3A and 3B for a graphical representation of the storm water management system.

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3. Water Distribution System.

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A.H. at Turnpike South (30 lots)

The water distribution system is composed of variable pipe sizes ranging from 6 to 16 inch diameters for water service and fire protection. The water distribution system will be connected to an existing 8 inch water main on SW 135TH Avenue and to a proposed 16 inch water main on SW 137 Avenue. The existing facilities are owned by the Miami-Dade County Water and Sewer Department (WASD). The proposed water system encompasses approximately 1,934 LF of 8 inch pipe, 382 LF of 16 inch pipe, and three (3) fire hydrants.

The developer of the project has entered into an agreement with Miami-Dade County Water and Sewer Department, under agreement number ID 21187 and all the required improvements are already installed and awaiting final inspection prior to conveyance. When completed, the water distribution system will be acquired by the District and then donated to WASD.

A.H. at Turnpike South First Addition (370 lots)

As per our preliminary design, the water distribution system will be composed of variable pipe sizes ranging from 6 to 10 inch diameters for water service and fire protection. The water distribution system will be connected to an existing 10 inch water main on SW 132nd Avenue and to an existing 10" inch water main on SW 280th Street. The existing facilities are owned by the Miami-Dade County Water and Sewer Department (WASD). The proposed water system encompasses approximately 17,280 LF of 8 inch pipe, 900 LF of 10 inch pipe, and forty nine (49) fire hydrants.

The developer of the project must enter into an agreement with the District and Miami-Dade County Water and Sewer Department, said agreement will provide the required improvements and points of connections. Base on our experience in the area we estimate that the proposed improvement shown on Exhibits 4 and 4A will be very similar to WASD requirements. When completed, the water distribution system will be acquired by the District and then donated to WASD.

See Exhibits 4A and 4B for a graphical representation of the water distribution system.

4. Sanitary Sewer System.

A.H. at Turnpike South (30 lots)

The developer of the project has entered into an agreement with Miami-Dade County Water and Sewer Department, under agreement number ID 21187 and all the required improvements are already installed and awaiting final inspection prior to conveyance. When completed, the sewer collection system will be acquired by the District and then donated to WASD.

The sanitary sewer collection system consists of approximately 1,365 LF of 8" PVC gravity sewer, 30 service laterals and 9 manholes.

A.H. at Turnpike South First Addition (370 lots)

The developer of the project must enter into an agreement with the District and Miami-Dade County Water and Sewer Department, said agreement will provide the required improvements and points of connections. Base on our experience in the area we estimate that the proposed improvement shown on Exhibits 5 and 5A will be very similar to WASD requirements. When completed, the sewer collection system will be acquired by the District and then donated to WASD.

The sanitary sewer collection system consists of approximately 16,090 LF of 8" PVC gravity sewer, 370 service laterals and 64 manholes.

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The system also includes the construction of a lift station and approximately 1,522 LF of 8 inch Ductile Iron Pipe force main.

The cost of construction of the sanitary sewer system is shown in Table 5 of the Construction Cost Estimates.

When completed, the sanitary sewer collection system will be acquired by the District and then donated to WASD.

See Exhibit 5A and 5B for a graphical representation of the sanitary sewer system.

IV. Ownership and Maintenance.

The District will finance the acquisition and/or construction of the improvements. It will then transfer the land and improvements to the following:

Description	Future Ownership	Future Maintenance
Roads	Miami-Dade County	Miami-Dade County
Stormwater Mangement		
a.Road Drainage System	Miami-Dade County	Miami-Dade County
Water Distribution System	WASD	WASD
Sanitary Sewer System	WASD	WASD

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V. Permitting Status.

1. Platting.

A.H. at Turnpike South Tentative Plat was reviewed and approved by the County on April 6, 2012 under T-Plat number T—23221 and valid through January 5, 2014.

A.H. at Turnpike South first addition Tentative Plat was reviewed and approved by the County on November 16, 2012 under T-Plat number T—23264 and valid through November 15, 2013.

2. Paving, Grading and Drainage Permits.

A.H. at Turnpike South

The Paving Grading and Drainage plans were approved by Miami-Dade County on January 30, 2013.

A.H. at Turnpike South First Addition

The Paving Grading and Drainage have not being submitted.

3. Stormwater Management System and Wetlands.

A.H. at Turnpike South

PERA issued Environmental Resource Permit Number 13-0418-5 on Sept. 11, 2013.

A.H. at Turnpike South First Addition

No ERP has being requested from PERA at the time of the report.

4. Water Distribution System.

A.H. at Turnpike South

Permit applications were submitted to WADS on Oct. 5, 2012. The approvals were received in October 17, 2013. A Florida Health Department permit was issued December 27, 2012 under permit number 312050-078-DSGP

5. Sanitary Sewer System.

Permit applications were submitted to WADS on Oct. 5, 2012. The approvals were received in October 17, 2013. The Regulatory and Economic Resources issued a permit on December 5, 2012 under FDEP No. 253649-736-DWC

VI. Estimate of Capital Improvement Cost.

Roadway Improvements	\$2,203,182.00
Stormwater Management	\$ 789,514.00
Water Distribution System	\$1,000,854.00
Sanitary Sewer System	<u>\$1,667,208.00</u>
Total	<u>\$5,660,758.00</u>

Tables 1 through 5 show line item estimates for each category of infrastructure.

The costs of the infrastructure will be allocated to each residential unit within the development in the form of special assessments, in accordance with the approved methodology described in the "Special Assessment Methodology Report" prepared for A.H. at Turnpike South Community Development District by Special District Services, Inc.

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VII. Engineer's Certification.

It is our opinion that the extent of proposed improvements and their estimated costs are fair and reasonable. We believe that the improvements can be permitted, constructed and installed at the estimated costs described in this report.

I hereby certify that the foregoing is a true and correct copy of the engineer's Report for the A.H. AT TURNPIKE SOUTH Community Development District.

Mario Duany
Florida Registration No. 67340
American Services of Miami, Corp.
October 10, 2013

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11/05/2013

TABLES AND EXHIBITS

**A.H. AT TURNPIKE SOUTH
Construction Cost Estimates**

Summary Table

Description of Work		Total Estimated Cost
Infrastructure Component Roadway Improvements Storwater Management Water Distribution System Sanitary Sewer System	Table 2 & Exhibits 2A & 2B Table 3 & Exhibits 3A & 3B Table 4 & Exhibits 4A & 4B Table 5 & Exhibits 5A & 5B	\$2,203,182.00 \$789,514.00 \$1,000,854.00 \$1,667,208.00
Total		\$5,660,758.00

**A.H. AT TURNPIKE SOUTH
Construction Cost Estimates**

Roadway Improvements

Description of Work	Quantity	Unit	Unit Price	Total Estimated Cost
Clearing & Grubbing (Road R/W's)	20.49	AC	\$5,000.00	\$102,450.00
Earthwork (Road R/W's)	20.49	AC	\$3,500.00	\$71,715.00
Democking	20.49	AC	\$1,000.00	\$20,500.00
Fill to subgrade (average 14")	38566.00	CY	\$10.00	\$385,667.00
12" Subgrade (Public Roads)	33,057	CY	\$11.50	\$380,155.00
8" Baserock	22,148	CY	\$13.50	\$298,998.00
6" Baserock (CB aprons)	28	CY	\$10.00	\$7,500.00
1" asphaltic concrete (apron)	1,500	SY	\$3.00	\$4,500.00
1" A.C.S.C.	40,000	SY	\$4.50	\$180,000.00
4" Concrete Sidewalk	11,015	SY	\$22.00	\$242,330.00
Type "F" Curb & Gutter	N/A	LF	\$7.75	\$0.00
Valley Gutter	N/A	LF	\$7.50	\$0.00
Finish Soil layer (swales)	30,000	SY	\$0.70	\$21,000.00
Sod (swales)	31,000	SY	\$2.50	\$77,500.00
Signing and Pavement Marking	LS	AC	LS	\$45,000.00
Surveying and As-Builts	2%	LS	\$1,837,315.00	\$36,746.00
Maintenance of Traffic	1	LS	\$7,500.00	\$7,500.00
Densities	150	EA	\$95.00	\$14,250.00
Permits	1	LS	\$20,000.00	\$20,000.00
Purchase Wetland Credits (Road R/W)	N/A	AC	N/A	\$0.00
Soft Costs (Eng and Prof. Fees)	5%	LS	\$1,915,811.00	\$95,790.00
Contingency*	10%	LS		\$191,581.00
*Does not includes Wetland Mitigation				
Total				\$2,203,183.00

**A.H. AT TURNPIKE SOUTH
Construction Cost Estimates**

Stormwater Management

Description of Work	Quantity	Unit	Unit Price	Total Estimated Cost
Clearing (Lake Tract and Ret.Tracts)	N/A	AC	N/A	\$0.00
Lake Excavation	N/A	CY	N/A	\$0.00
Lake & Ret. Tracts Side Grading	N/A	AC	N/A	\$0.00
Sod Lake & Ret. Tracts Side Slopes	N/A	SY	N/A	\$0.00
15" HDPE	1,000	LF	\$35.00	\$35,500.00
18"HDPE	125	LF	\$45.00	\$5,625.00
24"RCP	350	LF	\$55.00	\$22,750.00
Exfiltration Trench w/15" HDPE	3,920	LF	\$62.00	\$243,040.00
Exfiltration Trench w/24" HDPE	300	LF	\$75.00	\$22,500.00
Inlet w/P Box	N/A	EA	\$1,350.00	\$0.00
Inlet w/J Box	112	EA	\$2,500.00	\$280,000.00
Drainage Structure (WCS)	N/A	EA	\$3,500.00	\$0.00
CB Grates & MH Rings	112	EA	\$195.00	\$21,840.00
End Wall	N/A	EA	\$1,025.00	\$0.00
Surveying and As-Builts	4%	LS	\$552,720.00	\$22,108.00
Densities	50	EA	\$75.00	\$3,750.00
Permits	1	LS	\$20,000.00	\$20,000.00
Purchase Wetland Credits(lake&Ret)	N/A	AC	N/A	\$0.00
Soft Costs (Eng and Prof. Fees)	6%	LS	\$677,113	\$40,626.00
Contingency*	10%	LS	\$717,740.00	\$71,774.00
*Does not includes Wetland Mitigation				
Total				\$789,513.00

**A.H. AT TURNPIKE SOUTH
Construction Cost Estimates**

Water Distribution System

Description of Work	Quantity	Unit	Unit Price	Total Estimated Cost
Connect to Existing W.M	2	LS	\$4,000.00	\$8,000.00
6" D.I.P. (Assumed 25'/FH Branch)	925	LF	\$25.25	\$23,356.00
8" D.I.P.	18,180	LF	\$24.50	\$445,410.00
12" D.I.P.	N/A	LF	N/A	\$0.00
36" D.I.P	N/A	LF	N/A	\$0.00
6" Gate Valve & Box	37	EA	\$650.00	\$24,050.00
8" Gate Valve & Box	50	EA	\$755.00	\$37,750.00
12" Gate Valve & Box	N/A	EA	N/A	\$0.00
36" Butterfly Valve	N/A	EA	N/A	\$0.00
Fire Hydrants	37	EA	\$2,500.00	\$92,500.00
12" X 8" Reducer	N/A	EA	\$0.00	\$0.00
8" Tee & Cross	28	EA	\$475.00	\$13,300.00
8" X 6" Tee	37	EA	\$475.00	\$17,575.00
8" X 10" Tees	6	EA	\$750.00	\$4,500.00
12" X 8" Tee and Cross	N/A	EA	N/A	\$0.00
12" X (12" & 8") Tapping Sleeve	N/A	EA	N/A	\$0.00
12" Tee & Cross	N/A	EA	N/A	\$0.00
8" Bend	7	EA	\$425.00	\$2,975.00
12" Bend	N/A	EA	N/A	\$0.00
(8", 12" & 36") X2 CAP W/2" F.V.O.	2	EA	\$600	\$1,200.00
1" Single Service	5	EA	\$450	\$2,250.00
1" Dual Service	185	EA	\$500.00	\$92,500.00
Miscellaneous	1	LS	\$15,000.00	\$15,000.00
Maintenance of Traffic	1	LS	\$5,000.00	\$5,000.00
Densities	3	LS	\$5,000.00	\$15,000.00
Surveying & As-Builts	4%	LS	\$800,366.00	\$32,000.00
Chlorinating & Testing	18,179	LF	\$0.33	\$6,000.00
Permit	1	LS	\$20,000.00	\$20,000.00
Soft Costs (Eng and Prof. Fees)	6%	LS	\$858,366.00	\$51,502.00
Contingency	10%		\$909,867.00	\$90,986.00
Oversize Credit (12" D.I.P.)	N/A	LF	\$0.00	\$0.00
Oversize Credit (36" D.I.P.)	N/A	LF	\$0.00	\$0.00
Total				\$1,000,854.00

A.H. AT TURNPIKE SOUTH
Construction Cost Estimates
Sanitary Sewer System

Description of Work	Quantity	Unit	Unit Price	Total Estimated Cost
Gravity System				
8" D.I.P (0'-6')	0	LF	\$0.00	\$0.00
8"D.I.P. (6'-8')	0	LF	\$0.00	\$0.00
8" PVC (0'-6')	9,500	LF	\$25.00	\$237,500.00
8" PVC (6'-8')	3,297	LF	\$35.00	\$115,395.00
8" PVC (10'-12')	3,297	LF	\$42.00	\$138,474.00
10" PVC (10'-12')	0	LF	\$62.50	\$0.00
12" PVC (12"-14")	0	LF	\$72.50	\$0.00
MH (0'-6')	32	EA	\$1,500.00	\$48,000.00
MH (6'-8')	32	EA	\$2,200.00	\$70,400.00
MH (8'-10')	0	EA	\$0.00	\$0.00
MH (8'-10') w/Drop Inlet	0	EA	\$0.00	\$0.00
MH (10'-12')	0	EA	\$0.00	\$0.00
MH (10'-12') w/Drop Inlet	0	EA	\$0.00	\$0.00
MH (12'-14')	1	EA	\$3,500.00	\$35,000.00
6" PVC Lateral (SS1.0)	370	EA	\$450.00	\$166,500.00
MH Connection	128	EA	\$122.00	\$15,616.00
MH Inverst & Ring	64	EA	\$275.00	\$17,600.00
Gravel # 5/	7,000	LN	\$9.55	\$66,850.00
Miscellaneous	1	LS	\$17,500.00	\$17,500.00
Densities	42	EA	\$100.00	\$4,200.00
Cleaning and Testing	16,094	LF	\$0.75	\$12,070.00
Permit	1	LS	\$20,000.00	\$20,000.00
Surveying & As-Builts	4%	LS	\$965,105.00	\$38,604.00
Sub-Total Gravity System				\$1,003,709.00
Force Main and Lift Station				
8"DIP	1,522	LF	\$52.00	\$79,144.00
8" Gate Valve & Box	5	LF	\$1,525.00	\$7,625.00
8" Tee	1	EA	\$523.00	\$523.00
8" Plug	2	EA	\$500.00	\$1,000.00
8" Bend	3	EA	\$500.00	\$1,500.00
Connect to Existing FM	1	LS	\$15,000.00	\$15,000.00
Air Release	1	EA	\$450.00	\$450.00
Lift Station	1	EA	\$300,000.00	\$300,000.00
Maintenance of Traffic	1	LS	\$2,500.00	\$1,500.00
Densities	10	EA	\$100.00	\$1,000.00
Cleaning & Testing	1,522	LF	\$0.75	\$1,141.00
Permit	1	LS	\$20,000.00	\$20,000.00
Surveying & As-Builts	4%	LS	\$428,883.00	\$17,155.00
Sub-Total Force Main and Lift Station				\$446,038.00
Total Sanitary Sewer System (Gravity Syst. + FM and Lift Sta)				\$1,449,747.00
Soft Costs (Eng and Prof. Fees)	5%		\$1,449,747.00	\$72,487.00
Contingency	10%		\$1,449,747.00	\$144,974.00
Grand Total Sanitary Sewer System				\$1,667,208.00