

Summerville Community Development District

Engineer's Report
Infrastructure Improvements

Prepared for
Summerville Community Development District
Board of Supervisors
Miami-Dade County, Florida

Prepared by
Alvarez Engineers, Inc.

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November 16, 2004

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I. Introduction.

The Summerville Community Development District (the District) was created for the purpose of financing and managing the acquisition, construction and maintenance of the infrastructure of Summerville Subdivision, a 47.88 gross acre residential development located in Southwest Miami-Dade County, Florida. The development offers townhouses and single family dwelling units and it is proposed to be constructed in two phases. Phase 1 is located east of SW 117 Avenue and measures approximately 31.08 acres; Phase 2 is located west of SW 117 Avenue and measures approximately 16.80 acres.

The infrastructure is a network of roadway, drainage, water and sanitary sewer systems that will give access and service to 111 townhouses 156 single family dwelling units.

It is estimated that the infrastructure will be constructed according to the following schedule:

Earthwork: Begin on 4th Quarter, 2004. End on 2nd Quarter, 2006.

Sanitary Sewer System: Begin on 4th Quarter, 2004. End on 2nd Quarter, 2006.

Water Distribution System: Begin on 4th Quarter, 2004. End on 2nd Quarter, 2006.

Stormwater Management: Begin on 4th Quarter, 2004. End on 2nd Quarter, 2006.

Roadway Improvements: Begin on 4th Quarter, 2004. End on 2nd Quarter, 2006.

II. District Description.

The District was established under Ordinance No. 04-147 of the Miami-Dade County Commission. The Ordinance was passed and adopted on July 27, 2004 and became effective ten days later, on August 6, 2004.

The District is located in Section 19, Township 56S, Range 40E and in Section 24, Township 56S, Range 39E in Miami-Dade County, Florida. It is bounded by theoretical SW 118 Place and SW 117 Avenue on the west, SW 116 Avenue and theoretical SW 114 Court on the east, SW 247 Street and theoretical SW 245 Street on the south and theoretical SW 244 Street, theoretical SW 242 Lane and SW 242 Street on the north. The development is located within Zip Code 33032.

III. Description of the Infrastructure.**1. Roadway Improvements.**

A network of interior roads and driveways is proposed to provide circulation to the general public.

The development is accessed from SW 117 Avenue at the following points of entrance: SW 242 Street, SW 243 Street, SW 244 Street, SW 244 Lane, SW 245 Terrace, SW 246 Terrace and SW 247 Street. From these entrances a series of streets originate in order to provide access to the dwelling units. The interior streets consist of crowned and reversed crown sections with valley or curbed gutters and sidewalks on the sides. The typical section for all the interior streets consists of a 12 inch stabilized subgrade, an 8 inch limerock base and a 1 inch asphalt course.

All roads within this development will be accessible to the public.

2. Stormwater Management.

The stormwater management facilities consist of inlets, manholes, storm pipes and exfiltration trenches. The stormwater management system has been designed so that the storm runoff may be retained within the development at levels that provide flood protection for the road and residential dwelling units.

3. Water Distribution System.

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 16 inch water main on SW 248 Street. The existing facilities are owned by the Miami-Dade County Water and Sewer Department (WASD).

When completed, the water distribution system will be donated to WASD for operation and maintenance. In the case where water mains are constructed outside of County Right of Ways, a twelve foot easement encompassing such water mains will be granted to WASD for access and maintenance.

4. Sanitary Sewer System.

The sanitary sewer collection system consists of a combination of a gravity system and a lift station with a force main. The gravity system consists of pipes ranging in size from 6 to 10 inches in diameter. The lift station will discharge into a force main that measures between 8 and 24 inches in diameter. The force main will be connected to an existing force main owned by WASD at SW 248 Street and SW 113 Court.

When completed, the sanitary sewer collection system will be donated to WASD for operation and maintenance. In the case where sanitary sewers are constructed outside of County Right of Ways, a fifteen foot easement encompassing such sanitary sewers will be granted to WASD for access and maintenance.

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 agencies for ownership and maintenance:

Description	Future Ownership	Future Maintenance
County Roads	Miami-Dade County	Miami-Dade County
CDD Roads (Alleys)	Miami-Dade County	Miami-Dade County
Stormwater Management:		
a. County Road Drainage System	Miami-Dade County	Miami-Dade County
b. Green Tracts	Summerville CDD or a Special Taxing District	Summerville CDD or a Special Taxing District
Water Distribution System	WASD	WASD
Sanitary Sewer System	WASD	WASD

V. Permitting Status.**1. Platting.**

Tentative Plat No. T-21488 (Phase 1); Tentative Plat No. T-21634

2. Roadway, Paving, Grading and Drainage Permits.

Phase 1: Approval by Miami-Dade County Public Works Department, Paving, Grading and Drainage and Traffic on February 17 and 18, 2004. Permit Number T-21488.

Phase 2: Pending.

3. Stormwater Management System

Phase 1: Approval by Miami-Dade County Department of Environmental Resources Management (DERM) on January 7, 2004. Permit Number 13-02211-P.

Phase 2: Approval by Miami-Dade County Department of Environmental Resources Management (DERM) on January 7, 2004. Permit Number 13-02211-P.

4. Water Distribution System

Phase 1: Approval by WASD on December 27, 2003. Permit Number DW2003-208.

Approval by Miami-Dade County Fire Department on December 17, 2003. Permit Number 03340-00292.

Approval by Miami-Dade Department of Health on January 8, 2004. Permit Number 216896-137-DSGP.

Phase 2: Approval by Miami-Dade Department of Health on May 6, 2004. Permit Number 216896-270-DSGP.

5. Sanitary Sewer System.

Phase 1: Approval by WASD on December 2, 2003. Permit Number DS2003-629.

Approval by DERM Sewerage Facilities on January 4, 2004. Permit Number SE2003-196.

Phase 2: Pending.

VI. Estimate of Capital Improvement Costs.

Phase 1:

Roadway Improvements	\$ 1,892,624.28
Stormwater Management	\$ 664,260.31
Water Distribution System	\$ 672,760.22
Sanitary Sewer System	\$ 611,078.56
Sub-Total	\$ 3,840,723.37

Phase 2:

Roadway Improvements	\$ 916,688.19
Stormwater Management	\$ 252,610.42
Water Distribution System	\$ 241,767.72
Sanitary Sewer System	\$ 1,093,477.83
Sub-Total	\$ 2,504,544.16

Total Phase 1 and Phase 2

\$ 6,345,267.53

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 Summerville Community Development District by Special District Services, Inc.

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 costs described in this report.

I hereby certify that the foregoing is a true and correct copy of the Engineer's Report for the Summerville Community Development District.

Juan R. Alvarez, PE
Florida Registration No. 38522
Alvarez Engineers, Inc.
November 16, 2004.

TABLES AND EXHIBITS

SUMMERVILLE SUBDIVISION CDD (PHASE 1)

Construction Cost Estimates

Roadway Improvements

Description of Work	Quantity	Unit	Price (\$/Unit)	Estimated Cost (\$)
Mobilization	1.00	LS	50,000.00	50,000.00
Clearing & Grubbing (Road R/W's)	16.29	AC	1,775.00	28,911.45
Demuck (Road R/W's)	13,139	CY	2.00	26,278.20
Import Fill	46,118	TN	6.00	276,709.45
Grading (Road R/W's)	16.29	AC	10,000.00	162,881.40
12" Subgrade (Public Roads)	38,718	SY	1.00	38,718.12
8" Baserock	38,718	SY	5.75	222,629.19
6" Baserock (CB Aprons)	1,078	SY	5.50	5,929.00
1" Asphaltic Concrete (Aprons)	1,078	SY	4.00	4,312.00
1" A.C.S.C.	29,282	SY	4.50	131,768.60
2" A.C.S.C.	9,436	SY	6.00	56,617.26
4" Concrete Sidewalk	8,743	SY	18.75	163,933.09
Curb & Gutter	14,397	LF	8.75	125,977.83
Valley Gutter	8,069	LF	8.50	68,583.87
Finish Soil layer (swales)	31,373	SY	0.75	23,530.04
Sod (swales)	31,373	SY	2.50	78,433.46
Guardrail	65	LF	27.50	1,787.50
Signing and Pavement Marking	16.29	AC	5,500.00	89,584.77
Surveying and As-Builts	4%	LS	1,174,686.11	46,987.44
Maintenance of Traffic	1	LS	15,000.00	15,000.00
Densities	50	EA	60.00	3,000.00
Permits	1	LS	10,000.00	10,000.00
Soft Costs (Eng and Prof. Fees)	6%	LS	1,631,572.65	97,894.36
Contingency	10%	LS	1,631,572.65	163,157.27
Total				\$1,892,624.28

SUMMERVILLE SUBDIVISION CDD (PHASE 1)

Construction Cost Estimates

Water Distribution System

Description of Work	Quantity	Unit	Price (\$/Unit)	Estimated Cost (\$)
16" x 16" Tapping Sleeve & Tapping Valve	1	LS	11,000.00	11,000.00
6" D.I.P. (Assumed 25'/FH Branch)	350	LF	22.50	7,875.00
8" D.I.P.	7,986	LF	25.00	199,650.00
16" D.I.P.	1,997	LF	50.00	99,850.00
6" Gate Valve & Box	14	EA	750.00	10,500.00
8" Gate Valve & Box	35	EA	1,000.00	35,000.00
16" Butterfly Valve & Box	7	EA	4,500.00	31,500.00
Fire Hydrants	14	EA	1,800.00	25,200.00
8" x 6" Tee	14	EA	275.00	3,850.00
8" Tee	11	EA	300.00	3,300.00
8" x 45° Bend (Restrained)	51	EA	275.00	14,025.00
8" x 90° Bend	5	EA	250.00	1,250.00
8" Cross	2	EA	325.00	650.00
16"/8" Tee & Cross	6	EA	1,200.00	7,200.00
8" x 2" CAP W/ 2" F.V.O.	2	EA	750.00	1,500.00
16" x 2" CAP W/ 2" F.V.O.	2	EA	1,050.00	2,100.00
1" Single Service	47	EA	700.00	32,900.00
1" Dual Service	74	EA	750.00	55,500.00
Surveying & As-Builts	4%	LS	542,850.00	21,714.00
Miscellaneous	1	LS	5,000.00	5,000.00
Maintenance of Traffic	1	LS	10,000.00	10,000.00
Densities	25	EA	60.00	1,500.00
Chlorinating & Testing	10,333	LF	1.55	16,016.15
Permit	1	LS	10,000.00	10,000.00
Soft Costs (Eng and Prof. Fees)	6%	LS	607,080.15	36,424.81
Contingency	10%	LS	607,080.15	60,708.02
WASD Oversizing Credit for 16" DIP	1,997	LF	15.75	(31,452.75)
Total				\$672,760.22

SUMMERVILLE SUBDIVISION CDD (PHASE 1)**Construction Cost Estimates****Sanitary Sewer System**

Description of Work	Quantity	Unit	Price (\$/Unit)	Estimated Cost (\$)
Gravity System				
Connect to Existing MH	1	EA	1,750.00	1,750.00
8" PVC (0'-6')	3,028	LF	25.00	75,700.00
8" PVC (6'-8')	1,305	LF	30.00	39,150.00
8" PVC (8'-10')	165	LF	35.00	5,775.00
10" PVC (0'-6')	550	LF	45.00	24,750.00
10" PVC (6'-8')	827	LF	52.50	43,417.50
10" DIP (8'-10')	425	LF	87.50	37,187.50
8" DIP (0'-6')	1,406	LF	25.00	35,150.00
MH (0'-6')	26	EA	1,250.00	32,500.00
MH (6'-8')	12	EA	1,500.00	18,000.00
MH (8'-10')	2	EA	1,750.00	3,500.00
MH Inverts & Ring	40	EA	175.00	7,000.00
6" PVC Lateral (SS1.0)	100	EA	550.00	55,000.00
6" PVC Lateral (SS2.0)	37	EA	550.00	20,350.00
MH Connection	21	EA	475.00	9,975.00
Surveying & As-Builts	4%	LS	409,205.00	16,368.20
Gravel # 57	2,136	TN	10.25	21,896.95
Miscellaneous	1	LS	5,000.00	5,000.00
Maintenance of Traffic	1	LS	10,000.00	10,000.00
Densities	25	EA	60.00	1,500.00
Cleaning & Testing	7,706	LF	1.75	13,485.50
Permit	1	LS	10,000.00	10,000.00
Soft Costs (Eng and Prof. Fees)	6%	LS	487,455.65	29,247.34
Contingency	10%	LS	487,455.65	48,745.57
Subtotal Gravity System				\$565,448.56
Force Main				
8" DIP (Polybond)	78	LF	27.50	2,145.00
12" DIP (Polybond)	1,082	LF	40.00	43,280.00
8" Plug Valve	1	EA	3,500.00	3,500.00
8" Check Valve	1	EA	2,000.00	2,000.00
12" Plug Valve	1	EA	2,500.00	2,500.00
Valve Manhole	1	EA	1,250.00	1,250.00
12"/8" Tee	1	EA	1,250.00	1,250.00
12" Plug	1	EA	250.00	250.00
Surveying & As-Builts	4%	LS	56,175.00	2,247.00
Miscellaneous	1	LS	2,500.00	2,500.00
Maintenance of Traffic	1	LS	10,000.00	10,000.00
Densities	10	EA	60.00	600.00
Cleaning & Testing	1,160	LF	1.75	2,030.00
Permit	1	LS	10,000.00	10,000.00
Soft Costs (Eng and Prof. Fees)	6%	LS	83,552.00	5,013.12
Contingency	10%	LS	83,552.00	8,355.20
Subtotal Force Main				\$56,175.00
WASD Oversizing Credit for 12" DIP Force Main	1,406	LF	7.50	(10,545.00)
Total				\$611,078.56

11/16/2004

SUMMERVILLE SUBDIVISION CDD (PHASE 2)

Construction Cost Estimates

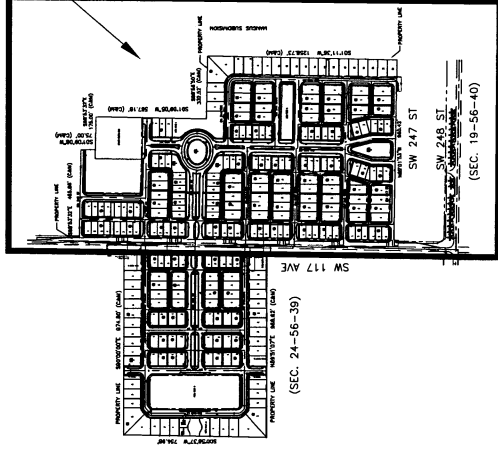
Stormwater Management

Description of Work	Quantity	Unit	Price (\$/Unit)	Estimated Cost (\$)
Mobilization	1.00	LS	25,000.00	25,000.00
12" HDPE	30	LF	15.00	450.00
15" HDPE	36	LF	17.50	630.00
Exfiltration Trench W/15" HDPE	1,652	LF	55.00	90,860.00
Inlet W/P Box & Swale Inlets	53	EA	1,275.00	67,575.00
Inlet W/J Box	1	EA	2,000.00	2,000.00
CB Grates & MH Rings	54	EA	150.00	8,100.00
Baffle	53	EA	150.00	7,950.00
Surveying and As-Builts	4%	LS	177,565.00	7,102.60
Densities	10	EA	60.00	600.00
Permits	1	LS	7,500.00	7,500.00
Soft Costs (Eng and Prof. Fees)	6%	LS	217,767.60	13,066.06
Contingency	10%	LS	217,767.60	21,776.76
Total				\$252,610.42

SUMMERVILLE SUBDIVISION CDD (PHASE 2) Construction Cost Estimates Sanitary Sewer System				
Description of Work	Quantity	Unit	Price (\$/Unit)	Estimated Cost (\$)
Gravity System				
8" PVC (0'-6')	1,259	LF	25.00	31,475.00
8" DIP (14'-16')	742	LF	85.00	63,070.00
8" DIP (16'-18')	1,389	LF	95.00	131,955.00
10" PVC (16'-18')	238	LF	65.00	15,470.00
12" DIP (16'-18')	35	LF	100.00	3,500.00
MH (0'-6')	10	EA	1,250.00	12,500.00
MH (14'-16')	1	EA	3,000.00	3,000.00
MH (14'-16') Drop	4	EA	3,500.00	14,000.00
MH (16'-18')	8	EA	3,500.00	28,000.00
MH (16'-18') Drop	2	EA	4,000.00	8,000.00
MH (18'-20')	1	EA	4,000.00	4,000.00
MH Inverts & Ring	26	EA	175.00	4,550.00
6" PVC Lateral (SS1.0)	83	EA	550.00	45,650.00
MH Connection	52	EA	475.00	24,700.00
Surveying & As-Builts	4%	LS	389,870.00	15,594.80
Gravel # 57	2,670	TN	10.25	27,371.19
Miscellaneous	1	LS	2,500.00	2,500.00
Maintenance of Traffic	1	LS	7,500.00	7,500.00
Densities	10	EA	60.00	600.00
Cleaning & Testing	3,663	LF	1.75	6,410.25
Permit	1	LS	7,500.00	7,500.00
Soft Costs (Eng and Prof. Fees)	6%	LS	457,346.24	27,440.77
Contingency	10%	LS	457,346.24	45,734.62
Subtotal Gravity System				\$530,521.64
Force Main				
8" DIP (Polybond)	1,212	LF	27.50	33,330.00
24" DIP (Polybond)	1,847	LF	75.00	138,525.00
8" Plug Valve	1	EA	3,500.00	3,500.00
8" Check Valve	1	EA	2,000.00	2,000.00
24" Plug Valve	1	EA	12,500.00	12,500.00
Valve Manhole	1	EA	1,250.00	1,250.00
24"/12" Tee	1	EA	1,250.00	1,250.00
24"X45° Bend	10	EA	2,000.00	20,000.00
24"X90° Bend	2	EA	2,000.00	4,000.00
Air Release Valve	2	EA	1,250.00	2,500.00
Lift Station	1	EA	225,000.00	225,000.00
Generator Building	1	EA	50,000.00	50,000.00
Surveying & As-Builts	4%	LS	493,855.00	19,754.20
Miscellaneous	1	LS	2,500.00	2,500.00
Maintenance of Traffic	1	LS	10,000.00	10,000.00
Densities	10	EA	60.00	600.00
Cleaning & Testing	3,059	LF	1.75	5,353.25
Permit	1	LS	10,000.00	10,000.00
Soft Costs (Eng and Prof. Fees)	6%	LS	542,062.45	32,523.75
Contingency	10%	LS	542,062.45	54,206.25
Subtotal Force Main				\$628,792.44
WASD Oversizing Credit for 24" Force Main	1,847	LF	33.75	(62,336.25)
WASD Oversizing Credit for 24" Plug Valve	1	LF	3,500.00	(3,500.00)
Total				\$1,093,477.83

SUMMERVILLE SUBDIVISION PAVING, GRADING & DRAINAGE PLANS

THE PROJECT



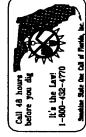
LOCATION MAP
SCALE: 1"=300'

SHEET INDEX

- PD-1 COVER SHEET
- PD-2 PAVING, GRADING & DRAINAGE PLAN
- PD-3 PAVING, GRADING & DRAINAGE PLAN
- PD-4 PAVING, GRADING & DRAINAGE PLAN
- PD-5 PAVING DETAILS PLAN
- PD-6 PAVING DETAILS PLAN
- PD-7 PAVING, GRADING & DRAINAGE PLAN
- PD-8 DRAINAGE DETAIL PLAN
- TC-1 TRAFFIC CONTROL PLAN
- TC-2 TRAFFIC CONTROL PLAN

ENGINEERING NOTES

1. ANY AMENDMENT TO THESE PLANS MUST BE MADE IN WRITING AND MUST BE APPROVED BY THE ENGINEER. ANY CHANGES SHALL BE BROUGHT TO THE OWNER PRIOR TO START OF ANY CONSTRUCTION.
2. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND LOCATIONS OF ALL UTILITIES PRIOR TO CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL UTILITIES DURING THE CONSTRUCTION OF THIS WORK. IF ANY UTILITIES ARE DAMAGED OR DISLOCATED, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING THEM AT HIS OWN COST. ANY AND ALL COSTS INCURRED DUE TO DAMAGE SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM THE APPROPRIATE AGENCIES PRIOR TO CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM THE APPROPRIATE AGENCIES PRIOR TO CONSTRUCTION.
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4. ALL DIMENSIONS IN THESE PLANS SHALL BE VERIFIED BY THE CONTRACTOR IN THE FIELD.
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12. ALL DIMENSIONS IN THESE PLANS SHALL BE VERIFIED BY THE CONTRACTOR IN THE FIELD.



CERTIFICATION

I, the undersigned, being a duly Licensed Professional Engineer in the State of Florida, do hereby certify that I am the Engineer of Record for the above described project and that I am a duly Licensed Professional Engineer in the State of Florida.

WILLIAM J. ADAMS
P.E., F.L.E.

PROJECT: SUMMERVILLE SUBDIVISION	PREPARED FOR: G.C. HOLMES INC.
DRAWING NAME: PAVING, GRADING & DRAINAGE PLAN	
DESIGNED: M.A.	
DRAWN: M.F.	
SCALE: AS SHOWN	
SHEET: PD-1	
DATE: 04-14-22	
PROJ: 2002	

AB ENGINEERS, INC.

ENGINEERING - PLANNING - SURVEYING - INSPECTION

10001 N.W. 152nd ST., SUITE 122 WALKER LAKES, FL 33016

TEL: (305) 828-8173 • FAX: (305) 828-8172

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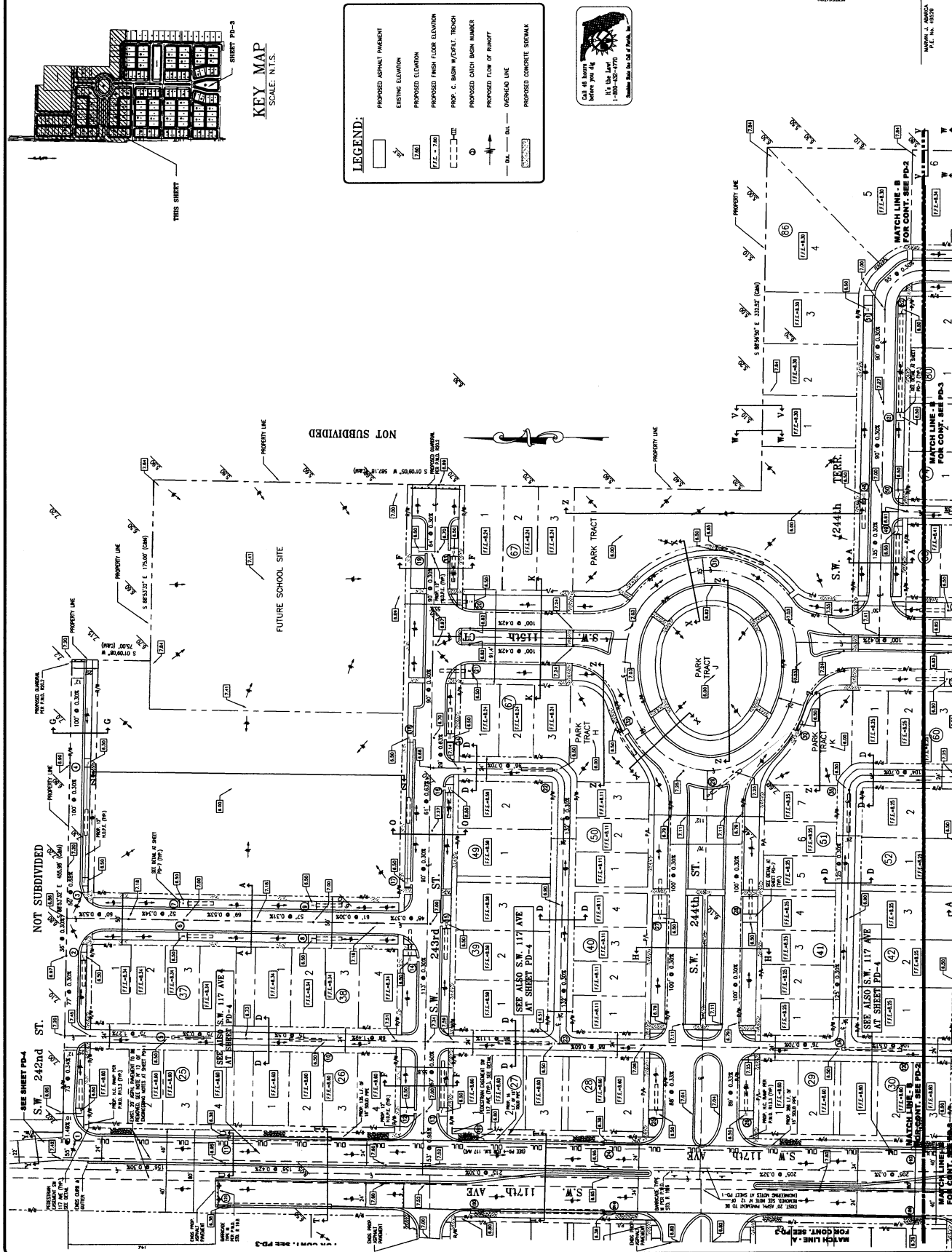
REVISIONS

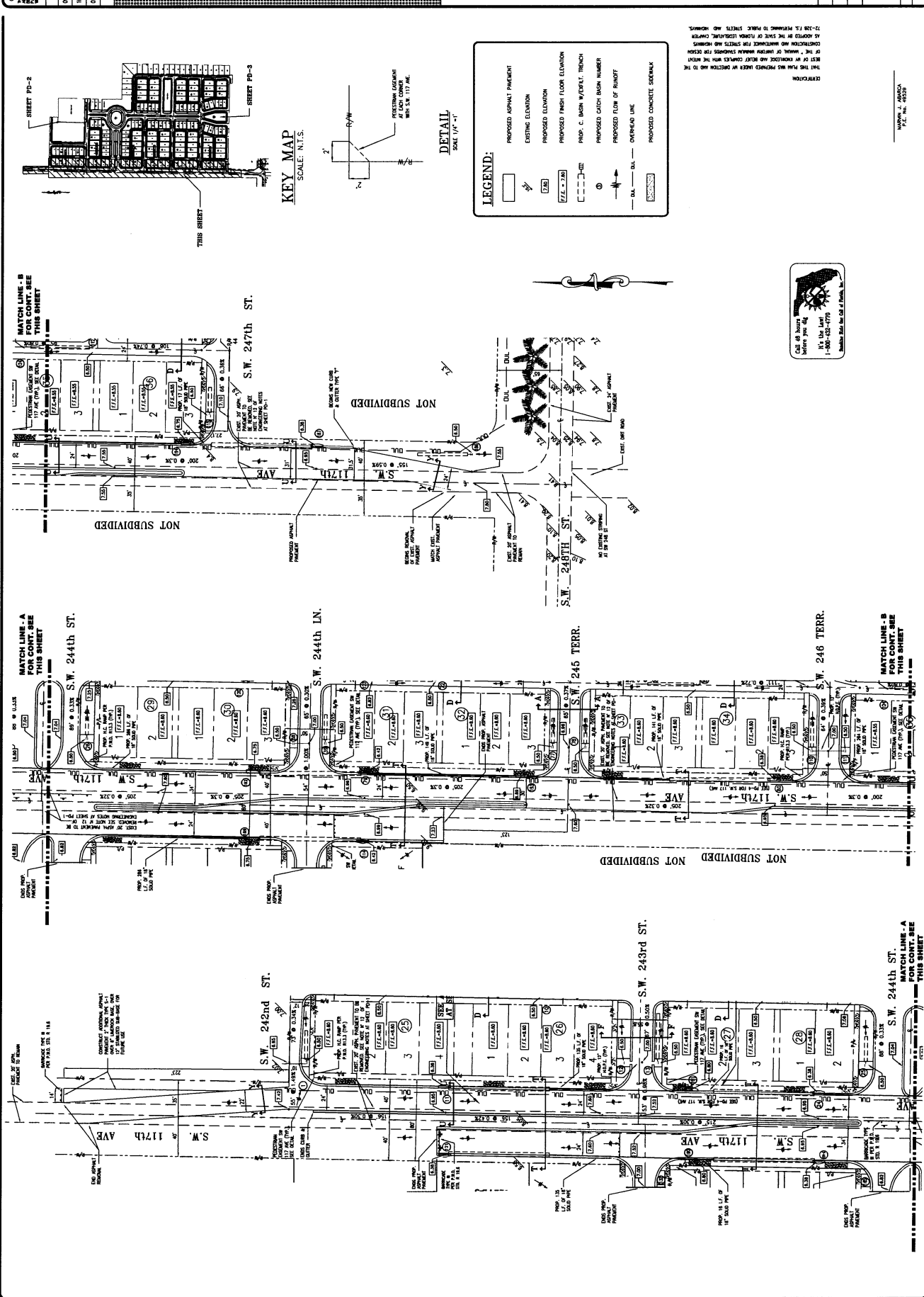
08-11-21	P.R.D. COMMENTS
10-20-21	P.R.D. COMMENTS

NOTES

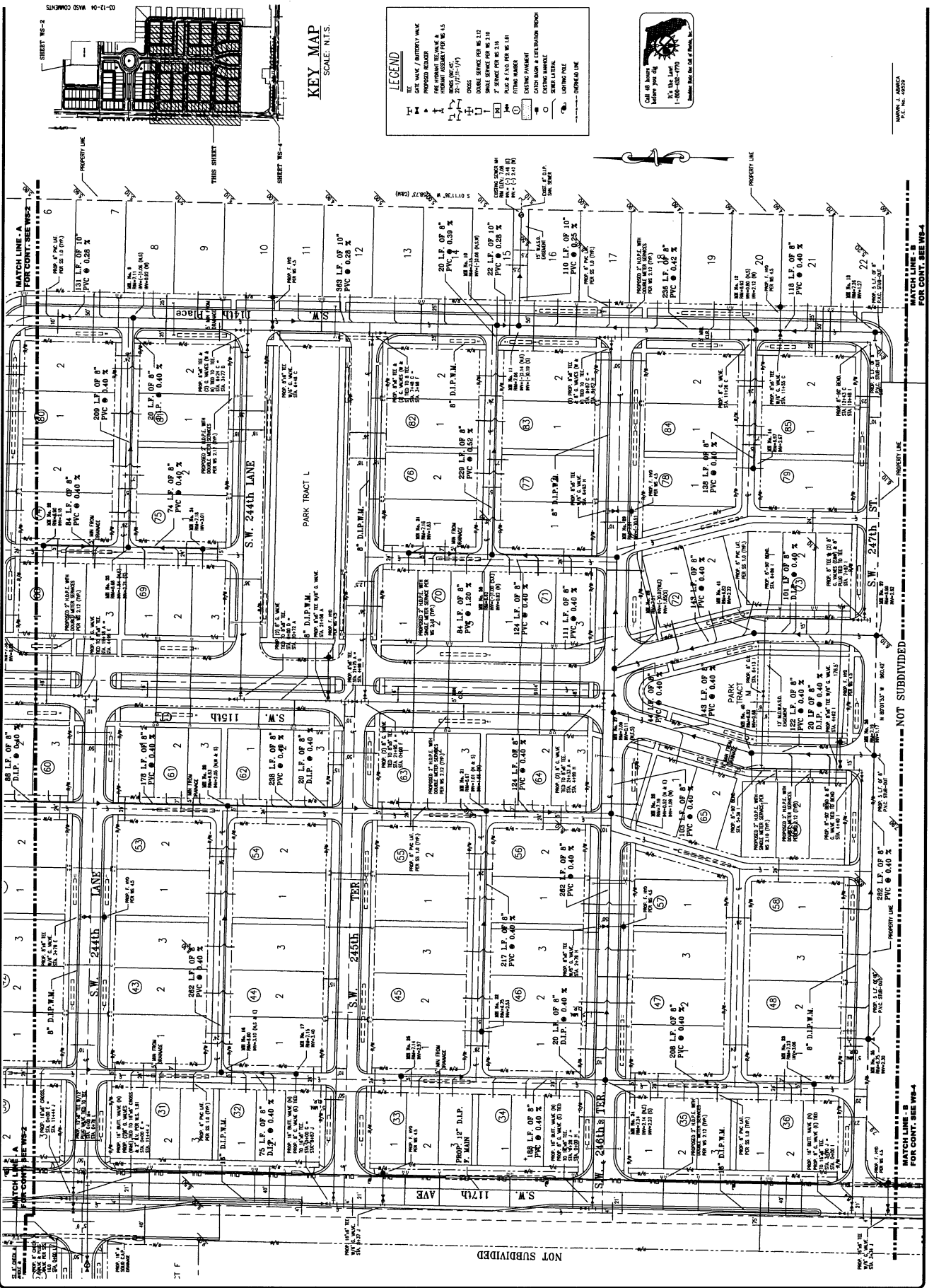
1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM THE APPROPRIATE AGENCIES PRIOR TO CONSTRUCTION.

2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM THE APPROPRIATE AGENCIES PRIOR TO CONSTRUCTION.





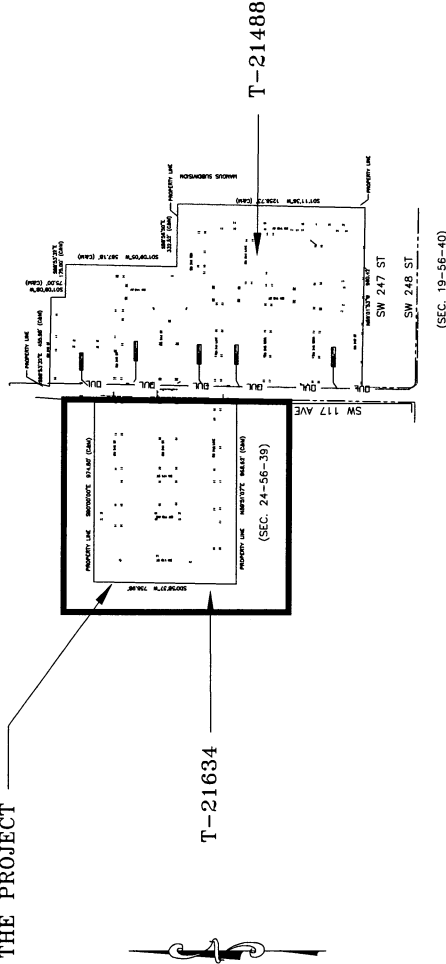






SUMMERVILLE SUBDIVISION FIRST ADDITION PAVING, GRADING & DRAINAGE PLANS

THE PROJECT



ENGINEERING NOTES:

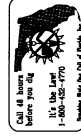
1. ANY APPARENT DISCREPANCIES BETWEEN THESE PLANS AND ACTUAL FIELD CONDITIONS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES.
3. NO MODIFICATIONS TO THIS PLAN ARE ALLOWED WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.
4. IT IS THE INTENT OF THESE PLANS TO BE IN ACCORDANCE WITH APPLICABLE CODES AND STANDARDS.
5. ALL DRAINAGE SURFACES SHALL BE CONSTRUCTED ON A DEPT. (8) HOLES ROCK BASE.
6. ALL DRAINAGE SURFACES SHALL BE CONSTRUCTED ON A DEPT. (8) HOLES ROCK BASE.
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8. ALL DRAINAGE SURFACES SHALL BE CONSTRUCTED ON A DEPT. (8) HOLES ROCK BASE.
9. ALL DRAINAGE SURFACES SHALL BE CONSTRUCTED ON A DEPT. (8) HOLES ROCK BASE.
10. FLOOD CREST ELEVATION: 5.50 (SOURCE: O.C.P.M.D.) FLOOD CREST MAPS.
11. WATER TABLE PER M.C. 2.2 IS 3.50 M.S.D.

LOCATION MAP

SCALE: 1" = 300'

SHEET INDEX

- PD-1 COVER SHEET
- PD-2 PAVING, GRADING & DRAINAGE PLAN
- PD-3 PAVING DETAILS PLAN
- PD-4 PAVING, GRADING & DRAINAGE PLAN
- PD-5 PAVING & DRAINAGE DETAIL PLAN
- TC-1 TRAFFIC CONTROL PLAN



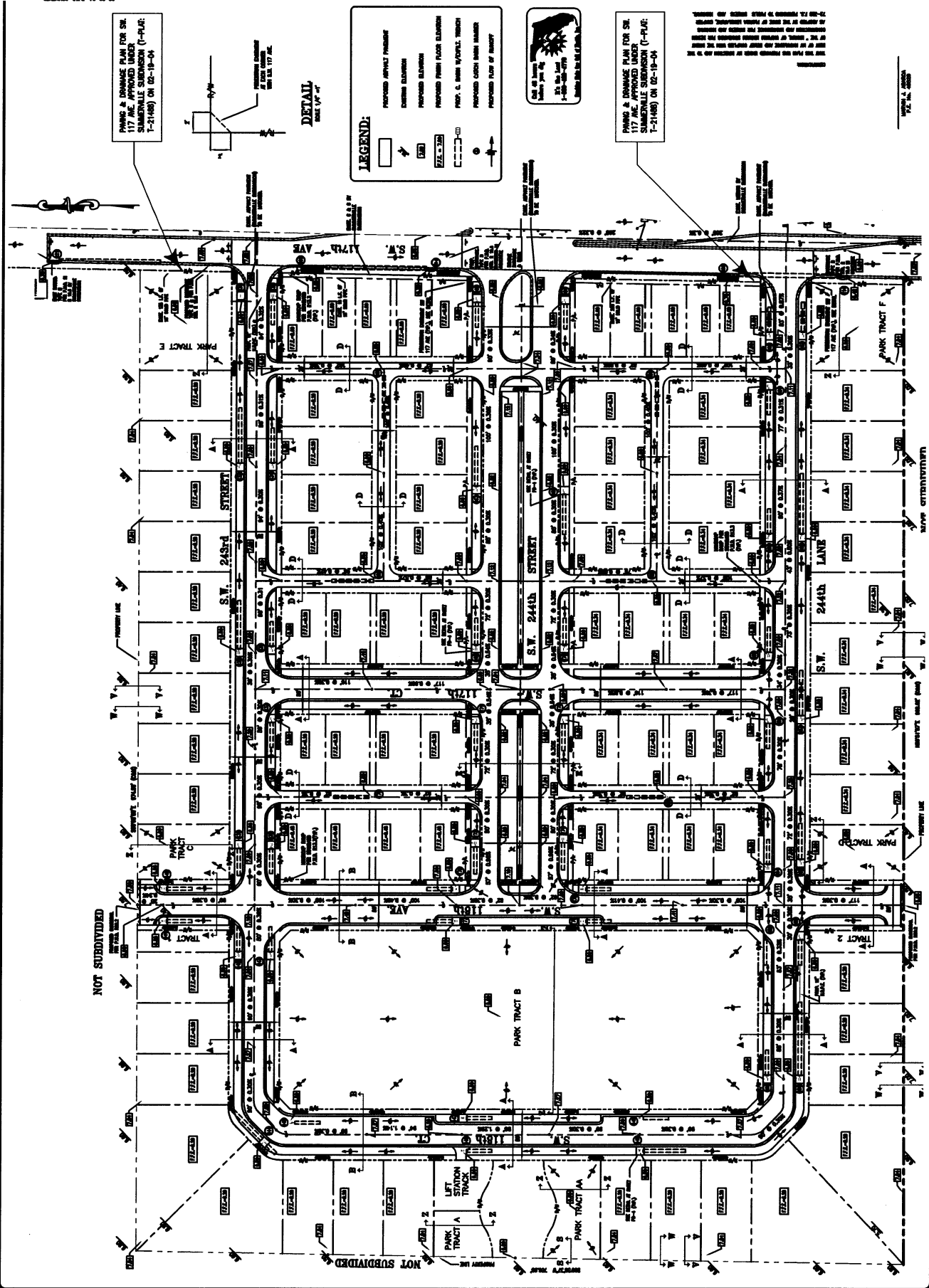
CONSTRUCTION: THE PLAN WAS PREPARED UNDER AN ORDER AND TO THE BEST OF THE ENGINEER'S KNOWLEDGE AND BELIEF, THE PLAN COMPLETES THE DESIGN OF THE PROJECT AND MEETS THE REQUIREMENTS OF THE CITY OF SUMMERVILLE AND THE STATE OF SOUTH CAROLINA. THE ENGINEER DOES NOT GUARANTEE THE ACCURACY OF THE INFORMATION PROVIDED BY THE CLIENT OR THE RESULTS OF THE DESIGN. THE ENGINEER'S LIABILITY IS LIMITED TO THE DESIGN OF THE PROJECT AND THE PREPARATION OF THE PLANS.

PAVING, GRADING & DRAINAGE PLAN
SUMMERVILLE SUBDIVISION FIRST ADDITION
G.C. HOMES INC.

AB ENGINEERS, INC.
ENGINEERING • PLANNING • SURVEYING
1001 NW 130th St. - Suite 122 Miami Lakes, FL 33014
Phone: (305) 828-6172 Fax: (305) 828-6173
E-Mail: design@abengineers.com

REVISIONS:
07-14-03 P.B. COMMENTS
12-05-03 SEE PLAN
01-26-04 P.B. COMMENTS

DESIGNED: M.A.
DRAWN: M.F.
SCALE: AS SHOWN
SHEET: PD-1
DATE: 04-14-03
PROJECT: 2003-



SUMMERVILLE SUBDIVISION PHASE TWO WATER AND SEWER PLANS

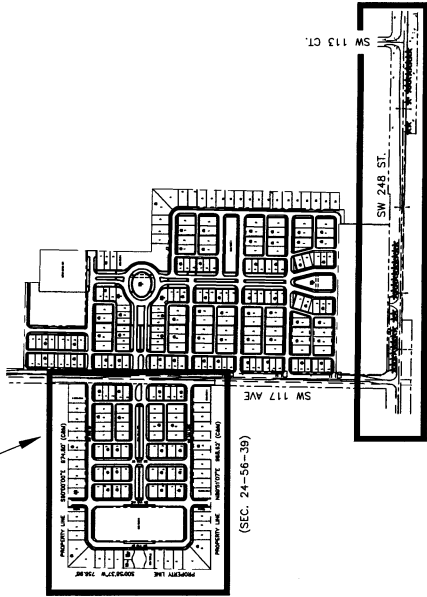
ENGINEER'S NOTE

- 1) These plans have been prepared with the best information available to the Engineer. The Engineer is not responsible for the accuracy of the information furnished by the owner or the contractor.
- 2) Power & Light Co., 48 hours prior to start of excavation and / or construction. The Engineer is not responsible for the accuracy of the information furnished by the owner or the contractor.
- 3) The Engineer is not responsible for the accuracy of the information furnished by the owner or the contractor.
- 4) All dimensions refer to the National Geodetic Vertical Datum.
- 5) All existing structures and utilities shall be protected at all times during construction. The contractor shall be responsible for the protection of all existing structures and utilities.
- 6) All existing structures and utilities shall be protected at all times during construction. The contractor shall be responsible for the protection of all existing structures and utilities.
- 7) The contractor shall be responsible for the protection of all existing structures and utilities.
- 8) The contractor shall be responsible for the protection of all existing structures and utilities.
- 9) The contractor shall be responsible for the protection of all existing structures and utilities.
- 10) The contractor shall be responsible for the protection of all existing structures and utilities.

DERM. NOTES

1. A horizontal distance of 10 feet shall be maintained between water and sewer mains.
2. A vertical distance of 10 feet shall be maintained between water and sewer mains.
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9. A horizontal distance of 10 feet shall be maintained between water and sewer mains.
10. A vertical distance of 10 feet shall be maintained between water and sewer mains.

THE PROJECT



THE PROJECT

LOCATION MAP

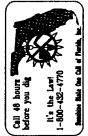
SCALE: 1" = 300'

SHEET INDEX

- WS-1 COVER SHEET
- WS-2 WATER AND SEWER PLAN
- WS-3 WATER PROFILES
- WS-4 SEWER PROFILES
- WS-5 SEWER PROFILES
- FM-1 FORCE MAIN PLAN
- FM-2 FORCE MAIN PROFILE

LEGEND

- 1. DATE: 11/11/11
- 2. PREPARED BY: J. L. HARRIS
- 3. CHECKED BY: J. L. HARRIS
- 4. DESIGNED BY: J. L. HARRIS
- 5. SCALE: 1" = 300'
- 6. SHEET: 1 OF 1
- 7. PROJECT: SUMMERVILLE SUBDIVISION PHASE TWO
- 8. DRAWING: COVER SHEET
- 9. DATE: 11/11/11
- 10. PREPARED BY: J. L. HARRIS
- 11. CHECKED BY: J. L. HARRIS
- 12. DESIGNED BY: J. L. HARRIS
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- 97. DATE: 11/11/11
- 98. PREPARED BY: J. L. HARRIS
- 99. CHECKED BY: J. L. HARRIS
- 100. DESIGNED BY: J. L. HARRIS



STANDARD REQUIREMENTS WATER AND SEWER CONSTRUCTION (CS 0.5)

- 1) All materials and labor used in the project shall be in accordance with the requirements of the Miami-Dade Water and Sewer Department and shall conform to the standards and specifications available and on file with the Department.
- 2) Cover over water and sewer lines shall be 4'-0" minimum.
- 3) All main line valves shall be installed complete with 10" steel pipes and flanges, 3" or 53 valve boxes. The hydrants and service valves shall be 10" steel pipes and flanges, 3" or 53 valve boxes.
- 4) All force main valves shall be installed complete with 10" steel pipes and flanges, 3" or 53 valve boxes.
- 5) All gravity systems shall be constructed in accordance with Department standards.
- 6) All water mains shall be installed by the Miami-Dade Water and Sewer Department.
- 7) The hydrants (number and location) shall be as required by the Department.
- 8) Contractor MUST CALL 48-HOURS prior to the proposed start of construction.
- 9) Department personnel will inspect all facilities approved by the Department.
- 10) Work performed under this project shall not be considered as complete until final acceptance of the system by the Department and until the following conditions are met:
- 11) Contractor's Letter of Warranty (i.e. Letter Agreement)
- 12) Contractor's Letter of Release of Lien
- 13) Contractor's Letter of Release of Lien
- 14) Contractor's Letter of Release of Lien
- 15) Contractor's Letter of Release of Lien
- 16) Contractor's Letter of Release of Lien
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- 18) Contractor's Letter of Release of Lien
- 19) Contractor's Letter of Release of Lien
- 20) Contractor's Letter of Release of Lien

"AS-BUILT" REQUIREMENTS (CS 0.5)

- 1) At the completion of any water and sewer job, the Contractor shall submit:
- a) "As-Built" map 24"x36" (min. 4 mil thickness) for each phase.
- b) "As-Built" map 24"x36" (min. 4 mil thickness) for each phase.
- c) "As-Built" map 24"x36" (min. 4 mil thickness) for each phase.
- d) "As-Built" map 24"x36" (min. 4 mil thickness) for each phase.
- e) "As-Built" map 24"x36" (min. 4 mil thickness) for each phase.
- f) "As-Built" map 24"x36" (min. 4 mil thickness) for each phase.
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- 10) "As-Built" map 24"x36" (min. 4 mil thickness) for each phase.

ALL RAVENHURST RESTORATION SHALL BE IN ACCORDANCE WITH MIAMI-DADE COUNTY STANDARD DETAIL R 211

AB ENGINEERS, INC.

1000 S.W. 12TH AVE., SUITE 100
MIAMI, FL 33135
PHONE: (305) 833-8173 • FAX: (305) 833-8174
WWW.ABENGINEERS.COM

REVISIONS

10-29-13 MOD COMMENTS

12-04-13 LAYOUT

03-12-14 MOD COMMENTS

PROJECT: SUMMERVILLE SUBDIVISION PHASE TWO

DESIGNED: M.A.

DRAWN: M.A.

SHEET: 1 OF 1

DATE: 04-16-13

SHEET: 1 OF 1

G.C. HOMES INC.

1000 S.W. 12TH AVE., SUITE 100
MIAMI, FL 33135
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