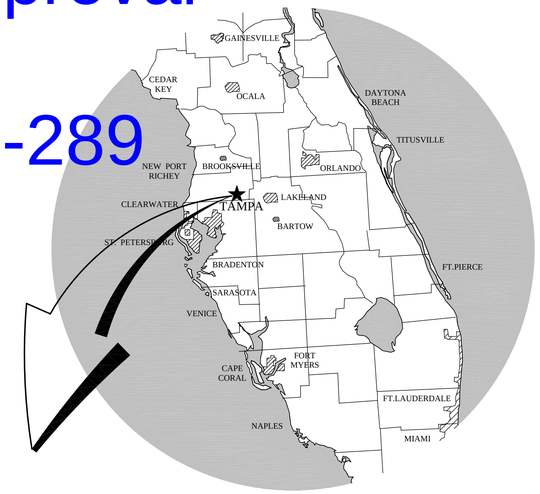
Final Approval

PDD15-289
Memo
1/8/15



LEGACY HILLS
(FKA FELICIANO)

5806-B Breckenridge Parkway
Tampa, Florida 33610
Office: 813-253-5311
Fax: 813-464-7629

www.HeidtDesign.com

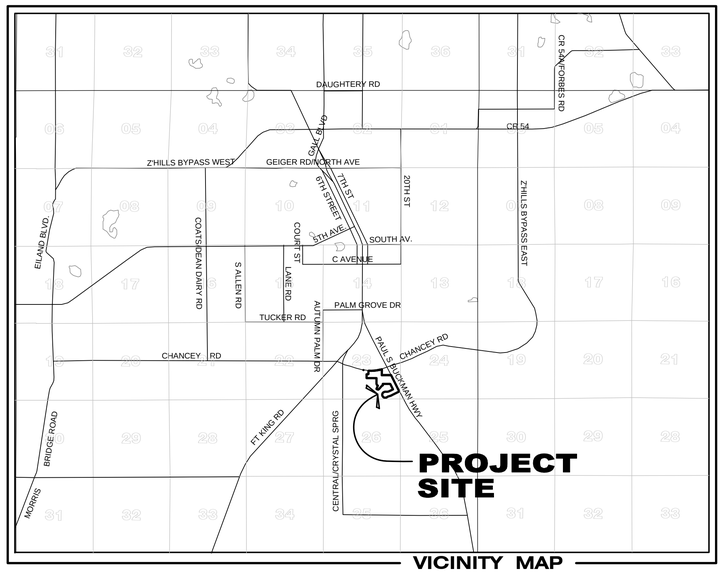
HEIDT DESIGN
Civil Engineering • Planning & GIS
Transportation Engineering
Ecological Services • Landscape Architecture

Engineering Business Certificate of Authorization No. 28782
Landscape Architecture Certificate of Authorization No. LC26000405

PRELIMINARY SITE PLAN, CONSTRUCTION PLANS, AND STORMWATER MANAGEMENT PLAN FOR: LEGACY HILLS (a.k.a. FELICIANO)

Prepared For:

LEGACY GREEN LLC
2 Post Road West
Westport, CT 06880
Telephone: (312) 932-1508



VICINITY MAP
PASCO COUNTY, FLORIDA
SECTION 23, TOWNSHIP 26 SOUTH, RANGE 21 EAST

CALL 48 HOURS BEFORE YOU DIG

Sunshine State One Call 811 OF FLORIDA, INC.

1-800-432-4770

DRAINAGE NOTE:
THE DRAINAGE DESIGN FOR THIS PROJECT INCORPORATES THE "EXISTING" CONDITIONS OF THE ABUTTING PROPERTY.

NOTE:
THE PLAN HAS BEEN CERTIFIED BY THE DESIGN ENGINEER TO BE IN SUBSTANTIAL CONFORMANCE WITH THE UNIFORM MINIMUM STANDARDS FOR DESIGN, CONSTRUCTION AND MAINTENANCE OF STREETS AND HIGHWAYS AS REQUIRED BY SECTION 336.045, FLORIDA STATUTES.

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2	GENERAL NOTES
3	GENERAL NOTES
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5	DIMENSIONAL LAYOUT
6	ROADWAY SECTIONS - PAVEMENT DETAILS
6A	ROADWAY SECTIONS - PAVEMENT DETAILS
7	MASTER DRAINAGE PLAN
8	GRADING & DRAINAGE PLAN
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1 OF 3	PERMIT LANDSCAPE PLAN, TREE REMOVAL & REPLACEMENT PLAN
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3 OF 3	PERMIT LANDSCAPE PLAN, TREE REMOVAL & REPLACEMENT PLAN
T3, T4	S.R.39 ROADWAY PLAN AND PROFILE
T5, T6	S.R.39 PAVEMENT MARKING PLAN

LEGACY HILLS
(FKA FELICIANO)

LEGACY GREEN LLC

DATE	SHEET NO.	BY
12-30-14	ROUND 2 COUNTY REVIEW COMMENTS	ENF
09-22-14	COUNTY COMMENTS	ENF
07-11-14	SUBMITTED FOR SUBSTANTIAL PLAN MOD. REVIEW BY COUNTY	JD
05-07-2014	**7, 8, 9, 13, 14, 16, 17, 42, 43**	ENF
01-08-2014	**REVISED FOR COUNTY RESUBMITTAL**	JD
12-24-2013	**PER COUNTY COMMENTS**	JD
09-16-2013	**ISSUED FOR PLAN MOD REVIEW BY COUNTY**	JD
07-03-2007	**17-27**	JPA
05-23-2007	**26-27**	JPA
05-18-2007	**1,7-16,29,MIT-01,CSWMP,FPM,EXH-SWF,DRA,PP-01**	ESD
03-28-2007	**2,4-14,17-24,28-32,FMP,EXH-SWF,DRA,PP-01,CSWMP**	JR
03-07-2007	17	BS
01-18-2007	4, 5, 7-14, 17-25, 28, 29, 30, FPM, DRA, CSWMP, PP-01	JR
12-21-2006	ALL SHEETS	JR
12-06-2006	ALL SHEETS	JR

REVISIONS

R:\LEGACY DEVELOPMENT PROJECTS\LEGACY HILLS 2012\WORKING FILES\CURRENT DRAWINGS\CP\COVER.DWG -1 2014/12/30 9:36 AM ERIC FRANCIS

HEIDT DESIGN
Civil Engineering • Planning & GIS
Transportation Engineering
Ecological Services • Landscape Architecture

ELEVATIONS BASED ON:
NATIONAL GEODETIC VERTICAL DATUM 1929
CONVERSION: NGVD 29 TO NAVD 88 = -0.85

ADDRESS CONTROL NUMBER	
WATER COMMITMENT	
SEWER COMMITMENT	
SWFWMD	
WATER DEP	
SEWER DEP	
FOLIO	

PERMIT / FILE NUMBERS

FLORIDA PROFESSIONAL ENGINEER

GARY D. MILLER
DATE:
REGISTRATION NO. 52717

FILE:	COVER
PROJECT NO:	MAR-RD-1001
GRADING & DRAINAGE	
DESIGN BY:	DUNNING
DRAWN BY:	DUNNING
UTILITIES	
DESIGN BY:	WS DESIGN
DRAWN BY:	WS DRAWN

COVER SHEET

1

STORM WATER POLLUTION PREVENTION PLAN

CONTAINED ON THESE PLANS AND WITHIN THE FOLLOWING NOTES IS A STORM WATER POLLUTION PREVENTION PLAN (SWPPP) WHICH HAS BEEN DEVELOPED BY HEIDT DESIGN, LLC IN ACCORDANCE WITH THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION'S (FDEP) "NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM" (NPDES) GENERIC PERMIT FOR STORMWATER DISCHARGE FROM LARGE AND SMALL CONSTRUCTION ACTIVITIES.

THE FOLLOWING ENTITIES ARE IDENTIFIED AS TEAM MEMBERS OF "SWPPP": HEIDT DESIGN, LLC, THE DEVELOPER AS IDENTIFIED IN THE TITLE BOX OF THESE PLANS, AND THE SITE CONTRACTOR AND HIS SUB-CONTRACTORS. EACH TEAM MEMBER HAS SPECIFIC RESPONSIBILITIES AND OBLIGATIONS. IN GENERAL, ALL TEAM MEMBERS, WITH REGARD TO THEIR INVOLVEMENT AND RESPONSIBILITIES ON THE PROJECT, ARE TO IMPLEMENT ALL NECESSARY STORM WATER MANAGEMENT CONTROLS TO ASSURE COMPLIANCE WITH THE NPDES GENERIC PERMIT FOR STORM WATER DISCHARGES FROM CONSTRUCTION ACTIVITIES, THE SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT PERMIT, THE APPLICABLE LOCAL GOVERNING AGENCY (I.E. HILLSBOROUGH COUNTY, CITY OF TAMPA, ETC) AND THE GUIDELINES LISTED IN THE SWPPP. THE DUTIES AND RESPONSIBILITIES OF THE TEAM MEMBERS AS THEY PERTAIN TO THE SWPPP ARE AS FOLLOWS:

HEIDT DESIGN, LLC:

A. DEVELOP SWPPP INCLUDING, BUT NOT LIMITED TO, RETENTION/DETENTION PONDS, CONTROL STRUCTURES, EROSION CONTROL METHODS AND LOCATIONS AND STABILIZATION CRITERIA. THIS DESIGN IS INCLUDED WITHIN THESE CONSTRUCTION PLANS AND THE FOLLOWING NOTES AND INSTRUCTIONS.

B. SUBMIT AND OBTAIN THE NECESSARY DESIGN RELATED STORM WATER PERMITS FROM THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION, THE SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT AND OTHER APPLICABLE GOVERNMENTAL BODIES.

C. UPON NOTIFICATION BY THE DEVELOPER OF HIS INTENT TO COMMENCE CONSTRUCTION, SUBMIT A NOTICE OF INTENT TO THE FDEP ON BEHALF OF THE DEVELOPER AND COPY THE CONTRACTOR INCLUDING SWPPP CERTIFICATION AND COPY OF THE PERMIT.

D. SUBMIT TO SWFWMD AND THE OPERATOR OF THE MUNICIPAL SEPARATE STORM WATER SYSTEM, IF APPLICABLE, A LETTER OF CONSTRUCTION COMMENCEMENT.

E. COMPLETE AND SUBMIT A NOTICE OF TERMINATION AND CERTIFICATION FOR DEVELOPER.
THE NOT'S SHALL BE SUBMITTED NO MORE THAN 30 DAYS AFTER;

(a) COMPLETION OF THE PROJECT AND FINAL STABILIZATION OF THE SITE OR

(b) WHEN RESPONSIBILITY FOR THE SITE HAS ENDED. FINAL STABILIZATION AS DEFINED BY EPA IS WHEN ALL SOIL DISTURBING ACTIVITIES AT THE SITE HAVE BEEN COMPLETED AND A UNIFORM (E.G. EVENLY DISTRIBUTED, WITHOUT LARGE BARE AREAS) PERENNIAL VEGETATIVE COVER WITH A DENSITY OF 70% OF THE NATIVE BACKGROUND VEGETATIVE COVER FOR THE AREA HAS BEEN ESTABLISHED ON ALL UNPAVED AREAS AND AREAS NOT COVERED BY PERMANENT STRUCTURES. AS AN ALTERNATIVE, EQUIVALENT PERMANENT STABILIZATION MEASURES (SUCH AS RIPRAP, GABIONS, OR GEOTEXTILES) MAY BE EMPLOYED. THE CLIENT SHALL NOTIFY HEIDT DESIGN, LLC WHEN ONE OF THESE CRITERIA HAS BEEN MET.

CONTRACTOR:

A. SIGN AND RETURN TO HEIDT DESIGN, LLC A CONTRACTORS CERTIFICATION FORM CERTIFYING YOUR UNDERSTANDING OF AND WILLINGNESS TO COMPLY WITH THE STORM WATER POLLUTION PREVENTION PLAN NO LATER THAN 48 HOURS PRIOR TO COMMENCEMENT OF CONSTRUCTION. ALSO, EACH SUBCONTRACTOR AFFECTED BY THE SWPPP MUST CERTIFY TO THE CONTRACTOR THAT THEY UNDERSTAND AND SHALL COMPLY WITH THE NPDES PERMIT AND SWPPP. A RECORD OF THESE CERTIFICATIONS SHALL BE MAINTAINED BY THE CONTRACTOR ON SITE.

B. DURING CONSTRUCTION, ASSURE COMPLIANCE WITH THE DESIGNED STORM WATER POLLUTION PREVENTION PLANS PREPARED BY HEIDT DESIGN, LLC AND THE NPDES GENERIC PERMIT FOR STORM WATER DISCHARGES FROM LARGE AND SMALL CONSTRUCTION ACTIVITIES.

C. MAINTAIN A COPY OF THE CONSTRUCTION PLANS, WHICH INCLUDE THE STORM WATER POLLUTION PREVENTION PLAN, THE NOI, AND ALL INSPECTION REPORTS AND CERTIFICATIONS ON SITE.

D. UNDERTAKE ALL REASONABLE BEST MANAGEMENT PRACTICES (BMP'S) TO ASSURE THAT SILTED OR OTHERWISE POLLUTED STORM WATER IS NOT ALLOWED TO DISCHARGE FROM THE SITE DURING ALL PHASES OF CONSTRUCTION. STABILIZATION BMP'S THAT MAY BE USED INCLUDE:

TEMPORARY OR PERMANENT SEEDING, MULCHING, GEOTEXTILES, SODDING, VEGETATIVE BUFFER STRIPS, PROTECTION OF TREES AND PRESERVATION OF MATURE VEGETATION. STRUCTURAL EROSION AND SEDIMENT CONTROL BMP'S THAT MAY BE USED INCLUDE: STRAW BALE DIKES, SILT FENCES, EARTH DIKES, BRUSH BARRIERS, DRAINAGE SWALES, CHECK DAMS, SUBSURFACE DRAIN, PIPE SLOPE DRAIN, LEVEL SPREADERS, STORM DRAIN INLET PROTECTION, OUTLET PROTECTION, SEDIMENT TRAPS, AND TEMPORARY SEDIMENT BASINS. DETENTION PONDS MAY ALSO BE USED AS TEMPORARY SEDIMENT BASINS. ADDITIONAL BMP'S THAT MAY NEED TO BE IMPLEMENTED INCLUDE: PROVIDING PROTECTED STORAGE AREAS FOR CHEMICALS, PAINTS, SOLVENTS, FERTILIZERS, AND OTHER POTENTIALLY TOXIC MATERIALS. PROVIDING WASTE RECEPTACLES AT CONVENIENT LOCATIONS AND PROVIDING REGULAR COLLECTION OF WASTES, INCLUDING BUILDING MATERIAL WASTES. MINIMIZE OFF-SITE TRACKING OF SEDIMENTS. MAKING ADEQUATE PREPARATIONS, INCLUDING TRAINING AND EQUIPMENT TO CONTAIN SPILLS OF OIL AND HAZARDOUS MATERIALS. COMPLYING WITH APPLICABLE STATE OR LOCAL WASTE DISPOSAL, SANITARY SEWER OR SEPTIC SYSTEM REGULATIONS AND THE USE OF APPROPRIATE POLLUTION PREVENTION MEASURES FOR ALLOWABLE NON-STORM WATER COMPONENTS OF DISCHARGE.

E. NOTIFY HEIDT DESIGN, LLC AND THE DEVELOPER IN WRITING OF ANY NON-STORM WATER POLLUTION SOURCES WHICH ARE BEING STORED, OR OTHERWISE USED DURING THE CONSTRUCTION OF THE PROJECT, I.E., FERTILIZERS, FUELS, PESTICIDES, OTHER CHEMICALS. THIS NOTIFICATION SHOULD BE ACCOMPANIED WITH THE CONTRACTOR'S DESIGN AND METHODS TO PREVENT POLLUTION RUN-OFF FROM THESE SOURCES.

F. DEVELOP A MAINTENANCE AND INSPECTION PLAN WHICH INCLUDES, BUT IS NOT LIMITED TO THE FOLLOWING:

A. THE SPECIFIC AREAS TO BE INSPECTED AND MAINTAINED THAT INCLUDES ALL THE DISTURBED AREAS AND MATERIAL STORAGE AREAS OF THE SITE.

B. THE EROSION AND SEDIMENT CONTROLS IDENTIFIED IN THE SWPPP TO BE MAINTAINED AND INSPECTED AND THOSE ADDITIONAL CONTROLS THAT THE CONTRACTOR DEEMS NECESSARY.

C. MAINTENANCE PROCEDURES.

D. THE PROCEDURE TO FOLLOW IF ADDITIONAL WORK IS REQUIRED OR WHOM TO CALL.

E. INSPECTIONS AND MAINTENANCE FORMS.

F. THE PERSONNEL ASSIGNED TO EACH TASK.

THE FOLLOWING SHALL BE INSPECTED A MINIMUM OF ONCE A WEEK OR WITHIN 24 HOURS AFTER 0.50 INCHES OF RAINFALL:

STABILIZATION MEASURES (ONCE A MONTH IF FULLY STABILIZED).

STRUCTURAL CONTROLS.

DISCHARGE POINTS.

CONSTRUCTION ENTRANCES AND EXITS.

AREAS USED FOR STORAGE OF EXPOSED MATERIALS.

AN INSPECTION FORM SHALL BE COMPLETED FOR EACH INSPECTION. ANY PERMIT VIOLATIONS SHOULD BE NOTED AND CORRECTIVE MEASURES SHALL BE TAKEN NO LATER THAN 7 DAYS AFTER THE INSPECTION OCCURRED. IF REVISIONS TO THE SWPPP ARE NEEDED, A REPORT FORM FOR CHANGES IN THE SWPPP SHALL BE COMPLETED AND A COPY SENT TO HEIDT DESIGN, LLC THE ORIGINAL SHALL BE KEPT ON-SITE AS DOCUMENTATION OF THE CHANGE. IF THE INSPECTION PASSES, A CERTIFICATION THAT THE FACILITY IS IN COMPLIANCE WITH THE SWPPP AND THE NPDES PERMIT MUST BE SIGNED BY A DULY AUTHORIZED REPRESENTATIVE OF THE PRINCIPAL EXECUTIVE OFFICIAL OF THE OPERATOR OF THE SWPPP WITH ONE OF THE FOLLOWING QUALIFICATIONS:

1. HAS SUCCESSFULLY COMPLETED THE FLORIDA STORMWATER, EROSION AND SEDIMENT CONTROL INSPECTOR TRAINING PROGRAM.

2. SUCCESSFULLY COMPLETED A SIMILAR TRAINING PROGRAM.

3. HAS ENOUGH PRACTICAL ON THE JOB TRAINING TO BE QUALIFIED TO PERFORM THE INSPECTIONS.

RETAIN INSPECTION REPORTS AND CERTIFICATIONS FOR AT LEAST THREE YEARS.

G. SITE STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICAL BUT IN NO CASE MORE THAN 7 DAYS, IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED.

H. RELEASES IN EXCESS OF REPORTABLE QUANTITIES.

1. THE DISCHARGE OF HAZARDOUS SUBSTANCES OR OIL IN THE STORMWATER DISCHARGE(S) FROM A FACILITY OR ACTIVITY SHALL BE PREVENTED OR MINIMIZED IN ACCORDANCE WITH THE APPLICABLE STORMWATER POLLUTION PREVENTION PLAN FOR THE FACILITY OR ACTIVITY. THIS PERMIT DOES NOT RELIEVE THE OPERATOR OF THE REPORTING REQUIREMENTS OF 40 CFR PART 117 AND 40 CFR PART 302. WHERE A RELEASE CONTAINING A HAZARDOUS SUBSTANCE IN AN AMOUNT EQUAL TO OR IN EXCESS OF A REPORTING QUANTITY ESTABLISHED UNDER EITHER 40 CFR 117 OR 40 CFR 302, OCCURS DURING A 24 HOUR PERIOD:

A. THE OPERATOR IS REQUIRED TO NOTIFY THE STATE WARNING POINT (800-210-0519 OR 850-413-9911) AS SOON AS HE OR SHE HAS KNOWLEDGE OF THE DISCHARGE;

B. THE OPERATOR SHALL SUBMIT WITHIN 14 CALENDAR DAYS OF KNOWLEDGE OF THE RELEASE A WRITTEN DESCRIPTION OF: THE RELEASE (INCLUDING THE TYPE AND ESTIMATE OF THE AMOUNT OF MATERIAL RELEASED), THE DATE THAT SUCH RELEASE OCCURRED, THE CIRCUMSTANCES LEADING TO THE RELEASE, AND REMEDIAL STEPS TO BE TAKEN, TO THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION, NPDES STORMWATER SECTION, MAIL STATION 2500, 2600 BLAIR STONE ROAD, TALLAHASSEE, FLORIDA 32399-2400; AND

C. THE STORMWATER POLLUTION PREVENTION PLAN REQUIRED UNDER PART V OF THIS PERMIT MUST BE MODIFIED WITHIN 14 CALENDAR DAYS OF KNOWLEDGE OF THE RELEASE TO: PROVIDE A DESCRIPTION OF THE RELEASE, THE CIRCUMSTANCES LEADING TO THE RELEASE, AND THE DATE OF THE RELEASE. IN ADDITION, THE PLAN MUST BE REVIEWED TO IDENTIFY MEASURES TO PREVENT THE REOCCURRENCE OF SUCH RELEASES AND TO RESPOND TO SUCH RELEASES, AND THE PLAN MUST BE MODIFIED WHERE APPROPRIATE.

2. THIS PERMIT DOES NOT AUTHORIZE THE DISCHARGE OF HAZARDOUS SUBSTANCES OR OIL RESULTING FROM AN ON-SITE SPILL.

DEVELOPER:

A. NOTIFY HEIDT DESIGN, LLC OF YOUR INTENT TO COMMENCE CONSTRUCTION. SIGN THE NOTICE OF INTENT FORM AS OPERATOR OF THE STORM WATER DISCHARGE FACILITY AND PERMITTEE AND RETURN TO HEIDT DESIGN, LLC.

B. SIGN A CERTIFICATION OF STORM WATER POLLUTION PREVENTION PLAN AND RETURN TO HEIDT DESIGN, LLC.

C. NOTIFY HEIDT DESIGN, LLC WHEN IT IS TIME TO SUBMIT A NOTICE OF TERMINATION AS DEFINED UNDER PART E OF THE HEIDT DESIGN, LLC SECTION OF THE SWPPP. SIGN AND RETURN TO HEIDT DESIGN, LLC FOR SUBMITTAL TO FDEP A NOTICE OF TERMINATION FORM AND CERTIFICATION.

PRE-DEVELOPED SITE INFORMATION:

1. TOTAL SITE ACREAGE: 40.31 ACRES plus
21.675 OFF SITE DRAINAGE EASEMENTS

2. LAND USE: VACANT PASTURE

3. VEGETATION: BAHIA PASTURE, CTPRESS SWAMPS, GRASSY MARSHES
4. RECEIVING WATERS OR MUNICIPAL SEPARATE STORM WATER SYSTEM: HILLSBOROUGH RIVER

5. 2 YEAR/24 HOUR RAINFALL DEPTH: 4.5 INCHES

6. SOIL TYPES: EAUGALLIE FINE SANDS AND LOCHLOOSA FINE SANDS WITHIN UPLAND AREAS; TAVARES, CANDLER & NOBLETON WITHIN WETLAND AND TRANSITIONAL AREAS.

PROJECT INFORMATION:

1. PROJECT TYPE: RESIDENTIAL

2. ANTICIPATED CONSTRUCTION SEQUENCE IS AS FOLLOWS:

1. COMPLETE EROSION CONTROL INSTALLATION
2. CLEARING AND GRUBBING
3. EARTHWORK ACTIVITIES
4. STORM WATER SYSTEM CONSTRUCTION
5. UTILITY CONSTRUCTION
6. BASE AND PAVEMENT CONSTRUCTION
7. FINAL STABILIZATION

THE BMP'S LISTED IN PART D OF THE CONTRACTOR SECTION OF THE SWPPP SHALL BE CONSIDERED DURING ALL PHASES OF CONSTRUCTION.

3. ANTICIPATED START DATE: OCTOBER 2014

4. ANTICIPATED COMPLETION DATE: OCTOBER 2015

5. TOTAL ACRES DISTURBED: 60

6. PRE-DEVELOPED "C" FACTOR: 0.20

7. POST-DEVELOPED "C" FACTOR: 0.5

8. THE STORM WATER MANAGEMENT SYSTEM, UPON COMPLETION OF CONSTRUCTION, APPROPRIATE CERTIFICATION AND AS-BUILT SUBMITTALS WILL BE OPERATED AND MAINTAINED BY *LEGACY HILLS HOA*

9. THE POTENTIAL SOURCE OF POLLUTION FROM THIS PROJECT IS ON-SITE DEVELOPMENT AND CONSTRUCTION ACTIVITY.

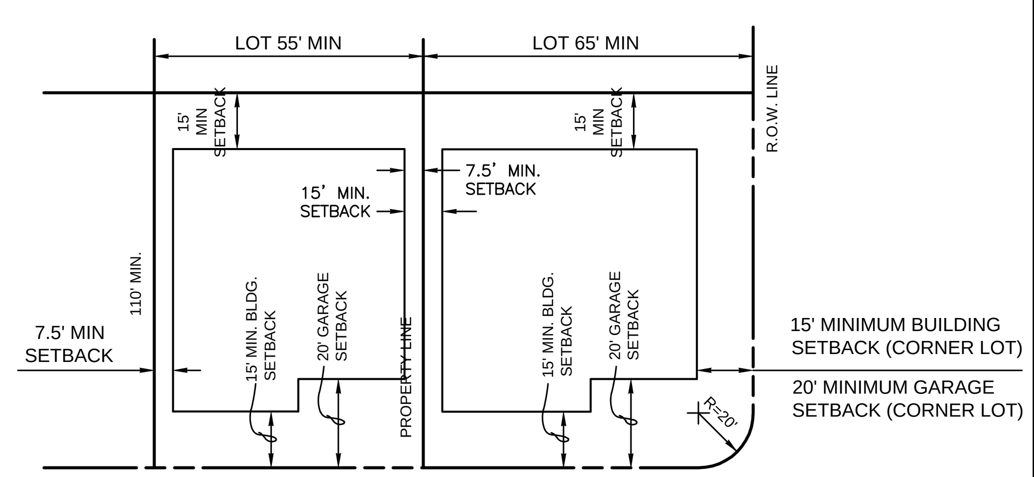
LEGACY HILLS LOT TYPES

LOT TYPE (WIDTH)	TOTAL LOTS
55' x 110'	
159	159

SITE DATA TABLE

PHASE	TOTAL ACRES	UPLAND	WETLAND	UNITS	GROSS DENSITY	NET DENSITY
PHASE 1	27.66	27.66	0	106	3.83	3.83
PHASE 2	12.65	12.65	0	53	4.19	4.19
TOTALS	40.31	40.31	0	159	3.94	3.94

NOTE: ALL WETLAND AREAS SHOWN IN THIS TABLE REPRESENT THE POST DEVELOPMENT CONDITION. ALL WETLAND IMPACT AREAS ARE COUNTED AS UPLAND, DEVELOPABLE AREA.



NOTES:
1. CORNER LOTS ARE CONSIDERED TO HAVE TWO FRONT AND SIDE SETBACKS (GARAGE AND BLDG.)
2. MAXIMUM LOT COVERAGE: 65%
(TOTAL PRINCIPAL & ACCESSORY STRUCTURES)

TYPICAL SINGLE FAMLY
(55' BY 110')
DETACHED BUILDING ARRANGMENT

NTS

NOTES:

1) Developer/Owner:
Greenfield Partners
50 North Water Street
South Norwalk, CT
Telephone: (203) 354-5035
Contact Person: John C. Coleman
2) Engineer:
Heidt Design, LLC
5806-B Breckenridge Parkway
Tampa, Florida 33610
(813) 253-5311
3) -deleted-
4) Existing Land Use Classification: VACANT PASTURE Future Land Use Classification: RES-9
5) The MPUD zoning petition #6404 was approved on October 25, 2005
6) Proposed development: 159 Single Family detached lots
7) Water service to be provided by Pasco County Utilities.
8) Sewage disposal service to be provided by Pasco County Utilities.
9) Electrical power to be provided by Withlacoochee River Electric CO-OP.
10) Telephone service to be provided by Verizon Communications.
11) Gas service to be provided by Clearwater Gas Systems.
12) Street lighting to be provided by a street lighting taxing district throughout the development.
13) Fire protection to be provided by the existing Pasco County Fire Station #25. Fire protection will be provided via on-site fire hydrants spaced in accordance with Pasco County standards.
14) The uplands are actively grazed bahia pasture. The wetlands are cypress swamps and grassy marshes.
15) Predominant soil types on-site consist of EauGallie fine sands and Lochloosa fine sands within upland areas; Tavares, Candler & Nobleton within wetland and transitional areas.
16) The mandatory Homeowners Association shall provide for the maintenance of all open space, drainage areas, common areas, buffer areas, preservation - conservation areas, recreation areas, wildlife corridor and crossing unless otherwise approved by Pasco County, and other special purpose areas by the said Association. Detention ponds to be within drainage easements to be operated- maintained by the HOA.
17) Contours shown are based on National Geodetic Vertical Datum of 1929.
18) Proposed rights-of-way for local streets shall be a minimum of fifty (50) feet.
19) All roadway standards to comply with the Manual of Uniform Minimum Standards, State of Florida.
20) All water and wastewater facilities to be installed in compliance with Pasco County Standards for design and construction of water and wastewater facilities.
21) All utility lines shall be installed underground.
22) Project lies within Flood Zone '"AE" & "X" as shown on FIRM Panel No. 120230 0460 D, revised September 30, 1992.
23) A minimum 16" strip of sod will be provided along all roadways per Pasco County requirements.
24) Corner lots will be a minimum of ten (10) feet greater in width than standard lots.
25) Wetland setbacks from SWFWMD wetlands shall be a minimum of 15' with an average of 25' as per ERP regulations.
26) All roadways to be publicly owned.
27) All landscape and sodded areas along collector road will be irrigated.
28) This project will comply with the new Pasco County Tree Protection ordinance No. 01-017 and Pasco County Landscape and Irrigation ordinance No. 02-04 and any subsequent amendments.
29) This project shall be subject to the Pasco County New Development Fair Share Contribution for Road Improvements Ordinance and School Impact Fee Ordinance.
30) All construction work, including road, drainage and utilities, shall be constructed in accordance with Pasco County design standards and tested in compliance with the Pasco County Engineering Service Department Testing Specifications for construction of roads, storm drainage and utilities.
31) All residential lots shall have a minimum access width of 25 feet along street.
32) If during construction activities; any evidence of historic resources including, but not limited to aboriginal or historic pottery, prehistoric stone tools, bone or shell tools, historic trash pits or historic building foundations are discovered, work shall come to an immediate stop, and the Florida Dept, of Historic Resources (State Historical Preservation Office) and Pasco County shall be notified within two working days of the resources found on site.
33) Prior to any clearing or grubbing associated with plan site plan a Gopher Tortoise Relocation Permit from the Florida Fish and Wildlife Conservation Commission shall be submitted to the Pasco County DRD.
34) If during the construction activities any evidence of the presence of State and Federally protected plant and/or animal species are discovered, work shall come to an immediate stop and Pasco County shall be notified within two working days of the plant and/or animal species found on site.
35) The development planned within Legacy Hills will be located in the upper reaches of the Hillsborough River. The proposed drainage system will collect, attenuate and provide treatment for the projected runoff generated by the development. The system of interconnected facilities (stormwater drainage pipes, attenuation ponds with littoral zones for water quality treatment, existing and created wetlands) has been designed to meet the minimum technical standards of Pasco County and the Southwest Florida Water Management District. Historical drainage basin patterns will be generally adhered to where practical to accommodate off-site stormwater discharges and stages from adjacent properties. The proposed stormwater drainage system will be owned and maintained by the Homeowners Association (HOA), that will be established through the Final Plat.
36) All Post-Development wetlands shall be incorporated in tracts as "Wetland Conservation Areas", designated on this plan as "W.C.A.".
37) The 30' existing right-of-way that runs north/south through the site shall be vacated and abandoned prior to recordation of Final Plat.
38) Pedestrian sidewalks shall be installed along both sides of all roadways within the limits of this project.
39) All proposed signs must be applied for, approved, and permitted on an individual basis apart from any ultimately-approved site plan. Approval of this site plan does not constitute approval of any signage.
40) All 20'x20' clear-site areas shall be kept free of any signage plantings, trees, etc. In excess of three-and-a-half (3-1/2) feet in height.
41) No irrigation system or landscaping shall be installed in any county or state right-of-way without issuance of appropriate right-of-way use permit.
42) Fugitive dust emissions shall be controlled by sprinkling or other means as necessary.
43) On-site burning shall not be employed without approval from the Fire Marshal.
44) The soil erosion and sediment control devices shall be installed prior to construction and maintained throughout construction until the site is permanently stabilized.
45) Please refer to roadway plan and profile sheets, which depict phasing. Phasing designations are for reference only. Phased construction may proceed out of numerical sequence. If construction proceeds out of numerical sequence, infrastructure supporting that phase must be built, completed and accepted prior to or concurrent with the phase in question prior to issuance of a CO for the project.
46) All projects must comply with Pasco County Fire Hydrant Ordinance No. 46-51.
47) Fire hydrants shall be installed and in service prior to the accumulation of combustibles.
48) Per the National Fire Protection Association, NFPA-1, 16.4.3.1.3: where underground water mains and hydrants are to be provided, they shall be installed, completed, and in service prior to building construction work
49) Per NFPA-1, 18.3.4.1: clearances of 7.5 feet in front of and to the sides of the fire hydrant with a four-foot clearance to the rear must be maintained at all times.
50) Access rights on double-frontage lots shall be dedicated to Pasco County.
51) Prior to construction, a building permit shall be obtained for all structures that have a footer, regardless of size, through Pasco County central permitting. (e.g., including but not limited to buildings, accessories, retaining walls, and etc.).
52) All demolition debris shall be removed from the site and legally disposed of.
53) Any off site disturbance shall be restored to the pre-construction condition or better.
54) As applicable, the owner/developer shall provide copies of the required permits from the respective governing agencies, prior to issuance of the site development permit (SDP).
55) Underdrains shall be the maintenance responsibility of the developer's successor (H.O.A. or C.D.D.). A Maintenance and License Agreement will be established to allow the successor entity to maintain the underdrains.
56) No driveway cuts shall be allowed on collector roads (Type 1a & 1b). Driveways are only allowed on local streets (Types 2, 3, & 4).
57) These plans were prepared with the benefit of and in conformance to the geotechnical recommendations in the reports by Mortensen Engineering, Inc. entitled as follows: "Preliminary Soils Study" (Dated 5/22/06); "Geotechnical Engineering Services/Roadway and Detention Pond Area Soils Study" (Dated 8/21/06)

LEGACY HILLS PHASE ONE

DESCRIPTION: A portion of Tract 78, Tracts 83 and 84, Tracts 93 through 99, inclusive, a portion of Tract 110 and 111, also a portion of the 30 foot wide right-of-way lying between said Tracts 94, 95, 98, 99, 110 and 111, ALL according to the plat of ZEPHYRHILLS COLONY COMPANY LANDS, as recorded in Plat Book 1, Page 55, of the Public Records of Pasco County, Florida, lying in Section 23, Township 26 South, Range 21 East, Pasco County, Florida, and being more particularly described as follows:

Commence at the Southeast corner of said Section 23, run thence along the East boundary of the Southeast 1/4 of said Section 23, N.00°17'02"E., 304.76 feet to a point on the Westerly right-of-way line of STATE ROAD No. 39 (PAUL BUCKMAN ROAD); thence along said Westerly right-of-way, N.27°12'20"W., 249.93 feet; thence S.62°47'40"W., 544.75 feet; thence S.61°21'58"W., 77.54 feet; thence S.67°41'40"W., 91.07 feet; thence S.75°35'40"W., 88.24 feet; thence S.65°43'25"W., 76.30 feet; thence S.58°19'29"W., 118.29 feet; thence S.81°19'29"W., 84.03 feet; thence N.75°40'31"W., 84.03 feet; thence N.52°40'31"W., 84.03 feet; thence N.29°40'31"W., 84.03 feet; thence N.06°40'31"W., 84.03 feet; thence N.16°19'29"E., 84.03 feet; thence N.39°19'29"E., 84.03 feet; thence N.62°19'29"E., 84.03 feet; thence N.85°19'29"E., 88.70 feet; thence S.88°35'31"E., 75.19 feet; thence N.86°06'36"E., 69.58 feet; thence N.74°47'40"E., 69.99 feet; thence N.64°20'01"E., 73.58 feet; thence N.62°47'40"E., 251.23 feet; thence N.27°12'20"W., 410.52 feet; thence N.77°56'04"W., 47.23 feet; thence S.89°19'29"W., 20.77 feet to the POINT OF BEGINNING; thence continue, S.89°19'29"W., 454.50 feet; thence S.00°40'31"E., 103.88 feet; thence S.69°15'28"W., 11.94 feet; thence S.88°44'01"W., 14.85 feet; thence S.67°42'49"W., 19.66 feet; thence S.42°38'33"W., 54.93 feet; thence S.40°58'06"W., 46.38 feet; thence S.45°16'16"W., 42.69 feet; thence S.32°19'21"W., 34.59 feet; thence S.36°17'51"W., 39.90 feet; thence S.50°10'46"W., 38.17 feet; thence S.37°30'46"W., 68.22 feet; thence S.54°40'53"W., 70.69 feet; thence N.73°42'42"W., 34.44 feet; thence N.74°09'29"W., 45.84 feet; thence N.46°44'58"W., 37.90 feet; thence N.84°49'23"W., 13.42 feet; thence N.22°16'32"E., 245.39 feet; thence N.67°43'28"W., 18.63 feet; thence N.45°22'28"W., 69.42 feet; thence N.23°01'28"W., 77.26 feet; thence N.00°40'28"W., 391.71 feet; thence S.89°19'29"W., 685.00 feet; thence N.00°40'31"W., 267.50 feet; thence N.89°19'29"E., 116.00 feet; thence N.00°40'31"W., 9.50 feet to a point of curvature; thence Northerly, 49.28 feet along the arc of a curve to the right having a radius of 95.00 feet and a central angle of 29°43'28" (chord bearing N.14°11'13"E., 48.73 feet); thence N.00°40'31"W., 152.16 feet to a point on the Southerly right-of-way line of CHANCEY ROAD; thence along said Southerly right-of-way line the following four (4) courses: 1) S.86°25'04"E., 18.71 feet; 2) N.02°54'26"E., 30.00 feet to a point on a curve; 3) Easterly, 767.57 feet along the arc of a curve to the left having a radius of 2606.48 feet and a central angle of 16°52'22" (chord bearing N.84°28'15"E., 764.80 feet); 4) N.76°04'06"E., 148.02 feet; thence S.00°00'54"W., 397.50 feet; thence N.89°19'29"E., 642.61 feet to a point on the aforesaid Westerly right-of-way line of STATE ROAD No. 39 (PAUL BUCKMAN ROAD); thence along said Westerly right-of-way line, S.27°12'20"E., 454.99 feet; thence S.62°47'40"W., 153.00 feet; thence N.27°12'20"W., 3.50 feet; thence S.62°47'40"W., 206.52 feet; thence S.00°40'31"E., 39.46 feet to the POINT OF BEGINNING.

Containing 27.661 acres, more or less.

LEGACY HILLS PHASE TWO

DESCRIPTION: A portion of Tracts 97, 98, 111, 112, 113, 114, 127 and 128, ALL according to the plat of ZEPHYRHILLS COLONY COMPANY LANDS, as recorded in Plat Book 1, Page 55, of the Public Records of Pasco County, Florida, lying in Section 23, Township 26 South, Range 21 East, Pasco County, Florida, and being more particularly described as follows:

Commence at the Southeast corner of said Section 23, run thence along the East boundary of the Southeast 1/4 of said Section 23, N.00°17'02"E., 304.76 feet to a point on the Westerly right-of-way line of STATE ROAD No. 39 (PAUL BUCKMAN ROAD); thence along said Westerly right-of-way, N.27°12'20"W., 249.93 feet to the POINT OF BEGINNING; thence S.62°47'40"W., 544.75 feet; thence S.61°21'58"W., 77.54 feet; thence S.67°41'40"W., 91.07 feet; thence S.75°35'40"W., 88.24 feet; thence S.65°43'25"W., 76.30 feet; thence S.58°19'29"W., 118.29 feet; thence S.81°19'29"W., 84.03 feet; thence N.75°40'31"W., 84.03 feet; thence N.52°40'31"W., 84.03 feet; thence N.29°40'31"W., 84.03 feet; thence N.06°40'31"W., 84.03 feet; thence N.16°19'29"E., 84.03 feet; thence N.39°19'29"E., 84.03 feet; thence N.62°19'29"E., 84.03 feet; thence N.85°19'29"E., 88.70 feet; thence S.88°35'31"E., 75.19 feet; thence N.86°06'36"E., 69.58 feet; thence N.74°47'40"E., 69.99 feet; thence N.64°20'01"E., 73.58 feet; thence N.62°47'40"E., 251.23 feet; thence N.27°12'20"W., 410.52 feet; thence N.77°56'04"W., 47.23 feet; thence S.89°19'29"W., 20.77 feet; thence N.00°40'31"W., 39.46 feet; thence N.62°47'40"E., 206.52 feet; thence S.27°12'20"E., 3.50 feet; thence N.62°47'40"E., 153.00 feet to a point on the aforesaid Westerly right-of-way line of STATE ROAD No. 39 (PAUL BUCKMAN ROAD); thence along said Westerly right-of-way line, S.27°12'20"E., 803.50 feet to the POINT OF BEGINNING.

Containing 12.650 acres, more or less.

HEIDT DESIGN
Civil Engineering • Planning & GIS
Transportation Engineering
Ecological Services • Landscape Architecture
Engineering Business Certificate of Authorization No. 28782
Landscape Architecture Certificate of Authorization No. LC26000405
5806-B Breckenridge Pkwy.
Tampa, Florida 33610
Office: 813-253-5311
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www.HeidtDesign.com

LEGACY HILLS (FKA FELICIANO)

GENERAL NOTES

PREPARED FOR: **LEGACY GREEN LLC**

DATE	DESCRIPTION
12-21-06	LEGAL PHASING
03-28-07	NOTE 3 DELETED; SITE DATA
09-16-13	ISSUED FOR PLAN MOD REVIEW BY COUNTY
01-08-14	REVISED FOR COUNTY RESUBMITTAL
	PLAN MOD. REVIEW BY COUNTY
07-11-14	SUBMITTED FOR SUBSTANTIAL

PROJECT NO:	MAR-RD-1001
FILE:	GN
DESIGN BY:	DUNNING
DRAWN BY:	DUNNING

FLORIDA PROFESSIONAL ENGINEER

GARY D. MILLER
DATE:
REGISTRATION NO. 52717

2

R:\LEGACY DEVELOPMENT PROJECTS\LEGACY HILLS 2012\WORKING FILES\CURRENT DRAWINGS\CPGN.DWG-2 2014/10/24 11:42 AM ERIC FRANCIS

GENERAL EROSION AND TURBIDITY CONTROL NOTES:

1. The site subcontractor shall be responsible for installation and maintenance of all erosion and turbidity controls and the quality and quantity of discharges to offsite or wetlands.
2. Prior to construction, the site subcontractor is responsible for having his dewatering plan and turbidity control plan approved by the applicable reviewing agencies. Refer to the project's permit approvals and permit conditions for agencies requiring such review and approval. Questions concerning appropriate techniques should be addressed to those agencies and/or discussed with the project engineer and owner.
3. The appropriate turbidity and erosion control methodologies selected by the site subcontractor for this project should be made following assessment of the plans and project site specific factors and after consultations, as needed, with the project engineer and appropriate agencies. The site subcontractor will be responsible for obtaining any and all necessary permits for such activity; several factors to consider are listed below.
   - A. Clay content in excavated materials and/or permeability rates
   - B. Depth of cut in ponds, trenches, or utility lines
   - C. Ambient ground water levels
   - D. Actual rainfall amounts and time of year relative to normal rainy season
   - E. Proximity to wetlands, water bodies or offsite properties
   - F. 'Class' designation of receiving water bodies (i.e., Outstanding Florida Waters, shellfish harvesting areas, etc.)
   - G. Density, type, and proximity of upland vegetation to be retained during construction (for use as possible filtration areas)
   - H. Fill height relative to natural grade and length and steepness of the proposed slopes
   - I. Existing topography and directions of surface flow
   - J. Type of equipment used
   - K. Project type
   - L. Duration of construction activities
   - M. Separation distance of onsite ponds
   - N. Ambient quality of surface and groundwater
   - O. Temporary stockpile locations and heights
4. At the onset of construction, the site subcontractor, as the party responsible for implementation of the erosion and sediment control plan, shall assess the above described conditions and factors with respect to relative cost effectiveness and select the appropriate methods of protection. A fairly extensive list of techniques are presented below but it must be stressed that any or all of the following may be necessary to maintain water quality and quantity standards. The construction sequencing should be thought out in advance of initiation to provide adequate protection of water quality.
5. Discharges which exceed 29 N.T.U.'s over the background levels are in violation of state water quality standards. Discharges of water quantities which affect offsite properties or may damage wetlands are also prohibited by regulating agencies.
6. The erosion and turbidity control measures shown hereon are the minimum required for agency approval. Additional control and measures may be required due to the site subcontractor's construction sequence & unforeseen weather conditions. Any additional measures deemed necessary by the site subcontractor shall be included in the lump sum bid with no extras for materials and labor allowed.
7. Erosion control shall be installed prior to land clearing to protect water quality and to identify areas to be protected from clearing activities and maintained for the duration of the project until all soil is stabilized.
8. Floating turbidity barriers shall be in place in flowing systems or in open water lake edges prior to initiation of earthwork and maintained for the duration of the project until all soil is stabilized.
9. No clay material shall be left exposed in any stormwater storage facility. If clay or sandy-clays are encountered during stormwater storage excavation, the site subcontractor shall notify the engineer immediately before proceeding with further excavation. If the engineer of record has determined that such soils are non-confining and must be excavated to meet permit and design conditions, excavation may proceed after obtaining written authorization from the appropriate governing agency. If said soils are left exposed at the permitted and designed depth, the site subcontractor shall over-excavate the pond's bottom and side slopes by a minimum of twelve (12") inches and backfill with clean sands to help prevent suspension of fine particles in the water column.
10. The installation of temporary erosion control barriers shall be coordinated with the construction of the permanent erosion control features to the extent necessary to assure effective and continuous control of erosion and water pollution throughout the life of the construction phase.
11. The type of erosion control barriers used shall be governed by the nature of the construction operation and soil type that will be exposed. Silty and clayey material may require solid sediment barriers to prevent turbid water discharge, while sandy material may need only silt screens or bales to prevent erosion. Floating turbidity curtains should generally be used in open water situations. Diversion ditches or swales may be required to prevent turbid stormwater runoff from being discharged to wetlands or other water bodies. It may be necessary to employ a combination of barriers, ditches, and other erosion/turbidity control measures if conditions warrant.
12. Where pumps are to be used to remove turbid waters from construction areas, the water shall be treated prior to discharge to the wetlands. Treatment methods include, for example, turbid water being pumped into grassed swales or appropriate upland vegetated areas (other than upland preservation areas and wetland buffers), sediment basins, or confined by an appropriate enclosure such as turbidity barriers or low berms, and kept confined until turbidity levels meet state water quality standards.
13. The permittee shall schedule his operations such that the area of unprotected, erodible earth exposed at any one time is not larger than the minimum area necessary for efficient construction operation, and the duration of exposed, uncompleted construction to the elements shall be as short as practicable. Clearing and grubbing shall be so scheduled and performed such that grading operations can follow immediately thereafter. Grading operations shall be so scheduled and performed that permanent erosion control features can follow immediately thereafter if conditions on the project permit.
14. Water derived from various dewatering methods used with approved permitting should be passed through sufficiently wide areas of existing upland vegetation to filter out excess turbidity. If this is not sufficient, the water shall be retained in previously constructed permanent stormwater ponds or else retained in temporary sedimentation basins until the clarity is suitable to allow for its discharge. Plugging the outfalls from completed stormwater ponds may be needed to avoid discharge. However, such situations should be monitored closely to preclude berm failure if water levels rise too high.
15. Water can be transported around the site by the use of internal swales or by pumps and pipes.
16. Sheet flow of newly filled or scraped areas may be controlled or contained by the use of brush barriers, diversion swales, interceptor ditches or low berms. Flow should be directed toward areas where sediments can sufficiently settle out.
17. Exposed soils shall be stabilized as soon as possible, especially slopes leading to wetlands. Stabilization methods including, but not limited to, solid sod, seeding and mulching or hydro-mulching to provide a temporary or permanent grass cover, mulch blankets, and filter fabrics can be employed to provide vegetative cover.
18. Energy dissipaters (such as rip rap, a gravel bed, bales, etc.) Shall be installed at the discharge point of pipes or swales if scouring is observed.
19. Attempt to install roadway curb and gutters as soon as possible to reduce the surface area for erosion to occur.
20. Implement storm drain inlet protection (bales or gravel) to limit sedimentation within the stormwater system. Perform inspections and periodic cleaning of sediments which wash out into the streets until all soil is stabilized.
21. Water discharge velocities from impounded areas and temporary sedimentation basins shall be restricted to avoid scouring in receiving areas.
22. If water clarity does not reduce to state standards rapidly enough in holding ponds, it may be possible to use chemical agents such as alum to flocculate or coagulate the sediment particles, subject to approved permitting.
23. Bales, silt screens, or gravel beds can be added around the pipe or swale discharge points to help clarify discharges. Spreader swales may help dissipate cloudy water prior to contact with wetlands.
24. All fuel storage areas or other hazardous storage areas shall conform to accepted state or federal criteria for such containment areas.
25. Vehicle or equipment washdown areas will be sufficiently removed from wetlands or offsite areas.
26. Fugitive dust controls (primarily by using water spray trucks) shall be employed as needed to control windborne emissions.
27. If the above controls remain ineffective in precluding release of turbid water, especially during pond or utility line dewatering, then the contractor may be compelled to use a vertical dewatering system such as well points or sock drains to withdraw groundwater which may already be clear enough to allow for direct discharge to wetlands.
28. Ongoing inspections and periodic maintenance by the site subcontractor shall occur throughout construction as necessary to insure the above methods are working suitably. This may be needed daily, if conditions so warrant. Site subcontractors are encouraged to obtain and thoroughly review the Florida Development Manual: A Guide to Sound Land and Water Management, which was developed by the State of Florida Department of Environmental Protection in 1988. This provides fairly in-depth discussions of recommended techniques and also provides specific design and technical standards. A copy of this document is available for review at Heidt Design, LLC.
29. The contractor will perform daily inspections of all on-site wetlands within the construction area to ensure that water levels within those wetlands are not excessively impounded prior to the time when the permitted control structure or outfall is built. Water levels significantly above normal should be corrected at a frequency that prevents a change in the vegetative character or health of any wetlands
30. Contractor is responsible for erosion control (silt fence) removal after stabilization.
31. At a minimum, all stormwater management facility berms and slopes shall be sodded to the seasonal high or control water line as applicable.

LAKE / POND EXCAVATION NOTE:

No excavation shall extend below the permitted design depths/elevations shown on the drawings, unless additional testing supports otherwise. No semi-confining unit clayey soil material and/or no limestone materials shall be excavated, regardless if these materials are encountered within the permitted excavation depths/elevations. If any lower semi-confining unit clayey soil material or limestone materials are encountered above the permitted depths/elevations, then excavation operations shall cease in the general area and the Engineer of Record shall be notified immediately. In the absence of any confining or semi-confining unit clayey soils, a minimum of five feet of undisturbed soil must remain above the underlying limestone. If subsequent subsurface geotechnical investigations support excavation below design/permitted depths/elevations, the additional excavation shall not begin until the Engineer of Record has received verbal and/or written permission from the appropriate governing agency.

PASCO COUNTY DEVELOPMENT SERVICES DEPARTMENT
PROTECTIVE BARRIER REQUIREMENT AND SPECIFICATIONS

PROTECTIVE BARRIERS are used during land alteration and construction activities to protect trees and natural areas to be retained on a site.

PROTECTIVE BARRIERS must be erected around TREES to be retained within an area where land alteration and construction activities will occur as well as along NATURAL AREAS where such areas are adjacent to permitted land alteration or construction activities. A PROTECTIVE BARRIER must remain in place until the land alteration and construction activities are completed or until commencement of grade finishing and sodding. No ground disturbance must occur within the barricaded area.

1. TREES - To restrict access into the area within the DRIPLINE of a tree, a physical structure not less than 3 feet in height, comprised of wood or other suitable material, is placed around the tree at the DRIPLINE, except where land alteration or construction activities are approved within the dripline. See Tree Ordinance Sec. 11.

   The DRIPLINE of a tree is the imaginary, vertical line that extends downward from the outermost tips of the tree's branches to the ground Fig. A.

   BARRIER SPECIFICATIONS FOR TREES:

   Four corner upright stakes of no less than 2" x 2" lumber connected by horizontal members of no less than 1" x 4" lumber, or upright stakes spaced at 5' intervals of no less than 2" x 2" lumber connected by a silt screen fabric or material of comparable durability. Fig. B.
2. NATURAL AREAS - To restrict access into areas where land alteration and construction activities are not authorized, a physical structure not less than 3 feet in height is placed along the perimeter of such areas.

   BARRIER SPECIFICATIONS FOR NATURAL AREAS:

   Upright stakes of no less than 2" x 2" lumber spaced no more than 25' apart and connected by twine flagged with plastic surveying tape at regular intervals of 5-10'. Fig. C. Other methods of demarcation will be considered depending upon the characteristics of the site.

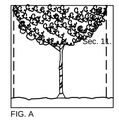


FIG. A

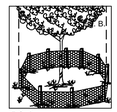


FIG. B

FIG. C

WHY A BARRIER

1. To protect all above ground portions of trees and other significant vegetation from mechanical damage.
2. To protect root systems from compaction.
3. To provide awareness of protected areas to equipment operators.

WHY IT WORKS

A tree's chance for survival is greatly enhanced if no construction material, heavy equipment or stockpiling of soil is allowed inside the barrier, only hand labor.

GENERAL TREE PROTECTION NOTES:

1. All trees to remain, where indicated on the returned site plan, must be protected by tree protection barricades meeting the minimum standards shown on the attached diagram. Protective barricades shall remain in place until land alteration and construction activities are completed.
2. During land alteration and construction activities, it shall be unlawful to remove vegetation by grubbing or to place soil deposits, debris, solvents, construction material, machinery or other equipment of any kind within the dripline of a tree to remain on the site unless otherwise approved by the County.
3. In order to comply with the Pasco County LDC and to minimize soil erosion, proposed land alteration activities shall not unnecessarily remove existing vegetation and alter existing topography. Adequate protection measures (i.e., hay bales, baffles, sodding and sandbagging) shall be provided, as necessary, to minimize erosion and downstream sedimentation caused by surface water runoff on exposed land surfaces.
4. Any areas subject to erosion must be adequately stabilized with vegetative material that will, within a reasonable time frame, deter soil disturbance. Sodding, plugging, sprigging or seeding is acceptable for stabilization; however, sodding may be required in areas of erosion-prone soils or where slopes are greater than 5:1. Vegetation other than grass is acceptable unless otherwise specified.
5. All tree roots existing within proposed improvement areas and originating from a protected tree shall be severed clean at the limits of the preserved area as identified on the approved construction plans. Utilization of root pruning equipment producing a clean, non-tattered cut is required.
6. All trimming undertaken on a tree to be retained according to the permitted construction plans shall be pruned in accordance with the National Arborist Association (NAA) standards. Failure to conform to these pruning standards may result in a delay in issuance of the Certificate of Occupancy (C/O).

STREET AND DRAINAGE (SUBDIVISION) NOTES:

1. Prior to construction, the Contractor shall obtain from the Engineer or Owner a copy of all pertinent permits related to this project. It is the Contractor's responsibility to assure that all construction activities are in compliance with the conditions of all permits and approvals. Contractor is also responsible for having his dewatering plan approved by SWFWMD and permitted by FDEP.
2. All construction, materials and workmanship are to be in accordance with Pasco County Land Development Code and FDOT Specifications, latest editions.
3. Grass and mulch, or solid sod, all areas in existing rights-of-way disturbed by construction. In the proposed rights-of-way, a 16' wide area behind the back of curb shall be solid sodded. The remainder of the proposed rights-of-way to be seeded and mulched if the slope is greater than 6:1 or flatter
4. In accordance with the Underground Facility Damage Prevention and Safety Act (Chapter 556, F.S.), the Contractor shall call the Sunshine State One Call of Florida (SSCOF) at 1-800-432-4770 forty eight (48) hours in advance of any excavation.
5. Prior to curb inlet construction, the Construction Surveyor shall lay out the back of the curb in the vicinity of the respective inlet for alignment and grade.
   a. For Miami Type Curb & Gutter: The Contractor shall construct the inlet allowing for an 18" concrete throat between the back of the curb and the face of the inlet. The top of the inlet shall be constructed to an elevation of 3/8" above the top of curb.
   b. For Type F Curb & Gutter: The Contractor shall construct the inlet top to be flush with the back of curb grade.
   c. Any inlets constructed incorrectly by deviating from this sequence of inlet construction shall be the sole responsibility of the Contractor and no additional payment shall be made or allowed for removing and/or correcting the inlet.
6. Suitable fill obtained through excavation of streets and detention ponds shall be placed on lots and adjacent land in accordance with the Master Drainage and Grading Plan as directed by the Engineer.
7. Sod/Seed & Mulch shall be placed in accordance with applicable City/County standards as well as in accordance with standard and specific conditions in the SWFWMD permit, if applicable. At a minimum this shall include sodding of all pond embankments of a slope 4:1 or greater to the normal water line, as well as seeding and mulching of the balance of the pond tracts (including pond berms, excluding the area below NW), sodding at a minimum of 16" from the back of curb, and seeding and mulching of any project area with a slope of flatter than 4:1.
8. Roadway underdrain has been located on these plans to ensure adequate base protection.
9. Site clearing shall be performed per the approved construction plans and in accordance with Pasco County Land Development Code. Installation and maintenance of the required barricading and erosion control shall be the responsibility of the site development contractor unless otherwise designated.
10. Prior to beginning construction, Site Contractor shall expose all existing utility inverts to which a tie-in is proposed and verify the elevation and adequacy of any reported inverts. All differences shall be reported to the Engineer of Record in writing prior to construction.
11. All subsurface construction shall comply with the "Trench Safety Act". The Site Contractor shall ensure that the method of trench protection and construction is in compliance with the Occupational Safety and Health Administration (OSHA) regulations.
12. Siltation accumulations greater than the lesser of 12 inches or one-half the depth of the siltation barrier shall be immediately removed and placed in upland areas.
13. During land alteration and construction activities, it shall be unlawful to remove vegetation by grubbing or to place soil deposits, debris, solvents, construction material, machinery or other equipment of any kind within the dripline of a tree to remain on the site unless otherwise approved by the County.
14. All erosion control installation and installation coordination shall be the responsibility of the Site Contractor. Heidt Design, if contracted by the Owner, will coordinate the staking of the alignment of the proposed erosion control and shall limit its responsibility and coordination at that point. Be advised that the construction approval and maintenance of the erosion control shall be the sole responsibility of the Site Contractor.

FELICIANO PROPERTY
OFFSITE DRAINAGE EASEMENT No. 1

DESCRIPTION: A portion of Tracts 114 and 115, Tracts 126 through 128, inclusive, and a portion of the 30 foot wide right-of-way lying between said Tracts 114, 115, 126 and 127, ALL of ZEPHYRHILLS COLONY COMPANY LANDS, according to the plat thereof as recorded in Plat Book 1, Page 55, of the Public Records of Pasco County, Florida, lying in Section 23, Township 26 South, Range 21 East, Pasco County, Florida, and being more particularly described as follows:

Commence at the Southeast corner of said Section 23, run thence along the South boundary of the Southeast 1/4 of said Section 23, S.89°14'06"W., 470.80 feet; thence N.00°45'54"W., 15.00 feet to the POINT OF BEGINNING; thence along a line lying 15.00 feet North of and parallel with said South boundary of the Southeast 1/4 of Section 23, S.89°14'06"W., 1097.45 feet; thence N.37°39'32"E., 63.65 feet; thence N.37°59'23"E., 42.48 feet; thence N.32°10'06"E., 28.95 feet; thence N.19°22'47"W., 72.08 feet; thence N.23°10'35"W., 24.06 feet; thence N.39°23'47"W., 22.32 feet; thence N.43°17'29"W., 109.12 feet; thence N.15°24'35"E., 140.06 feet; thence N.74°48'42"E., 132.36 feet; thence N.63°49'05"E., 90.97 feet; thence N.12°30'22"E., 70.08 feet; thence N.76°25'03"E., 152.42 feet; thence S.31°41'13"E., 43.82 feet; thence N.85°36'08"E., 137.15 feet; thence S.12°02'24"E., 80.62 feet; thence N.88°35'31"W., 24.50 feet; thence S.85°19'29"W., 88.70 feet; thence S.62°19'29"W., 84.03 feet; thence S.39°19'29"W., 84.03 feet; thence S.16°19'29"W., 84.03 feet; thence S.06°40'31"E., 84.03 feet; thence S.29°40'31"E., 84.03 feet; thence S.52°40'31"E., 84.03 feet; thence S.75°40'31"E., 84.03 feet; thence N.81°19'29"E., 84.03 feet; thence N.58°19'29"E., 118.29 feet; thence N.65°43'25"E., 76.30 feet; thence N.75°35'40"E., 88.24 feet; thence N.67°41'40"E., 91.07 feet; thence N.61°21'58"E., 77.54 feet; thence N.62°47'40"E., 87.25 feet; thence S.08°56'56"E., 312.97 feet to the POINT OF BEGINNING.

Containing 6.874 acres, more or less.

FELICIANO PROPERTY
OFFSITE DRAINAGE EASEMENT No. 2

DESCRIPTION: A portion of Tract 98 and Tracts 111 through 114, inclusive, of ZEPHYRHILLS COLONY COMPANY LANDS, according to the plat thereof as recorded in Plat Book 1, Page 55, of the Public Records of Pasco County, Florida, lying in Section 23, Township 26 South, Range 21 East, Pasco County, Florida, and being more particularly described as follows:

Commence at the Southeast corner of said Section 23, run thence along the South boundary of the Southeast 1/4 of said Section 23, S.89°14'06"W., 470.80 feet; thence N.00°45'54"W., 15.00 feet; thence along a line lying 15.00 feet North of and parallel with said South boundary of the Southeast 1/4 of Section 23, S.89°14'06"W., 1097.45 feet; thence N.37°39'32"E., 63.65 feet; thence N.37°59'23"E., 42.48 feet; thence N.32°10'06"E., 28.95 feet; thence N.19°22'47"W., 72.08 feet; thence N.23°10'35"W., 24.06 feet; thence N.39°23'47"W., 22.32 feet; thence N.43°17'29"W., 109.12 feet; thence N.15°24'35"E., 140.06 feet; thence N.74°48'42"E., 132.36 feet; thence N.63°49'05"E., 90.97 feet; thence N.12°30'22"E., 70.08 feet; thence N.76°25'03"E., 152.42 feet; thence S.31°41'13"E., 43.82 feet; thence N.85°36'08"E., 137.15 feet; thence S.12°02'24"E., 80.62 feet; thence S.88°35'31"E., 50.69 feet; thence N.86°06'36"E., 49.48 feet to the POINT OF BEGINNING; thence N.16°04'32"E., 64.80 feet; thence N.69°58'39"E., 40.19 feet; thence S.83°03'45"E., 25.62 feet; thence N.81°41'32"E., 54.53 feet; thence N.84°53'46"E., 68.28 feet; thence N.62°13'49"E., 164.26 feet; thence N.29°39'06"W., 106.12 feet; thence N.38°27'21"W., 197.24 feet; thence S.66°51'54"W., 87.34 feet; thence S.44°16'59"W., 66.41 feet; thence S.37°21'36"W., 123.54 feet; thence S.68°21'25"W., 45.70 feet; thence N.76°21'40"W., 138.36 feet; thence N.02°23'06"W., 56.57 feet; thence N.65°58'56"E., 69.12 feet; thence N.46°23'16"W., 161.06 feet; thence S.86°39'01"W., 52.14 feet; thence S.69°15'28"W., 18.55 feet; thence N.00°40'31"W., 103.88 feet; thence N.89°19'29"E., 475.27 feet; thence S.77°56'04"E., 47.23 feet; thence S.27°12'20"E., 410.52 feet; thence S.62°47'40"W., 251.23 feet; thence S.64°20'01"W., 73.58 feet; thence S.74°47'40"W., 69.99 feet; thence S.86°06'36"W., 20.10 feet to the POINT OF BEGINNING.

Containing 3.082 acres, more or less.

FELICIANO PROPERTY
OFFSITE DRAINAGE EASEMENT No. 3

DESCRIPTION: A portion of Tracts 93 and 94, Tracts 99 and 100, and Tracts 109 and 110, of ZEPHYRHILLS COLONY COMPANY LANDS, according to the plat thereof as recorded in Plat Book 1, Page 55, of the Public Records of Pasco County, Florida, lying in Section 23, Township 26 South, Range 21 East, Pasco County, Florida, and being more particularly described as follows:

Commence at the Southeast corner of said Section 23, run thence along the South boundary of the Southeast 1/4 of said Section 23, S.89°14'06"W., 2632.46 feet to the Southwest corner of said Southeast 1/4 of Section 23; thence along the West boundary of said Southeast 1/4 of Section 23, N.00°15'12"W., 1099.05 feet; thence N.89°44'48"E., 15.00 feet to the POINT OF BEGINNING; thence along a line lying 15.00 feet East of and parallel with said West boundary of the Southeast 1/4 of Section 23, N.00°15'12"W., 353.53 feet; thence N.89°19'29"E., 930.11 feet; thence S.00°40'28"E., 391.71 feet; thence S.23°01'28"E., 77.26 feet; thence S.45°22'28"E., 69.42 feet; thence S.67°43'28"E., 18.63 feet; thence S.22°16'32"W., 245.39 feet; thence N.84°49'23"W., 64.87 feet; thence N.13°18'35"W., 119.38 feet; thence N.29°52'28"W., 211.54 feet; thence N.57°37'23"W., 138.72 feet; thence S.53°06'15"W., 25.92 feet; thence N.48°42'48"W., 75.09 feet; thence N.36°19'06"E., 154.51 feet; thence S.86°49'21"E., 161.91 feet; thence N.89°50'21"E., 78.43 feet; thence N.00°40'28"W., 124.93 feet; thence N.84°38'57"W., 74.07 feet; thence S.72°18'25"W., 97.62 feet; thence N.59°14'35"W., 90.04 feet; thence N.56°53'45"W., 34.83 feet; thence N.79°30'58"W., 34.42 feet; thence S.70°38'28"W., 70.72 feet; thence S.77°09'49"W., 124.48 feet; thence S.35°17'22"W., 44.61 feet; thence S.19°55'59"E., 126.66 feet; thence S.70°58'52"E., 111.25 feet; thence S.19°39'04"E., 130.25 feet; thence S.70°09'32"W., 261.91 feet; thence N.87°08'37"W., 149.43 feet; thence N.50°27'34"W., 195.16 feet to the POINT OF BEGINNING.

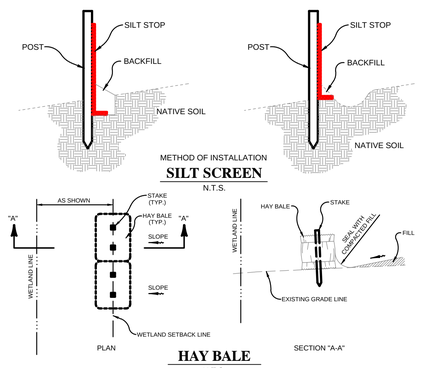
Containing 8.479 acres, more or less.

FELICIANO PROPERTY
OFFSITE DRAINAGE EASEMENT No. 4

DESCRIPTION: A portion of Tracts 84 and 93, of ZEPHYRHILLS COLONY COMPANY LANDS, according to the plat thereof as recorded in Plat Book 1, Page 55, of the Public Records of Pasco County, Florida, lying in Section 23, Township 26 South, Range 21 East, Pasco County, Florida, and being more particularly described as follows:

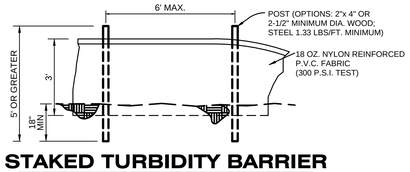
Commence at the Southeast corner of said Section 23, run thence along the South boundary of the Southeast 1/4 of said Section 23, S.89°14'06"W., 2632.46 feet to the Southwest corner of said Southeast 1/4 of Section 23; thence along the West boundary of said Southeast 1/4 of Section 23, N.00°15'12"W., 1522.47 feet; thence N.89°19'29"E., 15.00 feet to the POINT OF BEGINNING; thence along a line lying 15.00 feet East of and parallel with said West boundary of the Southeast 1/4 of Section 23, N.00°15'12"W., 489.05 feet to a point on a curve on the Southerly right-of-way line of CHANCEY ROAD; thence along said Southerly right-of-way line, the following seven (7) courses: 1) Easterly, 25.67 feet along the arc of a curve to the left having a radius of 2606.48 feet and a central angle of 00°33'51" (chord bearing S.78°42'36"E., 25.67 feet); 2) S.11°00'26"W., 30.00 feet; 3) S.79°40'04"E., 62.12 feet; 4) N.09°39'26"E., 30.00 feet to a point on a curve; 5) Easterly, 245.65 feet along the arc of said curve to the left having a radius of 2606.48 feet and a central angle of 05°24'00" (chord bearing S.83°02'34"E., 245.56 feet); 6) S.04°15'26"W., 30.00 feet; 7) S.86°25'04"E., 43.41 feet; thence S.00°40'31"E., 152.16 feet to a point on a curve; thence Southerly, 49.28 feet along the arc of a curve to the left having a radius of 95.00 feet and a central angle of 29°43'28" (chord bearing S.14°11'13"W., 48.73 feet) to a point of tangency; thence S.00°40'31"E., 9.50 feet; thence S.89°19'29"W., 116.00 feet; thence S.00°40'31"E., 197.50 feet; thence S.89°19'29"W., 244.59 feet to the POINT OF BEGINNING.

Containing 3.240 acres, more or less.



EROSION CONTROL DETAILS

NOTE: THE EROSION BARRIERS, AS SHOWN, ARE NOT TO BE CONSTRUED TO MEAN THAT THEY ARE ALL THAT MAY BE REQUIRED. THE CONTRACTOR IS TO TAKE WHATEVER MEASURES NECESSARY TO CONTROL EROSION THROUGHOUT THE PROJECT.



STAKED TURBIDITY BARRIER

N.T.S.

HEIDT DESIGN
Civil Engineering • Planning & GIS
Transportation Engineering
Ecological Services • Landscape Architecture
Engineering Business Certificate of Authorization No. 28762
Landscape Architecture Certificate of Authorization No. LC26000405
5806-B Breckenridge Pkwy.
Tampa, Florida 33610
Office: 813-253-5311
Fax: 813-464-7629
www.HeidtDesign.com

LEGACY HILLS (FKA FELICIANO)

GENERAL NOTES

LEGACY GREEN LLC

R:\LEGACY DEVELOPMENT PROJECTS\LEGACY HILLS 2012\WORKING FILES\CURRENT DRAWINGS\CPON DWG-3 2014\10\24 11:42 AM ERIC FRANCIS

DATE	DESCRIPTION
	PREPARED FOR

DATE	DESCRIPTION
07-11-14	SUBMITTED FOR SUBSTANTIAL PLAN MOD REVIEW BY COUNTY
01-08-14	REVISED FOR COUNTY RESUBMITTAL
09-16-13	ISSUED FOR PLAN MOD REVIEW BY COUNTY
12-21-06	UNDER DRAIN, DRAINAGE NOTES

PROJECT NO:	MAR-RD-1001
FILE:	GN
DESIGN BY:	DUNNING
DRAWN BY:	DUNNING

FLORIDA PROFESSIONAL ENGINEER

GARY D. MILLER
DATE:
REGISTRATION NO. 52717

HEIDT DESIGN
Civil Engineering • Planning & GIS
Transportation Engineering
Ecological Services • Landscape Architecture
Engineering Business Certificate of Authorization No. 28762
Landscape Architecture Certificate of Authorization No. LC26000465
5806-B Breckenridge Pkwy.
Tampa, Florida 33610
Office: 813-253-5311
Fax: 813-464-7629
www.HeidtDesign.com

LEGACY HILLS (FKA FELICIANO)

AERIAL SITE PLAN

PREPARED FOR: LEGACY GREEN LLC

DATE	DESCRIPTION
07-11-14	SUBMITTED FOR SUBSTANTIAL PLAN CONFORMANCE CERTIFICATIONS
01-08-14	REVISED FOR COUNTY RESUBMITTAL
09-16-13	ISSUED FOR PLAN MOD REVIEW BY COUNTY
03-28-07	STREET NAMES; POND CONFIG
01-18-07	SWFWMD COMMENTS
12-21-06	PC SUB

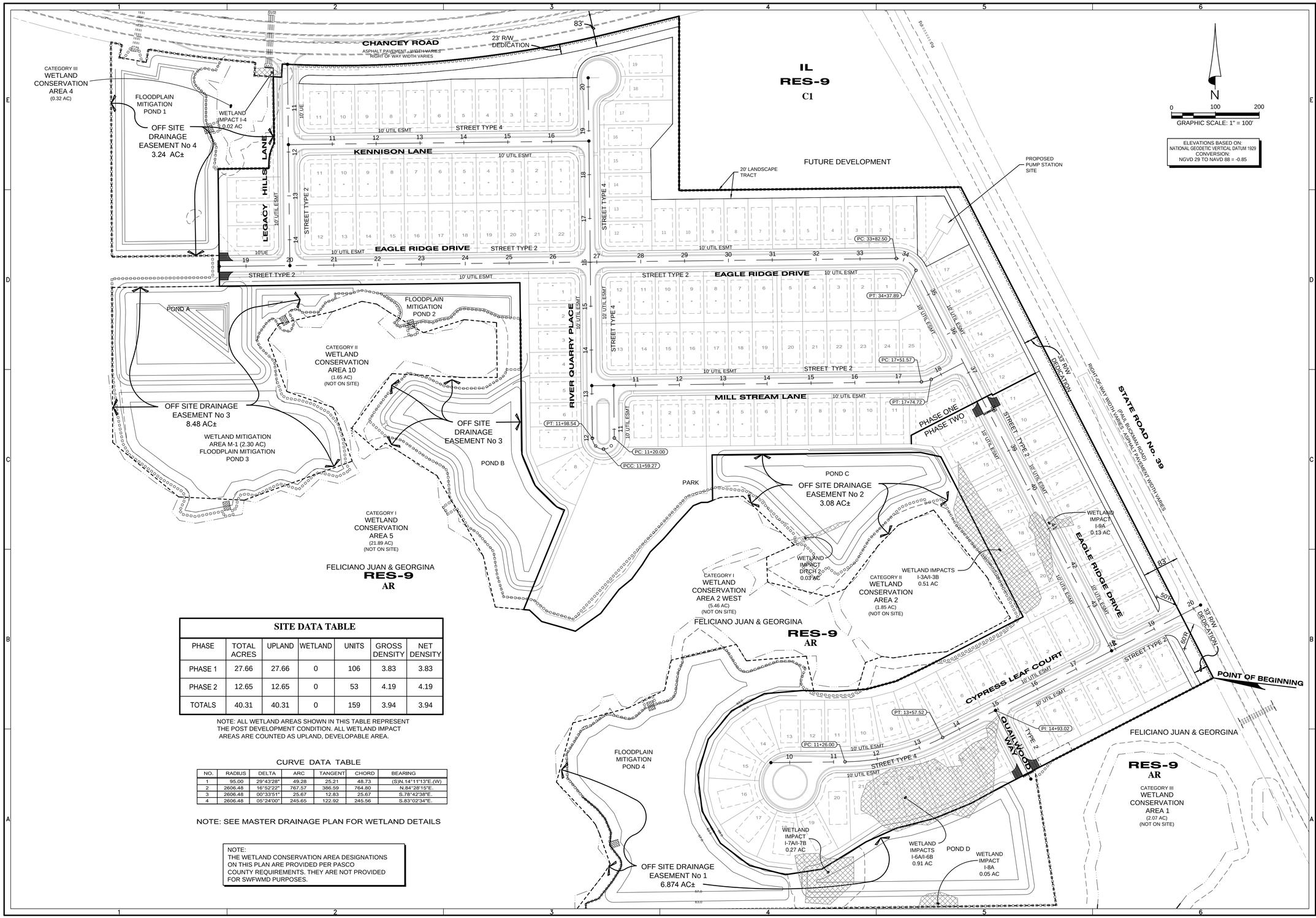
PROJECT NO:	MAR-RD-1001
FILE:	ASP
DESIGN BY:	DUNNING
DRAWN BY:	DUNNING

FLORIDA PROFESSIONAL ENGINEER

GARY D. MILLER
DATE:
REGISTRATION NO. 52717

4

R:\LEGACY DEVELOPMENT PROJECTS\LEGACY HILLS 2012\WORKING FILES\CURRENT DRAWINGS\CP\ASP.DWG-4 2014/10/24 11:42 AM ERIC FRANCIS



SITE DATA TABLE

PHASE	TOTAL ACRES	UPLAND	WETLAND	UNITS	GROSS DENSITY	NET DENSITY
PHASE 1	27.66	27.66	0	106	3.83	3.83
PHASE 2	12.65	12.65	0	53	4.19	4.19
TOTALS	40.31	40.31	0	159	3.94	3.94

NOTE: ALL WETLAND AREAS SHOWN IN THIS TABLE REPRESENT THE POST DEVELOPMENT CONDITION. ALL WETLAND IMPACT AREAS ARE COUNTED AS UPLAND, DEVELOPABLE AREA.

CURVE DATA TABLE

NO.	RADIUS	DELTA	ARC	TANGENT	CHORD	BEARING
1	95.00	29°43'28"	49.28	25.21	48.73	(S)N.14°11'13"E.(W)
2	2606.48	16°52'22"	767.57	386.59	764.80	N.84°28'15"E.
3	2606.48	00°33'51"	25.67	12.83	25.67	S.78°42'38"E.
4	2606.48	05°24'00"	245.65	122.92	245.56	S.83°02'34"E.

NOTE: SEE MASTER DRAINAGE PLAN FOR WETLAND DETAILS

NOTE:
THE WETLAND CONSERVATION AREA DESIGNATIONS ON THIS PLAN ARE PROVIDED PER PASCO COUNTY REQUIREMENTS. THEY ARE NOT PROVIDED FOR SWFWMD PURPOSES.

HEIDT DESIGN
Civil Engineering • Planning & GIS
Transportation Engineering
Ecological Services • Landscape Architecture
Engineering Business Certificate of Authorization No. 28762
Landscape Architecture Certificate of Authorization No. LC26000465
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Fax: 813-464-7629
www.HeidtDesign.com

LEGACY HILLS (FKA FELICIANO)

DIMENSIONAL LAYOUT

LEGACY GREEN LLC

PREPARED BY: RR

DATE	DESCRIPTION
07-11-14	SUBMITTED FOR SUBSTANTIAL PLAN REVIEW BY COUNTY
01-08-14	REVISED FOR COUNTY RESUBMITTAL
09-16-13	ISSUED FOR PLAN MOD REVIEW BY COUNTY
03-28-07	ADDED SITE DATA, ADJ. PROPERTY LABELS
01-18-07	SWFWMD COMMENTS
12-21-06	PC SUB

DATE	DESCRIPTION

PROJECT NO: MAR-RD-1001
FILE: DIM
DESIGN BY: DUNNING
DRAWN BY: DUNNING

FLORIDA PROFESSIONAL ENGINEER

GARY D. MILLER
DATE:
REGISTRATION NO. 52717

5

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PAVEMENT CONSTRUCTION NOTES - CRUSHED CONCRETE BASE

1. Pavement wearing surface shall be asphaltic concrete of type and thickness shown in detail and shall meet current Department of Transportation Specifications.
2. Pavement base shall be crushed concrete, as designated in plans, and shall be compacted to a minimum thickness as shown.
3. Crushed concrete road base material shall be of uniform quality, free of all organics, steel rebar, asphalt debris, and any other deleterious material.
4. Crushed concrete road base material shall generally conform to the gradation chart for graded aggregate base, FDOT Section 204, tested at a frequency required by the City or County having jurisdiction.
5. Crushed concrete base shall have a minimum compacted dry density of 114.0 pcf (per AASHTO T-180), and a minimum Limerock Bearing Ratio (LBR) of 150 (under-tolerance ±5%), tested at a frequency required the Governing Agency having jurisdiction, or in the absence thereof, by minimum FDOT standards.
6. Base single course lifts should not exceed 6-inches (compacted with 8" loose).
7. Crushed concrete road base shall be compacted to a minimum of 98% of Modified Proctor per AASHTO T-180, tested at a frequency required by Governing Agency having jurisdiction., or in the absence thereof, by minimum FDOT standards.
8. Stabilized Subgrade shall be placed and constructed for Type "B" stabilization in accordance with FDOT Section 160 and shall have a minimum LBR 40 or greater. Subgrade shall be compacted to the minimum thickness as shown. Subgrade shall be compacted to a minimum of 98% Modified Proctor per AASHTO T-180.
9. Compacted subgrade (beneath stabilized subgrade if required, or beneath base materials) shall be prepared in accordance with FDOT Index No. 505, latest edition and the project geotechnical report requirements. Embankment fills or natural sands to 24-inches below the bottom of the pavement base (if no stabilized subgrade), or to 24-inches below the bottom of stabilized subgrade, shall be sandy soils (A-3 or SP/SP-SM) with typically 15% fines or less passing the No. 200 sieve, compacted in 12-inch lifts (±) to a minimum of 98% Modified Proctor per AASHTO T-180.
10. All curbs and gutters shall be placed on a foundation of Type "B" stabilized subgrade with a minimum LBR 40 (±5%) which has been compacted to a minimum of 98% Modified Proctor per AASHTO T-180 for a minimum depth of six (6) inches.
11. All Portland Cement Concrete shall have a minimum compressive strength of 3000 p.s.i.
12. Roadway underdrain has been located on these plans to meet the minimum standards of Pasco County.
13. Should no underdrain be specified on the plans the Contractor is to include 1,000 linear feet of underdrain at unit prices for bid purposes.
14. All testing referenced above shall, at a minimum, be at the frequency required by the Governing Agency having jurisdiction, or in the absence thereof, by minimum FDOT standards.

Proposed Roadway Design:

Layer Coefficients	Thickness
0.44 - Type S-1 Asphalt Surface	1-3/4"
0.15 - Crushed Concrete Base (LBR 150)	6"
0.08 - Stabilized Subgrade (12" Min.)	12"

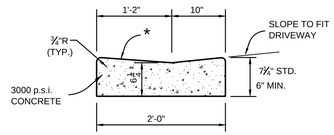
SN = (0.44) (1.75) + (0.15) (6) + (0.08) (12)

SN = 2.63

SN $\overline{SN}_D$

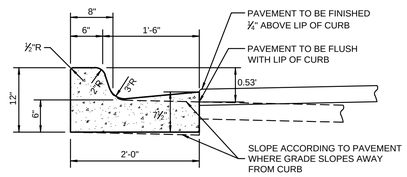
2.63 >/= 2.36

Use: 6" Crushed Concrete Base with 1-3/4" Type S-1 Asphalt Surface and 12" Stabilized Subgrade (12" Min.)

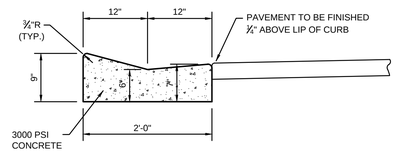


* WHEN USED ON HIGH SIDE OF ROADWAYS, THE CROSS SLOPE OF THE GUTTER SHALL MATCH THE CROSS SLOPE OF THE ADJACENT PAVEMENT. THE THICKNESS OF THE LIP SHALL BE 6", UNLESS OTHERWISE SHOWN.

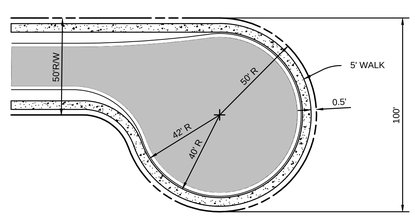
DROP CURB



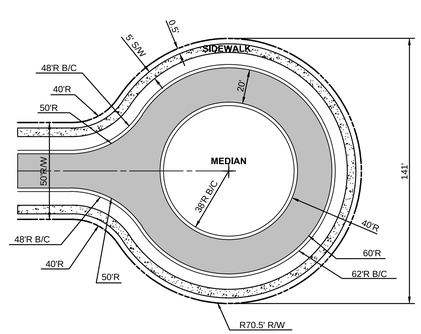
TYPE "F" CURB AND GUTTER



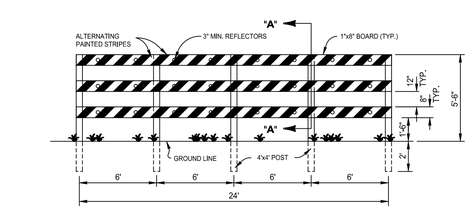
TYPE "A" CURB



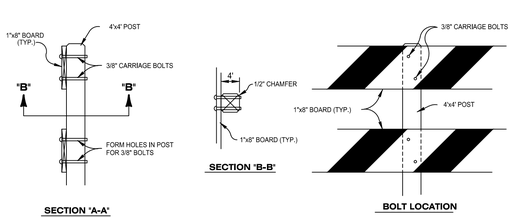
SMALL
CUL-DE-SAC LAYOUT



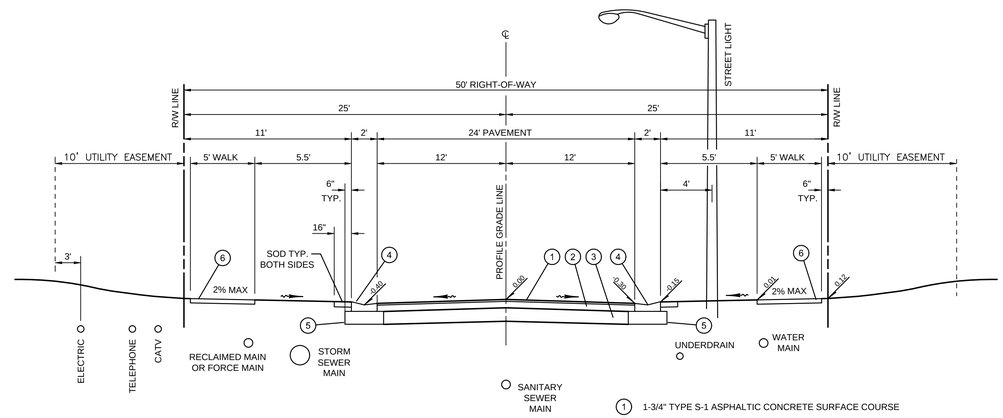
LARGE
CUL-DE-SAC LAYOUT



PLAN VIEW



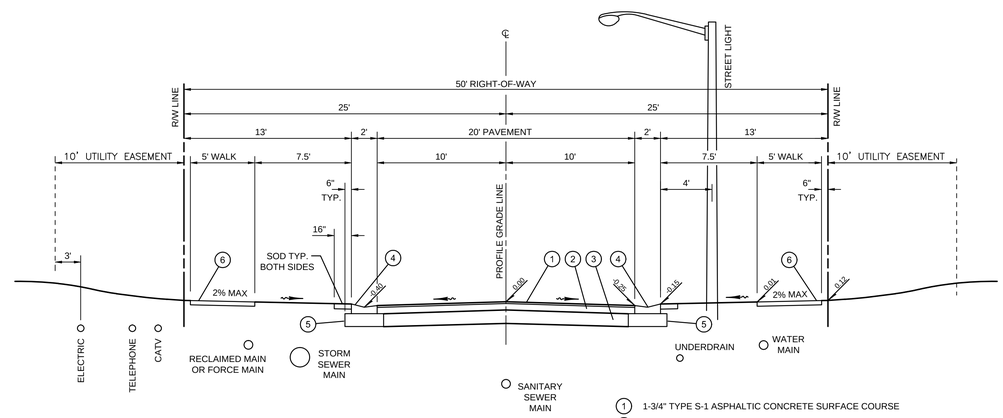
DEAD END BARRICADE



TYPE "2" STREET
50' RIGHT-OF-WAY
24' PAVEMENT
DESIGN SPEED 20 MPH
SCALE: 1" = 5'

1. 1-3/4" TYPE S-1 ASPHALTIC CONCRETE SURFACE COURSE
2. 6" CRUSHED CONCRETE BASE COURSE (LBR 150)
3. 12" STABILIZED SUBGRADE (98% MODIFIED PROCTOR)(LBR 40)
4. TYPE "A" CURB
5. 12" STABILIZED SUBGRADE UNDER CURB (LBR 40 - 98% DENSITY)
6. 4½" THICK CONCRETE SIDEWALK (3000 PSI)

DENOTES 1/4" PER FOOT MIN. SLOPE



TYPE "4" STREET
50' RIGHT-OF-WAY
20' PAVEMENT
DESIGN SPEED 20 MPH
SCALE: 1" = 5'

1. 1-3/4" TYPE S-1 ASPHALTIC CONCRETE SURFACE COURSE
2. 6" CRUSHED CONCRETE BASE COURSE (LBR 150)
3. 12" STABILIZED SUBGRADE (98% MODIFIED PROCTOR)(LBR 40)
4. TYPE "A" CURB
5. 12" STABILIZED SUBGRADE UNDER CURB (LBR 40 - 98% DENSITY)
6. 4½" THICK CONCRETE SIDEWALK (3000 PSI)

DENOTES 1/4" PER FOOT MIN. SLOPE

PROPOSED LOCAL ROADWAY DESIGN

MIN STR. # REQUIRED FOR RESIDENTIAL ROADS = 2.34
*PER PASCO COUNTY LDC SECTION 610.3

LAYER COEFFICIENTS	THICKNESS
0.44 - TYPE S-1 ASPHALT SURFACE COURSE	1.75"
0.15 - CRUSHED CONCRETE BASE COURSE (LBR 150)	6"
0.08 - STABILIZED SUBGRADE (12" MIN.)	12"

SN = (0.44 x 1.75) + (0.15 x 6) + (0.08 x 12) = 2.63
SN $\overline{SN}_R$
2.63 ≥ 2.34

ELEVATIONS BASED ON:
NATIONAL GEODETIC VERTICAL DATUM 1929
CONVERSION:
NGVD 29 TO NAVD 88 = -0.85

HEIDT DESIGN
Civil Engineering • Planning & GIS
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Ecological Services • Landscape Architecture
Engineering Business Certificate of Authorization No. 28762
Landscape Architecture Certificate of Authorization No. LC26000465
5806-B Breckenridge Pkwy.
Tampa, Florida 33610
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www.HeidtDesign.com

LEGACY HILLS
(FKA FELICIANO)

ROADWAY SECTIONS - PAVEMENT DETAILS

LEGACY GREEN LLC

PREPARED FOR:

DATE	DESCRIPTION

DATE	DESCRIPTION
09-23-14	COUNTY COMMENTS
07-11-14	SUBMITTED FOR SUBSTANTIAL PLAN REVIEW BY COUNTY
01-08-14	REVISED FOR COUNTI RESUBMITTAL
09-16-13	ISSUED FOR PLAN AND REVIEW BY COUNTI
03-28-07	SUBGRADE COEFFICIENT
12-21-06	DE BARRICADE; RS
12-06-06	TYPE 2 STREET CURB

PROJECT NO: MAR-RD-1001
FILE: RS
DESIGN BY: DUNNING
DRAWN BY: DUNNING

FLORIDA PROFESSIONAL ENGINEER

GARY D. MILLER
DATE:
REGISTRATION NO. 52717

6

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PASCO COUNTY CRUSHED CONCRETE BASE SPECIFICATIONS

THE WORK SPECIFIED UNDER THIS SECTION CONSISTS OF THE CONSTRUCTION OF ROADWAY BASE UTILIZING CRUSHED CONCRETE (RECLAIMED CONCRETE AGGREGATE BASE MATERIAL) ON A PREPARED STABILIZED SUBGRADE OF LBR 40 WITH A DENSITY OF 98% OF THE MODIFIED PROCTOR MAXIMUM DENSITY AS DETERMINED BY FM 1-T 180, METHOD D, IN CONFORMITY WITH THE LINES, GRADES NOTES AND TYPICAL CROSS SECTIONS SHOWN IN THE PLANS, AND AS DIRECTED BY THE COUNTY ENGINEER.

THE CONSTRUCTION OF CRUSHED CONCRETE BASE SHALL CONFORM TO THE REQUIREMENTS OF THIS SECTION, OR, IN LIEU THEREOF, SUCH REQUIREMENTS AS MAY BE ESTABLISHED BY THE COUNTY ENGINEER DURING CONSTRUCTION. THE COUNTY ENGINEER SHALL HAVE FULL AUTHORITY TO MODIFY THE PROVISIONS OF THIS SECTION AS DEEMED NECESSARY, IN HIS OPINION, TO MEET FIELD CONDITIONS AND REQUIREMENTS.

MATERIALS

CRUSHED CONCRETE MUST BE PRODUCED FROM A SOURCE APPROVED BY FLORIDA DEPARTMENT OF TRANSPORTATION OR THE COUNTY ENGINEER. THE SUPPLIER SHALL HAVE DEPARTMENT OF ENVIRONMENTAL PROTECTION (DEP) PERMIT REQUIREMENTS SECTION 62-701.730 OR BE QUALIFIED AS A CLEAN DEBRIS SOURCE UNDER DEP RULES. THE RECLAIMED CONCRETE AGGREGATE BASE SHALL CONSIST OF CRUSHED CONCRETE MATERIAL DERIVED FROM THE CRUSHING OF HARD PORTLAND CEMENT CONCRETE.

COMPOSITION

BASE MATERIAL SHALL CONFORM TO THE FOLLOWING **GRADATION REQUIREMENTS**:

SIEVE SIZE	PERCENT BY WEIGHT PASSING
2 INCH	100
3/4 INCH	65 to 95
3/8 INCH	40 to 85
No. 4	25 to 65
No. 10	20 to 50
No. 50	5 to 25
No. 200	0 to 10

BASE MATERIAL SHALL CONFORM TO THE FOLLOWING **PLASTICITY REQUIREMENTS**:

CRUSHED CONCRETE BASE SHALL NOT CONTAIN PLASTIC SOILS SUCH THAT THE No. 40 SIEVE MATERIAL SHALL BE NON-PLASTIC.

LIQUID LIMIT (AS DETERMINED BY AASHTO T80) (LESS THAN 25) PER MATERIAL TYPE

THE FINISHED IN-PLACE CRUSHED CONCRETE BASE **LIMEROCK BEARING RATIO** SHALL HAVE A MINIMUM (LBR) OF 150.

CRUSHED CONCRETE BASE SHALL BE FREE OF ALL MATERIALS THAT FALL UNDER THE CATEGORY OF SOLID WASTE OR HAZARD MATERIALS AS DEFINED BY THE STATE OR LOCAL JURISDICTION AND SHALL MEET ALL DEP PERMIT REQUIREMENTS WHICH PERTAIN TO CONSTRUCTION, DEMOLITION AND RECYCLING OF THESE MATERIALS. CRUSHED CONCRETE BASE SHALL BE ASBESTOS FREE. THE FOLLOWING LIMITS SHALL NOT BE EXCEEDED:

BITUMINOUS CONCRETE.......1% BY WEIGHT
BRICKS.......1% BY WEIGHT
WOOD AND OTHER ORGANIC SUBSTANCES.......0.5% BY WEIGHT
HEAVY METALS (EXCEPT LEAD).......0.1% BY WEIGHT
LEAD.......5 PARTS PER MILLION
REINFORCED STEEL AND WELDED WIRE FABRIC.......0.1% BY WEIGHT
PLASTER AND GYPSUM BOARD.......0.1% BY WEIGHT

THE MATERIAL FOR CRUSHED CONCRETE BASE SHALL CONSIST ONLY OF CRUSHED CONCRETE PAVEMENT AND SUCH ADDITIVE MATERIAL AS MAY BE APPROVED BY THE COUNTY ENGINEER FOR THE PURPOSE OF FACILITATING CONSTRUCTION AND ACHIEVING THE DESIRED CHARACTERISTICS OF THE FINISHED IN-PLACED PRODUCT. APPROVAL FROM THE COUNTY ENGINEER IS REQUIRED BEFORE PLACING MATERIAL FROM MORE THAN ONE SOURCE. ONCE APPROVED, A CHANGE IN THE SOURCE OF BASE MATERIAL SHALL REQUIRE ADDITIONAL ACCEPTANCE TESTING. THE MATERIAL SHALL NOT CONTAIN LUMPS, BALLS OR POCKETS OF SAND OR CLAY MATERIAL IN SIZE OR QUANTITY SUFFICIENT TO BE DETRIMENTAL TO THE PROPER BONDING, FINISHING, STRENGTH OF THE CONCRETE BASE. EXISTING BASE IS TO BE REMOVED TO CONSTRUCT THE NEW BASE.

INSPECTION

SUBGRADE AND BASE INSPECTIONS SHALL BE CONDUCTED BY THE ENGINEER OF RECORD AND THE COUNTY INSPECTOR PRIOR TO SURFACE COURSE CONSTRUCTION.

NOTE:
NO DEVIATIONS TO THIS DETAIL WILL BE PERMITTED UNLESS APPROVED BY THE COUNTY ENGINEER.
ANY PROPOSED ALTERATIONS SHALL BE CLEARLY IDENTIFIED AND HIGHLIGHTED ON DETAIL.

PASCO COUNTY ENGINEERING SERVICES — DESIGN STANDARDS
CRUSHED - CONCRETE BASE SPECIFICATIONS — Sheet No. 1 of 2 — Index No. 104
APPROVED BY JCW — BCC APPROVAL — REVISED
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EQUIPMENT, PLACEMENT AND SPREADING OF MATERIAL

USE MECHANICAL ROCK SPREADERS, EQUIPPED WITH A DEVICE THAT STRIKES OFF THE ROCK UNIFORMLY TO LAYING THICKNESS AND CAPABLE OF PRODUCING EVEN DISTRIBUTION. FOR ROADWAY WIDTHS OF 20 FEET OR LESS, CROSSOVERS, INTERSECTIONS, RAMP AREAS OR WHERE THE USE OF A MECHANICAL SPREADER IS NOT PRACTICABLE; THE CONTRACTOR MAY SPREAD THE CRUSHED CONCRETE BASE USING BULLDOZERS OR BLADE GRADERS.

TRANSPORT CRUSHED CONCRETE TO THE POINT OF USE, OVER THE BASE PREVIOUSLY PLACED, AND DUMP IT ON THE END OF THE PRECEDING SPREAD. HAULING ON SUBGRADE TO DUMP CRUSHED CONCRETE BASE WILL BE PERMITTED ONLY WHEN, IN THE ENGINEER'S OPINION, THESE OPERATIONS WILL NOT BE DETRIMENTAL TO THE BASE AND SUBGRADE.

CRUSHED CONCRETE SHALL BE SPREAD UNIFORMLY WITHOUT SEGREGATION OF FINE OR COURSE MATERIALS. SEGREGATED AREAS SHALL BE REPLACED WITH PROPERLY GRADED CRUSHED CONCRETE AFTER REMOVAL.

THE MINIMUM THICKNESS OF THE CRUSHED CONCRETE BASE SHALL BE INDICATED ON THE PLANS. WHEN THE SPECIFIED COMPACTED THICKNESS OF THE CRUSHED CONCRETE BASE IS **GREATER THAN SIX INCHES, CONSTRUCT THE BASE IN MULTIPLE COURSES OF EQUAL THICKNESS. INDIVIDUAL COURSES SHALL NOT BE LESS THAN THREE INCHES.** PLACE CRUSHED CONCRETE MATERIAL TO ENSURE THE TOTAL THICKNESS SINGLE SOURCE INTEGRITY AT ANY STATION LOCATION OF THE BASE.

COMPACTING, FINISHING AND TESTING REQUIREMENTS

AFTER SPREADING IS COMPLETED THE CRUSHED CONCRETE SHALL BE UNIFORMLY COMPACTED, WITH WATER BEING ADDED AS REQUIRED TO A **DENSITY OF NOT LESS THAN ONE HUNDRED PERCENT (100%) OF THE MAXIMUM DENSITY AS DETERMINED BY AASHTO T-180.** DURING FINAL COMPACTION OPERATIONS, IF THE BLADING OF ANY AREAS IS NECESSARY TO OBTAIN THE TRUE GRADE AND CROSS SECTION, FREE OF SCABS AND LAMINATIONS, THE COMPACTING OPERATIONS FOR SUCH AREAS SHALL BE COMPLETED PRIOR TO THE PERFORMANCE OF DENSITY TESTS ON THE FINISHED BASE.

MULTIPLE COURSE BASE: CLEAN THE FIRST COURSE OF FOREIGN MATERIAL, THEN BLADE AND BRING IT TO A SURFACE CROSS-SECTION APPROXIMATELY PARALLEL TO THE FINISHED BASE. BEFORE SPREADING ANY MATERIAL FOR THE UPPER COURSES, **OBTAIN DENSITY TESTS FOR THE LOWER COURSES** TO DETERMINE THAT THE REQUIRED COMPACTION [NOT LESS THAN ONE HUNDRED PERCENT (100%) OF THE MAXIMUM DENSITY AS DETERMINED BY AASHTO T-180] HAS BEEN OBTAINED. AFTER SPREADING THE CRUSHED CONCRETE FOR THE TOP COURSE, FINISH AND SHAPE IT'S SURFACE TO PRODUCE THE REQUIRED GRADE AND CROSS-SECTION, FREE OF SCABS AND LAMINATIONS, AFTER COMPACTION.

THE MINIMUM DENSITY THAT WILL BE ACCEPTED AT ANY LOCATION OUTSIDE THE TRAVELED ROADWAY (SUCH AS INTERSECTIONS, CROSSOVERS, TURNOUTS, ETC.) SHALL BE 98% OF THE MAXIMUM DENSITY AS DETERMINED BY AASHTO T-180.

TESTING OF BASE COURSE

THE MINIMUM **FREQUENCY** OF SAMPLING AND TESTING OF CRUSHED CONCRETE MATERIAL, LAB DENSITY, FIELD DENSITY AND THICKNESS SHALL ADHERE TO THE FREQUENCY OF TESTING FOR LIMEROCK BASE IN THE MOST CURRENT EDITION OF "**PASCO COUNTY ENGINEERING SERVICES DEPARTMENT TESTING SPECIFICATIONS FOR CONSTRUCTION OF ROADS, STORM DRAINAGE AND UTILITIES**". ONE PLANT MIX DESIGN, ONE PLANT GRADATION TEST FOR SIEVE ANALYSIS OF FINE AND COARSE AGGREGATES (AASHTO T-27) (FM1-T027) INCLUDING A PLASTICITY INDEX (FM-T090) (AASHTO T-90) FROM THE APPROVED SOURCE SHALL BE SUBMITTED AT ONE PER DAY OR CHANGE OF MATERIAL. ONE ROADWAY FIELD TEST FOR SIEVE ANALYSIS OF FINE AND COARSE AGGREGATES (ASTM C-136) SHALL BE SUBMITTED PER 500 FEET OF ROAD PER DAY PER MIX DESIGN; MINIMUM ONE PER ROAD.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TESTING PERFORMED IN CONNECTION WITH CONSTRUCTION OF THE BASE.

CORRECTION OF DEFECTS

ALL SEGREGATED AREAS OF FINE OR COURSE CRUSHED CONCRETE SHALL BE REMOVED AND REPLACED WITH PROPERLY GRADED RECLAIMED CONCRETE AGGREGATE BASE MATERIAL. ALL DEFECTS IN MATERIALS AND CONSTRUCTION SHALL BE CORRECTED BY THE CONTRACTOR, AT HIS EXPENSE, AND TO THE SATISFACTION OF THE COUNTY ENGINEER.

PRIMING AND MAINTENANCE

APPLY THE PRIME COAT ONLY WHEN THE BASE MEETS THE SPECIFIED DENSITY REQUIREMENTS AND WHEN THE MOISTURE CONTENT. AT THE TIME OF PRIMING, ENSURE THAT THE BASE IS FIRM, UNYIELDING AND IN SUCH CONDITION THAT NO UNDUE DISTORTION WILL OCCUR. MAINTAIN THE TRUE CROWN AND TEMPLATE, WITH NO RUTTING OR DISTORTION, WHILE APPLYING THE SURFACE COURSE.

EMBANKMENT MATERIAL UNDER CONCRETE PAVEMENT SHALL BE PER FDOT INDEX No. 505.

PASCO COUNTY TESTING SPECIFICATIONS ON CRUSHED CONCRETE BASE

TESTS FOR BASE THICKNESS, AND DENSITY SHALL BE LOCATED NO MORE THAN THREE HUNDRED (300) FEET APART AND SHALL BE STAGGERED TO THE LEFT, RIGHT, AND ON THE CENTERLINE OF ROADWAY. THERE SHALL BE NO LESS THAN ONE (1) TEST PER STREET. BEARING VALUE, GRADATION AND FIELD TEST FOR SIEVE ANALYSIS OF FINE AND COARSE AGGREGATES (ASTM C-136) SHALL BE NO MORE THAN FIVE HUNDRED (500) FEET.

EXAMPLE: A SEVEN HUNDRED FEET ROAD WOULD REQUIRE TWO FIELD LBR AND GRADATION TESTS, THREE FIELD DENSITY AND THICKNESS TESTS ALONG WITH THE APPROPRIATE LAB TESTING.

NOTE:
NO DEVIATIONS TO THIS DETAIL WILL BE PERMITTED UNLESS APPROVED BY THE COUNTY ENGINEER.
ANY PROPOSED ALTERATIONS SHALL BE CLEARLY IDENTIFIED AND HIGHLIGHTED ON DETAIL.

PASCO COUNTY ENGINEERING SERVICES — DESIGN STANDARDS
CRUSHED - CONCRETE BASE SPECIFICATIONS — Sheet No. 2 of 2 — Index No. 104
APPROVED BY JCW — BCC APPROVAL — REVISED
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SOIL – CEMENT BASE SPECIFICATIONS

DESCRIPTION
CONSTRUCT A BASE COURSE COMPOSED OF A COMBINATION OF SOIL, PORTLAND CEMENT, AND WATER.

MATERIALS
MEET THE FOLLOWING REQUIREMENTS:

CEMENT: PORTLAND CEMENT, TYPE I, II, III, OR TYPE I–P OR TYPE I–S.................SECTION 921

WATER: USE WATER THAT IS FREE FROM SUBSTANCES DELETERIOUS TO HARDENING OF THE SOIL–CEMENT MIXTURE.
CURING MATERIAL: 916–4

USE EMULSIFIED ASPHALT GRADE SS, RS, OR MS AS APPROVED BY THE ENGINEER. DILUTE THESE AS RECOMMENDED BY MANUFACTURER.

SOIL: FOR BASE COURSE CONSTRUCTION, USE EITHER THE MATERIAL EXISTING IN THE LOCATION TO BE OCCUPIED BY BASE, A SUITABLY FRIABLE MATERIAL FURNISHED BY THE CONTRACTOR, OR A COMBINATION OF THESE. IF THE MATERIAL EXISTING IN THE LOCATION TO BE OCUPIED BY THE BASE DOES NOT MEET THE REQUIREMENTS SPECIFIED BELOW, REMOVE AND REPLACED WITH SUITABLE SOIL.

OBTAIN APPROVAL OF THE MATERIAL PITS PRIOR TO USE. EXCAVATE MATERIAL PITS TO ACHIEVE A UNIFORMLY MIXED MATERIAL WITH REASONABLY CONSISTENT CHARACTERISTICS. BLEND STRATA OR DIFFERING MATERIALS IN ACCORDANCE WITH A PROCEDURE APPROVED BY THE ENGINEER. THE COUNTY WILL CONSIDER PROPOSED RECYCLED MATERIALS ON A CASE BY CASE BASIS.

SPECIFIC REQUIREMENTS FOR SOIL:
ORGANIC MATERIAL (AS PER FM 1–T267)..........MAXIMUM 5%
TOTAL CLAY AND SILT CONTENT (MINUS NO. 200 [75 µΩ SIEVE](AS PER FM 1–T088, NO HYDROMETER TEST)..........MAXIMUM 25%
PLASTIC INDEX (AS PER FM 1–T090)..........MAXIMUM 10%
LIQUID LIMIT (AS PER FM 1–T089)..........MAXIMUM 25%
GRADATION:
PASSING 2 INCH [50 MM] SIEVE..........MINIMUM 100%
PASSING NO. 4 [4.75 MM] SIEVE..........MINIMUM 55%
PASSING NO. 10 [2.00 MM] SIEVE..........MINIMUM 37%
(AS PER FM 1–T088)

AS AN EXCEPTION TO THE ABOVE REQUIRMENTS, THE CONTRACTOR MAY USE ANY MATERIAL MEETING THE REQUIREMENTS FOR LIMEROCK.

NOTE:

THE ABOVE SOIIL CEMENT BASE SPECIFICATIONS WERE TAKEN FROM FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION 2002 MANUAL – SECTION 270. AS SUCH, THE REFERENCED MATERIALS FOR SOIL CEMENT BASE SHALL CONFORM TO THE REQUIREMENTS SPECIFIED IN DIVISION III (MATERIALS) OF THIS FDOT MANUAL AS WELL.

SOIL CEMENT SHALL BE PLANT MIXED. DESIGN MIX SHALL BE 300 PSI AND CONSTRUCTED BASE SHALL NOT EXCEED 350 PSI.

NOTE:
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PASCO COUNTY ENGINEERING SERVICES — DESIGN STANDARDS
SOIL - CEMENT BASE SPECIFICATIONS — Sheet No. 1 of 1 — Index No. 105
APPROVED BY JCW — BCC APPROVAL — REVISED
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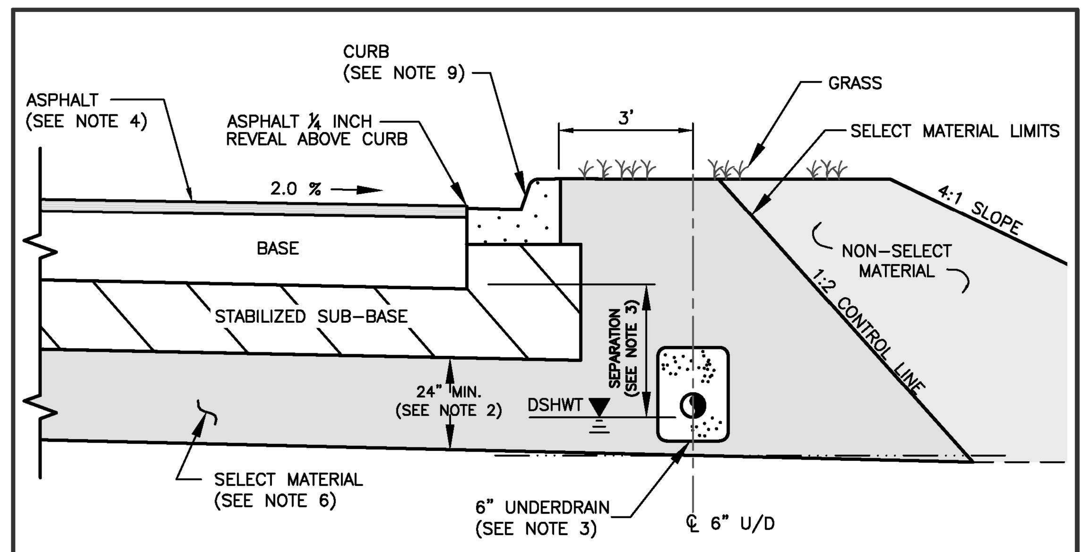

SECTIONAL VIEW
NTS

NOTES:

1. THE MINIMUM VERTICAL SEPARATION BETWEEN THE DESIGN SEASONAL HIGH WATER TABLE (DSHWT) AND THE BOTTOM OF THE BASE AT THE LOWEST EDGE OF PAVEMENT SHALL BE AS FOLLOWS:
   A. LIMEROCK BASE — 24 INCH
   B. SOIL CEMENT BASE — 12 INCH
   C. CRUSHED CONCRETE BASE (IF APPROVED) — 12 INCH
   D. ASPHALT BASE COURSE (ABC) — 12 INCH
2. A MINIMUM TWO (2) FEET OF SELECT MATERIAL CONSISTING OF A–1, A–3 OR A–2–4 WITH A MAXIMUM 15% PASSING THE #200 SIEVE BELOW THE STABILIZED SUB–BASE.
3. IF THE VERTICAL SEPARATION BETWEEN DSHWT AND BOTTOM OF BASE IS LESS THAN 2 FEET, UNDERDRAINS SHALL BE CONSTRUCTED ALONG BOTH SIDES OF THE ROAD. IF 2–3 FEET, UNDERDRAINS SHALL BE CONSTRUCTED ALONG ONE SIDE. THE INVERT OF A SIX (6) INCH UNDERDRAIN SHALL BE TWO (2) FEET MINIMUM BELOW THE BOTTOM OF THE BASE.
4. TYPE 2 THRU TYPE 5 ROADWAYS SHALL CONTAIN A MINIMUM OF 1.5 INCH OF SP ASPHALTIC CONCRETE. COLLECTOR ROADWAYS SHALL HAVE A MINIMUM OF THREE (3) INCHES OF SP ASPHALTIC CONCRETE. TYPE 1 ROADWAYS MAY BE COMPLETED IN STAGES, INITIALLY 2.25 INCHES OF SP 12.5 (S–1) ASPHALT COURSE WITH REQUIRED PAVEMENT MARKINGS AND 0.75 INCHES OF SP 9.5 (S–3) COURSE INSTALLED WITH ANY THERMOPLASTIC STRIPES, PRIOR TO RELEASE OF THE ASSURANCE FOR MAINTENANCE.
5. THE ROAD DESIGN DRAWINGS SHALL CONTAIN SOIL BORING LOCATIONS WITH EXISTING SOIL DATA, OBSERVED WATER LEVEL AND DSHWT SURFACE. UNDERDRAIN OUTFALL POND DATA AND PROXIMATE WETLAND HYDRO PERIOD ELEVATIONS SHALL ALSO BE IDENTIFIED.
6. SELECT MATERIAL SHALL BE PLACED PER FDOT INDEX DRAWINGS 500 & 505.
7. THE REQUIRED MINIMUM STRUCTURAL NUMBER (SN) SHALL BE;
   2.34 MIN. TYPE 2 ROADWAY
   3.50 MIN. TYPE I ROADWAYS
   3.70 MIN. COUNTY COLLECTOR
   4.00 MIN. COUNTY ARTERIAL
8. SOIL CEMENT BASE SHALL NOT BE CONSTRUCTED OVER STABILIZED SUBGRADE EXCEEDING LBR 20. THE COUNTY ASSIGNED LAYER COEFFICIENT FOR A MAXIMUM 12 INCH DEPTH, LBR 20 SHALL BE 0.04 PER INCH.
9. CURB DESIGN IS SITE SPECIFIC AND SHALL BE IDENTIFIED ON PLANS.

NOTE:
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PASCO COUNTY ENGINEERING SERVICES — DESIGN STANDARDS
ROADWAY DESIGN CRITERIA — Sheet No. 1 of 1 — Index No. 100
APPROVED BY JCW — BCC APPROVAL — REVISED
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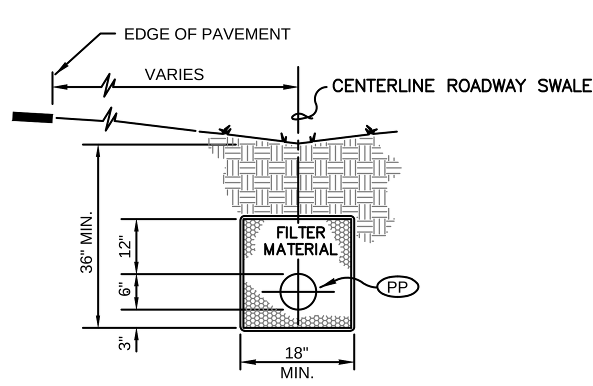
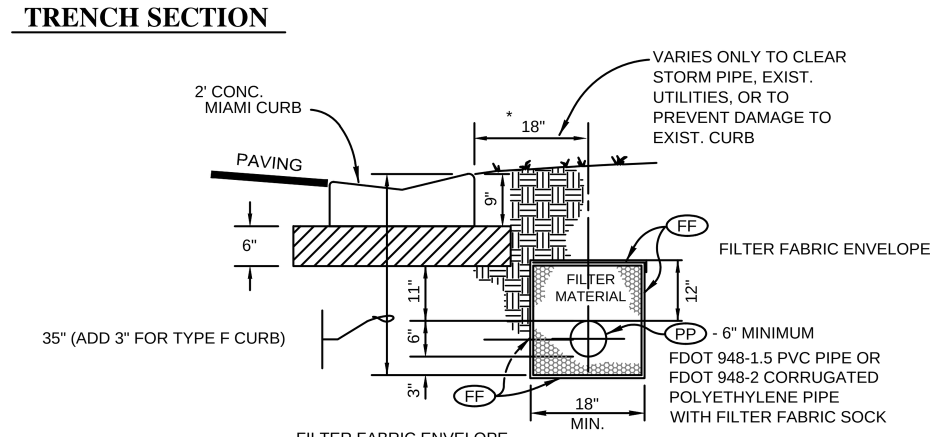


TRENCH SECTION

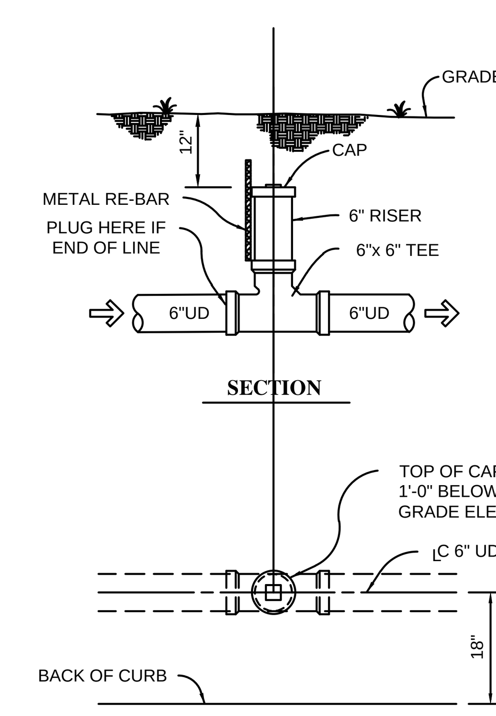


TRENCH SECTION

FINE AGGREGATE - NOTES

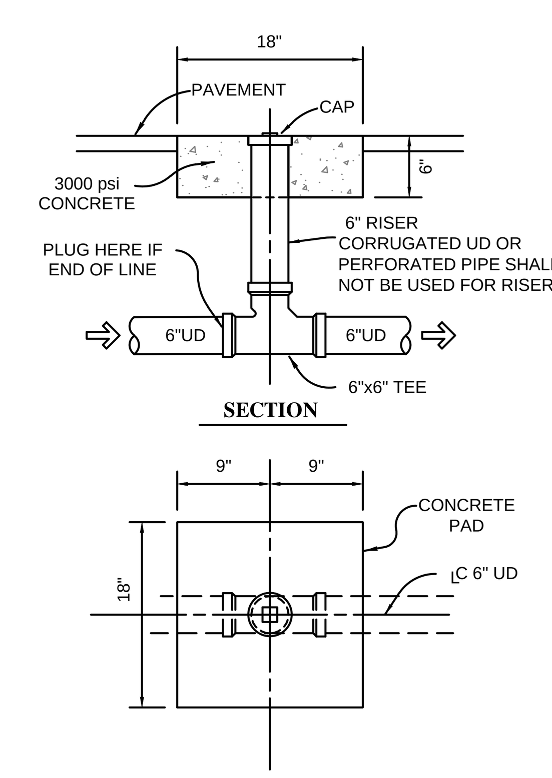
1. Minimum grade on underdrain pipe shall be 0.2%
2. Fine aggregate shall be quartz sand meeting the requirements of Sections 902-4 of the Standard Specifications.
3. Non-perforated shall be used for all roadway crossings. Perforated pipe shall not be placed under street pavement.
4. Filter fabric shall be Type D-3; in accordance with FDOT Index 199.
5. All piping shall meet FDOT 948-1.5 Standards for PVC Pipe and FDOT 948-2 for Corrugated Polyethylene Pipe.
6. When Corrugated Polyethylene tubing with slots or 360° perforations is used in conjunction with fine aggregate, a filter fabric sock meeting 948-3 is required.
7. FDOT and local governing agencies may have minimum standards which may exceed those referenced above. Contractor shall install underdrain in accordance with FDOT and local governing districts' minimum standards and regulations.
8. Filter material (fine aggregate) shall be completely wrapped in filter fabric. All filter fabric shall overlap a minimum of 1' (12 inches).

6 " UNDERDRAIN DETAIL
(FOR FINE AGGREGATE)



UNDERDRAIN CLEANOUT DETAIL

NOTE:
LOCATION OF CLEANOUT TO BE MARKED ON CURB.



UNDERDRAIN CLEANOUT DETAIL

ELEVATIONS BASED ON:
NATIONAL GEODETIC VERTICAL DATUM 1929
CONVERSION:
NGVD 29 TO NAVD 88 = -0.85

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LEGACY HILLS (FKA FELICIANO)

ROADWAY SECTIONS - PAVEMENT DETAILS

PREPARED FOR: **LEGACY GREEN LLC**

DATE	DESCRIPTION
07-11-14	SUBMITTED FOR SUBSTANTIAL PLAN MOD. REVIEW BY COUNTY
01-08-14	REVISED FOR COUNTY RESUBMITTAL
09-16-13	ISSUED FOR PLAN MOD REVIEW BY COUNTY
03-28-07	SUBGRADE COEFFICEINT
12-21-06	DE BARRICADE, RS
12-06-06	TYPE 2 STREET CURB

PROJECT NO:	MAR-RD-1001
FILE:	RS
DESIGN BY:	DUNNING
DRAWN BY:	DUNNING

FLORIDA PROFESSIONAL ENGINEER
GARY D. MILLER
DATE:
REGISTRATION NO. 52717

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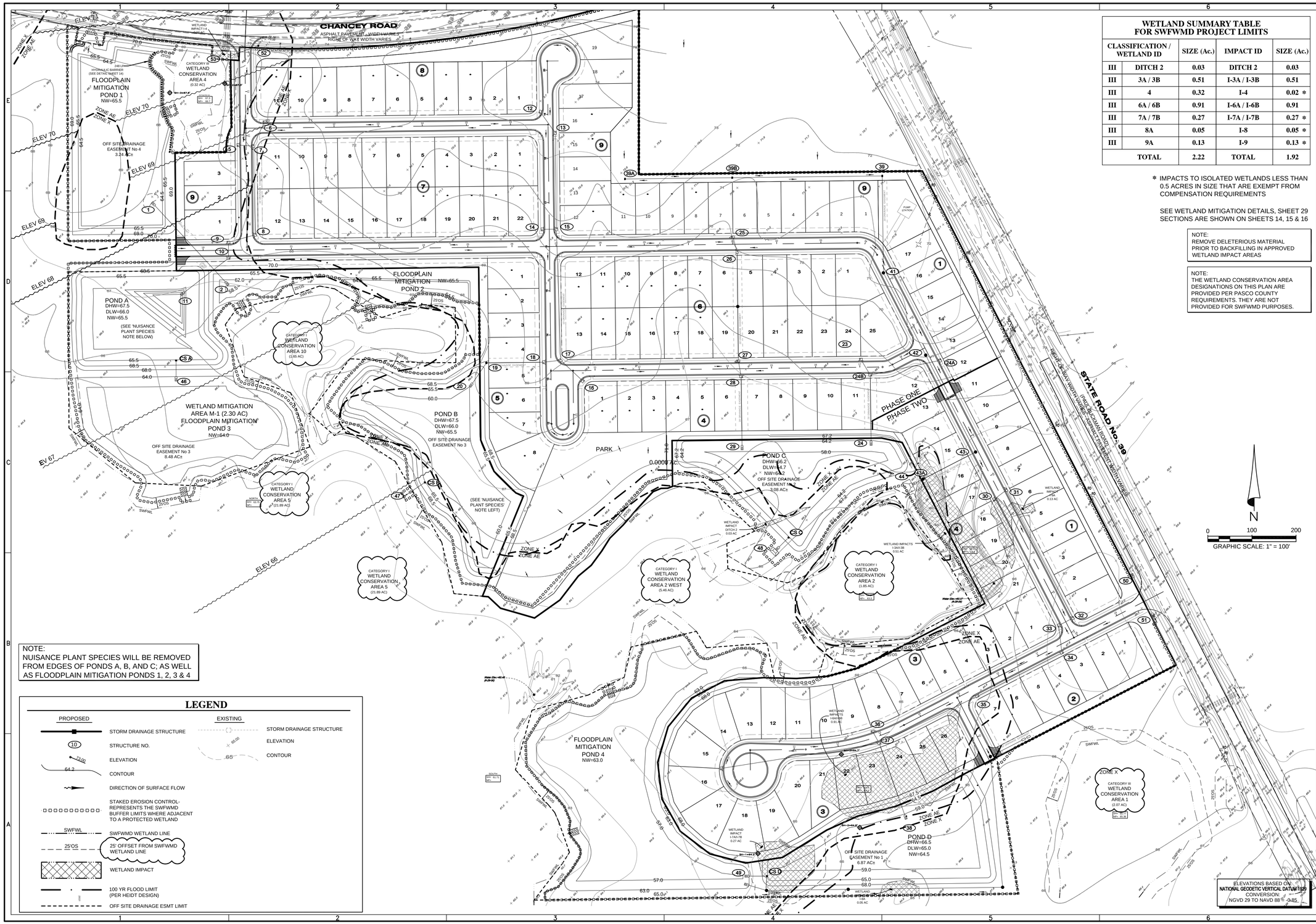

WETLAND SUMMARY TABLE FOR SWFWMD PROJECT LIMITS				
CLASSIFICATION / WETLAND ID		SIZE (Ac.)	IMPACT ID	SIZE (Ac.)
III	DITCH 2	0.03	DITCH 2	0.03
III	3A / 3B	0.51	I-3A / I-3B	0.51
III	4	0.32	I-4	0.02 *
III	6A / 6B	0.91	I-6A / I-6B	0.91
III	7A / 7B	0.27	I-7A / I-7B	0.27 *
III	8A	0.05	I-8	0.05 *
III	9A	0.13	I-9	0.13 *
	TOTAL	2.22	TOTAL	1.92

* IMPACTS TO ISOLATED WETLANDS LESS THAN 0.5 ACRES IN SIZE THAT ARE EXEMPT FROM COMPENSATION REQUIREMENTS

SEE WETLAND MITIGATION DETAILS, SHEET 29
SECTIONS ARE SHOWN ON SHEETS 14, 15 & 16

NOTE:
REMOVE DELETERIOUS MATERIAL PRIOR TO BACKFILLING IN APPROVED WETLAND IMPACT AREAS

NOTE:
THE WETLAND CONSERVATION AREA DESIGNATIONS ON THIS PLAN ARE PROVIDED PER PASCO COUNTY REQUIREMENTS. THEY ARE NOT PROVIDED FOR SWFWMD PURPOSES.

NOTE:
NUISANCE PLANT SPECIES WILL BE REMOVED FROM EDGES OF PONDS A, B, AND C; AS WELL AS FLOODPLAIN MITIGATION PONDS 1, 2, 3 & 4

LEGEND

PROPOSED		EXISTING	
	STORM DRAINAGE STRUCTURE		STORM DRAINAGE STRUCTURE
10	STRUCTURE NO.	65.50	ELEVATION
72.00	ELEVATION	65	CONTOUR
64.2	CONTOUR		
	DIRECTION OF SURFACE FLOW		
	STAKED EROSION CONTROL- REPRESENTS THE SWFWMD BUFFER LIMITS WHERE ADJACENT TO A PROTECTED WETLAND		
SWFWL	SWFWMD WETLAND LINE		
25'OS	25' OFFSET FROM SWFWMD WETLAND LINE		
	WETLAND IMPACT		
	100 YR FLOOD LIMIT (PER HEIDT DESIGN)		
	OFF SITE DRAINAGE ESMT LIMIT		

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LEGACY HILLS (FKA FELICIANO)

MASTER DRAINAGE PLAN

PREPARED FOR: LEGACY GREEN LLC

DATE	DESCRIPTION
12-30-14	ROUND 3 COUNTY REVIEW COMMENTS
09-22-14	COUNTY COMMENTS
07-11-14	SUBMITTED FOR SUBSTANTIAL ROUND 2 REVIEW BY COUNTY

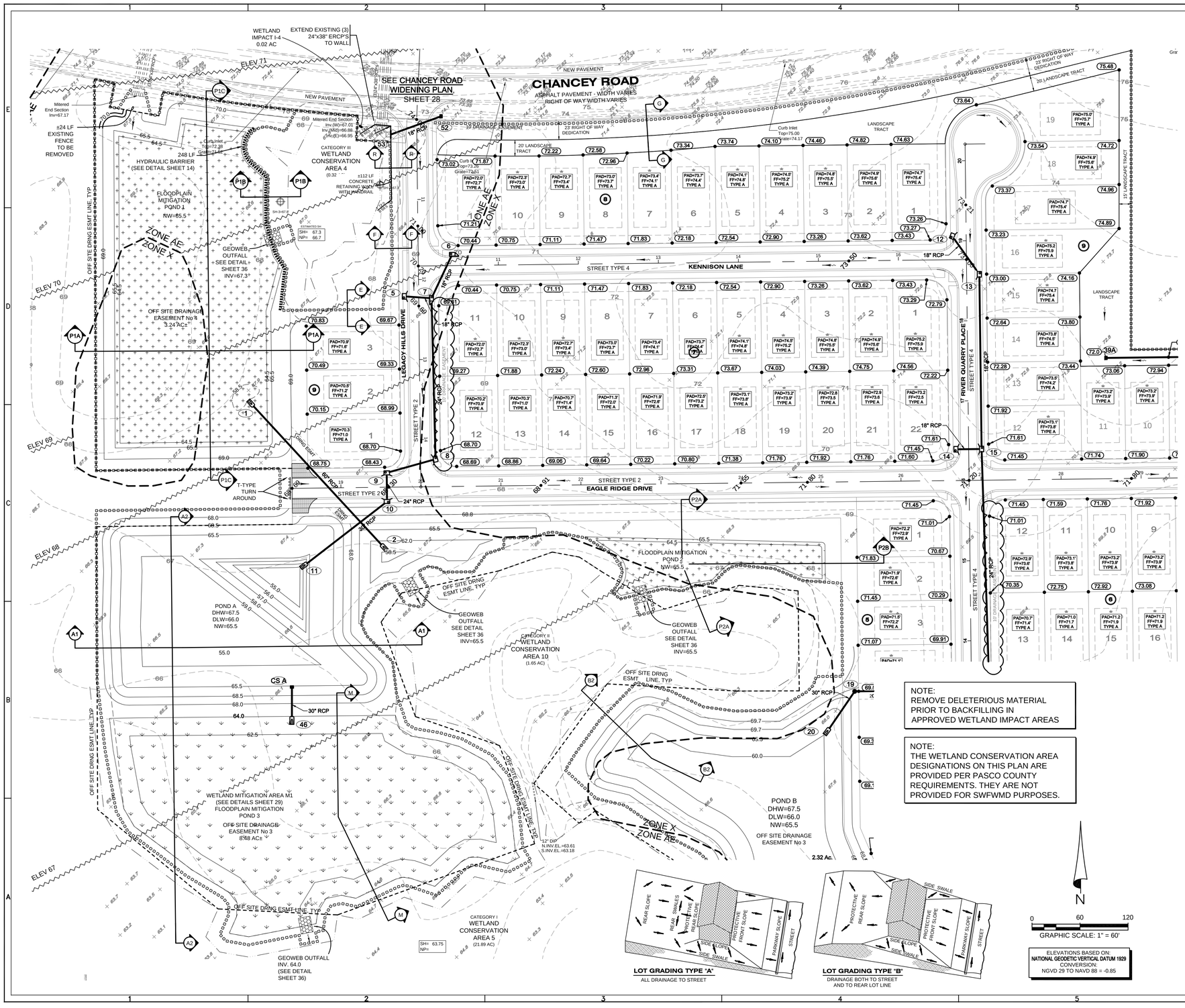
DATE	DESCRIPTION
05-07-14	REVISED FOR ERP COMMENTS
01-08-14	REVISED FOR COUNTY RESUBMITTAL
09-16-13	ISSUED FOR FLAM MOD REVIEW BY COUNTY
08-15-07	HYDRAULIC BARRIER
05-18-07	FPM PONDS 1 & 2
03-28-07	40-43 LLA ZJA XHRS, STREET NAMES
03-18-07	SWFWMD COMMENTS
12-21-06	PC SUB

PROJECT NO: MAR-RD-1001
FILE: MD-100
DESIGN BY: DUNNING
DRAWN BY: DUNNING

FLORIDA PROFESSIONAL ENGINEER

GARY D. MILLER
DATE:
REGISTRATION NO. 52717

R:\LEGACY DEVELOPMENT PROJECTS\LEGACY HILLS 2012\WORKING FILES\CURRENT DRAWINGS\CPMD-100.DWG - 7 2014\12\30 9:36 AM ERIC FRANCIS



NOTE:
REMOVE DELETERIOUS MATERIAL PRIOR TO BACKFILLING IN APPROVED WETLAND IMPACT AREAS

NOTE:
THE WETLAND CONSERVATION AREA DESIGNATIONS ON THIS PLAN ARE PROVIDED PER PASCO COUNTY REQUIREMENTS. THEY ARE NOT PROVIDED FOR SWFWMD PURPOSES.

LOT GRADING TYPE "A"
ALL DRAINAGE TO STREET

LOT GRADING TYPE "B"
DRAINAGE BOTH TO STREET AND TO REAR LOT LINE

N

0 60 120
GRAPHIC SCALE: 1" = 60'

ELEVATIONS BASED ON:
NATIONAL GEODETIC VERTICAL DATUM 1929 CONVERSION:
NGVD 29 TO NAVD 88 = -0.85

LEGEND

EXISTING

- STORM DRAINAGE STRUCTURE
- ELEVATION
- CONTOUR

PROPOSED

- STORM DRAINAGE STRUCTURE
- STRUCTURE NO.
- ELEVATION
- CONTOUR
- DIRECTION OF SURFACE FLOW
- STAKED EROSION CONTROL- REPRESENTS THE SWFWMD BUFFER LIMITS WHERE ADJACENT TO A PROTECTED WETLAND
- SWFWL — SWFWMD WETLAND LINE
- 25'OS — 25' OFFSET FROM SWFWMD WETLAND LINE
- WETLAND IMPACT
- WETLAND MITIGATION AREA
- 100 YR FLOOD LIMIT (PER HEIDT DESIGN)
- OFF SITE DRAINAGE ESMT LIMIT
- 10"Oak — TREES TO BE REMOVED
- 10"Oak — TREES TO BE PROTECTED
- ROOT PRUNING LIMITS (WITH APPROVED EQUIPMENT)
- FEMA BASE FLOOD ELEVATION
- HYDRAULIC BARRIER

- ASTERISK - 79 G LOT
- PAD ELEVATION
- FINISHED FLOOR ELEVATION
- LOT GRADING TYPE
- LOT NUMBER

NEIGHBORHOOD GRADING PLAN NOTES:

1. Pad grades shown are minimum grades. Elevations of adjoining lots, existing trees, and other field conditions may warrant leaving lots which are higher in their natural state. The Contractor should consult with the Developer/Builder and the Engineer prior to grading activities when these condition exist.
2. Pad elevations denote finish ground elevation at perimeter of building. Add 0.67 feet to this grade for finished floor elevations.
3. Lots marked by an asterisk require processing per FHA Data Sheet No. 79-G if FHA financing is to be provided. Similar testing is recommended as a quality control program in the absence of FHA required testing.
4. For all lots abutting wetlands no grading shall take place beyond the erosion control line unless specifically shown on the approved construction plans.
5. Side swales shall be constructed simultaneously with house construction. During the site grading activities, the contractor shall grade the side yards to an elevation no lower than 0.2 feet below the adjoining house pad grades.
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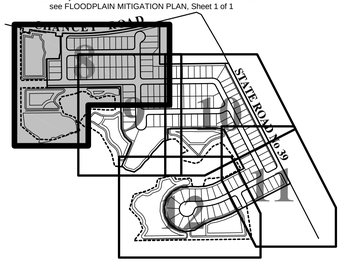
12. 100 year base flood elevation varies between 65.0 and 71.0 see FLOODPLAIN MITIGATION PLAN, Sheet 1 of 1



KEY MAP

NOTE: SECTIONS ARE SHOWN ON SHEETS 14, 15 & 16

HEIDT DESIGN
Civil Engineering • Planning & GIS
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Engineering Business Certificate of Authorization No. 28782
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LEGACY HILLS (FKA FELICIANO)
GRADING & DRAINAGE PLAN

PREPARED FOR: LEGACY GREEN LLC

R:\LEGACY DEVELOPMENT PROJECT S\LEGACY HILLS 2012\WORKING FILES\CURRENT DRAWINGS\CP\MD-01.DWG -B 2014/12/30 9:37 AM ERIC FRANCIS

DATE	DESCRIPTION
12-30-14	ROUND 2 COUNTY REVIEW COMMENTS
09-22-14	COUNTY COMMENTS
07-11-14	SUBMITTED FOR SUBSTANTIAL PLAN MOD. REVIEW BY COUNTY
05-07-14	REVISED FOR ERP COMMENTS
02-11-14	SWFWMD COMMENTS
DATE	DESCRIPTION

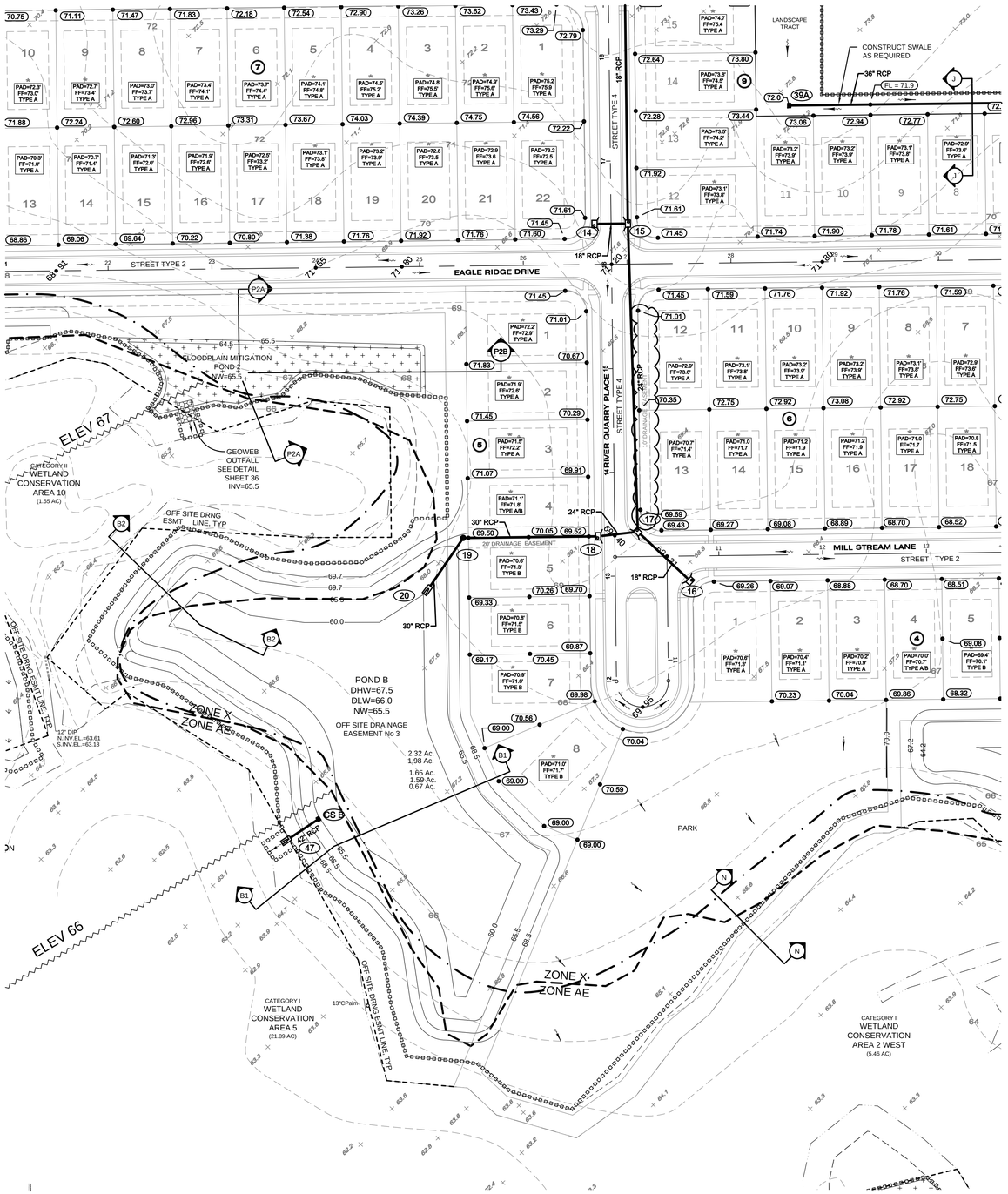
DATE	DESCRIPTION
01-08-14	REVISED FOR COUNTY RESUBMITTAL
12-23-13	REVISED CS A TO CONTOUR 65.5
09-16-13	ISSUED FOR PLAN MOD REVIEW BY COUNTY
08-15-07	HYDRAULIC BARRIER
06-01-07	ADD'L TOPO WCA 10
05-18-07	FPM PONDS I & J; LEGEND
03-28-07	STREET NAMES; PONDS
01-18-07	SWFWMD COMMENTS
12-21-06	PC SUB
DATE	DESCRIPTION

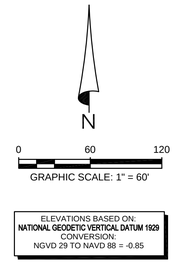
PROJECT NO:	MAR-RD-1001
FILE:	MD-01
DESIGN BY:	DUNNING
DRAWN BY:	DUNNING

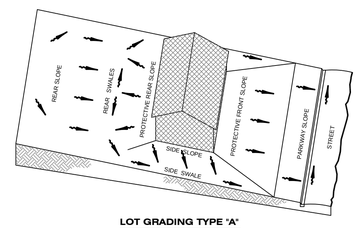
FLORIDA PROFESSIONAL ENGINEER

GARY D. MILLER
DATE:
REGISTRATION NO. 52717

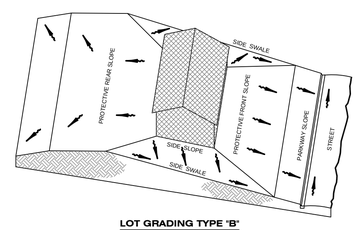
8







LOT GRADING TYPE "A"
ALL DRAINAGE TO STREET



LOT GRADING TYPE "B"
DRAINAGE BOTH TO STREET AND TO REAR LOT LINE

NOTE:
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NOTE:
REMOVE DELETERIOUS MATERIAL PRIOR TO BACKFILLING IN APPROVED WETLAND IMPACT AREAS

LEGEND

EXISTING

- STORM DRAINAGE STRUCTURE
- 65.00 ELEVATION
- 65 CONTOUR

PROPOSED

- STORM DRAINAGE STRUCTURE
- 10 STRUCTURE NO.
- 73.00 ELEVATION
- 64.2 CONTOUR
- DIRECTION OF SURFACE FLOW
- STAKED EROSION CONTROL- REPRESENTS THE SWFWMD BUFFER LIMITS WHERE ADJACENT TO A PROTECTED WETLAND
- SWFWL — SWFWMD WETLAND LINE
- 25'OS — 25' OFFSET FROM SWFWMD WETLAND LINE
- WETLAND IMPACT
- 100 YR FLOOD LIMIT (PER HEIDT DESIGN)
- OFF SITE DRAINAGE ESMT LIMIT
- 10"Oak TREES TO BE REMOVED
- 10"Oak TREES TO BE PROTECTED
- ROOT PRUNING LIMITS (WITH APPROVED EQUIPMENT)
- FEMA BASE FLOOD ELEVATION
- * ASTERISK - 79 G LOT
- PAD=70.0 FF=70.7 TYPE A — PAD ELEVATION, FINISHED FLOOR ELEVATION, LOT GRADING TYPE
- 1 LOT NUMBER

NEIGHBORHOOD GRADING PLAN NOTES:

1. Pad grades shown are minimum grades. Elevations of adjoining lots, existing trees, and other field conditions may warrant leaving lots which are higher in their natural state. The Contractor should consult with the Developer/Builder and the Engineer prior to grading activities when these condition exist.
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3. Lots marked by an asterisk require processing per FHA Data Sheet No. 79-G if FHA financing is to be provided. Similar testing is recommended as a quality control program in the absence of FHA required testing.
4. For all lots abutting wetlands no grading shall take place beyond the erosion control line unless specifically shown on the approved construction plans.
5. Side swales shall be constructed simultaneously with house construction. During the site grading activities, the contractor shall grade the side yards to an elevation no lower than 0.2 feet below the adjoining house pad grades.
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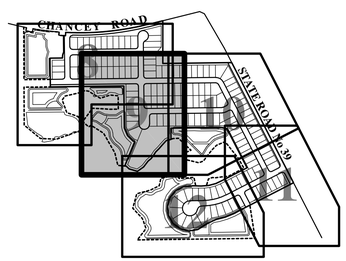
12. 100 year base flood elevation varies between 65.0 and 71.0 see FLOODPLAIN MITIGATION PLAN, Sheet 1 of 1



KEY MAP

NOTE: SECTIONS ARE SHOWN ON SHEETS 14, 15 & 16

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www.HeidtDesign.com

LEGACY HILLS (FKA FELICIANO)

GRADING & DRAINAGE PLAN

PREPARED FOR: LEGACY GREEN LLC

DATE	DESCRIPTION
12-30-14	ROUND 2 COUNTY REVIEW COMMENTS
09-22-14	COUNTY COMMENTS
07-11-14	SUBMITTED FOR SUBSTANTIAL PLAN MOD. REVIEW BY COUNTY

DATE	DESCRIPTION
05-07-14	REVISED FOR EPP COMMENTS
02-11-14	SWFWMD COMMENTS
01-08-14	REVISED FOR COUNTY RESUBMITTAL
12-23-13	REVISED C3 & TO CONTOUR 65.5
09-16-13	ISSUED FOR PLAN MOD REVIEW BY COUNTY
05-18-07	FPM POND 2, LEGEND
03-28-07	STREET NAMES, PONDS
01-18-07	SWFWMD COMMENTS
12-27-06	PC SUB

PROJECT NO:	MAR-RD-1001
FILE:	MD-02
DESIGN BY:	DUNNING
DRAWN BY:	DUNNING

FLORIDA PROFESSIONAL ENGINEER

GARY D. MILLER
DATE:
REGISTRATION NO. 52717

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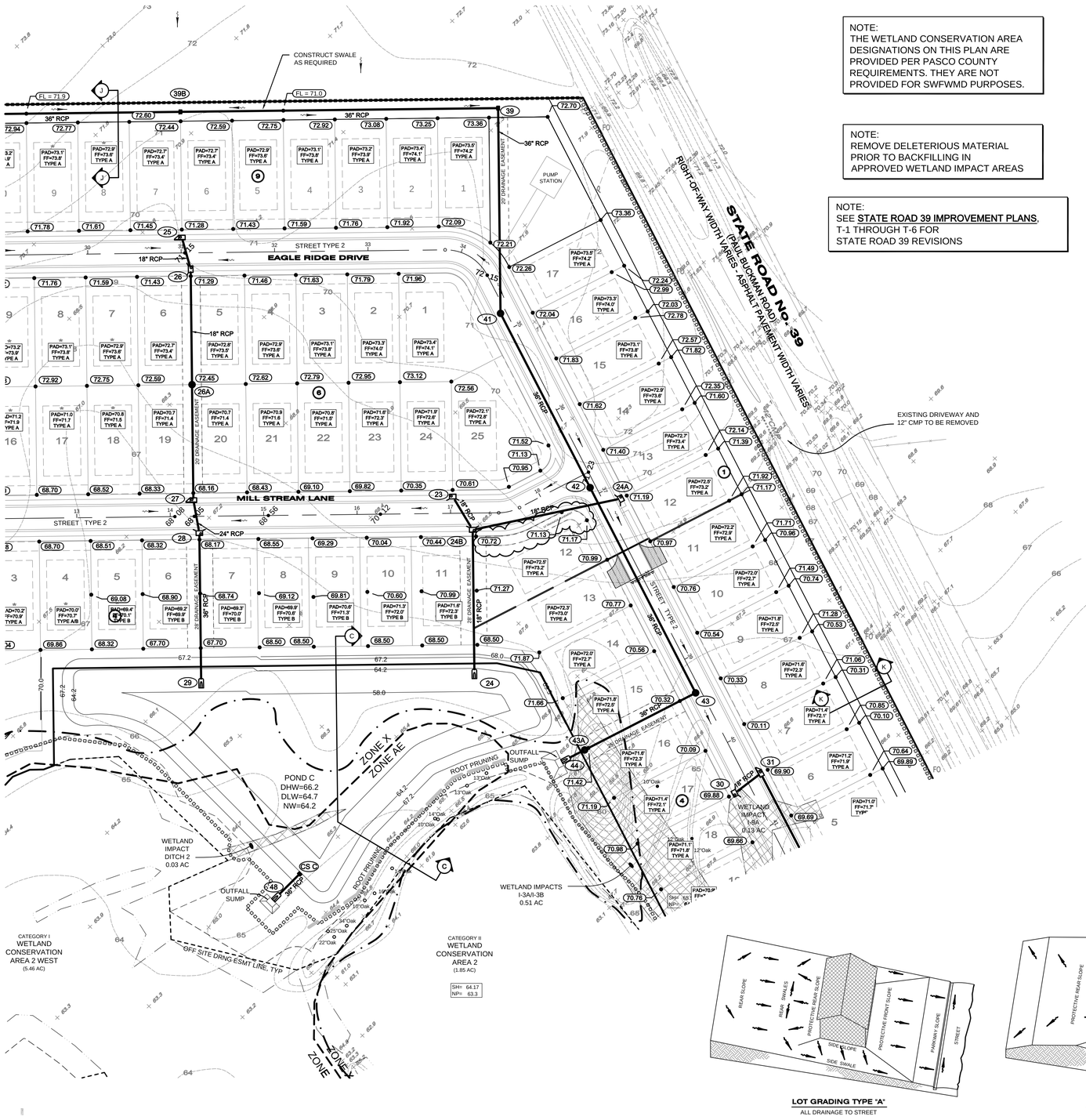

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NOTE:
SEE STATE ROAD 39 IMPROVEMENT PLANS, T-1 THROUGH T-6 FOR STATE ROAD 39 REVISIONS

N

0 60 120
GRAPHIC SCALE: 1" = 60'
HALF SCALE: 1" = 120'

ELEVATIONS BASED ON:
NATIONAL GEODETIC VERTICAL DATUM 1929
CONVERSION:
NGVD 29 TO NAVD 88 = -0.85

LEGEND

EXISTING

- STORM DRAINAGE STRUCTURE
- ELEVATION
- CONTOUR

PROPOSED

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- ROOT PRUNING LIMITS (WITH APPROVED EQUIPMENT)
- FEMA BASE FLOOD ELEVATION
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- LOT GRADING TYPE
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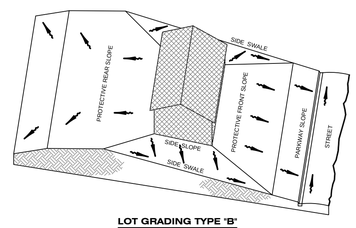
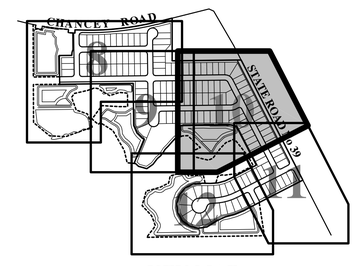
LOT GRADING TYPE "A"
ALL DRAINAGE TO STREET



LOT GRADING TYPE "B"
DRAINAGE BOTH TO STREET AND TO REAR LOT LINE



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LEGACY HILLS (FKA FELICIANO)

GRADING & DRAINAGE PLAN

PREPARED FOR: LEGACY GREEN LLC

DATE	DESCRIPTION
12-30-14	ROUND 2 COUNTY REVIEW COMMENTS
09-22-14	COUNTY COMMENTS
07-11-14	SUBMITTED FOR SUBSTANTIAL PLAN MOD. REVIEW BY COUNTY

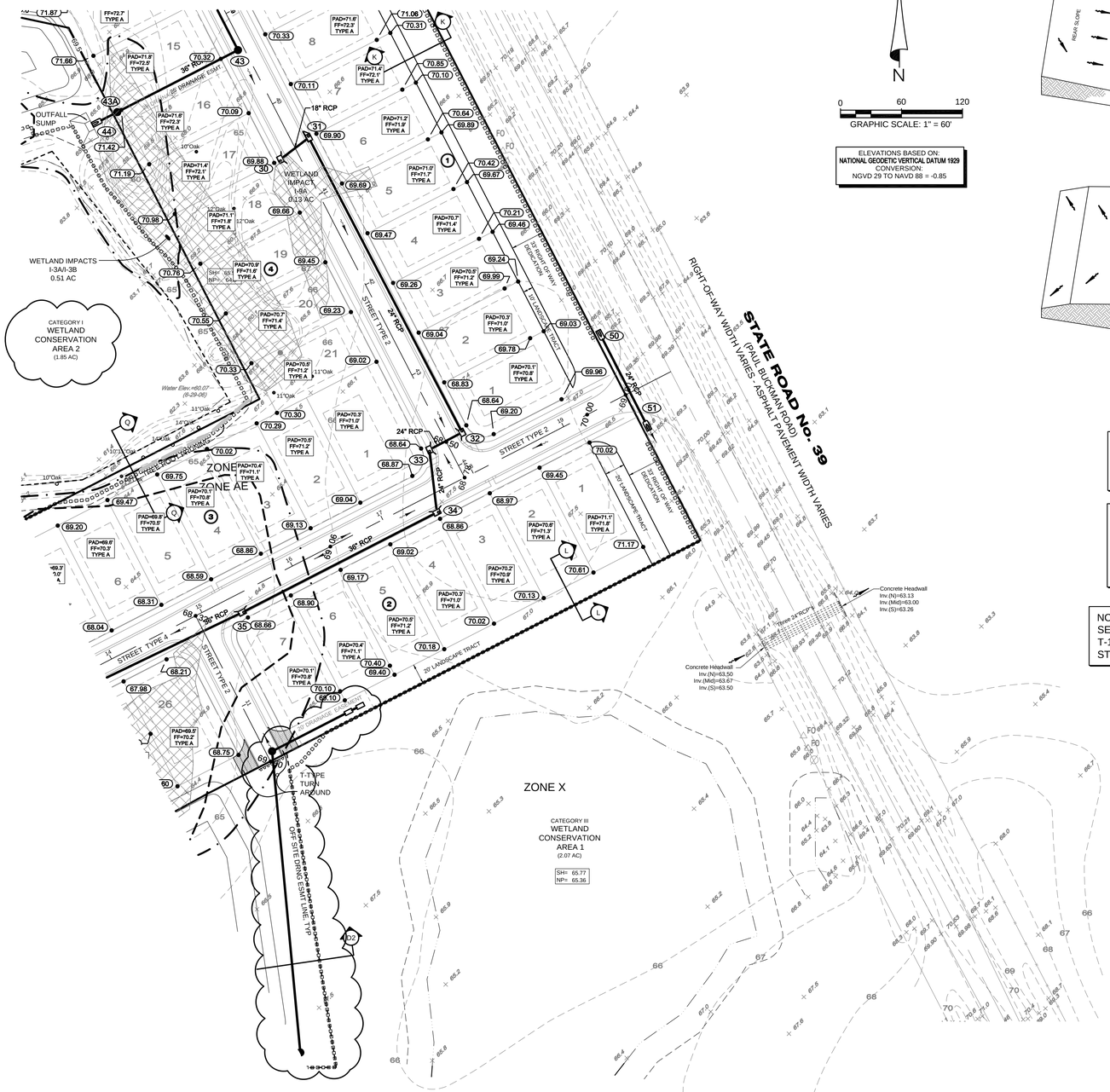
DATE	DESCRIPTION
02-11-14	SWFWMD COMMENTS
01-08-14	REVISED FOR COUNTY RESUBMITTAL
12-23-13	REVISED EROSION CONTROL AT CS C
09-16-13	ISSUED FOR PLAN MOD REVIEW BY COUNTY
05-18-07	LEGEND
03-28-07	STREET NAMES, PONDS
01-18-07	SWFWMD COMMENTS
12-27-06	PC SUB

PROJECT NO:	MAR-RD-1001
FILE:	MD-03
DESIGN BY:	DUNNING
DRAWN BY:	DUNNING

FLORIDA PROFESSIONAL ENGINEER

GARY D. MILLER
DATE:
REGISTRATION NO. 52717

10



N

0 60 120

GRAPHIC SCALE: 1" = 60'

ELEVATIONS BASED ON:
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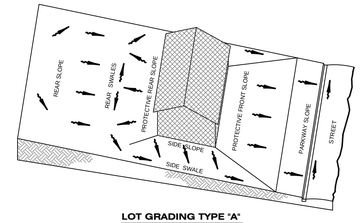

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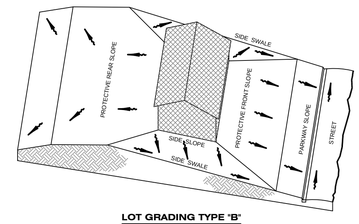

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STATE ROAD 39 REVISIONS

LEGEND

EXISTING

- STORM DRAINAGE STRUCTURE
- 65.0 — ELEVATION
- 65 — CONTOUR

PROPOSED

- STORM DRAINAGE STRUCTURE
- 10 — STRUCTURE NO.
- 73.00 — ELEVATION
- 64.2 — CONTOUR
- DIRECTION OF SURFACE FLOW
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- ROOT PRUNING LIMITS (WITH APPROVED EQUIPMENT)
- **FEMA BASE FLOOD ELEVATION**
- * — ASTERISK - 79 G LOT
- PAD=70.0 FF=70.7 TYPE A — PAD ELEVATION, FINISHED FLOOR ELEVATION, LOT GRADING TYPE
- 1 — LOT NUMBER

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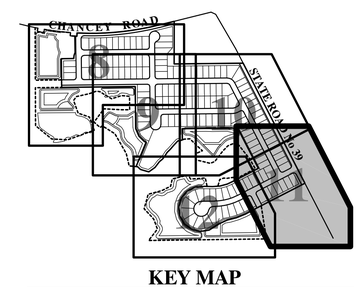

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LEGACY HILLS (FKA FELICIANO)

GRADING & DRAINAGE PLAN

LEGACY GREEN LLC

PREPARED FOR:

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09-22-14	COUNTY COMMENTS
07-11-14	SUBMITTED FOR SUBSTANTIAL PLAN MOD. REVIEW BY COUNTY
05-16-13	ISSUED FOR PLAN MOD REVIEW BY COUNTY
05-10-07	LETTER
03-26-07	41-47-43
03-19-07	SWFWMD COMMENTS
12-27-06	PC SUB

PROJECT NO:	MAR-RD-1001
FILE:	MD-04
DESIGN BY:	DUNNING
DRAWN BY:	DUNNING

FLORIDA PROFESSIONAL ENGINEER

GARY D. MILLER
DATE:
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11

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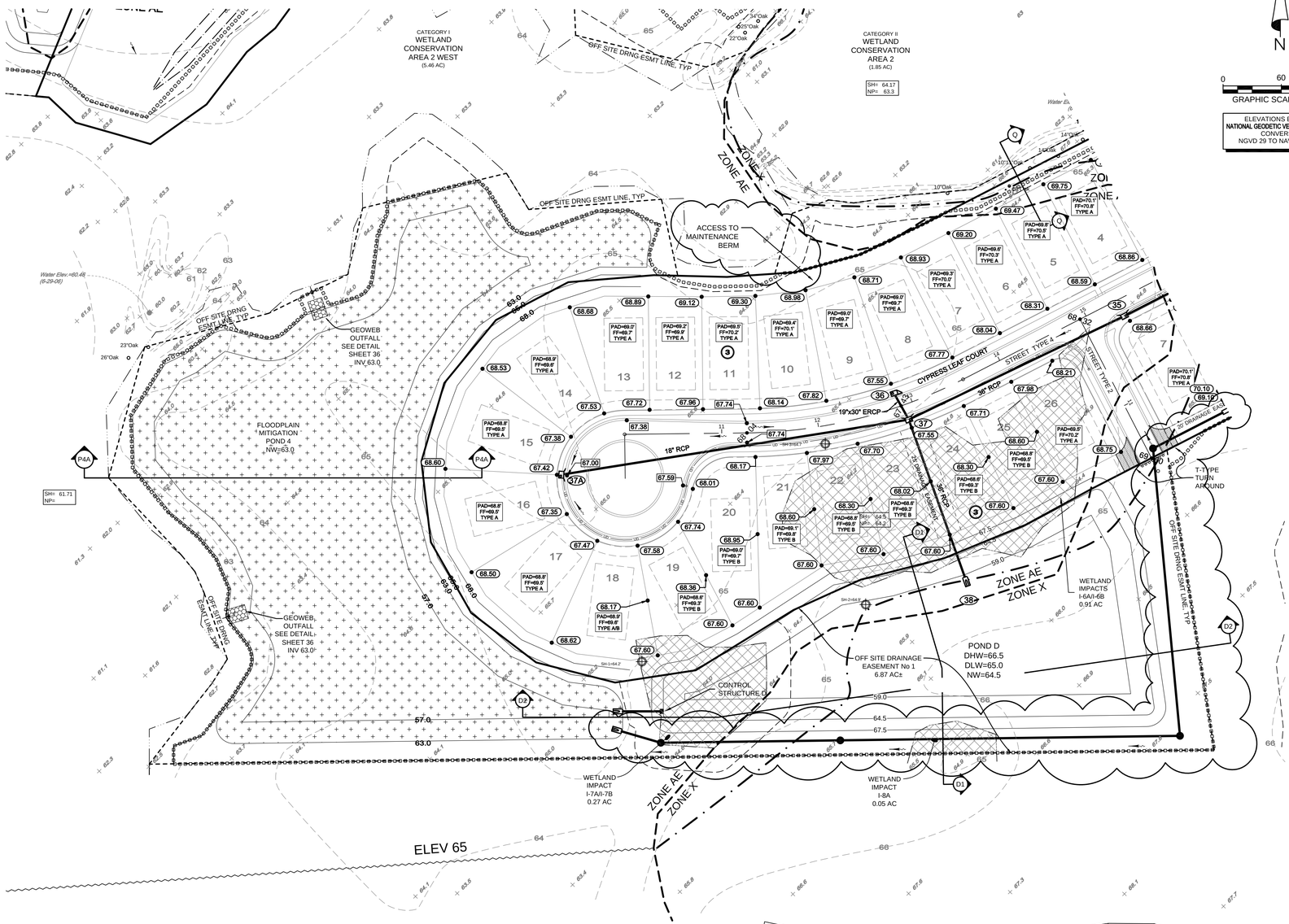
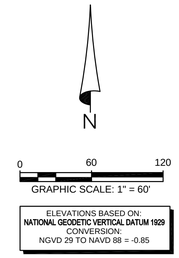




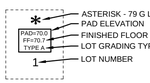
LEGEND

EXISTING

- STORM DRAINAGE STRUCTURE
- ELEVATION
- CONTOUR

PROPOSED

- STORM DRAINAGE STRUCTURE
- STRUCTURE NO.
- ELEVATION
- CONTOUR
- DIRECTION OF SURFACE FLOW
- STAKED EROSION CONTROL- REPRESENTS THE SWFWMD BUFFER LIMITS WHERE ADJACENT TO A PROTECTED WETLAND
- SWFWL — SWFWMD WETLAND LINE
- 25'OS — 25' OFFSET FROM SWFWMD WETLAND LINE
- WETLAND IMPACT
- 100 YR FLOOD LIMIT (PER HEIDT DESIGN)
- OFF SITE DRAINAGE ESMT LIMIT
- 10"Oak — TREES TO BE REMOVED
- 10"Oak — TREES TO BE PROTECTED
- ROOT PRUNING LIMITS (WITH APPROVED EQUIPMENT)
- FEMA BASE FLOOD ELEVATION

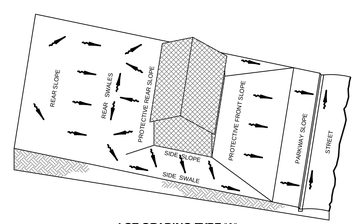


NEIGHBORHOOD GRADING PLAN NOTES:

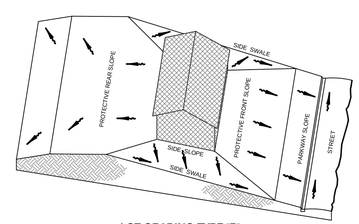
1. Pad grades shown are minimum grades. Elevations of adjoining lots, existing trees, and other field conditions may warrant leaving lots which are higher in their natural state. The Contractor should consult with the Developer/Builder and the Engineer prior to grading activities when these condition exist.
2. Pad elevations denote finish ground elevation at perimeter of building. Add 0.67 feet to this grade for finished floor elevations.
3. Lots marked by an asterisk require processing per FHA Data Sheet No. 79-G if FHA financing is to be provided. Similar testing is recommended as a quality control program in the absence of FHA required testing.
4. For all lots abutting wetlands no grading shall take place beyond the erosion control line unless specifically shown on the approved construction plans.
5. Side swales shall be constructed simultaneously with house construction. During the site grading activities, the contractor shall grade the side yards to an elevation no lower than 0.2 feet below the adjoining house pad grades.
6. For Type "A" lot grading receiving runoff from abutting Type "B" lots, all runoff shall be directed to side yard swales.
7. For Type "B" lot grading abutting Type "A" lot grading, all rear lots, all runoff shall be directed to side yard swales.
8. For Type "B" lot grading not abutting detention facilities, the builder shall make every practical effort to direct roof runoff to the fronting right-of-way unless otherwise directed by the Engineer of Record.
9. Minimum side yard swale slopes shall be 1.0%.
10. The minimum house pad size = 55' X 110'
11. This site lies within Flood Zones "AE", and "X" per Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM). See Community Panel No. 120230 0460 D Dated September 30, 1992. Lines shown have been digitally translated from Q3 FLOOD DATA supplied by FEMA NATIONAL FLOOD INSURANCE PROGRAM, dated 1996.
12. 100 year base flood elevation varies between 65.0 and 71.0 see FLOODPLAIN MITIGATION PLAN, Sheet 1 of 1

NOTE:
THE WETLAND CONSERVATION AREA DESIGNATIONS ON THIS PLAN ARE PROVIDED PER PASCO COUNTY REQUIREMENTS. THEY ARE NOT PROVIDED FOR SWFWMD PURPOSES.

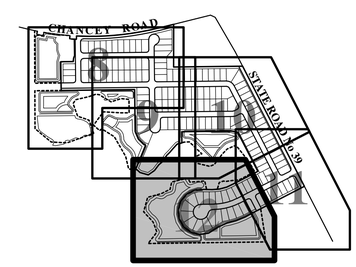
NOTE:
REMOVE DELETERIOUS MATERIAL PRIOR TO BACKFILLING IN APPROVED WETLAND IMPACT AREAS



LOT GRADING TYPE 'A'
ALL DRAINAGE TO STREET



LOT GRADING TYPE 'B'
DRAINAGE BOTH TO STREET
AND TO REAR LOT LINE



KEY MAP

NOTE: SECTIONS ARE SHOWN ON SHEETS 14, 15 & 16

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LEGACY HILLS (FKA FELICIANO)

GRADING & DRAINAGE PLAN

PREPARED FOR: LEGACY GREEN LLC

DATE	DESCRIPTION

DATE	DESCRIPTION
09-22-14	COUNTY COMMENTS
07-11-14	SUBMITTED FOR SUBSTANTIAL PLAN MOD REVIEW BY COUNTY
01-08-14	REVISED FOR COUNTY RESUBMITTAL
06-15-13	ISSUED FOR PLAN MOD REVIEW BY COUNTY
05-19-07	LEGEND
09-28-07	SHEETS 1-4 TO 1-6
01-18-07	SWFWMD COMMENTS
12-27-06	PC SUB

PROJECT NO: MAR-RD-1001
FILE: MD-05
DESIGN BY: DUNNING
DRAWN BY: DUNNING

FLORIDA PROFESSIONAL ENGINEER

GARY D. MILLER
DATE:
REGISTRATION NO. 52717

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STRUCTURE TABLE				
STR. NO.	STR. TYPE	TOP ELEV.	COMMENTS	PHASE
1	MES			1
2	MES			1
5	TYPE 1 CURB INLET	69.47	2'-6" x 4'-0" BOX	1
6	TYPE 2 CURB INLET	70.16	2'-6" x 4'-0" BOX	1
7	TYPE 2 CURB INLET	69.47	4'-0" x 4'-0" BOX	1
8	TYPE 1 CURB INLET	68.38	4'-0" x 4'-0" BOX	1
9	TYPE 1 CURB INLET	68.18	2'-6" x 4'-0" BOX	1
10	TYPE 1 CURB INLET	68.18	2'-6" x 4'-0" BOX	1
11	MES			1
12	TYPE 1 CURB INLET	72.96	2'-6" x 4'-0" BOX	1
13	TYPE 1 CURB INLET	72.76	2'-6" x 4'-0" BOX	1
14	TYPE 1 CURB INLET	71.33	2'-6" x 4'-0" BOX	1
15	TYPE 1 CURB INLET	71.33	4'-0" x 4'-0" BOX	1
16	TYPE 1 CURB INLET	69.11	2'-6" x 4'-0" BOX	1
17	TYPE 1 CURB INLET	69.27	2'-6" x 4'-0" BOX	1
18	TYPE 1 CURB INLET	69.28	2'-6" x 4'-0" BOX	1
19	P MANHOLE (4' DIA.)	69.40		1
20	MES			1
23	TYPE 1 CURB INLET	70.37	2'-6" x 4'-0" BOX	1
24	MES			1

STRUCTURE TABLE				
STR. NO.	STR. TYPE	TOP ELEV.	COMMENTS	PHASE
24A	TYPE 1 CURB INLET	70.74	2'-6" x 4'-0" BOX	1
24B	TYPE 1 CURB INLET	70.64	2'-6" x 4'-0" BOX	1
25	TYPE 2 CURB INLET	71.03	2'-6" x 4'-0" BOX	1
26	TYPE 1 CURB INLET	71.03	2'-6" x 4'-0" BOX	1
26A	J MANHOLE (6' DIA.)	72.40		1
27	TYPE 2 CURB INLET	67.91	2'-6" x 4'-0" BOX	1
28	TYPE 1 CURB INLET	67.90	2'-6" x 4'-0" BOX; J STR. BOTTOM	1
29	MES			1
30	TYPE 2 CURB INLET	69.64	2'-6" x 4'-0" BOX	1
31	TYPE 2 CURB INLET	69.64	2'-6" x 4'-0" BOX	2
32	TYPE 1 CURB INLET	68.38		2
33	TYPE 1 CURB INLET	68.38	2'-6" x 4'-0" BOX	2
34	TYPE 1 CURB INLET	68.61	2'-6" x 4'-0" BOX; J STR. BOTTOM	2
35	TYPE 1 CURB INLET	68.54	2'-6" x 4'-0" BOX; J STR. BOTTOM	2
36	TYPE 2 CURB INLET	67.31	2'-6" x 4'-0" BOX	2
37	TYPE 1 CURB INLET	67.31	2'-6" x 4'-0" BOX; J STR. BOTTOM	2
37A	TYPE 1 CURB INLET	67.18	2'-6" x 4'-0" BOX; J STR. BOTTOM	2
38	MES			2
39	E DBI; J STR. BOTTOM	71.00	SLOT WEST = 70.42, INDEX 232	1
39A	E DBI; J STR. BOTTOM	72.00	SLOT EAST = 71.42, INDEX 232	1

STRUCTURE TABLE				
STR. NO.	STR. TYPE	TOP ELEV.	COMMENTS	PHASE
39B	E DBI; J STR. BOTTOM	71.20	SLOT EAST & WEST = 70.62, INDEX 232	1
41	J MANHOLE (6' DIA.)	71.83		1
42	J MANHOLE (6' DIA.)	71.02		1
43	J MANHOLE (6' DIA.)	70.05		1
43A	J MANHOLE (6' DIA.)	69.90		1
44	MES			1
46	MES		EXCAVATE TO ELEV. 64.00	1
47	MES			1
48	MES			1
49	MES			2
50	MES			2
51	MES			2
52	C DBI	71.00		1
53	RETAINING WALL		SEE STRUCTURAL DETAIL BY OTHERS	1
60	H TOP GRATE TOP INLET	65.60		2
61	H TOP GRATE TOP INLET	65.60		2
62	J MANHOLE (6' DIA.)	67.28		2
63	J MANHOLE (6' DIA.)	67.60		2
64	J MANHOLE (6' DIA.)	67.50		2
65	J MANHOLE (6' DIA.)	67.50		2

STRUCTURE TABLE				
STR. NO.	STR. TYPE	TOP ELEV.	COMMENTS	PHASE
66	MES			2
CS A	D DBI	68.00	CONTROL STRUCTURE - SEE SHEET 35	1
CS B	H DBI	68.25	CONTROL STRUCTURE - SEE SHEET 35	1
CS C	D DBI	66.70	CONTROL STRUCTURE - SEE SHEET 35	1
CS D	E DBI	67.00	CONTROL STRUCTURE - SEE SHEET 35	2

PIPE TABLE							
STR. START	STR. END	PIPE DIMENSION & MATERIAL	LENGTH	SLOPE	START INV.	END INV.	FALL IN FEET
1	2	60" RCP	235	0.04%	58.60	58.50	0.10
5	7	18" RCP	34	0.26%	65.20	65.11	0.09
6	7	18" RCP	61	2.41%	64.60	63.14	1.46
7	8	24" RCP	201	0.16%	62.64	62.31	0.33
8	9	24" RCP	63	-0.16%	60.80	60.70	0.10
9	10	24" RCP	36	0.39%	60.70	60.56	0.14
10	11	30" RCP	126	0.08%	54.40	54.30	0.10
12	13	18" RCP	59	0.36%	68.50	68.29	0.21
13	15	18" RCP	218	0.65%	68.29	66.87	1.42
14	15	18" RCP	32	0.16%	66.83	66.78	0.05
15	17	24" RCP	297	0.48%	66.28	64.85	1.43
16	17	18" RCP	69	0.16%	64.61	64.50	0.11
17	18	24" RCP	38	0.10%	64.85	64.81	0.04
18	19	30" RCP	130	0.08%	62.87	62.77	0.10
19	20	30" RCP	56	0.07%	61.00	60.96	0.04
23	24B	18" RCP	42	0.17%	65.87	65.80	0.07
24A	24B	18" RCP	162	0.15%	62.10	61.85	0.25
24B	24	18" RCP	149	0.17%	61.85	61.59	0.26
25	26	18" RCP	35	0.17%	66.53	66.47	0.06
26	26A	18" RCP	124	0.15%	66.47	66.28	0.19

PIPE TABLE							
STR. START	STR. END	PIPE DIMENSION & MATERIAL	LENGTH	SLOPE	START INV.	END INV.	FALL IN FEET
26A	27	18" RCP	124	1.84%	66.28	64.00	2.28
27	28	24" RCP	36	0.14%	63.50	63.45	0.05
28	29	36" RCP	156	0.08%	60.32	60.20	0.12
30	31	18" RCP	35	0.17%	65.10	65.04	0.06
31	32	24" RCP	327	0.12%	64.00	63.61	0.39
32	33	24" RCP	36	0.14%	63.61	63.56	0.05
33	34	24" RCP	62	0.11%	63.56	63.49	0.07
34	35	36" RCP	215	0.08%	62.49	62.32	0.17
35	37	36" RCP	247	0.08%	60.20	60.00	0.20
36	37	19"x30" ERCP	31	0.13%	63.31	63.27	0.04
37	38	36" RCP	172	0.07%	59.20	59.08	0.12
37A	37	18" RCP	362	0.16%	59.80	59.22	0.58
39	41	36" RCP	220	0.08%	65.98	65.81	0.17
39A	39B	36" RCP	243	0.08%	66.45	66.26	0.19
39B	39	36" RCP	340	0.08%	66.26	65.98	0.28
41	42	36" RCP	210	0.10%	65.81	65.61	0.20
42	43	36" RCP	247	0.49%	65.61	64.41	1.20
43	43A	36" RCP	134	0.08%	62.72	62.61	0.11
43A	44	36" RCP	18	0.06%	61.51	61.50	0.01
50	51	24" RCP	90	0.27%	65.68	65.44	0.24

PIPE TABLE							
STR. START	STR. END	PIPE DIMENSION & MATERIAL	LENGTH	SLOPE	START INV.	END INV.	FALL IN FEET
52	53	36" RCP	61	0.16%	65.10	64.99	0.11
60	61	36" RCP	13	0.77%	61.10	61.00	0.10
61	62	36" RCP	85	0.17%	61.00	60.86	0.14
62	63	42" RCP	298	0.06%	60.35	60.17	0.18
63	64	42" RCP	350	0.06%	60.17	59.96	0.21
64	65	42" RCP	185	0.06%	59.96	59.85	0.11
65	66	42" RCP	42	0.07%	59.85	59.82	0.03
CS A	46	30" RCP	37	0.20%	64.00	63.93	0.07
CS B	47	42" RCP	32	0.08%	63.00	62.97	0.03
CS C	48	36" RCP	30	0.10%	62.20	62.17	0.03
CS D	49	42" RCP	40	0.05%	62.00	61.98	0.02

ELEVATIONS BASED ON:
NATIONAL GEODETIC VERTICAL DATUM 1929
CONVERSION:
NGVD 29 TO NAVD 88 = -0.85

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Tampa, Florida 33610
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Fax: 813-464-7629
www.HeidtDesign.com

LEGACY HILLS (FKA FELICIANO)

STORM STRUCTURE & PIPE TABLE

PREPARED FOR: LEGACY GREEN LLC

DATE	DESCRIPTION
09-22-14	COUNTY COMMENTS
07-11-14	SUBMITTED FOR SUBSTANTIAL PLAN MOD. REVIEW BY COUNTY
05-07-14	REVISED FOR ERP COMMENTS
02-11-14	SWFWMD COMMENTS
01-08-14	REVISED FOR COUNTY RESUBMITTAL
12-23-13	REV CS A, CS B, CS C, STR 1 - STR 7, STR 48
09-16-13	ISSUED FOR PLAN MOD. REVIEW BY COUNTY
12/21/06	REVIEW SUBMITTAL

DATE	DESCRIPTION

PROJECT NO: MAR-RD-1001
FILE: ST
DESIGN BY: DUNNING
DRAWN BY: DUNNING

FLORIDA PROFESSIONAL ENGINEER

GARY D. MILLER
DATE:
REGISTRATION NO. 52717

13

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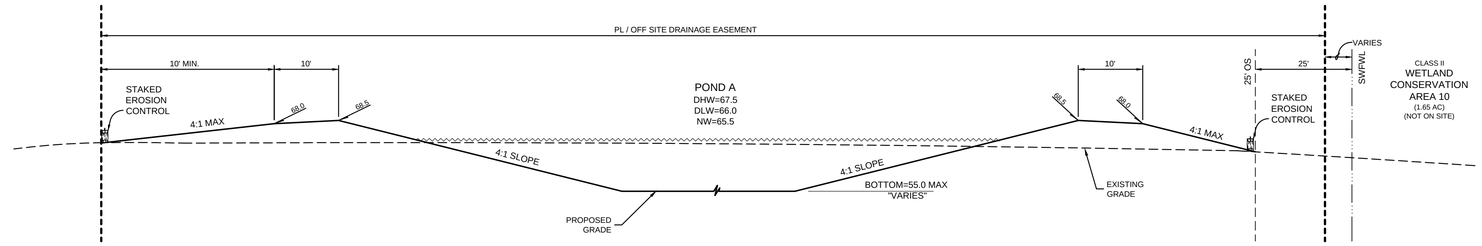

SECTION A1-A1

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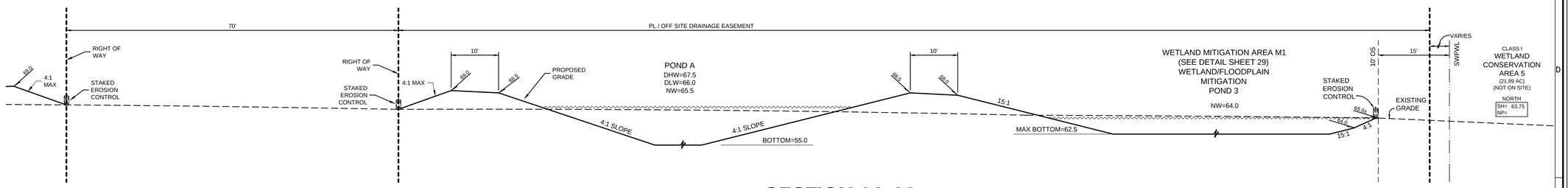

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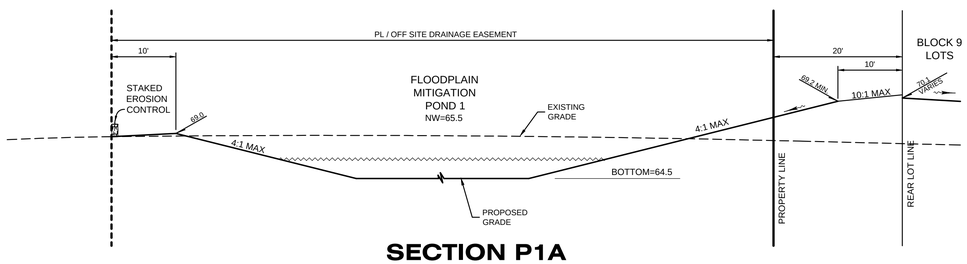

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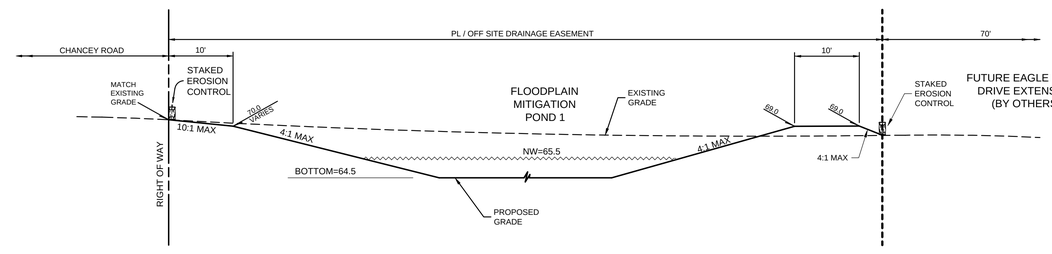

SECTION P1C

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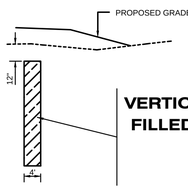


VERTICAL CLAYEY SOIL FILLED TRENCH WALL

NOT TO SCALE

HYDRAULIC LINER - CLAY BARRIER

NTS

SPECIFICATIONS FOR VERTICAL CLAYEY SOIL FILLED TRENCH WALL:

THE TRENCH SHOULD BE EXCAVATED AND BACKFILLED IN A RELATIVELY DEWATERED STATE, TO PERMIT MATERIAL REPLACEMENT AND TO MINIMIZE SIDE WALL SLOUGHING

THE TRENCH SHOULD BE CAREFULLY BACKFILLED IN 1-FOOT LIFTS FROM THE BOTTOM UP TO THE TOP OF TRENCH ELEVATION (± 0.1 FT.) SHOWN ON THE PLANS

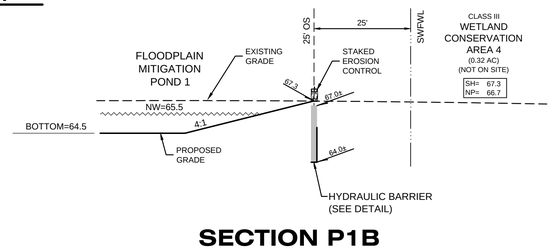
THE TRENCH SHOULD BE FILLED WITH APPROVED CLAYEY SOIL MATERIAL (CLASSIFIED AS SC, CL OR CH ACCORDING TO THE UNIFIED SOIL CLASSIFICATION SYSTEM) PLACED AND COMPACTED IN 1-FOOT LIFTS (GREATER THAN 35% FINES)

COMPACTION TO A PERMEABILITY OF 0.10 FEET PER DAY OR LESS; COMPACTED TO 95% OF ASTM D-1557 (OR UNLESS OTHERWISE ACCEPTED BY GEOTECHNICAL CONSULTANT)

A SYNTHETIC LINER MAY BE USED IN LIEU OF CLAY UPON ENGINEERS APPROVAL

ALL WORK SHOULD BE MONITORED FULL-TIME AND APPROVED BY A QUALIFIED FIELD TECHNICIAN REPRESENTING THE GEOTECHNICAL CONSULTANT MEI

THE GEOTECHNICAL FIELD TECHNICIAN WILL DETERMINE AND DIRECT IN THE FIELD THE VERTICAL DEPTH OF THE TRENCH AS THE WALL IS CONSTRUCTED; IN GENERAL, THE WALL WILL EXTEND 10 TO 15 FEET (±) BELOW EXISTING SITE GRADES



SECTION P1B

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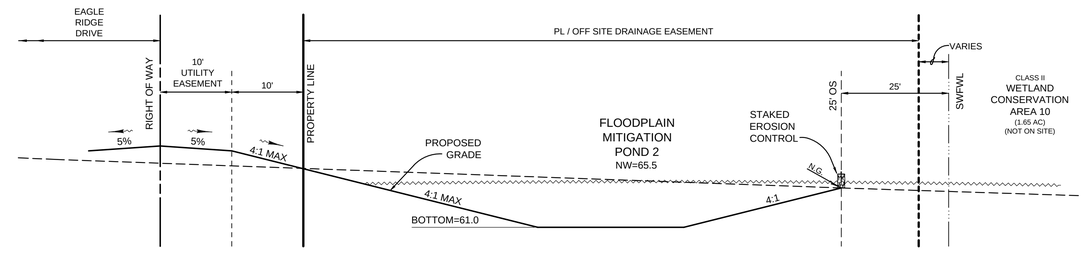

SECTION P2A

NOT TO SCALE

ELEVATIONS BASED ON:
NATIONAL GEODETIC VERTICAL DATUM 1929
CONVERSION:
NGVD 29 TO NAVD 88 = -0.85

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LEGACY HILLS (FKA FELICIANO)

DRAINAGE SECTIONS

LEGACY GREEN LLC

PREPARED FOR

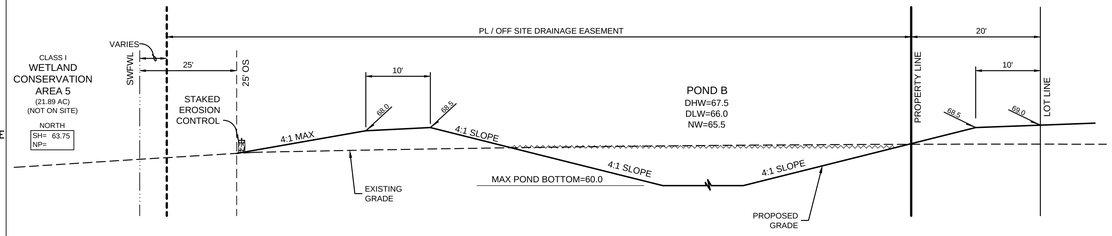
DATE	DESCRIPTION
07-11-14	SUBMITTED FOR SUBSTANTIAL PLAN MOD. REVIEW BY COUNTY
05-07-14	REVISED FOR ERP COMMENTS

DATE	DESCRIPTION
02-11-14	SWFWMD COMMENTS
01-09-14	REVISED FOR COUNTY RESUBMITTAL
09-16-13	ISSUED FOR PLAN MOD REVIEW BY COUNTY
09-25-07	HYDRAULIC BARRIER DEPTH
08-15-07	HYDRAULIC BARRIER
05-18-07	P1A, P1B, P1C
03-28-07	A1, A2
01-18-07	A1, A2, P1B
12-21-06	A1 60" RCP INV, A2 15:1 SLOPE

PROJECT NO: MAR-RD-1001
FILE: SEC
DESIGN BY: DUNNING
DRAWN BY: DUNNING

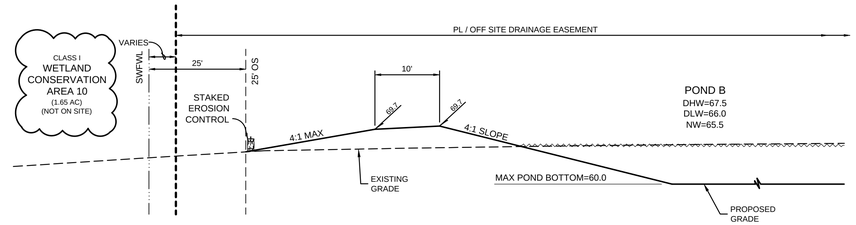
FLORIDA PROFESSIONAL ENGINEER

GARY D. MILLER
DATE:
REGISTRATION NO. 52717



SECTION B1-B1

NOT TO SCALE



SECTION B2-B2

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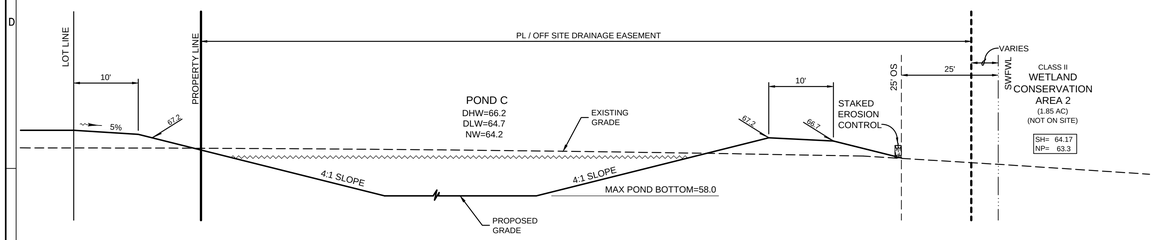

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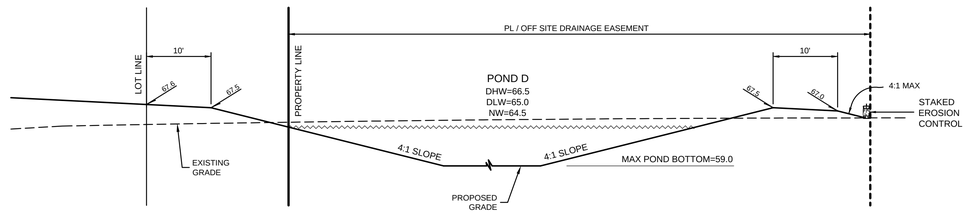

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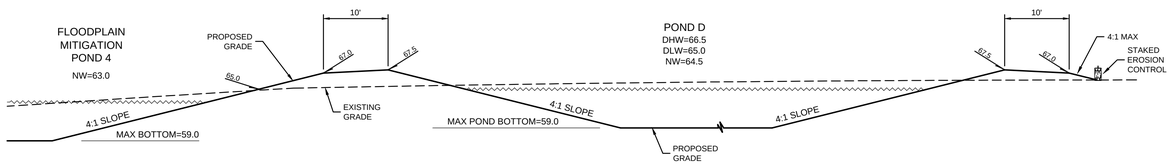

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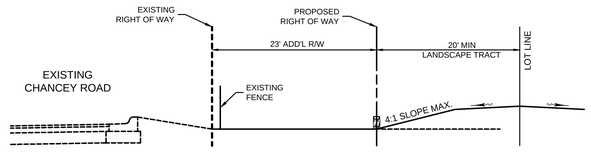

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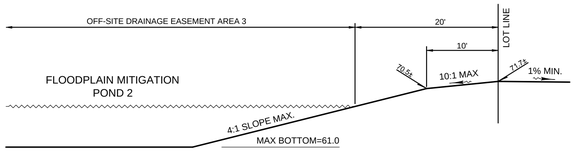

SECTION P2B

NOT TO SCALE

ELEVATIONS BASED ON:
NATIONAL GEODETIC VERTICAL DATUM 1929
CONVERSION:
NGVD 29 TO NAVD 88 = -0.85

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Office: 813-253-5311
Fax: 813-464-7629
www.HeidtDesign.com

LEGACY HILLS (FKA FELICIANO)

DRAINAGE SECTIONS

PREPARED FOR: LEGACY GREEN LLC

DATE	DESCRIPTION

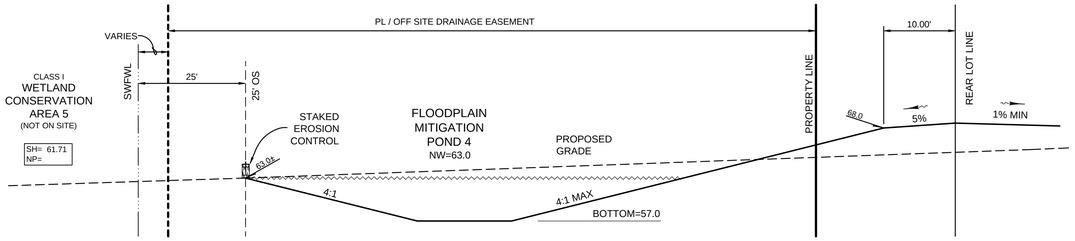
DATE	DESCRIPTION
09-22-14	COUNTY COMMENTS
07-11-14	SUBMITTED FOR SUBSTANTIAL PLAN MOD. REVIEW BY COUNTY
01-08-14	REVISED FOR COUNTY RESUBMITTAL
09-16-13	ISSUED FOR PLAN MOD REVIEW BY COUNTY
08-15-07	HYDRAULIC BARRIER
05-18-07	P2A, P2B
12-21-06	-

PROJECT NO:	MAR-RD-1001
FILE:	SEC
DESIGN BY:	DUNNING
DRAWN BY:	DUNNING

FLORIDA PROFESSIONAL ENGINEER

GARY D. MILLER
DATE:
REGISTRATION NO. 52717

R:\LEGACY DEVELOPMENT PROJECT\LEGACY HILLS 2012\WORKING FILES\CURRENT DRAWING\SCP\SEC.DWG 15 2014/10/24 11:47 AM ERIC FRANCIS



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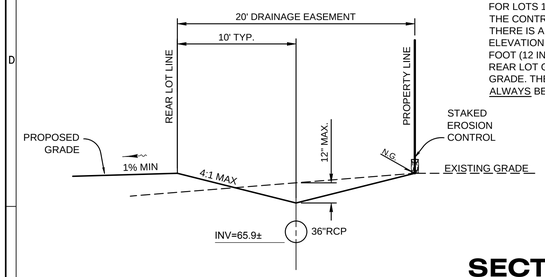
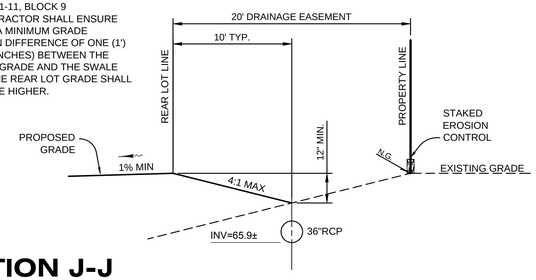


NOTE:
FOR LOTS 1-11, BLOCK 9
THE CONTRACTOR SHALL ENSURE THERE IS A MINIMUM GRADE ELEVATION DIFFERENCE OF ONE (1') FOOT (12 INCHES) BETWEEN THE REAR LOT GRADE AND THE SWALE GRADE. THE REAR LOT GRADE SHALL ALWAYS BE HIGHER.



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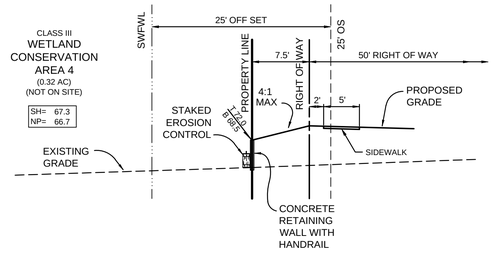

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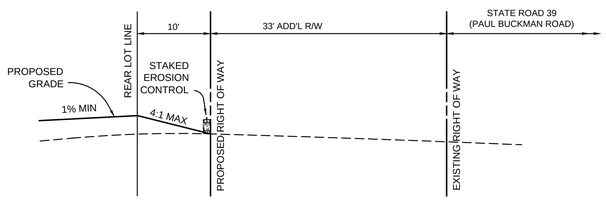

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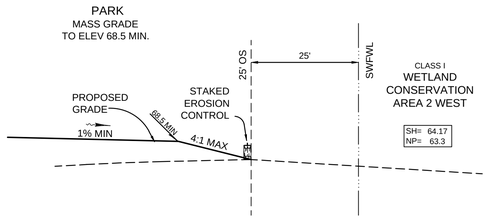
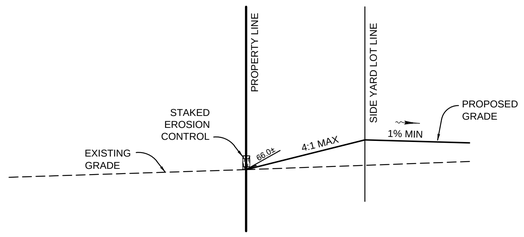


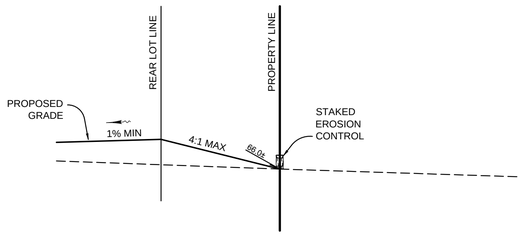
SECTION N-N

NOT TO SCALE



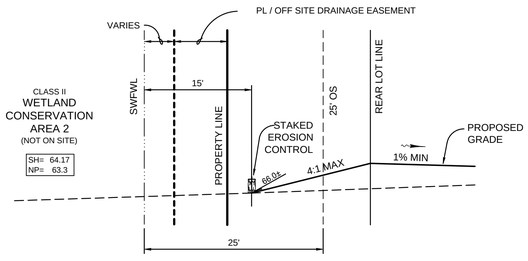
SECTION E-E

NOT TO SCALE



SECTION L-L

NOT TO SCALE



SECTION Q-Q

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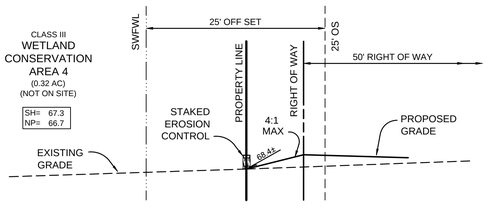

SECTION F-F

NOT TO SCALE

ELEVATIONS BASED ON:
NATIONAL GEODETIC VERTICAL DATUM 1929
CONVERSION:
NGVD 29 TO NAVD 88 = -0.85

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Fax: 813-464-7629
www.HeidtDesign.com

LEGACY HILLS (FKA FELICIANO)

DRAINAGE SECTIONS

PREPARED FOR: LEGACY GREEN LLC

DATE	DESCRIPTION

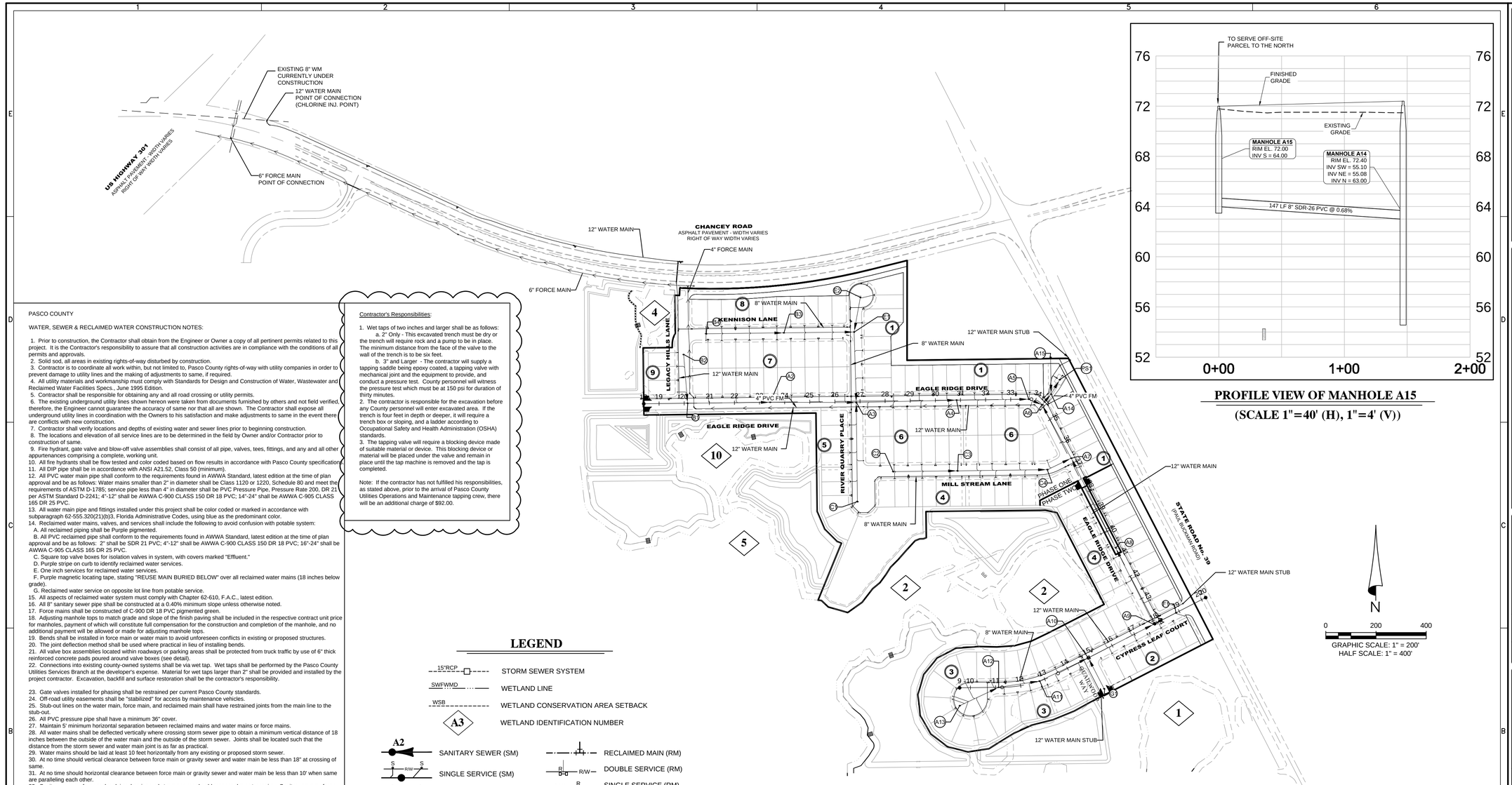
DATE	DESCRIPTION
07-11-14	SUBMITTED FOR SUBSTANTIAL PLAN MOD. REVIEW BY COUNTY
05-07-14	REVISIONS FOR ERP COMMENTS
02-11-14	SWFWMD COMMENTS
01-08-14	REVISED FOR COUNTY RESUBMITTAL
09-16-13	ISSUED FOR PLAN MOD REVIEW BY COUNTY
05-18-07	F. R
12-21-06	-

PROJECT NO:	MAR-RD-1001
FILE:	SEC
DESIGN BY:	DUNNING
DRAWN BY:	DUNNING

FLORIDA PROFESSIONAL ENGINEER

GARY D. MILLER
DATE:
REGISTRATION NO. 52717

R:\LEGACY DEVELOPMENT PROJECT\LEGACY HILLS 2012\WORKING FILES\CURRENT DRAWING\SCP\SEC.DWG 16 2014/10/24 11:47 AM ERIC FRANCIS



PROFILE VIEW OF MANHOLE A15

(SCALE 1"=40' (H), 1"=4' (V))

PASCO COUNTY

WATER, SEWER & RECLAIMED WATER CONSTRUCTION NOTES:

1. Prior to construction, the Contractor shall obtain from the Engineer or Owner a copy of all pertinent permits related to this project. It is the Contractor's responsibility to assure that all construction activities are in compliance with the conditions of all permits and approvals.
2. Solid sod, all areas in existing rights-of-way disturbed by construction.
3. Contractor is to coordinate all work within, but not limited to, Pasco County rights-of-way with utility companies in order to prevent damage to utility lines and the making of adjustments to same, if required.
4. All utility materials and workmanship must comply with Standards for Design and Construction of Water, Wastewater and Reclaimed Water Facilities Specs., June 1995 Edition.
5. Contractor shall be responsible for obtaining any and all road crossing or utility permits.
6. The existing underground utility lines shown hereon were taken from documents furnished by others and not field verified, therefore, the Engineer cannot guarantee the accuracy of same nor that all are shown. The Contractor shall expose all underground utility lines in coordination with the Owners to his satisfaction and make adjustments to same in the event there are conflicts with new construction.
7. Contractor shall verify locations and depths of existing water and sewer lines prior to beginning construction.
8. The locations and elevation of all service lines are to be determined in the field by Owner and/or Contractor prior to construction of same.
9. Fire hydrant, gate valve and blow-off valve assemblies shall consist of all pipe, valves, tees, fittings, and any and all other appurtenances comprising a complete, working unit.
10. All fire hydrants shall be flow tested and color coded based on flow results in accordance with Pasco County specifications.
11. All DIP pipe shall be in accordance with ANSI A21.52, Class 50 (minimum).
12. All PVC water main pipe shall conform to the requirements found in AWWA Standard, latest edition at the time of plan approval and be as follows: Water mains smaller than 2" in diameter shall be Class 1120 or 1220, Schedule 80 and meet the requirements of ASTM D-1785; service pipe less than 4" in diameter shall be PVC Pressure Pipe, Pressure Rate 200, DR 21 per ASTM Standard D-2241; 4"-12" shall be AWWA C-900 CLASS 150 DR 18 PVC; 14"-24" shall be AWWA C-905 CLASS 165 DR 25 PVC.
13. All water main pipe and fittings installed under this project shall be color coded or marked in accordance with subparagraph 62-555.320(21)(b)3, Florida Administrative Codes, using blue as the predominant color.
14. Reclaimed water mains, valves, and services shall include the following to avoid confusion with potable system:
   A. All reclaimed piping shall be Purple pigmented.
   B. All PVC reclaimed pipe shall conform to the requirements found in AWWA Standard, latest edition at the time of plan approval and be as follows: 2" shall be SDR 21 PVC; 4"-12" shall be AWWA C-900 CLASS 150 DR 18 PVC; 16"-24" shall be AWWA C-905 CLASS 165 DR 25 PVC.
   C. Square top valve boxes for isolation valves in system, with covers marked "Effluent."
   D. Purple stripe on curb to identify reclaimed water services.
   E. One inch services for reclaimed water services.
   F. Purple magnetic locating tape, stating "REUSE MAIN BURIED BELOW" over all reclaimed water mains (18 inches below grade).
   G. Reclaimed water service on opposite lot line from potable service.
15. All aspects of reclaimed water system must comply with Chapter 62-610, F.A.C., latest edition.
16. All 8" sanitary sewer pipe shall be constructed at a 0.40% minimum slope unless otherwise noted.
17. Force mains shall be constructed of C-900 DR 18 PVC pigmented green.
18. Adjusting manhole tops to match grade and slope of the finish paving shall be included in the respective contract unit price for manholes, payment of which will constitute full compensation for the construction and completion of the manhole, and no additional payment will be allowed or made for adjusting manhole tops.
19. Bends shall be installed in force main or water main to avoid unforeseen conflicts in existing or proposed structures.
20. The joint deflection method shall be used where practical in lieu of installing bends.
21. All valve box assemblies located within roadways or parking areas shall be protected from truck traffic by use of 6" thick reinforced concrete pads poured around valve boxes (see detail).
22. Connections into existing county-owned systems shall be via wet tap. Wet taps shall be performed by the Pasco County Utilities Services Branch at the developer's expense. Material for wet taps larger than 2" shall be provided and installed by the project contractor. Excavation, backfill and surface restoration shall be the contractor's responsibility.

23. Gate valves installed for phasing shall be restrained per current Pasco County standards.
24. Off-road utility easements shall be "stabilized" for access by maintenance vehicles.
25. Stub-out lines on the water main, force main, and reclaimed main shall have restrained joints from the main line to the stub-out.
26. All PVC pressure pipe shall have a minimum 36" cover.
27. Maintain 5' minimum horizontal separation between reclaimed mains and water mains or force mains.
28. All water mains shall be deflected vertically where crossing storm sewer pipe to obtain a minimum vertical distance of 18 inches between the outside of the water main and the outside of the storm sewer. Joints shall be located such that the distance from the storm sewer and water main joint is as far as practical.
29. Water mains should be laid at least 10 feet horizontally from any existing or proposed storm sewer.
30. At no time should vertical clearance between force main or gravity sewer and water main be less than 18" at crossing of same.
31. At no time should horizontal clearance between force main or gravity sewer and water main be less than 10' when same are paralleling each other.
32. Sanitary sewers, force and reclaimed mains and storm sewers should cross under water mains. Sanitary sewers, force and reclaimed mains and storm sewers crossing water mains shall be laid to provide a minimum vertical distance of 18 inches between the invert of the upper pipe and the crown of the lower pipe whenever possible.
33. When sanitary sewers, force and reclaimed mains and storm sewers must cross a water main with less than 18 inches vertical distance, both the sewer and the water main shall be constructed of ductile iron pipe (DIP) at the crossing. (DIP is not required for storm sewers if it is not available in the size proposed.) Sufficient lengths of DIP must be used to provide a minimum separation of 10 feet between any two joints. All joints on the water main within 20 feet of the crossing must be leak free and mechanically restrained. A minimum vertical clearance of 6 inches must be maintained at the crossing.
34. Where there is no alternative to sewer and reclaimed pipes crossing over a water main, the criteria for minimum separation of 18 inches between lines and 10 feet between joints shall be required.
35. All crossings shall be arranged so that the sewer and reclaimed pipes joints and the water main pipe joints are equidistant from the point of crossing (pipes centered on the crossing).
36. Where a new pipe conflicts with an existing pipe, the new pipe shall be constructed of DIP and the crossing shall be arranged to meet the requirements above.
37. A minimum 10-foot horizontal separation shall be maintained in parallel installations between any type of sewer (including drainage inlets) and water main whenever possible. A minimum 5-foot horizontal separation shall be maintained in parallel installation between reclaimed water mains and water mains, and between reclaimed water mains and sanitary sewers whenever possible.
38. In cases where it is not possible to maintain a 10-foot horizontal separation between any type of parallel sewer and water main, or a 5-foot separation between reclaimed main and water main, the water main must be laid in a separate trench or on an undisturbed earth shelf located on one side of the sewer, reclaimed main, or force main at such an elevation that the bottom of the water main is at least 18 inches above the top of the sewer.
39. Where it is not possible to maintain a vertical distance of 18 inches or a horizontal distance of 10 feet in parallel installations, the water main shall be constructed of DIP and the sewer, reclaimed main or the force main shall be constructed of DIP (if available in the size proposed) with a minimum vertical distance of 6 inches. The water main should be above the sewer, reclaimed main, or force main. Joints on the water main shall be located as far apart as possible from joints on the sewer, reclaimed main, or force main (staggered joints).
40. All subsurface construction shall comply with the "Trench Safety Act." The Contractor shall insure that the method of trench protection and construction is in compliance with the Occupational Safety and Health Administration (OSHA) Regulations.
41. The Pasco County Utilities Services Branch shall not own or maintain water and sewer lines or facilities on-site.
42. Sanitary sewer manholes constructed in unpaved areas shall be stabilized with 6" thick compacted limerock (LBR 100) for a ten foot radius.
43. Wastewater Collection System: Plugs shall be installed between the last collector manhole and the pump station; and at the sanitary sewer manhole used to isolate Phase 2 construction. The sanitary sewer plugs shall be installed at the beginning of construction and remain in place until the system has been cleaned, inspected and approved by Pasco County Utility Services. Once approved, the contractor shall be responsible for removal of all plugs

Contractor's Responsibilities:

1. Wet taps of two inches and larger shall be as follows:
   a. 2" Only - This excavated trench must be dry or the trench will require rock and a pump to be in place. The minimum distance from the face of the valve to the wall of the trench is to be six feet.
   b. 3" and Larger - The contractor will supply a tapping saddle being epoxy coated, a tapping valve with mechanical joint and the equipment to provide, and conduct a pressure test. County personnel will witness the pressure test which must be at 150 psi for duration of thirty minutes.
2. The contractor is responsible for the excavation before any County personnel will enter excavated area. If the trench is four feet in depth or deeper, it will require a trench box or sloping, and a ladder according to Occupational Safety and Health Administration (OSHA) standards.
3. The tapping valve will require a blocking device made of suitable material or device. This blocking device or material will be placed under the valve and remain in place until the tap machine is removed and the tap is completed.

Note: If the contractor has not fulfilled his responsibilities, as stated above, prior to the arrival of Pasco County Utilities Operations and Maintenance tapping crew, there will be an additional charge of $92.00.

LEGEND

- 15"RCP — STORM SEWER SYSTEM
- SWFWMD — WETLAND LINE
- WSB — WETLAND CONSERVATION AREA SETBACK
- A3 — WETLAND IDENTIFICATION NUMBER
- A2 — SANITARY SEWER (SM)
- SINGLE SERVICE (SM)
- DOUBLE SERVICE (SM)
- FORCE MAIN (FM)
- VALVE & BOX
- REDUCER
- PLUG
- BLOW-OFF
- BENDS
- RECLAIMED MAIN (RM)
- DOUBLE SERVICE (RM)
- SINGLE SERVICE (RM)
- SERVICE SLEEVE (RM)
- WATER MAIN (WM)
- FIRE HYDRANT
- DOUBLE SERVICE (WM)
- SINGLE SERVICE (WM)
- SERVICE SLEEVE (WM)

NOTE:

- INVERT ELEVATIONS AS SHOWN AT UTILITY CROSSINGS INDICATE MINIMUM REQUIRED SEPARATION. ELEVATION MAY BE ADJUSTED FOR SEPARATION GREATER THAN THE REQUIRED MINIMUM.
- SEE SANITARY SEWER PROFILES FOR ADDITIONAL CROSSINGS.
- SEE WATER & SEWER CONSTRUCTION NOTES 28-36.

ELEVATIONS BASED ON:
NATIONAL GEODETIC VERTICAL DATUM 1929
CONVERSION:
NGVD 29 TO NAVD 88 = -0.85

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Fax: 813-464-7629
www.HeidtDesign.com

LEGACY HILLS (FKA FELICIANO)

MASTER UTILITIES PLAN

LEGACY GREEN LLC

PREPARED BY: DR

DATE	DESCRIPTION
09-22-14	COUNTY COMMENTS
07-11-14	SUBMITTED FOR SUBSTANTIAL PLAN MOD. REVIEW BY COUNTY

DATE	DESCRIPTION
05-07-14	REVISED FOR ERP COMMENTS
01-08-14	REVISED FOR COUNTY RESUBMITTAL
09-16-13	ISSUED FOR FLAN MOD REVIEW BY COUNTY
07-09-07	WATER MAINS
03-28-07	STREET NAMES, PHASING, NOTE 43
03-07-07	COUNTY COMMENTS
01-18-07	CHANGES TO POND
12-21-06	-

PROJECT NO: MAR-RD-1001
FILE: WS
DESIGN BY: DUNNING
DRAWN BY: DUNNING

FLORIDA PROFESSIONAL ENGINEER

GARY D. MILLER
DATE:
REGISTRATION NO. 52717

17

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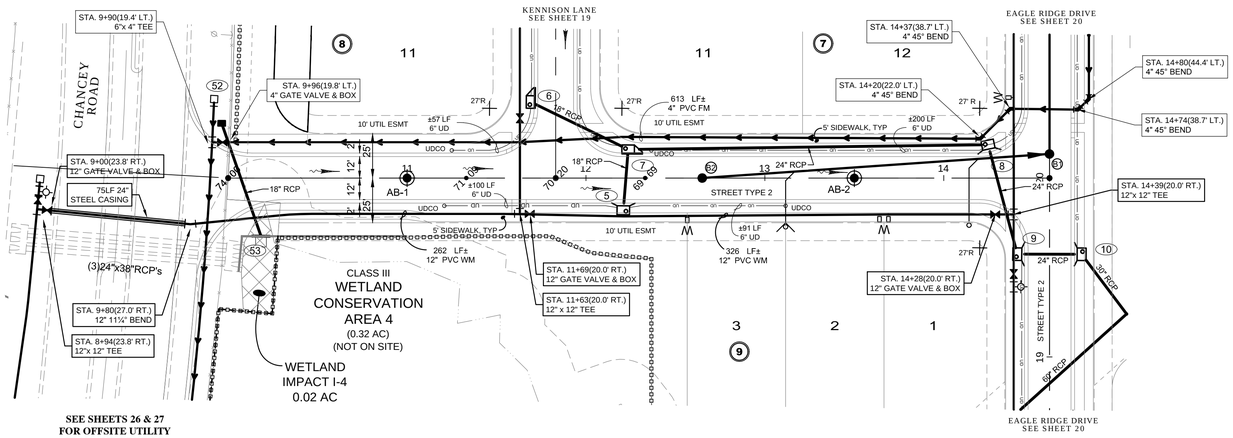
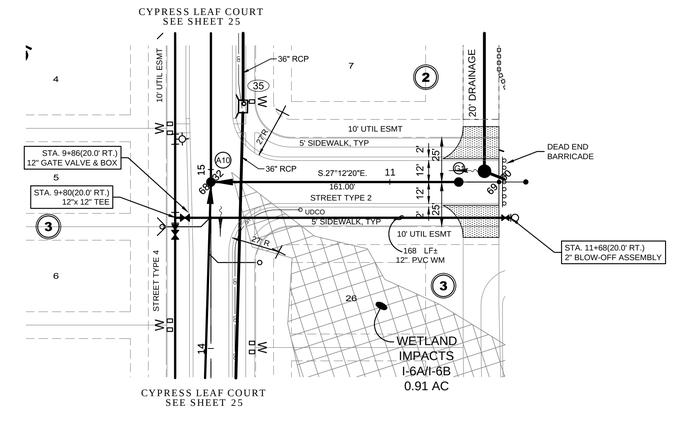


LEGACY HILLS LANE

0 40 80
HORIZONTAL SCALE: 1" = 40'
VERTICAL SCALE: 1" = 4'



QUAILWOOD WAY

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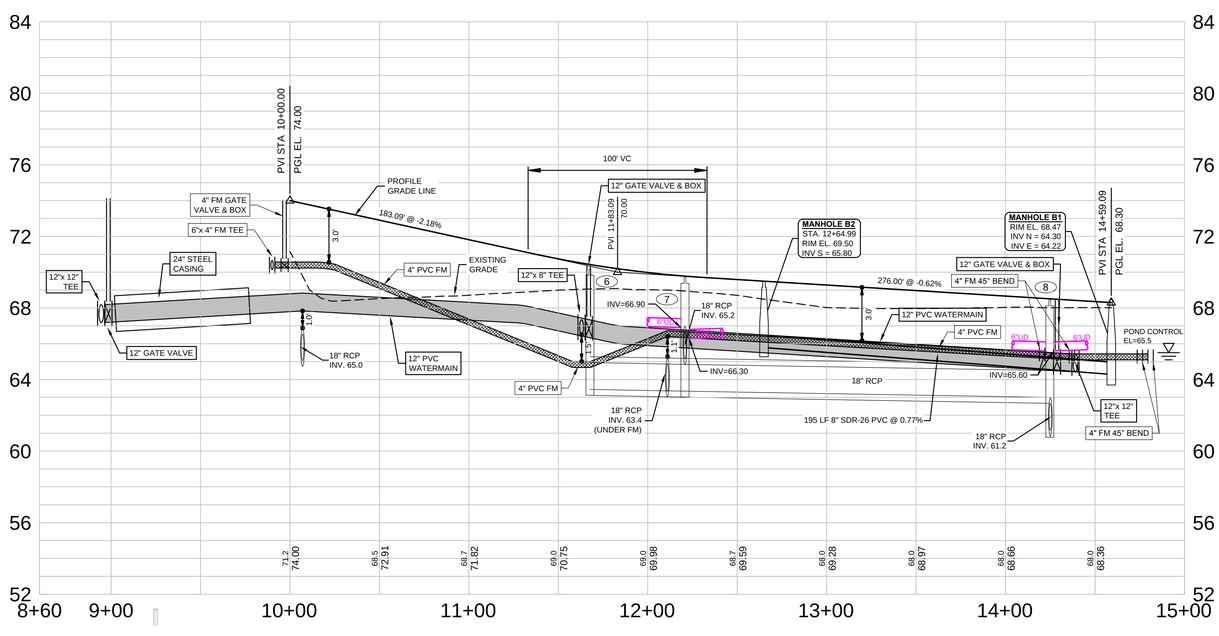
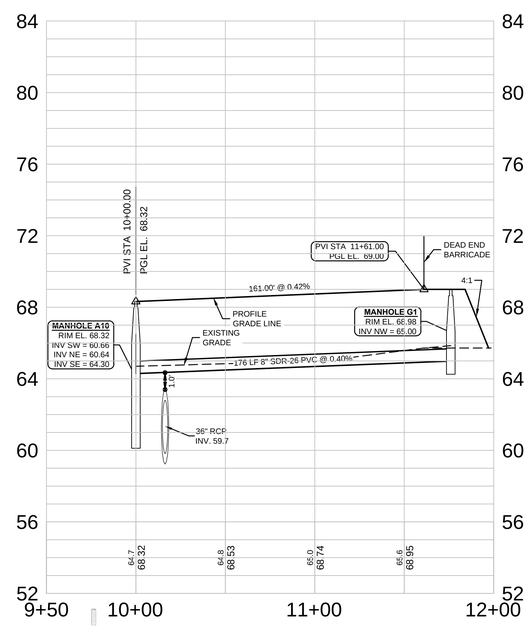
VERTICAL SCALE: 1" = 4'





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Fax: 813-464-7629
www.HeidtDesign.com

LEGACY HILLS (FKA FELICIANO)

ROADWAY PLAN AND PROFILE

LEGACY GREEN LLC

PREPARED FOR:

DATE	DESCRIPTION

DATE	DESCRIPTION
07-11-14	SUBMITTED FOR SUBSTANTIAL COMPLIANCE REVIEW BY COUNTY
01-08-14	REVISED FOR COUNTY RESUBMITTAL
09-16-13	ISSUED FOR PLAN MOD REVIEW BY COUNTY
07-03-07	WATER MAIN SIZE
03-28-07	LEGACY HILLS LANE UNDERDRAIN
01-18-07	UD
12-21-06	-

PROJECT NO: MAR-RD-1001
FILE: RP-LEGACY HILLS
DESIGN BY: DUNNING
DRAWN BY: DUNNING

FLORIDA PROFESSIONAL ENGINEER

GARY D. MILLER
DATE:
REGISTRATION NO. 52717

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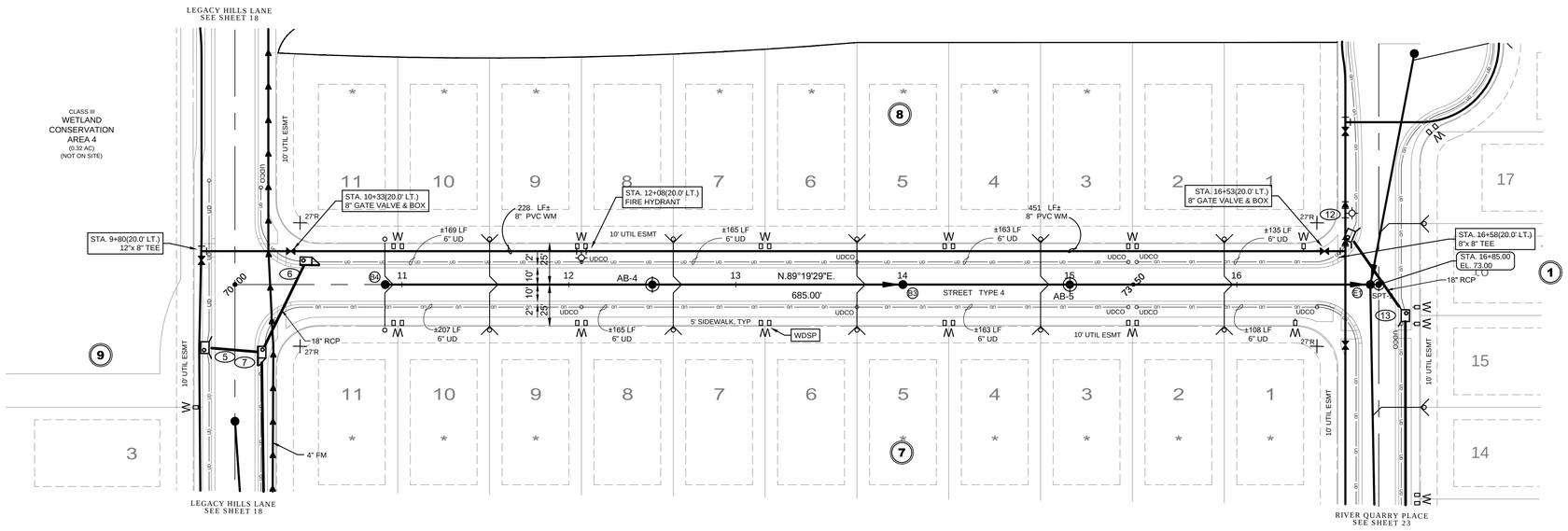

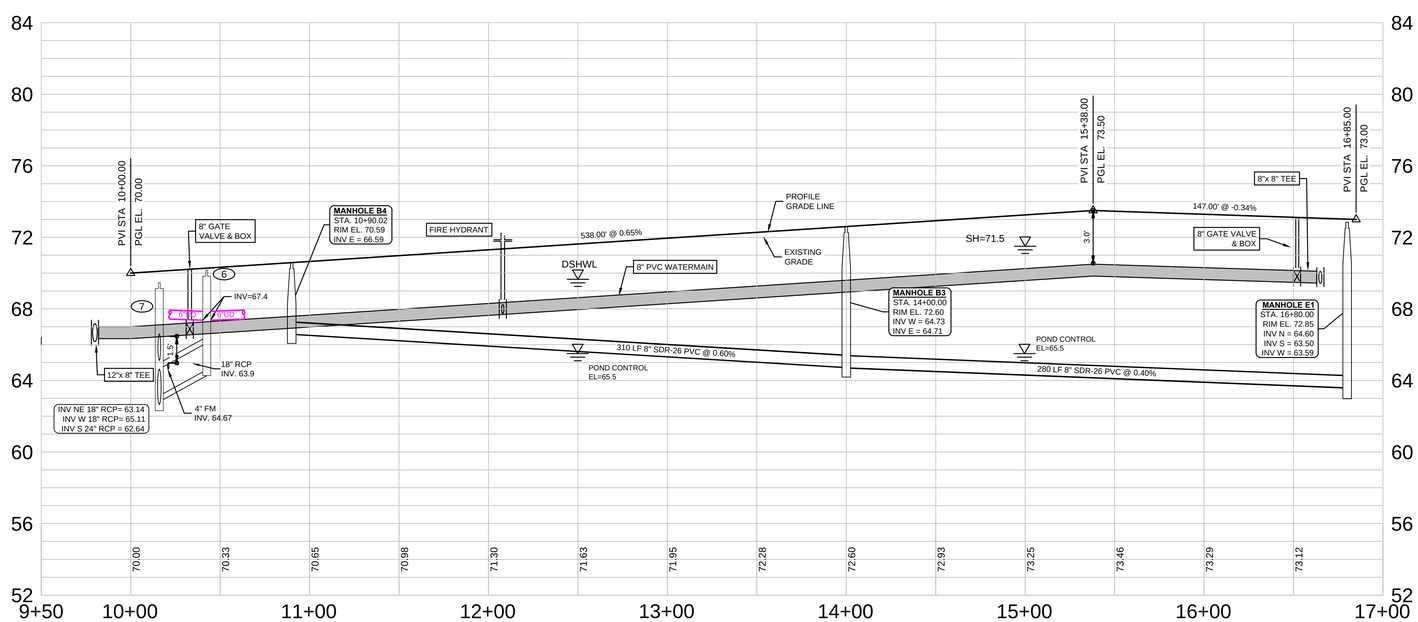

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LEGACY HILLS (FKA FELICIANO)

ROADWAY PLAN AND PROFILE

PREPARED FOR:

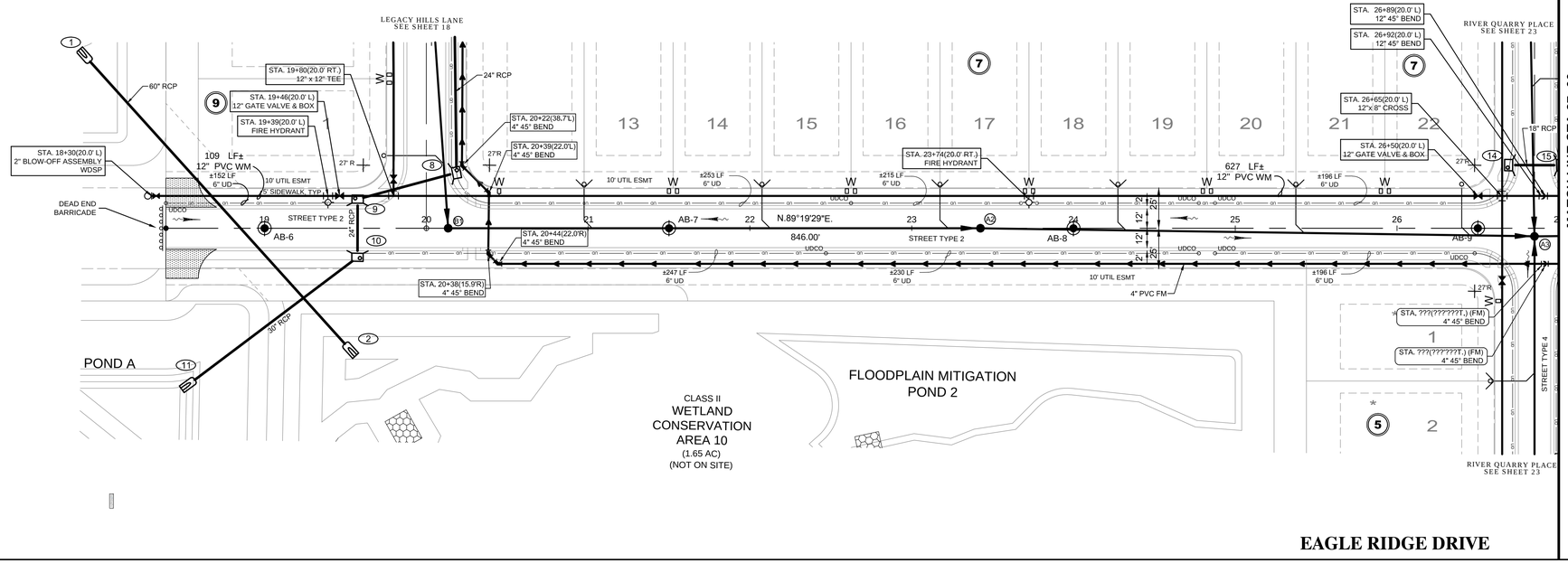
LEGACY GREEN LLC

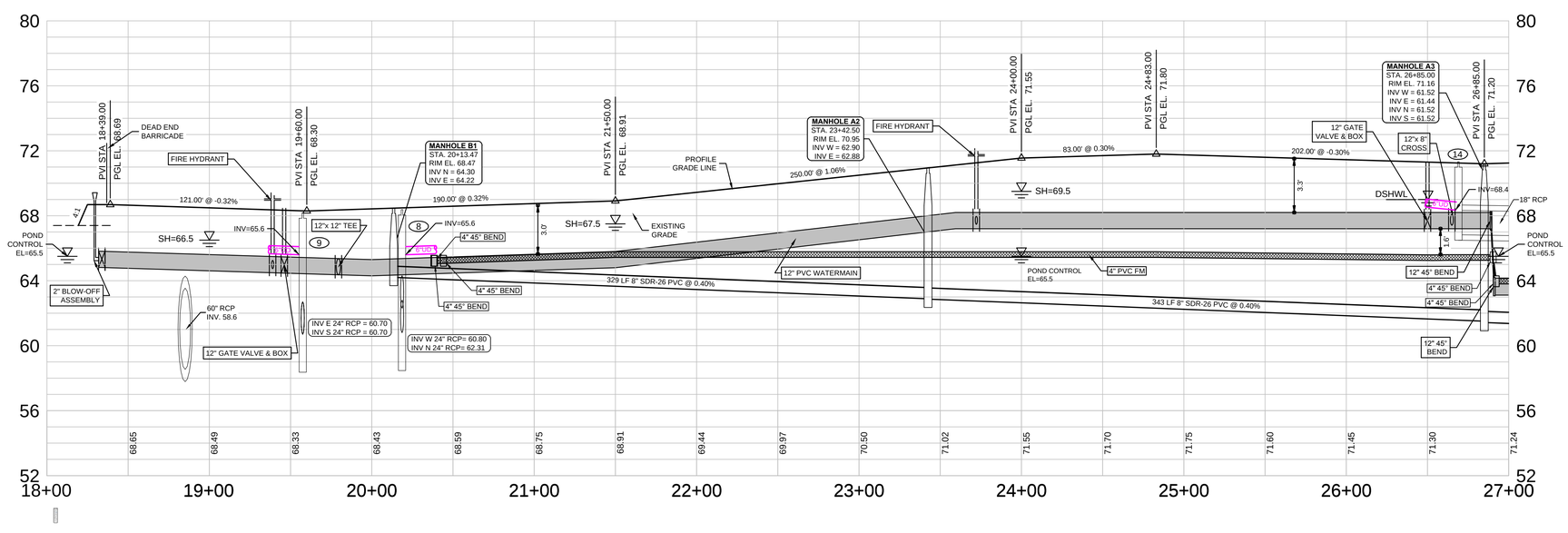
DATE	DESCRIPTION
07-11-14	SUBMITTED FOR SUBSTANTIAL PLANNING REVIEW BY COUNTY
01-08-14	REVISED FOR COUNTY RES/SBMITTAL
09-16-13	ISSUED FOR PLAN MOD REVIEW BY COUNTY
07-03-07	WATER MAIN SIZE
03-28-07	POND CONTROL EL
01-18-07	UD
12-21-06	-

PROJECT NO: MAR-RD-1001
FILE: RP-KENNISON
DESIGN BY: DUNNING
DRAWN BY: DUNNING

FLORIDA PROFESSIONAL ENGINEER

GARY D. MILLER
DATE:
REGISTRATION NO. 52717





EAGLE RIDGE DRIVE

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Fax: 813-464-7629
www.HeidtDesign.com

LEGACY HILLS (FKA FELICIANO)

ROADWAY PLAN AND PROFILE

PREPARED FOR: LEGACY GREEN LLC

R:\LEGACY DEVELOPMENT PROJECT\LEGACY HILLS 2012\WORKING FILES\CAD\PLAN\ DRAWINGS\CP\RP-EAGLE RIDGE.DWG 20 2014/10/24 11:52 AM ERIC FRANCIS

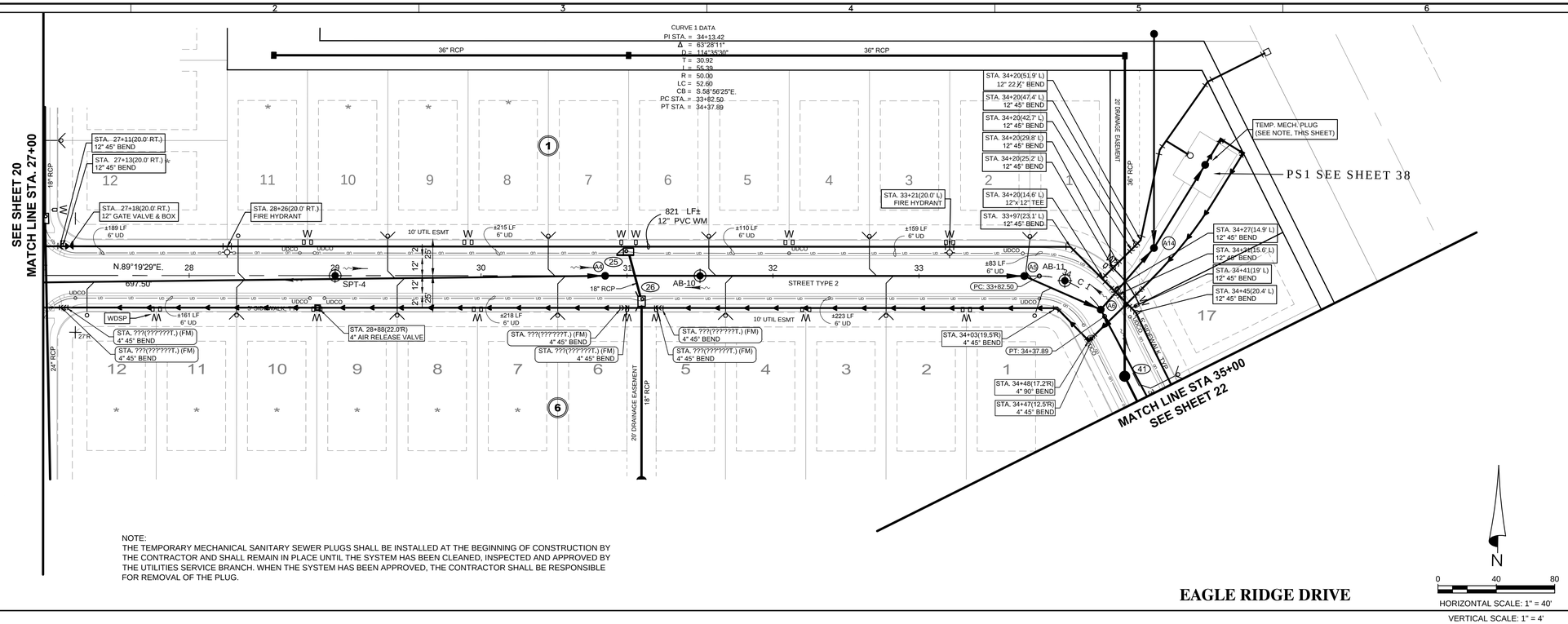
DATE	DESCRIPTION

DATE	DESCRIPTION
07-11-14	SUBMITTED FOR SUBSTANTIAL PLAN MOD. REVIEW BY COUNTY
01-08-14	REVISED FOR COUNTY RESUBMITTAL
09-16-13	ISSUED FOR PLAN MOD REVIEW BY COUNTY
07-03-07	WATER MAIN SIZE
03-28-07	POND CONTROL EL
03-07-07	COUNTY COMMENTS
01-18-07	UD
12-21-06	

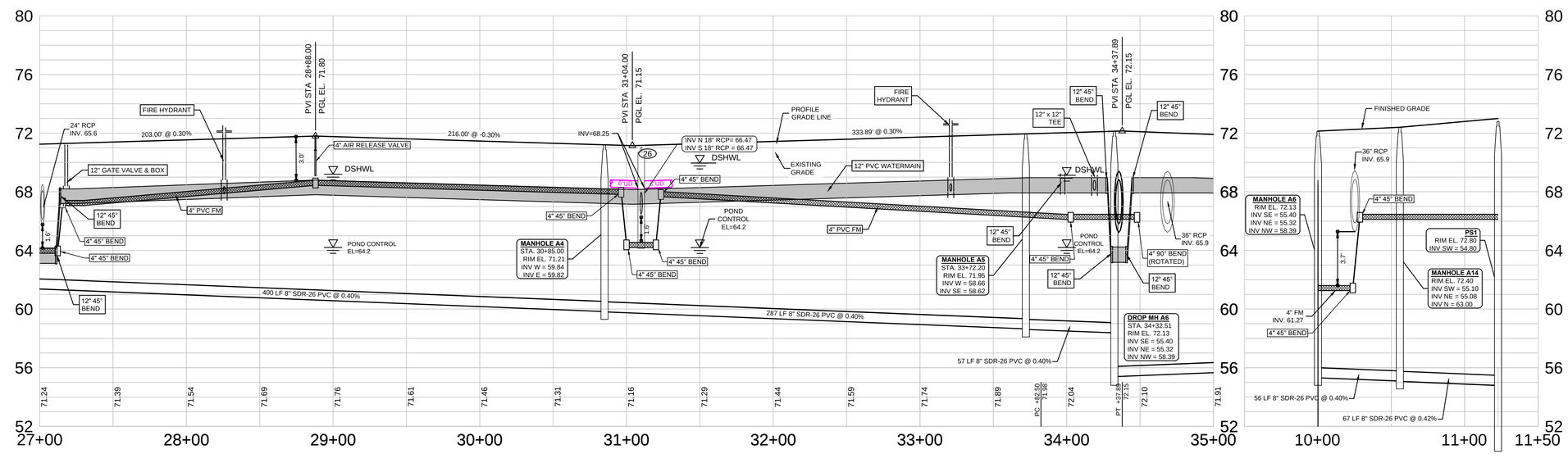
PROJECT NO: MAR-RD-1001
FILE: RP-EAGLE RIDGE
DESIGN BY: DUNNING
DRAWN BY: DUNNING

FLORIDA PROFESSIONAL ENGINEER

GARY D. MILLER
DATE:
REGISTRATION NO. 52717



NOTE:
THE TEMPORARY MECHANICAL SANITARY SEWER PLUGS SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION BY THE CONTRACTOR AND SHALL REMAIN IN PLACE UNTIL THE SYSTEM HAS BEEN CLEANED, INSPECTED AND APPROVED BY THE UTILITIES SERVICE BRANCH. WHEN THE SYSTEM HAS BEEN APPROVED, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL OF THE PLUG.



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LEGACY HILLS (FKA FELICIANO)

ROADWAY PLAN AND PROFILE

LEGACY GREEN LLC

PREPARED FOR:

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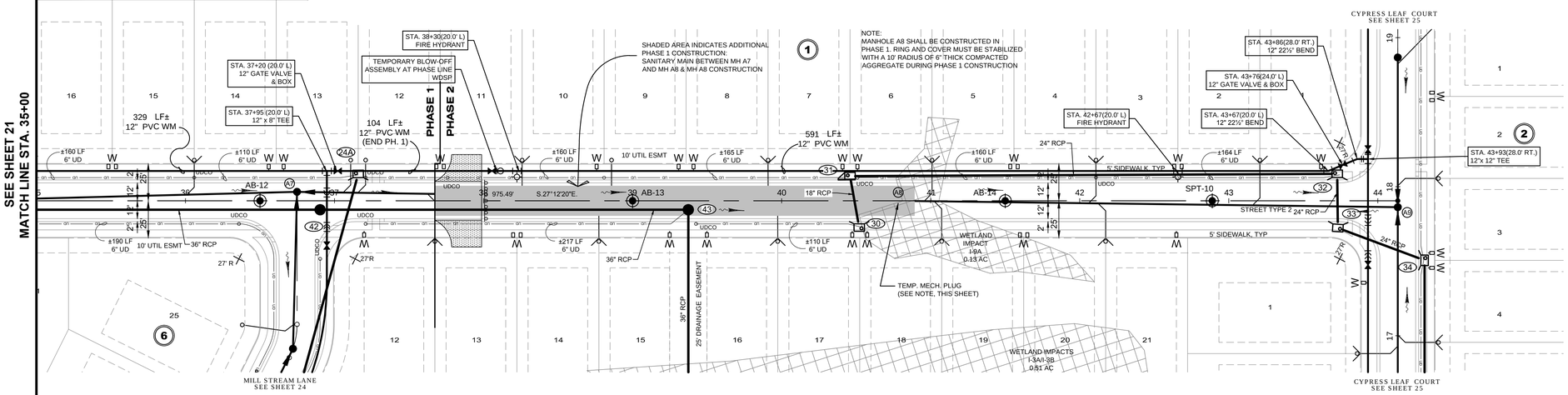
DATE	DESCRIPTION

DATE	DESCRIPTION
07-11-14	SUBMITTED FOR SUBSTANTIAL PLANNING COMMENTS/COMMITTAL
01-08-14	REVISED FOR COUNTY RESUBMITTAL
09-16-13	ISSUED FOR PLAN AND REVIEW BY COUNTY
07-03-07	WATER MAIN SIZE
03-28-07	POND CONTROL ELEVATION
01-18-07	UD, INTERSECTION DIM
12-21-06	-

PROJECT NO: MAR-RD-1001
FILE: RP-EAGLE RIDGE
DESIGN BY: DUNNING
DRAWN BY: DUNNING

FLORIDA PROFESSIONAL ENGINEER

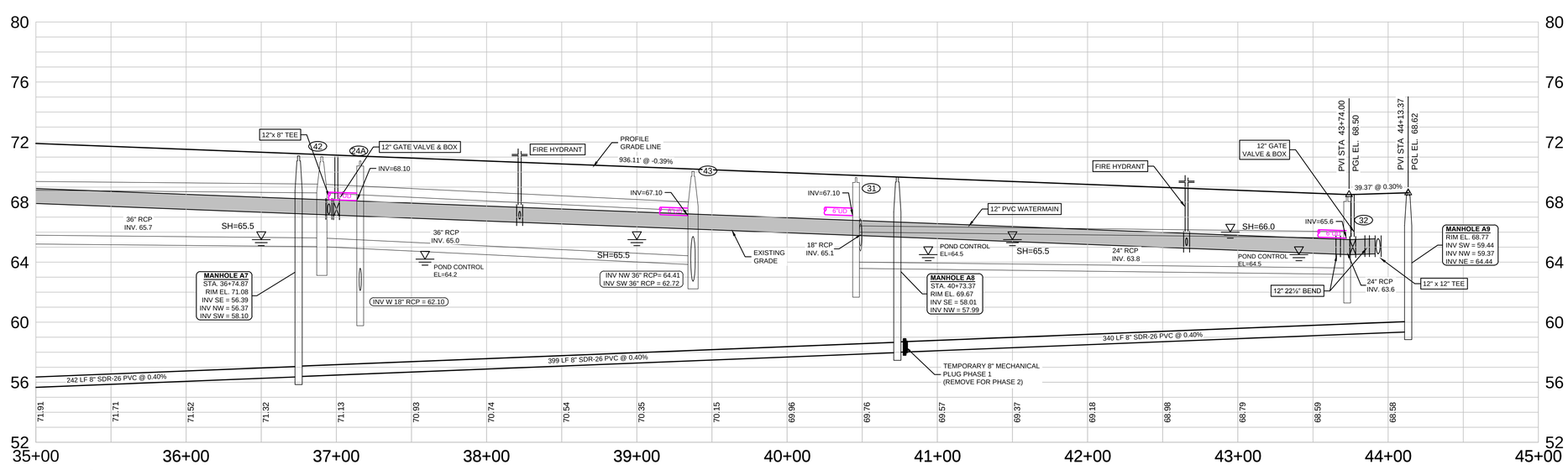
GARY D. MILLER
DATE:
REGISTRATION NO. 52717



NOTE:
THE TEMPORARY MECHANICAL SANITARY SEWER PLUGS SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION BY THE CONTRACTOR AND SHALL REMAIN IN PLACE UNTIL THE SYSTEM HAS BEEN CLEANED, INSPECTED AND APPROVED BY THE UTILITIES SERVICE BRANCH. WHEN THE SYSTEM HAS BEEN APPROVED, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL OF THE PLUG.

EAGLE RIDGE DRIVE

0 40 80
HORIZONTAL SCALE: 1" = 40'
VERTICAL SCALE: 1" = 4'



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LEGACY HILLS (FKA FELICIANO)

ROADWAY PLAN AND PROFILE

LEGACY GREEN LLC

PREPARED FOR

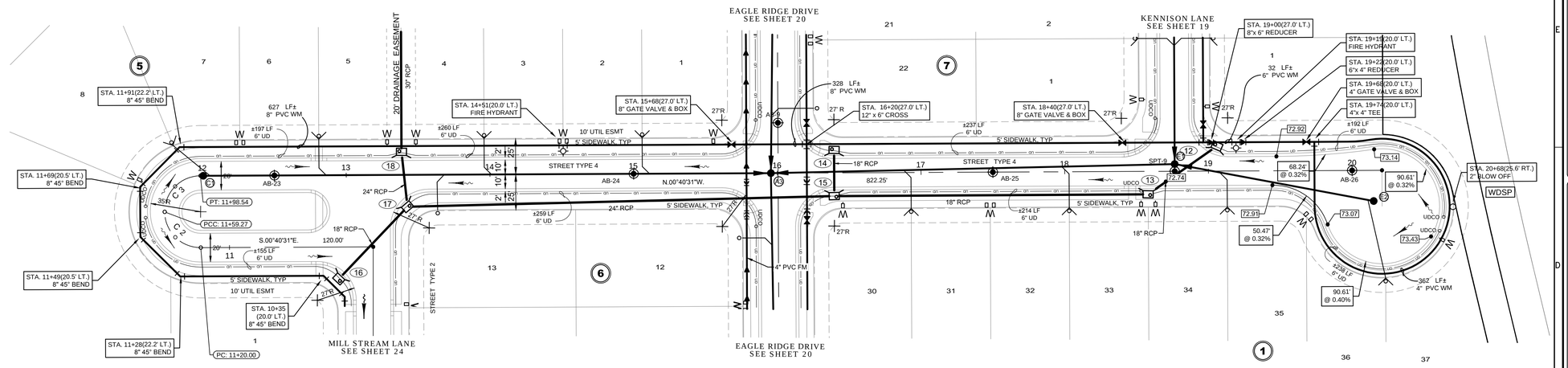
DATE	DESCRIPTION
07-11-14	SUBMITTED FOR SUBSTANTIAL PLAN MOD. REVIEW BY COUNTY

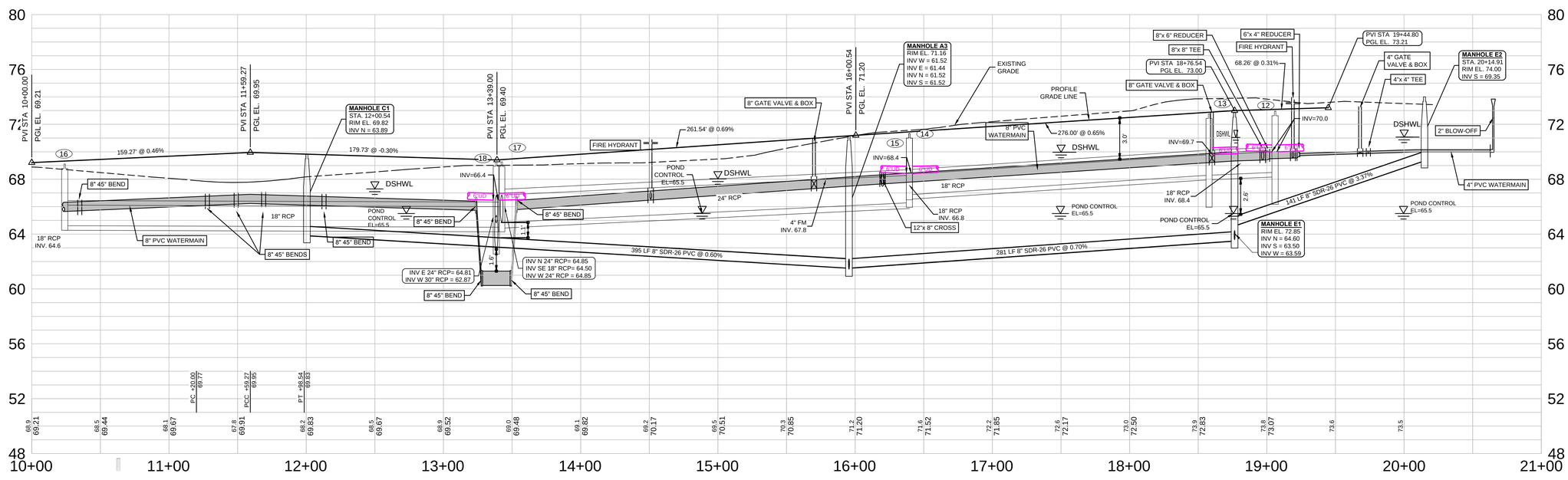
DATE	DESCRIPTION
01-08-14	REVISED FOR COUNTY RESUBMITTAL
12-24-13	PER COUNTY COMMENTS
09-16-13	ISSUED FOR PLAN MOD REVIEW BY COUNTY
07-03-07	WATER MAIN SIZE
03-28-07	POND CONTROL EL
03-07-07	COUNTY COMMENTS
01-18-07	UD
12-21-06	-

PROJECT NO: MAR-RD-1001
FILE: RP-EAGLE RIDGE
DESIGN BY: DUNNING
DRAWN BY: DUNNING

FLORIDA PROFESSIONAL ENGINEER

GARY D. MILLER
DATE:
REGISTRATION NO. 52717





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LEGACY HILLS (FKA FELICIANO)

ROADWAY PLAN AND PROFILE

PREPARED FOR: LEGACY GREEN LLC

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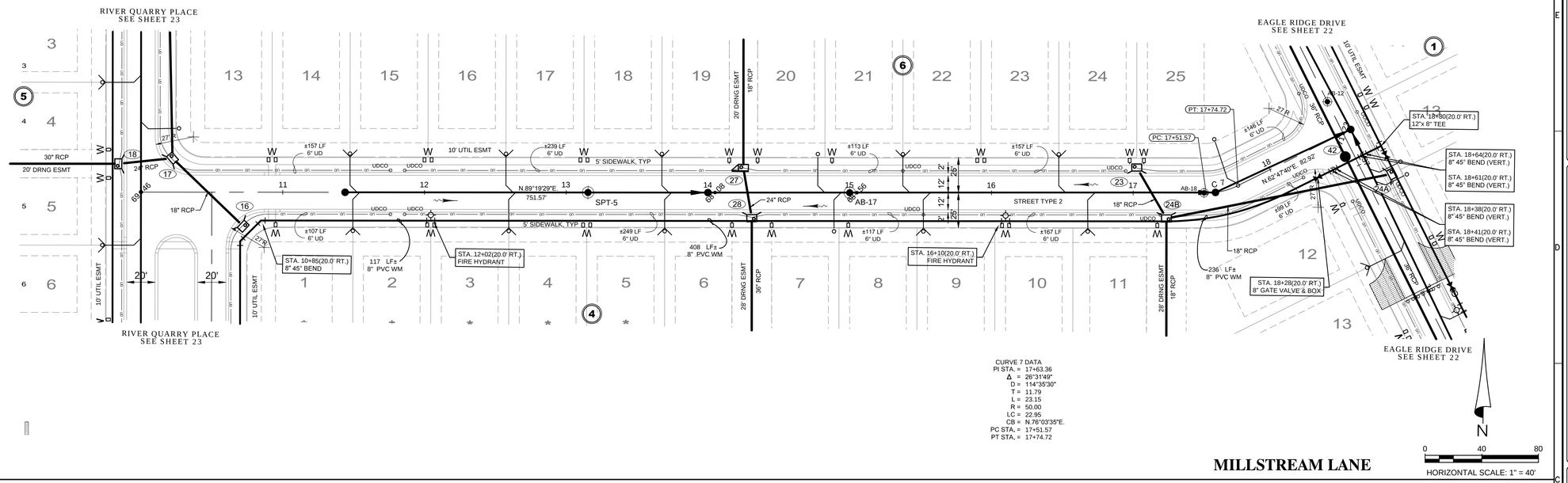
DATE	DESCRIPTION

DATE	DESCRIPTION
07-11-14	SUBMITTED FOR SUBSTANTIAL PLAN MOD. REVIEW BY COUNTY
01-08-14	REVISED FOR COUNTY RESUBMITTAL
09-16-13	ISSUED FOR PLAN MOD REVIEW BY COUNTY
07-03-07	WATER MAIN SIZE
03-28-07	POND CONTROL EL
03-07-07	COUNTY COMMENTS
01-18-07	UD
12-21-06	-

PROJECT NO:	MAR-RD-1001
FILE:	RP-RIVER QUARRY
DESIGN BY:	DUNNING
DRAWN BY:	DUNNING

FLORIDA PROFESSIONAL ENGINEER

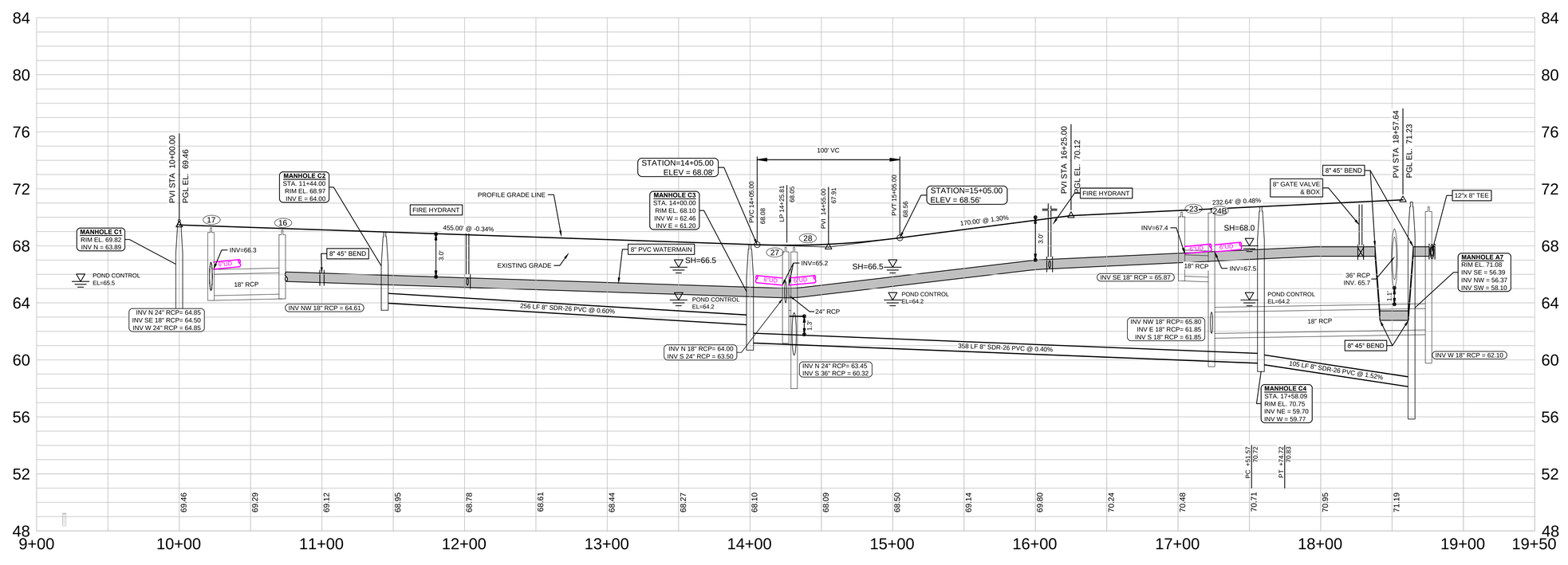
GARY D. MILLER
DATE:
REGISTRATION NO. 52717



CURVE 7 DATA
PI STA. = 17+63.36
Δ = 26°31'49"
D = 114°35'30"
T = 11.79
L = 23.15
R = 50.00
LC = 22.95
CB = N.76°03'35"E.
PC STA. = 17+51.57
PT STA. = 17+74.72

MILLSTREAM LANE

0 40 80
HORIZONTAL SCALE: 1" = 40'
VERTICAL SCALE: 1" = 4'



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LEGACY HILLS (FKA FELICIANO)

ROADWAY PLAN AND PROFILE

LEGACY GREEN LLC

PREPARED FOR:

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DATE	DESCRIPTION

DATE:	DESCRIPTION
07-11-14	SUBMITTED FOR SUBSTANTIAL COMPLIANCE REVIEW
01-08-14	REVISED FOR COUNTY RESUBMITTAL
09-16-13	ISSUED FOR PLAN MOD REVIEW BY COUNTY
07-03-07	WATER MAIN SIZE
03-28-07	POND CONTROL ELEV
01-18-07	UD
12-21-06	-

PROJECT NO: MAR-RD-1001
FILE: RP-MILL STREAM
DESIGN BY: DUNNING
DRAWN BY: DUNNING

FLORIDA PROFESSIONAL ENGINEER

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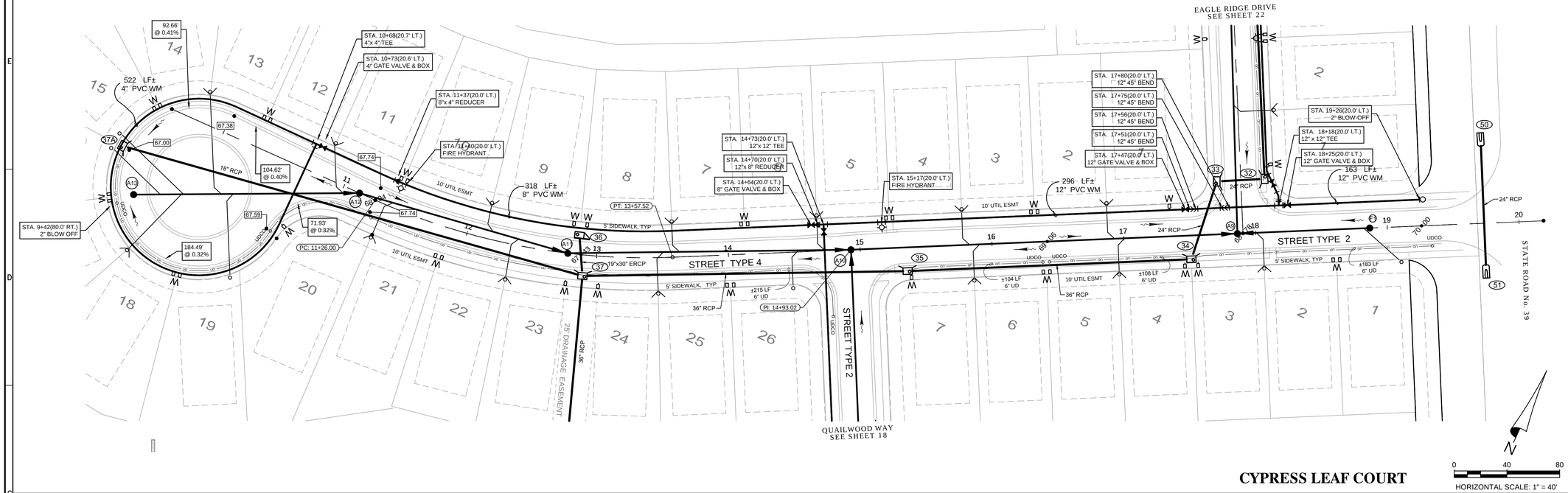
DATE:
REGISTRATION NO. 52717

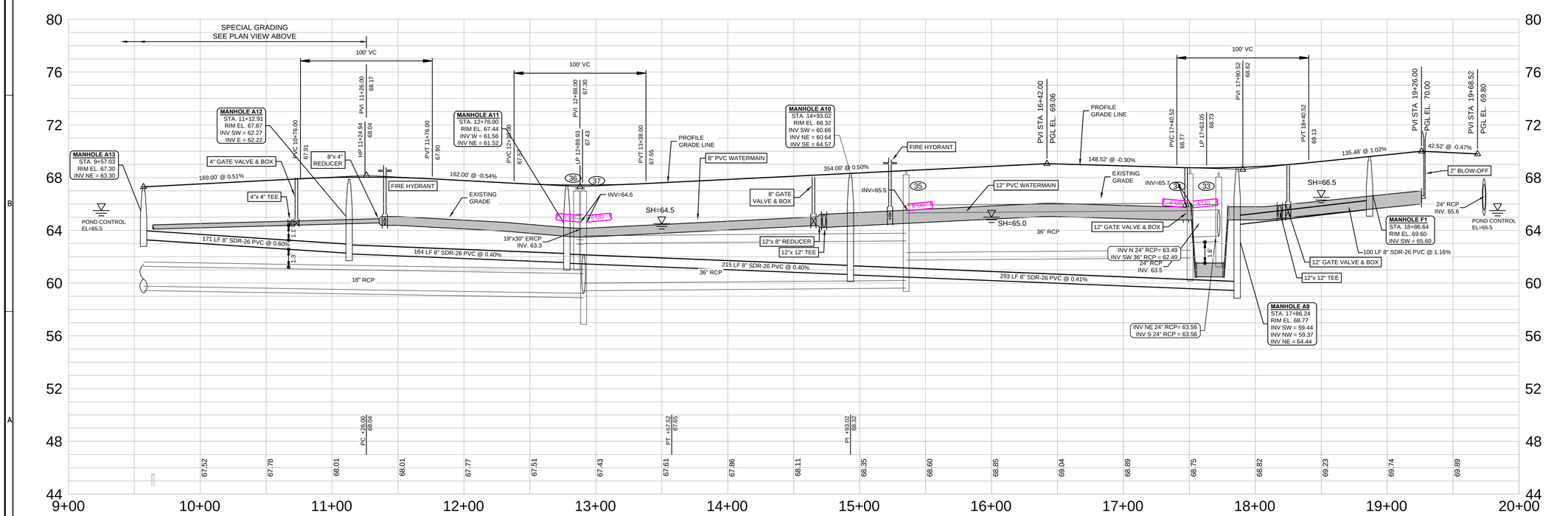


CYPRESS LEAF COURT

0 40 80

HORIZONTAL SCALE: 1" = 40'

VERTICAL SCALE: 1" = 4'



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LEGACY HILLS (FKA FELICIANO)

ROADWAY PLAN AND PROFILE

PREPARED FOR:

LEGACY GREEN LLC

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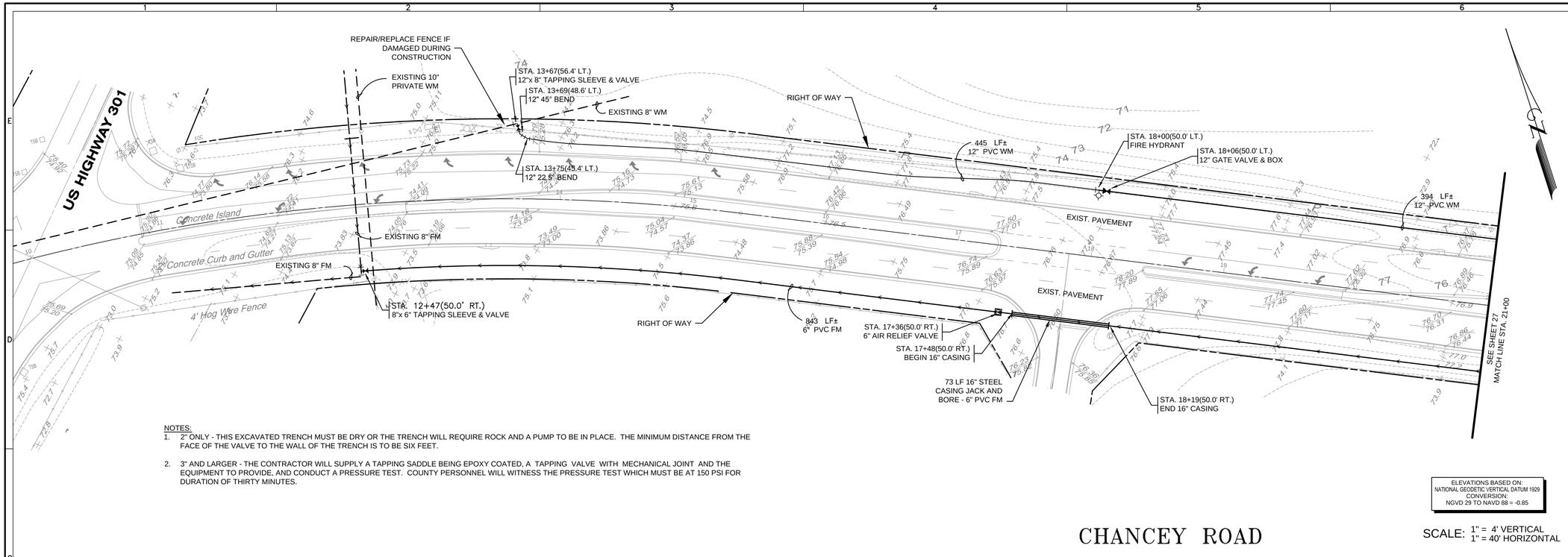
DATE	DESCRIPTION

DATE	DESCRIPTION
07-11-14	SUBMITTED FOR SUBSTANTIAL PLAN PAVING & DRAINAGE CAPACITY
01-08-14	REVISED FOR COUNTY RESUBMITTAL
09-16-13	ISSUED FOR PLAN AND REVIEW BY COUNTY
07-03-07	WATER MAIN SIZE
01-18-07	UD
12-21-06	-

PROJECT NO:	MAR-RD-1001
FILE:	RP-CYPRESS LEAF
DESIGN BY:	DUNNING
DRAWN BY:	DUNNING

FLORIDA PROFESSIONAL ENGINEER

GARY D. MILLER
DATE:
REGISTRATION NO. 52717



NOTES:

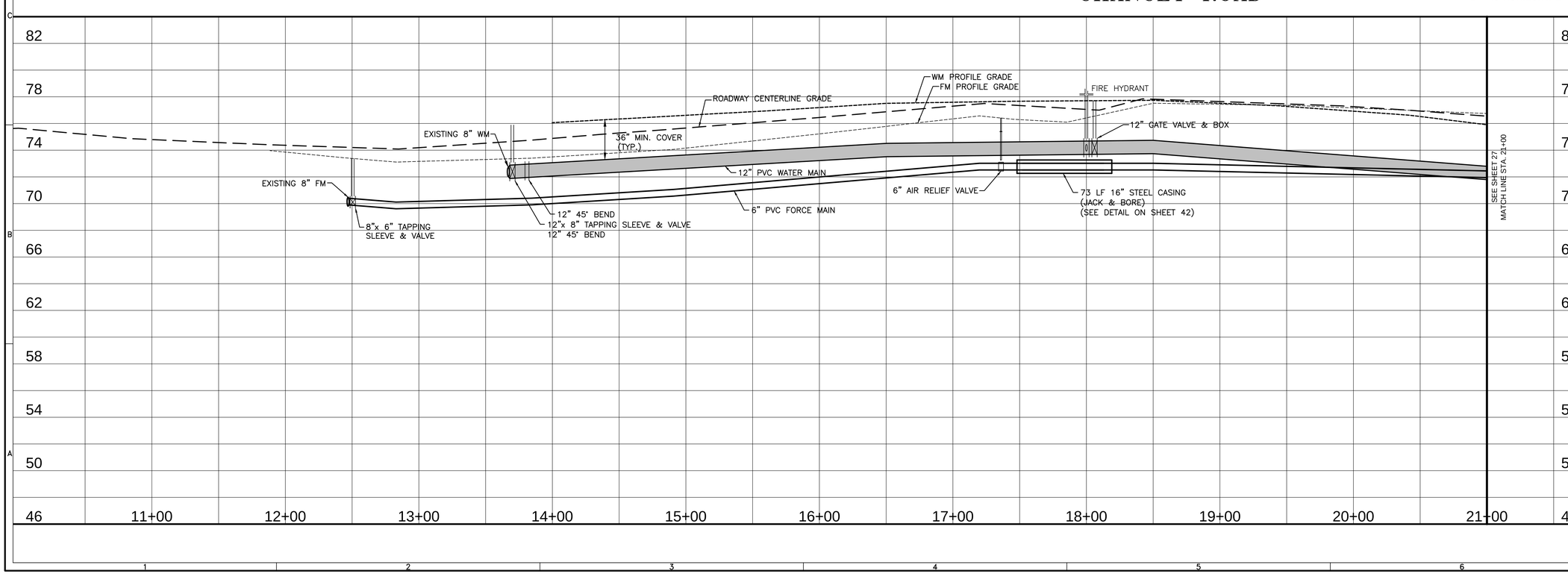
1. 2" ONLY - THIS EXCAVATED TRENCH MUST BE DRY OR THE TRENCH WILL REQUIRE ROCK AND A PUMP TO BE IN PLACE. THE MINIMUM DISTANCE FROM THE FACE OF THE VALVE TO THE WALL OF THE TRENCH IS TO BE SIX FEET.

2. 3" AND LARGER - THE CONTRACTOR WILL SUPPLY A TAPPING SADDLE BEING EPOXY COATED, A TAPPING VALVE WITH MECHANICAL JOINT AND THE EQUIPMENT TO PROVIDE, AND CONDUCT A PRESSURE TEST. COUNTY PERSONNEL WILL WITNESS THE PRESSURE TEST WHICH MUST BE AT 150 PSI FOR DURATION OF THIRTY MINUTES.

ELEVATIONS BASED ON:
NATIONAL GEODETIC VERTICAL DATUM 1929
CONVERSION:
NGVD 29 TO NAVD 88 = -0.85

CHANCEY ROAD

SCALE: 1" = 4' VERTICAL
1" = 40' HORIZONTAL



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LEGACY HILLS (FKA FELICIANO)

OFFSITE UTILITY PLAN AND PROFILE

LEGACY GREEN LLC

PREPARED FOR:

DATE	DESCRIPTION

DATE	DESCRIPTION
07-11-14	SUBMITTED FOR SUBSTANTIAL PLAN APPROVAL - COUNTY
01-08-14	REVISED FOR COUNTY RESUBMITTAL
12-24-13	PER COUNTY COMMENTS
09-16-13	ISSUED FOR PLAN MOD REVIEW BY COUNTY
7-3-07	WATER MAIN SIZE
5-23-07	FH SPACING
12-21-06	-

PROJECT NO: MAR-RD-1001
FILE: RP-OFFSITE1
DESIGN BY: DUNNING
DRAWN BY: DUNNING

FLORIDA PROFESSIONAL ENGINEER

GARY D. MILLER
DATE:
REGISTRATION NO. 52717

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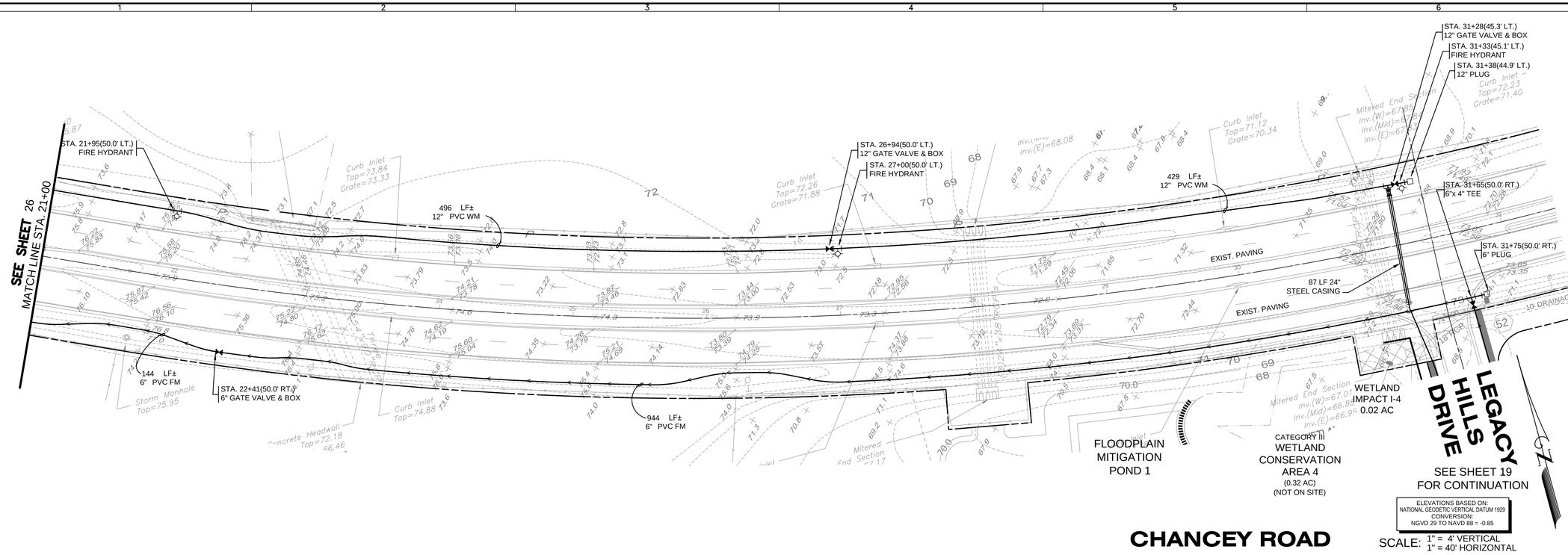
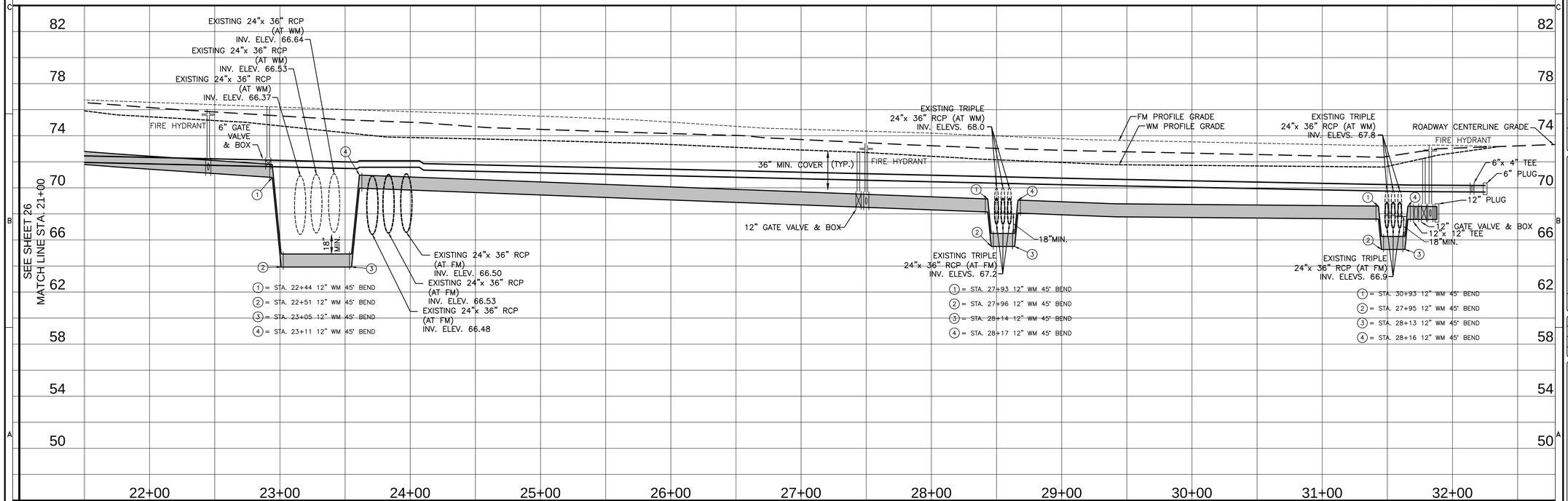


ELEVATIONS BASED ON:
NATIONAL GEODETIC VERTICAL DATUM 1929
CONVERSION:
NGVD 29 TO NAVD 88 = -0.85



① = STA. 22+44 12" WM 45° BEND
② = STA. 22+51 12" WM 45° BEND
③ = STA. 23+05 12" WM 45° BEND
④ = STA. 23+11 12" WM 45° BEND

① = STA. 27+93 12" WM 45° BEND
② = STA. 27+96 12" WM 45° BEND
③ = STA. 28+14 12" WM 45° BEND
④ = STA. 28+17 12" WM 45° BEND

① = STA. 30+93 12" WM 45° BEND
② = STA. 27+95 12" WM 45° BEND
③ = STA. 28+13 12" WM 45° BEND
④ = STA. 28+16 12" WM 45° BEND

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Fax: 813-464-7629
www.HeidtDesign.com

LEGACY HILLS (FKA FELICIANO)

OFFSITE UTILITY PLAN AND PROFILE

LEGACY GREEN LLC

PREPARED FOR

DATE	DESCRIPTION
07-11-14	SUBMITTED FOR SUBSTANTIAL PLAN MOD REVIEW BY COUNTY
09-16-13	ISSUED FOR PLAN MOD REVIEW BY COUNTY
7-3-07	WATER MAIN SIZE
5-23-07	FH SPACING
12-21-06	-

PROJECT NO:	MAR-RD-1001
FILE:	RP-OFFSITE2
DESIGN BY:	DUNNING
DRAWN BY:	DUNNING

FLORIDA PROFESSIONAL ENGINEER

GARY D. MILLER
DATE:
REGISTRATION NO. 52717

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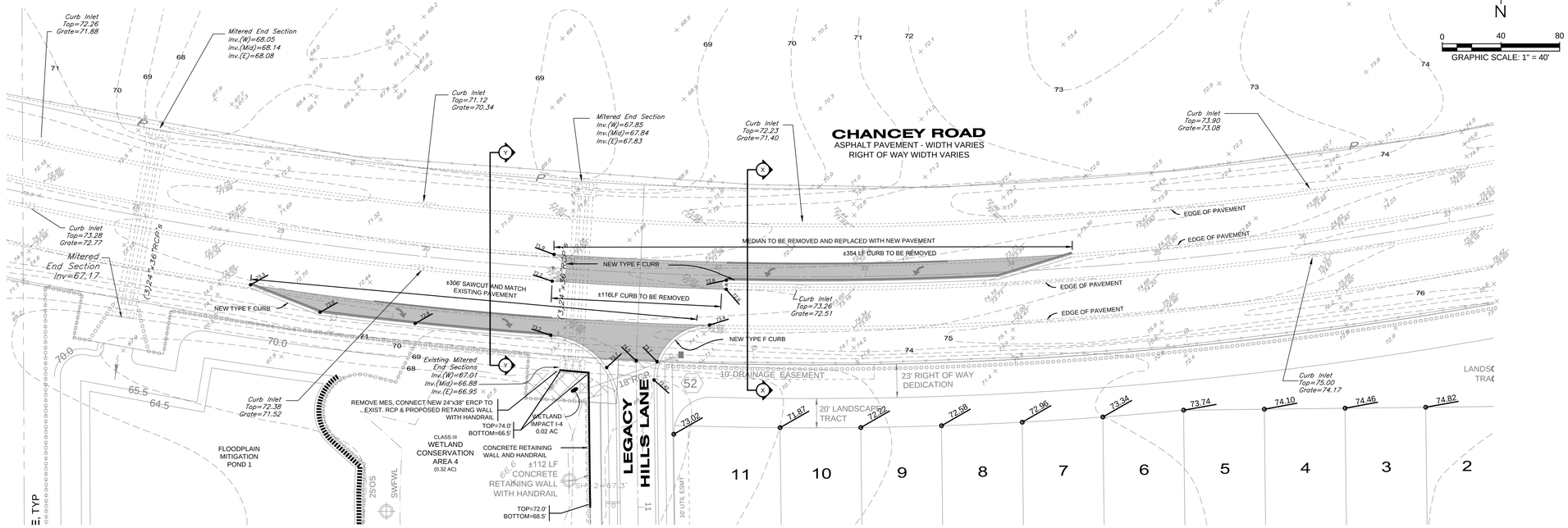
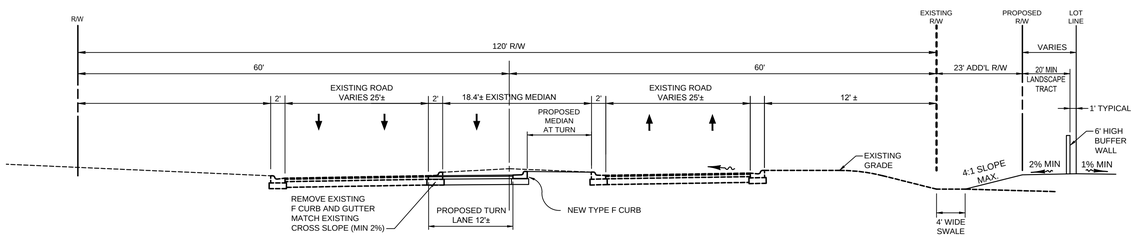
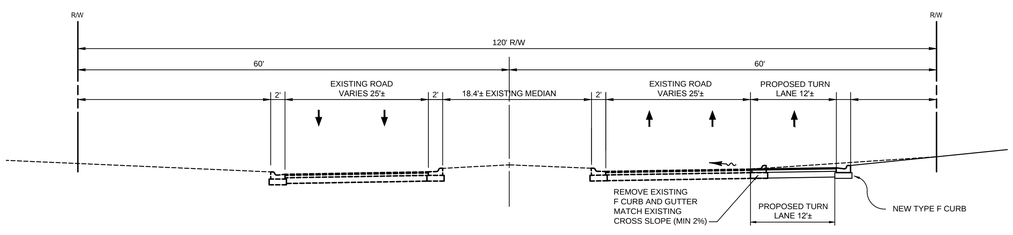




CHANCEY ROAD ROADWAY SECTION X-X

N.T.S.



CHANCEY ROAD ROADWAY SECTION Y-Y

N.T.S.

CHANCEY ROAD Proposed Roadway Design:

Layer Coefficients	Thickness
9.50 - Friction Course FC-6	1"
12.5 - Type S-1 Asphalt Surface	2"
0.15 - Crushed Concrete (LRB 150)	12"
0.08 - Stabilized Subgrade (12" Min.)	12"

SN = (0.44) (3") + (0.15) (12") + (0.04) (12")

SN = 4.08

SN $\overline{SN}_0$

4.08 >/= 4.0

Use: 12" Crushed Concrete with 1" FC-6 & 2" Type S-1 Asphalt Surface and 12" Stabilized Subgrade (12" Min.)

ELEVATIONS BASED ON:
NATIONAL GEODETIC VERTICAL DATUM 1929
CONVERSION:
NGVD 29 TO NAVD 88 = -0.85

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Landscape Architecture Certificate of Authorization No. LC26000405
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Tampa, Florida 33610
Office: 813-253-5311
Fax: 813-464-7629
www.HeidtDesign.com

LEGACY HILLS (FKA FELICIANO)

CHANCEY ROAD WIDENING PLAN

PREPARED FOR: LEGACY GREEN LLC

DATE	DESCRIPTION
07-11-14	SUBMITTED FOR SUBSTANTIAL PLAN MOD. REVIEW BY COUNTY
01-08-14	REVISED FOR COUNTY RESUBMITTAL
09-16-13	ISSUED FOR PLAN MOD REVIEW BY COUNTY
03-29-07	PAVEMENT SECTION
01-18-07	SWFWMD COMMENTS (WL ON SITE)

PROJECT NO:	MAR-RD-1001
FILE:	RD-WIDE
DESIGN BY:	DUNNING
DRAWN BY:	DUNNING

FLORIDA PROFESSIONAL ENGINEER

GARY D. MILLER
DATE:
REGISTRATION NO. 52717

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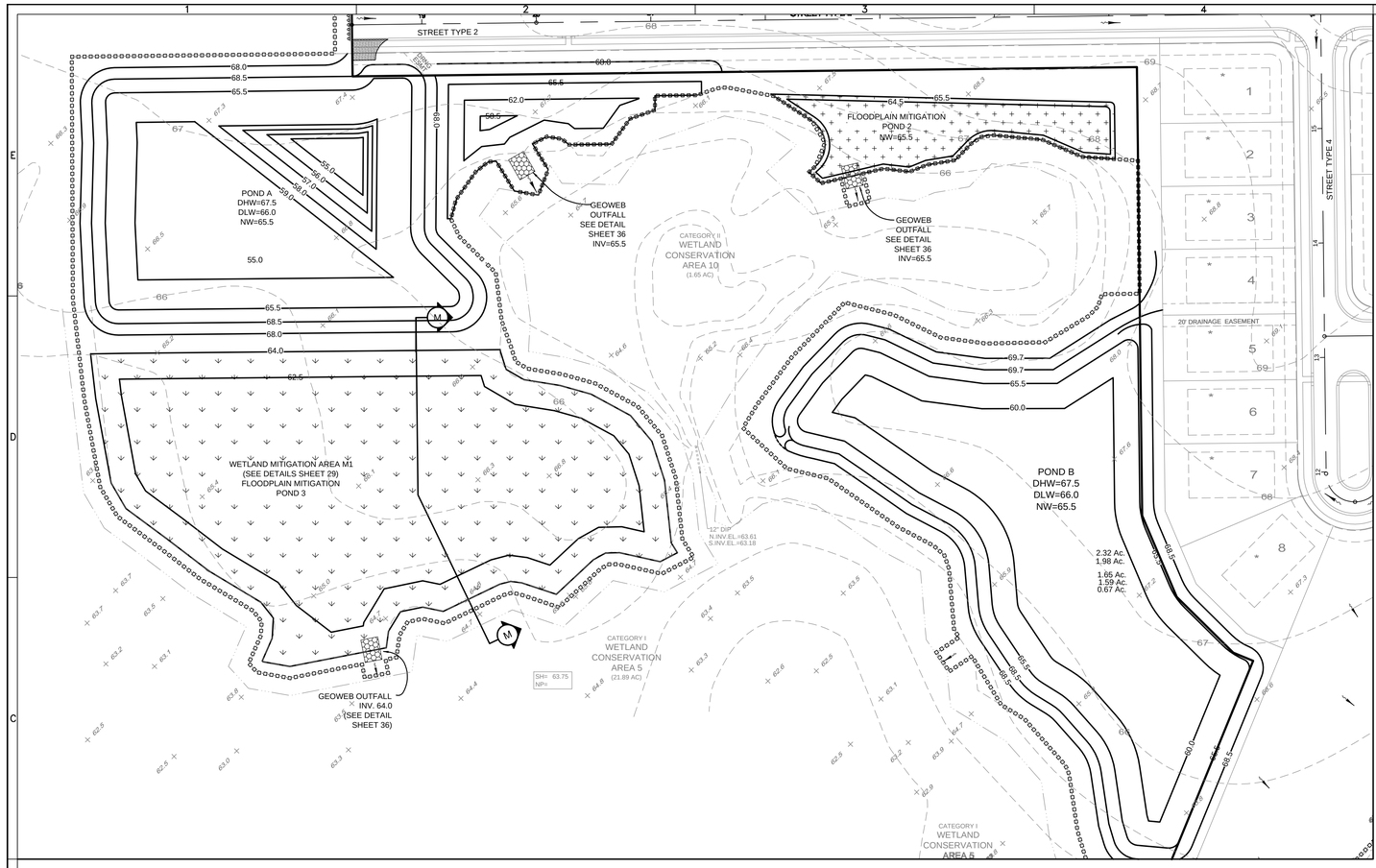
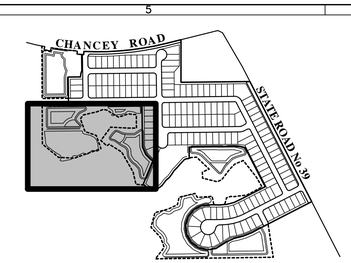




KEY MAP

N

0 60 120

GRAPHIC SCALE: 1" = 60'

ELEVATIONS BASED ON:
NATIONAL GEODETIC VERTICAL DATUM 1929
CONVERSION:
NGVD 29 TO NAVD 88 = -0.85

LEGEND

EXISTING

- STRUCTURE NO.
- ELEVATION
- CONTOUR

PROPOSED

- STRUCTURE NO.
- ELEVATION
- CONTOUR
- UDCO
- AB# — SOIL BORING LOCATION
- SWFWL — SWFWMD WETLAND LINE
- 25'OS
- 12" Oak — TREES TO BE REMOVED
- 12" Oak
- TREE BARRICADE
- 50.0 — PAD ELEVATION
- 55 — LOT NUMBER
- A — LOT GRADING TYPE

MISCELLANEOUS MITIGATION NOTES:

Plants will be installed in random patterns at the contractor's discretion unless otherwise directed by the plans or by the mitigation designer.

The Mitigation area will be considered as a conservation area. It is not being placed in a conservation easement for SWFWMD purposes.

Plants will be installed at elevations most conductive for their development. Planting ranges are depicted on the attached list.

The Mitigation area will be completed and planted within 120 days following initial wetland impact.

Grades and slopes shown on the mitigation areas may be field altered to insure that water levels will be achieved which result in optimal plant survival and habitat value. However, grade changes must be approved by appropriate agencies.

Minimum plant sizes:
Herbs: 4" potted material or bare root equivalent.
Shrubs: one gallon pots
Trees: three gallon pots in forested area
Three gallon trees will be a minimum of 3' in height at the time of planting.

Potted, nursery grown material will be used, unless otherwise approved in advance. Plants will be as shown on the attached list.

This herbaceous mitigation area will receive plants on 3 foot centers, woody plants will comprise 3% of this total.

Due to the poor quality of the wetland impacts, no wetland topsoil mulch is available. However, the contractor will provide a suitable substrate on which to allow plant development. There will be at least 24 inches of sandy, non-clay soil at the mitigation areas above the clay layer.

ATTACHMENT "A" - STANDARD WETLAND MITIGATION MONITORING & MAINTENANCE NOTES:

All the following items will be included in the mitigation monitoring and maintenance program.

A. Monitoring and maintenance will be performed for a minimum of 3 years for herbaceous areas and 5 years for the forested areas. Maintenance will occur monthly for year one and quarterly for years two and three and semi annually thereafter as needed. Monitoring will be done semi-annually and reported annually.
1. Monitoring reports will be submitted to SWFWMD and to COE within 30 days following each monitoring event. At a minimum, monitoring reports will address:
a. Percent survival of planted species.
b. Number of plants replanted if necessary to meet 85 % and when they were planted.
c. Water quality
1) Visual observations
2) Lab data if necessary, i.e., salinity, conductivity, PH, etc.
d. Total % coverage of vegetation
e. Plant diversification and natural recruitment (list species present)
f. Depth of water at monitoring event
g. Soil stabilization measures used
h. Permanently marked photo stations
i. Wildlife usage
j. Overall ecological evaluation
k. Problems encountered and corrective actions taken or needed
l. Date planted and number of planted materials used
B. Maintenance shall mean the removal of nuisance or exotic species. Nuisance species coverage must not exceed 5% (cattails, willows, Ludwigia peruviana, water hyacinths, Sesbania spp. dogfennel, Brazilian pepper, etc.).
C. Survival must be guaranteed for each planted species. The area will be replanted annually if species survivorship falls below 85%. 50% plant cover will be achieved at the end of year one, 75% by the end of year two and 85% plant cover of non-nuisance wetland species will be achieved by the end of the third year. Replanting may be needed to achieve these values. No more than 10% of the total aerial coverage shall be upland or nuisance species.
D. Monitoring and maintenance will continue until SWFWMD and COE permitted success criteria are achieved. Reconstruction of the site design may be necessary to achieve functioning wetlands.

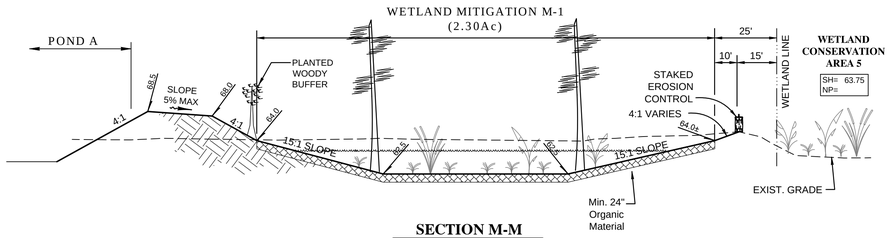
MITIGATION PLANTING LIST		PLANTING RANGE	M-1 HERBACEOUS 2.30 Ac	
			QUANTITY *	RELATIVE %
HERBS				
Pickerelweed	(Pontederia cordata)	M, L	2484	23
Arrowhead	(Sagittaria lancifolia)	M, L	2160	20
Softrush	(Juncus effusus)	U, M	540	5
Maidencane	(Pancium hemitomon)	U, M, L	2648	25
Blueflag iris	(Iris hexagona)	U, M	216	2
Cordgrass	(Spartina bakeri)	U, M	2160	20
Paspalum	(Paspalum distichum)	U, M	540	5
SUBTOTAL			10,798	100
SHRUBS				
Buttonbush	(Cephalanthus occidentalis)	M, L	100	30
SUBTOTAL			100	30
TREES				
Red Maple	(Acer rubrum)	U	33	10
Bald cypress	(Taxodium distichum)	M, L,	135	40
Laurel Oak	(Quercus laurifolia)	U	33	10
Dahoon	(Ilex cassine)	U	33	10
SUBTOTAL			234	70
OVERALL TOTAL			11,132	-

* 3% OF M-1 WILL BE WOODY PLANTS

	M-1
RELATIVE PLANTING RANGE	ELEVATIONS
U = UPPER RANGE	64.0 - 63.5
M = MIDDLE RANGE	63.5 - 63.0
L = LOWER RANGE	63.0 - 62.5

Additional Buffer Planting (400' Long With 3 Gallon Size Plants Averaging 3' On Center

Wax Myrtle = 65
Slash Pine = 38
Dahoon Holly = 15
Sweetgum = 15
Total = 133



SECTION M-M

NOT TO SCALE

NOTE:
THE WETLAND CONSERVATION AREA DESIGNATIONS ON THIS PLAN ARE PROVIDED PER PASCO COUNTY REQUIREMENTS. THEY ARE NOT PROVIDED FOR SWFWMD PURPOSES.

THE CRITERIA ABOVE ARE MINIMUM CRITERIA. SWFWMD OR COE PERMIT CONDITIONS MAY BE MORE RESTRICTIVE THAN THE ABOVE REQUIREMENTS.

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LEGACY HILLS (FKA FELICIANO)

MITIGATION PLAN AND DETAILS

PREPARED FOR: LEGACY GREEN LLC

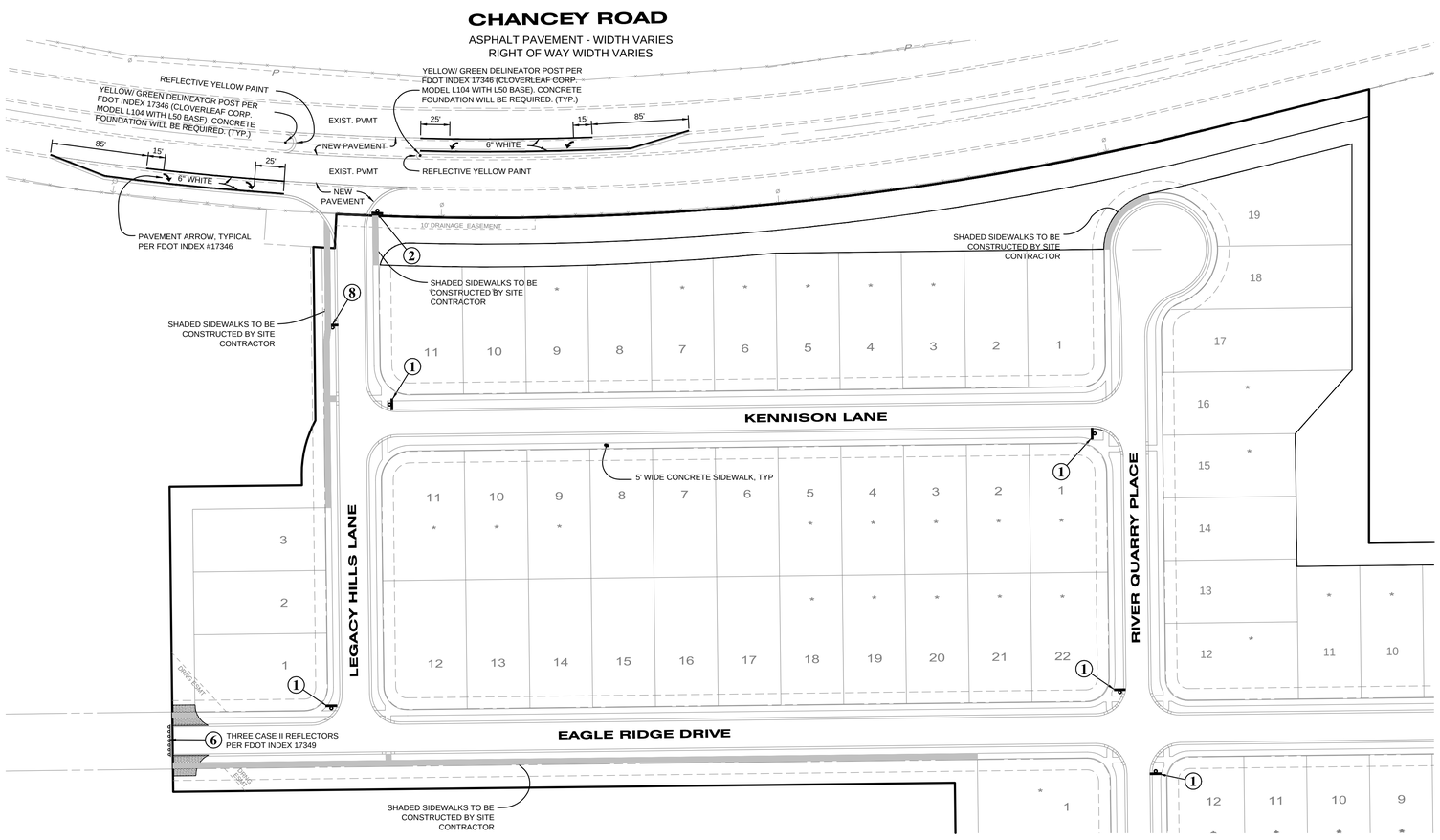
R:\LEGACY DEVELOPMENT PROJECTS\LEGACY HILLS 2012\WORKING FILES\CURRENT DRAWINGS\PMIT.DWG 29 2014/10/24 11:56 AM ERIC FRANCIS

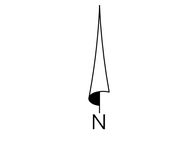
DATE	DESCRIPTION
07-11-14	SUBMITTED FOR SUBSTANTIAL PLAN MOD. REVIEW BY COUNTY
09-16-13	ISSUED FOR PLAN MOD REVIEW BY COUNTY
05-18-07	SUMP, FPM POND 2
03-28-07	POND A (WEST SIDE) PLANT LIST
01-18-07	SWFWMD COMMENTS
12-21-06	-

PROJECT NO:	MAR-RD-1001
FILE:	MIT
DESIGN BY:	DUNNING
DRAWN BY:	DUNNING

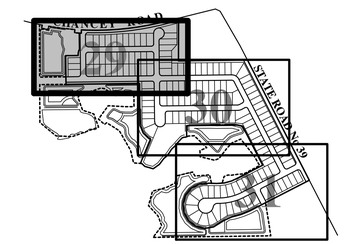
FLORIDA PROFESSIONAL ENGINEER

GARY D. MILLER
DATE:
REGISTRATION NO. 52717





ELEVATIONS BASED ON:
NATIONAL GEODETIC VERTICAL DATUM 1929
CONVERSION:
NGVD 29 TO NAVD 88 = -0.85

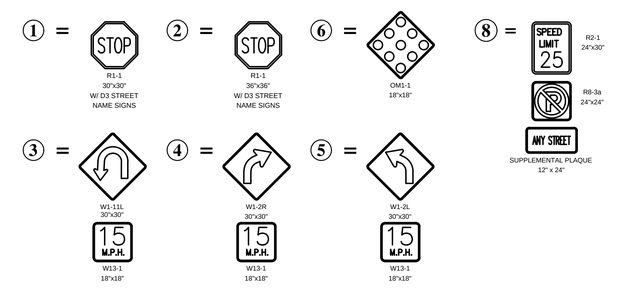


KEY MAP

NOTE:
SEE SHEETS 33 AND 34 FOR SIDEWALK DETAILS AND SPECIFICATIONS, INCLUDING PLACEMENT OF SIDEWALKS AT INTERSECTIONS.

SIGNS SUMMARY

SIGN IDENTIFICATION	SIGN DESCRIPTION	SIGN SIZE	SIGN QUANTITY
1 R1-1	STOP	30"x 30"	9
2 R1-1	STOP	36"x 36"	2
3 W1-11L	HAIRPIN CURVE	30"x 30"	1
4 W1-2R	CURVE (RIGHT)	30"x 30"	1
5 W1-2L	CURVE (LEFT)	30"x 30"	2
W13-1	ADVISORY SPEED	30"x 30"	1
6 OM4-1	END OF ROADWAY	18"x 18"	3
D3-1	STREET NAME	6"	20
D3-1	STREET NAME	9"	1
8 R2-1/ R8-3a	SPEED LIMIT	24"x 30"	2



SPECIFICATIONS FOR DESIGN AND INSTALLATION
OF TRAFFIC CONTROL DEVICES ON COUNTY ROADS

1) Purpose:
These specifications have been developed to provide developers with a uniform system for installation of traffic control devices on the County road system. A uniform system provides for reduced maintenance costs and a high standard of visibility for drivers. All required traffic control devices shall be installed by the developer of the project.

2) Florida State Statute 316.0745:
2.1) Any and all traffic control devices installed on the County road system shall conform to Florida State Statute 316.0745, Uniform Signals and Devices.

2.2) This statute requires that all devices conform to Florida Department of Transportation (FDOT) Specifications. The FDOT has adopted the Federal Manual on Uniform Traffic Control Devices as the standards to be used in the State of Florida.

3) Pavement Markings:
3.1) All pavement markings shall be thermoplastic or preformed tapes; raised pavement markers shall be class "B".

3.2) Pavement markings and raised pavement markers shall be installed on all roads classified other than residential with an ADT greater than 500 vehicles, or if other conditions exist that require pavement markings, (see M.U.T.C.D. Section 3B-1).

4) Traffic Control Signs:
4.1) All sign blanks shall be of a type currently certified by the FDOT for use in the State of Florida.

4.2) All sign faces shall be High Intensity grade and of a type currently certified by the FDOT for use in the State of Florida.

4.3) All signs shall be no less than the standard size as specified by the Federal Manual on Uniform Traffic Control Devices. No minimum size signing shall be accepted. Larger signs shall be used when required by design speed, etc.

4.4) Street name signs shall be 6" on local roads, and 9" on collector and arterial roads. Six inch signs shall have 4" series C letters and 9" signs shall have 6" series B letters. All street name signs on private roads shall be standard D3 street name signs with the colors reversed. White background with green letters and border. At intersections with county maintained roads, the county maintained road shall be green background with white letters and border. Street name sign brackets for 6" signs 30" long or less, or 9" signs 24" long or less, shall have a 5 inch blade or cross. All other street name signs shall be mounted with brackets with a 12 inch blade or 8 inch cross. All street name sign brackets shall be supplied with bolts, set screws will not be accepted.

4.5) On roads to be maintained by Pasco County, all signs other than street names shall be date coded with a yellow reflective label affixed to the back of the sign. It will be punched to show month, day and year of installation (See Sample Label). Alternate label designs providing the date code information may be used if a sample is submitted and approved by Pasco County prior to installation.

Sample Label: size 2" x 4"

WARNING

REMOVAL OF, OR DEFACING ANY TRAFFIC CONTROL
DEVICE IS PUNISHABLE BY FINE AND/OR IMPRISONMENT
REPORT DAMAGE BY CALLING (727) 847-2411

INSTALLED

J F M A M J J A S O N D

10's 20's 30's - 1 2 3 4 5 6 7 8 9

01 02 03 04 05 06 07 08 09

4.6) All post systems, mounting brackets and hardware shall be of a type currently in use by the Pasco County Public Works Department and currently certified by the Florida Department of Transportation for use in the State of Florida. Alternative systems, etc., shall only be used if approved by the County Engineer.

5) Certification of materials:
5.1) All traffic control devices and materials shall be on the current FDOT APPROVED PRODUCTS LIST. Proof of certification is required for all traffic control devices.

5.2) A Traffic Control Devices Submittal Data Form shall be submitted for approval prior to installation of any traffic control device. No traffic control device shall be installed until the certification submittal has been approved by the Traffic Operations Division. These forms are available from the Traffic Operations Division. Copies of the approved Traffic Control Devices Submittal Data Form shall be sent to the contractor and the Engineering Inspections Division.

6) Traffic Control Devices Plan:
6.1) A detailed set of plans for required traffic control devices shall be submitted for all road construction, site development, subdivision, and Right-of-Way Use Permits. These plans shall be in conformance with FDOT design standards. All plans shall be signed and sealed by a registered professional engineer in the State of Florida.

6.2) With the submittal of final plans to the Development Review Division, two additional sets of the traffic control plan portion of the entire plan shall be submitted. These two sets will be forwarded to the Traffic Operations Division.

7) Cost Estimate:
An engineer's cost estimate shall be required for all proposed traffic control devices. The estimate shall be provided in conjunction with the Traffic Control Devices Submittal Data Form (See Section 5.2).

8) Inspection and Acceptance:
8.1) Upon completion of the installation of the traffic control devices, the contractor shall call the Engineering Inspections Division for an inspection at (727) 847-8154.

8.2) The inspection shall be made by the Engineering Inspection Division within 48 hours (two working days) of the request.

8.3) An inspection report shall be made by the Engineering Inspections Division. Copies of the report shall be sent to the Engineer and the developer.

8.4) No roadway shall be open to the public until all traffic control devices have been inspected and accepted by Pasco County.

STANDARD NOTES (PRIVATE ROADWAYS):

1. ALL TRAFFIC CONTROL DEVICES SHALL BE INSTALLED IN CONFORMANCE WITH THE FEDERAL MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND FLORIDA DEPARTMENT OF TRANSPORTATION STANDARDS.

2. STREET NAME SIGNS SHALL BE 6" ON LOCAL ROADS AND 9" ON COLLECTOR AND ARTERIAL ROADS. SIX-INCH SIGNS SHALL HAVE 4" SERIES C LETTERS AND 9" SIGNS SIGNS SHALL HAVE 6" SERIES B LETTERS. ALL STREET NAME SIGNS ON PRIVATE STREETS (NON-COUNTY MAINTAINED) SHALL BE STANDARD D3 STREET NAMES WITH THE COLORS REVERSED, WHITE BACKGROUND WITH GREEN LETTERS AND BORDER. AT INTERSECTIONS WITH COUNTY MAINTAINED ROADS, THE COUNTY MAINTAINED ROAD SHALL BE GREEN BACKGROUND WITH WHITE LETTERS.

3. CONTRACTOR MUST CONTACT ENGINEER OF RECORD PRIOR TO ORDERING STREET NAME SIGNS. APPROVED STREET NAMES CAN NOT BE DETERMINED UNTIL RECORDING OF THE PLAT.

4. EXISTING STRIPING AND OTHER PAVEMENT MARKINGS TO BE REMOVED SHALL BE DONE AS NECESSARY BY HYDROBLASTING, GRINDING IS NOT PERMITTED.

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www.HeidtDesign.com

LEGACY HILLS (FKA FELICIANO)
SIDEWALK, SIGNING & PAVEMENT MARKING PLAN
LEGACY GREEN LLC

PREPARED FOR:

DATE	DESCRIPTION
07-11-14	SUBMITTED FOR SUBSTANTIAL PLAN AND REVIEW BY COUNTY
01-08-14	REVISED FOR COUNTI RESUBMITTAL
09-16-13	ISSUED FOR PLAN AND REVIEW BY COUNTI
07-25-07	PASCO COMMENTS - ADD SIGNS/LABELS
02-28-07	PASCO COMMENTS - ADD SIGNS/LABELS
01-18-07	SWFWMD COMMENTS (POND)

PROJECT NO: MAR-RD-1001
FILE: SPM-01
DESIGN BY: DUNNING
DRAWN BY: DUNNING

FLORIDA PROFESSIONAL ENGINEER

GARY D. MILLER
DATE:
REGISTRATION NO. 52717

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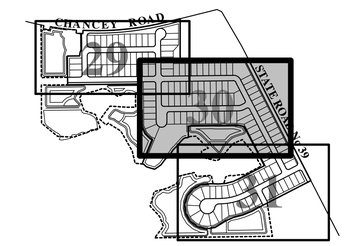
NOTE:
SEE FELICIANO S.R. 39 IMPROVEMENTS CONSTRUCTION PLANS BY HEIDT DESIGN, LLC FOR PAVEMENT MARKINGS WITHIN S.R. 39 RIGHT OF WAY

N

0 60 120
GRAPHIC SCALE: 1" = 60'



KEY MAP

NOTE:
SEE SHEETS 33 AND 34 FOR SIDEWALK DETAILS AND SPECIFICATIONS, INCLUDING PLACEMENT OF SIDEWALKS AT INTERSECTIONS.

① = STOP — R1-1, 30"x30", W/ D3 STREET NAME SIGNS

② = STOP — R1-1, 36"x36", W/ D3 STREET NAME SIGNS

⑥ = OM1-1, 18"x18"

③ = W1-11L, 30"x30" — 15 M.P.H. W13-1, 18"x18"

④ = W1-2R, 30"x30" — 15 M.P.H. W13-1, 18"x18"

⑤ = W1-2L, 30"x30" — 15 M.P.H. W13-1, 18"x18"

ELEVATIONS BASED ON:
NATIONAL GEODETIC VERTICAL DATUM 1929
CONVERSION:
NGVD 29 TO NAVD 88 = -0.85

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LEGACY HILLS (FKA FELICIANO)

SIDEWALK, SIGNING & PAVEMENT MARKING PLAN

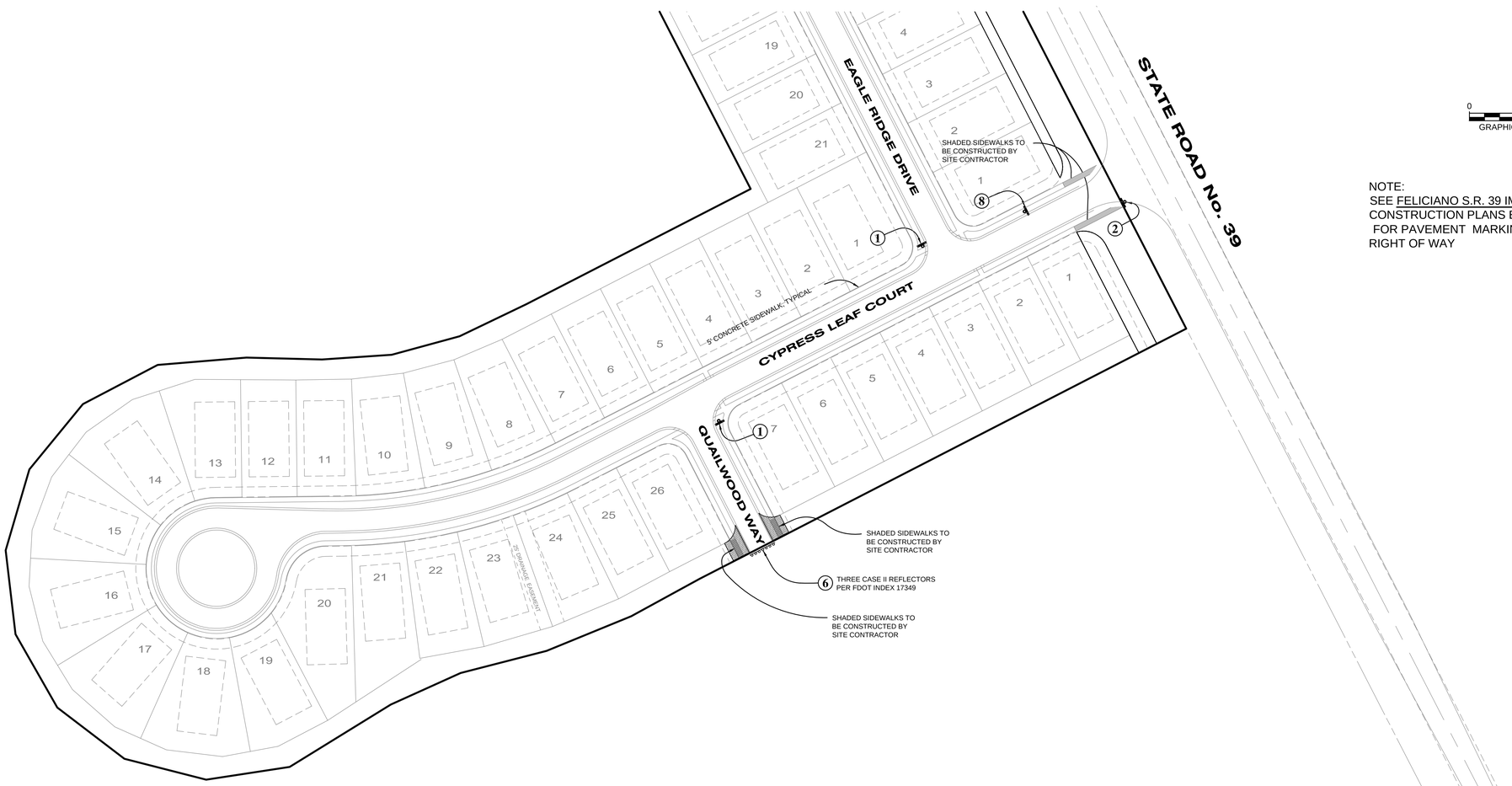
PREPARED FOR: LEGACY GREEN LLC

DATE	DESCRIPTION
07-11-14	SUBMITTED FOR SUBSTANTIAL PLAN RECO. REVIEW BY COUNTY
01-08-14	REVISED FOR COUNTY RESUBMITTAL
09-16-13	ISSUED FOR PLAN MOD REVIEW BY COUNTY
03-28-07	STREET NAMES

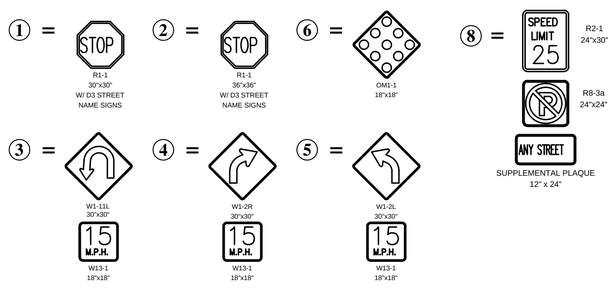
PROJECT NO:	MAR-RD-1001
FILE:	SPM-02
DESIGN BY:	DUNNING
DRAWN BY:	DUNNING

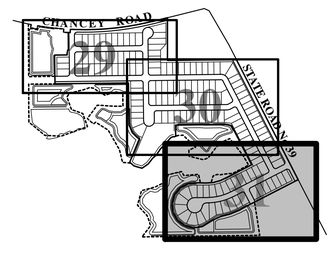
FLORIDA PROFESSIONAL ENGINEER

GARY D. MILLER
DATE:
REGISTRATION NO. 52717



NOTE:
SEE FELICIANO S.R. 39 IMPROVEMENTS CONSTRUCTION PLANS BY HEIDT DESIGN, LLC FOR PAVEMENT MARKINGS WITHIN S.R. 39 RIGHT OF WAY





KEY MAP

NOTE:
SEE SHEETS 33 AND 34 FOR SIDEWALK DETAILS AND SPECIFICATIONS, INCLUDING PLACEMENT OF SIDEWALKS AT INTERSECTIONS.

ELEVATIONS BASED ON:
NATIONAL GEODETIC VERTICAL DATUM 1929
CONVERSION:
NGVD 29 TO NAVD 88 = -0.85

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LEGACY HILLS (FKA FELICIANO)

SIDEWALK, SIGNING & PAVEMENT MARKING PLAN

PREPARED FOR: LEGACY GREEN LLC

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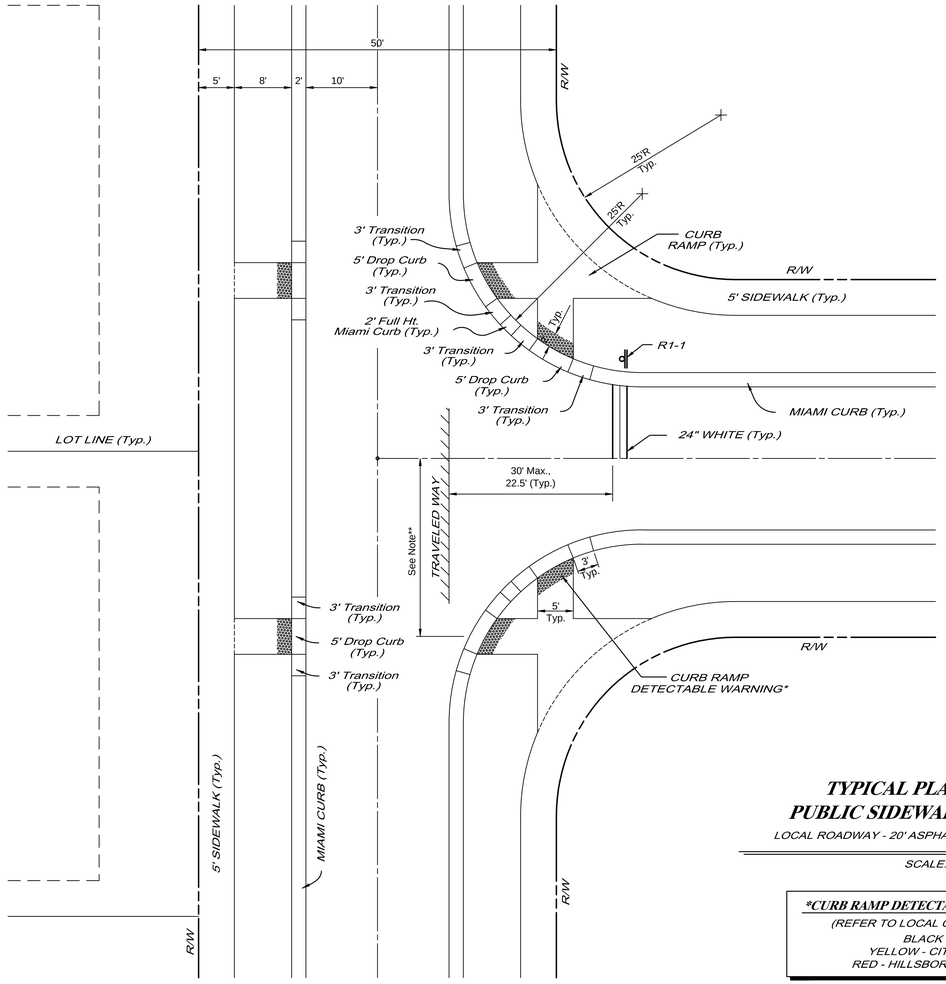
DATE	DESCRIPTION
07-11-14	SUBMITTED FOR SUBSTANTIAL PLAN MOD.- REVIEW BY COUNTY
09-16-13	ISSUED FOR PLAN MOD REVIEW BY COUNTY
03-28-07	PASCO COMMENTS - ADD SIGNS/LABELS

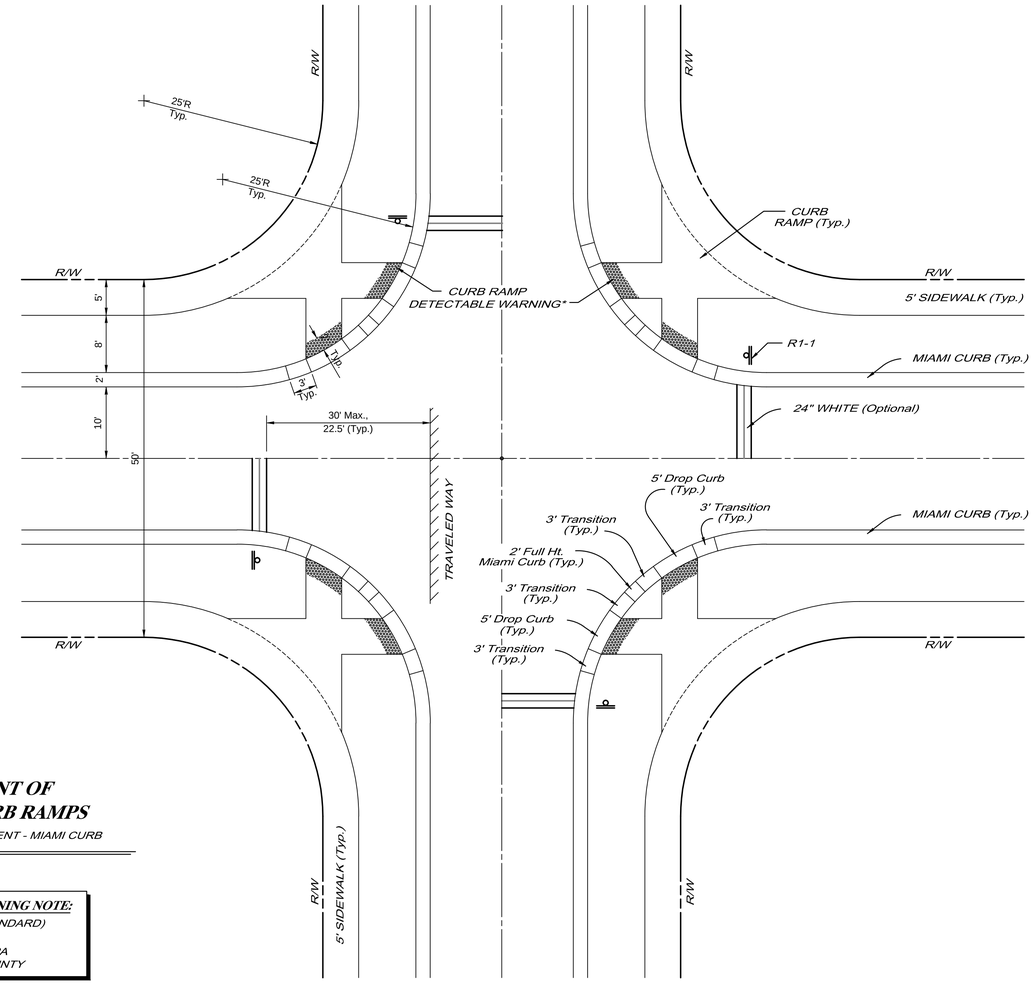
PROJECT NO:	MAR-RD-1001
FILE:	SPM-03
DESIGN BY:	DUNNING
DRAWN BY:	DUNNING

FLORIDA PROFESSIONAL ENGINEER

GARY D. MILLER
DATE:
REGISTRATION NO. 52717



"T" INTERSECTION



"CROSS" INTERSECTION

TYPICAL PLACEMENT OF PUBLIC SIDEWALK CURB RAMPS

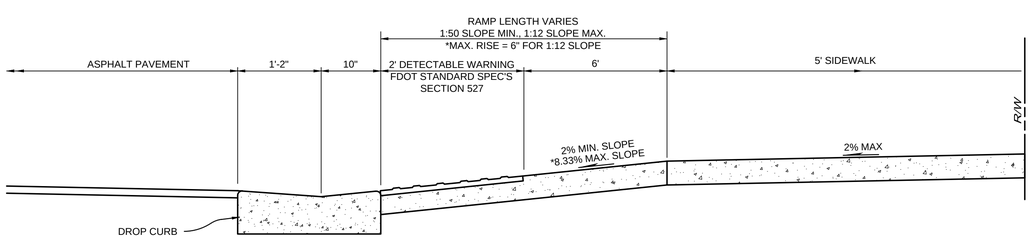
LOCAL ROADWAY - 20' ASPHALT PAVEMENT - MIAMI CURB

SCALE: 1"=10'

***CURB RAMP DETECTABLE WARNING NOTE:**

(REFER TO LOCAL COLOR STANDARD)
BLACK - FDOT
YELLOW - CITY OF TAMPA
RED - HILLSBOROUGH COUNTY

**PEDESTRIAN CROSSWALK ON INTERSECTING STREET MAY BE FIELD ADJUSTED PRIOR TO PLACEMENT BY THE COUNTY INSPECTOR AND ENGINEER OF RECORD AS MUTUALLY AGREED UPON.



SIDEWALK RAMP PROFILE

NOT TO SCALE

ELEVATIONS BASED ON:
NATIONAL GEODETIC VERTICAL DATUM 1929
CONVERSION:
NGVD 29 TO NAVD 88 = -0.85

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LEGACY HILLS (FKA FELICIANO)

SIDEWALK DETAILS

LEGACY GREEN LLC

PREPARED FOR

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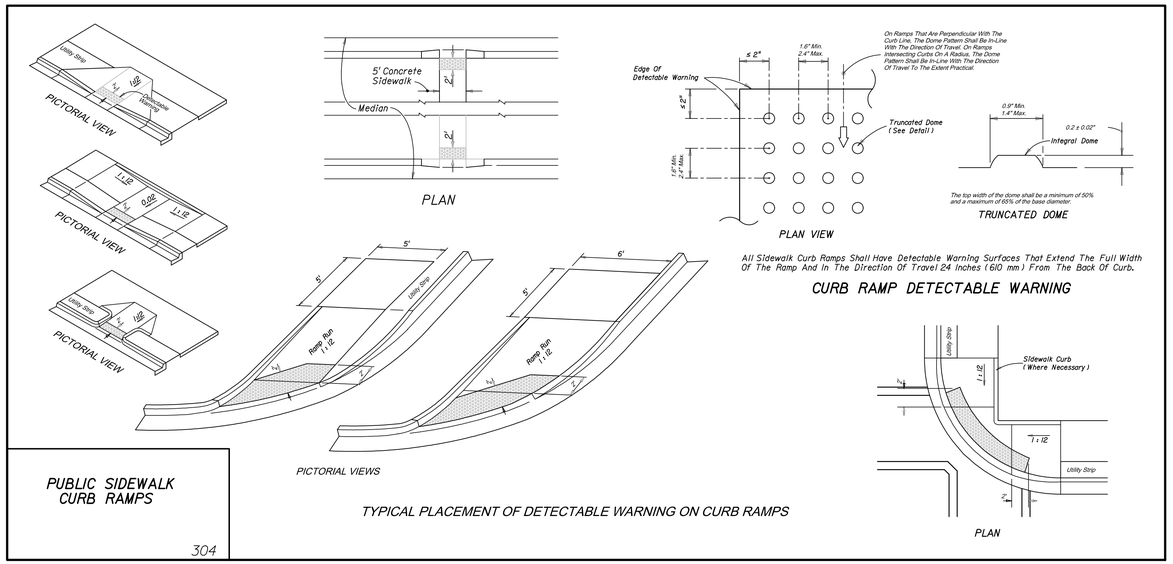
DATE	DESCRIPTION
07-11-14	SUBMITTED FOR SUBSTANTIAL PLAN MOD. REVIEW BY COUNTY
09-16-13	ISSUED FOR PLAN MOD REVIEW BY COUNTY
12/21/06	REVIEW SUBMITTAL
DATE	DESCRIPTION

PROJECT NO:	MAR-RD-1001
FILE:	SWD
DESIGN BY:	DUNNING
DRAWN BY:	DUNNING

FLORIDA PROFESSIONAL ENGINEER

GARY D. MILLER
DATE:
REGISTRATION NO. 52717



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LEGACY HILLS (FKA FELICIANO)

SIDEWALK DETAILS

PREPARED FOR: LEGACY GREEN LLC

DATE	DESCRIPTION

DATE	DESCRIPTION
07-11-14	SUBMITTED FOR SUBSTANTIAL PLAN MOD. REVIEW BY COUNTY
09-16-13	ISSUED FOR PLAN MOD REVIEW BY COUNTY
12/21/06	REVIEW SUBMITTAL

PROJECT NO: MAR-RD-1001
FILE: SWD
DESIGN BY: DUNNING
DRAWN BY: DUNNING

FLORIDA PROFESSIONAL ENGINEER

GARY D. MILLER
DATE:
REGISTRATION NO. 52717

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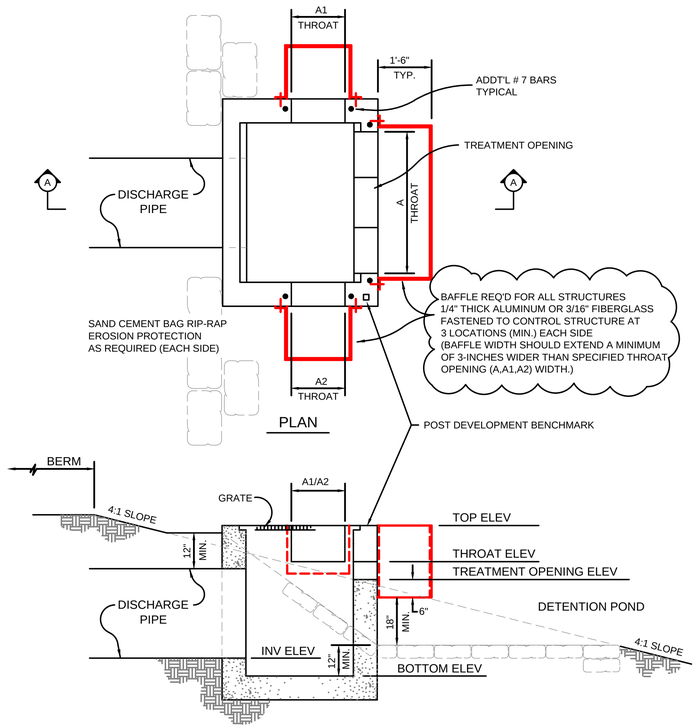
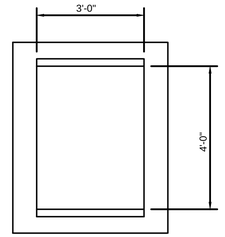
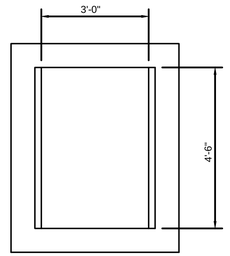


TYPICAL CONTROL STRUCTURE
MODIFIED



TYPE "D"



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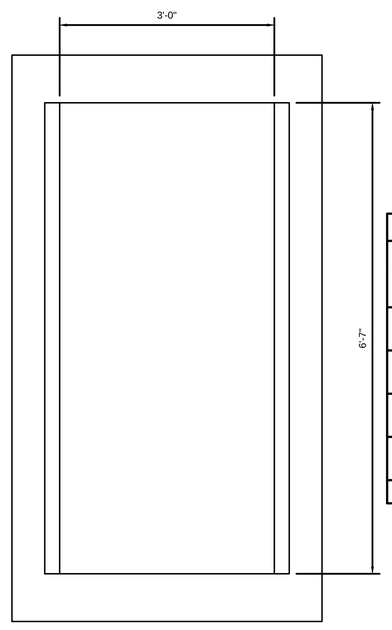

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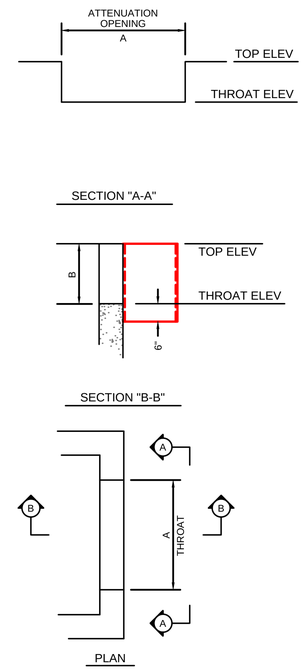

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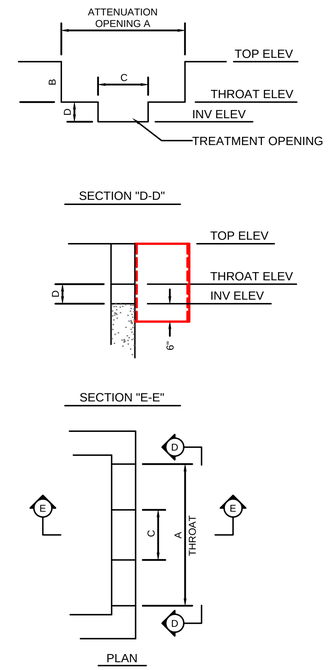
OPENING



TYPE "CS-4"
OPENING

CONTROL STRUCTURE DATA

STR. NO.	FDOT BOX TYPE	TOP EL. (FT.)	BOTT. EL. (FT.)	DISCHARGE PIPE TYPE	DISCHARGE PIPE SIZE (IN.)	DISCHARGE PIPE INV. EL. (FT.)	ATTENUATION AND TREATMENT CONTROLS STR. TYPE	ATTENUATION OPENING A	ATTENUATION OPENING B	EL. (FT.)	TREATMENT OPENING C	TREATMENT OPENING D	TREATMENT OPENING F"	EL. (FT.)	REMARKS
CSA	D	68.00.	62.50	RCP	30	64.00	CS-4	2'-0"	2'-0"	66.00	0'-7"	0'-6"	-	65.50	POND A
CSB	H	68.00	62.50	RCP	42	63.00	CS-4	6'-0"	2'-0"	66.00	0'-10 3/4"	0'-6"	-	65.50	POND B
CSC	D	66.70	61.20	RCP	36	62.20	CS-4	3'-0"	2'-0"	64.70	0'-9 3/8"	0'-6"	-	64.20	POND C
CSD	E	67.00	61.50	RCP	42	62.00	CS-4	3'-0"	2'-0"	65.00	0'-11 3/4"	0'-6"	-	64.50	POND D

NOTE:
DRAWING NOT TO SCALE

NOTE:
CONTRACTOR SHALL SUBMIT SHOP DRAWINGS
TO ENGINEER FOR APPROVAL PRIOR TO
CONSTRUCTING CONTROL STRUCTURES

ELEVATIONS BASED ON:
NATIONAL GEODETIC VERTICAL DATUM 1929
CONVERSION:
NGVD 29 TO NAVD 88 = -0.85

HEIDT DESIGN
Civil Engineering • Planning & GIS
Transportation Engineering
Ecological Services • Landscape Architecture
Engineering Business Certificate of Authorization No. 28762
Landscape Architecture Certificate of Authorization No. LC26000405
5806-B Breckenridge Pkwy.
Tampa, Florida 33610
Office: 813-253-5311
Fax: 813-464-7629
www.HeidtDesign.com

LEGACY HILLS (FKA FELICIANO)
CONTROL STRUCTURE DETAILS

PREPARED FOR: LEGACY GREEN LLC

DATE	DESCRIPTION

DATE	DESCRIPTION
09-22-14	COUNTY COMMENTS
07-11-14	SUBMITTED FOR SUBSTANTIAL PLAN MOD. REVIEW BY COUNTY
01-08-14	REVISED FOR COUNTY RESUBMITTAL
12-23-13	REVISED CSB & CSC ADDED TYPE "H"
09-16-13	ISSUED FOR PLAN MOD REVIEW BY COUNTY
12-21-06	POND C & D ATTENUATION

PROJECT NO: MAR-RD-1001
FILE: CSD
DESIGN BY: DUNNING
DRAWN BY: DUNNING

FLORIDA PROFESSIONAL ENGINEER

GARY D. MILLER
DATE:
REGISTRATION NO. 52717

35

R:\LEGACY DEVELOPMENT PROJECT\SLEGACY HILLS 2012\WORKING FILES\CURRENT DRAWINGS\CP\CSD.DWG-35 2014/10/28 3:02 PM ERIC FRANCIS

DIMENSIONS AND QUANTITIES

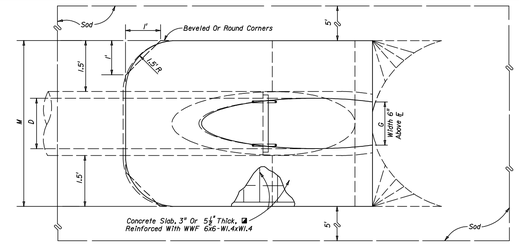
	D	X	A	B	C	E	F	G	H □	W Single Pipe	W Double Pipe	W Triple Pipe	W Quad. Pipe	N	5½" CONCRETE SLAB (CY) ◪ Single Pipe	Double Pipe	Triple Pipe	Quad. Pipe	SODDING (SQ. YDS.) Single Pipe	Double Pipe	Triple Pipe	Quad. Pipe
1:2 Slope	15"	8'-7"	1.92'	2.18'	4.67'	2.06'	5'	1.22'	2.9'	4.63'	7.21'	9.79'	12.37'	1.19'	0.38	0.58	0.77	0.96	21	24	27	30
	18"	9'-10"	1.98'	2.24'	4.67'	2.56'	6'	1.40'	3.4'	4.92'	7.75'	10.58'	13.42'	1.21'	0.44	0.65	0.87	1.09	22	25	28	31
	24"	3'-5"	2.06'	3.85'	5.9'	3.56'	7'	1.73'	3.4'	5.50'	8.90'	12.33'	15.75'	1.25'	0.54	0.83	1.12	1.42	24	28	32	35
	30"	4'-3"	2.15'	4.95'	7.07'	4.56'	8'	2.00'	3.4'	6.08'	10.33'	14.58'	18.83'	1.29'	0.66	1.09	1.50	1.91	26	31	35	40
	36"	5'-1"	2.25'	6.08'	8.33'	5.85'	9'	2.50'	3.4'	6.67'	11.75'	16.83'	21.92'	1.33'	0.81	1.38	1.95	2.52	28	34	39	45
	42"	6'-0"	2.34'	7.0'	9.55'	6.56'	10'	2.85'	3.4'	7.25'	13.25'	19.25'	25.25'	1.38'	0.97	1.70	2.45	3.19	30	37	43	50
	48"	6'-9"	2.43'	8.33'	10.76'	7.56'	11'	3.65'	3.4'	7.83'	14.58'	21.33'	28.08'	1.42'	1.13	2.04	2.93	3.84	32	40	47	55
	54"	7'-8"	2.52'	9.44'	11.96'	8.56'	12'	3.83'	3.4'	8.42'	16.08'	23.75'	31.42'	1.46'	1.31	2.44	3.58	4.72	34	42	51	59
	60"	8'-6"	2.62'	10.50'	13.28'	9.56'	14'	4.00'	4.4'	9.00'	17.50'	26.00'	34.50'	1.50'	1.51	2.89	4.28	5.68	36	45	55	64
	66"	9'-2"	2.71'	11.68'	14.39'	10.56'	15'	4.18'	4.4'	9.58'	18.75'	27.92'	37.08'	1.54'	1.68	3.25	4.84	6.43	38	48	58	68
	72"	10'-0"	2.80'	12.83'	15.60'	11.56'	16'	4.30'	4.4'	10.16'	20.16'	30.16'	40.16'	1.58'	1.89	3.74	5.59	7.45	40	51	62	73
1:4 Slope	15"	7'-7"	2.39'	4.09'	6.36'	4.03'	8'	1.40'	3.4'	4.63'	7.21'	9.79'	12.37'	1.19'	0.52	0.81	1.15	1.44	23	26	29	32
	18"	8'-10"	2.56'	4.70'	7.48'	5.03'	9'	1.61'	4.0'	4.92'	7.75'	10.58'	13.42'	1.21'	0.66	0.99	1.31	1.65	25	28	31	35
	24"	3'-5"	2.73'	7.18'△	9.17'	7.03'△	11'	1.79'	4.0'	5.50'	8.90'	12.33'	15.75'	1.25'	0.85	1.30	1.75	2.20	28	32	36	40
	30"	4'-3"	2.70'	9.28'	11.95'	9.03'	13'	2.00'	4.0'	6.08'	10.33'	14.58'	18.83'	1.29'	1.10	1.74	2.39	3.05	31	36	41	46
	36"	5'-1"	2.87'	11.57'◇	14.18'	10.03'◇	15'	2.24'	4.0'	6.67'	11.75'	16.83'	21.92'	1.33'	1.38	2.21	3.08	3.96	34	40	46	52
	42"	6'-0"	3.05'	13.37'	16.42'	12.03'	17'	2.45'	4.0'	7.25'	13.25'	19.25'	25.25'	1.38'	1.58	2.76	3.91	5.09	38	44	51	58
	48"	6'-9"	3.22'	15.43'	18.65'	15.03'	19'	2.65'	4.0'	7.83'	14.58'	21.33'	28.08'	1.42'	1.85	3.30	4.73	6.17	41	48	56	63
	54"	7'-8"	3.39'	17.49'	20.88'	17.03'	21'	2.83'	4.0'	8.42'	16.08'	23.75'	31.42'	1.46'	2.14	3.95	5.77	7.58	44	52	61	69
	60"	8'-6"	3.56'	19.55'	23.1'	19.03'	23'	3.00'	4.0'	9.00'	17.50'	26.00'	34.50'	1.50'	2.45	4.66	6.87	9.07	47	56	66	75
	66"	9'-2"	3.73'	21.63'	25.35'	21.03'	25'	3.18'	4.0'	9.58'	18.75'	27.92'	37.08'	1.54'	2.88	5.54	8.18	10.84	49	59	69	80
	72"	10'-0"	3.9'	23.68'	27.59'	23.03'	27'	3.30'	4.0'	10.16'	20.16'	30.16'	40.16'	1.58'	3.54	6.81	9.87	13.1	52	63	74	85

◪ See General Note No. 3.
See Sheet 5 Of 6 For 3" Slab Quantities

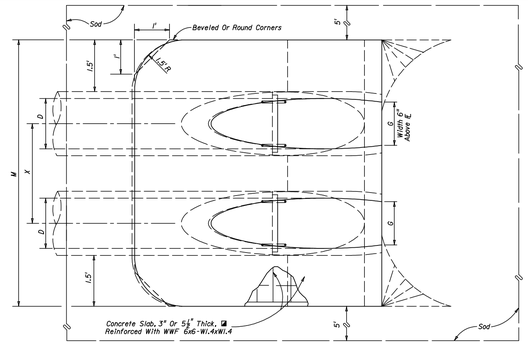
□ Values shown for estimating pipe quantities and are for information only.

B	E
△ 6.42'	△ 6.25'
◇ 10.40'	◇ 10.10'

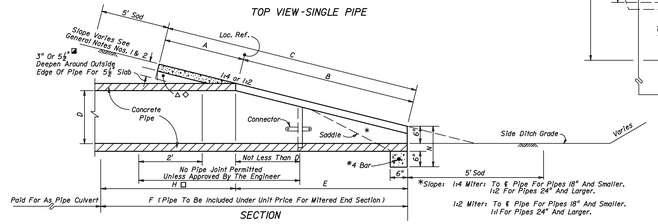
△◇ Dimensions permitted to allow use of 8' standard pipe lengths.
Dimensions permitted to allow use of 12' standard pipe lengths.
△◇ Concrete slab shall be deepened to form bridge across crown of pipe. See section below.



TOP VIEW - SINGLE PIPE



TOP VIEW - MULTIPLE PIPE



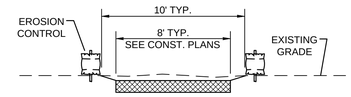
SECTION

NOTE: See sheet 6 for details and notes.

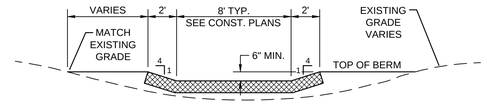
CROSS DRAIN MITERED END SECTION

SINGLE AND MULTIPLE ROUND CONCRETE PIPE

1 of 6 272



SECTION Y-Y



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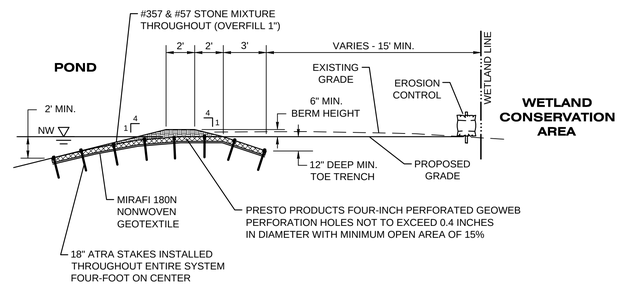
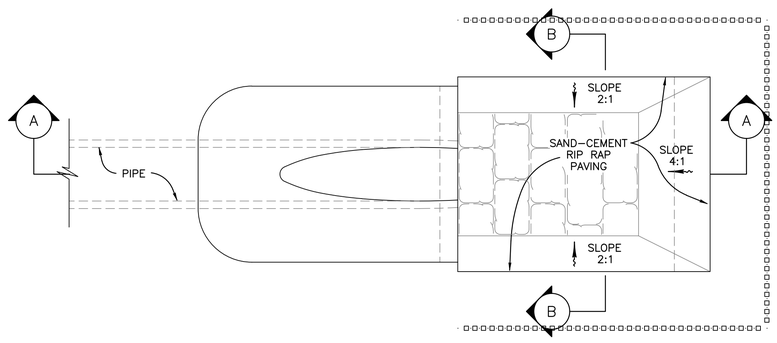
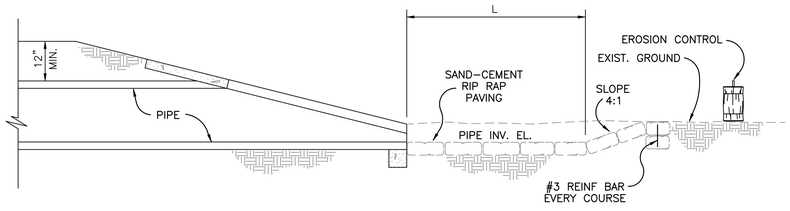


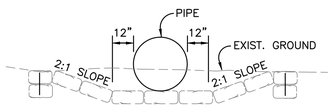
GEOWEB SECTION X-X



PLAN



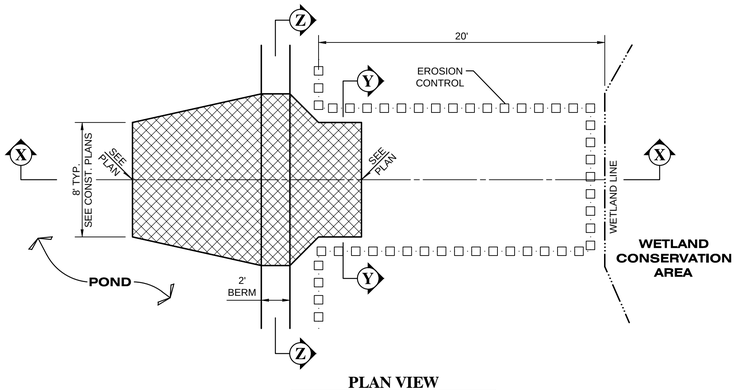
SECTION "A-A"



SECTION "B-B"

TYPICAL OUTFALL SUMP DETAIL

SAND-CEMENT BAG



PLAN VIEW

NOTE:
GEOWEB PANELS MUST BE FASTENED TOGETHER TO HELP PREVENT UNWANTED SEPARATION DURING INFILLING AND FOR LONG TERM SYSTEM INTEGRITY. A PNEUMATIC STAPLE GUN OR HAND HELD PLIERS AND LOC RINGS CAN BE USED FOR THIS PURPOSE. EACH CELL SHALL HAVE ONE FASTENER.

GEOWEB TYPICAL DETAIL

NTS

HEIDT DESIGN
Civil Engineering • Planning & GIS
Transportation Engineering
Ecological Services • Landscape Architecture
Engineering Business Certificate of Authorization No. 28762
Landscape Architecture Certificate of Authorization No. LC26000465
5806-B Breckenridge Pkwy.
Tampa, Florida 33610
Office: 813-253-5311
Fax: 813-464-7629
www.HeidtDesign.com

LEGACY HILLS (FKA FELICIANO)

DRAINAGE DETAILS

LEGACY GREEN LLC

PREPARED BY: ERI

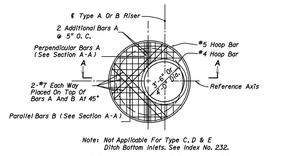
DATE	DESCRIPTION
07-11-14	SUBMITTED FOR SUBSTANTIAL PLAN MOD. REVIEW BY COUNTY
09-16-13	ISSUED FOR PLAN MOD REVIEW BY COUNTY

PROJECT NO:	MAR-RD-1001
FILE:	DD
DESIGN BY:	DUNNING
DRAWN BY:	DUNNING

FLORIDA PROFESSIONAL ENGINEER

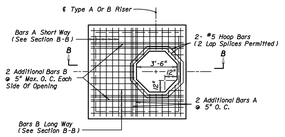
GARY D. MILLER
DATE:
REGISTRATION NO. 52717

R:\LEGACY DEVELOPMENT PROJECTS\LEGACY HILLS 2012\WORKING FILES\CURRENT DRAWINGS\CP\DD.DWG-36 2014/10/24 11:57 AM ERIC FRANCIS

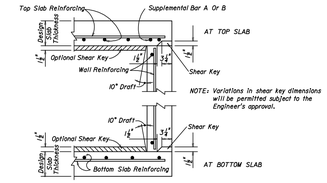


Note: Not Applicable For Type C, D & E Ditch Bottom Inlets. See Index No. 232.

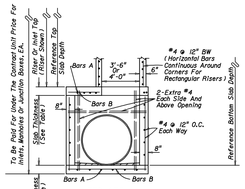
TOP SLAB REINFORCING STEEL DIAGRAM



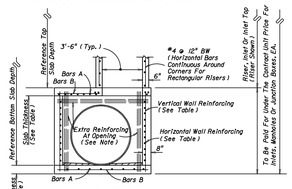
TOP SLAB REINFORCING STEEL DIAGRAM



SLAB TO WALL DETAILS FOR PRECAST ALTERNATE WITH 8" WALLS



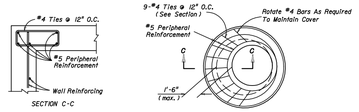
ALTERNATE A
SECTION A-A



ALTERNATE B
SECTION B-B

*NOTE: When the inside diameter of a round structure is not more than 1'-6" larger than the opening in the riser or top slab, the top of the structure or riser shall be constructed according to the "Special Top Slab" details on this sheet.

NOTE: Provide extra reinforcement each side of each opening at 3" maximum spacing equal to half the area of vertical reinforcement removed by the opening and provide the same area of reinforcement above each opening at 3" maximum spacing as removed by the opening.



SPECIAL TOP SLAB*

GENERAL NOTES

1. Standard structure bottoms 4'-0" diameter and smaller (Alt. A) and 3'-6" square (Alt. B) are designated Type P. Larger standard structure bottoms are designated Type J. Risers are permitted for all structures.
2. Walls of circular structures (Alternate A) constructed in place may be of non-reinforced concrete or brick or reinforced concrete. Precast and rectangular structures (Alternate B) shall be constructed of reinforced concrete only.
3. Wall thickness and reinforcement are for either reinforced cast-in-place or precast concrete units except that precast circular units may be furnished with walls in accordance with either ASTM C478 (up to 96" diameter) or ASTM C76, Class III, B Wall, modified where the elliptical steel cage area is placed in the center one-third of the wall.
4. Top and floor slab thickness and reinforcement are for precast and cast in place construction. Top and floor slabs shall be of Class II concrete. Concrete as specified in ASTM C478 (4000 psi) may be used in lieu of Class I and Class II concrete in precast items manufactured in plants which are under the "Standard Operating Procedures" for the inspection of precast drainage products.
5. All reinforcement shown is ASTM A615/A615M Grade 60 steel, either smooth or deformed. Equivalent area Grade 40 steel or Grade 65KSI welded wire fabric may be substituted according to Index No. 201.
6. Structure bottoms may be used in conjunction with curb inlet tops Types 1, 2, 3, 4, 5, 6, 9, and 10, and any manhole or junction box unless otherwise shown in the plans or other standard drawings. Alt. B structure bottoms may be used in conjunction with curb inlet Types 7 & 8, or any ditch bottom inlet unless otherwise shown in the plans or other standard drawings.
7. Rectangular structures may be rotated as directed by the Engineer in order to facilitate connections between the structure walls and storm sewer pipes.
8. Except when ACI hooks are specifically required, reinforcement top and slab shall be straight embedment.
9. All steel bars shall have $1\frac{1}{2}$" minimum cover unless otherwise shown except for precast circular units manufactured under ASTM C76 or ASTM C478. Horizontal steel in rectangular structures shall be lapped a minimum of 24 bar diameters at corners.
10. The corner fillets shown are necessary for rectangular structures used with circular risers and inlet throats and used on skew with rectangular risers, inlet and inlet throats. Fillets will be required in lieu of the bottom slab of the Alt. B riser when used with the Alt. A box. Each fillet shall be reinforced with 2-#5 bars.
11. Inlet throats, riser or manhole tops shall be secured to structures as shown on Index No. 201.
12. Structures with depths over 14' are to be checked for flotation by designer of project drainage.
13. Units larger than specified standard may be substituted at the contractor's option when these units will not cause or increase the severity of utility conflicts. Such larger units shall be furnished at no additional cost to the Department. Larger Alternate A units cannot replace Alternate B units without approval of the Engineer. This note applies to this Index only.
14. For manhole and junction box tops, for frames and covers, and, for supplementary details see Index No. 201.

STRUCTURE BOTTOMS
TYPE J AND P

1 of 2 200

SLAB DESIGNS - SQUARE AND RECTANGULAR STRUCTURES

(ALL SLABS 8" THICK - REINFORCING PARALLEL TO SHORT WAY AND LONG WAY)

SHORT-WAY SLAB DEPTH	SHORT-WAY SCHEDULE	LONG-WAY SLAB DEPTH	LONG-WAY SCHEDULE
SIZE: 3'-6" x UNLIMITED			
≥0.5'-<29'	B	≥0.5'-40'	B
29'-40'	C		
SIZE: 4'-0" x UNLIMITED			
≥0.5'-<19'	B	≥0.5'-<34'	B
19'-<29'	C	34'-40'	C
29'-40'	D		
SIZE: 5' x 5'			
≥0.5'-<3'	C	≥0.5'-<3'	C
3'-<19'	B	3'-<19'	B
19'-<28'	C	19'-<28'	C
28'-<38'	D	28'-<38'	D
38'-40'	F	38'-40'	F
SIZE: 5' x 6'			
≥0.5'-<3'	C	≥0.5'-<3'	C
3'-<16'	B	3'-<20'	B
16'-<24'	C	20'-<29'	C
24'-<34'	D	29'-40'	D
34'-40'	F		
SIZE: 5' x 7'			
≥0.5'-<3'	C	≥0.5'-<3'	C
3'-<14'	B	3'-<22'	B
14'-<21'	C	22'-<33'	C
21'-<33'	D	33'-40'	D
33'-40'	F		
SIZE: 5' x 8'			
≥0.5'-<3'	C	≥0.5'-<33'	B
3'-<8'	B	33'-40'	C
8'-<17'	C		
17'-<23'	D		
23'-40'	F		
SIZE: 5' x 9'			
≥0.5'-<3'	C	≥0.5'-<32'	B
3'-<8'	B	32'-40'	C
8'-<17'	C		
17'-<23'	D		
23'-40'	F		

SHORT-WAY SLAB DEPTH	SHORT-WAY SCHEDULE	LONG-WAY SLAB DEPTH	LONG-WAY SCHEDULE
SIZE: 6' x 6'			
≥0.5'-<3'	D	≥0.5'-<3'	D
3'-<4'	C	3'-<4'	C
4'-<14'	B	4'-<14'	B
14'-<21'	C	14'-<21'	C
21'-<28'	D	21'-<28'	D
28'-40'	F	28'-40'	F
SIZE: 6' x 7'			
≥0.5'-<3'	D	≥0.5'-<3'	D
3'-<4'	C	3'-<4'	C
4'-<12'	B	4'-<15'	B
12'-<15'	C	15'-<19'	C
19'-<26'	D	19'-<30'	D
26'-40'	F	30'-40'	F
SIZE: 6' x 8'			
≥0.5'-<3'	D	≥0.5'-<3'	D
3'-<4'	C	3'-<4'	C
4'-<7'	B	4'-<8'	B
7'-<16'	C	16'-<23'	C
16'-<23'	D	23'-<32'	D
23'-40'	F	32'-40'	F
SIZE: 6' x 9'			
≥0.5'-<3'	D	≥0.5'-<3'	D
3'-<15'	C	3'-<4'	C
15'-<21'	D	4'-<8'	B
21'-<27'	E	18'-<27'	C
27'-40'	G	27'-<37'	D
		37'-40'	E
SIZE: 7' x 7'			
≥0.5'-<3'	E	≥0.5'-<3'	E
3'-<4'	D	3'-<4'	D
4'-<16'	C	4'-<16'	C
16'-<22'	D	16'-<22'	D
22'-<28'	E	22'-<28'	E
28'-40'	G	28'-40'	G
SIZE: 7' x 8'			
≥0.5'-<3'	E	≥0.5'-<3'	E
3'-<4'	D	3'-<4'	D
4'-<15'	C	4'-<17'	C
15'-<21'	D	17'-<23'	D
21'-<27'	E	23'-<29'	E
27'-40'	G	29'-40'	G
SIZE: 7' x 9'			
≥0.5'-<3'	E	≥0.5'-<3'	E
3'-<4'	D	3'-<4'	D
4'-<12'	C	4'-<18'	C
12'-<18'	D	18'-<24'	D
18'-<24'	E	24'-<32'	E
24'-40'	G	32'-40'	G

SHORT-WAY SLAB DEPTH	SHORT-WAY SCHEDULE	LONG-WAY SLAB DEPTH	LONG-WAY SCHEDULE
SIZE: 8' x 8'			
≥ 0.5'-<3'	D	≥ 0.5'-<3'	D
3'-<4'	C	3'-<4'	C
4'-<9'	B	4'-<9'	B
9'-<17'	C	9'-<17'	C
17'-<3'	D	17'-<3'	D
3'-40'	G	3'-40'	G
SIZE: 8' x 9'			
≥ 0.5'-<3'	D	≥ 0.5'-<3'	E
3'-<4'	C	3'-<4'	D
4'-<16'	B	4'-<18'	C
16'-<22'	C	18'-<25'	D
22'-<29'	D	25'-<32'	F
29'-40'	F	32'-40'	G
SIZE: 9' x 9'			
≥ 0.5'-<3'	F	≥ 0.5'-<3'	F
3'-<14'	C	3'-<14'	C
14'-<20'	D	14'-<20'	D
20'-<26'	E	20'-<26'	E
26'-40'	G	26'-40'	G

SLAB DESIGNS - ROUND STRUCTURES

SLAB DEPTH	SLAB THICKNESS	REINFORCING (2 WAYS) SCHEDULE
SIZE: 3'-6"		
≥0.5'-40'	8"	C
SIZE: 4'-0"		
≥0.5'-40'	8"	C
SIZE: 5'-0"		
≥0.5'-30'	8"	C
30'-40'	8"	D
SIZE: 6'-0"		
≥0.5'-18'	8"	B
18'-<18'	8"	C
18'-<30'	8"	D
30'-<37'	8"	E
37'-40'	8"	G
SIZE: 8'-0"		
≥0.5'-<9'	10"	C
9'-<15'	10"	D
15'-<23'	10"	E
23'-<33'	12"	E
33'-40'	12"	G
SIZE: 10'-0"		
≥0.5'-<6'	10"	C
6'-<11'	10"	D
11'-<17'	10"	E
17'-<23'	12"	E
23'-40'	12"	G
SIZE: 12'-0"		
≥0.5'-<6'	12"	C
6'-<11'	12"	D
11'-<16'	12"	E
16'-<20'	14"	E
20'-40'	14"	G

WALL DESIGNS - RECTANGULAR STRUCTURES

VERTICAL REINFORCING WALL DEPTH	VERTICAL REINFORCING SCHEDULE	HORIZONTAL REINFORCING WALL DEPTH	HORIZONTAL REINFORCING SCHEDULE
SIZE: 3'-6" * SEE NOTE BELOW			
≥1.0'-40'	A	≥1.0'-40'	B
SIZE: 4'-0"			
≥1.0'-40'	A	≥1.0'-40'	B
SIZE: 5'-0"			
≥1.0'-40'	A	≥1.0'-<33'	B
		33'-40'	C
SIZE: 6'-0"			
≥1.0'-40'	A	≥1.0'-<22'	B
		22'-40'	C
SIZE: 7'-0"			
≥1.0'-40'	A	≥1.0'-<15'	B
		15'-<25'	C
		25'-40'	D
SIZE: 8'-0"			
≥1.0'-40'	A	≥1.0'-<11'	B
		11'-<19'	C
		19'-<29'	D
		29'-40'	F
SIZE: 9'-0"			
≥1.0'-40'	A	≥1.0'-<15'	C
		15'-<22'	D
		22'-40'	F

* Precast structures 3'-6" x 3'-6" maybe cast with 6" walls to depths of 15'. See Index No. 201.

GENERAL NOTES

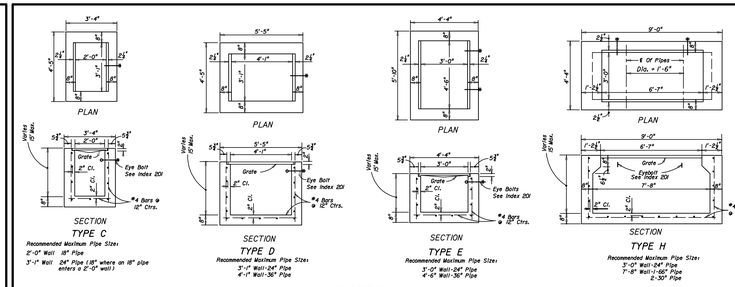
1. Size is the inside dimensions) of a structure.
2. Slab reinforcement is appropriate for top, intermediate, and bottom slabs.
3. Slab depth is measured from finished grade to top of slab.
4. Wall design depth is measured to the top of the bottom slab for boxes and to the top of the intermediate slab for risers.
5. Wall height is the distance between top of lower slab to bottom of upper slab.
6. Wall sizes exceeding 9'-0" require a special design.

REINFORCING SCHEDULE

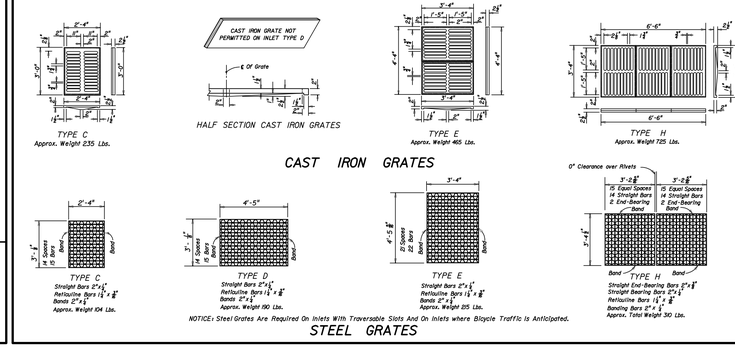
SCHEDULE	GRADE 60 STEEL OR 65 KSI (WIRE FABRIC) In²/ft
A	0.20
B	0.24
C	0.37
D	0.53
E	0.73
F	1.06
G	1.45

STRUCTURE BOTTOMS
TYPE J AND P

2 of 2 200



INLETS



CAST IRON GRATES

NOTICE: Steel Grates Are Required On Inlets With Traversable Slots And On Inlets where Bicycle Traffic is Anticipated.

STEEL GRATES

GENERAL NOTES

1. These inlets are suitable for bicycle traffic and are to be used in ditches, medians and other areas subject to infrequent traffic loadings but are not to be placed in areas subject to any heavy wheel loads. This inlet may be placed in areas subject to occasional pedestrian traffic such as landscaped areas and pavement areas where pedestrians can walk around the inlet.
2. Inlets subject to minimal debris should be constructed without slots. Where debris is a problem inlets should be constructed with slots. Slotted inlets located within roadway clear zones and areas subject to bicycles and/or pedestrians shall have traversable slots. The traversable slot modification is not adaptable to Inlet Type H. Slots may be constructed at either or both ends as shown on plans.
3. Steel grates are to be used on all inlets where bicycle traffic is anticipated. Steel grates are to be used on all inlets with traversable slots. Either cast iron or steel grates may be used on inlets without slots where bicycle traffic is not anticipated. Either cast iron or steel grates may be used on all inlets with non-traversable slots. Subject to the selection described above, when Alternate G grate is specified in the plans, either the steel grate, hot dipped galvanized after fabrication, or the cast iron grate may be used, unless the plans stipulate the particular type.
4. Recommended maximum pipe sizes shown are for concrete pipe. Size for other types of pipe must be checked for fit.
5. All exposed corners and edges of concrete are to be chamfered $\frac{3}{4}$".
6. Concrete inlet pavement to be used on inlets without slots and inlets with non-traversable slots only when called for in the plans; but required on all traversable slot inlets. Cost to be included in contract unit price for inlets. Quantities shown are for information only.
7. Traversable slots constructed in existing inlets shall be paid for as inlets partial. For conversion work and method of payment see "TRAVERSABLE SLOT INLETS (PARTIAL) FOR EXISTING INLETS".
8. Sodding to be used on all inlets not located in paved areas and paid for under contract concrete inlet pavement unit price for Sodding, SY.
9. For supplementary details see Index No. 201.

DITCH BOTTOM INLETS
TYPES C, D, E & H

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LEGACY HILLS
(FKA FELICIANO)

DRAINAGE DETAILS

LEGACY GREEN LLC

DATE	DESCRIPTION
07-11-14	SUBMITTED FOR SUBSTANTIAL PLAN MOD. REVIEW BY COUNTY
09-16-13	ISSUED FOR PLAN MOD REVIEW BY COUNTY

PREPARED FOR

PROJECT NO: MAR-RD-1001
FILE: DD
DESIGN BY: DUNNING
DRAWN BY: DUNNING

FLORIDA PROFESSIONAL ENGINEER

GARY D. MILLER
DATE:
REGISTRATION NO. 52717

37

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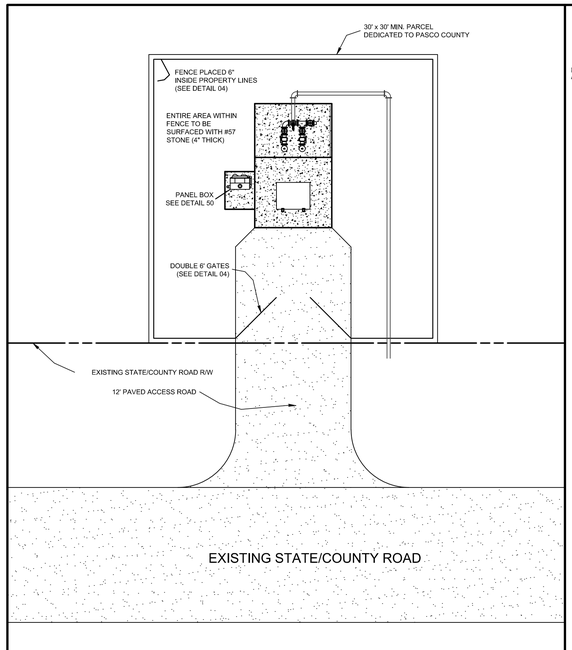
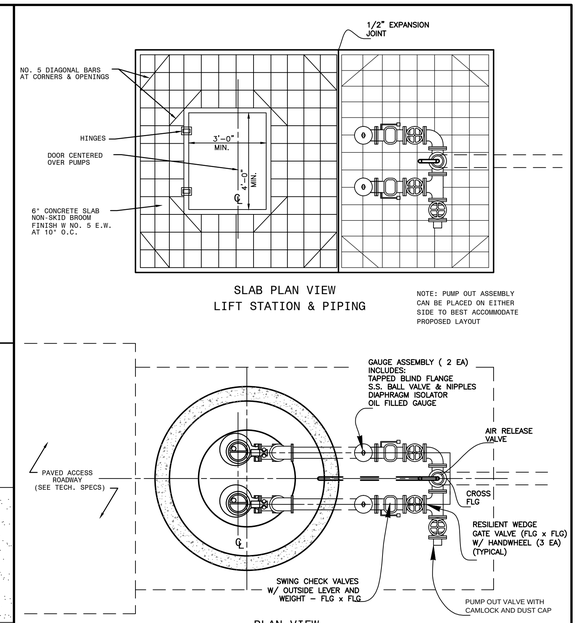
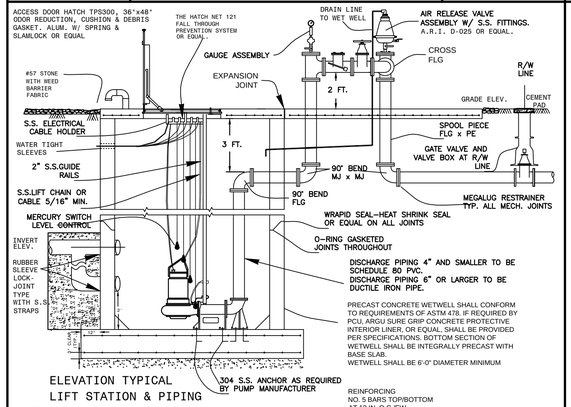


CREATED 02/24/03	PUMP STATION (DUPLEX) SITE PLAN & ACCESS	PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN PCU APPROVAL
REVISED	PASCO COUNTY UTILITIES	DETAIL 47



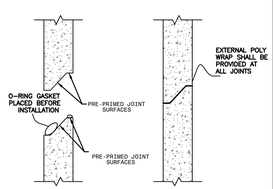
CREATED 02/24/03	PUMP STATION SLAB & PIPING PLAN	PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN PCU APPROVAL
REVISED	PASCO COUNTY UTILITIES	DETAIL 48



ELEVATION TYPICAL
LIFT STATION & PIPING

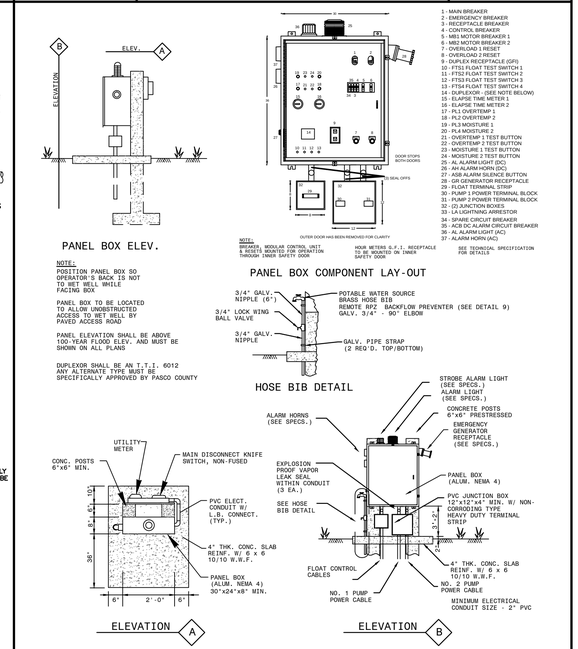
NOTES:

1. ALL PIPING WITHIN THE WETWELL (LARGER THAN 4") AND ALL ABOVE GROUND PIPING SHALL BE MANUFACTURED FLANGED PIPE. FIELD FABRICATED FLANGES (UNI–FLANGE OR MEGAFLANGE) WILL NOT BE PERMITTED.
2. ALL DUCTILE IRON PIPE AND FITTINGS SHALL BE PROVIDED WITH CERAMIC EPOXY INTERIOR LINING (PROTECTO 401). IN ADDITION, ALL PIPE & FITTINGS WITHIN THE WETWELL SHALL BE PROVIDED WITH POLYETHYLENE SHRINK WRAPPED EXTERIOR COATING.
3. ALL UNDERGROUND FITTINGS SHALL BE RESTRAINED MECHANICAL JOINT AND SHALL BE PROVIDED WITH PROTECTO 401 INTERIOR LINING.
4. IF LIFT CABLES ARE USED, LIFTING RINGS MUST BE PROVIDED EVERY 4 FT.
5. INDIVIDUAL WALL PENETRATION SLEEVES SHALL BE PROVIDED FOR EACH PUMP CABLE.
6. ALL HARDWARE (INCLUDING FLANGE BOLTS & NUTS) SHALL BE STAINLESS STEEL.
7. ALL ABOVE GROUND PIPING TO BE PAINTED SAFETY GREEN.
8. SLAB ELEVATION TO BE 12 IN. ABOVE C/L OF ROADWAY OR 12 IN. ABOVE 100 YEAR FLOOD PLAIN – WHICHEVER IS HIGHER.

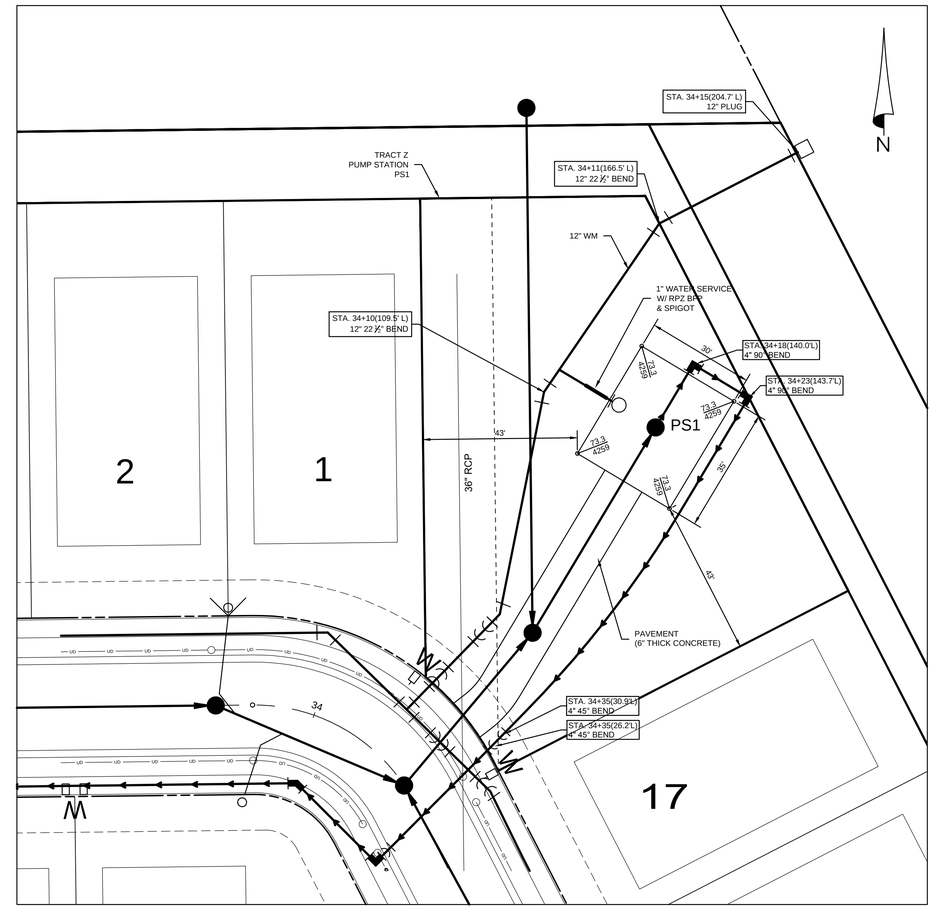


PRECAST JOINT DETAIL

CREATED 02/24/03	DUPLEX PUMP STATION ELEVATION & PIPING PROFILE	PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN PCU APPROVAL
REVISED	PASCO COUNTY UTILITIES	DETAIL 49



CREATED 02/24/03	STANDARD PUMP STATION (DUPLEX) PANEL BOX ELEVATION & COMPONENT LAY-OUT	PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN PCU APPROVAL
REVISED	PASCO COUNTY UTILITIES	DETAIL 50



SITE PLAN
SCALE: 1"=20'

ELEVATIONS BASED ON:
NATIONAL GEODETIC VERTICAL DATUM 1929
CONVERSION:
NGVD 29 TO NAVD 88 = -0.85

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LEGACY HILLS (FKA FELICIANO)
PUMP STATION DETAILS

LEGACY GREEN LLC

PREPARED BY: CR

DATE	DESCRIPTION
07-11-14	SUBMITTED FOR SUBSTANTIAL PLAN RVSD. REVIEW BY COUNTY
01-08-14	REVISED FOR COUNTY RESUBMITTAL
12-24-13	PER COUNTY COMMENTS
09-16-13	ISSUED FOR PLAN MOD REVIEW BY COUNTY

PROJECT NO: MAR-RD-1001
FILE: PS
DESIGN BY: DUNNING
DRAWN BY: DUNNING

FLORIDA PROFESSIONAL ENGINEER

GARY D. MILLER
DATE:
REGISTRATION NO. 52717

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WASTEWATER PUMPING STATION DESIGN PARAMETERS

FELICIANO — WASTEWATER PUMPING STATION

I. SERVICE AREA

II. DESIGN CAPICITY

A. AVERAGE DAILY FLOW

159 UNITS X 200 GPD = 31,800 GPD

B. PEAK HOUR FLOW (PEAK FACTOR = 3.8)

31,800 GPD x 3.8 / 1440 = 84 GPM

C. DESIGN MINIMUM FLOW

31,800 GPD x 0.20 / 1440 = 4 GPM

MINIMUM REQUIRED PUMP CAPACITY = 84 GPM

III. WETWELL DESIGN (DUPLEX SYSTEM)

A. DESIGN CRITERIA

1. MAXIMUM PUMP MOTOR CYCLE RATE = 6 STARTS PER HOUR
2. MAXIMUM DETENTION TIME AT MINIMUM FLOW = 30 MINUTES

B. PUMP CONTROL LEVEL SETTINGS

1. PUMP CYCLING RATES ARE AT A MAXIMUM WHEN INFLOW EQUALS ONE-HALF THE DESIGN PUMPING RATE OF 84 GPM.
2. WETWELL VOLUME REQUIRED BETWEEN LEAD PUMP START AND PUMP SHUT OF LEVEL =

V = CYCLE PERIOD x 1/2 PUMP RATE / 4

V = 10 MIN. x 42 GPM / 4 = 104.9 GALLONS

3. WETWELL DIAMETER = 6 FEET

WETWELL VOLUME = 211.5 GALLONS/FOOT DEPTH

4. WETWELL LEVEL CHANGE BETWEEN PUMP STOP AND LEAD PUMP START =

104.9 / 211.5 = 0.5 DESIGN FOR 6 INCHES

5. CONTROL ELEVATIONS

BOTTOM	EL. 47.8
ALL PUMPS OFF	EL. 52.8
LEAD PUMP ON	EL. 53.3
LAG PUMP ON	EL. 53.8
HIGH WATER ALARM	EL. 54.3
INFLUENT INVERT	EL. 54.8
TOP OF SLAB	EL. 73.3

IV. SYSTEM CURVE CALCULATIONS

A. PUMPING STATION PIPING

1. EQUIVALENT LENGTHS

	L.F.			
a.			DIP	FT.
b.		-	90° ELBOWS	FT.
c		-	SIDE OUTLET CROSS	FT.
d.		-	CHECK VALVE	FT.
e.		-	GATE VALVE	FT.
			TOTAL EQUIVALENT LENGTH	150 L.F.

B. FORCE MAIN PIPING

1. EQUIVALENT LENGTHS (4" PVC)

	L.F.			
a.	1608	4	PVC	1608 FT.
b.	2	4	90° ELBOWS	44 FT.
c	2	4	45° ELBOWS	10 FT.
d.	2	4	22-1/2° ELBOWS	10 FT.
e.	2	4	GATE VALVE	5 FT.
f.	1	-	TEE	22 FT.
			TOTAL EQUIVALENT LENGTH	1699 L.F.
			DESIGN FOR	1800 L.F.

EQUIVALENT LENGTHS (6" PVC)

	L.F.			
a.	1931	6	PVC	1931 FT.
b.		-	90° ELBOWS	FT.
c		-	45° ELBOWS	FT.
d.		-	22-1/2° ELBOWS	FT.
e.	1	6	GATE VALVE	3.5 FT.
f.	2	-	TEE	2000.5 FT.
			TOTAL EQUIVALENT LENGTH	2100 L.F.

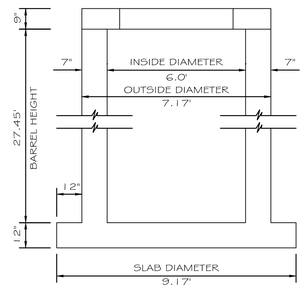
C. STATIC HEAD

1. LOW WATER LEVEL (ALL PUMPS OFF) = 52.8
2. PIPE CENTERLINE AT DISCHARGE = 74.47
3. TOTAL STATIC HEAD = 21.67 FT.

D. PRESSURE AT POINT OF CONNECTION = 12 PSI

ELEVATIONS BASED ON:
NATIONAL GEODETIC VERTICAL DATUM 1929
CONVERSION:
NGVD 29 TO NAVD 88 = -0.85

FLOTATION CALCULATIONS CONCRETE WET WELL



ASSUMPTIONS:

CONCRETE = 150 LBS./FT.^{3}
SATURATED SOIL = 120 LBS./FT.^{3}
WATER = 62.4 LBS./FT.^{3}

NO WATER IN WET WELL
NEGLECT TOP SLAB WEIGHT
NEGLECT SOIL FRICTION

(1) Barrel Weight = (A^2 - B^2) x (π/4) x E x (W_c) =	50,615	lb
(2) Bottom Slab Weight = C^2 x π/4 x D x W_c =	12,828	lb
(3) Soil Weight = (C^2 - A^2) x π/4 x E x (120 - 62.4)=	36,442	lb
(4) Total Weight =	99,885	lb
(5) H_2O Displaced = ((A^2 x π/4 x E) + (C^2 x π/4 x D)) x 62.4	69,030	lb

Safety Factor = Total Weight = / H_2O Displaced = 1.45

PUMP DATA

MAKE\MODEL: HYDROMATIC H3H
PUMP HP: 6.33 PHASE: 3
PUMP IMP. NO.: 8.0625" DIA.
PUMP VOLTS: 230
PUMP SPEED 1750 RPM

NOTE:

SYSTEM HEAD VERSUS PUMP CAPACITY CURVES ARE TO BE SHOWN TO DETERMINE THE SYSTEM OPERATING CAPABILITY AT THE FOLLOWING CONDITIONS:

A. CONVENTIONAL PUMPING STATION - FORCE MAIN (NON-MANIFOLDED)

1. ONE PUMP RUNNING, IF DUPLEX STATION
2. ONE PUMP AND TWO PUMPS RUNNING, IF TRIPLEX STATION, ETC.
3. IF FORCE MAIN PROFILE RESULTS IN SIPHON, CURVES SHALL SHOW OPERATION AT START-UP (TO HIGH POINT ONLY) AS WELL AS FULL FLOW CONDITIONS.

B. MANIFOLD PUMPING STATIONS

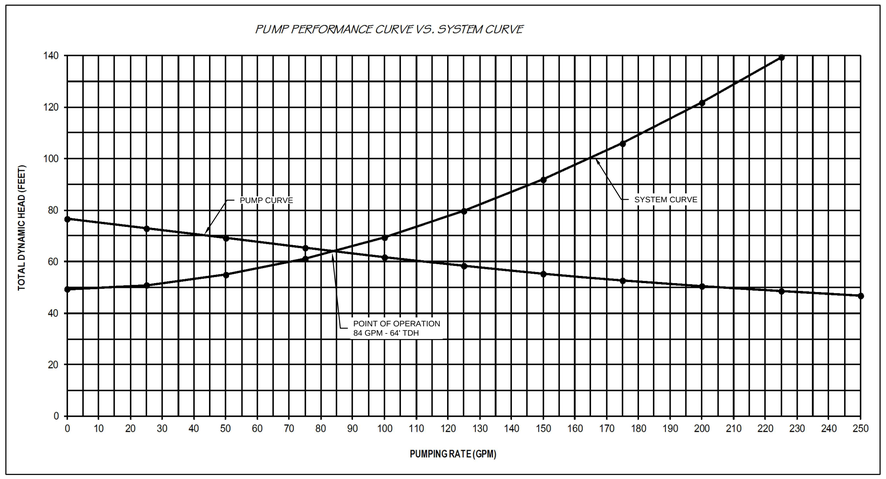
ALL CONDITIONS OUTLINED UNDER (A) ABOVE, AND THE FOLLOWING ADDITIONAL CONDITIONS:

1. SIMULTANEOUS OPERATION OF ALL PUMPING STATIONS ON SYSTEM.
2. OPERATION WHILE ALL REMAINING STATIONS ARE OFF.

C. VARIABLE SPEED PUMPING STATIONS

ALL APPLICABLE CONDITIONS UNDER (A) AND (B) ABOVE AND IN ADDITION:

1. OPERATION POINT, INCLUDING SPEED, AT PEAK, AVERAGE, AND MINIMUM FLOWS.



SYSTEMS HEAD COMPUTATIONS - TOTAL FRICTION LOSSES IN FEET

Item	0	25	50	75	100	125	150	175	200	225	250
Pump Station Piping (Equivelent Length)											
150 LF 4 " DIP	0.00	0.14	0.51	1.08	1.83	2.77	3.88	5.16	6.61	8.22	10.00
Force Main Piping (Equivelent Length)											
1800 LF 4 " PVC	0.00	1.20	4.34	9.21	15.68	23.71	33.23	44.21	56.61	70.41	85.58
2100 LF 6 " PVC	0.00	0.19	0.70	1.49	2.54	3.84	5.38	7.16	9.17	11.40	13.86
LF " PVC											
Static Head	21.67	21.67	21.67	21.67	21.67	21.67	21.67	21.67	21.67	21.67	21.67
(Design Pressure @ POC)	27.70	27.70	27.70	27.70	27.70	27.70	27.70	27.70	27.70	27.70	27.70
System Losses (System Curve)	49.37	50.91	54.92	61.14	69.42	79.68	91.86	105.90	121.76	139.41	158.81

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REGISTRATION NO. 52717

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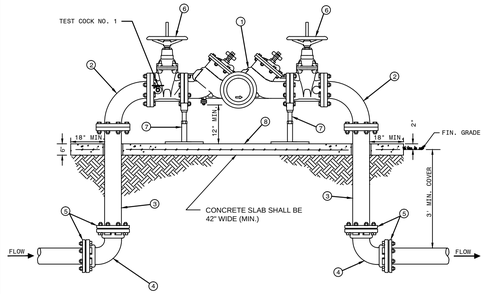


MATERIALS		
ITEM	QUANT.	DESCRIPTION
1	1	3", 4", 6", 8" BFP, REDUCED PRESSURE PRINCIPLE WITH DETECTOR ASSEMBLY
2	2	3", 4", 6", 8" BEND, 90° FLANGE x FLANGE
3	2	3", 4", 6", 8" SPOOL PIECE FLG. x PE. D.I.P.
4	2	3", 4", 6", 8" BEND, 90° M.J. x M.J.
5	4	3", 4", 6", 8" GLAND, RETAINER M.J. (MEGALUG)
6	2	3", 4", 6", 8" VALVE, GATE FLG. x FLG. RESILIENT WEDGE O.S. & Y.
7	2	SUPPORT (AS NEEDED)
8	1	CONCRETE SLAB (6" THICK)

NOTE:
- NO TIE RODS OR EYE BOLT RETAINERS PERMITTED ABOVE GROUND.
- B.F.P. ASSEMBLY TO BE INSTALLED LEVEL & PLUMB.
- MINIMUM CLEARANCE OF 36" TO BE MAINTAINED AROUND ENTIRE DEVICE FOR TESTING
- ENTIRE ASSEMBLY TO BE PAINTED SAFETY BLUE.
- DETECTOR BY-PASS ASSEMBLY TO BE FACTORY INSTALLED AND CERTIFIED
- ALL MECHANICAL JOINTS SHALL BE RESTRAINED WITH MEGALUGS OR APPROVED EQUAL.
- BELL JOINT RESTRAINERS SHALL BE PROVIDED ON ALL UNDERGROUND PIPING AS SPECIFIED IN JOINT RESTRAINT TABLE DETAIL
- ALL ABOVE GROUND PIPING SHALL BE FLANGED DUCTILE IRON PIPE (NO GALVANIZED OR PVC)
- ITEM 3 SHALL BE FIELD CUT TO PROPER LENGTH TO ACHIEVE DESIGNATED GROUND CLEARANCE
- IF SO SPECIFIED, ENTIRE ASSEMBLY TO BE ENCLOSED IN 6' CHAIN LINK FENCE.
- BFP DEVICE MUST BE LISTED WITH THE UNIVERSITY OF SOUTHERN CALIFORNIA FOUNDATION FOR CROSS CONNECTION CONTORL AND HYDRAULIC RESEARCH.

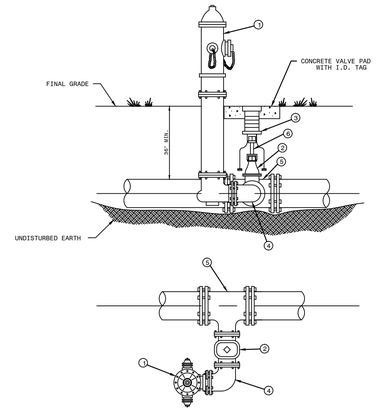
CREATED 02/24/03
REVISED

REDUCED PRESSURE BACKFLOW PREVENTER (SINGLE SERVICE: 3", 4", 6", 8")

PASCO COUNTY UTILITIES

PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN PCU APPROVAL

DETAIL 11



MATERIALS		
ITEM	QUANT.	DESCRIPTION
1	1	HYDRANT, FIRE (5 1/4" VALVE MIN.), PAINTED YELLOW
2	1	6" VALVE, GATE, MJ RESILIENT WEDGE
3	1	BOX, VALVE SLIP TYPE
4	1	6" BEND, ANCHORING, D.I.
5	1	TEE, ANCHORING, MJ
6	"	VALVE EXTENSION ROD, AS NECESSARY (3' MAX. BELOW GRADE)

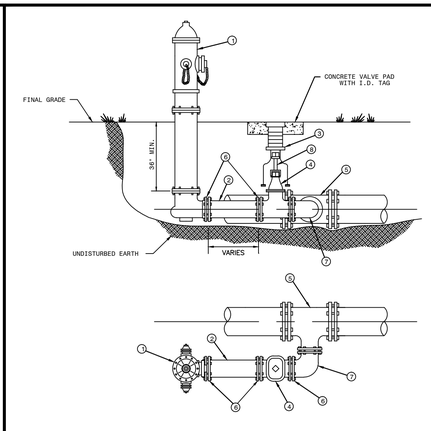
CREATED 02/24/03
REVISED

FIRE HYDRANT PARALLEL TO THE MAIN

PASCO COUNTY UTILITIES

PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN PCU APPROVAL

DETAIL 25



MATERIALS		
ITEM	QUANT.	DESCRIPTION
1	1	HYDRANT, FIRE (5 1/4" VALVE MIN.), PAINTED YELLOW
2	"	6" PIPE, P.V.C. (DR-18)
3	1	BOX, VALVE SLIP TYPE
4	1	6" VALVE, GATE, M.J. RESILIENT WEDGE
5	1	TEE, ANCHORING, M.J.
6	"	6" RESTRAINER GLAND (MEGALUG)
7	1	BEND, ANCHORING, D.I.
8	"	VALVE EXTENSION ROD, AS NECESSARY (3' MAX. BELOW GRADE)

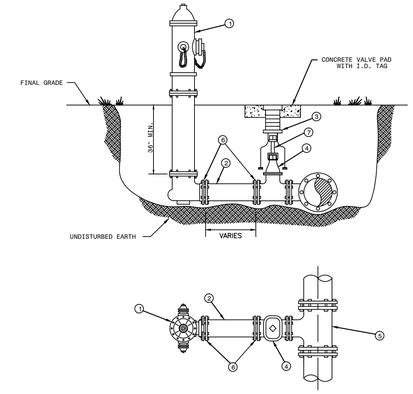
CREATED 02/24/03
REVISED

FIRE HYDRANT PARALLEL TO THE MAIN

PASCO COUNTY UTILITIES

PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN PCU APPROVAL

DETAIL 26



MATERIALS		
ITEM	QUANT.	DESCRIPTION
1	1	HYDRANT, FIRE (5 1/4" VALVE MIN.), PAINTED YELLOW
2	"	6" PIPE, P.V.C. (DR-18)
3	1	BOX, VALVE SLIP TYPE
4	1	6" VALVE, GATE, M.J. RESILIENT WEDGE
5	1	TEE, ANCHORING, M.J.
6	"	6" RESTRAINER GLAND (MEGALUG)
7	"	VALVE EXTENSION ROD, AS NECESSARY (3' MAX. BELOW GRADE)

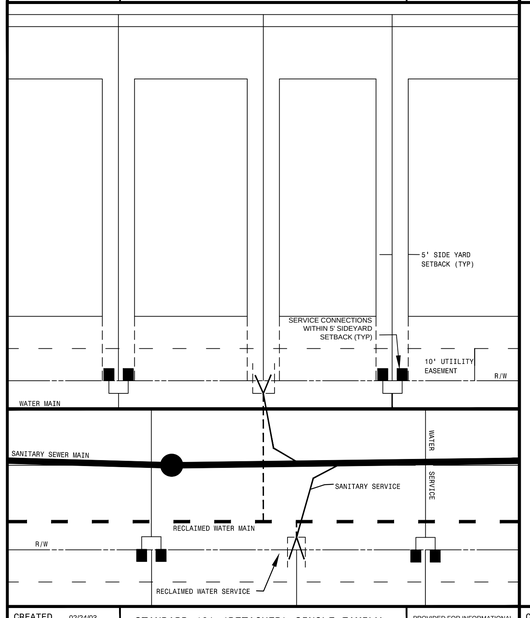
CREATED 02/24/03
REVISED

FIRE HYDRANT PERPENDICULAR TO THE MAIN

PASCO COUNTY UTILITIES

PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN PCU APPROVAL

DETAIL 27



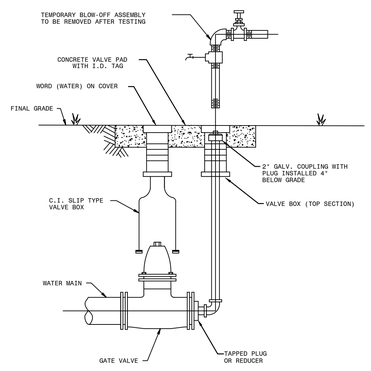
CREATED 02/24/03
REVISED

STANDARD 40' (DETACHED) SINGLE FAMILY TYPICAL UTILITY CONNECTION DETAIL

PASCO COUNTY UTILITIES

PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN PCU APPROVAL

DETAIL 22



NOTES:
- MECHANICAL JOINTS/UNDERGROUND PIPING SHALL BE RESTRAINED AS SPECIFIED IN JOINT RESTRAINT TABLE (DETAIL 46)
- VALVE EXTENSION ROD SHALL BE UTILIZED, AS NECESSARY, SO THAT VALVE OPERATING NUT IS A MAXIMUM OF 3' BELOW GRADE.

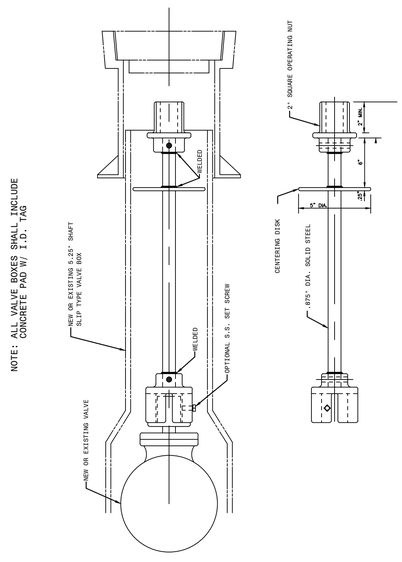
CREATED 02/24/03
REVISED

PERMANENT BLOW-OFF DETAIL

PASCO COUNTY UTILITIES

PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN PCU APPROVAL

DETAIL 28



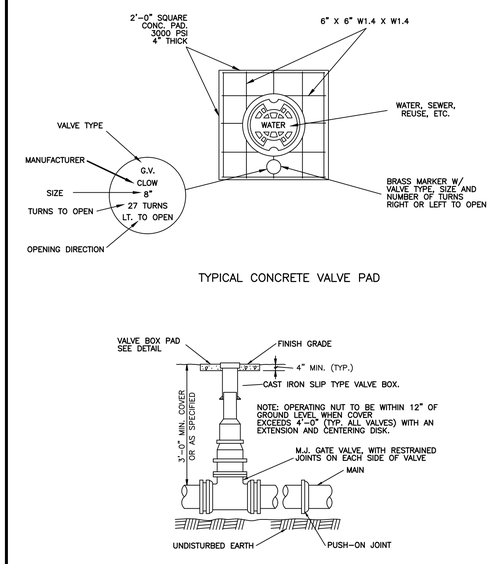
CREATED 02/24/03
REVISED

VALVE EXTENSION RODS

PASCO COUNTY UTILITIES

PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN PCU APPROVAL

DETAIL 29



CREATED 02/24/03
REVISED

VALVE BOX DETAIL SLIP TYPE

PASCO COUNTY UTILITIES

PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN PCU APPROVAL

DETAIL 30

HEIDT DESIGN
Civil Engineering • Planning & GIS
Transportation Engineering
Ecological Services • Landscape Architecture
Engineering Business Certificate of Authorization No. 28762
Landscape Architecture Certificate of Authorization No. LC26000465
5806-B Breckenridge Pkwy.
Tampa, Florida 33610
Office: 813-253-5311
Fax: 813-464-7629
www.HeidtDesign.com

LEGACY HILLS (FKA FELICIANO)

WATER DETAILS

LEGACY GREEN LLC

PREPARED BY: CRK

DATE	DESCRIPTION

DATE	DESCRIPTION
07-11-14	SUBMITTED FOR SUBSTANTIAL PLAN MOD. REVIEW BY COUNTY
09-16-13	ISSUED FOR PLAN MOD REVIEW BY COUNTY

PROJECT NO:	MAR-RD-1001
FILE:	WD
DESIGN BY:	DUNNING
DRAWN BY:	DUNNING

FLORIDA PROFESSIONAL ENGINEER

GARY D. MILLER
DATE:
REGISTRATION NO. 52717

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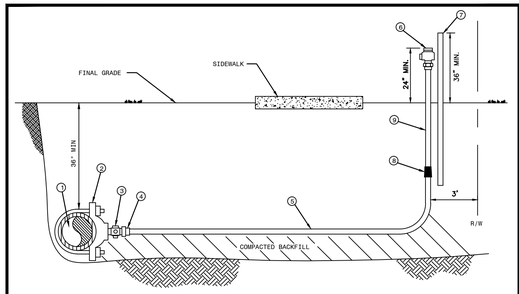
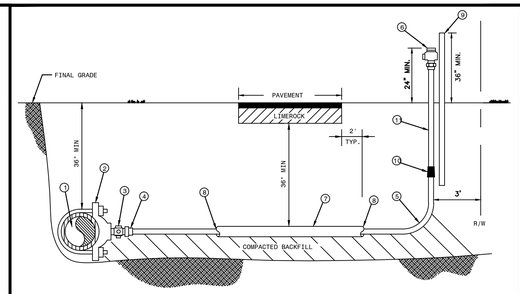


MATERIALS		
ITEM	QUANT.	DESCRIPTION
1	*	PIPE, PVC (DR-18) OR D.I.P.
2	1	SADDLE, SERVICE W/ 1" F.I.P. THREAD
3	1	1" CORPORATION (W.I.P. x COMP.)
4	1	1" INSERT (STAINLESS STEEL)
5	*	1" TUBING, POLYETHYLENE
6	1	3/4" WATER OR 1" REUSE CURB STOP BALL VALVE W/ LOCK WINGS (F.I.P. x COMP.)
7	1	2" x 4" P.T. MARKER STAKE
8	1	1" x 3/4" COUPLING (COMP. x COMP.) WATER ONLY
9	1	3/4" WATER OR 1" REUSE TUBING, POLYETHYLENE 4'

NOTES: - ALL FITTINGS FOR POLYETHYLENE TUBING ARE BRASS COMPRESSION TYPE.
- A VALVE BOX MAY BE REQUIRED AS SPECIFIED BY THE ENGINEER.
- CURB STOP TO TERMINATE 24" ABOVE GROUND AT R/W LINE.
- REUSE CURB STOPS = 1" / WATER CURB STOPS = 3/4"
- TUBING TO BE YARDLEY 3406 OR EQUAL.
- SADDLES 2" - 3" TO BE BRASS FULL CIRCLE TYPE.
- SADDLES 4" AND LARGER TO BE D.I. DUAL STRAP TYPE.
- CURB STOPS TO BE TIED TO MARKER STAKE.
- SADDLE MAY BE INSTALLED AT ANGLE (WITHIN 45° OF HORIZONTAL).
- MARKER STAKES PAINTED SAFETY BLUE FOR WATER, PURPLE FOR REUSE.

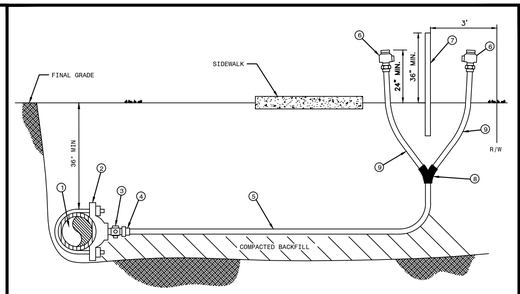
CREATED 02/24/03 REVISED	SINGLE NEAR SIDE WATER SERVICE - 3/4" SINGLE NEAR SIDE REUSE SERVICE - 1" POLYETHYLENE TUBING	PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN PCU APPROVAL
	PASCO COUNTY UTILITIES	DETAIL 17



MATERIALS		
ITEM	QUANT.	DESCRIPTION
1	*	PIPE, PVC (DR-18) OR D.I.P.
2	1	SADDLE, SERVICE W/ 1" F.I.P. THREAD
3	1	1" CORPORATION (W.I.P. x COMP.)
4	1	1" INSERT (STAINLESS STEEL)
5	*	1" TUBING, POLYETHYLENE
6	1	3/4" WATER OR 1" REUSE CURB STOP BALL VALVE W/ LOCK WINGS (F.I.P. x COMP.)
7	*	2" CASING, PVC OR HDPE - 2' BEYOND EDGE PAVEMENT
8	*	SEALER, RAM-NEK
9	1	2" x 4" P.T. MARKER STAKE
10	1	1" x 3/4" COUPLING (COMP. x COMP.) WATER ONLY
11	1	3/4" WATER OR 1" REUSE TUBING, POLYETHYLENE 4'

NOTES: - ALL FITTINGS FOR POLYETHYLENE TUBING ARE BRASS COMPRESSION TYPE.
- A VALVE BOX MAY BE REQUIRED AS SPECIFIED BY THE ENGINEER.
- CURB STOP TO TERMINATE 24" ABOVE GROUND AT R/W LINE.
- REUSE CURB STOPS = 1" / WATER CURB STOPS = 3/4"
- TUBING TO BE YARDLEY 3406 OR EQUAL.
- SADDLES 2" - 3" TO BE BRASS FULL CIRCLE TYPE.
- SADDLES 4" AND LARGER TO BE D.I. DUAL STRAP TYPE.
- CURB STOPS TO BE TIED TO MARKER STAKE.
- SADDLE MAY BE INSTALLED AT ANGLE (WITHIN 45° OF HORIZONTAL).
- MARKER STAKES PAINTED SAFETY BLUE FOR WATER, PURPLE FOR REUSE.

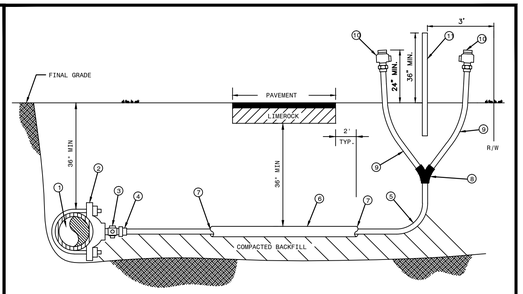
CREATED 02/24/03 REVISED	SINGLE FAR SIDE WATER SERVICE - 3/4" SINGLE FAR SIDE REUSE SERVICE - 1" POLYETHYLENE TUBING	PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN PCU APPROVAL
	PASCO COUNTY UTILITIES	DETAIL 18



MATERIALS		
ITEM	QUANT.	DESCRIPTION
1	*	PIPE, PVC (DR-18) OR D.I.P.
2	1	SADDLE, SERVICE W/ 1" F.I.P. THREAD
3	1	1" CORPORATION (W.I.P. x COMP.)
4	1	1" INSERT (STAINLESS STEEL)
5	*	1" TUBING, POLYETHYLENE
6	1	3/4" WATER OR 1" REUSE CURB STOP BALL VALVE W/ LOCK WINGS (F.I.P. x COMP.)
7	1	2" x 4" P.T. MARKER STAKE
8	1	1" x 3/4" WYE BRANCH (COMP. x COMP.) WATER ONLY
10	1	1" x 1" WYE BRANCH (COMP. x COMP.) REUSE ONLY
9	1	3/4" WATER OR 1" REUSE TUBING, POLYETHYLENE 4'

NOTES: - ALL FITTINGS FOR POLYETHYLENE TUBING ARE BRASS COMPRESSION TYPE.
- A VALVE BOX MAY BE REQUIRED AS SPECIFIED BY THE ENGINEER.
- CURB STOP TO TERMINATE 24" ABOVE GROUND AT R/W LINE.
- REUSE CURB STOPS = 1" / WATER CURB STOPS = 3/4"
- TUBING TO BE YARDLEY 3406 OR EQUAL.
- SADDLES 2" - 3" TO BE BRASS FULL CIRCLE TYPE.
- SADDLES 4" AND LARGER TO BE D.I. DUAL STRAP TYPE.
- CURB STOPS TO BE TIED TO MARKER STAKE.
- SADDLE MAY BE INSTALLED AT ANGLE (WITHIN 45° OF HORIZONTAL).
- MARKER STAKES PAINTED SAFETY BLUE FOR WATER, PURPLE FOR REUSE.

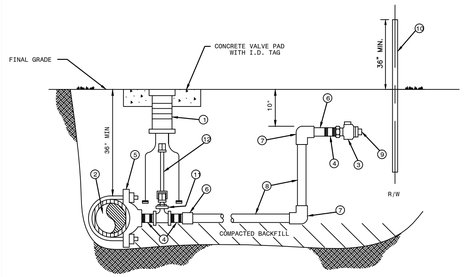
CREATED 02/24/03 REVISED	DOUBLE NEAR SIDE WATER SERVICE - 3/4" DOUBLE NEAR SIDE REUSE SERVICE - 1" POLYETHYLENE TUBING	PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN PCU APPROVAL
	PASCO COUNTY UTILITIES	DETAIL 19



MATERIALS		
ITEM	QUANT.	DESCRIPTION
1	*	PIPE, PVC (DR-18) OR D.I.P.
2	1	SADDLE, SERVICE W/ 1" F.I.P. THREAD
3	1	1" CORPORATION (W.I.P. x COMP.)
4	1	1" INSERT (STAINLESS STEEL)
5	*	1" TUBING, POLYETHYLENE
6	*	2" CASING, PVC OR HDPE - 2' BEYOND EDGE PAVEMENT
7	*	SEALER, RAM-NEK
8	1	WYE BRANCH FOR POLY TUBING
9	2	3/4" WATER OR 1" REUSE TUBING, POLYETHYLENE 4'
10	2	3/4" WATER OR 1" REUSE CURB STOP BALL VALVE W/ LOCK WINGS (F.I.P. x COMP.)
11	1	2" x 4" P.T. MARKER STAKE

NOTES: - ALL FITTINGS FOR POLYETHYLENE TUBING ARE BRASS COMPRESSION TYPE.
- A VALVE BOX MAY BE REQUIRED AS SPECIFIED BY THE ENGINEER.
- CURB STOP TO TERMINATE 24" ABOVE GROUND AT R/W LINE.
- REUSE CURB STOPS = 1" / WATER CURB STOPS = 3/4"
- TUBING TO BE YARDLEY 3406 OR EQUAL.
- SADDLES 2" - 3" TO BE BRASS FULL CIRCLE TYPE.
- SADDLES 4" AND LARGER TO BE D.I. DUAL STRAP TYPE.
- CURB STOPS TO BE TIED TO MARKER STAKE.
- SADDLE MAY BE INSTALLED AT ANGLE (WITHIN 45° OF HORIZONTAL).
- MARKER STAKES PAINTED SAFETY BLUE FOR WATER, PURPLE FOR REUSE.

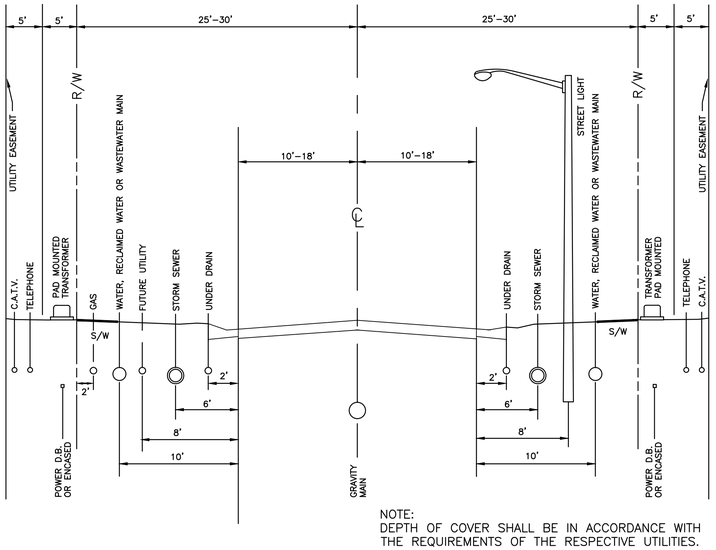
CREATED 02/24/03 REVISED	WATER AND REUSE LATERAL SERVICE 3/4" (DOUBLE - FAR SIDE) POLYETHYLENE TUBING	PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN PCU APPROVAL
	PASCO COUNTY UTILITIES	DETAIL 20



MATERIALS		
ITEM	QUANT.	DESCRIPTION
1	1	BOX, VALVE CAST IRON SLIP TYPE
2	*	4" & LARGER PIPE, PVC (DR-18) OR D.I.P. (CLASS 50)
3	2	1 1/2", 2" CURB STOP BALL VALVE W/ LOCK WINGS (FIP x FIP OR FIP x CTS)
4	3	1 1/2", 2" NIPPLE, BRASS OR STAINLESS STEEL
5	1	1 1/2", 2" SADDLE, SERVICE (I.P. THREADS)
6	2	1 1/2", 2" ADAPTER (PVC SCH 40 / SLIP x FPT OR BRASS MIP x CTS)
7	2	1 1/2", 2" 90° ELBOW (SLIP x SLIP) SCH 40 (NOT REQUIRED FOR HDPE)
8	*	1 1/2", 2" PIPE, PVC (SCH 40) OR HDPE (3408) - LENGTH VARIES
9	1	1 1/2", 2" PLUG, THREADED (W/ TEFLON TAPE)
10	1	2" x 4" P.T. MARKER STAKE
11	1	2" GATE VALVE, IRON BODY W/ SQUARE NUT
12	1	VALVE EXTENSION ROD, AS REQUIRED (3' MAX. BELOW GRADE)

NOTE: - A VALVE BOX SHALL BE REQUIRED ON ALL GATE VALVES.
- SERVICE SADDLES SHALL BE INSTALLED ON ALL TAPS TO P.V.C. (DR-18) WATER MAINS.
- 2" GATE VALVE TO BE RESILIENT WEDGE IRON BODY TYPE WITH 2" OPERATING UNIT.
- SADDLES 4" AND LARGER TO BE DUCTILE IRON DUAL STRAP TYPE.
- 1 1/2" BRASS REDUCER BUSHING REQUIRED WITH ITEM NO. 11 FOR 1 1/2" SERVICE.
- MARKER STAKES PAINTED SAFETY BLUE FOR WATER, PURPLE FOR REUSE.
- 4" DIAMETER CASING REQUIRED FOR ROAD CROSSINGS

CREATED 02/24/03 REVISED	WATER AND REUSE LATERAL SERVICE 1 1/2" OR 2" SERVICE LATERAL PVC (SCHEDULE 40)	PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN PCU APPROVAL
	PASCO COUNTY UTILITIES	DETAIL 21



NOTE:
DEPTH OF COVER SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE RESPECTIVE UTILITIES.

RECOMMENDED UTILITY LOCATIONS

SCALE: N.T.S.

HEIDT DESIGN
Civil Engineering • Planning & GIS
Transportation Engineering
Ecological Services • Landscape Architecture
Engineering Business Certificate of Authorization No. 28792
Landscape Architecture Certificate of Authorization No. LC26000405
5806-B Breckenridge Pkwy.
Tampa, Florida 33610
Office: 813-253-5311
Fax: 813-464-7629
www.HeidtDesign.com

LEGACY HILLS (FKA FELICIANO)

WATER DETAILS

LEGACY GREEN LLC

PREPARED BY:

DATE	DESCRIPTION
07-11-14	SUBMITTED FOR SUBSTANTIAL PLAN MOD. REVIEW BY COUNTY
09-16-13	ISSUED FOR PLAN MOD REVIEW BY COUNTY

PROJECT NO:	MAR-RD-1001
FILE:	WD
DESIGN BY:	DUNNING
DRAWN BY:	DUNNING

FLORIDA PROFESSIONAL ENGINEER

GARY D. MILLER
DATE:
REGISTRATION NO. 52717

R:\LEGACY DEVELOPMENT PROJECTS\LEGACY HILLS 2012\WORKING FILES\CURRENT DRAWINGS\CP\WD.DWG-41 2014/10/24 11:58 AM ERIC FRANCIS

PIPE RESTRAINT LENGTHS IN FEET
COMMON FITTINGS

PIPE SIZE	11-1/4°	22-1/2°	45°	90°	DEAD END
WATER MAINS - TEST PRESSURE 150 PSI					
4"	2'	4'	8'	20'	45'
6"	3'	6'	12'	28'	63'
8"	4'	7'	15'	36'	82'
10"	4'	9'	18'	43'	98'
12"	5'	10'	21'	50'	116'
16"	6'	13'	26'	63'	148'
20"	7'	15'	31'	76'	179'
24"	9'	17'	36'	87'	208'
FORCE MAINS - TEST PRESSURE 100 PSI					
4"	1'	3'	6'	13'	30'
6"	2'	4'	8'	19'	42'
8"	2'	5'	10'	24'	55'
10"	3'	6'	12'	29'	66'
12"	3'	7'	14'	34'	77'
16"	4'	8'	18'	42'	99'
20"	5'	10'	21'	50'	119'
24"	6'	11'	24'	58'	139'

RESTRAINT LENGTHS ARE MEASURED FROM THE CENTER LINE OF THE FITTING ALONG THE PIPE IN BOTH DIRECTIONS (EXCEPT DEAD ENDS).

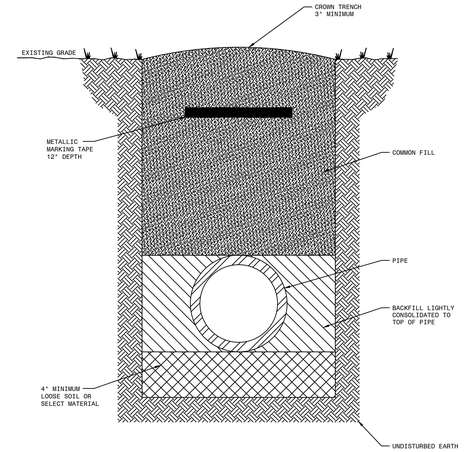
CREATED 02/24/03 REVISED	RESTRAINED JOINT TABLE COMMON FITTINGS	PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN PCU APPROVAL	
	PASCO COUNTY UTILITIES	DETAIL 31	

PIPE RESTRAINT LENGTHS IN FEET
TEES (BRANCH SIDE)

RUN SIZE	BRANCH SIZE 3"	4"	6"	8"	10"	12"	16"	20"	24"
WATER MAINS - TEST PRESSURE 150 PSI									
3"	6'	14'	30'	—	—	—	—	—	—
4"	2'	11'	28'	44'	—	—	—	—	—
6"	1'	2'	22'	40'	52'	—	—	—	—
8"	1'	1'	16'	35'	48'	62'	—	—	—
10"	1'	1'	10'	30'	44'	58'	83'	—	—
12"	1'	1'	3'	25'	40'	55'	80'	103'	—
16"	1'	1'	1'	14'	31'	48'	75'	98'	119'
20"	1'	1'	1'	2'	22'	40'	69'	94'	116'
24"	1'	1'	1'	1'	11'	31'	63'	89'	111'

RESTRAINT LENGTHS ARE MEASURED FROM THE CENTER LINE OF THE TEE ALONG THE BRANCH FOR THE DISTANCE INDICATED. A MINIMUM OF 5 FEET OF RESTRAINED PIPE MUST BE INSTALLED ON BOTH RUNS OF THE TEE. MEGALUG TYPE RESTRAINERS ARE REQUIRED ON ALL JOINTS.

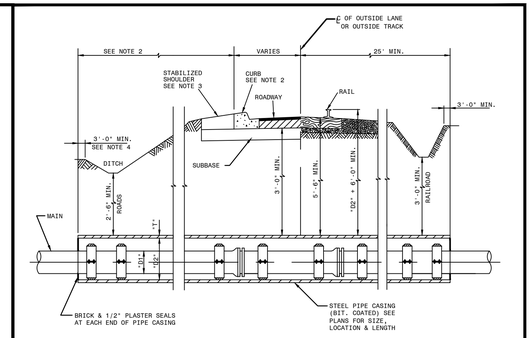
CREATED 02/24/03 REVISED	RESTRAINED JOINT TABLE TEES (BRANCH SIDE)	PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN PCU APPROVAL	
	PASCO COUNTY UTILITIES	DETAIL 32	



NOTES: –LOOSE SOIL OR SELECT MATERIAL IS NATIVE SOIL EXCAVATED FROM THE TRENCH FREE OF ROCKS AND FOREIGN MATERIAL.
–COMMON FILL TO BE PLACED AND COMPACTED IN 12" LAYERS. ROLLING EQUIPMENT SHALL NOT BE USED FOR COMPACTION UNTIL A MINIMUM OF 18" OF COMMON FILL HAS BEEN PLACED AND COMPACTED OVER THE PIPE. THREE FEET OF FILL SHALL BE PLACED BEFORE A HYDROHAMMER MAY BE USED FOR COMPACTION.

NTS

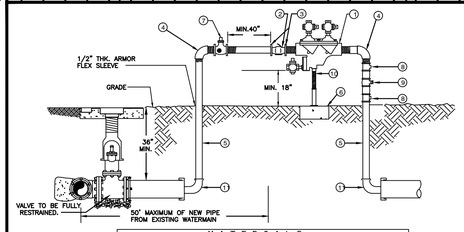
CREATED 02/24/03 REVISED	PIPE LAYING CONDITIONS STANDARD UNPAVED AREAS	PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN PCU APPROVAL	
	PASCO COUNTY UTILITIES	DETAIL 35	



NOTE:
1. VERTICAL DIMENSIONS ARE TYPICAL FOR MAINS.
2. CASINGS SHALL TERMINATE 8' MINIMUM BEYOND EDGE OF PAVEMENT.
3. CASINGS SHALL HAVE 30" MINIMUM COVER UNDER DITCH BOTTOMS AND 36" ELSEWHERE.
4. GRAVITY SEWERS SHALL BE PROPERLY ANCHORED TO PREVENT FLOATATION WITH SPACERS ADJUSTED TO PROVIDE THE SLOPE REQUIRED.
5. SEE SECTION 8.2 FOR CASING SIZE.

CARRIER PIPE (INCHES)	CASING PIPE (INCHES)	CASING WALL THICKNESS (INCHES)
4	12	1/4
6	16	1/4
8	16	1/4
10	24	5/16
12	24	5/16
16	30	3/8
20	36	3/8
24	42	3/8
30	48	3/8
36	54	1/2
42	60	1/2
48	66	1/2

CREATED 02/24/03 REVISED	JACK & BORE DETAIL	PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN PCU APPROVAL	
	PASCO COUNTY UTILITIES	DETAIL 38	

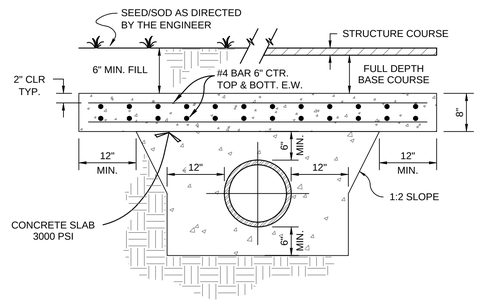


ITEM	QUANT.	DESCRIPTION
1	1	2" BACKFLOW PREVENTER ASSEMBLY, REDUCED PRESSURE ZONE
2	1	2" METER FURNISHED BY PASCO COUNTY UTILITIES
3	2	BRASS-METER FLANGES OR ADAPTORS
4	2	2" ELBOWS - GALV. 90°
5	2	2" RISER - GALV.
6	*	CONCRETE SLAB
7	1	2" VALVE - BRASS OR S.S.
8	2	TEE/ VALVES - BRASS OR S.S.
9	1	2" GATE VALVE - BRASS OR S.S.
10	1	PIPE STAND (SUPPORT)
11	2	M.J. CAP WITH 2" TAP

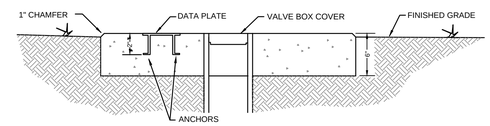
NOTE: – CONTRACTOR/CUSTOMER SHALL APPLY AT PASCO COUNTY UTILITIES CUSTOMER SERVICE FOR TEMPORARY WATER SERVICE AT LEAST THREE DAYS PRIOR TO REQUIRED SERVICE DATE.
– THE METER WILL BE FURNISHED, INSTALLED AND INITIAL READING TAKEN BY PASCO COUNTY UTILITIES. ALL FITTINGS, PIPING, VALVES AND MATERIALS INCLUDING THE PASCO COUNTY APPROVED REDUCED PRESSURE BACKFLOW PREVENTION DEVICE SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR/CUSTOMER.
– CONTRACTOR/CUSTOMER FURNISHED REDUCED PRESSURE BACKFLOW PREVENTION DEVICE MUST BE INSTALLED BEFORE THE METER IS INSTALLED BY PASCO COUNTY UTILITIES. THE APPROVED BACKFLOW PREVENTION DEVICE SHALL BE TESTED AND CERTIFIED BY PASCO COUNTY UTILITIES CERTIFIED BACKFLOW PREVENTION TECHNICIAN AT TIME OF METER INSTALLATION.
– CONTRACTOR/CUSTOMER SHALL PROTECT THE JUMPER/METER ASSEMBLY FROM DAMAGE.
– CONTRACTOR/CUSTOMER IS RESPONSIBLE FOR BACTERIOLOGICAL TESTING AFTER CONNECTION OF TEMPORARY WATER SERVICE.
– TEMPORARY CONSTRUCTION JUMPER/METER ASSEMBLY SHALL NOT BE REMOVED UNTIL SYSTEM IS ACCEPTED AND DEPARTMENT OF HEALTH CERTIFICATION AND CLEARANCE FOR SERVICE FORM HAS BEEN RECEIVED BY PASCO COUNTY UTILITIES.
– WHEN THE NEW SYSTEM IS ACCEPTED AND THE FINAL METER READING TAKEN BY PASCO COUNTY, THE TEMPORARY CONSTRUCTION JUMPER/METER ASSEMBLY MUST BE COMPLETELY REMOVED FROM M.J CAP TO M.J. CAP AND A NEW WATER MAIN IS TO BE CHLORINATED AND INSTALLED COMPLETING THE FINAL CONNECTION.
– BY APPLYING FOR SERVICE, CONTRACTOR/CUSTOMER AGREES TO TAKE WATER SERVICE FROM PASCO COUNTY UTILITIES IN ACCORDANCE WITH THE APPROPRIATE RATE SCHEDULE AND IN ACCORDANCE WITH PASCO COUNTY UTILITIES RULES AND REGULATION.

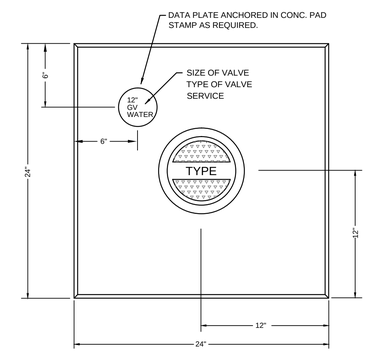
CREATED 11/18/05 REVISED 05/30/06	TEMPORARY CONSTRUCTION WATER SERVICE	PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN PCU APPROVAL	
	PASCO COUNTY UTILITIES	DETAIL 01	

NOTE:
ALL PRESSURIZED PIPE WILL BE INSTALLED AT A MAXIMUM DEPTH OF FIVE FEET. TO MEET THIS REQUIREMENT, AT CROSSINGS WITH STORM SEWER OR SANITARY SEWER PIPING, PRESSURIZED PIPE MAY NEED TO BE CONSTRUCTED ON TOP. IF A MINIMUM THREE FEET OF COVER IS NOT ACHIEVABLE, A CONCRETE SHOCK PAD WILL BE INSTALLED (SEE DETAIL BELOW).



CONCRETE SHOCK PAD





CONCRETE VALVE PAD
(FOR UNPAVED AREAS)

NOTES:

CONCRETE TO BE TYPE I GENERAL PORTLAND CEMENT WITH 3/4" TOP SIZE AGGREGATE AND SHALL DEVELOP A 28-DAY STRENGTH OF 3000 P.S.I.

CONCRETE VALVE PAD SHALL BE POURED IN PLACE AND SHALL BE SET 1/2" ABOVE FINISHED GRADE

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LEGACY HILLS (FKA FELICIANO)

WATER DETAILS

LEGACY GREEN LLC

PREPARED FOR:

DATE	DESCRIPTION
09-22-14	COUNTY COMMENTS
07-11-14	SUBMITTED FOR SUBSTANTIAL PLAN MOD. REVIEW BY COUNTY
05-07-14	REVISED FOR ERP COMMENTS
09-16-13	ISSUED FOR PLAN MOD REVIEW BY COUNTY

PROJECT NO:	MAR-RD-1001
FILE:	WD
DESIGN BY:	DUNNING
DRAWN BY:	DUNNING

FLORIDA PROFESSIONAL ENGINEER

GARY D. MILLER
DATE:
REGISTRATION NO. 52717

42

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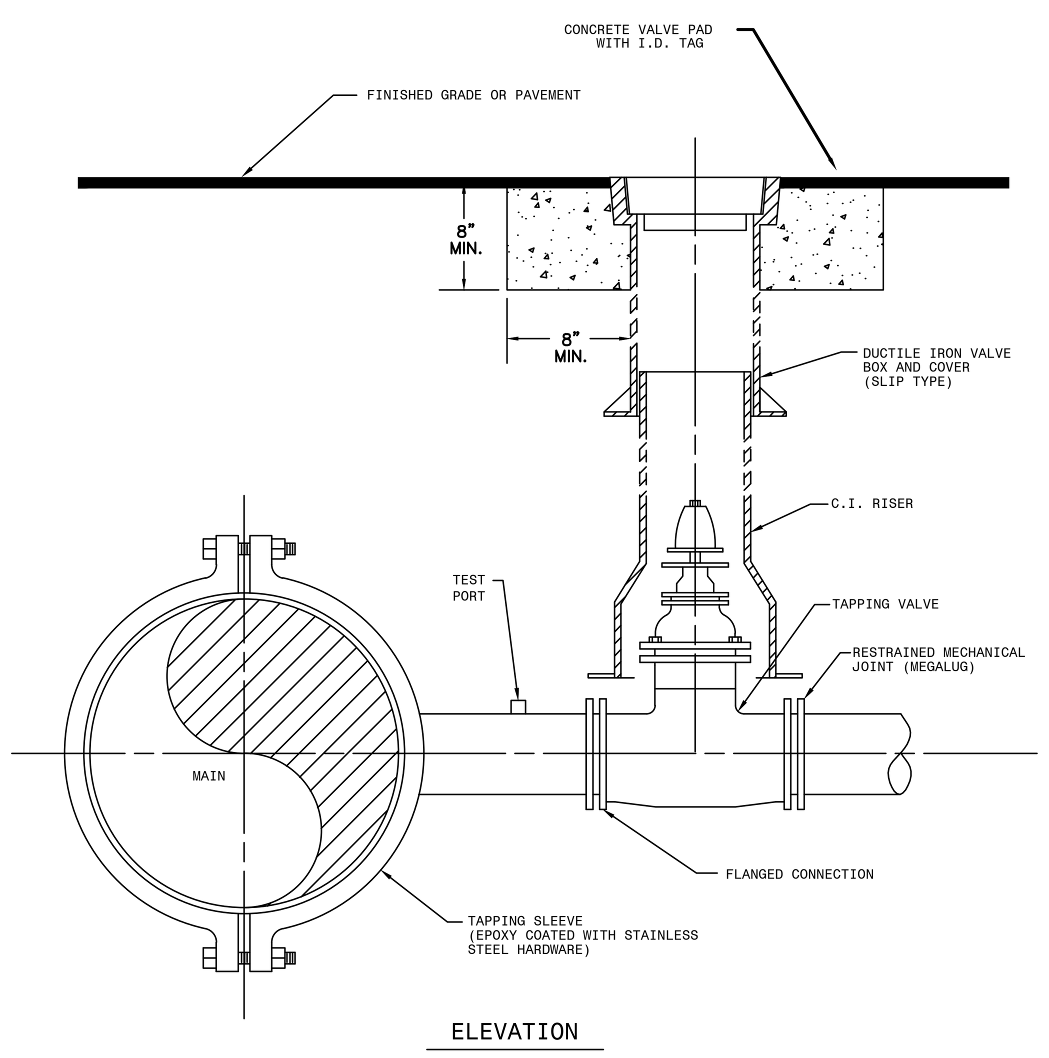
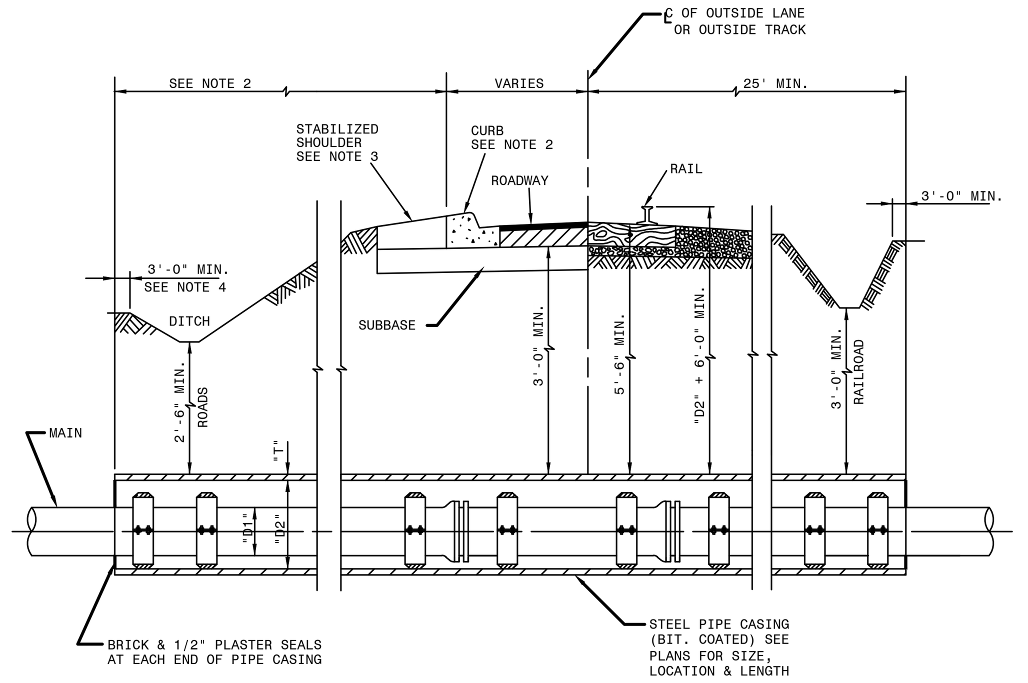


ELEVATION

NOTES:

- SADDLE CONNECTION WILL BE TESTED TO 150 PSI PRIOR TO TAPPING MAIN.
- MECHANICAL JOINTS/UNDERGROUND PIPING SHALL BE RESTRAINED AS SPECIFIED BY COUNTY/ENGINEER.
- VALVE EXTENSION ROD SHALL BE UTILIZED, AS NECESSARY, SO THAT VALVE OPERATING NUT IS A MAXIMUM OF 3' BELOW GRADE.

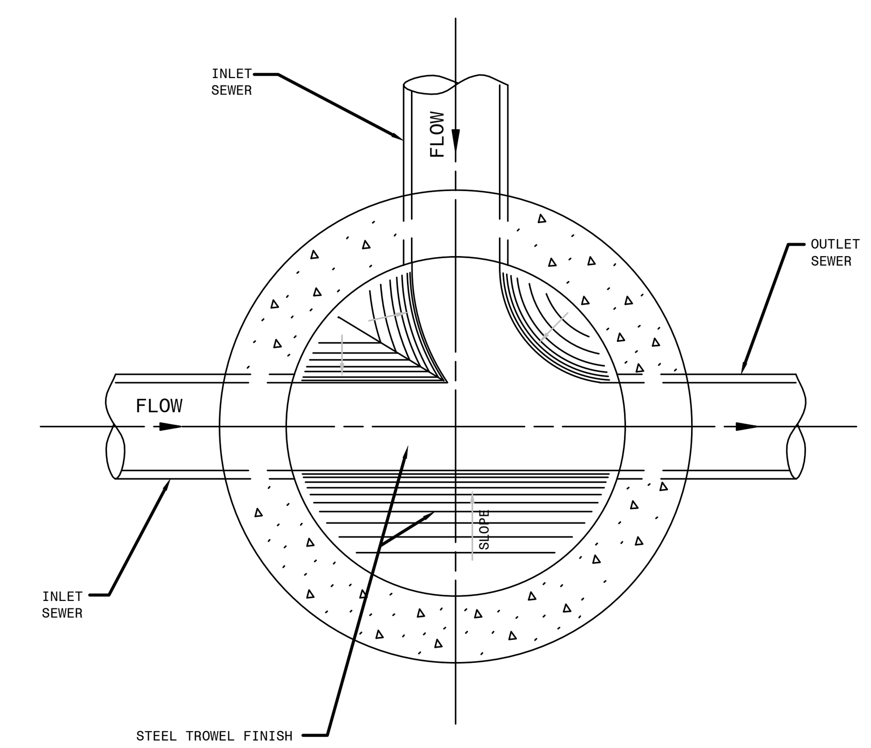
CREATED 02/24/03 REVISED	WATER, REUSE, AND FORCE MAIN TAPPING DETAIL W/ VALVE LOCATION	PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN PCU APPROVAL	
	PASCO COUNTY UTILITIES	DETAIL 37	



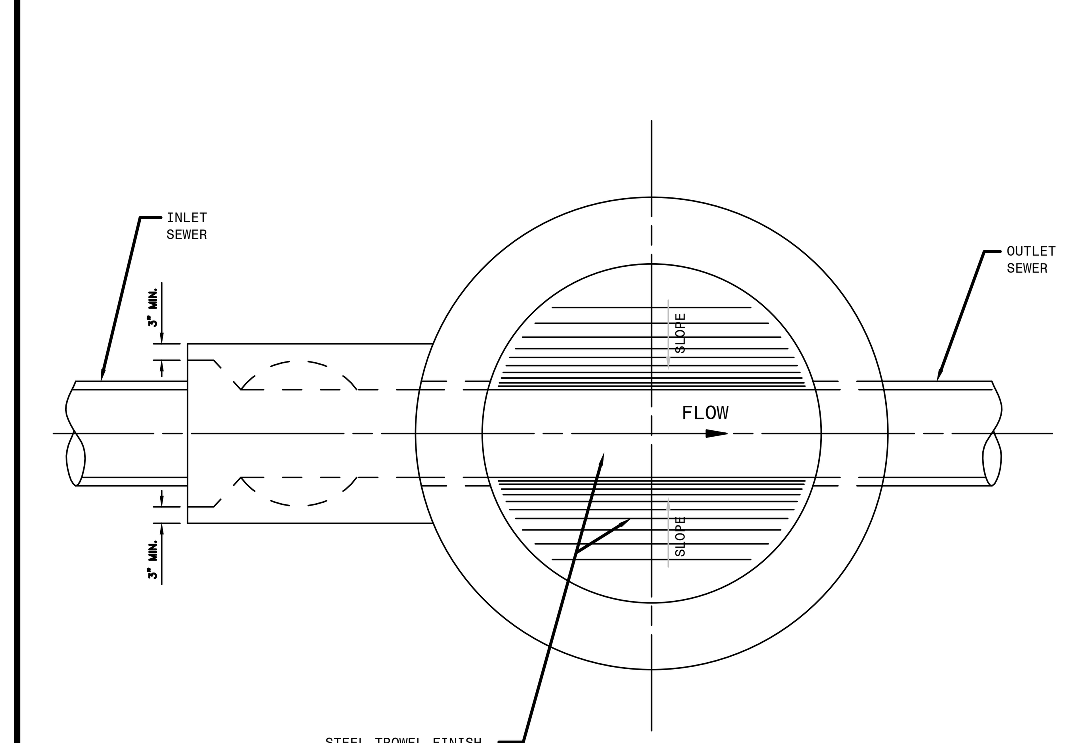
NOTE:
1. VERTICAL DIMENSIONS ARE TYPICAL FOR MAINS.
2. CASINGS SHALL TERMINATE 8' MINIMUM BEYOND EDGE OF PAVEMENT.
3. CASINGS SHALL HAVE 30" MINIMUM COVER UNDER DITCH BOTTOMS AND 36" ELSEWHERE.
4. GRAVITY SEWERS SHALL BE PROPERLY ANCHORED TO PREVENT FLOATATION WITH SPACERS ADJUSTED TO PROVIDE THE SLOPE REQUIRED.
5. SEE SECTION B.2 FOR CASING SIZE.

CARRIER PIPE (INCHES)	CASING PIPE (INCHES)	CASING WALL THICKNESS (INCHES)
4	12	1/4
6	16	1/4
8	16	1/4
10	24	5/16
12	24	5/16
16	30	3/8
20	36	3/8
24	42	3/8
30	48	3/8
36	54	1/2
42	60	1/2
48	66	1/2

CREATED 02/24/03 REVISED	JACK & BORE DETAIL	PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN PCU APPROVAL	
	PASCO COUNTY UTILITIES	DETAIL 38	



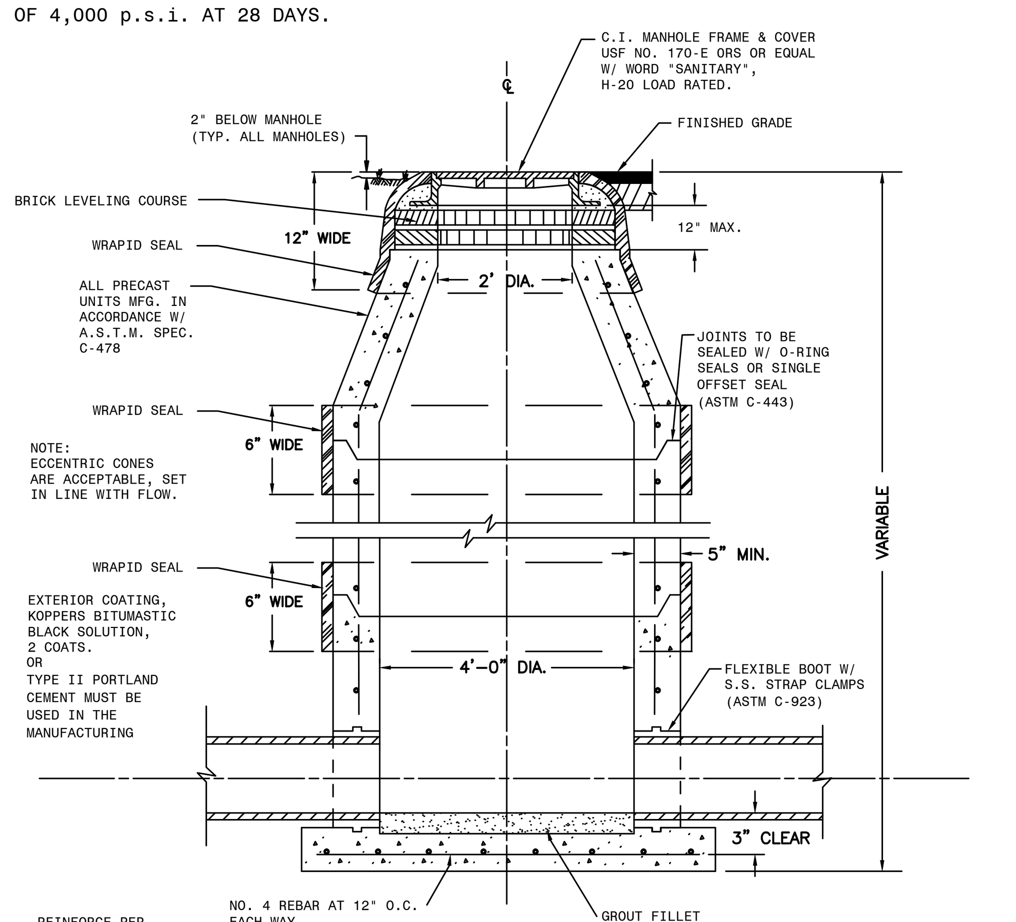
CREATED 02/24/03 REVISED	STANDARD MANHOLE (BENCH AND INVERTS)	PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN PCU APPROVAL	
	PASCO COUNTY UTILITIES	DETAIL 39	



NOTE:
DROP MANHOLE TO BE USED WHEN THE DIFFERENCE BETWEEN INVERTS IS 2' OR MORE.

CREATED 02/24/03 REVISED	DROP MANHOLE (BENCH AND INVERTS)	PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN PCU APPROVAL	
	PASCO COUNTY UTILITIES	DETAIL 40	

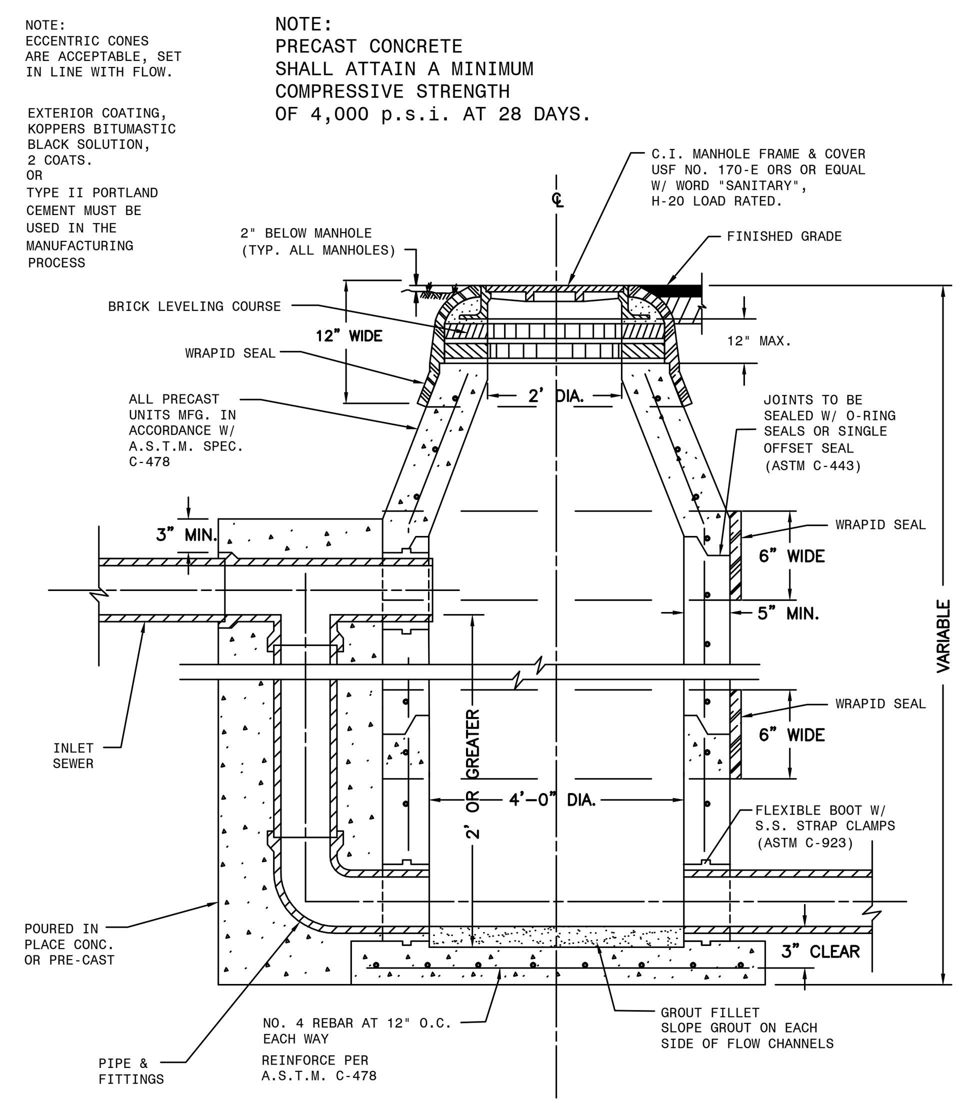
NOTE:
PRECAST CONCRETE
SHALL ATTAIN A MINIMUM
COMPRESSIVE STRENGTH
OF 4,000 p.s.i. AT 28 DAYS.



NOTE:
1. WRAPID SEAL MUST BE USED ON ALL JOINTS, CASTINGS AND RISER RINGS: ON ALL JOINTS ON AIR RELEASES, MANHOLES, GREASE/WATER, OIL/WATER SEPARATORS, AND WETWELLS.
2. WRAPID SEAL MUST BE USED IN ACCORDANCE WITH MANUFACTURES RECOMMENDATIONS.
3. PASCO COUNTY SHALL HAVE THE OPTION OF SPECIFYING THE TYPE OF INTERIOR LINING TO BE INSTALLED FOR EACH INDIVIDUAL MANHOLE.
4. PASCO COUNTY SHALL HAVE THE OPTION OF REQUIRING A NEGATIVE PRESSURE TEST PER ASTM C-1244
5. LIFT HOLES MUST NOT PENETRATE THE WALLS

CREATED 02/24/03 REVISED	STANDARD MANHOLE	PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN PCU APPROVAL	
	PASCO COUNTY UTILITIES	DETAIL 41	

NOTE:
PRECAST CONCRETE
SHALL ATTAIN A MINIMUM
COMPRESSIVE STRENGTH
OF 4,000 p.s.i. AT 28 DAYS.



NOTE:
1. WRAPID SEAL MUST BE USED ON ALL JOINTS, CASTINGS AND RISER RINGS: ON ALL JOINTS ON AIR RELEASES, MANHOLES, GREASE/WATER, OIL/WATER SEPARATORS, AND WETWELLS.
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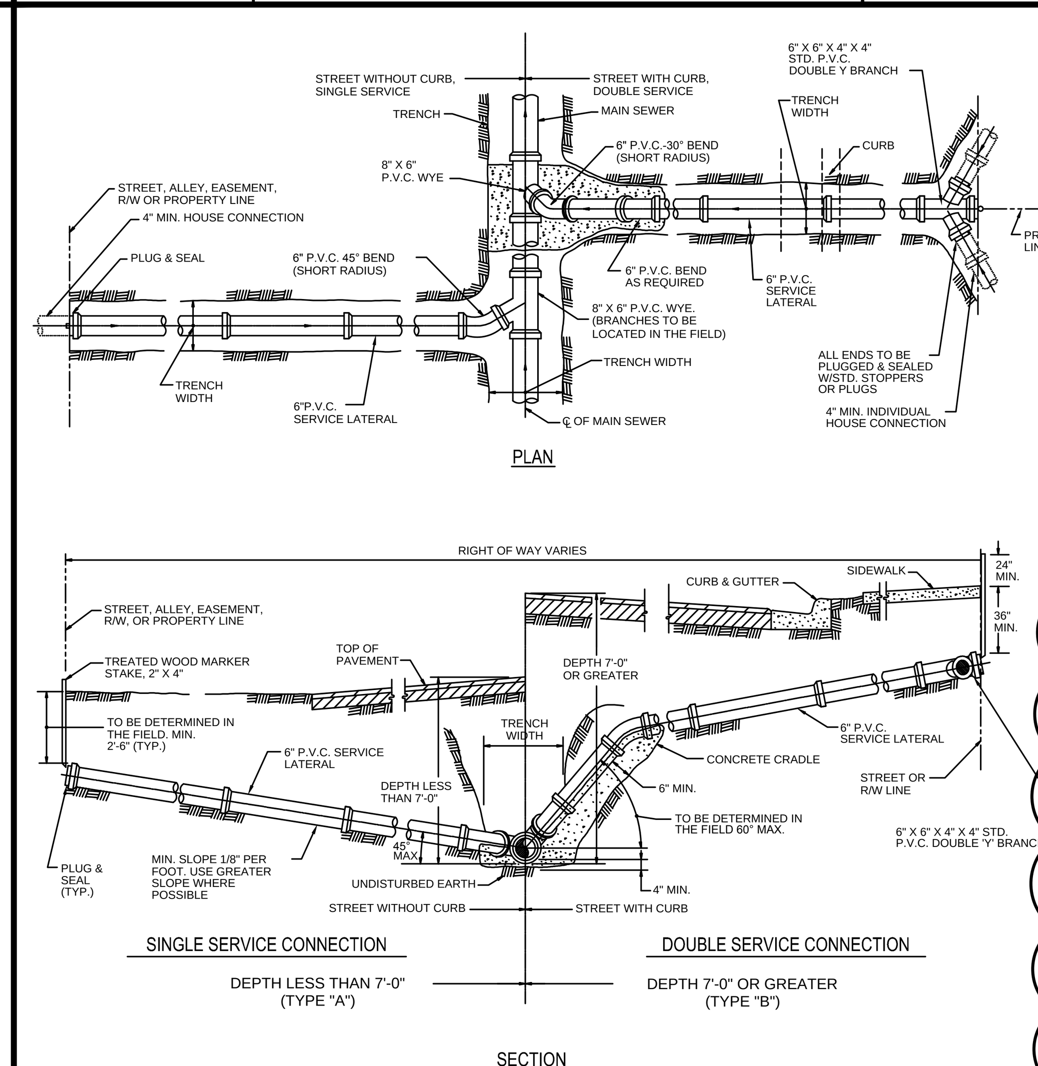
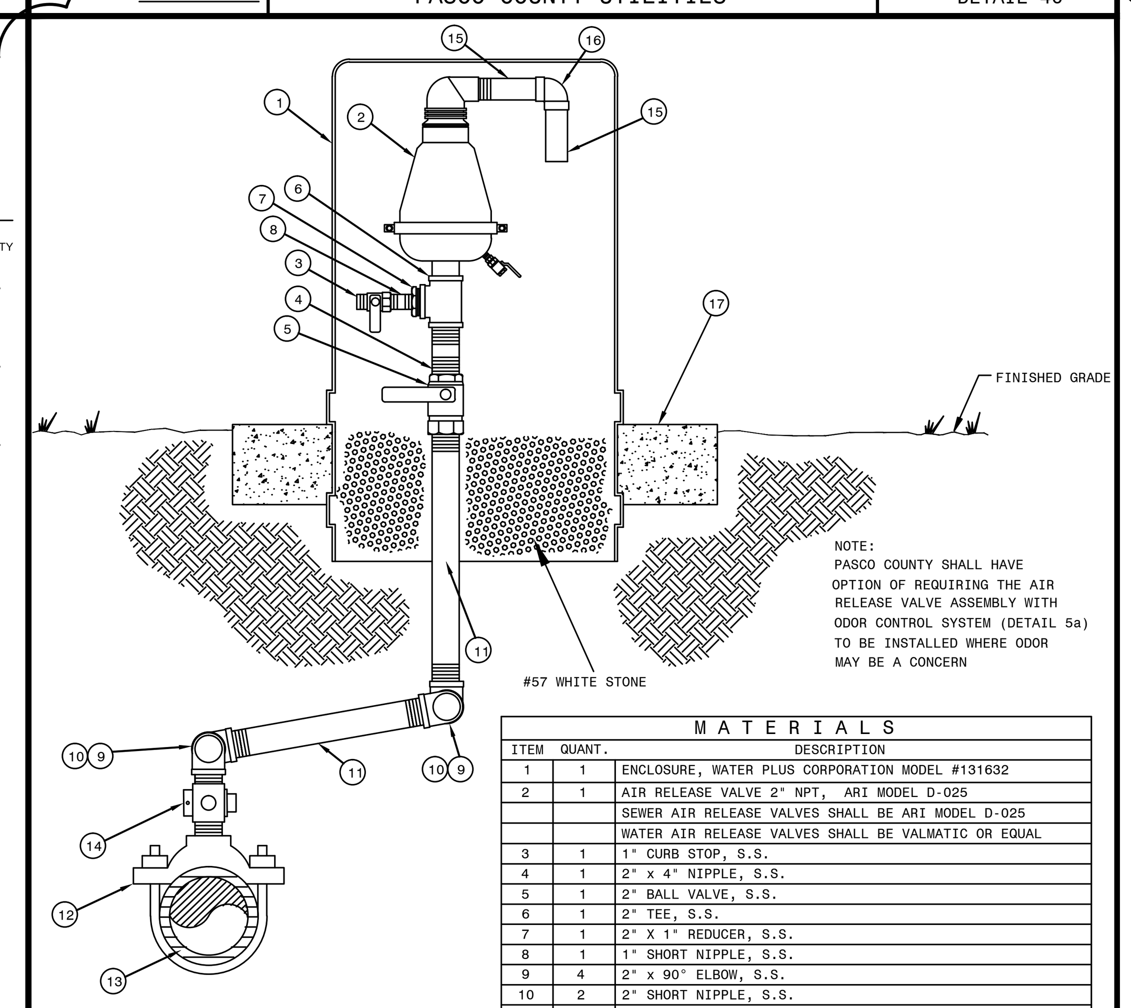
5. LIFT HOLES MUST NOT PENETRATE THE WALLS

CREATED 02/24/03 REVISED	DROP MANHOLE	PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN PCU APPROVAL	
	PASCO COUNTY UTILITIES	DETAIL 42	



NOTE:
- CONTRACTOR SHALL MAKE, ON A CLEAN SET OF PLANS, THE FINAL STATIONING OR DISTANCE AND DIRECTION FROM MANHOLE OF EACH SERVICE LATERAL AND THEN GIVE TO ENGINEER FOR RECORD PURPOSES.
- PROVIDE 2" x 4" PRESSURE TREATED WOOD MARKER STAKE AT ALL SANITARY SERVICES (INCLUDE IN PIPE PRICE), TOP OF STAKE TO BE PAINTED WITH GREEN PAINT.
- THE MINIMUM DIAMETER OF ALL SERVICE LATERALS SHALL BE 6 INCHES.

CREATED 02/24/03 REVISED	SEWER LATERAL CONNECTION	PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN PCU APPROVAL	
	PASCO COUNTY UTILITIES	DETAIL 44	



NOTE:
PASCO COUNTY SHALL HAVE OPTION OF REQUIRING THE AIR RELEASE VALVE ASSEMBLY WITH ODOR CONTROL SYSTEM (DETAIL 5a) TO BE INSTALLED WHERE ODOR MAY BE A CONCERN

MATERIALS

ITEM	QUANT.	DESCRIPTION
1	1	ENCLOSURE, WATER PLUS CORPORATION MODEL #131632
2	1	AIR RELEASE VALVE 2" NPT, ARI MODEL D-025
		SEWER AIR RELEASE VALVES SHALL BE ARI MODEL D-025
		WATER AIR RELEASE VALVES SHALL BE VALMATIC OR EQUAL
3	1	1" CURB STOP, S.S.
4	1	2" x 4" NIPPLE, S.S.
5	1	2" BALL VALVE, S.S.
6	1	2" TEE, S.S.
7	1	2" X 1" REDUCER, S.S.
8	1	1" SHORT NIPPLE, S.S.
9	4	2" x 90° ELBOW, S.S.
10	2	2" SHORT NIPPLE, S.S.
11	2	2" PIPE, S.S. LENGTH AS REQUIRED
12	1	2" DOUBLE STRAP TAPPING SADDLE, S.S.
13	1	4" & LARGER PIPE, D.I. OR PVC (DR-18)
14	1	2" CORPORATION BRASS
15	2	1-1/2" PIPE, PVC, LENGTH AS REQUIRED
16	1	1-1/2" x 90° ELBOW, PVC
17	1	CONCRETE SLAB AROUND ENCLOSURE

NOTE:

VENTED ENCLOSURE TO BE COLOR CODED AS FOLLOWS:

WATER MAIN – BLUE
FORCE MAIN – GREEN
REUSE MAIN – PURPLE

CREATED 02/24/03 REVISED	STANDARD AIR RELEASE VALVE ASSEMBLY ABOVE GROUND VERTICAL PIPE LAYOUT	PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN PCU APPROVAL	
	PASCO COUNTY UTILITIES	DETAIL 07	

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www.HeidtDesign.com

LEGACY HILLS (FKA FELICIANO)

SANITARY SEWER DETAILS

PREPARED FOR: LEGACY GREEN LLC

DATE	DESCRIPTION
09-22-14	COUNTY COMMENTS
07-11-14	SUBMITTED FOR SUBSTANTIAL PLAN MOD. REVIEW BY COUNTY
05-07-14	REVISED FOR ERP COMMENTS
01-08-14	REVISED FOR COUNTY RESUBMITTAL
09-16-13	ISSUED FOR PLAN MOD REVIEW BY COUNTY

PROJECT NO:	MAR-RD-1001
FILE:	SD
DESIGN BY:	DUNNING
DRAWN BY:	DUNNING

FLORIDA PROFESSIONAL ENGINEER

GARY D. MILLER
DATE: __________
REGISTRATION NO. 52717

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LEGEND

EXISTING	PROPOSED	
		STORM DRAINAGE STRUCTURE
15	15	CONTOUR
SWFWL		SWFWMD WETLAND LINE
25'OS		25' OFFSET FROM SWFWMD WETLAND LINE SHOWN FOR INFORMATIONAL PURPOSES
		STAKED EROSION CONTROL-REPRESENTS THE SWFWMD BUFFER LIMITS WHERE ADJACENT TO A PROTECTED WETLAND
		FEMA FLOOD LIMIT
		100 YR FLOOD LIMIT (PER HEIDT)
		FEMA BASE FLOOD ELEVATION
		FLOODPLAIN ENCROACHMENT
		FLOODPLAIN MITIGATION

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LEGACY HILLS (FKA FELICIANO)

FLOODPLAIN MITIGATION PLAN

LEGACY GREEN LLC

PREPARED FOR:

DATE	DESCRIPTION
07-11-14	SUBMITTED FOR SUBSTANTIAL PLANNING REVIEW BY COUNTY
09-16-13	ISSUED FOR PLAN AND REVIEW BY COUNTY
05-18-07	FPM PONDS 1 & 2
03-28-07	PASCO COUNTY COMMENTS
01-18-07	100 YR HEIDT CALC FLOOD LIMIT
12-21-06	DESCRIPTION

PROJECT NO:	MAR-RD-1001
FILE:	FPM
DESIGN BY:	DUNNING
DRAWN BY:	DUNNING

FLORIDA PROFESSIONAL ENGINEER

GARY D. MILLER
DATE:
REGISTRATION NO. 52717

1 OF 1

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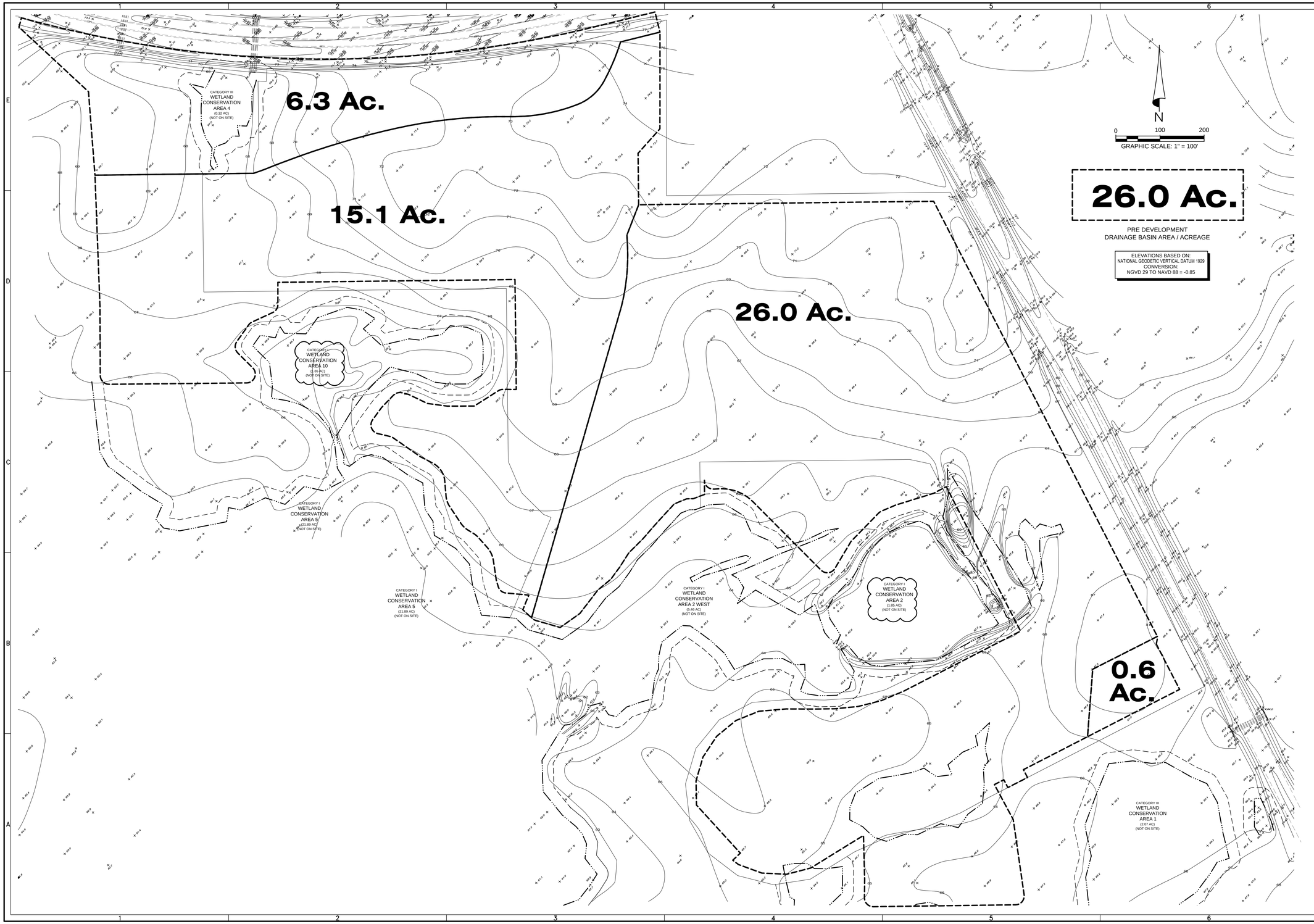

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LEGACY HILLS (FKA FELICIANO)

PRE-DEVELOPMENT DRAINAGE AREA MAP

LEGACY GREEN LLC

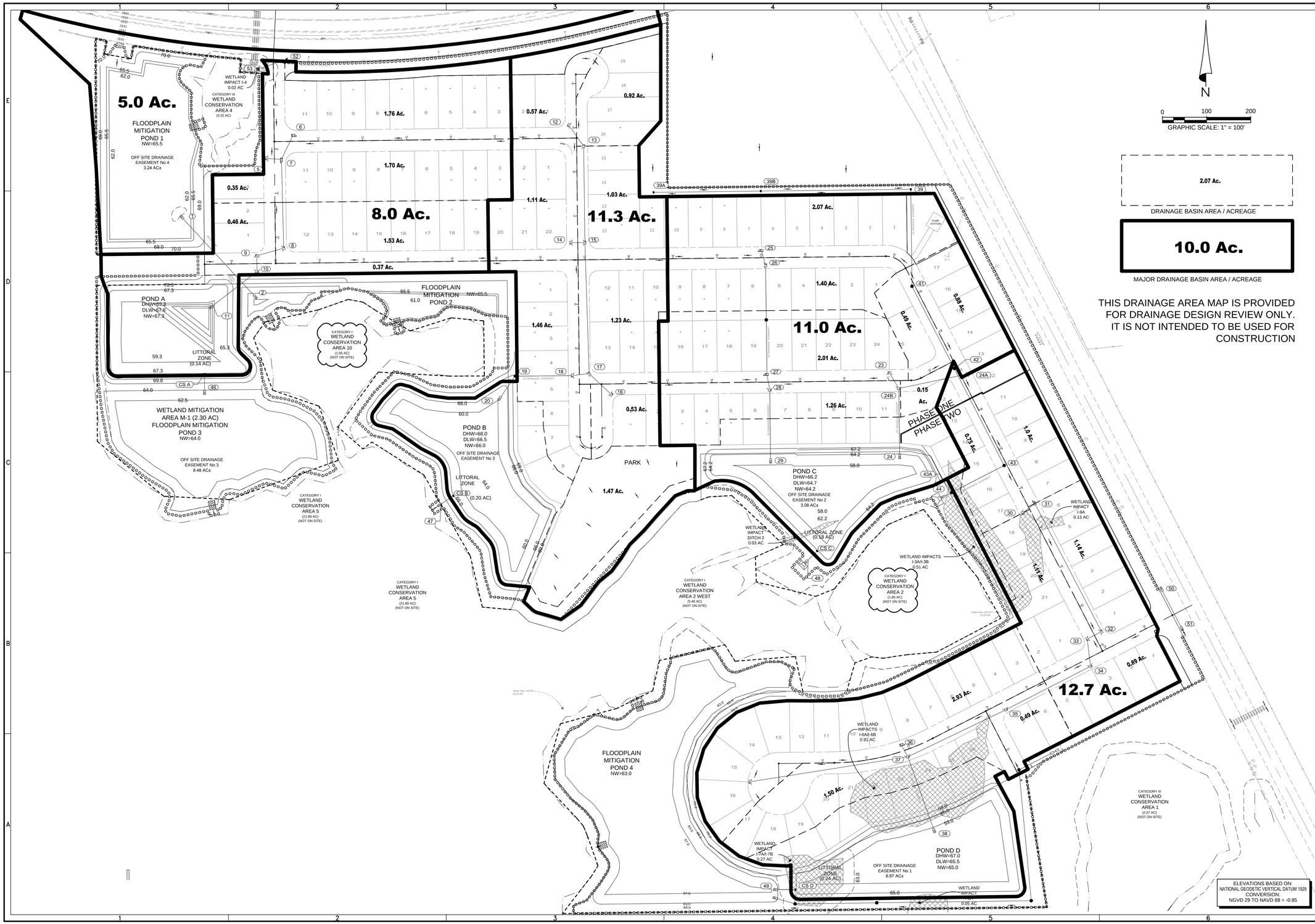
PREPARED BY: ERK

DATE	DESCRIPTION
09-22-14	COUNTY COMMENTS
07-11-14	SUBMITTED FOR SUBSTANTIAL PLAN MOD. REVIEW BY COUNTY
09-16-13	ISSUED FOR PLAN MOD REVIEW BY COUNTY

PROJECT NO:	MAR-RD-1001
FILE:	DRA-PRE
DESIGN BY:	DUNNING
DRAWN BY:	DUNNING

FLORIDA PROFESSIONAL ENGINEER

GARY D. MILLER
DATE:
REGISTRATION NO. 52717



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LEGACY HILLS (FKA FELICIANO)

POST-DEVELOPMENT DRAINAGE AREA MAP

LEGACY GREEN LLC

PREPARED FOR:

DATE	DESCRIPTION

DATE	DESCRIPTION
09-22-14	COUNTY COMMENTS
07-11-14	SUBMITTED FOR SUBSTANTIAL PLAN AND REVIEW BY COUNTY
09-16-13	ISSUED FOR PLAN MOD REVIEW BY COUNTY
09-18-07	FPM PONDS 1 & 2
03-26-07	PASCO COUNTY COMMENTS
01-18-07	SWFWMD COMMENTS
12-21-06	-

PROJECT NO:	MAR-RD-1001
FILE:	DRA
DESIGN BY:	DUNNING
DRAWN BY:	DUNNING

FLORIDA PROFESSIONAL ENGINEER

GARY D. MILLER
DATE:
REGISTRATION NO. 52717

1 OF 1

...TER POLLUTION PREVENTION PLAN

) ON THESE PLANS AND WITHIN THE FOLLOWING NOTES IS A STORM
LLUTION PREVENTION PLAN (SWPPP) WHICH HAS BEEN DEVELOPED BY
GN, LLC IN ACCORDANCE WITH THE FLORIDA DEPARTMENT OF
ENTAL PROTECTION'S (FDEP) "NATIONAL POLLUTANT DISCHARGE
ON SYSTEM" (NPDES) GENERIC PERMIT FOR STORMWATER DISCHARGE
GE AND SMALL CONSTRUCTION ACTIVITIES.

WING ENTITIES ARE IDENTIFIED AS TEAM MEMBERS OF "SWPPP": HEIDT
C, THE DEVELOPER AS IDENTIFIED IN THE TITLE BOX OF THESE PLANS, AND
ONTRACTOR AND HIS SUB-CONTRACTORS. EACH TEAM MEMBER HAS
SPONSIBILITIES AND OBLIGATIONS. IN GENERAL, ALL TEAM MEMBERS,
RD TO THEIR INVOLVEMENT AND RESPONSIBILITIES ON THE PROJECT,
PLEMENT ALL NECESSARY STORM WATER MANAGEMENT CONTROLS TO
MPLIANCE WITH THE NPDES GENERIC PERMIT FOR STORM WATER
S FROM CONSTRUCTION ACTIVITIES, THE SOUTHWEST FLORIDA WATER
ENT DISTRICT PERMIT, THE APPLICABLE LOCAL GOVERNING AGENCY (I.E.
UGH COUNTY, CITY OF TAMPA, ETC) AND THE GUIDELINES LISTED IN THE
HE DUTIES AND RESPONSIBILITIES OF THE TEAM MEMBERS AS THEY
) THE SWPPP ARE AS FOLLOWS:

GN, LLC:

ELOP SWPPP INCLUDING, BUT NOT LIMITED TO, RETENTION/DETENTION
NTROL STRUCTURES, EROSION CONTROL METHODS AND LOCATIONS AND
ON CRITERIA. THIS DESIGN IS INCLUDED WITHIN THESE CONSTRUCTION
THE FOLLOWING NOTES AND INSTRUCTIONS.

MIT AND OBTAIN THE NECESSARY DESIGN RELATED STORM WATER
OM THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION, THE
T FLORIDA WATER MANAGEMENT DISTRICT AND OTHER APPLICABLE
ENTAL BODIES.

N NOTIFICATION BY THE DEVELOPER OF HIS INTENT TO COMMENCE
TION, SUBMIT A NOTICE OF INTENT TO THE FDEP ON BEHALF OF THE
AND COPY THE CONTRACTOR INCLUDING SWPPP CERTIFICATION AND
HE PERMIT.

MIT TO SWFWMD AND THE OPERATOR OF THE MUNICIPAL SEPARATE
TER SYSTEM, IF APPLICABLE, A LETTER OF CONSTRUCTION
EMENT.

MPLETE AND SUBMIT A NOTICE OF TERMINATION AND CERTIFICATION
OPER.
'S SHALL BE SUBMITTED NO MORE THAN 30 DAYS AFTER;

MPLETION OF THE PROJECT AND FINAL STABILIZATION OF THE SITE OR

EN RESPONSIBILITY FOR THE SITE HAS ENDED. FINAL STABILIZATION AS
EPA IS WHEN ALL SOIL DISTURBING ACTIVITIES AT THE SITE HAVE BEEN
D AND A UNIFORM (E.G. EVENLY DISTRIBUTED, WITHOUT LARGE BARE
ENNIAL VEGETATIVE COVER WITH A DENSITY OF 70% OF THE NATIVE
ND VEGETATIVE COVER FOR THE AREA HAS BEEN ESTABLISHED ON ALL
AREAS AND AREAS NOT COVERED BY PERMANENT STRUCTURES. AS AN
VE, EQUIVALENT PERMANENT STABILIZATION MEASURES (SUCH AS
BIONS, OR GEOTEXTILES) MAY BE EMPLOYED. THE CLIENT SHALL NOTIFY
GN, LLC WHEN ONE OF THESE CRITERIA HAS BEEN MET.

OR:

N AND RETURN TO HEIDT DESIGN, LLC A CONTRACTORS CERTIFICATION
TIFYING YOUR UNDERSTANDING OF AND WILLINGNESS TO COMPLY WITH
WATER POLLUTION PREVENTION PLAN NO LATER THAN 48 HOURS
OMMENCEMENT OF CONSTRUCTION. ALSO, EACH SUBCONTRACTOR
BY THE SWPPP MUST CERTIFY TO THE CONTRACTOR THAT THEY
ND AND SHALL COMPLY WITH THE NPDES PERMIT AND SWPPP. A
THESE CERTIFICATIONS SHALL BE MAINTAINED BY THE CONTRACTOR ON

RING CONSTRUCTION, ASSURE COMPLIANCE WITH THE DESIGNED STORM
LLUTION PREVENTION PLANS PREPARED BY HEIDT DESIGN, LLC AND THE
ERIC PERMIT FOR STORM WATER DISCHARGES FROM LARGE AND SMALL
TION ACTIVITIES.

NTAIN A COPY OF THE CONSTRUCTION PLANS, WHICH INCLUDE THE
TER POLLUTION PREVENTION PLAN, THE NOI, AND ALL INSPECTION
ND CERTIFICATIONS ON SITE.

DERTAKE ALL REASONABLE BEST MANAGEMENT PRACTICES (BMP'S) TO
AT SILTED OR OTHERWISE POLLUTED STORM WATER IS NOT ALLOWED TO
FROM THE SITE DURING ALL PHASES OF CONSTRUCTION. STABILIZATION
MAY BE USED INCLUDE:

ORARY OR PERMANENT SEEDING, MULCHING, GEOTEXTILES, SODDING,
TATIVE BUFFER STRIPS, PROTECTION OF TREES AND PRESERVATION OF
RE VEGETATION. STRUCTURAL EROSION AND SEDIMENT CONTROL
THAT MAY BE USED INCLUDE: STRAW BALE DIKES, SILT FENCES, EARTH
BRUSH BARRIERS, DRAINAGE SWALES, CHECK DAMS, SUBSURFACE
, PIPE SLOPE DRAIN, LEVEL SPREADERS, STORM DRAIN INLET
CTION, OUTLET PROTECTION, SEDIMENT TRAPS, AND TEMPORARY
ENT BASINS. DETENTION PONDS MAY ALSO BE USED AS TEMPORARY
ENT BASINS. ADDITIONAL BMP'S THAT MAY NEED TO BE IMPLEMENTED
DE: PROVIDING PROTECTED STORAGE AREAS FOR CHEMICALS, PAINTS,
NTS, FERTILIZERS, AND OTHER POTENTIALLY TOXIC MATERIALS.
DING WASTE RECEPTACLES AT CONVENIENT LOCATIONS AND PROVIDING
LAR COLLECTION OF WASTES, INCLUDING BUILDING MATERIAL WASTES.
MIZE OFF-SITE TRACKING OF SEDIMENTS. MAKING ADEQUATE
RATIONS, INCLUDING TRAINING AND EQUIPMENT TO CONTAIN SPILLS OF
D HAZARDOUS MATERIALS. COMPLYING WITH APPLICABLE STATE OR
WASTE DISPOSAL, SANITARY SEWER OR SEPTIC SYSTEM REGULATIONS
HE USE OF APPROPRIATE POLLUTION PREVENTION MEASURES FOR
VABLE NON-STORM WATER COMPONENTS OF DISCHARGE.

TIFY HEIDT DESIGN, LLC AND THE DEVELOPER IN WRITING OF ANY
M WATER POLLUTION SOURCES WHICH ARE BEING STORED, OR
E USED DURING THE CONSTRUCTION OF THE PROJECT, I.E., FERTILIZERS,
TICIDES, OTHER CHEMICALS. THIS NOTIFICATION SHOULD BE
NIED WITH THE CONTRACTOR'S DESIGN AND METHODS TO PREVENT
RUN-OFF FROM THESE SOURCES.

ELOP A MAINTENANCE AND INSPECTION PLAN WHICH INCLUDES, BUT IS
D TO THE FOLLOWING:

A. THE SPECIFIC AREAS TO BE INSPECTED AND MAINTAINED THAT INCLUDES ALL THE DISTURBED AREAS AND MATERIAL STORAGE AREAS OF THE SITE.

B. THE EROSION AND SEDIMENT CONTROLS IDENTIFIED IN THE SWPPP TO BE MAINTAINED AND INSPECTED AND THOSE ADDITIONAL CONTROLS THAT THE CONTRACTOR DEEMS NECESSARY.

C. MAINTENANCE PROCEDURES.

D. THE PROCEDURE TO FOLLOW IF ADDITIONAL WORK IS REQUIRED OR WHOM TO CALL.

E. INSPECTIONS AND MAINTENANCE FORMS.

F. THE PERSONNEL ASSIGNED TO EACH TASK.

THE FOLLOWING SHALL BE INSPECTED A MINIMUM OF ONCE A WEEK OR WITHIN 24 HOURS AFTER 0.50 INCHES OF RAINFALL:

STABILIZATION MEASURES (ONCE A MONTH IF FULLY STABILIZED).

STRUCTURAL CONTROLS.

DISCHARGE POINTS.

CONSTRUCTION ENTRANCES AND EXITS.

AREAS USED FOR STORAGE OF EXPOSED MATERIALS.

AN INSPECTION FORM SHALL BE COMPLETED FOR EACH INSPECTION. ANY PERMIT VIOLATIONS SHOULD BE NOTED AND CORRECTIVE MEASURES SHALL BE TAKEN NO LATER THAN 7 DAYS AFTER THE INSPECTION OCCURRED. IF REVISIONS TO THE SWPPP ARE NEEDED, A REPORT FORM FOR CHANGES IN THE SWPPP SHALL BE COMPLETED AND A COPY SENT TO HEIDT DESIGN, LLC THE ORIGINAL SHALL BE KEPT ON-SITE AS DOCUMENTATION OF THE CHANGE. IF THE INSPECTION PASSES, A CERTIFICATION THAT THE FACILITY IS IN COMPLIANCE WITH THE SWPPP AND THE NPDES PERMIT MUST BE SIGNED BY A DULY AUTHORIZED REPRESENTATIVE OF THE PRINCIPAL EXECUTIVE OFFICIAL OF THE OPERATOR OF THE SWPPP WITH ONE OF THE FOLLOWING QUALIFICATIONS:

1. HAS SUCCESSFULLY COMPLETED THE FLORIDA STORMWATER, EROSION AND SEDIMENT CONTROL INSPECTOR TRAINING PROGRAM.

2. SUCCESSFULLY COMPLETED A SIMILAR TRAINING PROGRAM.

B. THE OPERATOR SHALL SUBMIT WITHIN 14 CALENDAR DAYS OF KNOWLEDG OF THE RELEASE A WRITTEN DESCRIPTION OF: THE RELEASE (INCLUDING THE TYPE AND ESTIMATE OF THE AMOUNT OF MATERIAL RELEASED), THE DATE THAT SUCH RELEASE OCCURRED, THE CIRCUMSTANCES LEADING TO THE RELEASE, AND REMEDIAL STEPS TO BE TAKEN, TO THE FLORIDA DEPARTMENT OF ENVIRONMENT PROTECTION, NPDES STORMWATER SECTION, MAIL STATION 2500, 2600 BLAIR STONE ROAD, TALLAHASSEE, FLORIDA 32399-2400; AND

C. THE STORMWATER POLLUTION PREVENTION PLAN REQUIRED UNDER PAR OF THIS PERMIT MUST BE MODIFIED WITHIN 14 CALENDAR DAYS OF KNOWLEDGE OF THE RELEASE TO: PROVIDE A DESCRIPTION OF THE RELEASE, THE CIRCUMSTANCES LEADING TO THE RELEASE, AND THE DATE OF THE RELEASE. IN ADDITION, THE PLAN MUST BE REVIEWED TO IDENTIFY MEASURES TO PREVENT T REOCCURRENCE OF SUCH RELEASES AND TO RESPOND TO SUCH RELEASES, AND T PLAN MUST BE MODIFIED WHERE APPROPRIATE.

2. THIS PERMIT DOES NOT AUTHORIZE THE DISCHARGE OF HAZARDOUS SUBSTANCES OR OIL RESULTING FROM AN ON-SITE SPILL.

DEVELOPER:

A. NOTIFY HEIDT DESIGN, LLC OF YOUR INTENT TO COMMENCE CONSTRUCTI SIGN THE NOTICE OF INTENT FORM AS OPERATOR OF THE STORM WATER DISCHARGE FACILITY AND PERMITTEE AND RETURN TO HEIDT DESIGN, LLC.

B. SIGN A CERTIFICATION OF STORM WATER POLLUTION PREVENTION PLAN AND RETURN TO HEIDT DESIGN, LLC.

C. NOTIFY HEIDT DESIGN, LLC WHEN IT IS TIME TO SUBMIT A NOTICE OF TERMINATION AS DEFINED UNDER PART E OF THE HEIDT DESIGN, LLC SECTION OF THE SWPPP. SIGN AND RETURN TO HEIDT DESIGN, LLC FOR SUBMITTAL TO FDEP A NOTICE OF TERMINATION FORM AND CERTIFICATION.

PRE-DEVELOPED SITE INFORMATION:

1. TOTAL SITE ACREAGE: 40.31 ACRES plus 21.675 OFF SITE DRAINAGE EASEMENTS

2. LAND USE: VACANT PASTURE

3. VEGETATION: BAHIA PASTURE, CTPRESS SWAMPS, GRASSY MARSHES
4. RECEIVING WATERS OR MUNICIPAL SEPARATE STORM WATER SYSTEM: HILLSBOROUGH RIVER

5. 2 YEAR/24 HOUR RAINFALL DEPTH: 4.5 INCHES

6. SOIL TYPES: EAUGALLIE FINE SANDS AND LOCHLOOSA FINE SAND WITHIN UPLAND AREAS; TAVARES, CANDLER & NOBLETON WITHIN WETLAND AND TRANSITIONAL AREAS.

PROJECT INFORMATION:

1. PROJECT TYPE: RESIDENTIAL

2. ANTICIPATED CONSTRUCTION SEQUENCE IS AS FOLLOWS:

1. COMPLETE EROSION CONTROL INSTALLATION
2. CLEARING AND GRUBBING
3. EARTHWORK ACTIVITIES
4. STORM WATER SYSTEM CONSTRUCTION
5. UTILITY CONSTRUCTION
6. BASE AND PAVEMENT CONSTRUCTION
7. FINAL STABILIZATION

THE BMP'S LISTED IN PART D OF THE CONTRACTOR SECTION OF THE SWPPP SHAL BE CONSIDERED DURING ALL PHASES OF CONSTRUCTION.

3. ANTICIPATED START DATE: OCTOBER 2014

4. ANTICIPATED COMPLETION DATE: OCTOBER 2015

5. TOTAL ACRES DISTURBED: 60

6. PRE-DEVELOPED "C" FACTOR: 0.20

7. POST-DEVELOPED "C" FACTOR: 0.5

8. THE STORM WATER MANAGEMENT SYSTEM, UPON COMPLETION OF CONSTRUCTION, APPROPRIATE CERTIFICATION AND AS-BUILT SUBMITTALS WILL B OPERATED AND MAINTAINED BY *LEGACY HILLS HOA*

9. THE POTENTIAL SOURCE OF POLLUTION FROM THIS PROJECT IS ON-SITE DEVELOPMENT AND CONSTRUCTION ACTIVITY.

GENERAL EROSION AND TURBIDITY CONTROL NOTES:

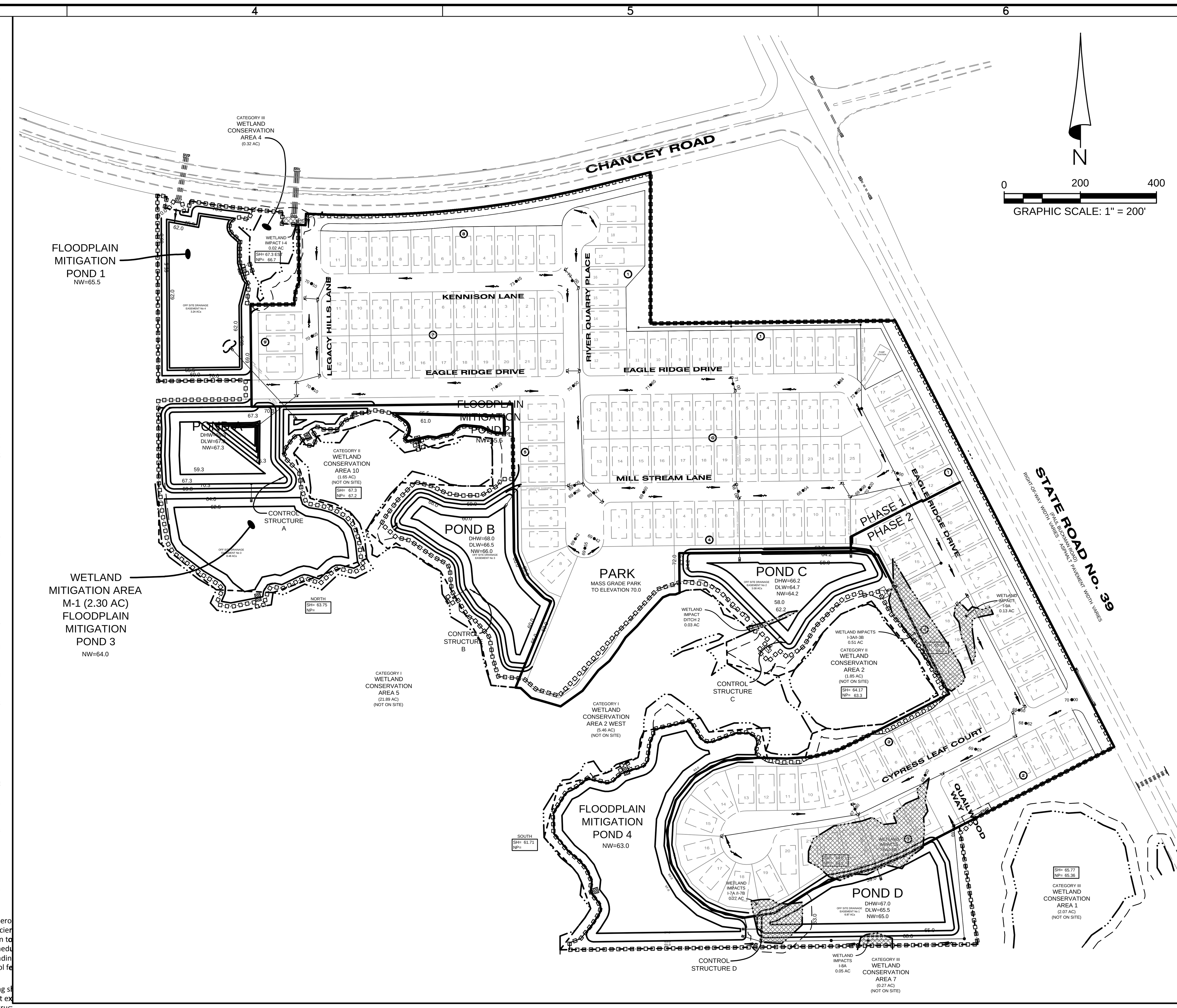
1. The site subcontractor shall be responsible for installation and maintenance of erosion and turbidity controls and the quality and quantity of discharges to offs or wetlands.
2. Prior to construction, the site subcontractor is responsible for having his dewatering plan and turbidity control plan approved by the applicable reviewin agencies. Refer to the project's permit approvals and permit conditions for agencies requiring such review and approval. Questions concerning appropriat techniques should be addressed to those agencies and/or discussed with the project engineer and owner.
3. The appropriate turbidity and erosion control methodologies selected by the si subcontractor for this project should be made following assessment of the plan and project site specific factors and after consultations, as needed, with the project engineer and appropriate agencies. The site subcontractor will be responsible for obtaining any and all necessary permits for such activity; severa factors to consider are listed below:
   - A. Clay content in excavated materials and/or permeability rates
   - B. Depth of cut in ponds, trenches, or utility lines
   - C. Ambient ground water levels
   - D. Actual rainfall amounts and time of year relative to normal rainy season
   - E. Proximity to wetlands, water bodies or offsite properties
   - F. 'Class' designation of receiving water bodies (i.e., Outstanding Florida Waters, shellfish harvesting areas, etc.)
   - G. Density, type, and proximity of upland vegetation to be retained during construction (for use as possible filtration areas)
   - H. Fill height relative to natural grade and length and steepness of the proposed slopes
   - I. Existing topography and directions of surface flow
   - J. Type of equipment used
   - K. Project type
   - L. Duration of construction activities
   - M. Separation distance of onsite ponds
   - N. Ambient quality of surface and groundwater
   - O. Temporary stockpile locations and heights
4. At the onset of construction, the site subcontractor, as the party responsible fo implementation of the erosion and sediment control plan, shall assess the abov described conditions and factors with respect to relative cost effectiveness and select the appropriate methods of protection. A fairly extensive list of techniqu are presented below but it must be stressed that any or all of the following may be necessary to maintain water quality and quantity standards. The constructic sequencing should be thought out in advance of initiation to provide adequate protection of water quality.
5. Discharges which exceed 29 N.T.U.'s over the background levels are in violation of state water quality standards. Discharges of water quantities which affect offsite properties or may damage wetlands are also prohibited by regulating agencies.
6. The erosion and turbidity control measures shown hereon are the minimum required for agency approval. Additional control and measures may be requirec due to the site subcontractor's construction sequence & unforeseen weather conditions. Any additional measures deemed necessary by the site subcontract shall be included in the lump sum bid with no extras for materials and labor allowed.
7. Erosion control shall be installed prior to land clearing to protect water quality and to identify areas to be protected from clearing activities and maintained fo the duration of the project until all soil is stabilized.
8. Floating turbidity barriers shall be in place in flowing systems or in open water lake edges prior to initiation of earthwork and maintained for the duration of th project until all soil is stabilized.
9. No clay material shall be left exposed in any stormwater storage facility. If clay sandy-clays are encountered during stormwater storage excavation, the site subcontractor shall notify the engineer immediately before proceeding with further excavation. If the engineer of record has determined that such soils ar non-confining and must be excavated to meet permit and design conditions, excavation may proceed after obtaining written authorization from the appropriate governing agency. If said soils are left exposed at the permitted an designed depth, the site subcontractor shall over-excavate the pond's bottom and side slopes by a minimum of twelve (12") inches and backfill with clean san to help prevent suspension of fine particles in the water column.
10. The installation of temporary erosion control barriers shall be coordinated with the construction of the permanent erosion control features to the extent necessary to assure effective and continuous control of erosion and water pollution throughout the life of the construction phase.
11. The type of erosion control barriers used shall be governed by the nature of the construction operation and soil type that will be exposed. Silty and clayey material may require solid sediment barriers to prevent turbid water discharge, while sandy material may need only silt screens or bales to prevent erosion. Floating turbidity curtains should generally be used in open water situations. Diversion ditches or swales may be required to prevent turbid stormwater runo from being discharged to wetlands or other water bodies. It may be necessary employ a combination of barriers, ditches, and other erosion/turbidity control measures if conditions warrant.
12. Where pumps are to be used to remove turbid waters from construction areas, the water shall be treated prior to discharge to the wetlands. Treatment methods include, for example, turbid water being pumped into grassed swales
13. The permittee shall schedule his operations such that the area of unprotected, ero exposed at any one time is not larger than the minimum area necessary for efficier construction operation, and the duration of exposed, uncompleted construction to elements shall be as short as practicable. Clearing and grubbing shall be so schedu performed such that grading operations can follow immediately thereafter. Gradin operations shall be so scheduled and performed that permanent erosion control fe follow immediately thereafter if conditions on the project permit.
14. Water derived from various dewatering methods used with approved permitting sh passed through sufficiently wide areas of existing upland vegetation to filter out ex turbidity. If this is not sufficient, the water shall be retained in previously construc permanent stormwater ponds or else retained in temporary sedimentation basins clarity is suitable to allow for its discharge. Plugging the outfalls from completed st ponds may be needed to avoid discharge. However, such situations should be mor closely to preclude berm failure if water levels rise too high.
15. Water can be transported around the site by the use of internal swales or by pump
16. Sheet flow of newly filled or scraped areas may be controlled or contained by the u barriers, diversion swales, interceptor ditches or low berms. Flow should be direct areas where sediments can sufficiently settle out.
17. Exposed soils shall be stabilized as soon as possible, especially slopes leading to we Stabilization methods including, but not limited to, solid sod, seeding and mulching hydro-mulching to provide a temporary or permanent grass cover, mulch blankets, fabrics can be employed to provide vegetative cover.
18. Energy dissipaters (such as rip rap, a gravel bed, bales, etc.) Shall be installed at the point of pipes or swales if scouring is observed.
19. Attempt to install roadway curb and gutters as soon as possible to reduce the surfa erosion to occur.
20. Implement storm drain inlet protection (bales or gravel) to limit sedimentation wit stormwater system. Perform inspections and periodic cleaning of sediments which into the streets until all soil is stabilized.
21. Water discharge velocities from impounded areas and temporary sedimentation ba be restricted to avoid scouring in receiving areas.
22. If water clarity does not reduce to state standards rapidly enough in holding ponds, possible to use chemical agents such as alum to flocculate or coagulate the sedime subject to approved permitting.
23. Bales, silt screens, or gravel beds can be added around the pipe or swale discharge help clarify discharges. Spreader swales may help dissipate cloudy water prior to c wetlands.
24. All fuel storage areas or other hazardous storage areas shall conform to accepted s federal criteria for such containment areas.
25. Vehicle or equipment washdown areas will be sufficiently removed from wetlands areas.
26. Fugitive dust controls (primarily by using water spray trucks) shall be employed as control windborne emissions.
27. If the above controls remain ineffective in precluding release of turbid water, espec pond or utility line dewatering, then the contractor may be compelled to use a vert dewatering system such as well points or sock drains to withdraw groundwater wh already be clear enough to allow for direct discharge to wetlands.
28. Ongoing inspections and periodic maintenance by the site subcontractor shall occu throughout construction as necessary to insure the above methods are working su may be needed daily, if conditions so warrant. Site subcontractors are encouraged and thoroughly review the Florida Development Manual: A Guide to Sound Land a Management, which was developed by the State of Florida Department of Environ Protection in 1988. This provides fairly in-depth discussions of recommended tech also provides specific design and technical standards. A copy of this document is a review at Heidt Design, LLC.
29. The contractor will perform daily inspections of all on-site wetlands within the con area to ensure that water levels within those wetlands are not excessively impoun the time when the permitted control structure or outfall is built. Water levels signi

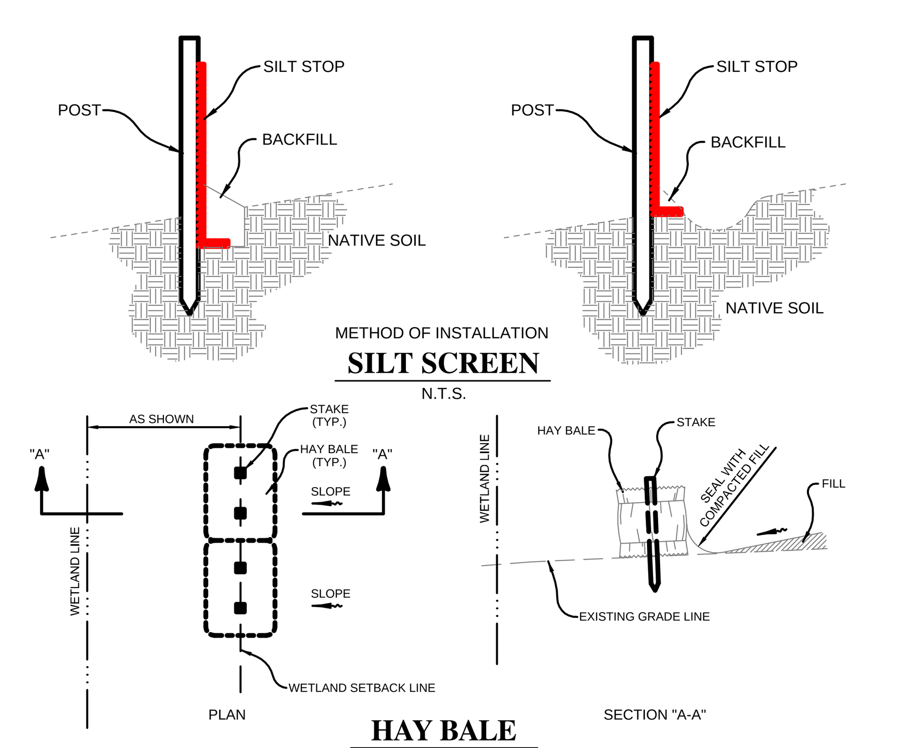
above normal should be corrected at a frequency that prevents a change in character or health of any wetlands

30. Contractor is responsible for erosion control (silt fence) removal after stabili
31. At a minimum, all stormwater management facility berms and slopes shall b seasonal high or control water line as applicable.

LAKE / POND EXCAVATION NOTE:

No excavation shall extend below the permitted design depths/elevations shown o unless additional testing supports otherwise. No semi-confining unit clayey soil ma limestone materials shall be excavated, regardless if these materials are encounter permitted excavation depths/elevations. If any lower semi-confining unit clayey sc limestone materials are encountered above the permitted depths/elevations, then operations shall cease in the general area and the Engineer of Record shall be notif In the absence of any confining or semi-confining unit clayey soils, a minimum of fi undisturbed soil must remain above the underlying limestone. If subsequent subsu geotechnical investigations support excavation below design/permitted depths/ele additional excavation shall not begin until the Engineer of Record has received verl permission from the appropriate governing agency.





EROSION CONTROL DETAILS

NOTE: THE EROSION BARRIERS, AS SHOWN, ARE NOT TO BE CONSTRUED TO MEAN THAT THEY ARE ALL THAT MAY BE REQUIRED. THE CONTRACTOR IS TO TAKE WHATEVER MEASURES NECESSARY TO CONTROL EROSION THROUGHOUT THE PROJECT.

APPLICANT: Jeff Ballantine
President
ResDev

APPLICANT SIGNATURE: ____________________

ELEVATIONS BASED ON:
NATIONAL GEODETIC VERTICAL DATUM 1929
CONVERSION:
NGVD 29 TO NAVD 88 = -0.85

HEIDT DESIGN
Civil Engineering • Planning & GIS
Transportation Engineering
Ecological Services • Landscape Architecture
Engineering Business Certificate of Authorization No. 28782
Landscape Architecture Certificate of Authorization No. LC26000405
5806-B Breckenridge Pkwy.
Tampa, Florida 33610
Office: 813-253-5311
Fax: 813-464-7629
www.HeidtDesign.com

LEGACY HILLS (FKA FELICIANO)

CONSTRUCTION SURFACE WATER MANAGEMENT PLAN

PREPARED FOR: LEGACY GREEN LLC

DATE	DESCRIPTION
07-11-14	SUBMITTED FOR SUBSTANTIAL PLAN MOD. REVIEW BY COUNTY
09-16-13	ISSUED FOR PLAN MOD REVIEW BY COUNTY
08-15-07	HYDRAULIC BARRIER
05-18-07	POND CONTROL ELEV, FPM PONDS 1&2
03-28-07	SWFMD & PASCO COUNTY COMMENTS
01-18-07	SWFMD COMMENTS
12-21-06	-

PROJECT NO:	MAR-RD-1001
FILE:	CSWMP
DESIGN BY:	DUNNING
DRAWN BY:	DUNNING

FLORIDA PROFESSIONAL ENGINEER

GARY D. MILLER
DATE: ____________
REGISTRATION NO. 52717

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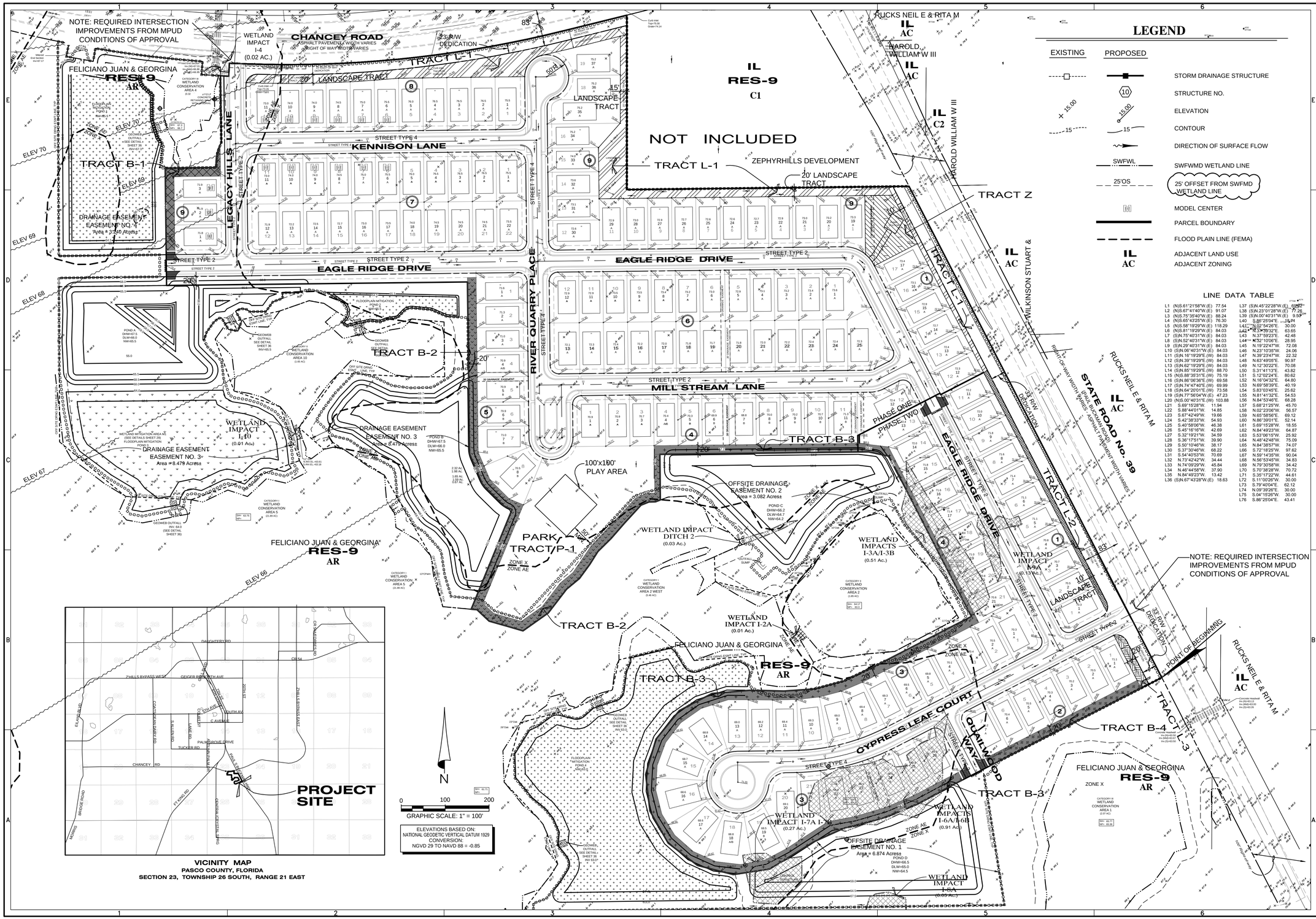


VICINITY MAP
PASCO COUNTY, FLORIDA
SECTION 23, TOWNSHIP 26 SOUTH, RANGE 21 EAST

LEGEND

EXISTING	PROPOSED	
		STORM DRAINAGE STRUCTURE
	10	STRUCTURE NO.
+ 15.00	15.00	ELEVATION
15	15	CONTOUR
		DIRECTION OF SURFACE FLOW
SWFWL		SWFWMD WETLAND LINE
25'OS		25' OFFSET FROM SWFWD WETLAND LINE
M		MODEL CENTER
		PARCEL BOUNDARY
		FLOOD PLAIN LINE (FEMA)
IL		ADJACENT LAND USE
AC		ADJACENT ZONING

LINE DATA TABLE

L1	(N)S.61°21'58"W.(E) 77.54	L37	(S)N.45°22'28"W.(E) 60.72
L2	(N)S.67°41'40"W.(E) 91.07	L38	(S)N.23°01'28"W.(E) 77.26
L3	(N)S.75°35'40"W.(E) 88.24	L39	(S)N.00°40'31"W.(E) 9.59
L4	(N)S.65°43'25"W.(E) 76.30	L40	S.88°25'04"E. 13.74
L5	(N)S.58°19'29"W.(E) 118.29	L41	N.02°54'26"E. 30.00
L6	(N)S.81°19'29"W.(E) 84.03	L42	N.33°35'32"E. 63.65
L7	(S)N.75°40'31"W.(E) 84.03	L43	N.37°59'23"E. 42.48
L8	(S)N.52°40'31"W.(E) 84.03	L44	N.32°10'06"E. 28.95
L9	(S)N.29°40'31"W.(E) 84.03	L45	N.19°22'47"W. 72.08
L10	(S)N.06°40'31"W.(E) 84.03	L46	N.23°10'35"W. 24.06
L11	(S)N.16°19'29"E.(W) 84.03	L47	N.39°23'47"W. 22.32
L12	(S)N.39°19'29"E.(W) 84.03	L48	N.63°49'05"E. 90.97
L13	(S)N.62°19'29"E.(W) 84.03	L49	N.12°30'22"E. 70.08
L14	(S)N.85°19'29"E.(W) 88.70	L50	S.31°41'13"E. 43.82
L15	(N)S.88°35'31"E.(W) 75.19	L51	S.12°02'24"E. 80.62
L16	(S)N.86°06'36"E.(W) 69.58	L52	N.16°04'32"E. 64.80
L17	(S)N.74°47'40"E.(W) 69.99	L53	N.69°58'39"E. 40.19
L18	(S)N.64°20'01"E.(W) 73.58	L54	S.83°03'45"E. 25.62
L19	(S)N.77°56'04"W.(E) 47.23	L55	N.81°41'32"E. 54.53
L20	(N)S.00°40'31"E.(W) 103.88	L56	N.84°53'46"E. 68.28
L21	S.69°15'28"W. 11.94	L57	S.68°21'25"W. 45.70
L22	S.88°44'01"W. 14.85	L58	N.02°23'06"W. 56.57
L23	S.67°42'49"W. 19.66	L59	N.65°58'56"E. 69.12
L24	S.42°38'33"W. 54.93	L60	N.86°39'01"E. 52.14
L25	S.40°58'06"W. 46.38	L61	S.69°15'28"W. 18.55
L26	S.45°16'16"W. 42.69	L62	N.84°49'23"W. 64.87
L27	S.32°19'21"W. 34.59	L63	S.53°06'15"W. 25.92
L28	S.36°17'51"W. 39.90	L64	N.48°42'48"W. 75.09
L29	S.50°10'46"W. 38.17	L65	N.84°38'57"W. 74.07
L30	S.37°30'46"W. 68.22	L66	S.72°18'25"W. 97.62
L31	S.54°40'53"W. 70.69	L67	N.59°14'35"W. 90.04
L32	N.73°42'42"W. 34.44	L68	N.56°53'45"W. 34.83
L33	N.74°09'29"W. 45.84	L69	N.79°30'58"W. 34.42
L34	N.46°44'58"W. 37.90	L70	S.70°38'28"W. 70.72
L35	N.84°49'23"W. 13.42	L71	S.35°17'22"W. 44.61
L36	(S)N.67°43'28"W.(E) 18.63	L72	S.11°00'28"W. 30.00
		L73	S.79°40'04"E. 62.12
		L74	N.09°39'26"E. 30.00
		L75	S.04°15'26"W. 30.00
		L76	S.86°25'04"E. 43.41

HEIDT DESIGN
Civil Engineering • Planning & GIS
Transportation Engineering
Ecological Services • Landscape Architecture
Engineering Business Certificate of Authorization No. 28762
Landscape Architecture Certificate of Authorization No. LC26000465
5806-B Breckenridge Pkwy.
Tampa, Florida 33610
Office: 813-253-5311
Fax: 813-464-7629
www.HeidtDesign.com

LEGACY HILLS (FKA FELICIANO)

PRELIMINARY PLAN

LEGACY GREEN LLC

PREPARED BY: DRL

DATE	DESCRIPTION
09-22-14	COUNTY COMMENTS
07-11-14	SUBMITTED FOR SUBSTANTIAL PLAN MOD REVIEW BY COUNTY
12-24-13	PER COUNTY COMMENTS
09-16-13	ISSUED FOR PLAN MOD REVIEW BY COUNTY
05-18-07	FPM PONDS 1 & 2
03-28-07	PASCO COUNTY COMMENTS
03-18-07	SWFWD
12-21-06	PC SUB
11-10-06	UPDATE WITH CONSTRUCTION DWG
03-21-06	RED LINE MARK-UPS

PROJECT NO: MAR-RD-1001
FILE: PP
DESIGN BY: DUNNING
DRAWN BY: DUNNING

FLORIDA PROFESSIONAL ENGINEER

GARY D. MILLER
DATE:
REGISTRATION NO. 52717

1 OF 2

R:\LEGACY DEVELOPMENT PROJECT\LEGACY HILLS 2012\WORKING FILES\CURRENT DRAWINGS\PP\PP.DWG-PP1 2014/10/30-3:02 PM ERIC FRANCIS

FELICIANO PROPERTY
OFFSITE DRAINAGE EASEMENT No. 1

DESCRIPTION: A portion of Tracts 114 and 115, Tracts 126 through 128, inclusive, and a portion of the 30 foot wide right-of-way lying between said Tracts 114, 115, 126 and 127, ALL of ZEPHYRHILLS COLONY COMPANY LANDS, according to the plat thereof as recorded in Plat Book 1, Page 55, of the Public Records of Pasco County, Florida, lying in Section 23, Township 26 South, Range 21 East, Pasco County, Florida, and being more particularly described as follows:

Commence at the Southeast corner of said Section 23, run thence along the South boundary of the Southeast 1/4 of said Section 23, S.89°14'06"W., 470.80 feet; thence N.00°45'54"W., 15.00 feet to the POINT OF BEGINNING; thence along a line lying 15.00 feet North of and parallel with said South boundary of the Southeast 1/4 of Section 23, S.89°14'06"W., 1097.45 feet; thence N.37°39'32"E., 63.65 feet; thence N.37°59'23"E., 42.48 feet; thence N.32°10'06"E., 28.95 feet; thence N.19°22'47"W., 72.08 feet; thence N.23°10'35"W., 24.06 feet; thence N.39°23'47"W., 22.32 feet; thence N.43°17'29"W., 109.12 feet; thence N.15°24'35"E., 140.06 feet; thence N.74°48'42"E., 132.36 feet; thence N.63°49'05"E., 90.97 feet; thence N.12°30'22"E., 70.08 feet; thence N.76°25'03"E., 152.42 feet; thence S.31°41'13"E., 43.82 feet; thence N.85°36'08"E., 137.15 feet; thence S.12°02'24"E., 80.62 feet; thence N.88°35'31"W., 24.50 feet; thence S.85°19'29"W., 88.70 feet; thence S.62°19'29"W., 84.03 feet; thence S.39°19'29"W., 84.03 feet; thence S.16°19'29"W., 84.03 feet; thence S.06°40'31"E., 84.03 feet; thence S.29°40'31"E., 84.03 feet; thence S.52°40'31"E., 84.03 feet; thence S.75°40'31"E., 84.03 feet; thence N.81°19'29"E., 84.03 feet; thence N.58°19'29"E., 118.29 feet; thence N.65°43'25"E., 76.30 feet; thence N.75°35'40"E., 88.24 feet; thence N.67°41'40"E., 91.07 feet; thence N.61°21'58"E., 77.54 feet; thence N.62°47'40"E., 87.25 feet; thence S.08°56'56"E., 312.97 feet to the POINT OF BEGINNING.

Containing 6.874 acres, more or less.

FELICIANO PROPERTY
OFFSITE DRAINAGE EASEMENT No. 2

DESCRIPTION: A portion of Tract 98 and Tracts 111 through 114, inclusive, of ZEPHYRHILLS COLONY COMPANY LANDS, according to the plat thereof as recorded in Plat Book 1, Page 55, of the Public Records of Pasco County, Florida, lying in Section 23, Township 26 South, Range 21 East, Pasco County, Florida, and being more particularly described as follows:

Commence at the Southeast corner of said Section 23, run thence along the South boundary of the Southeast 1/4 of said Section 23, S.89°14'06"W., 470.80 feet; thence N.00°45'54"W., 15.00 feet; thence along a line lying 15.00 feet North of and parallel with said South boundary of the Southeast 1/4 of Section 23, S.89°14'06"W., 1097.45 feet; thence N.37°39'32"E., 63.65 feet; thence N.37°59'23"E., 42.48 feet; thence N.32°10'06"E., 28.95 feet; thence N.19°22'47"W., 72.08 feet; thence N.23°10'35"W., 24.06 feet; thence N.39°23'47"W., 22.32 feet; thence N.43°17'29"W., 109.12 feet; thence N.15°24'35"E., 140.06 feet; thence N.74°48'42"E., 132.36 feet; thence N.63°49'05"E., 90.97 feet; thence N.12°30'22"E., 70.08 feet; thence N.76°25'03"E., 152.42 feet; thence S.31°41'13"E., 43.82 feet; thence N.85°36'08"E., 137.15 feet; thence S.12°02'24"E., 80.62 feet; thence S.88°35'31"E., 50.69 feet; thence N.86°06'36"E., 49.48 feet to the POINT OF BEGINNING; thence N.16°04'32"E., 64.80 feet; thence N.69°58'39"E., 40.19 feet; thence S.83°03'45"E., 25.62 feet; thence N.81°41'32"E., 54.53 feet; thence N.84°53'46"E., 68.28 feet; thence N.62°13'49"E., 164.26 feet; thence N.29°39'06"W., 106.12 feet; thence N.38°27'21"W., 197.24 feet; thence S.66°51'54"W., 87.34 feet; thence S.44°16'59"W., 66.41 feet; thence S.37°21'36"W., 123.54 feet; thence S.68°21'25"W., 45.70 feet; thence N.76°21'40"W., 138.36 feet; thence N.02°23'06"W., 56.57 feet; thence N.65°58'56"E., 69.12 feet; thence N.46°23'16"W., 161.06 feet; thence S.86°39'01"W., 52.14 feet; thence S.69°15'28"W., 18.55 feet; thence N.00°40'31"W., 103.88 feet; thence N.89°19'29"E., 475.27 feet; thence S.77°56'04"E., 47.23 feet; thence S.27°12'20"E., 410.52 feet; thence S.62°47'40"W., 251.23 feet; thence S.64°20'01"W., 73.58 feet; thence S.74°47'40"W., 69.99 feet; thence S.86°06'36"W., 20.10 feet to the POINT OF BEGINNING.

Containing 3.082 acres, more or less.

FELICIANO PROPERTY
OFFSITE DRAINAGE EASEMENT No. 3

DESCRIPTION: A portion of Tracts 93 and 94, Tracts 99 and 100, and Tracts 109 and 110, of ZEPHYRHILLS COLONY COMPANY LANDS, according to the plat thereof as recorded in Plat Book 1, Page 55, of the Public Records of Pasco County, Florida, lying in Section 23, Township 26 South, Range 21 East, Pasco County, Florida, and being more particularly described as follows:

Commence at the Southeast corner of said Section 23, run thence along the South boundary of the Southeast 1/4 of said Section 23, S.89°14'06"W., 2632.46 feet to the Southwest corner of said Southeast 1/4 of Section 23; thence along the West boundary of said Southeast 1/4 of Section 23, N.00°15'12"W., 1099.05 feet; thence N.89°44'48"E., 15.00 feet to the POINT OF BEGINNING; thence along a line lying 15.00 feet East of and parallel with said West boundary of the Southeast 1/4 of Section 23, N.00°15'12"W., 353.53 feet; thence N.89°19'29"E., 930.11 feet; thence S.00°40'28"E., 391.71 feet; thence S.23°01'28"E., 77.26 feet; thence S.45°22'28"E., 69.42 feet; thence S.67°43'28"E., 18.63 feet; thence S.22°16'32"W., 245.39 feet; thence N.84°49'23"W., 64.87 feet; thence N.13°18'35"W., 119.38 feet; thence N.29°52'28"W., 211.54 feet; thence N.57°37'23"W., 138.72 feet; thence S.53°06'15"W., 25.92 feet; thence N.48°42'48"W., 75.09 feet; thence N.36°19'06"E., 154.51 feet; thence S.86°49'21"E., 161.91 feet; thence N.89°50'21"E., 78.43 feet; thence N.00°40'28"W., 124.93 feet; thence N.84°38'57"W., 74.07 feet; thence S.72°18'25"W., 97.62 feet; thence N.59°14'35"W., 90.04 feet; thence N.56°53'45"W., 34.83 feet; thence N.79°30'58"W., 34.42 feet; thence S.70°38'28"W., 70.72 feet; thence S.77°09'49"W., 124.48 feet; thence S.35°17'22"W., 44.61 feet; thence S.19°55'59"E., 125.66 feet; thence S.70°58'52"E., 111.25 feet; thence S.19°39'04"E., 130.25 feet; thence S.70°09'32"W., 261.91 feet; thence N.87°08'37"W., 149.43 feet; thence N.50°27'34"W., 195.16 feet to the POINT OF BEGINNING.

Containing 8.479 acres, more or less.

FELICIANO PROPERTY
OFFSITE DRAINAGE EASEMENT No. 4

DESCRIPTION: A portion of Tracts 84 and 93, of ZEPHYRHILLS COLONY COMPANY LANDS, according to the plat thereof as recorded in Plat Book 1, Page 55, of the Public Records of Pasco County, Florida, lying in Section 23, Township 26 South, Range 21 East, Pasco County, Florida, and being more particularly described as follows:

Commence at the Southeast corner of said Section 23, run thence along the South boundary of the Southeast 1/4 of said Section 23, S.89°14'06"W., 2632.46 feet to the Southwest corner of said Southeast 1/4 of Section 23; thence along the West boundary of said Southeast 1/4 of Section 23, N.00°15'12"W., 1522.47 feet; thence N.89°19'29"E., 15.00 feet to the POINT OF BEGINNING; thence along a line lying 15.00 feet East of and parallel with said West boundary of the Southeast 1/4 of Section 23, N.00°15'12"W., 489.05 feet to a point on a curve on the Southerly right-of-way line of CHANCEY ROAD; thence along said Southerly right-of-way line, the following seven (7) courses: 1) Easterly, 25.67 feet along the arc of a curve to the left having a radius of 2606.48 feet and a central angle of 00°33'51" (chord bearing S.78°42'38"E., 25.67 feet); 2) S.11°00'26"W., 30.00 feet; 3) S.79°40'04"E., 62.12 feet; 4) N.09°39'26"E., 30.00 feet to a point on a curve; 5) Easterly, 245.65 feet along the arc of said curve to the left having a radius of 2606.48 feet and a central angle of 05°24'00" (chord bearing S.83°02'34"E., 245.56 feet); 6) S.04°15'26"W., 30.00 feet; 7) S.86°25'04"E., 43.41 feet; thence S.00°40'31"E., 152.16 feet to a point on a curve; thence Southerly, 49.28 feet along the arc of a curve to the left having a radius of 95.00 feet and a central angle of 29°43'28" (chord bearing S.14°11'13"W., 48.73 feet) to a point of tangency; thence S.00°40'31"E., 9.50 feet; thence S.89°19'29"W., 116.00 feet; thence S.00°40'31"E., 197.50 feet; thence S.89°19'29"W., 244.59 feet to the POINT OF BEGINNING.

Containing 3.240 acres, more or less.

LEGACY HILLS PHASE ONE

DESCRIPTION: A portion of Tract 78, Tracts 83 and 84, Tracts 93 through 99, inclusive, a portion of Tract 110 and 111, also a portion of the 30 foot wide right-of-way lying between said Tracts 94, 95, 98, 99, 110 and 111, ALL according to the plat of ZEPHYRHILLS COLONY COMPANY LANDS, as recorded in Plat Book 1, Page 55, of the Public Records of Pasco County, Florida, lying in Section 23, Township 26 South, Range 21 East, Pasco County, Florida, and being more particularly described as follows:

Commence at the Southeast corner of said Section 23, run thence along the East boundary of the Southeast 1/4 of said Section 23, N.00°17'02"E., 304.76 feet to a point on the Westerly right-of-way line of STATE ROAD No. 39 (PAUL BUCKMAN ROAD); thence along said Westerly right-of-way, N.27°12'20"W., 249.93 feet; thence S.62°47'40"W., 544.75 feet; thence S.61°21'58"W., 77.54 feet; thence S.67°41'40"W., 91.07 feet; thence S.75°35'40"W., 88.24 feet; thence S.65°43'25"W., 76.30 feet; thence S.58°19'29"W., 118.29 feet; thence S.81°19'29"W., 84.03 feet; thence N.75°40'31"W., 84.03 feet; thence N.52°40'31"W., 84.03 feet; thence N.29°40'31"W., 84.03 feet; thence N.06°40'31"W., 84.03 feet; thence N.16°19'29"E., 84.03 feet; thence N.39°19'29"E., 84.03 feet; thence N.62°19'29"E., 84.03 feet; thence N.85°19'29"E., 88.70 feet; thence S.88°35'31"E., 75.19 feet; thence N.86°06'36"E., 69.58 feet; thence N.74°47'40"E., 69.99 feet; thence N.64°20'01"E., 73.58 feet; thence N.62°47'40"E., 251.23 feet; thence N.27°12'20"W., 410.52 feet; thence N.77°56'04"W., 47.23 feet; thence S.89°19'29"W., 20.77 feet to the POINT OF BEGINNING; thence continue, S.89°19'29"W., 454.50 feet; thence S.00°40'31"E., 103.88 feet; thence S.69°15'28"W., 11.94 feet; thence S.88°44'01"W., 14.85 feet; thence S.67°42'49"W., 19.66 feet; thence S.42°38'33"W., 54.93 feet; thence S.40°58'06"W., 46.38 feet; thence S.45°16'16"W., 42.69 feet; thence S.32°19'21"W., 34.59 feet; thence S.36°17'51"W., 39.90 feet; thence S.50°10'46"W., 38.17 feet; thence S.37°30'46"W., 68.22 feet; thence S.54°40'53"W., 70.69 feet; thence N.73°42'42"W., 34.44 feet; thence N.74°09'29"W., 45.84 feet; thence N.46°44'58"W., 37.90 feet; thence N.84°49'23"W., 13.42 feet; thence N.22°16'32"E., 245.39 feet; thence N.67°43'28"W., 18.63 feet; thence N.45°22'28"W., 69.42 feet; thence N.23°01'28"W., 77.26 feet; thence N.00°40'28"W., 391.71 feet; thence S.89°19'29"W., 685.00 feet; thence N.00°40'31"W., 267.50 feet; thence N.89°19'29"E., 116.00 feet; thence N.00°40'31"W., 9.50 feet to a point of curvature; thence Northerly, 49.28 feet along the arc of a curve to the right having a radius of 95.00 feet and a central angle of 29°43'28" (chord bearing N.14°11'13"E., 48.73 feet); thence N.00°40'31"W., 152.16 feet to a point on the Southerly right-of-way line of CHANCEY ROAD; thence along said Southerly right-of-way line the following four (4) courses: 1) S.86°25'04"E., 18.71 feet; 2) N.02°54'26"E., 30.00 feet to a point on a curve; 3) Easterly, 767.57 feet along the arc of a curve to the left having a radius of 2606.48 feet and a central angle of 16°52'22" (chord bearing N.84°28'15"E., 764.80 feet); 4) N.76°04'06"E., 148.02 feet; thence S.00°00'54"W., 397.50 feet; thence N.89°19'29"E., 642.61 feet to a point on the aforesaid Westerly right-of-way line of STATE ROAD No. 39 (PAUL BUCKMAN ROAD); thence along said Westerly right-of-way line, S.27°12'20"E., 454.99 feet; thence S.62°47'40"W., 153.00 feet; thence N.27°12'20"W., 3.50 feet; thence S.62°47'40"W., 206.52 feet; thence S.00°40'31"E., 39.46 feet to the POINT OF BEGINNING.

Containing 27.661 acres, more or less.

LEGACY HILLS PHASE TWO

DESCRIPTION: A portion of Tracts 97, 98, 111, 112, 113, 114, 127 and 128, ALL according to the plat of ZEPHYRHILLS COLONY COMPANY LANDS, as recorded in Plat Book 1, Page 55, of the Public Records of Pasco County, Florida, lying in Section 23, Township 26 South, Range 21 East, Pasco County, Florida, and being more particularly described as follows:

Commence at the Southeast corner of said Section 23, run thence along the East boundary of the Southeast 1/4 of said Section 23, N.00°17'02"E., 304.76 feet to a point on the Westerly right-of-way line of STATE ROAD No. 39 (PAUL BUCKMAN ROAD); thence along said Westerly right-of-way, N.27°12'20"W., 249.93 feet to the POINT OF BEGINNING; thence S.62°47'40"W., 544.75 feet; thence S.61°21'58"W., 77.54 feet; thence S.67°41'40"W., 91.07 feet; thence S.75°35'40"W., 88.24 feet; thence S.65°43'25"W., 76.30 feet; thence S.58°19'29"W., 118.29 feet; thence S.81°19'29"W., 84.03 feet; thence N.75°40'31"W., 84.03 feet; thence N.52°40'31"W., 84.03 feet; thence N.29°40'31"W., 84.03 feet; thence N.06°40'31"W., 84.03 feet; thence N.16°19'29"E., 84.03 feet; thence N.39°19'29"E., 84.03 feet; thence N.62°19'29"E., 84.03 feet; thence N.85°19'29"E., 88.70 feet; thence S.88°35'31"E., 75.19 feet; thence N.86°06'36"E., 69.58 feet; thence N.74°47'40"E., 69.99 feet; thence N.64°20'01"E., 73.58 feet; thence N.62°47'40"E., 251.23 feet; thence N.27°12'20"W., 410.52 feet; thence N.77°56'04"W., 47.23 feet; thence S.89°19'29"W., 20.77 feet; thence N.00°40'31"W., 39.46 feet; thence N.62°47'40"E., 206.52 feet; thence S.27°12'20"E., 3.50 feet; thence N.62°47'40"E., 153.00 feet to a point on the aforesaid Westerly right-of-way line of STATE ROAD No. 39 (PAUL BUCKMAN ROAD); thence along said Westerly right-of-way line, S.27°12'20"E., 803.50 feet to the POINT OF BEGINNING.

Containing 12.650 acres, more or less.

WETLAND SUMMARY

		ONSITE PROJECT AREA			OFFSITE DRAINAGE EASEMENTS			TOTAL ONSITE/OFFSITE	
WETLAND ID	WETLAND CLASS	TOTAL AREA (AC.)	IMPACT ID / AREA		TOTAL AREA (AC.)	IMPACT ID / AREA		TOTAL WETLAND AREA	IMPACT AREA
2	II	0	-	-	0.01	I-2A	0.01	0.01	0.01
DITCH 2	II	0	-	-	0.03	DITCH 2	0.03	0.03	0.03
3	III	0.38	I-3A	0.38	0.13	I-3B	0.13	0.51	0.51
4	III	0	-	-	0.39	I-4	0.02	0.39	0.02
6	III	0.85	I-6A	0.85	0.06	I-6B	0.06	0.91	0.91
7	III	0.06	I-7A	0.06	0.21	I-7B	0.21	0.27	0.27
8	III	0	-	-	0.05	I-8A	0.05	0.05	0.05
9	III	0.13	I-9A	0.13	0	-	-	0.13	0.13
10	II	0	-	-	1.65	I-10	0.01	1.65	0.01
TOTALS		1.42		1.42	2.53		0.52	3.95	2.00

WETLAND CLASSIFICATION TABLE

	ONSITE PROJECT AREA	OFFSITE DRAINAGE EASEMENTS	TOTAL
CLASS I	-	-	-
CLASS II	-	1.69	1.69
CLASS III	1.42	0.84	2.26
TOTAL WETLANDS (ONSITE/OFFSITE)			3.95

SITE DATA TABLE

PHASE	TOTAL ACRES	UPLAND	WETLAND	UNITS	GROSS DENSITY	NET DENSITY
PHASE 1	27.66	27.66	0	106	3.83	3.83
PHASE 2	12.65	12.65	0	53	4.19	4.19
TOTALS	40.31	40.31	0	159	3.94	3.94

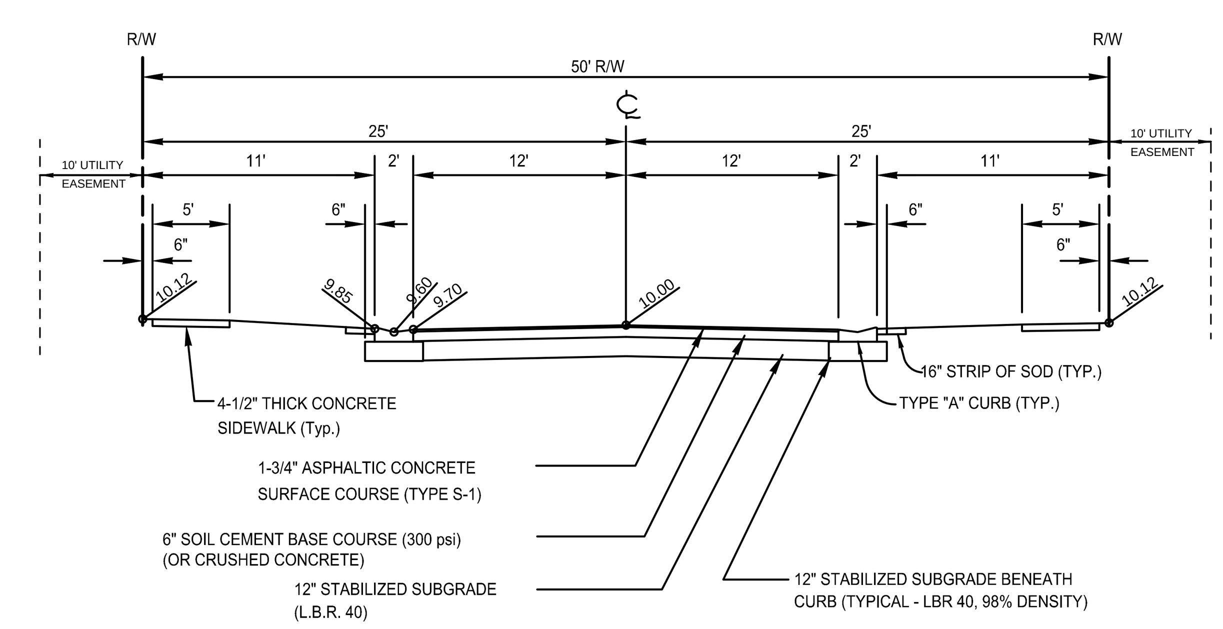
NOTE: ALL WETLAND AREAS SHOWN IN THIS TABLE REPRESENT THE POST DEVELOPMENT CONDITION. ALL WETLAND IMPACT AREAS ARE COUNTED AS UPLAND, DEVELOPABLE AREA.

LEGACY HILLS TRACT ACREAGES
(AREAS IN ACRES)

TRACT I.D.	TRACT ACREAGE	TRACT USES
B-1	0.19	OPEN SPACE, DRAINAGE, WETLAND CONSERVATION, ACCESS
B-2	0.95	OPEN SPACE, DRAINAGE, WETLAND CONSERVATION, ACCESS
B-3	1.19	OPEN SPACE, DRAINAGE, WETLAND CONSERVATION, ACCESS
B-4	0.18	OPEN SPACE, DRAINAGE, WETLAND CONSERVATION, ACCESS
L-1	1.20	LANDSCAPE / IRRIGATION
L-2	0.14	LANDSCAPE / IRRIGATION
L-3	0.06	LANDSCAPE / IRRIGATION
P-1	1.80	NEIGHBORHOOD PARK
Z	0.30	NEIGHBORHOOD PARK

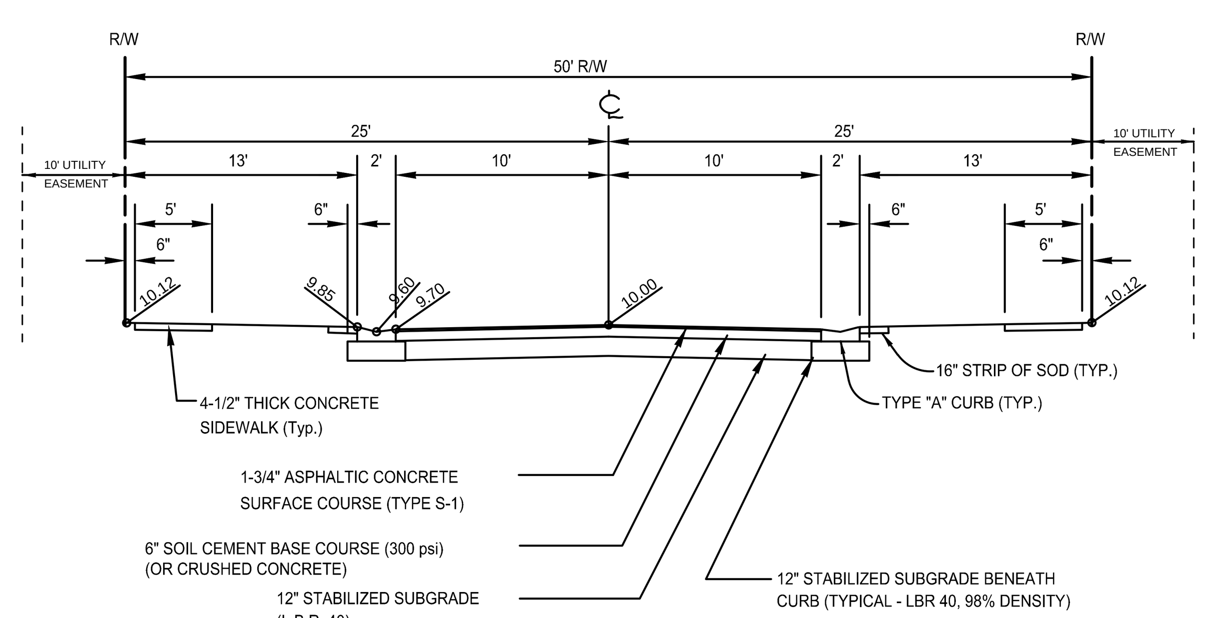
LEGACY HILLS LOT TYPES

LOT TYPE (WIDTH)	TOTAL LOTS
55'x110'	
159	159



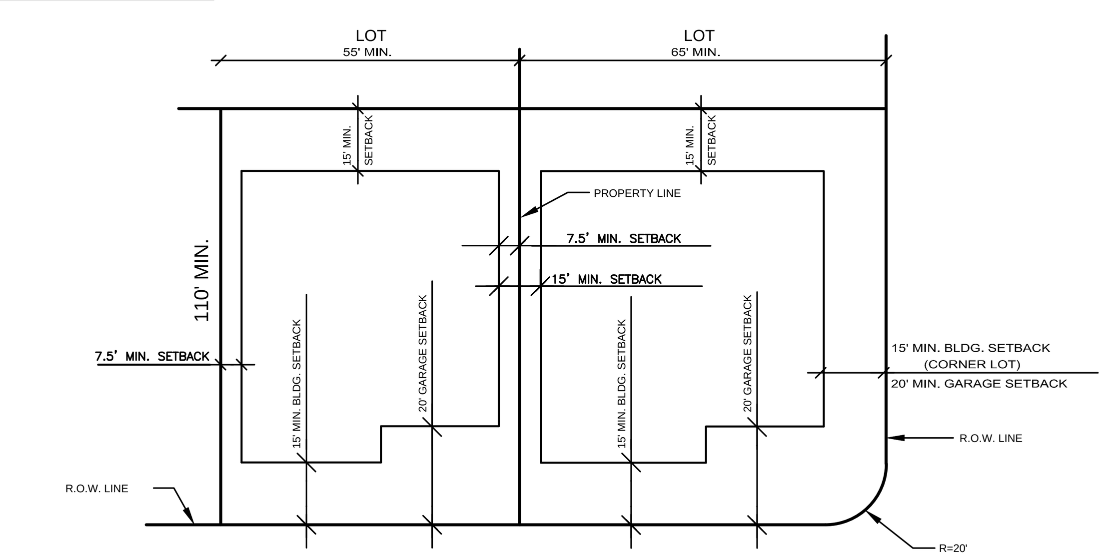
TYPE "2" STREET
24' PAVEMENT

DESIGN SPEED 25 M.P.H.
N.T.S.



TYPE "4" STREET
20' PAVEMENT

DESIGN SPEED 20 M.P.H.
N.T.S.



NOTES:
1. CORNER LOTS ARE CONSIDERED TO HAVE TWO FRONT AND SIDE SETBACKS (GARAGE AND BLDG.)
2. MAXIMUM LOT COVERAGE: 65%
(TOTAL PRINCIPAL & ACCESSORY STRUCTURES)

TYPICAL SINGLE FAMLY (55' BY 110')
DETACHED BUILDING ARRANGMENT

N.T.S.

NOTES:

1) Developer/Owner:
Greenfield Partners
50 North Water Street
South Norwalk, CT
Telephone: (203) 354-5035
Contact Person: John C. Coleman
2) Engineer:
Heidt Design, LLC
5806-B Breckenridge Parkway
Tampa, Florida 33610
(813) 253-5311
3) -deleted-
4) Existing Land Use Classification: VACANT PASTURE Future Land Use Classification: RES-9
5) The MPUD zoning petition #6404 was approved on October 25, 2005
6) Proposed development: 159 Single Family detached lots
7) Water service to be provided by Pasco County Utilities.
8) Sewage disposal service to be provided by Pasco County Utilities.
9) Electrical power to be provided by Withlacoochee River Electric CO-OP.
10) Telephone service to be provided by Verizon Communications.
11) Gas service to be provided by Clearwater Gas Systems.
12) Street lighting to be provided by a street lighting taxing district throughout the development.
13) Fire protection to be provided by the existing Pasco County Fire Station #25. Fire protection will be provided via on-site fire hydrants spaced in accordance with Pasco County standards.
14) The uplands are actively grazed bahia pasture. The wetlands are cypress swamps and grassy marshes.
15) Predominant soil types on-site consist of EauGallie fine sands and Lochloosa fine sands within upland areas; Tavares, Candler & Nobleton within wetland and transitional areas.
16) The mandatory Homeowners Association shall provide for the maintenance of all open space, drainage areas, common areas, buffer areas, preservation - conservation areas, recreation areas, wildlife corridor and crossing unless otherwise approved by Pasco County, and other special purpose areas by the said Association. Detention ponds to be within drainage easements to be operated- maintained by the HOA.
17) Contours shown are based on National Geodetic Vertical Datum of 1929.
18) Proposed rights-of-way for local streets shall be a minimum of fifty (50) feet.
19) All roadway standards to comply with the Manual of Uniform Minimum Standards, State of Florida.
20) All water and wastewater facilities to be installed in compliance with Pasco County Standards for design and construction of water and wastewater facilities.
21) All utility lines shall be installed underground.
22) Project lies within Flood Zone "'AE" & "X" as shown on FIRM Panel No. 120230 0460 D, revised September 30, 1992.
23) A minimum 16" strip of sod will be provided along all roadways per Pasco County requirements.
24) Corner lots will be a minimum of ten (10) feet greater in width than standard lots.
25) Wetland setbacks from SWFWMD wetlands shall be a minimum of 15' with an average of 25' as per ERP regulations.
26) All roadways to be publicly owned.
27) All landscape and sodded areas along collector road will be irrigated.
28) This project will comply with the new Pasco County Tree Protection ordinance No. 01-017 and Pasco County Landscape and Irrigation ordinance No. 02-04 and any subsequent amendments.
29) This project shall be subject to the Pasco County New Development Fair Share Contribution for Road Improvements Ordinance and School Impact Fee Ordinance.
30) All construction work, including road, drainage and utilities, shall be constructed in accordance with Pasco County design standards and tested in compliance with the Pasco County Engineering Service Department Testing Specifications for construction of roads, storm drainage and utilities.
31) All residential lots shall have a minimum access width of 25 feet along street.
32) If during construction activities; any evidence of historic resources including, but not limited to aboriginal or historic pottery, prehistoric stone tools, bone or shell tools, historic trash pits or historic building foundations are discovered, work shall come to an immediate stop, and the Florida Dept, of Historic Resources (State Historical Preservation Office) and Pasco County shall be notified within two working days of the resources found on site.
33) Prior to any clearing or grubbing associated with plan site plan a Gopher Tortoise Relocation Permit from the Florida Fish and Wildlife Conservation Commission shall be submitted to the Pasco County DRD.
34) If during the construction activities any evidence of the presence of State and Federally protected plant and/or animal species are discovered, work shall come to an immediate stop and Pasco County shall be notified within two working days of the plant and/or animal species found on site.
35) The development planned within Legacy Hills will be located in the upper reaches of the Hillsborough River. The proposed drainage system will collect, attenuate and provide treatment for the projected runoff generated by the development. The system of interconnected facilities (stormwater drainage pipes, attenuation ponds with littoral zones for water quality treatment, existing and created wetlands) has been designed to meet the minimum technical standards of Pasco County and the Southwest Florida Water Management District. Historical drainage basin patterns will be generally adhered to where practical to accommodate off-site stormwater discharges and stages from adjacent properties. The proposed stormwater drainage system will be owned and maintained by the Homeowners Association (HOA), that will be established through the Final Plat.
36) All Post-Development wetlands shall be incorporated in tracts as "Wetland Conservation Areas", designated on this plan as "W.C.A.".
37) The 30' existing right-of-way that runs north/south through the site shall be vacated and abandoned prior to recordation of Final Plat.
38) Pedestrian sidewalks shall be installed along both sides of all roadways within the limits of this project.
39) All proposed signs must be applied for, approved, and permitted on an individual basis apart from any ultimately-approved site plan. Approval of this site plan does not constitute approval of any signage.
40) All 20'x20' clear-site areas shall be kept free of any signage plantings, trees, etc. In excess of three-and-a-half (3-1/2) feet in height.
41) No irrigation system or landscaping shall be installed in any county or state right-of-way without issuance of appropriate right-of-way use permit.
42) Fugitive dust emissions shall be controlled by sprinkling or other means as necessary.
43) On-site burning shall not be employed without approval from the Fire Marshal.
44) The soil erosion and sediment control devices shall be installed prior to construction and maintained throughout construction until the site is permanently stabilized.
45) Please refer to roadway plan and profile sheets, which depict phasing. Phasing designations are for reference only. Phased construction may proceed out of numerical sequence. If construction proceeds out of numerical sequence, infrastructure supporting that phase must be built, completed and accepted prior to or concurrent with the phase in question prior to issuance of a CO for the project.
46) All projects must comply with Pasco County Fire Hydrant Ordinance No. 46-51.
47) Fire hydrants shall be installed and in service prior to the accumulation of combustibles.
48) Per the National Fire Protection Association, NFPA-1, 16.4.3.1.3: where underground water mains and hydrants are to be provided, they shall be installed, completed, and in service prior to building construction work
49) Per NFPA-1, 18.3.4.1: clearances of 7.5 feet in front of and to the sides of the fire hydrant with a four-foot clearance to the rear must be maintained at all times.
50) Access rights on double-frontage lots shall be dedicated to Pasco County.
51) Prior to construction, a building permit shall be obtained for all structures that have a footer, regardless of size, through Pasco County central permitting. (e.g., including but not limited to buildings, accessories, retaining walls, and etc.).
52) All demolition debris shall be removed from the site and legally disposed of.
53) Any off site disturbance shall be restored to the pre-construction condition or better.
54) As applicable, the owner/developer shall provide copies of the required permits from the respective governing agencies, prior to issuance of the site development permit (SDP).
55) Underdrains shall be the maintenance responsibility of the developer's successor (H.O.A. or C.D.D.). A Maintenance and License Agreement will be established to allow the successor entity to maintain the underdrains.
56) No driveway cuts shall be allowed on collector roads (Type 1a & 1b). Driveways are only allowed on local streets (Types 2, 3, & 4).
57) These plans were prepared with the benefit of and in conformance to the geotechnical recommendations in the reports by Mortensen Engineering, Inc. entitled as follows: "Preliminary Soils Study" (Dated 5/22/06); "Geotechnical Engineering Services/Roadway and Detention Pond Area Soils Study" (Dated 8/21/06)

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LEGACY HILLS (FKA FELICIANO)

PRELIMINARY PLAN

PREPARED FOR: **LEGACY GREEN LLC**

DATE	DESCRIPTION
09-22-14	COUNTY COMMENTS
07-11-14	SUBMITTED FOR SUBSTANTIAL PLAN MOD. REVIEW BY COUNTY
12-24-13	PER COUNTY COMMENTS
09-16-13	ISSUED FOR PLAN MOD REVIEW BY COUNTY
3-21-07	REVISED SITE DATA - ADDED PHASES
12-21-06	LEGAL
11-10-06	WETLAND SUMMARY TABLES
03-21-06	ADDED NOTE # 39-UPDATED TABLES

PROJECT NO:	MAR-RD-1001
FILE:	PP
DESIGN BY:	DUNNING
DRAWN BY:	DUNNING

FLORIDA PROFESSIONAL ENGINEER

GARY D. MILLER
DATE:
REGISTRATION NO. 52717

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PASCO COUNTY STANDARD SITE NOTES:

1. All utility construction shall comply with the Pasco County Standards for Design and Construction of Water and Wastewater Facilities Specifications, latest edition.
2. All on-site water and sewer facilities shall be owned and maintained by the owner-developer.
3. Installation of fuel storage tanks requires review and approval by the Fire Marshal and the issuance of a separate building permit. Approval of the site plan does not constitute approval of the location of the fuel tanks.
4. All proposed signs must be applied for, approved, and permitted on an individual basis apart from any ultimately-approved site plan. Approval of this site plan does not constitute approval of any signage.
5. Handicap parking spaces will be properly signed and striped in accordance with Florida Statute 316, the Manual on Uniform Traffic Control Devices, or other applicable standards.
6. The architect/engineer certifies that the site has been designed in accordance with the Americans with Disabilities Act.
7. All on-site parking spaces will be striped and signed in accordance with the Manual on Uniform Traffic Control Devices, latest edition. Parking spaces, directional arrows, and stop bars shall be striped in WHITE. It shall be the owner/developers' responsibility to properly sign and stripe the site in accordance with applicable standards.
8. The owner/developer acknowledges that this approval does not include any work in County right-of-way. All right of way work shall be a function of an approved Pasco County Right-of-Way Use Permit.
9. All clear-site areas shall be kept free of any signage, plantings, trees, etc. in excess of three-and-a-half (3-1/2) feet in height.
10. No irrigation system or landscaping shall be installed in any County or State right-of-way without issuance of appropriate Right-of-Way Use Permit.
11. The owner/developer acknowledges that the site and its subsequent building permits shall comply with all rezoning/MPUD/PUD conditions.

1 2 All structures, including buffer walls, retaining walls, signage, etc. require separate building permits.

BUFFER SPECIFICATIONS:

"A" 10' wide buffer w/single row trees spaced max. 30' on center and continuous row of evergreen shrubs w/min. height of 24" at installation planted 24" o.c.
"B" 15' wide buffer w/single row trees w/max. spacing 30' on center. A visual screen to be eighty percent (80%) opaque within one year, min. 6' ht. at installation shall also be provided within buffer. Screen may include opaque fence, wall, hedge, berm or any combination thereof. Wooden fences prohibited. Walls/fences max. 8' ht. Shrubs used for visual screen shall be spaced max. 5' on center.
"C" 20' wide buffer w/two staggered rows of trees w/max. spacing 30' o.c. ea. row. Visual screen to be 80% opaque within one year, min. 6' ht. at installation, shall be provided within the buffer. Screen may include opaque fence, wall, hedge, berm or any combination thereof. Wooden fences prohibited. Walls/fences max. 8' ht. Shrubs used for visual screen spaced max. 5' on center.
"D" See Landscape Ordinance for requirements.

WATER MANAGEMENT AREAS:

Retention areas visible from the road, or located within required buffering (max. 70% intrusion into buffer width), must be offset with one tree ea. 50 l.f. of pond and meandered.

LANDSCAPING SPECIFICATIONS:

Sizes required at installation: Shade trees: 2" cal/10'ht.; Shrubs 24" ht., 24" o.c.
No more than 30% of the required landscaped area may be grassed (Sect. 10)
No plantings over 3-1/2' ht. in the 20' clear-site areas.
Palm trees count as 3 to 1; i.e., 3 palms = 1 shade tree
Maximum 50% plant materials, other than trees, may be non-drought tolerant. Native plant material as follows: 2003 - 20% native plants; 2004 - 30% native plant materials. For every 5 trees required, there shall be minimum one species provided, up to a minimum of eight species when forty or more trees are required (Sect. 602.7.B.1.d.-Tree Ord.)
No one plant species of shrubs or groundcover, excluding turf grass, shall constitute more than twenty-five (25) percent of any landscape plan (Sect. 6.C.11, L&IO)
Berm height is measured from the vehicular use area grade.
Irrigation designed per requirements of Sect. 15.C.L&IO
Mulch and gravel specifications - LDC 6O3.

BUILDER REQUIRED / PROVIDED TREES (Based on Lot Size)

Site	Number of Lots	Number of Trees Required by Code per lot	Total Trees Required (2" CAL)	Total Inches of Trees Required	Number of Trees Provided per lot	Total Trees Provided	Total Inches of Trees Provided (Inches)
Townhomes	0	1	0	0	1	0	0
3500-6000	0	2	0	0	2	0	0
6001-7500	159	3	477	954	3	477	954
7501-9500	0	4	0	0	5	0	0
9501-16000	0	6	0	0	7	0	0
16001 +	0	8	0	0	9	0	0
Street Trees		0	0	0		0	0
Totals	**159**		**477**	**954**		**477**	**954**

DEVELOPER REQUIRED / PROVIDED TREES & LANDSCAPE

Site	Buffer Type	Total Linear Feet of Buffer	Total Shrubs Required	Total Trees Required	Diameter of Trees Required (Inches)	Total Inches of Trees Required	Total Trees Provided	Diameter of Trees Provided (Inches)	Total Inches of Trees Provided
POND BUFFER (1 tree/50 LF)	Water Management Area	685	0	14	3	42	14	3	42
ADJACENT USE BUFFER (1 tree/30 LF)	Type "A" Buffer	0	0	0	3	0	0	3	0
ADJACENT USE ROW BUFFER (1 tree/30 LF)	Type "D" Buffer	2,081	1,330	70	3	210	70	3	210
PARK SITE TREES	N\A	0	0	0	3	0	0	3	0
OPENSPACE TREES	N\A	0	0	0	3	0	19	3	57
Totals	**0**	**2,766**	**1330**	**84**		**252**	**103**		**309**
SUBTOTAL INCHES TO BE USED FOR TREE REPLACEMENT CREDIT									**57**
TOTAL INCHES REQUIRED									**1262**
TOTAL INCHES PROVIDED									**1263**
CREDIT									**1**

LEGEND

- STAKED EROSION CONTROL
- SWFWL — SWFWMD WETLAND LINE
- 25' SETBACK — CORP OF ENGINEERS WETLAND LINE
- 12" Oak — TREES TO BE REMOVED
- 12" Oak — TREES TO BE PROTECTED

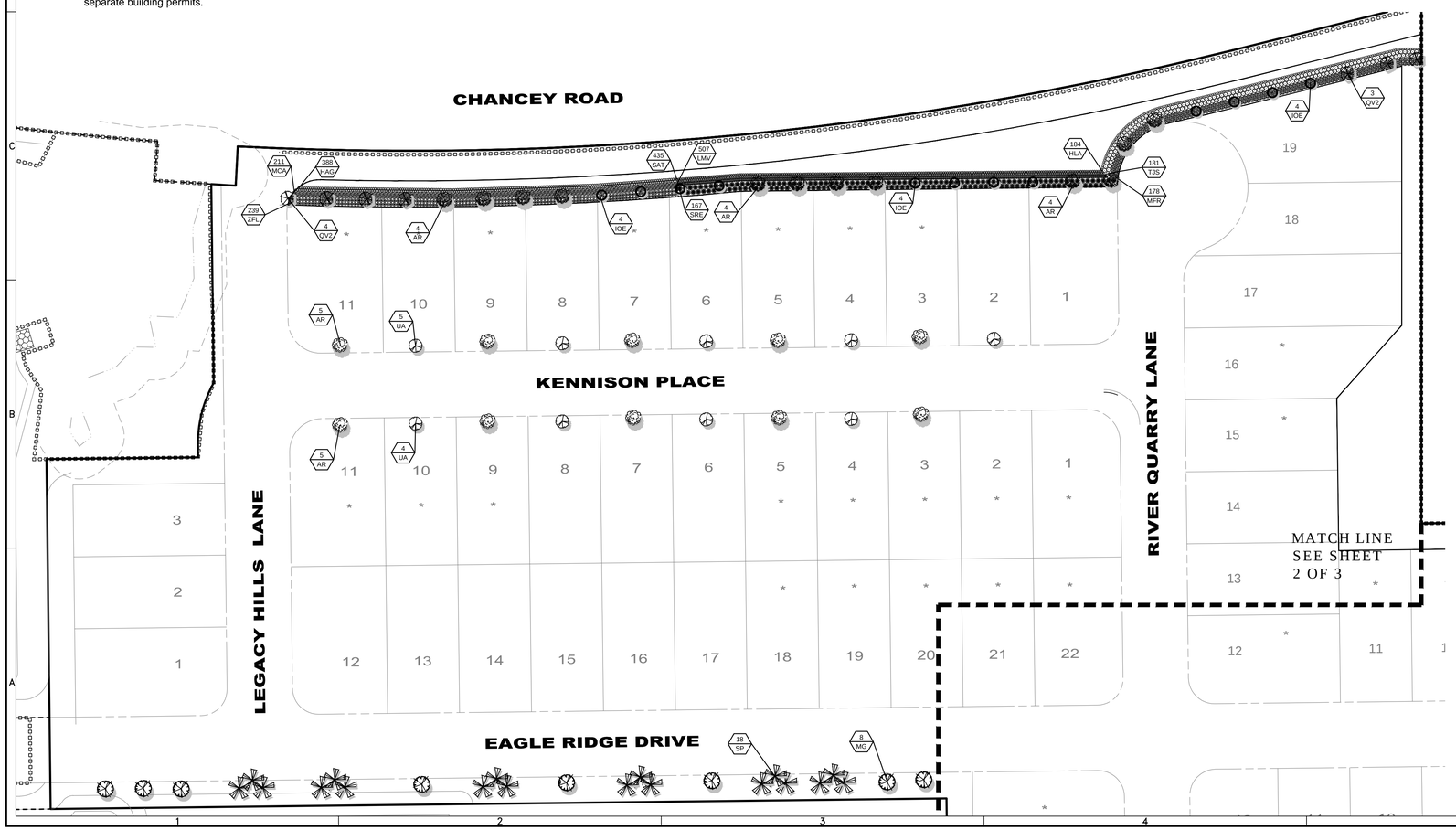
TREES TO BE REMOVED

LIVE OAK

Size (Inches)	Number of Trees	Total Inches
10	1	10
11	2	22
12	2	24
		56

OAK TREES PRESERVED

Size (Inches)	Number of Trees	Total Inches
10	4	40
11	2	22
13	2	26
14	4	56
16	1	16
22	1	22
23	1	23
25	1	25
34	1	34
		264



STANDARD NOTES:

1. PERSON OR ENTITY RESPONSIBLE FOR MAINTENANCE OF TREES: WINDARD HOMES & SUBSEQUENTLY FELICIANO HOA
2. THIS IS A "PERMIT LANDSCAPE PLAN" AND WAS PREPARED TO MEET MINIMUM PASCO COUNTY LANDSCAPE & IRRIGATION CODE.

NOTES:

1. ALL PLANTS SHALL BE FLORIDA GRADE #1 OR BETTER.
2. APPLY A 3" LAYER OF MULCH LAYER TO ALL PROPOSED TREE, SHRUB, GROUND COVER AND VINE PLANTINGS.
3. ALL REQUIRED TREES TO BE PLANTED SHALL BE A MINIMUM OF 3" CALIPER OR LARGER. MULTI-TRUNK TREES SHALL BE A MINIMUM OF THREE (3) TRUNKS (1" PER TRUNK).
4. NO REFERENCE TO ENGINEERING SHOULD BE MADE FROM THIS SHEET. FOR LANDSCAPE REFERENCE ONLY.
5. ANY DEVIATION FROM PLANT QUANTITY, SIZE OR GRADE MAY JEOPARDIZE THE CERTIFICATE OF OCCUPANCY. ADDITIONAL PLANTS MAY BE ADDED, BUT MUST COMPLY WITH PASCO COUNTY REQUIREMENTS.
6. LANDSCAPE PLAN MUST DESIGNATE THE PERSON OR ENTITY RESPONSIBLE FOR MAINTENANCE OF TREES.
7. ALL TREES MUST BE GUARANTEED FOR A PERIOD OF ONE YEAR FROM THE DATE OF INSPECTION.
8. FOR EVERY FIVE TREES REQUIRED THERE SHALL BE A MINIMUM OF ONE SPECIES PROVIDED, UP TO A MAX. OF EIGHT SPECIES WHEN 40 OR MORE TREES ARE REQUIRED.
9. AN UNDERGROUND IRRIGATION SYSTEM SHALL BE INSTALLED FOR ALL REQUIRED LANDSCAPING.
10. IRRIGATION SHALL BE DESIGNED TO COMPLY WITH SECTION LDC 603 OF LANDSCAPING & IRRIGATION ORDINANCE.

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LEGACY HILLS (FKA FELICIANO)

PERMIT LANDSCAPE PLAN, TREE REMOVAL & REPLACEMENT PLAN

PREPARED FOR: **LEGACY GREEN LLC**

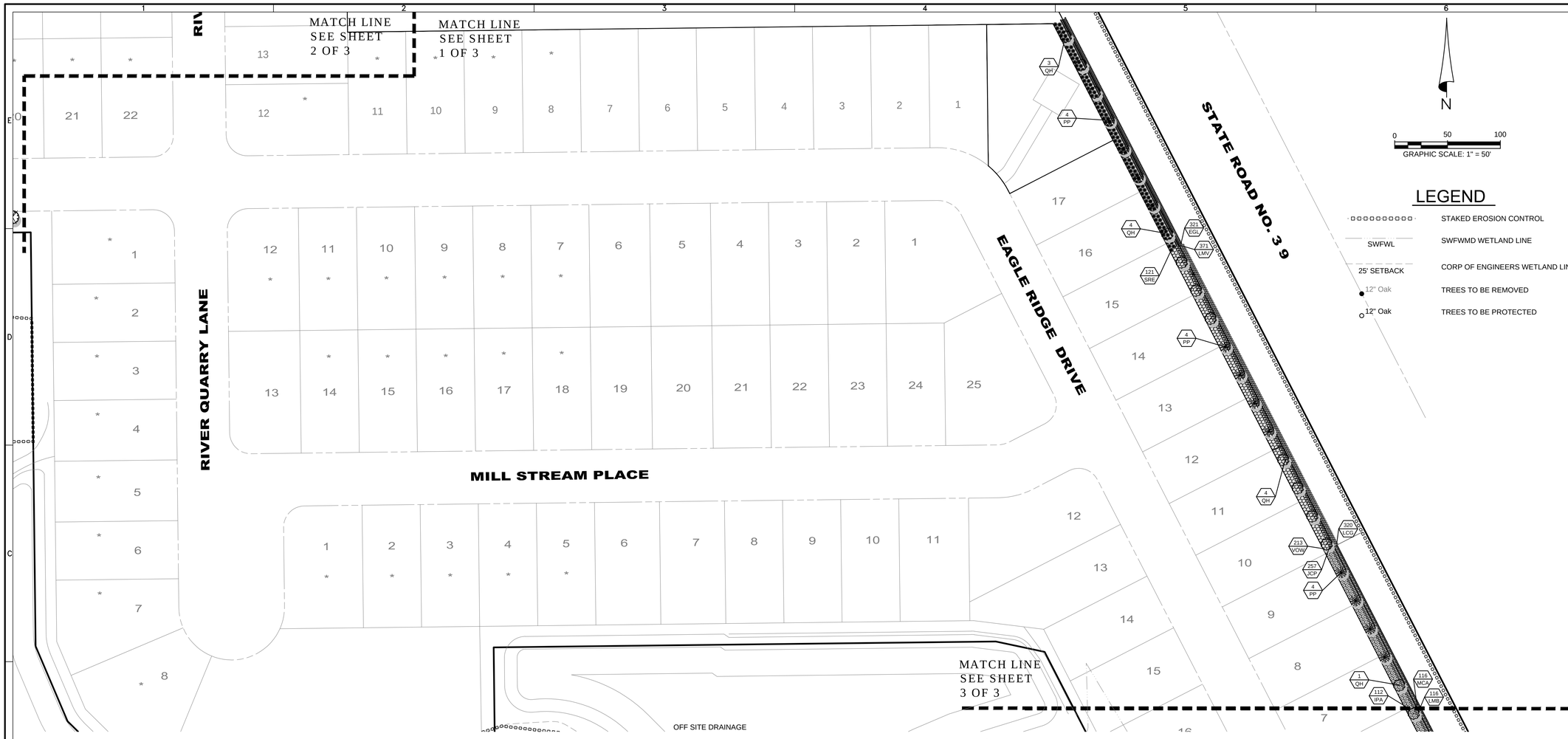
DATE	DESCRIPTION
07-11-14	SUBMITTED FOR SUBSTANTIAL PLAN MOD. REVIEW BY COUNTY
09-16-13	ISSUED FOR PLAN MOD REVIEW BY COUNTY
12/21/06	REVIEW SUBMITTAL

PROJECT NO: MAR-RD-1001
FILE: PLP
DESIGN BY: STEELE
DRAWN BY: STEELE

REGISTERED LANDSCAPE ARCHITECT

SCOTT E. ANDREASEN
DATE:
REGISTRATION NO. 0001658

1 OF 3



LEGEND

	STAKED EROSION CONTROL
SWFWL	SWFWMD WETLAND LINE
25' SETBACK	CORP OF ENGINEERS WETLAND LINE
12" Oak	TREES TO BE REMOVED
12" Oak	TREES TO BE PROTECTED

PLANT LIST:

Native	Drought Tolerant	Qty.	Code	Botanical Name	Common Name	Caliper	Height	Spread	Container	Comments	Spacing
				Trees							
YES	YES	22	AR	Acer rubrum	Red Maple	3"	10'	6'-8'	45 Gal		as shown
YES	YES	12	IOE	Ilex opaca 'East Palatka'	East Palatka Holly	3"	10'	6'-8'	45 Gal		as shown
YES	YES	8	MG	Magnolia grandiflora	Magnolia	3"	10'	6'-8'	45 Gal		as shown
YES	YES	16	PP	Pinus palustris	Long Leaf Pine	3"	10'	6'-8'	45 Gal		as Shown
YES	YES	15	QH2	Quercus hemisphaerica	Laurel Oak	3"	10'	6'-8'	45 Gal	5' ct. min., main central leader	as shown
YES	YES	15	QV2	Quercus virginiana	Live Oak	3"	10'	6'-8'	45 Gal	5' ct. min., main central leader	as shown
YES	YES	18	SP	Sabal palmetto	Cabbage Palm		see plans		B&B	Clear trunk	as shown
YES	YES	9	UA	Ulmus alata	Winged Elm	3"	10'	6'-8'	45 Gal	5' ct. min., main central leader	as shown
				Shrubs							
YES	YES	213	IPA	Illicium parviflorum	Yellow Anise		24"	24"	3 Gal		3'
YES	YES	178	MYF	Myrcianthes fragrans	Simpson's Stopper		24"	24"	3 Gal		2'
YES	YES	288	SRE	Serenoa repens	Saw Palmetto		24"	24"	3 Gal		4'
NO	YES	197	VOD	Viburnum odoratissium	Sweet Viburnum		24"	24"	3 Gal		3'
YES	YES	213	VOW	Viburnum odoratissium 'Awabuki'	Awabuki Viburnum		24"	24"	3 Gal		3'
YES	YES	239	ZFL	Zamia floridana	Coontie		24"	24"	3 Gal	Min. 8 stems	2.5'
				Groundcovers							
YES	YES	321	EGL	Evolvulus glomeratus	Blue Daze				1 Gal	Full in pot	18"
NO	YES	388	HAG	Hemerocallis 'Aztec Gold'	Aztec Gold				1 Gal	Full in pot	18"
YES	YES	184	HLA	Hymenocallis latifolia	Spider Lily				1 Gal	Full in pot	18"
NO	YES	257	JCP	Juniperus chinensis 'Parsonii'	Parson's Juniper			18"	2 Gal		2.5'
YES	YES	320	LCG	Lantana camara 'Gold Mound'	Gold Mound Lantana				1 Gal	Full in pot	2'
NO	YES	213	LMB	Liriope muscari 'Big Blue'	Big Blue Liriope				1 Gal	Full in pot	18"
NO	YES	878	LMV	Liriope muscari 'Variegated Giant'	Aztec Grass				1 Gal	Full in pot	18"
YES	YES	425	MCA	Muhlenbergia capillaris	Red Muhly Grass		15"-18"	15"-18"	1 Gal		12"
YES	NO	632	SAT	Sisyrinchium atlanticum	Blue-eyed Grass				1 Gal	Full in pot	12"
NO	YES	378	TJS	Trachelospermum Jasminoides 'Star'	Confederate Jasmine				3 Gal		as shown

*Roots plus trees may be substituted for container grown trees.

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LEGACY HILLS (FKA FELICIANO)

PERMIT LANDSCAPE PLAN, TREE REMOVAL & REPLACEMENT PLAN

PREPARED FOR: LEGACY GREEN LLC

DATE	DESCRIPTION

DATE	DESCRIPTION
07-11-14	SUBMITTED FOR SUBSTANTIAL PLAN MOD. REVIEW BY COUNTY
09-16-13	ISSUED FOR PLAN MOD REVIEW BY COUNTY
12/21/06	REVIEW SUBMITTAL

PROJECT NO: MAR-RD-1001
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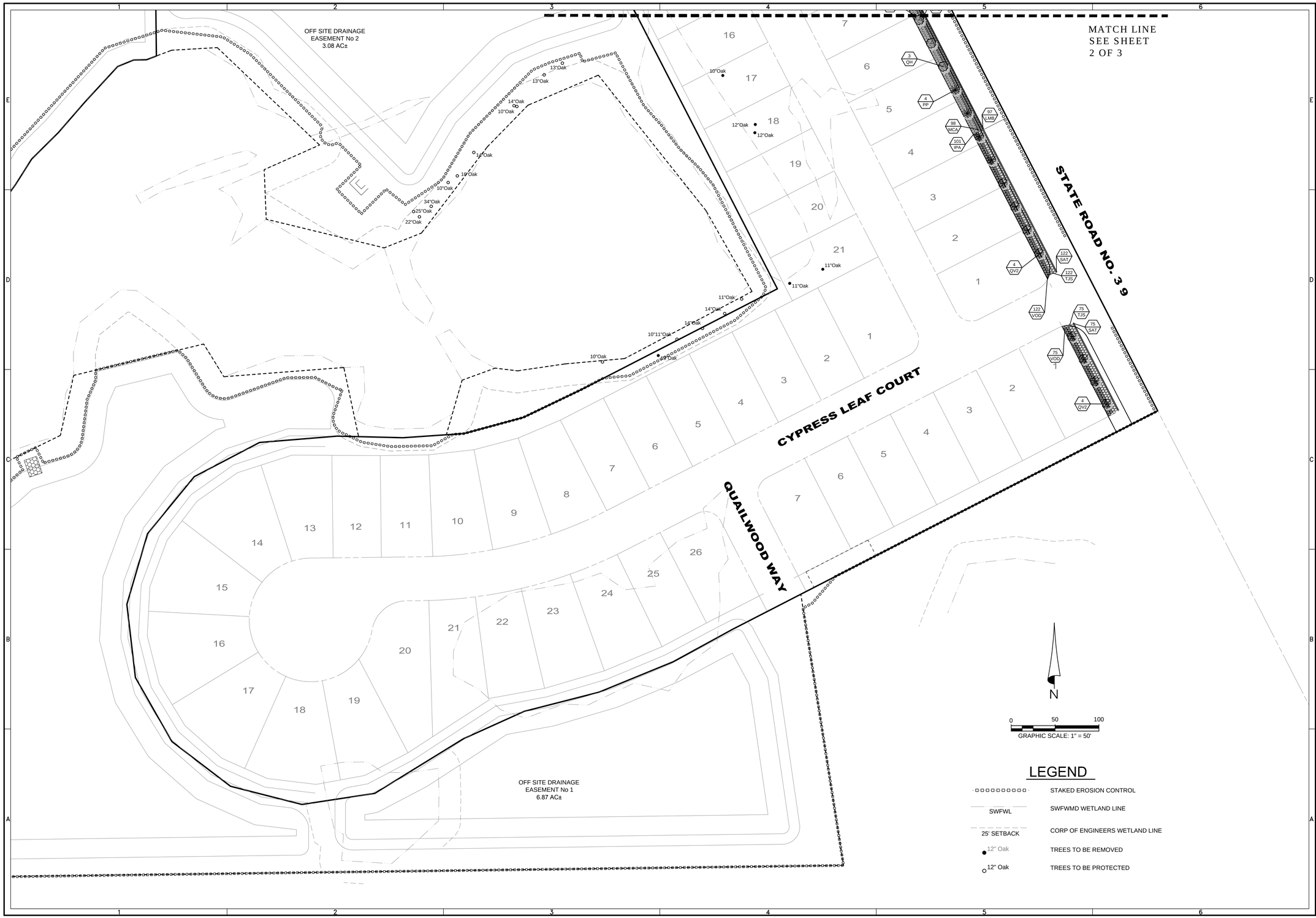

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LEGACY HILLS (FKA FELICIANO)

PERMIT LANDSCAPE PLAN, TREE REMOVAL & REPLACEMENT PLAN

PREPARED FOR: LEGACY GREEN LLC

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09-16-13	ISSUED FOR PLAN MOD REVIEW BY COUNTY
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