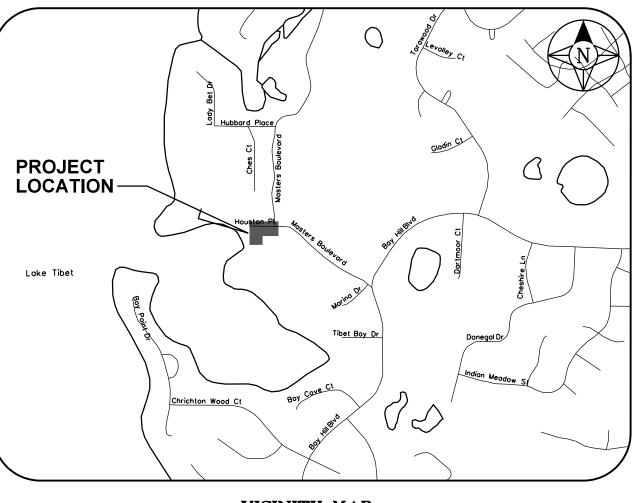


CONSTRUCTION PLANS FOR MASTERS BOULEVARD AND HOUSTON PLACE DRAINAGE IMPROVEMENTS PROJECT



Governing Specifications: FDOT Standard Specifications for Road and Bridge Construction, 2014 Edition.

Included in plans by reference: State of Florida, Départment of Transportation Roadway and Traffic Design Standards (Booklet dated 2014)

Topography, benchmarks, and rights-of-way information provided by Geodata Consultants, Inc. 1349 S. International Parkway, Suite 2401 Lake Mary,FL 32746 Phone: (407) 660-2322

BOARD OF COUNTY COMMISSIONERS

TERESA JACOBS S. SCOTT BOYD FRED BRUMMER PETE CLARKE JENNIFER THOMPSON TED EDWARDS TIFFANY MOORE RUSSELL MARK V. MASSARO, P.E.

N:\Orange\Masters_Condo\DGN\MC-Cover.dgn

MAYOR DISTRICT 1 DISTRICT 2 DISTRICT 3 DISTRICT 4 DISTRICT 5 DISTRICT 6 PUBLIC WORKS DIRECTOR

TYPE OF CONSTRUCTION: <u>STORMWATER RETROFIT</u> PROJECT LENGTH: 500 FT. : 0.1 MI.

DISTRICT NO. 1 ORANGE COUNTY, FLORIDA

VICINITY MAP SCALE: 1" • 1000'

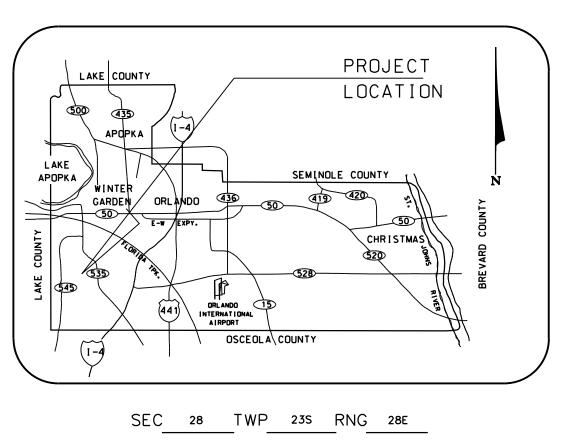
SOURCE OF BENCH MARK DATUM

ELEVATIONS SHOWN HEREON ARE RELATIVE TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) AS ESTABLISHED FROM THE FOLLOWING ORANGE COUNTY BENCHMARKS: C1147037 FOUND A SQUARE CUT IN THE CONCRETE CURB ON THE EAST SIDE OF BAY HILL BOULEVARD IN FRONT OF ADDRESS # 9025 PUBLISHED ELEVATION = 111.179 FEET (NAVD88) C1147040 FOUND 3.5" ORANGE COUNTY CONTROL DISK IN CURB INLET ON THE EAST SIDE OF BAY HILL BOULEVARD, 300 FEET ± SOUTH OF TIBET BAY DRIVE PUBLISHED ELEVATION = 102.042 FEET (NAVD88)



SINGHOFEN & ASSOCIATES, INC. Stormwater Management and Civil Engineering

> 11723 Orpington Street, Suite 100 Orlando, Florida 32817 Ph: (407) 679-3001 Fax: (407) 679-2691 DBPR No. 5112



LOCATION MAP

INDEX OF SHEETS

- Key Sheet
- General & Pay Item Notes
- Site Survey
- Stormwater Layout Plan
- Stormwater Layout Cross Sections
- **Miscellaneous Details**
- Suntree Baffle Box & Swallow Pipe High Capacity Inlet Details

Revision	Dat	e	Approved

Designed by:	Name MDD/AGH	
Drawn by:	BRW	
Checked by:	AGH/RBG	(SHEET
Approved by:	RBG	
Project No.:	2013-019.20	

GEN	RAL NOTES:							_
1.	All construction shall be in accorda specifications, the latest edition of Road and Bridge Construction and and Orange County Manual of Star	the Flo supplem	rida Departmer nents thereto, O	nt of Transportation Se range County Road Co	andard Specification	s for ions,	14.	SUNSHINESTATE ON 1-800-432-4770 (5 days notification prio Prior to any scheduled interrup
2.	Engineer or Inspector as referenc Manager" in the Contract.	ed in these General Notes and Drawings shall be defined as "Project				oject		the utility provider and shall pr water main shut down, a mini Contractor shall notify the gas Chapter 77-153 of the Florida S
3.	beginning construction, and shall permits included in the Contract Do	I required permits in-hand, including a consumptive use permit, prior to hall perform all work in accordance with the requirements of the various of Documents and those obtained by the Contractor. Payment is included in Prevention, Control, and Abatement of Erosion and Water Pollution".					15.	The Contractor is required to c around existing facilities. Prote conflict, notify Utility Company relocations shall be the response
4.	Transportation as having satisfact course, signed and sealed by an e	orily con ngineer, offic is to	e prepared by a person certified by the Florida Department of ily completed an FDOT approved work zone traffic control training gineer, and shall be submitted to the County for approval. The Traffic c is to be controlled during each construction phase and how traffic is					The Limits of Construction at easements, and temporary con-
5.	and personnel and for routing truck The Contractor shall be solely re	s during	earthwork oper	ations.			17.	to all other adjacent public and and appurtenances during the p
	materials offsite. The Contractor s for approval by the Engineer. The Florida Department of Environment	hall sub e erosior al Prote	mit an Erosion n control plan s ction as a qualif	Control Plan at the Pr hould be prepared by ied Management Inspe	econstruction Confere a person certified by ector. The certificate	ence / the shall	18.	All areas where sod has been kind. Payment included in the u
	be submitted to the County for a maintenance of all temporary and each phase of construction, includ materials and backfill. The plan stockpile and construction staging	perman ing tree shall als	ent sediment a removal, cleari so detail the er	nd erosion control deving and grubbing, and rosion control measure	vices to be utilized du the hauling of excav es to be employed a	uring vated at all :	19. 20.	Where the required minimum so outside of pipe to outside of pip All utilities are to be adjusted or the Engineer.
6.	zones and the maximum amount of Prior to beginning construction, the	f time ea	ch segment of t	he project will be unpro	otected against erosic	on.	21.	Existing traffic signs and paver directed by the Engineer. Payn
0.	benchmark elevations and referen location, description and elevation in constructing the project. All su Mapper registered in the State of F	ce point of all add ubmittals	ties shown on litional benchma shall be signe	the plans, and/or a s ark and reference poin ad and sealed by a P	et of field notes with t ties proposed to be rofessional Surveyor	the used 2	22.	Mailboxes in conflict with const approved by the Engineer. All Grubbing".
7.	Geodata Consultants, Inc. (407 information.) 660-2	322, provided	topography, benchn	narks, and rights-of		23.	Existing pavement shall be saw
8.	Within 21 calendar days after no intervals and at right-of-way break processed until the right-of-way ha	s with st	ationing shown	on the stakes. No in	voice for payment wi	100' ill be	24.	All existing fences that are rem activities are to be replaced wit the unit price for "Clearing and o
	remain until the end of all construct "Mobilization".	tion acti	vities. Paymer	nt is included in the pri	ce bid for Item No. 1	01-1 2	25.	The Contractor shall comply wir promulgated under the Occupa the Contract Work Hours and S
9.	All property corners and monumen If a property corner or monument the Engineer without delay and sha	is in dan	ger of being de	estroyed or disturbed,	he Contractor shall r	notify 2 n.	26.	No burning shall be done excep
10.	Any USCGS monument within the Contractor shall immediately notify and both shall notify:					, the	27.	The disposal of excess earthy disposal sites shall be obtained of the Contractor.
	Sate Geodetic Advisor		1. 000				28.	No trenches shall be allowed to
	3900 Commonwealth Boul Tallahassee, Florida 32304 (850) 245-2606		uite 309				29.	Disturbed areas shall be comp otherwise specified for bedding except for areas that are landso
11.	No Geotechnical information is pro such examination of the site as ma						30.	Properties adjacent to work zor and sodded with the same type
12.	be performed. The information shown on these d	rawings	concerning type	e and location of unde	rground and other uti		SUPP	LEMENTAL GENERAL NOTES
	is based on information provided I The information may not reflect act in service or abandoned, or that	ual cond	litions or be all	inclusive regarding all	utilities in the area, e	either	1.	All new or replacement concre unless noted otherwise on the c
	Contractor shall make his own d establish their locations and avoid or his subcontractors shall be the	etermina damage. sole resp	tion as to the Damage to ex consibility of the	type and location of isting utilities as a resu	utilities as necessar It of the Contractor's	ry to ź work fees,	2.	All joints of concrete pipe culv Standard Index 280.
13.	and all other cost associated with re The following utility representative	s should	be contacted		ning type and locatio		3. 4.	Steel grates shall be used for a All grates shall be chained and
	their facilities. The list may not incl POTABLE WATER	ude all u	tilities in the are	88.			5.	shall be included in the contract All manhole covers shall include
	Orange County Utilities 9150 Curry Ford Road Orlando, FL 32825 407-254-9700		38 O	rlando Utilities Commis 300 Gardenia Avenue rlando, FL 32839 07-423-9018	ssion	(6.	Changes of pipe inverts not ex compensation for the pertinent
	SANITARY SEWER Orange County Utilities 9150 Curry Ford Road Orlando, FL 32825 407-254-9700		38 O	rlando Utilities Commis 300 Gardenia Avenue rlando, FL 32839 07-423-9018	ssion			
	ELECTRIC UTILITY Duke Energy Engineering Distribution 3300 Exchange Place Lake Mary, FL 32746 407-942-9421		20 La	C Synergetic, Inc. 0525 Amberfield Dr., S and O' Lakes, FL 3463 13-909-1200				
	Orange County Utilities Engineering Division 9150 Curry Ford Road Orlando, FL 32825 407-254-9900							
	TELEPHONE / CABLE UT Bright House Networks, LL 3767 All American Bouleva Orlando, FL 32810 407-291-2500	С	33 W	enturylink 3 N. Main Street /inter Garden, FL 3478 07-654-1636	7			
	ComCast Communications 8130 CR 44 Leg A Leesburg, FL 34788 352-787-7875							
Revisi	on	Date	Approved	Designed by:	MDD/AGH	SINGHOFE	N	& ASSOCIATES, INC.
				Drawn by:	MDD/HMD	STORMWATER MA	NAGEN	MENT AND CIVIL ENGINEERING

		STORMWATER MA
Checked by: _	RBG	
Approved by: _	RBG	SAT
Vertical Datum: _	1988	

11723 Orpington Street, Suite 100 Orlando, Florida 32817 Ph: (407) 679-3001 Fax: (407) 679-2691 DBPR No. 5112

E-CALL

r to construction)

ption of utility service, the Contractor shall coordinate such interruption with rovide a minimum 24-hour notice to the affected parties. In the case of a mum 24-hour notice also shall be provided to the Fire Department. The utility a minimum of two (2) working days prior to excavation, as required by Statutes.

coordinate closely with the utility companies when connecting to or working ect any utilities encountered. If an existing utility must be relocated due to a and Engineer. All coordination and scheduling of utility crossings and sibility of the Contractor.

re defined as roadway rights-of-way, permanent drainage and/or utility struction easements.

responsible and liable for all damage or injury as a result of his operations private property, landscaping, trees, fences, utilities, structures of any kind progress of the Work.

removed or disturbed by Contractor's operations shall be sodded of like unit price for Performance Turf (Sod) (Match Existing).

eparation between utilities is specified, the distance shall be measured from

r relocated by others, unless noted otherwise on the drawings or directed by

nent markings in conflict with construction shall be removed and replaced as nent included in the unit price for "Maintenance of Traffic".

truction shall be relocated in accordance with FDOT Index No. 532 and as I costs shall be included in the unit price of the pay item for "Clearing and

/ cut as required for construction.

noved are to be replaced or relocated. All fences damaged by construction th new fencing of the same type and material. All costs shall be included in Grubbing", unless noted otherwise.

th the Department of Labor, Safety and Health Regulations for Construction ational Safety and Health Act of 1970 (PL 91-596) and under Section 107 of Safety Standards Act (PL 91-54).

ot upon approval by the Jurisdictional Municipality.

work materials shall be the responsibility of the Contractor. Approval of d from Orange County prior to disposal. All excess material is the property

o remain open overnight.

pacted (as a minimum) equal to adjacent undisturbed ground except when , backfill, or roadway embankment. All disturbed areas are to be sodded caped or paved.

nes shall be graded to drain within the limits of construction and compacted sod or existing, unless otherwise directed by the Engineer.

- STORMWATER CONSTRUCTION:

te pipes, culverts, and storm sewers shall be Class III reinforced concrete, drawings or by the Engineer.

verts and storm sewers shall have a "Filter Fabric Jacket" as detailed in

ditch bottom inlets.

l locked in accordance with FDOT Index 201. Cost of eyebolt and chain t unit price for the structure.

e the County's logo and be identified as "STORM".

xceeding plus or minus 1' will not be considered as a basis for additional pipe bid item or for modification of precast structures.

GENERAL PAY ITEM NOTES:

- 1. No separate payment will be made for dewatering. The costs for dewatering shall be included in the unit price for pipes.
- Payment for restoration of pavement, striping, markings, and signs shall be included in the unit price for 2. pipes.
- 3. No separate payment will be made for geotextile fabric or filter fabric. The costs for these items shall be included in the unit price for pipes.

STORMWATER PAY ITEM NOTES:

101-1 MOBILIZATION

The lump sum price also shall include costs for preparation of an approved Construction Progress Schedule, Erosion Control Plan, Dewatering Plan, Traffic Control Plan, Preconstruction Survey, and Preconstruction Video.

102-1 MAINTENANCE OF TRAFFIC

The lump sum price shall include all costs for preparation of an approved traffic control plan and all items required to safely maintaining traffic through and around the work zones.

104-14 POLLUTION, CONTROL, AND ABATEMENT OF EROSION AND WATER POLLUTION

The lump sum price shall include all costs for furnishing, installing, and maintaining baled hay or straw, staked silt fence, daily sweeping, inlet protection, and turbidity barrier. Also, includes costs for removal and disposal of captured sediment, removal and disposal sediment off-site upon completion of construction (including any necessary permits and fees for disposal).

110-1-1 CLEARING & GRUBBING

The lump sum price shall include all costs for removal and disposal of asphalt, curbs, sidewalks, driveways, drainage structures, pipes, trees, and other structures and obstructions necessary to be removed and for which items of the contract do not specify the removal thereof. The lump sum price shall also include all costs for the removal of existing fences and relocation or replacement with new fence, and the relocation of mailboxes. Partial payments shall be based upon the estimated lump sum price of clearing & grubbing work completed to the date of the estimate as determined by the Engineer. All partial estimates and payments shall be subject to correction in subsequent estimates and payment.

120-14 EXCAVATION, EMBANKMENT, AND GRADING

Excavation, Embankment, and Grading will be paid for at the contract lump sum price. Payment shall constitute full compensation for grading of shoulders, graded road connections, slopes, compaction, final dressing, embankment, excavation, replacement material, and all earthwork necessary to complete the project to lines and grades shown on the plans.

121-70 FLOWABLE FILL

The unit price constitutes full compensation for all labor and materials necessary for placement of flowable fill between drainage structures and existing sea wall. Final pay quantity will be plan quantity with no consideration for specification tolerances.

327-70-5 MILLING EXISTING ASPHALT PAVEMENT, 2"

The unit price constitutes full compensation for all labor and materials necessary for milling asphalt pavement to the shape and dimensions shown on the plans.

334-1-13 SUPERPAVE ASPHALT CONCRETE

The unit price constitutes full compensation for all labor and materials necessary for placing superpave asphalt pavement to the shape and dimensions shown on the plans.

425-1-901 through 425-4 INLETS, MANHOLES, JUNCTION BOX, ADJUST INLET

The unit price shall constitute full compensation for all work and materials necessary for the installation of inlets, manholes, and adjusting existing inlet. Payment includes all materials, bolt-on cover (S-4), steel plate (S-14), foundation preparation, covers, 2-piece covers, bolts, connecting existing pipes, drainage structure inverts, concrete curb transitions, Suntree Tech., Inc. Nutrient Separating Baffle Box (complete), and all appurtenances to complete the project.

430-174-112 through 430-175-236 OPTIONAL MATERIAL PIPE CULVERT AND CONCRETE PIPE CULVERT The unit price includes payment for furnishing and installing pipe, furnishing and placing select bedding and backfill, placing regular backfill, dewatering, wrapping of pipe joints with filter fabric, concrete pipe collar, shoring & bracing, restoration of pavement, and video.

430-984-140 MITERED END SECTION

The unit price shall constitute full compensation for all work and materials necessary for the installation of mitered end sections. Payment includes all materials, foundation preparation, reinforcing steel, joint forming, placing, finishing and curing

455-133-2: SHEET PILING STEEL, TEMPORARY

The unit price constitutes full compensation for all labor and materials necessary to furnish, install, and remove temporary steel sheet piling including any transition joint and filter material, aggregate, the existing fill, required excavation and dewatering, driving mandrel, temporary internal bracing and all incidental components. The unit price also includes removal of debris, boulders, vegetation, trash, hardpan soils, and organic muck as necessary and disposed of in accordance with the specifications.

520-1-8 CONCRETE CURB & GUTTER, SPECIAL

The unit price constitutes full compensation for all labor and materials necessary for placement of Miami Curb & Gutter to the locations shown on the plans. Also, includes saw-cutting existing curb & gutter, transitions to existing curb & gutter, joints, placing, finishing and curing. Final pay guantity will be plan guantity with no consideration for specification tolerances.

522-1 & 522-2 CONCRETE SIDEWALK

The unit price shall constitute full compensation for all work and materials necessary for the installation concrete sidewalk. Payment includes all materials, foundation preparation, reinforcing steel, joint forming (or sawing), placing, finishing and curing.

526-1-2 PAVERS, ARCHITECTURAL

The unit price shall constitute full compensation for all work and materials necessary for the removal and installation decorative pavers and new pavers. Payment includes all materials, foundation preparation, and seam (joint) materials.

530-3-4 RUBBLE RIPRAP (DITCH LINING)

The unit price shall be full compensation for all work specified in Section 530 of the FDOT Standard Specifications including foundation preparation, bedding stone, and filter fabric.

570-1-2 PERFORMANCE TURF (SOD) (MATCH EXISTING)

The unit price shall constitute full compensation for furnishing, delivering, protecting, and installing sod, including site preparation, removal of undesirable plant species, soil amendment, application of fertilizer, planting, and watering.

580-1-2 LANDSCAPE COMPLETE - LARGE PLANTS (CANARY ISLAND PALM, 12' CLEAR TRUNK) The unit price shall constitute full compensation for furnishing, delivering, protecting, and planting trees, including site preparation, removal of undesirable plant species, soil amendment, application of fertilizer, and watering.

1050-11-423 and 1050-11-424 UTILITY PIPE, SEWER

The unit price includes all costs for removal, cleaning, and disposal off-site of existing sewer pipe and waste material and for furnishing and installing ductile iron sewer pipe at the same location, including trenching, dewatering, sheeting and/or shoring, temporary connections, bypass pumping, making tie-ins to existing manholes or mains, furnishing and placing backfill.

ORANGE COUNTY ROADS & DRAINAGE DIVISION

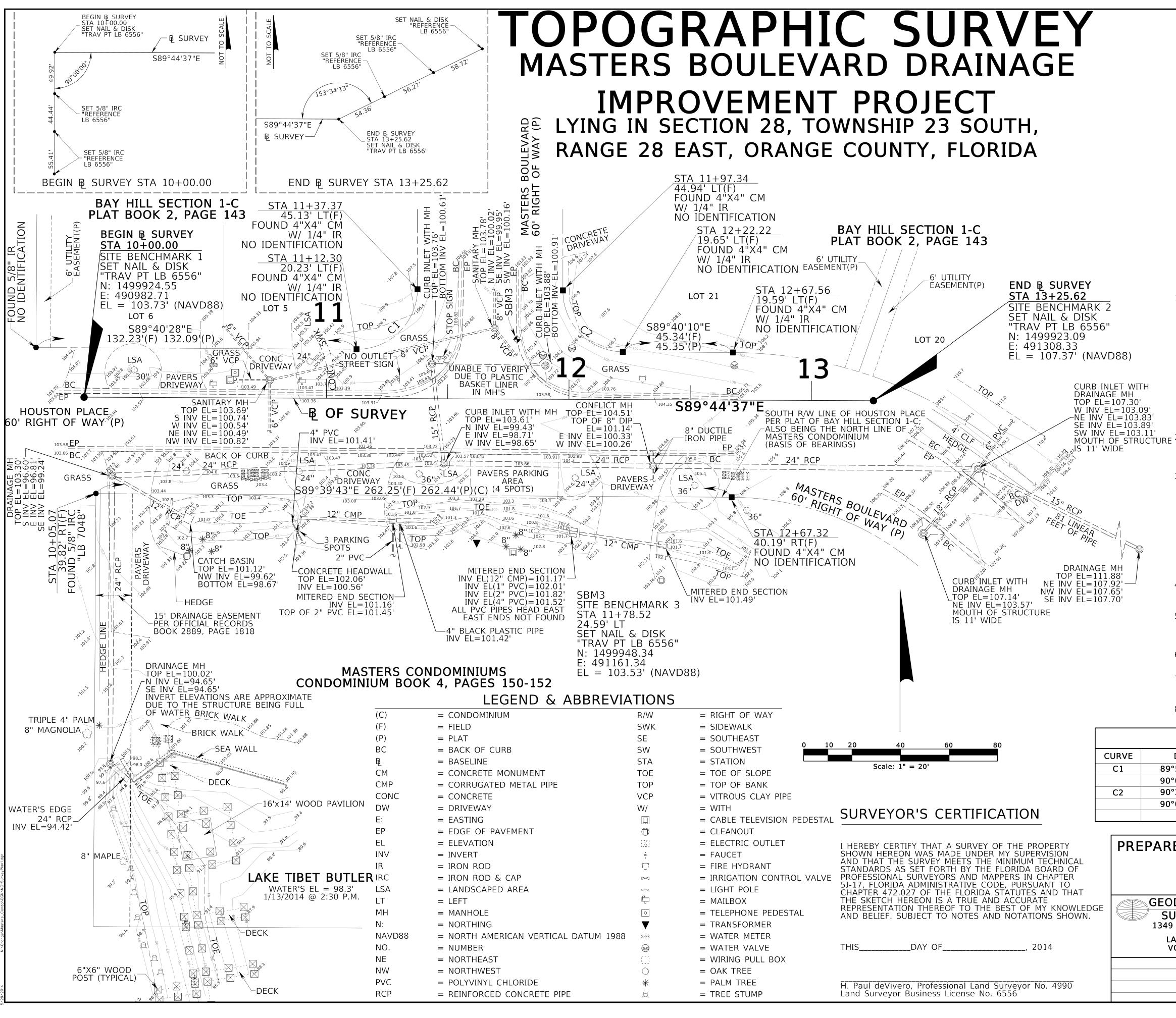
MASTERS BOULEVARD AND HOUSTON PLACE DRAINAGE **IMPROVEMENTS PROJECT**

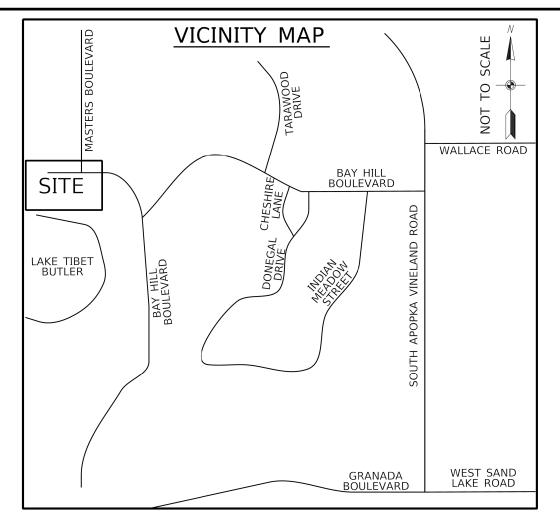
BIDFORM						
Ref. No.	ITEM NO.	DESCRIPTION	EST. QTY.	UNIT	UNIT PRICE	CONTRACT PRICE
1	100-4	INDEMNIFICATION	1	LS		
2	101-1	MOBILIZATION (5% OF BASE BID)	1	LS		
3	102-1	MAINTENANCE OF TRAFFIC	1	LS		
4	104-14	PREVENTION, CONTROL, AND ABATEMENT OF EROSION AND WATER POLLUTION	1	LS		
5	110-1-1	CLEARING AND GRUBBING	1	LS		
6	120-14	EXCAVATION, EMBANKMENT, AND GRADING	1	LS		
7	121-70	FLOWABLE FILL	5	CY		
8	327-70-5	MILLING EXISTING ASPHALT PAVEMENT, 2" AVERAGE DEPTH	595	SY		
9	334-1-13	SUPERPAVE ASPHALT CONCRETE (SP-9.5)	595	SY		
10	425-1-901	INLET, SPECIAL, SP-HC (SWALLOW PIPE - HIGH CAPACITY)	4	EA		
11	425-2-91	MANHOLES, J-8, <10'	3	EA		
12	425-3-81	JUNCTION BOX, DRAINAGE, SPECIAL, SUNTREE SYSTEMS	1	EA		
13	425-4	INLET, ADJUST		EA		
14	430-174-112	PIPE CULVERT, OPT. MATERIAL, ROUND 12"	28	LF		
15	430-175-136	CONCRETE PIPE CULVERT (CLASS III) 36"	113	LF		
16	430-175-142	CONCRETE PIPE CULVERT (CLASS III) 42"	117	LF		
17	430-175-215	CONCRETE PIPE CULVERT (CLASS III) 12"x18"	38	LF		
18	430-175-230	CONCRETE PIPE CULVERT (CLASS III) 24"x38"	33	LF		
19	430-175-236	CONCRETE PIPE CULVERT (CLASS III) 29"x45"	14	LF		
20	430-984-140	MITERED END SECTION, 42"	1	EA		
21	455-133-2	SHEET PILING STEEL, TEMPORARY	1134	SF		
22	520-1-8	CONCRETE CURB & GUTTER, SPECIAL (MIAMI CURB & GUTTER)	115	LF		
23	522-1	CONCRETE SIDEWALK, 4" THICK	5	SY		
24	522-2	CONCRETE SIDEWALK, 6" THICK	41	SY		
25	526-1-2	PAVERS, ARCHITECTURAL	113	SY		
26	530-3-4	RIPRAP, RUBBLE, DITCH LINING	14.1	TN		
27	570-1-2	PERFORMANCE TURF (SOD)	528	SY		
28	580-1-2	LANDSCAPE COMPLETE - LARGE PLANTS (CANARY ISLAND PALM, 12' CLEAR TRUNK)	2	EA		
29	1050-11-423	UTILITY PIPE, FURNISH & INSTALL, DUCTILE IRON, SEWER (6")	18	LF		
30	1050-11-424	UTILITY PIPE, FURNISH & INSTALL, DUCTILE IRON, SEWER (8")	18	LF		
31	1011-1	AS-BUILT CERTIFICATION	1	LS		
	<u> </u>			1 - 1		

TOTAL =

SHEET

GENERAL & PAY ITEM NOTES





SURVEYOR'S REPORT

THE PURPOSE OF THIS SURVEY IS TO ESTABLISH THE EXISTING RIGHT OF WAY LINES OF MASTERS BOULEVARD AND HOUSTON PLACE, ADJACENT TO THE MASTERS CONDOMINIUMS, RECORDED IN CONDOMINIUM BOOK 4, PAGE 150, TOGETHER WITH THE RIGHT OF WAY WITHIN 50 FEET OF THE INTERSECTION, ALONG WITH A 15 FOOT WIDE DRAINAGE EASEMENT LOCATED ON THE WEST SIDE OF SAID CONDOMINIUM, WHICH RUNS FROM HOUSTON PLACE TO LAKE TIBET BUTLER, ACCORDING TO THE DESCRIPTION CONTAINED IN OFFICIAL RECORDS BOOK 2889, PAGE 1818 OF THE PUBLIC RECORDS OF ORANGE COUNTY, FLORIDA BY ESTABLISHING OR RE-ESTABLISHING CORNERS, MONUMEN AND BOUNDARY LINES, AND TO ESTABLISH THE HORIZONTAL AND VERTICAL SPATIAL RELATIONSHIP OF THE NATURAL OR MANMADE FEATURES LYING WITHIN THE DEFINED TOPOGRAPHIC SURVEY LIMITS NOTED BELOW

THE TOPOGRAPHIC SURVEY LIMITS ARE THE INTERSECTION OF MASTERS BOULEVARD AND HOUSTON PLACE, EXTENDING 100 FEET ALONG EACH ROADWAY AS MEASURED FROM THE INTERSECTION AND EXTENDED 10 FEET BEYOND THE RIGHT OF WAY WHERE ACCESSIBLE THE SURVEY INCLUDED THE TOPOGRAPHY OF THE OUTFALL TO THE LAKE AND 10 FEET BEYOND THE OUTFALL STRUCTURE LOCATED AT LAKE TIBET BUTLER.

- BEARINGS AND COORDINATES SHOWN HEREON ARE RELATIVE TO THE FLORIDA STATE PLANE COORDINATE SYSTEM, NORTH AMERICAN DATUM OF 1983/2007 ADJUSTMENT (NAD83/07), ZONE 901, FLORIDA EAST, WITH THE SOUTH LINE OF HOUSTON PLACE HAVING A BEARING OF SOUTH 89°39'43" EAST.
- ELEVATIONS SHOWN HEREON ARE RELATIVE TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) AS ESTABLISHED FROM THE FOLLOWING ORANGE COUNTY BENCHMARKS:

FOUND A SQUARE CUT IN THE CONCRETE CURB ON THE EAST SIDE OF BAY HILL BOULEVARD IN FRONT OF ADDRESS # 9025 PUBLISHED ELEVATION = 111.179 FEET (NAVD88)

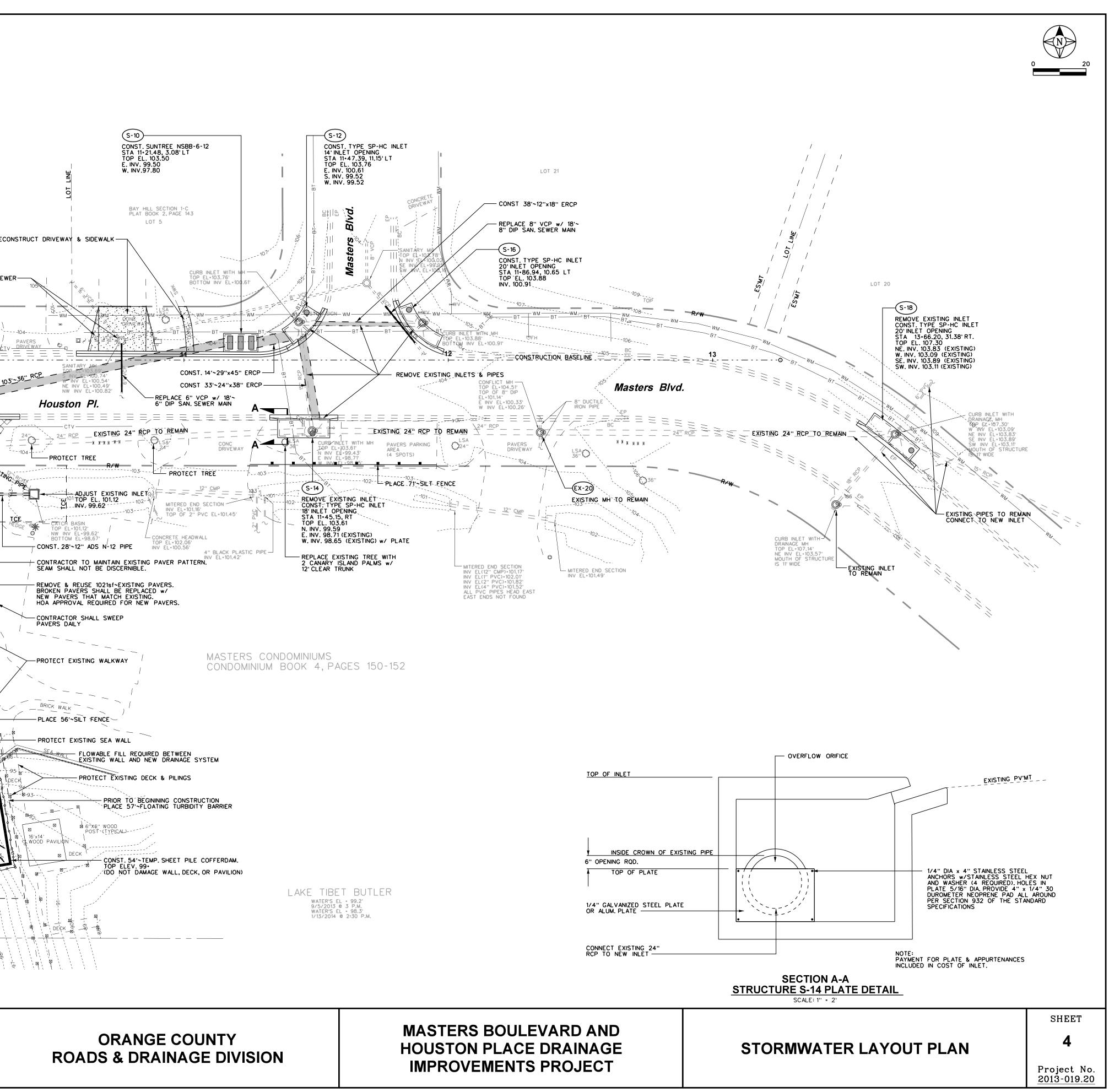
FOUND 3.5" ORANGE COUNTY CONTROL DISK IN CURB INLET ON THE EAST SIDE OF BAY HILL BOULEVARD, 300 FEET ± SOUTH OF TIBET BAY DRIVE PUBLISHED ELEVATION = 102.042 FEET (NAVD88)

- THE SURVEYOR HAS NOT ABSTRACTED THE LANDS SHOWN HEREON FOR EASEMENTS AND/OR RIGHT-OF-WAY RECORDS. THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A TITLE REPORT.
- THE LOCATION OF UNDERGROUND UTILITY LINES SHOWN HEREON WERE DETERMINED BY A CALL SUNSHINE LOCATE REQUEST, TICKET NUMBERS 238309381, 238309417, 238309459, 238309515 AND 007408003, AND BY EXAMINATION OF SURFACE APPURTENANCES OF SAID UTILITIES.
- NO UNDERGROUND INSTALLATIONS OR IMPROVEMENTS HAVE BEEN LOCATED EXCEPT AS SHOWN.
- UNLESS IT BEARS THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER THIS DRAWING, SKETCH, PLAT, OR MAP IS FOR INFORMATIONAL PURPOSES ONLY AND IS NOT VALID.
- ALL RECORDING REFERENCES SHOWN ON THIS SURVEY REFER TO THE PUBLIC RECORDS OF ORANGE COUNTY, FLORIDA, UNLESS OTHERWISE NOTED.

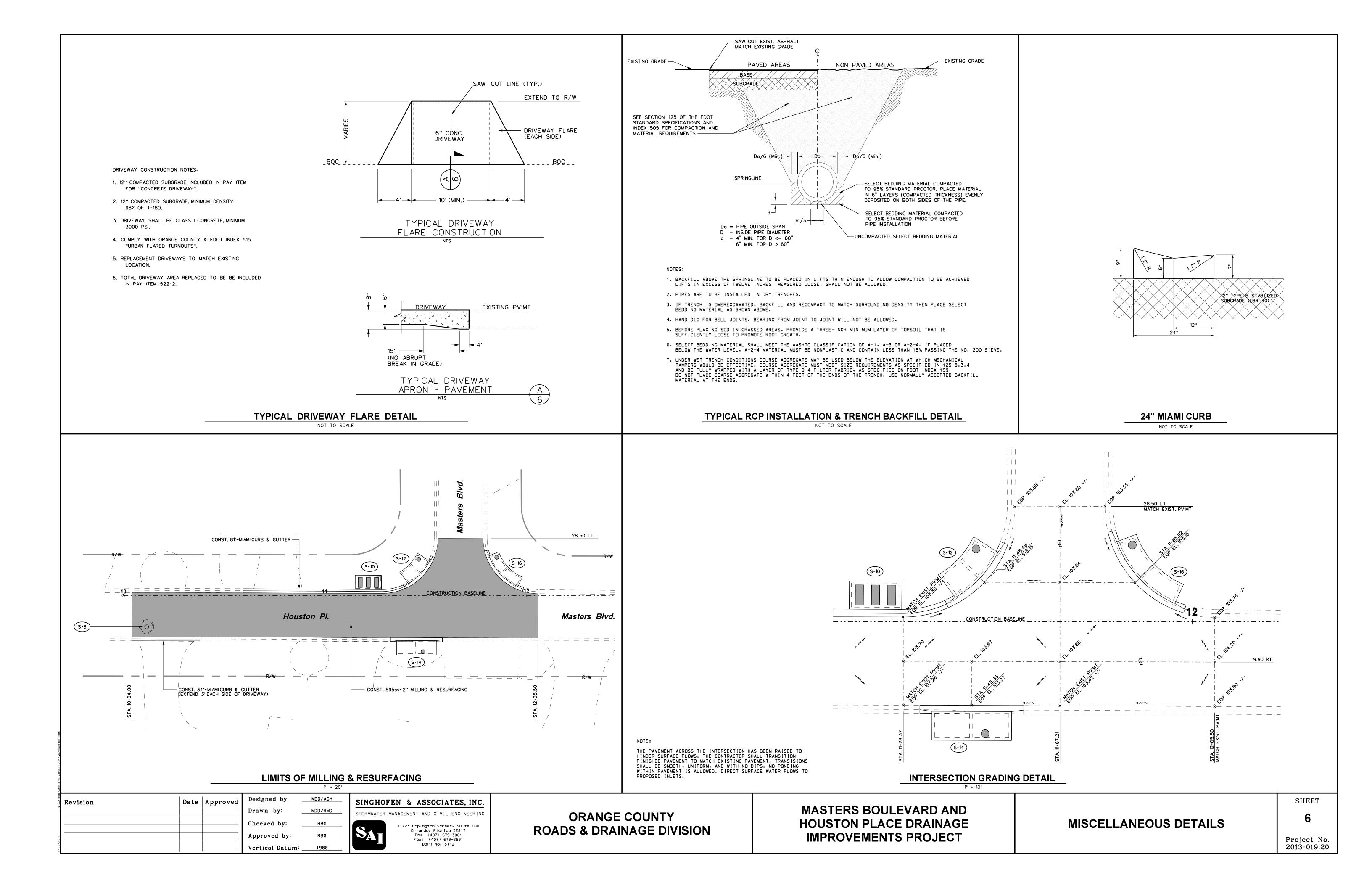
CURVE DATA						
DELTA	RADIUS	LENGTH	CHORD DISTANCE	CHORD BEARING		
9°56'50"(F)	25.00'(F)(P)	39.25'(F)	35.34'(F)	N45°27'23"E(F)		
0°00'00"(P)		39.27'(P)	35.36'(P)			
0°23'48"(F)	25.00'(F)(P)	39.44'(F)	35.48'(F)	N44°15'57"W(F)		
0°00'00"(P)		39.27'(P)	35.36'(P)			

RED FOR: SINGHOFEN & ASSOCIATES, INC. ORANGE COUNTY ENGINEERING PUBLIC WORKS ROADS AND DRAINAGE DIVISION						
ODATA CONSULTANTS, INC.	DRAWN BY: DPW	CHECKED BY: RJH & JMS				
SURVEYING & MAPPING	DATE OF FIELD SURVEY 01-13-14					
49 S INTERNATIONAL PARKWAY SUITE 2401	FIELD BOOK 13-23, PAGES 06-22, 53-57					
LAKE MĂŘÝ, FLOŘĪDA 32746 VOICE: (407) 732-6965	ORANGE COUNTY, FLORIDA					
	DATE:					
	JAN 16, 2014	SHEET 3				
	PROJECT No.					

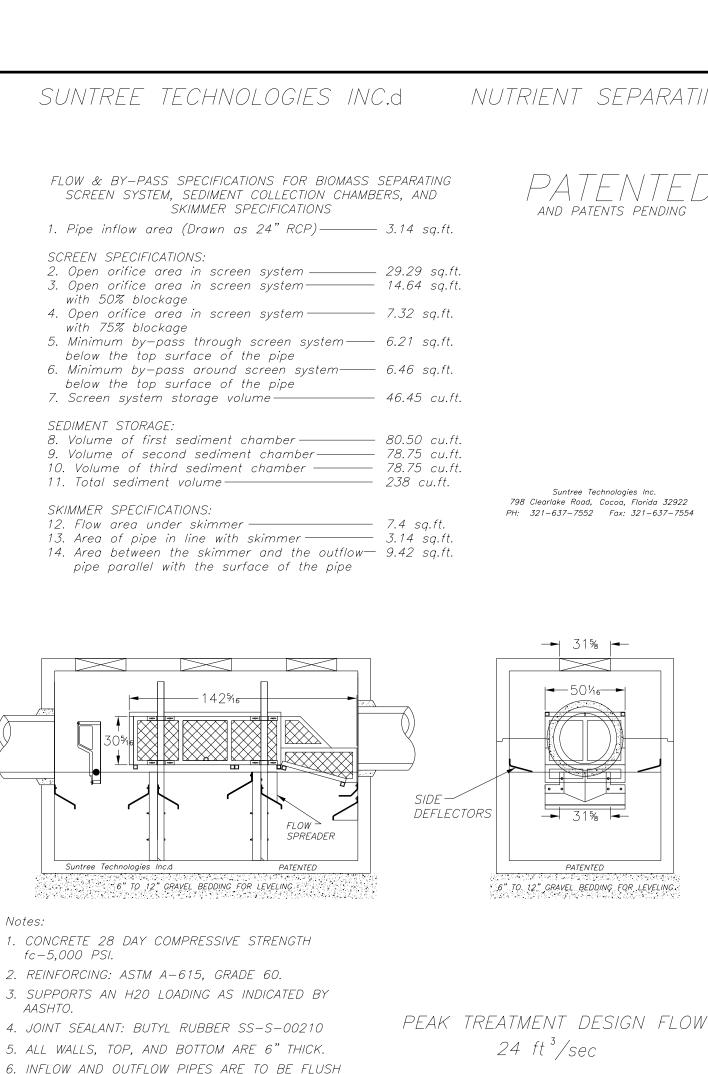
	NOTE	S:				
	1.	The Dewatering Pump condominiums and at a pla dewatering pump's dischar the cofferdam and turbidit outlet shall be located und prevent turbidity within the	ace approved by rge hose shall di ty barrier. The ler gravel or wit	the County. The scharge between discharge hose's		
	2.	No vibratory compactors w		uildinas.		
	3.	Contractor shall not park within the condominium's properties.	equipment, pe	ersonnel vehicles		6' UTILITY EASEMENT(P)
	4.	Contractor shall coordina Association (HOA) on any		rs Homeowner's	- TC -	
						RE
						PROTECT EXISTING SAN. SE
						SITE BENCHMARK 1 SITE BENCHMARK 1 SET NAIL & DISK "TRAV PT LB 6556" STA 10+00.00 N: 1499924.55 E 490982.71
				S-8 CONST. FDOT TYPE J-8 MH, ALT w/ 2-PIECE COVER STA. 10+11.60, 15.42' RT RIM EL. 103.72 S. INV. 93.74	A (6' DIA.)	EL * 103.73' (NAVD88) EL * 103.73' (NAVD88) CTV DRAINAGE MH TOP EL * 103.70' S INV EL •96 EQ E INV EL •96 EQ
				CONST. 10'~36'' RCP		SE INV EL 99.24
				S-6 REMOVE EXISTING MH CONST. FDOT TYPE J-8 MH, ALT w/ 2-PIECE COVER STA. 10+11.68, 32.36' RT RIM EL. 103.30	A (8' DIA.)	
				S. INV. 93.72 N. INV. 93.72 E. INV. 96.81 (EXISTING) SE. INV. 99.24 (EXISTING)	CONST. FDOT CON STA. 10+13.41, 50.7 INV. 94.90	CRETE COLLAR
					REMOVE EXISTING SLOPE AWAY FRO SOD ALL DISTURB	M PAVERS. 8
					REMOVE EXISTING CONST, 117'~42'' F	
					PLACE 191'~SILT	
					EXISTING 15' DRAI	
				S-4 REMOVE EXISTING MH CONST. FDOT TYPE J-8 MH, ALT. w/BOLT-ON COVER STA, 10+11.40, 156.56' RT RIM EL. 99.50 INV. 93.48	A (8' DIA.)	DRAINAGE MH TOP EL-100.02' N INV EL-94.65' SE INV EL-94.65'
					PIPE INCLUDED IN OF MES PER FDC	DT INDEX 272
					S-2 CONST. FDOT 1:2 STA. 10+16.24, 159 INV. 93.40	0.76' RT.
					PLACE 20sy~CON (FDOT DITCH LINI	C. RUBBLE RIPRAP
sters_Condo/DGN/MC-Layout1.dan						
Or ange \Masi	Revisi	on ·	Date Approved	Designed by: MDD/AGH	SINCHOF	'EN & ASSOCIATES, INC.
N:N				Drawn by: <u>MDD/HMD</u>		MANAGEMENT AND CIVIL ENGINEERING
114				Checked by: <u>RBG</u> Approved by: <u>RBG</u>	SAT	11723 Orpington Street, Suite 100 Orlando, Florida 32817 Ph: (407) 679-3001 Fax: (407) 679-2691
/29/20				Vertical Datum:1988		Fax: (407) 679-2691 DBPR No. 5112

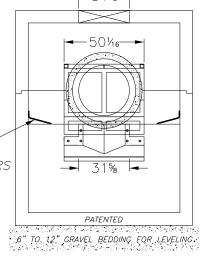


Revision	Date Approved Designed by: MDD/AGH SINGHOFEN & ASS Drawn by: MDD/HMD STORMWATER MANAGEMENT AND Checked by: RBG 11723 Orpingt Approved by: RBG Ph: (CFax: DBF) Vertical Datum: 1988			MASTERS BOULE HOUSTON PLACE IMPROVEMENTS		STORMWATER LAYOUT CROSS SECTIONS	SHEET 5 Project No. <u>2013-019.20</u>
	S-6 REMOVE EXISTING MH CONST. FDOT TYPE J-8 MH	CROSS SECTION OF S-6, S-14, & S-18 HSCALE: 1" - 20' VSCALE: 1" - 2'					
-95		S-14 CONST. TYPE SP-HC INLET			CONST. TYPE SP-HC INLET		95
			EX-20 EXISTING CONFLICT MH TO REMAIN	(S-18 REMOVE EXISTING INLET CONST. TYPE SP-HC INLET		
REMOVE EXISTING 24" RCP							
	EXISTING 24 TO		EXISTING SAN. SEWER MAIN				
-100	TO NEW MH @ INV. 99.24 REMOVE EXISTING 15" RCP —	EXISTING 24" RCP TO REMAIN					100
	CONNECT EXISTING 12" RCP TO NEW MH @ INV. 99.24	Λ	EXIST	ING 24" RCP TO REMAIN			
	EXISTING GRADE				I/I TO NEW MH @ INV. 103.83 I/I I/I		
-105				EXISTING GRAD	CONNECT EXISTING 18" RCP TO NEW MH @ INV. 103.11		105
				EXISTING GRADE			
- 110							
110		CROSS SECTION OF S-2, S-4, S-6, S-8, S-10, S-12, & HSCALE: 1" - 20' VSCALE: 1" - 2'	s S-16			CROSS SECTION OF S-12 & S-14 HSCALE: 1" = 20' VSCALE: 1" = 2'	
90 -90		S-6 REMOVE EXISTING MH CONST. FDOT TYPE J-8 MH					90
		CONST. 36" RCP INV. 93.72					
INV. 93.40		INV. 93.74 S-8 CONST. FDOT TYPE J-8 MH					
95 INV. 93.52	INV 93 72						95
	REMOVE EXISTING 24" RCP		S-10 CONST. SUNTREE			S-12 REMOVE EXISTING INLET CONST. TYPE SP-HC INLET	
		CONST. 36" RCP	INV.97.80 (S-12)	REMOVE EXISTING INLET CONST. TYPE SP-HC INLET		S-14 REMOVE EXISTING INLET CONST. TYPE SP-HC INLET	
-100	CONNECT EXISTING 12" RCP TO NEW MH @ INV. 99.24 CONNECT EXISTING 24" RCP TO NEW MH @ INV. 96.81			EXISTING 8" SAN. SEWER 	.ET		100
	EXISTING		29"x45" ERCP	CONST. 14"x23" ERCP	CONST. 14"×19" CONST. 29"×45'		
						1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
-105		<pre>//</pre>		REMOVE EXISTING 15" RCP			105
105							105



NUTRIENT SEPARATING BAFFLE BOXI

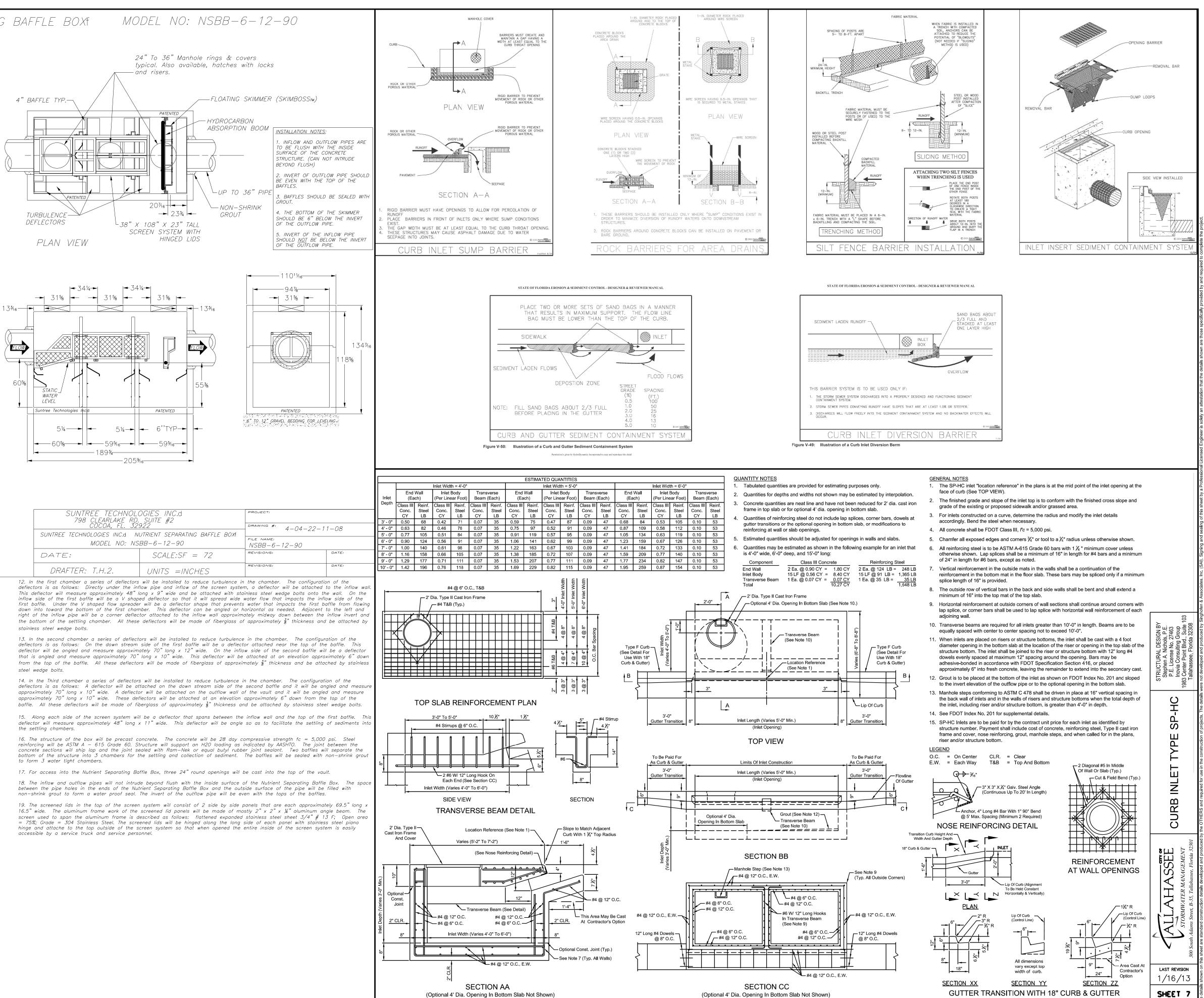




PEAK DESIGN FLOW

BASED ON SITE SPECIFIC

CRITERIA



SUNTREE TECHNOLO 798 CLEARLAKE RD. COCOA, FL. 325	
SUNTREE TECHNOLOGIES INC.d N MODEL NO: NS	UTRIENT SEPARAT
DATE:	SCALE:SF
DRAFTER: TH 2	/////TS -//

<u>Hydrodynamic, Volume, & Physical Specifications Of The Suntree Nutrient Separating Baffle Box</u> <u>Model Number: NSBB-6-12-90</u>

WITH THE INSIDE SURFACE OF THE CONCRETE

. HINGED LIDS FOR THE SCREEN SYSTEM ARE

AVAILABLE UPON REQUEST.

THREE WATER TIGHT CHAMBERS.

STRUCTURE. (CAN NOT INTRUDE BEYOND FLUSH)

8. BAFFLES WILL BE SEALED WITH GROUT TO FORM

. The stormwater treatment structure is commonly placed on-line or off-line. It will be sized so that the entire flow of a INFLOW" pipe will always receive treatment by passing it through the inside of the stormwater treatment structure.

2. For flows of 24 cfs a removal efficiency of at least 80% for TSS will be achieved. Peak flows will based on site specific criteria and be able to pass through the stormwater treatment structure for treatmen

3. The stormwater treatment structure will be able to store captured solid debris such as leaves and litter in a dry state between rain events. The volume of dry storage will be approximately 46.45 cubic feet. 4. The stormwater treatment structure will have the capacity to store approximately 238 cubic feet of captured sediment.

5. The skimmer will be the Suntree SkimBossm System. As the water level in the vault changes, the Suntree floating skimmer will automatically move vertically, floating on the changing water level as needed to prevent water flow from topping the skimmer. On each end of the skimmer a track system is attached to the wall to hold the skimmer in place and provide for vertical movement Wheels are attached to the ends of the skimmer and fit into the tracks and act to reduce the frictional forces between the skimmer and the tracks so that the skimmer can easily move vertically with the changing water elevations. There are 2 types of wheels that urn perpendicular to each other which are used to deal with the frictional forces. The centering wheels roll against the sides of the vault walls and work to reduce the frictional force of the vault walls. The load wheels reduce the friction produced from the water flow pushing the skimmer against the track in the direction of water flow. The body of the skimmer will be rigid and made of laminated fiberglass. The buoyancy of the skimmer comes from 2 components. The primary buoyancy component are the floats on the upstream side of the skimmer. These floats are located along the top of the skimmer and account for majority of the buoyancy. Another buoyancy component will be PVC structural foam laminated within the fiberglass layers of the body of the skimmer. The body of the skimmer is shaped so that the floats fit within the shape of the skimmer which combine to form a relatively flat surface on the upstream side. The floats are attached to the body of the skimmer within a cavity along the top of the skimmer. The floats are spaced off from the surface of the skimmer body so water can flow completely around on all sides of the float. The space between the float and the body of the skimmer is what allows the skimmer to buoyant relative to the water level on the upstream side of the skimmer. On the face of each end of the skimmer a rubber seal prevents the passage of oils or other floating chemicals. A ydrocarbon absorption boom is positioned along the face of the skimmer to absorb hydrocarbons. The hydrocarbon absorption boom is held in position by brackets that allow for the vertical movement of the boom along the face of the skimmer. The boom will float on the water surface and rise up and down with the changing water levels.

6. The nutrient separating screen system shall be positioned approximately 3.5" above the static water level within the baffle box. Adjacent to the inflow, the screen system will have openings on both sides that have a combined cross sectional area that exceeds the cross sectional area of the pipe. These openings will act as an internal bypass for water flow in the event that the screen system becomes full of debris.

7. The nutrient separating screen system shall have a minimum of 6" of vertical adjustment. The adjustment method shall be a system with brackets that are attached to the sides of the screen system that will slide vertically along $3^{"} \times 3^{"}$ aluminum square poles. Two stainless steel bolts on each bracket can be tightened to lock the screen system in place, or loosened to allow for vertical adjustment of the screen system. The square poles are anchored to the baffle wall by stainless steel bolts.

8. The nutrient separating screen system shall have a minimum of 3" of horizontal adjustment in the direction of the length of the concrete structure. The brackets that clamp the vertical adjustment poles to the side of the screen system can be repositioned to allow of horizontal adjustment

9. The nutrient separating screen system shall have a bottom section adjacent to the inflow which is hinged and can be opened for cleaning. This bottom section will function as a screened ramp to direct debris into the main body of the screened system. The sides of of the screen system adjacent to the inflow will be made with stainless steel screen and transition in vertical height from a minimum of 8" above the inflow invert to the height of the main body of the screen system. The lower sides of the screen system adjacent to the inflow will provide bypass for water flow around the main body of the screen system if necessary. The cross sectional area of the bypass around the screen system will be equal to or exceed the cross sectional area of the inflow pipe.

10. The nutrient separating screen system shall give access from above grade to the lower sediment collection chambers by the following method. The bottom of the screen system will contain hinged screened doors that can be opened in such a way as to allow adequate access for a vacuum truck to remove everything in all the lower collection chambers.

11. The screen system structure will be a welded aluminum framework spanned by stainless steel screen, be generally rectangular in shape, and be formed to make a bottom, 2 long sides, 1 end, and a top; The inflow end will remain open so as to allow water to enter the screen system. The screen system will consist of panel sections that are held together with stainless steel bolts. When the panel sections are unbolted and separated from each other they will be able to pass through an access hatch or round manhole in the top of the baffle box for removal purposes. The aluminum frame work will be made of mostly 2" x 2" x 4" aluminum angle beam. The screen used to span the aluminum frame is described as follows: For the body of the screen system, flattened expanded stainless steel sheet 3/4" # 13 F; Open area = 75%; Grade = 304 Stainless Steel. The screen will be attached to the screen system frame by sandwiching the screen to the aluminum frame between a series of $1 \frac{1}{4} \times \frac{3}{16}$ aluminum bars and welded in place. Aluminum screen material is not allowed.