ARIA, LONGBOAT KEY

SARASOTA COUNTY S.R. 789, SECTION 17030, MILE POST 6.574

SITE DEVELOPMENT PLANS

SECTION 8&17, TOWNSHIP 36 SOUTH, RANGE 17 EAST

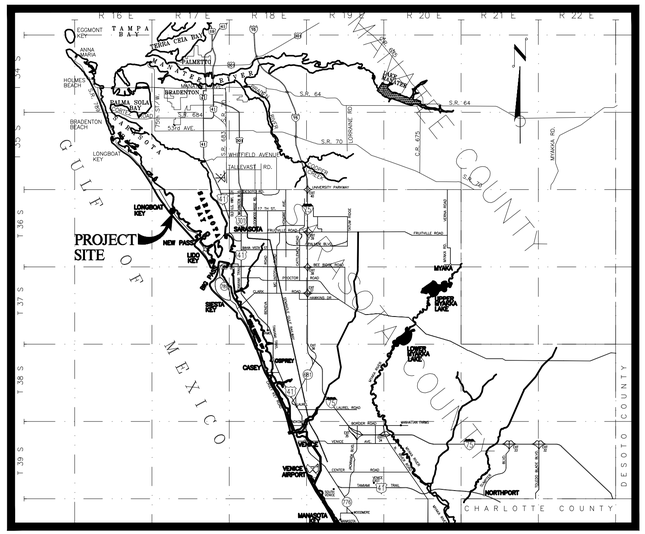
Since 1919

George F. Young, Inc.

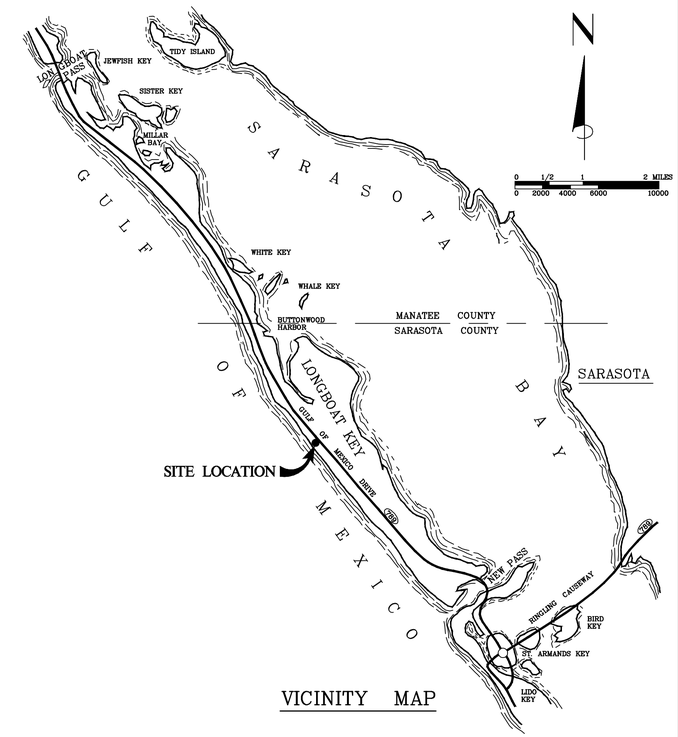
10540 PORTAL CROSSING, SUITE 105 BRADENTON, FLORIDA 34211
ENGINEERING CERTIFICATE OF AUTHORIZATION NUMBER 21
ARCHITECTURE•ENGINEERING•ENVIRONMENTAL•LANDSCAPE•PLANNING•SURVEYING•UTILITIES
GAINESVILLE•LAKEWOOD RANCH•ORLANDO•PALM BEACH GARDENS•ST. PETERSBURG•TAMPA
PHONE (941) 747-2981 FAX (941) 747-7234

FOR:

ADG | ASCENTIA DEVELOPMENT GROUP



LOCATION MAP



VICINITY MAP

SHEET INDEX

NUMBER	TITLE
C0.0	COVER SHEET
S1	TOPOGRAPHIC & TREE SURVEY
C1.0	DEMOLITION PLAN
C2.0	SITE DEVELOPMENT PLAN
C3.0	PAVING, GRADING AND DRAINAGE PLAN
C3.1	PROPOSED CONTOUR PLAN
C4.0	WATER AND SANITARY SEWER PLAN
C5.0	SITE CROSS SECTIONS AND PROFILES
C6.0	BEST MANAGEMENT PRACTICES DETAILS
C7.0	WATER SYSTEM DETAILS
C8.0	SANITARY SEWER DETAILS
C9.0	PAVING, GRADING AND DRAINAGE DETAILS
C9.1	PAVING, GRADING AND DRAINAGE DETAILS
C9.2	DRAINAGE DETAILS
C10.0	EROSION CONTROL PLAN
C11.0	STORMWATER POLLUTION PREVENTION PLAN
C12.0	STORMWATER FACILITY PLAN
C12.1	ADS DETAILS
C12.2	ADS DETAILS

F.D.O.T. NOTES

AT LEAST 72 HOURS IN ADVANCE OF BEGINNING CONSTRUCTION OF THE PROJECT, THE CONTRACTOR SHALL CONTACT THE LOCAL MAINTENANCE FDOT ENGINEER'S OFFICE TO SECURE GENERAL USE PERMITS AND/OR OTHER PERMITS AS REQUIRED FOR WORKING WITHIN THE DEPARTMENTS RIGHT-OF-WAY.

THESE PLANS HAVE BEEN PREPARED IN ACCORDANCE WITH AND ARE GOVERNED BY THE STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION, STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (DATED 2013) AND DESIGN STANDARDS BOOKLET (DATED 2013). FOR DESIGN STANDARDS REVISIONS, CLICK ON "DESIGN STANDARDS" AT THE FOLLOWING WEBSITE: http://www.dot.state.fl.us/rddesign/

GENERAL NOTES

RESPONSIBILITY REGARDING EXISTING UTILITIES & STRUCTURES

THE EXISTENCE AND LOCATION OF EXISTING UNDERGROUND UTILITIES ARE NOT GUARANTEED AND SHALL BE INVESTIGATED AND VERIFIED IN THE FIELD BY THE CONTRACTOR BEFORE STARTING WORK. EXCAVATION IN THE VICINITY OF EXISTING STRUCTURES AND UTILITIES SHALL BE CAREFULLY DONE, BY HAND IF NECESSARY. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY DAMAGE TO AND FOR MAINTENANCE AND PROTECTION OF, EXISTING UTILITIES AND STRUCTURES.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE POINT OF CONNECTION OF ALL BUILDING SERVICE LINES AT THE BUILDING PRIOR TO INSTALLATION.

EROSION CONTROL DURING CONSTRUCTION

THE CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO PREVENT THE RUNOFF OF ERODED SOIL MATERIAL FROM LEAVING THE CONSTRUCTION SITE AND BEING DEPOSITED ON THE PROPERTY OF OTHERS OR ON PORTIONS OF THE SITE OUTSIDE THE CONSTRUCTION LIMITS

THE CONTRACTOR SHALL INSURE THAT ALL NECESSARY PERMITS ARE OBTAINED PRIOR TO COMMENCING ANY CONSTRUCTION ACTIVITY.

LAWS TO BE OBSERVED

THE CONTRACTOR IS ASSUMED TO BE FAMILIAR WITH AND AT ALL TIMES SHALL OBSERVE AND COMPLY WITH ALL FEDERAL, STATE AND LOCAL LAWS, BYLAWS, SAFETY LAWS, BUILDING AND CONSTRUCTION CODES, AND ORDINANCES AND REGULATIONS IN ANY MANNER AFFECTING THE CONDUCT OF THE WORK.

ELEVATION MEASUREMENTS

ALL ELEVATIONS ARE BASED ON NAVD.

811 Know what's **below.** **Call** before you dig. callsunshine.com

THESE PLANS COMPLY WITH APPLICABLE STANDARDS, INCLUDING THE MANUAL OF UNIFORM MINIMUM STANDARDS FOR DESIGN, CONSTRUCTION AND MAINTENANCE FOR STREETS AND HIGHWAYS.
THESE PLANS ARE IN COMPLIANCE WITH THE AMERICANS WITH DISABILITIES ACT (A.D.A.) MANUAL, AT CURBS, GUTTERS, SIDEWALKS, INTERSECTIONS, ETC.
THESE PLANS ARE IN COMPLIANCE WITH THE FLORIDA ACCESSIBILITY CODE AT CURBS, GUTTERS, SIDEWALKS, INTERSECTIONS, ETC.

APPROVED _____
TIMOTHY DOVE, PE NO. 43268
DATE _____

PROJECT CONTACT LIST:

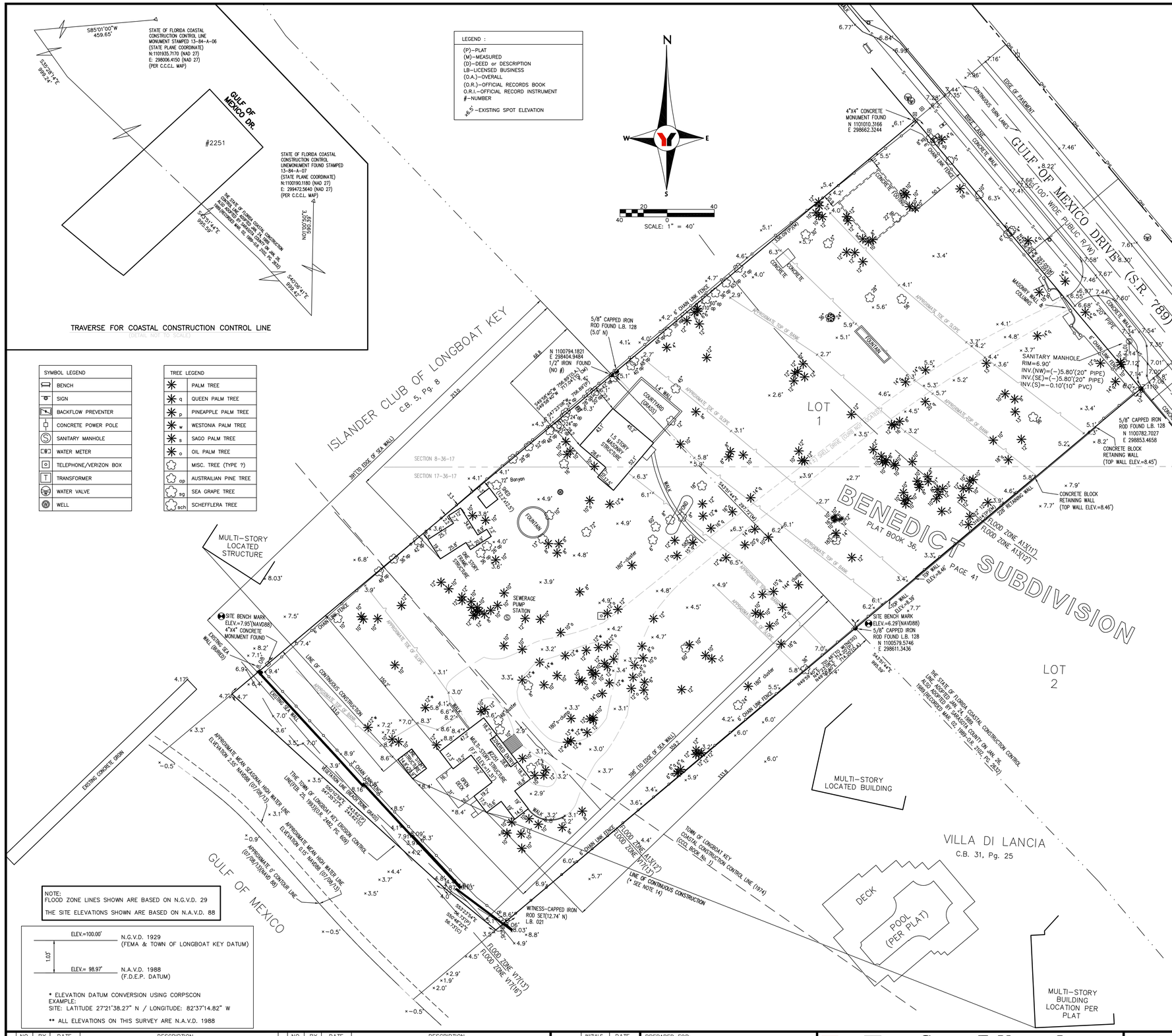
SITE OWNER/DEVELOPER:	VAM LBK DEVELOPMENT, LLC 1990 MAIN ST. STE. 750 SARASOTA, FL 34236 PHONE: (941) 309-5383	JAMES A TALLMAN EMAIL: jtallman@ascentiagrp.com
ARCHITECT:	SANTIESTEBAN & ASSOCIATES ARCHITECTS LLC 815 SOUTH HOWARD AVE. TAMPA, FL 33606 PHONE: (813) 251-1884	ALCIDES SANTIESTEBAN EMAIL: al@saa-arc.com
CIVIL ENGINEERING:	GEORGE F. YOUNG, INC. 10540 PORTAL CROSSING, SUITE 105 BRADENTON, FLORIDA 34211 PHONE: (941) 747-2981	TIMOTHY DOVE, P.E. EMAIL: tdove@georgefyoung.com
SURVEYOR:	GEORGE F. YOUNG, INC. 10540 PORTAL CROSSING, SUITE 105 BRADENTON, FLORIDA 34211 PHONE: (941) 747-2981	MARK E. BASSETT, PSM EMAIL: mbassett@georgefyoung.com
LANDSCAPE ARCHITECT:	PHIL GRAHAM LANDSCAPE ARCHITECTURE 436 SECOND STREET NORTH ST. PETERSBURG, FL 33701 PHONE: (727) 821-5225	PHIL GRAHAM, JR. PGRAHAM@PHILGRAHAMLA.COM -
GENERAL CONTRACTOR:	TO BE DETERMINED	

ISSUED FOR TOWN OF LONGBOAT KEY PLANNING AND ZONING REVIEW

DATE: 12/23/2013

PROJECT NO. 13-0046-00-LC

"DRAWING NOT VALID WITHOUT THE SIGNATURE AND SEAL OF A FLORIDA LICENSED ENGINEER"



SYMBOL LEGEND	
	BENCH
	SIGN
	BACKFLOW PREVENTER
	CONCRETE POWER POLE
	SANITARY MANHOLE
	WATER METER
	TELEPHONE/VERIZON BOX
	TRANSFORMER
	WATER VALVE
	WELL

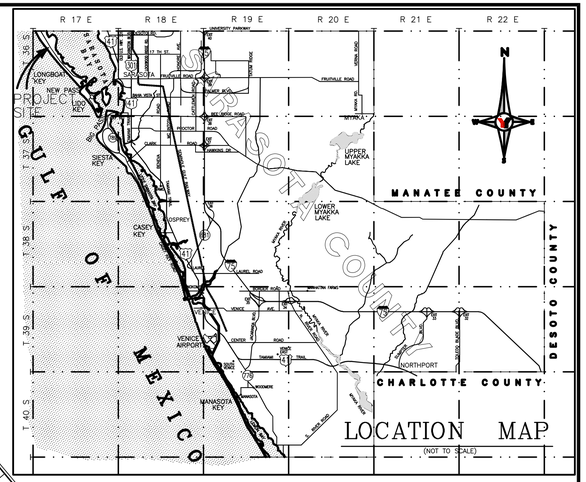
TREE LEGEND	
	PALM TREE
q	QUEEN PALM TREE
p	PINEAPPLE PALM TREE
w	WESTONIA PALM TREE
s	SAGO PALM TREE
o	OIL PALM TREE
	MISC. TREE (TYPE ?)
op	AUSTRAILIAN PINE TREE
sg	SEA GRAPE TREE
sch	SCHEFFLERA TREE

NOTE:
FLOOD ZONE LINES SHOWN ARE BASED ON N.G.V.D. 29
THE SITE ELEVATIONS SHOWN ARE BASED ON N.A.V.D. 88

ELEV.=100.00' N.G.V.D. 1929 (FEMA & TOWN OF LONGBOAT KEY DATUM)
1.03'
ELEV.= 98.97' N.A.V.D. 1988 (F.D.E.P. DATUM)

* ELEVATION DATUM CONVERSION USING CORPSCON
EXAMPLE:
SITE: LATITUDE 27°21'38.27" N / LONGITUDE: 82°37'14.82" W

** ALL ELEVATIONS ON THIS SURVEY ARE N.A.V.D. 1988



LEGAL DESCRIPTION

LOT 1, BENEDICT SUBDIVISION, ACCORDING TO THE PLAT THEREOF RECORDED IN PLAT BOOK 36, PAGE 41, PUBLIC RECORDS OF SARASOTA COUNTY, FLORIDA.

***NAVD 88 (ELEVATIONS SHOWN)**
CONVERSION TO NGVD 29 (+1.03', PER CORPSCON)

SURVEYOR'S REPORT

1. THIS SURVEY WAS PREPARED WITHOUT BENEFIT IF A CURRENT TITLE REPORT AND THEREFORE MAY NOT NECESSARILY INDICATE ALL ENCUMBRANCES AFFECTING SUBJECT PROPERTY.
2. THERE ARE NO VISIBLE ENCROACHMENTS EXCEPT AS SHOWN. FOUNDATIONS BENEATH THE SURFACE OF THE GROUND THAT MAY ENCROACH HAVE NOT BEEN LOCATED.
3. THE LOCATION AND EXISTENCE OF UNDERGROUND UTILITIES AND UNDERGROUND FOUNDATIONS OR ANY OTHER PERTINENT ATTRIBUTES TO SUBJECT PROPERTY (IF ANY) NOT ABSTRACTED AS PART OF THIS SURVEY, EXCEPT AS SHOWN.
4. BEARINGS SHOWN HEREON REFER TO STATE PLANE DATUM, FLORIDA WEST ZONE, NORTH AMERICAN DATUM OF 1927, AS ESTABLISHED BY FIELD TRAVERSE FROM THE SUBJECT PROPERTY TO THE F.D.N.R. (FEDERAL DEPARTMENT OF NATURAL RESOURCES) REFERENCE MONUMENTS "A–06" & "A–07".
5. SUBJECT TO ALL RESTRICTIONS, RIGHTS OF WAY AND EASEMENTS OF RECORD, IF ANY.
6. LOT CONTAINS 5.0± ACRES, CALCULATED TO THE TOWN OF LONGBOAT KEY EROSION CONTROL LINE, PER PLAT.
7. REUSE OF DOCUMENTS: THIS DOCUMENT IS AN INSTRUMENT OF SERVICE IN RESPECT OF THE PROJECT TO WHICH IT APPLIES AND ANY REUSE WITHOUT WRITTEN VERIFICATION OR ADAPTATION BY GEORGE F. YOUNG, INC. (GFY) FOR THE SPECIFIC PURPOSES INTENDED WILL BE AT THE USER'S SOLE RISK AND WITHOUT LIABILITY OR LEGAL EXPOSURE TO GFY AND USER SHALL INDEMNIFY AND HOLD HARMLESS GFY FROM ALL CLAIMS, DAMAGES, LOSSES AND EXPENSES INCLUDING ATTORNEYS FEES ARISING OUT OF OR RESULTING THEREFROM. ANY SUCH VERIFICATION OR ADAPTATION WILL ENTITLE GFY TO FURTHER COMPENSATION AT RATES TO BE AGREED UPON BY USER AND GFY.
8. THE EXPECTED USE OF THE LAND, AS CLASSIFIED IN THE FLORIDA MINIMUM TECHNICAL STANDARDS (5J–17–F.A.C.), IS SUBURBAN. THE MINIMUM RELATIVE DISTANCE ACCURACY FOR THIS TYPE OF BOUNDARY SURVEY IS 1 FOOT IN 7,500 FEET. THE ACCURACY OBTAINED BY MEASUREMENT AND CALCULATION OF A CLOSED GEOMETRIC FIGURE FOR THIS SURVEY WAS FOUND TO EXCEED THIS REQUIREMENT.
9. THE APPROXIMATE MEAN HIGH WATER LINE, AS SHOWN ON THIS SURVEY, IS NOT A TIDAL BOUNDARY, WAS NOT LOCATED IN ACCORDANCE PROCEDURES SPECIFIED IN THE COASTAL MAPPING ACT OF 1974 (CHAPTER 177, PART 2, OF THE FLORIDA STATUTES), AND THE RULES OF THE DEPARTMENT OF NATURAL RESOURCES CHAPTER 16–3 OF THE FLORIDA ADMINISTRATIVE CODE), AND THIS SURVEY IS NOT TO BE USED AS, REPRESENTED TO BE, OR ADMISSIBLE AS A TIDAL BOUNDARY BEFORE ANY COURT OF LAW.
10. WELL DEFINED FEATURES IN THIS SURVEY HAVE BEEN MEASURED TO AN ESTIMATED HORIZONTAL ACCURACY OF 0.10'.
11. THE STATED PURPOSE FOR THIS SURVEY IS TO SUPPLEMENT A COASTAL CONSTRUCTION PERMIT FOR PROPOSED IMPROVEMENTS TO THE SITE.
12. THIS SURVEY REPRESENTS A FIELD SURVEY PERFORMED ON JULY 15, 2013 AND THAT IT MEETS THE MINIMUM TECHNICAL STANDARDS FOR SURVEYING IN THE STATE OF FLORIDA AS SET FORTH BY THE FLORIDA BOARD OF LAND SURVEYORS, PURSUANT TO CHAPTER 472 OF THE FLORIDA STATUTES AND CHAPTER 5J–17 AND 62B–33 OF THE FLORIDA ADMINISTRATIVE CODE.
13. ELEVATIONS SHOWN AREA BASED ON FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION BENCH MARK "Z–689" (2008), SAID MARK BEING A FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION (FDEP) DISK IN A 4"x4" CONCRETE MONUMENT WITH A PUBLISHED ELEVATION OF 6.46' NORTH AMERICAN VERTICAL DATUM OF 1988(NAVD 88).
14. FLOOD ZONES SHOWN ARE APPROXIMATE AND SCALED FROM THE TOWN OF LONGBOAT KEY, FLORIDA FLOOD INSURANCE RATE MAP, COMMUNITY PANEL No. 125126–0010–B, REVISED DATE AUGUST 15, 1983. THE FLOOD ZONE DATA SHOULD BE VERIFIED BY THE LOCAL BUILDING DEPARTMENT BEFORE ANY CONSTRUCTION OR DESIGN.

"NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER"

REVISED	NO.	BY	DATE	DESCRIPTION
	1	P.L.	7/18/13	REVISE PHOTO 1974 CCCL, PER RECORDING DATA
	2			
	3			
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	INITIALS	DATE
CREW CHIEF	D.J.	7/11/13
DRAWN	P.L.	7/12/13
CHECKED	MEB	7/16/13
FIELD BOOK	353/26	
FIELD DATE	7/11/13	

PREPARED FOR:
Ascentia Group
1990 Main St., Ste. 750
Sarasota, FL. 34236

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BUSINESS ENTITY LB21
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GAINESVILLE•LAKEWOOD RANCH•ORLANDO•PALM BEACH GARDENS•ST. PETERSBURG•TAMPA•VENICE
Since 1919

Mark E. Bassett PSM LS4394
DATE

Lot 1, Benedict Subdivision
Topographic & Tree Survey
SECTION 8 & 17, TOWNSHIP 36 S., RANGE 17 E.

JOB NO. 13004600LC
SHEET NO. S1 OF S1

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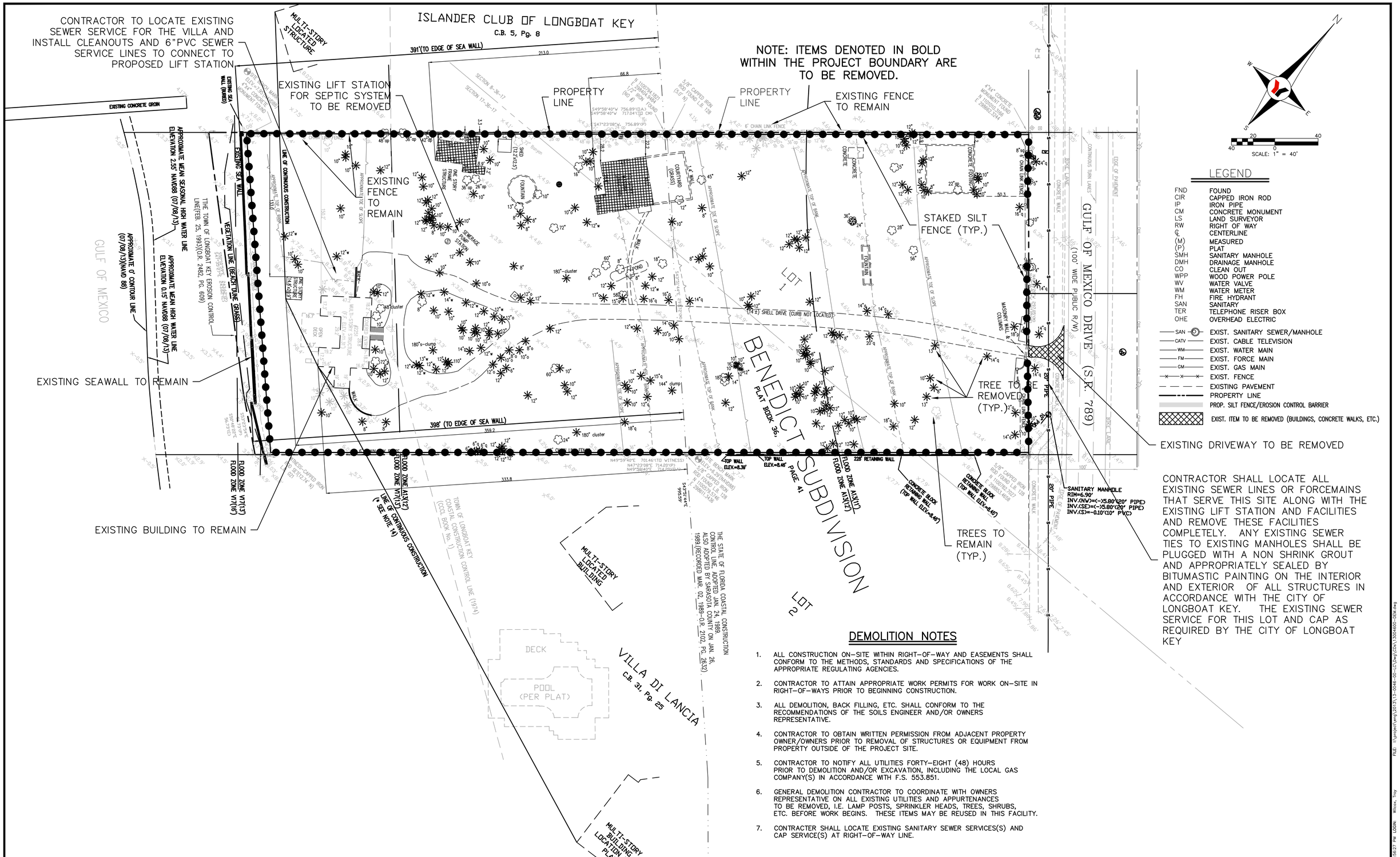

DEMOLITION NOTES

1. ALL CONSTRUCTION ON-SITE WITHIN RIGHT-OF-WAY AND EASEMENTS SHALL CONFORM TO THE METHODS, STANDARDS AND SPECIFICATIONS OF THE APPROPRIATE REGULATING AGENCIES.
2. CONTRACTOR TO ATTAIN APPROPRIATE WORK PERMITS FOR WORK ON-SITE IN RIGHT-OF-WAYS PRIOR TO BEGINNING CONSTRUCTION.
3. ALL DEMOLITION, BACK FILLING, ETC. SHALL CONFORM TO THE RECOMMENDATIONS OF THE SOILS ENGINEER AND/OR OWNERS REPRESENTATIVE.
4. CONTRACTOR TO OBTAIN WRITTEN PERMISSION FROM ADJACENT PROPERTY OWNER/OWNERS PRIOR TO REMOVAL OF STRUCTURES OR EQUIPMENT FROM PROPERTY OUTSIDE OF THE PROJECT SITE.
5. CONTRACTOR TO NOTIFY ALL UTILITIES FORTY-EIGHT (48) HOURS PRIOR TO DEMOLITION AND/OR EXCAVATION, INCLUDING THE LOCAL GAS COMPANY(S) IN ACCORDANCE WITH F.S. 553.851.
6. GENERAL DEMOLITION CONTRACTOR TO COORDINATE WITH OWNERS REPRESENTATIVE ON ALL EXISTING UTILITIES AND APPURTENANCES TO BE REMOVED, I.E. LAMP POSTS, SPRINKLER HEADS, TREES, SHRUBS, ETC. BEFORE WORK BEGINS. THESE ITEMS MAY BE REUSED IN THIS FACILITY.
7. CONTRACTER SHALL LOCATE EXISTING SANITARY SEWER SERVICES(S) AND CAP SERVICE(S) AT RIGHT-OF-WAY LINE.

REVISED NO.	BY	DATE	DESCRIPTION
1	TAW	12/12/13	REV. PER CITY REVIEW.
2	TAW	12/23/13	ISSUED FOR TOWN OF LONGBOAT KEY PLANNING AND ZONING REVIEW.
3			
4			
5			

	INITIALS	DATE
DESIGN	TAW	9/16/2013
DRAWN	TAW	9/16/2013
CHECKED	TAD	12/12/13
QUALITY CHK	---	-
SCALE	AS SHOWN	

PREPARED FOR:
VAM LBK DEVELOPMENT, LLC
1990 MAIN STREET, STE. 750
SARASOTA, FL 34236
941-309-5383

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Since 1919
TIMOTHY DOVE, PE No. 43268
DATE

ARIA, LONGBOAT KEY
ADG ASCENTIA DEVELOPMENT GROUP
DEMOLITION PLAN
SECTION 8&17, TOWNSHIP 36S., RANGE 17E.

JOB NO. 13004600LC
SHEET NO. C1.0

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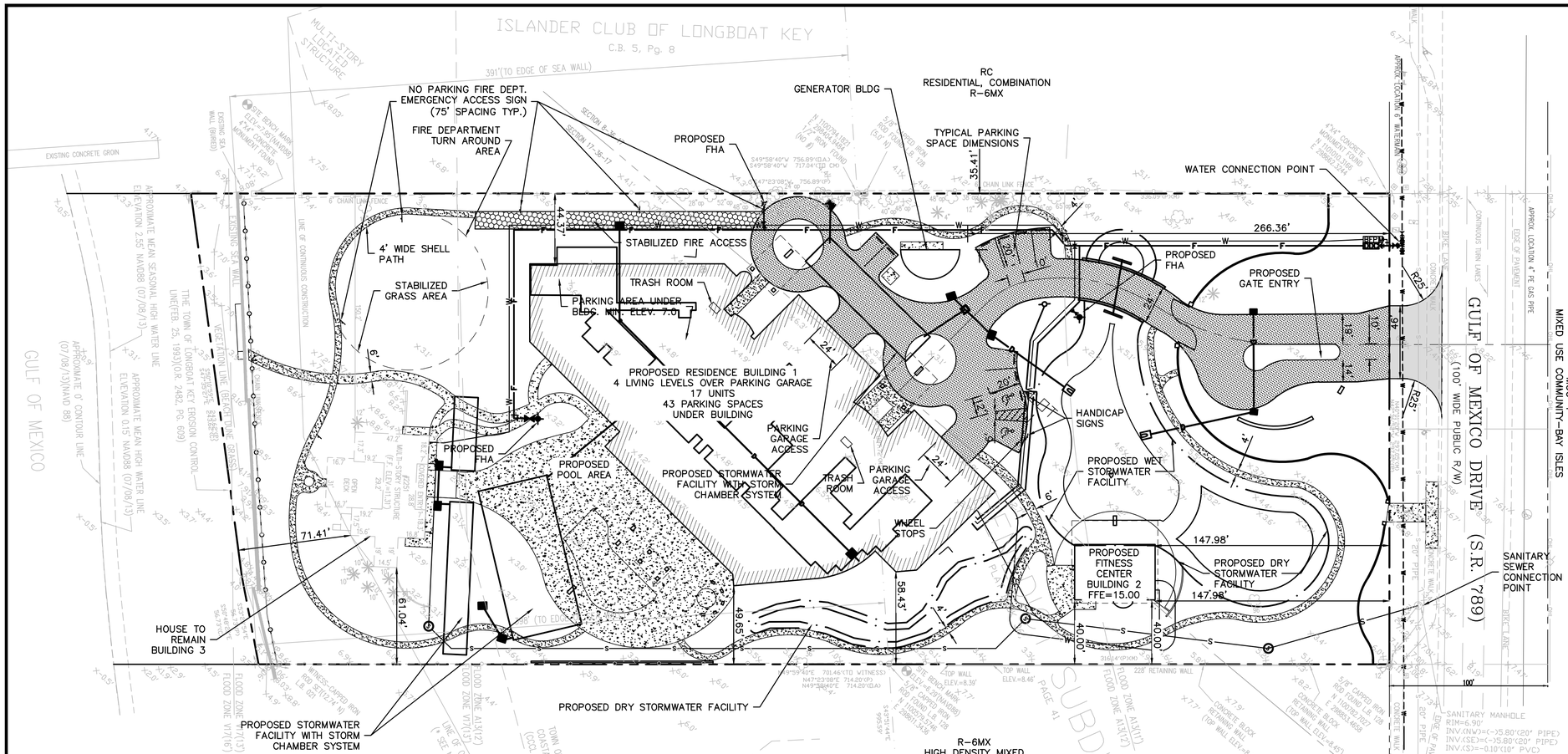

ZONING ANALYSIS

2251 GULF OF MEXICO DR. LONGBOAT KEY

ZONING DISTRICT	R6MX	ACCOUNT# 0008040008
LOT AREA	SF 219,012	ACRES 5.03
DENSITY (158.009.(R) NUMBER OF UNITS UNITS/ACRE 6 D.U./AC. x 5.03 AC.=30 D.U.	ALLOWED 30 (5.96 UNITS PER AC.)	PROPOSED 17 (3.38 UNITS PER AC.)
HEIGHT (158.145)	ALLOWED 4 STORY/ 50'-0" MAX.	PROVIDED 4 STORY/ 49'-4"
FLOOR AREA (158.102)(C) "R6MX" ZONE: 0.32 MAX.	70,084 S.F.	69,712 S.F.
LOT COVERAGE (158.145) "R6MX ZONE: 30% MAX.	65,704 S.F.	41,208 S.F.
OPEN SPACE (158.102)(F) 50% OF LOT AREA	REQUIRED 109,506 S.F.	PROVIDED 152,959 S.F.(69.84%)
LAND USE INTENSITY (158.102.(C)(2)	REQUIRED (BASED ON 6 UNITS PER ACRE)	PROVIDED
LIVING SPACE RATIO	(1.5 * F.A.R) 105,126 S.F.	104,568 S.F.
OPEN SPACE RATIO	(2.2 * F.A.R) 154,185 S.F.	153,366 S.F.
RECREATIONAL SPACE RATIO	(.15 * F.A.R) 10,513 S.F.	10,457 S.F.
SETBACKS (158.145)	REQUIRED	PROVIDED
FRONT	50'-0"	147.98'
SIDE(S)	80/30	
NORTH		44.37'
SOUTH		40.00'
REAR	30'-0"	71.41'
DISTANCE BETWEEN BUILDINGS (158.102)(L)(2)	SEE SHEET A10.00A FOR DISTANCE BETWEEN BUILDINGS	

PARKING (158.128)
1.5 per unit plus 1 per 5 units

	REQUIRED	PROVIDED
16*1.5 + 16/5 =	28	53

INCLUDES 2 HANDICAP PARKING SPACES PER FLORIDA ACCESSIBILITY CODE TABLE 208.2

LEGEND

EXISTING
- BENCH
- SIGN
- BACKFLOW PREVENTER
- CONCRETE POWER POLE
- SANITARY MANHOLE
- WATER METER
- TELEPHONE/VERIZON BOX
- TRANSFORMER
- WATER VALVE
- WELL
- PALM TREE
- q QUEEN PALM TREE
- p PINEAPPLE PALM TREE
- w WESTONIA PALM TREE
- s SAGO PALM TREE
- o OIL PALM TREE
- MISC. TREE (TYPE ?)
- op AUSTRAILIAN PINE TREE
- sg SEA GRAPE TREE
- sch SCHEFFLERA TREE

(P)-PLAT
(M)-MEASURED
(D)-DEED or DESCRIPTION
LB-LICENSED BUSINESS
(O.A.)-OVERALL
(O.R.)-OFFICIAL RECORDS BOOK
O.R.I.-OFFICIAL RECORD INSTRUMENT
#-NUMBER
x6.5 -EXISTING SPOT ELEVATION

- PROPERTY LINE
- (15) PROP. PARKING SPACES
- PROP. HANDICAP PARKING SPACES
- PROP. CONCRETE
- PROP. SHELL WALKWAYS
- PROP. PAVERS

SEE BOUNDARY SURVEY FOR SPECIFIC DELINEATION OF EXISTING FEATURES

NOTE:
FLOOD ZONE LINES SHOWN ARE BASED ON N.G.V.D. 29
THE SITE ELEVATIONS SHOWN ARE BASED ON N.A.V.D. 88

ELEV.=100.00'	N.G.V.D. 1929 (FEMA & TOWN OF LONGBOAT KEY DATUM)
1.03'	
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* ELEVATION DATUM CONVERSION USING CORPSCON
EXAMPLE:
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** ALL ELEVATIONS ON THIS SURVEY ARE N.A.V.D. 1988

LEGAL DESCRIPTION

LOT 1, BENEDICT SUBDIVISION, ACCORDING TO THE PLAT THEREOF RECORDED IN PLAT BOOK 36, PAGE 41, PUBLIC RECORDS OF SARASOTA COUNTY, FLORIDA.

*NAVD 88 (ELEVATIONS SHOWN)
CONVERSION TO NGVD 29 (+1.03', PER CORPSCON)

NOTES:

1. ALL ELEVATIONS ARE BASED ON NAVD.
2. ALL UTILITIES SHALL BE LOCATED UNDERGROUND.
3. A CONSTRUCTION FENCE SHALL BE PROVIDED TO SECURE THE CONSTRUCTION SITE.
4. THE SLOPE OF ALL GRADED AREAS ON THE SITE SHALL NOT EXCEED A RATIO OF 4:1 (FOUR(4) FEET HORIZONTAL FOR EVERY ONE (1) FOOT VERTICAL). PRIOR TO THE ISSUANCE OF ANY CERTIFICATE OF OCCUPANCY, THE APPLICANT SHALL SUBMIT AN "AS-BUILT" GRADING PLAN FOR APPROVAL BY THE TOWN PLANNING, ZONING & BUILDING DEPARTMENT.
5. THE SITE PLAN SHALL INDICATE THAT ALL SITE EXCAVATION AND GRADING SHALL CONFORM TO SECTION 158.156 OF THE TOWN ZONING CODE.
6. THE APPLICANT SHALL DEMONSTRATE COMPLIANCE WITH CHAPTER 158.006, DEFINITIONS, OF THE TOWN ZONING CODE (ORDINANCE 2000-02), ACCESSORY USES AND STRUCTURES. INCLUDE ALL ACCESSORY STRUCTURE SQUARE FOOTAGES AND PERCENTAGES IN THE DATA CALCULATIONS ON THE SITE PLAN.
7. ON THE SITE PLAN, THE APPLICANT SHALL GRAPHICALLY INDICATE THE HEIGHT AND ROOF PITCHES OF THE ACCESSORY STRUCTURES.
8. ALL EXTERIOR LIGHTING SHALL COMPLY WITH SECTION 158.102(B)(5), ARRANGING THE LIGHTING TO SHIELD OR DEFLECT THE LIGHT FROM ADJOINING PROPERTIES. ALL EXTERIOR LIGHTING TO BE IN COMPLIANCE WITH CHAPTER 100 SEA TURTLES, OF THE TOWN CODE.
9. PARKING OF CONSTRUCTION-RELATED VEHICLES SHALL BE PROHIBITED ALONG GULF OF MEXICO DRIVE.
10. NO LOFT, BALCONY, STORAGE, OR MEZZANINE IS PROPOSED ABOVE OR WITHIN THE SINGLE STORY OF THE PROPOSED BUILDING
11. SITE SIGNAGE WILL BE IN ACCORDANCE WITH ALL TOWN OF LONGBOAT KEY CODES AND REGULATIONS.
12. A SILT FENCE WILL BE USED DURING CONSTRUCTION TO CONTROL ANY SILT AND EROSION ON SITE.
13. FLOOD ZONES SHOWN ARE APPROXIMATE AND SCALED FROM THE TOWN OF LONGBOAT KEY, FLORIDA FLOOD INSURANCE RATE MAP, COMMUNITY PANEL No. 125126-0010-B, REVISED DATE AUGUST 15, 1983. THE FLOOD ZONE DATA SHOULD BE VERIFIED BY THE LOCAL BUILDING DEPARTMENT BEFORE ANY CONSTRUCTION OR DESIGN.

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	1	TD	12/11/13	REV. TRUCK TURN AROUND AREA.
	2	TAW	12/23/13	ISSUED FOR TOWN OF LONGBOAT KEY PLANNING AND ZONING REVIEW.
	3			
	4			
	5			

	INITIALS	DATE
DESIGN	TAW	9/16/2013
DRAWN	TAW	9/16/2013
CHECKED	TAD	12/12/13
QUALITY CHK	---	-
SCALE	AS SHOWN	

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ARCHITECTURE•ENGINEERING•ENVIRONMENTAL•LANDSCAPE•PLANNING•SURVEYING•UTILITIES
GAINESVILLE•LAKEWOOD RANCH•ORLANDO•PALM BEACH GARDENS•ST. PETERSBURG•TAMPA•VENICE

TIMOTHY DOVE, PE No. 43268
DATE

ARIA, LONGBOAT KEY

ADG ASCENTIA DEVELOPMENT GROUP

SITE DEVELOPMENT PLAN

SECTION 8&17, TOWNSHIP 36 S., RANGE 17 E.

JOB NO. 13004600LC
SHEET NO. C2.0

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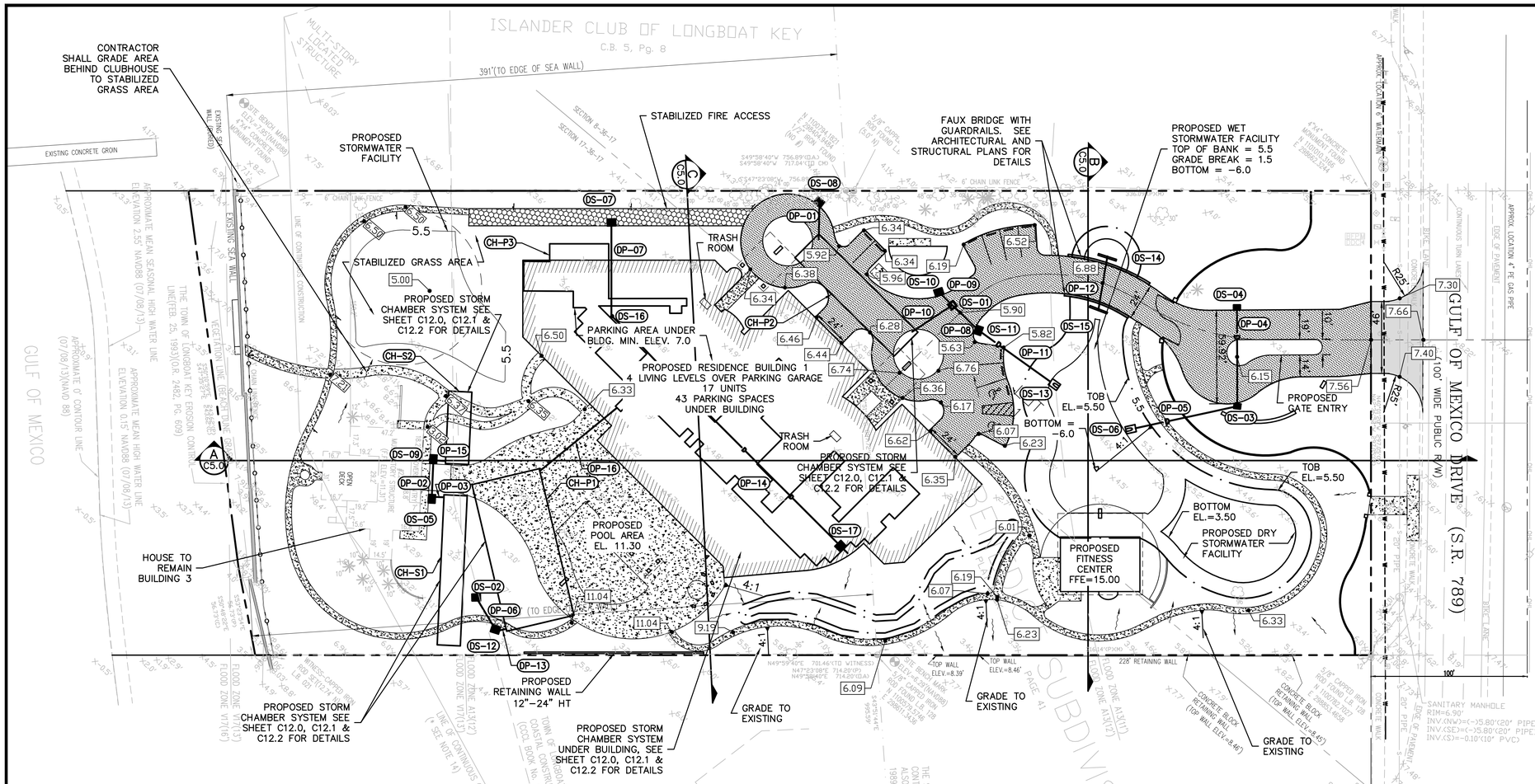
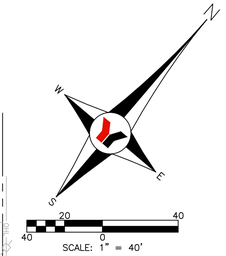




LEGEND

- EXIST. CONTOUR
- EXIST. SPOT ELEVATION
- EXIST. SANITARY SEWER/MANHOLE
- EXIST. CABLE TELEVISION
- EXIST. WATER MAIN
- EXIST. FORCE MAIN
- EXIST. GAS MAIN
- EXIST. FENCE
- EXIST. BUILDING FOOTPRINT
- EXIST. POND TOP OF BANK
- EXIST. PAVEMENT
- EXIST. POWER POLE
- EXIST. LIGHT POST
- EXIST. OVERHEAD ELECTRIC
- EXIST. STORM SEWER
- EXIST. STORM INLET
- EXIST. SIGN
- PROP. WATER SYSTEM
- PROP. BACKFLOW PREVENTER
- PROP. WATER METER
- PROP. FIRE SYSTEM
- PROP. SANITARY SEWER
- PROP. SANITARY MANHOLE
- PROP. SANITARY CLEANOUT
- PROP. STORM DRAINAGE
- PROP. CATCH BASIN
- PROPERTY LINE
- PROP. HANDICAP PARKING SPACES
- PROP. PAVERS
- PROP. CONCRETE SURFACE
- PROP. SHELL WALKWAYS

SEE TOPOGRAPHIC SURVEY FOR SPECIFIC DELINEATION OF EXISTING FEATURES

NOTES:

1. SILT BARRIERS, HAY BALES OR SIMILAR EFFECTIVE EROSION CONTROL BARRIERS WILL BE REQUIRED IN ANY AREA WHERE EROSION OR SILTATION MAY CAUSE DAMAGE TO TREES.
2. SILT FENCE BARRIER TO BE INSTALLED ALONG PERIMETER OF SITE PER THIS PLAN PRIOR TO ANY DEMOLITION OR CONSTRUCTION ON THIS SITE.
3. ALL STORMWATER RUNOFF FROM DEVELOPMENT SITE SHALL MEET APPLICABLE SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT (SWFWMD) AND/OR FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION (FDEP).
4. REFER TO FDOT INDEX 270 FOR FLARED END SECTION (FES) DETAIL.

DRAINAGE STRUCTURE TABULATION

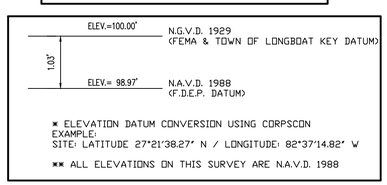
DS-01	JUNCTION BOX GE 5.78 INV. EL 2.90	DS-11	GRATE INLET GE 5.58 INV. EL 2.85
DS-02	GRATE INLET GE 5.50 INV. EL 3.17	DS-12	GRATE INLET GE 6.00 INV. EL 3.14
DS-03	GRATE INLET GE 5.49 INV. EL 2.24	DS-13	FES EL 0.00
DS-04	GRATE INLET GE 5.71 INV. EL 2.37	DS-14	CONST CONC. ENDWALL FDOT INDEX 250 EL 3.05
DS-05	GRATE INLET GE 2.95 INV. EL 2.11	DS-15	CONST CONC. ENDWALL FDOT INDEX 250 EL 3.00
DS-06	FES EL 0.00	DS-16	GRATE INLET GE 7.00 INV. EL 3.96
DS-07	GRATE INLET GE 8.00 INV. EL 4.20	DS-17	GRATE INLET GE INV. EL 3.10
DS-08	GRATE INLET GE 5.70 INV. EL 3.20	CH-P1	STORM CHAMBER SYSTEM N INV. 3.10 S INV. 3.10 NW INV. 3.20
DS-09	GRATE INLET GE 2.95 NE INV. EL 2.11 SE INV. EL 2.21	CH-P2	STORM CHAMBER SYSTEM NW INV. 3.10 NE INV. 3.10
DS-10	GRATE INLET GE 5.58 INV. EL 2.93	CH-S1	STORM CHAMBER SYSTEM NW INV. 2.08
		CH-S2	STORM CHAMBER SYSTEM NW INV. 2.08
		CH-P3	STORM CHAMBER SYSTEM NW INV. 4.06 S INV. 3.39

DRAINAGE PIPE TABULATION

DP-01	24 LF 10" ADS @ 0.40% SLOPE	DP-10	31 LF 10" ADS @ 0.65% SLOPE
DP-02	25 LF 8" ADS @ 0.40% SLOPE	DP-11	63 LF 15" RCP @ 4.52% SLOPE
DP-03	9 LF 10" ADS @ 0.35% SLOPE	DP-12	34 LF 30" RCP @ 0.20% SLOPE
DP-04	63 LF 12" RCP @ 0.20% SLOPE	DP-13	15 LF 12" ADS @ 0.25% SLOPE
DP-05	73 LF 15" RCP @ 3.07% SLOPE	DP-14	214 LF 8" ADS @ 0.40% SLOPE
DP-06	12 LF 12" ADS @ 0.25% SLOPE	DP-15	9 LF 10" ADS @ 0.35% SLOPE
DP-07	60 LF 8" ADS @ 0.40% SLOPE	DP-16	64 LF 10" ADS @ 0.30% SLOPE
DP-08	23 LF 15" RCP @ 0.22% SLOPE		
DP-09	12 LF 12" RCP @ 0.25% SLOPE		

NOTE:
FLOOD ZONE LINES SHOWN ARE BASED ON N.G.V.D. 29

THE SITE ELEVATIONS SHOWN ARE BASED ON N.A.V.D. 88



* ELEVATION DATUM CONVERSION USING CORPSCON
EXAMPLE:
SITE: LATITUDE 27°21'38.27" N / LONGITUDE: 82°37'14.82" W

** ALL ELEVATIONS ON THIS SURVEY ARE N.A.V.D. 1988

LEGAL DESCRIPTION

LOT 1, BENEDICT SUBDIVISION, ACCORDING TO THE PLAT THEREOF RECORDED IN PLAT BOOK 36, PAGE 41, PUBLIC RECORDS OF SARASOTA COUNTY, FLORIDA.

***NAVD 88 (ELEVATIONS SHOWN)**
CONVERSION TO NGVD 29 (+1.03', PER CORPSCON)

REVISED NO.	BY	DATE	DESCRIPTION
1	TAW	11/27/13	REV. PER CITY REVIEW.
2	TAW	12/12/13	REV. PER CITY REVIEW.
3	TAW	12/23/13	ISSUED FOR TOWN OF LONGBOAT KEY PLANNING AND ZONING REVIEW.
4			
5			

	INITIALS	DATE
DESIGN	TAW	9/16/2013
DRAWN	TAW	9/16/2013
CHECKED	TAD	12/12/13
QUALITY CHK	---	-
SCALE	AS SHOWN	

PREPARED FOR:
VAM LBK DEVELOPMENT, LLC
1990 MAIN STREET, STE. 750
SARASOTA, FL 34236
941-309-5383

George F. Young, Inc.
10540 PORTAL CROSSING, SUITE 105 BRADENTON, FLORIDA 34211
PHONE (941) 747-2981 FAX (941) 747-7234
ENGINEERING CERTIFICATE OF AUTHORIZATION NUMBER 21
ARCHITECTURE•ENGINEERING•ENVIRONMENTAL•LANDSCAPE•PLANNING•SURVEYING•UTILITIES
GAINESVILLE•LAKEWOOD RANCH•ORLANDO•PALM BEACH GARDENS•ST. PETERSBURG•TAMPA•VENICE
Since 1919

TIMOTHY DOVE, PE No. 43268
DATE

ARIA, LONGBOAT KEY
ADG ASCENTIA DEVELOPMENT GROUP
PAVING, GRADING AND DRAINAGE PLAN
SECTION 8&17, TOWNSHIP 36 S., RANGE 17 E.

JOB NO. 13004600LC
SHEET NO. C3.0

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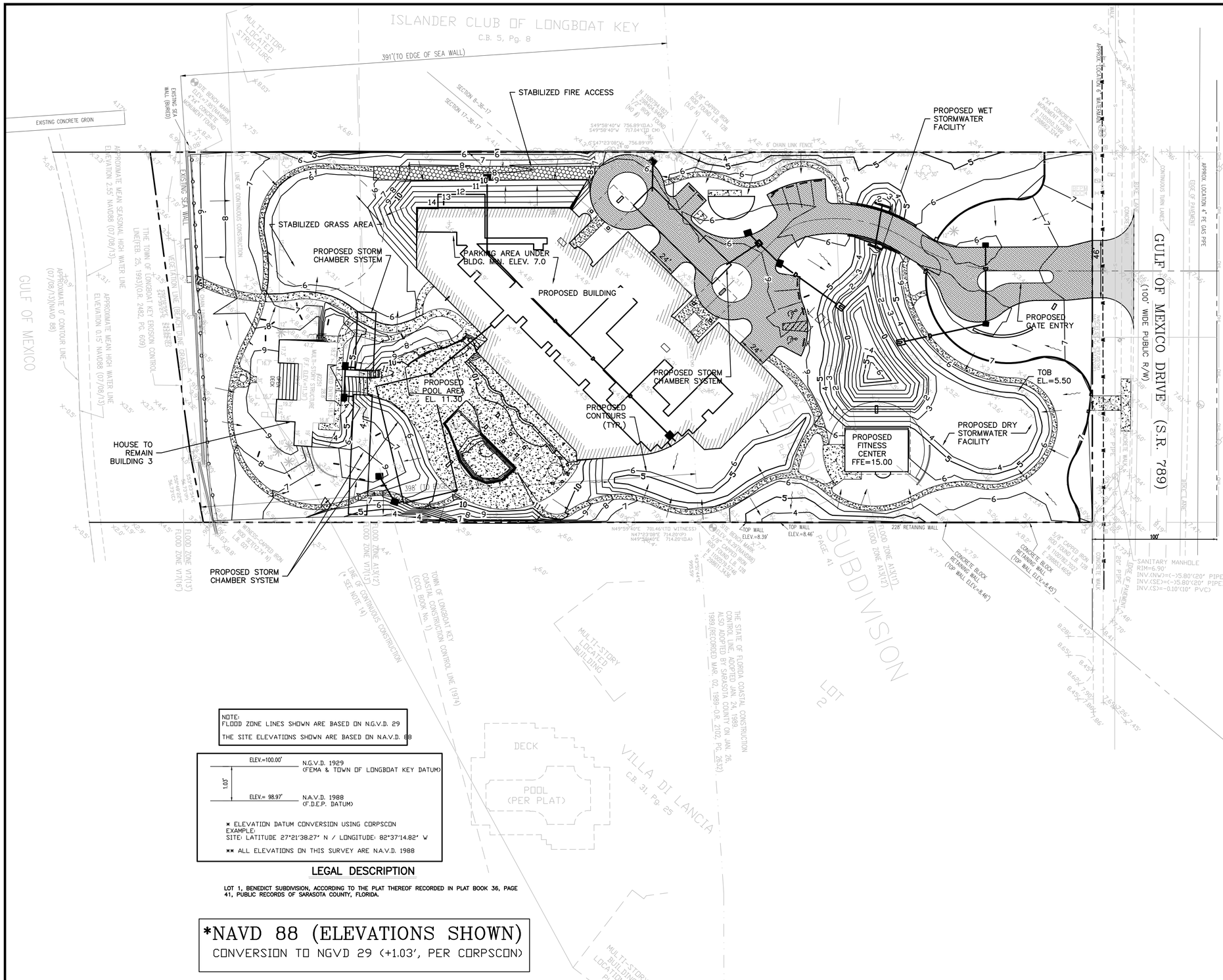

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- PROP. HANDICAP PARKING SPACES
- PROP. CONTOUR
- PROP. PAVERS
- PROP. CONCRETE SURFACE
- PROP. SHELL WALKWAYS

SEE TOPOGRAPHIC SURVEY FOR SPECIFIC DELINEATION OF EXISTING FEATURES

NOTE:
FLOOD ZONE LINES SHOWN ARE BASED ON N.G.V.D. 29

THE SITE ELEVATIONS SHOWN ARE BASED ON N.A.V.D. 88

ELEV.=100.00'		N.G.V.D. 1929 (FEMA & TOWN OF LONGBOAT KEY DATUM)
	1.03'	
ELEV.= 98.97'		N.A.V.D. 1988 (F.D.E.P. DATUM)

* ELEVATION DATUM CONVERSION USING CORPSCON
EXAMPLE:
SITE: LATITUDE 27°21'38.27" N / LONGITUDE: 82°37'14.82" W

** ALL ELEVATIONS ON THIS SURVEY ARE N.A.V.D. 1988

LEGAL DESCRIPTION

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***NAVD 88 (ELEVATIONS SHOWN)**
CONVERSION TO NGVD 29 (+1.03', PER CORPSCON)

REVISED	NO.	BY	DATE	DESCRIPTION
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	3			
	4			
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QUALITY CHK	---	-
SCALE	AS SHOWN	

PREPARED FOR:
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1990 MAIN STREET, STE. 750
SARASOTA, FL 34236
941-309-5383

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Since 1919
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TIMOTHY DOVE, PE No. 43268
DATE

ARIA, LONGBOAT KEY

ADG ASCENTIA DEVELOPMENT GROUP

PROPOSED CONTOUR PLAN

SECTION 8&17, TOWNSHIP 36S., RANGE 17E.

JOB NO. 13004600LC

SHEET NO. C3.1

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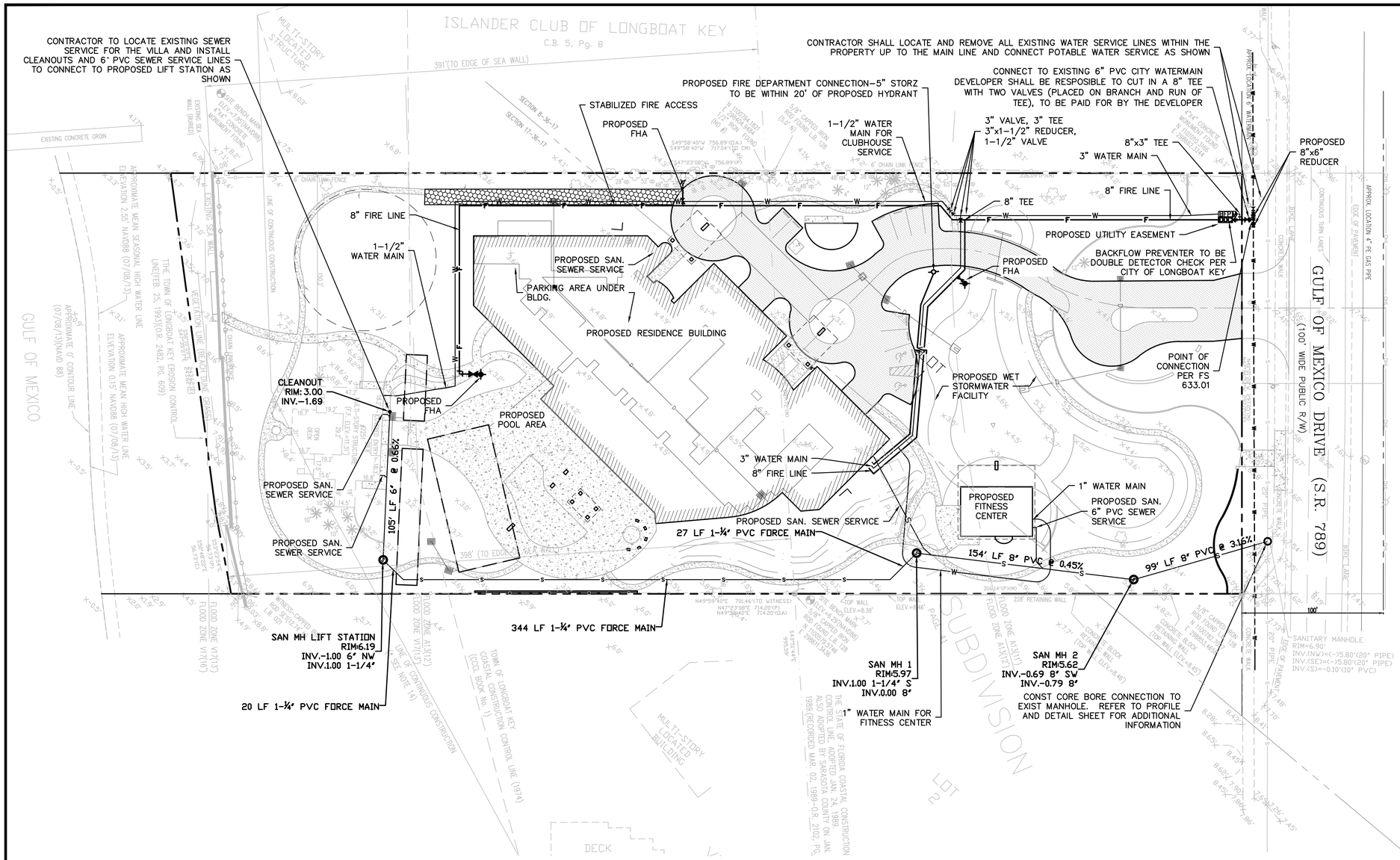

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- PROP. CATCH BASIN
- PROPERTY LINE
- PROP. HANDICAP PARKING SPACES
- PROP. CONCRETE POOL DECK
- PROP. SHELL WALKWAYS

SEE TOPOGRAPHIC SURVEY FOR SPECIFIC DELINEATION OF EXISTING FEATURES

NOTES:

1. 2" HDPE DOMESTIC WATERMAIN SHALL BE SDR 11, PRESSURE RATING 160 P.S.I.
2. 6" AND 8" WATERMAIN SHALL CONFORM TO THE REQUIREMENTS OF AWWA STANDARD C–900, DR–18 WITH WORKING PRESSURE OF 150 P.S.I.G.
3. ALL WATERMAIN SHALL BE COLOR CODE BLUE.
4. GRAVITY SANITARY SEWER PIPE SHALL BE P.V.C. SDR–35, ASTM D–3034, COLOR CODE GREEN.
5. ALL ELEVATIONS ARE BASED ON NAVD.
6. ALL NEW MANHOLE COVERS SHALL BE RUBBER "O" RING TYPE AND PLUMBERS TAPE SHALL BE INSTALLED ON ALL CLEAN–OUT CAPS.
7. FOR ALL FIRE PROTECTION SERVICES REFER TO FIRE PROTECTION PLAN PROVIDED BY THE PROPOSED BUILDING MEP ENGINEER.
8. PROPOSED MANHOLE 1 AND 2 SHALL BE FIBERGLASS LINED.
9. ALL PIPE DOWNSTREAM OF THE FDC SHALL BE SDR14. ALL OTHER PIPE SHALL BE SDR18.
10. ALL BURIED VALVES, FITTINGS AND PIPING SHALL BE WRAPPED IN 8 MIL PLASTIC.

FIRE HYDRANT NOTES

FH#	LOCATION	STATIC PRESSURE	FLOW AT 20PSI
20820	SOUTH	49	1798
20813	MORTH	52	174

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QUALITY CHK	---	–
SCALE	AS SHOWN	

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TIMOTHY DOVE, PE No. 43268
DATE

ARIA, LONGBOAT KEY
ADG ASCENTIA DEVELOPMENT GROUP
WATER AND SANITARY SEWER PLAN
SECTION 8&17, TOWNSHIP 36 S., RANGE 17 E.

JOB NO. 13004600LC
SHEET NO. C4.0

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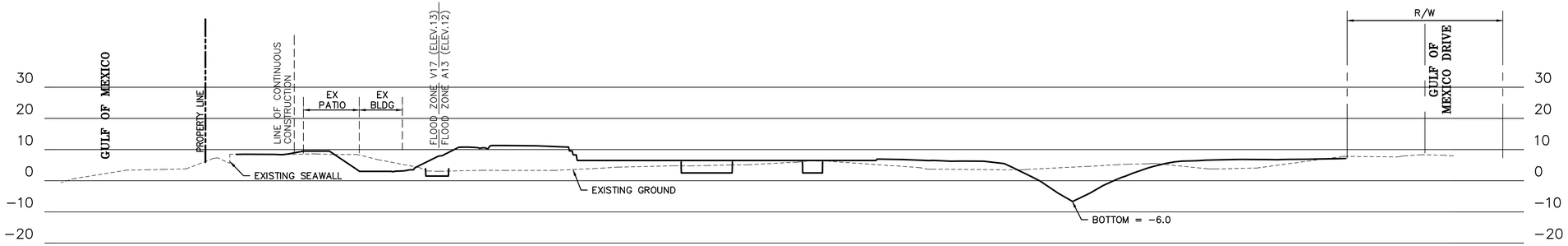

SECTION A (A / C3.0)
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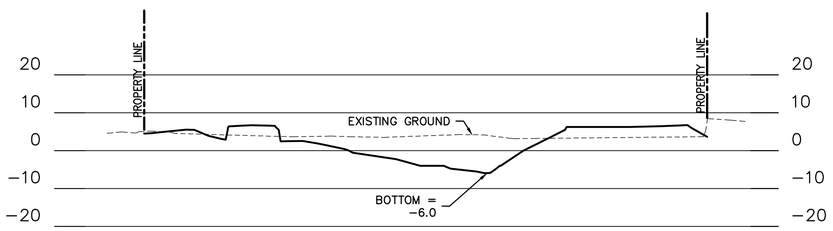

SECTION B (B / C3.0)
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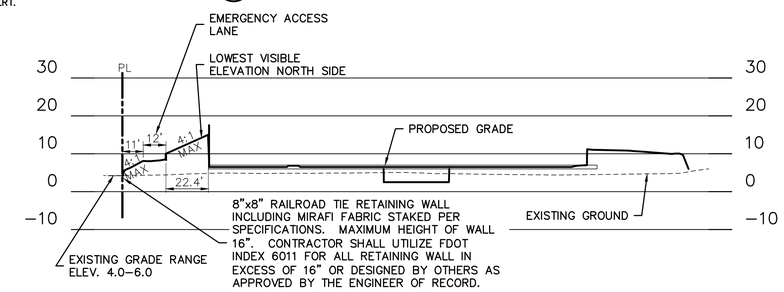

SECTION C (C / C3.0)
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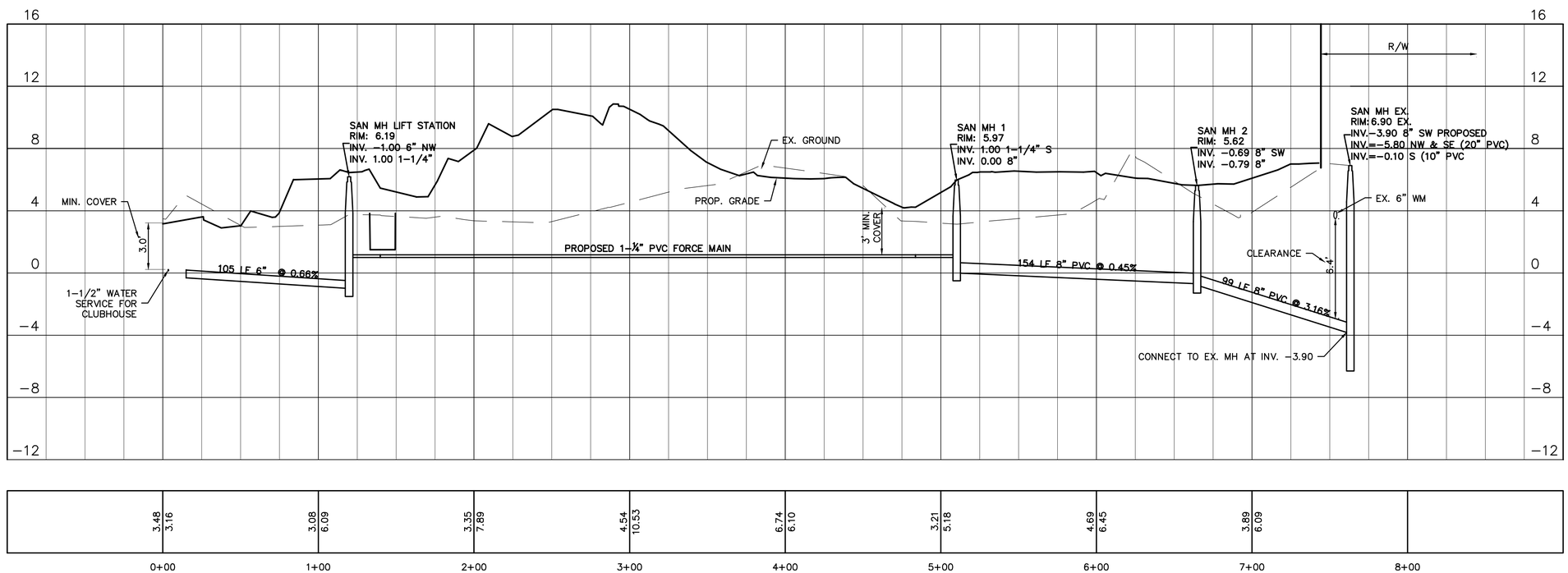

SANITARY SEWER PROFILE (C4.0)
SCALE: 1"=40' HORZ. 1"= 4' VERT.

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QUALITY CHK	---	-
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TIMOTHY DOVE, PE No. 43268
DATE

ARIA, LONGBOAT KEY
ADG ASCENTIA DEVELOPMENT GROUP
SITE CROSS SECTIONS AND PROFILES
SECTION 8&17, TOWNSHIP 36 S., RANGE 17 E.

JOB NO. 13004600LC
SHEET NO. C5.0

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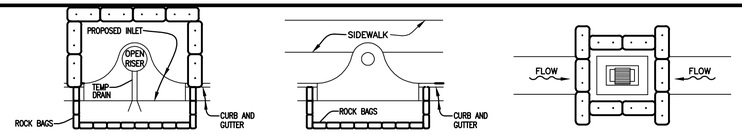
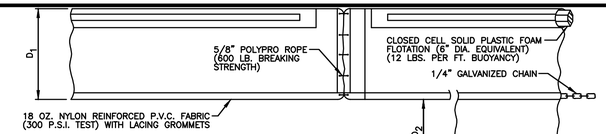


PARTIAL INLET | COMPLETED INLET | DITCH BOTTOM INLET

PROTECTION AROUND INLETS OR SIMILAR STRUCTURES

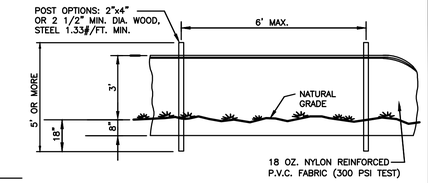
N.T.S.



D_1 = 5' STD. (SINGLE PANEL FOR DEPTHS 5' OR LESS).
D_2 = 5' STD. (ADDITIONAL PANEL FOR DEPTHS > 5').
CURTAIN TO REACH BOTTOM UP TO DEPTHS OF 10 FEET.
TWO (2) PANELS TO BE USED FOR DEPTHS GREATER THAN 10 FEET UNLESS SPECIAL DEPTH CURTAINS SPECIFICALLY CALLED FOR IN THE PLANS OR AS DETERMINED BY THE PROJECT ENGINEER.

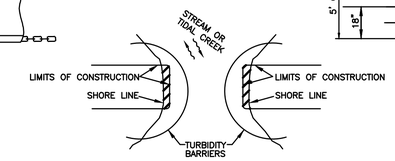
TYPE I FLOATING TURBIDITY BARRIER

N.T.S.



STAKED TURBIDITY BARRIER

N.T.S.



TURBIDITY BARRIER APPLICATIONS

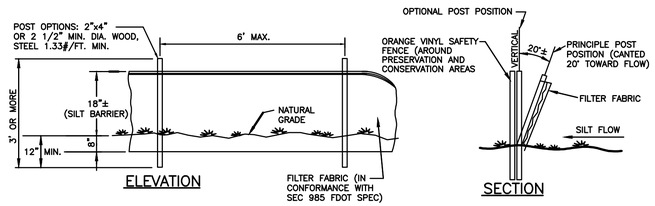
N.T.S.

NOTES:

1). TURBIDITY OF TYPE I MAY BE USED IN ALL PERMANENT BODIES OF WATER REGARDLESS OF WATER DEPTH.
2). NUMBER AND SPACING OF ANCHORS DEPENDENT ON WATER VELOCITIES.
3). DEPLOYMENT OF BARRIER AROUND PILE LOCATIONS MAY VARY TO ACCOMMODATE CONSTRUCTION OPERATIONS.
4). NAVIGATION MAY REQUIRE SEGMENTING BARRIER DURING CONSTRUCTION OPERATIONS.
5). TURBIDITY BARRIERS FOR FLOWING STREAMS, AND TIDAL CREEKS MAY BE EITHER FLOATING OR STAKED TYPES THAT WILL SUIT SITE CONDITIONS AND MEET EROSION CONTROL AND WATER QUALITY REQUIREMENTS.
6). THE BARRIER TYPE(S) WILL BE AT THE CONTRACTOR'S OPTION UNLESS OTHERWISE SPECIFIED IN THE PLANS, HOWEVER PAYMENT WILL BE UNDER THE PAY ITEM(S) ESTABLISHED IN THE PLANS FOR FLOATING TURBIDITY BARRIERS AND/OR STAKED TURBIDITY BARRIERS.
7). POSTS IN STAKED TURBIDITY BARRIERS TO BE INSTALLED IN VERTICAL POSITION UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
8). SUBSTITUTIONS FOR TYPE I SHALL BE AS APPROVED BY ENGINEER.
9). COMPONENTS OF TYPE I MAT BE SIMILAR OR IDENTICAL TO PROPRIETARY DESIGNS. ANY INFRINGEMENT ON THE PROPRIETARY RIGHTS OF THE DESIGNER SHALL BE THE SOLE RESPONSIBILITY OF THE USER.

TURBIDITY BARRIERS

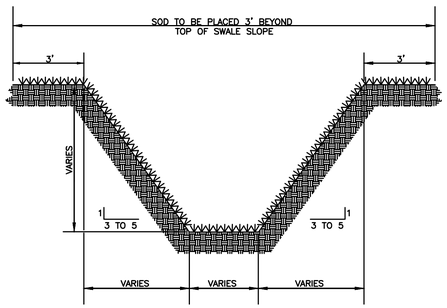
N.T.S.



ELEVATION | SECTION

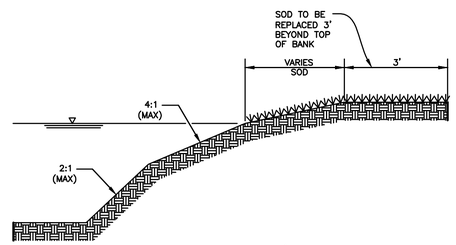
TYPICAL SILT FENCE

N.T.S.



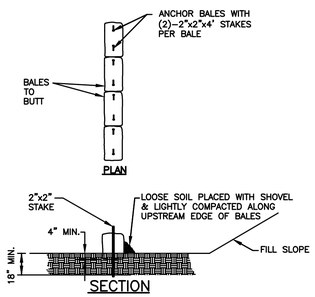
TYPICAL SWALE SECTION

N.T.S.



TYPICAL RETENTION/DETENTION POND SECTION

N.T.S.



TYPICAL BALE SILT BARRIER

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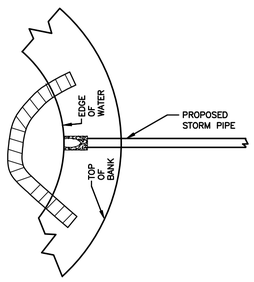
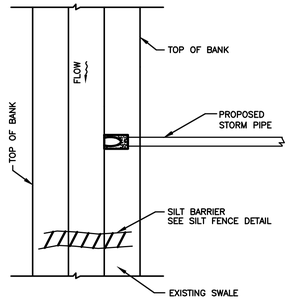


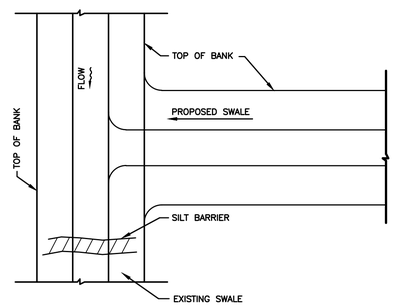
TURBIDITY BARRIER AT CONNECTION OF STORM PIPE TO EXISTING LAKE

N.T.S.



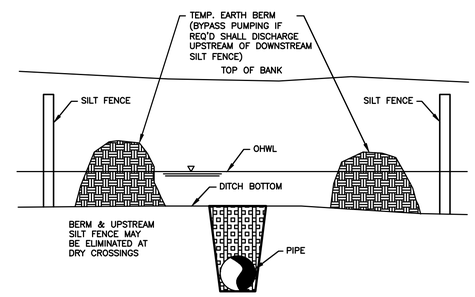
SILT BARRIER AT CONNECTION OF STORM PIPE TO EXISTING SWALE

N.T.S.



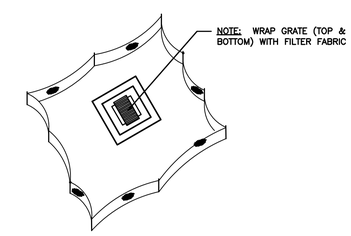
SILT BARRIER AT CONNECTION OF SWALE TO EXISTING SWALE

N.T.S.



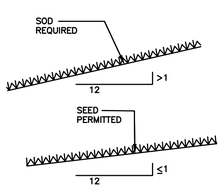
UNDERGROUND PIPE CROSSING

N.T.S.



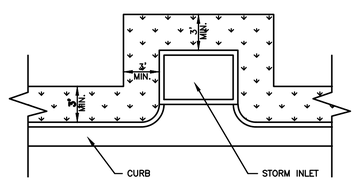
STAKED SILT BARRIER OR SILT FENCE PROTECTION AROUND DITCH BOTTOM INLETS

N.T.S.



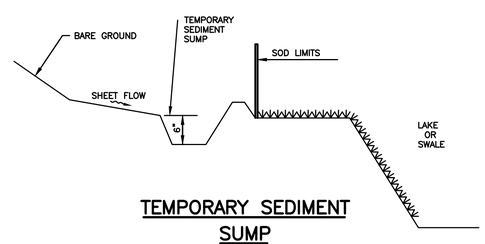
GRASS SLOPES

N.T.S.



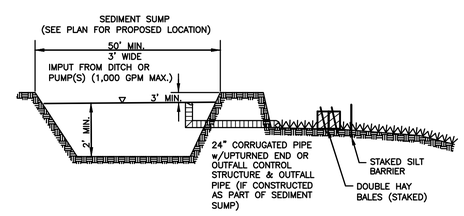
SOD AROUND CURB AND AROUND INLET

N.T.S.



TEMPORARY SEDIMENT SUMP

N.T.S.



SEDIMENT SUMP SECTION

N.T.S.

THE UNDERSIGNED, AS AN AUTHORIZED REPRESENTATIVE OF _____, LLC ACKNOWLEDGES RESPONSIBILITY FOR BEST MANAGEMENT PRACTICES AS THEY RELATE TO THE EROSION CONTROL AND SURFACE WATER MANAGEMENT SYSTEMS.

AUTHORIZED REPRESENTATIVE SIGNATURE _____ DATE _____

REVISED	NO.	BY	DATE	DESCRIPTION
	1	TAW	12/23/13	ISSUED FOR TOWN OF LONGBOAT KEY PLANNING AND ZONING REVIEW.
	2			
	3			
	4			
	5			

	INITIALS	DATE
DESIGN	TAW	9/16/2013
DRAWN	TAW	9/16/2013
CHECKED	TAD	12/12/13
QUALITY CHK	---	-
SCALE	AS SHOWN	

PREPARED FOR:
VAM LBK DEVELOPMENT, LLC
1990 MAIN STREET, STE. 750
SARASOTA, FL 34236
941-309-5383

George F. Young, Inc.
10540 PORTAL CROSSING, SUITE 105 BRADENTON, FLORIDA 34211
PHONE (941) 747-2981 FAX (941) 747-7234
ENGINEERING CERTIFICATE OF AUTHORIZATION NUMBER 21
ARCHITECTURE•ENGINEERING•ENVIRONMENTAL•LANDSCAPE•PLANNING•SURVEYING•UTILITIES
GAINESVILLE•LAKEWOOD RANCH•ORLANDO•PALM BEACH GARDENS•ST. PETERSBURG•TAMPA•VENICE
Since 1919
TIMOTHY DOVE, PE No. 43268
DATE

ARIA, LONGBOAT KEY

ADG ASCENTIA DEVELOPMENT GROUP

BEST MANAGEMENT PRACTICES DETAILS

SECTION 8&17, TOWNSHIP 36S., RANGE 17E.

JOB NO. 13004600LC

SHEET NO. C6.0

FILE: L:\project\eng\2013\13-0046-00-LongBoat\CD\13004600-BMPDTL.DWG
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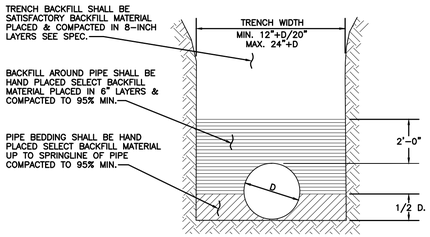
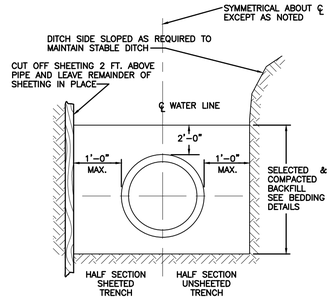


TYPE 2
PIPE BEDDING DETAIL
FOR DUCTILE IRON & P.V.C. PIPE
N.T.S.



WATER LINE PIPE
TRENCH DETAIL
N.T.S.

NOTES:

1). THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER FOR APPROVAL, HIS METHOD OF RESTRAINING THE VALVE OR HYDRANT PRIOR TO ORDERING MATERIAL. FOR THRUST BLOCKING CONSTRUCT THE HYDRANT THRUST BLOCK THE SAME SIZE AS FOR TEE. BLOCK DRAIN HOLE.

2). WHERE MINIMUM DISTANCE REQUIRED USE CLOW-F-1217 (OR EQUAL) ANCHORING TEE WITHOUT ANCHORING COUPLING BETWEEN TEE & GATE VALVE.

3). BURY LINE AS MARKED ON HYDRANT BY THE MANUFACTURER.

4). CONTRACTOR WILL PROVIDE AND INSTALL BLUE HYDRANT DELINEATORS AT LOCATIONS DESIGNATED BY THE ENGINEER.

5). CONTRACTOR WILL UTILIZE VARIOUS ADJUSTMENT TECHNIQUES, GRADLOCK, SPECIAL TEES OR OTHER A.W.W.A. APPROVED FITTINGS.

6). ALL FIRE HYDRANTS SHALL BE PAINTED YELLOW.

7). DUCTILE IRON FLANGED OFF-SET MAY BE USED FOR ADJUSTING FIRE HYDRANT TO FINISHED GRADE.

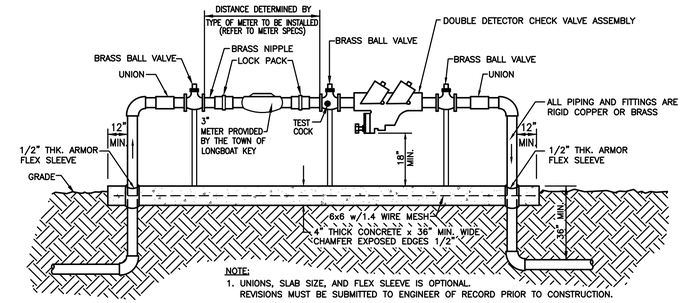
8). ONLY ONE (1) FIRE HYDRANT ASSEMBLY RISER KIT SHALL BE ALLOWED PER FIRE HYDRANT AND SHALL BE SUPPLIED BY FIRE HYDRANT MANUFACTURER.

9). VALVE STEM EXTENSIONS SHALL BE PINNED TO THE OPERATING NUT, AND SHALL BE SUPPLIED BY THE VALVE MANUFACTURER.

10). RESTRAINED JOINTS ON BACKFLOW PREVENTER AND FIRE HYDRANT CAN BE STAINLESS STEEL RODS OR OTHER APPROVED DEVICE.

11). ALL IRON PIPE AND FITTINGS SHALL BE WRAPPED IN 8-MIL THICK BLACK PLASTIC.

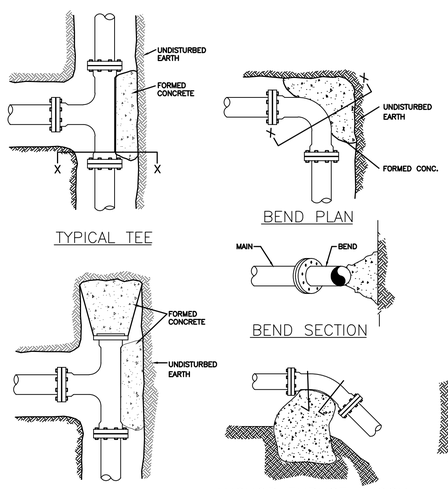
12). FIRE HYDRANT TO BE WATEROUS PACER MODEL ONLY.



NOTES:

1. BOTTOM OF BACKFLOW DEVICE MUST BE 18" ABOVE FINISHED GRADE.
2. BACKFLOW DEVICE MUST BE INSTALLED DOWNSTREAM OF METER, AS CLOSE TO METER AS POSSIBLE.
3. COPPER PIPE TYPE "L" OR "K" OR BRASS PIPE MINIMUM SCHEDULE 40 SHALL BE USED TO A MINIMUM DEPTH OF 36" BELOW GRADE.
4. PIPES PASSING THROUGH OR ENCASED IN CONCRETE MUST BE PROPERLY PROTECTED AND SLEEVED.
5. THE SYSTEM MUST MEET ALL REQUIREMENTS OF THE TOWN OF LONGBOAT KEY PLUMBING CODE (LATEST EDITION).
6. ALL PIPING FROM THE BACKFLOW DEVICE TO THE FIRST ATMOSPHERIC OPENING OR TO EACH BRANCH VALVE, MUST BE COLOR CODED BLUE.
7. METER, LOCK PACKS, AND BRASS NIPPLES WILL BE PROVIDED BY THE TOWN OF LONGBOAT KEY.
8. FOR USE WHERE BACKFLOW PREVENTER IS REQUIRED WITH METER.

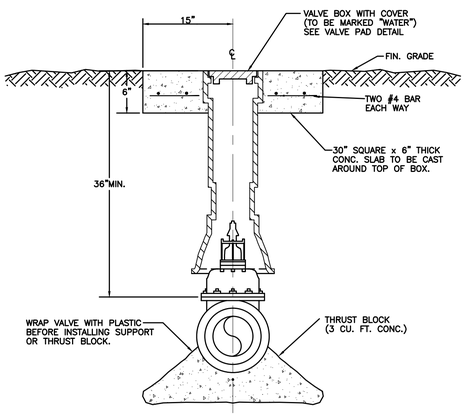
3" DOUBLE DETECTOR CHECK VALVE
AND METER ASSEMBLY INSTALLATION
N.T.S.



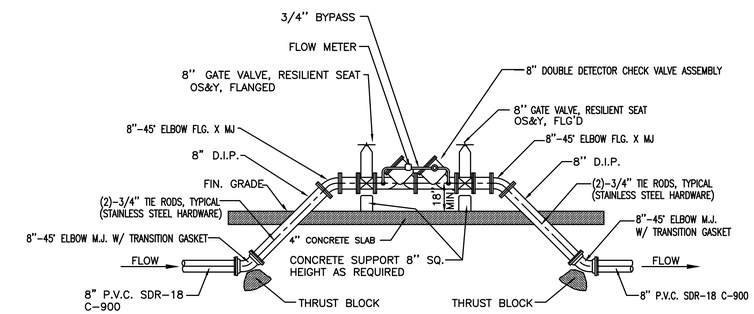
THRUST BLOCK BEARING AREA TABLE (SQ. FT.)					
SIZE OF PIPE	TEE & PLUGS	90° BENDS	45° BENDS	22 1/2° BENDS	11 1/4° BENDS
4"	2.5	2.5	1.5	1.0	1.0
6"	5.0	5.0	3.0	1.5	1.0
8"	9.0	9.0	5.0	2.5	1.5
10"	14.0	14.0	7.5	4.0	2.0
12"	20.0	20.0	11.0	5.5	3.0
14"	27.0	27.0	15.0	7.5	4.0
16"	35.0	35.0	19.0	10.0	5.0

NOTE:
1.) WRAP ALL FITTINGS WITH PLASTIC BEFORE POURING THRUST BLOCKS. ALL THRUST BLOCKS MUST BE LEFT OPEN FOR INSPECTION BY THE ENGINEER & TOWN OF LONGBOAT KEY.
2.) ALL BEARING SURFACE TO BE CARRIED TO UNDISTURBED SOIL.
3.) THESE TABLES SHOW MINIMUM SIZE THRUST BLOCKS FOR GOOD SOIL WITH A 2,000 P.S.F. SOIL BEARING (A-1 THRU A-3 CLEAN SAND AND GRAVELS).
4.) POOR SOIL (A-1 THRU A-8, SILTY SOILS, CLAYS, MUCK & PEAT) WILL REQUIRE LARGER THRUST BLOCKS.
5.) THRUST BLOCK SIZES BASED ON 150 P.S.I. HYDROSTATIC TEST PRESSURE.

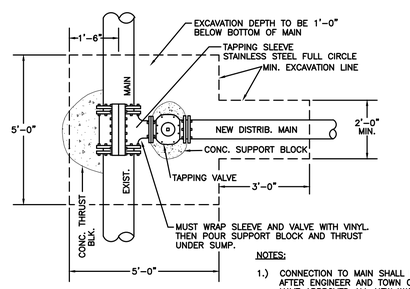
TYPICAL THRUST BLOCKING DETAIL FOR WATERMAIN
N.T.S.



GATE VALVE INSTALLATION DETAIL
N.T.S.

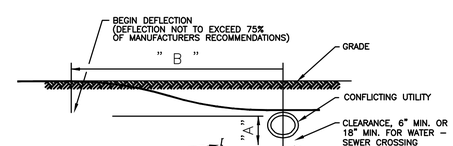


FIRE LINE/BACKFLOW PREVENTER DETAIL
N.T.S.



NOTES:
1.) CONNECTION TO MAIN SHALL BE MADE AFTER ENGINEER AND TOWN OF LONGBOAT KEY HAVE APPROVED ALL NEW WATER MAIN CONSTRUCTION. CONTRACTOR IS TO NOTIFY THE ENGINEER 48 HOURS PRIOR TO TAPPING.
2.) SEE SPECS. FOR TAPPING SLEEVE AND VALVE. ANY SUBSTITUTIONS SHALL BE APPROVED BY THE ENGINEER AND TOWN OF LONGBOAT KEY PRIOR TO CONSTRUCTION.

MAIN CONNECTION DETAIL (TAPPED)
N.T.S.



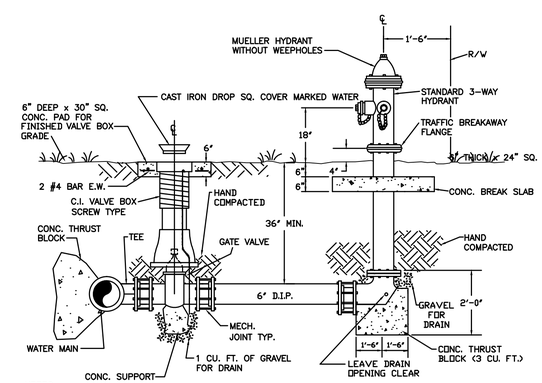
MINIMUM DISTANCE TO START DEFLECTION "B"

BENDING RADIUS OF PIPE		70	80	100	120	150	200	250	300	350	400	500	550
TOTAL DEFLECTION (FT.) "A"	0.5	20	20	20	20	20	20	22	25	26	28	32	34
	1.0	20	20	20	22	22	28	32	35	37	40	46	49
	1.5	20	22	24	27	30	35	39	42	46	49	56	60
	2.0	24	25	28	31	35	40	45	49	53	57	65	70
	3.0	30	31	35	38	42	49	55	60	65	69	80	85

ALLOWABLE BENDING RADIUS DETERMINED FOR ASTM D2241, SDR 21 AND C-900

PIPE DIAMETER		1 1/2"	2"	2 1/2"	3"	4"	6"	8"	12"
ALLOWABLE BENDING RADIUS (FT.)	SDR 21	70	80	100	120	150	220	290	430
	C-900	—	—	—	—	200	300	400	550

UTILITY CROSSING DETAIL
N.T.S.



NOTES:
1.) FIRE HYDRANTS NEAR ROADWAYS AND PARKING AREAS ARE TO BE PROTECTED WITH TWO OR MORE, CONC. FILLED, 6" DIA. STEEL PIPES, PAINTED O.S.H.A. YELLOW, EXTENDING FROM 6'-0" BELOW GRADE TO APPROX. 6" ABOVE TOP OF HYDRANTS.
2.) SEE VALVE DETAIL FOR PROPER HYDRANT VALVE INSTALLATION.

FIRE HYDRANT WITH TYPICAL GATE VALVE
N.T.S.

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CHECKED	TAD	12/12/13
QUALITY CHK	---	-
SCALE	AS SHOWN	

PREPARED FOR:
VAM LBK DEVELOPMENT, LLC
1990 MAIN STREET, STE. 750
SARASOTA, FL 34236
941-309-5383

George F. Young, Inc.
10540 PORTAL CROSSING, SUITE 105 BRADENTON, FLORIDA 34211
PHONE (941) 747-2981 FAX (941) 747-7234
ENGINEERING CERTIFICATE OF AUTHORIZATION NUMBER 21
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GAINESVILLE•LAKEWOOD RANCH•ORLANDO•PALM BEACH GARDENS•ST. PETERSBURG•TAMPA•VENICE
Since 1919
TIMOTHY DOVE, PE No. 43268
DATE

ARIA, LONGBOAT KEY
ADG ASCENTIA DEVELOPMENT GROUP
WATER SYSTEM DETAILS
SECTION 8&17, TOWNSHIP 36 S., RANGE 17 E.

JOB NO. 13004600LC
SHEET NO. C7.0

FILE: I:\projects\eng\2013\13-0046-00-LT\dwg\Cdn\13004600-WATER1.dwg
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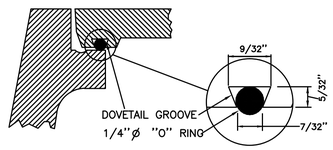


TYPICAL MANHOLE RING & COVER SECTION

DOVETAIL GROOVE DETAIL

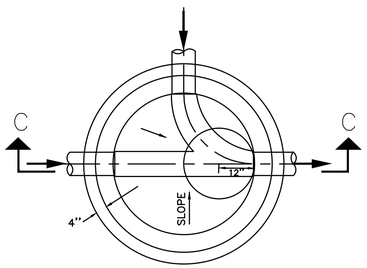
NTS

MANHOLE SPECIFICATIONS:

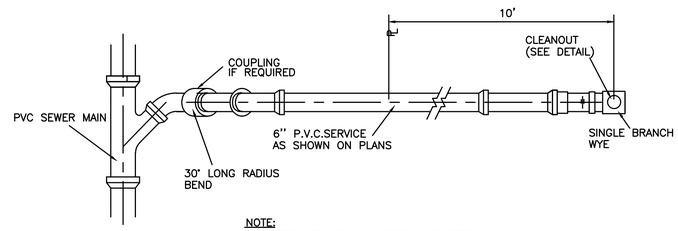
1. MANHOLES SHALL COMPLY WITH A.S.T.M. SPECS. C-478, LATEST REVISION, "PRECAST REINFORCED CONCRETE MANHOLE SECTIONS," EXCEPT WALL THICKNESS SHALL BE MIN. 6".
2. CONCRETE SHALL BE 4000 P.S.I./28 DAY MIN. STRENGTH, WITH TYPE II CEMENT.
3. HEAVY DUTY MANHOLE RING (6" HIGH) AND COVER SHALL BE TYPE B (DWG.NO.240; OLD NO.24) WITH FRAME & DOVETAIL GROOVED COVER (325 LB) TO ACCOMODATE 1/4" DIA., O-RING AS MANUFACTURED BY U.S.FOUNDARY CORP., MIAMI, FLORIDA, OR APPROVED EQUAL, WITH THE WORDS "WASTEWATER" CAST INTO THE COVER.
4. REINFORCING PER A.S.T.M. SPEC. C-478, LATEST REVISION.
5. LEVELING BRICKS TO BE CLAY; MORTAR TO BE 2 PARTS CLEAN SAND AND 1 PART CEMENT WITH NO MORE 1/4 HYDRATED LIME, WITH JOINTS FULL & STRUCK FLUSH.
6. NO STEPS SHALL BE USED.
7. COMPLETELY FILL SPACE BETWEEN PIPES AND MANHOLE WALL WITH CEMENT MORTAR AFTER PIPE IS SET WITH 15 LB. EMBECCO PER 100 LB. CEMENT.

GENERAL NOTES:

1. WHERE WATER & WASTEWATER MAINS CROSS WITH LESS THAN 18" VERTICAL CLEARANCE, THE WASTWATER PIPE SHALL BE OF EITHER DUCTILE IRON OR CONCRETE ENCASED PVC, (20' MIN.) CENTERED ON THE POINT OF CROSSING.
2. PARALLEL WATER & WASTEWATER MAINS SHALL MAINTAIN A HORIZINTAL SEPARATION OF AT LEAST 10'.
3. WHERE STORMWATER SEWERS CROSS OVER WASTEWATER SEWERS WITH LESS THAN 12" VERTICAL CLEARANCE, THE WASTEWATER PIPE SHALL BE EITHER DUCTILE IRON OR CONCRETE ENCASED PVC, 10' MIN. EITHER SIDE OF CROSSING.



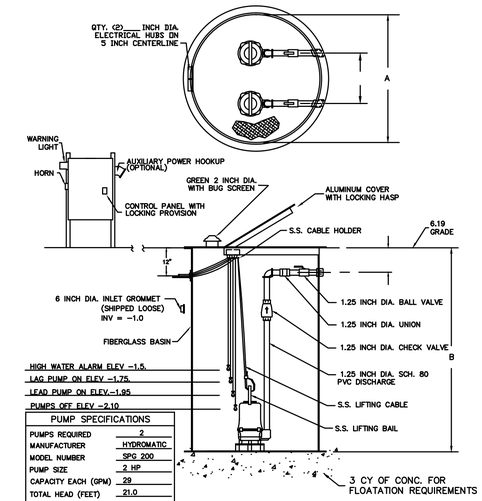
FLOW CHANNEL PLAN



NOTE:
1. WHERE SERVICE CONNECTIONS EXCEED 8' IN DEPTH THE SERVICE WYE SHALL BE ENCASED IN CONCRETE.
2. SEWER SERVICE TO BE STAKED IN THE FIELD BY OR UNDER THE DIRECTION OF A REGISTERED ENGINEER AND/OR LAND SURVEYOR.

PLAN VIEW SINGLE SERVICE

NTS



PUMP SPECIFICATIONS	
PUMPS REQUIRED	2
MANUFACTURER	HYDROMATIC
MODEL NUMBER	SPG 200
PUMP SIZE	2 HP
CAPACITY EACH (GPM)	29
TOTAL HEAD (FEET)	21.0
IMPELLER DIAMETER	3.75 A
MOTOR HP REQUIRED	2
SPEED (RPM)	3450
ELECTRICAL	1 PHASE

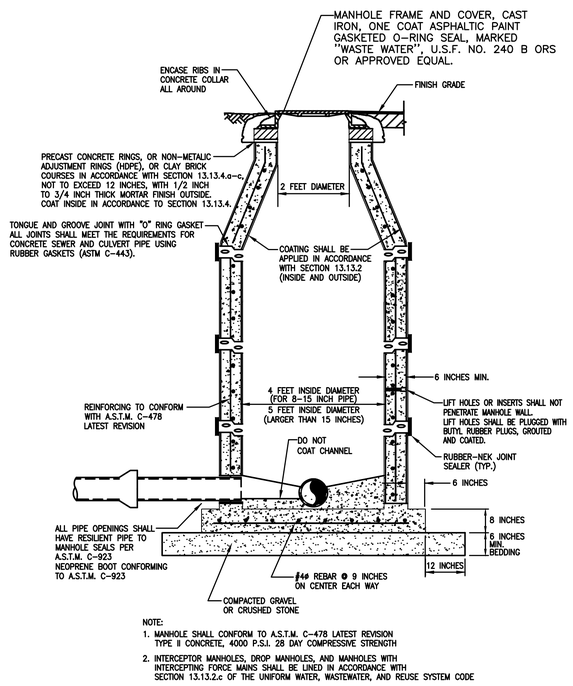
TANK	
A (DIA.)	B (HEIGHT)
36"	72"
48"	84"
60"	96"
OTHER____	108"
	120"
	OTHER____

FLOWS AT 11.25 GPM AND HEAD AT 21'

BARNEY'S PUMPS, INC.		
DESCRIPTION:	DUPLEX LIFT STATION	
PROJECT:	VILLA AM MEER	
CUSTOMER:	ASCENTIA DEVELOPMENT GROUP	
DATE:	TICKET #	DRAWN BY: DRAWING # SET WW2GF100
NOT TO SCALE		

DUPLEX LIFT STATION DETAIL

NTS

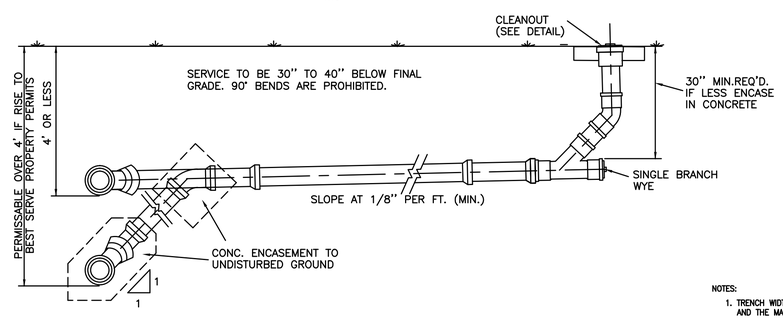


NOTE:
1. MANHOLE SHALL CONFORM TO A.S.T.M. C-478 LATEST REVISION TYPE II CONCRETE, 4000 P.S.I. 28 DAY COMPRESSIVE STRENGTH
2. INTERCEPTOR MANHOLES, DROP MANHOLES, AND MANHOLES WITH INTERCEPTING FORCE MAINS SHALL BE LINED IN ACCORDANCE WITH SECTION 13.13.2.c OF THE UNIFORM WATER, WASTEWATER, AND REUSE SYSTEM CODE

SECTION C-C

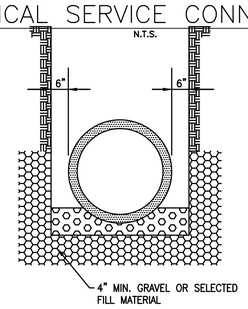
STANDARD WASTE WATER PRE-CAST MANHOLE

N.T.S.



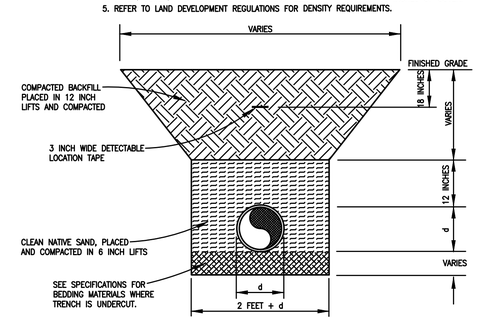
TYPICAL SERVICE CONNECTION

N.T.S.



TRENCH IN ROCK

NOTES:
1. TRENCH WIDTH SHALL BE APPROX. EQUAL TO THE PIPE DIA. + 2 FEET OR AS PER AWWA AND THE MANUFACTURERS RECOMMENDATIONS.
2. PROVIDE SHEETING AND SHORING AS NECESSARY FOR SAFETY.
3. BACKFILL MATERIALS SHALL BE APPROVED BY THE ENGINEER WHERE THE PIPE IS UNDERCUT.
4. WATER, SEWER, AND REUSE MAINS TO BE INSTALLED WITH A MINIMUM 36 INCHES OF COVER.
5. REFER TO LAND DEVELOPMENT REGULATIONS FOR DENSITY REQUIREMENTS.

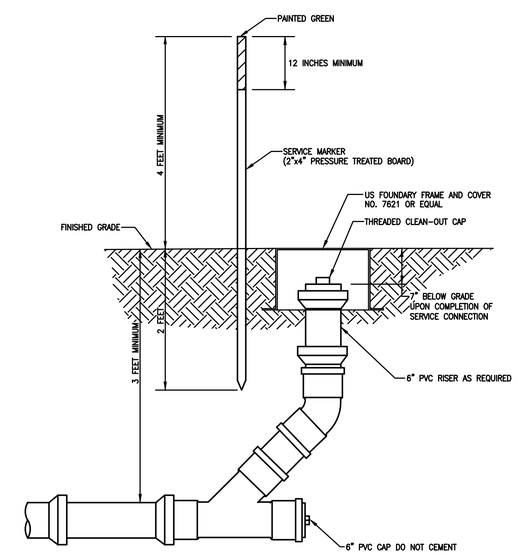


TYPICAL EXCAVATION AND PIPE SETTINGS

N.T.S.

TRENCH DETAIL

N.T.S.



CLEAN OUT DETAIL

NTS

REVISED	NO.	BY	DATE	DESCRIPTION
	1	TAW	12/23/13	ISSUED FOR TOWN OF LONGBOAT KEY PLANNING AND ZONING REVIEW.
	2			
	3			
	4			
	5			

	INITIALS	DATE
DESIGN	TAW	9/16/2013
DRAWN	TAW	9/16/2013
CHECKED	TAD	12/12/13
QUALITY CHK	---	-
SCALE	AS SHOWN	

PREPARED FOR:
VAM LBK DEVELOPMENT, LLC
1990 MAIN STREET, STE. 750
SARASOTA, FL 34236
941-309-5383

George F. Young, Inc.
10540 PORTAL CROSSING, SUITE 105 BRADENTON, FLORIDA 34211
PHONE (941) 747-2981 FAX (941) 747-7234
ENGINEERING CERTIFICATE OF AUTHORIZATION NUMBER 21
ARCHITECTURE•ENGINEERING•ENVIRONMENTAL•LANDSCAPE•PLANNING•SURVEYING•UTILITIES
GAINESVILLE•LAKEWOOD RANCH•ORLANDO•PALM BEACH GARDENS•ST. PETERSBURG•TAMPA•VENICE
Since 1919
TIMOTHY DOVE, PE No. 43268
DATE

ARIA, LONGBOAT KEY

ADG ASCENTIA DEVELOPMENT GROUP

SANITARY SEWER DETAILS

SECTION 8&17, TOWNSHIP 36S., RANGE 17E.

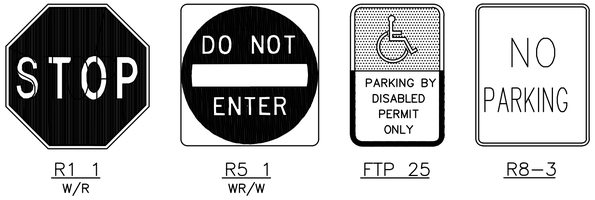
JOB NO. 13004600LC

SHEET NO. C8.0

FILE: I:\projects\eng\201313-0046-00-LC\Dwg\CDA\13004600-SANDET.dwg
PLOTTED: 12/31/2013 1:57:49 PM LOGIN: Wilcox, Troy

GENERAL NOTES:

1. ALL TRAFFIC CONTROL PAVEMENT MARKINGS SHALL BE ALKYD THERMOPLASTIC 90 MILS IN THICKNESS.
2. A TWO FOOT WIDE STRIP OF SOD IS TO BE PROVIDED BEHIND ALL CURBS AND PAVEMENT EDGES. SOD OR GRASSING/MULCHING SHALL BE PROVIDED FOR ALL OTHER OPEN AREAS UNLESS NOTED OTHERWISE ON LANDSCAPE PLANS.
3. ALL CONCRETE TO BE A MINIMUM 3000 P.S.I., UNLESS NOTED OTHERWISE ON THE PLANS.



SIGNAGE DETAILS

N.T.S.

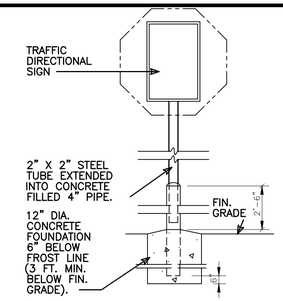
COLOR CODES

LEGEND (and/or) SYMBOL/BACKGROUND

B.....Black.....(Non-Reflectorized)
W.....White.....(Reflectorized)
R.....Red.....(Reflectorized)

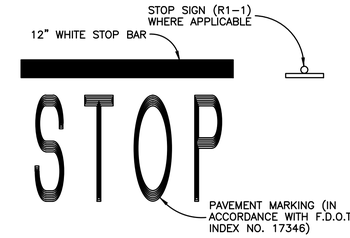
FTP 25 SIGN NOTES

1) Top portion of FTP 25 Sign shall have a reflective blue background with white reflective symbol and border.
2) Bottom portion shall have a reflective white background with black opaque legend and border.
3) Signs are to be mounted at standard height. (7' from pavement to bottom of sign).



TRAFFIC DIRECTIONAL SIGN (FREESTANDING)

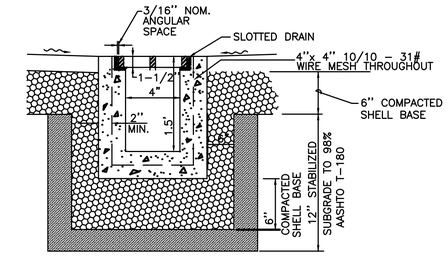
N.T.S.



NOTE: LETTERS REQUIRED WITH ALL STOP BARS. ALL PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH SECT. 711 OF THE F.D.O.T. "STANDARD SPECIFICATIONS FOR ROAD & BRIDGE CONSTRUCTION", LATEST EDITION.

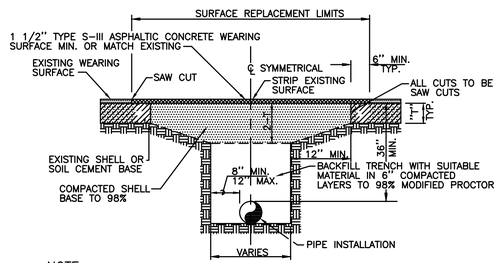
STOP BAR DETAIL

N.T.S.



TRENCH DRAIN SECTION

N.T.S.

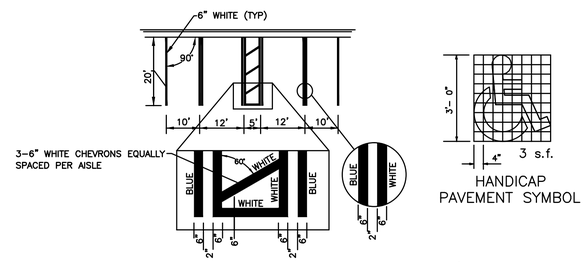


NOTE:

TEMPORARY PATCH SHALL BE MAINTAINED BY CONTRACTOR FOR A MAXIMUM OF 20 DAYS. THEN TO BE CONVERTED TO A PERMANENT PATCH IF MATERIAL IS SUITABLE AND APPROVED BY THE TOWN ENGINEER. BASE AND WEARING SURFACE TO BE APPROVED AND INSPECTED BY THE TOWN ENGINEER. SHELL SURFACED ROADS SHALL BE COMPACTED AS SPECIFIED WITH SHELL BASE AND SURFACED TO MATCH EXISTING GRADES.

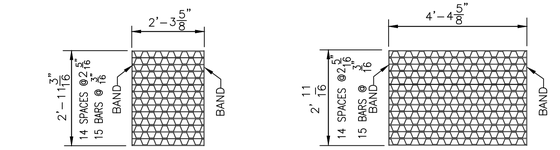
PAVEMENT RESTORATION DETAIL

N.T.S.



TYPICAL HANDICAP PARKING/STRIPING DETAIL

N.T.S.

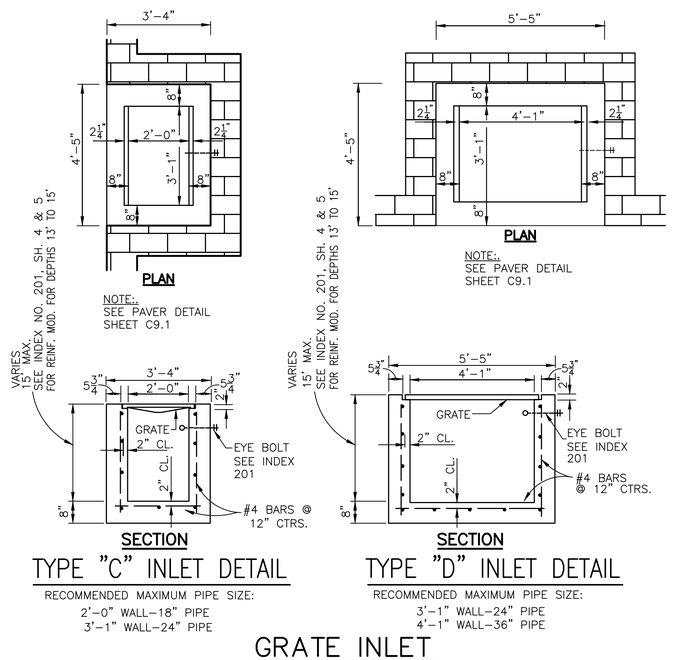


TYPE "C" GRATE

STRAIGHT BARS 2"x 3/16"
RETICULINE BARS 1 1/4" x 3/16"
BANDS 1 1/2" x 1/4"
APPROX. WEIGHT 100 LBS.
NOTE: ALL GRATE INLETS TO BE TRAFFIC BEARING

TYPE "D" GRATE

STRAIGHT BARS 2"x 3/16"
RETICULINE BARS 1 1/4" x 3/16"
BANDS 1 1/2" x 1/4"
APPROX. WEIGHT 180 LBS.
NOTE: ALL GRATE INLETS TO BE TRAFFIC BEARING



TYPE "C" INLET DETAIL

RECOMMENDED MAXIMUM PIPE SIZE:
2'-0" WALL-18" PIPE
3'-1" WALL-24" PIPE

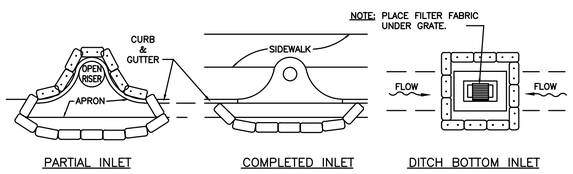
TYPE "D" INLET DETAIL

RECOMMENDED MAXIMUM PIPE SIZE:
3'-1" WALL-24" PIPE
4'-1" WALL-36" PIPE

GRATE INLET

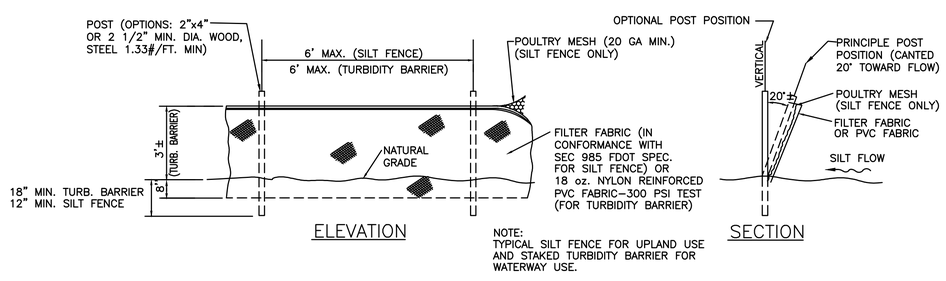
N.T.S.

NOTE: FOR CURRENT FDOT STANDARD DETAILS REFER TO LATEST DESIGN STANDARDS MANUAL.



PROTECTION AROUND INLETS OR SIMILAR STRUCTURES

N.T.S.



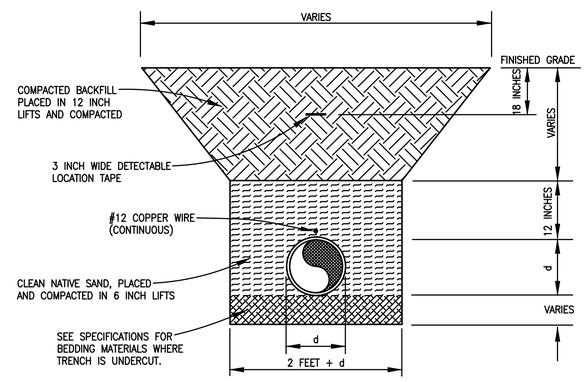
NOTE:
TYPICAL SILT FENCE FOR UPLAND USE AND STAKED TURBIDITY BARRIER FOR WATERWAY USE.

TYPICAL SILT FENCE AND STAKED TURBIDITY BARRIER

N.T.S.

NOTES:

1. TRENCH WIDTH SHALL BE APPROX. EQUAL TO THE PIPE DIA. + 2 FEET OR AS PER AWWA AND THE MANUFACTURERS RECOMMENDATIONS.
2. PROVIDE SHEETING AND SHORING AS NECESSARY FOR SAFETY.
3. BACKFILL MATERIALS SHALL BE APPROVED BY THE ENGINEER WHERE THE PIPE IS UNDERCUT.
4. WATER, SEWER, AND REUSE MAINS TO BE INSTALLED WITH A MINIMUM 36 INCHES OF COVER.
5. REFER TO LAND DEVELOPMENT REGULATIONS FOR DENSITY REQUIREMENTS.



TRENCH DETAIL

N.T.S.

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DRAWN	TAW	9/16/2013
CHECKED	TAD	12/12/13
QUALITY CHK	---	-
SCALE	AS SHOWN	

PREPARED FOR:
VAM LBK DEVELOPMENT, LLC
1990 MAIN STREET, STE. 750
SARASOTA, FL 34236
941-309-5383

George F. Young, Inc.
Since 1919
10540 PORTAL CROSSING, SUITE 105 BRADENTON, FLORIDA 34211
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GAINESVILLE•LAKEWOOD RANCH•ORLANDO•PALM BEACH GARDENS•ST. PETERSBURG•TAMPA•VENICE
TIMOTHY DOVE, PE No. 43268
DATE

ARIA, LONGBOAT KEY

ADG ASCENTIA DEVELOPMENT GROUP

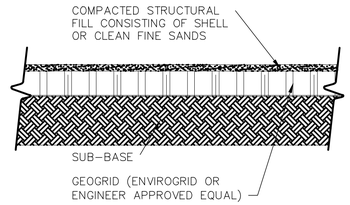
PAVING, GRADING AND DRAINAGE DETAILS

SECTION 8&17, TOWNSHIP 36 S., RANGE 17 E.

JOB NO. 13004600LC

SHEET NO. C9.0

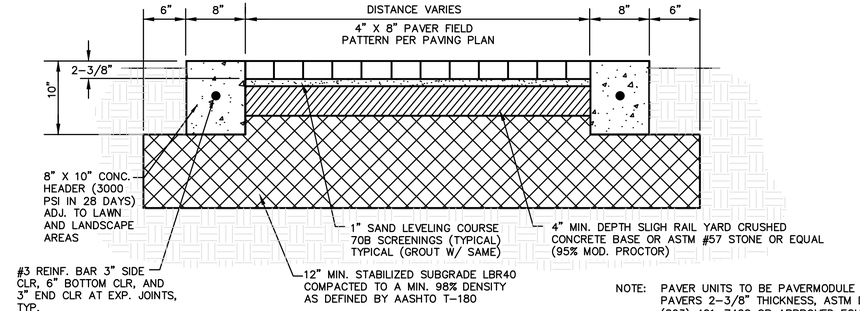
PLOTTED: 12/31/2013 1:57:54 PM LOGIN: Wilcox, Troy FILE: I:\projects\eng\2013\13-0046-00-LK\dwg\Cda\13004600-PGD1DET.dwg



NOTES:
COMPACTED BASE AND SUB-BASE TO MEET HEAVY TRAFFIC CONDITIONS.

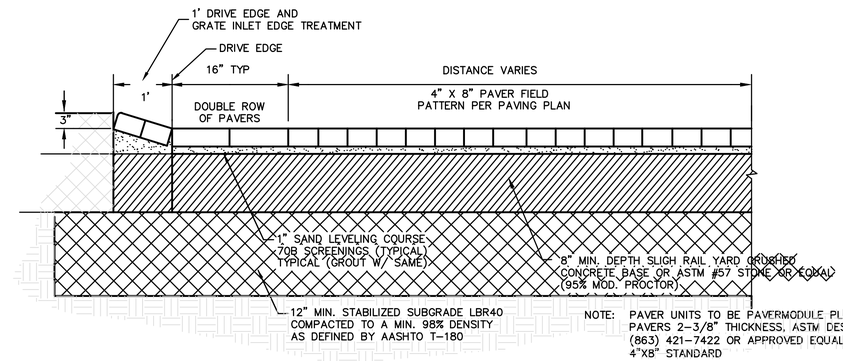
STABILIZATION DETAIL

N.T.S.



NOTE: PAVER UNITS TO BE PAVERMODULE PLAZA SYSTEM PAVERS 2-3/8" THICKNESS, ASTM DESIGNATION C936-82 (863) 421-7422 OR APPROVED EQUAL: 4"X8" STANDARD (PAVER UNIT COLORS TO BE CHOSEN BY OWNER.)

TYPICAL INTERLOCKING PAVING FOR PEDESTRIAN WALK AREAS

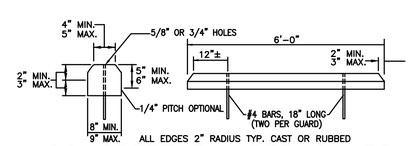


NOTE: PAVER UNITS TO BE PAVERMODULE PLAZA SYSTEM PAVERS 2-3/8" THICKNESS, ASTM DESIGNATION C936-82 (863) 421-7422 OR APPROVED EQUAL: 4"X8" STANDARD (PAVER UNIT COLORS TO BE CHOSEN BY OWNER.)

TYPICAL INTERLOCKING PAVING FOR VEHICULAR USE AREAS

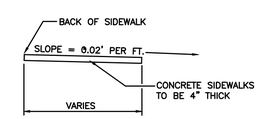
GENERAL NOTES:

1). ALL TRAFFIC CONTROL PAVEMENT MARKINGS SHALL BE ALKYD THERMOPLASTIC 90 MILS IN THICKNESS.
2). A TWO FOOT WIDE STRIP OF SOD IS TO BE PROVIDED BEHIND ALL CURBS AND PAVEMENT EDGES. SOD OR GRASS/MULCHING SHALL BE PROVIDED FOR ALL OTHER OPEN AREAS UNLESS NOTED OTHERWISE ON LANDSCAPE PLANS.
3). ALL CONCRETE TO BE A MINIMUM 3000 P.S.I., UNLESS NOTED OTHERWISE ON THE PLANS.
4). ALL CULVERT PIPE JOINTS ARE TO BE WRAPPED WITH A FILTER FABRIC JACKET PER F.D.O.T. INDEX NO. 280.
5). ALL TRAFFIC SIGN POSTS SHALL BE 2"x2" SQUARE BREAK-AWAY 14 GAUGE GALVANIZED STEEL WITH PUNCHED HOLES.



CONCRETE BUMPER GUARD

N.T.S.



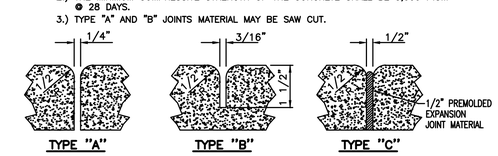
NOTES:
1. ALL ORGANIC MATERIAL & DEBRIS SHALL BE REMOVED & AREA GRADED & COMPACTED PRIOR TO CONCRETE PLACEMENT.
2. THE MINIMUM COMPRESSION STRENGTH OF THE CONCRETE SHALL BE 3000 p.s.i. @ 28 DAYS.
3. TYPE "A" & "B" JOINTS MAY BE SAW CUT.

STANDARD SIDEWALK

N.T.S.

TABLE OF SIDEWALK JOINTS	
TYPE	LOCATION
"A"	P.C. AND P.T. OF CURVES, JUNCTION OF EXIST. AND NEW SIDEWALKS
"B"	5'-0" CENTER TO CENTER ON SIDEWALKS
"C"	WHERE SIDEWALK ABUTS CONCRETE CURBS, DRIVEWAYS AND SIMILAR STRUCTURES AT INTERVALS NOT TO EXCEED 80 FEET.

NOTES
1.) ALL ORGANIC MATERIAL AND DEBRIS SHALL BE REMOVED AND AREA GRADED AND COMPACTED PRIOR TO CONCRETE PLACEMENT.
2.) THE MINIMUM COMPRESSIVE STRENGTH OF THE CONCRETE SHALL BE 3,000 P.S.I. @ 28 DAYS.
3.) TYPE "A" AND "B" JOINTS MATERIAL MAY BE SAW CUT.



SIDEWALK JOINTS

N.T.S.

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ARIA, LONGBOAT KEY

ADG ASCENTIA DEVELOPMENT GROUP

PAVING, GRADING AND DRAINAGE DETAILS

SECTION 8&17, TOWNSHIP 36 S., RANGE 17 E.

JOB NO. 13004600LC

SHEET NO. C9.1

FILE: L:\project\eng\2013\13-0046-00-LC\Dwg\Cdn\13004600-PGD2DET.dwg
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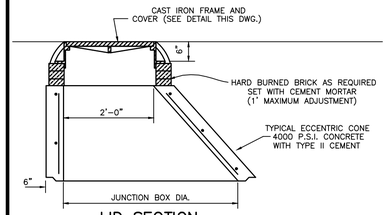
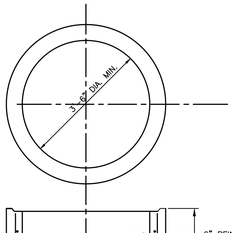
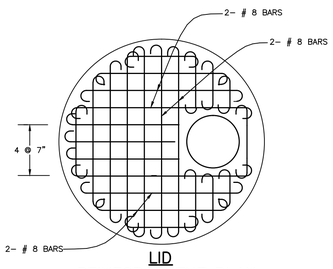


LID SECTION

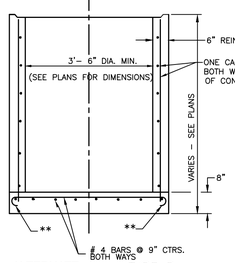
TYPE 8 (TRAFFIC) (H-20)





LID

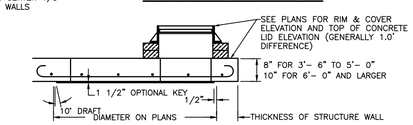
REINFORCEMENT PLAN



ALTERNATE A TYPE P

PERIPHERAL BARS OR STRAIGHT END EMBEDMENTS MAY BE USED IN LIEU OF STANDARD HOOKS, IN ACCORDANCE WITH DETAILS **INDEX NO. 201, SHT. 3 OF 6.

SECTION



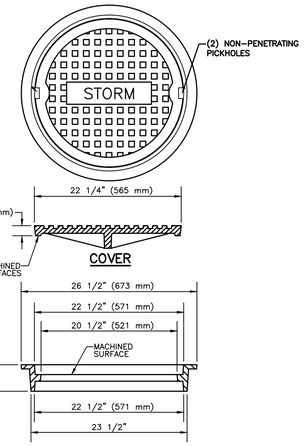
LID SECTION

TYPE 7-T (TRAFFIC) (H-20)

ALL REINFORCEMENT NO. 6 BARS EXCEPT 6- # 8 BARS SHOWN. BARS SPACED @ 6" CENTERS BOTH WAYS EXCEPT MIDDLE BARS @ 7" CENTERS. ALL BARS WITH ACI STANDARD HOOKS CANTED APPROX. 45°, OR EMBEDDED IN ACCORDANCE WITH THE SLAB REINFORCEMENT DETAIL SHOWN UNDER OPTIONAL CONSTRUCTION JOINTS. SHT.3 OF 6. EXCEPT ALL # 8 BARS AND # 6 BARS AROUND MANHOLE OPENING SHALL BE HOOKED.

STANDARD JUNCTION BOX

N.T.S.



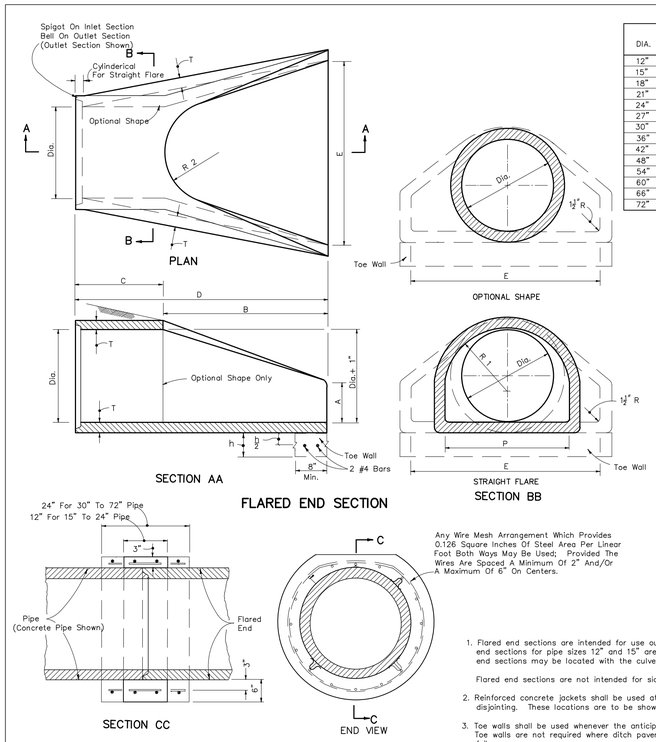
USF 1110 RING & PROPOSED COVER

NOTE:

1 - MATERIAL: ASTM-A48 CLASS 30B GRAY IRON.
2 - COVER WEIGHT: 105 LBS. APPROX.
3 - RING WEIGHT: 90 LBS. APPROX.

ACCESS COVER FOR STORMWATER JUNCTION BOX

N.T.S.



Any Wire Mesh Arrangement Which Provides 0.126 Square Inches Of Steel Area Per Linear Foot Both Ways May Be Used; Provided The Wires Are Spaced A Minimum Of 2" And/Or A Maximum Of 6" On Centers.

DIA.	T	REINF REINF. SQ IN/LF	BELL Or SPIGOT	A	B	C	D	E	P	R 1	R 2	FLAT	WEIGHT (LBS.)	h	TOE WALL CLASS - CONC (Misc.) CY
12"	2"	0.07	$1\frac{1}{4}$"	4"	2'-0"	4'-$0\frac{3}{8}$"	6'-$0\frac{3}{8}$"	2'-0"	$19\frac{15}{16}$"	$10\frac{1}{4}$"	9"	$3\frac{1}{4}$"	530	12"	.06
15"	$2\frac{1}{4}$"	0.07	2"	6"	2'-3"	3'-10"	6'-1"	2'-6"	$24\frac{5}{16}$"	$12\frac{1}{2}$"	11"	$3\frac{1}{2}$"	740	12"	.07
18"	$2\frac{1}{2}$"	0.07	$2\frac{3}{4}$"	9"	2'-3"	3'-10"	6'-1"	3'-0"	29"	$15\frac{1}{2}$"	12"	4"	990	15"	.11
21"	$2\frac{3}{4}$"	0.07	$2\frac{3}{4}$"	9"	2'-11"	3'-2"	6'-1"	3'-6"	$31\frac{3}{8}$"	$16\frac{1}{2}$"	13"	4"	1280	15"	.12
24"	3"	0.07	$2\frac{3}{4}$"	$9\frac{1}{2}$"	3'-$7\frac{3}{8}$"	2'-6"	6'-$5\frac{1}{2}$"	4'-0"	$33\frac{9}{16}$"	$16\frac{1}{2}$"	14"	$4\frac{1}{2}$"	1520	18"	.17
27"	$3\frac{1}{4}$"	0.148	$2\frac{3}{4}$"	$10\frac{1}{2}$"	4'-0"	2'-$12\frac{1}{2}$"	6'-$5\frac{1}{2}$"	4'-6"	36"	$18\frac{5}{8}$"	$14\frac{1}{2}$"	$4\frac{1}{2}$"	1930	18"	.19
30"	$3\frac{1}{2}$"	0.148	3"	1'-0"	4'-6"	1'-$7\frac{3}{8}$"	6'-$5\frac{1}{2}$"	5'-0"	37"	$18\frac{5}{8}$"	15"	5"	2190	21"	.24
36"	4"	0.148	$3\frac{1}{4}$"	1'-3"	5'-3"	2'-$10\frac{3}{8}$"	8'-$1\frac{1}{2}$"	6'-0"	$47\frac{11}{16}$"	$24\frac{5}{8}$"	20"	$5\frac{1}{2}$"	4100	21"	.29
42"	$4\frac{3}{4}$"	0.148	$3\frac{3}{4}$"	1'-9"	5'-3"	2'-11"	8'-2"	6'-6"	$53\frac{3}{8}$"	$27\frac{1}{2}$"	22"	$5\frac{1}{2}$"	5380	24"	.36
48"	5"	0.148	$4\frac{1}{4}$"	2'-0"	6'-0"	2'-2"	8'-2"	7'-0"	$56\frac{1}{2}$"	$28\frac{1}{2}$"	22"	$5\frac{1}{2}$"	6550	24"	.39
54"	$5\frac{1}{2}$"	0.174	$4\frac{3}{4}$"	2'-3"	5'-5"	2'-11"	8'-4"	7'-6"	$65\frac{1}{2}$"	$33\frac{1}{2}$"	24"	$6\frac{1}{2}$"	8040	24"	.42
60"	6"	0.174	5"	2'-6"	5'-0"	3'-3"	8'-3"	8'-0"	$72\frac{1}{2}$"	$36\frac{11}{16}$"	24"	$6\frac{1}{2}$"	8750	24"	.44
66"	$6\frac{1}{2}$"	0.174	$5\frac{1}{2}$"	2'-0"	6'-6"	1'-9"	8'-3"	8'-6"	72"	$36\frac{1}{2}$"	24"	$7\frac{1}{2}$"	10630	24"	.47
72"	7"	0.174	6"	2'-0"	6'-6"	1'-9"	8'-3"	9'-0"	$77\frac{13}{16}$"	$38\frac{13}{16}$"	24"	$7\frac{1}{2}$"	12520	24"	.50

GENERAL NOTES

1. Flared end sections shall conform to the requirements of ASTM C-76 with the exception that dimensions and reinforcement shall be as prescribed in the table above. Circumferential reinforcement may consist of either one cage or two cages of steel. Compressive strength of concrete shall be 4000 psi. Shop drawings for flared end sections having dimensions other than above must be submitted for approval to the State Drainage Engineer.

2. Connections between the flared end section and the pipe culvert may be any of the following types unless otherwise shown on the plans.
   a. Joints meeting the requirements of Section 941-1.5 of the Standard Specifications (O-Ring Gasket).
      Flared end section joint diminsions and tolerances shall be identical or compatiable to those used in the pipe culvert joint. When pipe culvert and flared end section manufacturers are different, the compatiability of joint designs shall be certified to by the manufacturer of the flared end sections.
   b. Joints sealed with preformed plastic gaskets.
      The gaskets shall meet the requirements of Section 942-2 of the Standard Specifications and the minimum sizes for gaskets shall be as that specified for equivalent sizes of elliptical pipe.
   c. Reinforced concrete jackets, as detailed on this drawing.
      Cost of the reinforced concrete jacket to be included in the contract unit price for the flared end section.
   When non-coated corrugated metal pipe is called for in the plans, the pipe shall be bituminous coated in the jacketed area as specified on Index No. 280. Bituminous coating to be included in the contract unit price for the pipe culvert.

3. Toe walls shall be constructed when shown on the plans or at locations designated by the Engineer. Toe walls are to be cast-in-place with Class ~ Concrete and paid for under the contract unit price for Class ~ Concrete (Miscellaneous) CY. Reinforcing steel to be included in cost of toe wall.

4. On skewed pipe culverts the flared end sections shall be placed in line with the pipe culvert. Side slopes shall be warped as required to fit the flared end sections.

5. Flared End Section to be paid for under the contract unit price for Flared End Section (Concrete), Each. Sodding shall be in accordance with Index No. 281, and paid for under the contract unit price for Sodding, SY.

DESIGN NOTES

1. Flared end sections are intended for use outside the clear zone on median drain and cross drain installation, except that flared end sections for pipe sizes 12" and 15" are permitted within the clear zone. When the slope intersection permits, these flared end sections may be located with the culvert opening as close as 8' beyond the outside edge of the shoulder.

   Flared end sections are not intended for side drain installations.

2. Reinforced concrete jackets shall be used at all locations where high velocities and/or highly erosive soils may cause disjointing. These locations are to be shown on the plans.

3. Toe walls shall be used whenever the anticipated velocity of discharge and soil type are such that erosive action would occur. Toe walls are not required where ditch pavement is provided, except when disjointing would occur if the ditch pavement should fail.

FLARED END SECTION

270 1 of 1

REVISED	NO.	BY	DATE	DESCRIPTION
	1	TAW	12/23/13	ISSUED FOR TOWN OF LONGBOAT KEY PLANNING AND ZONING REVIEW.
	2			
	3			
	4			
	5			

	INITIALS	DATE
DESIGN	TAW	9/16/2013
DRAWN	TAW	9/16/2013
CHECKED	TAD	12/12/13
QUALITY CHK	---	-
SCALE	AS SHOWN	

PREPARED FOR:

VAM LBK DEVELOPMENT, LLC
1990 MAIN STREET, STE. 750
SARASOTA, FL 34236
941-309-5383

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GAINESVILLE•LAKEWOOD RANCH•ORLANDO•PALM BEACH GARDENS•ST. PETERSBURG•TAMPA•VENICE
Since 1919

TIMOTHY DOVE, PE No. 43268

DATE

ARIA, LONGBOAT KEY ADG ASCENTIA DEVELOPMENT GROUP

DRAINAGE DETAILS

SECTION 8&17, TOWNSHIP 36 S., RANGE 17 E.

JOB NO. 13004600LC

SHEET NO. C9.2

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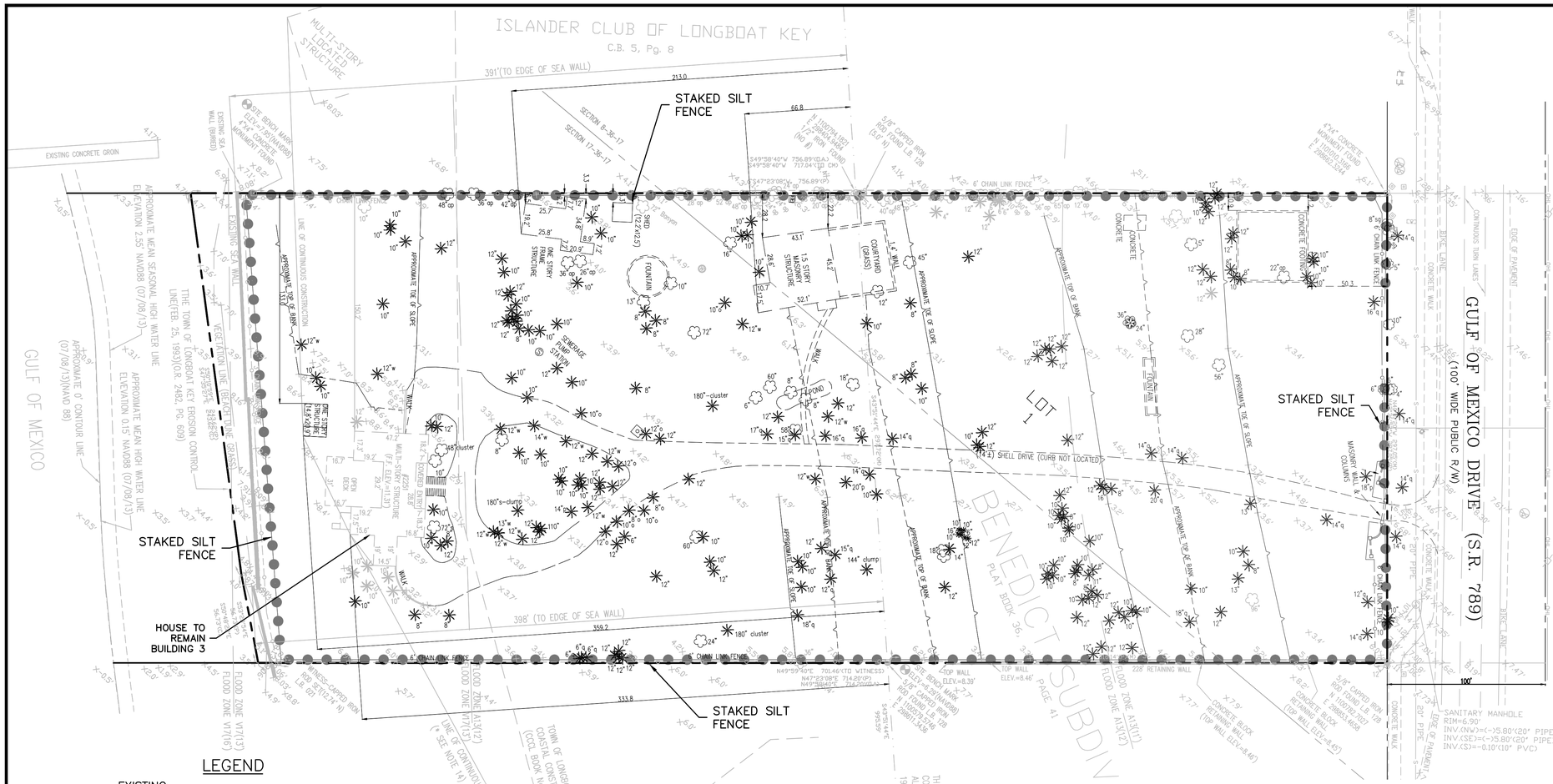

LEGEND

EXISTING

- BENCH
- SIGN
- BACKFLOW PREVENTER
- CONCRETE POWER POLE
- SANITARY MANHOLE
- WATER METER
- TELEPHONE/VERIZON BOX
- TRANSFORMER
- WATER VALVE
- WELL
- PALM TREE
- q QUEEN PALM TREE
- p PINEAPPLE PALM TREE
- w WESTONIA PALM TREE
- s SAGO PALM TREE
- o OIL PALM TREE
- MISC. TREE (TYPE ?)
- op AUSTRAILIAN PINE TREE
- sg SEA GRAPE TREE
- sch SCHEFFLERA TREE

(P)–PLAT
(M)–MEASURED
(D)–DEED or DESCRIPTION
LB–LICENSED BUSINESS
(O.A.)–OVERALL
(O.R.)–OFFICIAL RECORDS BOOK
O.R.I.–OFFICIAL RECORD INSTRUMENT
#–NUMBER
x6.5 –EXISTING SPOT ELEVATION

PROPERTY LINE

SEE BOUNDARY SURVEY FOR SPECIFIC DELINEATION OF EXISTING FEATURES

EROSION AND SEDIMENT CONTROL PLAN (ESCP)

1. EROSION/SEDIMENT CONTROL BMP IN ADDITION TO THOSE PRESENTED ON THE PLANS SHALL BE IMPLEMENTED AS NECESSARY TO PREVENT TURBID DISCHARGES FROM FLOWING ONTO ADJACENT PROPERTY OR ROADWAYS. CONTROLS SHALL BE DESIGNED, INSTALLED, AND MAINTAINED AS REQUIRED BY THE ENGINEER AND/OR CONTRACTOR TO ENSURE SURFACE WATER QUALITY CONDITIONS ARE IN COMPLIANCE WITH LOCAL AND STATE WATER QUALITY STANDARDS.
2. THE CONTRACTOR SHALL REPORT ALL OFFSITE SURFACE WATER DISCHARGES WITH TURBIDITY IN EXCESS OF 29 NTU'S (NEPHELOMETRIC TURBIDITY UNITS) ABOVE BACKGROUND LEVEL TO LOCAL WATER RESOURCES WITHIN 24 HOURS AFTER OCCURRENCE. NOTIFICATION SHALL INCLUDE CAUSE OF THE PROBLEM, CORRECTIVE ACTIONS TAKEN, AND INSTALLATION OF ADDITIONAL EROSION/SEDIMENT CONTROLS NOT SHOWN ON THE APPROVED CONSTRUCTION PLAN DRAWINGS.
3. THE CONTRACTOR SHALL ENSURE THAT ADJACENT PROPERTIES ARE NOT IMPACTED BY WIND EROSION OR EMISSIONS OF UNCONFINED PARTICULATE MATTER IN ACCORDANCE WITH RULE 62–296.320(4) (C)1., FLORIDA ADMINISTRATIVE CODE, FROM THE CONSTRUCTION SITE BY TAKING ADEQUATE MEASURES TO STABILIZE AFFECTED AREAS.
4. FUEL AND OTHER PETROLEUM PRODUCT SPILLS THAT ENTER STORM WATER DRAINAGES OR WATER BODIES, OR FUEL AND OTHER PETROLEUM PRODUCT SPILLS THAT ARE IN EXCESS OF 25 GALLONS SHALL BE CONTAINED, CLEANED UP AND REPORTED IMMEDIATELY TO LOCAL WATER RESOURCE. SMALLER GROUND SURFACE SPILLS SHALL BE CLEANED UP AS SOON AS PRACTICAL.
5. CONSTRUCTION IS ANTICIPATED TO BEGIN IN 2013 AND END 2014.
6. EXCAVATED MATERIAL WILL BE PLACED ON SITE. UNSUITABLE MATERIAL WILL BE TRUCKED AWAY.
7. STOCKPILE AREAS WILL BE ON SITE.
8. EROSION AND SEDIMENT CONTROL DEVICES WILL BE INSTALLED PRIOR TO CONSTRUCTION AND WILL BE INSPECTED WEEKLY AND REPAIRED AS NECESSARY BY THE GENERAL CONTRACTOR.
9. WETLAND BUFFERS IF ANY WILL BE STAKED PRIOR TO CONSTRUCTION.
10. IT IS ANTICIPATED THAT THE CONSTRUCTION WILL BE ONGOING EXCEPT FOR WEATHER DELAYS. ONCE GRADING IS COMPLETED AREAS WILL BE STABILIZED BY SEEDING.

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DATE

ARIA, LONGBOAT KEY

ADG ASCENTIA DEVELOPMENT GROUP

EROSION CONTROL PLAN

SECTION 8&17, TOWNSHIP 36 S., RANGE 17 E.

JOB NO. 13004600LC

SHEET NO. C10.0

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STORMWATER POLLUTION PREVENTION PLAN

PROJECT NAME: ARIA, LONGBOAT KEY

PROJECT ADDRESS:
2251 GULF OF MEXICO DR.
LONGBOAT KEY, FL

APPLICANT'S ADDRESS:
VAM LBK DEVELOPMENT, LLC
1990 MAIN STREET, STE. 750
941-309-5383

THE PROJECT WILL CONSIST:
CONSTRUCTION OF MULTI STORY RESIDENTIAL BUILDING WITH UTILITIES AND STORMWATER FACILITIES

SOIL DISTURBING ACTIVITIES WILL INCLUDE:
CLEARING AND GRUBBING OF EXISTING PROPERTY AND CONSTRUCTION OF BUILDING AND STORMWATER FACILITIES

CONSTRUCTION ACTIVITIES WILL INCLUDE:
BUILDING, UTILITES AND STORMWATER FACILITIES

SITE AREA:
5.03 ACRES

SEQUENCE OF MAJOR ACTIVITIES

1. INSTALL EROSION CONTROL DEVICES PER FDOT INDEX NO. 102 AS SHOWN ON THE EROSION CONTROL PLAN, SHEET C10.0
2. CLEARING AND GRUBBING
3. CONSTRUCT BUILDING, UTILITIES AND STORMWATER FACILITIES.
4. RE-GRADE AND SOD / LANDSCAPE DISTURBED AREA.

CONTROLS

EROSION AND SEDIMENT CONTROLS STABILIZATION PRACTICES

PROTECTION OF EXISTING STORM SEWER SYSTEMS – DURING CONSTRUCTION, ALL STORM SEWER INLETS IN THE VICINITY OF THE PROJECT SHALL BE PROTECTED BY SEDIMENT TRAPS SUCH AS SECURED SOD, STONE, ETC., WHICH SHALL BE MAINTAINED AND MODIFIED AS REQUIRED BY THE CONSTRUCTION PROCESS (SEE F.D.O.T. INDEX NO. 102).

SEDIMENT TRAPPING MEASURES – SEDIMENT BASINS AND TRAPS, PERIMETER BERMS, FILTER FENCES, BERMS SEDIMENT BARRIERS, VEGETATIVE BUFFERS AND OTHER MEASURES INTENDED TO TRAP SEDIMENT AND/OR PREVENT THE TRANSPORT OF SEDIMENT ONTO ADJACENT PROPERTIES, OR INTO EXISTING WATER BODIES, MUST BE INSTALLED, CONSTRUCTED OR IN THE CASE OF VEGETATIVE BUFFERS, PROTECTED FROM DISTURBANCE, AS A FIRST STEP IN THE LAND ALTERATION PROCESS.

WIND EROSION STABILIZATION – THE CONTRACTOR SHALL DENUDE ONLY AREAS WHERE IT IS EXPECTED TO BE GRADED OR ALTERED WITHIN A TWO (2) WEEK TIME- FRAME. FINAL GRADES SHALL BE PERFORMED AND TEMPORARY OR PERMANENT SOIL STABILIZATION SHALL BE APPLIED. AREAS WHERE CONSTRUCTION OPERATIONS WILL BE CONTINUOUS, FUGITIVE DUST SHALL BE MANAGED BY APPLYING A WATER SPRAY TO SATURATE THE SURFACE SOILS CONTINUOUSLY AND ADDITIONAL MEASURES MAY NEED TO BE TAKEN TO CONTROL OFF-SITE TRANSPORT OF UNACCEPTABLE LEVELS OF DUST.

TEMPORARY STABILIZATION – TOP OF SOIL STOCK PILES AND DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY TEMPORARILY CEASES FOR AT LEAST 21 DAYS WILL BE STABILIZED WITH TEMPORARY GRASS AND MULCH NO LATER THAN 14 DAYS FROM THE LAST CONSTRUCTION ACTIVITY. GRASS SEED SHALL BE A MIXTURE OF 20 PARTS OF BERMUDA SEED AND 80 PARTS OF PENSACOLA BAHIA. THE SEPARATE TYPES OF SEED USED SHALL BE THOROUGHLY DRY MIXED IMMEDIATELY BEFORE SOWING. SEED WHICH HAS BECOME WET SHALL NOT BE USED. THE MULCH MATERIAL USED SHALL NORMALLY BE DRY MULCH. DRY MULCH SHALL BE STRAW OR HAY, CONSISTING OF OAT, RYE OR WHEAT STRAW, OR OF PANGOLA, PEANUT, COASTAL BERMUDA OR BAHIA GRASS HAY. ONLY UNDETERIORATED MULCH, WHICH CAN BE READILY CUT INTO THE SOIL, SHALL BE USED. AREAS OF THE SITE, WHICH ARE TO BE PAVED, WILL BE TEMPORARILY STABILIZED BY APPLYING STABILIZATION AND BASE.

PERMANENT STABILIZATION – DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES PERMANENTLY CEASES SHALL BE STABILIZED WITH SOD NO LATER THAN 14 DAYS AFTER THE LAST CONSTRUCTION ACTIVITY.

STRUCTURAL PRACTICES

STAKED SILT FENCES – THE STAKED SILT FENCES WILL BE CONSTRUCTED ALONG THE CONSTRUCTION LIMITS AS DEPICTED ON THE AND CONSTRUCTION PLANS. THESE DEVICES WILL STOP AND DIVERT RUNOFF TO THE SEDIMENT BASINS.

SEDIMENT BASINS – THE TEMPORARY POND AREAS WILL ACT AS SEDIMENT BASINS DURING CONSTRUCTION.

STORM WATER MANAGEMENT

STORM WATER DRAINAGE WILL BE PROVIDED BY CATCH BASINS AND UNDERGROUND PIPING SYSTEM FOR THE DEVELOPED AREA. THE AREAS WHICH ARE NOT DEVELOPED WILL BE GRADED AND HAVE PERMANENT SEEDING OR PLANTINGS. WHEN CONSTRUCTION IS COMPLETE, THE ENTIRE SITE WILL DRAIN TO THE CITY STORM STRUCTURES.

OTHER CONTROLS

WASTE DISPOSAL

WASTE MATERIALS – ALL WASTE MATERIAL WILL BE COLLECTED AND STORED IN DUMPSTERS PER LOCAL SOLID WASTE REGULATIONS. ALL TRASH AND CONSTRUCTION DEBRIS FROM THE SITE WILL BE DEPOSITED IN THE DUMPSTER. THE DUMPSTER WILL BE EMPTIED A MINIMUM OF TWICE A WEEK OR MORE OFTEN IF NECESSARY, AND THE TRASH WILL BE HAULED TO THE APPROPRIATE COUNTY LOCATION FOR DUMPING. NO CONSTRUCTION MATERIALS WILL BE BURIED ON-SITE. ALL PERSONNEL WILL BE INSTRUCTED REGARDING THE CORRECT PROCEDURE FOR WASTE DISPOSAL. NOTICES STATING THESE PRACTICES WILL BE POSTED IN THE ON- SITE OFFICE TRAILER AND THE CONSTRUCTION MANAGER RESPONSIBLE FOR THE DAY-TO-DAY SITE OPERATIONS, WILL BE RESPONSIBLE FOR SEEING THAT THESE PROCEDURES ARE FOLLOWED.

HAZARDOUS WASTE – ALL HAZARDOUS WASTE MATERIALS, IF ENCOUNTERED, WILL BE DISPOSED OF IN THE MANNER SPECIFIED BY LOCAL OR STATE REGULATIONS. THE CONTRACTOR WILL BE RESPONSIBLE FOR SEEING THAT THESE PRACTICES ARE FOLLOWED.

SANITARY WASTE – ALL SANITARY WASTE WILL BE COLLECTED FROM PORTABLE UNITS A MINIMUM OF THREE TIMES PER WEEK BY A LICENSED SANITARY WASTE MANAGEMENT CONTRACTOR, AS REQUIRED BY LOCAL REGULATION.

OFFSITE VEHICLE TRACKING

STABILIZED CONSTRUCTION ENTRANCES SHALL BE PROVIDED TO HELP REDUCE VEHICLE TRACKING OF SEDIMENTS, PER FDOT INDEX NO. 106. THE PAVED STREETS ADJACENT TO THE PROJECT WILL BE CLEANED AS NEEDED TO REMOVE ANY EXCESS MUD, DIRT OR ROCK TRACKED FROM THE SITE. DUMP TRUCKS HAULING MATERIAL FROM OR TO THE SITE WILL BE COVERED WITH A TARP AT ALL TIMES.

TIMING OF CONTROL MEASURES

AS INDICATED IN THE SEQUENCE OF MAJOR ACTIVITIES, STAKED SILT BARRIERS, STABILIZED CONSTRUCTION ENTRANCES AND SEDIMENT BASINS WILL BE CONSTRUCTED PRIOR TO GRUBBING OR GRADING OF ANY OTHER PORTIONS OF THE SITE. AREAS WHERE CONSTRUCTION ACTIVITY TEMPORARILY CEASES FOR MORE THAN 21 DAYS WILL BE STABILIZED WITH A TEMPORARY GRASS AND MULCH WTHIN 14 DAYS OF THE LAST DISTURBANCE. ONCE CONSTRUCTED ACTIVITY CEASES PERMANENTLY IN THAT AREA, THAT AREA WILL BE STABILIZED WITH PERMANENT SOD. AFTER THE ENTIRE SITE IS STABILIZED, THE ACCUMLATED SEDIMENT WILL BE REMOVED FROM THE TRAPS AND THE STAKED SILT BARRIERS WILL BE REMOVED.

CERTIFICATION OF COMPLIANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS

THE CONSTRUCTION SURFACE WATER MANAGEMENT PLAN REFLECTS THE SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT'S (SWFWMD) REQUIREMENTS FOR STORMWATER MANAGEMENT AND EROSION AND SEDIMENT CONTROL, AS ESTABLISHED BY THE FLORIDA ADMINISTRATIVE CODE, CHAPTER 40D-4 AND 40D-40. TO DEMONSTRATE COMPLIANCE, THIS PLAN WAS PREPARED IN ACCORDANCE WITH SWFWMD'S "BASIS OF REVIEW FOR SURFACE WATER MANAGEMENT PERMIT APPLICATIONS WITHIN THE SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT". THIS PLAN ALSO REFLECTS THE REQUIREMENTS OF THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION FOR WORK IN BRANCH 6.

MAINTENANCE INSPECTION PROCEDURES

EROSION AND SEDIMENT CONTROL INSPECTION AND MAINTENANCE PRACTICES

THESE ARE THE INSPECTION AND MAINTENANCE PRACTICES THAT SHALL BE USED TO MAINTAIN EROSION AND SEDIMENT CONTROL.

LESS THAN ONE HALF OF THE SITE WILL BE DENUDED AT ONE TIME PRIOR TO ESTABLISHING EROSION CONTROL MANAGEMENT. ALL CONTROL MEASURES WILL BE INSPECTED AT LEAST ONCE EACH WEEK AND FOLLOWING ANY STORM EVENT OF 0.5 INCHES OR GREATER BY A CONTRACTOR'S REPRESENTATIVE. ALL MEASURES WILL BE MAINTAINED IN GOOD WORKING ORDER; IF A REPAIR IS NECESSARY, IT WILL BE INITIATED WITHIN 24 HOURS OF REPORT. BUILT UP SEDIMENT WILL BE REMOVED FROM SILT FENCE WHEN IT HAS REACHED ONE-THIRD THE HEIGHT OF THE FENCE. SILT FENCE WILL BE INSPECTED REGULARLY FOR DEPTH OF SEDIMENT, TEARS, TO SEE IF THE FABRIC IS SECURELY ATTACHED TO THE FENCE POSTS, AND TO SEE THAT THE FENCE POSTS ARE FIRMLY IN THE GROUND. THE SEDIMENT BASINS WILL BE INSPECTED FOR DEPTH OF SEDIMENT, AND BUILT UP SEDIMENT WILL BE REMOVED WHEN IT REACHES 10 PERCENT OF THE DESIGN CAPACITY OR AT THE END OF THE JOB. TEMPORARY AND PERMANENT GRASSING, MULCHING AND SODDING WILL BE INSPECTED FOR BARE SPOTS, WASHOUTS, AND HEALTHY GROWTH. FLOATING TURBIDITY BARRIERS WILL BE INSPECTED REGULARLY AND ADJUSTED OR REPLACED IF NECESSARY TO MAINTAIN PROPER SEDIMENT CONTROL. A MAINTENANCE INSPECTION REPORT SHALL BE MADE AFTER EACH INSPECTION BY THE CONTRACTOR AND SHALL BE KEPT IN AN ACTIVE LOG READILY AVAILABLE AT THE JOB SITE CONSTRUCTION TRAILER. THE SITE SUPERINTENDENT WILL SELECT INDIVIDUALS WHO WILL BE RESPONSIBLE FOR MAINTENANCE AND REPAIR ACTIVITIES. FILLING OUT THE INSPECTION AND MAINTENANCE REPORT WILL BE BY THE CONTRACTOR. PERSONNEL SELECTED FOR AND MAINTENANCE RESPONSIBILITIES WILL RECEIVE TRAINING FROM THE SITE SUPERINTENDENT. THEY WILL BE TRAINED IN ALL MAINTENANCE PRACTICES NECESSARY FOR KEEPING THE EROSION AND SEDIMENT CONTROLS USED ON-SITE IN GOOD WORKING ORDER.

NON-STORM WATER DISCHARGES

IT IS EXPECTED THAT THE FOLLOWING NON-STORM WATER DISCHARGES WILL OCCUR FROM THE SITE DURING THE CONSTRUCTION PERIOD:

* WATER FROM WATER LINE FLUSHING.

* PAVEMENT WASH WATERS (WHERE NO SPILL OR LEAKS OF TOXIC OR HAZARDOUS MATERIALS HAVE OCCURRED)

* UNCONTAMINATED GROUNDWATER (FROM DEWATERING EXCAVATION).

ALL NON-STORM WATER DISCHARGES WILL BE DIRECTED TO THE SEDIMENT BASIN PRIOR TO DISCHARGE.

INVENTORY FOR POLLUTION PREVENTION PLAN

THE MATERIALS OR SUBSTANCES LISTED BELOW ARE EXPECTED, BUT NOT LIMITED, TO BE PRESENT ON-SITE DURING CONSTRUCTION:

CONCRETE	FERTILIZERS
DETERGENTS	PETROLEUM BASED PRODUCTS AND FUELS
TAR	CLEANING SOLVENTS
SAND	WOOD
STONE	

SPILL PREVENTION

MATERIAL MANAGEMENT PRACTICES

THE FOLLOWING ARE THE MATERIAL MANAGEMENT PRACTICES THAT WILL BE USED TO REDUCE THE RISK OF SPILLS OR OTHER ACCIDENTAL EXPOSURE OF MATERIALS AND SUBSTANCES TO STORM WATER RUNOFF.

GOOD HOUSEKEEPING:

THE FOLLOWING GOOD HOUSEKEEPING PRACTICES SHALL BE FOLLOWED ON-SITE DURING THE CONSTRUCTION PROJECT.

* AN EFFORT SHALL BE MADE TO STORE ONLY ENOUGH PRODUCT REQUIRED TO DO THE JOB.

* ALL MATERIALS STORED ON-SITE SHALL BE STORED IN A NEAT, ORDERLY MANNER IN THEIR APPROPRIATE CONTAINERS AND, IF POSSIBLE, UNDER A ROOF OR OTHER CONTAINED ENCLOSURE.

* PRODUCTS SHALL BE KEPT IN THEIR ORIGINAL MANUFACTURER'S LABELED CONTAINERS.

* SUBSTANCES SHALL NOT BE MIXED WITH ONE ANOTHER UNLESS RECOMMENDED BY THE MANUFACTURER.

* WHENEVER POSSIBLE, ALL OF A PRODUCT SHALL BE USED UP BEFORE DISPOSING OF THE CONTAINER.

* MANUFACTURERS RECOMMENDATIONS FOR PROPER USE AND DISPOSAL SHALL BE FOLLOWED.

* THE SITE SUPERINTENDENT SHALL INSPECT DAILY TO ENSURE PROPER USE AND DISPOSAL OF MATERIALS ON-SITE.

THE FOLLOWING PRODUCT SPECIFIC PRACTICES WILL BE FOLLOWED ON-SITE:

HAZARDOUS PRODUCTS:

THESE PRACTICES ARE USED TO REDUCE THE RISKS ASSOCIATED WITH HAZARDOUS MATERIALS.

PRODUCTS SHALL BE KEPT IN ORIGINAL CONTAINERS UNLESS THEY ARE NOT RESEALABLE. ORIGINAL LABELS AND MATERIAL SAFETY DATA SHALL BE RETAINED; THEY CONTAIN IMPORTANT PRODUCT INFORMATION. IF SURPLUS PRODUCT MUST BE DISPOSED OF, MANUFACTURERS OR LOCAL AND STATE RECOMMENDED METHODS OF PROPER DISPOSAL SHALL BE FOLLOWED.

PETROLEUM PRODUCTS;

ALL ON-SITE VEHICLES WILL BE MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTIVE MAINTENANCE TO REDUCE THE CHANCE OF LEAKAGE. PETROLEUM PRODUCTS WILL BE STORED IN TIGHTLY SEALED CONTAINERS, WHICH ARE CLEARLY LABELED. ANY ASPHALT SUBSTANCES USED ON-SITE WILL BE APPLIED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.

FERTILIZERS:

FERTILIZERS USED WILL BE APPLIED ONLY IN THE MINIMUM AMOUNTS RECOMMENDED BY THE MANUFACTURER. ONCE APPLIED, FERTILIZER WILL BE WORKED INTO THE SOIL TO LIMIT EXPOSURE TO STORM WATER. STORAGE WILL BE IN A SEALABLE PLASTIC BIN TO AVOID SPILLS.

CONCRETE TRUCKS:

CONTRACTOR SHALL DESIGNATE AN AREA FOR DISCHARGE OF SURPLUS CONCRETE OR DRUM WASH WATER AND SHALL INSTALL A CONTAINMENT BERM AROUND THIS AREA TO PREVENT RUNOFF TO THE REMAINDER OF THE SITE. HARD DEBRIS SHALL BE DISPOSED OF BY CONTRACTOR UPON COMPLETION OF THE PROJECT.

SPILL CONTROL PRACTICES

IN ADDITION TO THE GOOD HOUSEKEEPING AND MATERIAL MANAGEMENT PRACTICES DISCUSSED IN THE PREVIOUS SECTIONS OF THIS PLAN, THE FLOWING PRACTICES WILL BE FOLLOWED FOR SPILL PREVENTION AND CLEANUP:

* MANUFACTURERS' RECOMMENDED METHODS FOR SPILL CLEANUP WILL BE CLEARLY POSTED AND SITE PERSONNEL WILL BE MADE AWARE OF THE PROCEDURES AND THE LOCATION OF THE INFORMATION AND CLEANUP SUPPLIES.

* MATERIALS AND EQUIPMENT NECESSARY FOR SPILL CLEANUP WILL KEPT IN THE MATERIAL STORAGE AREA ONSITE. EQUIPMENT AND MATERIALS WILL INCLUDE, BUT NOT LIMITED TO, BROOMS, DUSTPANS, MOPS, RAGES, GLOVES, GOGGLES, FINE PARTICLE SEPARATION FROM PELLETIZED-GRANULAR MEDIA, SAND, SAWDUST, AND PLASTIC AND METAL TRASH CONTAINERS SPECIFICALLY FOR THIS PURPOSE.

* ALL SPILLS WILL BE CLEANED UP IMMEDIATELY AFTER DISCOVERY.

* THE SPILL AREA WILL BE KEPT WELL VENTILATED AND PERSONNEL WILL WEAR APPROPRIATE PROTECTIVE CLOTHING TO PREVENT INJURY FROM CONTACT WITH A HAZARDOUS SUBSTANCE.

* SPILLS OF TOXIC OR HAZARDOUS MATERIAL WILL BE REPORTED TO THE APPROPRIATE STATE OR LOCAL GOVERNMENT AGENCY, REGARDLESS OF THE SIZE.

* THE SPILL PREVENTION PLAN WILL BE ADJUSTED TO INCLUDE MEASURES TO PREVENT THIS TYPE OF SPILL FROM REOCCURRING AND HOW TO CLEAN UP THE SPILL IF THERE IS ANOTHER ONE. A DESCRIPTION OF THE SPILL, WHAT CAUSED IT, AND THE CLEANUP MEASURES WILL ALSO BE INCLUDED.

* THE SITE SUPERINTENDENT WILL BE THE SPILL PREVENTION AND CLEANUP COORDINATOR. HE WILL DESIGNATE AT LEAST THREE OTHER SITE PERSONNEL WHO WILL RECEIVE SPILL PREVENTION AND CLEANUP TRAINING. THESE INDIVIDUALS WILL EACH BECOME RESPONSIBLE FOR A PARTICULAR PHASE OF PREVENTION AND CLEANUP. THE NAMES OF RESPONSIBLE SPILL PERSONNEL WILL BE POSTED IN THE MATERIAL STORAGE AREA AND IN THE OFFICE TRAILER ON SITE.

NOTICE OF TERMINATION

A NOTICE OF TERMINATION WILL BE SUBMITTED TO EPA AFTER THE CONSTRUCTION HAS BEEN COMPLETED AND THE SITE HAS UNDERGONE FINAL STABILIZATION BY THE CONTRACTOR.

POLLUTION PREVENTION PLAN CERTIFICATION

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS HAVE BEEN READ BY ME OR MY DESIGNATED REPRESENTATIVE AND UNDERSTAND THAT THIS SYSTEM HAS BEEN PREPARED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.

OWNER: _____

SIGNED: _____

NAME AND TITLE: _____

DEPARTMENT: _____

ADDRESS: _____

_____

_____

DATE: _____

CONTRACTOR'S CERTIFICATION

I CERTIFY UNDER PENALTY OF LAW THAT I UNDERSTAND THE TERMS AND CONDITIONS OF THE GENERAL NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT THAT AUTHORIZES THE STORM WATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY FROM THE CONSTRUCTION SITE IDENTIFIED AS PART OF THIS CERTIFICATION.

SIGNATURE	FOR	RESPONSIBLE FOR
NAME: TITLE: DATE:	COMPANY: ADDRESS: PHONE:	GENERAL CONTRACTOR
NAME: TITLE: DATE:	COMPANY: ADDRESS: PHONE:	TEMPORARY AND PERMANENT STABILIZATION
NAME: TITLE: DATE:	COMPANY: ADDRESS: PHONE:	STABILIZED CONSTRUCTION ENTRANCE, EARTH DIKES, SEDIMENT BASIN

REVISED	NO.	BY	DATE	DESCRIPTION	REVISED	NO.	BY	DATE
	1					6		
	2					7		
	3					8		
	4					9		
	5					10		

	INITIALS	DATE
DESIGN	TAW	9/16/2013
DRAWN	TAW	9/16/2013
CHECKED	TAD	12/12/13
QUALITY CHK	---	---
SCALE		

PREPARED FOR:
VAM LBK DEVELOPMENT, LLC
1990 MAIN STREET, STE. 750
SARASOTA, FL 34236
941-309-5383

George F. Young, Inc.
Since 1919
ENGINEERING CERTIFICATE OF AUTHORIZATION NUMBER 21
ARCHITECTURE•ENGINEERING•ENVIRONMENTAL•LANDSCAPE•PLANNING•SURVEYING•UTILITIES
GAINESVILLE•LAKEWOOD RANCH•ORLANDO•PALM BEACH GARDENS•ST. PETERSBURG•TAMPA•VENICE

TIMOTHY DOVE, PE No. 43268
DATE

ARIA, LONGBOAT KEY
STORMWATER POLLUTION PREVENTION PLAN
SECTION 8&17, TOWNSHIP 36 S., RANGE 17 E.

JOB NO. 13004600LC
SHEET NO. C11.0

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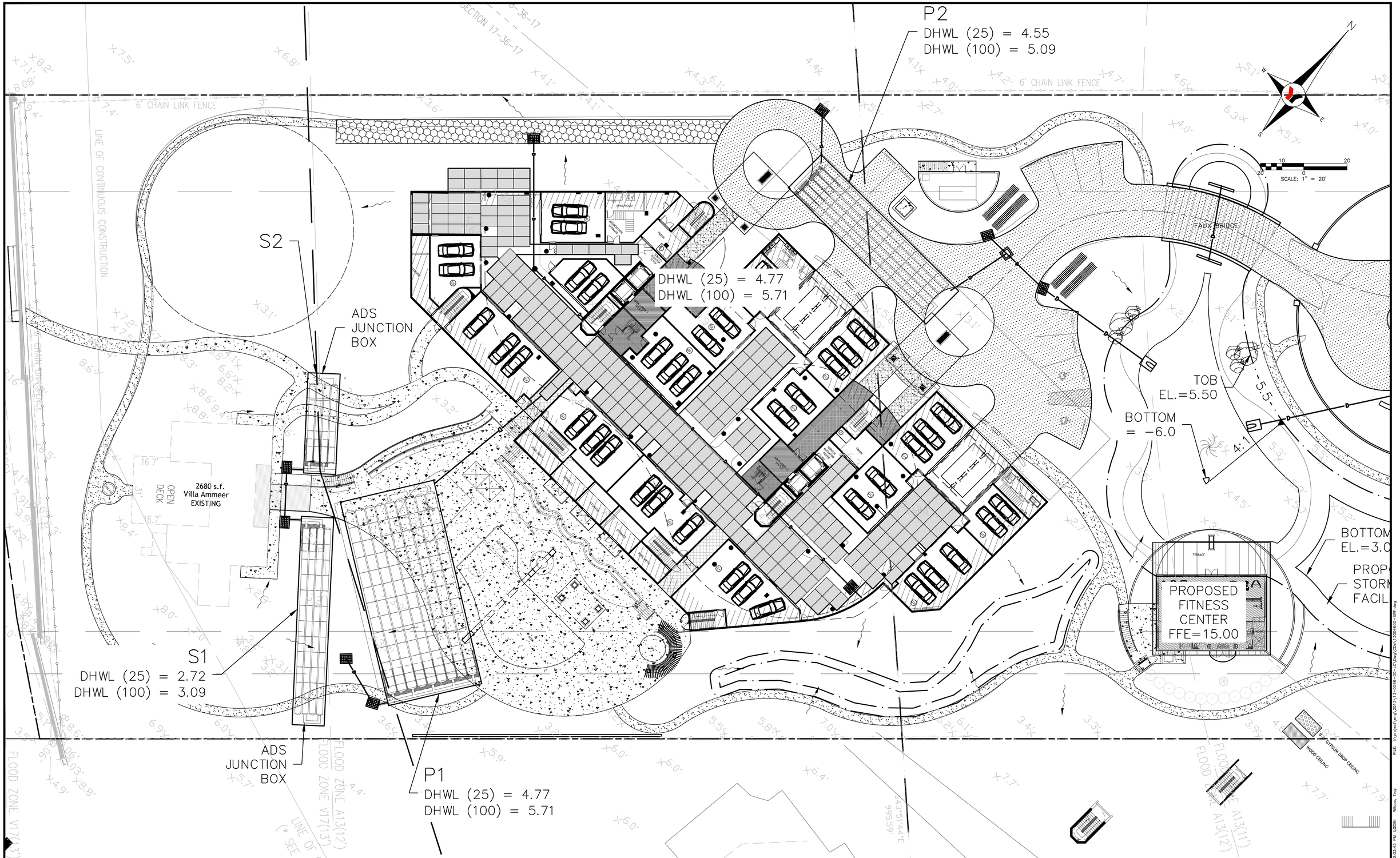

REVISED	NO.	BY	DATE	DESCRIPTION
	1	TAW	12/23/13	ISSUED FOR TOWN OF LONGBOAT KEY PLANNING AND ZONING REVIEW.
	2			
	3			
	4			
	5			

	INITIALS	DATE
DESIGN	TAW	9/16/2013
DRAWN	TAW	9/16/2013
CHECKED	TAD	12/12/13
QUALITY CHK	---	-
SCALE	AS SHOWN	

PREPARED FOR:
VAM LBK DEVELOPMENT, LLC
1990 MAIN STREET, STE. 750
SARASOTA, FL 34236
941-309-5383

George F. Young, Inc.
Since 1919
10540 PORTAL CROSSING, SUITE 105 BRADENTON, FLORIDA 34211
PHONE (941) 747-2881 FAX (941) 747-7234
ENGINEERING CERTIFICATE OF AUTHORIZATION NUMBER 21
ARCHITECTURE•ENGINEERING•ENVIRONMENTAL•LANDSCAPE•PLANNING•SURVEYING•UTILITIES
GAINESVILLE•LAKEWOOD RANCH•ORLANDO•PALM BEACH GARDENS•ST. PETERSBURG•TAMPA•VENICE

TIMOTHY DOVE, PE No. 43268
DATE

ARIA, LONGBOAT KEY
ADG ASCENTIA DEVELOPMENT GROUP
STORMWATER FACILITY PLAN
SECTION 8&17, TOWNSHIP 36 S., RANGE 17 E.

JOB NO. 13004600LC
SHEET NO. C12.0

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LOGIN: Wilcox, Troy
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PROJECT INFORMATION	
ENGINEERED PRODUCT MANAGER:	SUE MCNAMEE 860-391-3684 SUSAN.MCNAMEE@ADS-PIPE.COM
ADS SALES REP:	JOHN TRIVENTO 407-319-4484 JOHN.TRIVENTO@ADS-PIPE.COM
PROJECT NO:	41267

ADVANCED DRAINAGE SYSTEMS, INC.

VILLA AM MEER

SARASOTA, FL

STORMWATER CHAMBER SPECIFICATIONS

1. CHAMBERS SHALL BE STORMTECH SC-740, SC-310, OR APPROVED EQUAL.
2. CHAMBERS SHALL BE MANUFACTURED FROM VIRGIN POLYPROPYLENE OR POLYETHYLENE RESINS.
3. CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORT PANELS THAT WOULD IMPEDE FLOW OR LIMIT ACCESS FOR INSPECTION.
4. THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL, AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.
5. CHAMBERS SHALL MEET ASTM F2922 (POLYETHYLENE) OR ASTM F2418 (POLYPROPYLENE), "STANDARD SPECIFICATION FOR THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
6. CHAMBERS SHALL BE DESIGNED AND ALLOWABLE LOADS DETERMINED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
7. ONLY CHAMBERS THAT ARE APPROVED BY THE SITE DESIGN ENGINEER WILL BE ALLOWED. THE CHAMBER MANUFACTURER SHALL SUBMIT THE FOLLOWING UPON REQUEST TO THE SITE DESIGN ENGINEER FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE:
   a. A STRUCTURAL EVALUATION SEALED BY A REGISTERED PROFESSIONAL ENGINEER THAT DEMONSTRATES THAT THE SAFETY FACTORS ARE GREATER THAN OR EQUAL TO 1.95 FOR DEAD LOAD AND 1.75 FOR LIVE LOAD, THE MINIMUM REQUIRED BY ASTM F2787 AND BY AASHTO FOR THERMOPLASTIC PIPE.
   b. A STRUCTURAL EVALUATION SEALED BY A REGISTERED PROFESSIONAL ENGINEER THAT DEMONSTRATES THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET. THE 50 YEAR CREEP MODULUS DATA SPECIFIED IN ASTM F2418 OR ASTM F2922 MUST BE USED AS PART OF THE AASHTO STRUCTURAL EVALUATION TO VERIFY LONG-TERM PERFORMANCE.
   c. STRUCTURAL CROSS SECTION DETAIL ON WHICH THE STRUCTURAL EVALUATION IS BASED.
8. CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.

IMPORTANT - NOTES FOR THE BIDDING AND INSTALLATION OF THE SC-310/SC-740 SYSTEM

1. STORMTECH SC-310 & SC-740 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A PRE-CONSTRUCTION MEETING WITH THE INSTALLERS.
2. STORMTECH SC-310 & SC-740 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/SC-780 CONSTRUCTION GUIDE".
3. CHAMBERS ARE NOT TO BE BACKFILLED WITH A DOZER OR AN EXCAVATOR SITUATED OVER THE CHAMBERS.

   STORMTECH RECOMMENDS 3 BACKFILL METHODS:
   - STONESHOOTER LOCATED OFF THE CHAMBER BED.
   - BACKFILL AS ROWS ARE BUILT USING AN EXCAVATOR ON THE FOUNDATION STONE OR SUBGRADE.
   - BACKFILL FROM OUTSIDE THE EXCAVATION USING A LONG BOOM HOE OR EXCAVATOR.
4. THE FOUNDATION STONE SHALL BE LEVELED AND COMPACTED PRIOR TO PLACING CHAMBERS.
5. JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEATED PRIOR TO PLACING STONE.
6. MAINTAIN MINIMUM - 6" (150 mm) SPACING BETWEEN THE CHAMBER ROWS.
7. EMBEDMENT STONE SURROUNDING CHAMBERS MUST BE A CLEAN, CRUSHED, ANGULAR STONE 3/4-2" (20-50 mm).
8. THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE SITE DESIGN ENGINEER.
9. ADS RECOMMENDS THE USE OF "FLEXSTORM CATCH IT" INSERTS DURING CONSTRUCTION FOR ALL INLETS TO PROTECT THE SUBSURFACE STORMWATER MANAGEMENT SYSTEM FROM CONSTRUCTION SITE RUNOFF.

NOTES FOR CONSTRUCTION EQUIPMENT

1. STORMTECH SC-310 & SC-740 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/SC-780 CONSTRUCTION GUIDE".
2. THE USE OF CONSTRUCTION EQUIPMENT OVER SC-310 & SC-740 CHAMBERS IS LIMITED:
   - NO EQUIPMENT IS ALLOWED ON BARE CHAMBERS.
   - NO RUBBER TIRED LOADERS, DUMP TRUCKS, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE WITH THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
   - WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH SC-310/SC-740/DC-780 CONSTRUCTION GUIDE".
3. FULL 36" (900 mm) OF STABILIZED COVER MATERIALS OVER THE CHAMBERS IS REQUIRED FOR DUMP TRUCK TRAVEL OR DUMPING.

USE OF A DOZER TO PUSH EMBEDMENT STONE BETWEEN THE ROWS OF CHAMBERS MAY CAUSE DAMAGE TO THE CHAMBERS AND IS NOT AN ACCEPTABLE BACKFILL METHOD. ANY CHAMBERS DAMAGED BY THE "DUMP AND PUSH" METHOD ARE NOT COVERED UNDER THE STORMTECH STANDARD WARRANTY.

CONTACT STORMTECH AT 1-888-892-2694 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.

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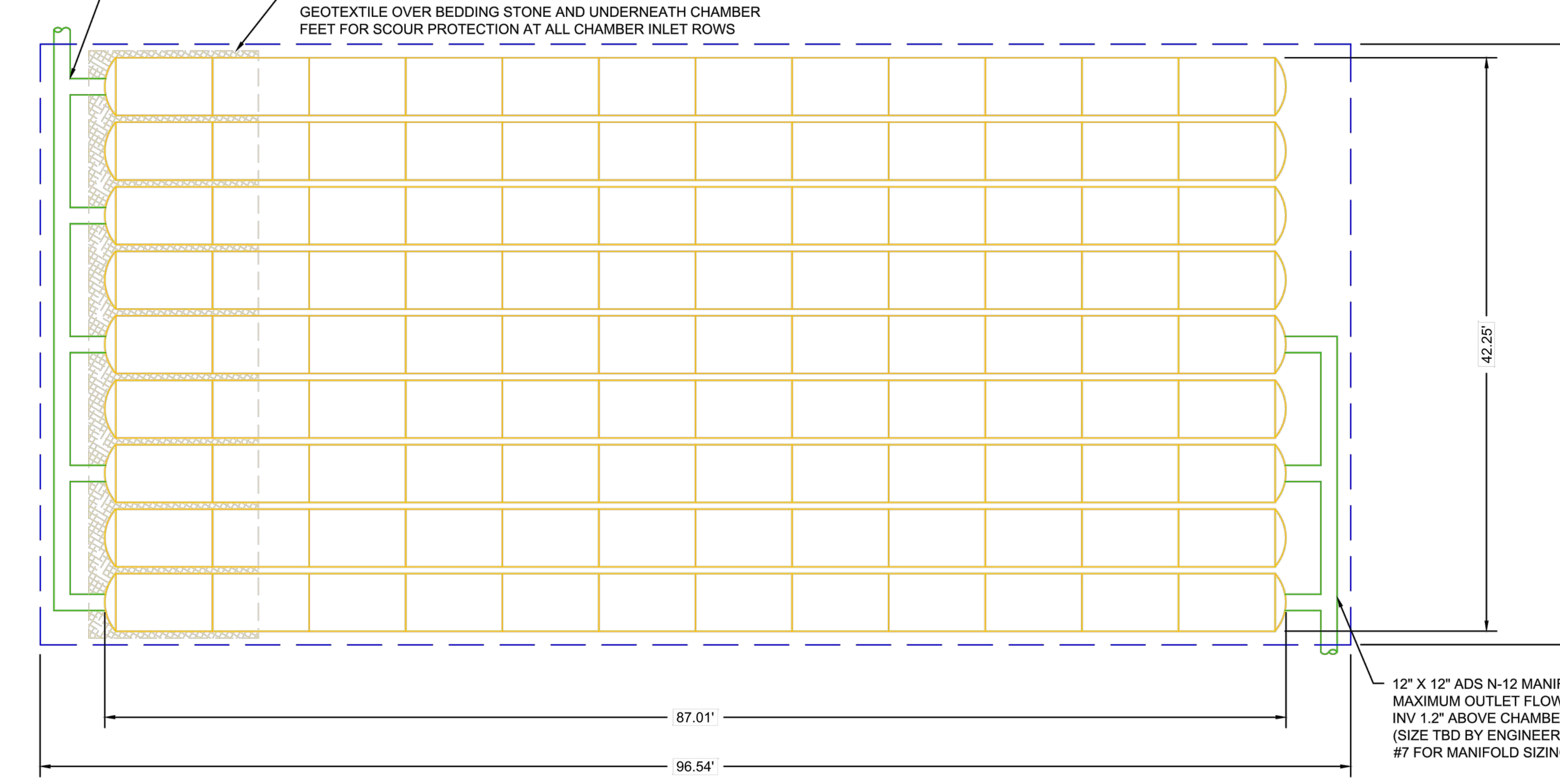
PROPOSED LAYOUT - P1

(108) STORMTECH SC-740 CHAMBERS
(18) STORMTECH SC-740 END CAPS
INSTALLED WITH 6" COVER STONE, 6" BASE STONE, 40% STONE VOID
INSTALLED SYSTEM VOLUME: 8,102 CF (PERIMETER STONE INCLUDED / 6" BASE STONE NOT INCLUDED)
AREA OF SYSTEM: 4,271 FT²
PERIMETER OF SYSTEM: 281 FT

PROPOSED ELEVATIONS

MAXIMUM ALLOWABLE GRADE (TOP OF PAVEMENT/UNPAVED):	13.50
MINIMUM ALLOWABLE GRADE (UNPAVED WITH TRAFFIC):	7.50
MINIMUM ALLOWABLE GRADE (UNPAVED NO TRAFFIC):	7.00
MINIMUM ALLOWABLE GRADE (BASE OF FLEXIBLE PAVEMENT):	7.00
MINIMUM ALLOWABLE GRADE (TOP OF REINFORCED CONCRETE PAVEMENT):	7.00
TOP OF STONE:	6.00
TOP OF CHAMBER:	5.50
12" TOP MANIFOLD INVERT:	4.04
12" BOTTOM MANIFOLD INVERT:	3.10
BOTTOM OF CHAMBER:	3.00
BOTTOM OF STONE:	2.50



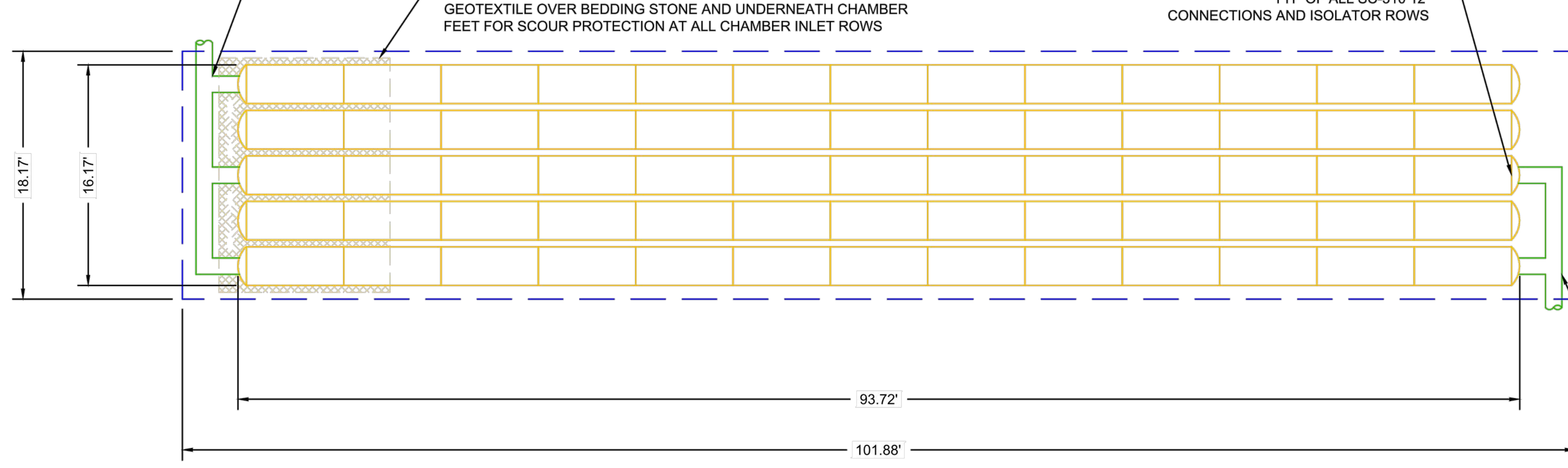
VILL AAM MEER
SARASOTA, FL
DATE: 10/17/13 DRAWN: CM
PROJECT #: 41267 CHECKED: KMS
REV | DRW | CHK | DESCRIPTION
StormTech® Detention • Retention • Water Quality
70 INWOOD ROAD, SUITE 3 | ROCKY HILL | CT | 06067
860-529-8188 | 888-892-2694 | WWW.STORMTECH.COM
ADS. 4640 TRUEMAN BLVD HILLIARD, OH 43026 1-800-733-7473
ADVANCED DRAINAGE SYSTEMS, INC
0 10' 20'
THIS DRAWING HAS BEEN PREPARED BASED ON INFORMATION PROVIDED TO ADS UNDER THE DIRECTION OF THE SITE DESIGN ENGINEER OR OTHER PROJECT REPRESENTATIVE. THE SITE DESIGN ENGINEER SHALL REVIEW THIS DRAWING PRIOR TO CONSTRUCTION. IT IS THE ULTIMATE RESPONSIBILITY OF THE SITE DESIGN ENGINEER TO ENSURE THAT THE PRODUCT(S) DEPICTED AND ALL ASSOCIATED DETAILS MEET ALL APPLICABLE LAWS, REGULATIONS, AND PROJECT REQUIREMENTS.
SHEET 2 OF 7

PROPOSED LAYOUT - P2

(65) STORMTECH SC-310 CHAMBERS
(10) STORMTECH SC-310 END CAPS
INSTALLED WITH 6" COVER STONE, 6" BASE STONE, 40% STONE VOID
INSTALLED SYSTEM VOLUME: 1,932 CF (PERIMETER STONE INCLUDED / 6" BASE STONE NOT INCLUDED)
AREA OF SYSTEM: 1,850 FT²
PERIMETER OF SYSTEM: 240 FT

PROPOSED ELEVATIONS

MAXIMUM ALLOWABLE GRADE (TOP OF PAVEMENT/UNPAVED):	12.33
MINIMUM ALLOWABLE GRADE (UNPAVED WITH TRAFFIC):	6.33
MINIMUM ALLOWABLE GRADE (UNPAVED NO TRAFFIC):	5.83
MINIMUM ALLOWABLE GRADE (BASE OF FLEXIBLE PAVEMENT):	5.83
MINIMUM ALLOWABLE GRADE (TOP OF REINFORCED CONCRETE PAVEMENT):	5.83
TOP OF STONE:	4.83
TOP OF CHAMBER:	4.33
12" BOTTOM MANIFOLD INVERT:	3.08
BOTTOM OF CHAMBER:	3.00
BOTTOM OF STONE:	2.50



VILL AAM MEER
SARASOTA, FL
DATE: 10/17/13 DRAWN: CM
PROJECT #: 41267 CHECKED: KMS
REV | DRW | CHK | DESCRIPTION
StormTech® Detention • Retention • Water Quality
70 INWOOD ROAD, SUITE 3 | ROCKY HILL | CT | 06067
860-529-8188 | 888-892-2694 | WWW.STORMTECH.COM
ADS. 4640 TRUEMAN BLVD HILLIARD, OH 43026 1-800-733-7473
ADVANCED DRAINAGE SYSTEMS, INC.
0 10' 20'
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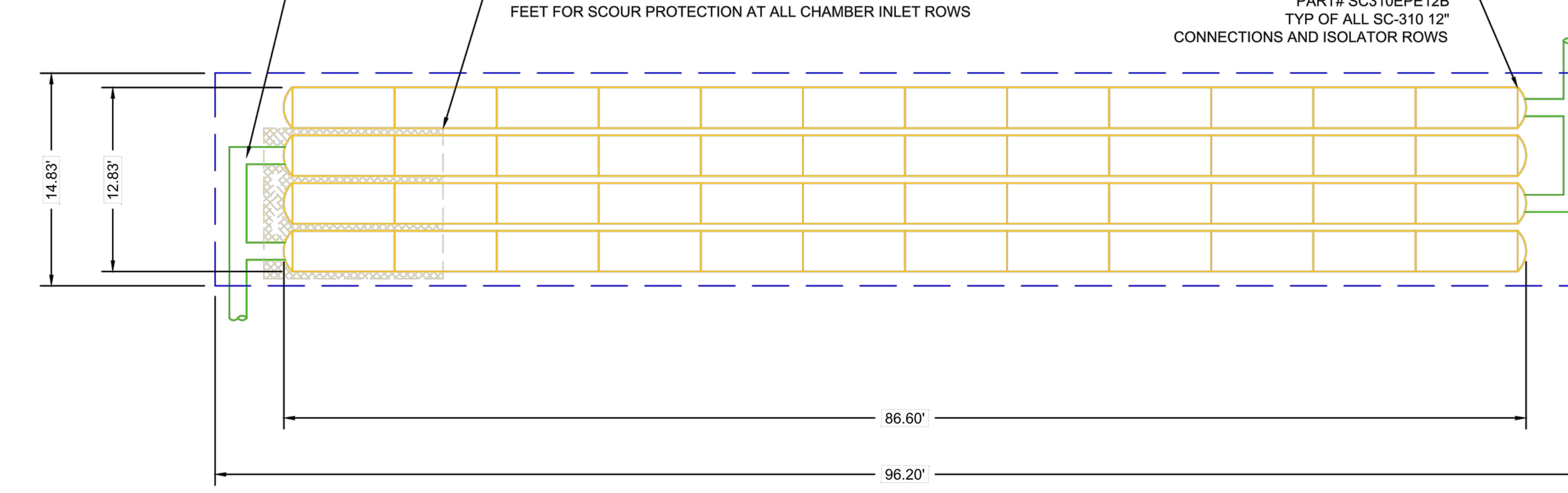
SHEET 3 OF 7

PROPOSED LAYOUT - S1

(48) STORMTECH SC-310 CHAMBERS
(8) STORMTECH SC-310 END CAPS
INSTALLED WITH 6" COVER STONE, 6" BASE STONE, 40% STONE VOID
INSTALLED SYSTEM VOLUME BETWEEN ELEVATIONS 2 & 3: 966 CF (PERIMETER STONE INCLUDED)
AREA OF SYSTEM: 1,426 FT²
PERIMETER OF SYSTEM: 222 FT

PROPOSED ELEVATIONS

MAXIMUM ALLOWABLE GRADE (TOP OF PAVEMENT/UNPAVED):	11.33
MINIMUM ALLOWABLE GRADE (UNPAVED WITH TRAFFIC):	5.33
MINIMUM ALLOWABLE GRADE (UNPAVED NO TRAFFIC):	4.83
MINIMUM ALLOWABLE GRADE (BASE OF FLEXIBLE PAVEMENT):	4.83
MINIMUM ALLOWABLE GRADE (TOP OF REINFORCED CONCRETE PAVEMENT):	4.83
TOP OF STONE:	3.83
TOP OF CHAMBER:	3.33
12" BOTTOM MANIFOLD INVERT:	2.08
BOTTOM OF CHAMBER:	2.00
BOTTOM OF STONE:	1.50



VILL AAM MEER
SARASOTA, FL
DATE: 10/17/13 DRAWN: CM
PROJECT #: 41267 CHECKED: KMS
REV | DRW | CHK | DESCRIPTION
StormTech® Detention • Retention • Water Quality
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860-529-8188 | 888-892-2694 | WWW.STORMTECH.COM
ADS. 4640 TRUEMAN BLVD HILLIARD, OH 43026 1-800-733-7473
ADVANCED DRAINAGE SYSTEMS, INC
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SHEET 4 OF 7

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DESIGN	TAW	9/16/2013
DRAWN	TAW	9/16/2013
CHECKED	TAD	12/12/13
QUALITY CHK	---	-
SCALE	AS SHOWN	

PREPARED FOR:
VAM LBK DEVELOPMENT, LLC
1990 MAIN STREET, STE. 750
SARASOTA, FL 34236
941-309-5383

Since 1919
George F. Young, Inc.
10540 PORTAL CROSSING, SUITE 105 BRADENTON, FLORIDA 34211
PHONE (941) 747-2981 FAX (941) 747-7234
ENGINEERING CERTIFICATE OF AUTHORIZATION NUMBER 21
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TIMOTHY DOVE, PE No. 43268
DATE

ARIA, LONGBOAT KEY
ADG ASCENTIA DEVELOPMENT GROUP
ADS DETAILS
SECTION 8&17, TOWNSHIP 36 S., RANGE 17 E.

JOB NO. 13004600LC
SHEET NO. C12.1

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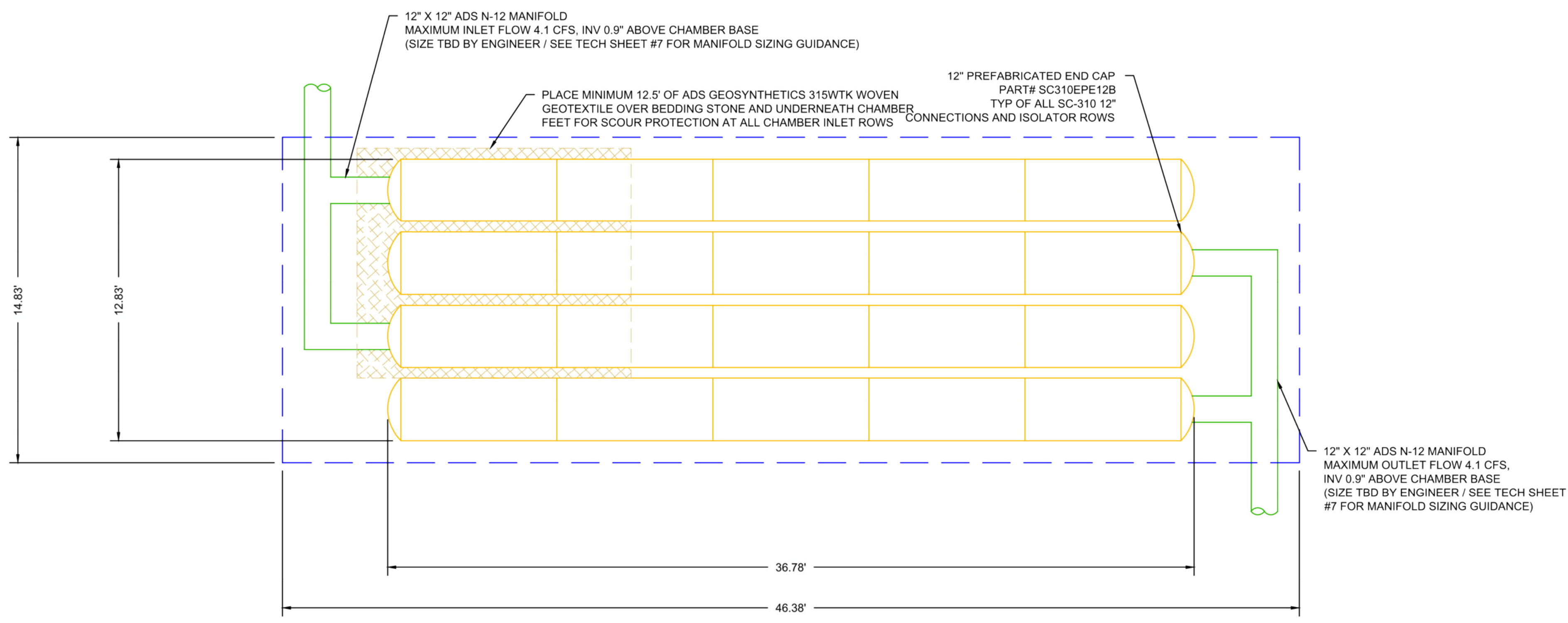
PROPOSED LAYOUT - S2

(20) STORMTECH SC-310 CHAMBERS
(8) STORMTECH SC-310 END CAPS
INSTALLED WITH 6" COVER STONE, 6" BASE STONE, 40% STONE VOID
INSTALLED SYSTEM VOLUME BETWEEN ELEVATIONS 2 & 3: 440 CF (PERIMETER STONE INCLUDED)
AREA OF SYSTEM: 688 FT²
PERIMETER OF SYSTEM: 122 FT

PROPOSED ELEVATIONS

MAXIMUM ALLOWABLE GRADE (TOP OF PAVEMENT/UNPAVED):	11.33
MINIMUM ALLOWABLE GRADE (UNPAVED WITH TRAFFIC):	5.33
MINIMUM ALLOWABLE GRADE (UNPAVED NO TRAFFIC):	4.83
MINIMUM ALLOWABLE GRADE (BASE OF FLEXIBLE PAVEMENT):	4.83
MINIMUM ALLOWABLE GRADE (TOP OF REINFORCED CONCRETE PAVEMENT):	4.83
TOP OF STONE:	3.83
TOP OF CHAMBER:	3.33
12" BOTTOM MANIFOLD INVERT:	2.08
BOTTOM OF CHAMBER:	2.00
BOTTOM OF STONE:	1.50



VILL AAM MEER
SARASOTA, FL

DATE: 10/17/13	DRAWN: CM	
PROJECT #: 41267	CHECKED: KMS	

REV | DRW | CHK | DESCRIPTION

StormTech®
Detention•Retention•Water Quality
70 INWOOD ROAD, SUITE 3 | ROCKY HILL | CT | 06067
860-529-8188 | 888-892-2694 | WWW.STORMTECH.COM

ADS. ADVANCED DRAINAGE SYSTEMS, INC.
4640 TRUEMAN BLVD
HILLIARD, OH 43026
1-800-733-7473

0 5' 10'

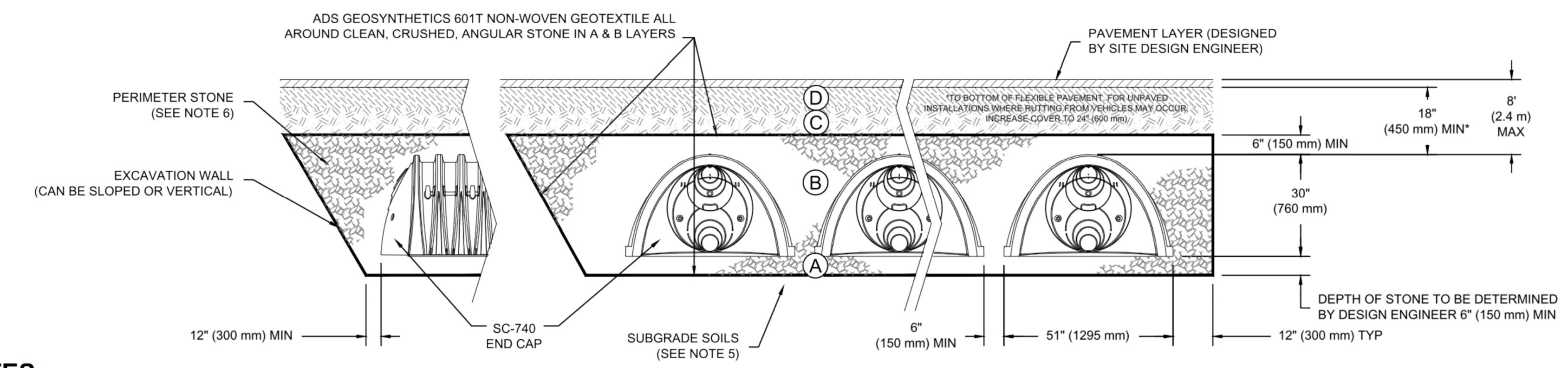
THIS DRAWING HAS BEEN PREPARED BASED ON INFORMATION PROVIDED TO ADS UNDER THE DIRECTION OF THE SITE DESIGN ENGINEER OR OTHER PROJECT REPRESENTATIVE. THE SITE DESIGN ENGINEER SHALL REVIEW THIS DRAWING PRIOR TO CONSTRUCTION. IT IS THE ULTIMATE RESPONSIBILITY OF THE SITE DESIGN ENGINEER TO ENSURE THAT THE PRODUCT(S) DEPICTED AND ALL ASSOCIATED DETAILS MEET ALL APPLICABLE LAWS, REGULATIONS, AND PROJECT REQUIREMENTS.

SHEET
5 OF 7

ACCEPTABLE FILL MATERIALS: STORMTECH SC-740 CHAMBER SYSTEMS

MATERIAL LOCATION		DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	**FINAL FILL:** FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER	ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	**INITIAL FILL:** FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 18" (450 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE. MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER.	AASHTO M145[1] A-1, A-2-4, A-3 OR AASHTO M43[1] 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 12" (300 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 6" (150 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS. ROLLER GROSS VEHICLE WEIGHT NOT TO EXCEED 12,000 lbs (53 kN). DYNAMIC FORCE NOT TO EXCEED 20,000 lbs (89 kN).
B	**EMBEDMENT STONE:** FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE, NOMINAL SIZE DISTRIBUTION BETWEEN 3/4-2 INCH (20-50 mm)	AASHTO M43[1] 3, 357, 4, 467, 5, 56, 57	NO COMPACTION REQUIRED.
A	**FOUNDATION STONE:** FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE, NOMINAL SIZE DISTRIBUTION BETWEEN 3/4-2 INCH (20-50 mm)	AASHTO M43[1] 3, 357, 4, 467, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE. [2,3]

PLEASE NOTE:
1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
2. STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 6" (150 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
3. WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.



NOTES:

1. SC-740 CHAMBERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM F2418 "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS", OR ASTM F2922 "STANDARD SPECIFICATION FOR POLYETHYLENE (PE) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
2. SC-740 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
3. "ACCEPTABLE FILL MATERIALS" TABLE ABOVE PROVIDES MATERIAL LOCATIONS, DESCRIPTIONS, GRADATIONS, AND COMPACTION REQUIREMENTS FOR FOUNDATION, EMBEDMENT, AND FILL MATERIALS.
4. THE "SITE DESIGN ENGINEER" REFERS TO THE ENGINEER RESPONSIBLE FOR THE DESIGN AND LAYOUT OF THE STORMTECH CHAMBERS FOR THIS PROJECT.
5. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
6. PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
7. ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.

VILL AAM MEER
SARASOTA, FL
DATE: 10/17/13 DRAWN: CM
PROJECT #: 41267 CHECKED: KMS
REV | DRW | CHK | DESCRIPTION
StormTech®
70 INWOOD ROAD, SUITE 3 | ROCKY HILL | CT | 06067
860-529-8188 | 888-892-2694 | WWW.STORMTECH.COM
ADS. 4640 TRUEMAN BLVD
HILLIARD, OH 43026
1-800-733-7473
THIS DRAWING HAS BEEN PREPARED BASED ON INFORMATION PROVIDED TO ADS UNDER THE DIRECTION OF THE SITE DESIGN ENGINEER OR OTHER PROJECT REPRESENTATIVE. THE SITE DESIGN ENGINEER SHALL REVIEW THIS DRAWING PRIOR TO CONSTRUCTION. IT IS THE ULTIMATE RESPONSIBILITY OF THE SITE DESIGN ENGINEER TO ENSURE THAT THE PRODUCT(S) DEPICTED AND ALL ASSOCIATED DETAILS MEET ALL APPLICABLE LAWS, REGULATIONS, AND PROJECT REQUIREMENTS.

SHEET
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ACCEPTABLE FILL MATERIALS: STORMTECH SC-310 CHAMBER SYSTEMS

MATERIAL LOCATION		DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	**FINAL FILL:** FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER	ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	**INITIAL FILL:** FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 18" (450 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE. MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER.	AASHTO M145[1] A-1, A-2-4, A-3 OR AASHTO M43[1] 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 12" (300 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 6" (150 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS. ROLLER GROSS VEHICLE WEIGHT NOT TO EXCEED 12,000 lbs (53 kN). DYNAMIC FORCE NOT TO EXCEED 20,000 lbs (89 kN).
B	**EMBEDMENT STONE:** FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE, NOMINAL SIZE DISTRIBUTION BETWEEN 3/4-2 INCH (20-50 mm)	AASHTO M43[1] 3, 357, 4, 467, 5, 56, 57	NO COMPACTION REQUIRED.
A	**FOUNDATION STONE:** FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE, NOMINAL SIZE DISTRIBUTION BETWEEN 3/4-2 INCH (20-50 mm)	AASHTO M43[1] 3, 357, 4, 467, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE. [2,3]

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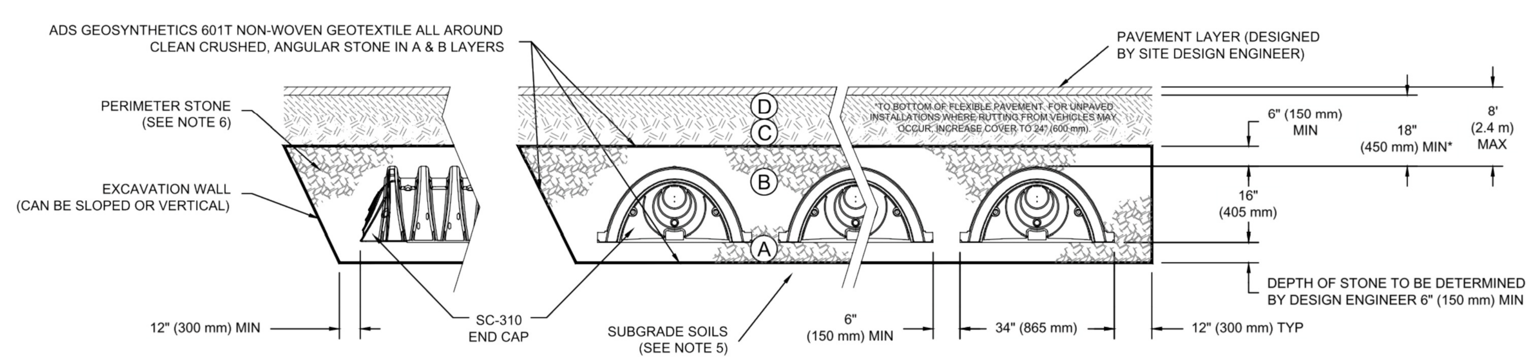

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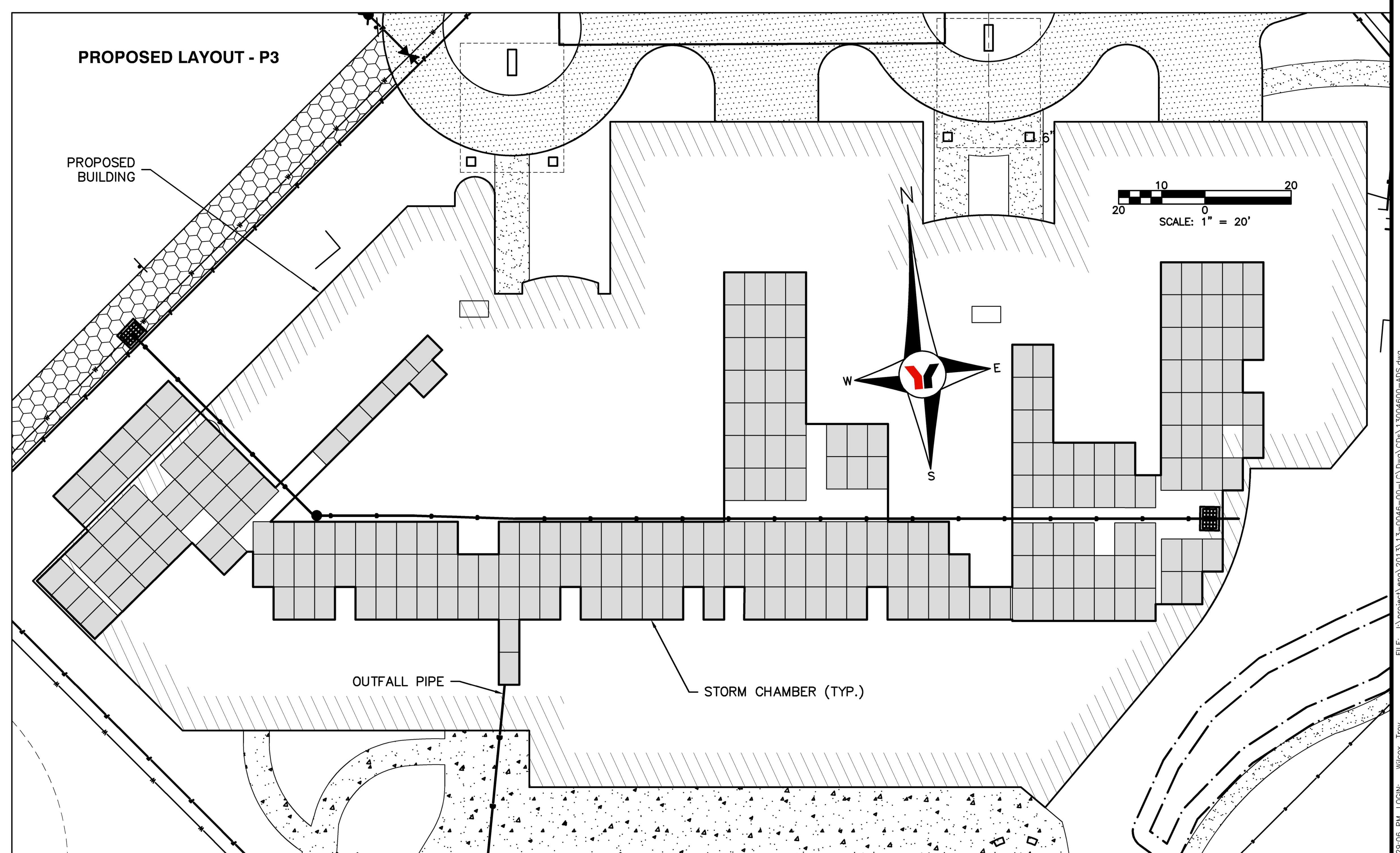
SHEET
7 OF 7

PROPOSED LAYOUT - P3



REVISED NO.	BY	DATE	DESCRIPTION
1	TAW	12/23/13	ISSUED FOR TOWN OF LONGBOAT KEY PLANNING AND ZONING REVIEW.
2			
3			
4			
5			

	INITIALS	DATE
DESIGN	TAW	9/16/2013
DRAWN	TAW	9/16/2013
CHECKED	TAD	12/12/13
QUALITY CHK	---	-
SCALE	AS SHOWN	

PREPARED FOR:
VAM LBK DEVELOPMENT, LLC
1990 MAIN STREET, STE. 750
SARASOTA, FL 34236
941-309-5383

George F. Young, Inc.
Since 1919
10540 PORTAL CROSSING, SUITE 105 BRADENTON, FLORIDA 34211
PHONE (941) 747-2981 FAX (941) 747-7234
ENGINEERING CERTIFICATE OF AUTHORIZATION NUMBER 21
ARCHITECTURE•ENGINEERING•ENVIRONMENTAL•LANDSCAPE•PLANNING•SURVEYING•UTILITIES
GAINESVILLE•LAKEWOOD RANCH•ORLANDO•PALM BEACH GARDENS•ST. PETERSBURG•TAMPA•VENICE

TIMOTHY DOVE, PE No. 43268
DATE

ARIA, LONGBOAT KEY

ADG ASCENTIA DEVELOPMENT GROUP

ADS DETAILS

SECTION 8&17, TOWNSHIP 36 S., RANGE 17 E.

JOB NO. 13004600LC
SHEET NO. C12.2

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PLOTTED: 12/23/2013 4:29:06 PM LOGIN: Wilcox, Troy