

UTILITY SEPARATION NOTE:
LOCATION OF PUBLIC WATER SYSTEM MAINS PER F.A.C. 62.565.314

OTHER PIPE MATERIAL	HORIZONTAL SEPARATION	VERTICAL (1) AT CROSSINGS	JOINT SPACING AT CROSSINGS
STORM SEWER, STORMWATER FORCE MAIN, RECLAIMED WATER (2)	3 FT MINIMUM BETWEEN OUTSIDE OF PIPES	12 IN. MIN FOR RECLAIMED WATER 8 IN. MIN. FOR STORM, BUT 12 IN. PREFERRED	MINIMUM 3 FT FROM CENTER OF CROSSING TO NEXT JOINT ON THE WM, BOTH DIRECTIONS
VACUUM SANITARY SEWER	3 FT MINIMUM, 10 FT PREFERRED	6 IN. MINIMUM, 12 IN. PREFERRED	MINIMUM 3 FT FROM CENTER OF CROSSING TO NEXT JOINT ON THE WM, BOTH DIRECTIONS
GRAVITY OR PRESSURE SANITARY SEWER, SANITARY SEWER FORCE MAIN, RECLAIMED WATER (4)	6 FT MINIMUM, 10 FT PREFERRED	12 IN. MINIMUM FOR ALL EXCEPT GRAVITY SEWER, WHICH IS 6 IN. MIN. BUT 12 IN. IS PREFERRED	MINIMUM 6 FT FROM CENTER OF CROSSING TO NEXT JOINT ON THE WM, BOTH DIRECTIONS
ONSITE SEWAGE TREATMENT & DISPOSAL SYSTEM	10 FT MINIMUM		

(1) WATER MAIN SHOULD CROSS ABOVE OTHER PIPE. WHEN WATER MAIN MUST BE BELOW OTHER PIPE, THE MINIMUM SEPARATION IS 12 INCHES.
(2) RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.
(3) 3 FT FOR GRAVITY SANITARY SEWER WHERE THE BOTTOM OF THE WATER MAIN IS LAID AT LEAST 6 INCHES ABOVE THE TOP OF THE GRAVITY SANITARY SEWER

- WATER SYSTEM LEGEND**
- ◇ 6" x 6" TEE, 6" GATE VALVE
 - ◇ 6" x 4" TEE
 - ◇ 6" GATE VALVE
 - ◇ FIRE HYDRANT ASSEMBLY
 - ◇ 4" DDCVA & 4" FIRE DEPARTMENT CONNECTION ASSEMBLY
 - ◇ CONNECT TO EXIST. 6" WM, 6" X 2" REDUCER, 2" GATE VALVE
 - ◇ 3/4" METER, CURB STOP, 2" X 1 1/2" REDUCER, 1 1/2" SERVICE TO TENANT
 - ◇ 3/4" METER, CURB STOP, 2" X 1 1/2" REDUCER, 1 1/2" SERVICE TO TENANT
 - ◇ 3/4" METER, CURB STOP, 2" X 1" REDUCER, 1" SERVICE TO TENANT
 - ◇ 3/4" METER, CURB STOP, 2" X 1" REDUCER, 1" SERVICE TO TENANT
 - ◇ 3/4" METER, CURB STOP, 2" X 1 1/2" REDUCER, 1 1/2" SERVICE TO TENANT
 - ◇ 2" x 2" TEE
 - ◇ TRANSFORMER WITH 7'X7' CONCRETE PAD
 - ◇ 4"X16" UNDERGROUND PROPANE TANK (BY OTHERS)
 - ◇ 6" STUB
 - ◇ 8" x 6" TEE
- NOTE: SEE SHEET 13 & 14 FOR WATER SYSTEM DETAILS

SANITARY SEWER SCHEDULE

STRUCTURE NUMBER	STRUCTURE TYPE	TOP OF CASTING EL.	INVERT ELEVATIONS IN	OUT
1	4" DIA. MH	32.40	27.85 W 27.89 S	28.28 NE
2	4" DIA. MH	32.27	25.79 SW	24.20 E
3	4" DIA. MH	32.56	23.47 W 23.47 S	23.37 N
4	EXIST. MH	31.34	22.63 S	22.53 N

STORM SEWER SCHEDULE

STRUCTURE NUMBER	STRUCTURE TYPE	TOP OF CASTING EL.	INVERT ELEVATIONS IN	OUT
1	TYPE C INLET	32.23	—	26.67 E
2	TYPE C INLET	32.31	28.28 W	28.28 N
3	TYPE C INLET	32.90	25.98 S	25.98 NW
4	TYPE P-6 CURB INLET	FL 32.80	25.85 S	25.85 NE
5	EXIST. CURB INLET	FL 31.31	25.62 SE, SW	25.62 N

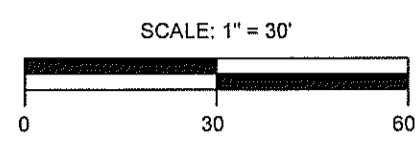
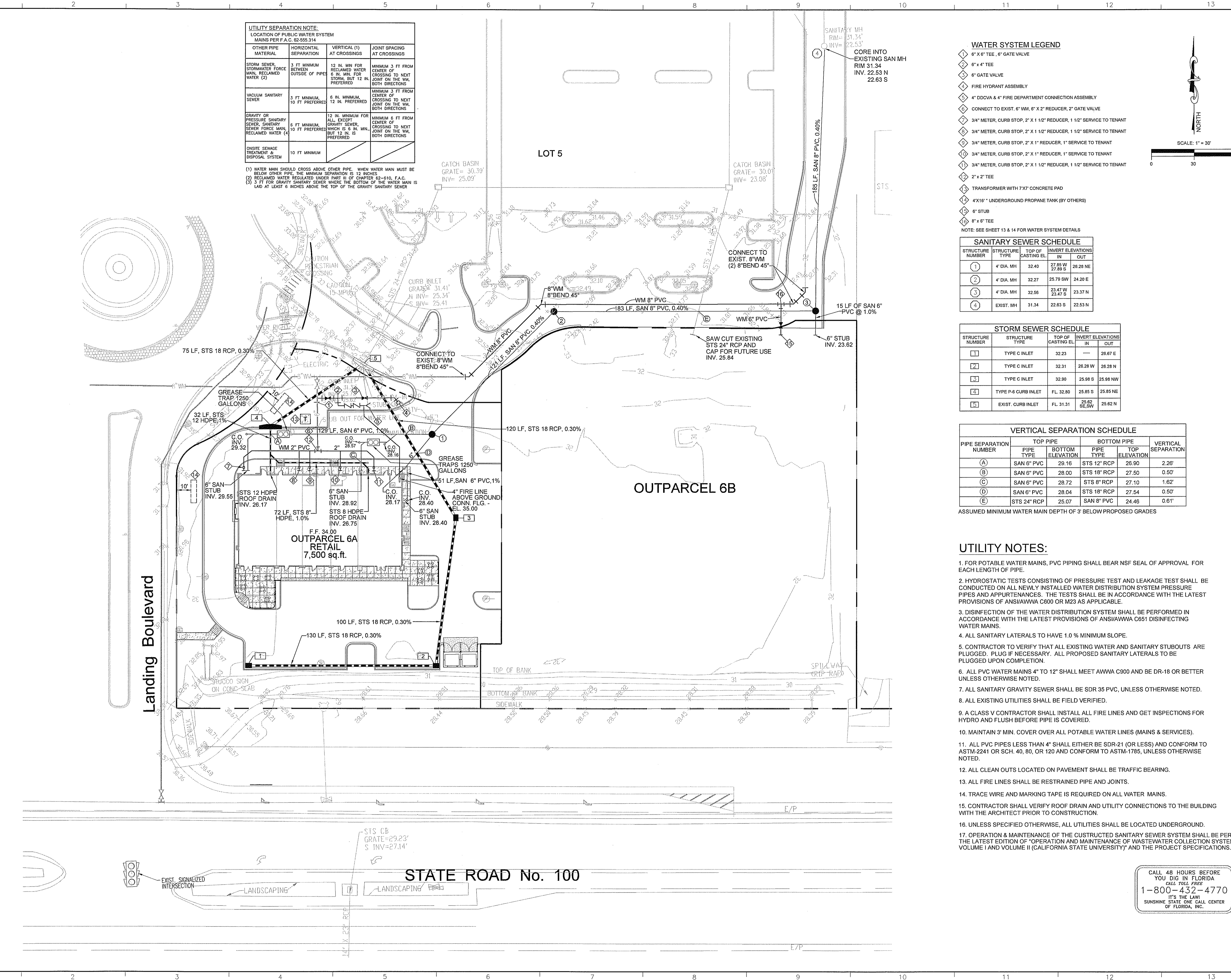
VERTICAL SEPARATION SCHEDULE

PIPE SEPARATION NUMBER	TOP PIPE		BOTTOM PIPE		VERTICAL SEPARATION
	PIPE TYPE	BOTTOM ELEVATION	PIPE TYPE	TOP ELEVATION	
(A)	SAN 6" PVC	29.16	STS 12" RCP	26.90	2.26'
(B)	SAN 6" PVC	28.00	STS 18" RCP	27.50	0.50'
(C)	SAN 6" PVC	28.72	STS 6" RCP	27.10	1.62'
(D)	SAN 6" PVC	28.04	STS 18" RCP	27.54	0.50'
(E)	STS 24" RCP	25.07	SAN 6" PVC	24.46	0.61'

ASSUMED MINIMUM WATER MAIN DEPTH OF 3' BELOW PROPOSED GRADES

- UTILITY NOTES:**
- FOR POTABLE WATER MAINS, PVC PIPING SHALL BEAR NSF SEAL OF APPROVAL FOR EACH LENGTH OF PIPE.
 - HYDROSTATIC TESTS CONSISTING OF PRESSURE TEST AND LEAKAGE TEST SHALL BE CONDUCTED ON ALL NEWLY INSTALLED WATER DISTRIBUTION SYSTEM PRESSURE PIPES AND APPURTENANCES. THE TESTS SHALL BE IN ACCORDANCE WITH THE LATEST PROVISIONS OF ANSI/AWWA C600 OR M23 AS APPLICABLE.
 - DISINFECTION OF THE WATER DISTRIBUTION SYSTEM SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST PROVISIONS OF ANSI/AWWA C651 DISINFECTING WATER MAINS.
 - ALL SANITARY LATERALS TO HAVE 1.0% MINIMUM SLOPE.
 - CONTRACTOR TO VERIFY THAT ALL EXISTING WATER AND SANITARY STUBOUTS ARE PLUGGED. PLUG IF NECESSARY. ALL PROPOSED SANITARY LATERALS TO BE PLUGGED UPON COMPLETION.
 - ALL PVC WATER MAINS 4" TO 12" SHALL MEET AWWA C900 AND BE DR-18 OR BETTER UNLESS OTHERWISE NOTED.
 - ALL SANITARY GRAVITY SEWER SHALL BE SDR 35 PVC, UNLESS OTHERWISE NOTED.
 - ALL EXISTING UTILITIES SHALL BE FIELD VERIFIED.
 - A CLASS V CONTRACTOR SHALL INSTALL ALL FIRE LINES AND GET INSPECTIONS FOR HYDRO AND FLUSH BEFORE PIPE IS COVERED.
 - MAINTAIN 3' MIN. COVER OVER ALL POTABLE WATER LINES (MAINS & SERVICES).
 - ALL PVC PIPES LESS THAN 4" SHALL EITHER BE SDR-21 (OR LESS) AND CONFORM TO ASTM-2241 OR SCH. 40, 80, OR 120 AND CONFORM TO ASTM-1785, UNLESS OTHERWISE NOTED.
 - ALL CLEAN OUTS LOCATED ON PAVEMENT SHALL BE TRAFFIC BEARING.
 - ALL FIRE LINES SHALL BE RESTRAINED PIPE AND JOINTS.
 - TRACE WIRE AND MARKING TAPE IS REQUIRED ON ALL WATER MAINS.
 - CONTRACTOR SHALL VERIFY ROOF DRAIN AND UTILITY CONNECTIONS TO THE BUILDING WITH THE ARCHITECT PRIOR TO CONSTRUCTION.
 - UNLESS SPECIFIED OTHERWISE, ALL UTILITIES SHALL BE LOCATED UNDERGROUND.
 - OPERATION & MAINTENANCE OF THE CONSTRUCTED SANITARY SEWER SYSTEM SHALL BE PER THE LATEST EDITION OF "OPERATION AND MAINTENANCE OF WASTEWATER COLLECTION SYSTEMS VOLUME I AND VOLUME II (CALIFORNIA STATE UNIVERSITY)" AND THE PROJECT SPECIFICATIONS.

CALL 48 HOURS BEFORE YOU DIG IN FLORIDA
CALL TOLL FREE
1-800-432-4770
IT'S THE LAW!
SUNSHINE STATE ONE CALL CENTER OF FLORIDA, INC.



08033.21
JOB #:
ENGINEER: JASON P. MAHONEY, P.E.
P.L.I. MGR: FLUC # 68183
DESIGNER: R.L.D.
CHECKED: T.G.L.

RECORD DRAWING
THIS RECORD DRAWING IS BASED ON THE RESULTS OF LIMITED REVIEW OF CONTRACTOR SUBMITTED RECORD PLANS. A FULL REVIEW OF THE RECORD PLANS HAS NOT BEEN CONDUCTED. THE ENGINEER'S REVIEW OF THE RECORD PLANS IS LIMITED TO THE INFORMATION PROVIDED AND IS NOT TO BE CONSIDERED AS A GUARANTEE OF THE ACCURACY OF THE INFORMATION PROVIDED. THE ENGINEER IS NOT RESPONSIBLE FOR THE RECORD DRAWING'S CORRECTNESS TO THE BEST OF HIS/HER KNOWLEDGE.
ENGINEER: FLUC # P

OUTPARCEL 6A
PALM COAST LANDING
AT
WEINGARTEN REALTY, INC.

UNDERGROUND UTILITY PLAN

Consulting Engineers & Surveyors

LOCHRANE ENGINEERING, INC.
2015 W. BUNNY AVENUE
ORLANDO, FLORIDA 32837
PH: (407) 993-3377 FAX: (407) 993-8187
CREATED BY: JPM/2009/12/07/08:00:00
DATE PLOTTED: 12/07/2009 11:35:00

SHEET C-10