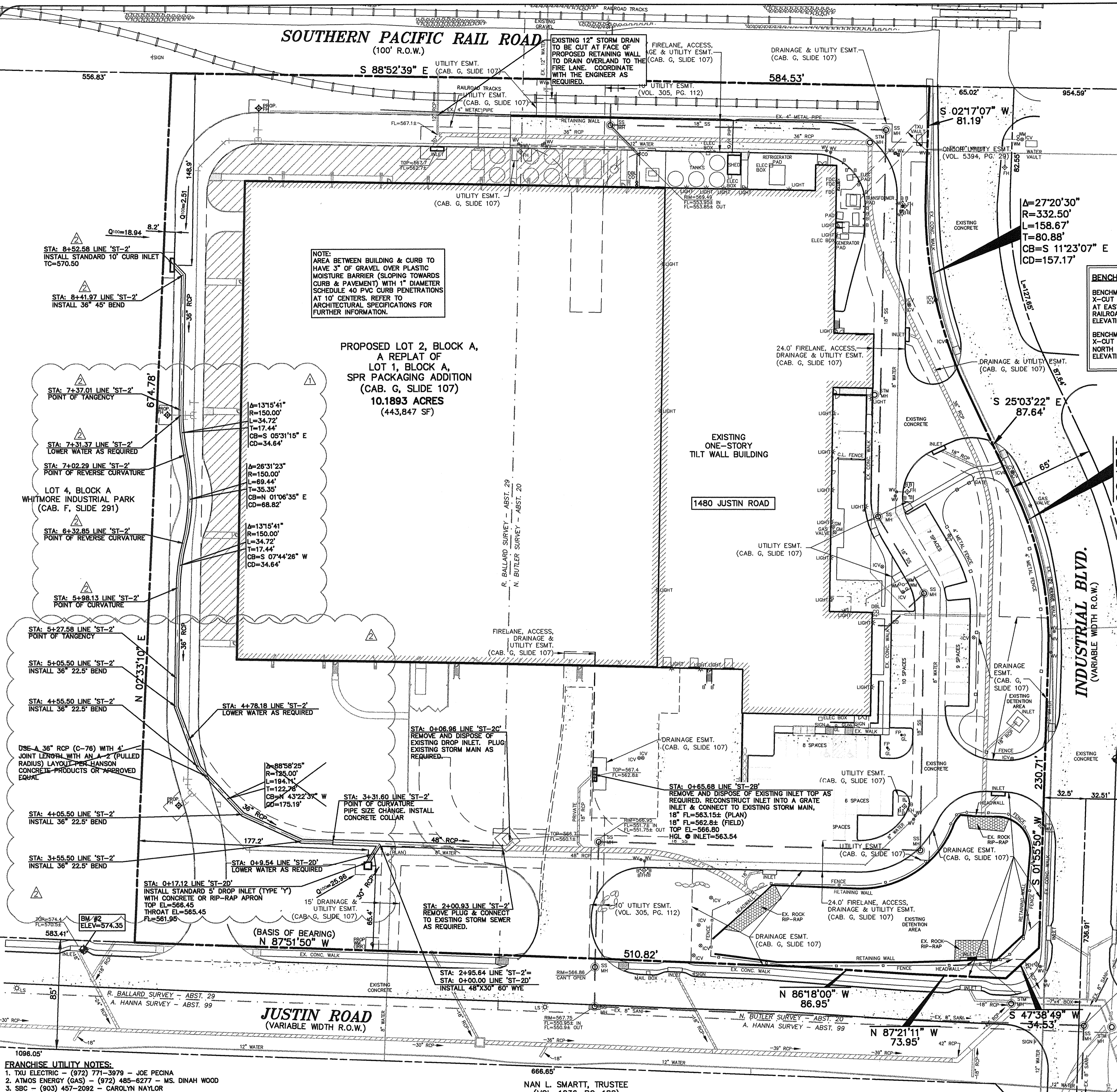
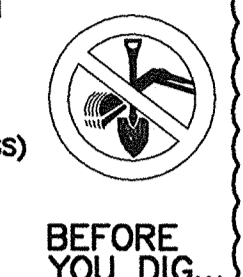


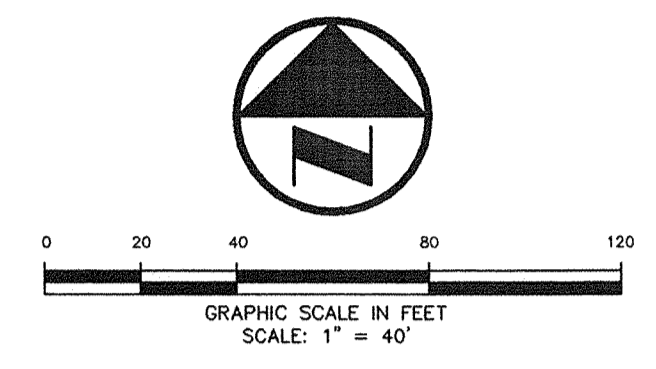
**SOUTHERN PACIFIC RAIL ROAD**  
(100' R.O.W.)



**CAUTION!**  
UNDERGROUND UTILITIES ARE LOCATED IN THIS AREA. 48 HOURS PRIOR TO ANY CONSTRUCTION ACTIVITIES, CONTACT LINE LOCATES FOR FRANCHISE UTILITY INFO. CALL BEFORE YOU DIG!  
TEXAS EXCAVATION SAFETY SYSTEM (TESS)  
1-800-344-8377  
TEXAS ONE CALL SYSTEMS  
1-800-245-4545  
LONE STAR NOTIFICATION CENTER  
1-800-669-8344 EXT. 5



**BENCHMARK LIST:**  
**BENCHMARK #1**  
X-CUT FOUND ON THE TOP OF CURB OF THE SOUTHERN CURB RETURN AT EAST SIDE OF INDUSTRIAL BLVD. 580± SOUTH FROM CENTERLINE OF RAILROAD.  
ELEVATION = 564.27  
**BENCHMARK #2**  
X-CUT SET AT THE SOUTHEAST CORNER OF CURB INLET LOCATED IN NORTH SIDE OF JUSTIN ROAD 40± WEST OF SOUTHWEST CORNER OF SITE.  
ELEVATION = 574.35



**LEGEND**

- B BOLLARD
- EM ELECTRIC METER
- PP POWER POLE
- LS LIGHT STANDARD
- WM WATER METER
- WV WATER VALVE
- ICV IRRIGATION CONTROL VALVE
- FDH FIRE HYDRANT
- FCO FIRE DEPARTMENT CONNECTION
- CO CLEAN OUT
- MH MANHOLE
- GM GAS METER
- TSC TRAFFIC SIGNAL CONTROL
- TSP TRAFFIC SIGNAL POLE
- TRF TRAFFIC SIGN
- TELE TELEPHONE BOX
- TV TV BOX
- FP FLAG POLE
- PROPERTY LINE
- O.H. POWER LINES
- U/G TELEPHONE LINES
- WATER
- U/G WATER LINE
- GAS
- U/G GAS LINE
- FENCE

**STORM SEWER DRAINAGE CALCULATIONS TABLE AND FLOW INFORMATION**

Line Description	Run-Off Collection Station	Distance Between Collections	Area Number	D.A. (Ac)	Coef. - C	Time of Travel (Min)	Rainfall Intensity (in/hr)	Storm Water Run-Off Q (CFS)	Selected Storm Sewer Size (in)	Slope of Storm Sewer (ft/ft)	Velocity in Storm Sewer (ft/s)	Capacity of Storm Sewer (CFS)	Loss Coeff. K	Head Loss (ft)	Inlet & Bend Losses (ft)	Time of Travel (Min)	Dist. to Next Station (ft)	Upstream Station	Downstream Station								
Line ST-2	295.64	200.93	94.71	B38	2.943	0.90	2.65	12.75	100yr	9.80	25.96	50.97	48	0.500%	0.013	4.06	8.08	101.57	0.12	0.00	0.19	0.00	0.39	13.14	564.03	564.22	
Line ST-2	331.60	285.64	35.96			0.90	0.00	12.45	100yr	9.80	0.00	25.01	48	0.500%	0.013	1.99	8.08	0.0003	101.57	0.01	0.00	-0.07	0.00	0.30	12.75	564.23	564.17
Line ST-2	395.50	331.60	23.90			0.90	0.00	12.34	100yr	9.80	0.00	25.01	36	0.500%	0.013	3.54	6.67	0.0014	47.16	0.03	0.45	0.00	0.09	0.11	12.45	564.20	564.29
Line ST-2	405.50	395.50	50.00			0.90	0.00	12.11	100yr	9.80	0.00	25.01	36	0.500%	0.013	3.54	6.67	0.0014	47.16	0.07	0.45	0.00	0.09	0.24	12.34	564.36	564.45
Line ST-2	455.50	405.50	50.00			0.90	0.00	11.87	100yr	9.80	0.00	25.01	36	0.500%	0.013	3.54	6.67	0.0014	47.16	0.07	0.45	0.00	0.09	0.24	11.87	564.67	564.76
Line ST-2	505.50	455.50	50.00			0.90	0.00	11.63	100yr	9.80	0.00	25.01	36	0.500%	0.013	3.54	6.67	0.0014	47.16	0.07	0.45	0.00	0.09	0.10	11.63	564.79	564.79
Line ST-2	527.58	505.50	22.08			0.90	0.00	11.53	100yr	9.80	0.00	25.01	36	0.500%	0.013	3.54	6.67	0.0014	47.16	0.03	0.00	0.00	0.10	1.48	11.53	565.24	565.33
Line ST-2	841.97	527.58	314.39			0.90	0.00	10.05	100yr	9.80	0.00	25.01	36	1.144%	0.013	3.54	9.96	0.0014	70.39	0.44	1.50	0.19	0.29	0.05	10.05	565.38	565.61
Line ST-2	852.58	841.97	10.61			0.90	0.37	2.55	10.00	100yr	9.80	25.01	36	1.144%	0.013	3.54	9.96	0.0014	70.39	0.01	1.50	0.19	0.29	0.05	10.05	565.38	565.61
Line ST-2	17.12	0.00	17.12	B38	2.943	0.90	2.65	10.00	100yr	9.80	25.96	25.96	30	8.640%	0.013	5.29	24.56	0.0040	120.57	0.07	1.50	0.43	0.65	0.05	10.05	564.29	564.94

**RECORD DRAWINGS:**  
IT WAS THE INTENT THAT THE IMPROVEMENTS SHOWN BE CONSTRUCTED ACCORDING TO THESE PLANS AS APPROVED BY THE CITY. THE LINES AND GRADES WERE SET ON THE GROUND FOR CONSTRUCTION ACCORDING TO SAID PLANS. THE CITY INSPECTED THE CONSTRUCTION. THE ENGINEER DID NOT VERIFY LINES OR GRADES AFTER CONSTRUCTION. WE ARE NOT AWARE OF ANY CHANGES OR REVISIONS TO THESE PLANS DURING CONSTRUCTION OTHER THAN THOSE SHOWN. DATE: SEPTEMBER 27, 2011

- FRANCHISE UTILITY NOTES:**
- TXU ELECTRIC - (972) 771-3979 - JOE PECINA
  - ATMOS ENERGY (GAS) - (972) 485-8277 - MS. DINAH WOOD
  - SBC - (903) 457-2092 - CAROLYN NAYLOR
  - CHARTER COMM. (CABLE) - (817) 509-8272 x8896 - HECTOR ELIZONDO

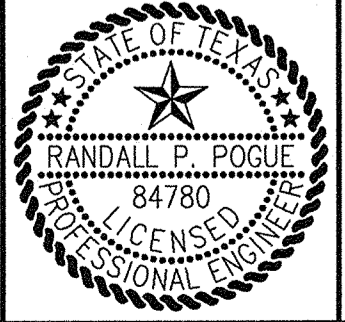
NO.	DATE	REVISION / DESCRIPTION	PI NUMBER
09-27-11		RECORD DRAWINGS	
05-24-11		RFI #6 (ST-2; DELETED RADIUS PIPE)	
05-17-11		COORDINATION AROUND 20" TREE	
DESIGN	DRAWN	DATE	PI NUMBER
RPP	WTW	03-07-2011	1312-10-069

**OWNER**  
FLEXLAND, L.P.  
1480 JUSTIN ROAD  
ROCKWALL, TEXAS 75087  
MR. STEVEN ROSENBERG  
(469) 252-1070 PHONE  
(469) 252-1069 FAX

**DEVELOPER**  
SPR PACKAGING, INC.  
1480 JUSTIN ROAD  
ROCKWALL, TEXAS 75087  
MR. STEVEN ROSENBERG  
(469) 252-1070 PHONE  
(469) 252-1069 FAX

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY RANDALL P. POGUE, P.E. #4780 ON 07-07-2011. ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT.

*M.P.P.*



**POGUE**  
ENGINEERING & DEVELOPMENT COMPANY, INC.  
1512 BRAY CENTRAL DRIVE  
SUITE 100  
MCKINNEY, TEXAS 75069  
(214) 544-8880 PHONE  
(214) 544-8882 FAX  
www.PogueEngineering.com

**STORM SEWER PLAN**  
SPR PACKAGING - EXPANSION  
BLOCK A, LOT 2, SPR PACKAGING ADDITION  
NWC OF INDUSTRIAL BLVD. @ JUSTIN ROAD  
CITY OF ROCKWALL, TEXAS

SHEET NO. C5.01

POGUE 09/27/2011 - 1:51PM

TEXAS BOARD OF PROFESSIONAL ENGINEERS, CERTIFICATE OF REGISTRATION #00481; TEXAS BOARD OF PROFESSIONAL LAND SURVEYING, CERTIFICATE OF REGISTRATION 100421-00