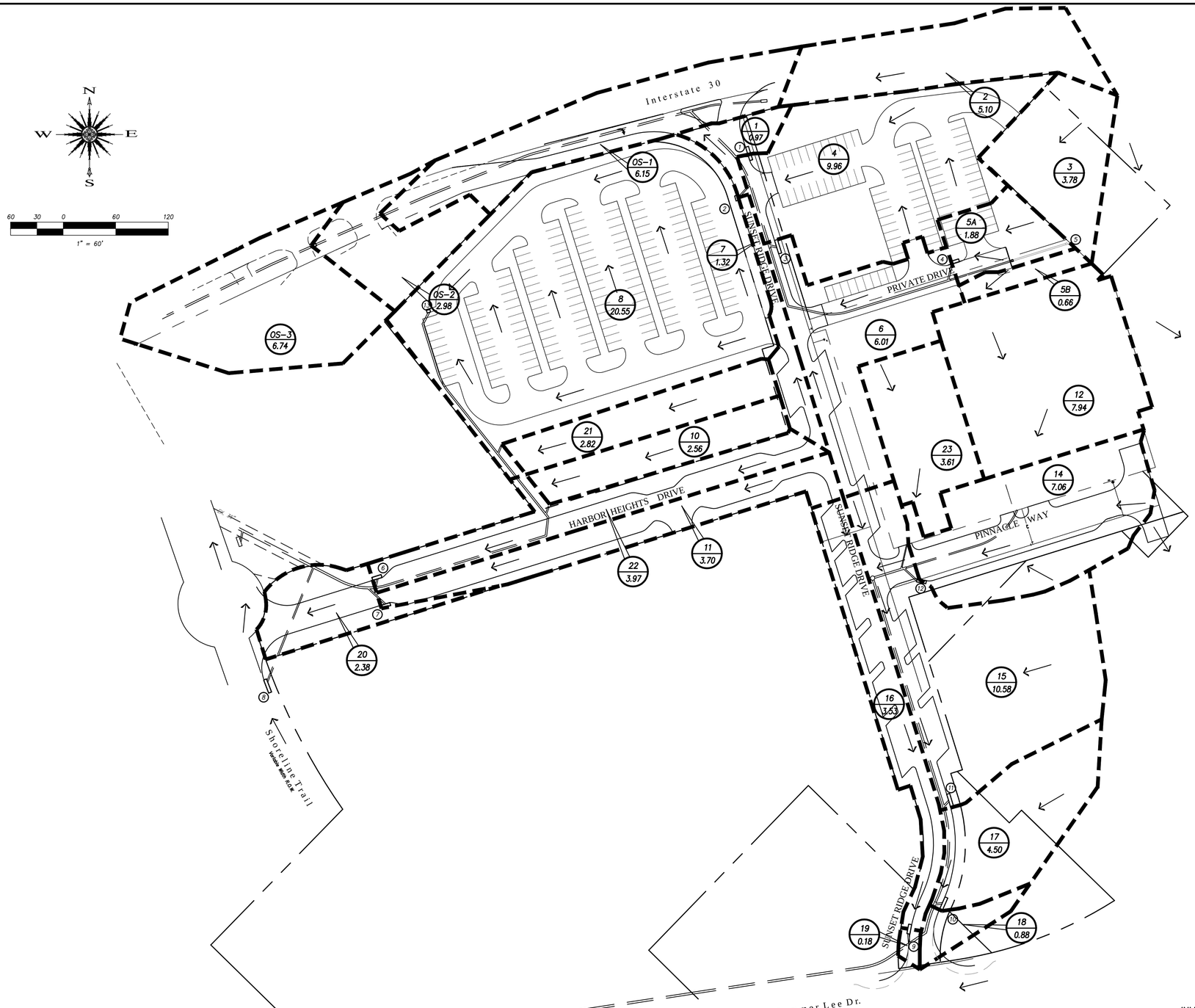

LEGEND

- DRAIN. AREA NO. / Q (cfs)
- DRAINAGE DIVIDE
- DIRECTIONAL FLOW
- EXIST. STORM SEWER — EX. 36"
- PROP. STORM SEWER — PROP.. 27"

DRAINAGE CALCULATIONS

AREA NO.	AREA (AC.)	TC (MIN.)	C	I 100 IN/HR	Q 100 C.F.S.	DRAINS TO
1	0.11	10	0.90	9.80	0.97	Ex. Ditch
2	0.58	10	0.90	9.80	5.10	Prop. 18" Culv.
3	0.43	10	0.90	9.80	3.78	"Y" Inlet
4	1.13	10	0.90	9.80	9.96	15' Inlet
5A	0.21	10	0.90	9.80	1.88	10' Inlet
5B	0.074	10	0.90	9.80	0.66	Trench Drain
6	0.68	10	0.90	9.80	6.01	15' Inlet
7	0.15	10	0.90	9.80	1.32	5' Inlet
8	2.33	10	0.90	9.80	20.55	"Y" Inlet
10	0.29	10	0.90	9.80	2.56	*Future Roof Drain
11	0.42	10	0.90	9.80	3.70	10' Inlet
12	0.90	10	0.90	9.80	7.94	18" Culv.
14	0.80	10	0.90	9.80	7.06	10' Inlet
15	1.20	10	0.90	9.80	10.58	15' Inlet
16	0.40	10	0.90	9.80	3.53	10' Inlet
17	0.51	10	0.90	9.80	4.50	15' Inlet
18	0.10	10	0.90	9.80	0.88	Ex. Inlet
19	0.02	10	0.90	9.80	0.18	Ex. 15' Inlet
20	0.27	10	0.90	9.80	2.38	15' Inlet
21	0.32	10	0.90	9.80	2.82	*Future Roof Drain
22	0.45	10	0.90	9.80	3.97	10' Inlet
23	0.41	10	0.90	9.80	3.61	18" Culv.
OS-1	0.70	10	0.90	9.80	6.15	24" Culv.
OS-2	0.34	10	0.90	9.80	2.98	24" Culv.
OS-3	0.76	10	0.90	9.80	6.74	24" Culv.

Q(cfs)=C x I x A
C=0.90
I=9.80 in/hr (Based on 10 min Tc)
A=Acres

* Drainage areas 10 and 21 are to be graded to drain to the proposed "Y" inlet number 13 prior to construction of future building pads.

INLET DESIGN CALCULATIONS

INLET		Design Storm Frequency	AREA RUNOFF Q = CIA					Carry-Over From Upstream Inlet	Total Gutter Flow	Gutter Capacity	Gutter Slope	Crown Type	SELECTED INLET		Inlet Capacity
Inlet No.	Location	(yrs)	Time of Conc. (min)	Intensity I (in./hr.)	Runoff Coeff. "C"	Area (ac.)	"Q" (c.f.s.)	(c.f.s)	(c.f.s.)	(c.f.s.)	(ft/100ft)		Length "L" (Feet)	Type	(c.f.s.)
1	LINE "B"	100	10	9.8	0.90	1.13	9.97	0	9.97	–	0.71%	Parabolic	15'	I	9.60
2	LINE "B"	100	10	9.8	0.90	0.15	1.32	0	1.32	–	0.71%	Parabolic	5'	I	2.50
3	LINE "B"	100	10	9.8	0.90	0.68	6.00	0	6.00	–	0.71%	Parabolic	15'	I	9.60
4	LINE "B"	100	10	9.8	0.90	0.31	2.73	0	2.73	–	Low	–	10'	I	4.60
5	LINE "B"	100	10	9.8	0.90	0.41	3.62	0	3.62	–	Low	–	3'x3'	V	15.00
6	LINE "D"	100	10	9.8	0.90	0.45	3.97	0	3.97	–	10.3%	Parabolic	10'	IA	4.60
7	LINE "D"	100	10	9.8	0.90	0.42	3.70	0	3.70	–	10.3%	Parabolic	10'	IA	4.60
8	LINE "D"	100	10	9.8	0.90	0.85	7.50	0	7.50	–	3.76%	Parabolic	15'	I	8.30
9	LINE "C"	100	10	9.8	0.90	0.40	3.53	0	3.53	–	4.52%	Parabolic	10'	IA	5.00
10	LINE "C"	100	10	9.8	0.90	0.51	4.50	3.08	7.58	–	9.98%	Parabolic	15'	I	7.50
11	LINE "C"	100	10	9.8	0.90	1.20	10.58	0	10.58	–	9.98%	Parabolic	15'	I	7.50
12	LINE "C"	100	10	9.8	0.90	0.80	7.06	0	7.06	–	Low	–	10'	IA	9.00
13	LINE "D"	100	10	9.8	0.90	*2.33	*20.55	0	*20.55	–	Low	–	4'x4'	V	26.00

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RECORD DRAWING

Revision	Date	Description

Owner:
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Harbor District Infrastructure
Rockwall, Texas

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STATE OF TEXAS
CHRISTOPHER R. CUNY
65642
REGISTERED PROFESSIONAL ENGINEER
9-30-2014

Drawn By: F.C. CUNY	Checked By: F.C. CUNY
Date: 08/11	Project No.: –

Sheet Title:
Drainage Area Map

Scale:	Sheet No.:
1" = 60'	10 of 21