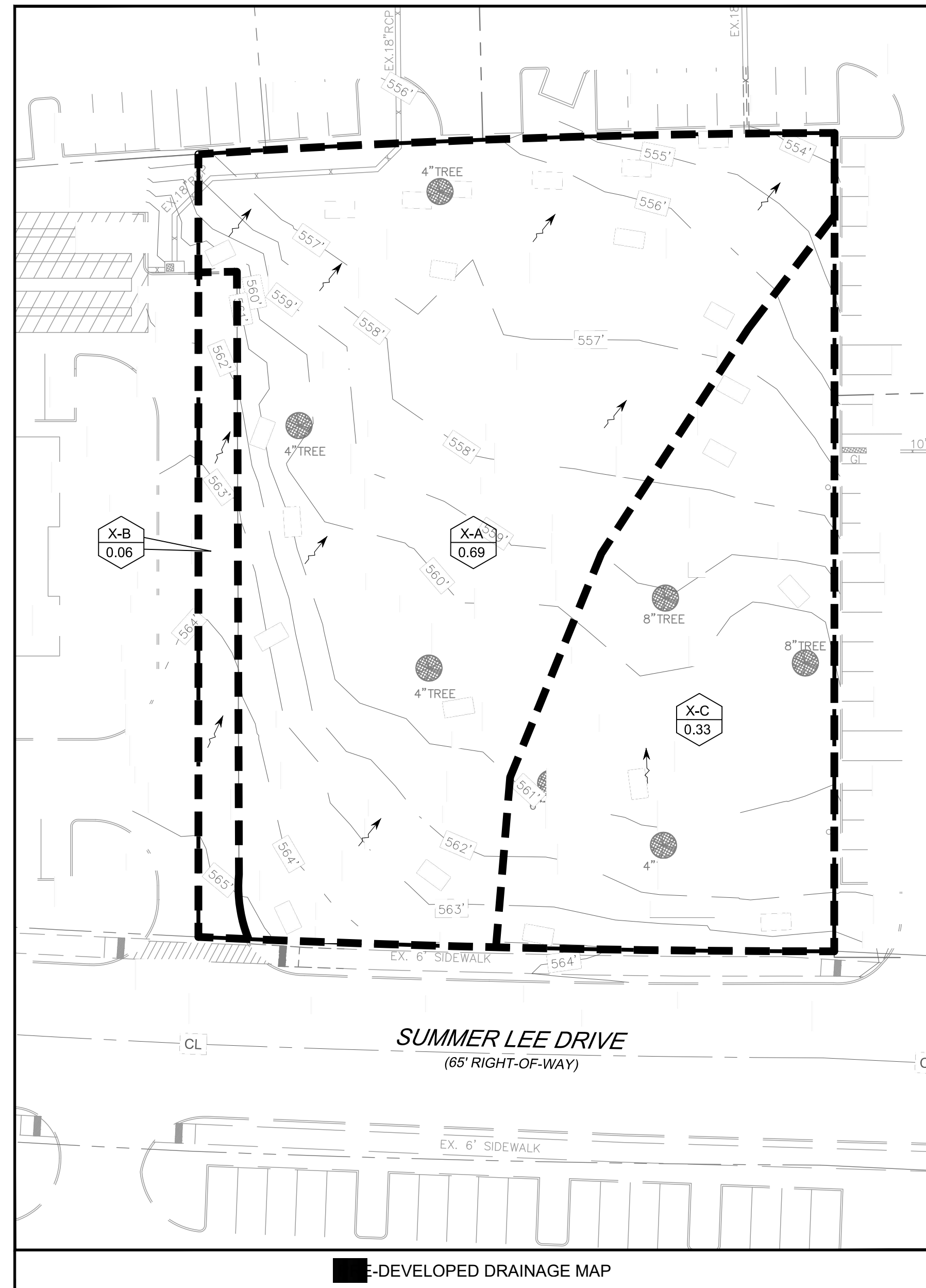
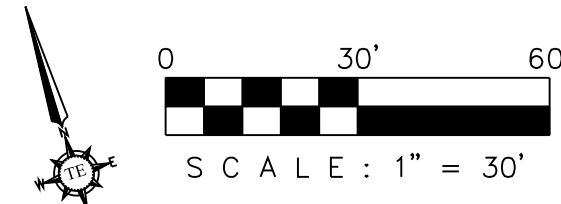
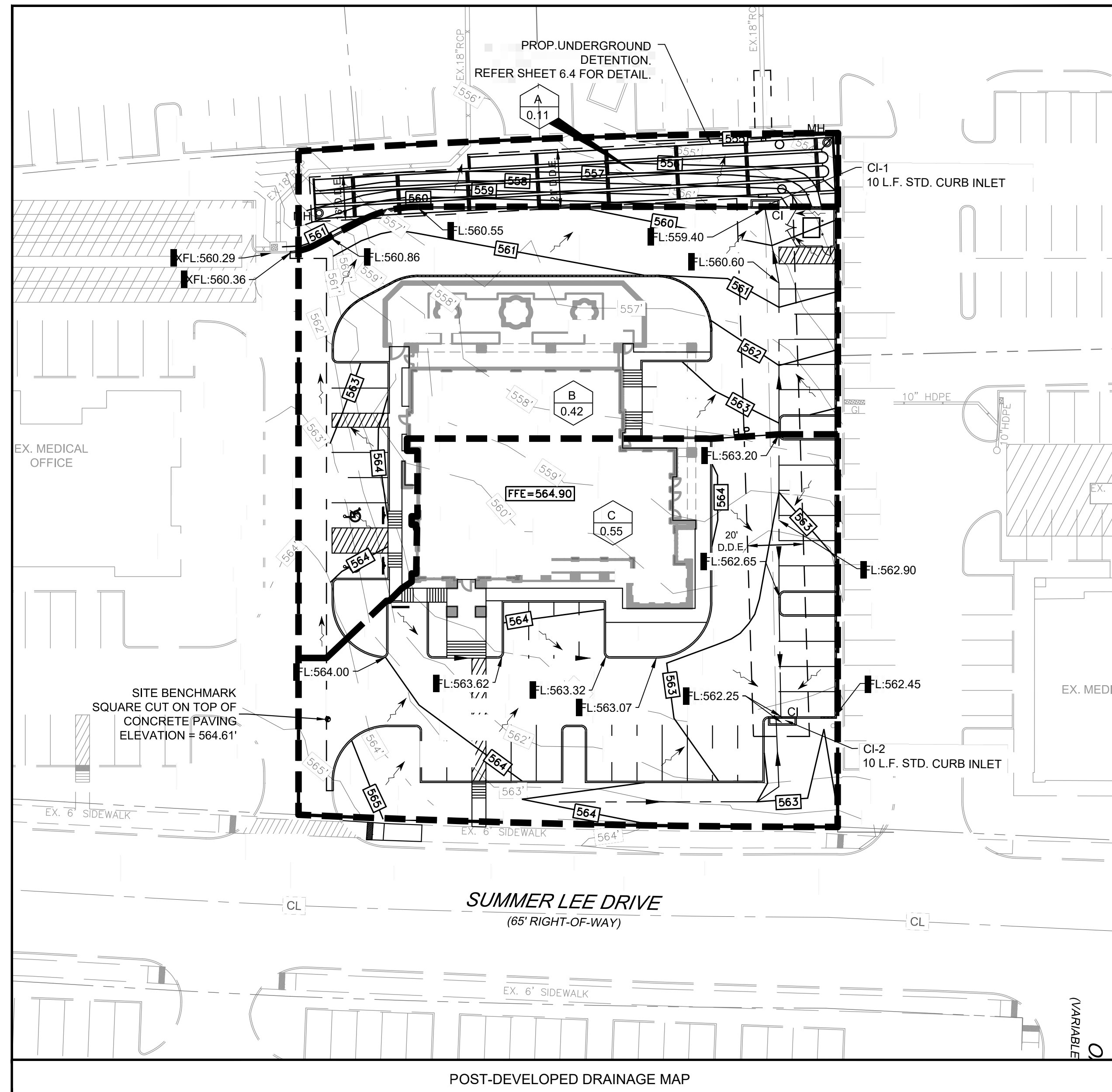


OFFICE BUILDING SITE DEVELOPMENT

1.082 ACRES OF LAND BEING LOT 6, BLOCK A OF TEMUNOVIC ADDITION, AN ADDITION TO THE CITY OF ROCKWALL, ROCKWALL COUNTY, TEXAS



PRE-DEVELOPED DRAINAGE MAP



POST-DEVELOPED DRAINAGE MAP

DEVELOPED DRAINAGE CALCULATIONS (100yr FLOW)						
Drainage Area	C	Tc (min)	A (acres)	I-100 (in/hr)	Q-100yr (cfs)	Remark
A	0.90	10	0.11	9.80	0.97	BY PASS RUNOFF/SHEET FLOW
B	0.90	10	0.42	9.80	3.70	FLOW TO UNDERGROUND STORAGE
C	0.90	10	0.55	9.80	4.85	FLOW TO UNDERGROUND STORAGE

DEVELOPED DRAINAGE CALCULATIONS (50yr FLOW)						
Drainage Area	C	Tc (min)	A (acres)	I-50 (in/hr)	Q-50yr (cfs)	Remark
A	0.90	10	0.11	9.00	0.89	BY PASS RUNOFF/SHEET FLOW
B	0.90	10	0.42	9.00	3.40	FLOW TO UNDERGROUND STORAGE
C	0.90	10	0.55	9.00	4.45	FLOW TO UNDERGROUND STORAGE

DEVELOPED DRAINAGE CALCULATIONS (25yr FLOW)						
Drainage Area	C	Tc (min)	A (acres)	I-25 (in/hr)	Q-25yr (cfs)	Remark
A	0.90	10	0.11	8.30	0.82	BY PASS RUNOFF/SHEET FLOW
B	0.90	10	0.42	8.30	3.14	FLOW TO UNDERGROUND STORAGE
C	0.90	10	0.55	8.30	4.11	FLOW TO UNDERGROUND STORAGE

DEVELOPED DRAINAGE CALCULATIONS (10yr FLOW)						
Drainage Area	C	Tc (min)	A (acres)	I-10 (in/hr)	Q-5yr (cfs)	Remark
A	0.90	10	0.11	8.00	0.79	BY PASS RUNOFF/SHEET FLOW
B	0.90	10	0.42	8.00	3.02	FLOW TO UNDERGROUND STORAGE
C	0.90	10	0.55	8.00	3.96	FLOW TO UNDERGROUND STORAGE

DEVELOPED DRAINAGE CALCULATIONS (5yr FLOW)						
Drainage Area	C	Tc (min)	A (acres)	I-5 (in/hr)	Q-5yr (cfs)	Remark
A	0.90	10	0.11	6.90	0.68	BY PASS RUNOFF/SHEET FLOW
B	0.90	10	0.42	6.90	2.61	FLOW TO UNDERGROUND STORAGE
C	0.90	10	0.55	6.90	3.42	FLOW TO UNDERGROUND STORAGE

RAINFALL EVENT	ALLOWABLE DISCHARGE	MAXIMUM ALLOWABLE DISCHARGE FROM UNDERGROUND STORAGE	BYPASS RUNOFF
100-YEAR	3.41 CFS	2.44 CFS	0.97 CFS
50-YEAR	3.08 CFS	2.19 CFS	0.89 CFS
25-YEAR	2.77 CFS	1.95 CFS	0.82 CFS
10-YEAR	2.35 CFS	1.56 CFS	0.79 CFS
5-YEAR	2.06 CFS	1.38 CFS	0.68 CFS

PRE-DEVELOPED DRAINAGE CALCULATIONS													
Drainage Area	C	Tc (min)	A (acres)	I-5 (in/hr)	I-10 (in/hr)	I-25 (in/hr)	I-50 (in/hr)	I-100 (in/hr)	Q-5yr (cfs)	Q-10yr (cfs)	Q-25yr (cfs)	Q-50yr (cfs)	Q-100yr (cfs)
X-A	0.35	20	0.69	5.00	5.70	6.75	7.50	8.30	1.21	1.38	1.63	1.81	2.00
X-B	0.90	20	0.06	5.00	5.70	6.75	7.50	8.30	0.27	0.31	0.36	0.40	0.45
X-C	0.35	20	0.33	5.00	5.70	6.75	7.50	8.30	0.58	0.66	0.78	0.87	0.96

NOTE

- VERIFY ROOF DRAIN LOCATION WITH ARCHITECTURAL PLANS.
- ALL ROOF DRAINS TO CONNECT STORM SEWER SYSTEM.
- POSITIVE DRAINAGE SHALL BE ALLOWED AROUND THE BUILDING FOUNDATION TO PREVENT WATER GOING TO BUILDING.

BENCHMARK

SQUARE-CUT ON TOP OF CONCRETE PAVEMENT. ELEVATION = 564.61'

DRAINAGE LEGEND

- Area No. 0.11
- Area Acreage
- Drainage Divide
- Flow Direction
- Proposed Contours (563)
- Existing Contours (561)
- Proposed Detention & Drainage Easement (D.D.E.)

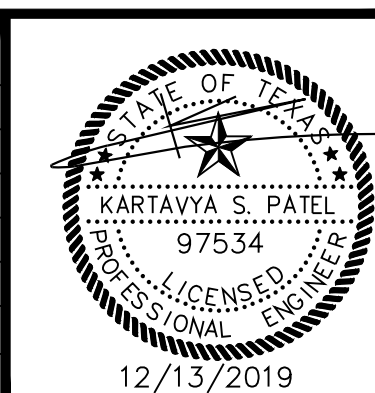
CI-1 (10 L.F. CURB INLET) @ SAG CALCS
 $Q = C \times L \times H^{3/2}$
 $Q100YR = 3.7 \text{ CFS}$
 $C = 3.1$
 $H (\text{DEPTH OF WATER AT INLET}) = ?$
 $3.7 = 3.1 \times 10 \times H^{3/2}$
 $H = 0.24' = 2.88 \text{ INCHES}$

CI-2 (10 L.F. CURB INLET) @ SAG CALCS
 $Q = C \times L \times H^{3/2}$
 $Q100YR = 4.85 \text{ CFS}$
 $C = 3.1$
 $H (\text{DEPTH OF WATER AT INLET}) = ?$
 $4.85 = 3.1 \times 10 \times H^{3/2}$
 $H = 0.29' = 3.48 \text{ INCHES}$

AS-BUILT DRAWINGS:
 TO THE BEST OF OUR KNOWLEDGE TRIANGLE ENGINEERING LLC., HEREBY STATES THAT THIS PLAN IS AS-BUILT. THE INFORMATION PROVIDED IS BASED ON SURVEYING AT THE SITE AND INFORMATION PROVIDED BY THE CONTRACTOR.

KARTAVYA S. PATEL, P.E. NO. 97534

NO.	DATE	DESCRIPTION	BY
1	12/13/2019	AS-BUILT RECORD DRAWING	KP



RECORD DRAWING

CASE # SP2017-023
DRAINAGE PLAN
 OFFICE BUILDING
 1306 SUMMER LEE DRIVE
 CITY OF ROCKWALL
 ROCKWALL COUNTY, TEXAS

TRIANGLE ENGINEERING LLC
 T: 214.609.9271 | F: 469.359.6709 | E: kpatel@triangle-engr.com
 W: triangle-engr.com | O: 1784 W. McDermott Drive, Suite 110, Allen, TX 75013

Planning | Civil Engineering | Construction Management

DESIGN/DRAWN	DATE	SCALE	PROJECT NO.	SHEET NO.
KP	DS	07/04/17	SEC SCALE BAR	018-17

TX PE FIRM #11525

6.0