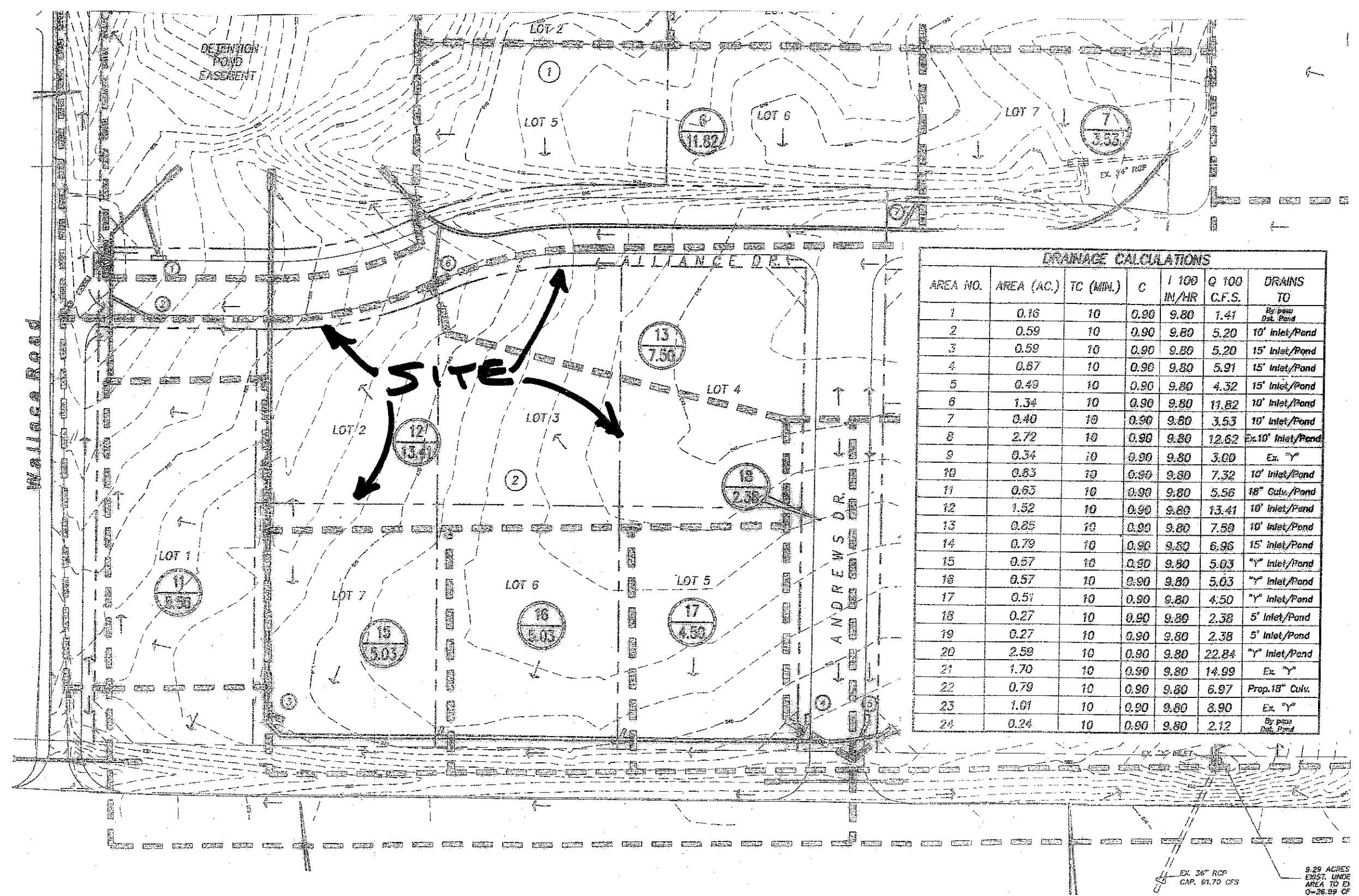
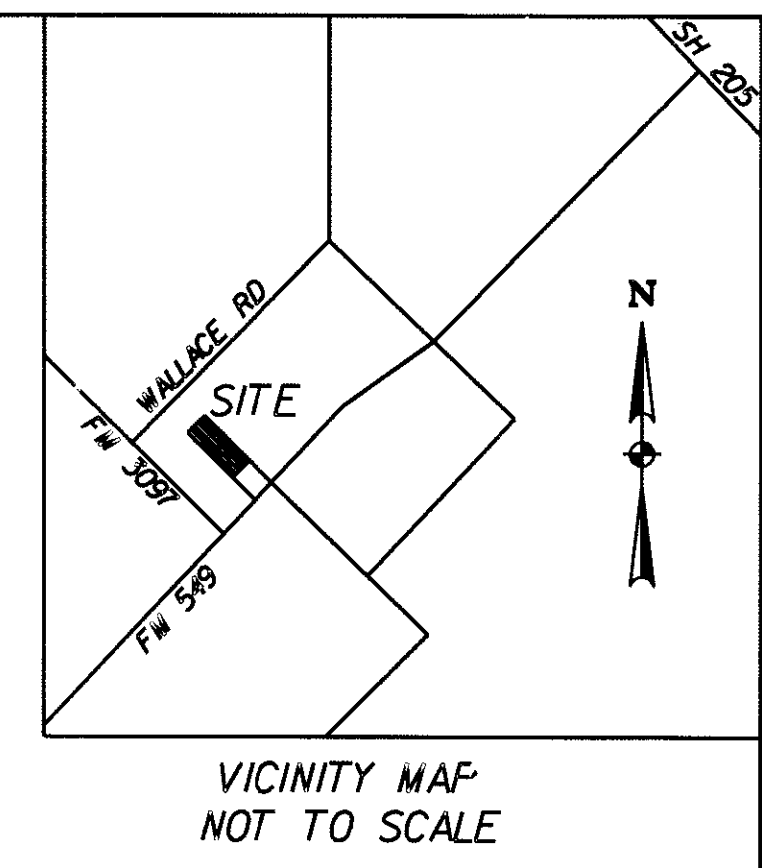
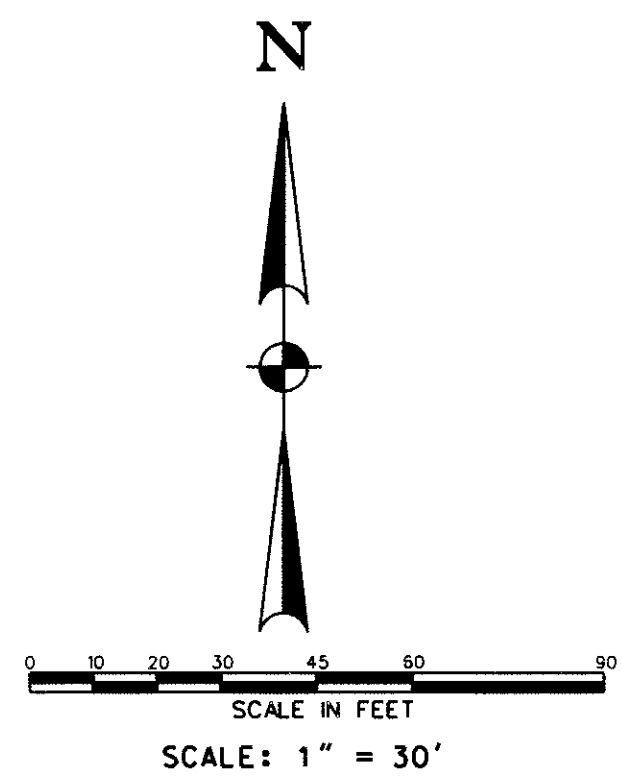


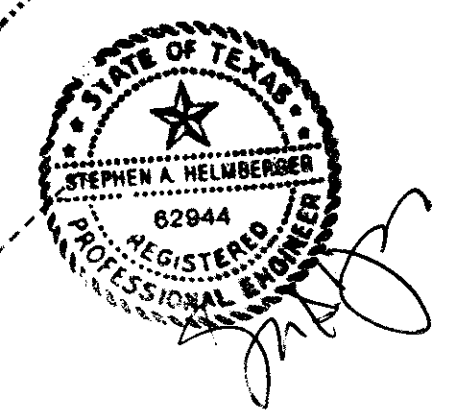
**LINE LEGEND:**

- PROPERTY LINE
- DRAINAGE FLOW LINE
- PROPOSED WATER LINE
- ROAD CENTER LINE
- PROPOSED STORM SEWER
- PROPOSED STREET
- 610 - EXISTING CONTOUR LINE
- 610 - PROPOSED CONTOUR LINE
- BUILDING SETBACK LINE
- DRAINAGE EASEMENT
- DRAINAGE DIVIDE LINE
- ROW / LOT LINE
- PROPOSED FENCE



**DRAINAGE CALCULATIONS**

AREA NO.	AREA (AC.)	TC (MIN.)	C	I 100 IN/HR	Q 100 C.F.S.	DRAINS TO
1	0.10	10	0.80	9.80	1.47	10" Inlet/Phand
2	0.59	10	0.80	9.80	5.20	10" Inlet/Phand
3	0.50	10	0.80	9.80	3.20	10" Inlet/Phand
4	0.87	10	0.80	9.80	5.91	10" Inlet/Phand
5	0.43	10	0.80	9.80	4.32	10" Inlet/Phand
6	1.34	10	0.80	9.80	11.82	10" Inlet/Phand
7	0.40	10	0.80	9.80	3.53	10" Inlet/Phand
8	2.72	10	0.80	9.80	12.62	10" Inlet/Phand
9	0.34	10	0.80	9.80	3.00	Ex. "Y"
10	0.83	10	0.80	9.80	7.32	10" Inlet/Phand
11	0.85	10	0.80	9.80	5.52	10" Inlet/Phand
12	1.52	10	0.80	9.80	13.43	10" Inlet/Phand
13	0.25	10	0.80	9.80	2.28	10" Inlet/Phand
14	0.79	10	0.80	9.80	6.98	10" Inlet/Phand
15	0.87	10	0.80	9.80	5.83	10" Inlet/Phand
16	0.57	10	0.80	9.80	5.03	10" Inlet/Phand
17	0.51	10	0.80	9.80	4.50	10" Inlet/Phand
18	0.27	10	0.80	9.80	2.38	5" Inlet/Phand
19	0.27	10	0.80	9.80	2.38	5" Inlet/Phand
20	2.58	10	0.80	9.80	22.84	10" Inlet/Phand
21	1.70	10	0.80	9.80	14.99	Ex. "Y"
22	0.79	10	0.80	9.80	6.97	Prop. 18" Chdn.
23	1.01	10	0.80	9.80	8.90	Ex. "Y"
24	0.24	10	0.80	9.80	2.12	5" Inlet



ASBUILT DRAINAGE AREA MAP (RECORD DATA)

THIS DOCUMENT IS SUBMITTED AS AN "AS-BUILT DRAWING" FOR RECORD PURPOSES ONLY. ANY MODIFICATION OR CHANGES THAT HAVE BEEN MADE DURING CONSTRUCTION AND NOTED ON THIS DRAWING HAVE BEEN SUPPLIED BY THE OWNER, HIS REPRESENTATIVE OR THE CONTRACTOR. FIELD INSPECTION/CONTRACT SUPERVISION OF THE CONSTRUCTION WAS PERFORMED BY OTHERS. IT IS NOT GUARANTEED BY HELMBERGER ASSOCIATES, INC. THAT THIS DOCUMENT REPRESENTS "AS-BUILT" CONDITIONS. TBPE FIRM NO. 000756

**STORMWATER RUNOFF CALCULATIONS (100 YR STORM)**

LOCATION	Tc (MINUTES)	I (100)	A (ACRES)	C	Q100	FLOWS TO
DA-1	10	9.8	0.17	0.80	1.5 CFS	CURB INLET
DA-2A	10	9.8	0.50	0.80	4.4 CFS	ALLIANCE
DA-2B	10	9.8	0.06	0.80	0.5 CFS	ALLIANCE
DA-3	10	9.8	0.28	0.80	2.5 CFS	DROP INLET
OS-1	10	9.8	0.19	0.80	1.7 CFS	DRAINAGE SWALE



**OWNER:**  
RANDALL NOE ENTERPRISES INC.  
P.O. BOX 369  
ROCKWALL, TEXAS 75087  
MR. ROB WHITNEY  
(972) 771-5253

**ENGINEER:**  
HELMBERGER ASSOCIATES, INC.  
1525 BOZMAN ROAD  
WYLE, TEXAS 75098  
MR. STEPHEN A. HELMBERGER, P.E.  
(972) 442-7459

**DRAINAGE AREA MAP**

LOTS 14/15 BLOCK 2 - ALLIANCE ADDITION PH 2

RANDALL NOE ENTERPRISES INC.

CITY OF ROCKWALL, TEXAS

HELMBERGER ASSOCIATES, INC.  
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DESIGN	DRAWN	DATE	SCALE	NOTES	FILE	NO.
HELM	CADD	FEB 2018	1"=30'	DABORDER	1727	C4