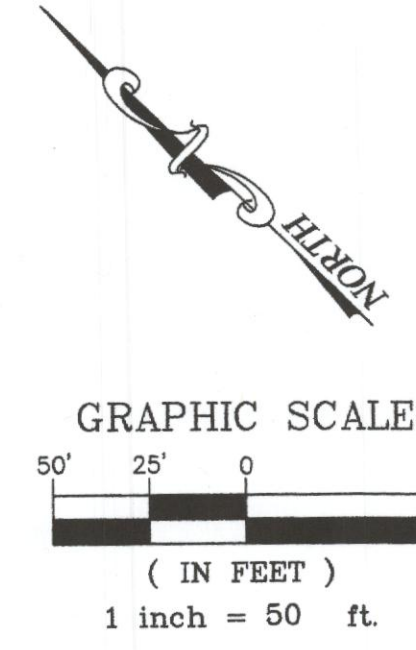


DRAINAGE CALCULATIONS

RATIONAL METHOD
 $Q_{100} = C \times I \times A$

AREA	ACRES	C	Tc	I100	Q100	REMARKS
OS1	0.05	0.9	10	9.8	0.4	ROW SHEET FLOW TO DA 6
1	0.40	0.9	10	9.8	3.5	5' CURB INLET
2	0.12	0.9	10	9.8	1.1	5' CURB INLET
3	0.07	0.9	10	9.8	0.6	2' CURB CUT
4	0.15	0.9	10	9.8	1.3	2' CURB CUT
5	0.31	0.9	10	9.8	2.7	2' CURB CUT
6	1.19	0.9	10	9.8	10.5	SHEET FLOW TO POND
7	0.16	0.9	10	9.8	1.4	BYPASS POND-SHEET FLOW TO LOT 6
8	0.11	0.9	10	9.8	1.0	BYPASS POND-SHEET FLOW TO STREET ROW



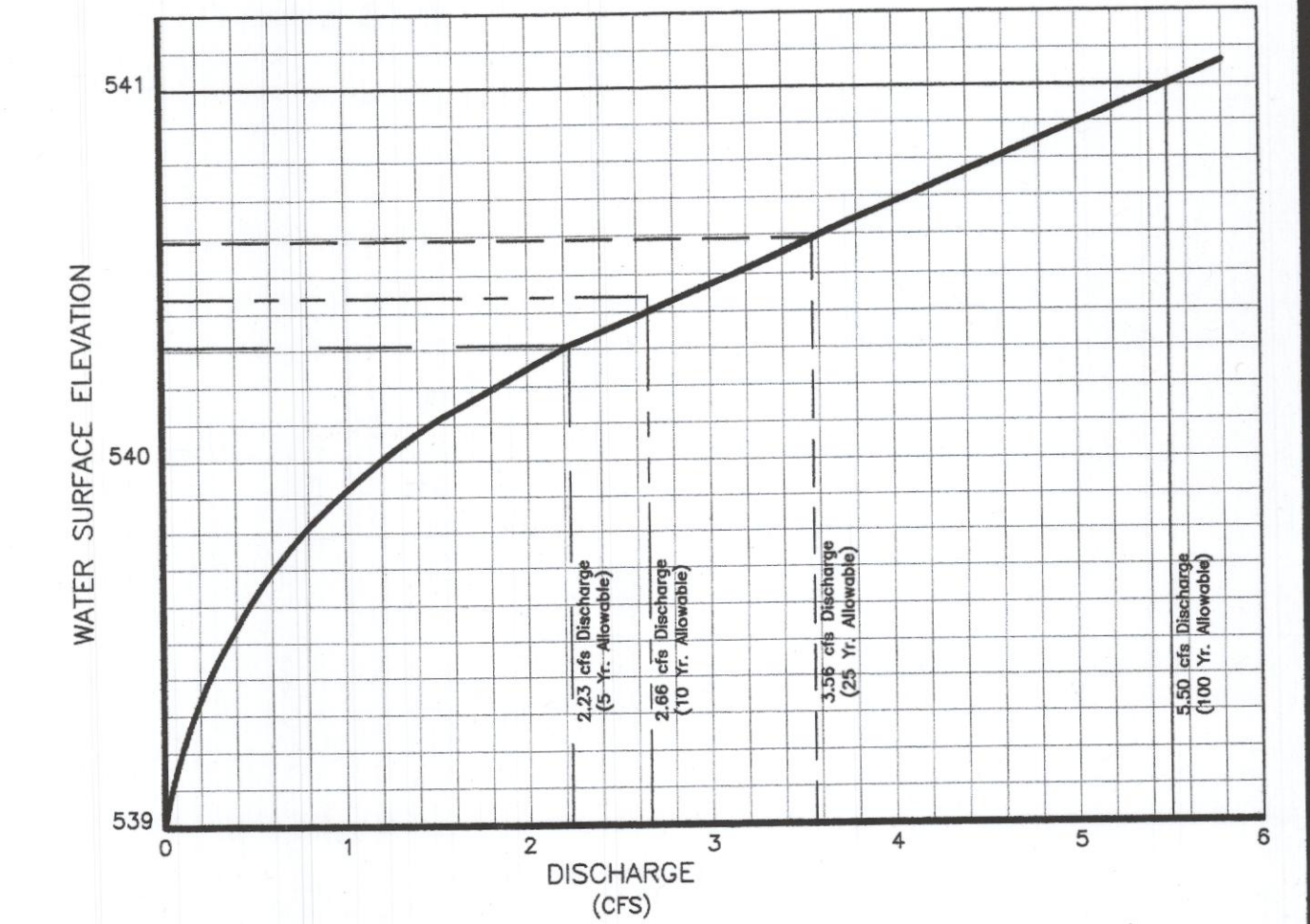
LEGEND

- EXISTING SANITARY SEWER MANHOLE
- PROPOSED SANITARY SEWER MANHOLE
- EXISTING POWER POLE
- w/ GUY ANCHOR
- ⊕ EXISTING FIRE HYDRANT
- ⊕ PROPOSED FIRE HYDRANT
- ⊕ PROPOSED MONUMENT SIGN
- ⊕ PROPOSED CURB INLET
- ⊕ PROPOSED FIRE DEPT. CONNECTION
- ⊕ PROPOSED TRANSFORMER
- ⊕ F.D.C.-4
- ⊕ DRAINAGE AREA DESIGNATION
- ⊕ Q_{100} RUNOFF IN CFS
- PROPOSED STORM RUNOFF FLOW
- - - 645 EXISTING CONTOURS
- - - 645 PROPOSED CONTOURS
- ▬ PROPOSED DRAINAGE DIVIDES
- ▬ EXISTING STORM SEWER
- ▬ PROPOSED STORM SEWER

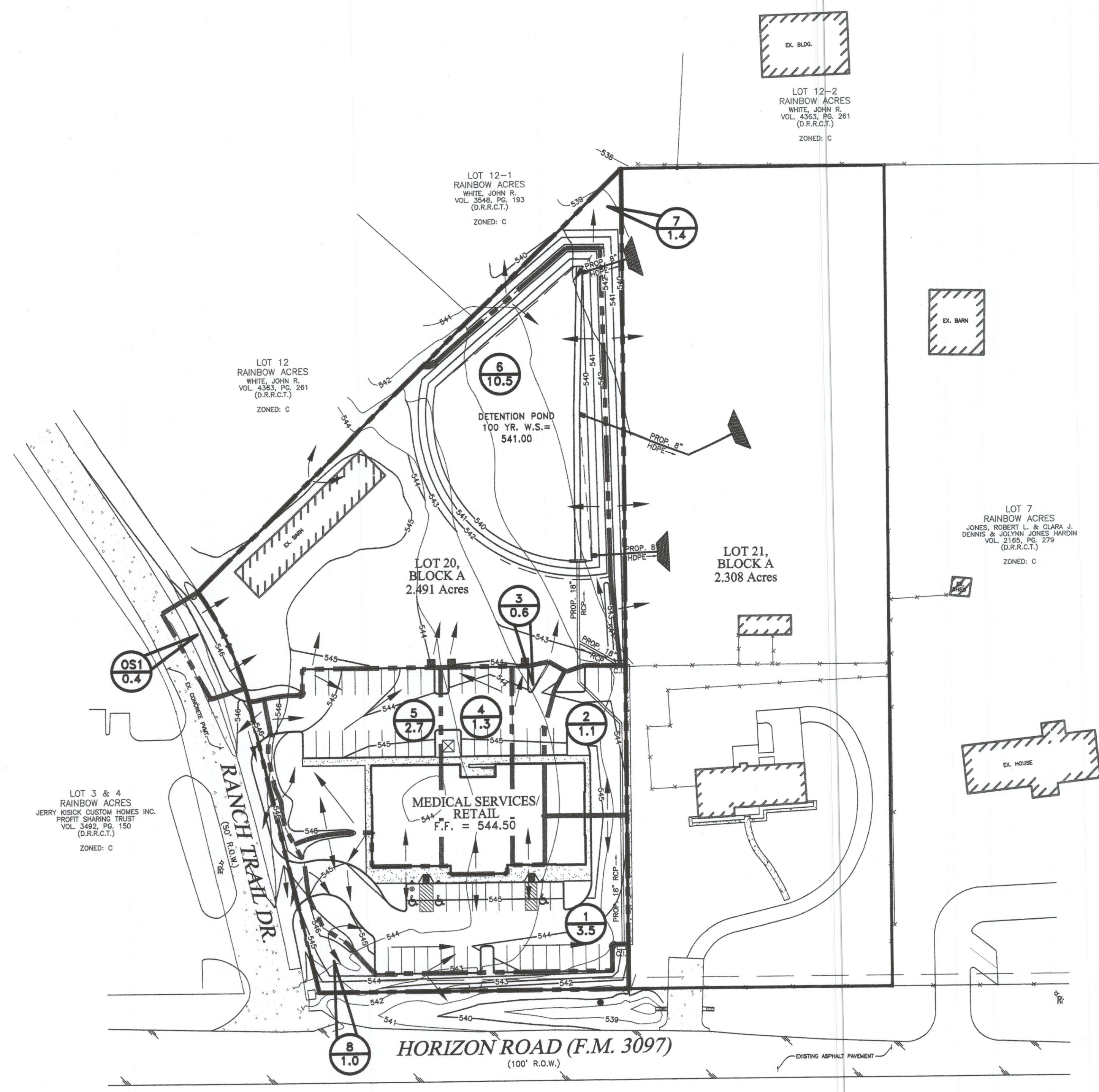
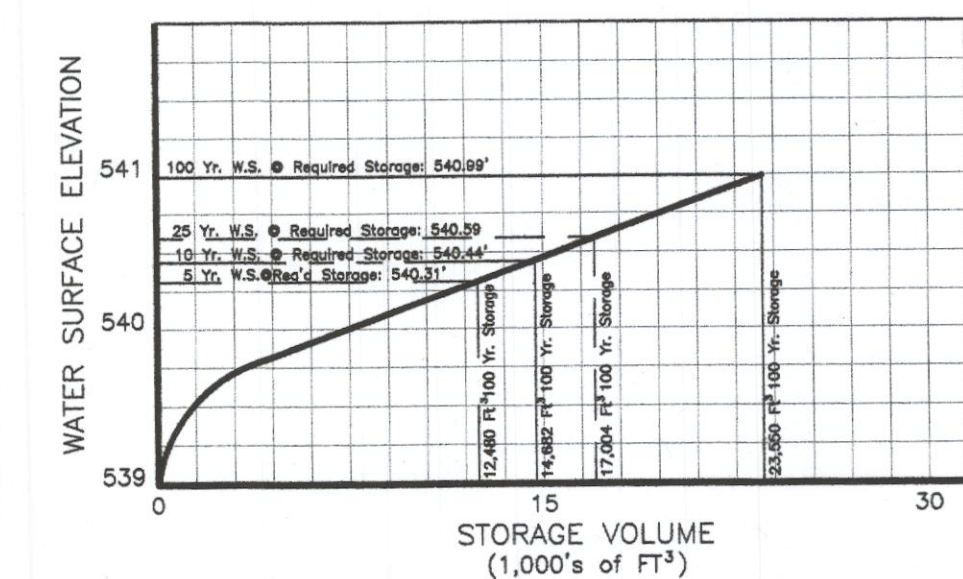
DETENTION POND SUMMARY:

STORM WATER EVENT	STORAGE REQUIRED (ft ³)	STORAGE PROVIDED (ft ³)	ALLOWABLE RELEASE (ft ³ /sec)	PROPOSED RELEASE (ft ³ /sec)
5 YEAR	12,480	12,480	3.16	2.23
10 YEAR	14,682	14,682	3.76	2.66
25 YEAR	17,004	17,004	4.36	3.56
100 YEAR	23,550	23,731	5.50	5.50

DISCHARGE ROUTING CURVE



POND VOLUME



BENCHMARK:
 60D NAIL IN POWER POLE ALONG HORIZON ROAD R.O.W. LINE
 ±208' SOUTHEAST OF RANCH TRAIL DR. ELEVATION: 542.51

BENCHMARK:
 RIM OF SEWER MANHOLE ±8' OFF HORIZON ROAD R.O.W. LINE
 ±307' SOUTHEAST OF RANCH TRAIL DR. ELEVATION: 538.00

1	09-16-09	INITIAL SUBMITTAL TO THE CITY OF ROCKWALL
2	10-15-09	REVISED SUBMITTAL TO THE CITY OF ROCKWALL

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 Consulting Civil Engineers · Designers · Planners
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 Phone: 214-724-0983
 Email: davidwalls@bcglobal.net

DRAINAGE AREA MAP
 RANCH TRAIL CORNERS

LOT 20, BLOCK A - RAINBO ACRES ADDITION
 N.E.C. HORIZON ROAD (F.M. 3097) AND RANCH TRAIL DR.
 CITY OF ROCKWALL, ROCKWALL COUNTY, TEXAS

DESIGN	DRAWN	CHECKED	SCALE	DATE	FILE	SHEET
Walls	Lovecchio	Martinez	H: 1" = 50'	08/15/09	9005	C-05

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY DAVID W. WALLS, P.E. 93086

10-16-09

