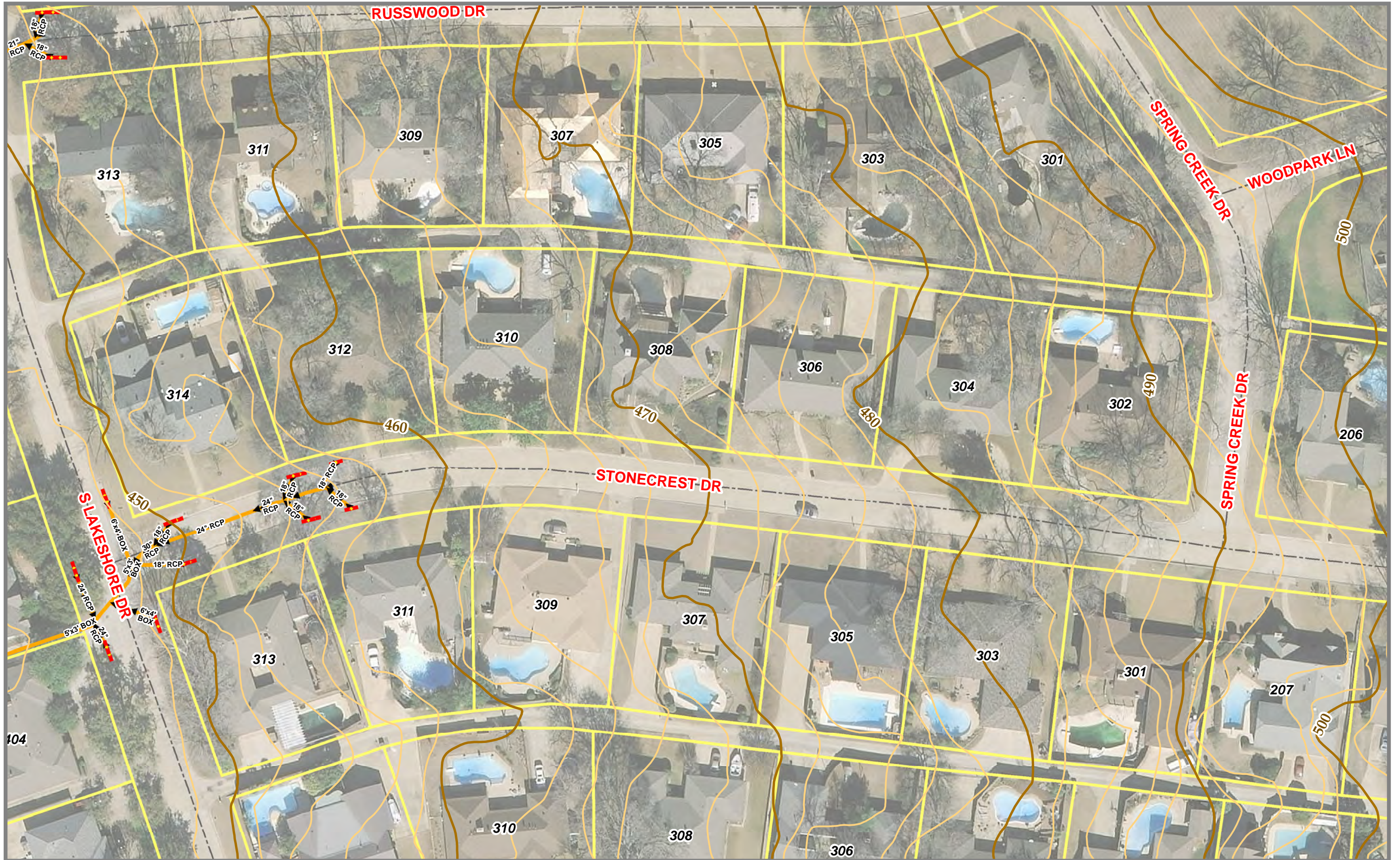


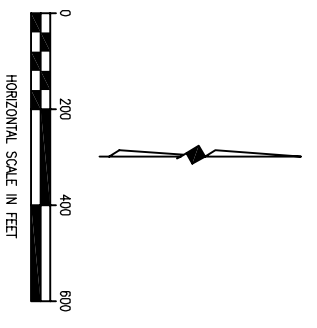
1 inch = 60 feet



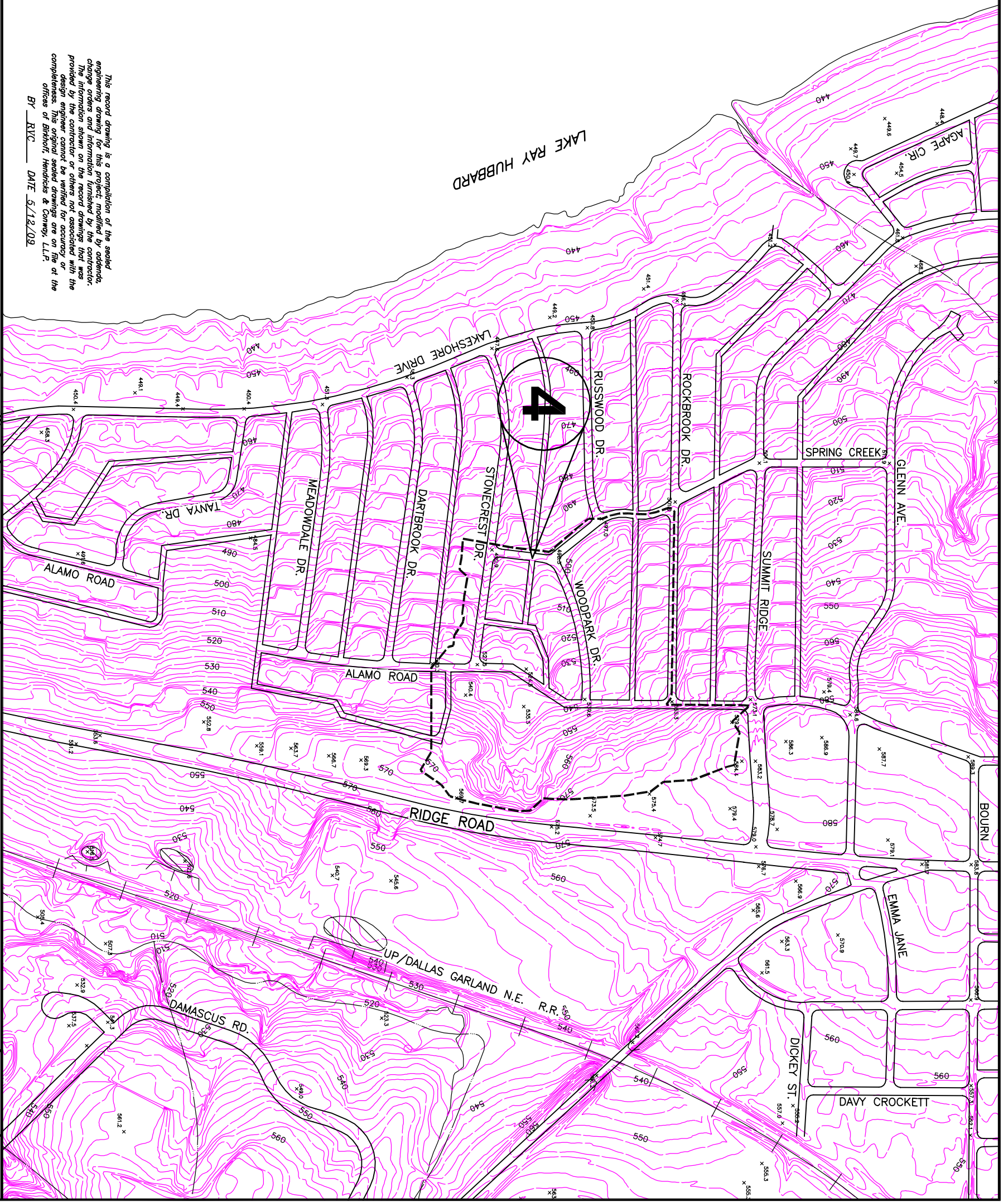
Date: 7/1/2015

AREA	ACREAGE	C	I (MIN)	I (in./hr.)	Q(cfs.)
4	21.00	0.5	15	9.0	94.5

DRAINAGE AREA DATA



This record drawing is a completion of the sealed engineering drawing for this project, modified by the addenda, change orders and information furnished by the contractor. The information shown on the record drawings that was provided by the contractor or others not associated with the design engineer cannot be verified for accuracy or completeness. This original sealed drawing is on file at the offices of Birkhoff, Hendricks & Conway, L.L.P.
 BY RYC DATE 5/12/09



BIRKHOFF, HENDRICKS & CONWAY, L.L.P.

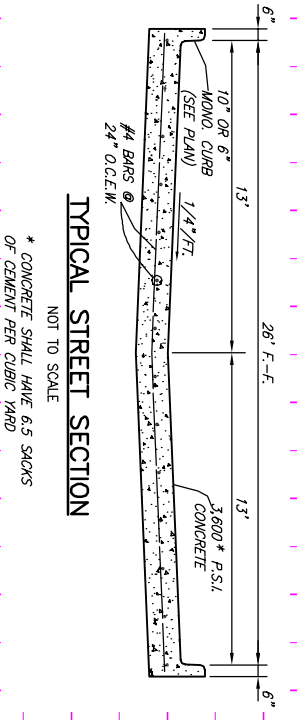
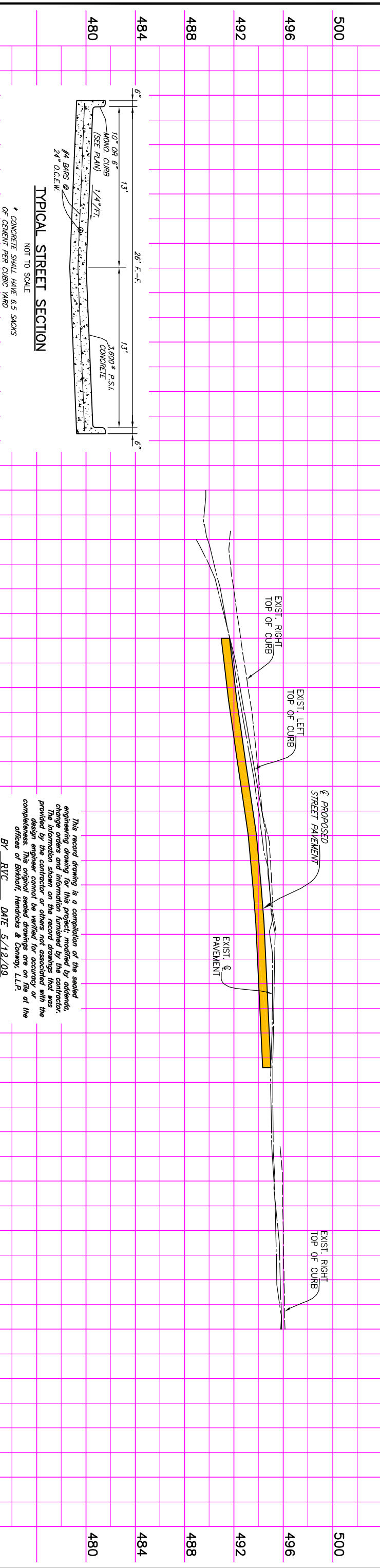
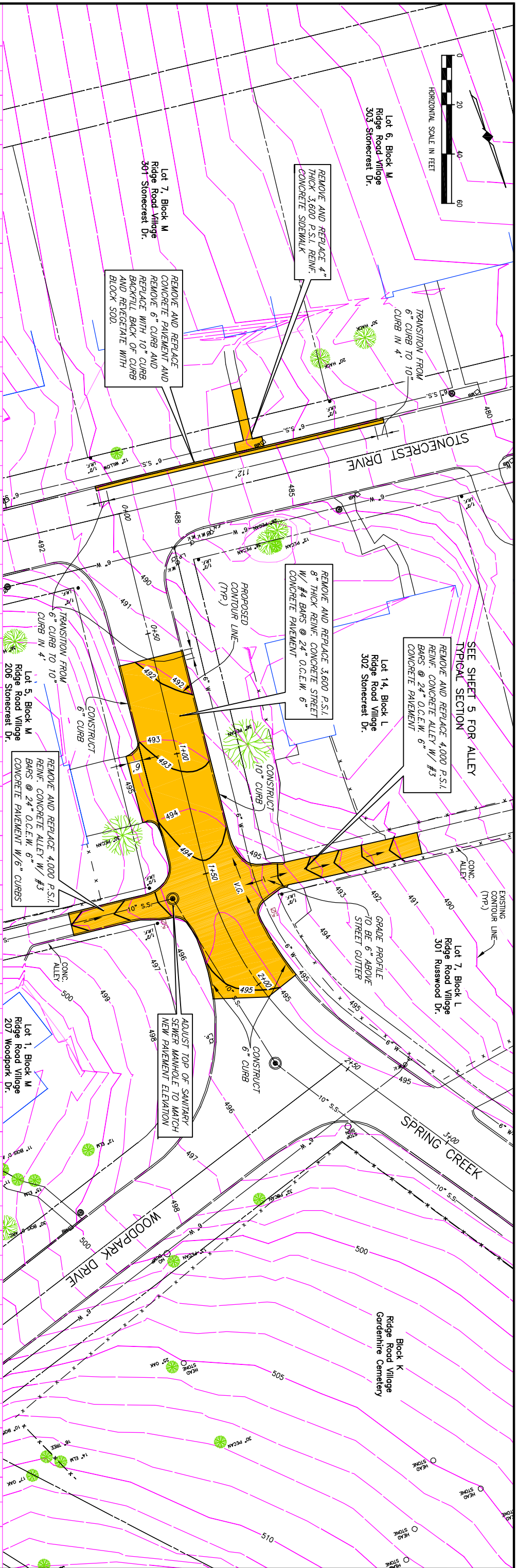
CONSULTING ENGINEERS
 7502 Greenville Ave., Suite 220
 Dallas, Texas
 (214) 361-7900



Ronald V. Conway
 9/15/05

CITY OF ROCKWALL, TEXAS
 NEIGHBORHOOD DRAINAGE IMPROVEMENTS - PHASE 2
 DRAINAGE AREA MAP
 DRAINAGE SITE 4

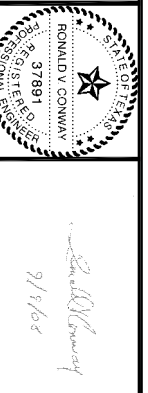
BHC PROJECT NO. 2006-182
 SHEET NO. 4
 SEPTEMBER 2008



TYPICAL STREET SECTION
NOT TO SCALE
* CONCRETE SHALL HAVE 6.5 SACKS OF CEMENT PER CUBIC YARD

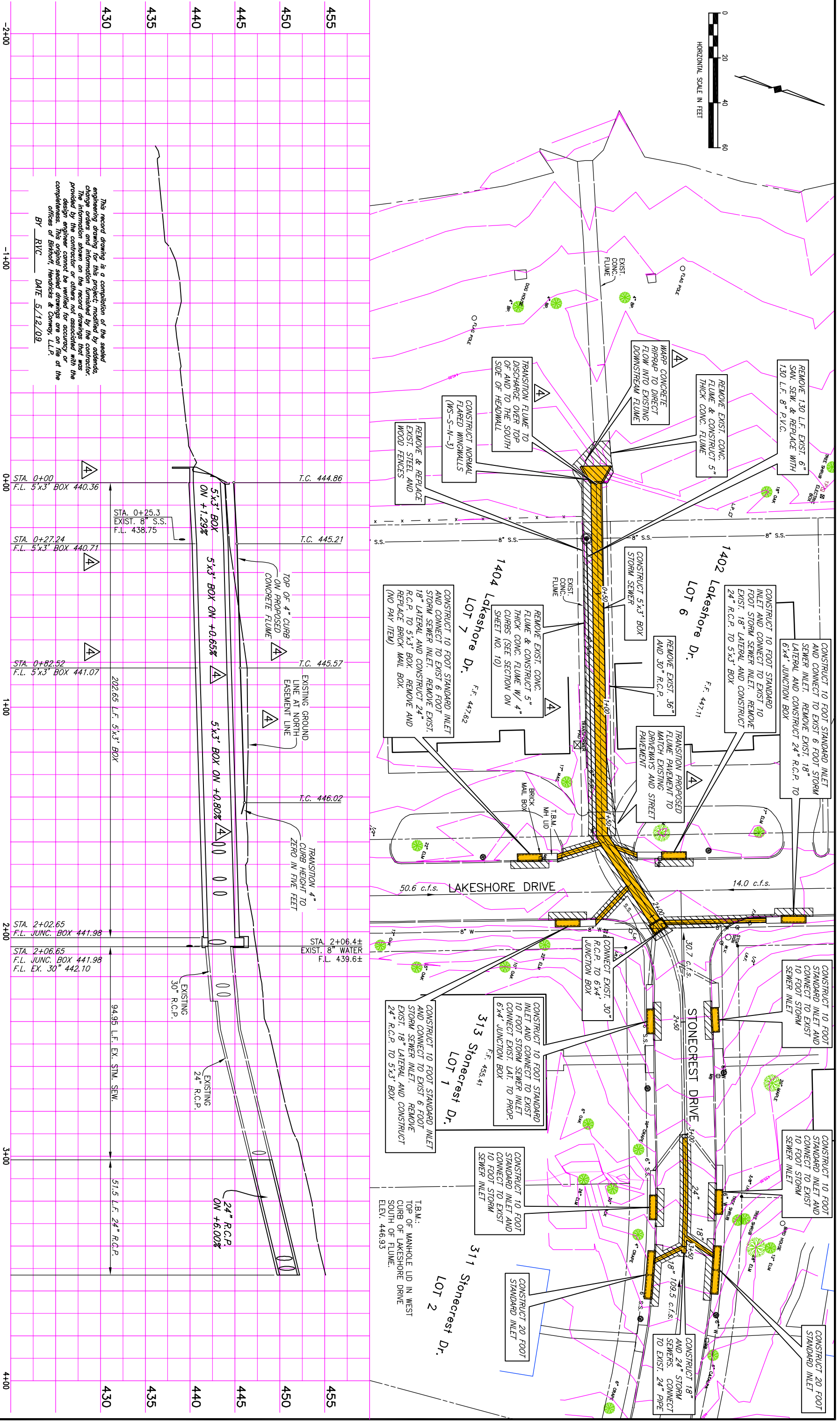
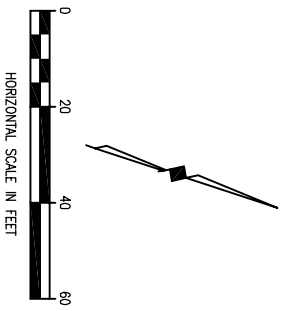
This record drawing is a compilation of the sealed engineering drawing for this project, modified by addenda, change orders and information furnished by the contractor. The information shown on the record drawings that was provided by the contractor or others not associated with the design engineer cannot be verified for accuracy or completeness. The original sealed drawings are on file at the offices of Birkhoff, Hendricks & Conway, L.L.P.
BY RVC DATE 5/12/09

BIRKHOFF, HENDRICKS & CONWAY, L.L.P.
CONSULTING ENGINEERS
7502 Greenville Ave., Suite 220
Dallas, Texas
(214) 361-7900



CITY OF ROCKWALL, TEXAS
NEIGHBORHOOD DRAINAGE IMPROVEMENTS - PHASE 2
DRAINAGE SITE 4 IMPROVEMENTS
SPRING CREEK DR. NORTH OF STONECREST DR.

BHC PROJECT NO. 2006-182
SEPTEMBER 2008
SHEET NO. **8**



This record drawing is a compilation of the sealed engineering drawing for this project modified by addenda, change orders and information furnished by the contractor. The information shown on the record drawings that was provided by the contractor or others not associated with the design engineer cannot be verified for accuracy or completeness. This original sealed drawing is on file at the offices of Birkhoff, Hendricks & Conway, L.L.P.
 BY RVC DATE 5/12/09

FIELD CHANGE NO. 4	JULY 13, 2007	
<p>BIRKHOFF, HENDRICKS & CONWAY, L.L.P. CONSULTING ENGINEERS 7502 Greenville Ave., Suite 220 Dallas, Texas (214) 361-7900</p>		

BIRKHOFF, HENDRICKS & CONWAY, L.L.P.
 CONSULTING ENGINEERS
 7502 Greenville Ave., Suite 220
 Dallas, Texas
 (214) 361-7900

<p>CITY OF ROCKWALL, TEXAS NEIGHBORHOOD DRAINAGE IMPROVEMENTS DRAINAGE SITE 2 IMPROVEMENTS LAKESHORE DRIVE NEAR STONECREST DRIVE</p>		<p>BHC PROJECT NO. 2006-182</p>	<p>SHEET NO. 9</p>
<p>REVISION: 5/11/09 - WHANS</p>		<p>PLAT SCALE: 1:40</p>	<p>PLotted BY: WHANS ON 5/13/2009</p>

INLET DESIGN CALCULATIONS

No.	INLET Location	Design Storm Frequency (yrs)	AREA RUNOFF					Carry-Over From Inlet (cfs)	Total Gutter Flow (cfs)	Gutter Capacity (cfs)	Gutter Slope (ft/100 ft)	Crown Type	SELECTED INLET		Carry-Over To Downstream Inlet (cfs)
			Time of Conc. (min)	Intensity I (in/hr)	Runoff Coeff. "C"	Area (ac)	"Q" _a (cfs)						Length "L" _s (feet)	Type	
SITE 2															
	Rockbrook at Lakeshore (N)	100	10	9.8	0.5	1.51	7.4	0.0	7.4	26	5%	Parabolic	6+8	Curb	0.0
	Rockbrook at Lakeshore (S)	100	10	9.8	0.5	1.69	8.3	0.0	8.3	26	5%	Parabolic	6+8	Curb	0.2
	Russwood at Lakeshore (N)	100	10	9.8	0.5	1.38	6.8	0.0	6.8	26	5%	Parabolic	6+6	Curb	0.0
	Russwood at Lakeshore (S)	100	10	9.8	0.5	1.64	8.1	0.0	8.1	26	5%	Parabolic	6+8	Curb	0.0
	Stonecrest at Lakeshore	100	15	9.0	0.5	23.88	107.5	0.0	107.5	26	5%	Parabolic	6-20	Curb	30.7
	Dartbrook at Lakeshore (N)	100	10	9.8	0.5	2.39	11.7	0.0	11.7	26	5%	Parabolic	6-10	Curb	1.9
	Dartbrook at Lakeshore (S)	100	10	9.8	0.5	1.95	9.6	0.0	9.6	26	5%	Parabolic	6-10	Curb	0.0
	Meadowdale at Lakeshore (N)	100	10	9.8	0.5	1.85	9.1	0.0	9.1	26	5%	Parabolic	6-10	Curb	0.0
	Meadowdale at Lakeshore (S)	100	10	9.8	0.5	1.62	7.9	0.0	7.9	26	5%	Parabolic	6+8	Curb	0.0
	Lakeshore at Russwood	100	10	9.8	0.5	2.56	12.5	0.2	12.7	16*	5%	Parabolic	3-6	Curb	0.0
	Lakeshore at Meadowdale	100	15	9.0	0.5	15.65	52.8**	0.0	52.8	16*	5%	Parabolic	6+2-10	Curb	33.8
	Lakeshore at Dartbrook	100	10	9.8	0.5	4.01	18.0	33.8	51.8	16*	5%	Parabolic	2-6+12	Curb	34.1
	Lakeshore at Stonecrest	100	10	9.8	0.5	6.77	30.5	64.8	95.3	--	LP	Parabolic	3-6-5-10	Curb	0.0
SITE 5															
5-1	South of Heath	100	15	9.0	0.5	20.79	93.6	0.0	--	--	--	--	5x3	Hdwl	0.0
5-2	Heath West of Fannin	100	10	9.8	0.5	8.34	40.9	0.0	40.9	--	LP	Parabolic	10+2-14	Curb	0.0
SITE 8															
8-1	Carriage S. of Westway (W)	100	10	9.8	0.5	0.55	2.7	9.6	12.3	20	2.5%	Parabolic	10+14	Curb	0.0
8-2	Carriage N. of Westway (E)	100	10	9.8	0.5	4.04	19.8	0.0	19.8	30	7%	Parabolic	14	Curb	11.9
8-3	Westway at Carriage (N)	100	10	9.8	0.5	3.93	19.3	0.0	19.3	26	5%	Parabolic	20	Curb	6.5
8-4	Carriage S. of Westway (E)	100	10	9.8	0.5	0.73	3.6	8.8	12.4	20	2.5%	Parabolic	16	Curb	1.9
SITE 11															
	Alley between Summit Ridge & Glenn	100	10	9.8	0.5	2.20	10.8	0.0	10.8	--	LP	Parabolic	3x3	Drop	0.0
SITE 20															
20-1	Austin at Heath	100	10	9.8	0.5	6.24	30.6	0.0	30.6	28*	1.25%	Parabolic	2-20	Curb	0.0
20-2	Heath E. of Austin	100	10	9.8	0.5	7.86	38.5	0.0	38.5	--	LP	Parabolic	10.2-15+2x2	Curb & Drop	0.0

* Full street capacity with flow to top of curb.
 ** 17.6 cfs assumed to flow out of drainage basin.

This record drawing is a completion of the sealed engineering drawing for this project, modified by addenda, change orders and information furnished by the contractor. The information shown on the record drawings that was provided by the contractor or others not associated with the design engineer cannot be verified for accuracy or completeness. This original sealed drawings are on file at the offices of Birkhoff, Hendricks & Conway, LLP.

BY RVC DATE 5/12/09

BIRKHOFF, HENDRICKS & CONWAY, L.L.P.
 CONSULTING ENGINEERS
 7502 Greenville Ave., Suite 220
 Dallas, Texas
 (214) 361-7900



Ronald V. Conway
 1/31/07

CITY OF ROCKWALL, TEXAS
 NEIGHBORHOOD DRAINAGE IMPROVEMENTS
INLET DESIGN CALCULATIONS

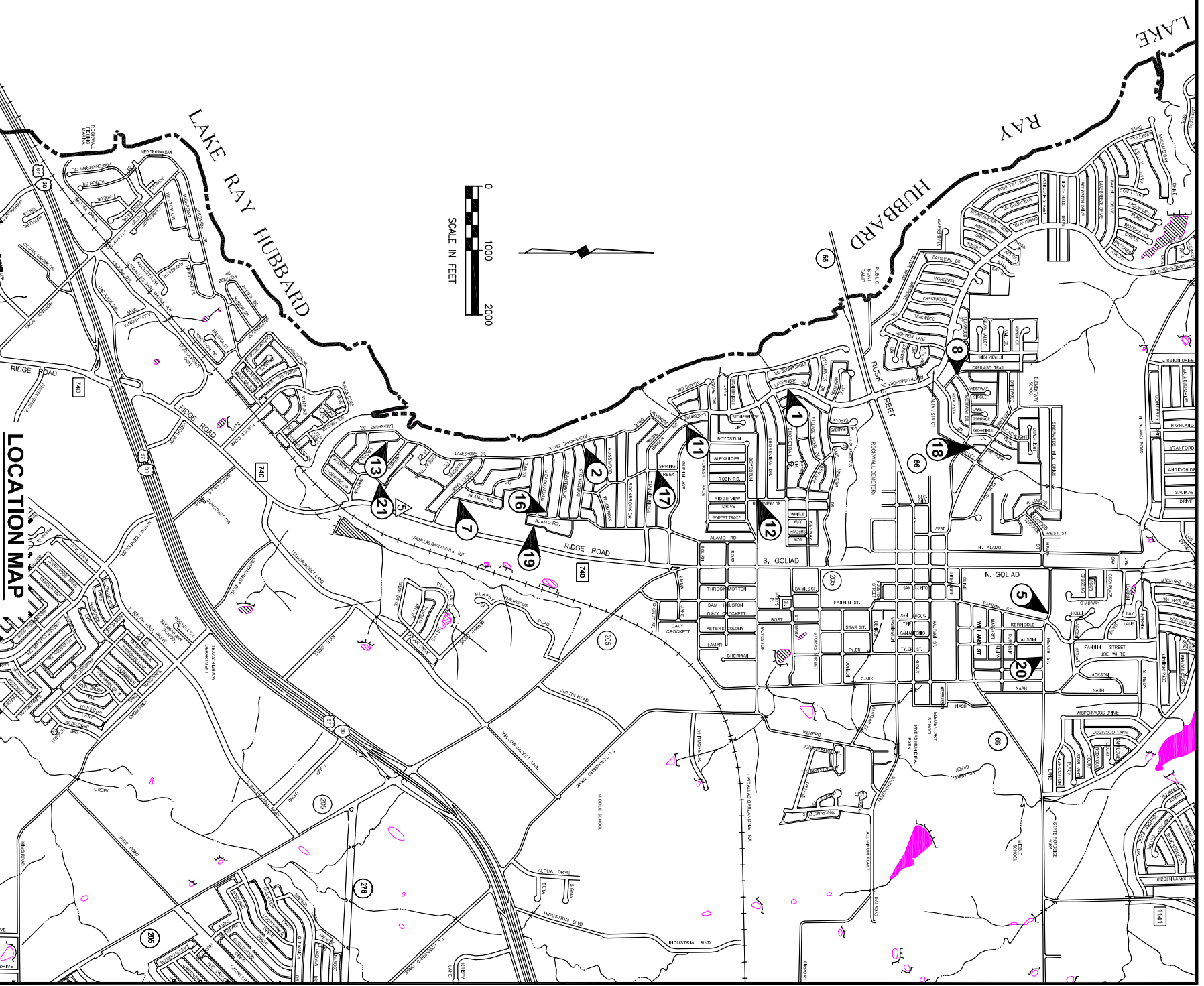
BHC PROJECT NO. 2006-182
 SHEET NO. 7

SHEET INDEX
SHEET DESCRIPTION

SHEET NO.	TITLE SHEET
1	LOCATION MAP & SHEET INDEX
2	DRAINAGE AREA MAP - DRAINAGE SITES 1, 11, 12 & 17
3	DRAINAGE AREA MAP - DRAINAGE SITES 2, 16 & 19
4	DRAINAGE AREA MAP - DRAINAGE SITES 5, 8, 18 & 20
5	DRAINAGE AREA MAP - DRAINAGE SITES 7 & 13
6	INLET DESIGN CALCULATIONS
7	DRAINAGE SITE 1 IMPROVEMENTS - LAKESHORE DR. NORTH OF SHORETRAIL DR.
8	DRAINAGE SITE 2 IMPROVEMENTS - LAKESHORE DR. NEAR STONECREST DR.
9-12	DRAINAGE SITE 5 IMPROVEMENTS - HEATH ST. WEST OF FANNIN ST.
13	DRAINAGE SITE 7 IMPROVEMENTS - ALLEY EAST OF ALAMO RD. AT BECKY LN.
14	DRAINAGE SITE 8 IMPROVEMENTS - CARRIAGE TR. NEAR WESTWAY DR.
15	DRAINAGE SITE 11 IMPROVEMENTS - ALLEY EAST OF LAKESHORE DR. NEAR FOREST TRACE
16	DRAINAGE SITE 12 IMPROVEMENTS - ALLEY NORTH OF BOYDSTUN DR. AT RIVERVIEW DR.
17	DRAINAGE SITE 13 IMPROVEMENTS - ALLEY EAST LAKESHORE DR. NEAR LAKEVIEW DR.
18	DRAINAGE SITE 16 IMPROVEMENTS - ALLEY NORTH OF MEADOWDALE AT ALAMO RD.
19	DRAINAGE SITE 17 IMPROVEMENTS - ALLEY NORTH OF SUMMIT RIDGE AT SPRING CREEK
20	DRAINAGE SITE 18 IMPROVEMENTS - ALLEY WEST OF VALLEY DR. AT WESTWAY DR.
21	DRAINAGE SITE 19 IMPROVEMENTS - ALLEY EAST OF ALAMO RD. NEAR MEADOWDALE
22	DRAINAGE SITE 20 IMPROVEMENTS - HEATH ST. WEST OF PARKS AVE.
23	DRAINAGE SITE 21 IMPROVEMENTS - ALLEY EAST OF LAKVIEW & NORTH OF LAKE DALE
24	

LEGEND

▲ DRAINAGE IMPROVEMENT SITE



This record drawing is a compilation of the sealed engineering drawing for this project, modified by addenda, change orders and information furnished by the contractor. The information shown on the record drawings that was provided by the contractor or others not associated with the design engineer cannot be verified for accuracy or completeness. This original sealed drawing is on file at the offices of Birkhoff, Hendricks & Conway, L.L.P.

BY RYC DATE 5/12/09

FIELD CHANGE NO. 5	AUGUST 14, 2007	5
--------------------	-----------------	---

BIRKHOFF, HENDRICKS & CONWAY, L.L.P.
CONSULTING ENGINEERS
7502 Greenhill Ave., Suite 220
Dallas, Texas
(214) 361-7900



Ronald V. Conway
8/13/07

CITY OF ROCKWALL, TEXAS
NEIGHBORHOOD DRAINAGE IMPROVEMENTS
LOCATION MAP & SHEET INDEX

BHC PROJECT NO. 2006-182	SHEET NO. 2
JANUARY, 2007	