
* FLOOD HYDROGRAPH PACKAGE (HEC-1) *
* MAY 1991 *
* VERSION 4.0.1E *
* RUN DATE 06/11/96 TIME 08:45:35 *

* U.S. ARMY CORPS OF ENGINEERS
* HYDROLOGIC ENGINEERING CENTER
* 609 SECOND STREET
* DAVIS, CALIFORNIA 95616
* (916) 551-1748

HEC-1 INPUT PAGE 1

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10
1 ID THE FOUNTAINS 2ND ADDN
2 ID PEAK FLOW FUTURE CONDITION
3 ID Q100 - 6ER STORM
4 ID FILE: POUNT
5 IT 2 0 300
6 IO 5 0
7 KK SBL
8 KO
9 KM COMPUTE THE RUN OFF HYDROGRAPH 21
10 BA .094
11 PE 100 0 .87 1.86 3.8 4.6 5.1 6.0
12 LS 0 81.7
13 UD 0.32
14 KK OUT
15 KM ROUTE FLOW THROUGH STRUCTURE 21
16 RS 1 STOR -1
17 SV 0 5.82
18 SE 1364.5 1369.0
19 SQ 0 67.95 124.8 185 229.3
20 SE 1364.5 1366.5 1367.5 1368.4 1369
21
22

X X XXXXX XXXX X
X X X X X X
X X X X X
XXXXX XXXX X XXXX X
X X X X X
X X X X X
X X XXXXX XXXX X

THIS PROGRAM REPLACES ALL PREVIOUS VERSIONS OF HEC-1 KNOWN AS HEC1 (JAN 73), HEC1GS, HEC1DB, AND HEC1EW.

THE DEFINITIONS OF VARIABLES -RTIME- AND -RTIOR- HAVE CHANGED FROM THOSE USED WITH THE 1973-STYLE INPUT STRUCTURE.
THE DEFINITION OF -JMSK- ON RM-CARD WAS CHANGED WITH REVISIONS DATED 28 SEP 81. THIS IS THE FORTRAN77 VERSION
NEW OPTIONS: DAMBREAN OUTFLOW SUBMERGENCE, SINGLE EVENT DAMAGE CALCULATION, DSS-WRITE STAGE FREQUENCY,
DSS-READ TIME SERIES AT DESIRED CALCULATION INTERVAL LOSS RATE:GREEN AND AMPT INFILTRATION
KINEMATIC WAVE: NEW FINITE DIFFERENCE ALGORITHM

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THE FOUNTAINS 2ND ADDN
PEAK FLOW FUTURE CONDITION
Q100 - 6ER STORM
FILE: POUNT
6 IO OUTPUT CONTROL VARIABLES
IPRNT 5 PRINT CONTROL
IPLOT 0 PLOT CONTROL
QSCAL 0. HYDROGRAPH PLOT SCALE

IT HYDROGRAPH TIME DATA
NMN 2 MINUTES IN COMPUTATION INTERVAL
IDATE 1 0 STARTING DATE
ITYME 0000 STARTING TIME
NQ 300 NUMBER OF HYDROGRAPH ORDINATES
NDDATE 1 0 ENDING DATE
NDTIME 0958 ENDING TIME
ICENT 19 CENTURY MARK

COMPUTATION INTERVAL 0.03 HOURS
TOTAL TIME BASE 9.97 HOURS

ENGLISH UNITS
DRAINAGE AREA SQUARE MILES
PRECIPITATION DEPTH INCHES
LENGTH, ELEVATION FEET
FLOW CUBIC FEET PER SECOND
STORAGE VOLUME ACRE-Feet
SURFACE AREA ACRES
TEMPERATURE DEGREES FAHRENHEIT

* SBL *

8 KO OUTPUT CONTROL VARIABLES
IPRNT 5 PRINT CONTROL
IPLOT 0 PLOT CONTROL

QSCAL 0. HYDROGRAPH PLOT SCALE
IPRNT 0 PUNCH COMPUTED HYDROGRAPH
IPLOT 21 SAVE HYDROGRAPH ON THIS UNIT
ISAV1 1 FIRST ORDNATE PUNCHED OR SAVED
ISAV2 300 LAST ORDNATE PUNCHED OR SAVED
TIMINT 0.033 TIME INTERVAL IN HOURS

* 0 *

16 KO OUTPUT CONTROL VARIABLES
IPRNT 5 PRINT CONTROL
IPLOT 0 PLOT CONTROL
QSCAL 0. HYDROGRAPH PLOT SCALE
IPRNT 0 PUNCH COMPUTED HYDROGRAPH
IPLOT 21 SAVE HYDROGRAPH ON THIS UNIT
ISAV1 1 FIRST ORDNATE PUNCHED OR SAVED
ISAV2 300 LAST ORDNATE PUNCHED OR SAVED
TIMINT 0.033 TIME INTERVAL IN HOURS

RUNOFF SUMMARY								
FLOW IN CUBIC FEET PER SECOND								
TIME IN HOURS, AREA IN SQUARE MILES								
OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD	BASIN AREA	MAXIMUM STAGE	TIME OF MAX STAGE	
				6-HOUR 24-HOUR 72-HOUR				
HYDROGRAPH AT	SBL	245.	3.37	40. 24. 24.	0.09			
ROUTED TO	0	186.	3.60	40. 24. 24.	0.09	1368.41	3.60	

*** NORMAL END OF HEC-1 ***

THE FOUNTAINS 2ND ADDN

REDUCE FLOW FROM POUNT TO 1960's

TRY 7.9 WIER

ELEV. FLOW

64.5 0

66.5 67.95

67.5 124.8

69.4 145

69.0 229.3

* FLOOD HYDROGRAPH PACKAGE (HEC-1) *
* MAY 1991 *
* VERSION 4.0.1E *
* RUN DATE 01/09/95 TIME 14:02:27 *

* U.S. ARMY CORPS OF ENGINEERS
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* DAVIS, CALIFORNIA 95616
* (916) 551-1748

X X XXXXX XXXX X
X X X X X X
X X X X X
XXXXXX XXXX X XXXX X
X X X X X
X X X X X
X X XXXXX XXXX X

THIS PROGRAM REPLACES ALL PREVIOUS VERSIONS OF HEC-1 KNOWN AS HEC1 (JAN 73), HEC1GS, HEC1DB, AND HEC1EW.

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DSS-READ TIME SERIES AT DESIRED CALCULATION INTERVAL LOSS RATE:GREEN AND AMPT INFILTRATION
KINEMATIC WAVE: NEW FINITE DIFFERENCE ALGORITHM

HEC-1 INPUT PAGE 1

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10
1 ID THE FOUNTAINS 2ND ADDN
2 ID PEAK FLOW FUTURE CONDITION
3 ID Q100 - 6ER STORM
4 ID FILE: POUNT
5 IT 2 0 300
6 IO 5 0
7 KK SBL
8 KO
9 KM COMPUTE THE RUN OFF HYDROGRAPH 21
10 BA .094
11 PE 100 0 .87 1.86 3.8 4.6 5.1 6.0
12 LS 0 81.7
13 UD 0.32
14 KK OUT
15 KM ROUTE FLOW THROUGH STRUCTURE 21
16 RS 1 STOR -1
17 SV 0 5.82
18 SE 1364.5 1369.0
19 SQ 0 25.5 85.5 316
20 SE 1364.5 1366.5 1367.5 1368.4 1369.0
21
22

RUNOFF SUMMARY								
FLOW IN CUBIC FEET PER SECOND								
TIME IN HOURS, AREA IN SQUARE MILES								
OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD	6-HOUR	24-HOUR	72-HOUR	BASIN AREA
HYDROGRAPH AT	SBI	245.	3.37	40.	24.	24.	0.09	
ROUTED TO	0	217.	3.50	39.	24.	24.	0.09	1368.36
								3.50

*** NORMAL END OF REC-1 ***

 * FLOOD HYDROGRAPH PACKAGE (REC-1) *
 * MAY 1991 *
 * VERSION 4.0.1B *
 * RUN DATE 01/09/95 TIME 12:22:16 *

X Y XXXXX XXXX X
 X X X X X X X
 X X X X X X X
 XXXXX XXXX X XXXX X
 X X X X X X X
 X X X X X X X
 X X XXXXX XXXX X

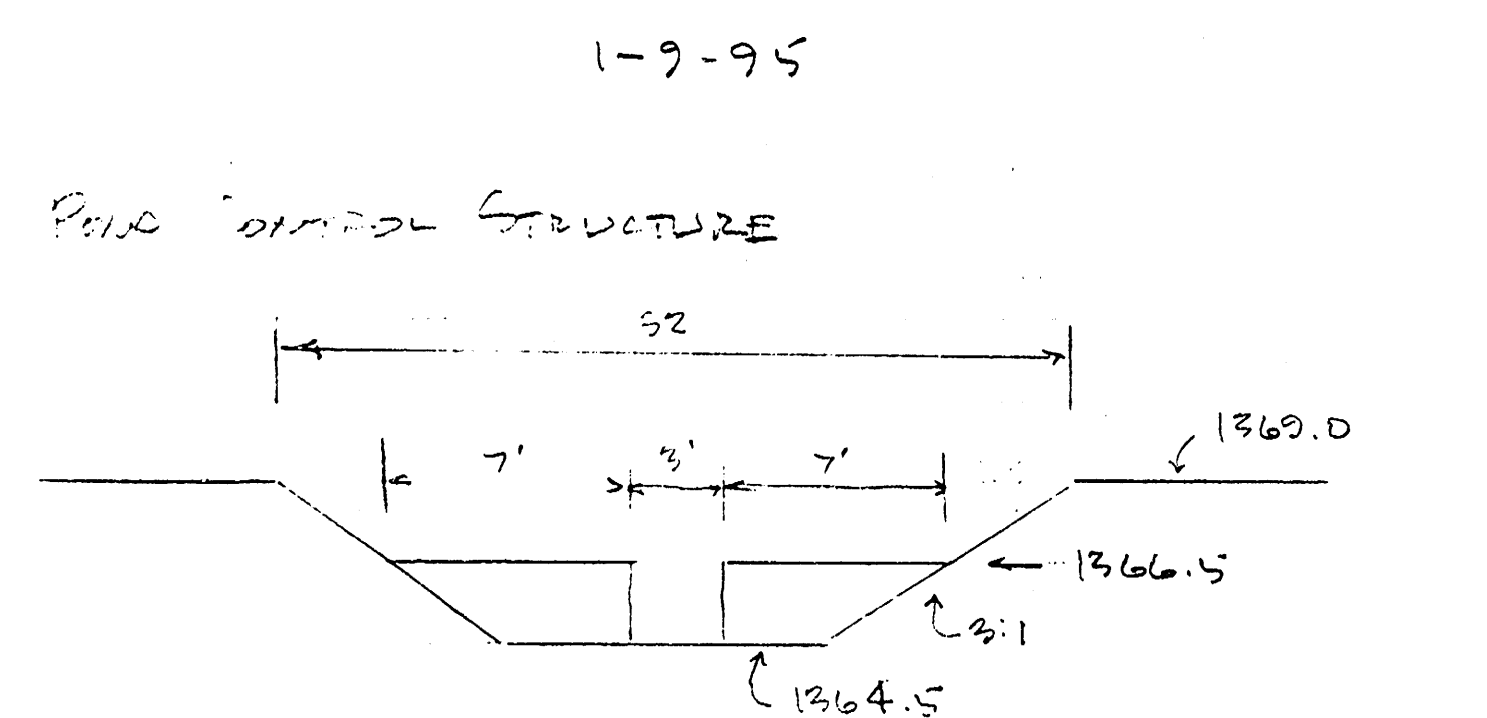
THIS PROGRAM REPLACES ALL PREVIOUS VERSIONS OF REC-1 KNOWN AS REC1 (JAN 73), REC1B, REC1D, AND REC1W.
 THE DEFINITIONS OF VARIABLES -RTIME- AND -RTIOR- HAVE CHANGED FROM THOSE USED WITH THE 1973-STYLE INPUT STRUCTURE.
 THE DEFINITION OF -ANSKS- ON RM-CARD WAS CHANGED WITH REVISIONS DATED 28 SEP 81. THIS IS THE FORTRAN77 VERSION
 NEW OPTIONS: DAMBREAN OUTFLOW SUBMERGENCE, SINGLE EVENT DAMAGE CALCULATION, DSS-WRITE STAGE FREQUENCY,
 DSS-READ TIME SERIES AT DESIRED CALCULATION INTERVAL LOSS RATE: GREEN AND NPT INFILTRATION
 KINEMATIC WAVE: NEW FINITE DIFFERENCE ALGORITHM

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 * (916) 551-1748 *

REC-1 INPUT PAGE 1
 LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10
 1 ID THE FOUNTAINS 2ND ADDITION
 2 ID PRESENT CONDITION
 3 ID Q100-6ER STORM
 4 ID FILE: FOUNT2
 5 IT 2 0 300
 6 IO 5 0
 7 KK SBI
 8 KO
 9 KM COMPUTE HYDROGRAPH 21
 10 BA .094
 11 PH 100 0 .87 1.86 3.8 4.6 5.1 6.0
 12 LS 0 79.8
 13 UD 0.37
 14 II

RUNOFF SUMMARY								
FLOW IN CUBIC FEET PER SECOND								
TIME IN HOURS, AREA IN SQUARE MILES								
OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD	6-HOUR	24-HOUR	72-HOUR	BASIN AREA
HYDROGRAPH AT	SBI	215.	3.43	38.	23.	23.	0.09	

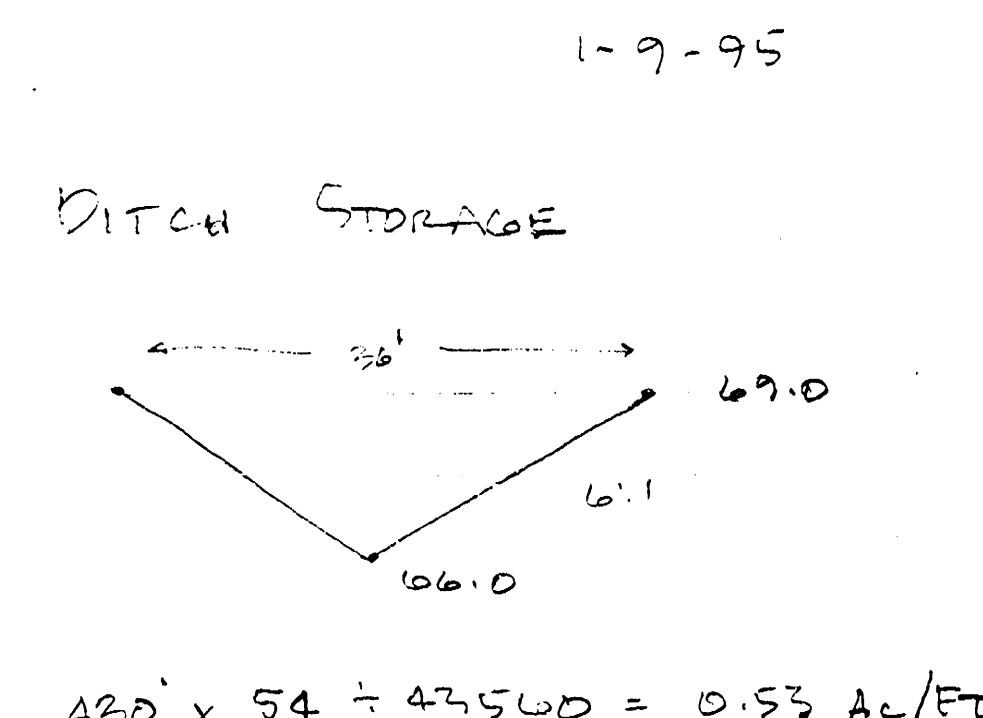
*** NORMAL END OF REC-1 ***



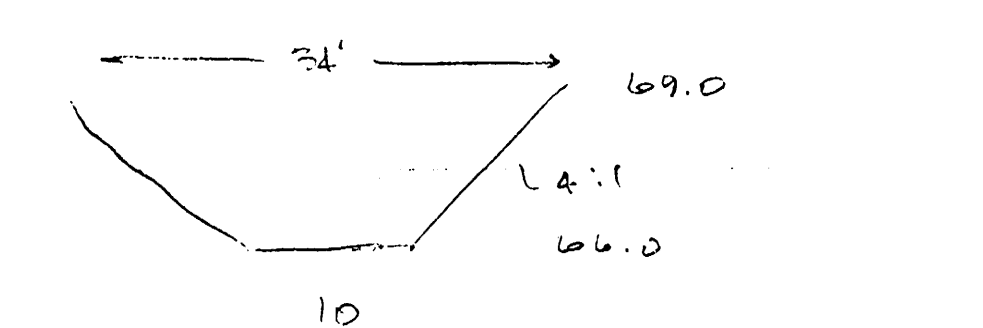
ELEV	C	L	H	Q
1364.5	3.0			
1366.5	3.0	8.0	2.0	25.46
1367.5	3.0	20.0	1.0	60.0 + 25.46 = 85.5
1369.0	3.0	24.5	2.5	290.53 + 25.46 = 316.0

Peak Q IN 245.0 cfs
 Peak Q OUT 217.0 cfs

Max STAGE 1368.4 (DWS)



$$430' \times 54' \div 47500 = 0.53 \text{ AC/FT}$$



$$130' \times 60' \div 47500 = 0.20 \text{ AC FT}$$

FOUR

64.5	0.94 AC	5.09 AC FT
69.0	1.32 AC	

TOTAL 3.82 AC FT @ 1369.0

1-9-95

THE FOUNTAINS 2ND ADDITION

64.5	40%	C	CN 95	3170
69.0	60%	D	CN 81	4260
				7980 ÷ 100 = 79.8

CALCULATED WITH DAMPED STRUCTURE

$$L = \frac{1000}{79.8} - 10 = 2.53$$

$$L = \frac{1900 \times 2.53}{1900 \times 1.5} = 0.37 \text{ HR}$$

AFTER DEVELOPMENT

21.0 AC 14 AC Lots 3.5% INFILTRATION 5.75 AC

$$L = 0.19 \left[\frac{0.96}{64.6} \right]^{.5} \cdot 1.38 \cdot 1.57 = 0.32 \text{ HR}$$

6 AC	C	DEVE.	CN 95	664
12.1 AC	D	DEVE.	CN 97	1052.7
16 AC	C	EXIST.	CN 76	1244
24 AC	D	"	CN 81	1984
				4905.7 ÷ 60.1 = 81.7

DRAINAGE PLAN

REVISED 3-26-96

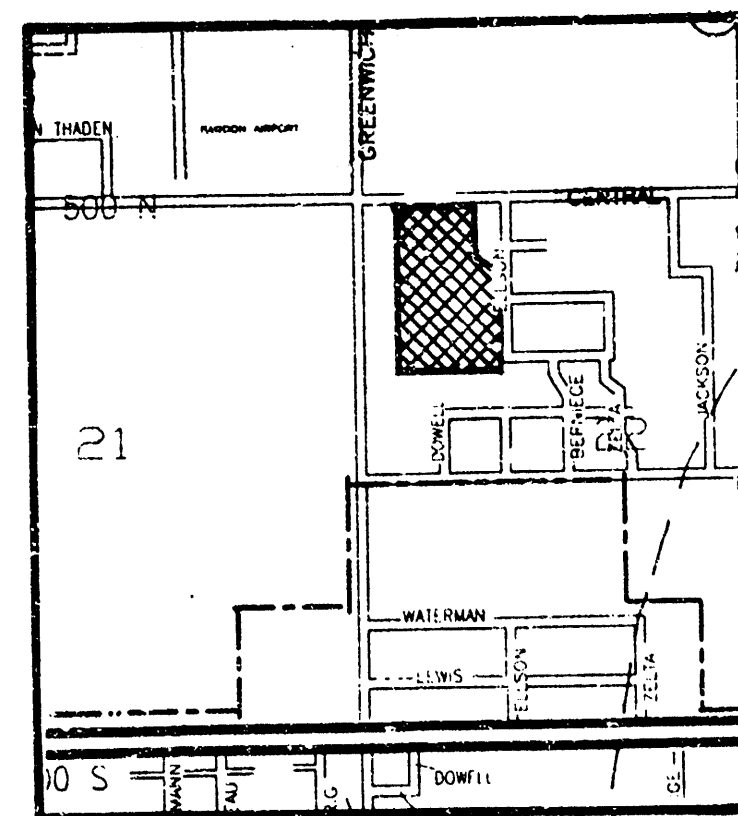
Prepared by:

POE & ASSOCIATES OF KANSAS, INC.
CONSULTING ENGINEERS

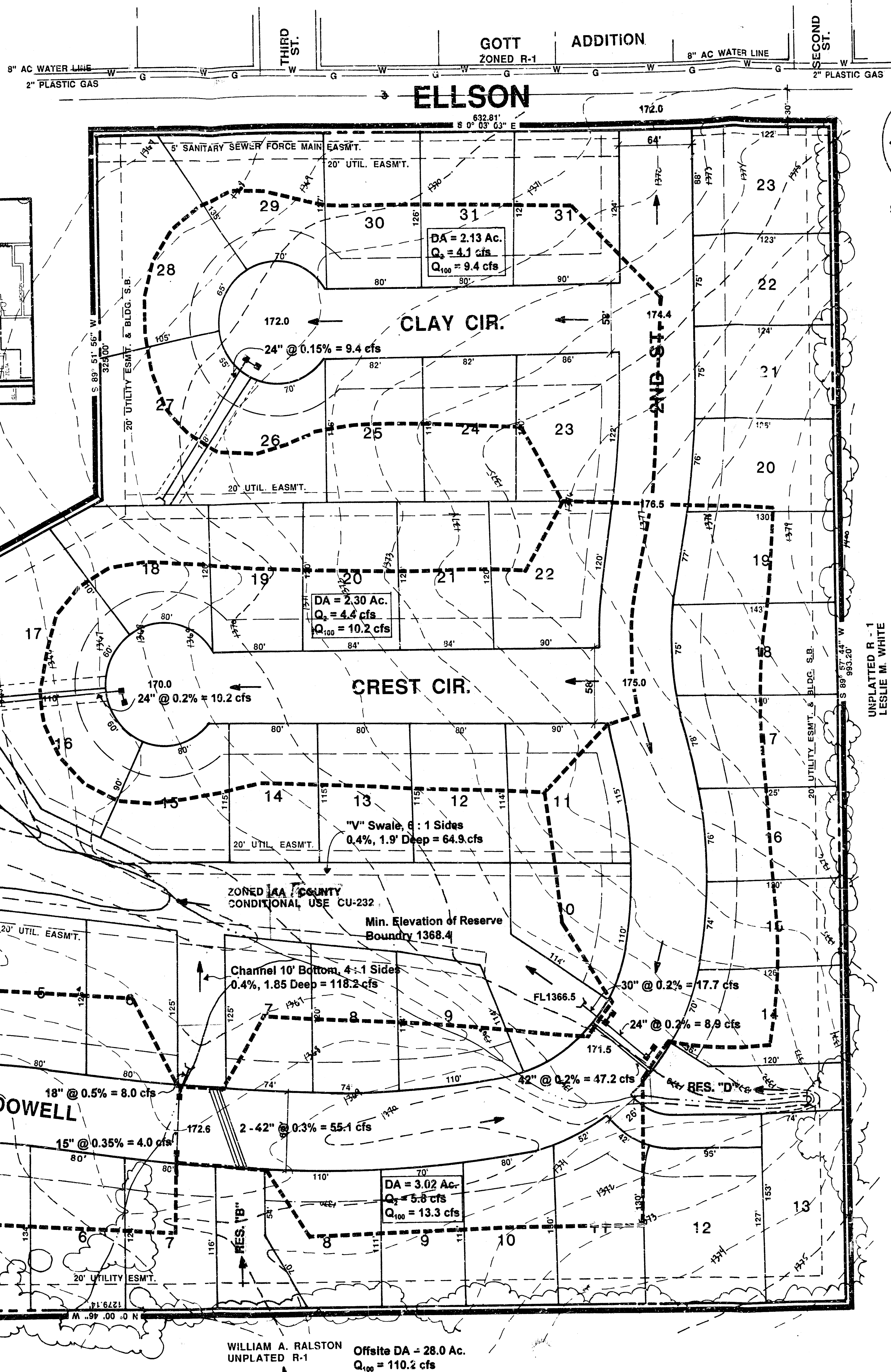
434 N. Oliver, Suite 110 • Wichita, Kansas 67208
Phone 316/685-4114 • FAX 316/685-4444

NOTES:

1. A DRAINAGE CONCEPT PLAN SHALL BE PREPARED AND SUBMITTED TO THE CITY ENGINEER BY POE AND ASSOCIATES.
2. BENCHMARK - (COUNTY) - TOP OF IRON IN THIMBLE AT INTERSECTION OF CENTRAL AND GREENWICH. EL. 1376.44.
3. BENCHMARK "A" - RAILROAD SPIKE IN POWER POLE 462± EAST OF N.W. COR. PARCEL. EL. 1379.42.
4. BENCHMARK "B" - 3-400 NAILS IN BASE OF 10" ELM TREE 1330± SOUTH AND 462± EAST OF THE N.W. COR. OF PARCEL EL. 1379.17.
5. CONTOURS ARE PLOTTED AT ONE FOOT INTERVALS.
6. RESERVES "B", "C", AND "D" SHALL PERMIT DRAINAGE, SIDEWALKS, UTILITIES CONFINED BY EASEMENTS, LANDSCAPE AND PLAYGROUND EQUIPMENT OR RECREATIONAL IMPROVEMENTS.
7. ALL PROPERTY WITHIN LIMITS OF PLAT IS ZONED "AA" / COUNTY UNDER CONDITIONAL USE CU-232.
8. MINIMUM LOW OPENING ELEVATION FOR HOMES BUILT ON LOTS ADJACENT TO RESERVE "C" IS 1369.4



LOCATION MAP
NO SCALE



FOUNTAINS SECOND ADDITION

REPLAT OF FOUNTAINS ADDITION

OWNER: K.R. SOLOMON INVESTMENTS, 1831 NORTH ROCK ROAD CT., WICHITA, KS 67205 (316) 684-9511



YUNG DESIGN GROUP

BRANSON OFFICE • 1831 W. HIGHWAY 76, SUITE 7 • BRANSON, MO 65616
PH. 417-335-9235 • FAX 417-335-9286
WICHITA OFFICE • 419 E. 10TH STREET NORTH • WICHITA, KS 67220
PH. 316-683-9507 • FAX 316-683-9508

DATE 12-14-94

REV. 2-9-96

SHEET TITLE

PROJECT

PROJECT NO.

SHEET

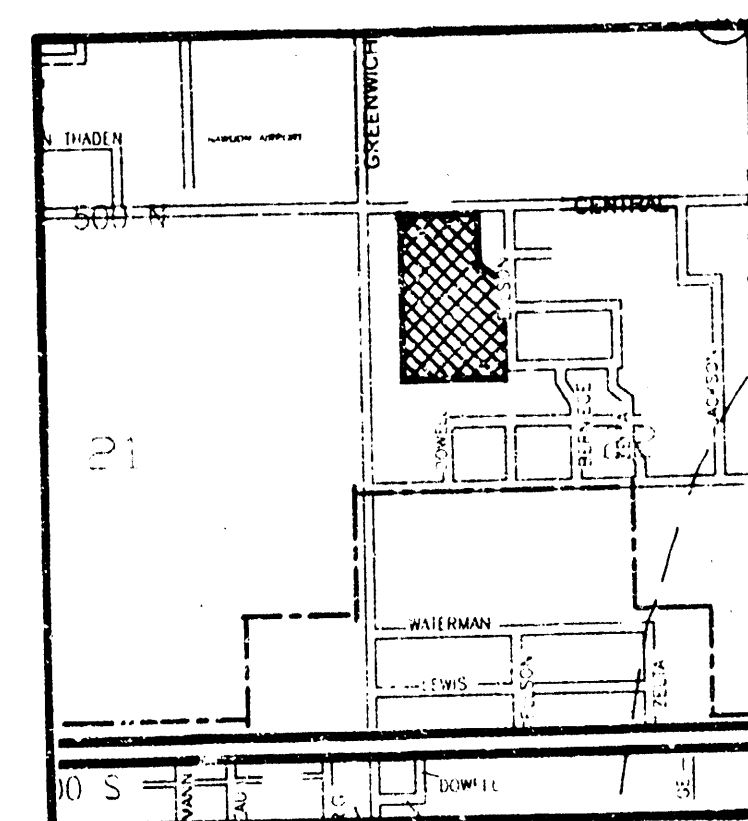
REVISED 3-26-96

Prepared by:

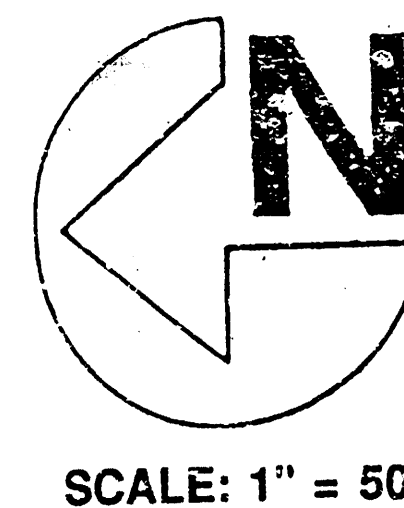
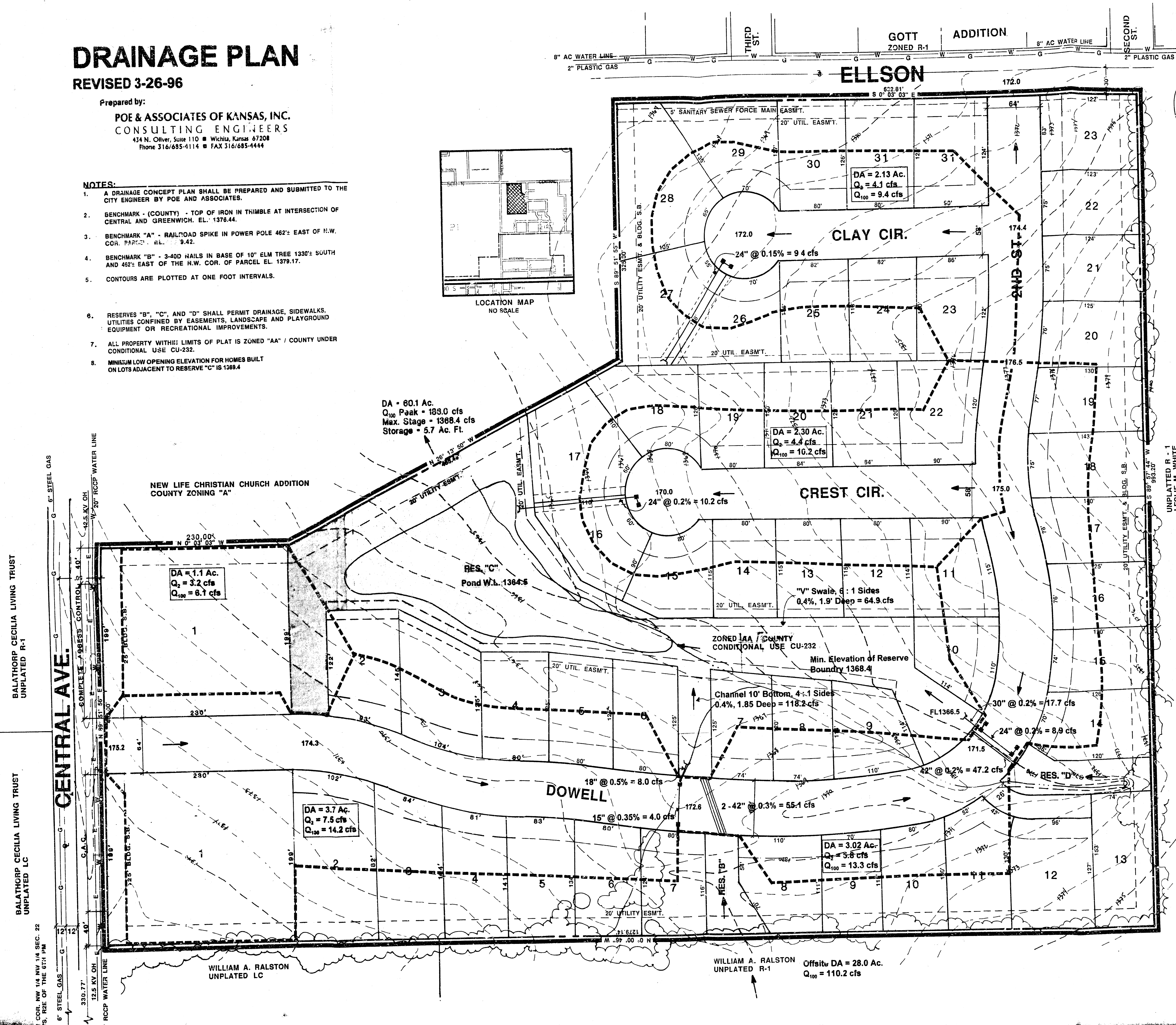
POE & ASSOCIATES OF KANSAS, INC.
CONSULTING ENGINEERS
434 N. Oliver, Suite 110 ■ Wichita, Kansas 67208
Phone 316/685-8114 ■ FAX 316/685-4444

NOTES:

- NOTES:**
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 2. BENCHMARK (COUNTY) - TOP OF IRON IN THIMBLE AT INTERSECTION OF CENTRAL AND GREENWICH. EL. 1376.44.
 3. BENCHMARK "A" - RAILROAD SPIKE IN POWER POLE 462± EAST OF N.W. COR. PARCEL. EL. 1392.942.
 4. BENCHMARK "B" - 3-40D HAILS IN BASE OF 10" ELM TREE 1330± SOUTH AND 462± EAST OF THE N.W. COR. OF PARCEL EL. 1379.17.
 5. CONTOURS ARE PLOTTED AT ONE FOOT INTERVALS.
 6. RESERVES "B", "C", AND "D" SHALL PERMIT DRAINAGE, SIDEWALKS, UTILITIES CONFINED BY EASEMENTS, LANDSCAPE AND PLAYGROUND EQUIPMENT OR RECREATIONAL IMPROVEMENTS.
 7. ALL PROPERTY WITHIN LIMITS OF PLAT IS ZONED "AA" / COUNTY UNDER CONDITIONAL USE CU-232.
 8. MINIMUM LOW OPENING ELEVATION FOR HOMES BUILT ON LOTS ADJACENT TO RESERVE "C" IS 1389.4



LOCATION MAP
NO SCALE



FOUNTAINS SECOND ADDITION

REPLAT OF FOUNTAINS ADDITION

REFLECT INVESTMENTS 1831 NORTH ROCK ROAD CT., WICHITA, KS 67206 (316) 684-9511



YOUNG DESIGN GROUP

BRANSON OFFICE • 1621 W. HIGHWAY 76, SUITE 7 • BRANSON, MO 65616
PH: 417-335-8235 • FAX: 417-335-8286

WICHITA OFFICE • 4912 E. 29TH STREET NORTH • WICHITA, KS 67220
PH: 318-683-5567 • FAX: 318-683-9296

DATE 12-14-94

REV. 2-9-96

SHEET TITLE

PROJECT

PROJECT

PROJECT NO.

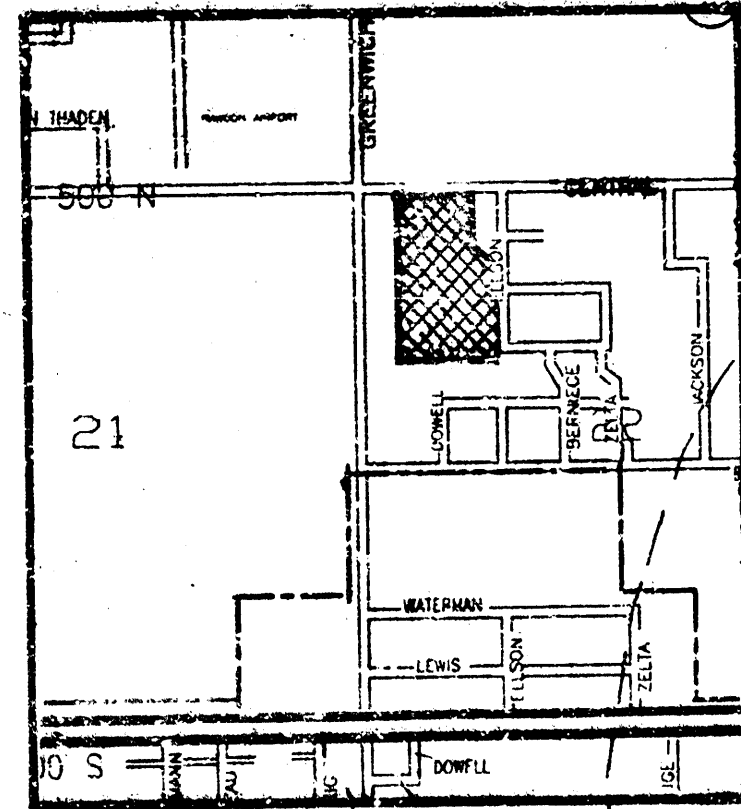
PROJECT NO.

DRAINAGE PLAN REVISED 2-28-95

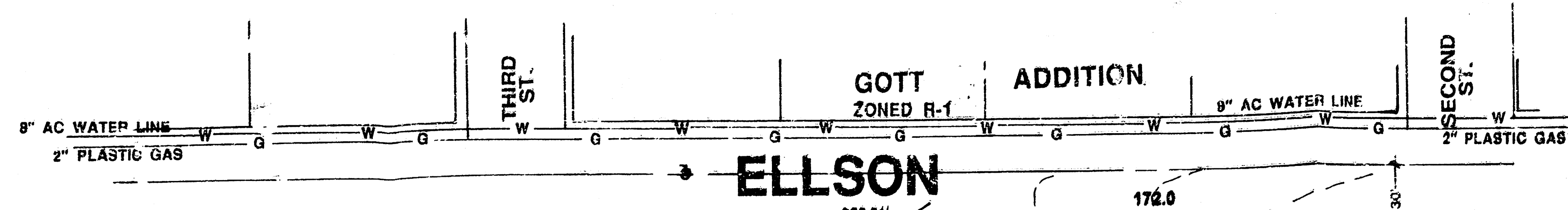
POE & ASSOCIATES OF KANSAS, INC.
CONSULTING ENGINEERS
434 N. Oliver, Suite 110 • Wichita, Kansas 67208
Phone 316/688-4114 • FAX 316/688-3047

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2. BENCHMARK (COUNTY) - TOP OF IRON IN THIMBLE AT INTERSECTION OF CENTRAL AND GREENWICH. EL. 1876.44.
3. BENCHMARK "A" - RAILROAD SPIKE IN POWER POLE 482± EAST OF N.W. COR. PARCEL. EL. 1879.41.
4. BENCHMARK "B" - 3-400 NAILS IN BASE OF 1" ELM TREE 1390± SOUTH AND 482± EAST OF THE N.W. COR. OF PARCEL EL. 1879.17.
5. CONTOURS ARE PLOTTED AT ONE FOOT INTERVALS.
6. RESERVES "B", "C", AND "D" SHALL PERMIT DRAINAGE, SIDEWALKS, UTILITIES CONFINED BY EASEMENTS, LANDSCAPE AND PLAYGROUND EQUIPMENT OR RECREATIONAL IMPROVEMENTS.
7. ALL PROPERTY WITHIN LIMITS OF PLAT IS ZONED "A" / COUNTY UNDER CONDITIONAL USE CU-232.
8. ~~RESERVES "B", "C", AND "D" SHALL PERMIT DRAINAGE, SIDEWALKS, UTILITIES CONFINED BY EASEMENTS, LANDSCAPE AND PLAYGROUND EQUIPMENT OR RECREATIONAL IMPROVEMENTS.~~



LOCATION MAP
NO SCALE



BALATHORP CECILIA LIVING TRUST
UNPLATTED R-1
CENTRAL AVE.
BALATHORP CECILIA LIVING TRUST
UNPLATTED LC
NEW LIFE CHRISTIAN CHURCH ADDITION
COUNTY ZONING "A"

NEW LIFE CHRISTIAN CHURCH ADDITION
COUNTY ZONING "A"

DA = 2.13 Ac.
Q₁₀₀ = 217.0 cfs
Q₁₀₀ = 1288.4 cfs
Q₁₀₀ = 8.7 Ac. Ft.

CREST CIR.

"V" Swale 6:1 Sides
0.4%, 1.8' Deep = 64.8 cfs

ZONED "A" / COUNTY
CONDITIONAL USE CU-232

Min. Elevation of Reserve
Boundary 1383.4

Channel 10' Bottom 4:1 Sides
0.4%, 1.85' Deep = 118.2 cfs

DOWELL

DA = 3.02 Ac.
Q₁₀₀ = 8.6 cfs
Q₁₀₀ = 13.3 cfs

WILLIAM A. RALSTON
UNPLATTED R-1
Offsite DA = 28.0 Ac.
Q₁₀₀ = 110.2 cfs

FOUNTAINS SECOND ADDITION

REPLAT OF FOUNTAINS ADDITION

CORNER: EAST SOUTHWEST INVESTMENTS, 1811 NORTH ROCK ROAD CT., WICHITA, KS 67268 (316) 624-9671

YUNG DESIGN GROUP

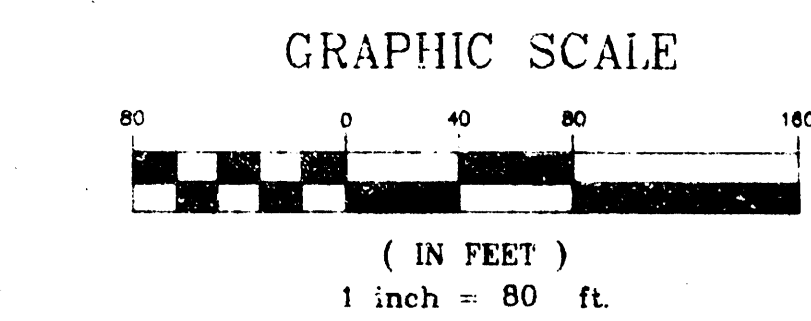
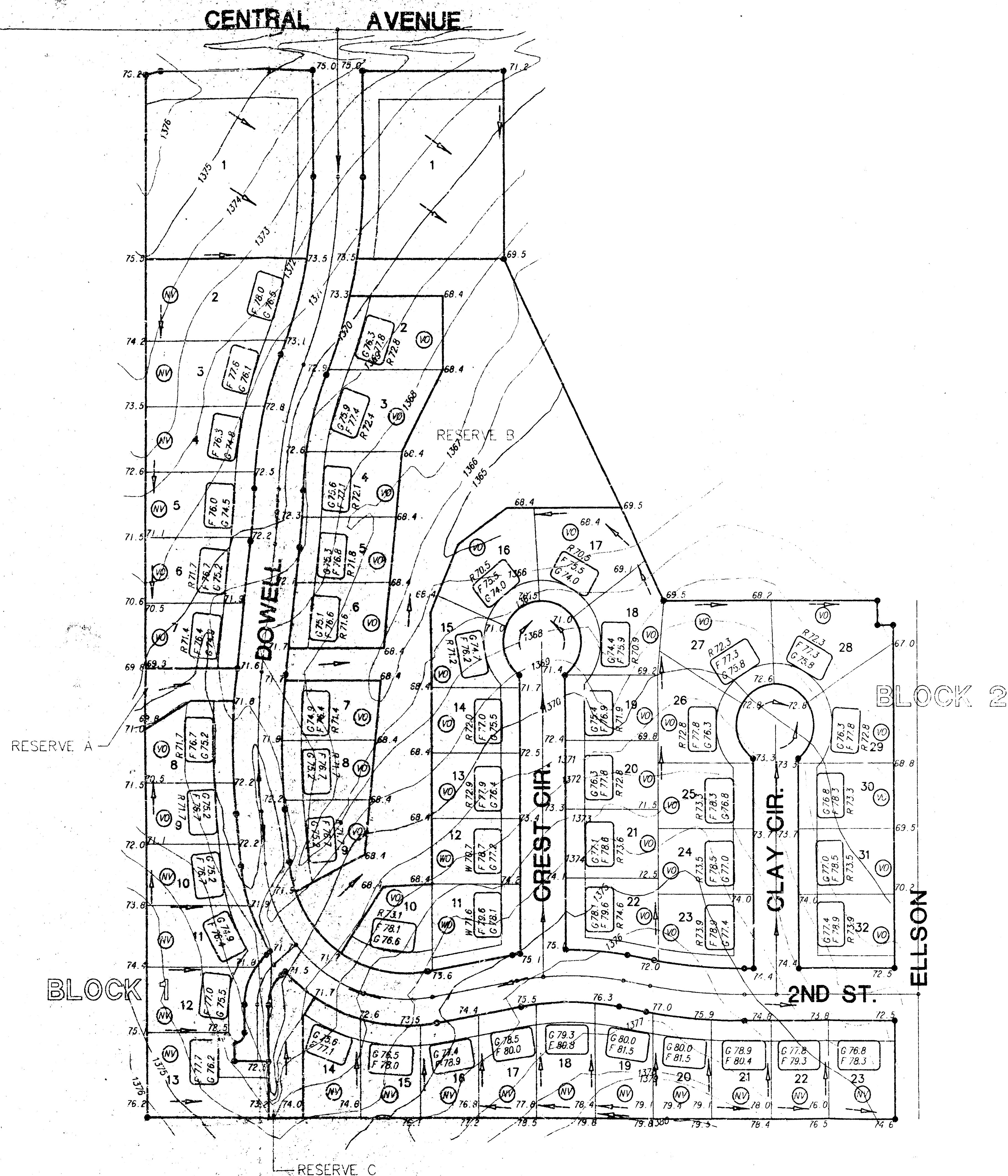
DATE: 12-14-95

SHEET TITLE

PROJECT

SHEET

PROJECT NO.



**APPROVED
DRAINAGE PLAN**

- LEGEND**
- G = GARAGE FLOOR ELEVATION
 - F = TOP OF FOUNDATION WALL ELEVATION
 - R = TOP OF REAR WALL ELEVATION (VIEW OUT)
 - W = BASEMENT FLOOR ELEVATION (WALK OUT)
 - (V) = NO VIEW OUT
 - (V) = VIEW OUT
 - (W) = WALK OUT

- BENCHMARKS**
- (U.S.G.S. Datum)
1. Top of iron in thimble at intersection of Central & Greenwich
Elev. 1376.44
 2. Railroad spike in PP 462± E. of NW. Cor. Lot 1, Block 1.
Elev. 1379.42
 3. 3-40d nails in base of 10" elm tree 1330± S. and 462± E.
of the NW. Cor. of Lot 1, Block 1
Elev. 1379.17

LOT GRADING PLAN
THE FOUNTAINS 2ND ADDITION

TO WICHITA, SEDGWICK COUNTY, KANSAS

NW 1/4, SECTION 21, T27S, R2E

APRIL 12, 1996