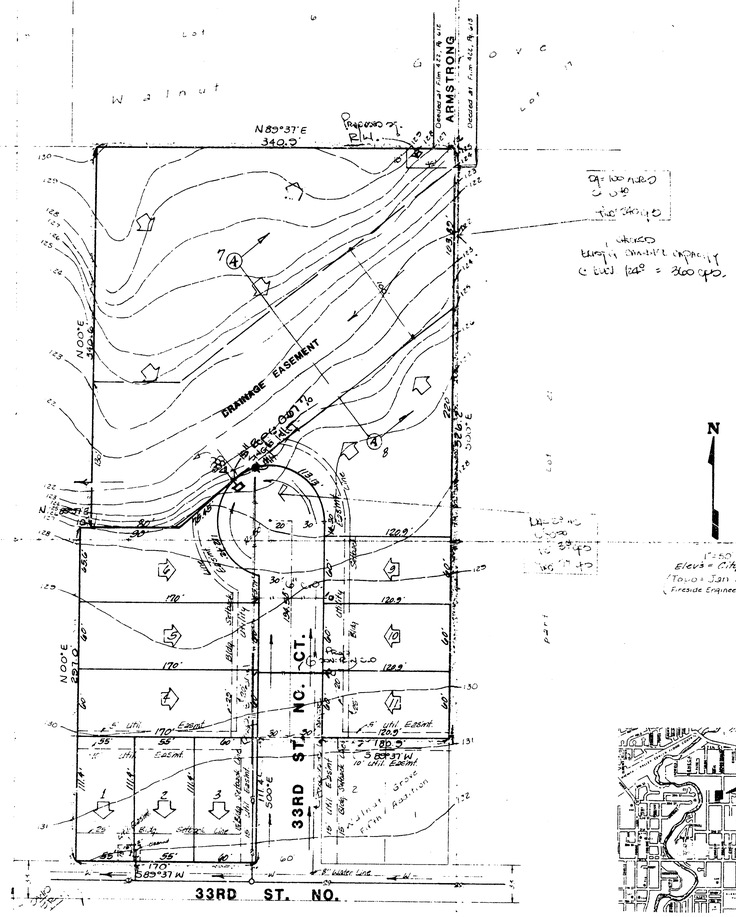

PRELIMINARY PLAT

JESSE ADDITION

REPLAT OF PART OF WALNUT GROVE FIFTH ADDITION,
WICHITA, KANSAS

OWNER: RICHARD P. JESSE

DRAINAGE & UTILITY PLAN

BAUGHMAN COMPANY, P.A.
SURVEYING & ENGINEERING
316/262-7271 • 315 ELLIS • WICHITA, KANSAS 67211

12-15-89

BAUGHMAN COMPANY, P.A.
SURVEYING, ENGINEERING & CONSULTING
316/262-7271 • 315 ELLIS • WICHITA, KANSAS 67211

CONFIRMATION MEMO

PROJECT: JESSE ADDITION — JOB NO.
DATE: March 19, 1990
COPIES TO:
TO: Vicky Huang, P.E.
FROM: N. Brent Wooten, P.E.
REFERENCE: Drainage Plan

I am providing you herein the revised drainage plan for the Jesse Addition plat. Please review the plan and the calculations as provided and advise if you should have any questions regarding the plat or the plan.

Thank you.

PAGE ___ OF ___

Jesse Addition - Drainage

By NBW Date 3/14/90 Page 1 of 3

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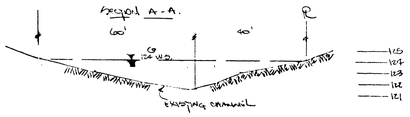
Drainage plan - Jesse Addition is a proposed 11 lot residential plat which has a drainage way flowing thru the plat from east to west. The plat is proposed to be graded and developed so that direct runoff will drain along and discharge into the drainage easement thru a system similar as indicated on the plan.

The drainage basin discharging from the east into Jesse Addition [illegible] from actual field observations. The total area equals approximately 100 acres. The 100 year storm is routed thru the plat in order to size the required drainage easement and establish an accurate minimum pad elevation.

Existing channel configuration.



By Date Page 2 of 3

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Rational calculations -

Q_A = 100 ACRES — AVERAGE C FACTOR = 0.40

(t_c = 25 minutes, @ 2400 L.W. feet) — I_{100} @ 25 min. = 6" / hr

$Q = CIA = 0.40(6)(100) = 240$ cfs.

$\therefore Q_{100} = 240$ cfs. (MAJOR STORM EVENT CONSIDERING PROJECT)

— CHANNEL CAPACITY IS CHECKED AT ELEVATIONS 123 & 124 (CITY DATUM) FOR WIDTH & FLOW.

$Q = \frac{1.49}{n}(A)(R)^{2/3}(S)^{1/2}$

@ ELEVATION 123.0 — A = 44 sq. ft. WP = 58' n = 0.30 S_{avg} = 0.30 % (MINIMUM)

$Q_{capacity} = \frac{1.49}{.03}(44)\left(\frac{44}{58}\right)^{2/3}(.0030)^{1/2}$

Q = 100 cfs. → (INSUFFICIENT)

TRY ELEVATION 124.0 — A = 116 sq. ft. WP = 95' n = 0.30 S_{avg} = 0.30 %

$Q_{capacity} = \frac{1.49}{.03}(116)\left(\frac{116}{95}\right)^{2/3}(.0030)^{1/2}$

Q = 240 cfs. → (THIS IS SUFFICIENT)

By Date Page 3 of 3

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Summary -

If 124.0 ELEVATION IS ASSUMED TO BE AN ADEQUATE WATER SURFACE, THEN A MINIMUM PAD ELEVATION OF 125.0 SHOULD BE USED FOR LOTS 6-7-8.

THE DRAINAGE EASEMENT WIDTH SHOULD BE A MINIMUM OF 100 FEET TO ACCOMODATE A PROPOSED WATER SURFACE OF 124.0.