



CONFIRMATION MEMO

PROJECT: East Fork of Chisholm Creek
(Willowbend Heights)

PROJECT NO.: DATE: 9/29/87

FOR: Chris Breitenstein

FROM: John White

REF: Summary of Hydraulic Review

This memo is written to summarize the findings of our hydraulic review of the East Fork of Chisholm Creek in Wichita, Kansas. Our study began north of 37th Street and extended to the downstream end of the Missouri Pacific Railroad. Attached is a copy of the flood boundary map for the study area.

Hydraulic analysis was completed using the HEC2 computer program. Cross section data for input was taken from field surveys. Starting elevations and 100 year flows were taken from the FEMA report dated May 15, 1986.

Two water surface profiles were developed for review. The first profile considered existing conditions. For an existing condition, the "n" factor used was relatively low. With these "n" factors, the calculated profile was similar but higher than that presented in the FEMA report. These elevations are outlined in the attached table.

The discrepancies in the two profiles were considered acceptable because of potential variances that would be expected in the methods of gathering cross section data.

The profile for the improved conditions considered an improved channel for the first 800 feet downstream of the Missouri Pacific Railroad. The improved channel will have a 52 foot flat bottom with near vertical limestone rock walls up 5 feet to a flat bench on each side. The benches will be 15 feet wide with 1:2 side slopes. The model assumed that low areas along the channel were filled to an elevation above the maximum high water.

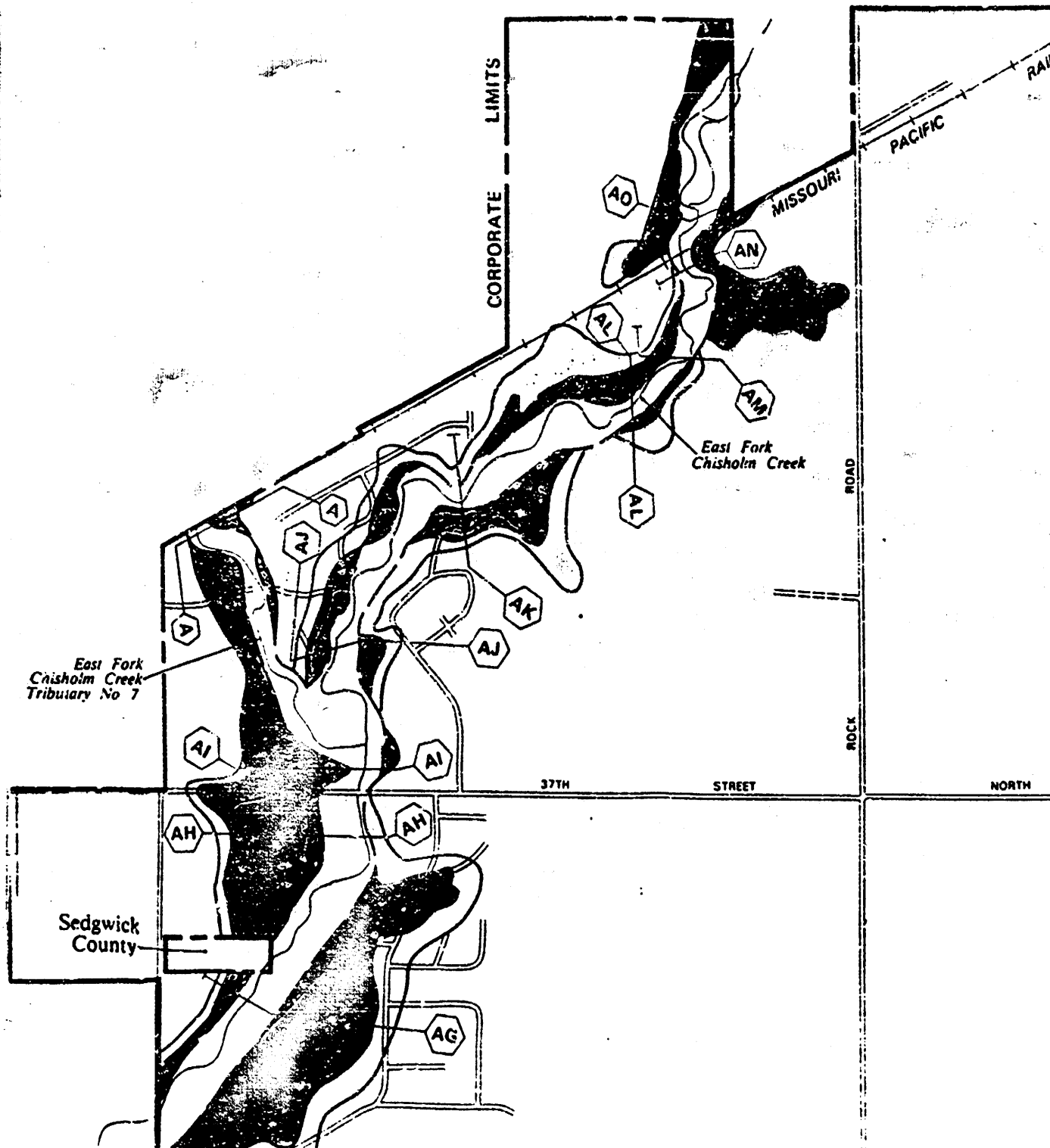
The improved channel profile indicates a reduction of about 0.5 feet in the water surface at the railroad as compared to the FEMA report. The reduction is greater when compared to the existing conditions profile.

For review purposes the HEC2 output for each of the two runs has been attached.

EAST FORK CHISHOLM CREEK Wichita, Kansas

Station	FEMA Section	FEMA 100 Year	100 Year Existing	100 Year Improved
50+00	AK	1364.1	1364.10	1364.10
55+00			1364.58	1364.58
60+00			1365.04	1365.04
64+00			1365.91	1365.91
68+00	AL	1366.2	1366.38	1366.38
70+00			1366.75	1366.75
72+00			1366.56	1366.66
75+00	AM	1367.3	1367.84	1367.04
80+00(1)	AN	1368.1	1368.91	1367.63

(1) Downstream of Missouri Pacific Railroad



FLOODWAY FLOOD BOUNDARY AND FLOODWAY MAP

CITY OF WICHITA,
KANSAS
SEDGWICK COUNTY

PANEL 15 OF 40

SEE MAP INDEX FOR PANELS NOT PRINTED

COMMUNITY-PANEL NUMBER
200328 0015

EFFECTIVE DATE:
MAY 15, 1986

Federal Emergency Management Agency

STATION	ELV	CH	CR	ES	100YR	VCH	AREA	Q
50+00	1364.10	0.00	0.00	0.00	1364.10	11.02	5.55	942.26
55+00	1364.58	0.00	0.00	0.00	1364.58	8.34	2.19	1055.59
60+00	1365.04	0.00	0.00	0.00	1365.04	24.26	5.05	794.60
64+00	1365.91	0.00	0.00	0.00	1365.91	18.42	4.53	872.55
68+00	1366.38	0.00	0.00	0.00	1366.38	20.39	4.72	838.89
70+00	1366.75	0.00	0.00	0.00	1366.75	7.72	5.56	648.95
72+00	1366.56	0.00	0.00	0.00	1366.56	11.91	6.41	561.29
75+00	1367.84	0.00	0.00	0.00	1367.84	17.49	7.27	492.56
80+00	1368.91	0.00	0.00	0.00	1368.91			

SUMMARY OF ERRORS AND SPECIAL NOTES

09-10-87 09-21-87

THIS RUN EXECUTED 09-10-87

HEC2 RELEASE DATED NOV 74 UPDATED MAY 1984

ERROR CODE = 01 02 03 04 05 06

MODIFICATION = 20 31 32 33 34 35 36

UNEXPECTED END OF FILE ABORT IN SUBROUTINE H04N1

09-29-87 09-29-87

THIS RUN EXECUTED 09-29-87

HEC2 RELEASE DATED NOV 74 UPDATED MAY 1984

ERROR CODE = 01 02 03 04 05 06

MODIFICATION = 20 31 32 33 34 35 36

UNEXPECTED END OF FILE ABORT IN SUBROUTINE H04N1

NOTE: ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

100-YEAR FLOW

SUMMARY PRINTOUT TABLE 150

SECTION ELCH ELTD ELIN D CHSL CRWS ES 100YR VCH AREA Q

50+00 1364.10 0.00 0.00 0.00 1364.10 11.02 5.55 942.26 978.41

55+00 1364.58 0.00 0.00 0.00 1364.58 8.34 2.19 1055.59 1125.40

60+00 1365.04 0.00 0.00 0.00 1365.04 24.26 5.05 794.60 659.88

64+00 1365.91 0.00 0.00 0.00 1365.91 18.42 4.53 872.55 757.20

68+00 1366.38 0.00 0.00 0.00 1366.38 20.39 4.72 838.89 719.77

70+00 1366.75 0.00 0.00 0.00 1366.75 7.72 5.56 648.95 680.01

72+00 1366.56 0.00 0.00 0.00 1366.56 11.91 6.41 561.29 732.08

75+00 1367.84 0.00 0.00 0.00 1367.84 17.49 7.27 492.56 732.08

80+00 1368.91 0.00 0.00 0.00 1368.91 24.26 6.41 605.14 654.91

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