

*Basin Interconnect*

# Fox Creek/ South Creek

Prepared for:  
Palmer Ranch Enterprises, Inc.

© Kimley-Horn and Associates, Inc. 1996



Kimley-Horn  
and Associates, Inc.

*Engineering, Planning, and Environmental Consultants*

**FOX CREEK/SOUTH CREEK  
BASIN INTERCONNECT**

**Prepared for:**

**PALMER RANCH ENTERPRISES, INC.  
7184 Beneva Road South  
Sarasota, Florida 34238**

**Prepared by:**

**KIMLEY-HORN AND ASSOCIATES, INC.  
7202 Beneva Road South  
Sarasota, Florida 34238**

**November, 1996**

**Project No.: 6679.05**

## **TABLE OF CONTENTS**

	<u>Page No.</u>
1.0 INTRODUCTION	1
2.0 HYDROLOGY	2
2.1 Reconciliation of Subbasin Areas	
2.2 Reconciliation of Subbasin Peak Rate Factors	
3.0 HYDRAULICS	3
3.1 Reconciliation of Routing Nodes	
3.2 Reconciliation of Routing Reaches	
4.0 RESULTS	4
5.0 CONCLUSIONS	5

## **1.0 INTRODUCTION**

The South Creek Basin Master Plan (BMP) prepared by Parsons Engineering Science, Inc. (PES) indicated overflows from the South Creek watershed to the Fox Creek watershed for the 100-year design storm. These overflows were identified at two locations, both located within the Palmer Ranch. The South Creek BMP analysis was conducted using Version 2.02 of the Interconnected Channel and Pond Routing computer program.

Previous analyses of the Fox Creek watershed were performed by Kimley-Horn and Associates, Inc. (KHA) using Version 1.40 of the Interconnected Channel and Pond Routing (ICPR) computer program.

To account for the effects of these South Creek cross-basin overflows upon flood stages in the Fox Creek watershed, the Palmer Ranch authorized KHA to perform the following tasks:

- Review and reconcile South Creek and Fox Creek subbasins in the vicinity of the basin overflow areas.
- Obtain the necessary field survey information needed to accurately model the overflow areas.
- Convert the Fox Creek Version 1.40 of ICPR model to Version 2.02 of ICPR.
- Merge the Fox Creek and South Creek input files, and perform a simulation of the 100-year design storm.
- Review the results and determine changes in flood levels in both basins.

## 2.0 HYDROLOGY

### 2.1 Reconciliation of Subbasin Areas

Comparison of the delineated major ridge lines shared by Fox Creek and South Creek revealed several areas of discrepancy between the two studies. Reconciliation of the major ridge line between the two watersheds was therefore necessary. Additional survey information obtained by KHA was used to assist in this effort. As a result, the following subbasins were added or revised:

<u>SOUTH CREEK</u>	<u>REASON</u>
Subtracted 52.5 acres from subbasin SC128	area already accounted for in the Fox Creek model
Added subbasin A080B (31.50 acres)	area not accounted for in either model
Added 37.4 acres to subbasin SC127	area not accounted for in either model
<u>FOX CREEK</u>	
Added subbasin FC-02E (96.71 acres)	area not accounted for in either model
Added subbasin FC-01B (17.97 acres)	area not accounted for in either model

EXHIBITS 1 and 2 of the Fox Creek Study have been updated to reflect the basin/subbasin revisions. Copies of both of these EXHIBITS are contained herein.

### 2.2 Reconciliation of Subbasin Peak Rate Factors

Curve numbers and times of concentration for the SCS curve number and unit hydrograph method were computed (or recomputed) in a manner consistent with the respective basin models. A peak rate factor of 100 was used for the new subbasins as well as for existing rural subbasins in Fox Creek in order to be consistent with the South Creek model. This was done in order to alleviate peak stages differentials near the connection associated with varying hydrograph peak times.

### **3.0 HYDRAULICS**

#### **3.1 Reconciliation of Routing Nodes**

The reconciliation of subbasin areas also required the reconciliation of their associated nodes. Using Southwest Florida Water Management District (SWFWMD) 1' contour aerials, the following nodes were added or revised:

<u>SOUTH CREEK</u>	<u>REASON</u>
Added A080B	Needed for new subbasin A080B
Revised node A130	Simulated flood stages exceed specified storage
<u>FOX CREEK</u>	
Added node FC-01B	needed for new subbasin FC-01B
Added node FC-02C	needed for culvert FC-02D (non-storage node)
Added node FC-02D	needed for culvert FC-02D (non-storage node)
Added node FC-02E	needed for new subbasin FC-02E

#### **3.2 Reconciliation of Routing Reaches**

To accurately analyze the hydraulics of the South Creek basin overflows to Fox Creek, additional field surveying was conducted. A copy of the survey field notes are contained in APPENDIX A. The following reaches were added or revised based upon the survey notes and the comparison of simulated flood levels with existing ground elevations:

<u>SOUTH CREEK</u>	<u>REASON</u>
Added overland flow reach A080B	Flood stages exceed ground elevations
Revised ditch reach A080X	Field survey notes
Added overland flow reach A120B	Flood stages exceed ground elevations
Added overland flow reach A120C	Flood stages exceed ground elevations
Revised culvert reach A130X	Field survey notes
Revised overland flow reach A130XW	Field survey notes
<u>FOX CREEK</u>	
Revised ditch reach FC-02E	Field survey notes
Added ditch reach FC-01B	Field survey notes
Added culvert reach FC-02D	Field survey notes
Added overland flow reach FC-02DW	Field survey notes

A revised node-reach schematic for the Fox Creek study area is contained in APPENDIX B.

#### 4.0 RESULTS

As previously indicated, KHA converted the previous input files for Fox Creek from Version 1.40 to Version 2.02 of the ICPR computer model. The converted Fox Creek model was then merged with the South Creek model, which already exists as Version 2.02 of ICPR. A simulation was then conducted for the merged basins using the 100-year design storm. Copies of the revised input data and output summary are provided in APPENDIX B.

The South Creek - Fox Creek simulation indicates the westerly overflow (from South Creek node A080 to Fox Creek node FC-06) will only increase flood stages in Fox Creek by 0.02' (i.e. from 16.43 NGVD to 16.45 NGVD). However, flood stages in South Creek node A080 decrease from 17.22 NGVD to 17.03 NGVD. This difference in flood stages is likely due to a shorter reach length being used between the two nodes. These findings seem consistent with photographs and video tapes of the June 1992 storm which do not indicate a broad overflow in this area. Overflows, if they occur, appear to be confined to the small upland cut ditch which connects these two basins. The  $\pm 0.5'$  difference in the flood levels is caused by the geometry of this small ditch.

However, the easterly overflow connection between South Creek node A130 and Fox Creek node FC-02E is very broad. In fact, flood stages in South Creek node A120 (located downstream of node A130) will also exceed the existing ground elevations and sheet flow to Fox Creek nodes FC-01B and FC-02C. This is generally consistent with the photographs taken in this area during June of 1992, copies of which are provided in APPENDIX C. Fox Creek flood stages for nodes FC-02 and FC-02B will increase from 16.20 to 16.54 and from 16.10 to 16.27, respectively. Flood stages in South Creek nodes A120 and A130 will decrease slightly (i.e. less than 0.1').

FOX CREEK NODE	FLOOD STAGE WITHOUT OVERFLOW	FLOOD STAGE WITH OVERFLOW
FC-02	16.20	16.54
FC-02B	16.10	16.27

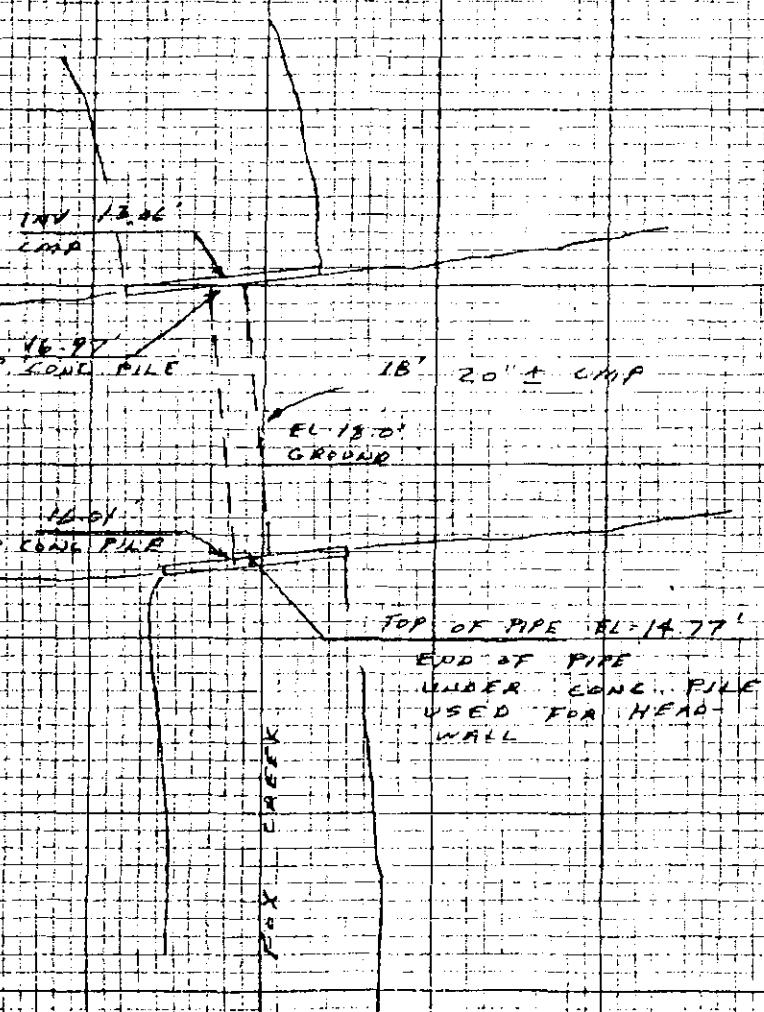
## 5.0 CONCLUSION

In conclusion, the South Creek - Fox Creek simulation indicates that overflows will occur from South Creek to Fox Creek in three locations for the 100-year design storm. Based upon the simulation, flood stages computed by the previous South Creek and Fox Creek models did not differ by more than 0.1' except in the following locations:

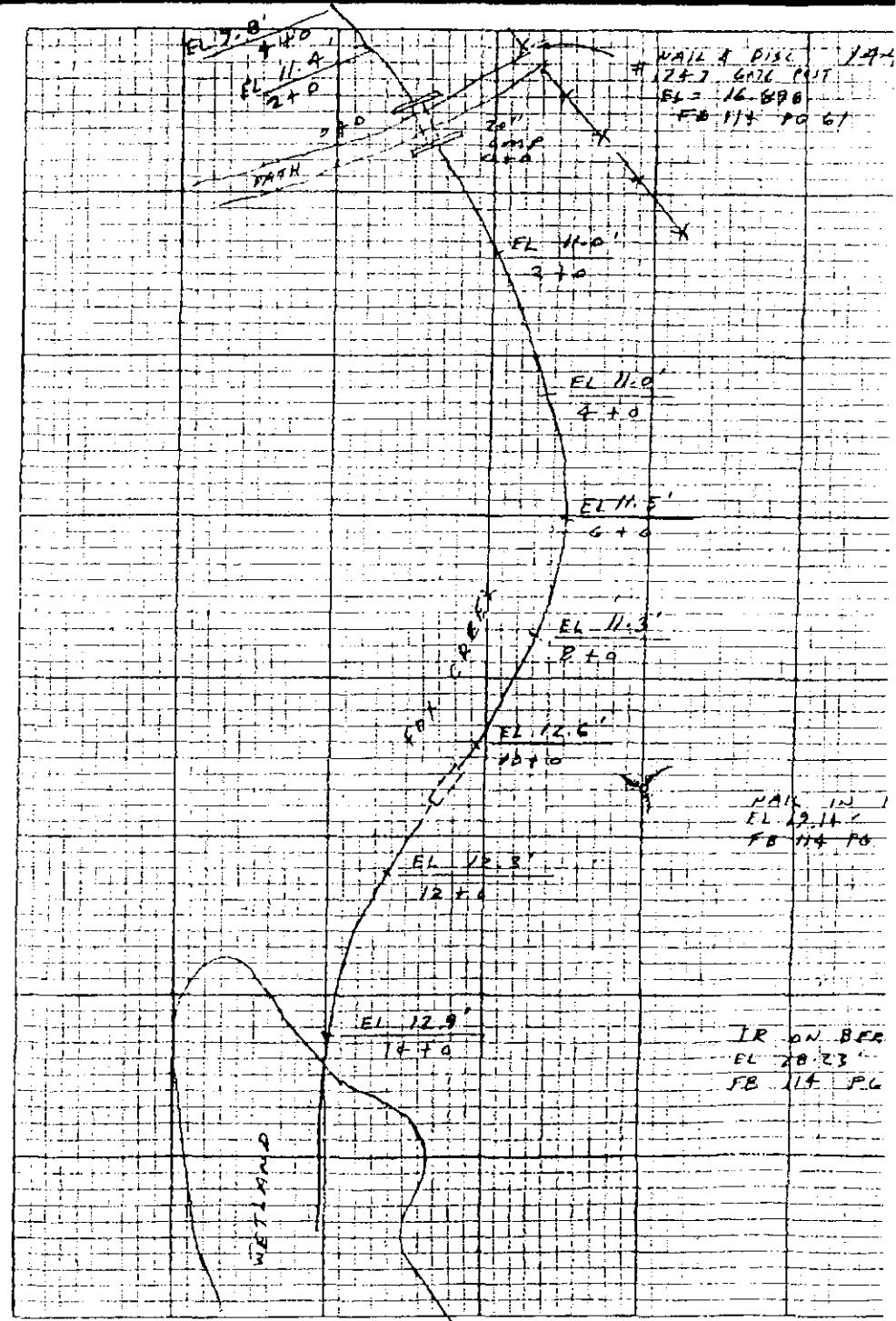
SOUTH CREEK NODE	FLOOD LEVEL PES STUDY	FLOOD LEVEL KHA STUDY	DIFFERENCE FT.
A070	17.08	16.92	-0.16
A072	17.08	16.92	-0.16
A074	17.08	16.92	-0.16
A076	17.08	16.92	-0.16
A080	17.22	17.03	-0.19
FOX CREEK NODE	FLOOD LEVEL WITHOUT OVERFLOW	FLOOD LEVEL WITH OVERFLOW	DIFFERENCE FT.
FC-02	16.20	16.54	+0.34
FC-02B	16.10	16.27	+0.17

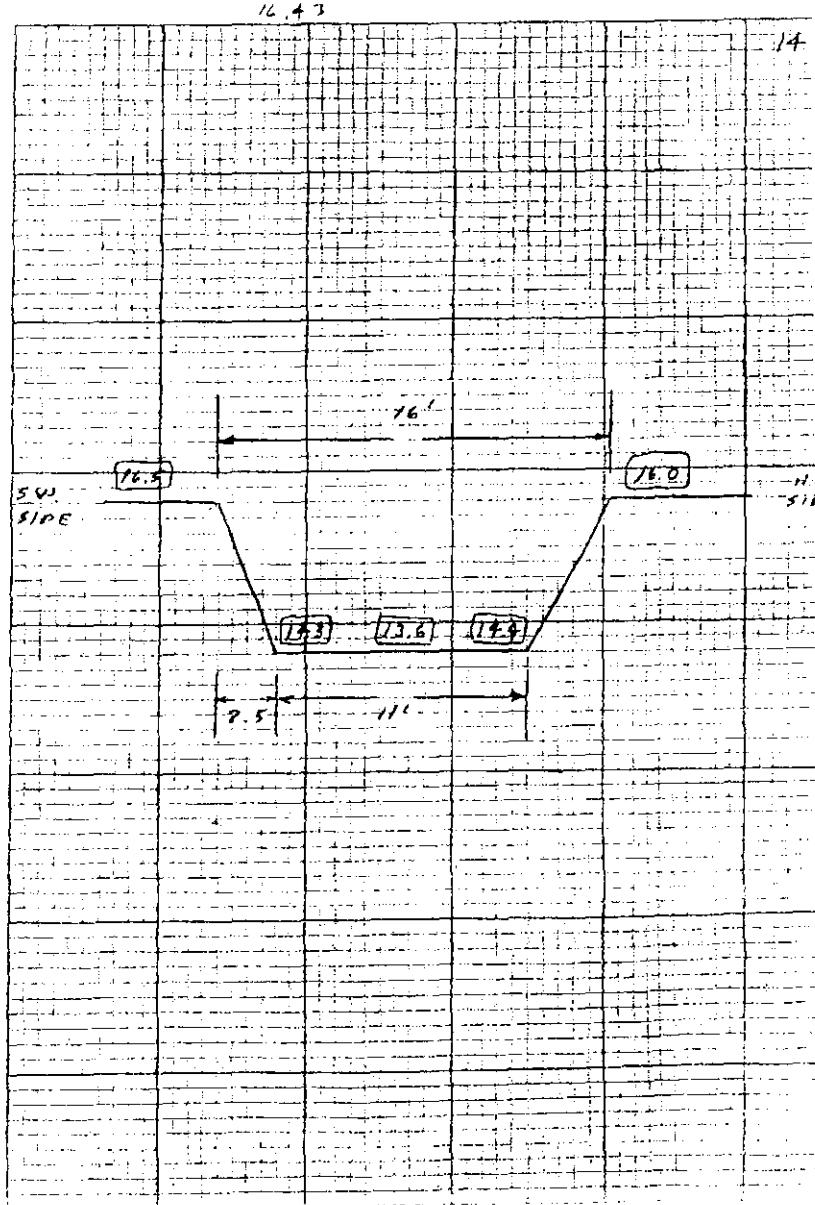
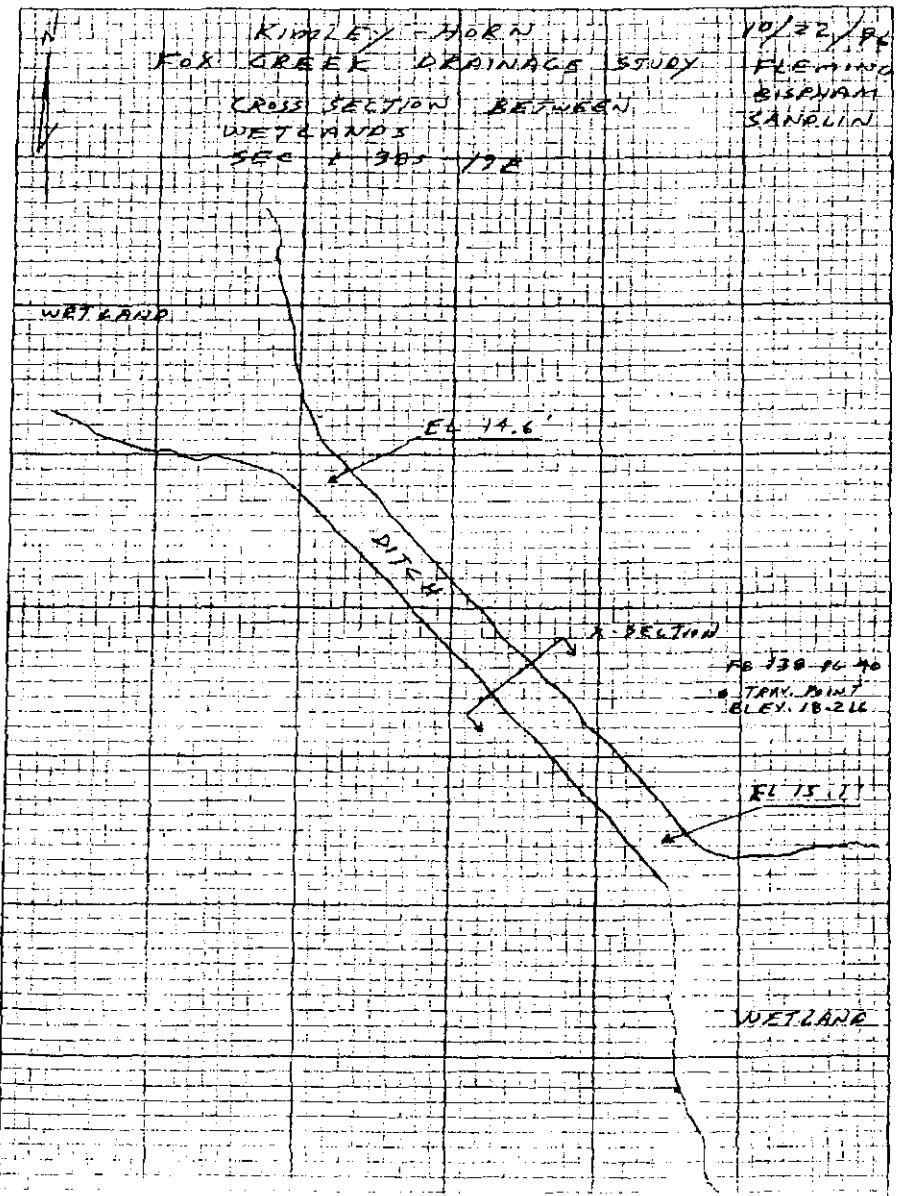
KIRKLEY - NORN  
FOX GREEK DRAINAGE STUDY

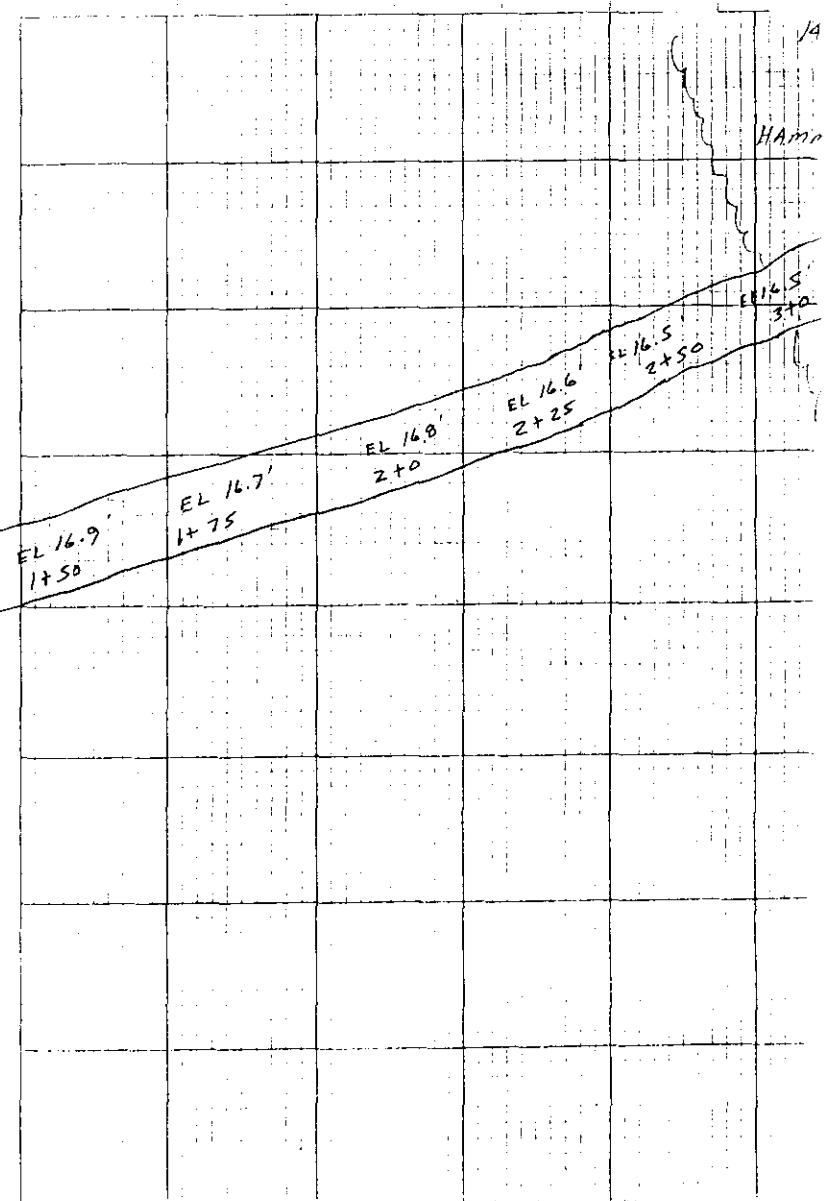
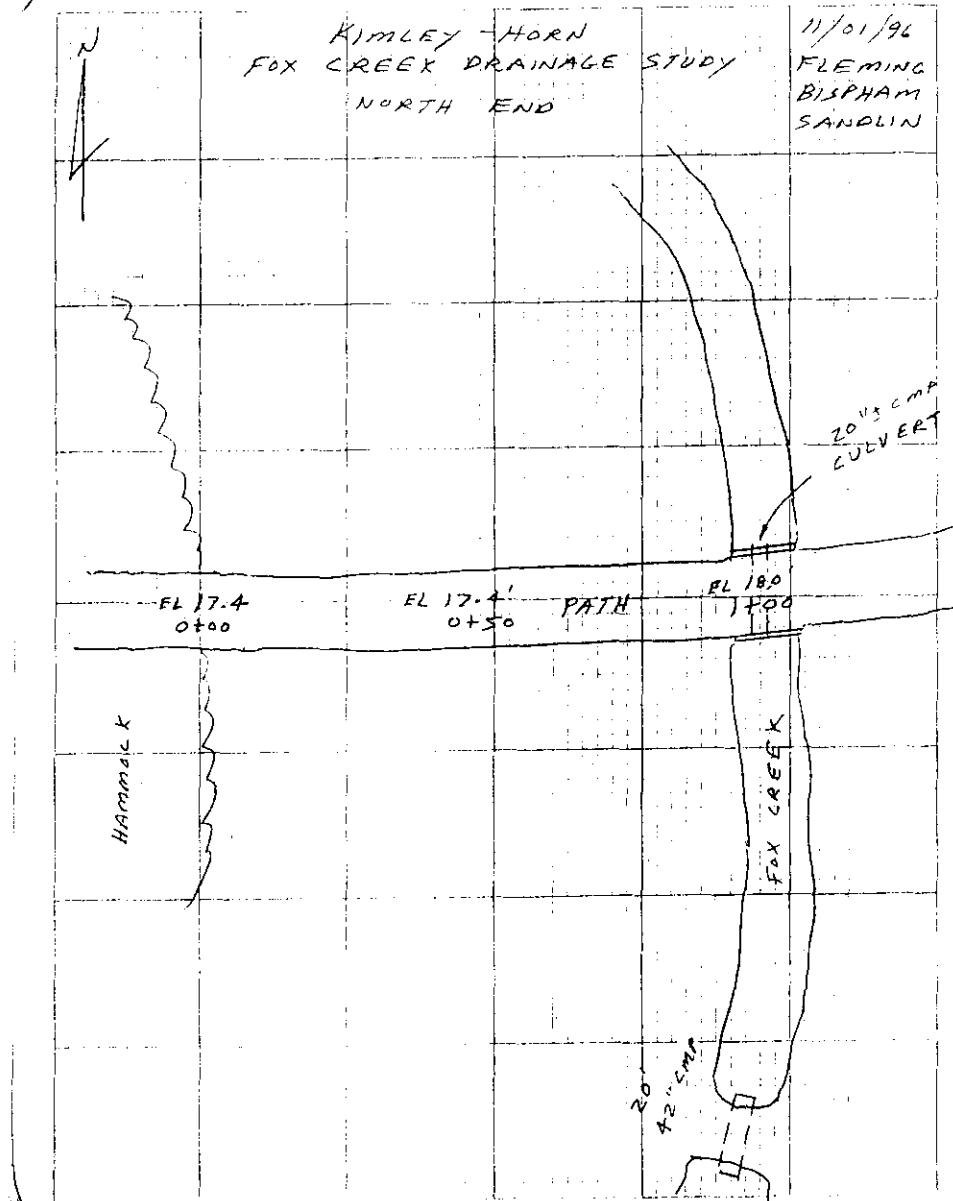
SEE FIG 114, PG. 61  
AO-R & 10-S PG 69

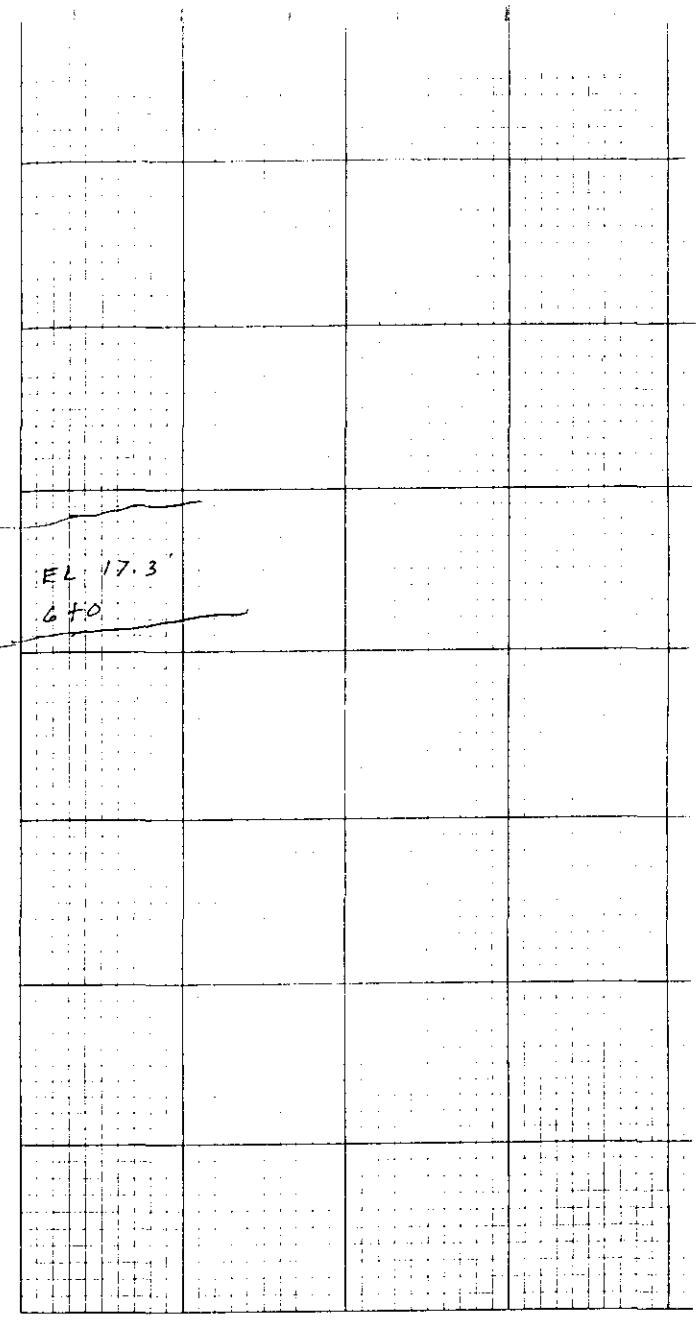
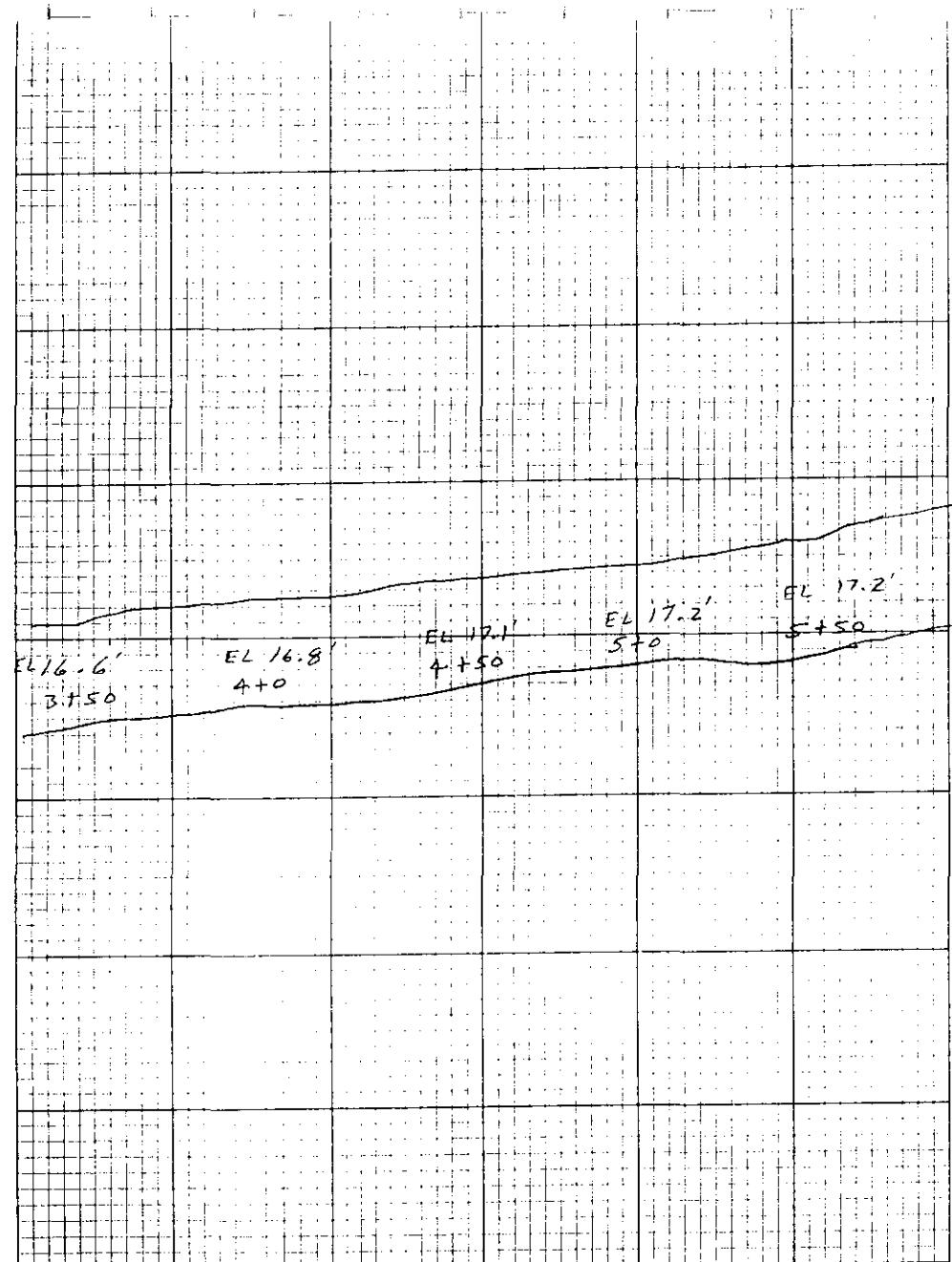


VO/12/78  
ELEM. 12  
815 PHANT  
BANALIC



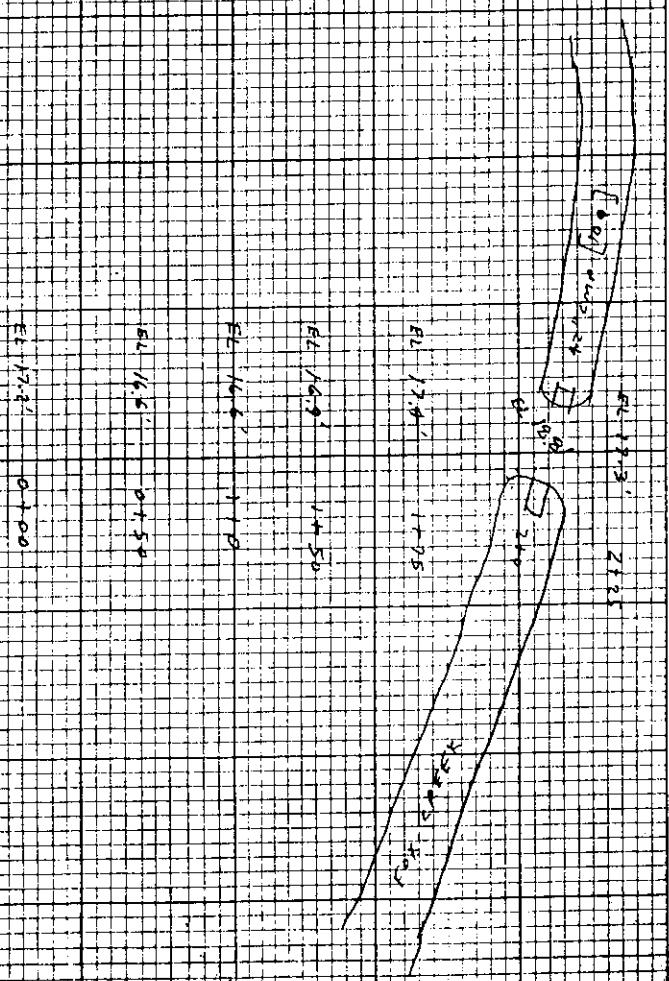






KUMLAJ - HORN  
FOX GREEK DRAINAGE STUDY  
SEC 5 - 38S - 19E

24/06/96  
FLEMING  
BISHAM  
SANDON



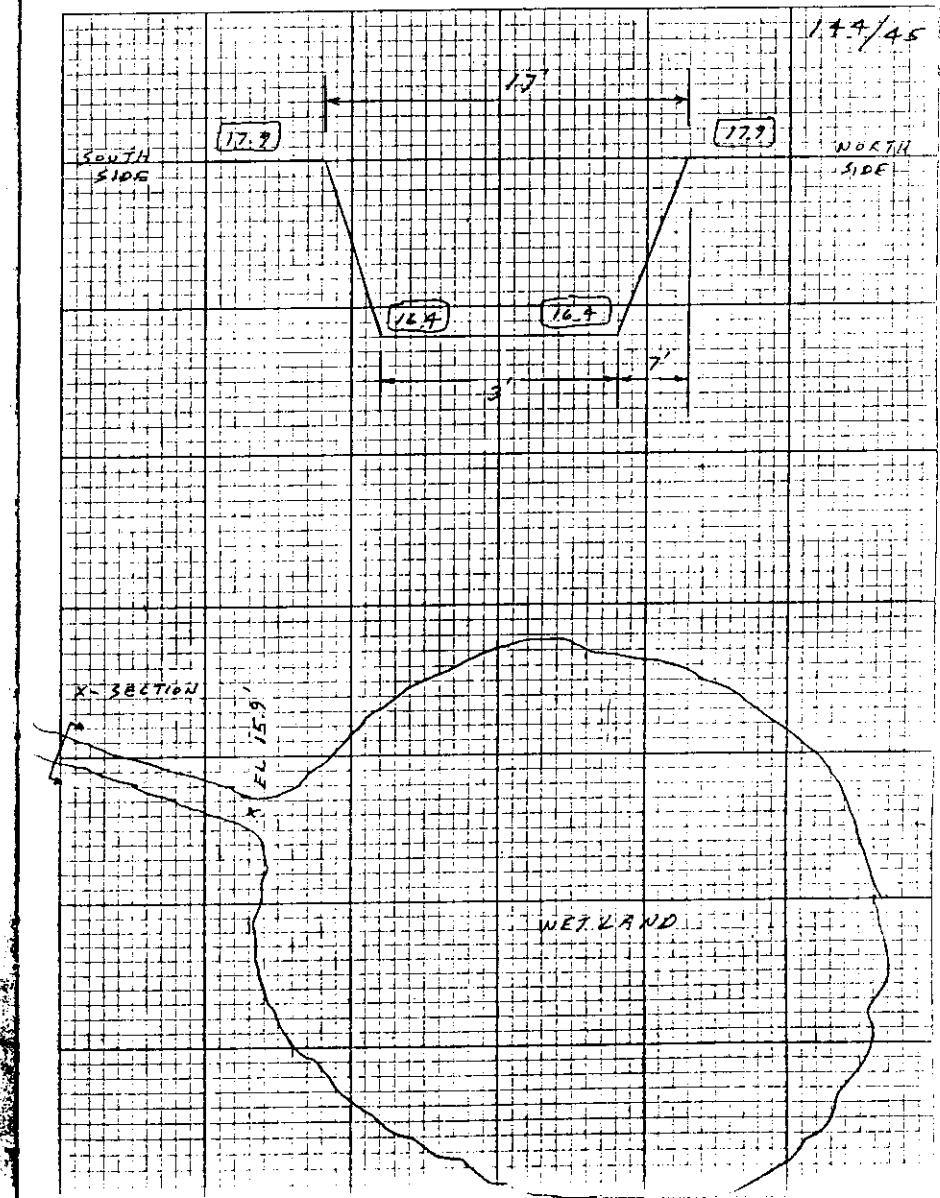
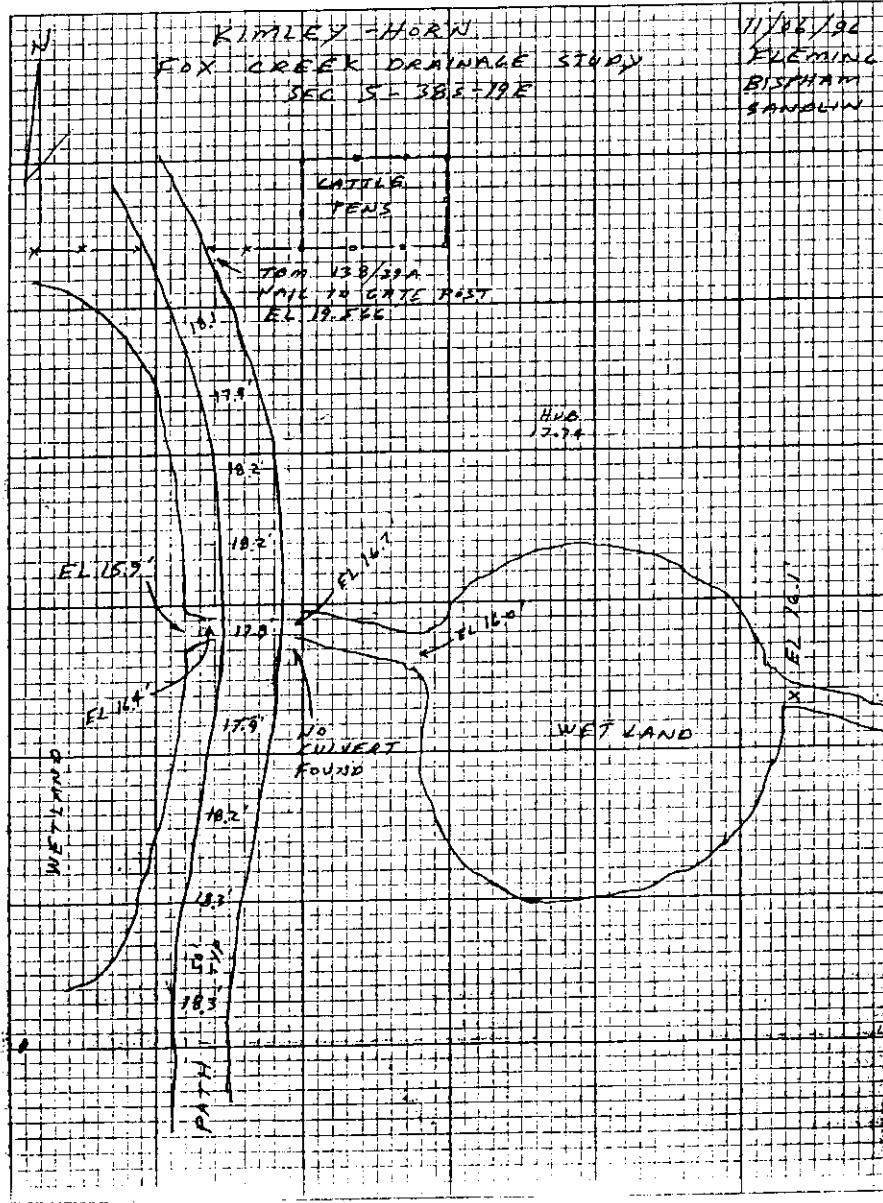
WALL IN PALM  
EL 19.11' FB 11' TO GO

EL 16.3' 4+0  
EL 16.5' 3+50

EL 16.4' 3+0

EL 16.2' 2+50

144/96



THIS IS TO CERTIFY THAT THE ENCLOSED ENGINEERING CALCULATIONS WERE  
PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION.

Stephen M. Suau

STEPHEN M. SUAU, P.E. #36309

DATE: 11/19/96

## SIMULATION RESULTS

The simulation results are presented in this section. The first figure shows the total error in the state estimation over time. The second figure shows the error in the estimated state variables. The third figure shows the error in the estimated control variable. The fourth figure shows the error in the estimated disturbance variable. The fifth figure shows the error in the estimated initial state. The sixth figure shows the error in the estimated initial control variable. The seventh figure shows the error in the estimated initial disturbance variable. The eighth figure shows the error in the estimated initial state. The ninth figure shows the error in the estimated initial control variable. The tenth figure shows the error in the estimated initial disturbance variable.



FOX CREEK / SOUTH CREEK  
10/96

## \*\*\*\*\* Node Maximum Conditions - SCS100 \*\*\*\*\*

(Time units - hours)













FOX CREEK / SOUTH CREEK  
10/96

\*\*\*\*\* Node Maximum Conditions - SCS100 \*\*\*\*\*

(Time units - hours)

Node Name	Group Name	Max Time Conditions	Max Stage (ft)	Warning Stage (ft)	Max Delta Stage (ft)	Max Surface Area (sf)	Max Time Inflow (cfs)	Max Time Outflow (cfs)	Max Time Inflow (cfs)	Max Outflow (cfs)
SC459	BASE	14.23	27.61	0.00	0.0003	4777.14	14.33	26.63	14.39	26.65
SC460	BASE	14.31	28.29	0.00	0.0001	40520.49	14.15	26.66	14.33	26.63
SC470	BASE	14.57	28.61	0.00	0.0001	39467.71	14.42	19.52	14.67	19.51
SC480	BASE	15.12	30.53	0.00	0.0004	26455.48	15.00	15.97	15.13	15.96
SC490	BASE	15.98	34.63	0.00	0.0001	33248.29	13.25	4.23	15.98	3.23

FOX CREEK / SOUTH CREEK  
10/96

\*\*\*\*\* Link Maximum Conditions - SCS100 \*\*\*\*\*

(Time units - hours)

Link Name	Group Name	Max Time Flow	Max Flow (cfs)	Max Delta Q (cfs)	Max Time U/S Stage	Max US Stage (ft)	Max Time D/S Stage	Max DS Stage (ft)
001	BASE	12.71	32.57	1.96	12.77	11.70	18.48	11.60
002	BASE	14.25	4.23	1.42	15.27	12.32	15.66	12.17
002NEW	BASE	14.25	7.63	2.57	15.27	12.32	15.66	12.17
003	BASE	13.92	12.36	4.29	15.66	12.17	23.22	11.65
004	BASE	12.94	32.82	-5.49	14.60	12.01	23.71	11.48
005	BASE	16.44	5.34	1.97	16.82	12.22	17.12	11.84
006	BASE	51.41	18.17	16.17	17.12	11.84	24.21	11.23
008	BASE	14.15	8.49	7.94	18.02	13.01	17.12	11.84
009	BASE	12.50	13.97	-11.32	18.01	13.15	18.02	13.01
010	BASE	13.10	6.97	1.56	16.44	12.08	16.75	12.01
010NEW	BASE	13.10	15.76	3.53	16.44	12.08	16.75	12.01
011	BASE	13.35	6.03	5.31	16.82	12.48	17.15	12.15
012	BASE	21.36	9.39	8.67	17.15	12.15	16.75	12.01
012NEW	BASE	21.36	14.54	13.41	17.15	12.15	16.75	12.01
013	BASE	13.99	16.42	16.42	16.75	12.01	16.63	11.79
013A	BASE	18.26	22.92	18.90	16.75	12.01	16.56	11.61
014	BASE	14.01	2.83	1.89	16.42	11.89	16.63	11.79
016	BASE	17.08	71.34	58.90	16.56	11.61	16.46	10.32
017	BASE	12.46	2.52	-1.38	15.34	12.14	15.36	12.25
017A	BASE	13.39	12.23	8.26	15.34	12.14	16.20	11.73
017NEW	BASE	12.32	4.70	-3.77	15.34	12.14	15.36	12.25
018	BASE	12.28	10.95	-10.70	15.36	12.25	17.75	11.99
019	BASE	19.71	11.17	10.34	17.75	11.99	16.59	11.60
019A	BASE	12.27	8.61	1.21	17.77	11.99	17.75	11.99
019B	BASE	20.19	3.80	3.63	17.75	11.99	15.14	11.32
020	BASE	20.01	9.88	9.33	17.04	11.97	15.14	11.32
020A	BASE	12.79	12.70	2.30	16.79	11.99	17.04	11.97
020B	BASE	12.92	7.26	-3.17	17.04	11.97	17.74	11.99
021	BASE	14.67	5.62	-4.18	14.97	11.94	15.14	11.32
022	BASE	14.95	30.38	21.21	15.14	11.32	15.18	10.90
023A	BASE	12.53	3.40	-0.38	17.74	11.99	17.75	11.99
023B	BASE	12.53	2.01	1.13	17.77	11.99	17.75	11.99
024	BASE	19.58	12.18	11.26	16.59	11.60	15.18	10.90
025	BASE	14.88	52.55	35.87	15.18	10.90	16.47	9.31
026	BASE	15.30	1.97	1.28	18.07	13.16	18.09	13.16
027	BASE	13.18	14.27	4.57	23.22	11.65	23.55	11.61
028	BASE	18.82	6.85	4.02	18.48	11.72	23.55	11.61
029	BASE	13.89	4.34	0.61	13.89	12.98	16.82	12.22
030	BASE	53.24	3.06	1.76	21.36	11.85	17.12	11.84
031	BASE	13.10	4.84	1.05	17.96	13.15	18.01	13.15
032	BASE	12.37	4.82	2.82	18.09	13.16	18.01	13.15
033	BASE	12.87	6.44	0.49	12.87	12.56	17.15	12.15
034	BASE	21.26	2.99	2.17	18.04	11.99	17.75	11.99
035	BASE	20.95	14.85	13.76	16.63	11.79	16.56	11.61
036	BASE	24.82	3.04	2.75	17.25	11.62	16.56	11.61
037	BASE	12.29	6.19	1.02	20.27	11.56	18.39	11.59
038	BASE	14.03	18.70	11.07	16.20	11.73	16.56	11.61

FOX CREEK / SOUTH CREEK  
 10/96

\*\*\*\*\* Link Maximum Conditions - SCS100 \*\*\*\*\*

(Time units - hours)

Link Name	Group Name	Max Time Flow	Max Flow (cfs)	Max Delta Q (cfs)	Max Time U/S Stage	Max US Stage (ft)	Max Time D/S Stage	Max DS Stage (ft)
120	BASE	15.73	989.88	710.23	15.73	5.03	0.00	3.64
130	BASE	16.76	694.05	618.98	15.91	5.46	15.73	5.03
132	BASE	16.55	692.00	617.76	15.90	5.89	15.91	5.46
134	BASE	16.45	691.16	616.65	15.89	6.09	15.90	5.89
136	BASE	16.33	690.90	615.83	16.32	6.98	15.89	6.09
140	BASE	26.51	413.01	404.40	16.70	7.61	16.32	6.98
143	BASE	16.69	40.77	20.17	16.69	7.83	16.70	7.61
144	BASE	15.88	340.86	329.93	16.69	7.83	16.70	7.61
145	BASE	16.69	112.29	54.19	16.69	7.83	16.70	7.61
146	BASE	0.00	0.00	0.00	16.69	7.83	16.70	7.61
148	BASE	26.76	413.72	403.42	16.69	8.55	16.69	7.83
149	BASE	16.69	464.69	319.77	16.69	8.62	16.69	8.55
150	BASE	26.76	295.81	-174.78	16.69	8.60	16.69	8.62
151	BASE	26.30	639.82	591.62	16.69	8.69	16.69	8.60
152	BASE	26.30	347.54	300.14	16.69	8.68	16.69	8.69
154	BASE	35.40	246.32	203.33	35.40	11.44	35.40	9.41
156	BASE	35.35	246.56	204.29	35.35	11.84	35.40	11.44
158	BASE	35.34	472.48	-270.45	35.34	12.70	35.34	11.84
510	BASE	14.45	260.73	76.11	15.64	5.16	15.73	5.03
512	BASE	13.56	179.57	129.67	15.07	6.58	15.64	5.16
513	BASE	15.07	81.56	0.03	15.07	6.58	15.64	5.16
514	BASE	0.00	0.00	-0.09	15.07	6.58	15.06	6.58
520	BASE	14.93	233.49	71.41	15.03	6.69	15.07	6.58
521	BASE	0.00	0.00	-1.14	15.03	6.69	15.02	6.72
522	BASE	23.08	105.19	95.88	15.03	6.69	15.03	6.69
523	BASE	13.45	40.13	-0.79	15.03	6.69	15.03	6.69
530	BASE	15.00	353.48	64.85	15.02	6.82	15.03	6.69
531	BASE	15.04	357.98	56.74	15.02	6.82	15.02	6.72
532	BASE	12.82	88.13	64.75	15.01	6.73	15.02	6.82
533	BASE	13.40	47.61	-5.84	15.01	6.73	15.02	6.82
540	BASE	14.94	100.86	60.03	15.01	6.76	15.01	6.73
541	BASE	14.59	48.07	-1.95	15.01	6.76	15.01	6.75
542	BASE	12.52	64.48	51.82	14.65	6.76	15.01	6.76
543	BASE	13.42	75.49	-32.05	14.65	6.76	15.01	6.76
550	BASE	14.98	145.38	57.02	14.98	6.79	14.65	6.76
551	BASE	14.82	96.87	-11.61	14.98	6.79	14.99	6.79
552	BASE	12.91	125.13	167.01	13.55	7.10	14.98	6.79
553	BASE	0.00	0.00	0.00	13.55	7.10	14.98	6.79
560	BASE	12.15	9.45	-2.09	15.06	6.58	15.07	6.58
561	BASE	0.00	0.00	-0.00	15.06	6.58	15.02	6.72
562	BASE	12.63	22.90	-24.69	15.02	6.72	15.03	6.69
563	BASE	0.00	0.00	0.16	15.02	6.72	15.01	6.75
564	BASE	12.20	12.08	-11.21	15.01	6.75	15.01	6.73
570	BASE	11.91	13.89	-5.89	14.99	6.79	14.98	6.79
571	BASE	14.81	150.95	0.70	14.99	6.79	15.01	6.75
580	BASE	12.59	23.71	10.77	12.76	7.73	13.55	7.10
581	BASE	12.76	65.50	-0.36	12.76	7.73	13.55	7.10

FOX CREEK / SOUTH CREEK

10/96

## \*\*\*\*\* Link Maximum Conditions - SCS100 \*\*\*\*\*

(Time units - hours)

Link Name	Group Name	Max Time Flow	Max Flow (cfs)	Max Delta Q (cfs)	Max Time U/S Stage	Max US Stage (ft)	Max Time D/S Stage	Max DS Stage (ft)
582	BASE	12.77	50.48	12.46	12.77	8.73	12.76	7.73
584	BASE	12.77	11.78	2.87	12.77	10.35	12.02	8.99
585	BASE	12.77	28.49	0.04	12.77	10.35	12.77	8.73
590	BASE	12.45	11.60	4.59	13.17	7.16	13.55	7.10
591	BASE	13.17	17.26	0.01	13.17	7.16	13.55	7.10
612	BASE	13.46	208.41	221.32	16.34	7.09	16.32	6.98
614	BASE	18.67	86.04	64.28	16.44	7.86	16.34	7.09
615	BASE	16.50	95.67	67.78	16.44	7.86	16.34	7.09
616	BASE	13.89	40.60	30.42	16.44	7.86	16.34	7.09
617	BASE	0.00	0.00	0.00	16.44	7.86	16.34	7.09
624	BASE	16.57	200.83	161.84	16.48	8.65	16.44	7.86
626	BASE	15.59	200.96	161.41	16.47	9.31	16.48	8.65
628	BASE	15.60	150.78	123.34	16.48	10.07	16.47	9.31
630	BASE	15.61	151.03	122.84	16.46	10.32	16.48	10.07
632	BASE	14.91	80.61	63.79	16.37	10.74	16.46	10.32
640	BASE	19.02	60.40	57.99	18.39	11.59	16.37	10.74
650	BASE	25.77	47.61	46.31	18.48	11.60	18.39	11.59
710	BASE	0.00	58.84	58.84	35.36	12.69	35.34	12.70
718	BASE	24.22	133.81	133.73	24.22	10.44	16.69	8.55
719	BASE	0.00	156.29	156.29	24.19	10.56	24.22	10.44
720	BASE	11.99	4.50	-13.48	24.19	10.56	35.36	12.69
722	BASE	24.25	109.30	109.15	24.22	10.67	24.19	10.56
732	BASE	24.21	109.30	109.17	24.21	11.23	24.22	10.67
734	BASE	23.01	88.91	88.56	23.71	11.48	24.21	11.23
736	BASE	22.94	80.73	80.33	23.55	11.61	23.71	11.48
738	BASE	18.34	25.21	-8.04	23.47	11.61	23.55	11.61
740	BASE	18.91	17.23	-10.99	18.48	11.60	23.47	11.61
QA720	BASE	0.00	0.00	0.00	24.19	10.56	35.36	12.69
QA740	BASE	0.00	0.00	0.00	18.48	11.60	23.47	11.61
QAFC-21	BASE	0.00	0.00	0.00	22.83	15.08	22.83	15.08
A010	BASE	82.21	111.34	32.87	48.35	16.61	42.83	16.53
A020	BASE	28.28	346.16	-358.05	51.08	16.66	48.35	16.61
A020W	BASE	0.00	0.00	0.00	51.08	16.66	48.35	16.61
A022	BASE	82.21	2.63	-16.81	51.54	16.66	51.08	16.66
A024	BASE	15.53	4.96	-6.67	51.77	16.66	51.54	16.66
A030	BASE	82.21	80.99	32.86	55.22	16.72	51.08	16.66
A040	BASE	63.85	212.86	186.71	55.36	16.74	55.22	16.72
A050	BASE	0.00	0.00	-362.03	55.52	16.73	55.36	16.74
A050W	BASE	0.00	0.00	0.00	55.52	16.73	55.22	16.72
A060	BASE	10.97	152.82	54.15	55.66	16.74	55.52	16.73
A060W	BASE	0.00	0.00	0.00	55.66	16.74	55.52	16.73
A070	BASE	70.81	74.13	39.08	60.96	16.92	55.66	16.74
A072	BASE	18.32	7.98	1.25	60.94	16.92	60.96	16.92
A074	BASE	18.31	8.18	1.37	61.17	16.92	60.94	16.92
A074W	BASE	0.00	0.00	0.00	61.17	16.92	60.94	16.92
A076	BASE	82.21	1.51	-2.75	61.17	16.92	61.17	16.92
A076W	BASE	0.00	0.00	0.00	61.17	16.92	61.17	16.92

FOX CREEK / SOUTH CREEK  
 10/96

\*\*\*\*\* Link Maximum Conditions - SCS100 \*\*\*\*\*

(Time units - hours)

Link Name	Group Name	Max Time Flow	Max Flow (cfs)	Max Delta Q (cfs)	Max Time U/S Stage	Max US Stage (ft)	Max Time D/S Stage	Max DS Stage (ft)
A080	BASE	56.87	73.10	45.52	60.16	17.03	60.96	16.92
A080B	BASE	21.66	10.11	8.69	21.66	17.28	60.16	17.03
A080X	BASE	60.22	59.68	-29.02	60.16	17.03	30.64	16.45
A090	BASE	50.49	135.59	70.30	54.48	17.41	60.16	17.03
A092	BASE	27.59	8.86	7.85	27.59	18.38	54.48	17.41
A100	BASE	82.21	27.40	6.26	54.62	17.41	54.48	17.41
A110	BASE	82.21	27.27	7.18	69.73	17.48	54.62	17.41
A110W	BASE	0.00	0.00	0.00	69.73	17.48	54.62	17.41
A120	BASE	82.21	26.27	12.29	74.29	17.51	69.73	17.48
A120B	BASE	59.38	10.11	-0.00	74.29	17.51	75.86	17.49
A120C	BASE	74.29	4.68	0.00	74.29	17.51	76.50	17.06
A130	BASE	27.50	39.55	38.47	72.28	17.58	74.29	17.51
A130X	BASE	18.67	6.01	4.89	72.28	17.58	76.82	17.35
A130XW	BASE	63.66	63.46	23.15	72.28	17.58	76.82	17.35
A140	BASE	63.60	104.85	71.84	67.13	17.88	72.28	17.58
A150	BASE	52.78	91.42	78.04	63.55	18.05	67.13	17.88
A152	BASE	16.38	28.76	12.17	63.52	18.05	63.55	18.05
A160	BASE	48.49	93.30	58.61	56.66	18.28	63.55	18.05
A160X	BASE	56.66	5.30	0.00	56.66	18.28	0.00	18.20
A170	BASE	52.76	96.52	56.74	54.58	18.47	56.66	18.28
A180	BASE	50.89	96.73	61.96	51.81	19.03	54.58	18.47
A181	BASE	33.99	18.92	16.62	46.99	19.21	51.81	19.03
A182	BASE	19.99	20.23	16.16	52.34	19.04	51.81	19.03
A183	BASE	26.05	27.53	27.01	25.08	21.71	46.99	19.21
A190	BASE	44.09	71.72	60.15	44.59	19.84	51.81	19.03
A200	BASE	43.92	70.57	46.82	43.88	20.56	44.59	19.84
A210	BASE	37.56	73.81	53.97	37.63	22.13	43.88	20.56
A220	BASE	30.26	83.16	67.83	28.99	22.59	37.63	22.13
A220X	BASE	28.99	6.05	0.00	28.99	22.59	0.00	22.40
A230	BASE	23.32	25.18	25.12	21.54	24.12	28.99	22.59
A240	BASE	15.30	15.48	3.76	14.85	24.91	21.54	24.12
A250	BASE	12.96	16.47	16.67	14.96	25.20	14.85	24.91
A250W	BASE	0.00	0.00	0.00	14.96	25.20	14.85	24.91
B010	BASE	61.38	103.66	62.00	60.11	17.90	54.48	17.41
B020A	BASE	58.75	31.06	16.04	59.68	18.11	60.11	17.90
B020B	BASE	12.21	111.38	-118.99	59.68	18.11	60.11	17.90
B020W	BASE	0.00	0.00	0.00	59.68	18.11	60.11	17.90
B030	BASE	58.10	103.47	56.10	58.78	18.61	59.68	18.11
B030X	BASE	58.78	15.92	0.00	58.78	18.61	67.13	17.88
B040	BASE	56.61	115.74	51.31	57.17	19.10	58.78	18.61
B050	BASE	51.71	117.34	61.73	54.39	19.46	57.17	19.10
B060	BASE	48.48	118.95	77.56	53.47	19.54	54.39	19.46
B070	BASE	45.11	122.87	85.61	47.23	20.17	53.47	19.54
B080	BASE	39.16	128.90	93.20	40.12	21.38	47.23	20.17
B082	BASE	27.14	59.55	56.92	28.35	22.32	40.12	21.38
B084	BASE	26.85	52.59	49.44	27.59	22.73	28.35	22.32
B086	BASE	17.07	39.56	29.71	24.77	22.95	27.59	22.32

FOX CREEK / SOUTH CREEK  
 10/96

\*\*\*\*\* Link Maximum Conditions - SCS100 \*\*\*\*\*

(Time units - hours)

Link Name	Group Name	Max Time Flow	Max Flow (cfs)	Max Delta Q (cfs)	Max Time U/S Stage	Max US Stage (ft)	Max Time D/S Stage	Max DS Stage (ft)
B090	BASE	38.42	79.25	42.68	38.41	22.99	40.12	21.38
B100	BASE	29.39	102.87	79.06	31.26	23.61	38.41	22.99
B110	BASE	24.82	120.28	117.92	24.82	24.48	31.26	23.61
B120	BASE	23.94	119.37	119.29	24.02	24.79	24.82	24.48
B122	BASE	22.49	62.08	61.01	21.78	25.17	24.02	24.79
B130	BASE	23.76	47.96	47.96	23.97	24.85	24.02	24.79
B140A	BASE	40.20	13.95	9.91	23.60	25.27	23.97	24.85
B140B	BASE	40.20	2.54	1.80	23.60	25.27	23.97	24.85
B140W	BASE	23.60	36.34	36.33	23.60	25.27	23.97	24.85
B150	BASE	23.96	43.71	43.68	23.67	25.30	23.60	25.27
B160	BASE	45.40	10.91	7.28	23.73	25.49	23.67	25.30
B160W	BASE	23.76	37.20	37.20	23.73	25.49	23.67	25.30
B170	BASE	23.58	43.58	43.57	23.57	26.31	23.73	25.49
B170X	BASE	0.00	0.00	0.00	23.57	0.00	26.00	
C010	BASE	34.74	31.58	28.62	38.29	17.56	51.08	16.66
C010X	BASE	39.00	29.38	21.43	38.29	17.56	38.14	17.45
C012	BASE	36.53	39.65	27.98	38.26	17.57	38.29	17.56
C012W	BASE	0.00	0.00	0.00	38.26	17.57	38.29	17.56
C014A	BASE	34.90	39.91	28.86	38.14	17.59	38.26	17.57
C014B	BASE	82.21	3.33	-11.45	38.14	17.59	38.15	17.59
C016	BASE	35.11	34.10	18.23	38.09	17.59	38.14	17.59
C016W	BASE	0.00	0.00	0.00	38.09	17.59	38.14	17.59
C016X	BASE	33.50	40.23	26.92	38.09	17.59	54.48	17.41
C018	BASE	31.04	66.89	55.06	32.44	18.11	38.09	17.59
C020	BASE	12.37	85.84	-89.23	38.15	17.59	38.29	17.56
C020W	BASE	0.00	0.00	0.00	38.15	17.59	38.29	17.56
C030	BASE	15.02	45.16	33.22	38.08	17.60	38.15	17.59
C040	BASE	16.65	37.71	30.65	37.93	17.65	38.08	17.60
C040W	BASE	0.00	0.00	0.00	37.93	17.65	38.08	17.60
C050	BASE	31.72	26.11	24.42	33.19	18.71	37.93	17.65
C050X	BASE	20.63	11.64	11.20	33.19	18.71	38.79	18.68
C050XW	BASE	0.00	0.00	0.00	33.19	18.71	38.79	18.68
C060	BASE	26.27	30.19	29.73	29.09	19.12	33.19	18.71
C060X	BASE	28.89	56.26	49.35	29.09	19.12	32.44	18.11
C070	BASE	22.50	36.41	36.22	25.07	19.59	29.09	19.12
C100	BASE	13.29	26.66	20.03	24.48	19.63	25.07	19.59
CFCN	BASE	27.55	3.75	3.32	27.55	19.26	0.00	19.10
CFCSS	BASE	32.77	141.12	111.94	32.77	15.91	0.00	11.12
D010	BASE	41.87	241.64	181.28	38.14	17.45	35.33	17.10
D020	BASE	40.44	210.58	178.99	39.69	18.50	38.14	17.45
D030	BASE	34.92	211.82	198.27	39.19	18.61	39.69	18.50
D040	BASE	33.24	212.39	201.07	39.00	18.64	39.19	18.61
D040W	BASE	0.00	0.00	0.00	39.00	18.64	39.19	18.61
D050	BASE	34.78	210.15	193.51	38.95	18.65	39.00	18.64
D060	BASE	34.75	210.18	193.73	38.79	18.68	38.95	18.65
D060W	BASE	0.00	0.00	0.00	38.79	18.68	38.95	18.65
D070	BASE	34.57	206.79	196.67	37.72	18.98	38.79	18.68

FOX CREEK / SOUTH CREEK  
 10/96

\*\*\*\*\* Link Maximum Conditions - SCS100 \*\*\*\*\*

(Time units - hours)

Link Name	Group Name	Max Time Flow	Max Flow (cfs)	Max Delta Q (cfs)	Max Time U/S Stage	Max US Stage (ft)	Max Time D/S Stage	Max DS Stage (ft)
D080	BASE	34.59	206.35	192.32	36.50	19.34	37.72	18.98
D090	BASE	37.27	111.00	98.14	36.80	19.82	36.50	19.34
D090W	BASE	0.00	0.00	0.00	36.80	19.82	36.50	19.34
D100	BASE	34.86	107.87	92.71	36.60	19.89	36.80	19.82
D110	BASE	34.06	107.44	91.19	35.93	20.04	36.60	19.89
D120A	BASE	82.21	32.36	11.53	35.75	20.09	35.93	20.04
D120B	BASE	79.81	8.33	4.02	35.75	20.09	35.93	20.04
D120W	BASE	34.14	93.15	73.39	35.75	20.09	35.93	20.04
D125	BASE	21.08	7.53	7.10	20.78	21.49	35.75	20.09
D140	BASE	34.14	96.31	70.42	34.37	21.19	35.75	20.09
D141	BASE	16.61	5.23	1.71	34.41	21.19	34.37	21.19
D142	BASE	22.04	2.89	2.79	34.78	21.24	34.37	21.19
D160	BASE	33.73	94.87	66.78	34.35	21.20	34.37	21.19
D160W	BASE	0.00	0.00	0.00	34.35	21.20	34.37	21.19
D174	BASE	12.95	13.26	-5.91	34.67	21.22	34.32	21.22
D174W	BASE	0.00	0.00	0.00	34.67	21.22	34.32	21.22
D176	BASE	20.73	3.85	3.62	24.76	21.43	34.67	21.22
D180	BASE	33.40	94.15	67.74	34.32	21.22	34.35	21.20
D181	BASE	40.67	13.95	10.21	35.96	21.56	34.32	21.22
D182	BASE	20.25	2.37	2.19	29.76	22.35	35.96	21.56
D183	BASE	23.58	2.55	2.55	23.95	23.66	29.76	22.35
D184	BASE	30.88	3.50	3.07	30.88	24.69	35.96	21.56
D185	BASE	24.31	1.74	1.74	24.31	24.31	35.96	21.56
D186	BASE	52.49	1.52	1.45	36.93	22.60	35.96	21.56
D190	BASE	25.82	103.38	100.31	33.71	21.26	34.32	21.22
D200	BASE	25.72	105.22	102.43	33.39	21.27	33.71	21.26
D200W	BASE	0.00	0.00	0.00	33.39	21.27	33.71	21.26
D202	BASE	23.55	7.95	7.95	28.28	21.63	33.39	21.27
D204	BASE	25.48	5.82	5.80	24.44	23.42	28.28	21.63
D206	BASE	27.73	3.85	3.71	26.83	24.89	24.44	23.42
D208	BASE	20.78	3.01	3.00	25.89	26.31	26.83	24.89
D230	BASE	25.64	99.73	97.13	28.10	21.66	33.39	21.27
D231	BASE	23.06	79.17	78.93	24.46	22.17	28.10	21.66
D232	BASE	27.81	12.19	10.14	27.81	25.07	24.46	22.17
D233	BASE	20.84	55.67	54.09	18.60	24.56	24.46	22.17
D234	BASE	24.46	27.45	27.32	24.46	23.28	24.45	22.17
D240	BASE	13.35	50.73	27.39	28.07	21.66	28.10	21.66
D240W	BASE	22.15	9.07	8.61	28.07	21.66	28.10	21.66
D242	BASE	14.67	50.51	32.43	13.54	25.29	28.07	21.66
D244	BASE	13.55	31.07	32.57	13.53	25.29	13.54	25.29
D244W	BASE	0.00	0.00	0.00	13.53	25.29	13.54	25.29
D250	BASE	63.85	12.51	-39.76	28.07	21.66	28.07	21.66
D260	BASE	36.97	21.58	20.13	28.07	21.66	28.07	21.66
D260W	BASE	0.00	0.00	0.00	28.07	21.66	28.07	21.66
D261	BASE	64.50	12.25	3.69	28.06	21.67	28.07	21.66
D261X	BASE	28.74	39.34	29.22	28.06	21.67	32.10	21.01
D262	BASE	18.88	58.46	43.21	19.46	22.34	28.06	21.67











FOX CREEK / SOUTH CREEK  
10/96

\*\*\*\*\* Link Maximum Conditions - SCS100 \*\*\*\*\*

(Time units - hours)

Link Name	Group Name	Max Time Flow	Max Flow (cfs)	Max Delta Q (cfs)	Max Time U/S Stage	Max US Stage (ft)	Max Time D/S Stage	Max DS Stage (ft)
SC459	BASE	14.39	26.65	11.80	14.23	27.61	23.52	26.44
SC460	BASE	14.33	26.63	11.72	14.31	28.29	14.23	27.61
SC470A	BASE	14.67	19.51	9.72	14.57	28.61	14.31	28.29
SC470B	BASE	0.00	0.00	0.00	14.57	28.61	14.31	28.29
SC480A	BASE	15.12	14.65	7.48	15.12	30.53	14.57	28.61
SC480B	BASE	0.00	0.00	0.00	15.12	30.53	14.57	28.61
SC480C	BASE	12.39	1.34	1.33	15.12	30.53	14.57	28.61
SC490	BASE	15.98	3.23	1.48	15.98	34.63	15.12	30.53

# **REVISED HYDROGRAPH**

## **INPUT/OUTPUT**

FOX CREEK / SOUTH CREEK  
10/96

\*\*\*\*\* Basin Summary - SCS100 \*\*\*\*\*

\*\*\*

Basin Name:	SC127	SC128	FC-02E	A080B	FC-01B
Group Name:	BASE	BASE	BASE	BASE	BASE
Node Name:	SC127	SC128	FC-02E	A080B	FC-01B
Hydrograph Type:	UH	UH	UH	UH	UH
Unit Hydrograph:	GAMMA	GAMMA	UH100	UH100	UH100
Peaking Factor:	100.00	100.00	100.00	100.00	100.00
Spec Time Inc (min):	25.59	36.79	29.73	10.93	10.26
Comp Time Inc (min):	15.00	15.00	15.00	10.93	10.27
Rainfall File:	FLMOD	FLMOD	FLMOD	FLMOD	FLMOD
Rainfall Amount (in):	10.00	10.00	10.00	10.00	10.00
Storm Duration (hr):	24.00	24.00	24.00	24.00	24.00
Status:	ONSITE	ONSITE	ONSITE	ONSITE	ONSITE
Time of Conc. (min):	192.00	276.00	223.00	82.00	77.00
Lag Time (hr):	0.00	0.00	0.00	0.00	0.00
Area (acres):	140.70	102.60	96.71	31.50	17.97
Vol of Unit Hyd (in):	0.99	0.99	1.00	1.00	1.00
Curve Number:	79.00	80.00	78.00	78.00	78.00
DCIA (%):	22.20	4.50	0.00	0.00	0.00
Time Max (hrs):	15.25	17.25	18.25	13.85	13.69
Flow Max (cfs):	61.94	32.39	33.37	24.41	14.64
Runoff Volume (in):	7.92	7.59	7.26	7.25	7.26
Runoff Volume (cf):	4046013	2825848	2549944	829263	473596

**REVISED  
NODE**

**INPUT**

FOX CREEK/SOUTH CREEK INTERCONNECT

\*\*\*\*\* Input Report \*\*\*\*\*

-----Class: Node-----

Name: A074      Base Flow(cfs): 0      Init Stage(ft): 13.3  
Group: BASE      Length(ft): 0      Warn Stage(ft): 0  
Comment: A070 TRIB.

Stage(ft)	Area(ac)
13.3	0.05
14	0.05
14.5	0.05
15	3.8
16	4.9
17	13.2

-----Class: Node-----

Name: A076      Base Flow(cfs): 0      Init Stage(ft): 13.6  
Group: BASE      Length(ft): 0      Warn Stage(ft): 0  
Comment: A070 TRIB.

Stage(ft)	Area(ac)
13.6	0.05
14	0.05
14.5	0.05
15	8.4
16	11.4
17	21.9

-----Class: Node-----

Name: A080      Base Flow(cfs): 0.1      Init Stage(ft): 12.4  
Group: BASE      Length(ft): 0      Warn Stage(ft): 0  
Comment: TRIBUTARY A STA 67+80

Stage(ft)	Area(ac)
14.5	0.05
15	18.7
15.2	50.9
16	68.6
17	123.1

-----Class: Node-----

Name: A080B      Base Flow(cfs): 0      Init Stage(ft): 16.4  
Group: BASE      Length(ft): 0      Warn Stage(ft): 0  
Comment: NEW NODE

Stage(ft)	Area(ac)
15	2.59
16	7.88
17	16.51
17.5	27.2

FOX CREEK/SOUTH CREEK INTERCONNECT

\*\*\*\*\* Input Report \*\*\*\*\*

-----Class: Node-----

Name: A120      Base Flow(cfs): 0.1      Init Stage(ft): 13.3  
Group: BASE      Length(ft): 0      Warn Stage(ft): 0  
Comment: TRIBUTARY A STA 100+09

Stage(ft)	Area(ac)
13.5	0.05
14	2.9
15	22.4
16	74.5
17	92.9
17.5	138.6

-----Class: Node-----

Name: A130      Base Flow(cfs): 0.1      Init Stage(ft): 13.3  
Group: BASE      Length(ft): 0      Warn Stage(ft): 0  
Comment: TRIBUTARY A STA 121+59

Stage(ft)	Area(ac)
15.3	0.05
16	3.5
17	7.6
17.5	13.8
18	13.8

-----Class: Node-----

Name: A140      Base Flow(cfs): 0.1      Init Stage(ft): 13.3  
Group: BASE      Length(ft): 0      Warn Stage(ft): 0  
Comment: TRIBUTARY A STA 133+09

Stage(ft)	Area(ac)
14.5	0.5
15	8.1
16	20.7
17	49.8
18	102.2

-----Class: Node-----

Name: A150      Base Flow(cfs): 0.1      Init Stage(ft): 13.3  
Group: BASE      Length(ft): 0      Warn Stage(ft): 0  
Comment: TRIBUTARY A STA 143+59

Stage(ft)	Area(ac)
14.5	0.05
15	2.1
16	5.5
17	10.1
18	26.3

Advanced Interconnected Channel & Pond Routing (ICPR Ver 2.02) [S1]  
Copyright 1995, Streamline Technologies, Inc.

FOX CREEK/SOUTH CREEK INTERCONNECT

\*\*\*\*\* Input Report \*\*\*\*\*

-----Class: Node-----

Name: E098      Base Flow(cfs): 0      Init Stage(ft): 26.7  
Group: BASE      Length(ft): 0      Warn Stage(ft): 0  
Comment: SUNRISE SUBDIVISION POND (NORTH ENTRANCE)

Stage(ft)	Area(ac)
26.7	0.8
27	0.9
28	1
29	1.1
30	1.3
31	1.6

-----Class: Node-----

Name: FC-01      Base Flow(cfs): 0      Init Stage(ft): 16  
Group: BASE      Length(ft): 0      Warn Stage(ft): 17  
Comment:

Stage(ft)	Area(ac)
16	2.72
16.6	4.45
17	6.54

-----Class: Node-----

Name: FC-01B      Base Flow(cfs): 0      Init Stage(ft): 16.4  
Group: BASE      Length(ft): 0      Warn Stage(ft): 0  
Comment: NEW NODE

Stage(ft)	Area(ac)
16	2.44
17	6.89
17.5	17.15

-----Class: Node-----

Name: FC-02      Base Flow(cfs): 0      Init Stage(ft): 13  
Group: BASE      Length(ft): 0      Warn Stage(ft): 17  
Comment:

Stage(ft)	Area(ac)
14.5	0
14.9	5
15	9.96
16	22.99
17	37.22

-----Class: Node-----

Name: FC-02B      Base Flow(cfs): 0      Init Stage(ft): 13  
Group: BASE      Length(ft): 0      Warn Stage(ft): 17  
Comment:

Stage(ft)    Area(ac)

FOX CREEK/SOUTH CREEK INTERCONNECT

\*\*\*\*\* Input Report \*\*\*\*\*

-----Class: Node-----

Name: FC-02C      Base Flow(cfs): 0      Init Stage(ft): 12.9  
Group: BASE           Length(ft): 0        Warn Stage(ft): 0

Comment: NEW NODE

Stage(ft)    Area(ac)

-----Class: Node-----

Name: FC-02D      Base Flow(cfs): 0      Init Stage(ft): 13.2  
Group: BASE           Length(ft): 0        Warn Stage(ft): 0

Comment: NEW NODE

Stage(ft)    Area(ac)

-----Class: Node-----

Name: FC-02E      Base Flow(cfs): 0      Init Stage(ft): 13.2  
Group: BASE           Length(ft): 0        Warn Stage(ft): 0

Comment: NEW NODE

Stage(ft)    Area(ac)

15.5          0.1

16            8.77

17            21.59

17.5          72.67

-----Class: Node-----

Name: FC-03      Base Flow(cfs): 0      Init Stage(ft): 16.8  
Group: BASE           Length(ft): 0        Warn Stage(ft): 17.5

Comment:

Stage(ft)    Area(ac)

16            0.8

17            7.59

17.5          22

-----Class: Node-----

Name: FC-04      Base Flow(cfs): 0      Init Stage(ft): 16.7  
Group: BASE           Length(ft): 0        Warn Stage(ft): 18

Comment:

Stage(ft)    Area(ac)

16            2.32

17            7.4

18            39.03

# **REVISED REACH**

**INPUT**

FOX CREEK/SOUTH CREEK INTERCONNECT

\*\*\*\*\* Input Report \*\*\*\*\*

-----Class: Cross Section-----

Name: A080B Group: BASE Top of Bank(ft): 17.5  
Comment: OVERLAND FLOW WEIR

X-Station(ft)	Y-Elevation(ft)	Manning's N
0	17.5	0
300	17.1	0
640	17.1	0
900	17.4	0

-----Class: Cross Section-----

Name: A080X Group: BASE Top of Bank(ft): 16.5  
Comment: INTERCONNECTION WITH FOX CREEK BASIN (SURVEY XSEC)

X-Station(ft)	Y-Elevation(ft)	Manning's N
0	16.5	0.06
2.5	14.3	0.06
8	13.6	0.04
13.5	14.4	0.04
16	16.5	0.06

-----Class: Cross Section-----

Name: A090 Group: BASE Top of Bank(ft): 17.2  
Comment: SURVEY 120X

X-Station(ft)	Y-Elevation(ft)	Manning's N
-100	17.2	0.15
0	16.8	0.15
50	16.6	0.15
52	16.1	0.06
54	15.2	0.06
56	14.3	0.06
58	13.4	0.06
67	12.4	0.06
75	13.1	0.06
83	16.1	0.06
133	16.2	0.15
233	16.5	0.15

FOX CREEK/SOUTH CREEK INTERCONNECT

\*\*\*\*\* Input Report \*\*\*\*\*

-----Class: Cross Section-----

Name: A100      Group: BASE      Top of Bank(ft): 17  
Comment: SURVEY 130C(A-A)

X-Station(ft)	Y-Elevation(ft)	Manning's N
-100	16.9	0.15
0	16.5	0.15
50	15.8	0.15
59	13	0.15
65	12.6	0.06
71	12.8	0.06
73	13.8	0.06
75	14.7	0.06
77	15.7	0.15
127	16.2	0.15
227	16.6	0.15

-----Class: Cross Section-----

Name: A120      Group: BASE      Top of Bank(ft): 17.5  
Comment: SURVEY 140X

X-Station(ft)	Y-Elevation(ft)	Manning's N
0	17.5	0.15
50	16.9	0.15
58	14.1	0.08
67	13.4	0.08
72	13.5	0.08
78	14.9	0.08
81	15.6	0.08
131	17.3	0.15

-----Class: Cross Section-----

Name: A120B      Group: BASE      Top of Bank(ft): 17.6  
Comment: OVERLAND FLOW WEIR

X-Station(ft)	Y-Elevation(ft)	Manning's N
0	17.6	0
150	17.4	0
630	17.3	0
980	17.6	0

-----Class: Cross Section-----

Name: A120C      Group: BASE      Top of Bank(ft): 17.7  
Comment: OVERLAND FLOW WEIR

X-Station(ft)	Y-Elevation(ft)	Manning's N
400	17.7	0
550	17.3	0
700	17.35	0
701	18	0

Advanced Interconnected Channel & Pond Routing (ICPR Ver 2.02) [109]  
Copyright 1995, Streamline Technologies, Inc.

FOX CREEK/SOUTH CREEK INTERCONNECT

\*\*\*\*\* Input Report \*\*\*\*\*

-----Class: Cross Section-----

Name: A130 Group: BASE Top of Bank(ft): 17.2  
Comment: SURVEY 150X

X-Station(ft)	Y-Elevation(ft)	Manning's N
-100	17	0.15
0	16.6	0.15
50	15.5	0.15
57	13.6	0.08
63	12.9	0.08
69	13.6	0.08
73	14.6	0.08
77	15.6	0.08
127	16.6	0.15
227	17	0.15

-----Class: Cross Section-----

Name: A130XW Group: BASE Top of Bank(ft): 17.4  
Comment: ROADTOP OVERFLOW CONNECTION BETWEEN SOUTH & FOX

X-Station(ft)	Y-Elevation(ft)	Manning's N
100	18	0
150	16.9	0
175	16.7	0
200	16.8	0
225	16.6	0
250	16.5	0
300	16.5	0
350	16.6	0
400	16.8	0
450	17.1	0
500	17.2	0
550	17.2	0
600	17.3	0

-----Class: Cross Section-----

Name: A140 Group: BASE Top of Bank(ft): 17.5  
Comment: SURVEY 160X

X-Station(ft)	Y-Elevation(ft)	Manning's N
-100	17.6	0.15
0	17.5	0.15
50	17	0.15
55	15.2	0.07
58	14.1	0.07
62	13.5	0.07
66	12.9	0.07
75	14	0.07
82	16.2	0.07
132	17.1	0.15
232	17.3	0.15

Advanced Interconnected Channel & Pond Routing (ICPR Ver 2.02) [127]  
Copyright 1995, Streamline Technologies, Inc.

FOX CREEK/SOUTH CREEK INTERCONNECT

\*\*\*\*\* Input Report \*\*\*\*\*

-----Class: Cross Section-----

Name: FC-02A Group: BASE Top of Bank(ft): 17.5  
Comment:

X-Station(ft)	Y-Elevation(ft)	Manning's N
0	17.4	0.045
300	17	0.045
365	17.4	0.045
385	17.399	0.045
430	16	0.045
500	17	0.045
740	17.5	0.045

-----Class: Cross Section-----

Name: FC-02B Group: BASE Top of Bank(ft): 15.8  
Comment:

X-Station(ft)	Y-Elevation(ft)	Manning's N
0	15.8	0.04
7	12.7	0.04
9	12.3	0.04
13	12.299	0.04
17	13	0.04
24	15.7	0.04

-----Class: Cross Section-----

Name: FC-02DW Group: BASE Top of Bank(ft): 17.2  
Comment: OVERLAND FLOW WEIR

X-Station(ft)	Y-Elevation(ft)	Manning's N
0	17.2	0
50	16.6	0
100	16.6	0
150	16.9	0
151	16.6	0
200	16.4	0
250	16.5	0
300	16.8	0
350	17.2	0

-----Class: Cross Section-----

Name: FC-02E Group: BASE Top of Bank(ft): 16.5  
Comment: FOX CREEK / SOUTH CREEK INTERCONNECTING DITCH

X-Station(ft)	Y-Elevation(ft)	Manning's N
0	16.25	0.04
7	13.4	0.04
12	12.9	0.04
17	13	0.04
24	16.5	0.04

FOX CREEK/SOUTH CREEK INTERCONNECT

\*\*\*\*\* Input Report \*\*\*\*\*

-----Class: Pipe-----

Name: A110	From Node: A110	Length(ft): 24
Group: BASE	To Node: A100	Count: 1
UPSTREAM	DOWNSTREAM	Equation: Average K
Geometry: Circular	Circular	Flow: Both
Span(in): 48	48	Entrance Loss Coef: 0.9
Rise(in): 48	48	Exit Loss Coef: 1
Invert(ft): 13.2	13	Bend Loss Coef: 0
Manning's N: 0.024	0.024	Outlet Cntrl Spec: Use dc or tw
Top Clip(in): 0	0	Inlet Cntrl Spec: Use dc
Bottom Clip(in): 0	0	Stabilizer Option: K Reduction
App XSec Nm:		Stabilizer Tol(ft): 0.005
App XSec El(ft): 0	0	K Reduction Factor(%): 0.99

Upstream FHWA Inlet Edge Description:

Circular CMP: Projecting                          2        3

Downstream FHWA Inlet Edge Description:

Circular CMP: Projecting                          2        3

IBIS ST CULVERT (130C)

-----Class: Pipe-----

Name: A130X	From Node: A130	Length(ft): 19
Group: BASE	To Node: FC-02E	Count: 1
UPSTREAM	DOWNSTREAM	Equation: Average K
Geometry: Circular	Circular	Flow: Positive
Span(in): 18	18	Entrance Loss Coef: 0.7
Rise(in): 18	18	Exit Loss Coef: 1
Invert(ft): 13.06	13.1	Bend Loss Coef: 0
Manning's N: 0.024	0.024	Outlet Cntrl Spec: Use dc or tw
Top Clip(in): 0	0	Inlet Cntrl Spec: Use dc
Bottom Clip(in): 0	0	Stabilizer Option: K Reduction
App XSec Nm:		Stabilizer Tol(ft): 0.005
App XSec El(ft): 0	0	K Reduction Factor(%): 0.99

Upstream FHWA Inlet Edge Description:

Circular CMP: Headwall                          2        1

Downstream FHWA Inlet Edge Description:

Circular CMP: Headwall                          2        1

DIRT ROAD INTERCONNECTION WITH FOX CREEK BASIN

FOX CREEK/SOUTH CREEK INTERCONNECT

\*\*\*\*\* Input Report \*\*\*\*\*  
-----Class: Pipe-----

Name: FC-02	From Node: FC-02	Length(ft): 20
Group: BASE	To Node: FC-02B	Count: 2
UPSTREAM	DOWNTSTREAM	Equation: Average K
Geometry: Circular	Circular	Flow: Both
Span(in): 42	42	Entrance Loss Coef: 0.9
Rise(in): 42	42	Exit Loss Coef: 0
Invert(ft): 12.83	12.88	Bend Loss Coef: 0
Manning's N: 0.024	0.024	Outlet Cntrl Spec: Use dc or tw
Top Clip(in): 0	0	Inlet Cntrl Spec: Use dn
Bottom Clip(in): 0	0	Stabilizer Option: None
App XSec Nm:		
App XSec El(ft): 0	0	

Upstream FHWA Inlet Edge Description:  
Circular CMP: Projecting 2 3

Downstream FHWA Inlet Edge Description:  
Circular CMP: Projecting 2 3

-----Class: Pipe-----

Name: FC-02D	From Node: FC-02D	Length(ft): 20
Group: BASE	To Node: FC-02C	Count: 1
UPSTREAM	DOWNTSTREAM	Equation: Average K
Geometry: Circular	Circular	Flow: Both
Span(in): 42	42	Entrance Loss Coef: 0.7
Rise(in): 42	42	Exit Loss Coef: 1
Invert(ft): 13.07	13.2	Bend Loss Coef: 0
Manning's N: 0.024	0.024	Outlet Cntrl Spec: Use dc or tw
Top Clip(in): 0	0	Inlet Cntrl Spec: Use dn
Bottom Clip(in): 0	0	Stabilizer Option: None
App XSec Nm:		
App XSec El(ft): 0	0	

Upstream FHWA Inlet Edge Description:  
Circular CMP: Projecting 2 3

Downstream FHWA Inlet Edge Description:  
Circular CMP: Projecting 2 3

Advanced Interconnected Channel & Pond Routing (ICPR Ver 2.02) [238]  
Copyright 1995, Streamline Technologies, Inc.

FOX CREEK/SOUTH CREEK INTERCONNECT

\*\*\*\*\* Input Report \*\*\*\*\*

-----Class: Channel-----

Name: A080 From Node: A080 Length(ft): 1050  
Group: BASE To Node: A070 Count: 1

UPSTREAM	DOWNTSTREAM	
Geometry: Irregular	Irregular	Equation: Aver Conveyance
Invert(ft): 12.4	12.2	Flow: Both
TOB(ft): 16.5	16.5	Eddy Contrac Coef: 0
Manning's N: 0	0	Eddy Expans Coef: 0
TClip(ft): 0	0	Entrance Loss Coef: 0
BClip(ft): 0	0	Exit Loss Coef: 0
Main Xsec: A080	A080	Outlet Cntrl Spec: Use dc or tw
AxEl1(ft): 0	0	Inlet Cntrl Spec: Use dc
Aux Xsec1:		Stabilizer Option: None
AxEl2(ft): 0	0	
Aux Xsec2:	A080	
TWidth(ft): 0	0	
Depth(ft):		
BWidth(ft):		
LsdSlp(h/v):		
RSdSlp(h/v):		

XSEC 110X

-----Class: Channel-----

Name: A080X From Node: A080 Length(ft): 1000  
Group: BASE To Node: FC-06 Count: 1

UPSTREAM	DOWNTSTREAM	
Geometry: Irregular	Irregular	Equation: Aver Conveyance
Invert(ft): 13.6	13.6	Flow: Both
TOB(ft): 18	18	Eddy Contrac Coef: 0.1
Manning's N: 0	0	Eddy Expans Coef: 0.3
TClip(ft): 0	0	Entrance Loss Coef: 0
BClip(ft): 0	0	Exit Loss Coef: 0
Main Xsec: A080X	A080X	Outlet Cntrl Spec: Use dn or tw
AxEl1(ft): 0	0	Inlet Cntrl Spec: Use dn
Aux Xsec1:		Stabilizer Option: None
AxEl2(ft): 0	0	
Aux Xsec2:		
TWidth(ft): 0	0	
Depth(ft):		
BWidth(ft):		
LsdSlp(h/v):		
RSdSlp(h/v):		

INTERCONNECTION WITH FOX CREEK BASIN

Advanced Interconnected Channel & Pond Routing (ICPR Ver 2.02) [277]  
Copyright 1995, Streamline Technologies, Inc.

FOX CREEK/SOUTH CREEK INTERCONNECT

\*\*\*\*\* Input Report \*\*\*\*\*

-----Class: Channel-----

Name: FC-01B From Node: FC-01B Length(ft): 500  
Group: BASE To Node: FC-01 Count: 1

UPSTREAM	DOWNTSTREAM	
Geometry: Trapezoidal	Trapezoidal	Equation: Aver Conveyance
Invert(ft): 16.4	15.9	Flow: Both
TOB(ft): 18	18	Eddy Contrac Coef: 0
Manning's N: 0.04	0.04	Eddy Expans Coef: 0
TClip(ft): 0	0	Entrance Loss Coef: 0
BClip(ft): 0	0	Exit Loss Coef: 0
Main Xsec:		Outlet Cntrl Spec: Use dc or tw
AxEl1(ft):		Inlet Cntrl Spec: Use dn
Aux Xsec1:		Stabilizer Option: None
AxEl2(ft):		
Aux Xsec2:		
TWidth(ft):		
Depth(ft):		
BWidth(ft): 3	3	
LSdSlp(h/v): 4.7	4.7	
RSdSlp(h/v): 4.7	4.7	

-----Class: Channel-----

Name: FC-02B From Node: FC-02B Length(ft): 300  
Group: BASE To Node: FC-05 Count: 1

UPSTREAM	DOWNTSTREAM	
Geometry: Irregular	Irregular	Equation: Aver Conveyance
Invert(ft): 12.3	12.3	Flow: Both
TOB(ft): 17.5	17.5	Eddy Contrac Coef: 0
Manning's N: 0	0	Eddy Expans Coef: 0
TClip(ft): 0	0	Entrance Loss Coef: 0
BClip(ft): 0	0	Exit Loss Coef: 0
Main Xsec: FC-02B	FC-02B	Outlet Cntrl Spec: Use dc or tw
AxEl1(ft): 0	0	Inlet Cntrl Spec: Use dn
Aux Xsec1:		Stabilizer Option: None
AxEl2(ft): 0	0	
Aux Xsec2:		
TWidth(ft): 0	0	
Depth(ft):		
BWidth(ft):		
LSdSlp(h/v):		
RSdSlp(h/v):		

WETLAND CONNECTION

FOX CREEK/SOUTH CREEK INTERCONNECT

\*\*\*\*\* Input Report \*\*\*\*\*

-----Class: Channel-----

Name: FC-02C From Node: FC-02C Length(ft): 1300  
Group: BASE To Node: FC-02 Count: 1

UPSTREAM	DOWNTSTREAM	
Geometry: Irregular	Irregular	Equation: Aver Conveyance
Invert(ft): 12.9	12.7	Flow: Both
TOB(ft): 18	18	Eddy Contrac Coef: 0.1
Manning's N: 0	0	Eddy Expans Coef: 0.3
TClip(ft): 0	0	Entrance Loss Coef: 0
BClip(ft): 0	0	Exit Loss Coef: 0
Main Xsec: FC-02E	FC-02E	Outlet Cntrl Spec: Use dn or tw
AxEl1(ft): 0	0	Inlet Cntrl Spec: Use dn
Aux Xsec1:		Stabilizer Option: None
AxEl2(ft): 0	0	
Aux Xsec2:		
TWidth(ft): 0	0	
Depth(ft):		
BWidth(ft):		
LSdSlp(h/v):		
RSdSlp(h/v):		

-----Class: Channel-----

Name: FC-02E From Node: FC-02E Length(ft): 960  
Group: BASE To Node: FC-02D Count: 1

UPSTREAM	DOWNTSTREAM	
Geometry: Irregular	Irregular	Equation: Aver Conveyance
Invert(ft): 11	12.6	Flow: Both
TOB(ft): 18	18	Eddy Contrac Coef: 0.1
Manning's N: 0	0	Eddy Expans Coef: 0.3
TClip(ft): 0	0	Entrance Loss Coef: 0
BClip(ft): 0	0	Exit Loss Coef: 0
Main Xsec: FC-02E	FC-02E	Outlet Cntrl Spec: Use dn or tw
AxEl1(ft): 0	0	Inlet Cntrl Spec: Use dn
Aux Xsec1:		Stabilizer Option: None
AxEl2(ft): 0	0	
Aux Xsec2:		
TWidth(ft): 0	0	
Depth(ft):		
BWidth(ft):		
LSdSlp(h/v):		
RSdSlp(h/v):		

Advanced Interconnected Channel & Pond Routing (ICPR Ver 2.02) [342]  
Copyright 1995, Streamline Technologies, Inc.

FOX CREEK/SOUTH CREEK INTERCONNECT

\*\*\*\*\* Input Report \*\*\*\*\*

-----Class: Weir-----

Name: A076W From Node: A076  
Group: BASE To Node: A074  
Count: 1

Type: Mavis Flow: Both Geometry: Trapezoidal

Bottom Width(ft): 100  
Left Side Slope(h/v): 0  
Right Side Slope(h/v): 0  
Invert(ft): 22.3  
Control Elev(ft): 22.3  
Structure Opening(ft): 99 TABLE  
Bottom Clip(ft): 0  
Top Clip(ft): 0  
Weir Discharge Coef: 2.6  
Orifice Discharge Coef: 0.6

I-75 ROAD OVERTOP

-----Class: Weir-----

Name: A080B From Node: A080B  
Group: BASE To Node: A080  
Count: 1

Type: Mavis Flow: Both Geometry: Irregular

XSec Name: A080B

Invert(ft): 17.1  
Control Elev(ft): 17.1  
Structure Opening(ft): 999 TABLE  
Bottom Clip(ft): 0  
Top Clip(ft): 0  
Weir Discharge Coef: 0.3  
Orifice Discharge Coef: 0.6

OVERLAND FLOW SIMULATION

FOX CREEK/SOUTH CREEK INTERCONNECT

\*\*\*\*\* Input Report \*\*\*\*\*

-----Class: Weir-----

Name: A120B From Node: A120  
Group: BASE To Node: FC-01B  
Count: 1

Type: Mavis Flow: Both Geometry: Irregular

XSec Name: A120B

Invert(ft): 17.3  
Control Elev(ft): 17.3  
Structure Opening(ft): 999 TABLE  
Bottom Clip(ft): 0  
Top Clip(ft): 0  
Weir Discharge Coef: 0.3  
Orifice Discharge Coef: 0.6

OVERLAND FLOW SIMULATION - BASIN INTERCONNECT

-----Class: Weir-----

Name: A120C From Node: A120  
Group: BASE To Node: FC-02C  
Count: 1

Type: Mavis Flow: Both Geometry: Irregular

XSec Name: A120C

Invert(ft): 17.3  
Control Elev(ft): 17.3  
Structure Opening(ft): 999 TABLE  
Bottom Clip(ft): 0  
Top Clip(ft): 0  
Weir Discharge Coef: 0.3  
Orifice Discharge Coef: 0.6

OVERLAND FLOW SIMULATION - BASIN INTERCONNECT

FOX CREEK/SOUTH CREEK INTERCONNECT

\*\*\*\*\* Input Report \*\*\*\*\*

-----Class: Weir-----

Name: A130XW From Node: A130  
Group: BASE To Node: FC-02E  
Count: 1

Type: Mavis Flow: Both Geometry: Irregular

XSec Name: A130XW

Invert(ft): 16.5  
Control Elev(ft): 16.5

Structure Opening(ft): 99 TABLE

Bottom Clip(ft): 0

Top Clip(ft): 0

Weir Discharge Coef: 0.3

Orifice Discharge Coef: 0.6

ROADTOP OVERFLOW INTERCONNECT WITH FOX CREEK BASIN

-----Class: Weir-----

Name: A160X From Node: A160  
Group: BASE To Node: CPS003  
Count: 1

Type: Mavis Flow: Both Geometry: Trapezoidal

Bottom Width(ft): 800  
Left Side Slope(h/v): 0  
Right Side Slope(h/v): 0

Invert(ft): 18.2

Control Elev(ft): 18.2

Structure Opening(ft): 99 TABLE

Bottom Clip(ft): 0

Top Clip(ft): 0

Weir Discharge Coef: 0.3

Orifice Discharge Coef: 0.6

INTERCONNECTION WITH COW PEN SLOUGH CANAL BASIN

Advanced Interconnected Channel & Pond Routing (ICPR Ver 2.02) [365]  
Copyright 1995, Streamline Technologies, Inc.

FOX CREEK/SOUTH CREEK INTERCONNECT

\*\*\*\*\* Input Report \*\*\*\*\*

-----Class: Weir-----

Name: FC-02A From Node: FC-02  
Group: BASE To Node: FC-02B  
Count: 1

Type: Fread Flow: Both Geometry: Irregular

XSec Name: FC-02A

Invert(ft): 16  
Control Elev(ft): 16  
Structure Opening(ft): 999 TABLE  
Bottom Clip(ft): 0  
Top Clip(ft): 0  
Weir Discharge Coef: 2.6  
Orifice Discharge Coef: 0.6

WETLAND OUTFALL

-----Class: Weir-----

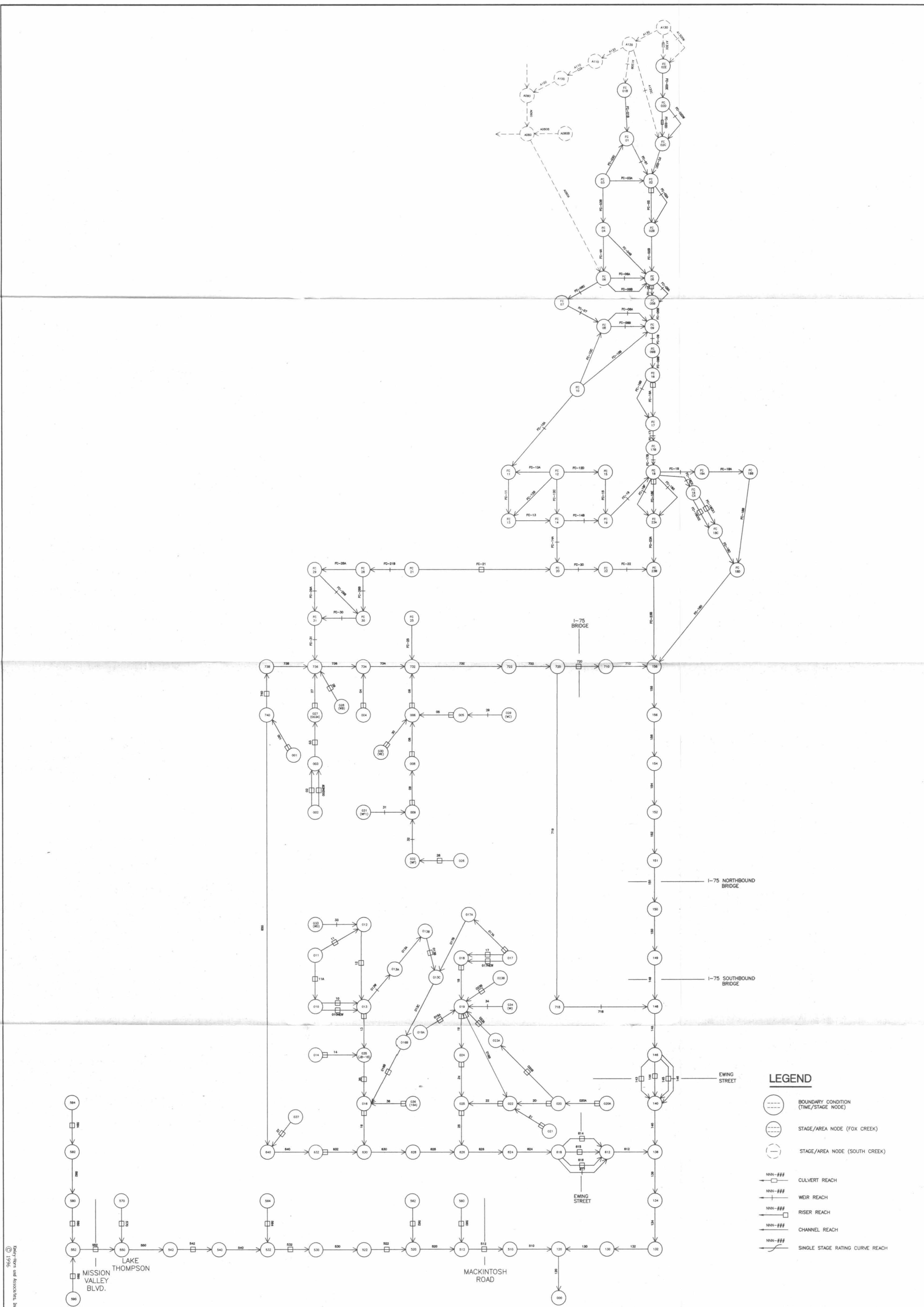
Name: FC-02DW From Node: FC-02D  
Group: BASE To Node: FC-02C  
Count: 1

Type: Mavis Flow: Both Geometry: Irregular

XSec Name: FC-02DW

Invert(ft): 16.4  
Control Elev(ft): 16.4  
Structure Opening(ft): 999 TABLE  
Bottom Clip(ft): 0  
Top Clip(ft): 0  
Weir Discharge Coef: 0.3  
Orifice Discharge Coef: 0.6

OVERLAND FLOW SIMULATION



FOR: TITLE: FOX CREEK DRAINAGE STUDY PROPOSED CONDITIONS		This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and use for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.	NO. 1 REvised to include Shire Street Study 2 REVISED WITH SOUTH CREEK OVERFLOWS	REVISION DATE 7/26/96 MKH 11/19/96 MKH	By Kimley-Horn and Associates, Inc.
DESC: ROUTING SCHEMATIC	STEPHEN M. SIUAU P.E. FLA. CERT. NO. 36309 DATE: 11/19/96				Engineering, Planning and Environmental Consultants 7202 BENEVA ROAD SOUTH GARASOTA, FLORIDA 34238 TEL (813) 922-8187 FAX (813) 922-2351



**SOUTH CREEK/  
FOX CREEK AREA**

**JUNE 1992 FLOOD**

LOCATION OF  
WESTERLY  
CONNECTION



LOCATION OF  
WESTERLY  
CONNECTION



LOCATION OF  
EASTERLY  
CONNECTION