

BRAZOS RIVER BASIN, TEXAS

DESIGN MEMORANDUM NO. 11C
(REVISED 1971)

UPDATED MASTER PLAN
PROCTOR LAKE
LEON RIVER, TEXAS

U. S. ARMY ENGINEER DISTRICT, FORT WORTH
CORPS OF ENGINEERS
FORT WORTH, TEXAS

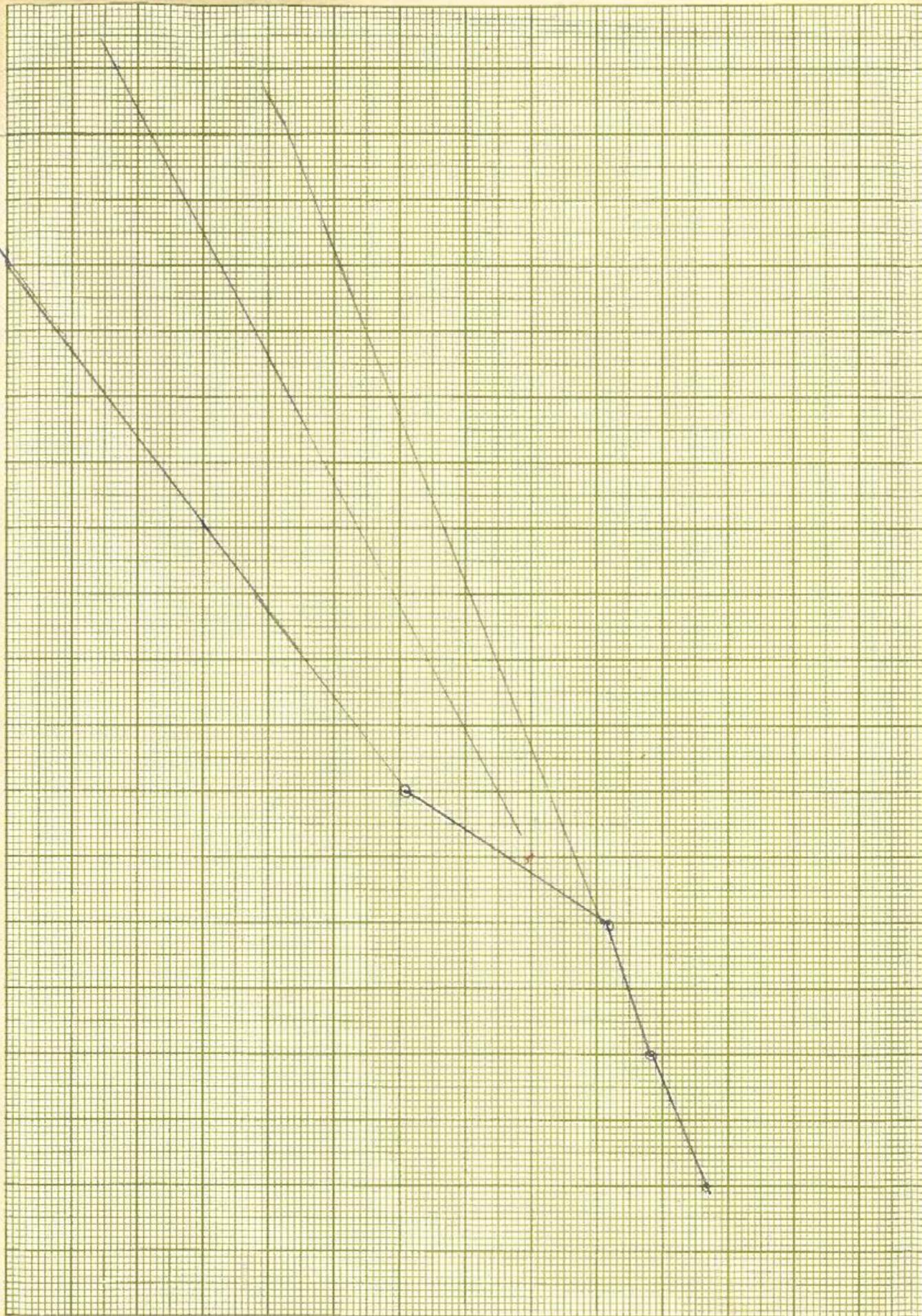
JUNE 1971

(Army-Fort Worth, Texas)

Proctor

BEE 20x20 TO INCH

1000 -
950 -



76
75
74
73
72
71
70
69
68



DEPARTMENT OF THE ARMY
FORT WORTH DISTRICT, CORPS OF ENGINEERS
P. O. BOX 17300
FORT WORTH, TEXAS 76102

SWFED-P

28 June 1971

SUBJECT: Proctor Dam and Lake, Leon River, Texas, Design Memorandum
No. 11C, Updated Master Plan

THRU: Division Engineer, Southwestern

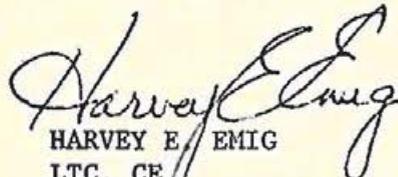
TO: Chief of Engineers

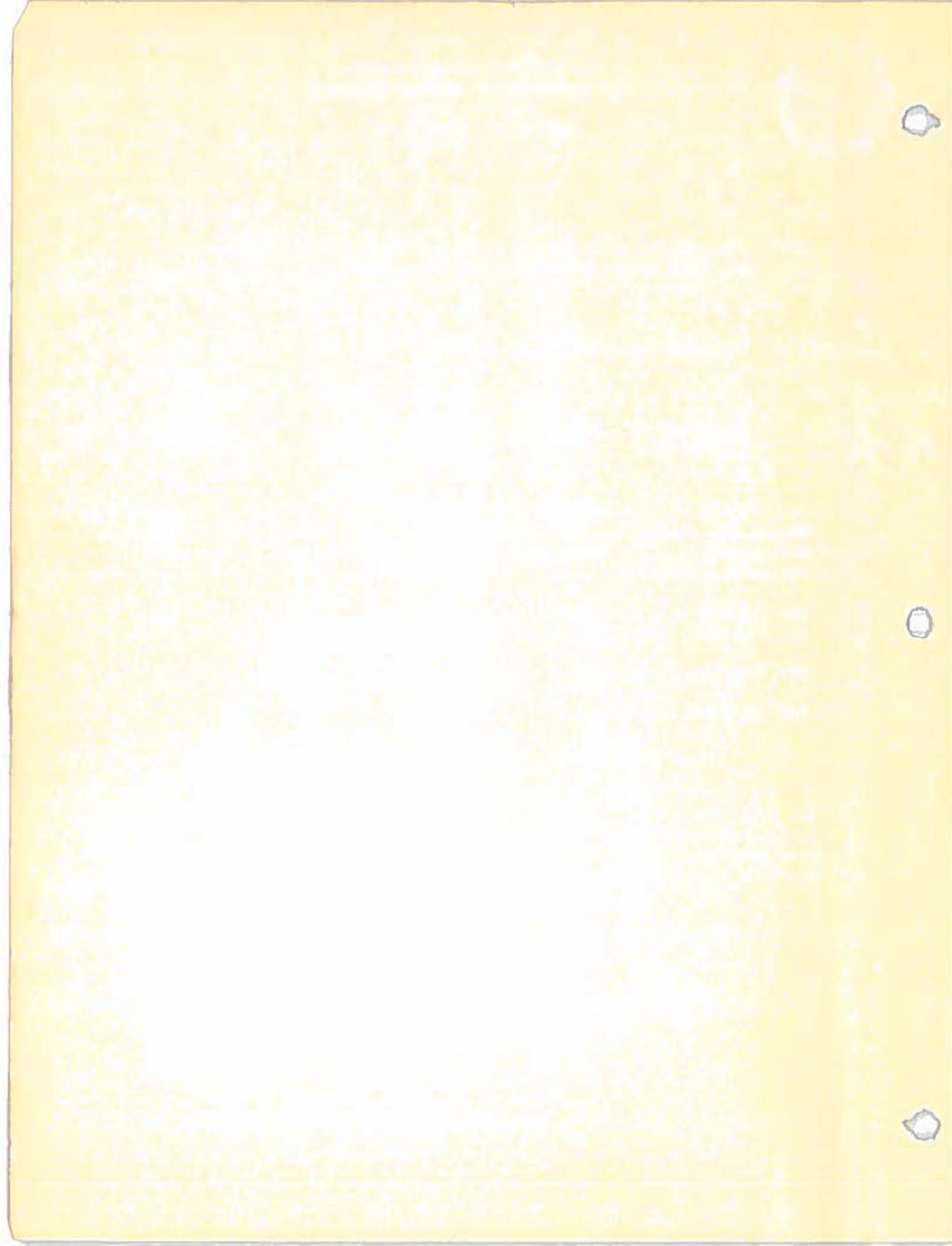
1. Design Memorandum No. 11C, updated master plan for the development and management of the Proctor project, Leon River, Texas, is submitted for review and approval.
2. The updated plan includes existing and planned development at the project and is in compliance with previous endorsements.
3. The land use plan has been developed and is recommended for approval.

FOR THE DISTRICT ENGINEER:

3 Incl (9 cys)

1. Design Memo No. 11C
2. Cost estimates
3. Land use maps (35 copies prepared)


HARVEY E. EMIG
LTC, CE
Deputy District Engineer



SWDPL-R (SWFED-P 28 Jun 71) 1st Ind
SUBJECT: Proctor Dam and Lake, Leon River, Texas, Design Memorandum
No. 11C, Updated Master Plan

DA, Southwestern Division, Corps of Engineers, 1114 Commerce Street,
Dallas, Texas 75202 13 Aug 71

TO: Chief of Engineers, ATTN: ENGCW-PV

Forwarded recommending approval subject to the following:

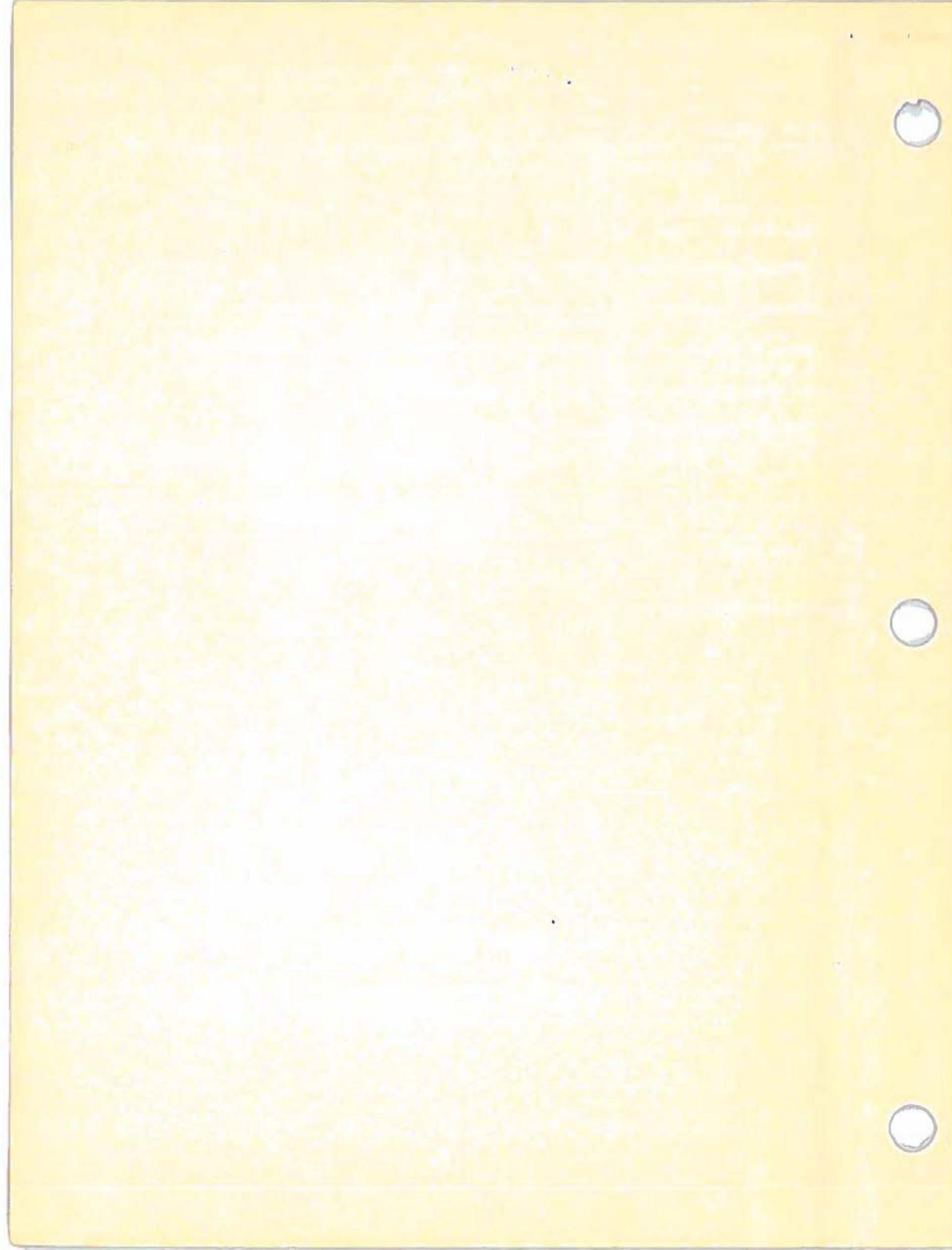
Para 5-03f, second sentence. Since structures for human habitation
are prohibited in Priority 4 areas, this sentence should be revised to
delete that portion following "habitation,"

FOR THE DIVISION ENGINEER:

3 Incl
wd 4 cys ea


HOWARD R. BARE
Chief, Planning Division

CF:
Fort Worth District



PL-R

DAEN-CWP-V (28 Jun 71) 2nd Ind
SUBJECT: Proctor Dam and Lake, Leon River, Texas, Design Memorandum
No. 11C, Updated Master Plan

DA, Office of the Chief of Engineers, Washington, D. C. 20314 27 Oct 71

TO: Division Engineer, Southwestern

1. The Updated Master Plan is approved subject to the comments expressed by SWDPL-R in the preceding 1st Indorsement and to the following.

a. Paragraph 4-04b, page 17. Reference is made to SWDR 1130-2-7 in the narrative. This should be provided as an inclosure to the Master Plan.

b. Paragraph 4-07a, page 19, and Plate 7. Additional information and justification should be provided on the proposed lease to the Proctor Recreation Association of portions of the Copperas Creek Park.

c. Paragraph 5-03, pages 20, 21, 23 and 24 and Appendix B. Land zoning should be guided by paragraph 9 of ER 1165-2-400, Recreational Planning, Development, and Management Policies. Also, in this connection it should be noted that lands for quasi-public uses are only made available for leasing down to the 5-year frequency.

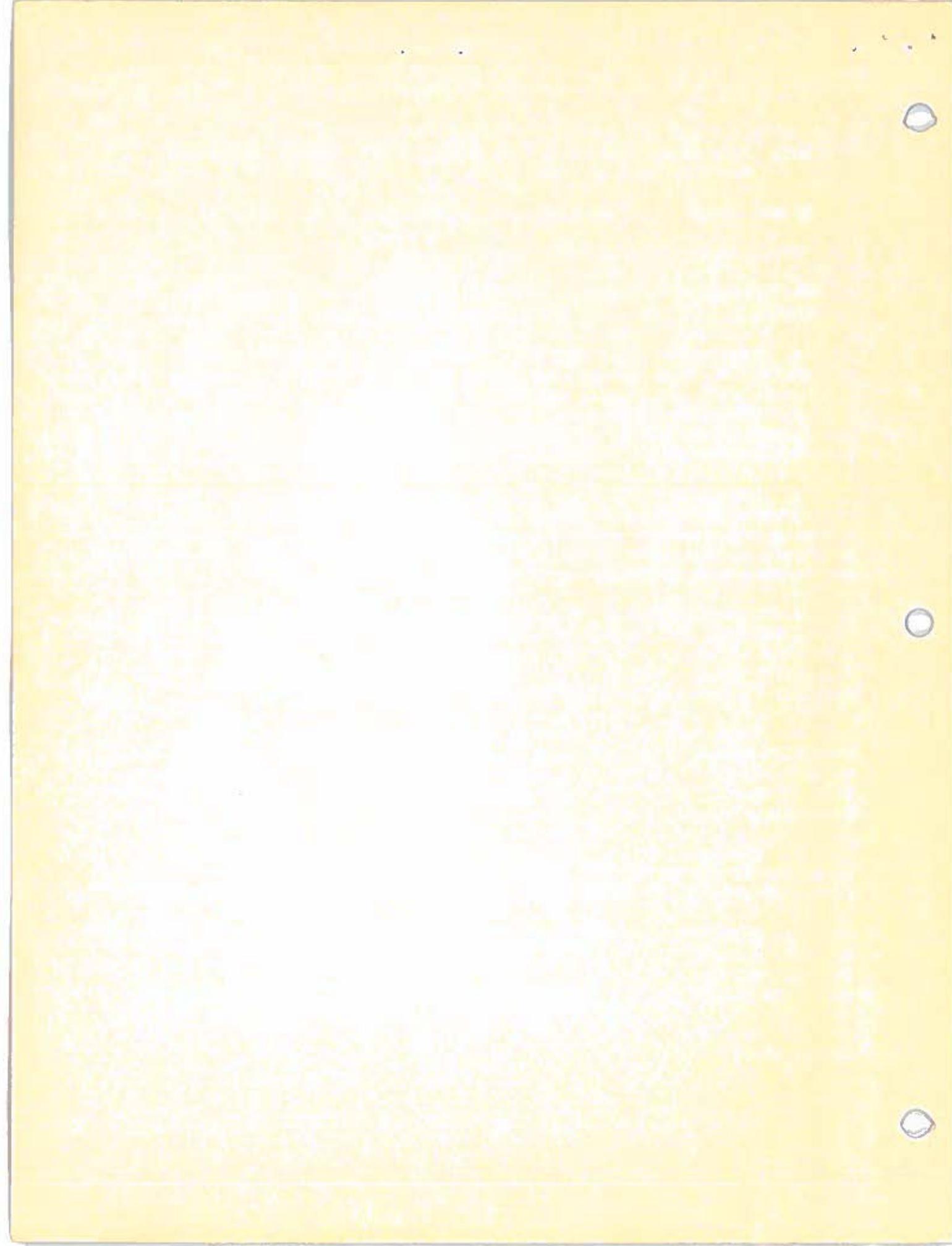
d. Paragraph 5-03c, page 23. Suggest purchase of paper-back book "Trail Planning and Layout" by Byron L. Ashbaugh and Raymond J. Kordish, published by National Audubon Society, Nature Center Planning Division, 1130 Fifth Avenue, New York, New York 10028, price \$3.00 for use by each District in planning and developing hiking trails.

e. Paragraphs 9-05, page 27; 9-06, page 28, Plates 11 and 15. Forest Management Plan should be prepared in accordance with ER 1130-2-400 at an early date and should include necessary reforestation and revegetation of borrow, spoil areas and the entire dam site area. Riverside Park downstream from the dam as shown on Plate 2 is not discussed in the plan.

f. Plates 7 and 17. Consideration should be given to locating all campsites at the Copperas Creek and Promontory Park above the 5-year frequency flood control pool, elevation 1172.0 m.s.l.

g. Plate 15. Consideration should be given to changing Camping Area No. 1 to picnicking with the additional camping required relocated to Camping Area No. 2 to provide a better separation of overnight and day use. (ER 1110-2-400.)

h. Appendix A, Table A. The use of an appropriate contingency factor should be indicated, if such a factor has been used.



DAEN-CWP-V

27 Oct 71

SUBJECT: Proctor Dam and Lake, Leon River, Texas, Design Memorandum
No. 11C, Updated Master Plan

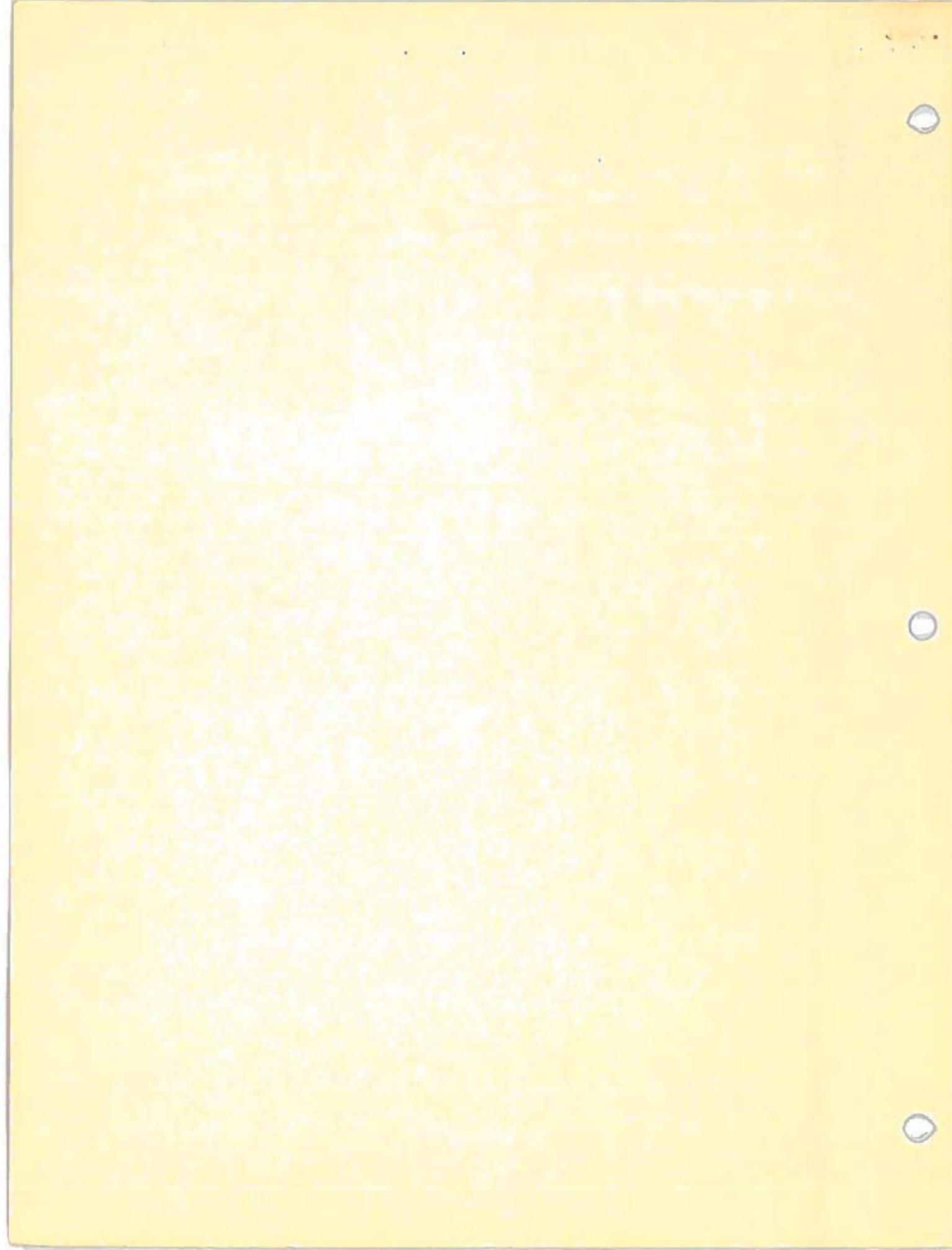
2. Information in response to the above should be provided OCE, ATTN:
DAEN-CWP-V.

FOR THE CHIEF OF ENGINEERS:

wd all incl



IRWIN REISLER
Acting Chief, Planning Division
Civil Works Directorate



SWDPL-R (SWFED-P 28 Jun 71) 3rd Ind
SUBJECT: Proctor Dam and Lake, Leon River, Texas, Design Memorandum
No. 11C, Updated Master Plan

DA, Southwestern Division, Corps of Engineers, 1114 Commerce Street,
Dallas, Texas 75202 5 Nov 71

TO: District Engineer, Fort Worth

The updated master plan is approved subject to comments in the preceding
indorsements and to the following:

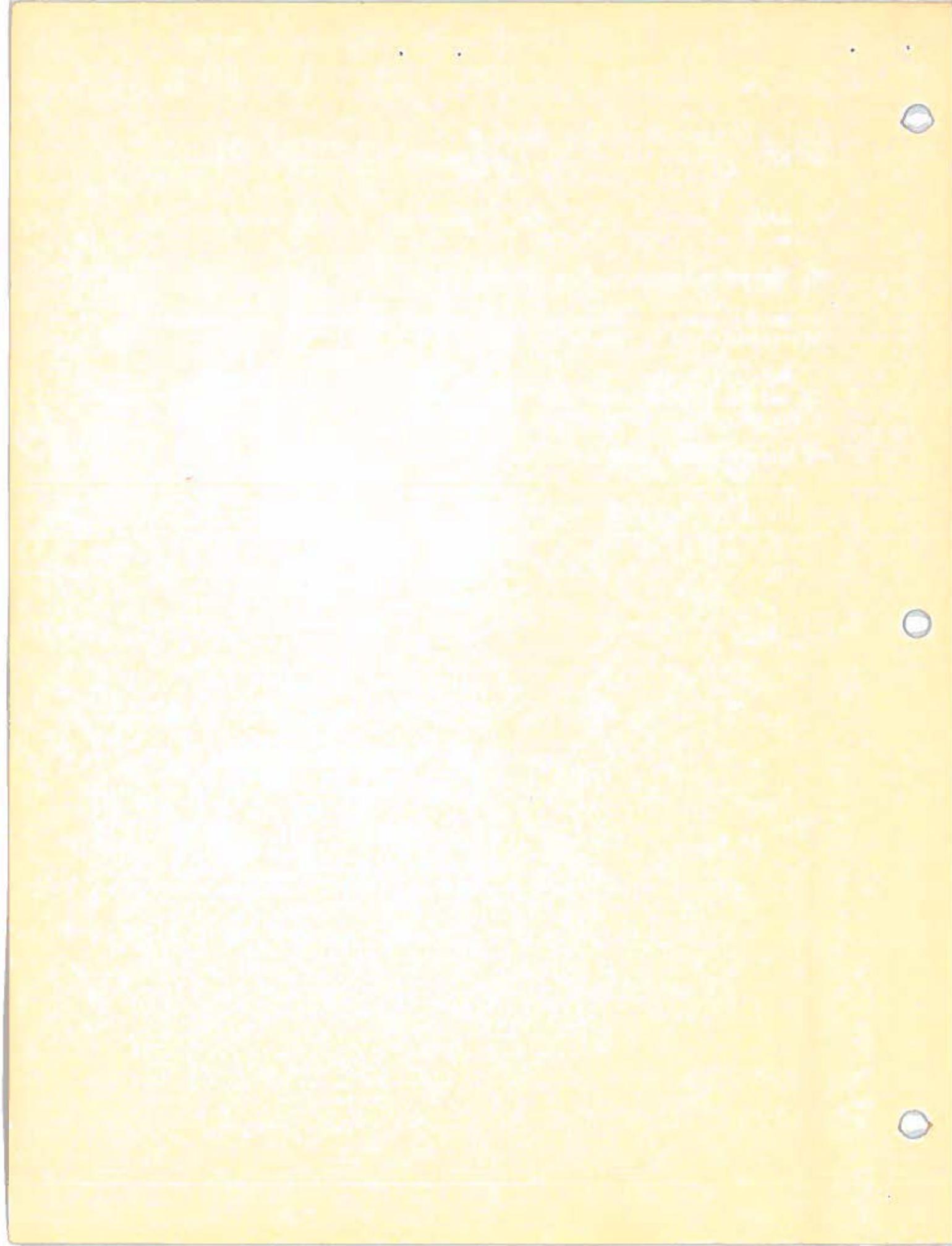
Para 1a, 2d Ind. This comment has been discussed with personnel of
OCE and the comment withdrawn, with the understanding that a current copy
of the SWDR would be furnished for OCE files.

FOR THE DIVISION ENGINEER:



HOWARD R. BARE
Chief, Planning Division

CF:
DAEN-CWP-V



SWFED-P (SWFED-P 28 Jun 71) 4th Ind
SUBJECT: Proctor Dam and Lake, Leon River, Texas Design Memorandum
No. 11C, Updated Master Plan

Mr. Garrett/1h/2212

DA, Fort Worth District, Corps of Engineers, Box 17300, Fort Worth,
Texas 76102 23 November 1971

THRU: Division Engineer, Southwestern

TO: HQDA (DAEN-CWP-V)
WASH DC 20314

1. This replies to the comment contained in paragraph 1c, 2d Indorsement, DAEN-CWP-V, 27 October 1971, subject as above.

2. We recommend that a portion of land in Copperas Creek Park be made available for the expansion of the Proctor Area Recreation Association's golf course for the following reasons:

a. Without the small area in Copperas Creek Park, one hole would have to be located across Farm Road 2861 from the rest of the course. This causes users to have to cross the farm road, which is an inconvenience as well as creating a hazard.

b. We believe the best interests of the people of the area that use the public facilities around Lake Proctor will be served best by the redesignation of approximately 5.0 acres of land as shown on the attached map. The area to be redesignated only serves as a buffer area along the roadway and would not be developed for picnicking or camping.

3. Request your further consideration of the matter reported in the previous paragraph.

1 Incl
as

FLOYD H. HENK
Colonel, CE
District Engineer

DIXON SWFED-P

ORENDORFF SWFED

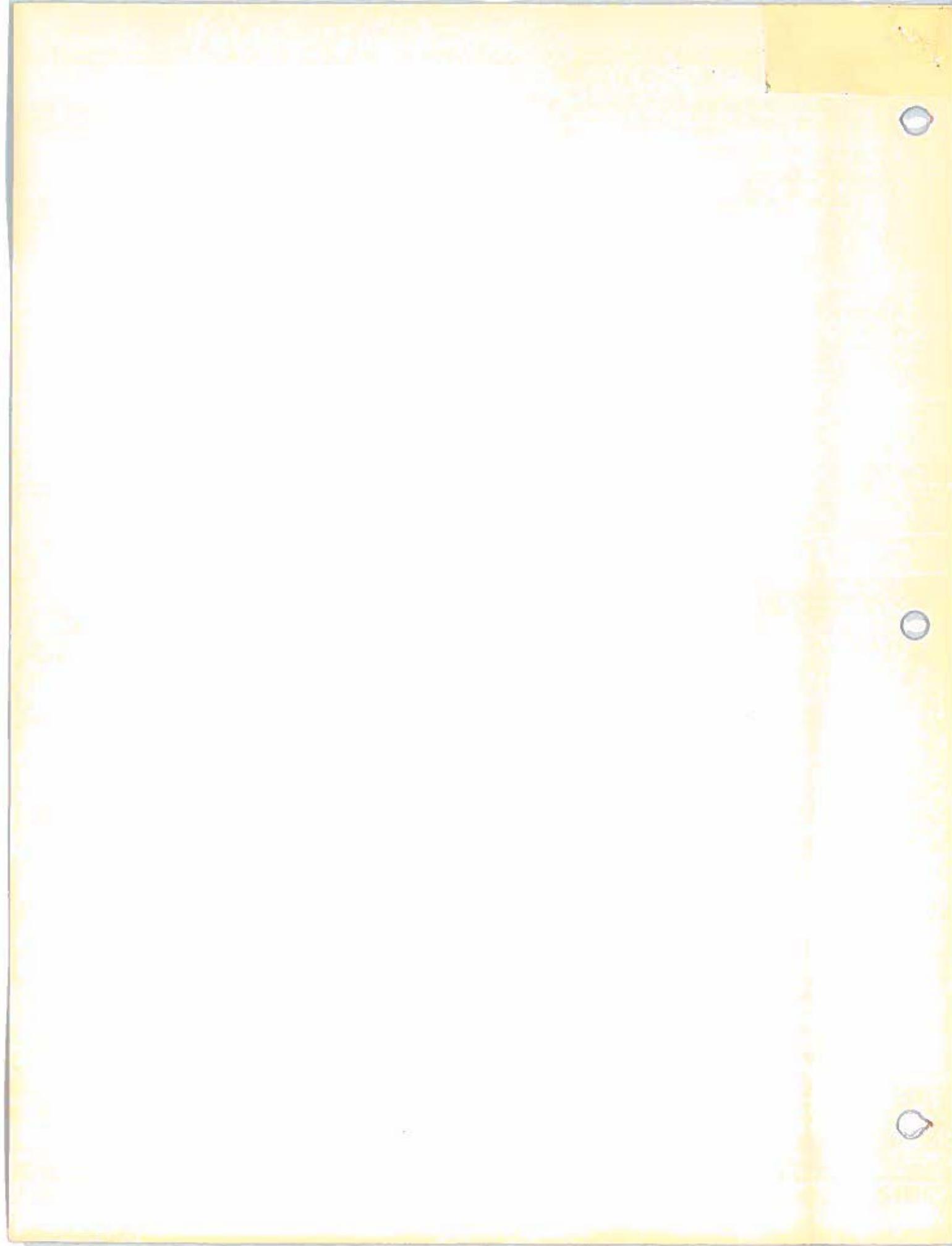
SMITH SWFEX

MAJ HEWITT SWFDD

COL HENK SWFDE

MAIL

RETURN TO
Env Res Sec
Room 3C10



SWDPL-R (SWFED-P 28 Jun 71) 5th Ind
SUBJECT: Proctor Dam and Lake, Leon River, Texas, Design Memorandum
No. 11C, Updated Master Plan

DA, Southwestern Division, Corps of Engineers, 1114 Commerce Street,
Dallas, Texas 75202 17 Jan 72

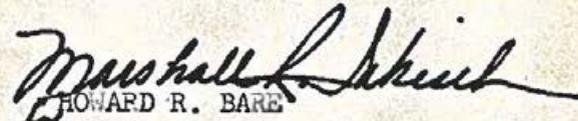
TO: HQDA (DAEN-CWP-V) WASH DC 20314

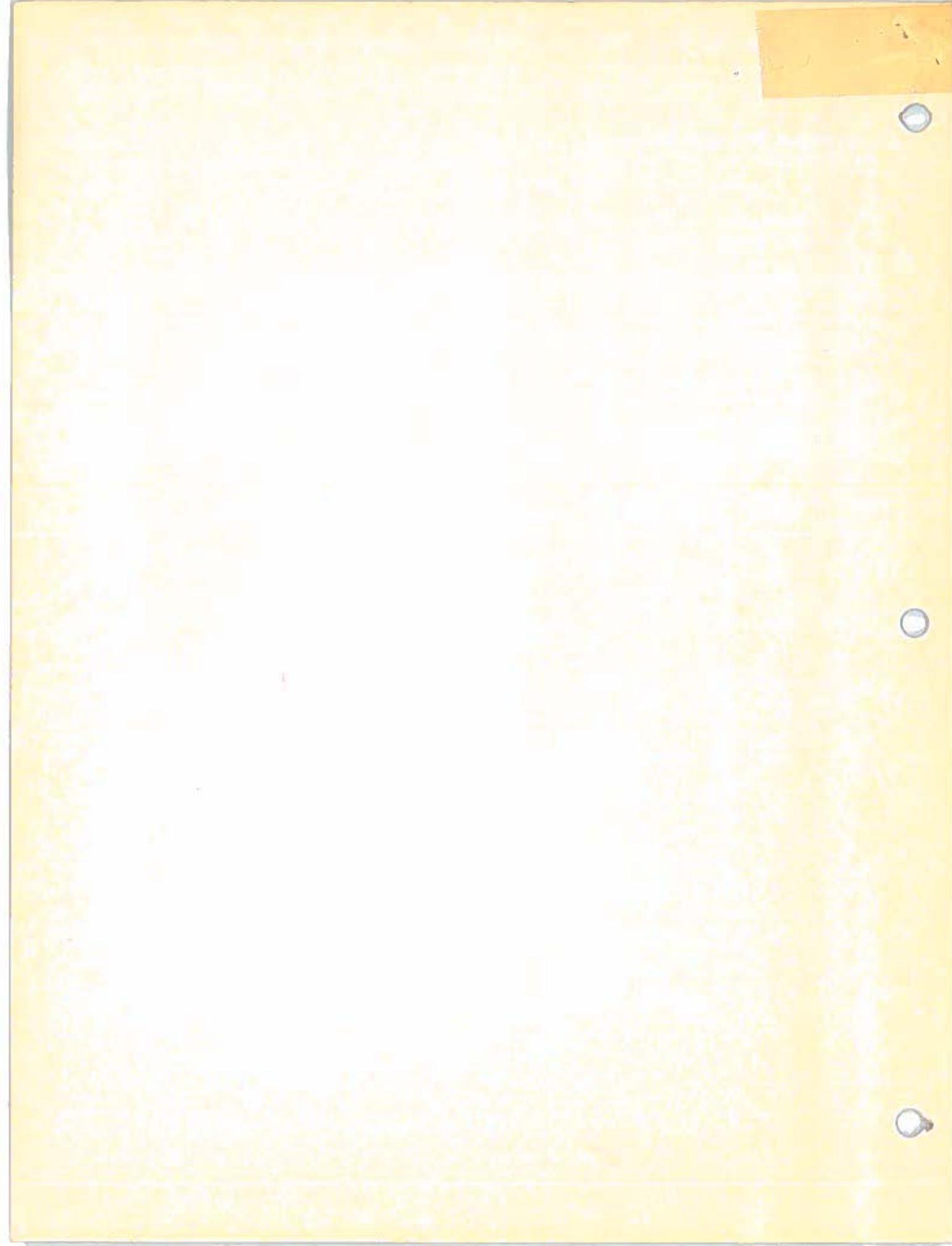
On the basis of additional information furnished, we have no objection to the proposed lease to the Proctor Recreation Association. While the Association is a profit making organization, it is considered that they serve a recreational need in this area. If approved, in view of the nature of the proposed lessee (profit making), we plan to handle as a concession lease with fixed rental. We will require that the golf course continue to be operated as a public course for the duration of their lease. Approval is recommended.

FOR THE DIVISION ENGINEER:

1 Incl
wd 4 cys

CF:
Fort Worth District


HOWARD R. BARE
Chief, Planning Division

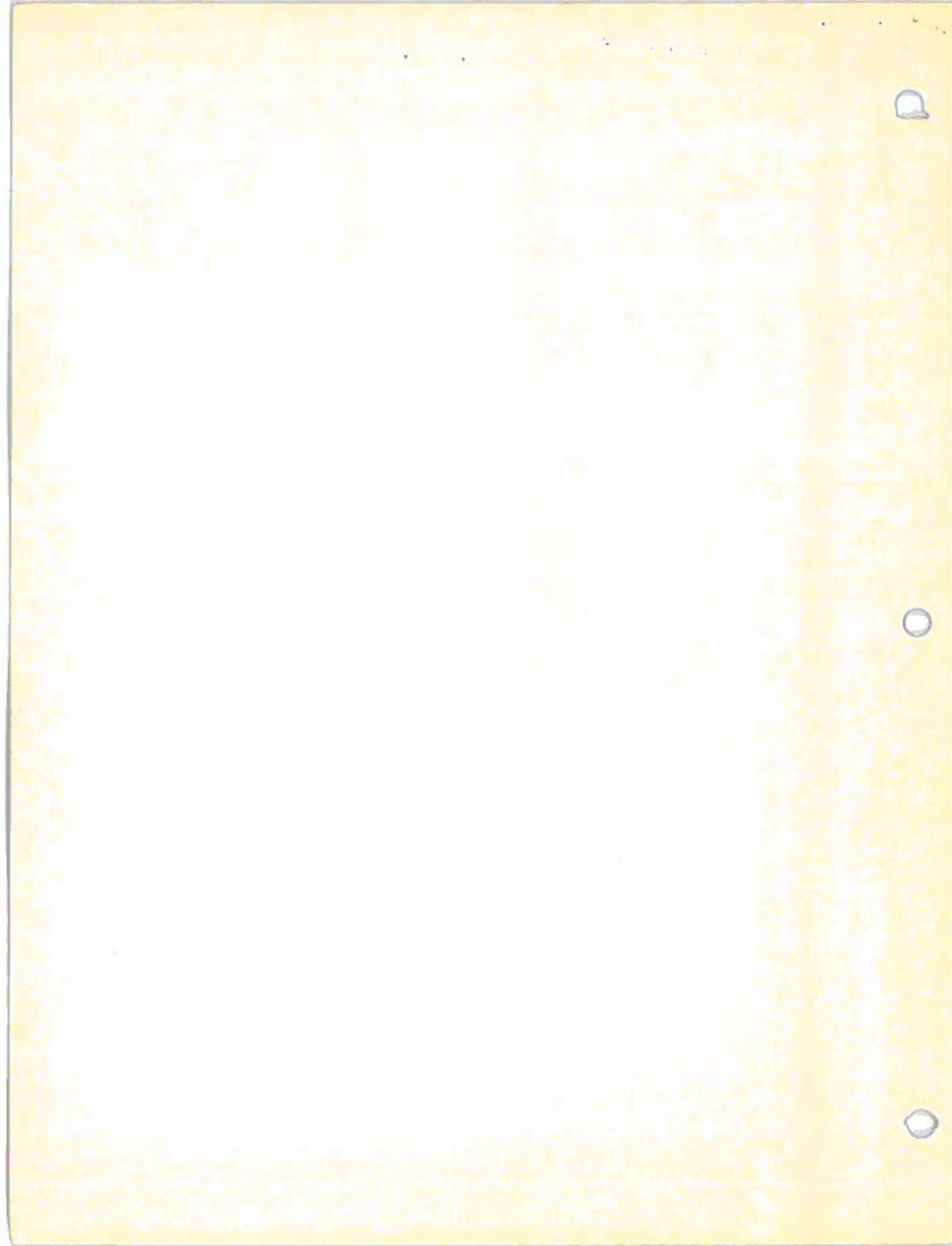


SWDPL-R (SWFED-P 28 Jun 71) 7th Ind
SUBJECT: Proctor Dam and Lake, Leon River, Texas, Design Memorandum
No. 11C, Updated Master Plan

DA, Southwestern Division, Corps of Engineers, 1114 Commerce Street,
Dallas, Texas 75202 7 Feb 72

TO: District Engineer, Fort Worth


H.R.B.



PL-R

DAEN-CWP-V (28 Jun 71) 6th Ind

SUBJECT: Proctor Dam and Lake, Leon River, Texas, Design Memorandum
No. 11C, Updated Master Plan

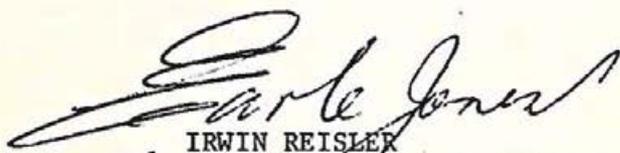
DA, Office of the Chief of Engineers, Washington, D. C. 20314 28 Jan 72

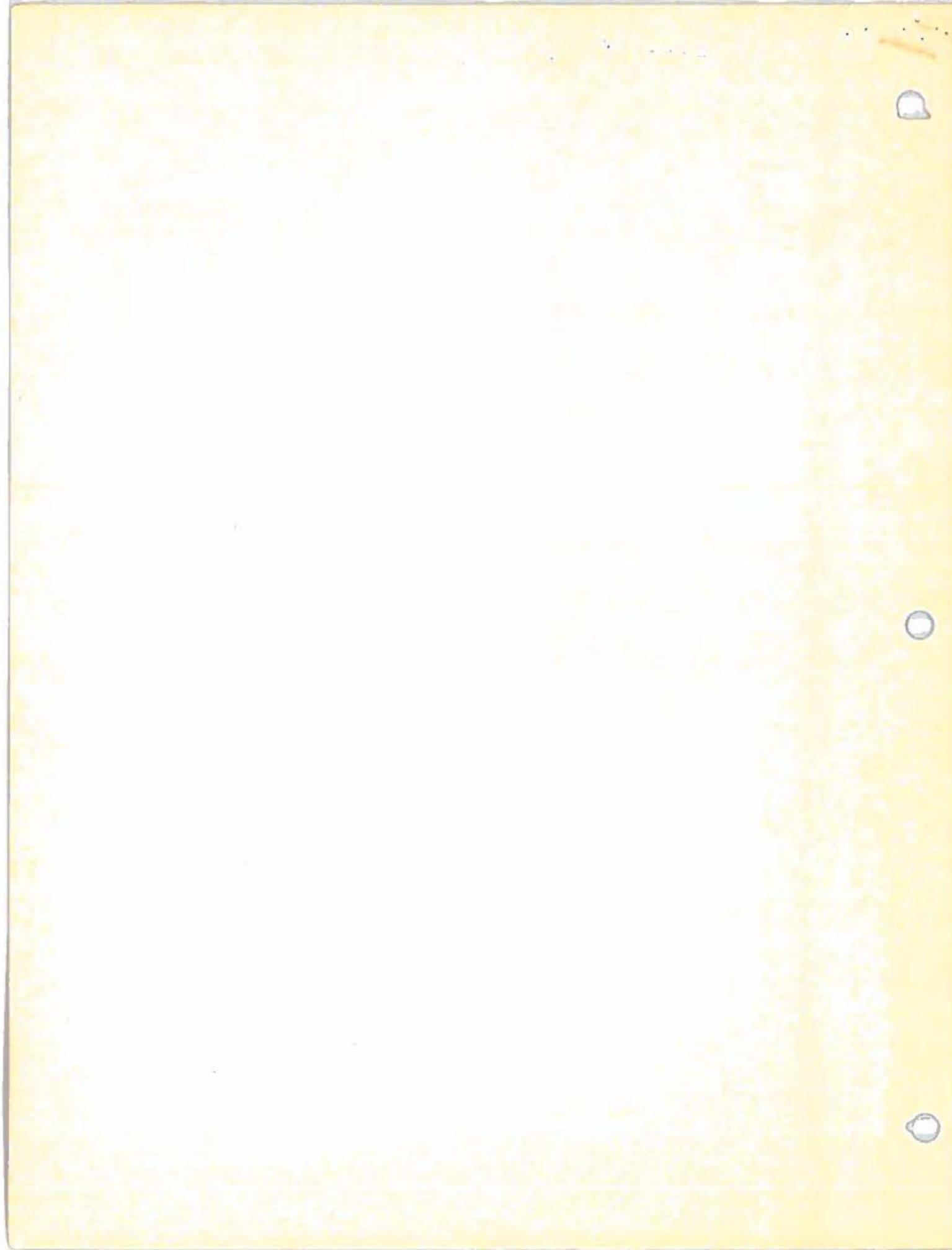
TO: Division Engineer, Southwestern

Approved subject to comments of the Division Engineer in preceding 5th
Indorsement.

FOR THE CHIEF OF ENGINEERS:

wd all incl


for IRWIN REISLER
Chief, Planning Division
Civil Works Directorate

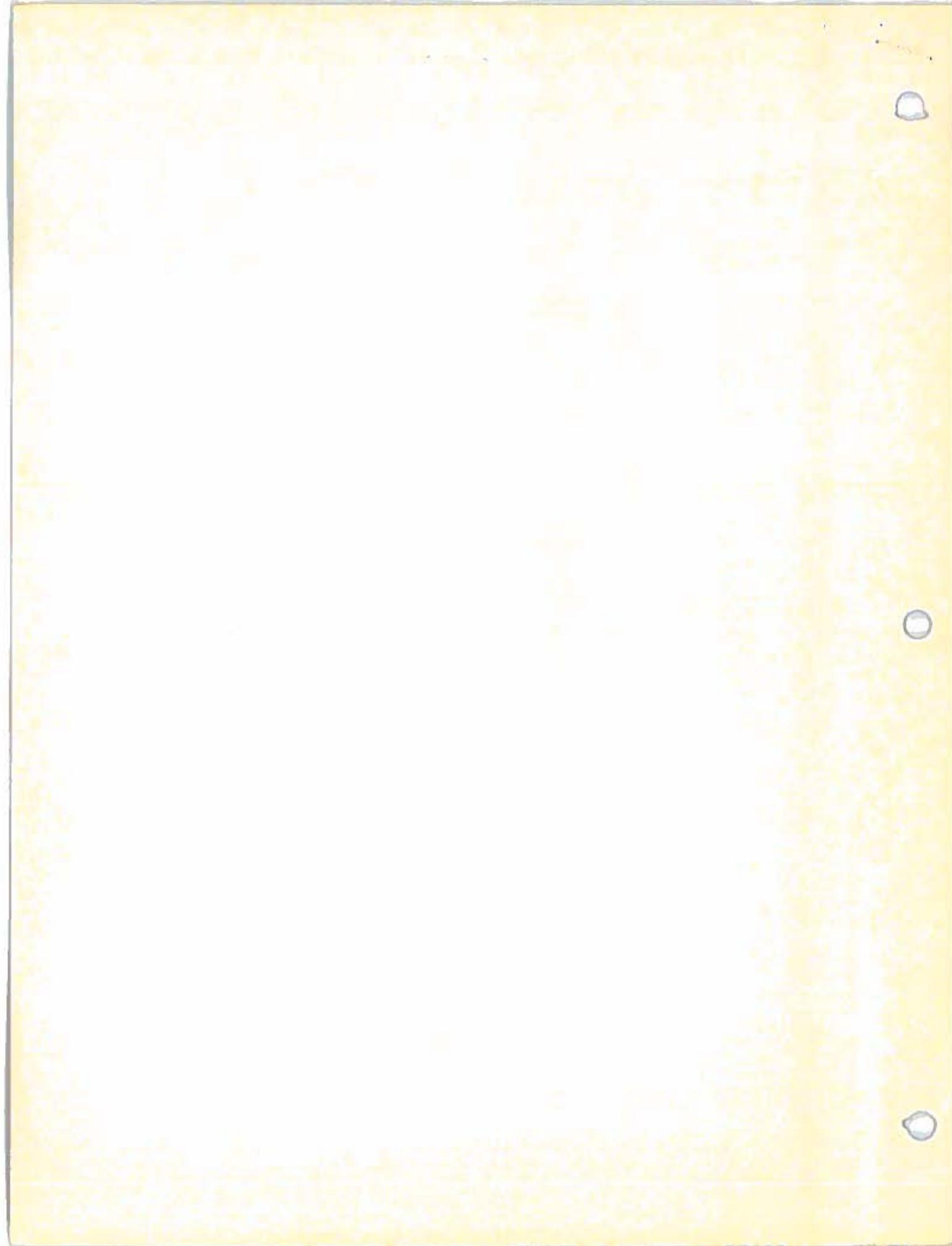


SWDPL-R (SWFED-P 28 Jun 71) 7th Ind
SUBJECT: Proctor Dam and Lake, Leon River, Texas, Design Memorandum
No. 11C, Updated Master Plan

DA, Southwestern Division, Corps of Engineers, 1114 Commerce Street,
Dallas, Texas 75202 7 Feb 72

TO: District Engineer, Fort Worth


H.R.B.



PL-R

DAEN-CWP-V (28 Jun 71) 6th Ind
SUBJECT: Proctor Dam and Lake, Leon River, Texas, Design Memorandum
No. 11C, Updated Master Plan

DA, Office of the Chief of Engineers, Washington, D. C. 20314 28 Jan 72

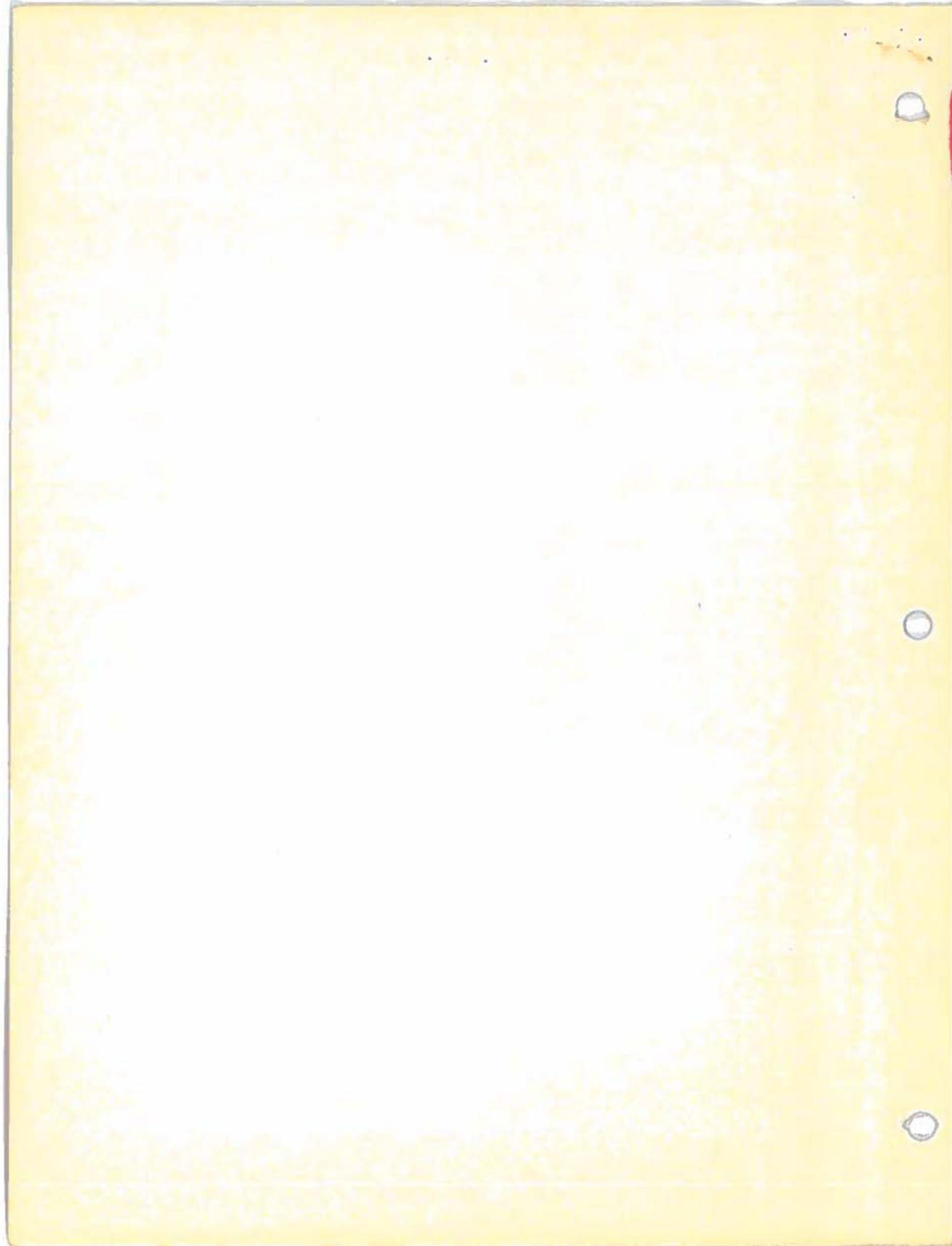
TO: Division Engineer, Southwestern

Approved subject to comments of the Division Engineer in preceding 5th
Indorsement.

FOR THE CHIEF OF ENGINEERS:

wd all incl


IRWIN REISKLER
for Chief, Planning Division
Civil Works Directorate

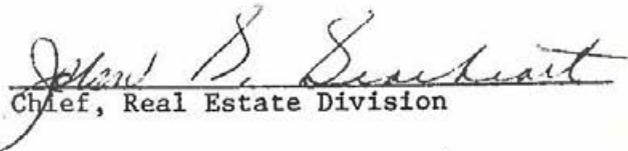


BRAZOS RIVER BASIN, TEXAS

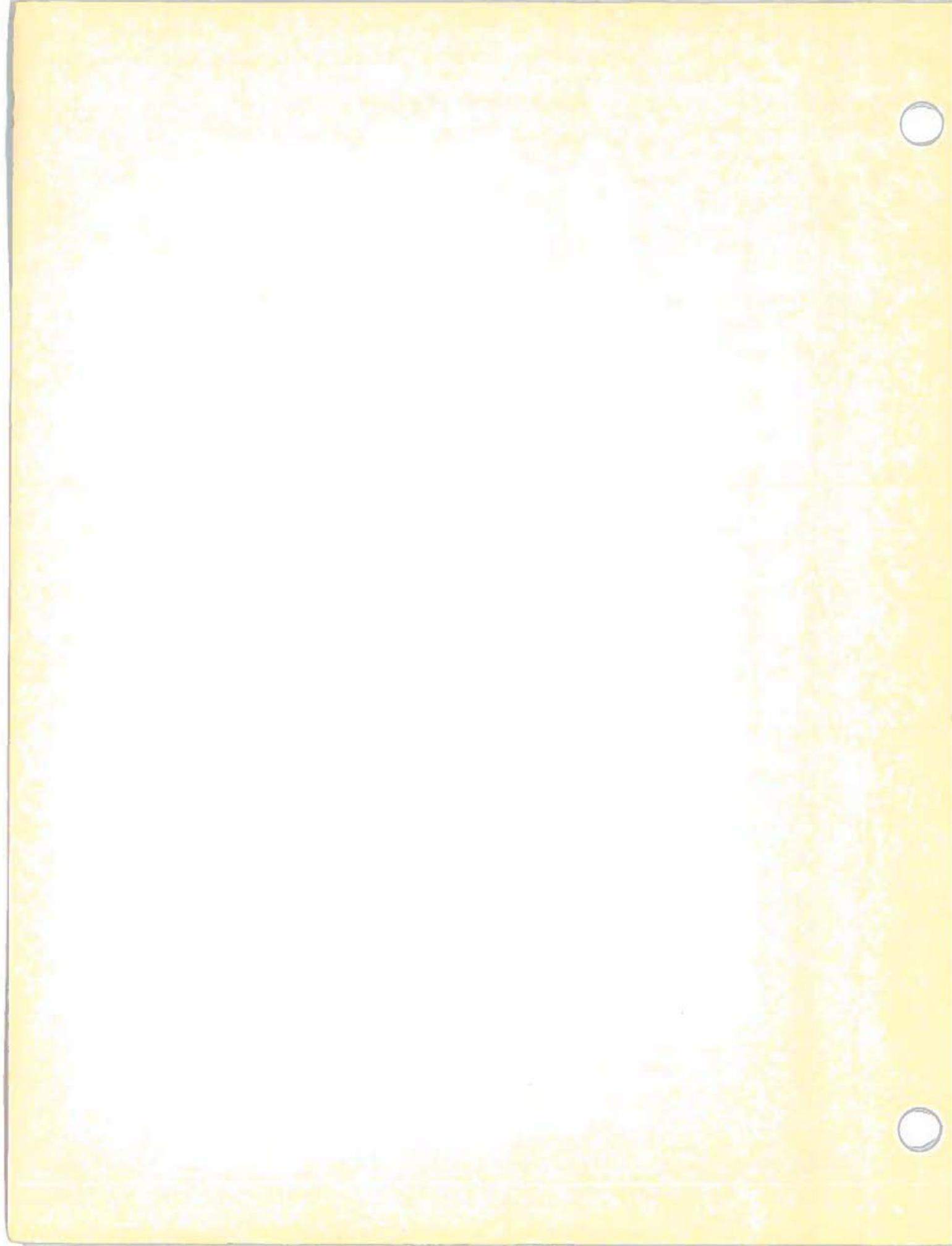
DESIGN MEMORANDUM NO. 11C (REVISED JUNE 1971)

MASTER PLAN
FOR PROCTOR LAKE
LEON RIVER, TEXAS

This report, prepared in the Planning Branch of the Engineering Division, Fort Worth District, has been coordinated with the Real Estate Division and the Operations Division and is recommended for approval.


Chief, Real Estate Division


Chief, Operations Division



BRAZOS RIVER BASIN, TEXAS

DESIGN MEMORANDUM NO. 11C (REVISED APRIL 1971)

MASTER PLAN
FOR PROCTOR LAKE
LEON RIVER, TEXAS

TABLE OF CONTENTS

<u>Paragraph Number</u>	<u>Description</u>	<u>Page Number</u>
I - INTRODUCTION		
1-01	Authority for project	1
1-02	Authority for recreational program	1
1-03	Authority for fish and wildlife program	1
1-04	Federal Water Project Recreation Act (PL 89-72)	1
1-05	Scope of this report	2
1-06	Status of the master plan	2
II - DESCRIPTION AND CHARACTERISTICS OF THE PROJECT		
2-01	Purpose	2
2-02	Conservation storage contract	2
2-03	Location	2
2-04	Accessibility	2
2-05	Reservoir area	3
2-06	Project structures	3
2-07	Pertinent data	3
2-08	Status of project	4
2-09	Fluctuation of pool	4
2-10	Lands	4
2-11	Archeological and paleontological resources	5
III - RECREATIONAL RESOURCES		
3-01	General	5
3-02	Climate	6
3-03	Region served	6
3-04	Population	7
3-05	Estimated attendance	7
3-06	Design load	7
3-07	Related recreation areas	7
IV - PLAN OF DEVELOPMENT		
4-01	General	8
4-02	Basis for selection of areas	8

TABLE OF CONTENTS (continued)

<u>Paragraph Number</u>	<u>Description</u>	<u>Page Number</u>
4-03	Recreational facilities	17
4-04	Recreational and commercial activities	17
4-05	Fees	17
4-06	Design criteria	17
4-07	Public use areas	19
V - LAND MANAGEMENT		
5-01	General	20
5-02	Natural vegetation and priority 1 esthetics	20
5-03	Allocations and discussions	20
5-04	Collateral and interim use	24
VI - RESOURCE ANALYSIS		
VII - RESOURCE DEVELOPMENT		
VIII - SPECIAL FEATURES		
8-01	General	25
8-02	Project clearing requirements for recreation and resource development	25
8-03	Project excavation requirements for recreation and resource development	25
8-04	Protection of sites and resources during construction	25
8-05	Monumentation	25
8-06	Fencing	26
8-07	Subimpoundments	26
8-08	Beautification	26
8-09	Environmental considerations	26
IX - ADMINISTRATION AND MANAGEMENT		
9-01	General	26
9-02	Public use areas	27
9-03	Group and private club areas	27
9-04	Commercial sites and services	27
9-05	Soils	27
9-06	Vegetative cover	28
9-07	Fisheries	28
9-08	Wildlife	29
9-09	Archeological and historical	29
9-10	Rules and regulations	29
9-11	Law enforcement	29

TABLE OF CONTENTS (continued)

<u>Paragraph Number</u>	<u>Description</u>	<u>Page Number</u>
9-12	Fire control	30
9-13	Vector control	30
9-14	Noxious weed control	30
9-15	Land and water zoning	30
9-16	Interim use	30
9-17	Mooring policy	31
9-18	Access by adjacent property owners	31
9-19	Safety measures	31
9-20	Health and sanitation	31
9-21	Protection of biological resources of project lands and waters	32
9-22	Boating	32

X - COORDINATION WITH OTHER AGENCIES

10-01	General	32
10-03	Recreation	32
10-04	Soils	32
10-05	Vegetative cover	33
10-06	Archeological and historical	33
10-07	National Park Service	33
10-08	Fish and Wildlife Service	33
10-09	Public Health Service	33
10-10	State agencies	33
10-11	Organizations	33
10-12	Public hearing	33

XI - JUSTIFICATION FOR DEVELOPMENT

11-01	Economic effect	34
11-02	Benefits	34
11-03	Development and management	34
11-04	Personnel requirements	34

XII - CONCLUSIONS AND RECOMMENDATIONS

12-01	Conclusions	34
12-02	Recommendations	35

LIST OF TABLES

<u>Table Number</u>	<u>Description</u>	<u>Page Number</u>
1	Pertinent features of the project	4
2	Visitation from 1964-1970	6
3	Population projections	9

TABLE OF CONTENTS (continued)

LIST OF TABLES (continued)

<u>Table Number</u>	<u>Description</u>	<u>Page Number</u>
4	Recreation analysis	11
5	Recreation analysis	13
6	Recreation analysis	15
7	Land use acreage	21

LIST OF PLATES

<u>Plate Number</u>	<u>Description</u>
1	Embankment plan and profile
2	Clearing
3	Water depth areas
4	Pool elevations
5	Regional recreation areas
6	General development plan
7	Copperas Creek Park, Sheet 1 of 2
8	Copperas Creek Park mosaic, Sheet 1 of 2
9	Copperas Creek Park, Sheet 2 of 2
10	Copperas Creek Park mosaic, Sheet 2 of 2
11	Sowell Creek Park, Sheet 1 of 2
12	Sowell Creek Park mosaic, Sheet 1 of 2
13	Sowell Creek Park, Sheet 2 of 2
14	Sowell Creek Park mosaic, Sheet 2 of 2
15	High Point Park
16	High Point Park mosaic
17	Promontory Park
18	Promontory Park mosaic
19	Land use map, Sheet No. 1
20	Land use map, Sheet No. 2
21	Land use map, Sheet No. 3
22	Land use map, Sheet No. 4
23	Land use map, Sheet No. 5
24	Land use map, Sheet No. 6
25	Land use map, Sheet No. 7
26	Land use map, Sheet No. 8
27	Land use map, Sheet No. 9
28	Land use map, Sheet No. 10
29	Land use map, Sheet No. 11
30	Land use map, Sheet No. 12

BRAZOS RIVER BASIN, TEXAS

DESIGN MEMORANDUM NO. 11C (REVISED 1971)

MASTER PLAN
FOR PROCTOR LAKE
LEON RIVER, TEXAS

I - INTRODUCTION

1-01. Authority for project.- Congressional authority for construction of the Proctor Lake project on the Leon River, a unit in the plan of improvement for the Brazos River Basin, is contained in the Flood Control Act approved 3 September 1954 (Public Law 780, 83d Congress, 2d Session) in accordance with the plan outlined in House Document No. 535 (81st Congress, 2d Session). Authority to initiate advance planning on the Proctor project is contained in the Public Works Appropriation Act of 1957, approved 2 July 1956 (Public Law 641, 84th Congress, 2d Session) and in Advice of Allotment C-56 dated 20 July 1956.

1-02. Authority for recreational program.- Congressional authority for the recreational program at reservoir projects under the control of the Department of the Army is contained in the Flood Control Act approved 22 December 1944 (Public Law 534, 78th Congress, 2d Session) as amended by the Flood Control Act approved 24 July 1946 (Public Law 526, 79th Congress, 2d Session) and further amended by the Flood Control Act approved 3 September 1954 (Public Law 780, 83d Congress, 2d Session).

1-03. Authority for fish and wildlife program.- Congressional authority for the fish and wildlife program at reservoir projects under the control of the Department of the Army is contained in the Fish and Wildlife Coordination Act of 1958, as amended, Public Law 85-624 (72 Stat 563).

1-04. Federal Water Project Recreation Act (PL 89-72).- The above referenced law is not applicable to this project, but rather the cost sharing requirements set forth in ER 1120-2-404 - Appendix I, Category A, apply. Facilities and improvements may be made available without cost to non-Federal entities for operation, maintenance, and further development at their expense. Further development of "old" areas may be accomplished with 711 funds without the cost sharing provision of the act until 30 June 1976.

1-05. Scope of this report.- This design memorandum presents an updated master plan for recreation development and other water and land uses at the Proctor Lake project. The concept of the plan is to obtain the optimum utilization of the project area for public use, recreational activities, and provide proper stewardship of the water and land areas.

1-06. Status of the master plan.- The draft of the master plan for Proctor Lake was submitted to the Office, Chief of Engineers, by letter dated 6 April 1961, subject: Design Memorandum No. 11B, Master Plan for Proctor Dam and Reservoir on the Leon River, Texas. The draft was returned by Office, Chief of Engineers by 4th indorsement dated 8 February 1962.

II - DESCRIPTION AND CHARACTERISTICS OF THE PROJECT

2-01. Purpose.- Proctor Lake is a flood control and water conservation project.

2-02. Conservation storage contract.- The Federal Government has consummated a contract with the Brazos River Authority, a state agency, whereby the Authority pays for the allocated cost of the conservation storage space in the reservoir below elevation 1162.0, top of the conservation pool. Under the terms of the consummated contract the Authority can delay payment of the allocated cost for the conservation storage space for a fifteen-year period after the date of initiation of deliberate impoundment of water, or until local interests commence using water from the storage space.

2-03. Location.- Proctor Dam is located on the Leon River 238.9 miles above its confluence with Little River. The Leon River is the principal tributary of the Little River and a secondary tributary of the Brazos River. The dam is located in the east central portion of Comanche County, approximately 8 miles northeast of Comanche, Texas. The entire project is located in Comanche County, Texas. The plan and profile of the dam and spillway area are shown on plate 1.

2-04. Accessibility.-

a. Roads.- Proctor Lake is readily accessible over hard-surfaced federal and state highways and county roads. U. S. Highway Nos. 67 and 377, which connect Dublin and Comanche, cross the Leon River about one mile downstream from the dam. State Highway No. 6, which connects Dublin and DeLeon, crosses the Leon River in the upper reaches of the lake. A portion of State Highway No. 16, which connects DeLeon and Comanche, is located in the upper reaches of the lake. Access to the Government property and public access areas is available over existing county roads. These county roads are both improved and unimproved.

b. Railroads.- The nearest railheads are about two miles from each end of the dam. One is at Proctor and the other is at Hasse, Texas.

2-05. Reservoir area.- The topographic features of the upstream two-thirds and downstream one-third of the lake area are in direct contrast from a recreational standpoint. The topography in the downstream one-third of the area adjacent to the conservation pool level has sufficient slope and variation of elevation to make the impounded water suitable for recreational activities. However, the topography in the upstream two-thirds of the area is too flat where the impounded water will be shallow and is unsuitable for most recreational activities. The gentle slopes in the upstream two-thirds of the lake dictate generally that the sites for public use and access be located in the downstream one-third of the lake. The main body of the impounded water at elevation 1162.0 has a maximum length of about eight miles and a width of about one and one-half miles. The impounded water at elevation 1162.0 inundates 4,610 acres and has a capacity of 59,400 acre-feet, of which 28,000 acre-feet are allocated to sediment storage. The tree cover in the lake area adjacent to the Leon River and tributary streams is heavy, consisting of pecan, hackberry, oak, cottonwood, etc. However, the tree cover on the uplands is rather sparse, consisting of scrub oak, hackberry, honey locust, etc. Proctor is located in the Cross Timber and Prairie Vegetative Area.

2-06. Project structures.- The dam is 13,460 feet long, including the spillway. The spillway is located in the right abutment. The crest of the controlled ogee spillway is at elevation 1162.0, and eleven tainter gates, each 40 feet wide and 35 feet high, surmount the spillway crest. The gates are separated by ten concrete piers, each eight feet wide. The net width of the spillway is 440 feet. The outlet works consists of two 36-inch-diameter conduits which are located in the two center concrete piers. Each conduit is controlled by a manually operated sluice gate, which is located on the upstream face of the pier. The invert of each conduit is at elevation 1128.0. The capacity of each conduit is 204 cubic feet per second at elevation 1162.0. The headquarters building and maintenance facilities are located on the right abutment near the southwest end of the dam. A layout indicating the location of these facilities is shown on plate 1.

2-07. Pertinent data.- The pertinent features of the project are shown in table 1.

TABLE 1
PERTINENT FEATURES OF THE PROJECT

Feature	: Elevation: :(feet msl):	Area (acres):	:Capacity :(acre-ft)
Top of dam	1206.0	17,380	514,900
Maximum design water surface	1201.0	15,410	433,000
Upper guide contour for easement acquisition (1)	1200.0	15,050	417,800
Top of flood control storage and gates	1197.0	14,010	374,200 (2)
Five-year flood line	1172.0	6,900	116,900
Spillway crest	1162.0	4,610	59,400 (3)
Top of conservation pool	1162.0		
Five-year drawdown	1157.0	3,480	39,200
Ten-year drawdown	1155.0		
Streambed	1120.0		
Shoreline at conservation pool - about 38 miles.			

- (1) Upper guide contour for easement acquisition applies to the entire lake area.
- (2) Includes 32,700 acre-feet of sediment storage.
- (3) Includes 28,000 acre-feet of sediment storage.

2-08. Status of project.- Construction of the access road leading from U. S. Highways 67 and 377 to the Government property near the west end of the dam was initiated during July 1960. Construction of the dam proper was initiated during January 1961. Deliberate impoundment of water was started 30 September 1963.

2-09. Fluctuation of pool.- The top of the present conservation pool is at elevation 1162.0 and the spillway crest is at elevation 1162.0. Hypothetical regulation of the reservoir for the period 1924 - 1958 was used as a basis for determining the frequency of lake drawdown as shown on plate 4. The flood frequency curve shown on plate 4 was constructed from floods occurring during the period between January 1924 and September 1958, based upon the assumption of a full conservation pool at the beginning of each flood. Water depths in the lake are shown on plate 3.

2-10. Lands.- Approximately 9,021 acres were acquired in fee title and a lesser interest over approximately 6,925 acres. Land for this project was acquired in accordance with the policy outlined in EM 405-2-150. The basis for establishing the five-year flood line and the upper guide contour line is discussed in Design Memorandum No. 1, Hydrology. Fee title was acquired to the lands

blocked-out above the 1172.0 contour, plus additional lands required for project purposes and public requirements. The upper guide line for easement acquisition is the 1200.0 contour, which was established for the flat pool area of the main lake and will be applicable to the entire lake. No other federal agency has jurisdiction over any lands within the project area.

2-11. Archeological and paleontological resources.-- Forty archeological sites were located and recorded during a preliminary survey of the Proctor Lake area, Comanche County, Texas, in November 1959. The two principal cultures that appear to be present are those of the Edwards Plateau Aspect and the Central Texas Aspect. In addition, there are indications of possible pre-Archaic components at two of the sites.

a. During the summer of 1963, the Texas Archeological Salvage Project conducted excavations at two sites in Proctor Lake. They were the Eli Terri Site, located on the Sabanna River and the F. H. Lightfoot Site on the Leon River.

b. Relatively few artifacts were obtained, and the only occupational features were several concentrations of sandstone fragments. Since the loose, sandy soil of the area does not tend to be geologically stratified, the recognition of meaningful artifact sequences is difficult. Nevertheless, the data indicate that both sites were occupied earliest by peoples who used relatively large numbers of milling stones, and later by peoples who had fewer milling stones but a relative abundance of projectile points, scrapers, and knives. Although "pure" components could not be isolated in the poorly stratified deposits, elements considered more or less diagnostic of the Edwards Plateau Aspects, the Central Texas Aspects, and the Henrietta Focus were found in the upper levels of both sites.

c. The project inundated the major portions of both the Terri and Lightfoot sites.

III - RECREATIONAL RESOURCES

3-01. General.-- Proctor Lake is located in an area which is predominantly agricultural. The population of this region is predominantly rural. Principal industries are farming, livestock raising, and related agricultural activities. The production of dairy products and poultry is accomplished on a large scale. Comanche County is the leading county of the United States in peanut acreage and also produces about 1,000,000 pounds of pecans annually. Lake Proctor provides an attractive body of water which has proved very popular and a major recreational resource for the region. The attendance at the project has risen from 358,900 visitors in 1964 (first year of record) to 442,500 in 1970. The increased

emphasis on outdoor recreation indicates that this annual visitation will increase for the next several years. Factors which have influenced the favorable recreational acceptance by the public have been the mild climate, the topography, fish and wildlife resources, and the location of the reservoir in a rural area generally lacking in recreational facilities. Four park areas have been approved for recreational use by the public. The proposed development program includes facilities for picnicking, camping, boating, fishing, and other related recreational activities.

3-02. Climate.- Proctor Lake lies in a moderately humid region and experiences a generally mild climate. In summer the days are hot and the nights warm. The winter temperatures are generally mild, but occasional cold periods of short duration are experienced. Freezing temperatures are experienced occasionally and snowfall is light. Southerly winds prevail during the spring, summer, and fall months, and northerly winds prevail during the winter months. The mean annual temperature over the watershed is about 65 degrees. Temperatures in the watershed have ranged from a maximum of 115 degrees recorded at Eastland, to a minimum of minus 6 degrees recorded at Gatesville. The average length of the growing season, between killing frosts, varies from 226 days in the northern portion of the watershed to 248 days near the southern watershed boundary. The mean annual precipitation over the watershed lying above the Proctor Dam is 28.1 inches.

3-03. Region served.- Two zones of influence were established to determine the potential number of visitors to the lake. The primary zone includes the territory within a 50-mile radius of the dam. The secondary zone includes the area lying between a 50-mile radius and a 100-mile radius of the dam. Both zones lie entirely in Texas and include all or portions of 36 counties. A survey of visitors to the project indicated that approximately 80 percent of the visitors reside within the 50-mile zone, but on weekends and holidays an appreciable number travel more than 100 miles to use the recreational facilities and opportunities of the reservoir. Attendance records are shown in table 2.

TABLE 2

VISITATION FROM 1964-1970

1964	358,900
1965	225,600
1966	411,000
1967	500,600
1968	368,100
1969	414,400
1970	442,500

3-04. Population.- Population projections are figured on two zones of influence, the 50-mile radius of the dam, and between the 50-mile radius and 100-mile radius of the dam. For a breakdown of estimated population, see table 3.

3-05. Estimated attendance.- The continued development and operation of the recreational facilities at Proctor Lake will have an upward effect on the future attendance at the project. It is estimated that the project, under favorable conditions of development will eventually attain an annual visitation of 1,000,000 persons.

3-06. Design load.- The design load is based on 1,000,000 visits per annum. The attendance surveys reveal that during the summer months of June, July, and August, the project attracts about 51 percent of its annual visitors and that 56 percent are attracted on weekends during the summer months. Based on the above statistics, the design load is 10,985. The design load and facility requirements are calculated as shown in tables 4, 5 and 6.

3-07. Related recreation areas.- Located within a 50-mile radius of Lake Proctor are the following recreation areas:

a. Reservoirs.-

(1) Lake Palo Pinto, a municipal water supply project on Palo Pinto Creek about 15 miles southwest of Mineral Wells, in operation.

(2) Lake Leon, a municipal water supply project on the Leon River about 7 miles south of Ranger, in operation.

(3) Lake Daniel, a municipal water supply project on Gonzales Creek about 7 miles south of Breckenridge, in operation.

(4) Lake Cisco, a municipal water supply project on Sandy Creek about 4 miles north of Cisco, in operation.

(5) Lake Brownwood, a municipal water supply project on Pecan Bayou about 8 miles north of Brownwood, in operation.

(6) DeCordova Bend Reservoir, a municipal, industrial and irrigation project on the Brazos River about 8 miles southeast of Granbury, in operation.

b. State parks.-

(1) Lake Brownwood State Park, consisting of 450 acres of rugged shoreline, innumerable secluded coves and picturesque islands.

Facilities include swimming beaches, hiking trails, camping areas, nature study areas, trailer facilities, restrooms, shelters, cabins, and group camp accommodations.

(2) Dinosaur Valley State Park, located near Glen Rose. This state park features, in the bed of the Paluxy River, a 26-inch imprint where a 30-ton brontosaurus went strolling before the dawn of civilization.

(3) Meridian State Park. This park consists of 461 acres of parkland offering camping, trailer facilities, restrooms, picnicking, fishing, swimming, hiking, and boat rental facilities.

IV - PLAN OF DEVELOPMENT

4-01. General.- All public access areas and their related facilities are located on lands purchased in fee title for this project, which is under the jurisdiction of the Corps of Engineers. The plan of development presented herein is intended to provide the optimum recreational development that can be offered at Proctor Lake for the benefit of the general public. The plan is designed to be flexible enough to meet variable conditions and changing needs. It is to serve as a guide for the comprehensive use of the Lake area through the use of sound land use planning principles, and basic site design criteria. Appropriate provisions are included in the plan for providing recreational facilities for current and projected design loads. It is also proposed to provide sufficient services and supplies to meet the visitors' needs and demands. The planned development is divided into two periods, the amount of work that should be accomplished through fiscal year 1976, and the development to be constructed during fiscal year 1977 and subsequent years. The general development plan is presented as plate 6.

4-02. Basis for selection of areas.- Factors considered in selecting the areas for recreational development as presented in the preliminary master plan are as follows:

- a. Access to existing roads.
- b. Topography of the area.
- c. Scenery.
- d. Location of the area with respect to usable exposure of water for recreational activities.
- e. Degree of shelter for protection of boats.
- f. Water depths in coves where marinas are located or proposed.

TABLE 3

POPULATION PROJECTIONS
(Figures based on 1960 series C population projections)

	<u>0-50 mile radius</u>	<u>50-100 mile radius</u>	<u>Total</u>
1960	104,139	1,211,482	1,315,621
1965	100,661	1,322,985	1,423,646
1970	97,665	1,411,109	1,508,774
1975	95,552	1,510,381	1,605,933
1980	94,736	1,627,645	1,722,381
1985	95,302	1,760,769	1,856,071
1990	96,528	1,896,782	1,993,310
1995	98,235	2,032,619	2,130,854
2000	100,719	2,174,170	2,274,889
2005	104,071	2,322,016	2,426,087
2010	107,994	2,489,507	2,597,501
2015	112,226	2,658,819	2,771,045
2020	116,511	2,830,744	2,947,255



TABLE 4

RECREATION ANALYSIS

Design load computations: 4,861

Project: Proctor

Total annual attendance: 442,500 (present)

Design day load

442,500 total annual attendance x .51 visits during summer months x 56 which occurs on weekends = 126,378 total number of weekend users.
Total number of weekend users + 26 weekend days = 4,861 design day load.

Picnicking

Design day load x .20 of total are picnickers = number of picnickers
No. of picnickers x .40 of picnickers requiring facilities = number of picnickers requiring facilities
No. of picnickers requiring facilities + turnover rate of 2 + 3 persons per vehicle = 65 picnic units required.

Camping

Design day load x .20 of total are campers = number of campers
No. of campers + 3 persons per vehicle = 324 camping units required.

Boat ramps

Design day load + load factor of 3 = number of vehicles
No. of vehicles x .21 of vehicles with boats = number of boats
No. of boats + 60 launchings per day = 6 boat launching ramps required.

Beaches

Design day load x .53 swimmers = number of swimmers
No. of swimmers x 60 swimmers on beach = number of beach users
No. of beach users + turnover rate of 3 = number of users on beach at any one time
No. of users on beach at same time x 50 square feet of beach per person = .59 acre of land area required for sand beach

No. of swimmers x .30 are swimmers in water = number of swimmers in water
No. of swimmers in water + turnover rate of 3 = number of swimmers in the water at any one time
No. of swimmers in the water at any one time x 100 square feet of water surface per user = .59 acre water surface required.

10% of swimmers need no additional land.



TABLE 5

RECREATION ANALYSIS

Design load computations: 5,382

Project: Proctor

Total annual attendance: 490,000 (1976)

Design day load

490,000 total annual attendance x .51 visits during summer months x .56 which occurs on weekends = 139,944 total number of weekend users.
Total number of weekend users + 26 weekend days = 5,382 design day load.

Picnicking

Design day load x .20 of total are picnickers = number of picnickers
No. of picnickers x .40 of picnickers requiring facilities = number of picnickers requiring facilities
No. of picnickers requiring facilities + turnover rate of 2 + 3 persons per vehicle = 72 picnic units required.

Camping

Design day load x .20 of total are campers = number of campers
No. of campers + 3 persons per vehicle = 359 camping units required.

Boat ramps

Design day load + load factor of 3 = number of vehicles
No. of vehicles x .21 of vehicles with boats = number of boats
No. of boats + 60 launchings per day = 6 boat launching ramps required.

Beaches

Design day load x .53 swimmers = number of swimmers
No. of swimmers x .60 swimmers on beach = number of beach users
No. of beach users + turnover rate of 3 = number of users on beach at any one time
No. of users on beach at same time x 50 square feet of beach per person = .65 acre of land area required for sand beach

No. of swimmers x .30 are swimmers in water = number of swimmers in water

No. of swimmers in water + turnover rate of 3 = number of swimmers in the water at any one time

No. of swimmers in the water at any one time x 100 square feet of water surface per user = .65 acre water surface required.

10% of swimmers need no additional land.



TABLE 6

RECREATION ANALYSIS

Design load computations: 10,985

Project: Proctor

Total annual attendance: 1,000,000 (ultimate)

Design day load

1,000,000 total annual attendance x .51 visits during summer months x .56 which occurs on weekends = 285,600 total number of weekend users.
Total number of weekend users + 26 weekend days = 10,985 design day load.

Picnicking

Design day load x .20 of total are picnickers = number of picnickers
No. of picnickers x .40 of picnickers requiring facilities = number of picnickers requiring facilities
No. of picnickers requiring facilities + turnover rate of 2 + 3 persons per vehicle = 150 picnic units required.

Camping

Design day load x .20 of total are campers = number of campers
No. of campers + 3 persons per vehicle = 732 camping units required.

Boat ramps

Design day load + load factor of 3 = number of vehicles
No. of vehicles x .21 of vehicles with boats = number of boats
No. of boats + 60 launchings per day = 13 boat launching ramps required.

Beaches

Design day load x .53 swimmers = number of swimmers
No. of swimmers x 60 swimmers on beach = number of beach users
No. of beach users + turnover rate of 3 = number of users on beach at any one time
No. of users on beach at same time x 50 square feet of beach per person = 1.3 acres of land area required for sand beach

No. of swimmers x .30 are swimmers in water = number of swimmers in water
No. of swimmers in water + turnover rate of 3 = number of swimmers in the water at any one time
No. of swimmers in the water at any one time x 100 square feet of water surface per user = 1.3 acres water surface required.

10% of swimmers need no additional land.



4-03. Recreational facilities.- The recreational facilities developed at this project will be based on approved plans. The facilities include, but are not limited to, roads, parking areas, boat launching ramps, sanitary facilities, potable water supplies, public camping and picnic areas, signs, both informational and directional, and essential safety measures required in connection with such facilities.

4-04. Recreational and commercial activities.-

a. At the present time, there are no outgrants pertaining to recreational and commercial activities.

b. Reference is made to SWDR 1130-2-7 for instructions on awarding additional recreational and commercial outgrants as follows:

- (1) Chapter 15 for parks and recreational grants.
- (2) Chapter 16 for commercial concessions.
- (3) Chapter 17 for boats with cabins.

4-05. Fees.- Recreational fees will be charged in accordance with existing legislation and directives in park areas that meet minimum standards as set forth in current EC's and ER's.

4-06. Design criteria.- The following design criteria will be utilized in the planning and construction of the proposed development.

a. Structures.- Structures, such as permanent concession buildings, waterborne toilets, etc. which would be damaged by flooding will be constructed at or above the 50 year-flood elevation 1186.0 msl. Approved plans will be used in the construction of all facilities.

b. Roads and parking areas.- Existing state and county roads which provide access to the various sites will be used. It is proposed to encourage Comanche County and the State to improve to all-weather status all existing county roads that provide access to the public use areas and to pave them at no cost to the Government. All necessary rights-of-way purchased by the Corps of Engineers to provide access from existing roads to selected public use areas will be 100 feet in width. Existing roads within the public use areas will be utilized to the fullest extent practicable. Access roads connecting recreation roads with existing public use recreation areas will vary from 18 to 20 feet in width with 3-foot shoulders. Service roads will

vary from 10 to 12 feet in width with 2-foot shoulders. Except for roads leading to the launching ramps, all roads and parking areas, when practicable, will be kept at least three feet above the conservation pool, elevation 1162.0 msl. Bituminous surfacing will be used for roads and parking areas. Locally available suitable materials will be used for surfacing. Parking spaces for automobiles will be 10 X 20 feet. In order not to destroy the vegetation in areas to be cleared for large parking areas, it is planned initially to provide parking spaces for two cars at intervals to be determined in the field by the location of existing trees. This will provide desired privacy to family groups and save existing tree growth. The two car parking spaces can be connected in the future to provide additional parking space as the need warrants. Excessive clearing will be prohibited on road rights-of-way in trailer and tent camping areas and parking areas. In some areas, one-way drives 12 feet in width will be used for short loops in camping areas. Car-trailer spaces will be 10 X 40 feet for 90 degree head-in parking and 10 X 35 feet for 45 degree parking with 25-foot-wide aisles or access lanes. Hand clearing will be specified in camping areas and in parking spaces for these areas.

c. Water supply.- Potable water in each public use area has been provided from a well and hydropneumatic system.

d. Sanitary facilities.- These facilities will vary with the location and extent of development. The following criteria are used to determine the type of facility used.

(1) Waterborne toilets will be used. No vault type toilets are planned. Waterborne toilets will be provided in service buildings, and beach change shelters. They are located above the 50 year flood frequency elevation wherever possible. Where this is impossible, waterborne facilities will be provided by utilizing waste treatment plants. It is proposed to convert all existing vault toilets to waterborne.

(2) Sanitary sewage dump stations to serve mobile campers are proposed at strategic points in designated public use areas. The locations of these proposed stations are shown on the respective park maps.

e. Power.- The lake area is served by several electric power companies. The lines can be extended when necessary to supply the electric power required. Power lines in park areas will be buried wherever practicable.

f. Waterfront facilities.- Boat launching ramps will be 14 feet, or multiples of 14 feet, in width, with the length governed by the slope of the land and estimated water level fluctuations. The

upper and lower vertical limits and the slope of ramps will be in accordance with paragraph 3a of EM 1130-2-312, wherever practicable. Boat ramps will be constructed of concrete according to approved standard plans and will be located so as to offer a minimum hazard to boating operations. Ramps will be provided with riprap protection as required. Courtesy docks will be provided at boat ramps and in camping and picnic areas. In order to provide adequate protection, boat basins and storage facilities will be located in embayments or tributary arms with sufficient water depth.

g. Plans.- Approved plans will be used in the construction of recreational facilities.

h. Vegetative improvements.- Vegetative improvements will be accomplished in accordance with Public Law 86-717. A vegetative management plan has been prepared and will be included in the Land Use Plan, Appendix B.

i. Signs.- Signs will be constructed and installed in accordance with instructions outlined in ER 1130-2-312 and the Handbook on Signs issued by the Southwestern Division.

j. Clearing for road right-of-way in public access areas.- The clearing limits of the park roads will be confined within the top of the back slope and/or the toe of the fill as far as practicable. In order to prevent the needless destruction of desirable trees and shrubs, the back slope shall be warped around such growth. Excessive ditching, where not needed, will be eliminated in order that vegetation may grow as close to the roads as possible. Selective clearing will be performed to encourage desirable growth on the back slopes, selective clearing will be performed by trained personnel using on the site analysis.

4-07. Public use areas.- A brief description of each public use area is presented in the following subparagraphs.

a. Copperas Creek Park.- (Plates 7 and 9 and aerial mosaic plates 8 and 10. This park is located adjacent to the west end of the dam. It consists of approximately 380 acres above elevation 1162.0. The terrain above the conservation pool elevation varies from moderately steep to flat. The existing tree cover within the park is sparse and is confined principally to the shoreline area. Vegetative improvements are necessary. Access to the park is available from Farm to Market 2861. A commercial concession activity is recommended for approval in this park. A museum is proposed for the area, north-east of the headquarters area and south of the overlook. The Proctor Area Recreation Association, Inc. has a golf course adjacent to the west end of the park.

b. Sowell Creek Park.- (Plates 11 and 12 and aerial mosaic plates 12 and 14). This park lies adjacent to the east end of the dam and extends in a northerly direction. It consists of approximately 420 acres above elevation 1162.0. The terrain above the conservation pool

varies from steep to flat. The tree cover in the area is not too heavy and some vegetative improvements will be required. The south end of the park was used as a borrow area during construction and in its present condition is not suitable for recreational development. This area should be reshaped and a vegetation improvement program started. The county road which provides access to the park is extremely rough and dusty and should be paved.

c. High Point Park.- (Plate 15 and aerial mosaic plate 16). This park is located on the eastern side of a peninsula formed by a loop of the Leon River. The site contains approximately 270 acres above the conservation pool elevation 1162.0. The terrain varies from fairly steep to flat. The existing tree cover is very sparse as most of the land was in cultivation or used for grazing. Access to the park is available from Farm to Market road 1496. The extremely barren conditions which exist in the west end of the park indicate that an extensive vegetative improvement program is needed.

d. Promontory Park.- (Plate 17 and aerial mosaic plate 18).- This park is located just north of the dam and extends into the center of the main lake. The site contains approximately 320 acres above elevation 1162.0. The land varies from steep bluffs to rolling terrain. The tree cover is adequate and the only vegetative improvements required will be in the graded and disturbed areas. Access to the park is available over Farm to Market road 2318.

V - LAND MANAGEMENT

5-01. General.- In general, land at this project has been acquired under two categories. These are fee title and a lesser interest, of which the majority are flowage easements. Acquisition of a major portion of the land of Proctor Lake was completed by the first of 1963. The total amount of land acquired under these categories is shown in table 7. Table 7 also shows the allocation of the land area above the conservation pool level acquired in fee title and allocated for various uses.

5-02. Natural vegetation and priority 1 esthetics will be encouraged and preserved as may be practicable to control soil erosion, enhance wildlife habitat, and to render the shoreline esthetically pleasing. Restrictions placed upon the use of the land because of operational requirements will include any regulations necessary to prevent interference with the project operation and maintenance.

5-03. Allocations and discussions.- The maps designated as the land use maps (see plates 19-30, included in Appendix B) show the allocation of uses, either existing or proposed for the project lands. Adaptability to different uses varies according to immediate surroundings,

TABLE 7
 LAND USE ACREAGE
 PROCTOR LAKE

<u>Project use</u>	<u>Acres</u>
Conservation pool	4,610
Dam and operational purposes	420
Total	<u>5,030</u>
<u>Public use</u>	
Priority 1 park areas	1,390
Wildlife and nature study areas	1,262
Priority 2	36
Priority 3	24
Priority 4	12
Total	<u>2,724</u>
<u>Other land use</u>	
Priority 1 esthetics	<u>1,267</u>
Total	1,267
 Total fee	 9,021
Total flowage easement	6,925
TOTAL	15,946

The total acreage is in accordance with GSA Form 1166 dated 30 June 1970.



scenic beauty, availability of utilities, access to water's edge, access to state and county roads, and location in respect to other developed areas and to trading centers. Allocations made to the recreational priorities are consistent with operation and maintenance requirements and the foreseeable public demands over the life of the project. Based on the estimated requirements, these allocations assume the maximum sustained benefits for the greatest number of people. Lands for project operational purposes, wildlife and nature study area, and priorities 1, 2, 3 and 4 are outlined in the following subparagraphs.

a. Project use.- The land use map plates (19-30, included in Appendix B) and table 7 show the lands designated for project use, public use, and other uses which include esthetic areas to complement public use areas.

b. Priority 1.- Areas shown on the land use map for priority 1 and esthetic areas are above the conservation pool level, elevation 1162.0. Priority 1 areas are reserved for use by the general public and are to be developed and administered by the Corps of Engineers or by federal and state and local governmental agencies for park and recreational purposes and commercial concession purposes.

c. Wildlife and nature study area.- The wildlife and nature study area designated on the land use map is intended to provide through proper management suitable habitat for the propagation and preservation of the native wildlife species and to promote a greater variety of species. Grazing the areas will be limited so as to provide wildlife feed and cover. The wildlife and nature study area is proposed for a habitat improvement program to provide special day use areas for bird watchers, nature groups, dog trainers, scout and campfire groups. This area is located in the Upper Leon River Area. The area is fairly well covered in timber with pecan, oak, elm, ash, cedar and underbrush. The open areas consist of native and introduced grasses. The nature area is proposed to provide special use areas for wilderness camping, hiking, nature groups and bird watchers. Access will be provided by foot trails. The boundaries will be marked with signs and/or fencing. Detailed management plans and cost estimates will be added to the master plan as a supplement after the areas are surveyed and a rough trail laid out to the various points of interest to be developed.

d. Priority 2.- Priority 2 land was selected for use by a nonprofit organization or agency for the purpose of rendering a public recreational educational service of a charitable or character building nature on a nonexclusive basis. Consideration was given to scenic beauty, tree cover, adaptability, access to water's edge, sheltered water for boat protection and swimming, and open water for other sports. The priority 2 and 3 lessee or group user may exercise permissive use, along with the general public, below the five-year flood frequency of 1172.0 feet msl use to the water's edge (see plates 27 and 29 included in Appendix B). There are four sites located on the lake in this plan.

e. Priority 3.- These lands are available to accommodate the need for nonprofit organizations or agencies providing public recreational opportunity. It is required that organizations requesting a site present a development program that will reflect authorization of the land for public use benefits. (See plates 27 and 30 included in Appendix B). There are two sites in this plan.

f. Priority 4.- This priority provides land for private clubs which include club development for the protection and care of private boats on a noncommercial basis or other club use. Priority use will have a provision prohibiting the construction of buildings for human habitation below the upper guide contour of 1200 feet msl. Several residential and cottage type developments have developed around the reservoir due to the project. There are four sites located on the lake in this plan. (See plates 26, 27, 28 and 29).

g. Easements.- All outgrants, including easements for roads and utility lines, will be processed on an individual case basis. The policy of attempting to have roads and utility lines located on privately owned lands will be adhered to. Flowage easement acquired provides for periodic inundation by reservoir waters and no building for human habitation to be constructed on flowage easement lands. The written consent of the District Engineer shall be obtained for the type and location of any structure and for appurtenances thereto now existing or to be erected or constructed on flowage easement land.

5-04. Collateral and interim use.- This plan proposes to continue to offer lands available for grazing and hay production purposes until such time as a higher priority category develops for the reservoir lands. Leases will provide for cooperation in programs for management and improvements of fish and wildlife in furtherance thereof. The leased premises will be subject to free public use for hunting and fishing. It is proposed that all Government lands formerly cultivated be planted and maintained to a permanent vegetative cover. This restriction is considered advisable in order to prevent excessive siltation of the reservoir. Protection of desirable trees and native grasses will be encouraged so as to augment the natural beauty and improve the land. Any land use practices in the outleased program will be prepared with the cooperation of the U. S. Department of Agriculture representatives.

VI - RESOURCE ANALYSIS

For an analysis of the resources at Proctor Lake, see the Land Use Plan, Appendix B.

VII - RESOURCE DEVELOPMENT

For the development of the resources at Proctor Lake, see the Land Use Plan, Appendix B.

VIII - SPECIAL FEATURES

8-01. General.- There are specific project features that require special consideration because of their relationship to recreation and resource development. These features are discussed in this chapter.

8-02. Project clearing requirements for recreation and resource development.- The features considered were requirements for shoreline stabilization, aesthetics, vistas, safety, health, beach and marina development, and fish and wildlife. Clearing criteria contained in ER 415-2-1 for multiple purpose reservoirs cover most of the requirements. However, additional requirements were necessary as shown below.

a. Water tolerant species of trees were left above the top of the conservation pool.

b. Trees in boat harbors were cut close to the ground line.

c. Stumps in the beach areas were removed.

8-03. Project excavation requirements for recreation and resource development.- Future marina concession sites may require some excavation prior to developing a marina. Determination will be made prior to advertising the proposed lease as to whether the excavation will be accomplished by the Corps of Engineers or be the responsibility of the successful bidder. All excavation will be in accordance with the provisions of Public Law 91-190.

8-04. Protection of sites and resources during construction.- Construction contracts will contain statements to the effect that trees and other vegetation will not be subjected to unnecessary mechanical, chemical or fire damage with penalty clauses for violation. Hired labor forces will be given instructions and proper supervision to protect critical sites and endangered resources. Access roads terminating in the lake will be properly marked with signs prior to opening them to public use. Before construction is commenced on new recreation facilities, the contracting officer and district personnel, along with project personnel, will set the limits of the construction area. Any resource within the construction site will be protected when considered necessary.

8-05. Monumentation.- Monuments have been set along the Government's fee acquisition line and iron pins at strategic locations along the flowage easement line in order to improve administration of the lands over which the Government has acquired fee title or a lesser interest. The Government property lines should be fenced and/or clearly marked to cut down on encroachments. Clearing of the line should be done regularly.

8-06. Fencing.-- Fencing will be provided where necessary for safety purposes.

8-07. Subimpoundments.-- There are no subimpoundments planned in the development program.

8-08. Beautification.-- Beautification will be considered in facility design, relocations, excavation and spoil areas, clearing, landscaping and planting plans. Plant species utilized in planting along the shoreline within the project areas will be water tolerant and should be selected preferably from the species indigenous in the project area. Plant material utilized in plantings within the project area should be resistant to cotton root rot. Also, for some types of plants, it may be necessary to reduce the alkalinity to obtain desirable growth.

8-09. Environmental considerations.-- Reference is made to the requirements set forth in the National Environmental Policy Act of 1969 (PL 91-190). A five-point statement in response to this Act is not required for this project.

IX - ADMINISTRATION AND MANAGEMENT

9-01. General.-- The policies regarding the administration and management of the project are formulated to make the majority of the lake and the Government-owned land available to the visiting public to the fullest extent compatible with an orderly and planned development. These policies control the administration, management, and development of the project area but will not conflict with the operation of the project for its authorized purposes. They will be based on legislation enacted by Federal, state, and local governmental agencies and experience gained in the operation and development of similar projects, public parks, etc. The administration and management of the project are accomplished jointly through the district office and field personnel of the Fort Worth District.

a. District office.-- District office personnel are principally concerned that the project is operated and managed in accordance with purposes for which it was authorized; the nature, extent, location, construction codes, and requirements of developments and improvements; coordination and reconciliation of activities relative to policies and regulations; relations with representatives of other agencies and individuals; processing of leases, licenses, and permits not delegated to field personnel for issuance; and public relations.

b. Field office.-- The field personnel are trained in the rudiments of activities that are favorable to the operation and maintenance of the project. Some of these are fire control, vector control, safety, etc. Sufficient materials and equipment are available at the project for the field personnel to conduct these

activities when the conditions demand. The reservoir manager assigned responsibility for all field activities has been delegated as much authority as is practicable in order to maintain expeditious and beneficial administration and management of the project. He has been furnished with copies of all rules and regulations pertaining to maintenance and management of the project, including a manual outlining his procedures, policies, responsibilities, and duties. (See chapter 3 of SWDR 1130-2-7).

9-02. Public use areas.- The public use areas, which include four park areas and one wildlife area, will be administered and managed in accordance with EM 1130-2-302, ER 405-2-835, ER 405-1-830, SWDR 1130-2-7, and the Operation and Maintenance Manual, to provide the greatest feasible safe use of the areas. The administration and management of the wildlife areas will be coordinated with the U. S. Fish and Wildlife Service, the U. S. Soil Conservation Service, and the Texas Parks and Wildlife Department.

9-03. Group and private club areas.- These areas will be administered and managed in accordance with EM 1130-2-302, ER 405-1-830, ER 405-2-835, SWDR 1130-2-7, and the Operation and Maintenance Manual. Churches, scouts, and other organizations with compatible recreation programs will be encouraged to share available sites to insure that the sites will be effectively utilized by the greatest number of persons. This will result in greater utilization of project lands and at the same time reduce the cost of development, maintenance, and operation of the areas for these organizations. The use of these areas by an organization will depend on the ability and willingness of the group to assume the responsibilities for the development and management of the areas.

9-04. Commercial sites and services.- At this time there are no commercial services. A commercial site has been advertised in Copperas Creek Park, but no bids were received. Concession leases will be granted in a fair and impartial manner by advertising and awarding the lease in accordance with ER 405-1-830. The concession prices to be charged for commodities and services will be subject to the approval of the District Engineer.

9-05. Soils.- Use and management of the soil resources will be planned to maintain and improve the resources through proper use, erosion control, and establishment and improvement of vegetative cover. Management practices will include the following and will be accomplished in accordance with guidance and instructions of district specialists, i.e., agronomist, biologist, forester, and landscape architect.

a. Shaping borrow, spoil, and other disturbed areas and establishing desirable vegetative cover.

b. Stabilizing cultivated fields by establishing desirable vegetative cover.

c. Shaping and stabilizing gullies by using diversion terraces and desirable vegetation.

d. Maintaining seeding, sodding and landscape plantings accomplished during construction by proper watering, fertilizing, mowing and pruning.

e. All agriculture and grazing leases will be based on approved plans and coordinated with the Soil Conservation Service, U. S. Department of Agriculture.

9-06. Vegetative cover.

a. Selection of planting areas will be coordinated with the district agriculturist to insure that the plantings will be protected in the initial stages of development. Protection will be accomplished by fencing and/or coordination of the leasing program with the planting program to allow at least three years growth on planted stock before allowing the areas to be grazed. Qualified personnel under the direction of the district forester, agronomist or landscape architect will supervise the planting operation and selection of species.

b. Those areas within the boundaries of extensive tree cover (wildlife area) will be treated as necessary to maintain effective ground cover and to promote desirable wildlife habitat. Management will include cutting in some areas to promote browse production and possibly planting to provide cover. These activities will be done by project personnel under the direction of the district forester, biologist, or landscape architect.

c. Selection of trees to be saved inside the clearing area will be made by project personnel under the supervision of the district forester and landscape architect. The esthetic arrangement and selection of ornamental plantings in park areas and around facilities will be designed and selected by the district landscape architect. The implementation of planting plans will be done by contract, hired labor, or project personnel under the direction and supervision of the district landscape architect.

9-07. Fisheries.- A fisheries management program is planned for the purpose of deriving maximum benefits from the fisheries resource. While such a program is essentially the responsibility of the Texas Parks and Wildlife Department, the considerable burden imposed upon the Department by the increasing number of Corps of Engineers projects requires that the Fort Worth District supply all

possible aid and assistance to secure an adequate management program. The Corps of Engineers will solicit the assistance of and coordinate the efforts of the U. S. Fish and Wildlife Service and the Texas Parks and Wildlife Department. The management program will be carried out under the supervision and guidance of the district biologist.

9-08. Wildlife.-- A wildlife management program is planned for the purpose of deriving maximum benefits from the wildlife resource. The responsibility for such a program rests primarily with the Texas Parks and Wildlife Department. However, since these areas do not meet the state's criteria for wildlife management areas, the Corps of Engineers will initiate a cover restoration program to insure an adequate management plan. The Corps of Engineers has and will continue to solicit the assistance of and coordinate the efforts of the U. S. Fish and Wildlife Service, the Soil Conservation Service, and the Texas Parks and Wildlife Department. The management program will be carried out under the supervision and guidance of the district biologist. A wildlife habitat management plan will be developed as a supplement to this master plan.

9-09. Archeological and historical.-- Archeological excavation and historical sites will be administered in accordance with ER 405-1-875. The District Engineer is authorized to permit only the National Park Service to use directly or through its cooperating agents such portions of Army properties under his jurisdiction which are available for historical sites and archeological excavations. Other applicants will be so advised, so that the National Park Service may make such arrangements with the applicant as authorized.

9-10. Rules and regulations.-- In order that the greatest feasible number of people may have an equal opportunity to enjoy the recreational resources and facilities available at the project, the establishment of certain rules and regulations has been necessary.

Basic rules and regulations governing public use of this reservoir area were prescribed by the Secretary of the Army and published in the Federal Register dated 14 March 1962. They are incorporated as Title 36, Chapter III, Part 311, Code of Federal Regulations. They have been supplemented by the District Engineer. Printed copies of the rules and regulations and project pamphlet maps are readily available at the project office. (See Chapter 29 and Exhibit A of SWDR 1130-2-7).

9-11. Law enforcement.-- Enforcement of civil and criminal laws at the reservoir will remain the responsibility of duly constituted officers of federal, state, and local governmental agencies. The Corps of Engineers, through field personnel, has cooperated fully with all law enforcement officers responsible for the enforcement of laws relative to civil actions, game and fish

conservation, public health and sanitation, boating, and prevention of pollution. Title 36, Part 311 - Rules and Regulations Governing Public Use of Certain Lake and Reservoir Areas, now applies to the Corps of Engineers.

9-12. Fire control.- A fire control plan has been developed by the reservoir manager, and agreements have been made with local fire departments to assist in suppressing fires. Burning will not be authorized or permitted on the project lands without the reservoir manager's approval and supervision.

9-13. Vector control.- The potential malaria hazard was evaluated prior to construction by the U. S. Public Health Service in a report which was included as Appendix II to the General Design Memorandum. The report recommended several preventive measures, one of which was a mosquito surveillance program. A surveillance program has been conducted each year since impoundment, and efforts will be continued to prevent an outbreak of malaria or encephalitis which could be attributed to the construction of the reservoir. Vector surveillance and control programs will be conducted under the supervision and guidance of the district biologist in cooperation with the federal and state health units.

9-14. Noxious weed control.- Noxious weeds have not created a problem to date, probably due, in part, to the short periods of freezing weather each winter and the natural turbidity of the water. Should they become a problem, a control program will be initiated.

9-15. Land and water zoning.

a. The land area has been zoned for allocation to the various priority uses.

b. The water area has been zoned and buoys will be placed which limit the speed of watercraft to five miles per hour at the spillway, commercial docks, and other sites where safety is required. Buoys will be installed at designated swimming beaches.

c. Zoning for special events of short duration will be permitted after approval from the reservoir manager.

9-16. Interim use.- Lands not required for immediate or near future use for public use, fish and wildlife, and project operations may be leased for priorities 2, 3, and 4 activities, grazing purposes, designated for hunting, or left idle for soil restoration through native plant succession. Management plans for priorities 2, 3, and 4 use and grazing will be developed as supplements to this master plan.

9-17. Mooring policy.-

a. Individuals who desire to store and moor boats, boat-houses, docks, barges and other vessels on the lake for periods in excess of three days at any one time shall arrange for such storage in selected storage areas leased to concessionaires. Such concessionaires shall be responsible for the care and protection of vessels stored with them when not in use, and for the movement of such vessels in case of fluctuation of the reservoir level, and in other emergencies. Permits will not be issued by the Corps of Engineers for the construction of permanent piers and docks, or for the permanent mooring of any individual boats, boat docks, boathouses, barges, houseboats, or other vessels on reservoir waters and project lands at locations other than those included in concession and/or other lease areas.

b. When justified need for boat storage and vessel mooring facilities develops at various locations throughout the reservoir area, the Corps of Engineers will attempt to provide for these facilities.

c. Written requests from county authorities or other governmental agencies for authority to construct access roads to lake waters, and build boat launching facilities and parking areas at the ends of such roads in order to serve adjoining real estate developments will be considered for approval.

d. Bona fide yacht clubs will, upon written request, be given consideration to lease certain land and water areas for the purpose of providing collective multiple storage facilities for vessels belonging to members of the club.

9-18. Access by adjacent property owners.- Owners of land adjacent to the project will be allowed reasonable access to the lake in accordance with SWDR 1130-2-7 dated 25 September 1968. This does not mean that the adjacent owners are conveyed any rights to Government-owned lands, nor does it mean that these owners have any private rights for lease thereof for access or recreational purposes. Consents to tie into Government-owned roads located on land on which the Government owns only a road easement will be obtained in accordance with SWDR 405-2-9 dated 20 April 1965. Consents to tie into Government-owned roads located on fee-owned land will require the approval of the Secretary of the Army, who must find that the grant will not be against the public interest.

9-19. Safety measures.- Safety programs and measures have been administered in accordance with SWDR 1130-2-7 dated 25 September 1968 and the Operation and Maintenance Manual.

9-20. Health and sanitation.- The development and use of the lake are planned for the public interest and the utmost consideration has been given to the maintenance of high standards of

public health and safety. The state health laws, rules and regulations are applicable to all facilities constructed and provided at the project. Commercial operators and/or licensees are also required to abide by the state health laws, rules and regulations. Disposal of waste, trash and debris will not be permitted on Government land without authorization and then only in accordance with state laws and at designated locations.

9-21. Protection of biological resources of project lands and waters.- A biological management program for Proctor Lake is planned for the purpose of deriving maximum benefits from fish and wildlife resources associated with the project. The Corps of Engineers will solicit the assistance of, and coordinate the efforts of, the U. S. Fish and Wildlife Service, the U. S. Public Health Service, the Texas Parks and Wildlife Department, and the Texas State Department of Health in the implementation of this program.

9-22. Boating.- Boat permits are required for some floating craft. (See Chapter 5 of SWDR 1130-2-7).

X - COORDINATION WITH OTHER AGENCIES

10-01. General.- Section 4 of the Flood Control Act approved 22 December 1944, as amended, provides that development of lake areas controlled by the Department of the Army shall be concerned with the public interest and that preference shall be given to Federal, State, and local governmental agencies for use of areas suitable for recreational purposes. Federal, state, and local governmental agencies were contacted during the planning stage of the original master plan, and the plan has been coordinated with their desires.

10-02. This updated plan of development will be submitted to other Federal, state, or local governmental agencies for review and comment. It is considered that the updated plan is in consonance with the policies and comments stated by these agencies when the original master plan was developed. Liaison will be maintained with these agencies to insure that recreational development at the project is in accordance with the State Comprehensive Outdoor Recreation Plan.

10-03. Recreation.- Planning for recreational development was coordinated with the Texas Parks and Wildlife Department's State Comprehensive Outdoor Recreation Plans, the Bureau of Outdoor Recreation survey and recreation trends, the needs for the handicapped furnished by the State Department of Mental Health and Mental Retardation and the Texas Education Agency.

10-04. Soils.- Planning for protection, development, and management of soil resources and their effects upon recreational development and construction was coordinated with the Soil Conservation Service. Their survey data and guidance were utilized in developing the plan.

10-05. Vegetative cover.- Same coordination as for soil resources. Coordination will continue through development and management programs in reference to the Memorandum of Understanding, 27 March 1963, between the Secretaries of the Department of Defense and the Department of Agriculture for the conservation of forest, vegetative cover, soil, and water on lands administered by the Department of Defense.

10-06. Archeological and historical.- Planning for development and protection of archeological resources and their effects upon recreation development and construction was coordinated with the National Park Service. Development of historical resources will be accomplished by initiating a historical research program conducted by competent historians. The program will be coordinated with state universities, state historical commissions and societies.

10-07. National Park Service.- On 29 February 1960 representatives of the Region Three Office, National Park Service, and of the Corps of Engineers reconnoitered the Proctor Lake area to evaluate the recreational potential of the project. A copy of this report is included in Design Memorandum No. 11B as Appendix I.

10-08. Fish and Wildlife Service.- In May 1960, the Bureau of Sport Fisheries and Wildlife, of the U. S. Fish and Wildlife Service, in cooperation with the Texas Game and Fish Commission, submitted a report on the fish and wildlife resources of the project. A copy of this report is included in Design Memorandum No. 11B, as Appendix II.

10-09. Public Health Service.- In February 1957, the U. S. Public Health Service, in cooperation with the Texas State Department of Health, submitted a report entitled "Preliminary Evaluation Report on Vector Problems related to the proposed Corps of Engineers Proctor Dam and Reservoir, Texas." A copy of this report is incorporated in Design Memorandum No. 5, General, as Appendix II.

10-10. State agencies.- At the present time, no state agencies have shown any interest in an area at the project.

10-11. Organizations.- No applications have been received from quasi-public, religious and educational organizations, and private clubs for areas to be developed for recreational purposes. The Boy Scouts of America has made inquiries.

10-12. Public hearing.- A public hearing was held at Comanche, Texas, on 25 October 1960 with a total attendance of about 100 people, which included representatives of various state and local governmental agencies and interested individuals. The purpose of the hearing was to inform the public of the proposed plan of land acquisition for Proctor Lake.

XI - JUSTIFICATION FOR DEVELOPMENT

11-01. Economic effect.- Proctor Lake has been in operational status since September 1963. During its operation to the present time, the project has been one of the prime recreation attractions of Central Texas. Visitation to the project has produced an increase in business activities in the towns within the immediate vicinity of the project.

11-02. Benefits.- The benefits that will be derived by the visiting public from the use of the Government-owned land and the facilities developed for recreational activities will be in the form of pleasure and relaxation. Recreational benefits may have a higher monetary value to certain individuals than others, depending upon individual recreational interests, and ability and willingness to pay for recreational activities.

11-03. Development and management.- The plan of development and management as presented herein complies with the requirements of the Flood Control Act of 22 December 1944, as amended, and existing policies adopted and instruction issued by higher authority. Facilities presented in this plan were derived from the computation of the design day load at the project and in accordance with ER 1130-2-312. See Tables 4, 5 and 6 for details of this computation.

11-04. Personnel requirements.- The full or part time services of the personnel shown in the following tabulation will be required for recreation and resource management.

Reservoir Manager, GS-09
Clerk-Typist, GS-05

Operation and Maintenance

Dam Equipment Repairer lead foreman, WS-07
Two Dam Equipment Repairers, WG-08
Three Reservoir Construction and Maintenance, WG-05

Public Use

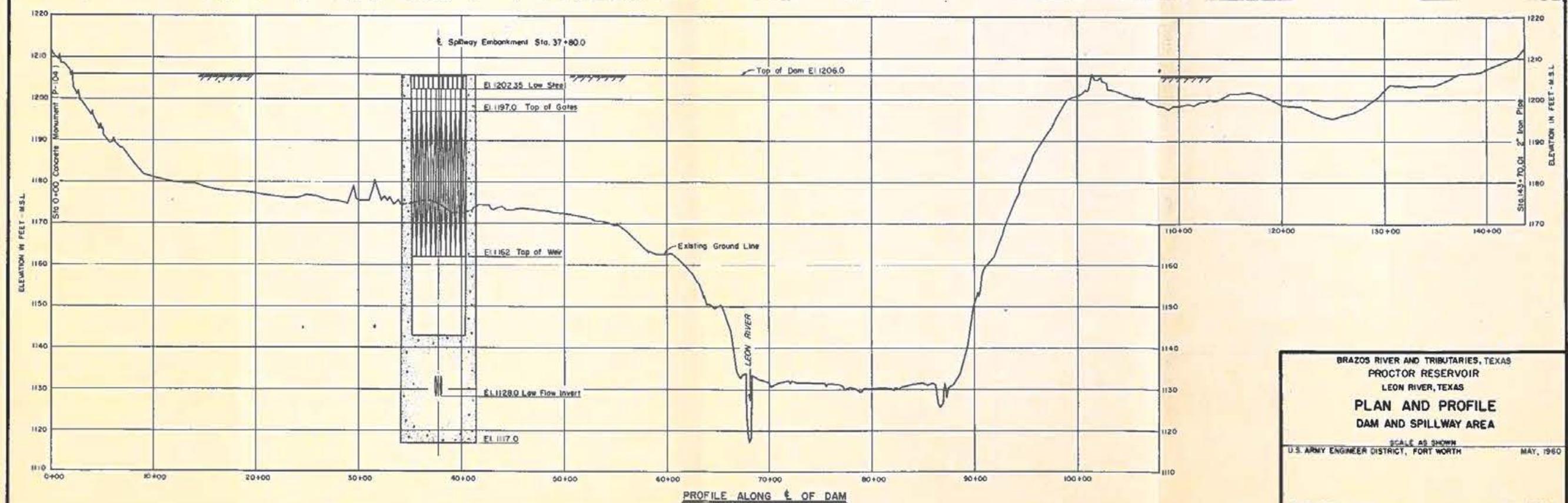
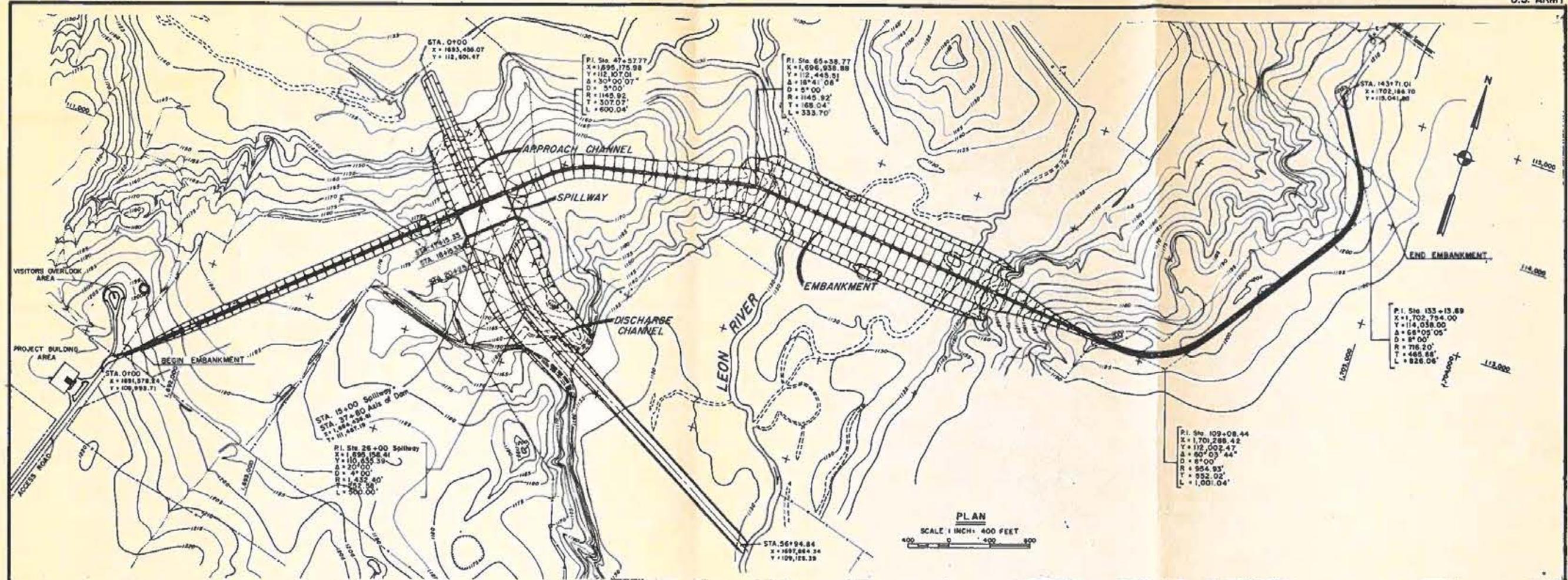
Outdoor Recreation Planner, GS-07
Reservoir Ranger, GS-07
Reservoir Ranger, GS-05

XII - CONCLUSIONS AND RECOMMENDATIONS

12-01. Conclusions.- The plan of development presented herein has the concurrence and support of local governmental agencies and the general public as evidenced by existing lease agreements and annual visitation to the project.

12-02. Recommendations.- It is recommended that this updated master plan for Proctor Lake involving development for public use and land management be approved as proposed herein.





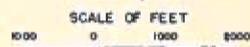
BRAZOS RIVER AND TRIBUTARIES, TEXAS
 PROCTOR RESERVOIR
 LEON RIVER, TEXAS
**PLAN AND PROFILE
 DAM AND SPILLWAY AREA**
 SCALE AS SHOWN
 U.S. ARMY ENGINEER DISTRICT, FORT WORTH
 MAY, 1960
 FILE: BRAZ. 514-1
 PLATE 1



LEGEND

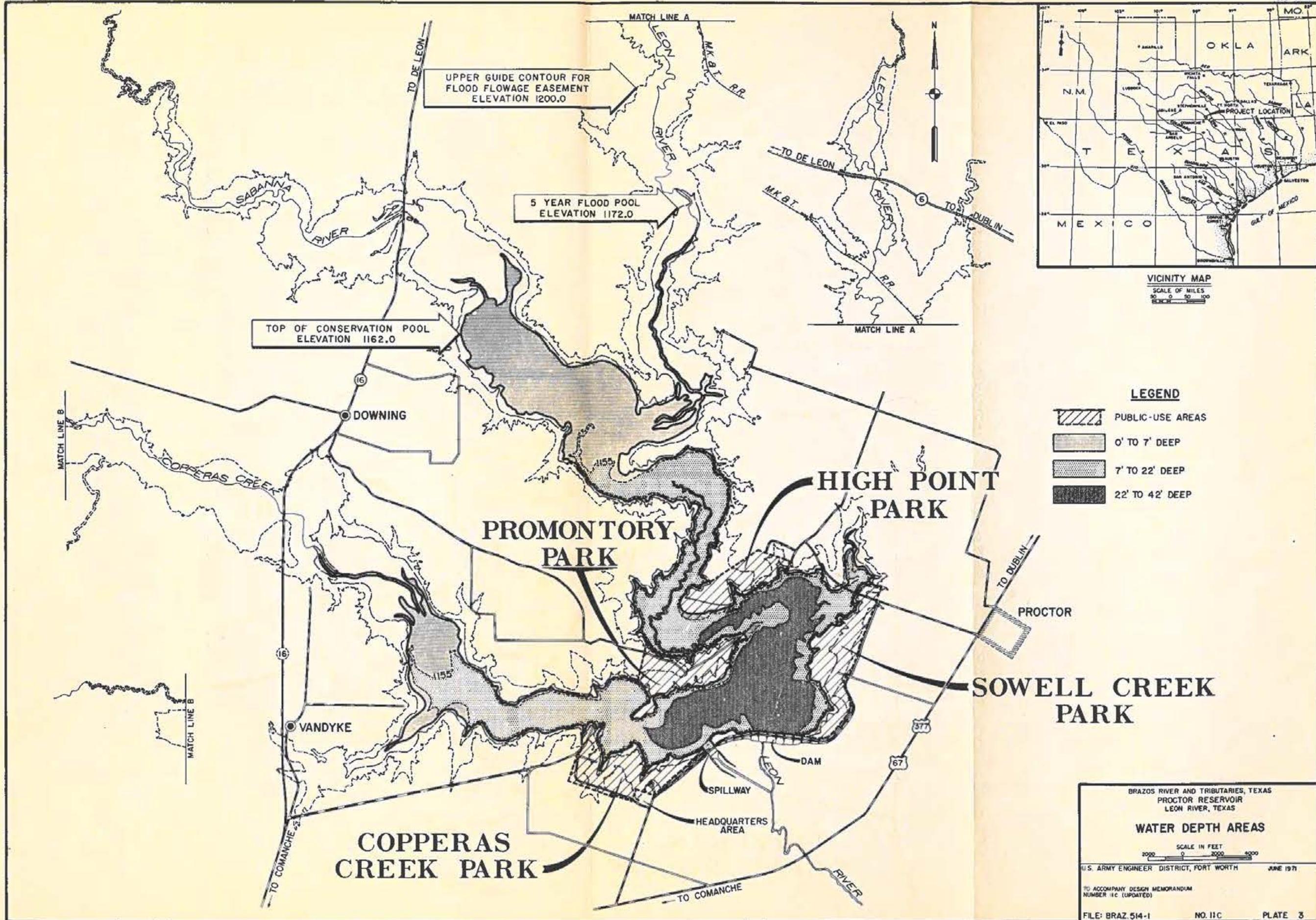
-  TOTAL CLEARING
(BETWEEN EL. 1162 AND 1150.0)
-  LIMITED CLEARING*
(FELLING OR TOPPING OF TREES
PROJECTING ABOVE EL. 1150.0)
-  PUBLIC USE AREAS

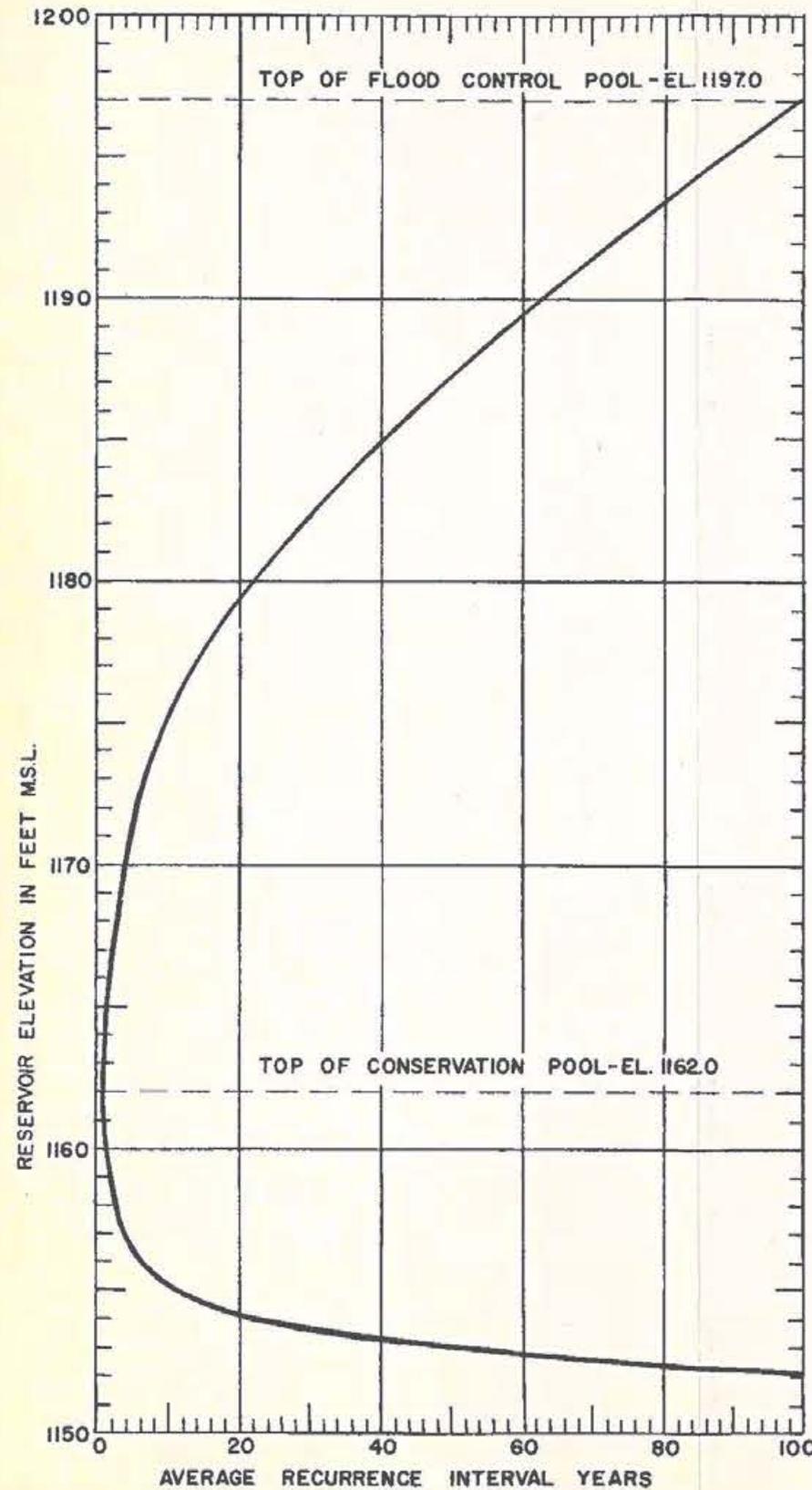
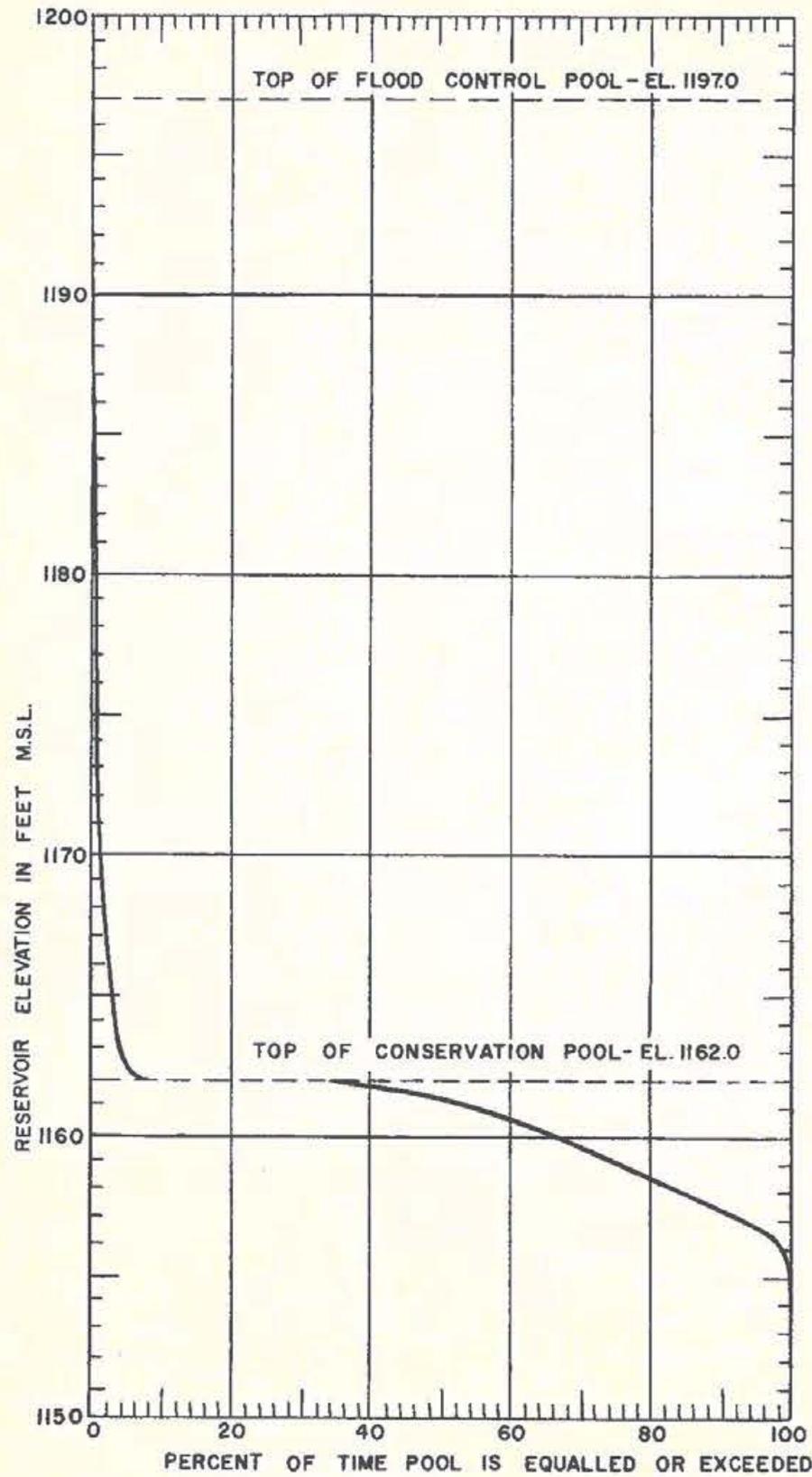
PHOTOGRAPHY FLOWN AUGUST, 1956



BRAZOS RIVER AND TRIBUTARIES, TEXAS
PROCTOR RESERVOIR
 LEON RIVER, TEXAS
CLEARING
GENERAL PLAN
 SCALE AS SHOWN
 U.S. ARMY ENGINEER DISTRICT, FORT WORTH MAR. 1961

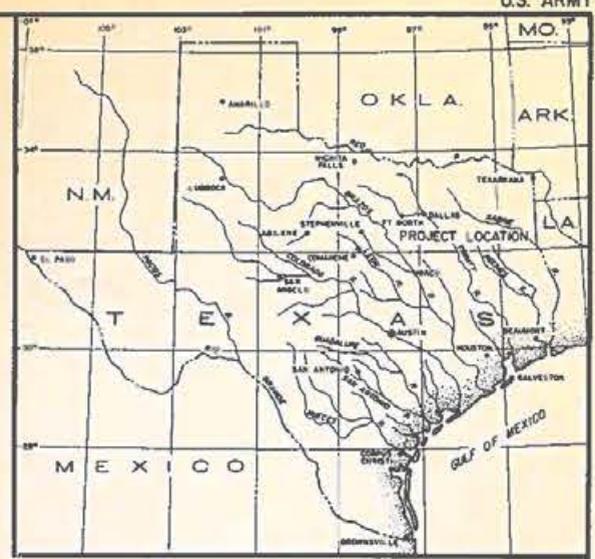
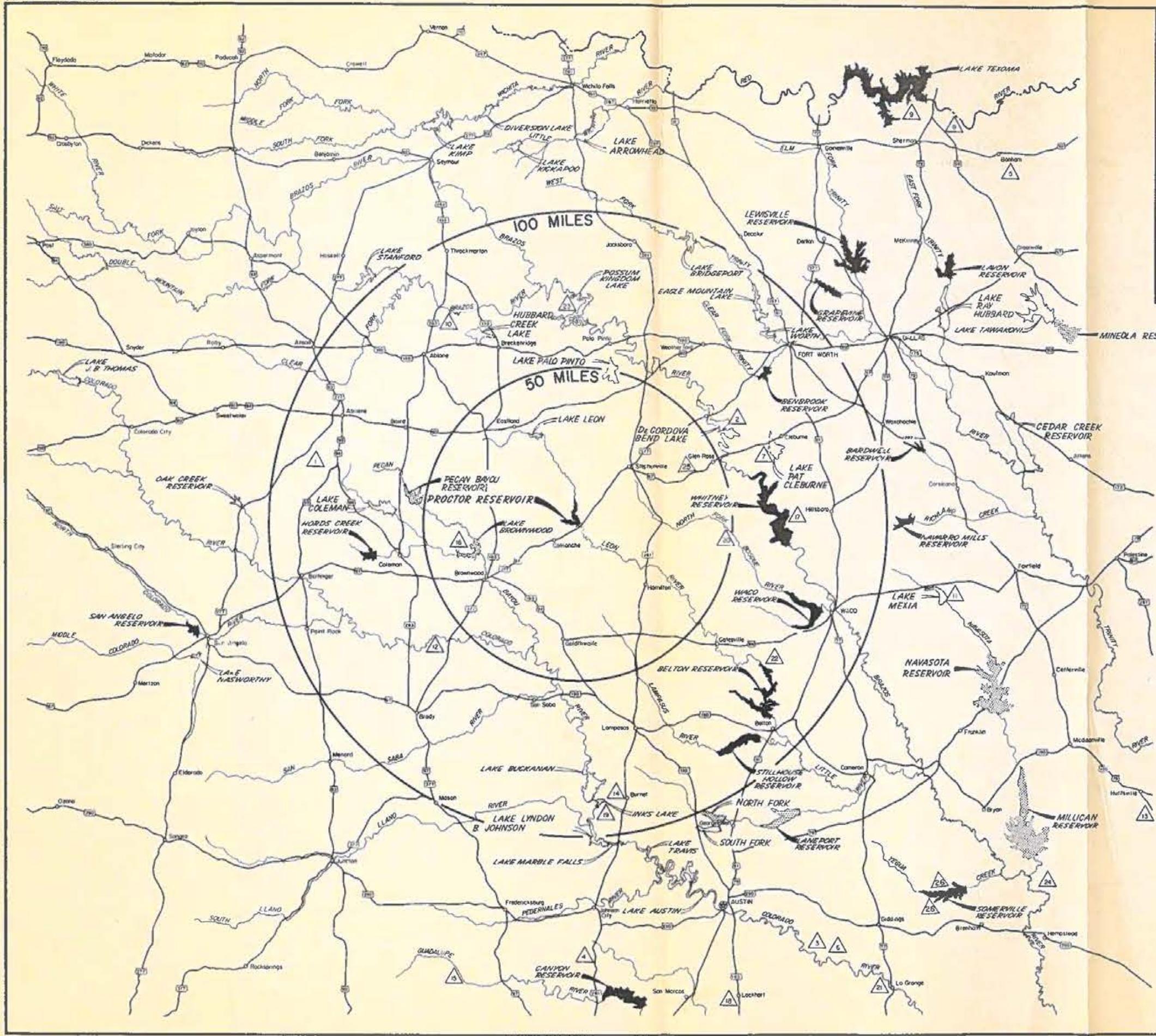
FILE: BRAZ. 514-1 PLATE 2





NOTE:
 CURVES BASES UPON HYPOTHETICAL
 REGULATION OF THE RESERVOIR
 DURING THE PERIOD 1924-1958 AS
 USE IN THE DESIGN OF THE PROJECT.

BRAZOS RIVER AND TRIBUTARIES, TEXAS
 PROCTOR RESERVOIR
 LEON RIVER, TEXAS
 POOL ELEVATION-PROBABILITY
 AND
 DURATION CURVE
 SCALE AS SHOWN
 U.S. ARMY ENGINEER DISTRICT, FORT WORTH JUNE 71
 TO ACCOMPANY DESIGN MEMORANDUM
 NUMBER 11C (UPDATED)
 FILE: BRAZ. 514 NO. 11C PLATE 4



VICINITY MAP
SCALE OF MILES
0 50 100

LEGEND

- C. OF E. PROJECTS
 - COMPLETED
 - UNDER CONSTRUCTION
 - AUTHORIZED
- OTHER PROJECTS
 - LAKES AND RESERVOIRS BY OTHER AGENCIES
- POINTS OF INTEREST

INDEX TO POINTS OF INTEREST

- | | |
|---|--------------------------------|
| 1. Abilene State Park | 16. Lake Brownwood State Park |
| 2. Acton State Park | 17. Lake Whitney State Park |
| 3. Bastrap State Park | 18. Lockhart State Park |
| 4. Blanco State Park | 19. Longhorn Cavern State Park |
| 5. Bonham State Park | 20. Meridian State Park |
| 6. Buescher State Park | 21. Mountani State Park |
| 7. Claburne State Park | 22. Mother Nell State Park |
| 8. Eisenhower Birth Place State Park | 23. Possum Kingdom State Park |
| 9. Eisenhower State Park | 24. Washington State Park |
| 10. Fort Griffin State Park | 25. Dinosaur Valley State Park |
| 11. Fort Parker State Park | 26. Lake Somerville State Park |
| 12. Geographical Center of the State of Texas | |
| 13. Huntsville State Park | |
| 14. Inks Lake State Park | |
| 15. Kerrville State Park | |

BRAZOS RIVER AND TRIBUTARIES, TEXAS
PROCTOR RESERVOIR
LEON RIVER, TEXAS

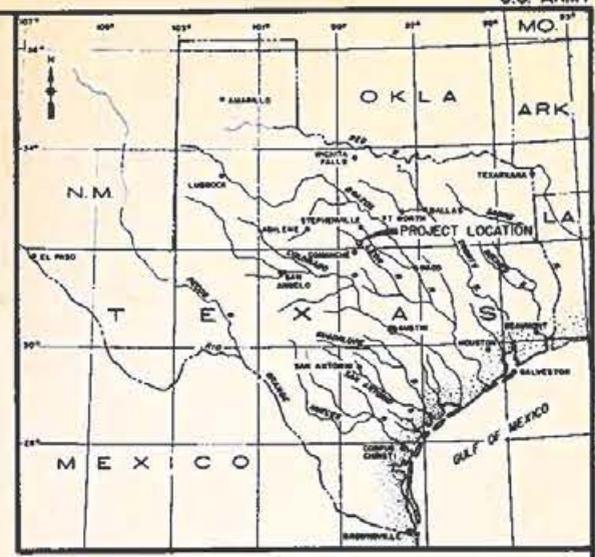
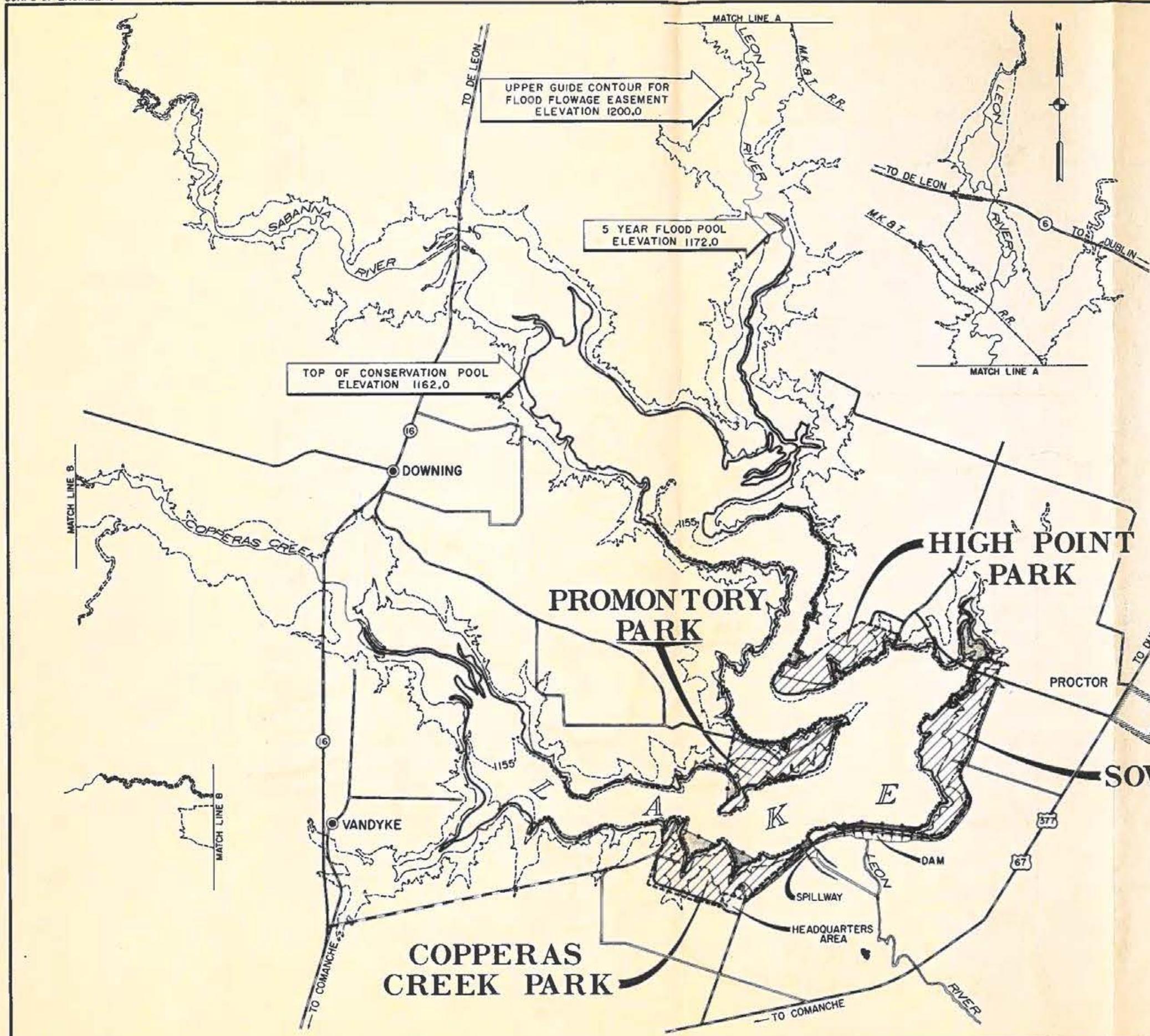
REGIONAL RECREATION AREAS

SCALE IN MILES
0 10 20 30 40

U.S. ARMY ENGINEER DISTRICT FORT WORTH, TEXAS JUNE 1971

TO ACCOMPANY DESIGN MEMORANDUM
NUMBER H C (UPDATED)

FILE: BRAZ. 514 -1 NO. IIC PLATE 5



VICINITY MAP
SCALE OF MILES
0 20 40 60 80 100

LEGEND

- PUBLIC-USE AREAS
- U.S. HIGHWAY
- STATE HIGHWAY
- COUNTY ROADS
- PAVED ROADS
- RESTRICTED AREA
- SLOW SPEED AREA, 5 M.P.H.
- BUOYS

BRAZOS RIVER AND TRIBUTARIES, TEXAS
PROCTOR RESERVOIR
LEON RIVER, TEXAS

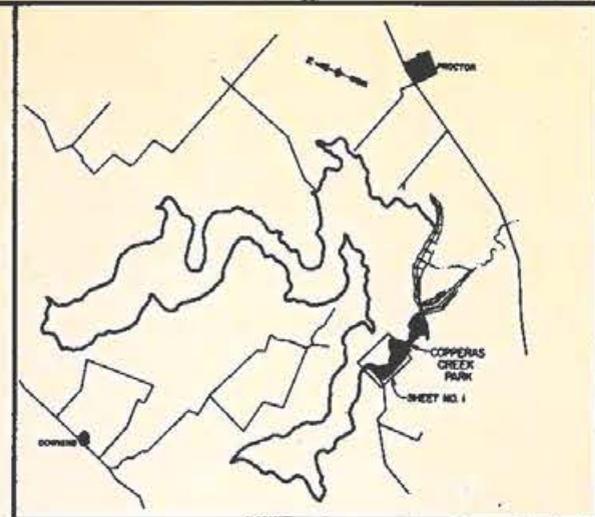
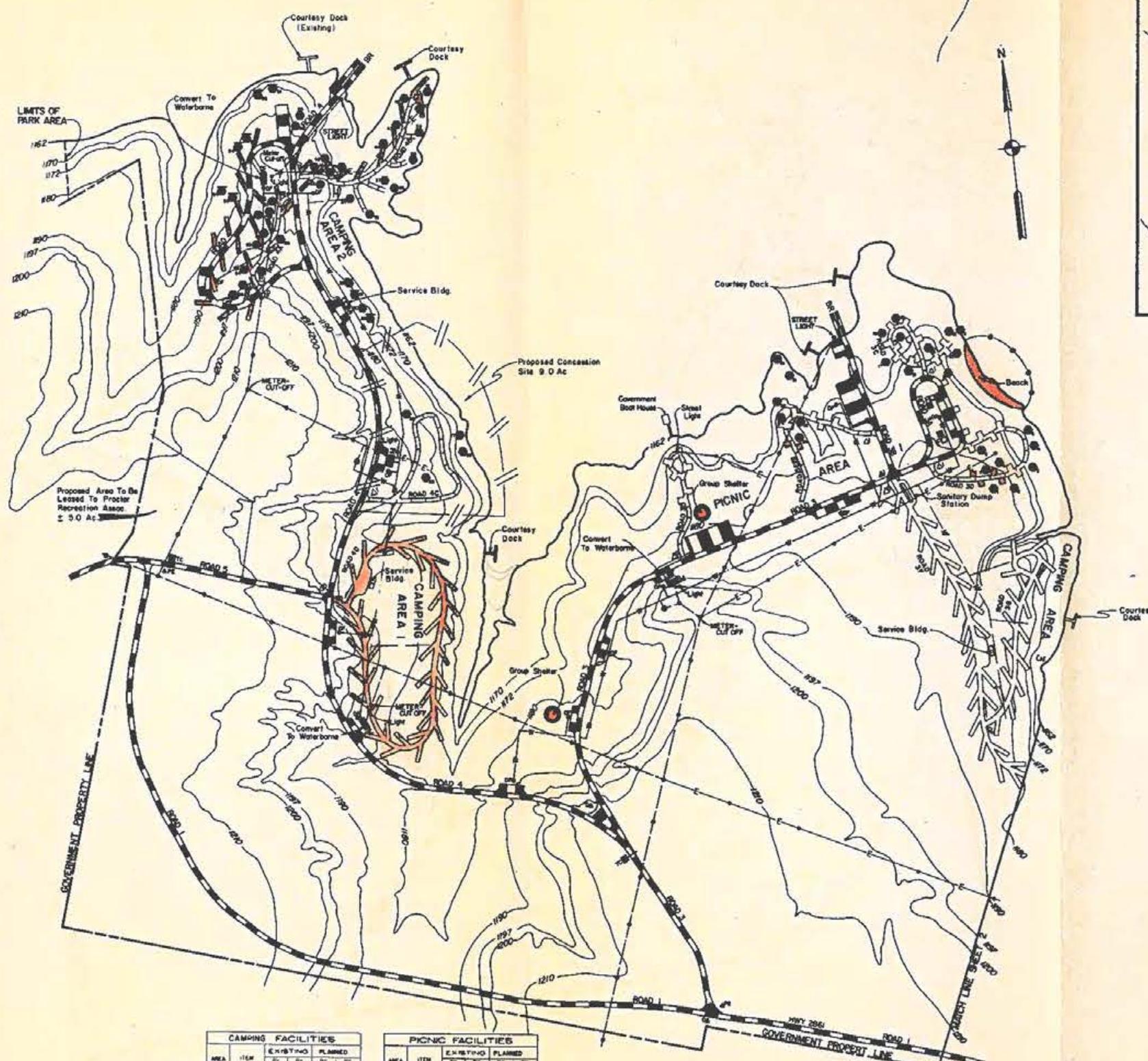
GENERAL DEVELOPMENT PLAN

SCALE IN FEET
0 1000 2000

U.S. ARMY ENGINEER DISTRICT, FORT WORTH JUNE 1971

TO ACCOMPANY DESIGN MEMORANDUM
NUMBER 11C (UPDATED)

FILE BRAZ. 514-1 NO. 11C PLATE 6



KEY MAP
NOT TO SCALE

LEGEND

	EXISTING	PLANNED
GRAVEL ROADS	---	---
PAVED ROADS	---	---
SECONDARY ROADS	---	---
GRAVEL PARKING AREAS	---	---
PAVED PARKING AREAS	---	---
FRAME TOILETS (CONCRETE VAULT)	---	---
FRAME TOILETS (PIT TYPE)	---	---
MASONRY TOILETS (CONCRETE VAULT)	---	---
MASONRY TOILETS (WATER BORNE)	---	---
BOAT RAMPS	---	---
BUILDING STRUCTURE (AS DESIGNATED)	---	---
WATER WELLS (SUPPLY)	---	---
WATER LINES	---	---
ELECTRIC SERVICE LINES	---	---
RESERVOIR INFORMATION SIGNS	---	---
PARK ENTRANCE SIGNS	---	---
DIRECTIONAL SIGNS	---	---
BUOYS	---	---
REGISTRATION BOOTH	---	---
TABLE COVER	---	---
TABLE COUNTERS	---	---
SWIMMING BEACH	---	---
LIMITS OF CONCESSION AREAS	---	---
LIMITS OF LICENSE OR LEASE AREAS	---	---
UPPER LIMITS (FLOWAGE EASEMENT)	---	---
GOVERNMENT PROPERTY LINE	---	---
PLANNED DEVELOPMENT (THRU FY 1978)	---	---

AREA NO.	ITEM	EXISTING		PLANNED	
		BY C. OF E.	BY OTHERS	BY C. OF E.	BY OTHERS
1	TABLES	27	27	27	27
	FRAMES	27	27	27	27
2	TABLES	42	42	42	42
	FRAMES	42	42	42	42
3	TABLES	41	41	41	41
	FRAMES	41	41	41	41
4	TABLES	41	41	41	41
	FRAMES	41	41	41	41
5	TABLES	41	41	41	41
	FRAMES	41	41	41	41
6	TABLES	41	41	41	41
	FRAMES	41	41	41	41

AREA NO.	ITEM	EXISTING		PLANNED	
		BY C. OF E.	BY OTHERS	BY C. OF E.	BY OTHERS
1	TABLES	24	24	24	24
	FRAMES	24	24	24	24
2	TABLES	10	10	10	10
	FRAMES	10	10	10	10
3	TABLES	10	10	10	10
	FRAMES	10	10	10	10
4	TABLES	10	10	10	10
	FRAMES	10	10	10	10
5	TABLES	10	10	10	10
	FRAMES	10	10	10	10
6	TABLES	10	10	10	10
	FRAMES	10	10	10	10

POOL ELEVATIONS
 CONSERVATION POOL ----- 1162
 PLUS 5-YEAR FLOOD ----- 1172
 TOP OF FLOOD-CONTROL STORAGE ----- 1187
 UPPER GUIDE CONTOUR ----- 1200
 ACRES IN PARK
 ABOVE CONSERVATION POOL ----- 380

BRAZOS RIVER AND TRIBUTARIES, TEXAS
 PROCTOR RESERVOIR
 LEON RIVER, TEXAS

COPPERAS CREEK PARK

W 2 SHEETS SHEET NO. 1

SCALE OF FEET
 0 100 200

U.S. ARMY ENGINEER DISTRICT, FORT WORTH JUNE 1971

TO ACCOMPANY DESIGN MEMORANDUM
 NUMBER IIC (UPDATED)

FILE: BRAZ. 514-1 NO. IIC PLATE 7



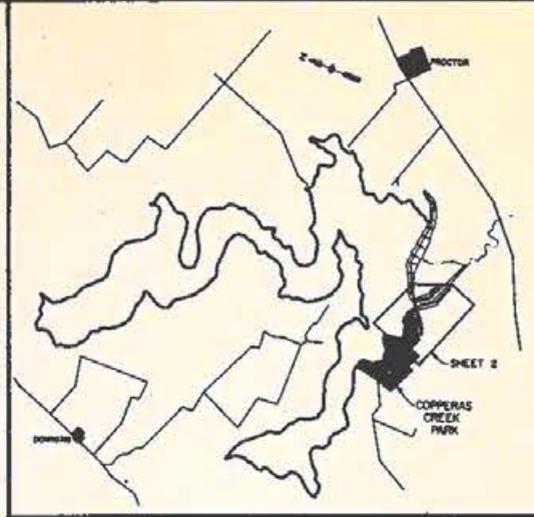
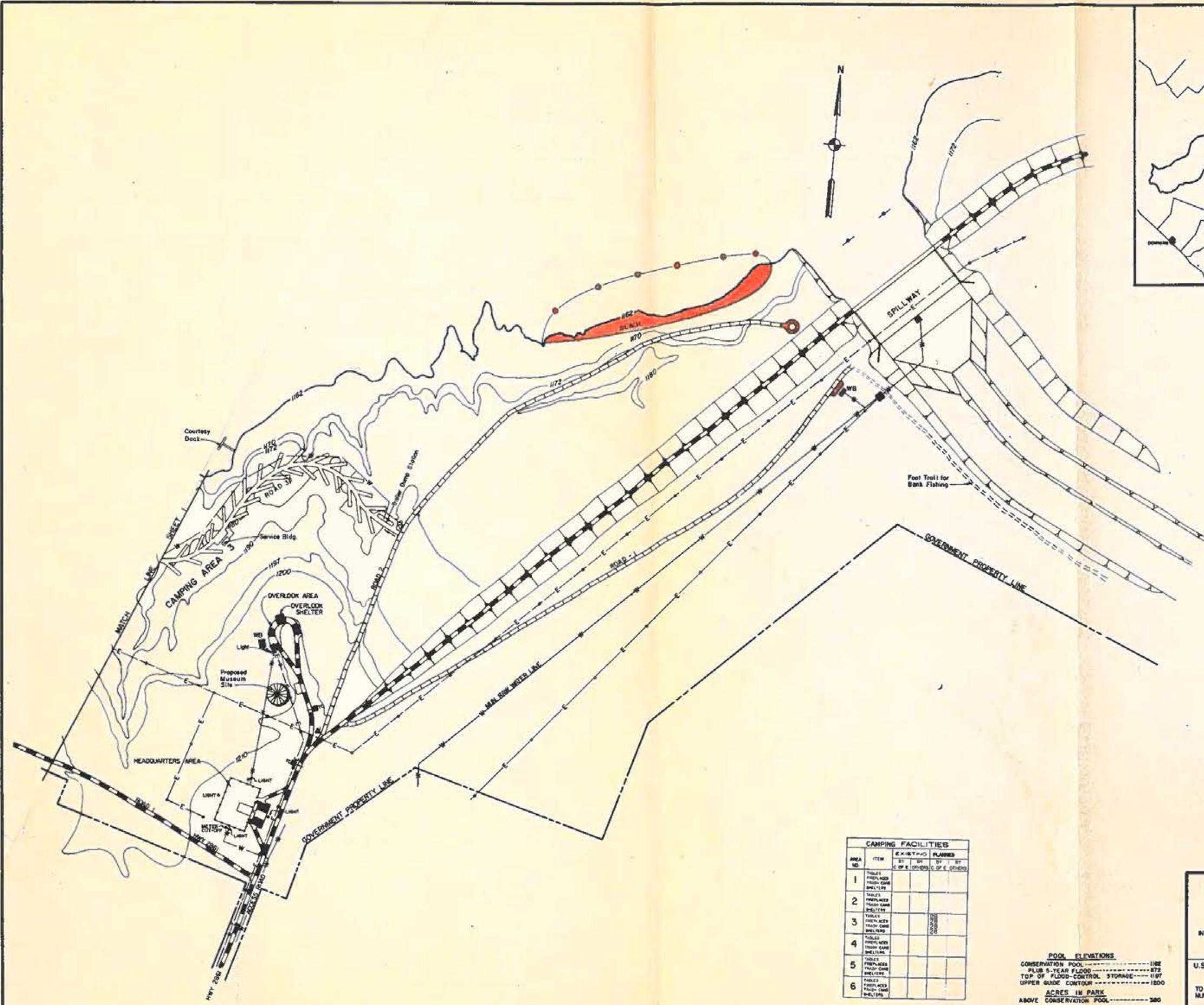
WATER ELEVATION 1154.88
DATE OF PHOTOGRAPHY JULY 1967

BRAZOS RIVER AND TRIBUTARIES, TEXAS
PROCTOR RESERVOIR
LEON RIVER, TEXAS

COPPERAS CREEK PARK
4 SHEETS SCALE OF FEET SHEET NO. 1
200 400 800 400

U.S. ARMY ENGINEER DISTRICT, FORT WORTH JUNE 1971
TO ACCOMPANY DESIGN MEMORANDUM
NO. IC (UPDATED)

FILE: BRAZ 514-1 NO. IC PLATE 8



KEY MAP
NOT TO SCALE

LEGEND

	EXISTING	PLANNED
GRAVEL ROADS	--- C OF E	--- BY OTHERS C OF E
PAVED ROADS	--- C OF E	--- BY OTHERS C OF E
SECONDARY ROADS	--- C OF E	--- BY OTHERS C OF E
GRAVEL PARKING AREAS	--- C OF E	--- BY OTHERS C OF E
PAVED PARKING AREAS	--- C OF E	--- BY OTHERS C OF E
FRAME TOILETS (CONCRETE VAULT)	--- C OF E	--- BY OTHERS C OF E
FRAME TOILETS (PIT TYPE)	--- C OF E	--- BY OTHERS C OF E
MASONRY TOILETS (CONCRETE VAULT)	--- C OF E	--- BY OTHERS C OF E
MASONRY TOILETS (WATER BORNE)	--- C OF E	--- BY OTHERS C OF E
BOAT RAMPS	--- C OF E	--- BY OTHERS C OF E
BUILDING STRUCTURE (AS DESIGNATED)	--- C OF E	--- BY OTHERS C OF E
WATER WELLS (SUPPLY)	--- C OF E	--- BY OTHERS C OF E
WATER LINES	--- C OF E	--- BY OTHERS C OF E
ELECTRIC SERVICE LINES	--- C OF E	--- BY OTHERS C OF E
RESERVOIR INFORMATION SIGNS	--- C OF E	--- BY OTHERS C OF E
PARK ENTRANCE SIGNS	--- C OF E	--- BY OTHERS C OF E
DIRECTIONAL SIGNS	--- C OF E	--- BY OTHERS C OF E
BUOYS	--- C OF E	--- BY OTHERS C OF E
REGISTRATION BOOTH	--- C OF E	--- BY OTHERS C OF E
TREE COVER	--- C OF E	--- BY OTHERS C OF E
TRAFFIC COUNTERS	--- C OF E	--- BY OTHERS C OF E
SWIMMING BEACH	--- C OF E	--- BY OTHERS C OF E
LIMITS OF CONCESSION AREAS	--- C OF E	--- BY OTHERS C OF E
LIMITS OF LICENSE OR LEASE AREAS	--- C OF E	--- BY OTHERS C OF E
UPPER LIMITS (FLOWAGE EASEMENT)	--- C OF E	--- BY OTHERS C OF E
GOVERNMENT PROPERTY LINE	--- C OF E	--- BY OTHERS C OF E
PLANNED DEVELOPMENT (THRU FY 1976)	--- C OF E	--- BY OTHERS C OF E

CAMPING FACILITIES

AREA NO.	ITEM	EXISTING		PLANNED	
		BY C OF E	BY OTHERS	BY C OF E	BY OTHERS
1	TABLES PROPANE TRUCK CAMP SHELTERS				
2	TABLES PROPANE TRUCK CAMP SHELTERS				
3	TABLES PROPANE TRUCK CAMP SHELTERS				
4	TABLES PROPANE TRUCK CAMP SHELTERS				
5	TABLES PROPANE TRUCK CAMP SHELTERS				
6	TABLES PROPANE TRUCK CAMP SHELTERS				

POOL ELEVATIONS
 CONSERVATION POOL --- 1182
 PLUS 5-YEAR FLOOD --- 1172
 TOP OF FLOOD-CONTROL STORAGE --- 1197
 UPPER GRADE CONTOUR --- 1200
 ACRES IN PARK
 ABOVE CONSERVATION POOL --- 380

BRAZOS RIVER AND TRIBUTARIES, TEXAS
 PROCTOR RESERVOIR
 LEON RIVER, TEXAS

COPPERAS CREEK PARK

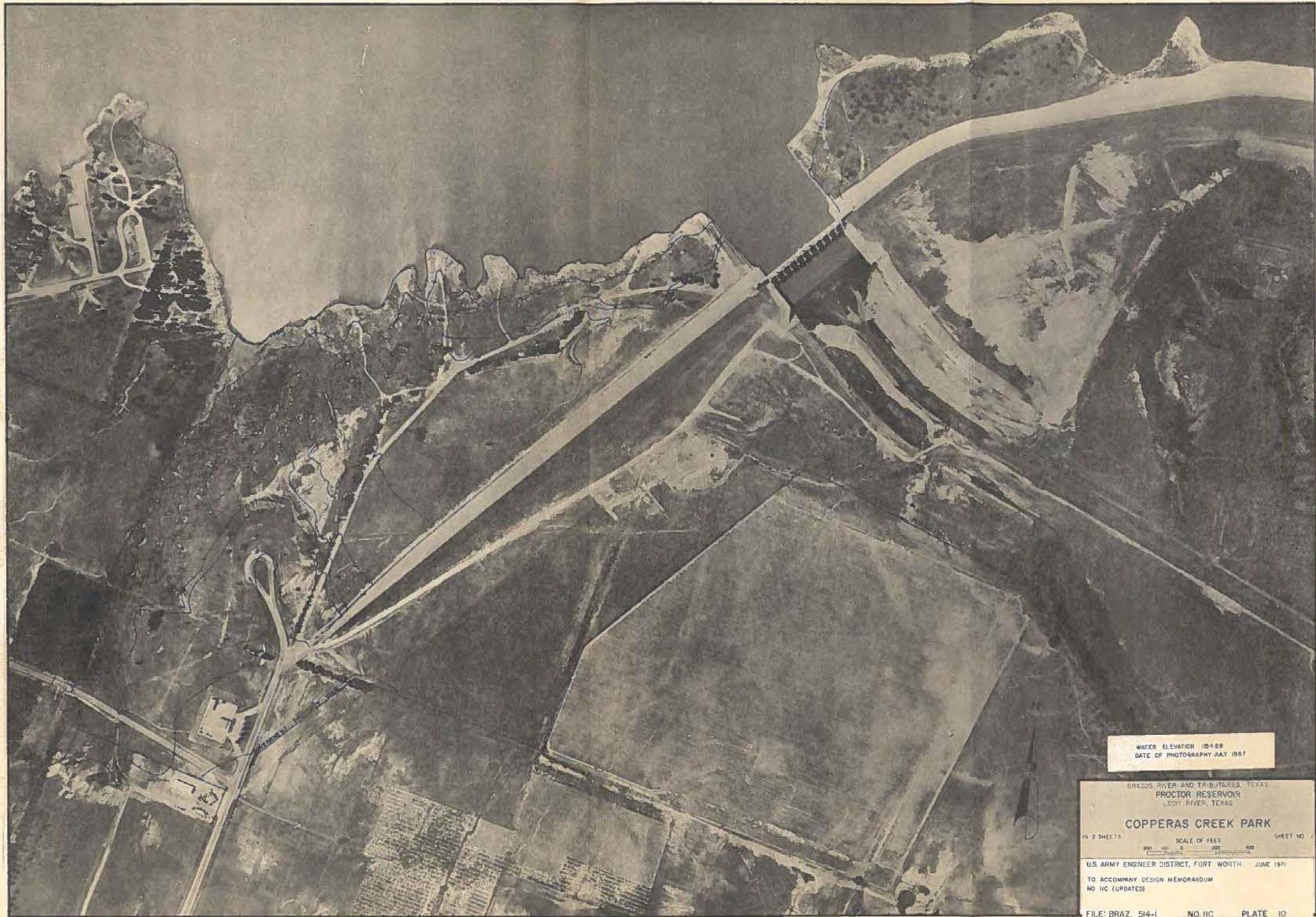
N 2 SHEETS SHEET 2

SCALE OF FEET
 0 100 200

U.S. ARMY ENGINEER DISTRICT, FORT WORTH JUNE 1971

TO ACCOMPANY DESIGN MEMORANDUM
 NUMBER 11 C (UPDATED 3)

FILE: BRAZ. 514 NO. 11 C PLATE 9

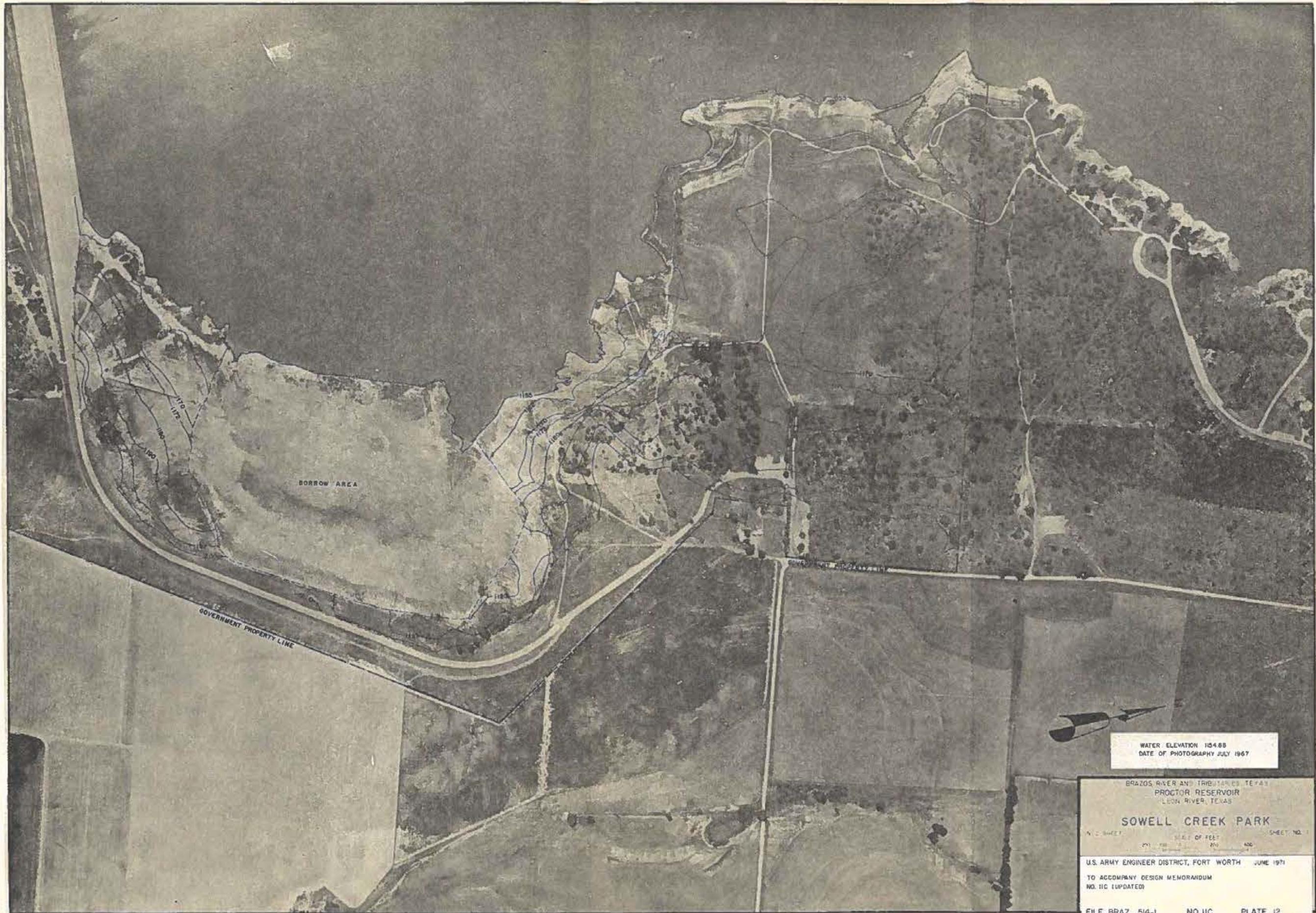


WATER ELEVATION 154.88
DATE OF PHOTOGRAPHY JULY 1967

BRAZOS RIVER AND TRIBUTARIES, TEXAS
PROCTOR RESERVOIR
LEON RIVER, TEXAS
COPPERAS CREEK PARK
IN 2 SHEETS SCALE OF FEET SHEET NO. 10

U.S. ARMY ENGINEER DISTRICT, FORT WORTH, JUNE 1971
TO ACCOMPANY DESIGN MEMORANDUM
NO. 11C (UPDATED)

FILE: BRAZ. 514-1 NO. 11C PLATE 10



WATER ELEVATION 104.88
DATE OF PHOTOGRAPHY JULY 1967

BRAZOS RIVER AND TRIBUTARIES TEXAS
PROCTOR RESERVOIR
LOCK RIVER, TEXAS

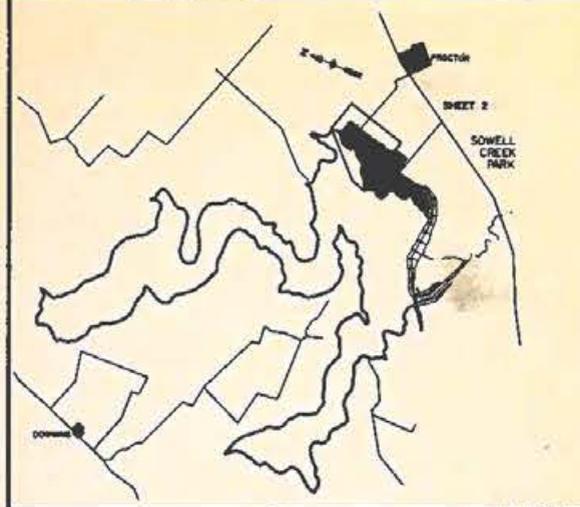
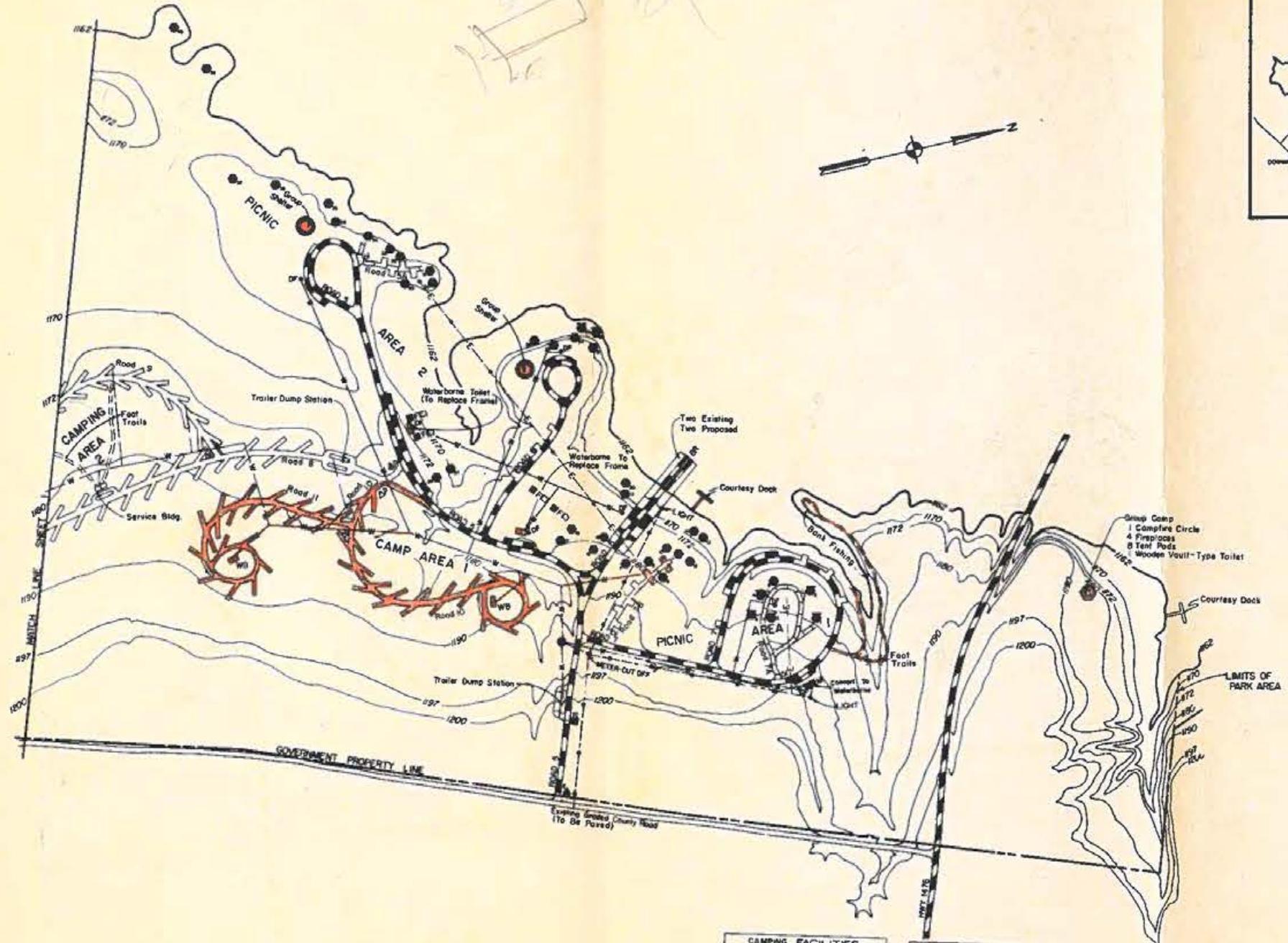
SOWELL CREEK PARK

N. C. SHEET SHEET OF FEET SHEET NO. 1

U.S. ARMY ENGINEER DISTRICT, FORT WORTH JUNE 1971

TO ACCOMPANY DESIGN MEMORANDUM
NO. 11C (UPDATED)

FILE BRAZ 514-1 NO. 11C PLATE 12



KEY MAP
NOT TO SCALE

LEGEND

	EXISTING	PLANNED
GRAVEL ROADS	--- C of E ---	--- O of E ---
PAVED ROADS	--- C of E ---	--- O of E ---
SECONDARY ROADS	--- C of E ---	--- O of E ---
GRAVEL PARKING AREAS	--- C of E ---	--- O of E ---
PAVED PARKING AREAS	--- C of E ---	--- O of E ---
FRAME TOILETS (CONCRETE VAULT)	--- C of E ---	--- O of E ---
FRAME TOILETS (PIT TYPE)	--- C of E ---	--- O of E ---
MASONRY TOILETS (CONCRETE VAULT)	--- C of E ---	--- O of E ---
MASONRY TOILETS (WATER BORNE)	--- C of E ---	--- O of E ---
BOAT RAMPS	--- C of E ---	--- O of E ---
BUILDING STRUCTURE (AS DESIGNATED)	--- C of E ---	--- O of E ---
WATER WELLS (SUPPLY)	--- C of E ---	--- O of E ---
WATER LINES	--- C of E ---	--- O of E ---
ELECTRIC SERVICE LINES	--- C of E ---	--- O of E ---
RESERVOIR INFORMATION SIGNS	--- C of E ---	--- O of E ---
PARK ENTRANCE SIGNS	--- C of E ---	--- O of E ---
DIRECTIONAL SIGNS	--- C of E ---	--- O of E ---
BUOYS	--- C of E ---	--- O of E ---
REGISTRATION BOOTH	--- C of E ---	--- O of E ---
TREE COVER	--- C of E ---	--- O of E ---
TRAFFIC COUNTERS	--- C of E ---	--- O of E ---
SWIMMING BEACH	--- C of E ---	--- O of E ---
LIMITS OF CONCESSION AREAS	--- C of E ---	--- O of E ---
LIMITS OF LICENSE OR LEASE AREAS	--- C of E ---	--- O of E ---
UPPER L.M.'S (FLOWAGE EASEMENT)	--- C of E ---	--- O of E ---
GOVERNMENT PROPERTY LINE	--- C of E ---	--- O of E ---
PLANNED DEVELOPMENT (THRU FY1975)	--- C of E ---	--- O of E ---

CAMPING FACILITIES

AREA NO	ITEM	EXISTING		PLANNED	
		BY C of E	BY OTHERS	BY C of E	BY OTHERS
1	TABLES	48	0	48	0
	BENCHES	48	0	48	0
	BELTS	48	0	48	0
2	TABLES	24	0	24	0
	BENCHES	24	0	24	0
	BELTS	24	0	24	0
3	TABLES	0	0	0	0
	BENCHES	0	0	0	0
	BELTS	0	0	0	0
4	TABLES	0	0	0	0
	BENCHES	0	0	0	0
	BELTS	0	0	0	0
5	TABLES	0	0	0	0
	BENCHES	0	0	0	0
	BELTS	0	0	0	0
6	TABLES	0	0	0	0
	BENCHES	0	0	0	0
	BELTS	0	0	0	0

PICNIC FACILITIES

AREA NO	ITEM	EXISTING		PLANNED	
		BY C of E	BY OTHERS	BY C of E	BY OTHERS
1	TABLES	24	0	24	0
	BENCHES	24	0	24	0
	BELTS	24	0	24	0
2	TABLES	0	0	0	0
	BENCHES	0	0	0	0
	BELTS	0	0	0	0
3	TABLES	0	0	0	0
	BENCHES	0	0	0	0
	BELTS	0	0	0	0
4	TABLES	0	0	0	0
	BENCHES	0	0	0	0
	BELTS	0	0	0	0
5	TABLES	0	0	0	0
	BENCHES	0	0	0	0
	BELTS	0	0	0	0
6	TABLES	0	0	0	0
	BENCHES	0	0	0	0
	BELTS	0	0	0	0

POOL ELEVATIONS
 CONSERVATION POOL 1182
 PLUS 5-YEAR FLOOD 1172
 TOP OF FLOOD-CONTROL STORAGE 1197
 UPPER DUNE CONTOUR 1200
ACRES IN PARK
 ABOVE CONSERVATION POOL 420

BRAZOS RIVER AND TRIBUTARIES, TEXAS
 PROCTOR RESERVOIR
 LEON RIVER, TEXAS

SOWELL CREEK PARK

IN 2 SHEETS SHEET 2

SCALE OF FEET

U.S. ARMY ENGINEER DISTRICT, FORT WORTH JUNE 1971

TO ACCOMPANY DESIGN MEMORANDUM
 NUMBER 11 C (UPDATED)

FILE: BRAZ. 514 NO. 11C PLATE 13



WATER ELEVATION 104.88
DATE OF PHOTOGRAPHY JULY 1967

BRAZOS RIVER AND TRIBUTARIES, TEXAS
PROCTOR RESERVOIR
LEON RIVER, TEXAS

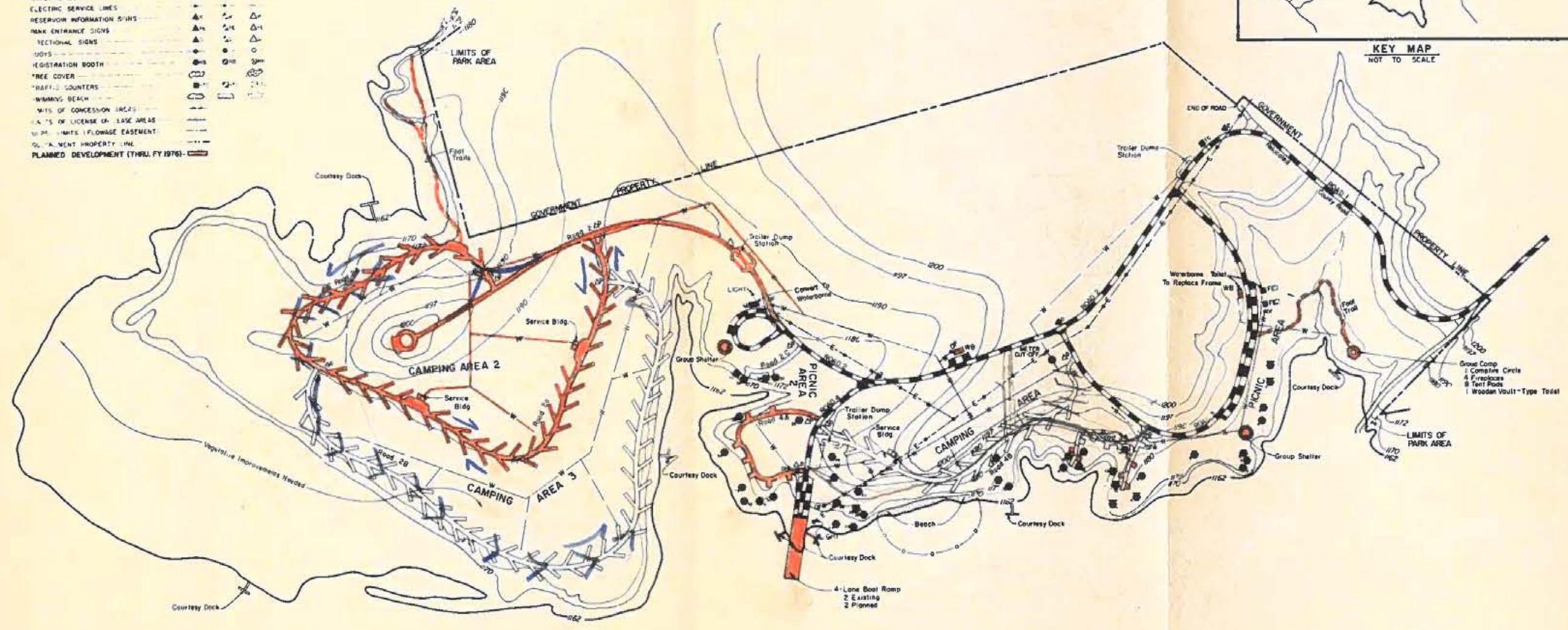
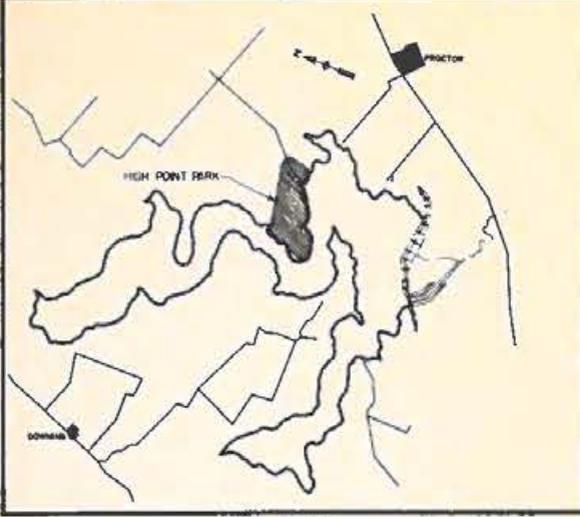
SOWELL CREEK PARK
IN 2 SHEET SHEET NO. 2
SCALE OF FEET
0 100 200 400

U.S. ARMY ENGINEER DISTRICT, FORT WORTH JUNE 1971
TO ACCOMPANY DESIGN MEMORANDUM
NO. IIC (UPDATED)

FILE: BRAZ. 514-1 NO. IIC PLATE 14

LEGEND

	EXISTING	PLANNED
PAVED ROADS	[Symbol]	[Symbol]
UNPAVED ROADS	[Symbol]	[Symbol]
CONCRETE ROADS	[Symbol]	[Symbol]
PAVED PARKING AREAS	[Symbol]	[Symbol]
UNPAVED PARKING AREAS	[Symbol]	[Symbol]
FRAME TOILETS (CONCRETE VAULT)	[Symbol]	[Symbol]
FRAME TOILETS (PIT TYPE)	[Symbol]	[Symbol]
MASONRY TOILETS (CONCRETE VAULT)	[Symbol]	[Symbol]
MASONRY TOILETS (PIT TYPE)	[Symbol]	[Symbol]
BOAT RAMPS	[Symbol]	[Symbol]
BUILDING STRUCTURE (AS DESIGNATED)	[Symbol]	[Symbol]
WATER WELLS (SUPPLY)	[Symbol]	[Symbol]
WATER LINES	[Symbol]	[Symbol]
ELECTRIC SERVICE LINES	[Symbol]	[Symbol]
RESERVOIR INFORMATION SIGNS	[Symbol]	[Symbol]
PARK ENTRANCE SIGNS	[Symbol]	[Symbol]
SECTIONAL SIGNS	[Symbol]	[Symbol]
BOYS	[Symbol]	[Symbol]
REGISTRATION BOOTH	[Symbol]	[Symbol]
TREE COVER	[Symbol]	[Symbol]
RAFFLE COUNTERS	[Symbol]	[Symbol]
SWIMMING BEACH	[Symbol]	[Symbol]
LOTS OF CONCESSION STANDS	[Symbol]	[Symbol]
LOTS OF LICENSE OR LAKE AREAS	[Symbol]	[Symbol]
UNPAVED RIGHTS OF WAY EASEMENT	[Symbol]	[Symbol]
GOVERNMENT PROPERTY LINE	[Symbol]	[Symbol]
PLANNED DEVELOPMENT (THRU FY 1976)	[Symbol]	[Symbol]



CAMPING FACILITIES

AREA NO.	ITEM	BY	DATE	PLANNED
1	PAVED PARKING	CE	11/77	17
2	UNPAVED PARKING	CE	11/77	17
3	PAVED PARKING	CE	11/77	17
4	UNPAVED PARKING	CE	11/77	17
5	PAVED PARKING	CE	11/77	17
6	UNPAVED PARKING	CE	11/77	17

PICNIC FACILITIES

AREA NO.	ITEM	BY	DATE	PLANNED
1	PAVED PARKING	CE	11/77	17
2	UNPAVED PARKING	CE	11/77	17
3	PAVED PARKING	CE	11/77	17
4	UNPAVED PARKING	CE	11/77	17
5	PAVED PARKING	CE	11/77	17
6	UNPAVED PARKING	CE	11/77	17

FOOT ELEVATIONS

- CONSERVATION POOL 1162
- PLUS 5 YEAR FLOOD 1172
- TOP OF FLOOD CONTROL STORAGE 1187
- UPPER WIDE CONTOUR 1200
- PLUS 5 YEAR FLOOD ABOVE CONSERVATION POOL 1170

BRAZOS RIVER AND TRIBUTARIES, TEXAS
 PROCTOR RESERVOIR
 LEON RIVER, TEXAS

HIGH POINT PARK

SCALE OF FEET
 0 100 200 400

U.S. ARMY ENGINEER DISTRICT, FORT WORTH JUNE 1971

TO ACCOMPANY DESIGN MEMORANDUM
 NUMBER 17-C (UPDATED)

FILE: BRAZ 5:4 NO. 11C PLATE 15



WATER ELEVATION 1154.88
DATE OF PHOTOGRAPHY JULY 1957

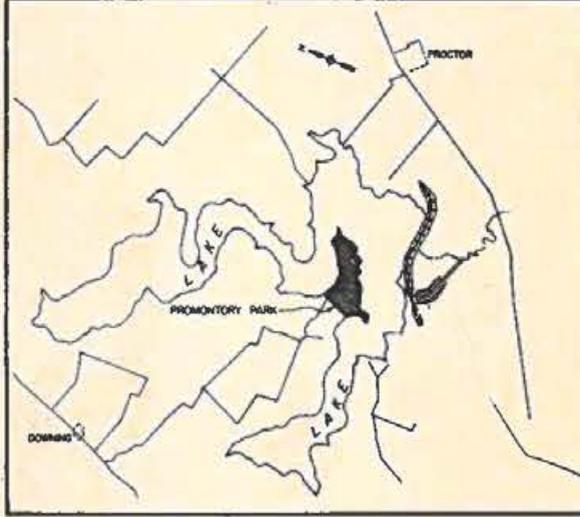
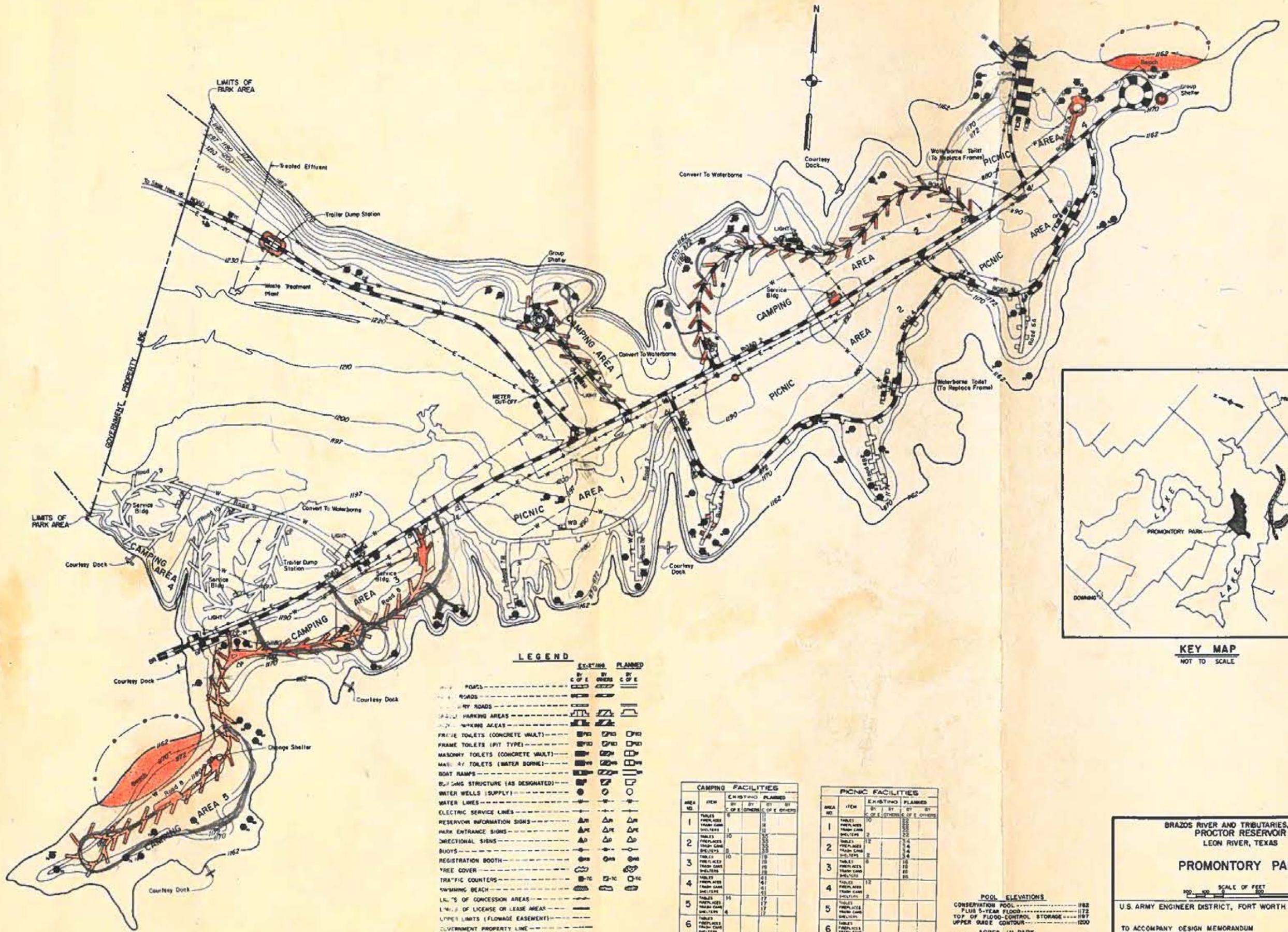
BRAZOS RIVER AND TRIBUTARIES, TEXAS
PROCTOR RESERVOIR
LEON RIVER, TEXAS

HIGH POINT PARK

SCALE OF FEET
0 100 200 300

U.S. ARMY ENGINEER DISTRICT, FORT WORTH JUNE 1971
TO ACCOMPANY DESIGN MEMORANDUM
NO. IIC (UPDATED)

FILE: BRAZ 514-1 NO. IIC PLATE 16



KEY MAP
NOT TO SCALE

LEGEND

	EXISTING		PLANNED	
	BY C OF E	BY OTHERS	BY C OF E	BY OTHERS
ROADS	---	---	---	---
TRAIL ROADS	---	---	---	---
PARKING AREAS	---	---	---	---
WORKING AREAS	---	---	---	---
FRAME TOILETS (CONCRETE VAULT)	---	---	---	---
FRAME TOILETS (PIY TYPE)	---	---	---	---
MASONRY TOILETS (CONCRETE VAULT)	---	---	---	---
MASONRY TOILETS (WATER BORNE)	---	---	---	---
BOAT RAMPS	---	---	---	---
BUILDING STRUCTURE (AS DESIGNATED)	---	---	---	---
WATER WELLS (SUPPLY)	---	---	---	---
ELECTRIC SERVICE LINES	---	---	---	---
RESERVOIR INFORMATION SIGNS	---	---	---	---
PARK ENTRANCE SIGNS	---	---	---	---
DIRECTIONAL SIGNS	---	---	---	---
BUOYS	---	---	---	---
REGISTRATION BOOTH	---	---	---	---
TREE COVER	---	---	---	---
TRAFFIC COUNTERS	---	---	---	---
SWIMMING BEACH	---	---	---	---
LIMITS OF CONCESSION AREAS	---	---	---	---
LIMITS OF LICENSE OR LEASE AREAS	---	---	---	---
LIMITS OF FLOODAGE EASEMENT	---	---	---	---
GOVERNMENT PROPERTY LINE	---	---	---	---
PLANNED DEVELOPMENT (THRU FY 1976)	---	---	---	---

CAMPING FACILITIES

AREA NO.	ITEM	EXISTING		PLANNED	
		BY C OF E	BY OTHERS	BY C OF E	BY OTHERS
1	TABLES	8	11	11	11
2	FIREPLACES	10	10	10	10
3	FRAMES	10	10	10	10
4	FRAMES	10	10	10	10
5	FRAMES	10	10	10	10
6	FRAMES	10	10	10	10

PICNIC FACILITIES

AREA NO.	ITEM	EXISTING		PLANNED	
		BY C OF E	BY OTHERS	BY C OF E	BY OTHERS
1	TABLES	10	10	10	10
2	FRAMES	10	10	10	10
3	FRAMES	10	10	10	10
4	FRAMES	10	10	10	10
5	FRAMES	10	10	10	10
6	FRAMES	10	10	10	10

POOL ELEVATIONS
 CONSERVATION POOL 1182
 PLUS 5-YEAR FLOOD 1172
 TOP OF FLOOD-CONTROL STORAGE 1187
 UPPER QUOTE CONTOUR 1200
 ACRES IN PARK ABOVE CONSERVATION POOL 320

BRAZOS RIVER AND TRIBUTARIES, TEXAS
 PROCTOR RESERVOIR
 LEON RIVER, TEXAS

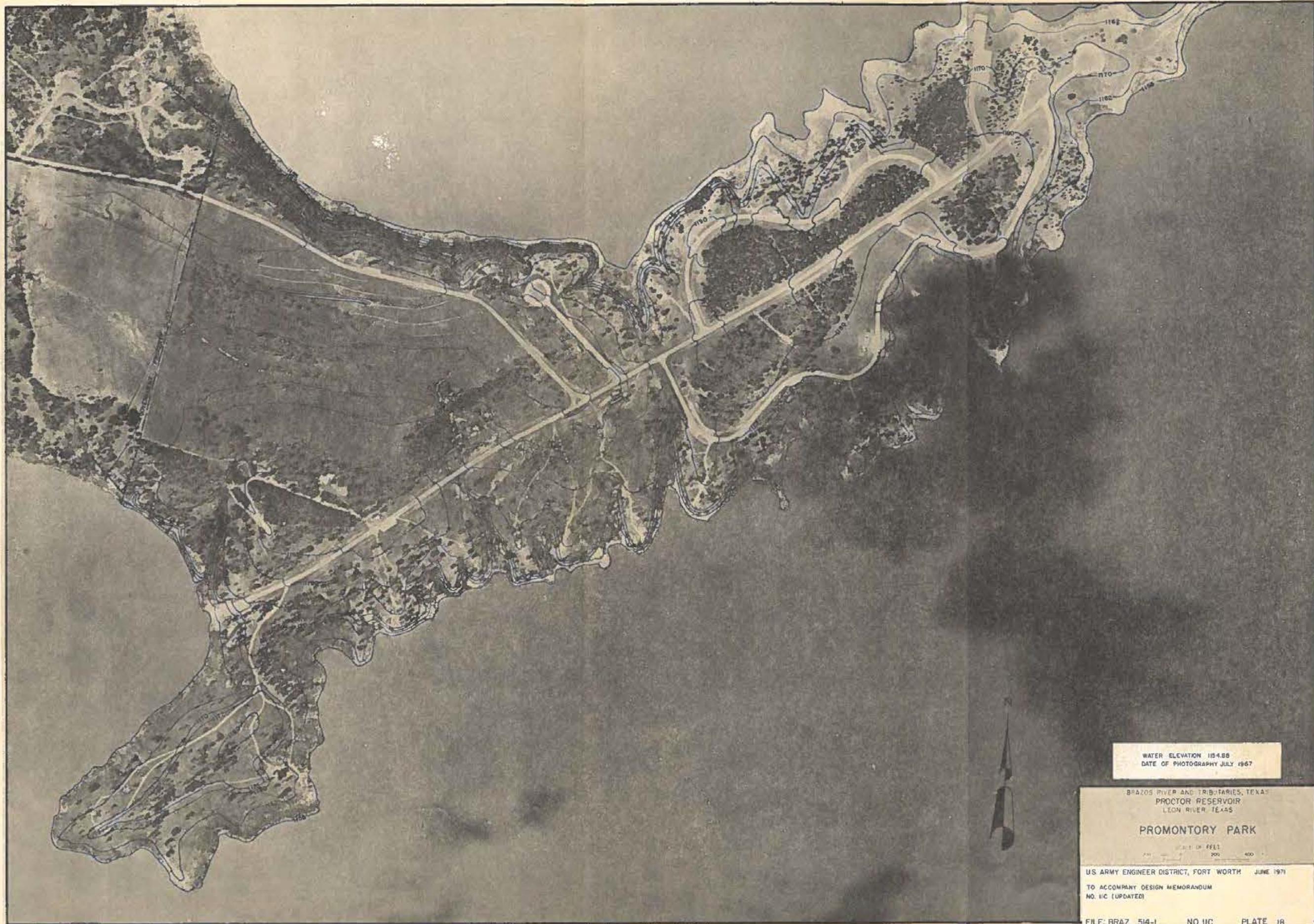
PROMONTORY PARK

SCALE OF FEET
 0 100 200 300

U.S. ARMY ENGINEER DISTRICT, FORT WORTH JUNE 1971

TO ACCOMPANY DESIGN MEMORANDUM NUMBER 11C (UPDATED)

FILE: BRAZ. 514-1 NO. 11C PLATE 17



WATER ELEVATION 1154.88
DATE OF PHOTOGRAPHY JULY 1967

BRAZOS RIVER AND TRIBUTARIES, TEXAS
PROCTOR RESERVOIR
LEON RIVER, TEXAS

PROMONTORY PARK

SCALE OF FEET
0 200 400

U.S. ARMY ENGINEER DISTRICT, FORT WORTH JUNE 1971
TO ACCOMPANY DESIGN MEMORANDUM
NO. 11C (UPDATED)

FILE: BRAZ 514-1 NO. 11C PLATE 18