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**OPERATION AND MAINTENANCE  
MANUAL**

**SALT CREEK  
TEHAMA COUNTY, CALIFORNIA**

**CLEARED FLOODWAY**



**DEPARTMENT OF THE ARMY  
SACRAMENTO DISTRICT, CORPS OF ENGINEERS  
SACRAMENTO, CALIFORNIA**

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CORPS OF ENGINEERS

U. S. ARMY

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U. S. ARMY ENGINEER DISTRICT  
Corps of Engineers  
Sacramento, California  
December 1970

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OPERATION AND MAINTENANCE MANUAL  
SALT CREEK, TEHAMA COUNTY

CLEARED FLOODWAY

SECTION I

INTRODUCTION

1-01. Project Works. The flood-control improvement covered by this manual is a part of channel improvement on Salt Creek authorized by Section 2 of the Flood Control Act of 1937 as amended by Section 208 of the 1954 Flood Control Act. The channels of the Project constitute that part of the waterway of Salt Creek which lies between its mouth at the Sacramento River and a point 1.7 miles upstream. The area is generally as shown on the "As Constructed" drawings, EXHIBIT B.

1-02. Construction Data and Contractor. Clearing necessary to bring the waterway area of Salt Creek to project standards in the reach described above was accomplished under the Channel Improvement Project for Salt Creek under Contract No. DA CW05-71-C-0037 by Frank J. Fuller during the period from 9 September 1970 to 29 October 1970. Specification 986, Drawing No. 50-6-4504.

1-03. Assurances Provided by Local Interests. Assurance of cooperation by local interests is provided by State legislation as contained in Chapter 3, Part 2, Division 5 of the State Water Code.

1-04. Acceptance by the State Reclamation Board. Responsibility for operating and maintaining the cleared portion of Salt Creek was officially accepted by the Reclamation Board of the State of California on 23 February 1971 as shown on the copy of the letter of acceptance, EXHIBIT D.

SECTION II  
FEATURES OF THE PROJECT SUBJECT TO FLOOD CONTROL REGULATIONS

2-01. Channel.

a. General. The channels within this project works are as described in paragraph 1-01 which covers the cleared channel of Salt Creek from its mouth at the Sacramento River to a point about 1.7 miles upstream. The channel widths vary and are as shown on the drawings of EXHIBIT B. The maintenance and operation of the channel within this unit shall be limited to flood-control requirements as referred to below. In general, the channels shall be maintained to the same condition as existed after completion of the contract listed in paragraph 1-02 of this manual. The channels shall be maintained annually by clearing all dense growth that has or will have a detrimental effect on the project works by restricting the passage of floodflows. Live trees, with diameters greater than 6 inches, left standing after completion of the contract listed in paragraph 1-02 shall not be removed during normal maintenance operations. All cleared floatable debris shall be burned to ashes or removed outside the project works prior to 1 November of each year.

b. For pertinent Requirements of the Code of Federal Regulations see paragraph 208.10(g), Exhibit A and for other requirements see checklist, Exhibit C of this manual. Inclosed as Exhibit F are photographs of the channel taken at intervals varying from 500 feet to 1,100 feet showing the condition of the stream after completion of the project work. It shall be the responsibility of the maintaining agency to maintain the channel floodway to the approximate condition shown in the photographs.

### SECTION III

#### REPAIR OF DAMAGE TO PROJECT WORKS AND

#### METHODS OF COMBATING FLOOD CONDITIONS

3-01. Repair of Damage. In the event of serious damage to the project works, whether due to flood conditions or other causes, and which may be beyond the capability of local interests to repair, the Superintendent (local representative appointed by the sponsoring agency) will contact a representative of the Department of Water Resources, State of California, who coordinates maintenance of project works of the Sacramento River Flood Control Project. The State representative will give assistance or advice, or will determine appropriate action to be taken.

3-02. Applicable Methods of Combating Floods. For applicable methods of combating flood conditions, reference is made to paragraph 208.10(g)(2) of the Flood Control Regulations, Exhibit A.

CODE OF FEDERAL REGULATIONS (EXTRACT)

TITLE 33—NAVIGATION AND  
NAVIGABLE WATERS

Chapter II — Corps of Engineers,  
Department of the Army

PART 208 — FLOOD CONTROL REGULATIONS

AUTHORITY: § 208.10 issued under Sec. 7,  
58 Stat. 890; 33 U.S.C. 709.

§ 208.10 *Local flood protection works; maintenance and operation of structures and facilities—(a) General.* (1) The structures and facilities constructed by the United States for local flood protection shall be continuously maintained in such a manner and operated at such times and for such periods as may be necessary to obtain the maximum benefits.

(2) The State, political subdivision thereof, or other responsible local agency, which furnished assurance that it will maintain and operate flood control works in accordance with regulations prescribed by the Secretary of the Army, as required by law, shall appoint a permanent committee consisting of or headed by an official hereinafter called the "Superintendent," who shall be responsible for the development and maintenance of, and directly in charge of, an organization responsible for the efficient operation and maintenance of all of the structures and facilities during flood periods and for continuous inspection and maintenance of the project works during periods of low water, all without cost to the United States.

(3) A reserve supply of materials needed during a flood emergency shall be kept on hand at all times.

(4) No encroachment or trespass which will adversely affect the efficient operation or maintenance of the project works shall be permitted upon the rights-of-way for the protective facilities.

(5) No improvement shall be passed over, under, or through the walls, levees, improved channels or floodways, nor shall any excavation or construction be permitted within the limits of the project right-of-way, nor shall any change be made in any feature of the works without prior determination by the District Engineer of the Department of the Army or his authorized representative that such improvement, excavation, construction, or alteration will not adversely affect the functioning of the protective facilities. Such improvements or alterations as may be found to be desirable and permissible under the above determination shall be constructed in accordance with standard engineering practice. Advice regarding the effect of proposed improvements or alterations on the functioning of the project and information concerning methods of construction acceptable under standard engineering practice shall be obtained from the District Engineer or, if otherwise obtained, shall be submitted for his approval. Drawings or prints showing such improvements or alterations as finally constructed shall be furnished the District Engineer after completion of the work.

(6) It shall be the duty of the Superintendent to submit a semiannual report to the District Engineer covering inspection, maintenance, and operation of the protective works.

(7) The District Engineer or his authorized representatives shall have ac-

cess at all times to all portions of the protective works.

(8) Maintenance measures or repairs which the District Engineer deems necessary shall be promptly taken or made.

(9) Appropriate measures shall be taken by local authorities to insure that the activities of all local organizations operating public or private facilities connected with the protective works are coordinated with those of the Superintendent's organization during flood periods.

(10) The Department of the Army will furnish local interests with an Operation and Maintenance Manual for each completed project, or separate useful part thereof, to assist them in carrying out their obligations under this part.

(b) *Levees—(1) Maintenance.* The Superintendent shall provide at all times such maintenance as may be required to insure serviceability of the structures in time of flood. Measures shall be taken to promote the growth of sod, exterminate burrowing animals, and to provide for routine mowing of the grass and weeds, removal of wild growth and drift deposits, and repair of damage caused by erosion or other forces. Where practicable, measures shall be taken to retard bank erosion by planting of willows or other suitable growth on areas riverward of the levees. Periodic inspections shall be made by the Superintendent to insure that the above maintenance measures are being effectively carried out and, further, to be certain that:

(i) No unusual settlement, sloughing, or material loss of grade or levee cross section has taken place;

(ii) No caving has occurred on either the land side or the river side of the levee which might affect the stability of the levee section;

(iii) No seepage, saturated areas, or sand boils are occurring;

(iv) Toe drainage systems and pressure relief wells are in good working condition, and that such facilities are not becoming clogged;

(v) Drains through the levees and gates on said drains are in good working condition;

(vi) No revetment work or riprap has been displaced, washed out, or removed;

(vii) No action is being taken, such as burning grass and weeds during inappropriate seasons, which will retard or destroy the growth of sod;

(viii) Access roads to and on the levee are being properly maintained;

(ix) Cattle guards and gates are in good condition;

(x) Crown of levee is shaped so as to drain readily, and roadway thereon, if any, is well shaped and maintained;

(xi) There is no unauthorized grazing or vehicular traffic on the levees;

(xii) Encroachments are not being made on the levee right-of-way which might endanger the structure or hinder its proper and efficient functioning during times of emergency.

Such inspections shall be made immediately prior to the beginning of the flood season; immediately following each major high water period, and otherwise at intervals not exceeding 90 days; and such intermediate times as may be necessary to insure the best possible care of the levee. Immediate steps will be taken to correct dangerous conditions disclosed by such inspections. Regular maintenance repair measures shall be accom-

plished during the appropriate season as scheduled by the Superintendent.

(2) *Operation.* During flood periods the levee shall be patrolled continuously to locate possible sand boils or unusual wetness of the landward slope and to be certain that:

(i) There are no indications of slides or sloughs developing;

(ii) Wave wash or scouring action is not occurring;

(iii) No low reaches of levee exist which may be overtopped;

(iv) No other conditions exist which might endanger the structure.

Appropriate advance measures will be taken to insure the availability of adequate labor and materials to meet all contingencies. Immediate steps will be taken to control any condition which endangers the levee and to repair the damaged section.

(c) *Flood walls.—(1) Maintenance.* Periodic inspections shall be made by the Superintendent to be certain that:

(i) No seepage, saturated areas, or sand boils are occurring;

(ii) No undue settlement has occurred which affects the stability of the wall or its water tightness;

(iii) No trees exist, the roots of which might extend under the wall and offer accelerated seepage paths;

(iv) The concrete has not undergone cracking, chipping, or breaking to an extent which might affect the stability of the wall or its water tightness;

(v) There are no encroachments upon the right-of-way which might endanger the structure or hinder its functioning in time of flood;

(vi) Care is being exercised to prevent accumulation of trash and debris adjacent to walls, and to insure that no fires are being built near them;

(vii) No bank caving conditions exist riverward of the wall which might endanger its stability;

(viii) Toe drainage systems and pressure relief wells are in good working condition, and that such facilities are not becoming clogged.

Such inspections shall be made immediately prior to the beginning of the flood season, immediately following each major high water period, and otherwise at intervals not exceeding 90 days. Measures to eliminate encroachments and effect repairs found necessary by such inspections shall be undertaken immediately. All repairs shall be accomplished by methods acceptable in standard engineering practice.

(2) *Operation.* Continuous patrol of the wall shall be maintained during flood periods to locate possible leakage at monolith joints or seepage underneath the wall. Floating plant or boats will not be allowed to lie against or tie up to the wall. Should it become necessary during a flood emergency to pass anchor cables over the wall, adequate measures shall be taken to protect the concrete and construction joints. Immediate steps shall be taken to correct any condition which endangers the stability of the wall.

(d) *Drainage structures—(1) Maintenance.* Adequate measures shall be taken to insure that inlet and outlet channels are kept open and that trash, drift, or debris is not allowed to accumulate near drainage structures. Flap gates and manually operated gates and valves on drainage structures shall be examined, oiled, and trial operated at least once

## CODE OF FEDERAL REGULATIONS (EXTRACT)

every 90 days. Where drainage structures are provided with stop log or other emergency closures, the condition of the equipment and its housing shall be inspected regularly and a trial installation of the emergency closure shall be made at least once each year. Periodic inspections shall be made by the Superintendent to be certain that:

(i) Pipes, gates, operating mechanism, riprap, and headwalls are in good condition;

(ii) Inlet and outlet channels are open;

(iii) Care is being exercised to prevent the accumulation of trash and debris near the structures and that no fires are being built near bituminous coated pipes;

(iv) Erosion is not occurring adjacent to the structure which might endanger its water tightness or stability.

Immediate steps will be taken to repair damage, replace missing or broken parts, or remedy adverse conditions disclosed by such inspections.

(2) *Operation.* Whenever high water conditions impend, all gates will be inspected a short time before water reaches the invert of the pipe and any object which might prevent closure of the gate shall be removed. Automatic gates shall be closely observed until it has been ascertained that they are securely closed. Manually operated gates and valves shall be closed as necessary to prevent inflow of flood water. All drainage structures in levees shall be inspected frequently during floods to ascertain whether seepage is taking place along the lines of their contact with the embankment. Immediate steps shall be taken to correct any adverse condition.

(e) *Closure structures—(1) Maintenance.* Closure structures for traffic openings shall be inspected by the Superintendent every 90 days to be certain that:

(i) No parts are missing;

(ii) Metal parts are adequately covered with paint;

(iii) All movable parts are in satisfactory working order;

(iv) Proper closure can be made promptly when necessary;

(v) Sufficient materials are on hand for the erection of sand bag closures and that the location of such materials will be readily accessible in times of emergency.

Tools and parts shall not be removed for other use. Trial erections of one or more closure structures shall be made once each year, alternating the structures chosen so that each gate will be erected at least once in each 3-year period. Trial erection of all closure structures shall be made whenever a change is made in key operating personnel. Where railroad operation makes trial erection of a closure structure infeasible, rigorous inspection and drill of operating personnel may be substituted therefor. Trial erection of sand bag closures is not required. Closure materials will be carefully checked prior to and following flood periods, and damaged or missing parts shall be repaired or replaced immediately.

(2) *Operation.* Erection of each movable closure shall be started in sufficient time to permit completion before flood waters reach the top of the structure sill. Information regarding the proper method of erecting each individual closure structure, together with an estimate

of the time required by an experienced crew to complete its erection will be given in the Operation and Maintenance Manual which will be furnished local interests upon completion of the project. Closure structures will be inspected frequently during flood periods to ascertain that no undue leakage is occurring and that drains provided to care for ordinary leakage are functioning properly. Boats or floating plant shall not be allowed to tie up to closure structures or to discharge passengers or cargo over them.

(f) *Pumping plants—(1) Maintenance.* Pumping plants shall be inspected by the Superintendent at intervals not to exceed 30 days during flood seasons and 90 days during off-flood seasons to insure that all equipment is in order for instant use. At regular intervals, proper measures shall be taken to provide for cleaning plant, buildings, and equipment, repainting as necessary, and lubricating all machinery. Adequate supplies of lubricants for all types of machines, fuel for gasoline or diesel powered equipment, and flash lights or lanterns for emergency lighting shall be kept on hand at all times. Telephone service shall be maintained at pumping plants. All equipment, including switch gear, transformers, motors, pumps, valves, and gates shall be trial operated and checked at least once every 90 days. Megger tests of all insulation shall be made whenever wiring has been subjected to undue dampness and otherwise at intervals not to exceed one year. A record shall be kept showing the results of such tests. Wiring disclosed to be in an unsatisfactory condition by such tests shall be brought to a satisfactory condition or shall be promptly replaced. Diesel and gasoline engines shall be started at such intervals and allowed to run for such length of time as may be necessary to insure their serviceability in times of emergency. Only skilled electricians and mechanics shall be employed on tests and repairs. Operating personnel for the plant shall be present during tests. Any equipment removed from the station for repair or replacement shall be returned or replaced as soon as practicable and shall be trial operated after reinstallation. Repairs requiring removal of equipment from the plant shall be made during off-flood seasons insofar as practicable.

(2) *Operation.* Competent operators shall be on duty at pumping plants whenever it appears that necessity for pump operation is imminent. The operator shall thoroughly inspect, trial operate, and place in readiness all plant equipment. The operator shall be familiar with the equipment manufacturers' instructions and drawings and with the "Operating Instructions" for each station. The equipment shall be operated in accordance with the above-mentioned "Operating Instructions" and care shall be exercised that proper lubrication is being supplied all equipment, and that no overheating, undue vibration or noise is occurring. Immediately upon recession of flood waters, the pumping station shall be thoroughly cleaned, pump house sumps flushed, and equipment thoroughly inspected, oiled and greased. A record or log of pumping plant operation shall be kept for each station, a copy of which shall be furnished the District Engineer following each flood.

(g) *Channels and floodways—(1) Maintenance.* Periodic inspections of improved channels and floodways shall be made by the Superintendent to be certain that:

(i) The channel or floodway is clear of debris, weeds, and wild growth;

(ii) The channel or floodway is not being restricted by the depositing of waste materials, building of unauthorized structures or other encroachments;

(iii) The capacity of the channel or floodway is not being reduced by the formation of shoals;

(iv) Banks are not being damaged by rain or wave wash, and that no sloughing of banks has occurred;

(v) Riprap sections and deflection dikes and walls are in good condition;

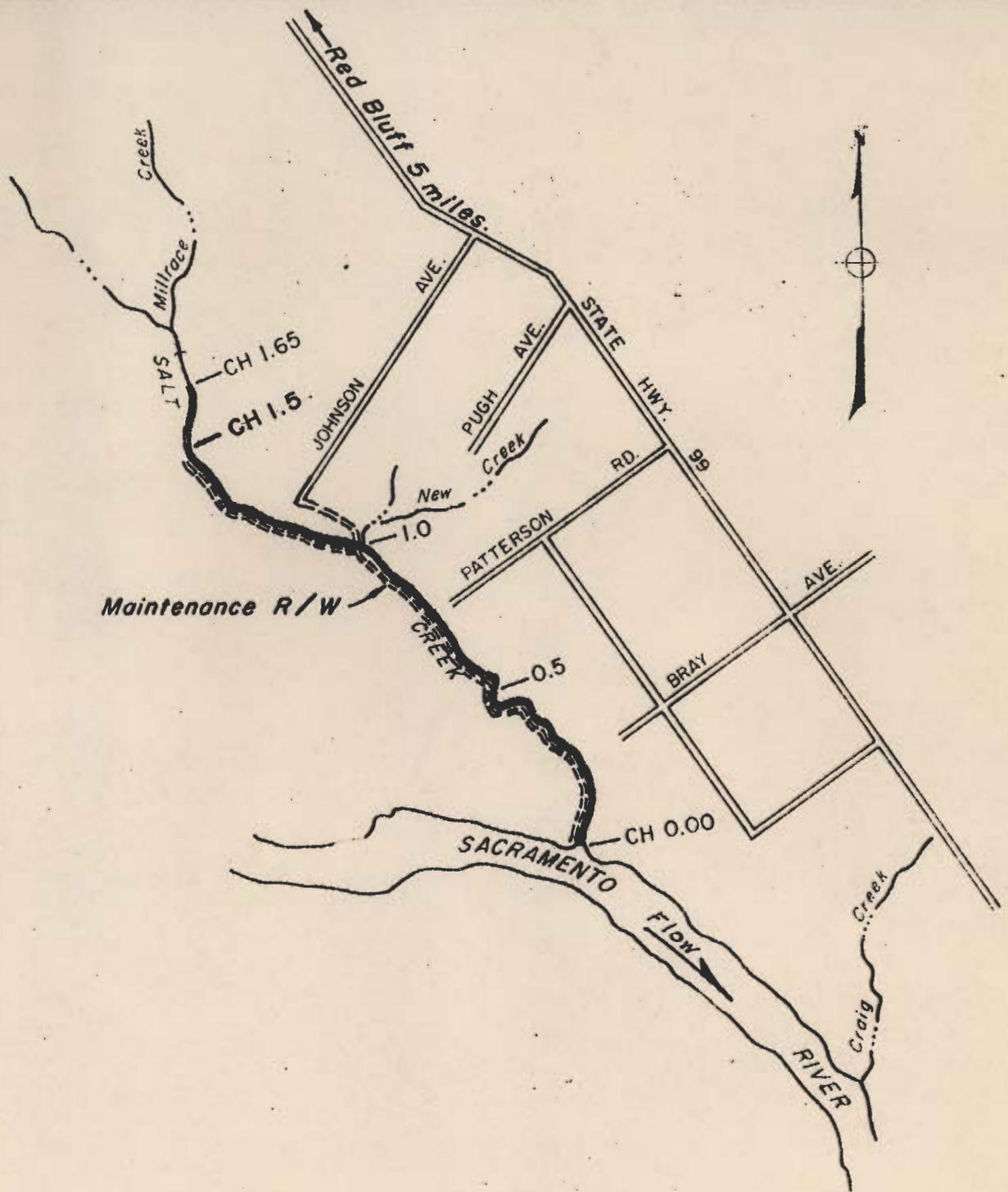
(vi) Approach and egress channels adjacent to the improved channel or floodway are sufficiently clear of obstructions and debris to permit proper functioning of the project works.

Such inspections shall be made prior to the beginning of the flood season and otherwise at intervals not to exceed 90 days. Immediate steps will be taken to remedy any adverse conditions disclosed by such inspections. Measures will be taken by the Superintendent to promote the growth of grass on bank slopes and earth deflection dikes. The Superintendent shall provide for periodic repair and cleaning of debris basins, check dams, and related structures as may be necessary.

(2) *Operation.* Both banks of the channel shall be patrolled during periods of high water, and measures shall be taken to protect those reaches being attacked by the current or by wave wash. Appropriate measures shall be taken to prevent the formation of jams of ice or debris. Large objects which become lodged against the bank shall be removed. The improved channel or floodway shall be thoroughly inspected immediately following each major high water period. As soon as practicable thereafter, all snags and other debris shall be removed and all damage to banks, riprap, deflection dikes and walls, drainage outlets, or other flood control structures repaired.

(h) *Miscellaneous facilities—(1) Maintenance.* Miscellaneous structures and facilities constructed as a part of the protective works and other structures and facilities which function as a part of, or affect the efficient functioning of the protective works, shall be periodically inspected by the Superintendent and appropriate maintenance measures taken. Damaged or unserviceable parts shall be repaired or replaced without delay. Areas used for ponding in connection with pumping plants or for temporary storage of interior run-off during flood periods shall not be allowed to become filled with silt, debris, or dumped material. The Superintendent shall take proper steps to prevent restriction of bridge openings and, where practicable, shall provide for temporary raising during floods of bridges which restrict channel capacities during high flows.

(2) *Operation.* Miscellaneous facilities shall be operated to prevent or reduce flooding during periods of high water. Those facilities constructed as a part of the protective works shall not be used for purposes other than flood protection without approval of the District Engineer unless designed therefor. (Sec. 3, 49 Stat. 1571, as amended; 33 U.S.C. 701C) [9 F.R. 9999, Aug. 17, 1944; 9 F.R. 10203, Aug. 22, 1944]



~ LIMITS OF CHANNEL CLEARING

**LOCATION MAP**  
**SALT CREEK**  
 TEHAMA COUNTY, CALIFORNIA  
 CLEARED FLOODWAY

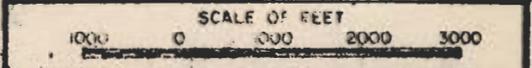


EXHIBIT B  
"AS CONSTRUCTED"  
DRAWINGS

File No.

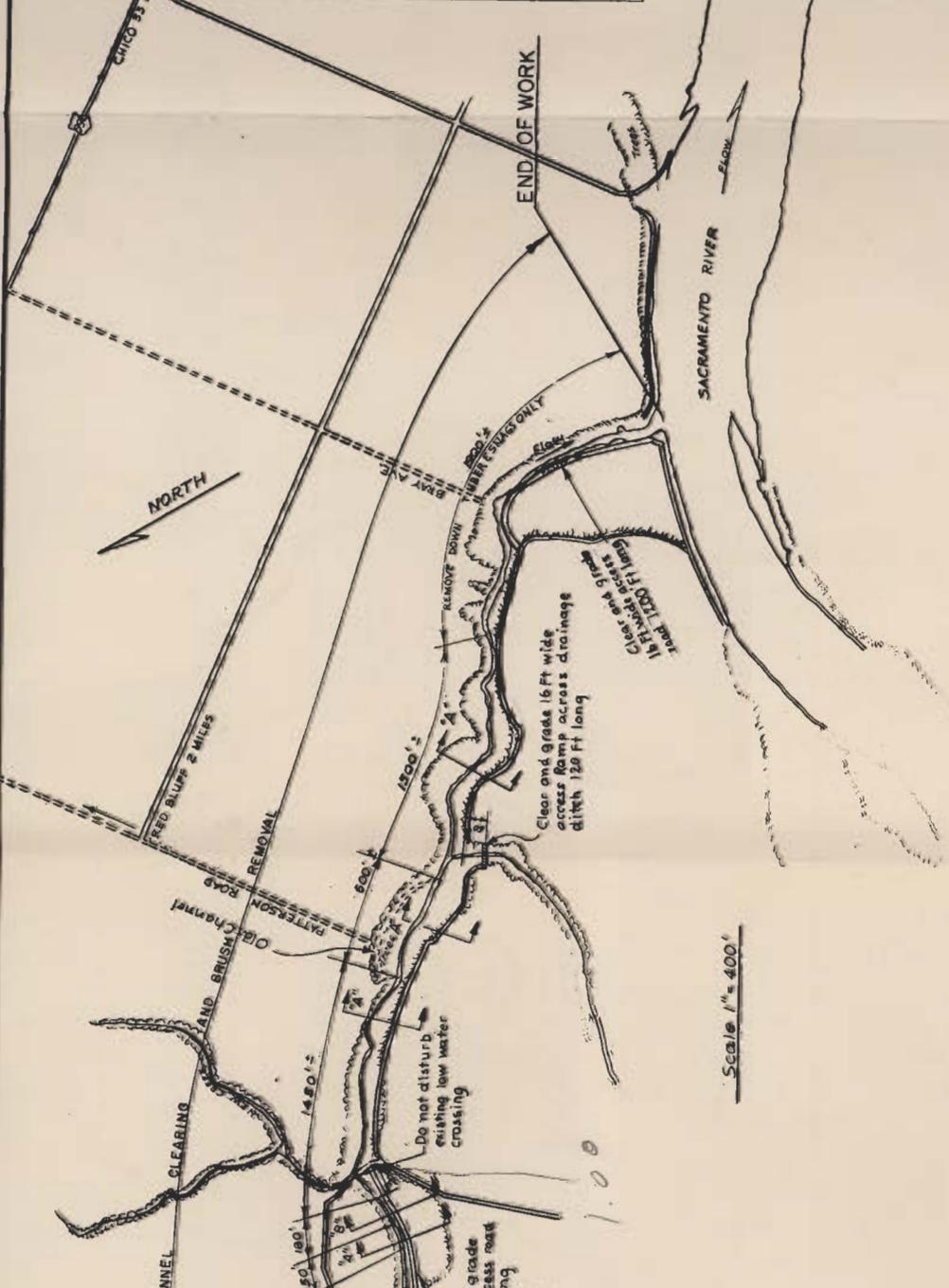
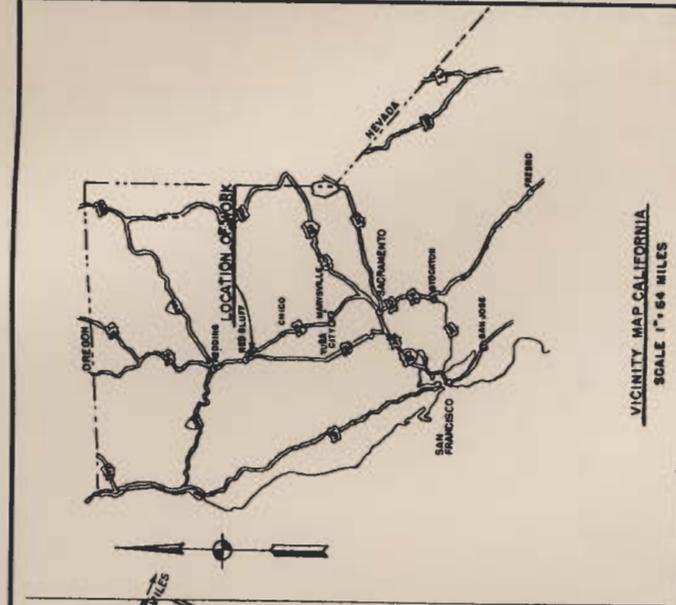
Title

50-6-4504

Channel Improvement - Salt Creek, Tehama County,  
in 1 sheet

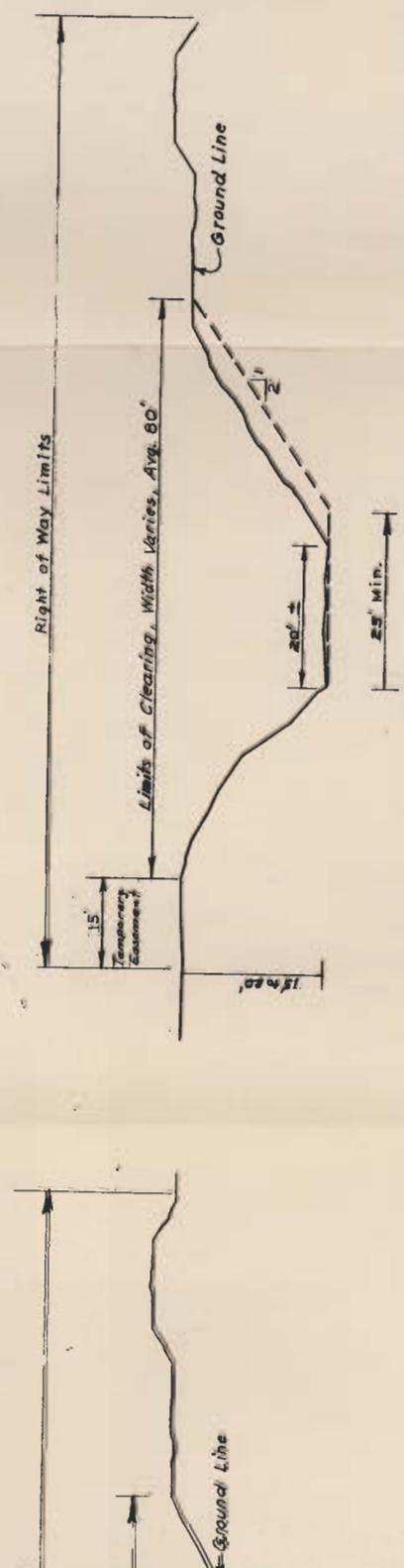
EXHIBIT B

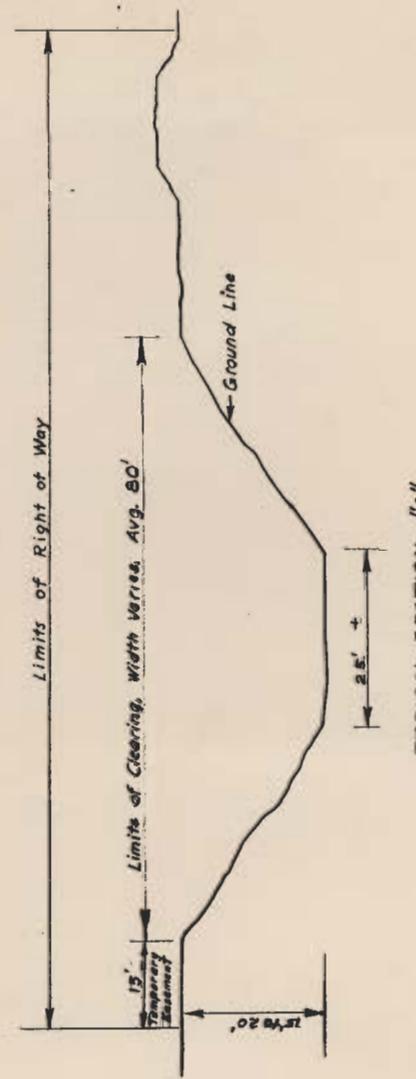
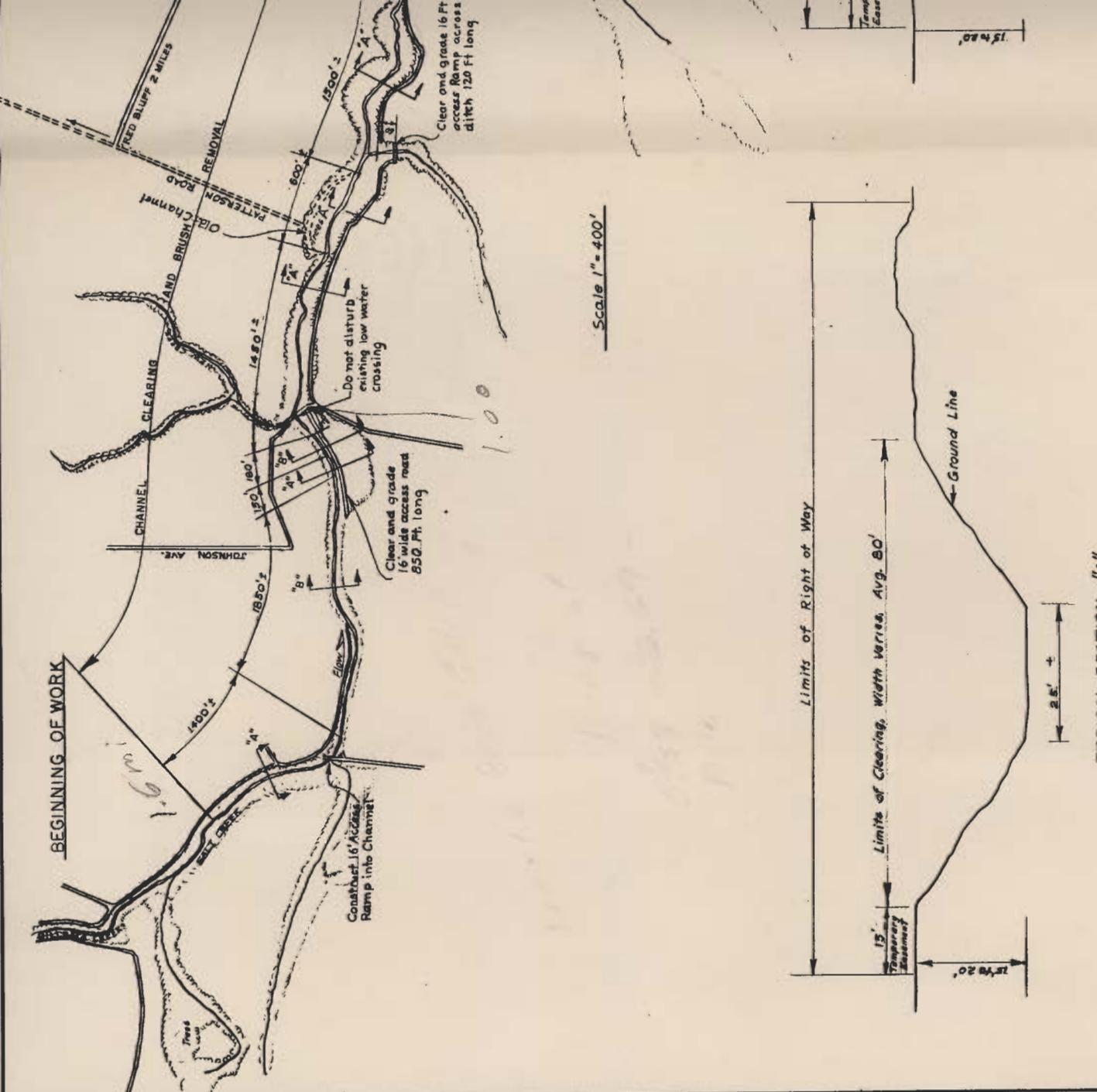
# VALUE ENGINEERING PAYS



Scale 1" = 400'

- NOTES.
1. Debris and excavated material to be disposed of along the right bank between top of bank and the levee.
  2. No trees are to be removed in the overbank area.
  3. No Live Trees Over 12" diam. within channel clearing limits are to be removed.





15' x 20'

Temp. Embankment

TYPICAL SECTION "A"

Channel Clearing

EXHIBIT C

CHECKLISTS OF CHANNELS

CHECKLIST

CHANNEL AND RIGHT-OF-WAY

SALT CREEK  
CLEARED FLOODWAY

Inspector's Report Sheet No. \_\_\_\_\_ Inspector \_\_\_\_\_

Date \_\_\_\_\_ Superintendent \_\_\_\_\_

Item	Remarks
(a) Name of channel and location by stations	
(b) Vegetal growth in channel	
(c) Debris and refuse in channel	
(d) New construction within right-of-way	
(e) Extent of aggradation or degradation	
(f) Condition of low water crossings and access ramps	
(g) Measures taken since last inspection	
(h) Comments	

INSTRUCTIONS FOR COMPLETING SHEET I, EXHIBIT C

- Item (a) Indicate station of observation obtained by pacing from nearest reference point.
- Item (b) Note nature, extent, and size of vegetal growth within the limits of floodflow channel.
- Item (c) Note nature and extent of debris and refuse that might cause clogging of the conduits of the irrigation intake works, fouling of the tainter gates, or the bridges over the channel.
- Item (d) Report any construction along the diversion channel or above the diversion channel or above the diversion works that has come to the attention of the inspector and that might affect the functioning of the project.
- Item (e) Indicate any change in grade or alignment of the channels, either by deposition or sediment or scour, that is noticeable by visual inspection. Estimate amount and extent.
- Item (f) Indicate condition of low water crossings, access ramps and other appurtenances.
- Item (g) Indicate maintenance measures that have been performed since the last inspection and their condition at time of this inspection.
- Item (h) Record opinion, if any, of contributory causes for conditions observed, also any observations not covered under other columns.

NOTE: One copy of the Inspector's Report is to be mailed to the District Engineer immediately on completion, and one copy is to be attached to and submitted with the Superintendent's semi-annual report.

EXHIBIT D

LETTER OF ACCEPTANCE

BY THE STATE RECLAMATION BOARD

C  
O  
P  
Y

THE RECLAMATION BOARD  
STATE OF CALIFORNIA

C  
O  
P  
Y

February 23, 1971

File No: 4130.70.403  
Your Contract: DACW05-71-C-0037

District Engineer  
U. S. Army Corps of Engineers  
650 Capitol Mall  
Sacramento, California 95814

Dear Sir:

Reference is made to your letter of February 9, 1971, concerning transfer to the State of California the Salt Creek Project, Clearing and Snagging, for maintenance and operation.

This work was constructed in conformance with Specification No. 986C and Contract No. DACW05-71-C-0037. The work was done on Salt Creek, Tehama County.

The Reclamation Board at its meeting of February 19, 1971, formally accepted the above-referred to work for operation and maintenance.

Sincerely yours,

/s/ A. E. McCollam  
A. E. MCCOLLAM  
Chief Engineer and General Manager

EXHIBIT D

EXHIBIT E

SUGGESTED SEMI-ANNUAL REPORT FORM

TO: The District Engineer  
Sacramento District  
Corps of Engineers  
650 Capitol Mall  
Sacramento, California 95814

(1 May 19\_\_ )  
(1 Nov 19\_\_ )

Dear Sir:

The semi-annual report for the period (1 May 19\_\_ to 31 October 19\_\_) (1 November 19\_\_ to 30 April 19\_\_) on the Salt Creek Channel Improvement Project is as follows:

a. The physical condition of the protective works is indicated by the inspector's report, copies of which are inclosed, and may be summarized as follows:

(Superintendent's summary of conditions)

It is our intention to perform the following maintenance work in order to repair or correct the conditions indicated:

(Outline the anticipated maintenance operations for the following 6 months.)

b. During this report period, major high water periods occurred on the following dates:

<u>Dates</u>	<u>Maximum Elevation at Low Water Crossing (Estimated)</u>
_____	_____
_____	_____
_____	_____

Comments on the behavior of the protective works during such high water periods are as follows:

(Superintendent's log of flood observations)

During the high water stages when the water level reached a height of about one foot below top of bank at the low water crossing or excess thereof (dates) \_\_\_\_\_, it was necessary to organize and carry out flood operations as follows:

(See Maintenance Manual \_\_\_\_\_.)

c. The inspections have indicated (no) or (the following) encroachments or trespasses upon the project right-of-way.

d. (No) ( ) permits have been issued for the (the following) improvements or construction within the project right-of-way.

Executed copies of the permit documents issued are transmitted for your files.

e. The status of maintenance measures, indicated in the previous semi-annual report as being required or as suggested by the representatives of the District Engineer, is as follows:

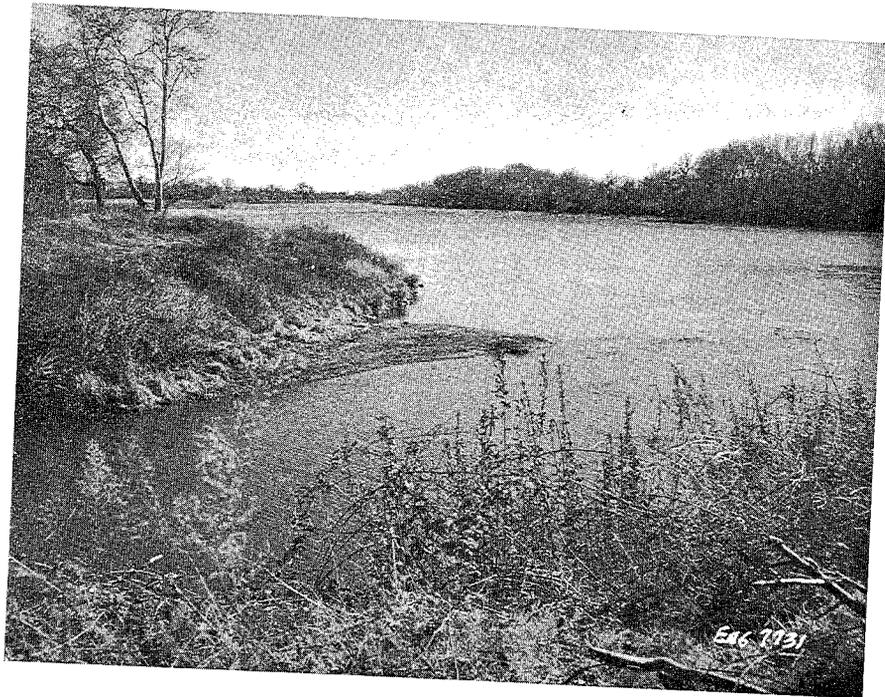
(Statement of maintenance operations, item by item with percent completion.)

f. The fiscal statement of the Superintendent's operations for the current report period is as follows:

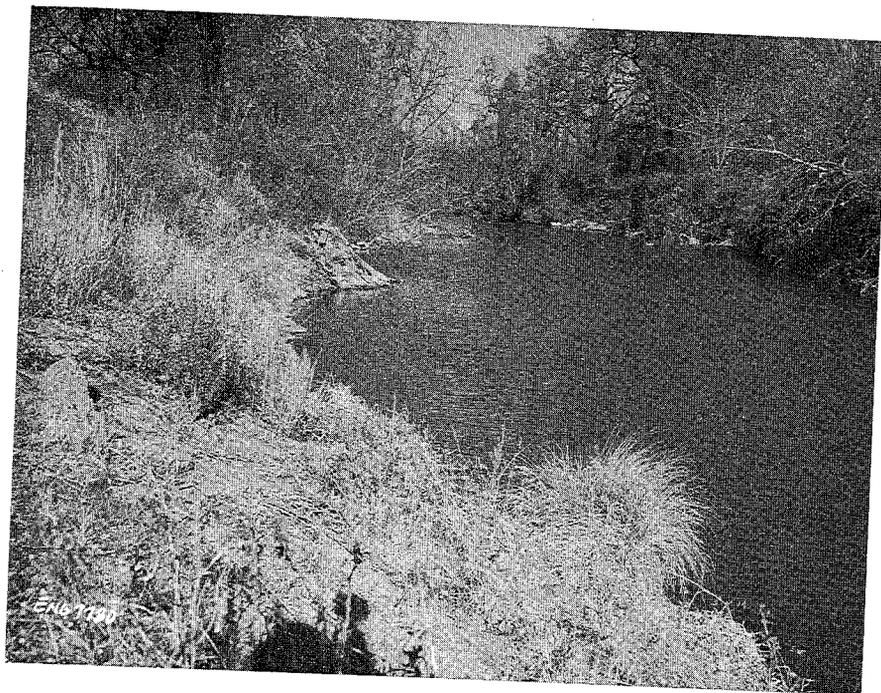
	<u>Labor</u>	<u>Material</u>	<u>Equipment</u>	<u>Overhead</u>	<u>Total</u>
1. Inspection					
2. Maintenance					
3. Flood fighting operations					
TOTAL					

Respectfully submitted,

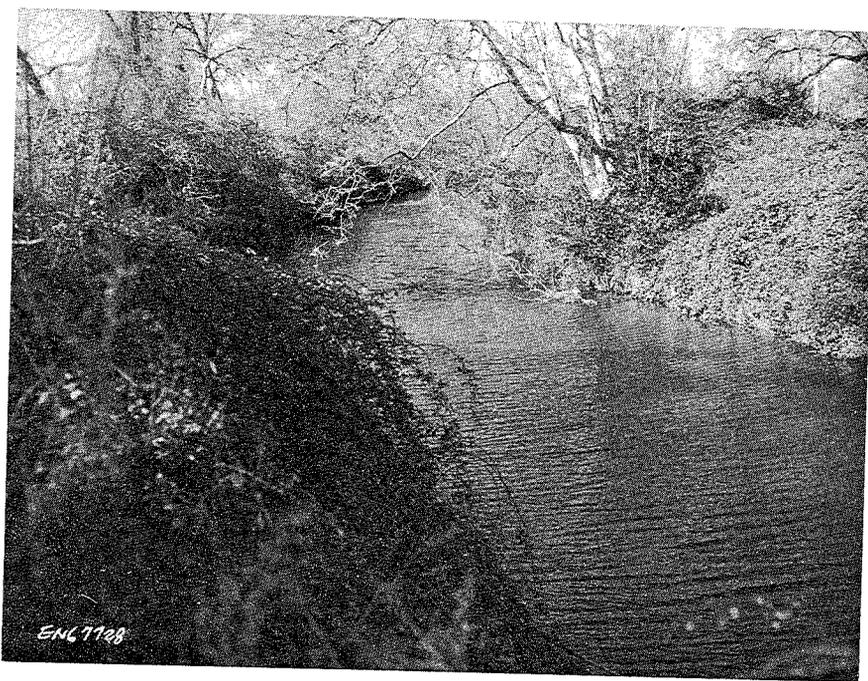
Superintendent of Works



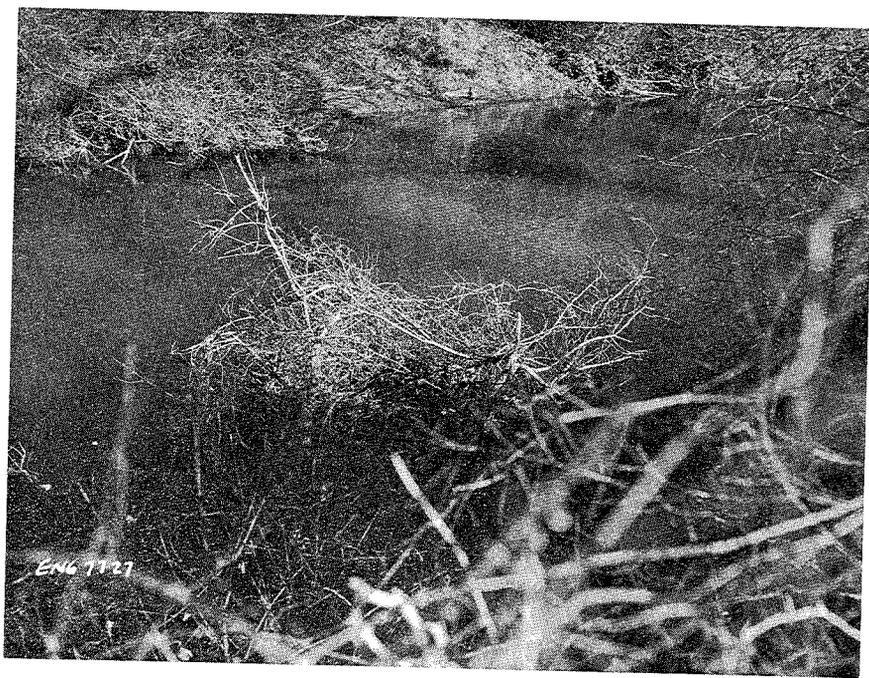
LOOKING DOWNSTREAM AT CONFLUENCE OF  
SACRAMENTO RIVER AND SALT CREEK



LOOKING UPSTREAM AT SALT CREEK FROM  
CONFLUENCE OF SACRAMENTO RIVER - CHANNEL MILE 0.0



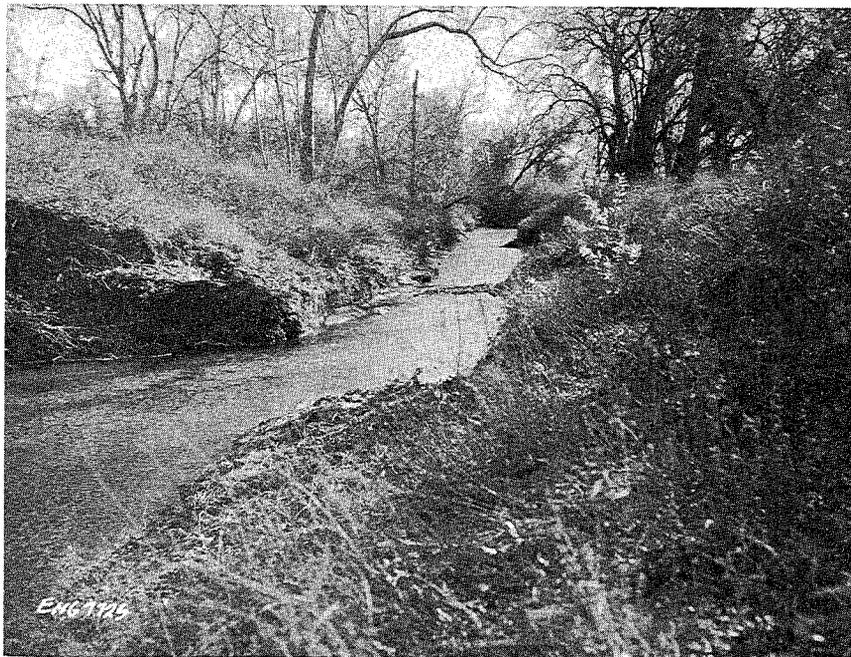
LOOKING UPSTREAM AT CHANNEL  
CHANNEL MILE 0.20



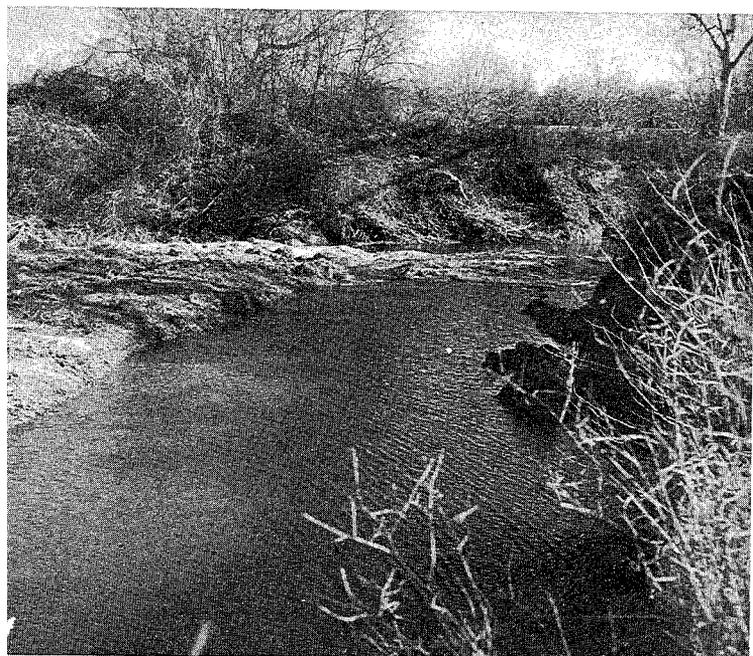
LOOKING DOWNSTREAM AT CHANNEL  
CHANNEL MILE 0.40



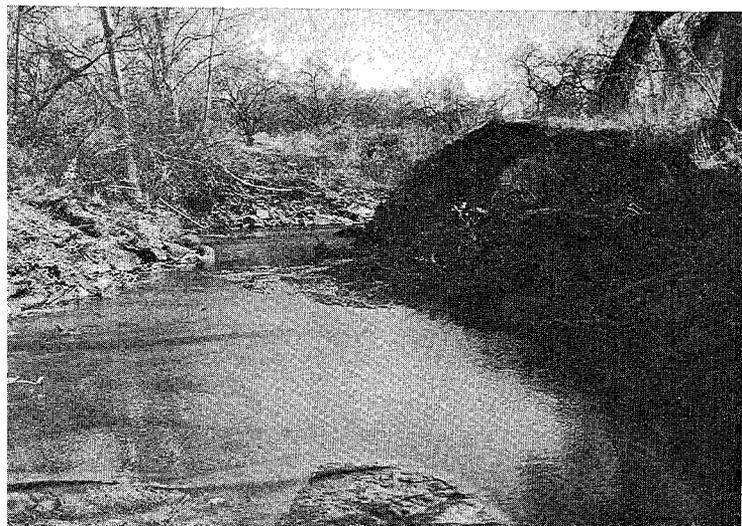
LOOKING DOWNSTREAM FROM ENTRANCE OF SIDE SLOUGH  
CHANNEL MILE 0.60



LOOKING DOWNSTREAM AT CHANNEL - CHANNEL MILE 0.70  
(OLD CHANNEL EXIT AT LEFT)



ING DOWNSTREAM AT ENTRANCE TO OLD CHANNEL  
CHANNEL MILE 0.85

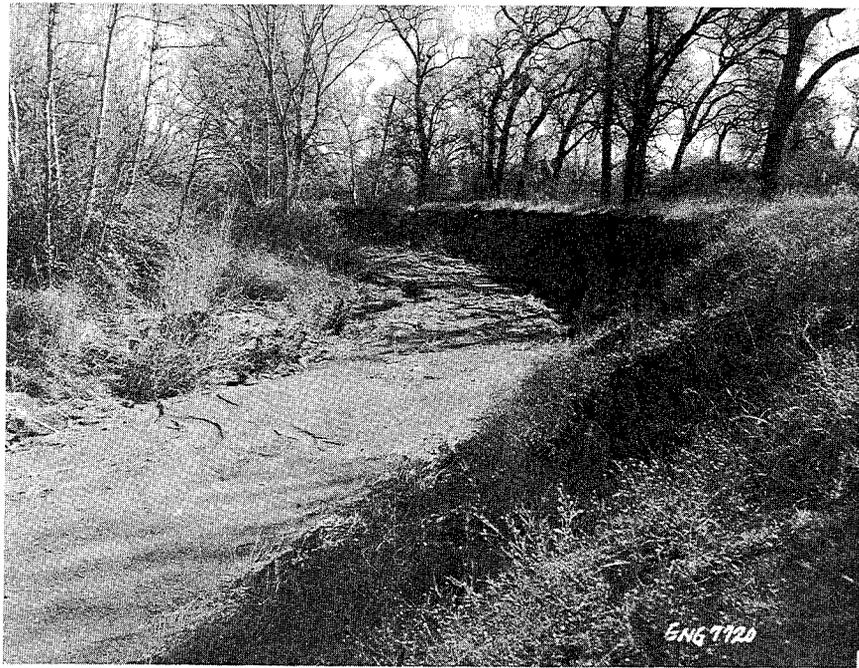




LOOKING UPSTREAM AT CHANNEL FROM LOW WATER CROSSING  
CHANNEL MILE 1.0



LOOKING DOWNSTREAM AT CHANNEL  
CHANNEL MILE 1.20



LOOKING DOWNSTREAM AT CHANNEL  
CHANNEL MILE 1.30

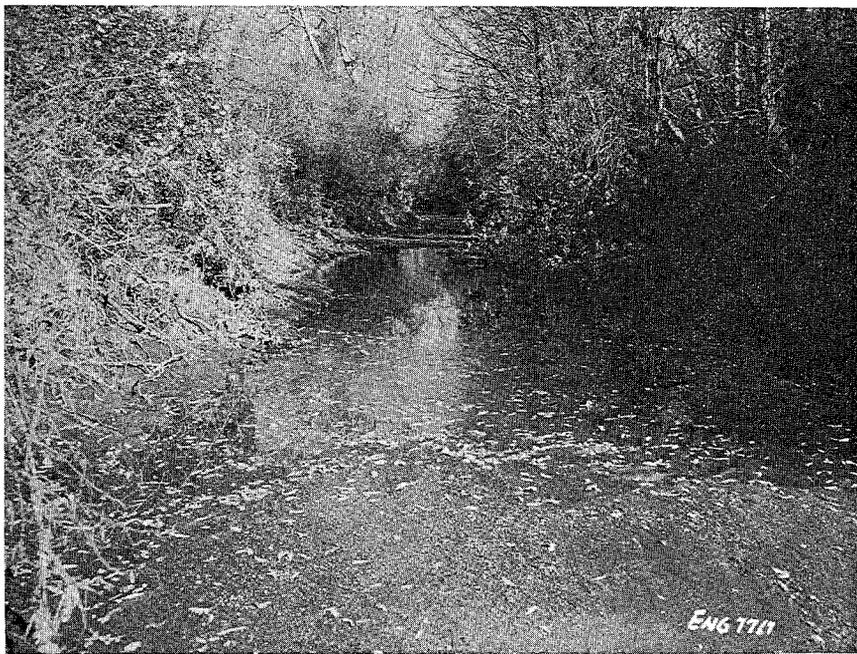


LOOKING DOWNSTREAM AT CHANNEL  
CHANNEL MILE 1.40

E



LOOKING DOWNSTREAM AT CHANNEL FROM ENTRANCE OF  
SIDE DRAIN - CHANNEL MILE 1.50



LOOKING UPSTREAM TOWARD BEGINNING OF PROJECT  
CHANNEL MILE 1.60

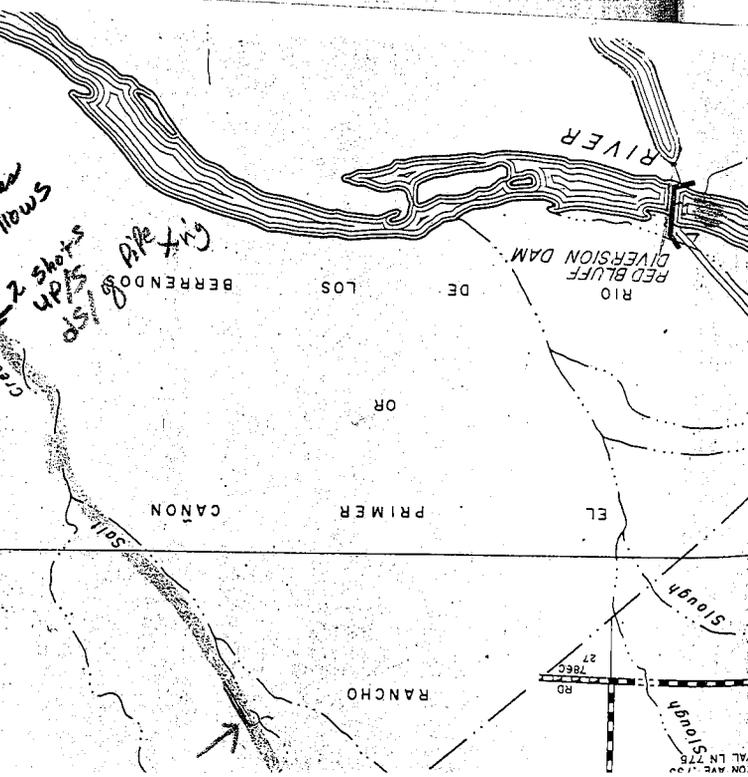
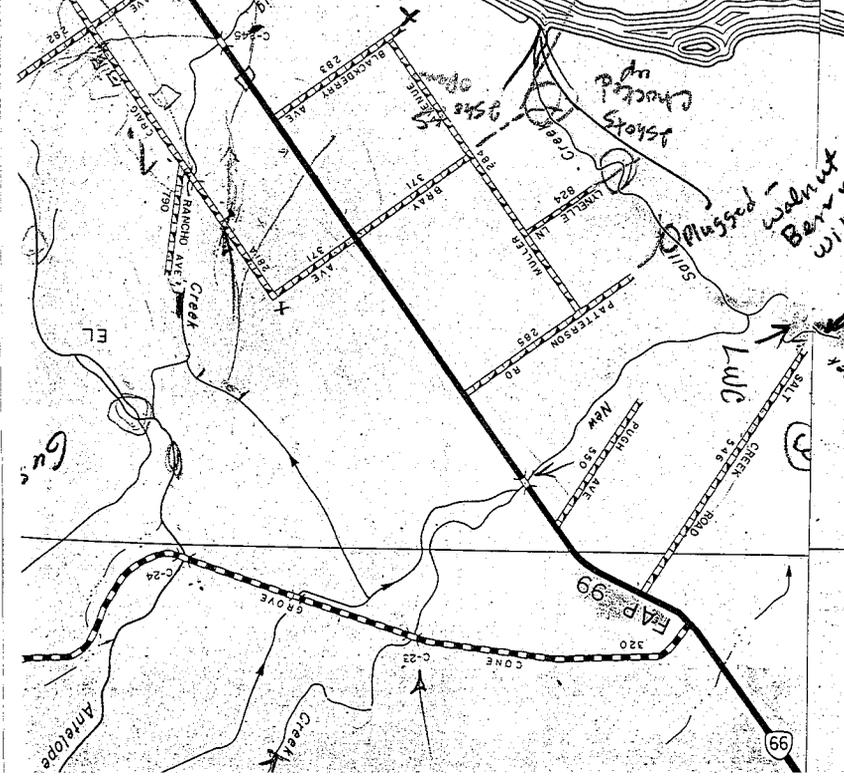
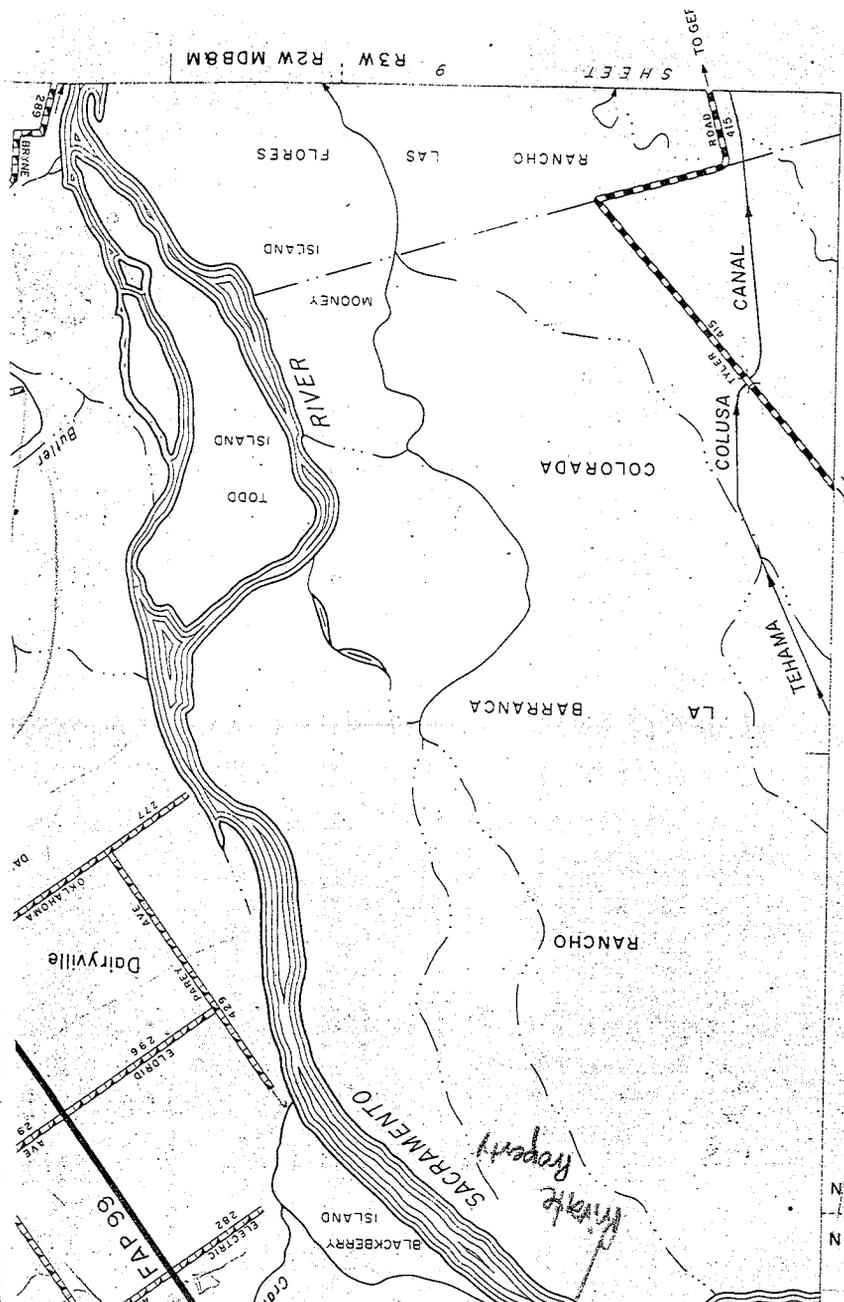
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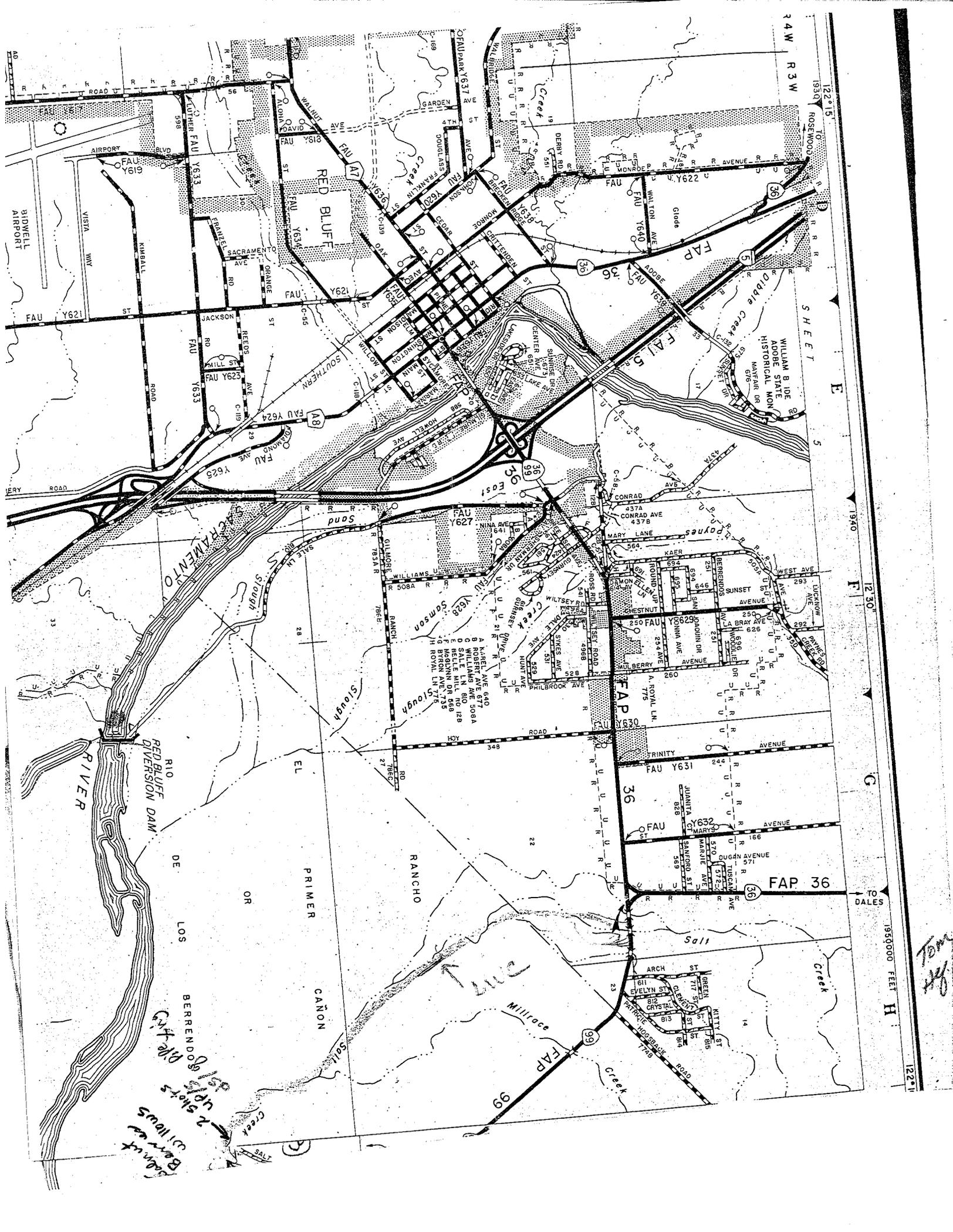
*River property*

*Shocks  
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barrier  
passing  
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5/24  
5/25  
APK*

*LWC*

*RED BLUFF  
DIVERSION DAM*

*South  
South*



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