

SUPPLEMENT TO STANDARD
OPERATION AND MAINTENANCE
MANUAL

SACRAMENTO RIVER
FLOOD CONTROL PROJECT

UNIT NO. 151

EAST LEVEE OF FEATHER RIVER
FROM
HONGCUT CREEK TO MARYSVILLE

AND

SOUTH LEVEE OF HONGCUT CREEK
AND

EAST LEVEE OF RECL. DIST. NO. 10



SACRAMENTO DISTRICT

CORPS OF ENGINEERS

U. S. ARMY

SACRAMENTO, CALIFORNIA

Reference US 50-10/24/50-29110

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Prepared by the Sacramento District
Corps of Engineers U. S. Army
Sacramento, California, dated May 1953

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LOCATION	ADDITION OR REVISION	DATE
Paragraph 1-04 d.	Add Contract No. 56-77 and 56-161	Nov 1963
Paragraph 1-04 e.	Add Contract No. 61-68	Nov 1963
Exhibit B	Add Drawing 4-4-513	Nov 1963
Paragraph 1-04 f.	Add Contract No. -1452	Jun 1967
Exhibit B	Add Drawing No. 4-4-138-3	Jun 1967
Paragraph 1-04	Add subparagraph g	Jun 1998
Paragraph 2-01 (b)	Add subparagraph b: Inspection	Jun 1998
Exhibit B	Add Drawing No. 50-4-5870	Jun 1998
Exhibit F	Add copy of letter of transfer dated 18 Jun 1998	Jun 1998
Exhibit F	Add copy of transfer letter dated 14 Mar 1949	28 Dec 2010
Exhibit F	Add copy of acceptance letter dated 14 Apr 1949	28 Dec 2010
Exhibit F	Add copy of letter of transfer dated 8 Dec 1951	28 Dec 2010
Exhibit F	Add copy of letter of acceptance dated 29 May 1953	28 Dec 2010
Exhibit F	Add copy of letter of transfer dated 25 Aug 1961	28 Dec 2010
Exhibit F	Add copy of letter of acceptance dated 7 Sep 1961	28 Dec 2010

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EAST LEVEE OF RECL. DIST. NO. 10

May 1953

SECTION I - INTRODUCTION

1-01. Location. - The improvement covered by this manual is that part of the Sacramento River Flood Control Project which includes the east levee of the Feather River from Honcut Creek to Marysville, the south levee of Honcut Creek and the east levee of Reclamation District No. 10. Honcut Creek is a tributary to the Feather River and the Feather River in turn is a tributary to the Sacramento River. Grade fill of the Western Pacific Railroad tracks comprises the east levee of Reclamation District No. 10. In general, the area lies between the city of Marysville and Honcut Creek in the County of Yuba, State of California. Location of the completed unit of the Sacramento River Flood Control Project covered by this manual is shown on Exhibit A-1 herewith.

1-02. Protection provided. - Levees within this unit are designed to protect adjacent agricultural lands lying within Reclamation District No. 10 from a flood flow of 5,000 cubic feet per second in Honcut Creek and a flood flow of 210,000 cubic feet per second in the Feather River. The grade of the adopted flood plane along the main channel of the Feather River varies from elevation 91.5 at the mouth of Honcut Creek to elevation 81.2 at Simmerly Slough near Marysville. The grade of the adopted flood plane in Honcut Creek varies from elevation 98.4 at high ground upstream from the Western Pacific Railroad to elevation 91.5 at its junction with the Feather River. The grade of the Honcut Creek South levee from high ground to the Western Pacific Railroad Bridge was built 3 feet higher than the highest water mark of record in this vicinity, whereas, that portion of Honcut Creek south levee from the Western Pacific Railroad Bridge to its confluence with the Feather River, was designed to protect adjacent lands from the highest flood flow of record in Honcut Creek with the Feather River at project design flood of 210,000 cubic feet per second. The levee grade along the Feather River and Honcut Creek provides a freeboard of 3 feet above the adopted flood plane profile.

1-03. Project works. – The flood-control improvement covered by this manual was authorized by the Flood Control Act of 1917 as modified by the Acts of 1928, 1937 and 1941, and consists of:

a. The east levee of the Feather River extending from the mouth of Honcut Creek downstream to Simmerly Slough as built by local interests and enlarged to adopted grade and section by the Corps of Engineers.

b. The south levee of Honcut Creek extending from high ground above the Western Pacific Railroad bridge downstream to its confluence with the Feather River, as built by local interests and enlarged to adopted grade and section by the Corps of Engineers.

c. The east levee of Reclamation District No. 10 from Honcut Creek southerly to Simmerly Slough as built for grade fill by the Western Pacific Railroad Company and enlarged to adopted grade and section by the Corps of Engineers.

1-04. Constructed data. – In addition to levees as built by local interests, construction required by the U.S. Corps of Engineers to bring levees of this unit to project standards was accomplished under the following contracts:

a. Reconstruction of the east levee of Reclamation District No. 10 from Simmerly Slough north 2.5 miles was accomplished under Contract No. W-1105-eng-2930 by George E. France. Work on this contract was completed on 25 July 1941.

b. Reconstruction of the east levee of the Feather River from Simmerly Slough upstream 4.8 miles was accomplished under Contract No. W-04-167-eng-1387 by H. Earl Parker, Inc. Work on this contract was started on 1 June 1948 and completed on 14 March 1949.

c. Reconstruction of the east levee of the Feather River from a point 4.8 miles upstream from Simmerly Slough to Honcut Creek, the south levee of Honcut Creek and a portion of the east levee of Reclamation District No. 10 (W.P.R.R. grade) was accomplished under Contract No. DA-04-167-eng-468 by foster & McHarg. Work was begun on 16 April 1951 and completed on 12 September 1952.

d. Repair of levee on Feather River in R.D. 10 near W.P.R.R just north of Marysville was accomplished under Contract No. DA-04-167-CIVENG-56-77 and 56-161 by Baldwin Contracting Company during the period from 30 December 1955 to 6 February 1956. No drawings made.

e. Construction of turnouts along the back levee of R.D. 10 was accomplished under Contract NO. DA-04-167-CIVENG-61-68 by S.G. Voudouris and A.E. McEwen, contractors, during the period from 17 April 1961 to 25 August 1961, Specification No. 2683, Drawing No. 4-4-513.

f. Feather River in Reclamation District 10. Slab and raise east levee of Feather River from W.P. R.R. to Live Oak (8 mi. approx.) was accomplished under Contract No. W-1105-ENG-1452 by Swinger Construction Company. Work on this contract was completed on 1 February 1935. Specification No. 5976, Drawing No. 4-4-138-3.

g. A landside toe drain and berm was constructed on the left bank of Feather River (Reclamation District No. 10) between levee miles 3.60 and 6.25 of Unit 2 under Contract No. DACW05-C-0076. Construction was completed on September 17, 1996, Specification No. 9283, and Drawing File Number 50-4-5870.

1-05. Flood flows. – For purposes of this manual, the terms “flood” or “high water period” shall refer to flows when the water surface reaches or exceeds a reading of 95.0 on the Division of Water Resources continuous water stage recorder and staff gage located on the east side (left bank) of the Feather River on downstream side of abutment of bridge on Gridley-Oroville Road two and one-half miles east of Gridley. Continuous water stage recorder and staff gage set on U.S. corps of Engineers datum. Also when the water surface reaches or exceeds a reading of 67.0 on the Division of Water Resources continuous water stage recorder and staff gage located near the right bank of the Feather River on downstream side of the Sacramento Northern Railroad Bridge at Yuba City. Recorder and staff gage set on U.S. Corps of Engineers datum.

1-06. 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 (see paragraph 2-02a of the Standard Manual).

1-07. Acceptance by State Reclamation Board. – Responsibility for operating and maintaining portions of the completed works was officially accepted by the Reclamation Board of the State of California on 18 December 1951, as shown on the attached letter of acceptance, EXHIBIT F.

Two units of work (Parts “A” and “B”) were transferred to the State Reclamation Board on 3 July 1952, as shown on attached letter of transfer, EXHIBIT F.

1-08. Superintendent. – The name and address of the Superintendent appointed by local interests to be responsible for the continuous inspection, operation, and maintenance of the project works shall be furnished the District Engineer, and in case of any change of Superintendent, the District Engineer shall be so notified.

SECTION II - FEATURES OF THE PROJECT SUBJECT TO FLOOD-CONTROL REGULATIONS

2-01. Channels.

a. Description. The principal features consist of:

(1) Channels or Floodways. The channel of Honcut Creek located within this unit will carry a flood flow of 5,000 cubic feet per second with the Feather River at flood stage. The low water channel of the Feather River meanders along a comparatively wide overflow area which is confined between the east and west levees of the Feather River from Honcut Creek to Marysville. The overflow channel within this area contains considerable tree growth and open agricultural areas adapted for seasonal crops.

b. Inspection.

(1) Pertinent Requirements of the Code of Federal Regulations. Flood Control Regulations, Par. 208.10(g)(1) are quoted in part as follows:

- "(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"

(2) The purpose of inspection of the flood-flow channels is to insure that conditions which affect the channel capacity will remain the same, as far as possible, as those considered in the design assumptions and that no new conditions develop that may affect the stability of the project structures. At each inspection required by Par. 208.10(g)(1) of the Flood Control Regulations, particular attention will, therefore, be given the following:

- (a) Location, extent and size of vegetal growth.
- (b) Unauthorized operations within the flood-flow channel right-of-way, such as excavations, buildings, and other structures, levees, bank protection, or training dikes.
- (c) Rubbish and industrial waste disposal.
- (d) Changes in the channel bed such as aggradation or degradation, which would interfere with free flow from side drainage structures or induce local meanders that would scour the banks.
- (e) Operations of any nature upstream from the project that would affect flow conditions within the limits of the flood control project.
- (f) Condition of project structure.
 - 1. Channel walls:
 - a. Deviation from alignment and grade.
 - b. Development of cracks and spalls.
 - c. Mechanical injuries.
 - 2. Fencing:
 - a. Injuries to posts, fencing or barbed wire.
 - b. Damage to galvanizing.
 - 3. Earth fills.
 - a. Settlement.
 - b. Erosion of levee slopes.
 - c. Excessive seepage of saturation area back of fills.

d. Condition of bank protection concrete or stone blanket.

4. Right-of-way

a. Presence of dumped refuse.

b. Encroachment or trespass.

(3) No excavation within the limits of Unit No. 151 of the Feather River, Honcut Creek or Simmerly Slough will be permitted unless an excavation permit has been approved by the State Reclamation Board.

(4) If any work is done to improve flow conditions in the Feather River, Honcut Creek or Simmerly Slough, it should be coordinated with the District Engineer to insure that proper provisions are made for channel alignment and capacity to conform to the existing project.

(5) The intent of these inspections is to disclose all conditions which in any way affect the stability of the structures and their functioning for the control of floods. Each inspection report should note and comment on any repair measures that have been taken since the last inspection. In making these inspections, the check sheets included as Exhibit E shall be explicitly followed.

(6) Reference paragraph 1-04 g:

A landside toe drain and berm was constructed on the left bank of Feather River (Reclamation District No. 10) between levee miles 3.60 and 6.25 of Unit 2 under Contract No. DACW05-C-0076. Construction was completed on September 17, 1996, Specification No. 9283, and Drawing File Number 50-4-5870.

Insure that all local irrigation/drainage ditches are at least 10 feet from the toe of the above constructed berm.

c. Maintenance

(1) Pertinent Requirements of the Code of Federal Regulations. Flood Control Regulations, Par. 208.10(g)(1) are quoted in part as follows: "...Immediate steps will be taken to remedy any adverse conditions disclosed by such inspection...."

(2) Shoaling or aggradation at the inlets or outlets of side drainage structures may render them inoperative. It is, therefore, imperative that all drains be kept open and unobstructed at all times.

(3) Dumped rock or other suitable types of protection should be placed at locations found by experience to be critical trouble points, with a view to stabilizing the channel alignment and preserving the general uniformity of the bank lines.

(4) Sediment and debris plugs or other obstructions should be removed from the channel to prevent or any tendency for the flow to be deflected within the channel. The heavy material likely to accumulate in the new channel at the mouths of tributaries should be removed to keep the channel clear.

(5) The channel and right-of-way shall be kept reasonably clear of debris, refuse matter or industrial wastes.

(6) Weeds and other vegetal growth in the channel shall be cut in advance of the flood season and, together with all debris, removed from the channel.

(7) All eroded concrete shall be repaired as soon as erosion reaches a depth of 4 inches. For this purpose, it is recommended that the repair be made by thoroughly cleaning the surface by sandblasting and building up the section with pneumatically placed Portland cement mortar. All evidence of settlement, uplift, or failure of concrete structures shall be referred to the State Engineer for analysis and remedial measures.

(8) All damage to fending, whether resulting from accidental or willful injuries or from corrosion, shall be promptly repaired with new material in order to maintain satisfactory protection to the public.

(9) All subdrainage structures which have become cemented due to the evaporation of ground water or other causes, shall be thoroughly cleaned out and repacked with fresh gravel.

d. Operation.

(1) Pertinent Requirements of the Code of Federal Regulations, Par. 208.10(g)(2), are quoted in part as follows:

"(g) Channels and floodways....(2) Operation. Both banks of the channel shall be patrolled during periods of high water Appropriate measures shall be taken to prevent the formation of jamsof 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 walls, drainage outlets or other flood control structures repaired."

(2) It shall be the duty of the Superintendent to maintain a patrol of the project works during all periods of flow in excess of a reading of 95.0 on the gage at Gridley Bridge and a reading of 67.0 on the gage at the Sacramento Northern Railroad Bridge at Yuba City as indicated in paragraph 1-05 of this manual. The Superintendent shall dispatch a message by the most suitable means to the District Engineer whenever the water surface at Gridley Bridge and S.N.R.R. Bridge reaches the gage readings indicated above. The Superintendent shall ~~arrange for~~ readings to be taken at said gages at intervals of one to two hours during the period when the water surface is above flood-flow stage and record the time of the observations. One copy of the readings shall be forwarded to the District Engineer immediately following the flood, and a second copy transmitted as an inclosure to the semi-annual report in compliance with paragraph 3-03c of the Standard Manual.

2-02. Levees.

a. Description. The levees described in this manual are located along the east side of the Feather River from Honcut Creek to Maryville, the south levee of Honcut Creek from high ground to its junction with the Feather River and the east levee of Reclamation District No. 10 which parallels and comprises the grade section of the Western Pacific Railroad tracks. All levees within this unit that were originally built by local interests and those portions that required enlargement have been built to adopted grade and section by new construction. For more complete detail of items included in construction of above-mentioned levees, refer to the "As Constructed" drawings of Exhibit B.

b. Inspection.

(1) Pertinent Requirements of the Code of Federal Regulations. Flood Control Regulations, paragraph 208.10(b)(1), are quoted in part as follows:

- "(b) Levees - (1) Maintenance Periodic inspection shall be made by the Superintendent 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 riverside 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; (See Note (a) at end of subparagraph (1) on page 10.)

- (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"

Note (a)

Since the growth of sod on the slopes of the levees of this project is not practicable and as the nature of the levee growth warrants burning thereof to facilitate inspection, the provisions of subparagraph b(1) of the regulations inconsistent therewith shall not apply. In place of item (vii), therefore, the following shall be observed.

Weeds, grasses and debris on the levee are burned during appropriate seasons, where not dangerous or impracticable, in order to permit the detection of cracks, holes, burrows, slips, and other damage and to permit the detection and extermination of burrowing animals and that grass and weeds on levee slopes be mowed where removal by burning is dangerous or impracticable, such as peat levees or where burning would constitute a hazard.

(2) To insure the taking of such maintenance measures as will be required for proper functioning of the levee, the following items shall be specifically covered in each inspection:

- (a) Aggradation and degradation of the stream bed along the toe.
- (b) Settlement of levee fill.

- (c) Erosion of levee slopes, both sides of levees.
- (d) Presence of seepage, saturated areas, or sand boils back of levee.
- (e) Condition of access roads and roadway on levee.

c. Maintenance

(1) Repairs to Levee Embankment. Methods used for repair or reconstruction of the levee fill will depend on the extent of the damaged section. If of small extent, the most suitable method will be to bring the levee back to line and grade by a fill made in 6-inch layers of earth free from brush, roots, sod or other unsuitable material. If of larger extent, the fill should be made in the same manner as the original construction, of selected material from borrow pits approved for the project, placed in uniform layers of loose material and not more than 6 inches in depth and compacted in accordance with the specifications under which the work was completed or compacted according to approved construction practices.

(2) Depredations of Burrowing Animals. Dens and runways formed within the levee by burrowing animals are frequently the causes of levee failures during flood stages. Burrowing animals such as muskrats, ground hogs, ground squirrels, moles and gophers, found in the levee should be exterminated. The dens and runways should be opened up and thoroughly compacted as they are backfilled. Levees kept properly cleared are not seriously menaced by burrowing animals as they prefer areas where a protective cover, such as high grass, weeds, and brush, is found. Several methods of extermination are found effective, such as trapping, baiting, and poison gases, depending on the type of animal present and the time of year the work is done. Advice concerning the best methods in each locality can be obtained from the County Agricultural Agent.

(3) Access Roads. Access roads to the levees shall be maintained in such condition that they will be accessible at all times to trucks used to transport equipment and supplies for maintenance and flood fighting.

d. Operation

(1) Pertinent Requirements of the Code of Federal Regulations. Flood Control Regulations, Par 208.10(b)(2) are quoted in part as follows:

"(2) Operation. During flood periods, the levee shall be patrolled continuously to locate possible sand boils or unusual wetness of the landward slope 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 structures;

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."

2-03. Drainage and Irrigation Structures

a. Description. Drainage and irrigation structures which extend through the levees are listed as follows:

SOUTH LEVEE OF HONCUT CREEK

See Drawings No. 4-4-318 of Exhibit B

Location Station	Size and Kind of pipe	Gate Model No.	Other Structure Description	Elev. of Invert at pipe
134/06"H.C."	24"C.M.P.	102 R.S. 101 L.S.	2-24"C.M. Cut-off walls; concrete headwall L.S., concrete saddle and a iron R.S.	79.1
192/33"H.C."	24"C.M.P.	102 R.S. 101 L.S.	"	83.3
0/60"C"	24"C.M.P.	102 R.S. 101 L.S.	"	84.0
5/65"C"	24"C.M.P.	102 R.S.	"	85.0
36/00"C"	24"C.M.P.	101 R.S.	"	91.3
53/70"C"	24"C.M.P.	102 R.S.	"	89.8

EAST LEVEE OF FEATHER RIVER
See Drawings No. 4-4-295 and 4-4-318 of Exhibit B

Location Station	Size and Kind of Pipe	Gate Model No.	Other Structure Description	Elev. of Invert at pipe
1/00	24"C.M.P.	100	2-C.M. cut-off walls, concr. headwall, saddle and apron	60.0
10/38	30"C.M.P.	100&101	"	58.87
13/88	16"steel	100	Dist. No. 10 drainage pump, concr. pump pit, saddle and apron, steel cut-off plate.	87.73
14/16	10"steel		Steel cut-off plate, concrete pump and motor base, R.S.	87.73
14/82	10"steel			87.73
37/66	24"C.M.P.	100&101	2-C.M. cut-off walls, concrete headwall, saddle and apron	57.69
46/60	24"C.M.P.	100	"	56.08
106/00	24"C.M.P.	100	"	62.10
149/88	24"C.M.P.	100	2-C.M. cut-off walls, concrete headwall, saddle and apron	65.15
164/65	36"C.M.P.	100&101	"	63.83
249/29	30"C.M.P.	100&101	"	66.80
259/76	36"C.M.P.	102 R.S. slidegate L.S.	"	64.20
277/00	30"C.M.P.	"	"	67.40
294/84	30"C.M.P.	"	"	67.30
322/25	24"C.M.P.	102 R.S.	"	68.90
341/70	24"C.M.P.	"	"	69.00
354/96	30"C.M.P.	102 R.S. & slidegate L.S.	"	68.80

EAST LEVEE OF FEATHER RIVER, Cont.

Location Station	Size and Kind of Pipe	Gate Model No.	Other Structure Description	Elev. of Invert at pipe
413/81	30"C.M.P.	102 R.S.	2-C.M. cut-off walls, concrete headwall, saddle and apron	72.40
471/21	24"C.M.P.	102&101	"	78.20
493/50	24"C.M.P.	102 R.S.	"	78.70
515/52	24"C.M.P.	102&101	"	79.10
551/96	30"C.M.P.	102 R.S.	"	69.00
565/74	24"C.M.P.	"	"	78.00
576/75 v	24"C.M.P.	"	"	79.50
582/72	24"C.M.P.	"	"	80.40
591/77	24"C.M.P.	102&101	"	79.00
602/47	24"C.M.P.	"	"	80.60
614/60	24"C.M.P.	102 R.S.	"	80.90
638/00	24"C.M.P.	102&101	2-C.M. cut-off walls, concrete headwall, saddle and apron	80.80
655/65	24"steel	102 L.S.	1-C.M. cut-off wall, concrete outlet structure, pump R.S.	88.60
674/73	24"C.M.P.	102 R.S.	2-C.M. cut-off walls, concrete headwall, saddle and apron	87.30
0/65.5"A"	24"C.M.P.	101&300	"	90.30

EAST LEVEE OF RECL. DIST. NO. 10
See Drawings No. 4-4-245-3 & 4-4-320 of Exhibit B

Location Station	Size and Kind of pipe	Gate Model No.	Other Structure Description	Elev of invert at pipe
208/11	24"C.M.P.	100	Concrete saddle and apron	56.00
255/35	36"Concrete		"	56.80
299/56	24"C.M.P.	100	"	57.50
317/80	24"Concrete	100	"	62.50
339/55.10	24"C.M.P.	100	1-C.M. cut-off wall, concrete saddle and apron	66.90
381/76.24	36"C.M.P.	102	2-C.M. cut off walls, concrete saddle and apron	65.80
455/00	30"C.M.P.	102	" " "	73.70
473/58	15"steel	100	1-C.M. cut-off wall	76.00

Notes pertaining to gate models and abbreviations used:

- (1) Gate Model No. 100 is a Calco automatic drainage gate on outlet end of pipe. This cast iron flapgate closes against face pressure and opens automatically to permit outflow when pressure is released.
- (2) Gate Model No. 101 is a Calco slide gate which operates by hand-screw on a steel frame.
- (3) Gate Model No. 102 is a Calco automatic drainage gate on outlet end of pipe. This cast steel flapgate closes against face pressures and opens automatically to permit outflow the instant pressure is reversed.
- (4) Gate Model No. 300 is a Calco slide gate which operates by hand-screw on a steel frame designed for both face and low unseating or back pressure.
- (5) C. M. P. indicates corrugated metal pipe.
- (6) C. M. indicates corrugated metal.
- (7) R. S. indicates riverside.
- (8) L. S. indicates landside.

Note: Pipe inverts listed above are inverts at crown of levee

b. Inspection.

(1) Pertinent Requirements of the Code of Federal Regulations. Flood Control Regulations, paragraph 208.10(d)(1), are quoted in part as follows:

- "(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 every 90 days.... 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 structures which might endanger their 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) At each inspection required by paragraph 4-02(b)(2) of the standard manual, the following items, if applicable, shall be particularly noted:

- (a) Debris or other obstructions to flow.
- (b) Condition of pipes and gates.
- (c) Damage or settlement of pipe.
- (d) Condition of concrete cracks, spalls, erosion.

c. Maintenance.

(1) All eroded concrete shall be repaired as soon as any reinforcing steel is exposed. For this purpose it is recommended that the repair be made by thoroughly cleaning the surface by sandblasting and

building up the concrete to its original section with pneumatically placed Portland cement mortar. All evidences of settlement, uplift, or failure of concrete structures should be referred to the State Engineer for analysis and recommendation of remedial measures.

(2) If the inspection shows that the automatic drainage structures have been jammed in an open position by debris or other obstructions, they shall be thoroughly cleaned so that they swing freely to a true closure. If any part of the gates have been damaged or broken, they shall be replaced by new parts.

(3) Compliance with the provisions prescribed above pertaining to drainage structures is essential for proper maintenance of the levee system covered by this manual. Levee failures caused by neglected drainage structures are of common occurrence; it is, therefore, of utmost importance that these structures always be kept in perfect working condition in accordance with the regulations.

(4) Care should be taken not to bury any of the side drainage inlets in the event that it becomes necessary to fill any of the low-lying pockets in back of the levee. Plans for the maintenance of drainage facilities at any such points should be submitted to the State Engineer for approval before such work is started.

d. Operation.

(1) Pertinent Regulations of the Code of Federal Regulations. Flood Control Regulations, paragraph 208.10(d)(2), are quoted in part as follows:

"(2) Operation. Whenever high water conditions impend, all gates will be inspected a short time before water reaches the invert of the pipe and objects 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 All drainage structures in the 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 conditions."

(2) The outlets of side drainage structures inundate at relatively low river stages. They should, therefore, be inspected at the first sign of a rise in the river to make certain that the gates are not jammed in an open position and thus allow flood waters to enter behind the levee.

2-04. Miscellaneous Facilities.

a. Description. Miscellaneous structures or facilities which were constructed as a part of, or in conjunction with the protective works, and which might affect their functioning, include the following:

(1) Bridges.

(a) Three State Highway No. 24 bridge crossings over Honcut Creek at Station 107/70 "H".

(b) W.P.R.R. bridge crossing Honcut Creek at Station 192/93.47 "H".

(c) W.P.R.R. bridge crossing Simmerly Slough at Station 0/75.

(d) State Highway No. 24 bridge crossing Simmerly Slough at Station 9/50.

(e) S.P.R.R. bridge across Simmerly Slough at Station 22/63.61, (= 47/30.24 Sim. SL. - Hon. Cr. Trav.)

(f) S.P.R.R. bridge crossing Feather River at Station 85/52, (Sim. SL. - Hon. Cr. Trav.)

(2) Utility Relocation. No relocation of public utilities was required during re-construction of this unit.

(3) Hydrographic Facilities. Continuous water stage recorders and staff gages located near Unit No. 151, are shown on Exhibit A-1 and listed as follows:

(a) Gage in the Feather River on Gridley-Oroville Road Bridge, 2 $\frac{1}{2}$ miles east of Gridley.

(b) Gage in the Feather River on downstream side of Sacramento Northern Railroad Bridge at Yuba City.

b. Inspection and Maintenance.

(1) Pertinent Requirements of the Code of Federal Regulations. Flood Control Regulations, paragraph 208.10(h)(1) are quoted in part as follows:

"(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 replaced without delay"

(2) Inspection of the miscellaneous facilities shall be made at the same time that the inspection of the other features of the project are made, and shall be reported on check list No. 3, sheet No. 4 of EXHIBIT E.

(3) The interest of the Corps of Engineers and the responsibility of the local interests in the existing highway and railroad bridges is confined to their effect on the safety and functioning of the flood control channel, but any conditions noted in the inspections that may affect them in any way should, as a matter of courtesy, be brought to the attention of the agencies maintaining and operating them. If the inspection of any miscellaneous structure, either existent or constructed in the future under permit, discloses any condition that indicates the probability of failure during periods of high water, the Superintendent shall address a letter to the owner of the structure, quoting this manual as authority and inviting attention to the conditions observed and requesting that immediate steps be taken to correct them. A copy of such letter shall be forwarded to the District Engineer for his information. A report on the action taken by the owner shall be submitted to the District Engineer to accompany the next semi-annual report under provisions of paragraph 3-03c of the Standard Manual. A suggested report form is included as EXHIBIT G of this manual.

(4) The purpose of maintenance work is to insure continuous satisfactory operation of equipment. It is, therefore, important in such work that all possible causes of future trouble be found and corrected. Particular attention should be given to minor weaknesses which may be an indication of future trouble.

c. Operation.

(1) Requirements of the Code of Federal Regulations. Flood Control Regulations, paragraph 208.10(h)(2) are quoted as follows:

"(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."

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 will contact a representative of the 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 Section V of the Standard Manual, where the subject is fully covered.

EXHIBIT A

FLOOD CONTROL REGULATIONS

(See Standard Manual)

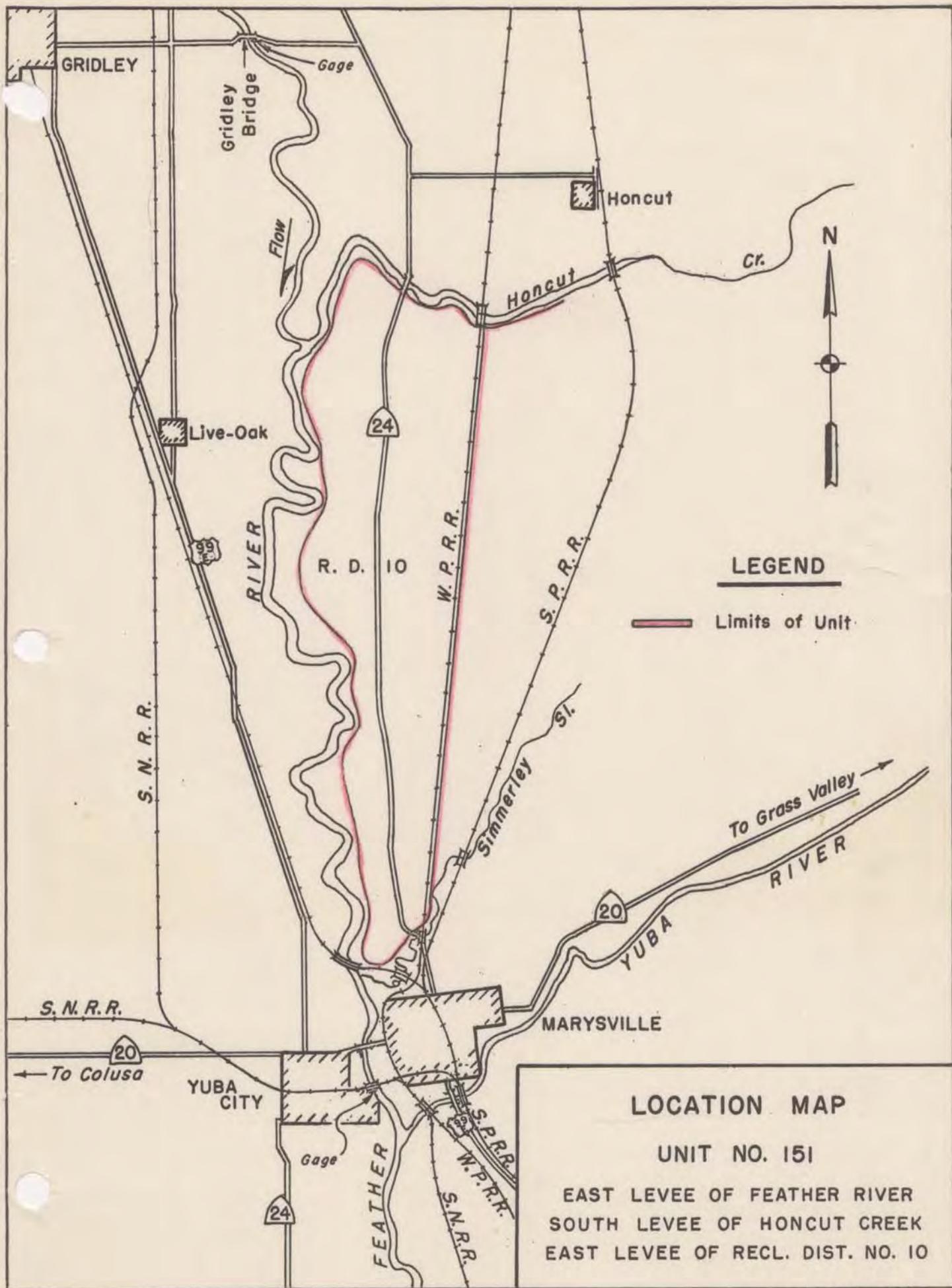


EXHIBIT B

“AS CONSTRUCTED”

DRAWINGS

See separate folder for the following drawings:

<u>File No.</u>	<u>Title</u>
4-4-245-3	East Levee Reclamation District No. 10 from Simmerly Slough North 2.5 miles, sheets 1 & 2.
4-4-295	East Levee Feather River from Simmerly Slough upstream 4.8 miles, sheets 2 to 5, Inclusive.
4-4-318	East Levee Feather River and South Levee Honcut Creek – 4.8 miles upstream from Simmerly Slough to highground, sheets 2 to 7, incl.
4-4-320	East Levee Reclamation District No. 10 from 2.5 miles above Simmerly Slough northerly 3.5, sheets 2 and 3.
4-4-513	Levee rehabilitation, Feather River, Marysville and R.D. 10 levees, in 8 sheets.
4-4-38-3	Feather River in Reclamation District 10. Slab and raise east levee from W.P.R.R. to Live Oak, in 2 sheets.
50-4-5870	Marysville/Yuba City Area, California, Sacramento River Flood Control Phase II, Levee Reconstruction Contract I.

Additional drawings of cross-sections, structures, and miscellaneous facilities are available in the Office of the District Engineer.

EXHIBIT C

PLATES OF SUGGESTED FLOOD FIGHTING METHODS

(See Standard Manual.)

EXHIBIT D

CHECK LIST NO. 1

LEVEE INSPECTION REPORT

(See Standard Manual)

EXHIBIT E
CHECK LISTS OF LEVEES,
CHANNELS AND STRUCTURES

For definition of "flood" or "high water
period" see paragraph 1-05 of this manual

CHECK LIST NO. 2
LEVEES OF UNIT NO. 151
(RECLAMATION DISTRICT NO. 10)

Inspector's Report Sheet No. _____ Inspector _____

Date _____ Superintendent _____

Item	Remarks
(a) Location by Station	
(b) Settlement, sloughing, or loss of grade	
(c) Erosion of both slopes of levees	
(d) Condition of roadways, including ramps	
(e) Evidence of seepage	
(f) Condition of farm gates and fencing	
(g) Maintenance measures taken since last inspection	
(h) Comments	

INSTRUCTIONS FOR COMPLETING SHEET 2, EXHIBIT E

(To be printed on back of sheet 2)

- Item (a) Indicate levee station of observation, obtained by pacing from nearest reference point; indicate right or left bank.
- Item (b) If sufficient settlement of earthwork has taken place to be noticeable by visual observation, indicate amount of settlement in tenths of a foot. If sloughing has caused a change in slope of the embankment sections, determine the new slope.
- Item (c) If sufficient erosion or gullyng of either slope of the levee has taken place to be noticeable by visual inspection, indicate area affected and depth.
- Item (d) Note any other changes in any section of roadway or ramps. Indicate any inadequacy in surface drainage system.
- Item (e) Indicate any evidence of seepage through the embankment section.
- Item (f) Indicate the serviceability of all farm gates across the embankments and roadway, and indicate if repainting is required.
- Item (g) Indicate maintenance measures that have been performed since last inspection and their condition at the time of this inspection.
- Item (h) Record opinion, if any, of contributory causes for conditions observed and 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.

UNIT NO. 151

CHECK LIST NO. 3

CHANNEL AND RIGHT-OF-WAY

RECLAMATION DISTRICT NO. 10 LEVEES

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 riprapped section	
(g) Condition of bridges	
(h) Measures taken since last inspection	
(i) Comments	

INSTRUCTIONS FOR COMPLETING SHEET 4, EXHIBIT E
(To be printed on the back of sheet 4)

- 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 flood flow 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, 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 of sediment or scour, that is noticeable by visual inspection. Estimate amount and extent.
- Item (f) Indicate any change that has taken place in the riprap such as disintegration of the rock, erosion, or movement of the rock. Note the presence of vegetal growth through the riprap.
- Item (g) Note any damage or settlement of the footings of the bridges. Indicate condition of wooden structures and if repainting is required. Indicate condition of bridge approaches, headwalls, and other appurtenances.
- Item (h) Indicate maintenance measures that have been performed since the last inspection and their condition at time of this inspection.
- Item (i) 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.

UNIT NO. 151
 CHECK LIST NO. 4
DRAINAGE AND IRRIGATION STRUCTURES
RECLAMATION DISTRICT NO. 10 LEVEES

Inspector's Report Sheet No. _____ Inspector _____

Date _____ Superintendent _____

(a) Location by Station	(b) Bank	(c) Debris or other obstruction to flow	(d) Damage or settlement of pipe or conduit	(e) Condition of concrete head- wall or invert paving	(f) Condition of right-of-way adjacent to structure	(g) Repair measures taken since last inspection	(h) Comments
134/06 "HC"	left				<u>SOUTH LEVEE OF HONCUT CREEK</u>		
192/33 "HC"	"						
0/60" C"	"						
5/65" C"	"						
36/00" C"	"						
53/70" C"	"						
1/00 10/38 13/88	left " "				<u>EAST LEVEE OF FEATHER RIVER</u>		

UNIT NO. 151
CHECK LIST NO. 4

DRAINAGE AND IRRIGATION STRUCTURES
RECLAMATION DISTRICT NO. 10 LEVEES

Inspector's Report Sheet No. _____

Inspector _____

Date _____

Superintendent _____

(a) Location By Station	(b) Bank	(c) Debris or Other Obstruction To Flow	(d) Damage or Settlement of Pipe or Conduit	(e) Condition of Concrete Head-wall or invert paving	(f) Condition of Right-of-Way Adjacent to Structure	(g) Repair Measures Taken Since Last Inspection	(h) Comments
14716	Left						
14782	"						
37766	"						
46760	"						
106700	"						
149788	"						
164765	"						
249729	"						
259776	"						
277700	"						
294784	"						
322725	"						
341770	"						
354796	"						

EAST LEVEE OF FEATHER RIVER (Cont)

UNIT NO. 151

CHECK LIST NO. 4

DRAINAGE AND IRRIGATION STRUCTURES
RECLAMATION DISTRICT NO. 10 LEVEES

Inspector's Report Sheet No. _____ Inspector _____

Date _____ Superintendent _____

(a) Location By Station	(b) Bank	(c) Debris or Other Obstruction To Flow	(d) Damage or Settlement of Pipe or Conduit	(e) Condition of Concrete Head-wall or Invert Paving	(f) Condition of Right-of-Way Adjacent to Structure	(g) Repair Measures Taken Since Last Inspection	(h) Comments
413+81	left						
471+21	"						
493+50	"						
515+52	"						
551+96	"						
565+74	"						
576+75	"						
582+72	"						
591+77	"						
602+47	"						
614+60	"						
638+00	"						
655+65	"						
674+73	"						
0+65.5"AF	"						
<u>EAST LEVEE OF FEATHER RIVER (Cont)</u>							

UNIT NO. 151
CHECK LIST NO. 4
DRAINAGE AND IRRIGATION STRUCTURES
RECLAMATION DISTRICT NO. 10 LEVEES

Inspector's Report Sheet No. _____ Inspector _____

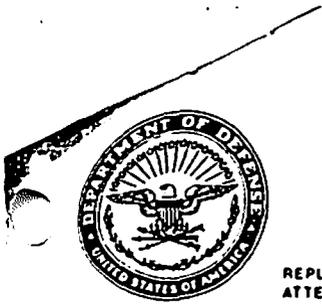
Date _____ Superintendent _____

(a) Location By Station	(b) Bank	(c) Debris or Other Obstruction To Flow	(d) Damage or Settlement of Pipe or Conduit	(e) Condition of Concrete Headwall or Invert Paving	(f) Condition of Right-of-Way Adjacent to Structure	(g) Repair Measures Taken Since Last Inspection	(h) Comments
208/11	Right						
255/35							
299/58							
317/80							
340/00							
339/55.1							
381/76.24							
455/00							
473/58							

INSTRUCTIONS FOR COMPLETING SHEET 6, EXHIBIT E
(To be printed on back of Sheet No. 6)

- (1) Enter station of all structures under Column (a) for check list.
- (2) Inspect inlet, barrel, and outlet for accumulation of sediment, rubbish, and vegetal matter. Note condition under Column (c).
- (3) If any settlement or damage to the pipe, barrel, or invert of the drain has occurred, estimate the location and amount. Note particularly if any backfill has come into the pipe or been disturbed. Record observations under Column (d).
- (4) Inspect the concrete portions of the structures for evidence of settlement, cracks, "pop-outs", spaces, abrasive wear, or other deterioration. Record conditions under Column (e).
- (5) Inspect backfill area adjacent to structure for evidence of erosion caused by overflow of the drainage structure and note conditions in Column (f).
- (6) Under Column (g) indicate physical measures that have been taken to correct conditions reported in last inspection, and their condition at time of this inspection.
- (7) Under Column (h) record opinion, if any, of contributory causes for conditions observed, also any observations not covered under other columns.
- (8) A copy of the Inspector's Report is to be mailed to the District Engineer immediately on completion, and a record copy shall be attached to the Superintendent's semi-annual report.

EXHIBIT F
LETTER OF ACCEPTANCE
BY STATE RECLAMATION BOARD



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
U.S. ARMY ENGINEER DISTRICT, SACRAMENTO
CORPS OF ENGINEERS
1325 J STREET
SACRAMENTO, CALIFORNIA 95814-2922

July 6, 1998

Central Valley Section

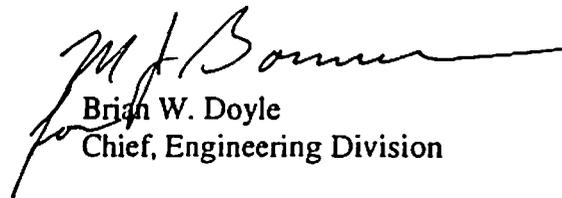
Mr. Peter D. Rabbon, General Manager
The Reclamation Board
State of California
1416 9th Street, Room 1601
Sacramento, California 95814

Dear Mr. Rabbon:

The levee reconstruction work on the left bank of the Feather River (Reclamation District No. 10) was transferred to the State by letter dated June 18, 1998. Enclosed are two copies of the revisions and additions to the Operation and Maintenance Manual, Unit Number 151, of the Sacramento River Flood Control Project associated with that work.

Copies of the as constructed drawings can be provided by contacting the Project Manager, Mr. John Brown at (916) 557-7801.

Sincerely,


Brian W. Doyle
Chief, Engineering Division

Enclosure

Copy Furnished:

Mr. Donald Yeoman
Department of Water Resources
State of California
1801 6th Street
Sacramento, California 95814

cc: (w/encl)

cc: (w/o encl)

PPMD

Civ Proj Mgmt (John Brown)

Engr Div

Civ Des Br

✓ Cen Val Sec — ~~M/K~~ 8/10

File (M/PC)

[Signature]
GUNDLACH/ED-D

[Signature]
HARANO/ED-D

[Signature]
MACK/ED-D

[Signature]
DOYLE/ED



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
U.S. ARMY ENGINEER DISTRICT, SACRAMENTO
CORPS OF ENGINEERS
1325 J STREET
SACRAMENTO, CALIFORNIA 95814-2922

June 18, 1998

Operations Technical Branch

Mr. Peter D. Rabbon, General Manager
The Reclamation Board
1416 9th Street, Room 1610
Sacramento, California 95814

Dear Mr. Rabbon:

You are hereby notified that the Corps of Engineers has completed the Reclamation District No. 10 work on the left bank of the Feather River between levee miles 3.60 and 6.25 of Unit 2. The work was accomplished as an essential portion of the Marysville/Yuba City Area Levee Reconstruction Project, pursuant to the Sacramento River Flood Control Act of 1917, as amended, and the Project Cooperation Agreement signed July 19, 1994. The work included the construction of a landside toe drain and berm along a 14,000-foot segment of existing levee.

A final inspection was completed on September 11, 1996, and all reported deficiencies corrected by September 17, 1996, in accordance with Contract Number DACW05-C-0076, Specification Number 9283, and Drawing File Number 50-4-5870. The existing levee and reconstruction modifications will continue to be maintained in accordance with the Project Cooperation Agreement between the Department of The Army and the State of California. The new work will be added by amendment to the Operation and Maintenance Manual, Unit Number 151 ~~147~~, of the Sacramento River Flood Control Project. Copies will be forwarded to your office at a later date.

If you have any questions concerning this matter please contact Mr. Mohsen Tavana at (916) 557-5282 or Mr. Craig Gaines at (916) 557-6672.

Sincerely,

Dorothy F. Klasse
Colonel, Corps of Engineers
District Engineer

Exhibit F

EDMUND G. BROWN
GOVERNOR

STANLEY W. KRONICK, SACRAMENTO
PRESIDENT
GROVER SHANNON, YUBA CITY
VICE PRESIDENT
J. J. MADIGAN, CHICO
SECRETARY

THE RECLAMATION BOARD

OF THE
STATE OF CALIFORNIA

1215 O STREET
SACRAMENTO 14, CALIFORNIA
TELEPHONE: HI 5-4711

MAX S. VANN, SR., WILLIAMS
WALLACE MCCORMACK, RIO VISTA
GEORGE W. NICKEL, JR., LOS BANOS
HAROLD J. O'BANION, DOS PALOS
BOARD MEMBERS
A. N. MURRAY
GENERAL MANAGER AND CHIEF ENGINEER

September 7, 1961

District Engineer
Sacramento District
U. S. Corps of Engineers
P. O. Box 1739
Sacramento, California

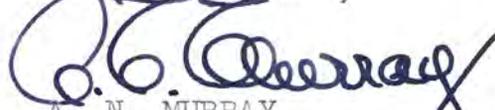
Dear Sir:

Reference is made to your letter of August 25, 1961, File SPKKO-C, regarding transfer to the State of California of levee rehabilitation and improvement work on the left bank of the Feather River and on the back levee of Reclamation District 10, Specification No. 2683, at the following locations:

- Item 7a -- Construction of 7 turnouts along back levee R.D. 10, including standard turnaround at levee end.
- Item 58e -- Correction of seepage conditions endangering levee at Binny Junction.
- Item 58s -- Construction of 3 turnarounds in vicinity of Binny Junction.
- Item 58t -- Provided 20-foot standard crown on levee between 13th Street and S.P.R.R. (North) in Marysville.

The Reclamation Board at its meeting of September 7, 1961, formally accepted the above levee rehabilitation and improvement work for operation and maintenance.

Sincerely yours,



A. N. MURRAY
General Manager and Chief Engineer

HSB:ED

*Copies sent to
205th
Banzak
Jensen
9/12/61
LJK*

Unit 147,151

25 AUG 1961

The Reclamation Board
State of California
1215 "O" Street
Sacramento 14, California

Supplement #1

Gentlemen:

Reference is made to Supplement dated 29 November 1957 to the Memorandum of Understanding entered into with the State of California under date of 30 November 1953, covering added items of work required to complete the Sacramento River Flood Control Project.

The flood control work, consisting of levee rehabilitation and improvement work on the left bank of the Feather River and back levee Reclamation District No. 10, Marysville, California, items listed below, was completed on 25 August 1961 in accordance with Specification No. 2683, Contract No. DA-04-167-CIVENG-61-68 and Drawing No. 4-4-513:

- Item 7a -- Construction of seven turnouts along back levee R.D. #10, including standard turnaround at levee end.
- Item 58e - Correction of seepage condition endangering levee at Binny Junction.
- Item 58s - Construction of three turnarounds in vicinity of Binny Junction.
- Item 58t - Provided 20-foot standard crown on levee between 13th Street and S.P.R.R. (North) in Marysville.

The foregoing supplemental work, having been completed to current standards for the Sacramento River Flood Control Project, is hereby transferred to the State of California for operation and maintenance. A maintenance manual for these sections of project levees has already been furnished which adequately covers operation and maintenance requirements for above items.

Unw 7147, 151

SPKGO-C
The Reclamation Board

25 AUG 1961

A copy of this letter is being transmitted to the State of California, Department of Water Resources.

Sincerely yours,

H. N. TURNER
Colonel, CE
District Engineer

Copy furnished:
Dept Water Res
23rd & "N" Sts
Sacto, Calif.

O.C.E.
S.P.D.

CC: Engr Divn-Levees & Channels
Engr Divn-Program Dev. Br.
Finance & Acctg Br.
Northern Area Office

OPERATIONS BRANCH
CHANNELS & LEVEES SECTION

Handwritten initials

Concurrents	
Originator:	RHT/ck
Date:	8/25/61
Dist. Engr.	<i>[Signature]</i>
Dep. Dist. Engr.	<i>[Signature]</i>
Exec. Asst.	<i>[Signature]</i>
Compt.	
Records	
Fin. Acctg.	
Legal	
Plan. & Insp.	
Spec. Insp.	
Off. Sec'y	<i>[Signature]</i>
Comm. Off.	
Engr. Insp.	
R. E.	
Personnel	
Contract	
Supply	
Security	
Stamps	
Training	
Library	

Handwritten notes:
Unit 147,157
[Signature]

EARL WARREN
GOVERNOR

A. R. GALLAWAY, JR., SACRAMENTO
PRESIDENT

GROVER SHANNON, YUBA CITY
VICE PRESIDENT

GEO. H. HOLMES, CLARKSBURG
SECRETARY

W. P. HARKEY, GRIDLEY
GEO. R. WILSON, WALNUT GROVE
GEO. E. LODI, ARBUCKLE
DOUGLAS B. COHEN, BANTA

THE RECLAMATION BOARD

OF THE
STATE OF CALIFORNIA

1100 O STREET
SACRAMENTO 14, CALIFORNIA
TELEPHONE: GI 3-4671

A. M. BARTON
CHIEF ENGINEER AND GENERAL MANAGER

EDMUND G. BROWN, ATTORNEY GENERAL
LEGAL ADVISER

G. F. MELLIN
ASSISTANT ENGINEER AND APPRAISER

S. A. HONAKER
ASSISTANT SECRETARY

May 29, 1953

District Engineer
Sacramento District
U. S. Corps of Engineers
P. O. Box 1739
Sacramento, California

Dear Sir:

Reference your letters File No. SPKKO-P 824.3 (Sac.Riv.F.C.P.) dated 28 April 1953 and 29 April 1953. Subject letters requested information relative to action taken by The Reclamation Board in regard to units of work transferred by your letters File No. SPKKO-P 824.3 (Sac. Riv.F.C.P.) dated 28 June 1952 and 3 July 1952.

The Reclamation Board in meeting held 6 May 1953, accepted on behalf of the State of California, for operation and maintenance, subject levee units together with their contiguous waterway banks. A description of the units so accepted follows:

1. Transfer letter dated 28 June 1952.
Levee construction, Part "B" of Specification No. 1492, along the right bank of Georgiana Slough, on Andrus Island, commencing at the junction of Georgiana Slough with the North Fork of the Mokelumne River and extending northwesterly for approximately 2 miles in the vicinity of Isleton, California.
2. Transfer letter dated 3 July 1952.
 - a. Levee Construction, Part "A" of Specification No. 1489, located along the east bank of the Feather River and the south bank of Honcut Creek, commencing at a point 4.8 miles above Simmerly Slough and extending northerly therefrom approximately 13 miles near Marysville, California.

Section 335 ✓

Section 326

Unit 103
151

335

6464

-2-

District Engineer
May 29, 1953

b. Levee construction, Part "B" of Specification No. 1489, located along the east side of Reclamation District No. 10, commencing at a point 2.5 miles above Simmerly Slough and extending northerly therefrom a distance of 3.5 miles, near Marysville, California.

Section
327

Yours very truly

THE RECLAMATION BOARD
A. M. BARTON
Chief Engineer and General Manager

By


D. M. CARR

DMC:emw
cc: State Engineer

335

REGISTERED MAIL
Receipt Receipt
Requested

Letter No. 12

12

SPKKA 824,3(Sac. Riv. F.C.P.)

8 DEC 1951

The Reclamation Board
State of California
1100 "O" Street
Sacramento 16, California

Gentlemen:

Reference is made to your letter of 22 June 1951 acknowledging that certain reaches of the levees of the Sacramento River Flood Control Project and the waterway bank contiguous to said levee reaches meet the requirements of the project as authorized prior to the Flood Control Act of 1944.

The levee reaches in question are located as follows:

140. a. Northerly levee of the American River from Jibboom Street Bridge to Sacramento River. 118.2 (?)

b. Easterly levee of the Sacramento River.

Reach 15 141. (1) American River to Natones Out. 60.25 to 79.0 124

Reach No. 11 142. (2) At Moulton Weir. (man 2) 154

143. (3) Mile 158.5 (North End Moulton Weir) to Mile 164.4 (Princeton Ferry). (man 2) ? 134

144. (4) Mile 168.5 to Mile 168.9 (at Dutch City). (man 2) ? 138

c. Westerly levee of the Sacramento River.

145. (1) Mile 59.9 to Mile 60.75. 116

146. (2) Mile 61.8 to Mile 62.65 (at Drye Bend) 116

62.65

Accepted by letter dated 9 March 1953

Letter 12 Items 140 to 198

12

SPKRA 024,5 (Sac. Riv. F.C.P.)
The Reclamation Board

Letter No. 12

12

c. Westerly levee of the Sacramento River, (cont'd)

- ✓ 147. (8) Mile 62.65 to Mile 63.1 (South End Sacramento Weir). 116
- ✓ 148. (4) At Sacramento Weir. 158
- ✓ 149. (5) Mile 63.5 (North End Sacramento Weir) to Mile 67.11. 122
- ✓ 150. (6) Mile 68.42 to Mile 70.9. 122
- ✓ 151. (7) Mile 76.5 to Mile 81.7 (East End Fremont Weir). 123
- ✓ 152. (8) Along Fremont Weir. 157
- ✓ 153. (9) Mile 84.0 (West End Fremont Weir) to Mile 85.3. 128
- ✓ 154. (10) Mile 85.5 to Mile 85.9. 128
- ✓ 155. (11) Mile 87.6 to Mile 88.4. 128
- ✓ 156. (12) Mile 89.2 to Mile 89.8 (Knights Landing Highway Bridge). 128
- ✓ 157. (13) Mile ^{89.2}89.8 (Knights Landing Highway Bridge) to Sycamore Slough. 89.9 128
- ✓ 158. (14) Mile ^{100.6}100.6 to Mile 101.4. 128
- ✓ 159. (15) Mile 110.9 to Mile 111.2. 128

Reach No. 5

Reach No. 4

d. Westerly levee of the Feather River.

- Reach 39 ✓ 160. (1) Sutter Bypass to Nicolaus Bridge. 143
- ✓ 161. (2) From a point 3.51 miles northerly from Nicolaus Bridge to the Fifth Street Bridge between Marysville and Yuba City. 143, 144
- Reach 38 ✓ 162. (3) From a point 1,400 feet northerly from the Fifth Street Bridge between Marysville and Yuba City to Station 774+00 "Y.C.N.B." Traverse. 144
- ✓ 163. (4) From a point east of Station 1188+00 "Y.C.N.B." Traverse to high ground just northerly from the Western Canal Headgate. 144

- Reach 42 ✓ 164. a. Easterly levee of the Sacramento River from Natomas Cut to Feather River. 141.1

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Letter No. 12

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f. Easterly levee of the Feather River.

- Reach 42 ✓ 165. (1) Sacramento River to a point 2.37 miles southerly from Nicolaus Bridge. 141 Pt 1
- Reach 41 ✓ 166. (2) Bear River to Mile 14.4. } 145
- ✓ 167. (3) Mile 14.4 to Mile 14.7.
- ✓ 168. (4) Mile 14.7 to Mile 21.5.
- ✓ 169. (5) Mile 21.5 to Mile 22.75.
- ✓ 170. (6) Mile 22.75 to Mile 26.5 (Point where levee and S.N.R.R. meet). 145

g. Levees protecting the City of Marysville. All 147

- Reach 43 ✓ 171. (1) From the W.P.R.R. at Simerly Slough easterly to the Yuba River.
- ✓ 172. (2) Along the Yuba River from the "D" Street Bridge to the back levee near the Valley Meat Company.

h. Levees protecting Reclamation District No. 10.

- Reach No. 40 ✓ 173. (1) Northerly levee of Simerly Slough from the W.P.R.R. to the S.P.R.R. 151
- ✓ 174. (2) Easterly levee of the Feather River from Simerly Slough to a point 4.3 miles northerly from Simerly Slough. 151

Reach 46 ✓ 175. i. Northerly levee of the Yuba River from the back levee of the City of Marysville to a point 1.3 miles easterly from said back levee. 147

Reach 47 ✓ 176. j. Southerly levee of the Yuba River from Feather River (i.e. S.N.R.R.) easterly to the S.P.R.R. Main Line. 147

45 ✓ 177. k. Northerly levee of Bear River from Feather River easterly to the W. P.R.R. Interceptor. 145

45 ✓ 178. l. Westerly levee of the W.P.R.R. Interceptor and Clark Slough Interceptor (i.e. back levee of Reclamation District No. 784) from Bear River to the southerly end of the Clark Slough Interceptor. 145

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SPIKA 824.3 (Sac. Riv. P.C.P.)
The Reclamation Board

Letter No. 12

12

m. Southerly levee of the American River.

Reach No. 25 ✓

- ✓ 179. (1) Sixteenth Street Bridge to the S.N.R.R. 118.1
- ✓ 180. (2) From a point 800 feet easterly from the W.P.R.R. to Mayhew Station. 118.1

n. Westerly levee of the Yolo Bypass.

- ✓ 181. (1) Sacramento River to Knights Landing Ridge Cut. 127
- ✓ 182. (2) Knights Landing Ridge Cut to the northeast corner of the Cache Creek Settling Basin. 126
- 28 ✓ 183. (3) S.N.R.R. Woodland Branch to a point 1.6 miles southerly from said railroad. 121
- 28 ✓ 184. (4) From a point 1.6 miles southerly from the S.N.R.R. Woodland Branch to the Willow Slough Pipes. 121
- 28 ✓ 185. (5) From a point 1.48 miles southerly from the Willow Slough Pipes to a point 1.9 miles southerly from said pipes. 121
- 28 ✓ 186. (6) From a point 1.9 miles southerly from the Willow Slough Pipes to the Willow Slough Interceptor. 121
- 28 ✓ 187. (7) From the Willow Slough Interceptor to Highway U.S. 40. 120
- ✓ 24 ✓ 188. (8) From Highway U.S. 40 to Putah Creek. 119

27 ✓ 189 o. Easterly and Westerly training levees of Cache Creek Settling Basin from Cache Creek southerly. 126

28 ✓ 190 p. Northerly and Southerly levees of the Willow Slough Interceptor from the S.P.R.R. to the Yolo Bypass. 120

29 ✓ 191 q. Northerly levee of Putah Creek from Yolo Bypass westerly to high ground. 119

✓ 192 r. Southerly levee of Putah Creek from high ground on Dixon Ridge westerly to high ground. 119

s. Southerly levee of Knights Landing Ridge Cut. 127

- 26 ✓ 193 (1) From Yolo Bypass westerly 600 feet. Also covered under Unit 96-A
- 26 ✓ 194 (2) { From a point 2,500 feet westerly from Yolo Bypass to a point 2,900 feet westerly from Yolo Bypass. 127
Also covered under 96-A

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SPKKA 824.3(Sac.Riv.F.C.P.)
The Reclamation Board

Letter No. 12

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s. Southerly levee of Knights Landing Ridge Cut. (cont'd)

- 26 ✓ 195 (S) { From a point 3,300 feet westerly from Yolo Bypass to a point 7,100 feet westerly from Yolo Bypass. 127
Also covered under Unit No. 96-A
- 35 ✓ 196 t. That portion of the back or westerly levee of Hastings Tract which runs east and west along the County Road for a distance of approximately one mile. 107
- ✓ 197 u. Northerly levee of Sycamore Slough from Sacramento River to Knights Landing Outfall Gates. 130
- ✓ 198 v. Southerly levee of Sycamore Slough from Sacramento River to Knights Landing Outfall Gates. 132

The records of this office show that your Board has accepted the levees and/or works covered by Items b.(1), b.(2), b.(3), c.(2), c.(4), c.(8), c.(11), c.(12), c.(14), d.(1), d.(3), d.(4), f.(3), f.(5), g., h., i., l., m., n.(1), n.(2), n.(3), n.(6), n.(7), n.(8), o., p., q., r. and s.(1) above, as complete. Accordingly the waterway bank contiguous to said Items is hereby transferred to the State of California for maintenance and operation.

The levee covered by Items a., b.(4), c.(1), c.(3), c.(5), c.(6), c.(7), c.(9), c.(10), c.(13), c.(15), d.(2), e., f.(1), f.(2), f.(4), f.(6), j., k., n.(4), n.(5), s.(2), s.(3), t., u. and v., above, although complete has not been formally transferred as contemplated by the Project documents. Accordingly the levee covered by said Items, together with the waterway bank contiguous thereto, is hereby transferred to the State of California for maintenance and operation.

The maintenance work required under the provisions of the Sacramento River Flood Control Project shall be performed in accordance with existing Flood Control Regulations which have been prescribed by the Secretary of the Army pursuant to Section 3 of the Act of Congress approved 22 June 1936, as amended and supplemented. As provided under paragraph 208.10(10) of these regulations, a maintenance manual covering these works is in process of preparation and will be furnished your Board upon completion.

A copy of this letter is being transmitted to the State Engineer.

FOR THE DISTRICT ENGINEER:

Sincerely yours,

Copy Furnished:
Office, Chief of Engrs.
So. Pac. Div. Engr.
State Engineer
Engr. Div. (2)
C. de Arrieta

H. R. Reifsnnyder
Lt. Colonel, Corps of Engineers
Executive Officer

12

824.5 (Feather Riv.)

A. R. GALLAWAY, JR., SACRAMENTO
PRESIDENT

EARL WARREN
GOVERNOR

A. M. BARTON
CHIEF ENGINEER AND GENERAL MANAGER

GROVER SHANNON, YUBA CITY
VICE PRESIDENT

FRED N. HOWSER, ATTORNEY GENERAL
LEGAL ADVISER

GEO. H. HOLMES, CLARKSBURG
SECRETARY

THE RECLAMATION BOARD

G. F. MELLIN
ASSISTANT ENGINEER AND APPRAISER

W. P. HARKEY, GRIDLEY
GEO. R. WILSON, WALNUT GROVE

OF THE STATE OF CALIFORNIA

S. A. HONAKER
ASSISTANT SECRETARY

HENRY OHM, STOCKTON
GEO. E. LODI, ARBUCKLE

1100 O STREET

SACRAMENTO 14, CALIFORNIA

TELEPHONE: 3-4671

April 14, 1949

Arrieta

District Engineer
Sacramento District
U. S. Corps of Engineers
P. O. Box 1739
Sacramento, California

Dear Sir:

Reference PSKKB.

Your letter of March 14, 1949, notified this office of the completion of the easterly levee of the Feather River from Simmerly Slough upstream 4.8 miles.

The Reclamation Board at its meeting April 6th, accepted said section of levee for maintenance and operation under regulations prescribed by the Secretary of the Army, and has in turn notified Reclamation District No. 10 of its responsibilities in regard thereto.

Yours very truly

THE RECLAMATION BOARD
A. M. BARTON
Chief Engineer and General Manager

By *S. A. Honaker*
S. A. HONAKER
Assistant Secretary

SAH:ems

824.5 (FEATHER R.V.) PSK 54.1

Unit No. 25

Unit 25

C de Arrieta.

MAR

MAR 14 1949

MEMO

Contract No. 1387

The Reclamation Board
State of California
1180 "O" Street
Sacramento, California

Gentlemen:

Management of the easterly levee of the Feather River from Hixson Slough upstream 4.3 miles has recently been completed. Therefore, in accordance with established procedure, this section of the completed levee is hereby transferred to the State of California for maintenance.

This construction forms an integral part of the Sacramento River Flood Control Project. The details and extent of the work are shown on the inclosed drawings.

There is also inclosed a copy of Flood Control Regulations prescribed by the Secretary of War (now designated the Secretary of the Army) pursuant to the provisions of Section 3 of the Act of Congress approved 22 June 1936, as amended and supplemented, to govern the maintenance and operation of flood control works, of which the levees referred to are a part. In accordance with paragraph 205.10(10) of said regulations, this office will furnish your Board and local interests at a later date with an Operation and Maintenance Manual to assist in carrying out their obligations established by these regulations.

For the records of this office, acknowledgment of receipt of this letter is requested on or before 10 April 1949.

Copy of this letter, with inclosures, is being transmitted to the State Engineer.

FOR THE DISTRICT ENGINEER:

Sincerely yours,

5 Incls.

Drawings, File Nos. 4-4295
(in 5 sheets), 50-4-2239, 50-4-1825,
and 50-4-1717
Flood Control Regulations

J. T. Murphy
Captain, Corps of Engineers
Executive Assistant

Copy Furnished:
State Engineer, with inclosures

cc: Engr. Div.
Const. Div.
JCSA

Unit No. 25

THE RECLAMATION BOARD
OF THE
STATE OF CALIFORNIA

C
O
P
Y

March 11, 1953

District Engineer
Sacramento District
Corps of Engineers, U. S. Army
P. O. Box 1739
Sacramento 8, California

Dear Sir:

Reference your letters file No. SPKKO-P 824.3 (Sac. R.F.C.P.) dated 1 December 1951, 3 December 1951, 4 December 1951, three letters dated 6 December 1951, 7 December 1951 and six letters dated 8 December 1951. Subject letters transferred to the Reclamation Board for operation and maintenance, various levee units of the Sacramento River Flood Control Project.

The Reclamation Board at its 18 December 1951 meeting, on behalf of the State of California, accepted certain of the transferred units together with their contiguous waterway banks for operation and maintenance, and rejected others. A tabulation of the units so accepted or rejected is attached hereto.

Yours very truly,

THE RECLAMATION BOARD
A. M. BARTON
Chief Engineer and General Manager

By /s/ D. M. Carr
D. M. CARR

C
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P
Y

December 18, 1951

The Board accepted the transfer from the Corps of Engineers, in letters of dates listed below, the following reaches of levees and their contiguous waterway banks where applicable for flood control operation and maintenance, as complete and meeting the requirements of the Sacramento River Flood Control Project.

<u>No.</u>	<u>Date of Letter</u>	<u>Levee Location</u>	<u>Remarks</u>
1	1 Dec. 1951	-----	-----
11	8 Dec. 1951	N. Levee Simmerly Slough from W.P.R.R. and E. Levee Feather River from Sim- merly Slough upstream 4.8 miles	Maintained by R.D. No. 10 Completed Contract.
11	8 Dec. 1951	-----	-----

NOTE: Only item pertaining to Operation and Maintenance Manual No. 151 is included in the above copy.

REGISTERED MAIL
Return Receipt
Requested

C
O
P
Y

SPKKO-P 824.3

July 3, 1952

The Reclamation Board
State of California
1100 "O" Street
Sacramento, California

Gentlemen:

Reference is made to letters from this office dated 9 November 1951 and 24 June 1952 relative to the transfer to the jurisdiction of the State of California, for operation and maintenance, two units of the Sacramento River Flood Control Project. Reference is also made to two joint inspections of these units which were made on 27 November 1951 and 1 July 1952. These two units of work are described as follows:

a. Levee construction, Part "A" of Specification No. 1489, located along the east bank of the Feather River and the south bank of Honcut Creek, commencing at a point 4.8 miles above Simmerly Slough and extending northerly therefrom for approximately 13 miles, near Marysville, California.

b. Levee construction, Part "B" of Specification No. 10, commencing at a point 2.5 miles above Simmerly Slough and extending northerly therefrom for 3.5 miles, near Marysville, California.

The two units of work referred to above have been completed recently in accordance with Specification No. 1489 and drawings No. 4-4-318, 4-4-320, and 4-4-328, and meet with the requirements of the Sacramento River Flood Control Project. Therefore, said units of work, together with the waterway banks contiguous thereto, are hereby transferred to the State of California for maintenance and operation.

The maintenance work required under the provisions of the Sacramento River Flood Control Project shall be performed in accordance with existing Flood Control Regulations which have been prescribed by the Secretary of the Army pursuant to Section 3 of the Act of Congress, approved 22 June 1936, as amended and supplemented. As provided under Paragraph 208.10 (10) of these regulations, a maintenance manual

C
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Y

covering these levee units is in process of preparation and will be furnished your Board upon completion.

A copy of this letter is being transmitted to the State Engineer.

FOR THE DISTRICT ENGINEER:

Sincerely yours,

/s/ H. R. Reifsnnyder
H. R. REIFSNYDER
Lt. Colonel, Corps of Engineers
Executive Officer

EXHIBIT G

SUGGESTED SEMI-ANNUAL REPORT FORM

TO: The District Engineer
Sacramento District
Corps of Engineers
1209-8th Street
Sacramento, California

(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__) Sacramento River Project Unit No. 151, the east levee of the Feather River from Marysville to Honcut Creek, the south levee of Honcut Creek and the east levee of Reclamation District No. 10 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 summarised 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 stages (water level at 95.0 on the Gridley Bridge gage and 67.0 on the Sacramento Northern Railroad Bridge gage at Yuba City) occurred on the following dates:

<u>Dates</u>	<u>Maximum Elevation</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 _____, on the gage, 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 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