

SUPPLEMENT TO STANDARD
OPERATION AND MAINTENANCE
MANUAL

SACRAMENTO RIVER
FLOOD CONTROL PROJECT

UNIT NO. 125
BACK LEVEE OF
RECLAMATION DISTRICT NO. 1000



U. S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SACRAMENTO, CALIFORNIA

CORPS OF ENGINEERS
U. S. ARMY

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Sacramento District
Corps of Engineers
U. S. Army
June 1959

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OPERATION AND MAINTENANCE MANUAL
SACRAMENTO RIVER FLOOD CONTROL PROJECT**

UNIT NO. 125

BACK LEVEE OF
RECLAMATION DISTRICT NO. 1000

LOCATION	ADDITION OR REVISION	DATE
1-04	Add subparagraph d.	Jul 1984
Exhibit B	Added drawing no. 50-4-5596	Jul 1984
Exhibit F	Added transfer letter dated 13 Feb 1984	Jul 1984
Exhibit F	Add copy of letter of transfer dated 13 Dec 1951	22 Dec 2010
Exhibit F	Add copy of letter of acceptance dated 2 Jan 1952	22 Dec 2010

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B	"As Constructed" Drawings. Unattached
C	Plates of Suggested Flood Fighting Methods. Unattached (Contained in Standard Manual)
D	Check List No. 1 - Levee Inspection Report Unattached (Contained in Standard Manual)
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SUPPLEMENT TO STANDARD
OPERATION AND MAINTENANCE MANUAL
UNIT NO. 125
BACK LEVEE OF
RECLAMATION DISTRICT NO. 1000

SECTION I

INTRODUCTION

1-01. Location. The improvement covered by this manual is that part of the Sacramento River Flood Control Project which comprises the levee and channel along the south side (left bank) of the Natomas Cross Canal, the west side of Pleasant Grove Creek Canal and the west side of the Natomas East Canal that borders on the north and east sides of Reclamation District No. 1000. The levee of this unit lies north of the junction of the American and Sacramento Rivers and the City of Sacramento as shown on the location map, Exhibit A-1.

1-02. Protection Provided. The levee of this unit is an essential feature of the Sacramento River Flood Control Project. It provides direct protection to about 52,000 acres of highly developed agricultural land and related buildings and homes, a small part of North Sacramento, the subdivision of Northgate and several county roads. The grade of the adopted flood plane profile along the Natomas East Canal varies from elevation 35.3 at the confluence of the American River and Natomas East Canal to elevation 40.7 at its upper end in the vicinity of Sankey Road. Along the Natomas Cross Canal the grade of the adopted flood plane profile varies from elevation 41.2 at its lower end, the junction with the Sacramento River, to elevation 42.1 at its upper or easterly end. Along the Pleasant Grove Creek Canal the grade of the adopted flood plane profile varies from elevation 42.1 at its junction with the Natomas Cross Canal to elevation 43.4 at its upper end in the vicinity of the Sankey Road crossing. Elevations are referred to U. S. Corps of Engineers datum. The reach of the Natomas East Canal from the American River to Arcade Creek has a project design capacity of 16,000 cubic feet per second, from Arcade Creek to Magpie Creek pumping station 12,900 cubic feet per second, from Magpie to Linda Creek 12,600 cubic feet per second and upstream from Linda Creek the project design capacity is 1,100 cubic feet per second. Along Natomas Cross Canal the project design capacity is 22,000 cubic feet per second and along the Pleasant Grove Creek Canal from the head of the Natomas Cross Canal to Pleasant Grove Creek the project

design capacity is 7,000 cubic feet per second; from Pleasant Grove Creek to Curry Creek 2,700 cubic feet per second; and from Curry Creek to high ground 900 cubic feet per second. The levee provides for a freeboard of at least 3 feet above the grade of the adopted flood plane profile within this unit except along the westerly levee of Natomas East Canal between stations 162+00 to 276+00 as shown on drawings of Exhibit B where the levee provides for a freeboard of at least 2.5 feet above the grade of the adopted flood plane profile.

1-03. Project Works. The flood control improvement covered by this manual is a part of the Sacramento River Flood Control Project authorized by the Flood Control Act of 1917, as modified by the Acts of 1928, 1937, and 1941, and consists of the westerly levees and channels of Natomas East Canal and Pleasant Grove Creek canal extending for a distance of about 17.3 miles and the southerly levee and channel of the Natomas Cross Canal which is about 4.4 miles long. The above-described levee was constructed by local interests and for the most part has been enlarged, shaped or raised by the Corps of Engineers to project standards.

1-04. Construction Data and Contractor. Construction required by the Corps of Engineers to bring levees of this unit to project standards and to perform repair work to locally built levees was accomplished under the following contracts:

a. Emergency levee repairs along Natomas Cross Canal in R. D. 1000, Sutter County was accomplished under Contract No. DA-04-167-CIVENG-57-61 by Lee Stephens, contractor, during the period from 18 October 1956 to 9 May 1957.

b. Levee construction, back levees of R. D. 1000 in Sacramento and Sutter Counties was accomplished under Contract No. DA-04-167-CIVENG-58-14 by Lee Stephens, contractor, during the period from 2 August 1957 to 27 January 1958.

c. Grading and surfacing of the back levee of R. D. 1000 in Sacramento County was accomplished under Contract No. DA-04-167-CIVENG-59-9 by Brighton Sand and Gravel Co. during the period from 7 August 1958 to 7 October 1958.

d. 1-05. Flood Flows. For purposes of this manual, the term "flood" or "high water period" shall refer to flows when the water surface reaches or exceeds a reading of 35.0 on a staff gage located on the second pile bent at the southeast corner of the El Centro Road Bridge over the Natomas Cross Canal. Also when the

d. Emergency repairs to project levees on the Natomas Cross Canal left bank levee in Reclamation District 1000 was accomplished under Contract No. DACW05-83-C-0148 by Holman Pettibone.

water surface reaches or exceeds a reading of 30.0 on a staff gage located on the northwest end of the Silver Eagle Road Bridge over the Natomas East Canal. Both gages are 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. Transfer to the State Reclamation Board. The levees and channels of this unit were transferred to the State Reclamation Board for maintenance and operation by letters dated 14 February 1958, 24 March 1958 and 22 October 1958.

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. Levees.

a. Description. The levees along the left bank of Natomas Cross Canal, the left bank of Pleasant Grove Creek Canal and the right bank of the Natomas Canal are located as described in paragraphs 1-01 and 1-03 of this manual. A surfaced road traverses the crown of the levee for the full distance of about 21.7 miles. For more complete details of construction of the above-mentioned levee, refer to the "As Constructed" drawings listed in Exhibit B.

b. For pertinent Requirements of the Code of Federal Regulations and other requirements see the following:

(1) Maintenance - paragraph 4-02 of the Standard Manual.

(2) Check Lists - Exhibit E of this Supplement Manual.

(3) Operation - paragraph 4-04 of the Standard Manual.

(4) Special Instructions - paragraph 4-05 of the Standard Manual.

2-02. Drainage and Irrigation Structures.

a. Description. Drainage and irrigation structures which extend through the levee are located and described as follows:

Levee Mileage	Size of Pipe	Gate Location	Other Structure Description	Invert-ft. below crown
<u>Natomas East Canal - American River to Cross Canal</u>				
0.74	6" & 12"	-	P.G.&E. Co. gas line crossing	-
2.48	18"	-	Sewer discharge pipe	-
2.48	8"	-	Effluent pipe	4.8
6.27	8"	w.s.	Pump W.S.	3.4
10.50	24"	w.s.	Pump W.S.	8.5
12.12	24"	-	-	-
12.62	24"	w.s.	-	9.4

Levee Mileage	Size of Pipe	Gate Location	Other Structure Description	Invert-ft. below crown
13.31	48"	w.s.	Gate in riser unit	14.1
14.07	24"	w.s.	Gate in riser unit	15.5
14.92	36"	w.s.	Gate in riser unit	14.3
15.62	8"	w.s.	Pump W.S.	3.2
15.71	24"	w.s.	Gate in riser unit	14.3
15.96	24"	w.s.	Gate in riser unit	16.6
16.00	8"	-	Pump W.S.	2.1

South Levee Natomas Cross Canal - Mile 0.0 at El Centro Road Crossing

0.54	3-28"		Pumping Plant W.S.	2.5
2.05	48"	w.s.	Mutual Water Co.	16.4
3.24	42"	w.s.	-	16.4
4.29	18"	w.s.	Pumphouse W.S.	1.9

Note on abbreviations: w.s. = Waterside
l.s. = Landside

b. For pertinent Requirements of the Code of Federal Regulations and other requirements, see the following:

(1) Maintenance - paragraph 5-02 of the Standard Manual.

(2) Check Lists - Exhibit E of this Supplement Manual.

(3) Operation - paragraph 5-04 of the Standard Manual.

(4) Additional Requirements - paragraph 5-05 of the Standard Manual.

(5) Safety Requirements - paragraph 5-06 of the Standard Manual.

2-03. Channel.

a. Description. The floodway of the Natomas East Canal from Linda Creek to the American River is confined between levees

along both banks. From Linda Creek northerly to Sankey Road along the Natomas East Canal and along the Pleasant Grove Creek Canal there is a levee only along the westerly side. In the vicinity of the Sankey Road crossing the direction of flow is southerly along the Natomas East Canal and northerly along the Pleasant Grove Creek Canal. The floodway of the Natomas Cross Canal is confined between levees along both banks for the entire length and the width between levees is about 550 feet. The project design capacity of the channels is as indicated in paragraph 1-02 of this manual.

b. For pertinent Requirements of the Code of Federal Regulations and other requirements, see the following:

- (1) Maintenance - paragraph 6-02 of the Standard Manual.
- (2) Check Lists - Exhibit E of this Supplement Manual.
- (3) Operation - paragraph 6-04 of the Standard Manual.
- (4) Safety Requirements - paragraph 6-05 of the Standard Manual.

It shall be the duty of the Superintendent to maintain a patrol of the project works during all periods of flood in excess of a reading of 35.0 on the gage at the El Centro Road Bridge and a reading of 30.0 on the gage at the Silver Eagle Road Bridge as indicated in paragraph 1-05 of this manual. Gage readings shall be taken in accordance with the following schedule:

<u>Gage Reading</u>	<u>Stage at Gage</u>	
	<u>El Centro Road</u>	<u>Silver Eagle Road</u>
Every 12 hours	above 35 feet	above 30 feet
Every 6 hours	above 38 feet	above 33 feet
Every 2 hours	above 42 feet	above 36 feet

The Superintendent shall dispatch messages, by the most suitable means, to the State Department of Water Resources whenever the water surface reaches or exceeds the gage readings indicated above and record the time of observations. One copy of the readings shall be forwarded to the District Engineer following the flood, and a second copy transmitted as an inclosure to the semi-annual report in compliance with paragraph 3-05 of the Standard Manual.

2-04. Miscellaneous Facilities.

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

(1) Bridges.

(a) Bridges crossing the East Natomas Canal at the following locations:

West El Camino Ave. - Station -0+30
Silver Eagle Road - Station 70+10
Main Ave. - Station 161+80
Sorento Road - Station 240+47
Elkhorn Road - Station 282+57
Elverta Road - Station 390+18
Riego Road - Station 530+94

Canal follow: (b) Bridges crossing the Pleasant Grove Creek

Sankey Road - Station 639+15
Fifield Road - Station 755+24
Howsley Road - Station 813+15

Canal follow: (c) Bridges crossing the Natomas Cross

El Centro Road - Station 873+55
Garden Highway - Station 1100+44

For location of stations see the "As Constructed" drawing as listed in Exhibit B.

(2) Utility Relocations. Because of the nature of the construction of the levee by local interests, no records of any utility relocations are available.

(3) Hydrographic Facilities.

(a) A staff gage located at the southeast corner of the El Centro Road Bridge that crosses the Natomas Cross Canal. This gage to be maintained by local interests.

(b) A staff gage located on the northwest end of the Silver Eagle Road Bridge over the Natomas East Canal. This gage to be maintained by local interests.

b. For pertinent Requirements of the Code of Federal Regulations and other requirements, see the following:

(1) Maintenance - paragraph 7-02 of the Standard Manual.

(2) Check Lists - paragraph 7-03 of the Standard Manual.

(3) Operation - paragraph 7-04 of the Standard Manual.

SECTION III

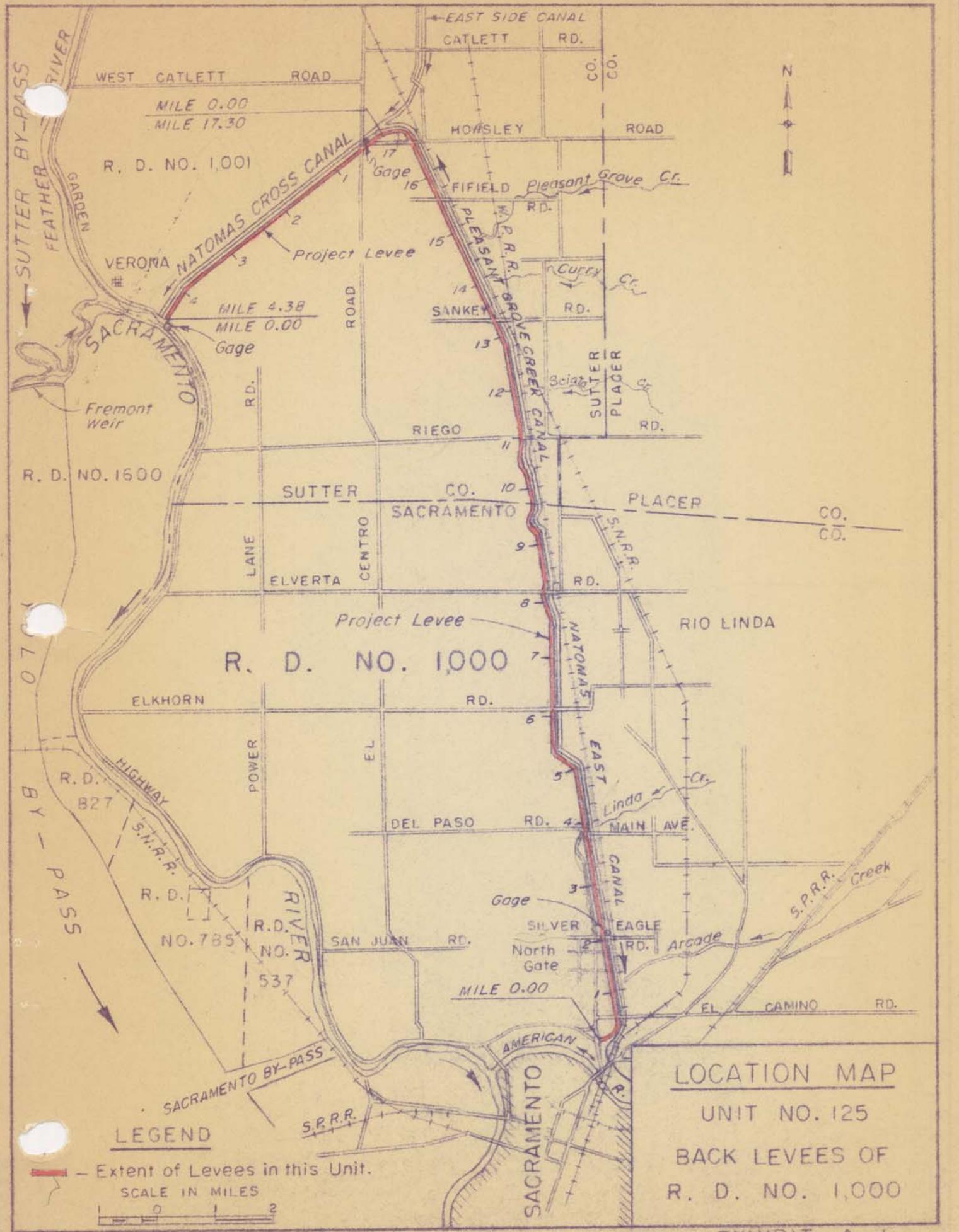
REPAIR OF DAMAGE TO PROJECT WORKS AND METHODS OF COMBATING FLOOD CONDITIONS

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 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 Section VIII of the Standard Operation and Maintenance Manual, revised May 1955, where the subject is fully covered.

EXHIBIT A
FLOOD CONTROL REGULATIONS
(See Standard Manual)

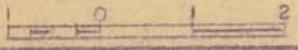
EXHIBIT A
Unattached



LEGEND

 - Extent of Levees in this Unit.

SCALE IN MILES



LOCATION MAP
 UNIT NO. 125
 BACK LEVEES OF
 R. D. NO. 1,000

EXHIBIT A-1

EXHIBIT B

"AS CONSTRUCTED" DRAWINGS

See separate folder for the following drawings:

<u>FILE NO.</u>	<u>TITLE</u>
50-4-3164	Levee Construction, Back Levees of R. D. 1000 and 1001 in Sacramento and Sutter Counties, Sheets 1 to 17, incl.
50-4-3318	Emergency Levee Repairs along Natomas Cross Canal Sheets 5, 6, 7 and 8.
50-4-3516	Back Levee of R. D. 1000 in Sacramento County 5 sheets.

For further details, additional drawings are available from the office of the District Engineer.

50-4-5596	Sutter and Yolo Counties, California, Emergency Levee Repairs, Right Bank Yolo Bypass - RD 2035, Left Bank Natomas Cross Canal - RD 1000, PL 84/99, in 2 sheets.
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EXHIBIT B
Unattached

EXHIBIT C

PLATES OF SUGGESTED FLOOD FIGHTING METHODS

(See Standard Manual)

EXHIBIT C
Unattached

EXHIBIT D

CHECK LIST NO. 1

LEVEE INSPECTION REPORT
(See Standard Manual)

EXHIBIT D
Unattached

EXHIBIT E
CHECK LISTS OF LEVEES,
CHANNEL AND STRUCTURES

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

CHECK LIST NO. 2

UNIT NO. 125

BACK LEVEE OF R. D. 1000

Inspector's Report Sheet No. _____ Inspector _____

Date _____ Superintendent _____

Item	Remarks
(a) Location by Station	
(b) Settlement, sloughing, or loss of grade	
(c) Erosion of back slope of levee	
(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. Note areas where erosion or gullying of the section has occurred.
- Item (c) If sufficient erosion or gullying of back face of back toe of levee has taken place to be noticeable by visual inspection, indicate area affected and depth.
- Item (d) Note any natural change 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.

CHECK LIST NO. 3

CHANNEL AND RIGHT-OF-WAY

UNIT NO. 125

BACK LEVEE OF R. D. 1000

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 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 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 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.

CHECK LIST NO. 4

DRAINAGE AND IRRIGATION STRUCTURES

UNIT NO. 125

Inspector's Report Sheet No. _____

Inspector _____

Date _____

Superintendent _____

(a) Location by levee miles	(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
0.74	Right						
2.48	"						
2.48	"						
6.27	"						
10.50	"						
12.12	"						
12.62	"						
13.31	"						
14.07	"						
14.92	"						
15.62	"						
15.71	"						
15.96	"						
16.00	"						

Natomas East Canal - American River to Cross Canal

CHECK LIST NO. 4

DRAINAGE AND IRRIGATION STRUCTURES
UNIT NO. 125

Inspector's Report Sheet No. _____ Inspector _____
Date _____ Superintendent _____

(a) Location by levee miles	(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
0.54	Left						
2.05	"						
3.24	"						
4.29	"						
South Levee Natomas Cross Canal - Mile 0.0 at El Centro Road Crossing							

Instructions for Completing Sheets 6 and 7, Exhibit E
(To be printed on back of Sheets 6 and 7)

- (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
LETTERS OF TRANSFER TO
THE STATE RECLAMATION BOARD

EXHIBIT F

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SPKKO-P 824.3 (Sac. Riv. F.C.P.)

14 Februray 1958

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

Gentlemen:

Reference is made to District Engineer's letter dated 4 September 1957, which referred in part to the completion of emergency levee repairs on the Natomas Cross Canal of the Sacramento River Flood Control Project.

The work consisting of construction of certain levee units referred to above was completed on 9 May 1957 in accordance with Specification No. 2243, Contract No. DA-04-167-CIVENG-57-61 and Drawing No. 50-4-3318. The levee sections referred to above are listed as follows:

<u>Levee Section No.</u>	<u>River Mile Points</u>	<u>Right or Left Bank</u>
618	4.0 to 4.4	Left

The levee sections, Sec. 617 and 618, described above, now meet the requirements of the Sacramento River Flood Project; therefore said levee sections, together with the waterway banks contiguous thereto, are hereby transferred to the State of California for maintenance and operation beginning 29 November 1957, in accordance with the provisions of the "Supplement to the Memorandum of Understanding" executed as of that date.

The maintenance work required under the provisions of the Sacramento River Flood Control Project shall be performed in accordance with existing Flood Control Regulations, inclosed herewith, 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 by the current issue of the Standard Operation and Maintenance Manual for the Sacramento River Flood Control Project. As provided under paragraph 208.10(10) of these

EXHIBIT F
Sheet 1 of 6

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SPKKO-P
The Reclamation Board

regulations, a supplement to the Standard Operation and Maintenance Manual covering these units of work is in process of preparation and will be furnished to you upon completion.

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

NOTE: Only portion pertaining to Unit No. 125 included in this copy.

Sincerely yours,

A. E. McCOLLAM
Colonel, CE
District Engineer

C
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P
Y

C
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Y

SPKKO-P 824.3 (Sac. Riv. F.C.P.)

24 March 1958

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

Gentlemen:

Reference is made to District Engineer's letter dated 5 December 1957, relative to the joint inspection made on 10 December 1957, of certain levee units pertaining to the Sacramento River Flood Control Project for the purpose of transferring them to the jurisdiction of the State of California for operation and maintenance.

The required work consisting of construction of the levee units referred to above was completed on 27 January 1958 in accordance with Specification No. 2271, Contract No. DA-04-167-CIVENG-30-14 and Drawing No. 50-4-3164. Completion of the contract excluded two road ramps at approximately stations 620+00 and 627+00. Work at these two sites will be completed later by purchase order when weather conditions permit.

	<u>Levee Section No.</u>	<u>River Mile Points</u>	<u>Right or Left Bank</u>
<u>Natomas East Canal</u>	619	0.72 to 3.80	Right
	620	9.0 to 16.4	Right
<u>Natomas Cross Canal</u>	621	0.0 to 4.0	Left
	622	4.4 to 5.44	Left
<u>Coon</u>	-	-	-

The levee sections, Nos. 619 to 623, inclusive, described above, now meet the requirements of the Sacramento River Flood Control Project; therefore said levee sections, together with the waterway banks contiguous thereto, are hereby transferred to the State of California.

EXHIBIT F
Sheet 3 of 6

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

The maintenance work required under the provisions of the Sacramento River Flood Control Project shall be performed in accordance with existing Flood Control Regulations, inclosed herewith, which have been prescribed by the Secretary of the Army pursuant to Section 5 of the Act of Congress, approved 22 June 1936, as amended and supplemented by the current issue of the Standard Operation and Maintenance Manual for the Sacramento River Flood Control Project. As provided under paragraph 200.10(10) of these regulations, a supplement to the Standard Operation and Maintenance Manual covering these units of work is in process of preparation and will be furnished to you upon completion.

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

Sincerely yours,

A. E. McCOLLAM
Colonel, CE
District Engineer

C
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P
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C
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SPKKO-P 824.3 (Sac Riv FCP)

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

Gentlemen:

Reference is made to the joint inspection made on 30 September 1958 of a certain levee unit pertaining to the Sacramento River Flood Control Project for the purpose of transferring it to the jurisdiction of the State of California for operation and maintenance.

The required work consisting of construction of the levee unit referred to above was completed on 7 October 1958 in accordance with Specification No. 2459, Contract No. DA-04-167-CIVENG-59-9 and Drawing No. 50-4-3516.

This levee unit No. 625, referred to above, which extends along the right bank of the Natomas East Canal from Mile 3.80 to Mile 6.00, now meets the requirement of the Sacramento River Flood Control Project; therefore said levee unit, together with the waterway bank contiguous thereto, is hereby transferred to the State of California for operation and maintenance.

In addition to the above, recent surveys indicate that the levee unit adjoining, extending from mile 6.00 to mile 9.00, and designated as unit No. 626 also meets the requirements of the Sacramento River Flood Control Project. Therefore said levee unit No. 626, together with the waterway banks contiguous thereto, is also hereby transferred to the State of California for operation and maintenance.

It is to be noted that the levee units described above combined with other units previously transferred to your jurisdiction now form a continuous levee reach around Reclamation District No. 1000.

EXHIBIT F
Sheet 5 of 6

C
O
P
Y

C
O
P
Y

SPKKO-P 824.3 (Sac Riv FCP)
The Reclamation Board

The maintenance work required under the provisions of the Sacramento River Flood Control Project shall be performed in accordance with existing Flood Control Regulations, inclosed herewith, 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 by the current issue of the Standard Operation and Maintenance Manual for the Sacramento River Flood Control Project. As provided under paragraph 208.10(10) of these regulations, a supplement to the Standard Operation and Maintenance Manual covering these units of work is in process of preparation and will be furnished to you upon completion.

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

Sincerely yours,

/s/ A. E. McCollam
A. E. McCOLLAM
Colonel, CE
District Engineer

REGISTERED MAIL
Return Receipt
Requested

Letter No. 13

①

⑬

13 DEC 1951

SPEKA 624.3(Sac. Riv. F.C.P.)

The Reclamation Board
State of California
1100 "G" Street
Sacramento 14, California

Accepted by the Recl. Board:

-  Completed by Contract by C. of E.
-  Const. by Local Interests 203-246-250-285
-  No maint. is required. 204

Not Accepted

 No capable of separate maint.

Gentlemen:

Reference is made to your letter of 2 July 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:

a. Sherman Island levee of Three Mile Slough.

- ✓  (1) State Highway Bridge to Sacramento River.  101
- ✓  (2) From the State Highway Bridge, 1300 feet toward the San Joaquin River.  101
- ✓  (5) From a point 3900 feet toward the San Joaquin River from the State Highway Bridge to a point 6900 feet toward the San Joaquin River from the State Highway Bridge. 101
- ✓  (4) From a point 10,500 feet toward the San Joaquin River from the State Highway Bridge to the San Joaquin River. 101

 b. Plug across Seven Mile Slough near Three Mile Slough.  102

✓  c. Sherman Island levee of Seven Mile Slough and Three Mile Slough from the Plug across Seven Mile Slough southwesterly to Sacramento River.  102

Items 199 to 295

⑬

SPRKA 624.S (Sac. Riv. F.C.P.)
The Reclamation Board

d. Easterly levee of the Sacramento River.

Reach
19

- 205 (1) From a point 25,850 feet, measured along the Sherman Island levee, downstream from Three Mile Slough to a point 21,950 feet downstream from Three Mile Slough. 101
- 206 (2) From a point 14,850 feet, measured along the Sherman Island levee, downstream from Three Mile Slough to a point 7,700 feet downstream from Three Mile Slough. 101
- 207 (3) From a point 6,300 feet, measured along the Sherman Island levee, downstream from Three Mile Slough to a point 3,450 feet downstream from Three Mile Slough. 101
- 208 (4) From a point 5,500 feet, measured along the Sherman Island levee, downstream from Three Mile Slough to a point 700 feet downstream from Three Mile Slough. 101
- 209 (5) From a point 500 feet, measured along the Sherman Island levee, downstream from Three Mile Slough to Three Mile Slough. 101
- 210 (6) Three Mile Slough to Mile 10.58. 102
- 211 (7) Mile 10.71 to Mile 13.1. 102
- 212 (8) Mile 13.59 to Mile 14.5 (Junction Point). 102
- 213 (9) Mile 14.5 (Junction Point) to Mile 15.0. 102
- 214 (10) Mile 15.1 to Mile 16.9. 102
- 215 (11) Mile 16.95 to Mile 17.5. Brannan 102
- 216 (12) Mile 17.6 to Mile 18.0. Andrus 103
- 217 (13) Mile 18.15 to Mile 18.5. " 103
- 218 (14) Mile 18.5 to Mile 21.5. ✓ ○ " 103
- 219 (15) Mile 21.6 to Mile 26.3. ✓ ○ " 103
- 220 (16) Mile 26.4 to Georgiana Slough. ✓ ○ 103
- 221 (17) Mile 26.5 to Mile 27.55. ✓ ○ III
- 222 (18) Mile 27.7 to Mile 28.5. III

2 X

Reach
19

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

d. Easterly levee of the Sacramento River. (cont'd)

- ✓ 223 (19) Mile 28.6 to Mile 28.9.
- ✓ 224 (20) Mile 29.1 to Mile 29.9.
- ✓ 225 (21) Mile 30.25 to Mile 30.55.
- ✓ 226 (22) Mile 30.75 to Mile 31.5.
- ✓ 227 (23) Mile 31.8 to Mile 32.2.
- ✓ 228 (24) Mile 32.4 to Mile 33.0.
- ✓ 229 (25) Mile 33.1 to Mile 34.45.
- ✓ 230 (26) Mile 34.65 to Mile 34.95.
- ✓ 231 (27) Mile 35.1 to Mile 35.35.
- ✓ 232 (28) Mile 35.38 to Mile 35.74. ✓
- ✓ 233 (29) Mile 35.85 to Mile 36.55.
- ✓ 234 (30) Mile 36.5 to Mile 36.75.
- ✓ 235 (31) Mile 36.85 to Mile 37.15.
- ✓ 236 (32) Mile 37.3 to Mile 37.85.
- ✓ 237 (33) Mile 38.0 to Mile 38.3.
- ✓ 238 (34) Mile 38.5 to Mile 39.15.
- ✓ 239 (35) Mile 39.75 to Mile 39.9.
- ✓ 240 (36) Mile 40.0 to Mile 40.15.
- ✓ 241 (37) Mile 40.25 to Mile 40.35.
- ✓ 242 (38) Mile 40.5 to Mile 40.8.
- ✓ 243 (39) Mile 41.2 to Mile 41.6.
- ✓ 244 (40) Mile 41.75 to Mile 42.35.
- ✓ 245 (41) Mile 42.5 to Mile 43.05.

Reach 17



SPKRA 324.3 (Sac. Riv. F.C.P.)
The Reclamation Board

d. Easterly levee of the Sacramento River. (cont'd)

Reach 17

- ✓ (246) (42) Mile 43.3 to Mile 43.55. } III
- ✓ (247) (43) Mile 43.55 to Mile 44.2. }
- ✓ (248) (44) Mile 44.5 to Mile 45.3. x D 115
- ✓ (249) (45) Mile 55.4 to Mile 55.5. 115
- ✓ (250) (46) Mile 55.1 to American River. x D 118.1

Reach 1A

- (251) (47) West levee of Sutter Bypass to Mile 87.5.
- (252) (48) Mile 91.4 to Mile 92.1.
- (253) (49) Mile 92.6 to Mile 92.7.
- (254) (50) Mile 92.9 to Mile 94.0. ✓ ○
- (255) (51) Mile 96.6 to Mile 97.4.
- (256) (52) Mile 97.5 to Mile 97.7. ✓ ○
- (257) (53) Mile 97.7 to Mile 97.8.
- (258) (54) Mile 99.9 to Mile 102.5. ✓ ○
- (259) (55) Mile 103.45 to Mile 103.7.
- (260) (56) Mile 103.8 to Mile 104.2.
- (261) (57) Mile 104.2 to Mile 104.7. ✓ ○
- (262) (58) Mile 104.7 to Mile 105.65.
- (263) (59) Mile 110.9 to Mile 111.5. ✓ ○
- (264) (60) Mile 118.4 to Mile 118.6 (South End Tisdale Weir)
- (265) (61) At Tisdale Weir. ✓ ○ 150



(266) e. Northerly levee of Miner Slough from a point 1,200 feet easterly from the easterly levee of Yolo Bypass to a point 4,400 feet easterly from the easterly levee of Yolo Bypass.

SPKKA 224.3 (Sac. Riv. F.C.P.)
The Reclamation Board

Letter No. 13

13

f. Westerly levee of Sutter Slough.

113

Ranch 36

- ✓ (267) (1) Mile 26.5 to Mile 26.7.
- ✓ (268) (2) Mile 27.05 to Mile 27.2.
- ✓ (269) (3) Mile 27.3 to Elkhorn Slough.

g. Westerly levee of Elkhorn Slough.

113

- ✓ (270) (1) Sutter Slough to Station "A" 431+00.
- ✓ (271) (2) Station "A" 429+50 to Station "A" 405+00.
- ✓ (272) (3) Station "A" 403+50 to Station "A" 344+75.
- ✓ (273) (4) Station "A" 340+75 to Station "A" 326+00.
- ✓ (274) (5) Station "A" 70+50 to Station "A" 60+50.

h. Westerly levee of the Sacramento River.

131

Ranch 3

- ✓ (275) (1) Mile 119.2 to Mile 119.7.
- ✓ (276) (2) Mile 131.4 to Mile 131.8.
- ✓ (277) (3) Mile 133.1 to Mile 133.3. ✓ 0
- ✓ (278) (4) Mile 134.0 (Meridian Bridge) to Mile 134.3.
- ✓ (279) (5) Mile 134.3 to Mile 140.6. ✓ 0
- ✓ (280) (6) Mile 140.6 to Mile 141.3.
- ✓ (281) (7) Mile 141.3 to Mile 142.0. ✓ 0
- ✓ (282) (8) Mile 142.0 to Mile 142.3.
- ✓ (283) (9) Mile 142.3 to Mile 142.7 (Union Oil Co. Wharf). ✓ 0

AX (284) 1. Easterly levee of Georgiana Slough from the S.P.R.R. stream 22,500 feet. ✓ 0 103

AB

(285) j. Northerly levee of the American River and the back levee of Reclamation District No. 1000 from Jibboom Street Bridge to El Camino Avenue. x D

125

13

SPEKA 524.3(Sac.Riv.F.C.F.)
The Reclamation Board

k. Northerly levee of Natoms Cut.

- 48 ✓ (286) (1) From Sacramento River easterly to a point 1,550 feet easterly from the Garden Highway Bridge. 142
- ✓ (287) (2) From a point 2,550 feet easterly from the Garden Highway Bridge to a point 3,250 feet easterly from the Garden Highway Bridge. 142

Recd No. 30

✓ (288) l. Back levee of Reclamation District No. 2068 along the S.N.R.R. from the County Road northeasterly 7,200 feet to high ground. 109

✓ (289) m. Southerly levee of North Dry Creek near Wheatland from high ground to the W.P.R.R. Interceptor. 145

✓ (290) n. Easterly levee of the W. P. R. R. Interceptor from North Dry Creek southerly to Bear River. 145

✓ (291) o. Northerly levee of Bear River from the W. P. R. R. Interceptor easterly to South Dry Creek. 145

✓ (292) p. Northerly levee of South Dry Creek near Wheatland from Bear River easterly to high ground, including the Singh saddle closure levee. 145

✓ (293) q. Southerly levee of Bear River from the W.P.R.R. easterly to a point 5,400 feet easterly from Carlin Bridge. 141.1

✓ (294) r. Southerly levee of South Dry Creek near Wheatland from Bear River easterly 1.86 miles. 144

✓ (295) s. Northerly levee of Bear River from South Dry Creek easterly to a point 4,000 feet easterly from Carlin Bridge. 144

The records of this office show that your Board has accepted the levees and/or works covered by Items d.(14), d.(15), d.(16), d.(29), d.(50), d.(52), d.(54), d.(57), d.(59), d.(61), h.(3), h.(5), h.(7), h.(9), i., m., n., o., p., q., r., and s., 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. to c., inclusive, d.(1) to d.(13), inclusive, d.(17), to d.(27), inclusive, d.(29), to d.(49), inclusive, d.(51), d.(53), d.(55), d.(56), d.(58), d.(60), e., f., g., h.(1), h.(2), h.(4), h.(6), h.(8) and j. to l., inclusive, above, although complete has not been formally transferred as contemplated by the Project documents.

Letter No. 13

13

SPEKA 824.5(Sac,Riv.F.C.F.)
The Reclamation Board

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. Reifsnyder
Lt. Colonel, Corps of Engineers
Executive Officer

13

Jan. 2, 1952

The Board accepted the transfer from the Corps of Engineers, in letters as 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:

No.	Date of Letter	Levee Location	Remarks
Unit No. 80A = 322 1	13 Dec. 1951	a. Left Bank Sacramento River Mile 94.0 to 96.6	Completed contract. Spec. No. 1485. Maintained by R. D. No. 1500
Unit No. 81A 323		b. Left Bank Sacramento River Mile 114.2 to 115.6	Do
Unit No. 82A 324		c. Left Bank Sacramento River Mile 116.1 to 117.0	Do
Unit No. 86A 325 2	19 Dec. 1951	Part A, Site 1 - Right Bank Sacramento River, Spec. No. 1515, Grand Island Mile 30.25 to 30.5	Completed contract. Maintained by R. D. No. 3
3	13 Dec. 1951	a(1) Sherman Island Levee Bridge to Sacramento River 199	Completed contract. Maintained by R. D. No. 341. 101
		a(2) Sherman Island Levee Bridge East 1300 ft. 200	Do 101
		b. Plug across Seven Mile Slough 203	Constructed and maintained by R.D. Nos. 1601 and 2067. 102
		c. Brannan Island levee of Seven Mile Slough plug and along Three Mile Slough to Sacramento River 204	Spoil area owned by S. & S.J.D.D. No maintenance required.
		d(14) East levee Sacramento River Mile 18.5 to 21.5 218	Completed contract. Maintained by R.D. No. 407. 103
		d(15) East levee Sacramento River Mile 21.6 to 26.3 219	Completed contract. Maintained by R.D. No. 556.
		d(16) East levee Sacramento River Mile 26.4 to Georgiana Sl. 220	Completed contract. Maintained by R. D. No. 556. 103
		d(17) East levee Sacramento River Mile 26.5 to 27.55 221	Completed contract. Maintained by R.D. No. 554. No liability for Delta Cross Channel. 103

Units No. 80A-81A-82A and 86A, and
Items 199 to 295
1005
15

No.	Date of Letter	Levee Location	Remarks
3	13 Dec. 1951	d(28) East levee Sacramento River Mile 35.38 to 35.74	Completed contract. Maintained by R.D. No. 755. 111
		(248) d(44) East levee Sacramento River Mile 44.5 to 45.3	Constructed by Assessment No. 5. 115 X
		(250) d(46) East levee Sacramento River Mile 56.1 to American River	Constructed and maintained by City of Sacramento. 118.1 X
		(254) d(50) East levee Sacramento River Mile 92.9 to 94.0	Completed contract. Maintained by R.D. No. 1500.
		(256) d(52) East levee Sacramento River Mile 97.5 to 97.7	Completed contract. Maintained by R. D. No. 1500.
		(258) d(54) East levee Sacramento River Mile 99.9 to 102.5	Do
		(261) d(57), (58) East levee Sacramento River Mile 104.2 to 105.65	Do
		(263) d(59) East levee Sacramento River Mile 110.9 to 111.5	Do
		(265) d(61) East bank Sacramento River at Tisdale Weir	Maintained by State under Section 8361 Water Code. 130
		(277) h(3) West levee Sacramento River Mile 133.1 to 133.3	Completed contract. Maintained by Sacramento River West Side Levee District.
		(279) h(5) West levee Sacramento River Mile 134.3 to 140.6	Do
		(281) h(7) West levee Sacramento River Mile 141.3 to 142.0	Do
		(283) h(9) West levee Sacramento River Mile 142.3 to 142.7	Do
		(284) i. East levee Georgiana Slough from S.P.R.R. upstream 22,500 ft.	Completed contract. Maintained by Tyler Island District. 103
		(285) j. North levee American River from Jibboom St. Bridge to El Camino Avenue	Constructed by and maintained by R. D. No. 1000. 125 X

<u>No.</u>	<u>Date of Letter</u>	<u>Levee Location</u>	<u>Remarks</u>
3	13 Dec. 1951	l. Back levee R.D. No. 2068	Completed contract. Maintained by R.D. No. 2068. 109
		m. S. levee North Dry Creek to W.P.R.R. Interceptor	Completed contract.
		n. E. levee W.P.R.R. Interceptor from North Dry Creek to Bear River	Do
		o. N. levee Bear River from W.P.R.R. Interceptor to South Dry Creek	Completed contract. Maintained by R. D. No. 784. 145
		p. N. levee South Dry Creek from Bear River to high ground	Completed contract. Maintained by R. D. No. 817.
		q. South levee Bear River from W.P.R.R. easterly to 5,400 feet east of Carlin Bridge	Completed contract. Maintained by R. D. No. 1001. 141.1
		r. South levee of South Dry Creek from Bear River easterly 1.86 miles	Completed contract. Maintained by R. D. No. 817.
		s. North levee Bear River from South Dry Creek easterly to 4,000 feet easterly from Carlin Bridge	Completed contract. Maintained by R. D. No. 817. 146

31



DEPARTMENT OF THE ARMY
SACRAMENTO DISTRICT, CORPS OF ENGINEERS
850 CAPITOL MALL
SACRAMENTO, CALIFORNIA 95814

REPLY TO
ATTENTION OF

February 13, 1964

Navigation and Flood Control Unit

The Reclamation Board
State of California
1416 - 9th Street, Room 455
Sacramento, California

Members of the Board:

You are hereby notified that the Corps of Engineers has completed emergency repairs to project levees under authority of Section 5 of the Flood Control Act of August 18, 1941, as amended (Public Law 99, 84th Congress, 1st Session). The work was completed on February 6, 1954 and consisted of repairing the Yolo Bypass right bank levee in Reclamation District 2035 and the Natomas Cross Canal left bank levee in Reclamation District 1090 in accordance with Contract Number DACW05-83-C-0148 and Drawing Number 50-4-5596. This work shall be maintained in accordance with the assurances which your Board provided for the Sacramento River Flood Control Project. This portion of the work will be added by amendment to the Operation and Maintenance Manual, supplement Numbers 121 and 125, Sacramento River Flood Control Project. Copies will be furnished your office at a later date.

Sincerely,

Arthur E. Williams
Colonel, Corps of Engineers
District Engineer

EXHIBIT F

EXHIBIT G
SUGGESTED SEMI-ANNUAL REPORT FORM

EXHIBIT G

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__) Unit No. 125 of the Sacramento River Flood Control Project (Back Levee of R.D. No. 1000) 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 (water level at 35.0 on the gage at El Centro Road and 30.0 on the gage at Silver Eagle Road) occurred on the following dates:

<u>Dates</u>	<u>Maximum Elevation</u>
_____	_____
_____	_____
_____	_____

EXHIBIT G
Sheet 1 of 2

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