

Staff Report

for the Board of Director's Meeting, September 13, 2017

TO: Board of Directors

FROM: Gary D. King, P.E., PhD, Engineering Manager
Adrian Schneider, P.E., Senior Engineer
Dar Chen, P.E., Dam Safety Engineer

DATE: September 6, 2017

SUBJECT: Loma Rica Reservoir 24-inch Pipe Rehabilitation Project (#1079)

ENGINEERING

RECOMMENDATION:

Award contract to Lorang Brothers Construction for the Loma Rica Reservoir 24-inch Pipe Rehabilitation Project in the amount of \$416,000, and authorize the General Manager to execute the necessary documents

BACKGROUND:

The Loma Rica Reservoir has two outlets; a 20-inch diameter pipe that feeds the Loma Rica Water Treatment Plant and a 24-inch diameter pipe that feeds the beginning of the Chicago Park Canal system. In 2015 the 24-inch diameter (steel) pipe was video inspected and damage was seen including cracks and offsets at joints, following observations of seepage in the dam embankment fill. In May 2016, California Division of Safety of Dams (DSOD) required that the District replace the damaged pipe or repair it. Staff proposed to the DSOD to rehabilitate the 24-inch pipe by installing a 20-inch HDPE pipe using the slip-lining method. In addition, needs to replace a malfunctioning outlet valve and to build a new catwalk structure for the new inlet valve operations was incorporated into the project. The rehabilitation is planned to start in September and to be completed in November 2017.

Quotes were requested from ten contractors, and the following two quotes were received on August 3, 2017: \$416,000 from Lorang Brothers Construction and \$608,000 from Sierra Mountain Construction.

It is staff's recommendation to approve the contract with Lorang Brothers Construction in the amount of \$416,000.

BUDGETARY IMPACT:

The project is budgeted in the amount of \$450,000 under the Raw Water Project category and follows the budget transfer approved in the Administrative Practices Committee meeting on September 5, 2017.

Attachments: Quote Results Summary Table
Letters from Department of Water Resources (3)

QUOTE RESULTS - 8/3/2017

LOMA RICA 24-INCH INLET PIPE REHABILITATION PROJECT

Item	Descriptions	Qty.	Unit	Sierra Mountain Construction	Lorang Brothers Construction
				Cost	Cost
1	Mob/Demob	1	LS	\$5,000	\$5,000
2	20"diam HDPE Pipe Purchase*	1	LS	\$7,500	\$28,000
3	20"diam Pipe Welding*	1	LS	\$7,500	\$24,000
4	Inlet Demolition/Installation	1	LS	\$130,000	\$63,000
5	Outlet Modifications	1	LS	\$55,000	\$31,000
6	24"diam Steel Pipe Cleaning*	1	LS	\$10,000	\$12,000
7	Videotaping 24" Steel Pipe Interior*	1	LS	\$3,000	\$5,000
8	20"diam HDPE Pipe Install within 24"*	1	LS	\$75,000	\$27,000
9	Grouting Annular Space btwn 24" & 20"*	1	LS	\$20,000	\$30,000
10	Inlet Vertical Structure/Panels F&I	1	LS	\$100,000	\$67,000
11	Walkway, F&I	1	LS	\$100,000	\$68,000
12	18-inch Gate Valve, F&I	1	EA	\$45,000	\$25,000
13	24-inch Gate Valve, F&I	1	EA	\$50,000	\$31,000
<i>Total Quote Price</i>				\$608,000	\$416,000

DEPARTMENT OF WATER RESOURCES

1416 NINTH STREET, P.O. BOX 942836
SACRAMENTO, CA 94236-0001
(916) 653-5791



JAN 29 2016

Mr. Remleh Scherzinger, General Manager
Nevada Irrigation District
28311 Secret Town Road
Colfax, California 95713

Attention: Mr. Keane Sommers, Hydroelectric Manager

Loma Rica Airport Dam, No. 61-25
Nevada County

Dear Mr. Scherzinger:

This is in reply to Mr. Keane Sommers' letter dated December 16, 2015, regarding defects inside the low-level outlet pipe noted during a remote operated vehicle (ROV) inspection at Loma Rica Airport Dam. The ROV inspection was prompted by the discovery of moist spots on the downstream face of the dam, when the pipe was operated under pressure. A copy of the ROV inspection was forwarded to us with Nevada Irrigation District's (NID) transmittal dated November 30, 2015.

We have reviewed the ROV inspection and agree with NID's findings that rehabilitation of the outlet pipe is warranted. We also agree with the interim plan to keep the downstream butterfly valve always open to prevent pressurizing the pipe, and to perform daily inspections of the dam until the rehabilitation work is completed. Notify us immediately if any unusual conditions appear.

Please submit a plan and schedule by May 30, 2016, for the rehabilitation of the outlet pipe. This work will require a repair application, which will need to be submitted along with plans, specifications, and an appropriate filing fee.

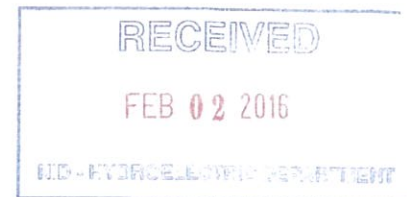
Mr. Sommers reported the condition of the outlet that supplies the downstream treatment plant, which is similar in design and construction to the low-level outlet, will be investigated. Please continue to keep us informed. If rehabilitation of this outlet is necessary, it can be combined with the low-level outlet rehabilitation work.

If you have any questions or need additional information, you may contact Area Engineer Aspet Ordoubigian at (916) 227-4635 or Regional Engineer Andrew Mangney at (916) 227-4631.

Sincerely,

A handwritten signature in blue ink, appearing to read "David A. Gutierrez".

David A. Gutierrez, Chief
Division of Safety of Dams



DEPARTMENT OF WATER RESOURCES

1416 NINTH STREET, P.O. BOX 942836
SACRAMENTO, CA 94236-0001
(916) 653-5791



JUN 13 2016

Mr. Remleh Scherzinger, General Manager
Nevada Irrigation District
28311 Secret Town Road
Colfax, California 95713

Attention: Mr. Keane Sommers, Hydroelectric Manager

Loma Rica Airport Dam, No. 61-25
Nevada County

Dear Mr. Scherzinger:

This is in reply to Mr. Keane Sommers' letter dated May 18, 2016, providing a plan and schedule for the rehabilitation of the low-level outlet pipe at Loma Rica Airport Dam.

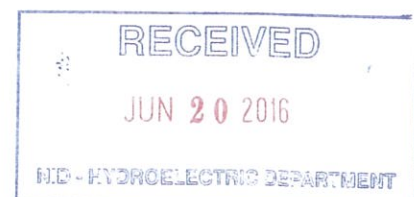
The conceptual plan to slip line the 24-inch low-level outlet pipe is acceptable. The proposed schedule to submit a repair application along with plans, specifications, and an appropriate filing fee by December 2016, and to complete construction by December 2017, is also acceptable. Please continue to operate the outlet and monitor the dam in accordance with the interim plan agreed to in our letter of January 29, 2016, until the rehabilitation work is completed.

If you have any questions or need additional information, you may contact Area Engineer Aspet Ordoubigian at (916) 227-4635 or Regional Engineer Andrew Mangney at (916) 227-4631.

Sincerely,

Sham K. Lopia

for David A. Gutierrez, Chief
Division of Safety of Dams



DEPARTMENT OF WATER RESOURCES

1416 NINTH STREET, P.O. BOX 942836
SACRAMENTO, CA 94236-0001
(916) 653-5791



JUN 13 2016

Mr. Remleh Scherzinger, General Manager
Nevada Irrigation District
28311 Secret Town Road
Colfax, California 95713

Attention: Mr. Keane Sommers, Hydroelectric Manager

Loma Rica Airport Dam, No. 61-25
Nevada County

Dear Mr. Scherzinger:

This is in reply to Mr. Keane Sommers' letter dated May 18, 2016, providing a plan and schedule for the rehabilitation of the low-level outlet pipe at Loma Rica Airport Dam.

The conceptual plan to slip line the 24-inch low-level outlet pipe is acceptable. The proposed schedule to submit a repair application along with plans, specifications, and an appropriate filing fee by December 2016, and to complete construction by December 2017, is also acceptable. Please continue to operate the outlet and monitor the dam in accordance with the interim plan agreed to in our letter of January 29, 2016, until the rehabilitation work is completed.

If you have any questions or need additional information, you may contact Area Engineer Aspet Ordoubigian at (916) 227-4635 or Regional Engineer Andrew Mangney at (916) 227-4631.

Sincerely,

Sham K. Lopia

for David A. Gutierrez, Chief
Division of Safety of Dams

