

THE CONSTRUCTION PROCEDURE
ADOPTED
DURING THE CONSTRUCTION OF OPEN
FOUNDATION IN REMOTE AREA
-A CASE STUDY OF RIMNA BRIDGE, JAJARKOT

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DESIGN AND BUILD OF BHERI RIVER BRIDGE, RIMNA

SALIENT FEATURES

NAME OF THE PROJECT:

CONSTRUCTION OF PSC BRIDGES ACROSS BHERI RIVER

LOCATION :

RIMNA ,JAJARKOT

TYPE OF CONTRACT :

DESIGN AND BUILD

NAME OF THE CONTRACTOR :

ANK CONSTRUCTIONION COMPANY(Pvt.) LTD

LENGTH OF THE BRIDGE :

110 M

CARRIAGEWAY WIDTH :

7.0 M

NO. OF SPAN :

2

SPAN LENGTH :

52.5 M

TYPE OF FOUNDATION :

OPEN

TYPE OF PIER :

CIRCULAR (4 M DIAMETER)

SUPERSTRUCTURE :

PSC BOX-GIRDER

APPROACH ROAD :

500 M

DATE OF AGREEMENT :

ASHAD, 2071

DUE DATE FOR COMPLETION:

ASHAD 2074

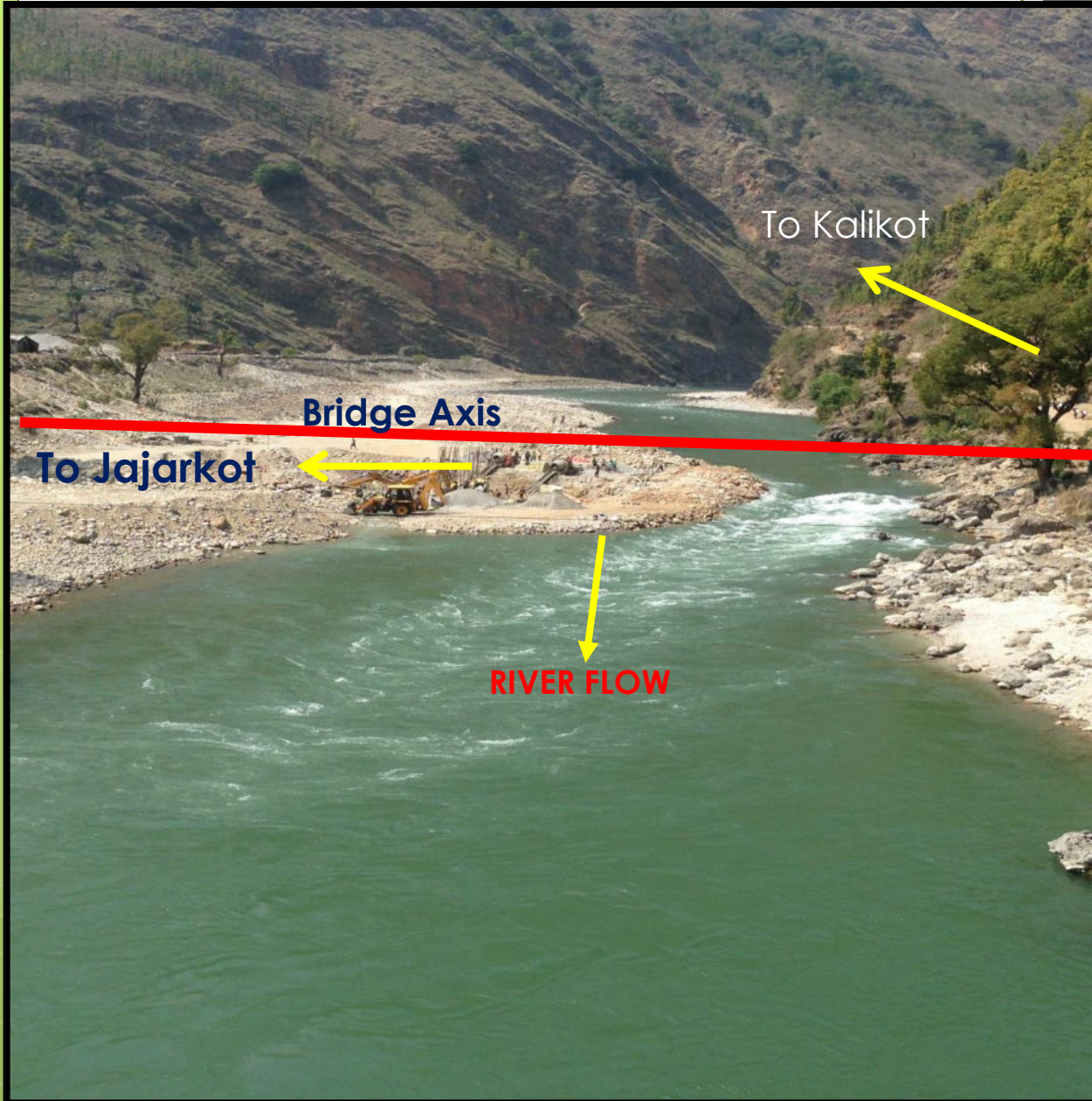
COMPLETION DATE:

ASHAD, 2073



BHERI BRIDGE, RIMNA

View of Bheri River from Jajarkot



CONSTRAINTS AND CHALLENGES

CONSTRAINTS:

- EARTHEN TRACK (20KM) FROM JAJARKOT
- CONCENTRATED CENTRAL RIVER FLOW
- NO ACCESS ON LEFT APPROACH (HARD ROCK CLIFF 600M)

CHALLENGES:

- TRANSPORTATION OF CONSTRUCTION MATERIALS TO BRIDGE SITE
- RIVER DIVERSION
- FOUNDATION EXCAVATION FOR PIER LOCATED AT MAIN STREAM
- SEEPAGE CONTROL SPECIALLY IN PIER FOUNDATION (**7.5 m Deep from G.L**)
- TRANSPORTATION OF MATERIALS AND CONSTRUCTION OF LEFT ABUTMENT



BHERI BRIDGE, RIMNA

**LEFT APPROACH- 600 M
HARD ROCK**

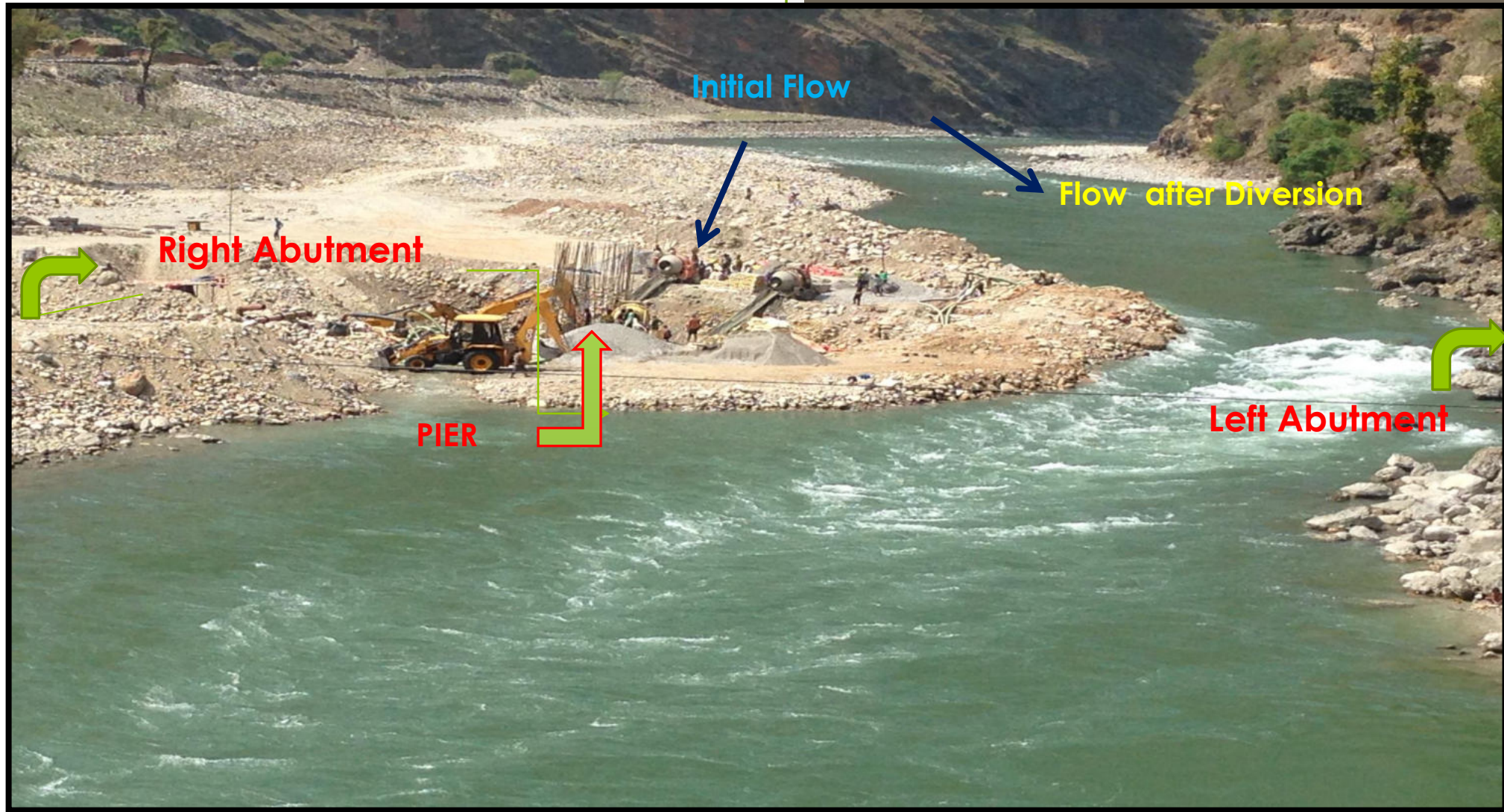
CONSTRUCTION OF RIGHT ABUTMENT





BHERI BRIDGE, RIMNA

CONCENTRATED FLOW



BHERI BRIDGE, RIMNA

RIVER DIVERSION FROM RIGHT BANK

SEEPAGE CONTROL IN PIER FOUNDATION

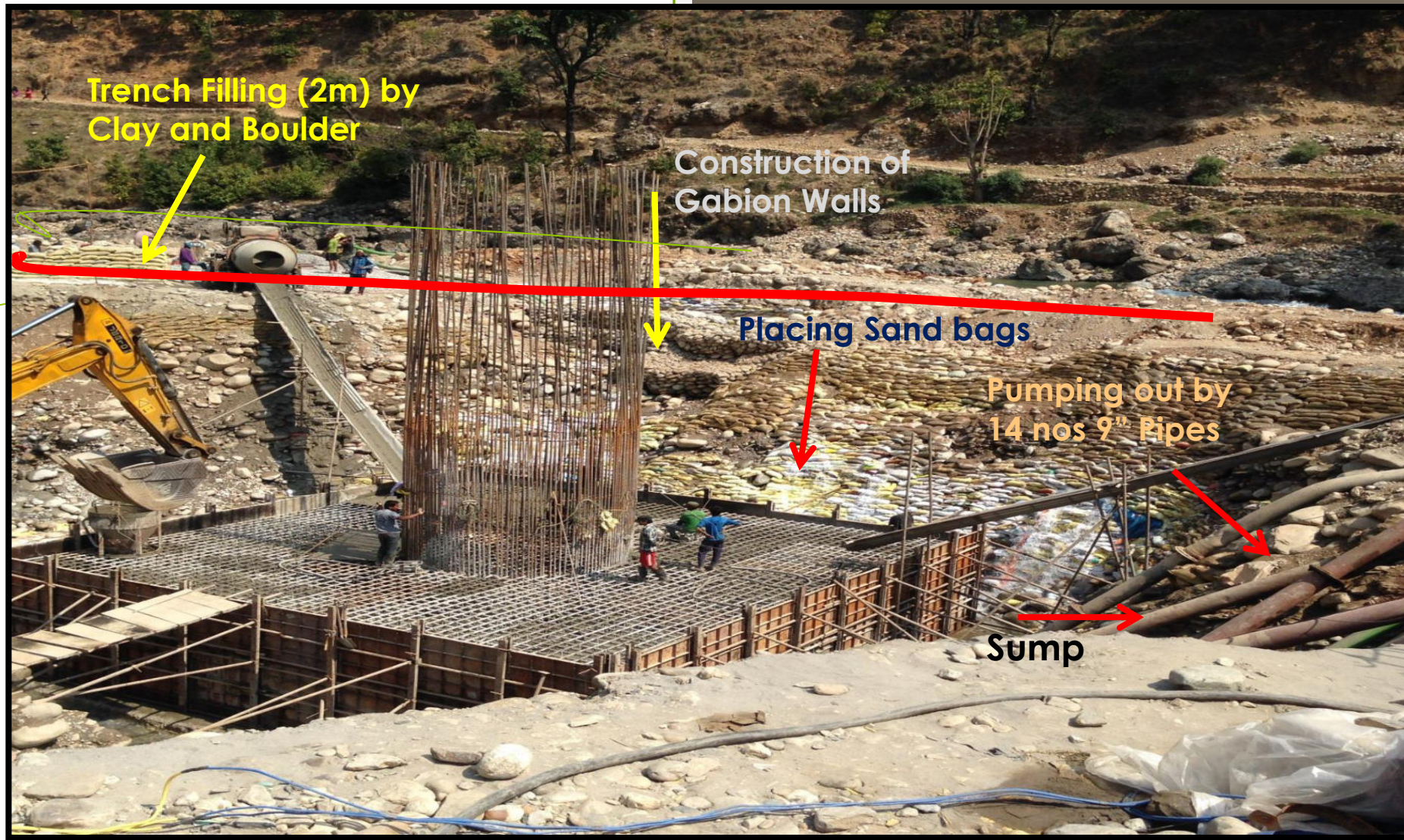
METHODS ADOPTED:

- CONSTRUCTION OF TRENCH FILLED WITH CLAY ON U/S AND ALONG THE FLOW
- CONSTRUCTION OF GABION WALL AT TOE OF FOUNDATION
- SAND BAGS AND GABION MATTRESSES ON SLOPES OF FOUNDATION
- ADQUATE PUMPING ARRANGEMENTS



BHERI BRIDGE, RIMNA

**RIVER DIVERSION-FILLING
BOULDER/CLAY LAYER IN TRENCH**



BHERI BRIDGE, RIMNA

SEEPAGE CONTROL ARRANGEMENT



BHERI BRIDGE, RIMNA

CONCRETING ARRANGEMENT FOR PIER FOOTING



BHERI BRIDGE, RIMNA

**PUMPING
ARRANGEMENT**



BHERI BRIDGE, RIMNA

Concreting on Pier Footing



BHERI BRIDGE, RIMNA

ENORMOUS SEEPAGE IN FOUNDATION



BHERI BRIDGE,RIMNA

COMPLETION OF RIGHT SPAN



BHERI BRIDGE,RIMNA



TEMPORARY BRIDGE



BHERI BRIDGE, RIMNA

TEMPORARY TRUSS BRIDGE



BHERI BRIDGE, RIMNA

LEFT ABUTMENT FOOTING



BHERI BRIDGE, RIMNA

**CONSTRUCTION OF
RIGHT SPAN SUPERSTRUCTURE**



BHERI BRIDGE,RIMNA

**RIGHT SPAN SUPERSTRUCTURE-
STRESSING COMPLETED**





BHERI BRIDGE, RIMNA

**RIVER DIVERSION FROM
RIGHT SPAN**



Left Span

BHERI BRIDGE, RIMNA

VIEW FROM D/S



BHERI BRIDGE,RIMNA

COMPLETION-VIEW FROM LEFT APPROACH



BHERI BRIDGE,RIMNA

COMPLETION-VIEW FROM U/S