GOVERNMENT OF THE PUNJAB

IRRIGATION DEPARTMENT

SARGODHA IRRIGATION ZONE SARGODHA

FLOOD FIGHTING PLAN 2026



BHALWAL DRAINAGE DIVISION BHALWAL

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FLOOD FIGHTING PLAN 2026

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FLOOD FIGHTING PLAN 2026

PART-A

CHAPTER – 1

SALIENT FEATURE OF THE BHALWAL DRAINAGE DIVISION BHALWAL.

1.1 Location.

The Bhalwal Drainage Division has its jurisdiction mostly between two Rivers, the Chenab and the Jhelum in Districts Sargodha Mandi Bahauddin & Chiniot. The River Jhelum runs along the northwestern boundary of Tehsil Bhalwal and covering a distance of about 25-55 miles. The river in tract of Bhalwal. The River Chenab enters into the area of this Division in the villages Bhabra and Midh Ranjha (Up steam of Talibwala Bridge) of District Sargodha and flows through vast area of this Division situated in Districts Sargodha and Chiniot located on its right bank. All the drainage systems of this Division have their outfalls in River Chenab.

1.2 General Description.

There are Three Major Drainage systems which fall in Bhalwal Drainage Division, Bhalwal with almost 357.35 miles' total length of drains. These drainage systems provide the drainage facilities to an area Sargodha, Bhera, Phularwan, Chiniot and Bhalwal. If these Drainage systems do not function properly then the rain / storm water takes much time in discharging into basin from the catchment areas. As a result of longer detention, the water percolates into the soil and causes rise in sub soil water level. In the absence of effective Drainage Systems, water remains stagnant in the fields and damages standing crops and Abadie's in low lying areas. The stagnancy of water in drains results into the growth of different weeds due to which the drains get chocked up to a larger extent and their discharging capacity is reduced considerably. Therefore, the sub soil water level of highly fertile agricultural land in the catchment area rises up to dangerous level. Such abnormal situation may be controlled by execution of rehabilitation / reconditioning works for all Drainage Systems.

The Main Drainage systems are listed below.

1- **F.S. Drainage system [RD:204+000 to 345+750]**

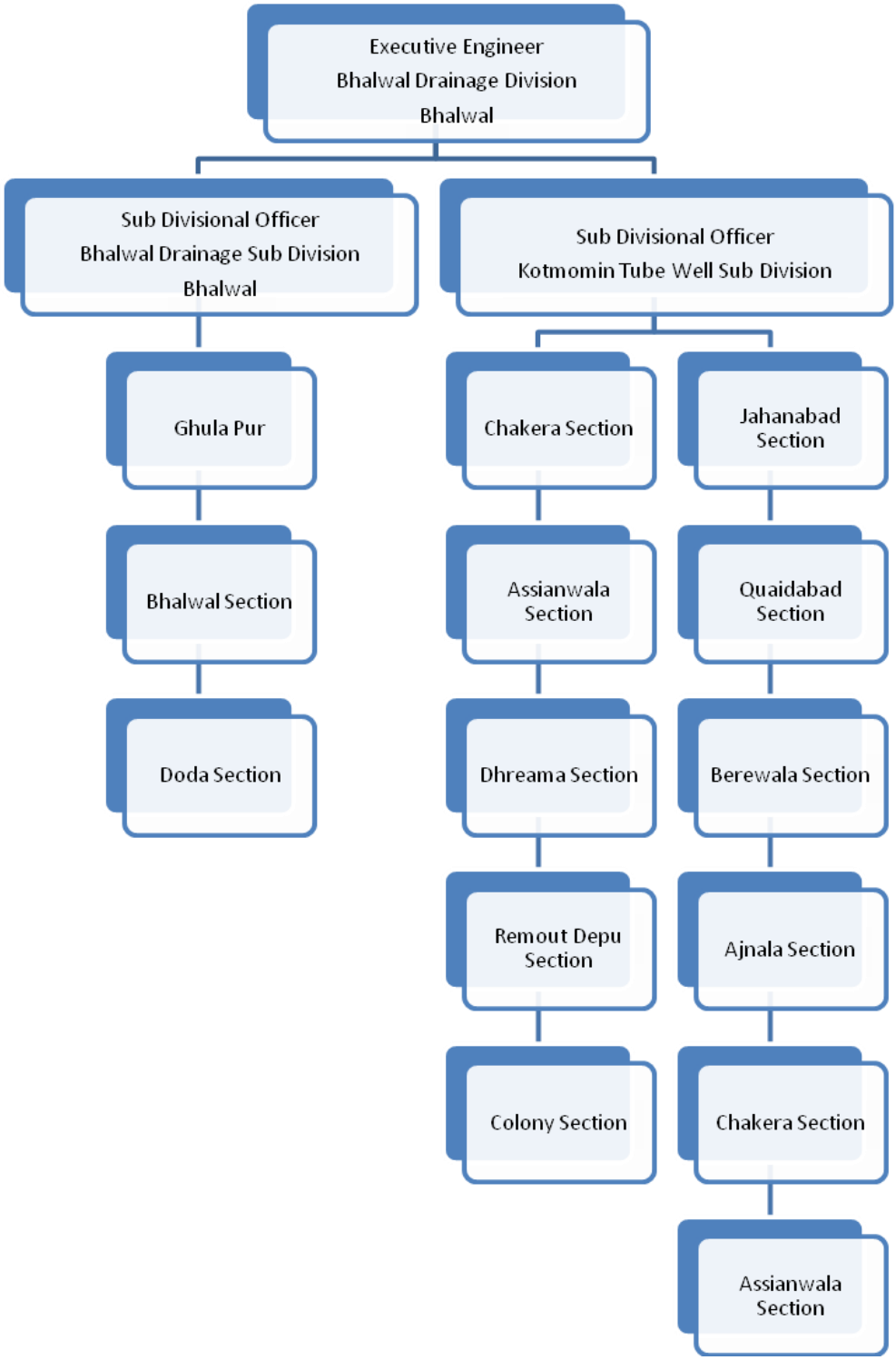
2- **L.B.N Drainage system**

3- **Mona Drainage System [RD: 194+500 to 281+000]**

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1.3 Administrative Set-up

Administratively, setup plan of Bhalwal Drainage Division, Bhalwal is as under.



XEN: / BHL DRG

CHAPTER – 2

FLOOD PROTECTION AND RIVER TRAINING WORKS.

2.1 Design Parameter of Training Works.

The Bhalwal Drainage Division Bhalwal is affected by River Chenab. The Chenab runs on its East. The kacha area along the sides of the rivers is usually in the principal hit of the floods. In addition to flood water, the drains during rainy season are also prone to over flow and cause much damage to life and property, as is the case for river flood. Thus, constant vigilance and supervision over Drainage systems becomes necessary during rainy season. The catchment areas located near out-fall reaches of the drain is badly affected due to backwater flows and spills during flood in the river.

The Division is responsible for maintenance of Drainage Systems, Flood Protection Works and River Training Works.

PARAMETERS OF FLOOD EMBANKMENTS & RIVER TRAINING WORKS

Description	Total length Miles	Discharge Cs	Top width (Feet)	Top R.L (Feet)	Side Slop	
					River Side	Country Side
A. Flood Embankments						
Flood embankments along F.S. Drain RD 258+591-270+500	2.38	130	15'.0	645.30	1.5:1	1:5:1
Flood embankment along L.B.N Drain RD 0-20+000	4.0	766	20'.0	611.0	2:1	2:1
Tie Flood Bund RD 0-4850	0.97	8,00,000	20'.0	611.0	3:1	2:1
Gunda Bund Near Maddokana RD:0-5+000	1.00	8,00,000	25'.0	613.00	2:1	2:1
Mona Bhera Flood Bund	7.00	750	20'.0	611.00	2:1	2:1
B. Training Works						
Maddokana Guide wall J-Head Spur RD 0-6+776 at Maddokana	1.35	8,00,000	25	613.0	3:1	2:1

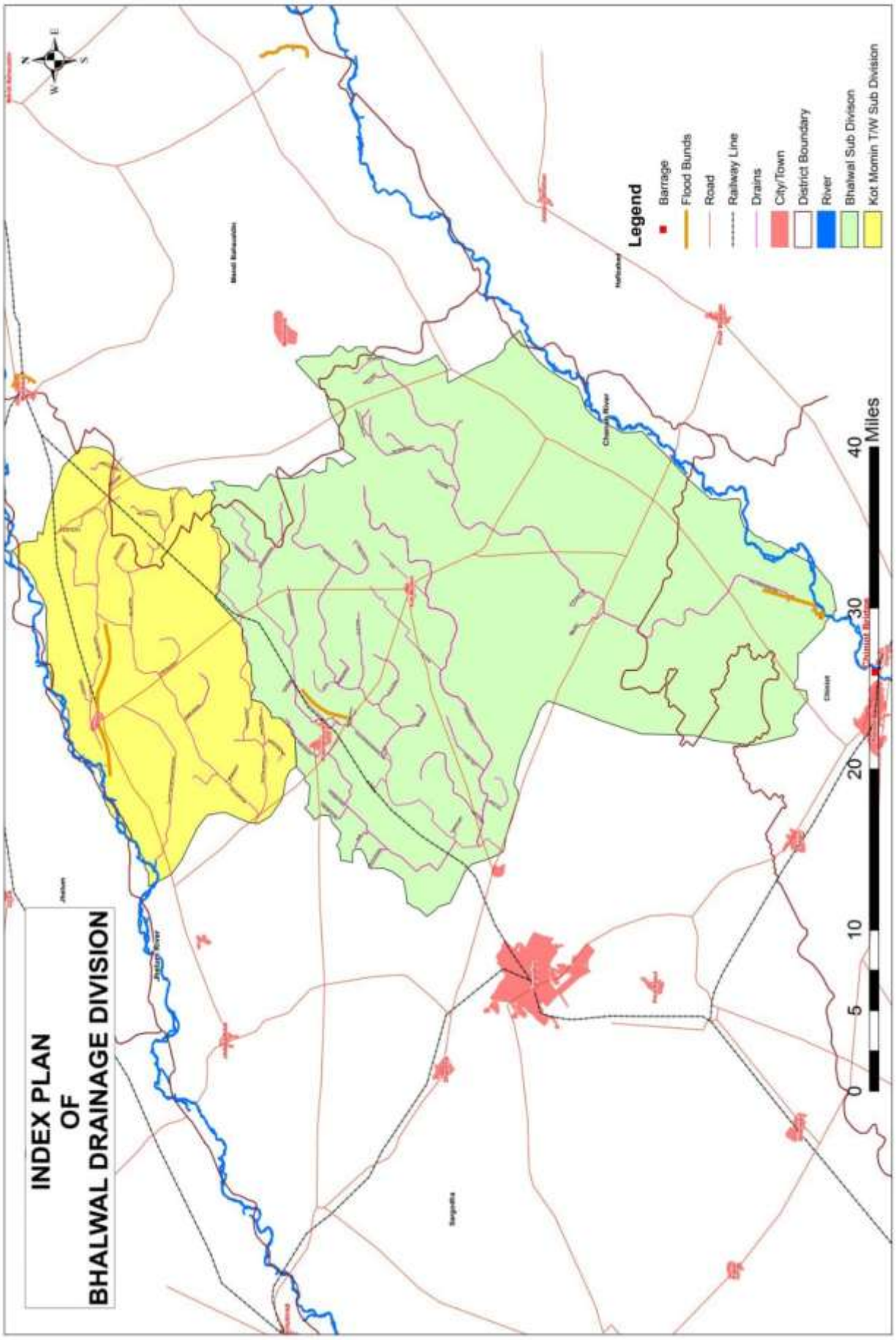
Guide wall J-Head spur near Madokana village in District Chiniot on Right bank of River Chenab and Tied with the L.B.N Flood Bund through Tie Flood Bund.

DRAINAGE SYSTEMS

Sr. No.	Name of Drainage System	Drains likely to be over spilled	Total mile length	Discharge Cs	Out falling points
1	LBN Drainage System	L.B.N Drain RD 20-34	41.20	668	River Chenab

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2.2 LOCATION MAP.



CHAPTER – 3

BRIEF HISTORY OF PAST FLOOD EVENTS

Bhalwal Drainage Division is new created Division on 01.07.2021.

Flood causes enormous economic losses to both urban & rural communities throughout the Bhalwal Drainage Division. Torrential rains and flood in the River affected the whole Drainage Network, Flood Embankments and River Training Works. Bhalwal, Chiniot Tehsils were badly affected by floods in the river Chenab and heavy rainfall during monsoon season. Bhalwal Town was cut off from east of the District by hit of flood and rain water. A large number of villages were inundated and remained in deplorable condition for over six months till depletion of the accumulated water as result of which colossal damage was caused to livestock. Houses, infrastructures and other properties. Means of communication were disrupted and roads were badly damaged.

The rain water accumulated in the area during 1997, and made its flow into drains. The drains were flooded. Main Drainage system i.e. F.S (Faquirian - Sillanwali), posed immense threat due to rise in water levels in drains, causing damage to systems as well as to the areas of their influence as a whole. The outfall reaches of F.S. and L.B.N drains were badly affected due to backwater effect. The outfall reach of Mona Bhera Drain was badly affected due to backwater effect of River Jhelum.

However, the strenuous and zealous efforts of the department reduced the losses to the flood hit area.

In 2005, maximum discharge recorded D/S Qadirabad Barrage on 08-07-2005, was 369847 Cs. Only 1.00 ft free board was left on Flood Embankment along L.B.N Drain and all existing bridges were submerged.

During 2006 maximum discharge was recorded D/S Qadirabad Barrage as 443206 Cs. At the same duration two number deliberate cuts were made by the inhabitants of villages situated on the country side in between RD 7000 to 8000 & 13000 to 14000 of Flood Embankment along LBN drain, which were repaired just after the passing of freshet.

In 2007 maximum discharge recorded D/S Qadirabad Barrage was 311382 & there was no mentionable damage.

In 2008 maximum discharge 31,419 Cs and 190,438 Cs were passed D/S Rasul Barrage and D/S Qadirabad Barrage respectively and as no reportable damages were occurred there. No abnormal situation was observed during flood season 2008, as almost all drains of Drainage Division, have flowed with very normal discharge or remained dry. In 2009, no significant event took place due to lesser rainfall in the country.

In 2010 maximum discharge recorded D/S Quadirabad Barrage was 3,19,733 Cs and D/S Rasul Barrage was 2,63,795 Cs during July and August 2010 due to the heavy rain fall and flood the rain water accumulated in the area and made its flow into the Drains. The drains were flooded. Main Drainage System i.e. F.S. Drainage System, due to rise in water levels in drains caused damage to the system.

In 2011, a maximum discharge of D/S Qadirabad Barrage was 164604 Cs

In 2012, a maximum discharge of D/S Qadirabad Barrage was 180789 Cs

In 2013, a maximum discharge of D/S Qadirabad Barrage was 403403 Cs

In 2014, a maximum discharge of D/S Qadirabad Barrage was 903504 Cs and during September 2014 exceptionally high flood passed in river Chenab, Guide Wall J-Head Spur at Madokana, Tie Flood Bund and LBN Flood Bund were directly under threat of Flood. The flood water rose up to top of flood bund in many reaches. Horizontal creeks were developed on the top of bund all along its length. The drain over flowed between RD 20-50, due to back water in drain.

In 2015 a maximum discharge of D/S Qadirabad Barrage was 161054 Cs

In 2016 a maximum discharge of D/S Qadirabad Barrage was 405542 Cs

In 2017 a maximum discharge of D/S Qadirabad Barrage was 154420 Cs

In 2018 a maximum discharge of D/S Qadirabad Barrage was 172031 Cs,

In 2019 a maximum discharge of D/S Qadirabad Barrage was 159544 Cs

In 2020 a maximum discharge of D/S Qadirabad Barrage was 258954 Cs

In 2021 a maximum discharge of D/S Qadirabad Barrage was 167812, Cs

In 2022 a maximum discharge of D/S Qadirabad Barrage was 202149 Cs,

In 2023 a maximum discharge of D/S Qadirabad Barrage was 185749 Cs,

In 2024 a maximum discharge of D/S Qadirabad Barrage was 145219 Cs,

The super flood in river Chenab passed on dated:27.08.2025 to 30.08.2025 and exceptionally high flood passed on dated:03.09.2025 to 06.09.2025 in the jurisdiction of Bhalwal Drainage Division Bhalwal. Maximum discharge recorded D/S Qadirabad Barrage on 27.08.2025, was 1077951 Cs and breaching section on this barrage was operated to pass the additional discharge. By the grace of Almighty ALLAH, flood water has passed successfully in the jurisdiction of Bhalwal Drainage Division Bhalwal, without any severe damage to major structures.

1. L.B.N Flood Bund

Lower Budhi Nallah Drain was constructed by WAPDA in 1986. The drain leads off from village Bhabra of Tehsil Kotmomin District Sargodha. After travelling a distance of 39.00 miles, it out falls in Chenab River near village Madokana Tehsil Lalian District Chiniot with authorized discharge 766.00 Cs. The drain plays a pivotal role to rehabilitate the water logged area of village Bhabra, Ghullapure, Doda Tehsil Kotmomin District Sargodha, Langar Makhdoom, Ratapur Tehsil Lalian District Chiniot. The catchment areas located near out-fall of L.B.N drain was badly affected due to backwater flows and spills during flood in the river Chenab. Only 1.00 ft free board was left on Flood Embankment along L.B.N Drain and all existing bridges were submerged. The left bank of LBN Drain washed away in different reaches from RD: 0+000 to 50+000 and water entered in

the shape of flash flow in different reaches on left side of L.B.N Flood Bund. The machinery was deployed in this reach to control the back water to overflow from drain at weak sites and the hindrance in this reach of drain was cleared for safe back flow of river water. Due to back water effect in recent flood event dated. 27.08.2025 to 30.08.2025 & 03.09.2025 to 06.09.2025, flood water raised beyond the High Flood Level of LBN Drain. Due to prolonged raise in flood water in the drain than its design capacity, LBN Drain has over flown at RD:31+000 to 32+000/R. Flood water spread in the adjoining cultivated land and villages. Sloughing action was observed during peak flow hours, significant water level was raised at the structure. Serious efforts have been made by deployment of machinery & manpower for closing of rat holes, plugging of porcupine holes and strengthen the weak sites to protect it from severe damages. The sand bags were fixed/laid along right side of L.B.N Flood Bund at RD:10+000 and from RD:24+000-25+000 to control the flood water from overflow. The banks of L.B.N Drain between RD:20+000-25+000 should be raised considering recent high flood level, as per Irrigation Manual.

2. Tie Flood Bund

Tie Flood Bund having length 4850 feet and top width of 20 feet with side slope on river side 3:1 & on country side 2:1, was constructed to protect village Hambuwana, Dhun Hurilian, Dera Ilyana Tehsil Lalian District Sargodha. Tie Flood Bund was directly under threat of Flood. Especially in reach RD:0+000-1+000, sloughing action was observed during peak flow hours, significant water level was raised at the structure. Serious efforts have been made by deployment of machinery & manpower to protect it from severe damages. The stone pitching along River side is very necessary for the protection of structure in future. Top level should be maintained as per top level of Gunda Bund for safety of structure.

3. Maddokana Guide wall J-Head Spur

Maddokana Guide wall J-Head Spur having length 6776 feet and top width of 25 feet with side slope on river side 3:1 & on country side 2:1, was constructed to protect Madokana village in District Chiniot on Right bank of River Chenab. Seepage was observed along Maddokana Guide Wall Spur between RD:4+000 to 5+000. During peak flow significant water level was raised at the structure. Serious efforts have been made by deployment of machinery & manpower to protect it from severe damages. Earthen pushta should be provided at this site to avoid further seepage in future and to protect the structure.

4. Gunda Bund

Gunda Bund having length 5380 feet and top width of 25 feet with side slope on river side 2:1 & on country side 2:1, was constructed to protect area of villages Muhammad Bakhshwala, Riazabad etc. in District Chiniot on Right bank of River Chenab. Sloughing action was observed on country side between RD:3+000-4+000 of Ganda Bund during peak flow hours, significant water level was raised at the structure. Serious efforts have been made by deployment of machinery & manpower to protect it from severe damages. Earthen pushta should be provided immediately at this site to avoid further seepage / sloughing in future and to protect the structure. Stone pitching alongwith apron should also be extended from RD:4+000-3+000 on Country Side to protect the structure in future.

In 2025 a maximum discharge of D/S Rasul was 1,19,780 Cs, there were no flood damages.

XEN: / BHL DRG

CHAPTER – 4

DESIGN DATA, HISTORIC PEAK FLOOD DATA AND PAST FIVE YEARS DATA OF HEAD WORKS / BARRAGES AND OTHER CONTROL POINTS.

The terminology of different kinds of floods i.e., Low, Medium, High and exceptionally high and they will be taken as such in the light of any wireless message received from respective warning centers.

4.1 FLOOD LIMITS.

Head Works	Lac Cs:				
	Low	Medium	High	Very High	Exceptionally High
Marala	1.00 to 1.50	1.50 to 2.00	2.00 to 4.00	4.00 to 6.00	More than 6.00
Khanki	1.00 to 1.50	1.50 to 2.00	2.00 to 4.00	4.00 to 6.00	More than 6.00
Qadirabad	1.00 to 1.50	1.50 to 2.00	2.00 to 4.00	4.00 to 6.00	More than 6.00
Source: Federal Flood Commission Islamabad.					

4.2 TIME LAGS OF FLOODS

Following are the time lags for high flood condition in River Chenab.

Location		Distance (Km)	Time Lag (Hour)		Remarks
From	To		Range	Indicative Average	
Marala	**Khanki**	56	10-14	12	60) Indicative average time lags values may vary in view of conditions / factors prevalent at the time of flood flows. **ii)** These values are for high flood conditions and may be used by the concerned agencies for rescue / evacuation purposes.
Khanki	**Qadirabad**	30	06-10	7	
Qadirabad	**Trimmu.**	214	60-84	72	
Qadirabad	**MainaHazara.**	40	-	12	
MainaHazara.	**ChiniotBridge**	80	-	24	
Source: Federal Flood Commission Islamabad.					

4.3 HIGHEST FLOODS.

The highest flood discharges recorded downstream Qadirabad Barrage during last five year are as under:

Year	D/S Qadirabad Barrage (in Cs)
2017	154420 Cs
2018	172031 Cs
2019	159544 Cs
2020	258954 Cs
2021	167812 Cs
2022	202149 Cs
2023	185749 Cs
2024	145219 Cs
2025	10,77,951 Cs

XEN: / BHL DRG

4.4 PEAK DISCHARGES (HISTORICAL PEAK FLOOD DATA)

Date	Discharge (Cs)	Pond Level (ft.)
Downstream Qadirabad Barrage		
08.08.1985	321917	696.50
05.08.1986	342758	695.70
27.07.1987	97879	691.40
26.09.1988	**892299**	**700.30**
31.07.1989	**498474**	**697.60**
22.03.1990	347205	695.90
15.04.1991	249663	694.50
11.09.1992	**948530**	**700.50**
11.07.1993	**434754**	**697.30**
21.07.1994	**425567**	**697.00**
29.07.1995	**644397**	**699.00**
24.08.1996	**853231**	**700.50**
28.08.1997	**873442**	**700.80**
05.03.1998	259713	694.50
08.08.1999	122447	691.60
23.07.2000	291349	693.70
08.08.2001	136575	691.70
14.08.2002	226398	694.60
19.02.2003	367408	696.20
18.08.2004	90043	691.50
06.07.2005	369847	697.00
04.09.2006	**443206**	**699.10**
14.03.2007	289002	693.05
01.08.2008	190438	692.05
17.08.2009	55535	690.85
07.08-2010	319733	696.01
17-09-2011	164604	691.85
05-08-2012	180789	691.97
15-08-2013	**403403**	**696.90**
07-09-2014	**903504**	**701.70**
13-07-2015	161054	694.50
08-08-2016	**405542**	**696.95**
03-08-2017	154420	694.00
14-08-2018	172031	692.80
01-08-2019	159544	684.70
29-08-2020	258954	693.00
29-07-2021	167812	688.25
12-08-2022	202149	694.00
20-07-2023	185749	692.70
16-08-2024	145219	691.80
27.08.2025	1077951	700.00

XEN: / BHL DRG

CHAPTER – 5

FLOOD FIGHTING STRATEGY

In view of the experience of the past flood history, constant watch is required to meet the on slaughts of floods in rainy season.

Constant vigilance and caution will be required at all levels particularly on spots for relief and flood fighting on Drains, Flood Embankments and River Training works.

BATTLE STATIONS

The department proposes to install the following battle stations for protection of irrigation structures, flood fighting and watching to minimize the losses.

THE PROPOSED CAMPS SITES ON DRAINS.

(Low Flood)

Drains	Reach	Length in Mils	Battle Station
L.B.N Drain	20-34	2.8	RD- 24

CAMP SITES ON FLOOD EMBANKMENT AND RIVER TRAINING WORKS.

Name of Embankment	Reach	Watching length (In miles)	Camp site
L.B.N Drain	0-9+000	4.0	RD- 4+500 RD-9+000
Gunda Bund Near Maddokana Guide Wall Spur	0-5+380	1.018	RD- 4+000
Mona Bhera Flood Bund	0-5+700	7	RD 0+000 RD-3+000 RD-5+700

THE PROPOSED CAMPS SITES ON DRAINS.

(Medium Flood)

Drains	Reach	Length in Mils	Battle Station
L.B.N Drain	20-34	2.8	RD- 24

CAMP SITES ON FLOOD EMBANKMENT AND RIVER TRAINING WORKS.

Name of Embankment	Reach	Watching length (In miles)	Camp site
L.B.N Drain	0-9+000	4.0	RD- 4+500 RD-9+000
Gunda Bund Near Maddokana Guide Wall Spur	0-5+380	1.018	RD- 4+000
Mona Bhera Flood Bund	0-5+700	7	RD 0+000 RD-3+000 RD-5+700

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THE PROPOSED CAMPS SITES ON DRAINS.
(High Flood)

Drains	Reach	Length in Mils	Battle Station
L.B.N Drain.	20-34	2.8	RD- 24

CAMP SITES ON FLOOD EMBANKMENT AND RIVER TRAINING WORKS.

Name of Embankment	Reach	Watching length (In miles)	Camp site
L.B.N Drain	0-9+000	4.0	RD- 4+500 RD-9+000
Gunda Bund Near Maddokana Guide Wall Spur	0-5+380	1.018	RD- 4+000
Mona Bhera Flood Bund	0-5+700	7	RD 0+000 RD-3+000 RD-5+700

THE PROPOSED CAMPS SITES ON DRAINS.

Name of Embankment	Reach	Watching length (In miles)	Camp site
L.B.N Drain	0-9+000	4.0	RD- 4+500 RD-9+000
Gunda Bund Near Maddokana Guide Wall Spur	0-5+380	1.018	RD- 4+000
Mona Bhera Flood Bund	0-5+700	7	RD 0+000 RD-3+000 RD-5+700

(Exceptionally High Flood)

Drains	Reach	Length in Mils	Battle Station
L.B.N Drain	20-34	2.8	RD- 24

CAMP SITES ON FLOOD EMBANKMENT AND RIVER TRAINING WORKS.

The above-mentioned camps will be installed on above sites for controlling the protection activities during emergency. For all spots, sufficient quantity of flood fighting material with manpower will be made available in all these camps.

Engagement of work charge establishment to supplement the efforts through regular establishment will be made in accordance with the demand of the situation.

At the stage of very high flood, the strength of watching establishment will be enhanced. Executive Engineer, will be authorized to engage labour and purchase material up to any requirement in consultation with the Superintending Engineer.

The following Sub Divisional Officers will supervise all the operations in their Respective Sub Divisions.

Designation of Officer	Sub Division
Sub Divisional Officer	Bhalwal Drainage Sub Division, Bhalwal
Sub Divisional Officer	Kotmomin T/W Sub Division, Bhalwal

The Executive Engineer is fully competent to assign and change duty of the Officer/ Officials working under him.

A flood emergency Sub Office will be established within the Divisional Office, which will become operative with effect from 15-06-2025, and remain functional through the flood season till 15-10-2025. A duty clerk along with a messenger would be available and deliver messages about flood warning emergency and any eventuality, which may arise.

i. LOW FLOOD DISCHARGE 100000 – 150000 Cs.

No extra labour will be employed. The labour arranged for preparedness will continue as such.

ii. MEDIUM FLOOD DISCHARGE 150000 – 200000 Cs

The flood water flows within river bank. No extra labour will be employed. The labour arranged for preparedness will continue as such.

iii. HIGH FLOOD DISCHARGES 200000 – 400000 Cs.

The flood water spills out and inundates the low-lying areas and touches the flood bund. The watching is necessary to be arranged. Therefore, four men for day & night for two miles are employed, including the existing gang, for watching purposes.

iv. VERY HIGH FLOOD DISCHARGES 400000 – 600000 Cs.

All activities will remain as such. The watching establishment will be raised to two men per mile on Drains and three men per mile per shift for three shifts on Flood Bund.

v. EXCEPTIONALLY HIGH FLOOD ABOVE 600000 Cs.

This stage warrants alarming situation. The watching labour will be raised to three men per mile per shift on Drains and five men per mile per shift for three shifts on bund. On receipt of exceptionally high flood warning, Sub Divisional Officer, Bhalwal Drainage Sub Division along with concerned Sub Engineer will shift their camp at L.B.N Drain, Gunda Bund Near Maddokana Guide Wall Spur

XEN: / BHL DRG

CHAPTER-6

6. Flood Damages Restoration Works.

No flood damage was occurred during the flood season 2025 and no flood restoration work in Bhalwal Drainage Division.

XEN: / BHL DRG

CHAPTER – 7
FLOOD FIGHTING WATCHING ARRANGEMENTS

7.1 Pre-Flood Arrangements.

STRUCTURE WISE DETAIL OF STOCK STONE

The flood activities in the jurisdiction of Bhalwal Drainage Division Bhalwal have been Divided into two parts under the supervision of Executive Engineer Bhalwal Drainage Division Bhalwal and Sub Divisional Officer Bhalwal Drainage Sub Division Bhalwal.

Furthermore, the reserve stock is already being sanctioned by the competent authority, which will be completed well before commencement of flood season.

J-Head Spur at Madokana			
Sanctioned	**Available**	**Balance**	**Remarks**
0.35 Lac. Cft	0.089 Lac. Cft	0.261 Lac. Cft	Estimate sanctioned and Tender has been called.

XEN: / BHL DRG

CONSOLIDATED STATUS OF RESERVE STOCK STONE

Sanctioned Reserve Stock	Available Quantity	Balance Quantity	Status of procurements of balance quantity
0.35 Lac Cft.	0.089 Lac Cft	0.261 Lac Cft	Estimate sanctioned and Tender has been called.

7.2 WATCHING ESTABLISHMENT

Following are the main spots where watching Huts will be established on temporary basis. During medium floods for Spurs and high floods for Flood Bund, the tents/shouldered will be erected and Flood. Watching material will be shifted in the huts. One Chowkidar for each Hut will be employed from the report of receipt of medium Flood and will remain employed till end of flood season. The scale / engagement of work charge labour on flood bunds and Spur will be required on work charge basis.

In addition to the existing field establishment, extra manpower will be engaged during the flood season on work charge basis for watching and general maintenance of banks of drains, Flood Embankments, and River Training works in whole of the Division. The engagement of labour would however will be subject to the intensity of rains / flood as the situation could warrant.

Sr. No.	Structure Name	Length (Miles)	Flood Limits							
			Normal Flood Season		Low Flood		Medium/High Flood		Very High/ Exp. High Flood	
			Men	Shift	Men	Shift	Men	Shift	Men	Shift
			1 Person/ 2 mile (1 Shift)		1 Person/ mile (1 Shift)		2 Person/ mile (2 Shift)		5 Person/ mile (3 Shift)	
1	LBN Drain RD- 0000-34000	6.8	3	1	6	1	12	2	29	3
2	F.S Drain RD- 204+000-345+700	28.34	14		14		28		70	
3	Gunda Bund RD: 0+000 to 5+380	3.79	2		4		7		17	
4	Mona Bhera Flood Bund RD: 0+000 to 35+000	7	4		4		8		20	
5	Maddokana Giode Wall Spur RD- 0-6700	1.34	1		1		3		6	
6	Tie Flood Bund RD- 0-4850	0.92	1		1		1		2	
	TOTAL PER SHIFT:-		**25**	**1**	**30**	**1**	**59**	**2**	**144**	**3**
	TOTAL :-		**25**		**30**		**118**		**432**	
	No. of Mates		**2**		**3**		**10**		**36**	

7.3 Arrangement at Sensitive Sites.

The guide wall spur exists in Bhalwal Drainage Division, Bhalwal. Sanctioned stone of this spur is 50,000 Cft. Status of reserve stock of stone available at site 8860 Cft Stack plan attached.

Sr. No.	Structure Name	Length (Miles)	Vulnerable sites		No. of Camps Established Except Vulnerable Points		
					Normal Flood season/Low Flood	Medium/High Flood	Very High/Exp. High Flood
			Reach	No. of Camps	15 Miles	7 Miles	5 Miles
1	L.B.N Drain 0+000 to 20+000	4	RD- 0+000 9+000	2	0	0	0
2	Gunda Bund RD: 0+000 to 5+380	1	RD- 0+000 -4+000	1	0	0	0
3	Mona Bhera Flood Bund RD: 0+000 to 35+000	7	RD 0+000-5+700	3	0	0	0
Total				**6**	**0**	**0**	**0**

The above-mentioned camps will be installed on above sites for controlling the protection activities during emergency. For all spots, sufficient quantity of flood fighting material with manpower will be made available in all these camps.

Engagement of work charge establishment to supplement the efforts through regular establishment will be made in accordance with the demand of the situation.

At the stage of very high flood, the strength of watching establishment may be enhanced. Executive Engineer, will be authorized to engage labour and purchase material upto any requirement in consultation with the Superintending Engineer.

7.4 WATCHING MATERIAL

There will be two No. watching centers on flood embankment along L.B.N Drain, Guid Wall Spur & Tie Bund. Flood material will be arranged and stored at Bhalwal village. The material will be shifted to watching Hut as soon as the intimation of medium / high flood limit is received.

Minimum Requirement of Flood Fighting Material for Permanent Camps (15 miles)

Sr#	Description	Unit	Quantity Required	Quantity Available	Quantity Net (Balance)	Remarks
1	Shouldari / Tent.	No.	6	0	6	Flood fighting material will be purchase as per necessity and subject to approval of competent authority.
2	Chairs	No.	36	0	36	
3	Table.	No.	6	0	6	
4	Generator 2-3 KVA	No.	6	0	6	
5	Pedestal Fan.	No.	6	0	6	
6	Charpois	No.	12	0	12	
7	Symbolic Jackets.	No.	300	0	300	
8	Polythene sheet	Kg.	600	0	600	
9	Bamboos (4" inch dia and 10 ft long)	No.	600	0	600	
10	Water Cooler	No.	6	0	6	
11	Portable umbrella	No.	12	0	12	
12	Life jackets	No.	30	0	30	
13	Utensils (10 Person serving)	No.	6	0	6	
14	Jute / Plastic bags	No.	6000	0	6000	
15	Walke talkie set	Sets.	12	0	12	
16	Raincoats	No.	60	0	60	

17	LED Flood light	No.	60	0	60	
18	Extension cable 10 ft	No.	12	0	12	
19	Rechargeable torches	No.	120	0	120	
20	Kassi	No.	120	0	120	
21	Axes	No.	120	0	120	
22	G.I Buckets	No.	30	0	30	
23	7/44 Cable	Feet.	3000	0	3000	
24	Sutli	Kg.	12	0	12	
25	Sewing Needles	No.	120	0	120	
26	Emergency Medical Kit	No.	6	0	6	
27	Wire crates (3x3x3) (at only those camp near river action and reserve stock exists)	No.	600	0	600	

Following minimum requirement of Flood Fighting Material for Temporary Camp (7 or 5 miles during medium to exceptionally high flood to be outsourced)

Sr #	Items	Unit	Total Required Qty / Camp	Remarks
01	Shouldari / Tent	No	01	Material for temporary camps (07 or 05 miles during medium to exceptionally high flood) will be outsourced.
02	Walkie talkie set	No	01	
03	Chairs	No	06	
04	Raincoats	No	10	
05	Table	No	01	
06	Flood Light	No	10	
07	Generator (2–3 KVA)	No	01	
08	Extension cable	No	02	
09	Pedestal Fans	No	01	
10	Rechargeable torch	No	20	
11	Charpois	No	02	
12	Kassi	No	20	

13	Symbolic Jackets	No	50	
14	Axes	No	20	
15	Water Cooler	No	01	
16	G.I Buckets	No	05	
17	Portable Umbrella	No	02	
18	7/44 Cable	Feet	500	
19	Utensils (10 person serving)	No	01	
20	Sutli	Kg	02	
21	Jute/Plastic Bags	No	500	
22	Sewing Needles	No	10	

7.5 Arrangement for Sounding & Probing.

This item relates to barrage / Head works Canal Divisions.

7.6 Lighting Arrangement.

Sufficient numbers of emergencies lights, lanterns and petromax lamps have already been provided. Petrol generators have been arranged and available for lighting arrangements.

7.7 Ration Arrangement.

The establishment and supervisory staff will make their own food arrangements. However, in the event of dearth of commodities, the Civil Authorities will be approached to store sufficient ration.

7.8 P.O.L. Arrangement for Vehicle.

Respective Deputy District Officer (Revenue) will be requested by the Sub Divisional Officer in-charge to provide help for reserve at the nearest petrol pumps to keep the vehicles on. Any obstruction found there will be pointed out by the Sub Divisional Officer.

7.9 Transportation.

Vehicles will available for transportation during flood season.

7.10 Law and order.

There is no likelihood of any interruption by anyone except cutting of LBN flood bund between RD 0-40. In case of necessity. District Coordination Officer Chiniot will be contacted by the Executive Engineer, Bhalwal Drainage Division Bhalwal to take decision at site.

7.11 Medical Arrangement for Labour.

It will be responsibility of District Government to provide Medical Facilities in flood areas where will be required.

7.12 Liaison with another Department.

Executive Engineer, Bhalwal Drainage Division Bhalwal will keep liaison with the Civil and Army Authorities and will keep the Superintending Engineer Drainage Circle Sargodha fully apprised of the flood situation in Bhalwal Drainage Division.

7.13 Role of the Army.

Role of the Army is very important in case of any emergent situation arising due to high floods. A continuous liaison with the Army Authorities will be maintained during floods and if required necessary help will be sought.

7.14 **Duties of Telephone Attendant.**

Phone and cell No of all officers / officials have been given in Flood Fighting Plan 2023 to make immediate contact at any emergency during flood.

Sr #	Name of Office / Officials	Period	Time	
			From	To
01	Sub Divisional Officer Bhalwal Drainage Sub Division (Mr. Muhammad Idrees)	15.06.2026 to 15.10.2026	8:00 AM	4:00 PM
02	Senior Sub Engineer Doda Drainage Section (Muhammad Riaz).		4:00 PM	12:00 AM
03	Bhalwal Drainage Division Bhalwal (Mr. Iftikhar) SDC		12:00 AM	8:00 AM
04	Telegraph Office Sargodha.		8:00 AM	8:00 AM

7.15 Wireless Arrangements.

Wireless system will be installed w.e.f. 01.06.2025 in the vehicle of XEN Drainage Bhalwal No. GBA - 488, SDO Bhalwal Drainage Sub Division Jeep No. GTC-5342.

XEN: / BHL DRG

CHAPTER – 8
DETAIL OF ENCROACHMENT
DETAILS OF ENCROACHMENTS ON FLOOD WORKS

Presently there is no encroachment exists on any flood works of Bhalwal Drainage Division, Bhalwal.

A. Detail of Encroachment.

Sr #.	Total Encroachment	Removed	Remaining	Remarks
------NIL------				

B. Detail of Critical Encroachment.

Sr #.	Total Encroachment	Removed	Remaining	Remarks
------NIL------				

XEN: / BHL DRG

CHAPTER – 9
Duty Roster/Flood Fighting Program
DUTY ROSTER OF KEY PERSONAL DURING FLOOD SEASON 2026

Key personal	Battle Station	Drains	Sub Division
Executive Engineer Bhalwal Drainage Division Bhalwal shall supervise the flood camps along with SDO Bhalwal SDO.			
Sub Engineer, Doda	RD- 20	LBN Drain	Bhalwal Drainage Sub Division
Sub Engineer, Bhalwal	RD- 15	Gand Bund Near Maddokana Guide Wall Spur	Bhalwal Drainage Sub Division

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CHAPTER – 10
Emergency Telephone Nos.

Sr. No.	Designation	Telephone / Cell. No.	
		Office	Residence
1	Minister of Irrigation Punjab Lahore.	042-99212809 042-99211761	
		Fax 042-99212810	-
2	Secretary Irrigation Department, Punjab Lahore.	042-99212117	042-99200286
		042-99212118	
		Fax 042-99212116	
3	Chief Engineer, Irrigation Sargodha Zone.	048-9230445	03336941690
		Fax 048-9230414	048-9230451
4	Flood Emergency Officer Sargodha Irrigation Zone Sargodha.	048-9230446	03006363739
		Fax 048-9230414	
5	Chief Engineer Drainage and Flood Zone Lahore.	042-99233551	03018448709
		Fax 042-35291304	
6	Director, Flood Drainage and Flood Zone Lahore.	042-99231614 Fax-042-35862081	0300-6999490
7	Deputy Director, Drainage and Flood Lahore.	042-99230282	03234864378
8	Flood Warning Center Jail Road Lahore.	042-99230282	-
9	Superintending Engineer Lower Jhelum Canal Circle Sargodha.	048-9230413	048-9230463
		Fax 048-9230832	03336752753
10	Superintending Engineer Drainage Circle Sargodha.	048-9230450	03088637291
11	Executive Engineer, Sargodha Division L.J.C, Sargodha.	048-9230409	03338161746
		Fax 048-9230918	
12	Executive Engineer, Kirana Division L.J.C, Sargodha.	048-9230399	
		Fax 048-9230649	
13	Executive Engineer, Shahpur Division L.J.C, Sargodha.	048-9230447	03444132393
		Fax 048-9230836	
14	Executive Engineer, Rasul Division L.J.C, Rasul.	0546-553211	-
15	District Coordination Officer Sargodha.	048-9230025	048-9230046
		048-9230026	
16	District Coordination Officer Chiniot.	0476-330071-2	-
17	District Coordination Officer Jhang	047-9200081	-
18	Executive Engineer, Drainage Division Bhalwal.	--	0333-8899931
19	In-charge Vigilance Cell Irrigation & Power Department Punjab Lahore.	042-9213157	-
20	Telegraph Office Sargodha (Flood Emergency Center Sargodha).	048-9230408	-
21	Sub Divisional Officer Bhalwal Drainage Division Bhalwal		0340-1336544

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CHAPTER – 11

Standard operating procedure (SOP) for Breaching Sections

11.1 History of the breaching section.

No breaching section in Bhalwal Drainage Division Bhalwal.

11.2 Location, Design, Quantity and Variety of the explosive required for detonation.

Does not relate.

11.3 Arrangement of explosives and security of explosive stores.

Does not relate.

11.4 List of the security staff along with detail of their training etc

Does not relate.

11.5 Detail of mechanical means as a standby arrangement in case of detonation failure.

Does not relate.

11.6 Duty Roster in case of critical situation.

Does not relate.

11.7 Breaching Committee with their action plan.

Does not relate.

11.8 List of the villages likely to be inundated in case of breach.

Does not relate.

11.9 Announcement and detail of evacuation arrangements.

Does not relate.

11.10 Details of coordination with Civil/Army Authorities

Does not relate.

11.11 Parallel communication arrangements.

Does not relate.

11.12 Index Plan.

Does not relate.

Sub Divisional Officer,
Bhalwal Drainage Sub Division,
Bhalwal.

Executive Engineer,
Bhalwal Drainage Division,
Bhalwal

CHAPTER-12

12. Vulnerable sites on Flood Bund/Structures:

(Part-A)

12.1 Apprehended breach sites in Flood Bunds/Structures

The following flood bund and structure are indentified as vulnerable to potential techniques due to high flood levels in the River Chenab and its tributaries:

- LBN Flood bund reach RD 0-9+000.
- Ganda Bund near Maddokana RD: 0-4+000.
- Mona Bhera Flood Bund RD: 0-5+700

12.2 Operation of breaching sections.

There is no breaching section in Bhalwal Drainage Division.

12.3 Breaches due to rising of flood water, deterioration of flood bunds etc.

No such

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CHAPTER-13

SITE PLAN NO. 1 (LBN Flood Bund Reach RD 0-9+000.)

Emergency Contingency Plan for vulnerable sites listed above

Emergency Contingency Plan must include: -

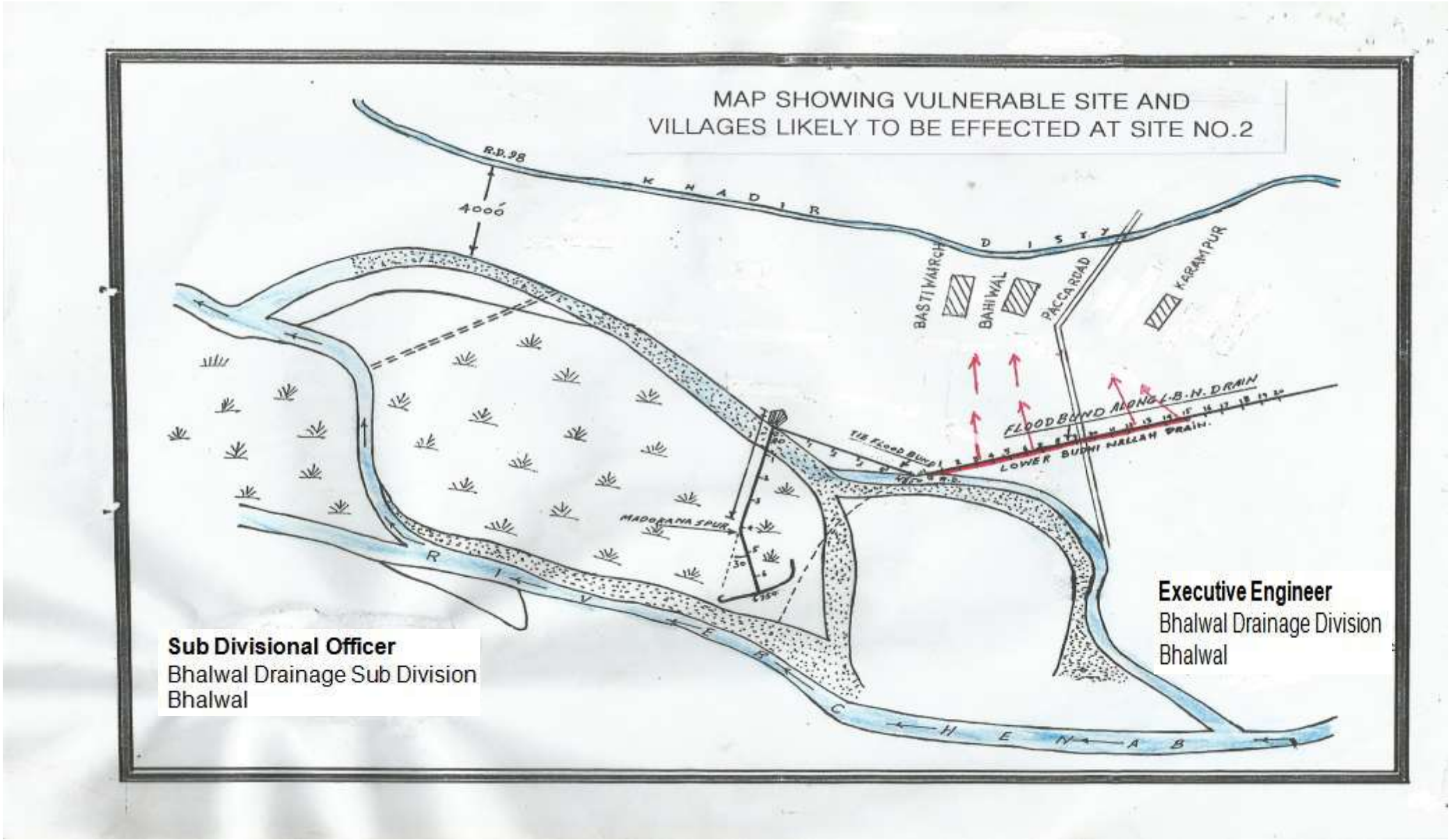
13.1 Plan showing the route of expected flood water coming out of the breach supported with level.

A plan given on next page showing the rout of accepted flood water coming out of mishap site situated **LBN Flood bund reach RD 0-9+000.**

13.2 Detail of villages Abadie's likely to be affected mentioned as under (to be shown on the plan).

Bahiwal	RD:15+000
Karaam Pur	RD:15+000
Basti Warriachan	RD:15+000

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MAP SHOWING VULNERABLE SITE AND
VILLAGES LIKELY TO BE EFFECTED AT SITE NO.2
R.D. 98
4000'
K H A D I R
D I S T Y
BASTI WAIRCH
BAHIWAL
PACCA ROAD
KARAMPUR
FLOOD BUND ALONG L.B.N. DRAIN
LOWER BUDHI NALLAH DRAIN.
MADORANA SPUR
R I V E R
C H E N A B
Sub Divisional Officer
Bhalwal Drainage Sub Division
Bhalwal
Executive Engineer
Bhalwal Drainage Division
Bhalwal

13.3 Strategy and action taken be explained in detail.

As explained above at Sr. No. 13.4, there are no vital installations in this area like oil refineries, power houses and other important infrastructure

13.3.1 Arrangements.

The incharge of Sub Sector, Sub Divisional Officer, Bhalwal Drainage Sub Division Bhalwal & Executive Engineer Drainage Division Bhalwal taking the cognizance of situation will make liaison with the civil administration and police department and also arrange.

i. Proclamation on loudspeakers etc for evacuation of abadies inside the route of flood water.

ii. Flood hut has been proposed to be established at RD 9+000 of LBN Flood Bund at high level to monitor the emergent flood situation. If any obstruction found coming out in the way of flood water, it would be removed by deploying establishment and machines such like tractors excavator machine and bulldozers as per situation prevailing at site. Efforts would be made that flood water may not stand in crops as well as abadies, to minimize the loss/ damages and ultimately fall again the same way in river Chenab from the shortest possible time.

iii. Keep a close liaison with Civil Administration Public Representatives. Army authorities. List of phone numbers of above authorities have been mentioned in this flood fighting plan (chapter No. 10)

13.3.2 Establishment of Flood Fighting Camps.

CAMP SITES ON DRAINS

Drains	Reach	Length in Mils	Battle Station
L.B.N Drain	0000-9000	4	RD: 4+500 RD 9+000

13.3.3 Duties of Officers/Officials and their camp sites.

Camp No.	Location	Officer's Name, Designation & Cell #	Official's Name, Designation & Cell #
01	LBN Flood bund reach RD 0-9+000	Muhammad Idrees, Sub Divisional Officer 0340-1336544	Riaz Lali Sub Engineer 0343-4146841

13.3.4 Departmental Machinery available.

There is no machinery available in the control of Bhalwal Drainage Division Bhalwal.

13.3.5 Machinery available from Private Source.

If machinery is needed, it will be arranged / hired from private source. (The machinery can be hired in case of emergency).

13.3.6 Flood Fighting Material Required.

Sr#	Description	Unit	Quantity Required	Quantity Available	Quantity Net (Balance)	Remarks
1	Shouldari / Tent.	No.	2	0	2	Flood fighting material will be purchase as per necessity and subject to approval of competent authority.
2	Chairs	No.	12	0	12	
3	Table.	No.	2	0	2	
4	Generator 2-3 KVA	No.	12	0	12	
5	Pedestal Fan.	No.	2	0	2	
6	Charpois	No.	4	0	4	
7	Symbolic Jackets.	No.	100	0	100	
8	Polythene sheet	Kg.	200	0	200	
9	Bamboos (4" inch dia and 10 ft long)	No.	200	0	200	
10	Water Cooler	No.	2	0	2	
11	Portable umbrella	No.	4	0	4	
12	Life jackets	No.	10	0	10	
13	Utensils (10 Person serving)	No.	2	0	2	
14	Jute / Plastic bags	No.	2000	0	2000	
15	Walke talkie set	Sets.	4	0	4	
16	Raincoats	No.	20	0	20	
17	LED Flood light	No.	20	0	20	
18	Extension cable 10 ft	No.	4	0	4	
19	Rechargeable torches	No.	40	0	40	
20	Kassi	No.	40	0	40	
21	Axes	No.	40	0	40	
22	G.I Buckets	No.	10	0	10	
23	7/44 Cable	Feet.	1000	0	1000	
24	Sutli	Kg.	4	0	4	

25	Sewing Needles	No.	40	0	40	
26	Emergency Medical Kit	No.	2	0	2	
27	Wire crates (3x3x3) (at only those camp near river action and reserve stock exists)	No.	200	0	200	

13.3.7 Flood Fighting Material Available.

Detail of flood fighting material available has already been discussed in Section 13.3.6.

13.4 Detail of other infrastructure like electric, Sui Gas, Telephone installation, Road network, other building canals and Drainage network.

The details of infrastructure which may be affected.

1. Pacca Road Bhalwal to River Chenab
2. Khadir Disty.
3. Electric installation of village.

There is no such huge infrastructure like Grid station, Sui Gas station exists in this area. It is expected that minor damages may occur.

XEN: / BHL DRG

SITE PLAN NO. 2 (Ganda Bund near Maddokana RD: 0-4+000)

Emergency Contingency Plan for vulnerable sites listed above

Emergency Contingency Plan must include: -

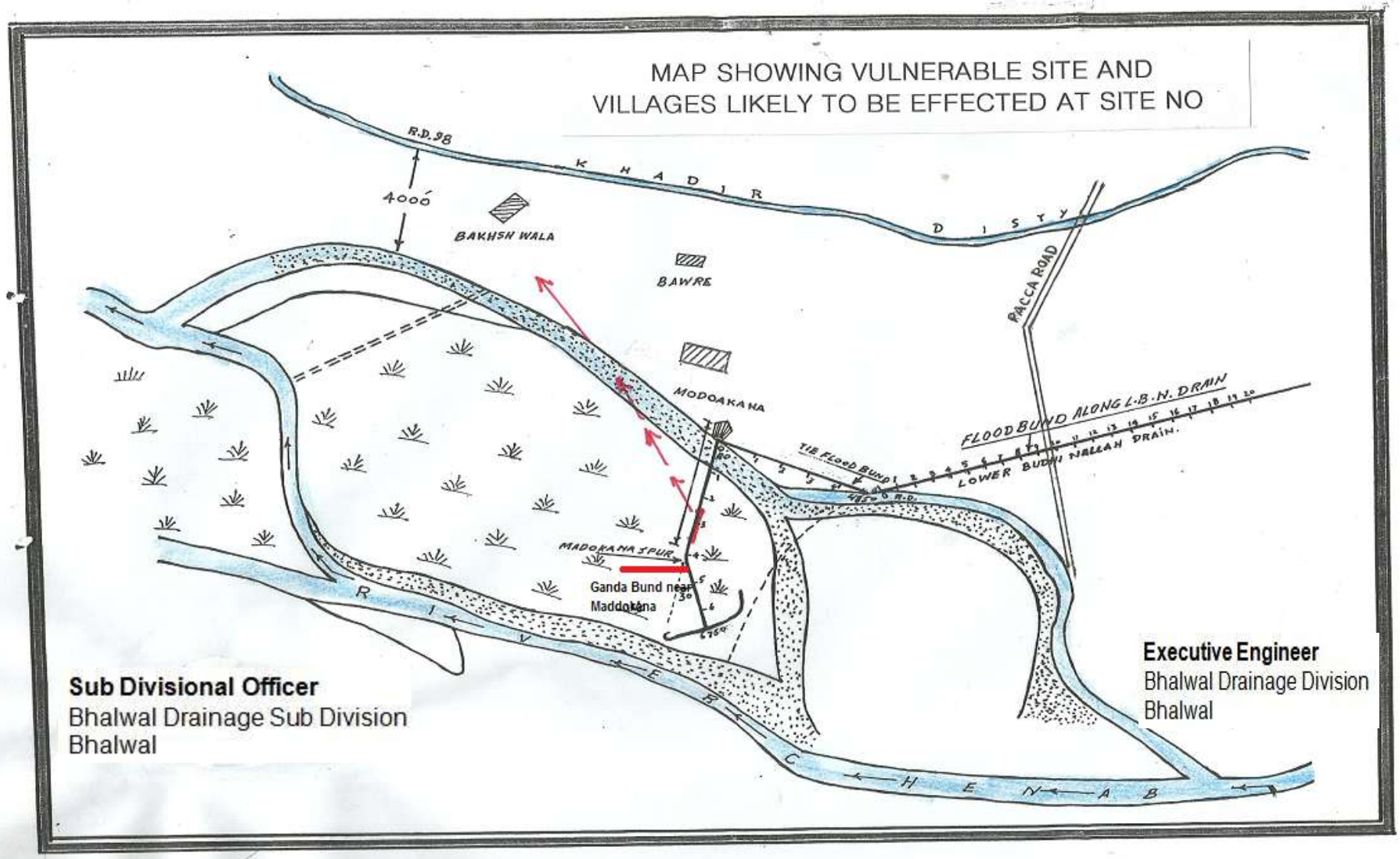
13.1 Plan showing the route of expected flood water coming out of the breach supported with level.

A plan showing the rout of accepted flood water coming out of mishap site situated **Ganda Bund near Maddokana RD: 0+2000.** Work in progress at site

13.2 **Detail of villages abadies likely to be affected mentioned as under(to be shown on the plan).**

Bakhshawala	RD: 2+500
Maddokana	RD: 4+300

XEN: / BHL DRG


MAP SHOWING VULNERABLE SITE AND
VILLAGES LIKELY TO BE EFFECTED AT SITE NO
R.D.98
4000
KHADIR DISTY
BAKHSN WALA
BAWRE
MODOAKANA
PACCA ROAD
FLOOD BUND ALONG L.B.N. DRAIN
TIE Flood Bund
LOWER BUDHI NALLAH DRAIN.
MADOKANA SPUR
Ganda Bund near Maddokana
RIVER CHENAB
Sub Divisional Officer
Bhalwal Drainage Sub Division
Bhalwal
Executive Engineer
Bhalwal Drainage Division
Bhalwal

13.3.1 Arrangements.

The incharge of Sub Sector, Sub Divisional Officer, Bhalwal Drainage Sub Division Bhalwal & Executive Engineer Drainage Division Bhalwal taking the cognizance of situation will make liaison with the civil administration and police department and also arrange.

iv. Proclamation on loudspeakers etc for evacuation of abadies inside the route of flood water.

13.3.2 Establishment of Flood Fighting Camps.

CAMP SITES ON DRAINS

Drains	Reach	Length in Mils	Battle Station
Ganda Bund	0000-4+000	1.018	RD 4+000

13.3.3 Duties of Officers/Officials and their camp sites.

Camp No.	Location	Officer's Name, Designation & Cell #	Official's Name, Designation & Cell #
01	Gunda Bunda Near Maddokana Guide Spur 0+000 – 4+000	Muhammad Idrees, Sub Divisional Officer 0340-1336544	Riaz Lali Sub Engineer 0343-4146841

13.3.4 Departmental Machinery available.

There is no machinery available in the control of Bhalwal Drainage Division Bhalwal.

13.3.5 Machinery available from Private Source.

If machinery is needed, it will be arranged / hired from private source. (The machinery can be hired in case of emergency). Govt Contractor is working at Gunda Bund site can be deputed from contractor in case of emergency.

13.3.6 Flood Fighting Material Required.

Sr#	Description	Unit	Quantity Required	Quantity Available	Quantity Net (Balance)	Remarks
1	Shouldari / Tent.	No.	1	0	1	Flood fighting material will be purchase as per necessity and subject to approval of competent authority.
2	Chairs	No.	6	0	6	
3	Table.	No.	1	0	1	
4	Generator 2-3 KVA	No.	6	0	6	
5	Pedestal Fan.	No.	1	0	1	
6	Charpois	No.	2	0	2	
7	Symbolic Jackets.	No.	50	0	50	
8	Polythene sheet	Kg.	100	0	100	

9	Bamboos (4" inch dia and 10 ft long)	No.	100	0	100	
10	Water Cooler	No.	1	0	1	
11	Portable umbrella	No.	2	0	2	
12	Life jackets	No.	5	0	5	
13	Utensils (10 Person serving)	No.	1	0	1	
14	Jute / Plastic bags	No.	1000	0	1000	
15	Walke talkie set	Sets.	2	0	2	
16	Raincoats	No.	10	0	10	
17	LED Flood light	No.	10	0	10	
18	Extension cable 10 ft	No.	2	0	2	
19	Rechargeable torches	No.	20	0	20	
20	Kassi	No.	20	0	20	
21	Axes	No.	20	0	20	
22	G.I Buckets	No.	5	0	5	
23	7/44 Cable	Feet.	500	0	500	
24	Sutli	Kg.	2	0	2	
25	Sewing Needles	No.	20	0	20	
26	Emergency Medical Kit	No.	1	0	1	
27	Wire crates (3x3x3) (at only those camp near river action and reserve stock exists)	No.	100	0	100	

13.3.7 Flood Fighting Material Available.

14 Detail of flood fighting material available has already been discussed in Section 13.3.6.

14.3 Detail of other infrastructure like electric, Sui gas, Telephone Installations, Road Network, other buildings, Canals and Drainage network.

The details of infrastructure which may be affected.

1. Pacca Road Bhalwal to River Chenab
2. Khadir Disty.

3. Electric installation of village.

There is no such huge infrastructure like Grid station, Sui Gas station exists in this area. It is expected that minor damages may occur.

XEN: / BHL DRG

SITE PLAN NO. 3 (Mona Bhera Flood Bund From RD: 0+000 to 5+700)

Emergency Contingency Plan for vulnerable sites listed above

Emergency Contingency Plan must include: -

13.1 Plan showing the route of expected flood water coming out of the breach supported with level.

A plan showing the rout of accepted flood water coming out of mishap site situated **Mona Bhera Flood Bund between RD: 0+000 to 35+000.**

13.2 **Detail of villages abadies likely to be affected mentioned as under(to be shown on the plan).**

Bhera Town, Fateh Gargh, Ali Pur Syddan, Hajka & Motor Way M-2	RD: 5+000
Ali Pur Syddan, Hajka	RD: 8+000

13.3.1 Arrangements.

The incharge of Sub Sector, Sub Divisional Officer, Bhalwal Drainage Sub Division Bhalwal & Executive Engineer Drainage Division Bhalwal taking the cognizance of situation will make liaison with the civil administration and police department and also arrange.

v. Proclamation on loudspeakers etc for evacuation of abadies inside the route of flood water.

13.3.2 Establishment of Flood Fighting Camps.

CAMP SITES ON DRAINS

Drains	Reach	Length in Mils	Battle Station
Mona Bhera Flood Bund	0000-5+700	7	RD: 0+000 RD: 3+000 RD- 5+700

13.3.3 Duties of Officers/Officials and their camp sites.

Camp No.	Location	Officer's Name, Designation & Cell #	Official's Name, Designation & Cell #
01	Mona Bhera Flood Bund	Mst. Musfira Nadeem, Sub Divisional Officer	Taswar Iqbal Sub Engineer 0300-4472318

13.3.4 Departmental Machinery available.

There is no machinery available in the control of Bhalwal Drainage Division Bhalwal.

13.3.5 Machinery available from Private Source.

If machinery is needed, it will be arranged / hired from private source. (The machinery can be hired in case of emergency). Govt Contractor is working at Gunda Bund site can be deputed from contractor in case of emergency.

13.3.6 Flood Fighting Material Required.

Sr#	Description	Unit	Quantity Required	Quantity Available	Quantity Net (Balance)	Remarks
1	Shouldari / Tent.	No.	3	0	3	Flood fighting material will be purchase as per necessity and subject to approval of competent authority.
2	Chairs	No.	18	0	18	
3	Table.	No.	3	0	3	
4	Generator 2-3 KVA	No.	18	0	18	
5	Pedestal Fan.	No.	3	0	3	
6	Charpois	No.	3	0	3	
7	Symbolic Jackets.	No.	150	0	150	
8	Polythene sheet	Kg.	300	0	300	
9	Bamboos (4" inch dia and 10 ft long)	No.	300	0	300	
10	Water Cooler	No.	3	0	3	
11	Portable umbrella	No.	6	0	6	
12	Life jackets	No.	15	0	15	
13	Utensils (10 Person serving)	No.	3	0	3	
14	Jute / Plastic bags	No.	3000	0	3000	
15	Walke talkie set	Sets.	6	0	6	
16	Raincoats	No.	30	0	30	
17	LED Flood light	No.	30	0	30	
18	Extension cable 10 ft	No.	6	0	6	
19	Rechargeable torches	No.	60	0	60	
20	Kassi	No.	60	0	60	
21	Axes	No.	60	0	60	
22	G.I Buckets	No.	15	0	15	
23	7/44 Cable	Feet.	1500	0	1500	
24	Sutli	Kg.	6	0	6	

25	Sewing Needles	No.	60	0	60	
26	Emergency Medical Kit	No.	3	0	3	
27	Wire crates (3x3x3) (at only those camp near river action and reserve stock exists)	No.	300	0	300	

13.3.7 Flood Fighting Material Available.

Detail of flood fighting material available and stored at Site Plan 01 Sr No. 13.3.6

13.4 Detail of other infrastructure like electric, Sui gas, Telephone Installations, Road Network, other buildings, Canals and Drainage network.

The details of infrastructure which may be affected.

1. Pacca Road Bhalwal to River Jhelum
2. Electric installation of village.

There is no such huge infrastructure like Grid station, Sui Gas station exists in this area. It is expected that minor damages may occur.

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CHAPTER – 14

ACTION PLAN

14.1 Re-shifting /recouping plan of reserve stone departmentally.

Reshuffling of stone not required as there is only one structure namely **Guid Wall J-Head Spur at Madokana,** whereas the minimum limit has been fixed as 35000 Cft. Anyhow, 8860 Cft stone has been available at site (attached) and the balance 26141 Cft will be recouped after sanction of estimate and availability of funds before start of flood season 2026.

14.2 Detail of Inlet/Outlet Crossing Along with Closing Methodology.

_____Nil_____

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14.3 DEPLOYMENT OF MACHINERY.

Deployment of Machinery (Normal to Low Flood)

Sr. No.	Structure Name	Length (Miles)	Excavators	Trolleys	Dumpers	Tractor with Front blade 1 per 15 mile reach
1	Flood Embankment along LBN Drain RD-20	4	S.E shall allow deputation of one (1) excavator & four (4) Trolleys during low flood at camps/vulnerable points & LMB / RMB.		-	-
2	Gunda Bund Near Maddokana RD:0-5+380	1			-	-
3	Mona Bhera Flood Bund	7			-	-
Total					-	-

Payment for machinery & work charge employees will be made subject to verification by TPM / consultant

XEN: / BHL DRG

14.4. DEPLOYMENT OF MACHINERY.

Deployment of Machinery (Medium to High Flood)

Sr. No.	Structure Name	Length (Miles)	Excavators	Trolleys	Dumpers	Tractor with Front blade
			1 per 7 mile reach	4 per 7 mile reach	2 per 7 mile reach	1 per 7 mile reach
1	Flood Embankment along LBN Drain RD-20	4	1	2	1	1
2	Gunda Bund Near Maddokana RD:0-5+380	1	0	1	0	0
3	Mona Bhera Flood Bund	7	1	4	2	1
Total			**2**	**7**	**3**	**2**

Payment for machinery & work charge employees will be made subject to verification by TPM / consultant

14.5 DEPLOYMENT OF MACHINERY (HIGH TO EXCEPTIONALLY HIGH FLOOD).

Deployment of Machinery (Very High to Exceptionally High Flood)

Sr. No.	Structure Name	Length (Miles)	Excavators		Trolleys	Dumpers	Tractor with Front blade	
			Very High Flood	Exp. High Flood	4 per 5 mile reach	2 per 5 mile reach	Very High Flood	Exp. High Flood
			1 per 5 mile reach	2 per 5 mile reach			1 per 5 mile reach	2 per 5 mile reach
1	Flood Embankment along LBN Drain RD-20	4	1	2	3	2	1	2
2	Gunda Bund Near Maddokana RD:0-5+380	1	-	1	1	1	0	1
3	Mona Bhera Flood Bund	7	1	3	6	3	2	3
Total			**2**	**6**	**10**	**6**	**3**	**6**

14.6 POLICE DEPLOYMENT PLAN.

Sr. No.	Vulnerable sites used for illegal cuts during floods	Concerned Division	Concerned Police Station & Distt	Police Persons Deployed		Remarks (if any)
				Inspector/ Sub Inspector/ASI	Constable	
01	Tie Flood Bund RD:2+000 – 4+850	Drainage Division Bhalwal	Kandiwal Distt Chiniot	ASI = 01	03	-
02	LBN Flood Bund RD:0+000 – 15+000	Drainage Division Bhalwal	Kandiwal Distt Chiniot	Sub Inspector = 01	02	-
03	Guide Wall J-Head Spur RD:2+500 – 3+500	Drainage Division Bhalwal	Kandiwal Distt Chiniot	Inspector = 01	04	-
04	Gunda Bund near Maddokana RD: 0-5+380	Drainage Division Bhalwal	Kandiwal Distt Chiniot	Inspector = 01	04	-
05	Mona Bhera Flood Bund	Drainage Division Bhalwal	Bhera District Sargodha	Inspector = 01	06	-

LBN Drain Flood bund falls within the administrative jurisdiction of District Sargodha

Proportionately, in case of observing any sort of law-and-order situation from the public sides; it shall immediately be contacted by the Sub Divisional Officer, concerned with the respective authority of civil administration to maintain the situation at site to avoid any mishap.

XEN: / BHL DRG

14.7 DETAIL OF SYNTHETIC BAGS WITH CAPACITY OF 500 KG AND 1000 KG.

Sr.No.	Name of Structure	Length in Mile	Vulnerable Reach	Camp / Location	Site Incharge by name & Cell No.	No. of Synthetic bags				Remarks
						50 Kg		100 Kg		
1	2	3	4	5	6	7		8		9
FLOOD BUNDS ALONG RIVER CHENAB IN DRAINGE DIVISION BHALWAL										
						Required	Available	Required	Available	Not available at stock and will be procured in emergency.
1	**Flood embankment along LBN drain RD 0 + 20**	4	RD: 0+000 to 15+000	9+000	Riaz Lali Sub Engineer 0343-4146843	110	Nil	75	Nil	
2	**Gunda Bund near Maddokana RD: 0-5+380**	1.018	RD: 0 - 5+380	4+000	Riaz Lali Sub Engineer 0343-4146841	90	Nil	40	Nil	
FLOOD BUNDS ALONG RIVER JHELUM IN DRAINGE DIVISION BHALWAL										
3	**Mona Bhera Flood Bund 0+000 to 35+000**	7	RD: 0+000 to 35+000	5-800	Taswar Iqbal Sub Engineer 0300-4472318	125	Nil	85	Nil	

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14.8 DETAIL OF POLYTHENE SHEETS OF BLACK COLOR TO PROTECT UPSTREAM SLOP AGAINST WAVW ACTION AND TO CONTROL SEEPAGE THROUGH EMBANKMENTS.

S No.	Name of Structure	Length in Mile	Vulnerable Reach	Camp / Location	Site Incharge by name & Cell No.	Plastic Sheet (Sft)		Remarks
						Required	Available	
1	2	3	4	5	6	7	8	9
FLOOD BUNDS ALONG RIVER CHENAB IN DRAINGE DIVISION BHALWAL								
1	**Flood embankment along LBN drain RD 0+20**	4	0+000 to 15+000	9+000	Riaz Lali Sub Engineer 0343-4146841	130	Nil	Not available at stock and will be procured in emergency.
2	**Tie Flood bund RD 0-4850**	0.97	2+000 to 4+850		Riaz Lali Sub Engineer 0343-4146841	130	Nil	
3	**Guid Wall J-Head Spur RD:0-6776 near Madokana**	1.355	2+500 to 3+500	4+000	Riaz Lali Sub Engineer 0343-4146841	130	Nil	
4	**Gunda Bund near Maddokana RD:0-5+380**	1.018	0- 5+380		Riaz Lali Sub Engineer 0343-4146841	35	Nil	

XEN: / BHL DRG

14.8 DETAIL OF POLYTHENE SHEETS OF BLACK COLOR TO PROTECT UPSTREAM SLOP AGAINST WAVW ACTION AND TO CONTROL SEEPAGE THROUGH EMBANKMENTS.

S No.	Name of Structure	Length in Mile	Vulnerable Reach	Camp / Location	Site Incharge by name & Cell No.	Plastic Sheet (Sft)		Remarks
						Required	Available	
1	2	3	4	5	6	7	8	9
FLOOD BUNDS ALONG RIVER JHELUM IN DRAINGE DIVISION BHALWAL								
1	**Mona Bhera Flood Bund from RD: 0+000 to 35+000**	7	Rd: 0+000 to 35+000	5-800	Taswar Iqbal Sub Engineer 0300-4472318	170	Nil	Not available at stock and will be procured in emergency.

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14.9 ANY OTHER DETAILS AS PER SOPs APPROVED BY THE ADMINISTRATIVE DEPARTMENT.

SOPs shared vide No. SO(FLOODS)VII-22/2017 DATED 26-12-2025 shall be strictly followed.

CHAPTER-15

BACK UP DIVISIONS (IN CASE OF BREACH).

In case of breach or during emergency, ***Sargodha Drainage Division Sargodha*** and his field staff will act as sister Division.

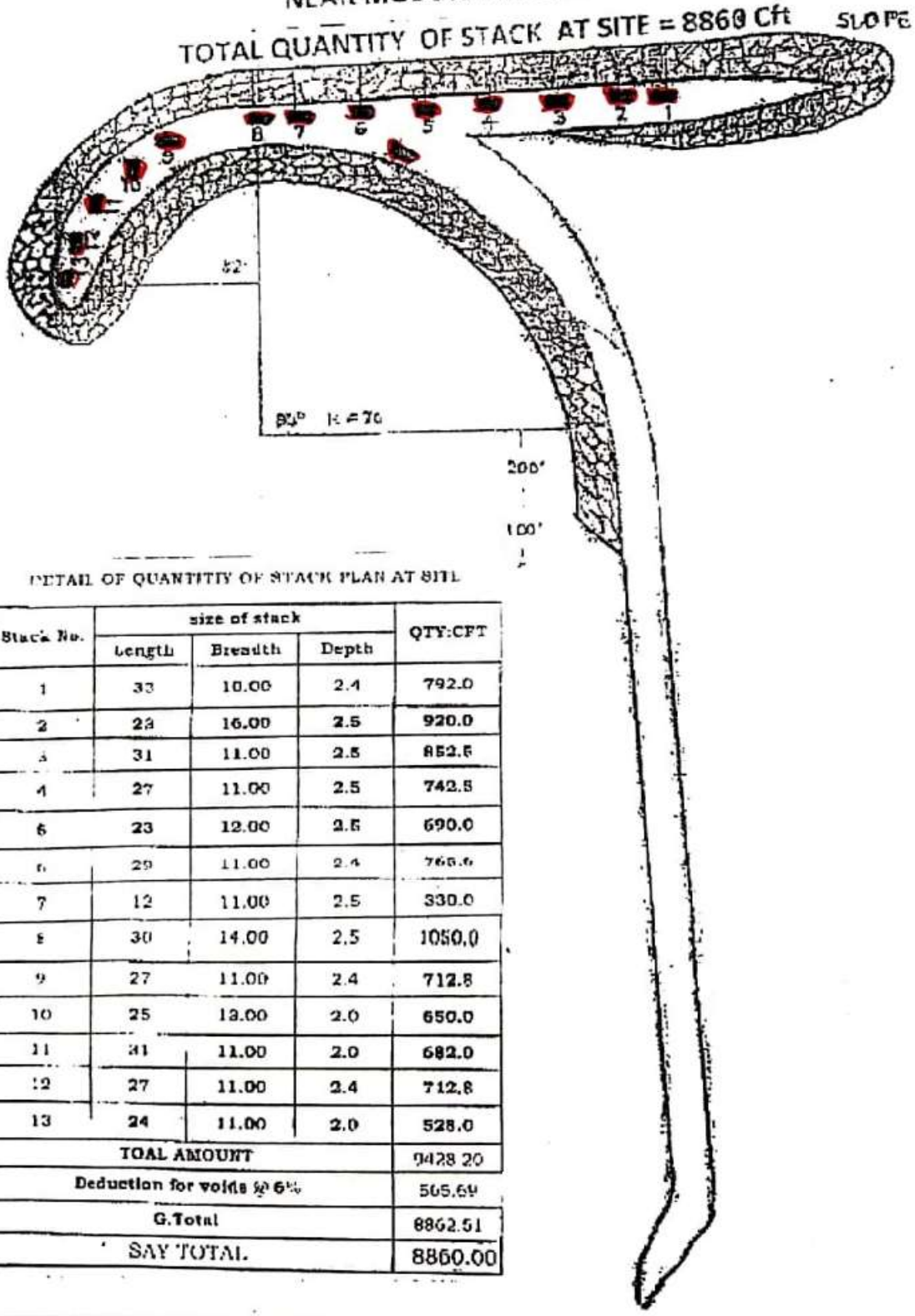
Sub Divisional Officer,
Bhalwal Drainage Sub Division,
Bhalwal.

Executive Engineer,
Bhalwal Drainage Division,
Bhalwal.

GUIDE WALL SPUR

NEAR MODOKANA VILLAGE

TOTAL QUANTITY OF STACK AT SITE = 8860 Cft



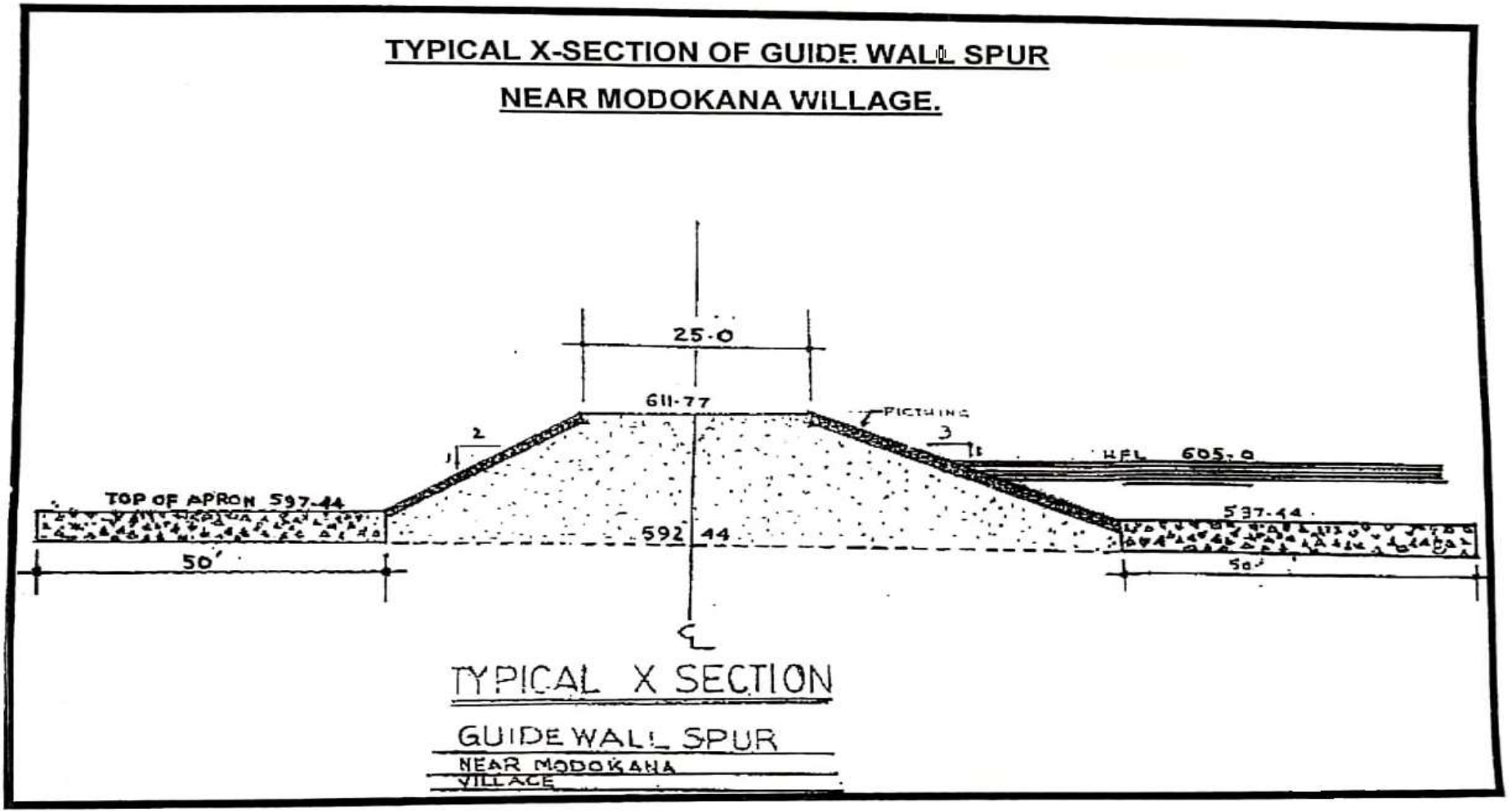
DETAIL OF QUANTITTY OF STACK PLAN AT SITE

Stack No.	size of stack			QTY:CFT
	Length	Breadth	Depth	
1	33	10.00	2.4	792.0
2	23	16.00	2.5	920.0
3	31	11.00	2.5	852.5
4	27	11.00	2.5	742.5
5	23	12.00	2.5	690.0
6	29	11.00	2.4	766.6
7	12	11.00	2.5	330.0
8	30	14.00	2.5	1050.0
9	27	11.00	2.4	712.8
10	25	13.00	2.0	650.0
11	31	11.00	2.0	682.0
12	27	11.00	2.4	712.8
13	24	11.00	2.0	528.0
TOAL AMOUNT				9428.20
Deduction for voids @ 6%				565.69
G.Total				8862.51
SAY TOTAL				8860.00

Sub Divisional Officer
Bhalwal Drainage Sub Division
Bhalwal

Executive Engineer
Bhalwal Drainage Division
Bhalwal

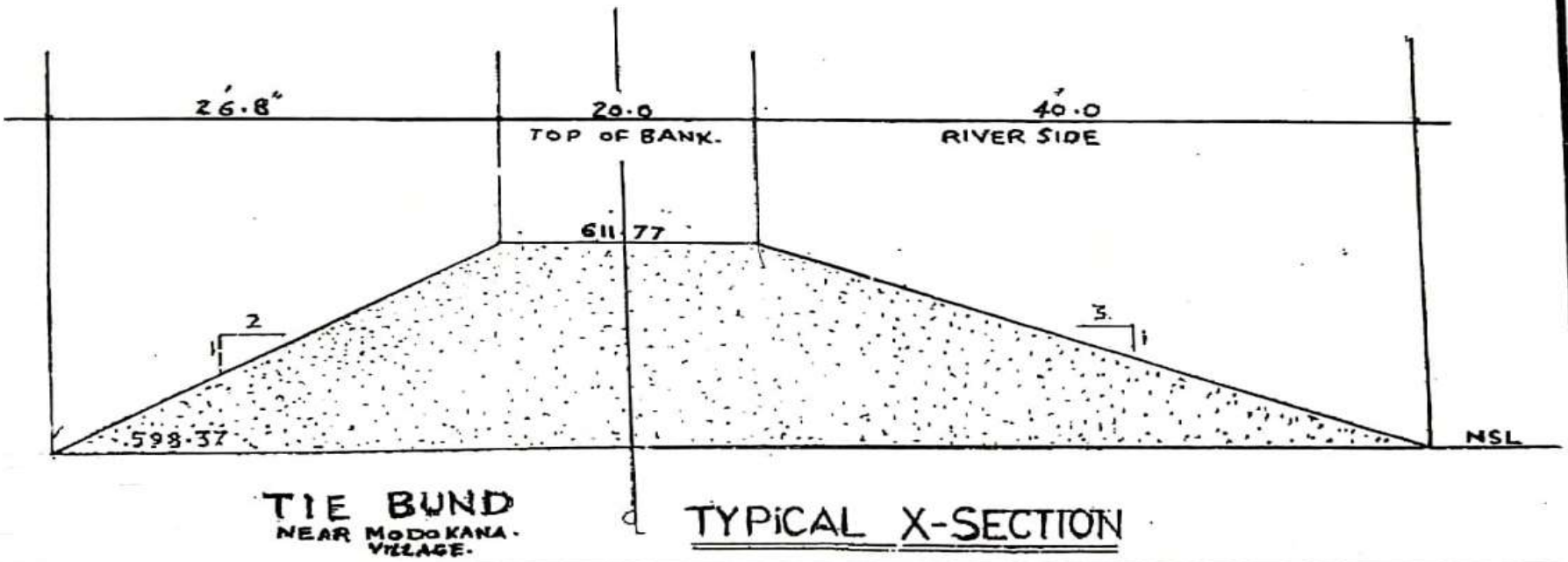
TYPICAL X-SECTION OF GUIDE WALL SPUR
NEAR MODOKANA WILLAGE.



Sub Divisional Officer
Bhalwal Drainage Sub Division
Bhalwal

Executive Engineer
Bhalwal Drainage Division
Bhalwal

TYPICAL X-SECTION OF TIE FLOOD BUND NEAR MODOKANA WILLAGE.

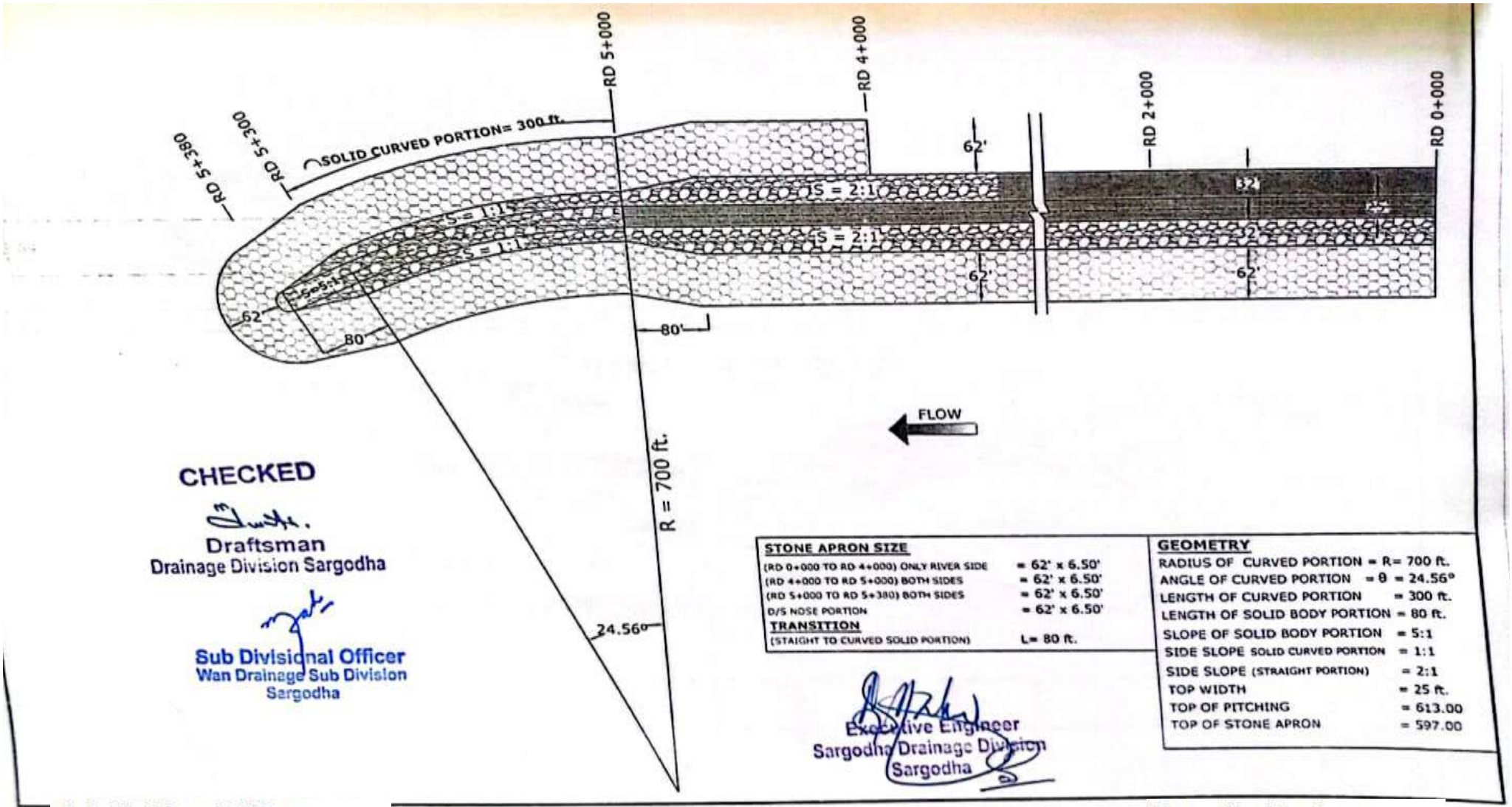


Sub Divisional Officer
Bhalwal Drainage Sub Division
Bhalwal

Executive Engineer
Bhalwal Drainage Division
Bhalwal

REVISED PLAN OF MODOKANA GUIDE WALL SPUR TO PROTECT MODOKANA VILLAGE
1100' (Center Line)
700'
500' (Center Line)
R = 700
R = 350
974.51'
538.32'
463.25'
387.25'
614.75'
375.98'
87.19'
90°
RD 4+500
RD 0+000
200'
100'
EXECUTIVE ENGINEER
BHALWAL DRAINAGE DIVISION
BHALWAL
SUB DIVISIONAL OFFICER
BHALWAL DRAINAGE SUB DIVISION
AT BHALWAL
SUB ENGINEER
DODA DRAINAGE SECTION

PLAN OF GUNDA BUND NEAR MADDOKANA GUIDE WALL SPUR.



Sub Divisional Officer
Bhalwal Drainage Sub Division
Bhalwal

Executive Engineer
Bhalwal Drainage Division
Bhalwal