**Government of the Punjab**

***IRRIGATION DEPARTMENT***

***SARGODHA IRRIGATION ZONE***

***SARGODHA.***



FLOOD FIGHTING PLAN 2024.

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FLOOD FIGHTING PLAN 2024.

I N D E X

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FLOOD FIGHTING PLAN- 2024.

PART – A

***Chapter-1***

***Salient feature of the Sargodha Canal Division Sargodha.***

***1.1 Location***

Sargodha Canal Division Sargodha comprises part of Lower Jhelum Canal (LJC) which off takes from the left bank of the River Jhelum at Rasul barrage. The boundaries of the division starts from D/S Meter Flume RD: 170+000 Northern Branch near Ludewala Canal Rest House District Sargodha and extends upto RD 154+330 tail Masson Disty in District Jhang. 02 No. Branch Canals run in the jurisdiction of this Division with following details:-

1. Northern Branch D/S RD 170+000 discharge 900 cs
2. Sulki Branch discharge 480 cs.

There are two Canal Sub Divisions on Northern Branch canal system i.e. Ara Canal Sub Division at Sargodha and Shahjewana Canal Sub Division at Ramdana Canal Rest House (near Sillanwali Town) and one No. Canal Sub Division is on Sulki Branch Canal System Head Quarter at Sultanpur Canal Rest House.

These three Canal Sub Divisions are under the control of Sargodha Canal Division Sargodha headed by the Executive Engineer.

***1.2 General Description***

The Lower Jhelum Canal off-takes from the left flank of the River Jhelum at Rasul Barrage and commands the area by gravity flow in Chaj Doab i.e. (Between the boundaries of the River Jhelum and the River Chenab) which includes the major part of the Districts Sargodha and Jhang and a minor part of District Chiniot. The Main Lower Jhelum Canal flows parallel to the River Jhelum for about 20 miles, but with a gradient less than that of the River, till it attains elevation enough to command the lands by gravitation flow. It bifurcates at Faqirian Regulator at RD 196+830 tail LJC into the Northern and Southern Branches. Operation of the Northern Branch upto RD 170+000 is with the Rasul Canal Division, Rasul. At RD 170+000 it is further divided. On the left is the continuation of the Northern Branch Canal which extends down to the lower end of the Doab, and on the right is the Sulki Branch Canal running parallel the River Jhelum.

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***1.3 Administrative setup***

Administrative setup plan of Sargodha Canal Division is attached at page 2.

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**Sub Divisional Officer, Sultanpur Sub Division**

**Sub Divisional Officer, Ara Sub Division**

**Sub Engineer, Shahjewana Section**

**Sub Divisional Officer, Shahjewana Sub Division**

**Sub Engineer, Station Section**

**Sub Engineer, Mangowana Section**

**Sub Engineer, Sargodha Section**

**Sub Engineer, Rurala Section**

**Sub Engineer, Kariwala Section**

**Sub Engineer, Nurewala Section**

**Sub Engineer, Budhewala Section**

**Sub Engineer, Sultanpur Section**

**Sub Engineer, Jahanabad Section**

**Sub Engineer, Mangowali Section**

**Sub Engineer, Ramdana Section**

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***Chapter-2***

**2**

***Flood Protection and River Training Works***

***2.1 Design parameter of Training Works***

**I- FLOOD EMBANKMENTS.**

a) Masson Flood Bund RD: 0 – 66+800 (13.38 Mile)

along Masson Disty: RD (87+500) – (154+300) Tail.

b) Embankment along Sahiwal Disty RD: 58- 68+250/R (2.05 Mile)

(for protection of Sahiwal Town).

**II- RIVER TRAINING WORKS.**

**a) J- Head Spur No. 1 at RD: 16+500 Masson Flood Bund (RD 0-10+385).**

**b) J- Head Spur No. 2 at RD: 35+200 Masson Flood Bund (RD 0-1+000).**

**IlI- DESIGN PARA METERS**.

**i. Flood Embankments.**

|  |  |  |
| --- | --- | --- |
| **Description** | **Masson Flood Bund** | **Flood embankment along Sahiwal Disty** |
| **Length** | **13.36 Mile (66800 Ft)** | **2.05 Mile (10250 Ft)** |
| **Top width** | **25 Ft** | **10 Ft** |
| **Side Slope** | **2:1( country side) &**  **3:1(River side)** | **1.5:1(Both sides)** |
| **Free board** | **6.00 ft above H.F.L. 1973** | **2.00 ft above H.F.L. 1997** |

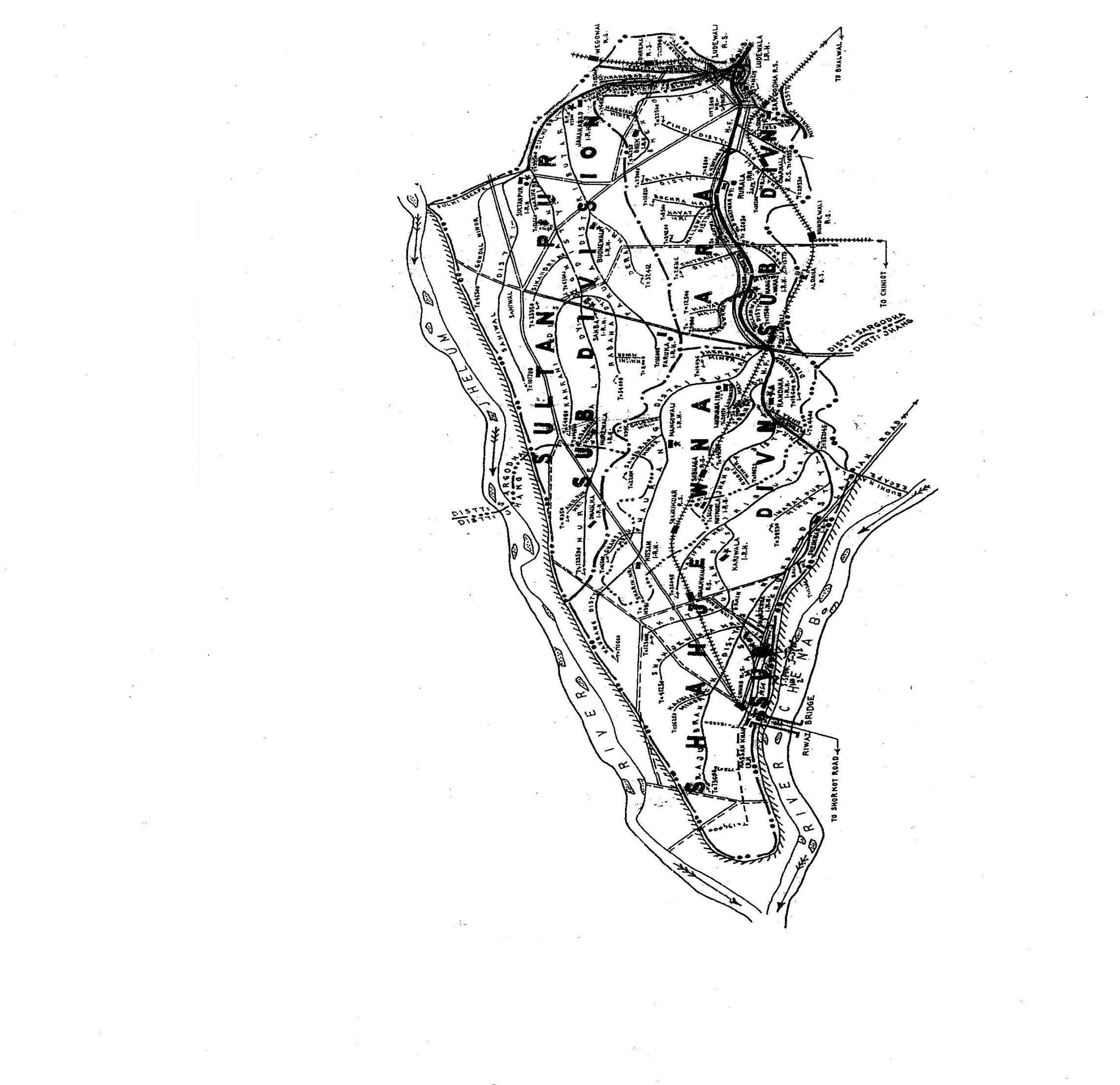
**ii. J - Head Spurs**

|  |  |  |  |
| --- | --- | --- | --- |
| **Parameters** | | **J-Head Spur No. 1 at RD: 16+500** | **J-Head Spur No. 2 at TD: 35+200** |
| **1.** | **Shank Length** | **2.08 Mile (10385 Ft)** | **0.20 Mile (1000 Ft)** |
| **2.** | **Top Width** | **30 Ft** | **30 Ft** |
| **3.** | **Side slopes** | **2:1 on both sides** | **U/S 3:1 & D/S 2:1** |
| **4.** | **Free Board** | **6 ft above H.F.L of 1973** | **6 ft above H.F.L of 1973** |
| **5.** | **Stone Apron Size** | **420 Cft./Ft run (70 x 6)** | **420 Cft./Ft run (70 x 6)** |
| **6.** | **Stone pitching thickness** | **3.25 ft** | ***2.00 ft*** |
| **7.** | **Minimum limit of reserve stock of stone** | **0.50 Lac Cft** | **0.50 Lac Cft** |

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***2.2 Location Map***

The location of Masson Flood Bund and J-Head Spur No. 01 & J-Head Spur No. 02 existed on right flank of the river Chenab and the Sahiwal Flood Bund existed on left flank of the river Jhelum falling in the jurisdiction of Sargodha Canal Division Sargodha is shown as under.

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***Chapter-3***

***Brief history of past flood events***

Masson Disty flows in close proximity of the River Chenab and the rivers spill had been badly affecting the area on right side since very long. The past floods of 1950, 1959, 1973 and 1976 shattered / damaged the canal network and created havoc for the abadies, dwellers of the locality. The canal system was badly damaged and supplies remained interrupted for a long duration, resulting colossal losses both in public and private sector. The Lalian – Chund road was also damaged, resulting traffic hazards. The most critical and vulnerable reach was from Shahjewana Town RD 87 to RD: 194+200 (Tail) Masson Disty.

Ultimately the Masson Disty was curtailed from RD: 194+200 to RD: 154+330 vide Chief Engineer, Irrigation Sargodha letter No. 9843/WI/79/56/57 dated 24.04.1979.

The past experience of unprecedented floods necessitated the construction of flood embankment and therefore the left bank of Masson Disty reach RD: 87+500 (Zero point of flood bund) to RD154+330 tail, was converted into Masson Flood bund during 1982-84.The flood bund was meant for protecting Shahjewana Town, Lalian - Chund road and Masson Disty from RD 110 to tail RD154+330.

The River meandering subsequently developed a right sided loop between RD15-18 Masson Flood Bund. The erosive action was so severe and rapid that it threatened the safety of flood bund in reach RD: 15-18, Lalian-Chund Road, Wajidabad Town with allied abadies and other vital infrastructures. In order to safeguard the National assets, the Model studies were carried out (Report No. 383/C/57 dated. 24-02-1980) and a J- Head Spur was constructed during, 1982-84 opposite RD: 16+500 of Masson Flood Bund (opposite Wajidabad Town).

Again the River developed a loop opposite RD: 33-37 of Flood Bund. The historic and unprecedented floods of 1992, washed the Flood Bund in reach RD 33-37 Masson Disty, and other abadies. The spilled water also blocked the Sargodha –Jhang road and caused traffic hazards. The sensitivity of situation warranted immediate measures. In the light of the recommendations of Expert Committee, the Flood Bund as well Masson Disty had been restored on the sanctioned alignment, along with construction of a J-Head Spur at RD: 35+200 of Masson flood Bund. This Project accomplished during April - July, 1996 under "1992 Flood Damages Restoration Project". The newly constructed Spur has reflected the good results and proved its usefulness, during exceptionally high Flood of 1997. More than 50 acres of fertile land has been re-claimed, in addition to protection of Masson Flood Bund, Local infrastructures and abadies. During flood season 2006, the River Chenab was in high flood with a peak discharge of 4.43 Lac Cs D/S Qadirabad Head Works on 04.09.2006. The Flood water directly hit the armored nose of J-Head Spur No. 2 at RD 35+200 Masson Flood Bund and the apron at various X-Section lines SS, AA, BB, CC, DD and EE was completely launched. The stone pitching on slope of armored nose at X-Section Lines SS to DD also launched. This work was included in ***Flood Damages Restoration Project 2006*** and was approved by Federal Government with estimated cost Rs. 8.058 Million. The work completed during the year 2006 – 07. The J – Head Spur No. 2 is now safe.

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During 2009 no significant flood came in the River Jhelum and Chenab, therefore, no flood damages occurred.

During 2010 there was high flood in the River Chenab. Main active creek of the river Chenab twisted towards right bank and started erosion between RD 31-35 and threatened the safety of flood bund. Some portion of stone apron of J-head Spur No2 was launched with the erosive action of flood water.

A meeting of **Departmental Expert Committee** was held in the office of Chief Engineer (Research) Lahore on 02.02.2011 to discuss this aggrieved situation and agreed with the proposal already given by **PRO (Hydraulic)** vide his letter No. 576 / 838 – C / A / II dated 31.08.2010 However it was decided that the site be again inspected by the PRO (Hydraulic) to see fresh position of site after flood 2010. The Experts visited the site on 09.03.2011 and conveyed recommendations by the Director / PRO (Hydraulics) Irrigation Research Institute Lahore vide letter No. 140 / PRO (H) / 838 – C / A – II dated 21.03.2011

The recommendations of the ***Director / PRO (Hydraulics)*** Irrigation Research Institute Lahore are given as under;-

**A)** **Construction of an inverted hockey stud at RD 33+000 of Masson**

**Flood Bund.**

The parameters of the structure are as below:-

1. Level part straight = 450 ft
2. Curved part = 209 ft

a) Radius of the curved part = 150 ft

b) Angle = 80 ft

1. **Construction of a sloping stud at RD 33+850 of Masson Flood Bund**

**with its level part straight 200 ft with sloping part (1:5).**

The subjected work was taken up under ***Para 2.89 PWD Code*** during year 2012 with the approval of the Secretary Irrigation Department Punjab Lahore.75% work has executed at site .The Executed work is safe and proved its existence during the flood 2016.

The extraordinary rains in the first week of September 2014 during a very short duration in the upper catchments of the river Chenab and Jhelum experienced exceptionally high flood in the both rivers. No major change in the morphology of river Jhelum reach Rasul Head work to Trimu Head works as well as river Chenab reach downstream Chiniot Bridge to Trimu Head works noticed during flood 2014.Low flood was experienced in river Jhelum and medium flood was experienced in the river Chenab during July 2015. 400 acre area was erroded by the action of river Chenab. The river shifted its regime towards Masson Flood Bund and became very close in between reach RD 29-31, whereas the distance recorded between river edge and Masson Flood Bund is about 600 ft.

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***Chapter-4***

***Design Data, Historic peak flood data and previous five years flood data of Head Works / Barrages and or other control points***

***4.1 Flood Limits***

The terminology of different kinds of flood is low, Medium, High, very  
high and exceptionally high and they will be taken as such in the light of any wireless message received from respective warning centers.

**FLOOD LIMITS (ABOVE) CUSECS**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Rivers** | **Control Point** | **Low** | **Medium** | **High** | **Very High** | **Exception ally High** |
| Jhelum | Mangla | 0.75 to 1.10 | 1.10 to 1.50 | 1.50 to 2.25 | 2.25 to 3.00 | More than 3.00 |
| Jhelum | Rasul | 0.75 to 1.10 | 1.10 to 1.50 | 1.50 to 2.25 | 2.25 to 3.00 | More than 3.00 |
| Chenab | 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 |
| Chenab | 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 |

***4.2 Time Lag of Floods***

As per statement, the following are the time lags for average flood flows in the Rivers.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **River** | **From** | **To** | **Distance** | **Time Lag** |
| Jhelum | Mangla | Rasul | 45 mile | 9 Hours |
|  | Rasul | Bridge Khushab | 80 mile | 22 Hours |
| Chenab | Marala | Qadirabad | 58 mile | 19 Hours |
|  | Qadirabad | Trimmu | 160 mile | 36 Hours |

***4.3 Highest Floods***

The highest flood discharges in cuses recorded downstream Rasul Barrage and Qadirabad Barrage during last Five years are as under:-

|  |  |  |
| --- | --- | --- |
| **Year** | **D/S Rasul** | **D/S Qadirabad** |
| 2016 | 43,135 Cs | 405542 Cs |
| 2017 | 39230 Cs | 154420 Cs |
| 2018 | 43,135 Cs | 1,72,031 Cs |
| 2019 | 23,610 Cs | 1,59,544 Cs |
| 2020 | 1,26,951 Cs | 2,58,954 Cs |
| 2021 | 31,420 Cs | 1,67,812 Cs |
| 2022 | 23610 Cs | 202149 Cs |
| 2023 | 23090 Cs | 185749 Cs |

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***4.4 Peak discharges (*HISTORIC PEAK FLOOD DATA)**

|  |  |  |
| --- | --- | --- |
| Date | Discharge | Pond Level |
| DOWN STREAM RASUL BARRAGE (RIVER JHELUM) | | |
| 10.09.1992 | 952170 | 721.00 |
| 23.08.1994 | 129392 | 717.00 |
| 28.07.1995 | 285071 | 715.00 |
| 26.06.1996 | 133192 | 716.00 |
| 27.08.1997 | 549598 | 716.00 |
| 17.07.1998 | 70674 | 719.00 |
| 11.05.1999 | 46160 | 719.00 |
| 22.07.2000 | 39222 | 718.00 |
| 27.07.2001 | 30270 | 718.00 |
| 14.08.2002 | 49170 | 718.00 |
| 05.09.2003 | 49170 | 718.00 |
| 30.04.2004 | 31422 | 719.00 |
| 17.07.2005 | 92246 | 719.00 |
| 13.07.2006 | 165947 | 720.00 |
| 07.07.2007 | 34098 | 719.00 |
| 14.11.2008 | 20678 | 719.00 |
| 17.08.2009 | 56794 | 719.00 |
| 01-02/08/2010 | 263000 | 719.00 |
| 17.09.2011 | 96864 | 719.00 |
| 05.08.2013 | 43135 | 719.00 |
| 06.09.2014 | 516387 | 720.40 |
| 01.07.2015 | 99103 | 718.00 |
| 24.06.2016 | 40424 | 701.30 |
| 23.07.2017 | 39230 | 719.00 |
| 02.10.2018 | 43135 | 691.50 |
| 03.10.2019 | 23610 | 698.10 |
| 28.08.2020 | 126951 | 698.10 |
| 30.06.2021 | 31420 | 698.10 |
| 23.06.2022 | 23610 | 698.00 |
| 08.09.2023 | 23090 | 550.00 |
| DOWN STREAM QADIR ABAD BARRAGE (RIVER CHENAB) | | |
| 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 | 697.70 |
| 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 | 697.00 |
| 01.08.2008 | 190438 | 697.00 |
| 17.08.2009 | 55535 | 697.00 |
| 07.08.2010 | 298961 | 697.00 |
| 17.09.2011 | 164604 | 697.00 |
| 05.08.2012 | 180789 | 691.97 |
| 24.07.2013 | 403403 | 696.90 |
| 07.09.2014 | 903504 | 701.70 |
| 07.07.2015 | 161054 | 701.00 |
| 08.08.2016 | 405542 | 696.95 |
| 03.08.2017 | 154420 | 694.00 |
| 14.08.2018 | 172071 | 692.80 |
| 01.08.2019 | 159544 | 684.70 |
| 29.08.2020 | 196077 | 693.00 |
| 29.07.2021 | 167812 | 688.25 |
| 12.08.2022 | 202149 | 694.00 |
| 20.07.2023 | 185749 | 692.95 |

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**Chapter-5**

**Flood Fighting Strategy**

A. RIVER JHELUM.

The following channels are directly affected by RIVER spills and their right bank acts as Flood embankment and protection to the Towns (like Sahiwal, Sial Sharif), abadies, crops and other infrastructure, against the Flood.. The main towns/villages protected by canal embankment are Mauza Gondal, Mauza Buslana, Mauza Mohabata, Mauza Pir Sabz, Mochiwal, Mauza Sangraka, Mauza Mubarawala, Rakh Mega, Rakh Bar, Thatti Raja, Bahli Bala, Blochanwala, Rakh Kallar Sarkar, Sahiwal, Ratri, Thatti Said Shameer, Bagga Balochan, Hindwan, Mohibpur, Todarpur, Sial Sharif, Matta, Pollah, Sheikh, Badar Bhown, Abuwal, Ahir Surkhru, Ahir Fateh Shah, Jalla Zairian, Dadal, Buri, Shauri wala, Long Shumali, Dhulka, Akil Pur, Attoana, Kallar, Kot Khushal, Qadir pur, Pabbar wala, Daulka, Feroze Chandia, Turbat Haji Shah and Tibba.

The reaches of channels which are affected by .River spills and where the right bank of channels acts as flood protection embankments are:-

|  |  |  |  |
| --- | --- | --- | --- |
| **S.NO.** | **CHANNEL** | **REACH** | **LENGTH** |
| 1. | Sahiwal Disty. | RD: 45-101+700 (Tail) | 11.34 mile |
| 2. | Gondal Minor. | RD: 14-46+500 (Tail) | 6.50 mile |
| 3. | Nurewala Disty. | RD: 91-117+040 (Tail) | 5.20 mile |
| 4. | Aqilpur Minor. | RD: 0-8+350 (Tail) | 1.67 mile |
| 5. | Naurang Disty. | RD: 150-171+660 (Tail) | 4.33 mile |
|  |  | **Total:** | **29.04 mile.** |

In view of vulnerable location of channels, running close to river jhelum, it  
is essential to take up the flood preparedness activities like strengthening of weak and ghat sites, clearance of Jungle, shrubs from banks and slopes and making them fit to face the ensuing floods. As there exists no regular establishment on these flood embankments so a gang of one man per mile is employed from 1st June to 30TH September, in addition to existing establishment of one beldar in six mile length of canal.

**i. LOW FLOOD (DISCHARGE 75.000 Cs TO 1.10,000 Cs.** (Duty jurisdiction of Sub Engineers)

|  |  |  |  |
| --- | --- | --- | --- |
| (1) same establishment, as already employed will continue and no further gang will be engaged. However, the under given Sub Engineers will be vigilant and arrange watching the channels.(1) | Sub Engineer Sultanpur Section | i. | Sahiwal Disty RD: 0- Tail. |
|  |  | ii. | Gondal Minor RD: 0-Tail. |
| (2) | Sub Engineer Nurewala Section | i. | Nurewala Disty RD: 80- Tail. |
|  |  | ii. | Aqilpur Minor RD: 0- Tail. |
| (3) | Sub Engineer Mongowali Section | i. | Naurang Disty RD: 135- Tail. |

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ii. MEDIUM FLOOD DISCHARGE 1,10,000 - 1,50,000 Cs.

At medium flood stage, the water spill out and inundates the low lying areas. It  
also hits the canals at some places hence watching is required, therefore, one man for day and one for night per mile is employed, including the existing gang, for watching purpose.

iii. HIGH FLOOD DISCHARGE 1,50,000 - 2,25,000 Cs.

The watching establishment will be raised to one man per mile per shift for three shifts a day, including existing gang.

The Sub Engineer, Budhewala will shift his camp at RD: 29 of Gondal Minor and  
will be incharge of Gondal Minor.

The Sub Engineer, Sultanpur will be incharge of Sahiwal Disty and will shift his camp at RD: 65,000 of Sahiwal Disty.

The Sub Engineer Nurewala, Section will be incharge of both Nurewala Disty and Aqilpur Minor and will shift his camp at Dhaulka Rest House (RD: 108 of Nurewala  
Disty). The Sub Engineer Mongowali will be incharge of watching/flood fighting activities on Naurang Disty and will shift his camp at RD; 160,000 of Naurang Dirty. The Sub Divisional Officer Sultanpur and Sub Divisional Officer Shahjewana will be the overall incharge of their respective channels but in case of flood in River Chenab, the Sub Divisional Officer Shahjewana will shift to Masson Flood Bund / Spurs and that the Sub Divisional Officer Sultanpur will take care of Naurang Disty, also. The Zilladar Sultanpur, Nurewala and Lakhuana Section will also assist their Sub Engineers for procurement of labour and other camping arrangements.

iv. VERY HIGH FLOOD DISCHARGE 2,25,000-3,00,000 Cs.

The staff duties as assigned for high Flood limits will remains as such. However the watching establishment will be raised to 2 men per mile per shift for three shifts round the clock.

**v. EXCEPTIONALLY HIGH FLOOD (DISCHARGE ABOVE 3.00.000 Cs).**

At this stage, the Sub Divisional Officer Sultanpur will be overall incharge of all the watching/flood fighting activities. He will manage the activities, keeping in view the demand of site and consultation with Deputy District Officer (Revenue) Sahiwal. In case of Canal Closure he may shift the regular establishment for watching/fighting activities. The labour strength will be enhanced to 4 men per mile per shift for three shifts a day. He will also arrange record of hourly flood gauges at one mile interval. The flood situation and other relevant instances/damages will be promptly report to Executive Engineer Sargodha Canal Division, District Flood Control Center Sargodha, in office of DCO Sargodha / Chief Engineer Irrigation Zone Sargodha Office and Canal Telegraph Office Sargodha.  
 **NOTE:-** For all the Flood Stages, one mate will be employed for 8 beldars strength.

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**B.** **RIVER CHENAB.**

The following Flood Bund, Spurs and the channels are directly affected by the Floods and Flood spill:-

|  |  |  |  |
| --- | --- | --- | --- |
| **S.No:** | **FLOOD BUND/CHANNELS** | **REACH.** | **LENGTH.** |
| 1. | Masson Flood Bund | RD: 4+000 to RD 66+800 | 12.56 mile |
| 2. | Spur at RD: 16500 Masson F.B | RD: 0+000 to RD 10+385 | 2.08 mile |
| 3. | Spur at RD: 35200 Masson F.B | RD: 0+000 to RD 1+000 | 0.20 mile |
| 4. | Raju Minor | RD: 27 to RD 71 (T) | 9.32 mile |
| 5. | Kachian Minor | RD: 0+000 to RD 16+250 (T) | 3.25 mile |
| 6. | Masson Disty: | RD 110+000 to RD 154+330 (T) | 8.87 mile |
|  |  | **Total:** | 36.28 miles. |

**NOTE:-** Masson Disty in reach RD: 87+500-Tail flows in shadow of MassonFlood Bund

Therefore no extra labour is employed on Masson Disty.

For watching of channels, one man per mile will be employed for one month i.e. 1st to 30th June, in addition to existing strength of one man per six mile length. Since there is no regular establishment on Masson Flood Bund and Spurs, so a gang of one man per mile will be employed on Masson Flood Bund and two man for J-Head Spur No. 2 and four No for J-Head Spur No. having length 2.07 mile will be employed w,e,f, 1st June to 30th September. The establishment will take care of all preparations like filling depressions, rain cuts/gharas, clearance of slopes upto 10 feet beyond toe of Flood Bund, Opening/puddling holes etc.

**i. LOW FLOOD DISCHARGE 100000-150000 Cs.**

No extra labour will be employed. The labour arranged for preparedness will  
continue as such. The Sub Engineer Shahjewana will shift his camp at Spur RD: 35200 Masson Flood Bund and will also watch Spur at RD: 16500.

**ii. MEDIUM FLOOD DISCHARGE 150,000-200,000 Cs.**

The flood water flows within River banks. No extra labour will be employed on  
Masson Flood Bund. However, the labour on Spurs will be doubled i.e. two men for J-Head Spur No. 2 and 8 No for J-Head Spur No 2 for day and night. Sub Divisional Officer Shahjewana will also shift his camp on the Spur where the situation so warrants and will minutely watch the River action on Spurs. In case of any emergency, SDO Shahjewana will promptly contact Executive Engineer Sargodha and suggest/take fighting measures with prior concurrence of Superintending Engineer LJC, Circle Sargodha. He will keep a close liaison with Flood Center of District Coordination Officer Jhang and Flood Emergency Officer of Sargodha Irrigation Zone Sargodha.

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**iii. HIGH FLOOD DISCHARGE 200000 - 400000 Cs.**

The flood water spills out during this stage of flow and a gang of one man per mile per shift for three shifts will be employed on channels whereas the labour strength of 2 men per mile per shift will be employed on Masson Flood Bund. Two men per shift for three shifts on Spur RD: 35200 and four men per shift for three shifts will be employed for Spur RD: 16500 of Masson Flood Bund. The Sub Engineer Karriwala will shift his camp at Spur RD: 16500 and will be incharge of Spur and Flood Bund RD; 0-25, Similarly the Sub Engineer Shahjewana, already camping at Spur RD: 35200, will be incharge of Spur No. 35200 and Flood Bund from RD: 25000 to RD: 66800 (tail). The Sub Engineer will also ensure temporary plugging of all water courses / tube wells crossings under Masson Flood Bund. Drainage X-ing for Shahjewana Drain, with gated structure demands vigorous control of water from both sides. The Sub Divisional Officer Shahjewana will be overall incharge of flood watching and related activities.

**iv. VERY HIGH FLOOD DISCHARGE 400000-600000 Cs.**

All activities will remain as such. The watching establishment will be raised to two men per mile on channels and three men per mile per shift for three shifts on Masson Flood Bund. The strength on Spur will be same as for high flood limits.

**v. EXCEPTIONALLY HIGH FLOOD ABOVE 600000 Cs.**

This stage warrants alarming situation. The watching labour will be raised to 3  
men per mile per shift on channels and 5 men per mile per shift for three shifts on Flood Bund. Similarly the strength will be raised to six men per shift on Spur RD: 16500 and three men per shift for three shifts on Spur RD: 35200 Masson Flood Bund. On receipt of exceptionally high flood, the Deputy Collector Sargodha alongwith concerned Zilladars will shift their camp at Shahjewana Rest House. He will arrange.

1. Proclamation on loudspeakers etc for evacuation of abadies inside the flood bunds.
2. Prepare maps for the areas inundated and carry out immediate survey for damages to crops and other properties.
3. Keep a close liaison with Sub Divisional Officer and assist him in procurement of labour and other camping arrangements.

Executive Engineer, Sargodha Division will camp at Shahjewana Rest House and will be overall in charge of all watching and fighting activities. He will remain in touch with District Administration Jhang and Flood Emergency Officer, Sargodha. He will launch Flood fighting activities after Consultation/Concurrence of Superintending Engineer, LJC, Circle Sargodha.

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***Chapter-6***

***Flood Damages Restoration Works***

There is no flood damages restoration work under execution in Sargodha Canal Division Sargodha. However, Machinery was deployed to meet with any kind of emergency during flood season 2023.

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***Chapter-7***

***Flood Fighting Watching Arrangement***

***7.1 Pre-Flood Arrangement***

|  |  |  |  |
| --- | --- | --- | --- |
| **Sr.#** | **Activity** | **Target Dates** | **Compliance Report** |
| **I.** | **Preparation of Flood Fighting Plans** |  |  |
|  | a) Submission of Draft Divisional Plans by  Zonal Chief to Chief Engineer Drainage  And Flood (After scrutiny by SE/CE). | 01.03.2024 | Submitted |
|  | b) Review by Chief Engineer D&F. | 31.03.2024 | Will be submitted within due date. |
|  | c) Final submission of Divisional Plans. | 15.04.2024 | Will be submitted within due date. |
|  |  |  | - |
| **II.** | **Inspection of Flood Works.** |  | - |
|  | a) By XEN's | 15.03.2024 | - |
|  | b) Checking / Inspection by SE's/CE) | 31.03.2024 |  |
|  | c) Inspection by Departmental & Army  Team. | 31.03.2024 | - |
|  |  |  | - |
| **III.** | **Identification of encroachments on bunds and spurs to the Civil Administration.** | 31.03.2024 | 153 No. encroachments on Masson Flood Bund have been indentified and reported to District Administration Jhang. |
| **IV.** | **Painting Gauges, RD Marks, Data Boards and repair to Flood Bunds etc.** | 31.05.2024 | Will be painted within schedule date. |
| **V.** | **Replenishment of Reserve Stock of Stone and Flood fighting materials.** |  |  |
|  | a) Identification of needs. | 28.02.2024 | Already indentified reserve stock of stone which is to be replenished. |
|  | b) Funding/Procurement Arrangements. | 15.03.2024 | Sanction of estimate is under process. |
|  | c) Procurement, Stacking, Prescribed field  checks. | 31.05.2024 | Will be done before schedule date. |
| **VI.** | **Installation of wireless sets** | 15.06.2024 | Will be installed on schedule date. |
| **VII.** | **Opening of Zonal Flood Cells** |  |  |
|  | a) Duty Rosters. | 01.06.2024 | Will be issued before schedule date. |
|  | b) Operative. | 15.06.2024 | Will be operative within target date. |

***Status of reserve stock of stone***

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|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Name of Structure** | **Sanction Limit of Stone** | **Available Stone at Site** | **Balance** | **Remarks** |
| J-Head Spur No. 1 | 0.50 Lac Cft: | 0.34 Lac Cft: | 0.16 Lac Cft | 0.70 lac cft(70%) Sufficient quantity of stone is available at site. |
| J-Head Spur No. 2 | 0.50 Lac Cft: | 0.36 Lac Cft: | 0.14 Lac Cft |

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***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 channels and Flood Bund, the tents/shouldaries will be erected and Flood .watching material shifted in such 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 channels and flood bunds.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Site | LENGTH | **Flood Limits** | | | | | | | | | | | |
| **Normal Flood Stage** | | **Low Flood Stage** | | **Medium Flood Stage** | | **High Flood Stage** | | **Very High Flood Stage** | | **Exceptionally High Flood Stage** | |
| 1 Man per mile per shift | | 2 Men per mile per shift | | 2 Men per mile per shift | | 4 Men per mile per shift | | 6 Men per mile per shift | | 9 Men per mile per shift | |
| **Man** | **shift** | **Man** | **shift** | **Man** | **shift** | **Man** | **shift** | **Man** | **shift** | **Man** | **shift** |
| Masson Flood Bund  RD 0+000 to 66+800 Tail | 13.36 (Mile) | No extra labour will be employed. | | The flood water flows within river bank. No extra labour will be employed. | | 78 | 3 Shift | 156 | 3 Shift | 234 | 3 Shift | 351 | 3 Shift |
| J-Head Spur RD 16+500  Masson Flood Bund. | 1 No. | 12 | 3 Shift | 12 | 3 Shift | 18 | 3 Shift | 27 | 3 Shift |
| J-Head Spur RD 35+200  Masson Flood Bund. | 1 No. | 12 | 3 Shift | 12 | 3 Shift | 18 | 3 Shift | 27 | 3 Shift |
| **Total** | | **102** |  | **180** |  | **270** |  | **405** |  |

|  |  |  |
| --- | --- | --- |
| **Sr.#** | **Name of Channel** | **Location of watching Hut** |
| 1 | Sahiwal Disty. | RD 65-66 Sahiwal Disty, at Lakhiwal road |
| 2 | Gondal Minor. | RD 29 Gondal Minor |
| 3 | Nurewala Disty, Akilpur Minor. | RD 107-108 at Dhaulka Canal Rest House |
| 4 | Naurang Disty. | RD: 160 Naurang Disty |
| 5 | Masson Flood Bund | At start of J-Head Spur No 1 at RD 16+500 Masson Flood Bund. |
| 6 | Masson Flood Bund | At start of J-Head Spur No 2 at RD 35+200 Masson Flood Bund. |
| 7 | Masson Flood Bund | Between RD: 53-54 Junction of Masson Flood Bund with Sargodha –Jhang Pacca Road near Chund Bus Stop. |

***7.3 Arrangement at Sensitive sites***

Status of reserve stock of stone is submitted as under:-

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Name of Structure** | **Sanction Limit of Stone** | **Available Stone at Site** | **Balance Qty:** | **Remarks** |
| J-Head Spur No. 1 | 0.500 Lac Cft: | 0.34 Lac Cft: | 0.16 Lac Cft | 0.70 lac cft(70%) Sufficient quantity of stone is available at site. |
| J-Head Spur No. 2 | 0.500 Lac Cft: | 0.36 Lac Cft: | 0.14 Lac Cft |

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***7.4 Watching Material***

There will be total 04 No. watching Camp along Channels and 03 No. on Masson  
Flood Bund. The following Flood material will be arranged and stored at Sultanpur, Nurewala and Shahjewana rest House. The material will be shifted to watching huts as soon as the intimation of Medium / High Flood limit is received. The medium flood limit applies to Spurs and High Flood limit for Flood Bund and Channels. Following will be the scale of watching material for temporary watching camps / huts.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Sr. No.** | **Description** | **Total required** | **Total available** | **Balance** | **Remarks** |
| 1 | Motor boat | 1 | 1 | 0 | The deficient quantity of Flood Fighting material will be procured before start of Flood season. |
| 2 | Axes | 21 | 18 | 3 |
| 3 | Bamboos 8' to 10' (for Lighting arrangements) | 140 | 120 | 20 |
| 4 | Baskets (Toot) | 35 | 30 | 5 |
| 5 | Buckets Plastic | 35 | 30 | 5 |
| 6 | Cell for Torches | 252 | 108 | 144 |
| 7 | Chimneys for Lamps | 21 | 9 | 12 |
| 8 | Chouldaries | 7 | 6 | 1 |
| 9 | E.G. Bags | 350 | 300 | 50 |
| 10 | Energy Savers | 70 | 60 | 10 | The deficient quantity of Flood Fighting material will be procured before start of Flood season. |
| 11 | Folding Chair | 28 | 26 | 2 |
| 12 | Folding Table | 7 | 6 | 1 |
| 13 | Funnels | 21 | 18 | 3 |
| 14 | G.I. Buckets | 14 | 13 | 1 |
| 15 | Gas Mentles | 70 | 60 | 10 |
| 16 | Generator | 7 | 6 | 1 |
| 17 | Hand Saws | 7 | 6 | 1 |
| 18 | Handle for Kassi / Axes | 70 | 60 | 10 |
| 19 | Holder for Lamp | 70 | 60 | 10 |
| 20 | Kassi with Handles | 70 | 60 | 10 |
| 21 | Kerosene Oil | 350 | 300 | 50 |
| 22 | Killas | 140 | 120 | 20 |
| 23 | Lanterns | 21 | 9 | 12 |
| 24 | Life Belt | 21 | 18 | 3 |
| 25 | M. Oil | 70 | 60 | 10 |
| 26 | Manila Rope | 7 | 6 | 1 |
| 27 | Match Boxes | 14 | 12 | 2 |
| 28 | Munj / Patha / Trungers | 7 | 6 | 1 |
| 29 | Needles | 70 | 60 | 10 |
| 30 | Oil Extractors | 7 | 6 | 1 |
| 31 | Patromax | 7 | 6 | 1 |
| 32 | Petrol | 350 | 300 | 50 |
| 33 | Rain Coats | 35 | 30 | 5 |
| 34 | Steel Charpoy | 14 | 12 | 2 |
| 35 | Sutli | 35 | 30 | 5 |
| 36 | Switch / Plugs | 140 | 120 | 20 |
| 37 | Torches 3 cells | 35 | 30 | 5 |
| 38 | Umbrella | 70 | 60 | 10 |
| 39 | Wicks | 70 | 30 | 40 |
| 40 | Wires 7/29 | 700 | 600 | 100 |
| 41 | Wooden Boards 10 x 12 | 35 | 30 | 5 |
| 42 | Wooden Hammers | 7 | 6 | 1 |

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*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 patromax 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 be provided food and water by the Departmental arrangement.

***7.8 P.O.L. Arrangement for Vehicle***

Department will arrange to supply POL for vehicles.

***7.9 Transportation***

Vehicles are available for transportation during food season.

***7.10 Law and order***

There is no likelihood of any interruption by anyone except cutting of banks of channels to reduce heading up. In case of necessity District Coordination Officer Sargodha and Jhang will be contacted by the Executive Engineer, Canal Sargodha Division 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 required.

***7.12 Liaison with other Department***

Executive Engineer, Sargodha Canal Division will keep liaison with the Civil and Army Authorities and will keep the Superintending Engineer L.J.C, Sargodha fully apprised of the flood situation in Sargodha Canal Division.

***7.13 Role of the Army***

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

***7.14 Duties of Telephone Attendant***

The Phone and Cell No of all officers and official have been given in *Flood Fighting Plan 2023* to make immediate contact at any emergency during flood. *Plan 2023* to make immediate contact at any emergency during flood.

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|  |  |  |  |
| --- | --- | --- | --- |
| **DUTY ROSTER OF TELEPHONE ATTENDENT** | | | |
| **NAME** | **OVER ALL LOOK AFTER** | **TIME OF DUTY** | **TELEPHONE No.** |
| Abdulqudus | Head Signaller | OVER ALL LOOK AFTER | 048-9230408  0300-7747910 |
| Muhammad Ramzan Shah | Signaller | 7:00 AM TO 2:00 PM | 0308-6712612 |
| Malik Taimoor Shahzad | Signaller | 7:00 AM TO 2:00 PM | 0300-6051063 |
| Asad Sial | Signaller | 7:00 AM TO 2:00 PM | 0300-6047154 |
| Muhammad Arif | Naib Qasid | 7:00 AM TO 2:00 PM | 0313-7812873 |
| Zahid Iqbal | Signaller | 11:00 PM TO 7:00 AM | 0346-8624508 |
| Muhammad Saeed | Telephone attendant | 11:00 PM TO 7:00 AM | 0343-7485758 |
| Safdar Amin | Naib Qasid | 11:00 PM TO 7:00 AM | 0343-6927410 |
| Muhammad Shahbaz | Gauge reader | 11:00 PM TO 7:00 AM | 0301-6719320 |

|  |  |
| --- | --- |
| Name of Office / Officials | Telephone No. / Cell No. |
| Sargodha Canal Division Sargodha Telephone attendant | 048-9230409 |
| Telegraph Office Sargodha | 048-9230408 |
| Sub Divisional Officer Shahjewana Sub Division  ( Muhammad Arif ) | 0300-6036742 |
| Sub Engineer Shahjewana Section  (Waqar Shah) | 0301-6799187 |
| Sub Divisional Officer Sultanpur Sub Division  (Tariq Abbas) | 0345-6790160 |
| Sub Engineer Sultanpur Section  (Mansab) | 0301-7186502 |

Duties of Officer / Officials

* 1. ***Wireless Arrangements***

Wireless system will be installed in the vehicle of XEN Sargodha No. SGP 452, SDO Shahjewana Jeep No. SGE-7515 and SDO Sultanpur Jeep No MIA 6012 i.e. 01.06.2024

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***Chapter-8***

***Detail of Encroachment along Masson Flood Bund***

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| لمبائی/چوڑائی | کیفیت ناجائز تجاوزات | برجی نمبر/سائیڈ | پتہ/سکونت | نام بمعہ ولدیت/قوومیت | نمبر شمار |
| 8 x 8 | کھوکھا | 3-4/R | شاہ جیونہ | احمد علی ولد عمیر علی قوم مسلم شیخ | 1 |
| 15 x 14 | ایک عددکچا مکان | 4-5/L | شاہ جیونہ | محمد شریف ولد قطب الدین قوم مسلم شیخ | 2 |
| 15 x 14 | ایک عددکچا مکان | 4-5/L | شاہ جیونہ | فلکشیر ولد قطب الدین قوم مسلم شیخ | 3 |
| 22 x 14 | دو عددکچے مکان | 4-5/L | شاہ جیونہ | سوہنا ولد ذوالفقار ولد قطب الدین قوم مسلم شیخ | 4 |
| 22 x 14 | دو عددکچے مکان | 4-5/L | شاہ جیونہ | حیدر علی ولد محمد علی | 5 |
| 22 x 14 | دو عددکچے مکان | 4-5/L | شاہ جیونہ | محمد خان/الللہ یار ولد محمد خان | 6 |
| 18 x 14 | ایک عددپکا مکان | 4-5/L | شاہ جیونہ | غلام شبیر ولد محمد افضل | 7 |
| 18 x 14 | ایک عددکچا مکان | 4-5/L | شاہ جیونہ | غلام شبیر ولد محمد علی | 8 |
| 30 x 49 | موقع پر قبضیہ ایرا | 4-5/L | شاہ جیونہ | غلام شبیر ولد طفیل عرف بوٹا | 9 |
| 30 x 37 | دو عدد پختہ دوکان | 4-5/L | شاہ جیونہ | غلام علی ولد محمد رمضان | 10 |
| 18 x 12 | ایک عدد پختہ دوکان | 5-6/L | شاہ جیونہ | غلام حیدر ولد محمد رمضان | 11 |
| 22 x 14 | ایک عدد پختہ دوکان | 5-6/L | شاہ جیونہ | محمد انور ولد شیر محمد | 12 |
| 22 x 14 | ایک عدد پختہ دوکان | 5-6/L | شاہ جیونہ | محمد امین ولد شیر محمد | 13 |
| 22 x 14 | ایک عدد پختہ دوکان | 5-6/L | شاہ جیونہ | محمد اسلام ولد شیر محمد | 14 |
| 22 x 14 | ایک عدد پختہ دوکان | 5-6/L | شاہ جیونہ | محمد سیلم ولد شیر محمد | 15 |
| 44 x 28 | ایک عدد پختہ دوکان | 5-6/L | شاہ جیونہ | یسن انور ولد شیر محمد | 16 |
| 22 x 12 | ایک عدد پختہ دوکان | 5-6/L | شاہ جیونہ | علی محمد ولد بکھوال | 17 |
| 14 x 18 | ایک عدد پختہ دوکان وسروس سٹیشن | 5-6/L | شاہ جیونہ | حاجی ذوالفقار ولد راجہ خان | 18 |
| 14 x 18 | ایک عدد پختہ دوکان | 5-6/L | شاہ جیونہ | قمیر عباس ولد محمد بخش | 19 |
| 18 x 27 | دوعدددوکان پختہ ورکشاب | 5-6/L | شاہ جیونہ | ملک محمد رمضان ولد سلطان | 20 |
| 18 x 27 | دو عدد پختہ دوکان | 5-6/L | شاہ جیونہ | شاہ بیگ ولد جیون لدھیانہ | 21 |
| 10 x 18 | ایک عدد پختہ دوکان | 5-6/L | شاہ جیونہ | نور محمد ولد جیون | 22 |
| 9 x 14 | ایک عدد پختہ دوکان | 5-6/L | شاہ جیونہ | ڈاکٹ محمد عبدالللہ ولد محمد علی قاضی | 23 |
| 9 x 14 | ایک عدد پختہ دوکان | 5-6/L | شاہ جیونہ | محمد اقبال ولد احمدعلی | 24 |
| 14 x 12 | ایک عدد پختہ دوکان | 5-6/R | شاہ جیونہ | ملک ناصرعلی ولد بہادر | 25 |
| 14 x 12 | ایک عدد پختہ دوکان | 5-6/L | شاہ جیونہ | محمدعارف ولد بہادر | 26 |
| 14 x 18 | ایک عدد پختہ دوکان | 5-6/R  **19** | شاہ جیونہ | احمد علی ولد الللہ بخش  **XEN SGD** | 27 |
| 18 x 14 | ایک عدد پختہ دوکان | 5-6/R | شاہ جیونہ | صفدر ولد غلام احمد | 28 |
| 19 x 8 | دو عدد پختہ دوکان | 5-6/R | شاہ جیونہ | امیر علی ولد الللہ یار بالی | 29 |
| 19 x 9 | ایک عدد پختہ دوکان | 5-6/R | شاہ جیونہ | ممتاز ولد نور محمد | 30 |
| 19 x 9 | ایک عدد دوکان سائیکل ورکس | 5-6/R | شاہ جیونہ | محمد وسیم ولد طالب حسین | 31 |
| 25 x 12 | ایک عدد پختہ دوکان | 5-6/R | شاہ جیونہ | خالد ولد بکھوال | 32 |
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| 13 x 14 | ایک عدد پختہ دوکان | 5-6/L | شاہ جیونہ | محمد خان ولد خان محمد | 34 |
| 13 x 14 | ایک عدد پختہ دوکان | 5-6/L | شاہ جیونہ | غلام علی ولد شماں | 35 |
| 13 x 14 | ایک عدد پختہ دوکان | 5-6/L | شاہ جیونہ | حاکم علی ولد شماں | 36 |
| 14 x 6 | ایک عددکھوکھا | 5-6/R | شاہ جیونہ | سید غلام عباس ولد نذیر شاہ | 37 |
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| 14 x 14 | ایک عدد پختہ دوکان | 5-6/R | شاہ جیونہ | غلام جعفر ولد جین | 39 |
| 14 x 14 | ایک عدد پختہ دوکان | 5-6/R | شاہ جیونہ | محمد حسین ولد محمد یوسف | 40 |
| 18 x 10 | ایک عدد پختہ دوکان | 5-6/R | شاہ جیونہ | چاکر علی ولدمختار حسین | 41 |
| 18 x 14 | ایک عدد پختہ دوکان | 5-6/R | شاہ جیونہ | سجاد حسین ولد اللہ دتہ | 42 |
| 20 x 14 | ایک عدد پختہ حجام | 5-6/R | شاہ جیونہ | ضیائ اللہ ولد محمد نواز | 43 |
| 11 x 25 | ایک عدد پختہ ہوٹل | 5-6/R | شاہ جیونہ | گلزار حسین ولدغلام محمد | 44 |
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| 14 x 10 | ایک عدد پختہ دوکان | 5-6/R | شاہ جیونہ | سجاد علی ولد بکھوال | 47 |
| 14 x 10 | ایک عدد پختہ دوکان | 5-6/R | شاہ جیونہ | غلام حسین ولد محمد رشید | 48 |
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| 24 x 14 | ایک عدد پختہ دوکان | 5-6/R | شاہ جیونہ | حاجی شیر عباس ولد فضل عباس | 51 |
| 8 x 8 | ایک عددکھوکھا | 5-6/R | شاہ جیونہ | ذوالفقار علی ولد محمد بخش | 52 |
| 20 x 10 | ایک عدد پختہ دوکان | 5-6/R | شاہ جیونہ | پپو ولد جیون بخش | 53 |
| 40 x 14 | تین عدد پختہ دوکان | 5-6/R | شاہ جیونہ | غلام مصطفے ولد نبی بخش | 54 |
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| 13 x 12 | ایک عدد پختہ دوکان | 6-7/L | شاہ جیونہ | محمد آصف ولد محی الدین | 60 |
| 20 x 14 | ایک عدد پختہ دوکان | 6-7/L | شاہ جیونہ | نیک محمد ولد احمد | 61 |
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| 150 x 30 | رائس ملز دیواری بمہ کنڈا | 11-12/L | شاہ جیونہ | نثار احمد ولد محمد | 64 |
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| 15 x 25 | دو عدد پختہ دوکان | 0-1//L | شاہ جیونہ | محمد نواز ولد ذوالفقار علی | 66 |
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| 25 x 48 | دو عدد پختہ مکان | 23-24/L | شاہ جیونہ | محمد جاوید ولد ذوالفقار | 78 |
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| 36 x 18 | دو عددپختہ مکان | 50-51/L | شاہ جیونہ | نذیر احمد ولد محمد خان | 117 |
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| 45 x 80 | چار عددپختہ مکان | 50-51/L | شاہ جیونہ | محمدخان۔احمد خان۔پسران شہا مند خان | 136 |
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| 20 x 30 | لکڑی آرا | 51-52/L | شاہ جیونہ | غلام عباس ولد محمد | 138 |
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| 40 x 60 | دو عددپختہ مکان ، چاردیواری گیٹ | 51-52/L | شاہ جیونہ | ڈاکٹر محمد ایوب ولد | 141 |
| 40 x 90 | دو عددپختہ مکان | 51-52/L | شاہ جیونہ | حاجی امیر ولد احمد بخش | 142 |
| 60 x 120 | تین عددپختہ مکان خالی پلاٹ قبضہ | 51-52/L | شاہ جیونہ | محمد یعقوب ولد محمد رمضان | 143 |
| 30 x 60 | دو عددکچےمکان | 52-53/L | شاہ جیونہ | محمد عبداللہ ولد بختاور | 144 |
| 30 x 40 | ایک عدد پختہ مکان، ایک عددکچا مکان | 52-53/L | شاہ جیونہ | حاجی ؐحمد بخش ولد بختاور | 145 |
| 80 x 60 | ایک عدد پختہ مکان، ایک عددکچا مکان | 52-53/L | شاہ جیونہ | شمس الدین ولد بختاور | 146 |
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| 35 x 80 | چار عددپختہ مکان | 55-56/L | شاہ جیونہ | محمد اقبال۔محمد اسحاق پسران امیر قربانہ | 150 |
| 25 x 75 | چار عددپختہ مکان | 55-56/L  **23** | شاہ جیونہ | محمد افضل ولد غلام فرید  **XEN SGD** | 151 |
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|  |  |  |  |
| --- | --- | --- | --- |
| **Remarks** | **Balance No. of Encroachments** | **No. Of Encroachments Removed** | **Total No. of Encroachments** |
| The list of encroachment submitted to the DC Jhang but so far could not be removed. | 153 | NIL | 153 |

**­­­**

**Detail of critical encroachment on flood structure**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sr. No.** | **Total Encroachment** | **Removed** | **Remaining** | **Remarks** |
| **--------------- N I L ---------------** | | | | |

**XEN SGD**

**24**

***Chapter-9***

***Duty Roster/Flood Fighting Program***

**DUTY ROSTER/BATTLE STATIONS OF KEY PERSONNEL DURING HIGH FLOOD FLOW.**

|  |  |  |  |
| --- | --- | --- | --- |
| **Key Personal** | **Battle Stations** | **Canals** | **Sub Division.** |
| Sub Engineer Sultanpur  **0301-7186502** | RD: 65-66 Sahiwal, at Lakhiwal Road | Sahiwal Disty: | Sultanpur |
| Sub Engineer Budhewala.  **0306-4587539** | RD: 29  Gondal Minor | Gondal Minor | Sultanpur |
| Sub Engineer Nurewala.  **0301-2252382** | RD: 107-108 at  Canal Rest House Dhaulka | Nurewala Disty | Sultanpur |
| SDO Sultanpur  **0345-6790160** | Over all incharge | Nurewala Disty: | Sultanpur |
| Sub Engineer Mangowali  **0302-1153684** | RD: 160 | Naurang Disty: | Shahjewana |
| Sub Engineer Kariwala  **0300-0850142** | J-Head Spur No. 1 | Masson Flood Bund | Shahjewana |
| Sub Engineer Shahjewana  **0301-6799187** | J-Head Spur No. 2 | Masson Flood Bund | Shahjewana |
| SDO Shahjewana  **0300-6036742** | Over all incharge | Masson Flood Bund and J-Head Spur | Shahjewana |

**XEN SGD**

**25**

***Chapter-10***

***Emergency Telephone No.***

|  |  |  |  |
| --- | --- | --- | --- |
| **Sr.#** | **Name of Post & Designation** | **Telephone No.** | |
| **Office** | **Residence/Cell** |
| 1 | Chief Engineer, Sargodha Irrigation Zone Sargodha. | 048-9230445 Fax 048-9230414 | 048-9230451 0333-6941690 |
| 2 | Flood Emergency Officer/Executive Engineer (OP) Sargodha Irrigation Zone Sargodha. | 048-99230446 Fax 048-9230414 | 0300-6363739 |
| 3 | Chief Engineer, Drainage and Flood Zone Lahore. | 042-99233551 Fax 042-99230731 | 0300-6999490 |
| 4 | Director Flood Drainage and Flood Zone Lahore. | 042-99230282 Fax 35862081 | 0323-4864378 |
| 5 | Deputy Director Flood Drainage and Flood Zone Lahore. | 042-99230282 | 0300-6362154 |
| 6 | Flood Warning Center Jail Road Lahore. | 042-99205371-2 | - |
| 7 | Superintending Engineer Lower Jhelum Canal Circle Sargodha. | 048-9230413 Fax 048-9230832 | 048-9230463 |
| 8 | Superintending Engineer Drainage Circle Sargodha. | 048-9230450 | 0333-8161746 |
| 9 | Executive Engineer, Sargodha Division L.J.C, Sargodha. | 048-9230409 Fax 048-9230918 | 0300-0147499 |
| 10 | Executive Engineer, Kirana Division L.J.C, Sargodha. | 048-9230399 | 0345-5165764 |
| 11 | Executive Engineer, Shahpur Division L.J.C, Sargodha. | 048-9230447 Fax 048-9230836 | 048-9230003 0344-4132393 |
| 12 | Executive Engineer, Bhalwal Division L.J.C, Bhalwal. | 048-9230406 | 0300-6363739 |
| 13 | District Coordination Officer Sargodha. | 048-9230025 048-9230026 | 0304-0920074 |
| 14 | District Coordination Officer Jhang. | 047-625881 | 047-613300 |
| 15 | District Police Officer Sargodha. | 048-9230897 | 048-9230444 |
| 16 | District Police Officer Jhang | 047-9200445-46 | 047-6330023 |
| 17 | Executive Engineer, Drainage Division Sargodha. | 048-9230453 | 0333-8899931 |
| 18 | Incharge Vigilance Cell Irrigation & Power Department Punjab Lahore. | 042-9213157 | - |
| 19 | Telegraph Office Sargodha (Flood Emergency Center Sargodha) | 9230408 | 9230408 |
| 20 | Sub Divisional Officer, Shahjewana Sub Division | - | 0300-6036742 |
| 21 | Sub Divisional Officer, Ara Sub Division | 048-9230918 | 0300-8699866 |
| 22 | Sub Divisional Officer, Sultanpur Sub Division. | - | 0345-6790160 |
| 23 | Sub Engineer Shahjewana Section At Shahjewana Rest House. | - | 0301-6799187 |
| 24 | Sub Engineer Sultanpur Section At Sultanpur Rest House. | - | 0301-7186502 |
| 25 | Sub Engineer, Mangowali Section | - | 0302-1153684 |
| 26 | Sub Engineer, Kariwala Section | - | 0300-0850142 |

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***Chapter-11***

***Standard operating procedure (SOP) for Breaching Sections***

***11.1 History of the breaching section***

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

***11.3 Arrangement of explosives and security of explosive stores***

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

***11.5 Detail of mechanical means as a standby arrangements in case of detonation failure***

***11.6 Duty Roster in case of critical situation***

***11.7 Breaching Committee with their action plan***

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

***11.9 Announcement and detail of evacuation arrangements***

***11.10 Details of coordination with Civil/Army Authorities***

***11.11 Parallel communication arrangements***

***11.12 Index Plan***

There is no Breaching Section in Sargodha Canal Division Sargodha. Hence actions mentioned from serial No. 11.1 to 11.12 are not applicable.

***Sub* *Divisional Officer,* *Executive Engineer,***

Shahjewana Sub Division L.J.C, Sargodha Division L.J.C,

At Ramdana Rest House. Sargodha.

***Superintending Engineer,***

Lower Jhelum Canal Circle,

Sargodha.

***Chief Engineer,***

Sargodha Irrigation Zone,

Sargodha.

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FLOOD FIGHTING PLAN- 2024.

PART – B

***Chapter-12***

***Vulnerable sites on Flood Bund/Structures:***

***12.1 Apprehended breach sites in Flood Bunds/Structures***

There are following vulnerable sites along flood bunds in Sargodha Canal Division Sargodha.

|  |  |  |
| --- | --- | --- |
| **Sr. No.** | **Location** | **No. of sites** |
| 1 | Between RD 31-35 Masson Flood Bund near village Alipur (Shahjewana Town) Tehsil & District Jhang | 01 No. |
| 2 | Between RD 64-65 Embankment along Sahiwal Disty apposite Sahiwal Town District Sargodha. | 01 No. |

* 1. ***Operation of breaching section.***

There is no breaching section exist in this Division.

* 1. ***Breaches due to Rising of flood water, deterioration of flood bund etc.***

No Such.

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***Chapter-13***

***Emergency Contingency Plan for vulnerable sites (sites)***

***listed above. Emergency Contingency Plan must include:-***

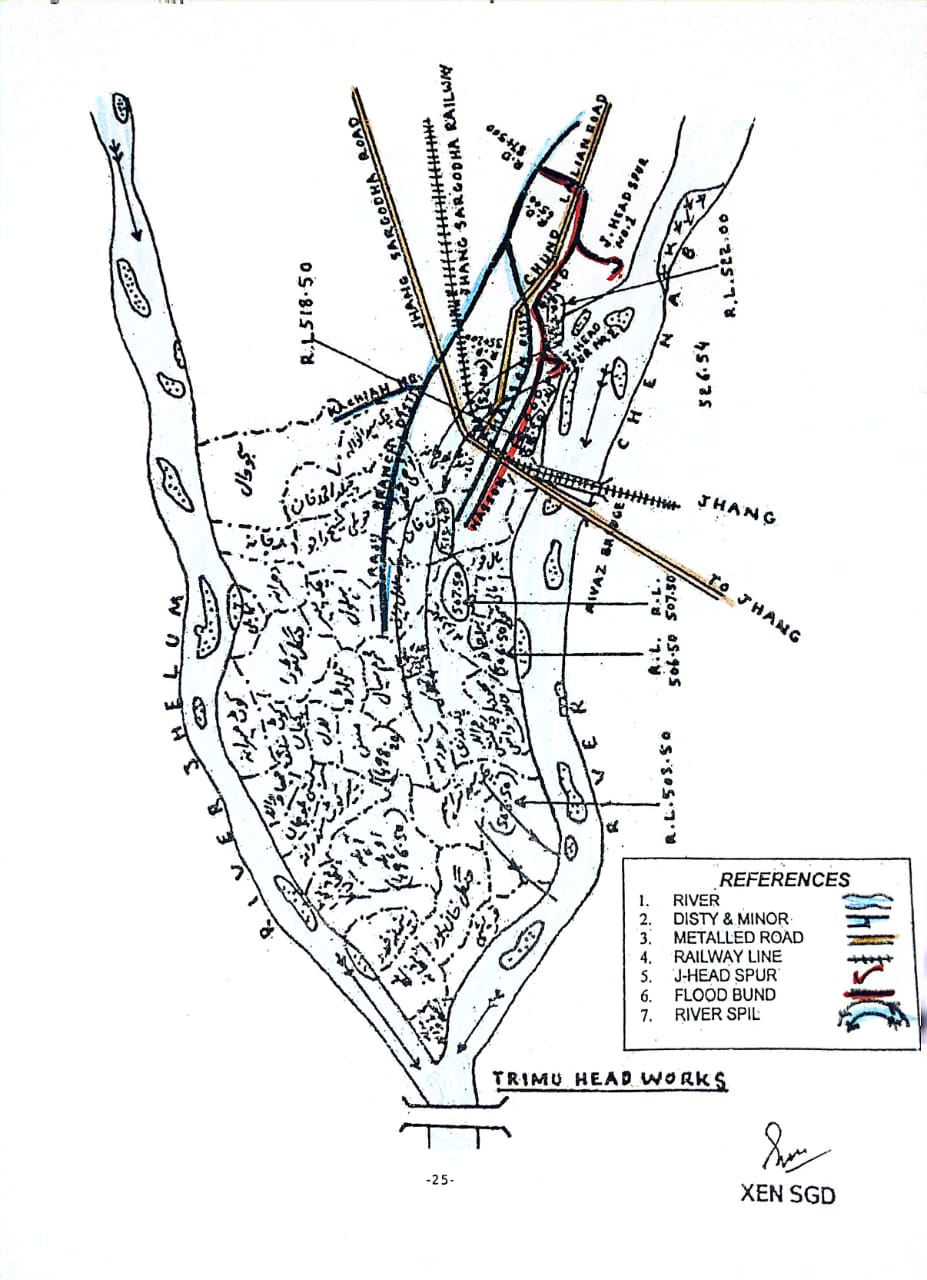
* 1. ***Plan showing route of Flood Water coming out of the breach supported with levels.***

***Plan for site No. 01 (Between RD 31-35 Masson Flood Bund)***

A plan showing the route of expected flood water coming out of mishap site between RD 31-35 Masson Flood Bund near Shahjewana Town in Tehsil & District Jhang is given as under:-

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***13.2 Detail of villages abadies likely to be affected and this should also be shown on the plan.***

The detail of 41 No. villages of Tehsil & District Jhang which are likely to be inundated has given as under;-

1)Kot Khan 2)Havali Dewan, 3)Chak Balo 4)Chan wala 5)Zinda Shah 6)Rajana 7)Chak Sayyadan wala 8)Jangle Katora 9)Sajhowal 10)Chund 11) Dharama 12)Hassn Khan 13)Budhi Thatti 14)Hawd 15)Sheikh Raju 16)Kabli 17)Kot Bura 18)Chela Ahmad Khan 19)Dheraha 20)Sohra 21)Chak Pir Bahlol 22)Chak Jalal Din 23)Chak Sialanwali 24)Bali Nathu 25)Bal Kura 26)Bhela Chand 27)Bhon Wala 28)Chak Ganesh Das 29)Chak Darzi Wala 30)Medarisa 31)Masson 32)Mahram Sial 33)Sajjar Kelason 34)Kot Cang Khichian 35)Joho Wala 36)Lal 37)Kot Sirana 38)Basti Blochian 39)Pir Kot Sidraha 40)Bela Butta Wala 41)Madarisa

***13.3 Strategy and action taken be explained in detail. This may include.***

***13.3.1 Arrangements***

The spilled out water will inundate the area on right side of Masson Flood Bund. The flood water will spread up in the adjoining area in a height of 3 ft to 4 ft range only. The RLs of the area are ranging from 518 to 503. This spilled out water however may cause damage to the Railway line, Sargodha-Jhang Pacca Road near Chund Railway Station, Government Schools, standing crops, private property like Kacha Houses / Deras and canal i.e. tail portion of Raju Branch Disty.

The spilled out water from breach site after crossing Railway Line and pacca road leading from Sargodha to Jhang will fall in the River Chenab again much D/S of Masson Flood Bund / Masson Disty near villages Bhonwala, Chak Darziwala, Chak Ghanish and Dheer Mona where RL are ranging from RL 506 to RL 503 and fall in the River Chenab.

The Incharge ***Sub Sector* *Sub Divisional Officer, Shahjewana Canal Sub Division*** and ***Deputy Collector Sargodha Canal Division Sargodha*** taking the cognizance of situation will make liaison with the civil administration and Police Department and also arrange the following;-.

* 1. Proclamation on loudspeakers etc for evacuation of abadies inside the route of flood water
  2. Prepare maps for the area inundated and carry out immediate survey for damages to crops and other properties.
  3. Flood Camps have been proposed to be established between RD 53-54 Masson Flood Bund at a high level near Jhang-Sargodha Pacca Road crossing to monitor the emergent flood situation. If any obstruction found coming in the way of flood water, it would be removed by deploying establishment and machines such like Tractors, Excavator Machines and Bulldozers as per situation prevailing at site. Efforts would be made that flood water may not stand in crops as well as abadies and to minimize the losses / damages and ultimately this flood water will fall again in the River Chenab in the shortest possible time.

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* 1. Keep a close liaison with Civil Administration, Public Representatives, Army authorities and the Executive Engineer Sargodha Canal Division Sargodha. List of Phone numbers of above authorities have been mentioned in this flood fighting plan.

***13.3.2 Establishment of Flood Fighting Camps.***

|  |  |  |
| --- | --- | --- |
| **Sr. No.** | **Description of Flood Fighting Camps** | **Location of Camps** |
| **1** | Masson Flood Bund | At start of J-Head Spur No 1 at RD: 16+500Masson Flood Bund. |
| **2** | Masson Flood Bund | At start of J-Head Spur No 2 at RD: 35+200 Masson Flood Bund. |
| **3** | Masson Flood Bund | Between RD: 53-54 Junction of Masson Flood Bund with Sargodha –Jhang Pacca Road near Chund Bus Stop. |

***13.3.3 Duties of Officers/Officials and their camp sites***

|  |  |  |  |
| --- | --- | --- | --- |
| **Key Personal** | **Battle Stations** | **Camp** | **Sub Division.** |
| **Sub Engineer**  **Kariwala Section**  **0300-085142** | J-Head Spur  No. 1 | At start of J-Head  Spur No 1 | Shahjewana |
| **Sub Engineer**  **Shahjewana section**  **0301-6799187** | J-Head Spur  No. 2 | At start of J-Head Spur No 2 and between RD 53-54 Junction of Masson Flood Bund with Sargodha –Jhang Road near Chund Bus Stop. | Shahjewana |
| **SDO Shahjewana Sub Division**  **0300-6036742** | Over all in charge of Masson Flood Bund and J-Head Spur  No 1&2 | Between RD 53-54 Junction of Masson Flood Bund with Sargodha –Jhang Pacca Road near Chund Bus Stop. | Shahjewana |

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***13.3.4 Departmental Machinery available***

There is no departmental machinery in control of Sargodha Canal Division Sargodha. However in case of any emergency during flood season 2018, the Government Machinery / Bulldozers of Agricultural Engineering Department Division at Sargodha will be arranged.

***13.3.5 Machinery available from Private Source***

If machinery is needed it will be arranged / hired from private source such as Tractors, Excavator Machine and these are easily available in this area.

***13.3.6 Flood Fighting Material required***

***Material for site No. 01 (Between RD 31-35 Masson Flood Bund)***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sr. No.** | **Description** | **Unit** | **Required Qty:** | **Remarks** |
| 1 | Motor boat | **Per No.** | 1 | The deficient quantity of Flood Fighting material will be procured before start of Flood season. |
| 2 | Axes | Per No. | 9 |
| 3 | Bamboos 8' to 10' (for Lighting arrangements) | Per No. | 60 |
| 4 | Baskets (Toot) | Per No. | 15 |
| 5 | Buckets Plastic | Per No. | 15 |
| 6 | Cell for Torches | Per No. | 108 |
| 7 | Chimneys for Lamps | Per No. | 9 |
| 8 | Chouldaries | Per No. | 3 |
| 9 | E.G. Bags | Per No. | 150 |
| 10 | Energy Savers | Per No. | 30 |
| 11 | Folding Chair | Per No. | 13 |
| 12 | Folding Table | Per No. | 3 |
| 13 | Funnels | Per No. | 9 |
| 14 | G.I. Buckets | Per No. | 4 |
| 15 | Gas Mentles | Per No. | 30 |
| 16 | Generator | Per No. | 3 |
| 17 | Hand Saws | Per No. | 3 |
| 18 | Handle for Kassi / Axes | Per No. | 30 |
| 19 | Holder for Lamp | Per No. | 30 |
| 20 | Kassi with Handles | Per No. | 30 |
| 21 | Kerosene Oil | Per Liter | 150 |
| 22 | Killas | Per No. | 60 |
| 23 | Lanterns | Per No. | 9 |
| 24 | Life Belt | Per No. | 9 |
| 25 | M. Oil | Per Liter. | 30 |
| 26 | Manila Rope | Per No. | 3 |
| 27 | Match Boxes | Per Packet. | 6 |
| 28 | Munj / Patha / Trungers | Munds. | 3 |
| 29 | Needles | Per No. | 30 |
| 30 | Oil Extractors | Per No. | 3 |
| 31 | Patromax | Per No. | 3 |
| 32 | Petrol | Per Liter. | 150 |
| 33 | Rain Coats | Per No. | 15 |
| 34 | Steel Charpoy | Per No. | 6 |
| 35 | Sutli | Per Kg. | 15 |
| 36 | Switch / Plugs | Per No. | 60 |
| 37 | Torches 3 cells | Per No. | 15 |
| 38 | Umbrella | Per No. | 30 |
| 39 | Wicks | Per Packet. | 30 |
| 40 | Wires 7/29 | Per Rft | 300 |
| 41 | Wooden Boards 10 x 12 | Per No. | 15 |
| 42 | Wooden Hammers  **32** | Per No. | 3  **XEN SGD** |

***13.3.7 Flood Fighting Material available***

Flood fighting material as per minimum requirement had been procured last year and now available.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Sr. No.** | **Description** | **Unit** | **Required** | **Available** | **Balance** | **Location** |
| 1 | Motor boat | **Per No.** | 1 | 1 | 0 | Sufficient material available at site at Shahjewana Canal Rest House |
| 2 | Axes | Per No. | 9 | 9 | 0 |
| 3 | Bamboos 8' to 10' (for Lighting arrangements) | Per No. | 60 | 60 | 0 |
| 4 | Baskets (Toot) | Per No. | 15 | 15 | 0 |
| 5 | Buckets Plastic | Per No. | 15 | 15 | 0 |
| 6 | Cell for Torches | Per No. | 108 | 108 | 0 |
| 7 | Chimneys for Lamps | Per No. | 9 | 9 | 0 |
| 8 | Chouldaries | Per No. | 3 | 3 | 0 |
| 9 | E.G. Bags | Per No. | 150 | 150 | 0 |
| 10 | Energy Savers | Per No. | 30 | 30 | 0 |
| 11 | Folding Chair | Per No. | 13 | 13 | 0 |
| 12 | Folding Table | Per No. | 3 | 3 | 0 |
| 13 | Funnels | Per No. | 9 | 9 | 0 |
| 14 | G.I. Buckets | Per No. | 4 | 4 | 0 |
| 15 | Gas Mantles | Per No. | 30 | 30 | 0 |
| 16 | Generator | Per No. | 3 | 3 | 0 |
| 17 | Hand Saws | Per No. | 3 | 3 | 0 |
| 18 | Handle for Kassi / Axes | Per No. | 30 | 30 | 0 |
| 19 | Holder for Lamp | Per No. | 30 | 30 | 0 |
| 20 | Kassi with Handles | Per No. | 30 | 30 | 0 |
| 21 | Kerosene Oil | Per Liter | 150 | 150 | 0 |
| 22 | Killas | Per No. | 60 | 60 | 0 |
| 23 | Lanterns | Per No. | 9 | 9 | 0 |
| 24 | Life Belt | Per No. | 9 | 9 | 0 |
| 25 | M. Oil | Per Liter. | 30 | 30 | 0 |
| 26 | Manila Rope | Per No. | 3 | 3 | 0 |
| 27 | Match Boxes | Per Packet. | 6 | 6 | 0 |
| 28 | Munj / Patha / Trungers | Munds. | 3 | 3 | 0 |
| 29 | Needles | Per No. | 30 | 30 | 0 |
| 30 | Oil Extractors | Per No. | 3 | 3 | 0 |
| 31 | Patromax | Per No. | 3 | 3 | 0 |
| 32 | Petrol | Per Liter. | 150 | 150 | 0 |
| 33 | Rain Coats | Per No. | 15 | 15 | 0 |
| 34 | Steel Charpoy | Per No. | 6 | 6 | 0 |
| 35 | Sutli | Per Kg. | 15 | 15 | 0 |
| 36 | Switch / Plugs | Per No. | 60 | 60 | 0 |
| 37 | Torches 3 cells | Per No. | 15 | 15 | 0 |
| 38 | Umbrella | Per No. | 30 | 30 | 0 |
| 39 | Wicks | Per Packet. | 30 | 30 | 0 |
| 40 | Wires 7/29 | Per Rft | 300 | 300 | 0 |
| 41 | Wooden Boards 10 x 12 | Per No. | 15 | 15 | 0 |
| 42 | Wooden Hammers | Per No. | 3 | 3 | 0 |

* 1. ***Detail of other infrastructure like electric, Sui Gas, Telephone installations, road network, other buildings, canals and drainage network.***

No such installations like Sui Gas and Telephone etc exist in the route of flood water from breach / mishap site. Breach water after passing through X-Drainage works already existing under the Railway track, Sargodha-Jhang Pacca Road near Chund Railway Station, Railway line, Schools, standing crops, private property like Kacha Houses / Deras and canal i.e. tail portion of Raju Branch Disty would be affected

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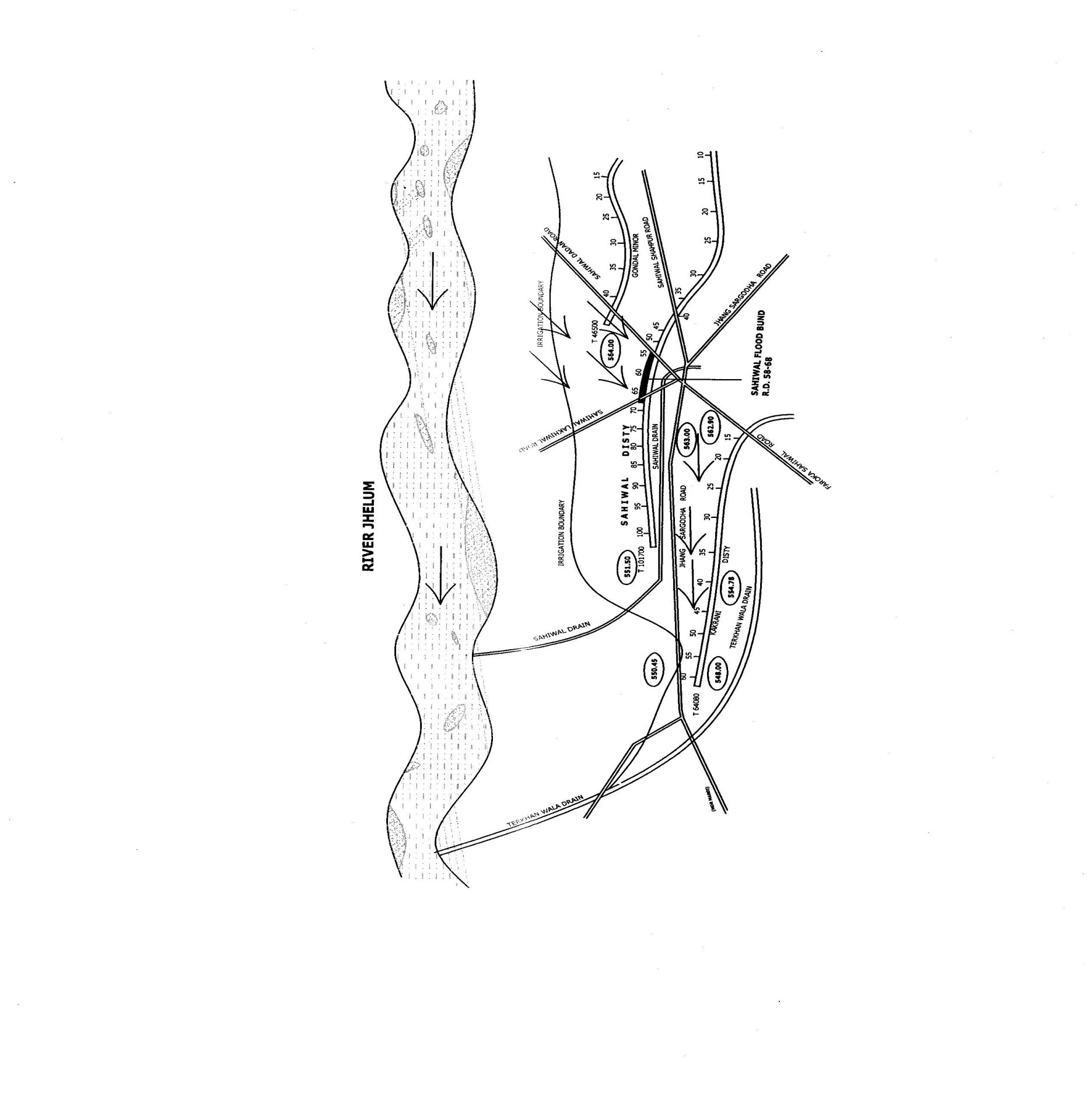
**33**

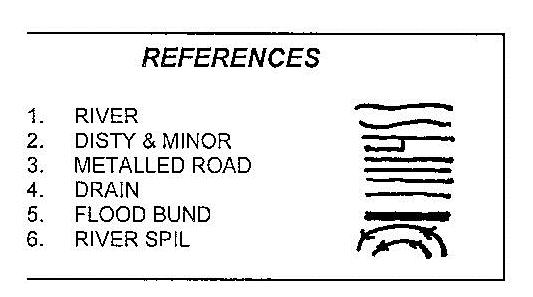
* 1. ***Plan showing route of Flood Water coming out of the breach***

***supported with levels.***

***Plan for site No. 02***

***(Between RD 64-65 Embankment along Sahiwal Disty)***

A plan showing the route of expected flood water coming out of mishap site Between RD 65-68 Embankment along Sahiwal Disty apposite Sahiwal Town District Sargodha is given as under:-



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***Detail of villages abadies likely to be affected and this should also be shown on the plan.***

The detail of 18 No. villages of Tehsil Sahiwal & District Sargodha which are likely to be inundated has given as under:-

1) Sahiwal 2) Dhool Bala 3) Thatti Said Shamir 4) Buga Blocha 5) Sial Sharif 6) Mohib Pur 7) Toder Pur 8) Meta 9) Salaka 10) Pohla 11) Buder Bhon 12) Thatti Sahbazada 13) Aki 14) Sheikh Jalil 15) Nehang 16) Fetha Wala 17) Jahania Shah 18) Nurewala

***13.3 Strategy and action taken be explained in detail.This may include.***

***13.3.1 Arrangements***

The spilled out water will inundate the area on left side of Embankment along Sahiwal Disty starting from D/S of Main Sahiwal Town. The flood water will spread up in the adjoining area in a height of ranging from 04 ft to 05 ft height. The RLs of the area are ranging from 561.00 to 552.50. This spilled out water may inundate the adjoining agricultural lands located D/S of the Sahiwal Town, Sial Sharif Town, Nehang Town and other small abadies including higher Secondary Schools, Government Offices, Electric lines, Sargodha-Jhang Pacca Road near Sahiwal Town, standing crops, private property like Kacha Houses / Deras and canals i.e. the tail portion of Sahiwal and Kakrani Disty. Flood water from breach site will flow parallel to Sahiwal drain and Sargodha-Jhang road. The flood water will over top the Sahiwal drain and also cross / over flow the Sargodha-Jhang road at some places. Finally it will fall in the Terkhanwala Drain much D/S of tail of Sahiwal Disty which carries the flood water again in the River Jhelum where RL are ranging from RL 552.50 to RL 545.85.

The Incharge ***Sub Sector* *Sub Divisional Officer, Sultanpur Canal Sub Division*** and ***Deputy Collector Sargodha Canal Division Sargodha*** taking the cognizance of situation will make liaison with the civil administration and Police Department for necessary help and also arrange the following:-

* + - 1. Proclamation on loudspeakers etc for evacuation of abadies inside the route of flood water.
      2. Prepare maps for the area inundated and carry out immediate survey for damages to crops and other properties.
      3. Flood Camps have been proposed to be established between RD 65-68 Sahiwal Disty at a high level near Sahiwal to Lakhiwal Pacca Road to monitor the emergent flood situation. If any obstruction found coming in the way of flood water, it would be removed by deploying establishment and machines such like Tractors, Excavator Machines and Bulldozers as per situation prevailing at site. Efforts would be made that flood water may not stand in crops as well as abadies and to minimize the losses / damages and ultimately this flood water will fall again in the River Jhelum in the shortest possible time.

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* + - 1. Keep a close liaison with Civil Administration, Public Representatives, Army authorities and the Executive Engineer Sargodha Canal Division Sargodha. List of Phone numbers of above authorities have been mentioned in this flood fighting plan.

***13.3.2 Establishment of Flood Fighting Camps.***

|  |  |  |
| --- | --- | --- |
| **Sr. No.** | **Description of Flood Fighting Camps** | **Location of Camps** |
| **1** | Sahiwal Disty. | RD: 65-66 at Sahiwal, Lakhiwal Road |
| **2** | Gondal Minor. | RD: 29-30 |
| **3** | Nurewala Disty | RD: 107-108 at Canal Rest House Dhaulka |

***13.3.3 Duties of Officers/Officials and their camp sites***

|  |  |  |  |
| --- | --- | --- | --- |
| **Key Personal** | **Battle Stations** | **Location** | **Sub Division.** |
| SDO Sultanpur  **0345-6790160** | RD: 65-66 at Sahiwal, Lakhiwal Road and  Over all incharge of flood fighting activities in Sultanpur Sub Division | Sahiwal Disty: | Sultanpur |
| Sub Engineer Sultanpur  **0301-7186502** | RD: 65-66 at Sahiwal, Lakhiwal Road | Sahiwal Disty: | Sultanpur |
| Sub Engineer Budewala.  **0306-4587539** | RD: 29-30  Godal Minor | Gondal Minor | Sultanpur |
| Sub Engineer Nurewala.  **0301-2252382** | RD: 107-108 at  Canal Rest House Dhaulka | Nurewala Disty | Sultanpur |

***13.3.4 Departmental Machinery available***

There is no departmental machinery in control of Sargodha Canal Division Sargodha. However in case of any emergency during flood season 2022, the Government Machinery / Bulldozers of Agricultural Engineering Department Punjab will be arranged.

***13.3.5 Machinery available from Private Source***

If machinery is needed it will be arranged / hired from private source such as Tractors, Excavator Machine and these are easily available in this area.

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***13.3.6 Flood Fighting Material required***

***Material for site No. 02***

***(Between RD 64-65 Embankment along Sahiwal Disty)***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sr. No.** | **Description** | **Unit** | **Required** | **Location** |
| 1 | Axes | Per No. | 9 | Sufficient material available at site at Sultanpur Canal Rest House |
| 2 | Bamboos 8' to 10' (for Lighting arrangements) | Per No. | 60 |
| 3 | Baskets (Toot) | Per No. | 15 |
| 4 | Buckets Plastic | Per No. | 15 |
| 5 | Cell for Torches | Per No. | 108 |
| 6 | Chimneys for Lamps | Per No. | 9 |
| 7 | Chouldaries | Per No. | 3 |
| 8 | E.G. Bags | Per No. | 150 |
| 9 | Energy Savers | Per No. | 30 |
| 10 | Folding Chair | Per No. | 13 |
| 11 | Folding Table | Per No. | 3 |
| 12 | Funnels | Per No. | 9 |
| 13 | G.I. Buckets | Per No. | 4 |
| 14 | Gas Mentles | Per No. | 30 |
| 15 | Generator | Per No. | 3 |
| 16 | Hand Saws | Per No. | 3 |
| 17 | Handle for Kassi / Axes | Per No. | 30 |
| 18 | Holder for Lamp | Per No. | 30 |
| 19 | Kassi with Handles | Per No. | 30 |
| 20 | Kerosene Oil | Per Liter | 150 |
| 21 | Killas | Per No. | 60 |
| 22 | Lanterns | Per No. | 9 |
| 23 | Life Belt | Per No. | 9 |
| 24 | M. Oil | Per Liter. | 30 |
| 25 | Manila Rope | Per No. | 3 |
| 26 | Match Boxes | Per Packet. | 6 |
| 27 | Munj / Patha / Trungers | Munds. | 3 |
| 28 | Needles | Per No. | 30 |
| 29 | Oil Extractors | Per No. | 3 |
| 30 | Patromax | Per No. | 3 |
| 31 | Petrol | Per Liter. | 150 |
| 32 | Rain Coats | Per No. | 15 |
| 33 | Steel Charpoy | Per No. | 6 |
| 34 | Sutli | Per Kg. | 15 |
| 35 | Switch / Plugs | Per No. | 60 |
| 36 | Torches 3 cells | Per No. | 15 |
| 37 | Umbrella | Per No. | 30 |
| 38 | Wicks | Per Packet. | 30 |
| 39 | Wires 7/29 | Per Rft | 300 |
| 40 | Wooden Boards 10 x 12 | Per No. | 15 |
| 41 | Wooden Hammers | Per No. | 3 |
| 42 | Synthetic Bags | Per No. | 500 |
| 43 | Polythene sheet Black color | Per Sft | 5000 |

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***13.3.7 Flood Fighting Material available***

Flood fighting material as per minimum requirement had been procured last year and now available.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sr. No.** | **Description** | **Required** | **Available** | **Balance** |
| 1 | Axes | 9 | 9 | 0 |
| 2 | Bamboos 8' to 10' (for Lighting arrangements) | 60 | 60 | 0 |
| 3 | Baskets (Toot) | 15 | 15 | 0 |
| 4 | Buckets Plastic | 15 | 15 | 0 |
| 5 | Chouldaries | 3 | 3 | 0 |
| 6 | E.G. Bags | 150 | 150 | 0 |
| 7 | Energy Savers | 30 | 30 | 0 |
| 8 | Folding Chair | 13 | 13 | 0 |
| 9 | Folding Table | 3 | 3 | 0 |
| 10 | Funnels | 9 | 9 | 0 |
| 11 | G.I. Buckets | 4 | 4 | 0 |
| 12 | Gas Mentles | 30 | 30 | 0 |
| 13 | Generator | 3 | 3 | 0 |
| 14 | Hand Saws | 3 | 3 | 0 |
| 15 | Handle for Kassi / Axes | 30 | 30 | 0 |
| 16 | Holder for Lamp | 30 | 30 | 0 |
| 17 | Kassi with Handles | 30 | 30 | 0 |
| 18 | Kerosene Oil | 150 | 150 | 0 |
| 19 | Killas | 60 | 60 | 0 |
| 20 | Life Belt | 9 | 9 | 0 |
| 21 | M. Oil | 30 | 30 | 0 |
| 22 | Manila Rope | 3 | 3 | 0 |
| 23 | Match Boxes | 6 | 6 | 0 |
| 24 | Munj / Patha / Trungers | 3 | 3 | 0 |
| 25 | Needles | 30 | 30 | 0 |
| 26 | Oil Extractors | 3 | 3 | 0 |
| 27 | Patromax | 3 | 3 | 0 |
| 28 | Petrol | 150 | 150 | 0 |
| 29 | Rain Coats | 15 | 15 | 0 |
| 30 | Steel Charpoy | 6 | 6 | 0 |
| 31 | Sutli | 15 | 15 | 0 |
| 32 | Switch / Plugs | 60 | 60 | 0 |
| 33 | Torches Rechargable | 15 | 15 | 0 |
| 34 | Umbrella | 30 | 30 | 0 |
| 35 | Wires 7/29 | 300 | 300 | 0 |
| 36 | Wooden Boards 10 x 12 | 15 | 15 | 0 |
| 37 | Wooden Hammers | 3 | 3 | 0 |

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13.4 ***Detail of other infrastructure like electric, Sui Gas, Telephone***

***installations, road network, other buildings, canals and***

***drainage network.***

Infrastructures like Electric, Telephone installations, roads, Drains, canals networks and buildings etc exist in the route of flood water and likely to be affected by the flood. Detail of important towns and other infrastructures which could be damaged is given as under:-

1. Higher Secondary Boys & Girls Schools, High Schools, Primary Schools, Rural Health Centers, Electric lines, Telephone installations and other Government buildings located in villages or Union Councils Offices etc.

Following important towns will be affected partly by the spill of flood water:-

1. Sahiwal Town
2. Sial Sharif Town
3. Nehang

***Sub* *Divisional Officer,* *Executive Engineer,***

Sultanpur Sub Division L.J.C, Sargodha Division L.J.C,

At Sultanpur Rest House. Sargodha.

***Superintending Engineer,***

Lower Jhelum Canal Circle,

Sargodha.

***Chief Engineer,***

Sargodha Irrigation Zone,

Sargodha

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***Chapter-14***

***Action Plan***

**14.1 Reshuffling /Recouping Plan Of Reserve Stone Departmentally.**

Reshuffling of stone is not required as there is only one structure namely J-head Spur No. 1 and 2 of Masson Flood Bund where reserve stock of stone is proposed. With respect to recouping of reserved stone it will be purchased after calling tender before start of flood season 2024.

**14.2 Detail of inlet/outlet crossing along with closing methodology**

Following are the water course crossing on Masson flood bund in Sargodha canal division.

|  |  |  |
| --- | --- | --- |
| Sr No. | RD of water cource crossing | Closing Methodology |
| 01 | 112300/L | Water cource crossing will be plugged through earth filled Gunny bags when required. |
| 02 | 120000/L |
| 03 | 137567/L |
| 04 | 138000/L |
| 05 | 143354/L |
| 06 | 149358/L |
| 07 | 154330/TL |

Following are the water course crossing on Sahiwal flood bund in Sargodha canal division.

|  |  |  |
| --- | --- | --- |
| Sr No. | RD of water course crossing | Closing Methodology |
| 01 | 60800/R | Water course crossing will be plugged through earth filled Gunny bags when required. |
| 02 | 64000/R |
| 03 | 66000/R |

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**14.3 DEPLOYMENT OF MACHINERY ( MEDIUM TO HIGH FLOOD )**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Sr. No. | Name of structure | Length in mile | Vulnerable  Reach | Camp Location | Site Incharge by name & cell No. | Machinery Deployed | | | | | Availability of stone Lac Cft |
| Excavator | Dozer | Trolleys/  Dumpers | Tractor with front blade | Labour  Beldar + Mate |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| **FLOOD BUND ALONG RIVER CHENAB** | | | | | | | | | | | |
| 1 | Masson Flood Bund RD 0+000 to RD 66+800 tail. | 13.38 | RD 28-30 | At RD 35+200 | Sub Engineer Shahjewana Section Waqar Shah.  Cell No. 0301-6799187 | 2 | - | 6 | 2 | 78+8 | 0.68 Lac Cft stone at  J-Head Spur No. 1 and 0.33 Lac Cft stone at  J- Head Spur No. 2 |
| **FLOOD BUND ALONG RIVER JHELUM** | | | | | | | | | | | |
| 2 | Embankment along Sahiwal Disty RD 58+000 to RD 68+250 / R | 2.05 | RD 65-66 | At RD 66 | Sub Engineer Sultanpur Section. Mansab.  Cell No. 0301-7186502 | 1 | - | 3 | 1 | 2+1 | Stone is not required at this flood bund. |
| **Total** | | | | | | 3 | - | 9 | 3 | 80+9 |  |

\* Payment for machinery & work charge employees subject to verification by TPM/consultants.

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**14.4 DEPLOYMENT OF MACHINERY (HIGH TO VERY HIGH FLOOD)**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Sr. No. | Name of structure | Length in mile | Vulnerable  Reach | Camp Location | Site Incharge by name & cell No. | Machinery Deployed | | | | | Availability of stone  Lac Cft |
| Excavator | Dozer | Trolleys/  Dumpers | Tractor with front blade | Labour  Beldar + Mate |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| **FLOOD BUND ALONG RIVER CHENAB** | | | | | | | | | | | |
| 1 | Masson Flood Bund RD 0+000 to RD 66+800 tail. | 13.38 | RD 28-30 | At RD 35+200 | Sub Engineer Shahjewana Section Waqar Shah.  Cell No. 0301-6799187 | 2 | - | 8 | 4 | 80+10 | 0.68 Lac cft stone at  J-Head Spur No. 1 and 0.33 Lac Cft stone at  J- Head Spur No. 2 |
| **FLOOD BUND ALONG RIVER JHELUM** | | | | | | | | | | | |
| 2 | Embankment along Sahiwal Disty RD 58+000 to RD 68+250 / R | 2.05 | RD 65-66 | At RD 66 | Sub Engineer Sultanpur Section. Mansab.  Cell No. 0301-7186502 | 1 | - | 5 | 2 | 3+1 | Stone is not required at this flood bund. |
| **Total** | | | | | | 3 | 0 | 13 | 6 | 83+11 |  |

\* Payment for machinery & work charge employees subject to verification by TPM/consultants.

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

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Sr. No. | Name of structure | Length in mile | Vulnerable  Reach | Camp Location | Site Incharge by name & cell No. | Machinery Deployed | | | | | Availability of stone  Lac Cft |
| Excavator | Dozer | Trolleys/  Dumpers | Tractor with front blade | Labour  Beldar + Mate |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| **FLOOD BUND ALONG RIVER CHENAB** | | | | | | | | | | | |
| 1 | Masson Flood Bund RD 0+000 to RD 66+800 tail. | 13.38 | RD 28-30 | At RD 35+200 | Sub Engineer Shahjewana Section Waqar Shah.  Cell No. 0301-6799187 | 3 | - | 10 | 4 | 117+12 | 0.68 Lac cft stone at  J-Head Spur No. 1 and 0.33 Lac Cft stone at  J- Head Spur No. 2 |
| **FLOOD BUND ALONG RIVER JHELUM** | | | | | | | | | | | |
| 2 | Embankment along Sahiwal Disty RD 58+000 to RD 68+250 / R | 2.05 | RD 65-66 | At RD 66 | Sub Engineer Sultanpur Section. Mansab.  Cell No. 0301-7186502 | 2 | - | 7 | 3 | 8+1 | Stone is not required at this flood bund. |
| **Total** | | | | | | 5 | - | 17 | 7 | 125+13 |  |

\* Payment for machinery & work charge employees subject to verification by TPM/consultants.

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**14.6 POLICE DEPLOYMENT PLAN**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Sr. # | Vulnerable sites used for illegal cuts during floods | Concerned Canal Division | Concerned Police Station and District | Police Persons Deployed | | Remarks  (If any) |
| Inspector/Sub Inspector/A.S.I | Constable |
| 1 | Between RD 31-35 Masson Flood Bund near village Alipur (Shahjewana Town) Tehsil & District Jhang | Sargodha Canal Division | Police Station Masson, District Jhang | ASI = 1 | 03 | - |
| 2 | Between RD 64-65 Embankment along Sahiwal Disty apposite Sahiwal Town District Sargodha. | Sargodha Canal Division | Police Station Sahiwal, District Sargodha | ASI = 1 | 02 | - |

**14.7 DETAILS OF SYNTHETIC BAGS WITH CAPACITY OF 500 KG AND 1000 KG**

**DURING MEDIUM TO HIGH FLOOD STAGE.**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Sr. No.** | **Name of structure** | **Length in mile** | **Vulnerable**  **Reach** | **Camp Location0** | **Site Incharge by name & cell No.** | **No. of Synthetic bags required** | | | **Available** | | **Plastic Sheets (Sft)** | **Remarks** |
| **500 kg** | | **1000 kg** | **500 kg** | **1000 kg** |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | | 8 | 9 | 10 | 11 | 12 |
| **FLOOD BUND ALONG RIVER CHENAB** | | | | | | | | | | |  |  |
| 1 | Masson Flood Bund RD 0+000 to RD 66+800 tail. | 13.38 | RD 33-34 | At RD 35+200 | Sub Engineer Shahjewana Section Waqar Shah.  Cell No. 0301-6799187 | | 50 | 10 | 0 | 0 | 0 | Not available at stock and will be procured in emergency. |
| **FLOOD BUND ALONG RIVER JHELUM** | | | | | | | | | | | |
| 2 | Embankment along Sahiwal Disty RD 58+000 to RD 68+250 / R | 2.05 | RD 65-66 | At RD 66 | Sub Engineer Sultanpur Section. Mansab.  Cell No. 0301-7186502 | 25 | | - | 0 | - | - |

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**14.8 Details of polythene sheets of Black color to protect upstream slope against wave action and to control seepage through embankments.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Item** | **Unit** | **Required** | **Available** | **Remarks** |
| Polythene sheet black color | Per sft | 5000 | 0 | Not available at stock and will be procured in emergency |

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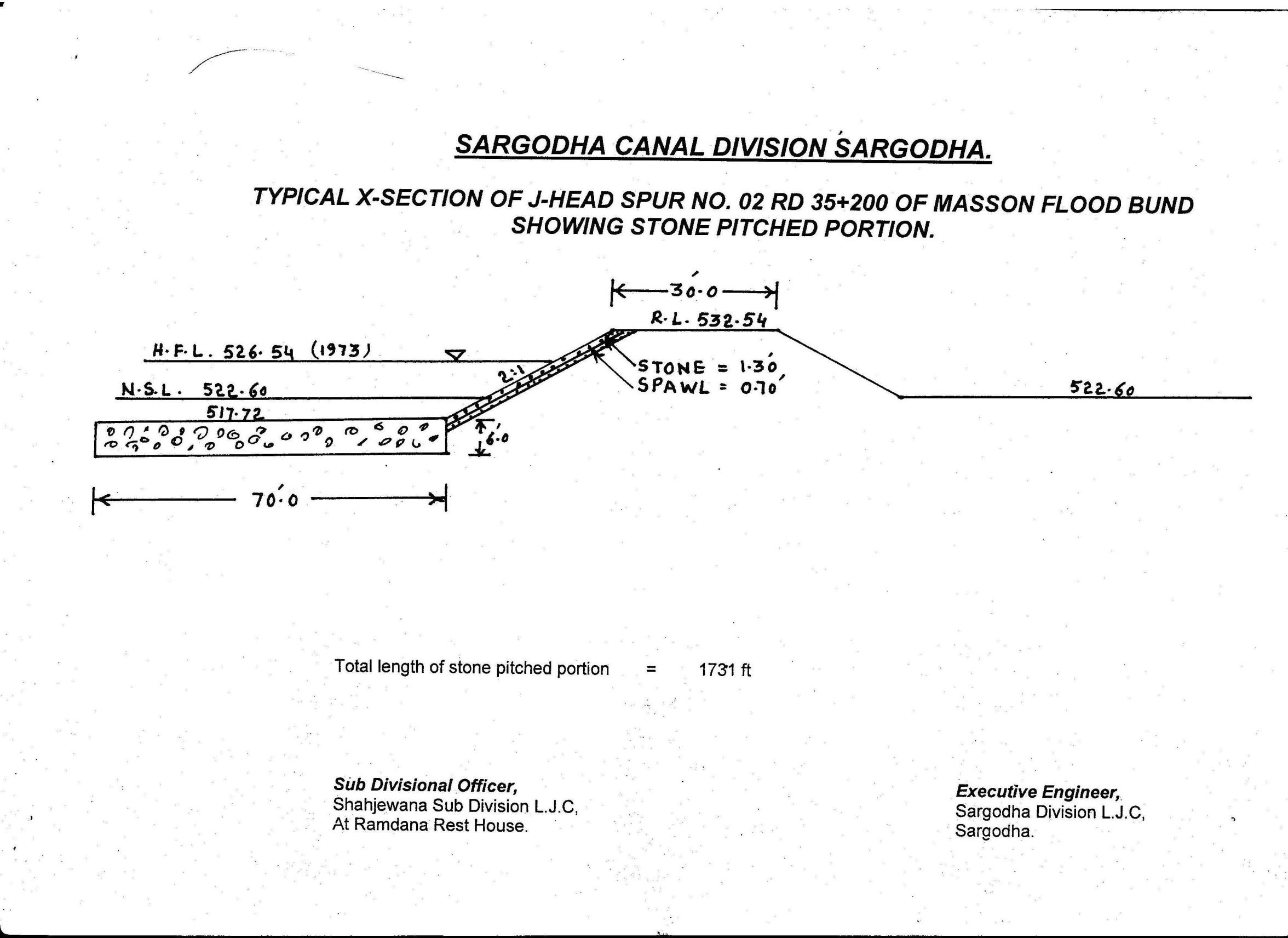
***Chapter-15***

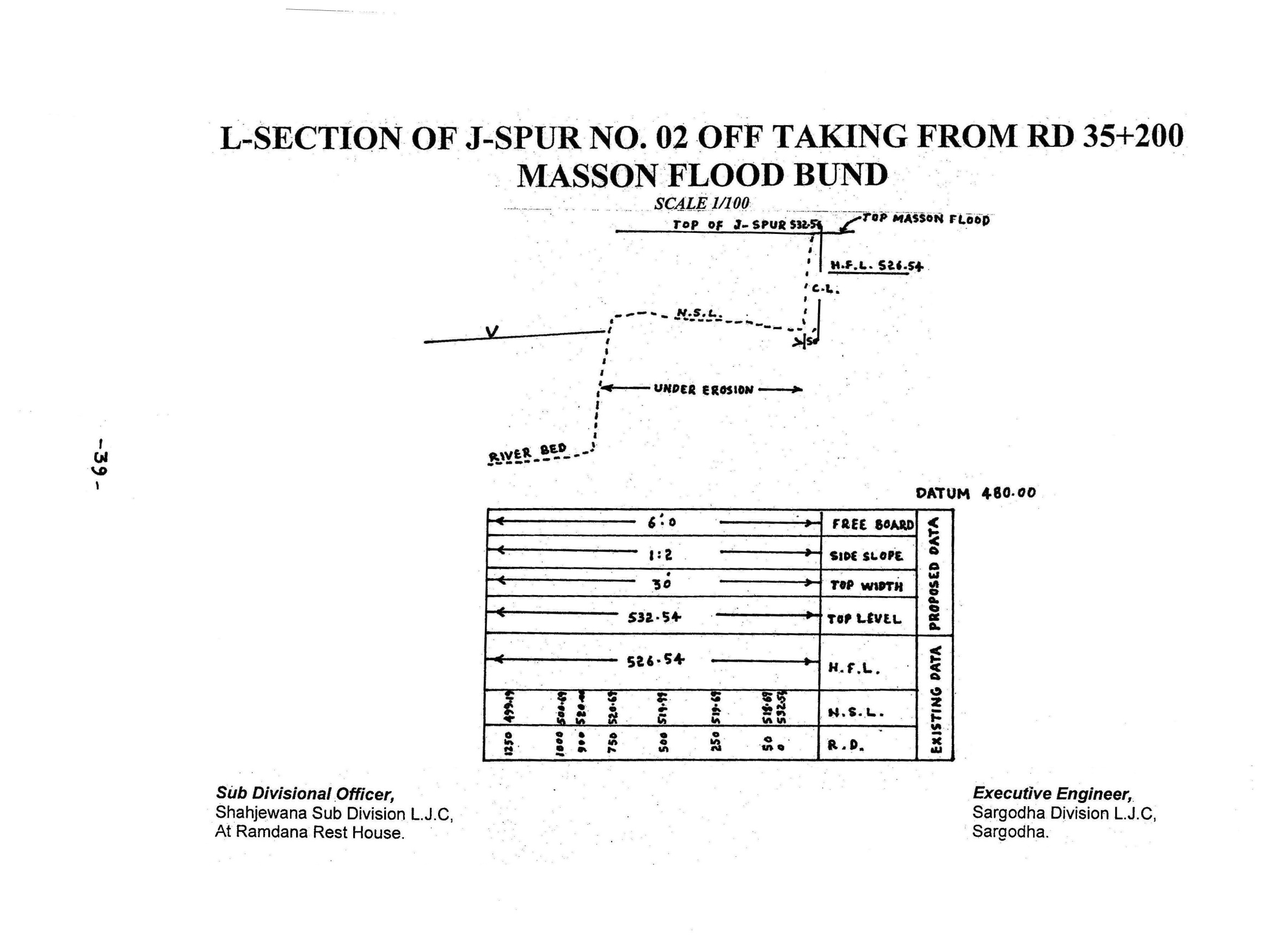
**Backup Divisions (In case of breach)**

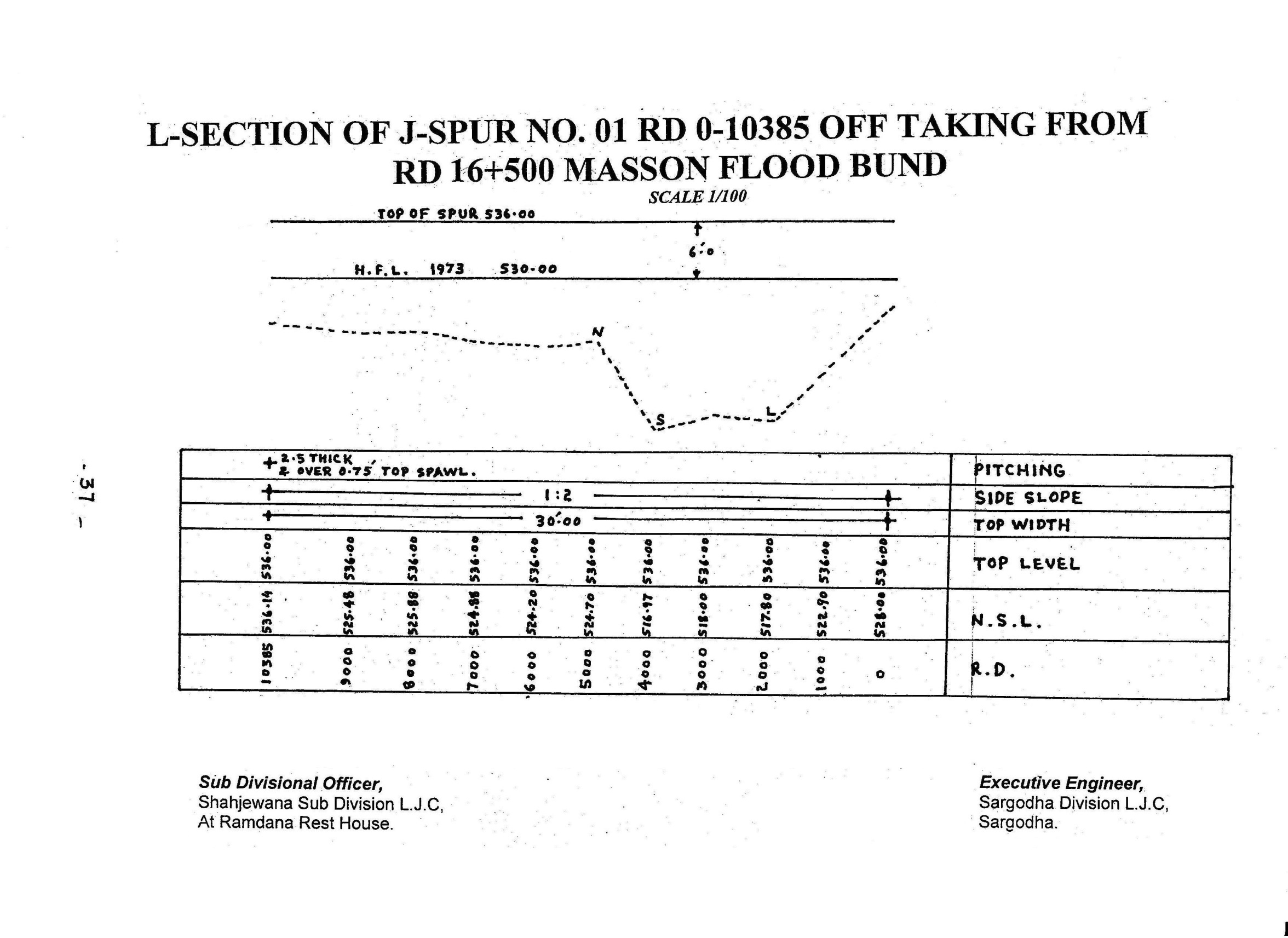
In case of breach or during emergency, ***Kirana Canal Division LJC, Sargodha*** and his field staff will act as sister Division.

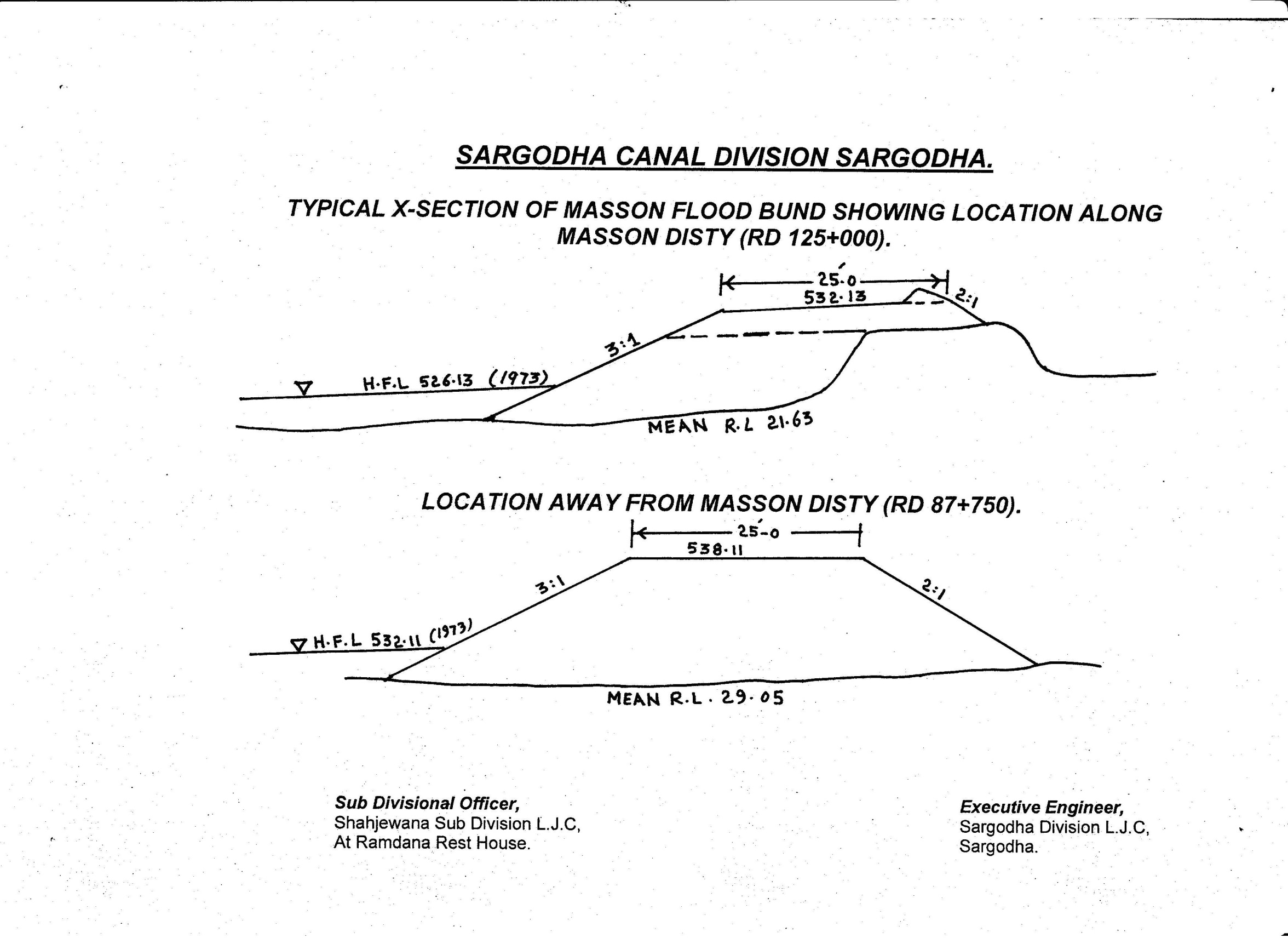
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