



**Government of Sindh  
Sindh Irrigation Department**

# **Sindh Barrages Improvement Project**

Rehabilitation of Guddu Barrage – Addendum to  
Abbreviated Resettlement Plan (ARAP)

January 2021



# Contents

1	Introduction	1
2	Policy, Legal and Administrative Framework	2
3	Description of the Sub-Project	3
4	Socio-Economic Survey	4
5	Assessment of Impacts	5
6	Compensation and Resettlement Assistance	7
6.1	Type of Loss: Structures and hand pumps	7
6.1.1	Entitlement: Cash Compensation	7
6.1.2	Entitlement: Transport Allowance	7
6.2	Type of Loss: Land (agricultural – excluding standing crops)	8
6.2.1	Entitlement: Cash Compensation	8
6.3	Type of Loss: Crops	8
6.3.1	Entitlement: Cash Compensation	8
7	Consultation	9
7.1	Consultation with PAP 1	9
7.2	Consultation with PAP 2	9
8	Implementation	11
9	Conclusion	12
	Appendices	13
A.	Per Acre Cost of the Land Tehsil Sadiqabad	14

## Tables

<b>Table 1: Summary of Additional Impacts Resulting from Changes to Works at Guddu Barrage</b>	6
<b>Table 2: Details of affected structures and compensation</b>	7
<b>Table 3: Estimated Land Acquisition Costs</b>	8

<b>Table 4: Yield price and total value of affected crop/acre</b>	8
<b>Table 5: Implementation Budget</b>	11

## Figures

Figure 3.1: Amendments to Works at Guddu Barrage	3
Figure 7.1: Consultations at Muhammed Afzal Mazari Village	9
Figure 7.2: Consultations at Shamsheer Khan Mazari Village	10

## Abbreviations

ARAP	Abbreviated Resettlement Plan
PAP	Project Affected Person
PMO	Project Management Office
RPF	Resettlement Policy Framework
SBIP	Sindh Barrages Improvement Project
USD	United States Dollars
WB	World Bank

# 1 Introduction

The World Bank (WB) is supporting the Sindh Irrigation Department (Government of Sindh) in the implementation of the Sindh Barrages Improvement Project, which includes the rehabilitation of Guddu Barrage. The works currently being implemented as part of the rehabilitation of Guddu Barrage (the sub-project) have adverse resettlement impacts. Therefore, the WB's Operational Policy 4.12 [Involuntary Resettlement] was triggered for this sub-project.

As agreed with the World Bank, an Abbreviated Resettlement Action Plan (ARAP) was completed for the sub-project in September 2017<sup>1</sup> to provide detail on land-based impacts of the sub-project and defined the approach and measures to be adopted to avoid or minimize these impacts.

The 2017 ARAP provided an assessment of resettlement impacts, and a plan to compensate Project Affected Persons (PAPs) resulting from the following works:

- Strengthening and raising of the existing the left and right spur complexes upstream of Guddu Barrage;
- Extension of the left spur upstream of Guddu Barrage; and,
- Strengthening and raising of the existing left guide bund at Guddu Barrage.

The Project Management Office (PMO) for Sindh Barrage Improvement Project has been formed within the Sindh Irrigation Department and is the Project Proponent for the rehabilitation of Guddu Barrage. PMO developed an ARAP which was reviewed and cleared by the World Bank in 2017. PMO has completed the compensation payment to the affected families under ARAP.

In 2020, additional modelling studies were completed to assess the performance of the training works (spurs). These studies resulted in the following minor changes to the works being implemented under the sub-project:

- Reduction in the proposed length of the T-spur on the left bank, and realignment of the spur head; and,
- Reduction in the existing length of the existing J-spur on the right bank, and realignment of the spur head.

The resettlement impacts resulting from the realignment of both spur heads are beyond the scope of the 2017 ARAP, and therefore this Addendum has been prepared to supplement the original ARAP to include the additional impacts due to the realignment of both spur heads. This Addendum details the additional social impacts due to the changes to the works planned under this sub-project and propose appropriate measures to reduce the adverse effects. The provisions of the disclosed ARAP remain in force in addition to the changes provided in this addendum.

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<sup>1</sup> Sindh Barrages Improvement Project, Rehabilitation of Guddu Barrage: Abbreviated Resettlement Action Plan (September 2017).

## 2 Policy, Legal and Administrative Framework

This Addendum has been prepared in accordance with the Resettlement Policy Framework (RPF) for the project (as included within the Social Management Framework<sup>2</sup>), Pakistan Government policy and WB policy. For full details of the WB framework and the RPF for this project, including entitlements, please refer to Chapter 2 of the 2017 ARAP and the Social Management Framework.

In accordance with the RPF prepared by the Sindh Irrigation Department for the Sindh Barrages Improvement Project (SBIP); Rehabilitation of Guddu Barrage, this Addendum will be submitted to the World Bank for review and approval. Following approval, the Addendum will be translated into Urdu and Sindhi by the Project Management Office (PMO), and all these versions will be disclosed on the SBIP website.

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<sup>2</sup> Sindh Irrigation Department, 'Sindh Barrage Improvement Project, Rehabilitation and Modernization of Guddu Barrage, Social Management Framework', December 2014, Government of Sindh

### 3 Description of the Sub-Project

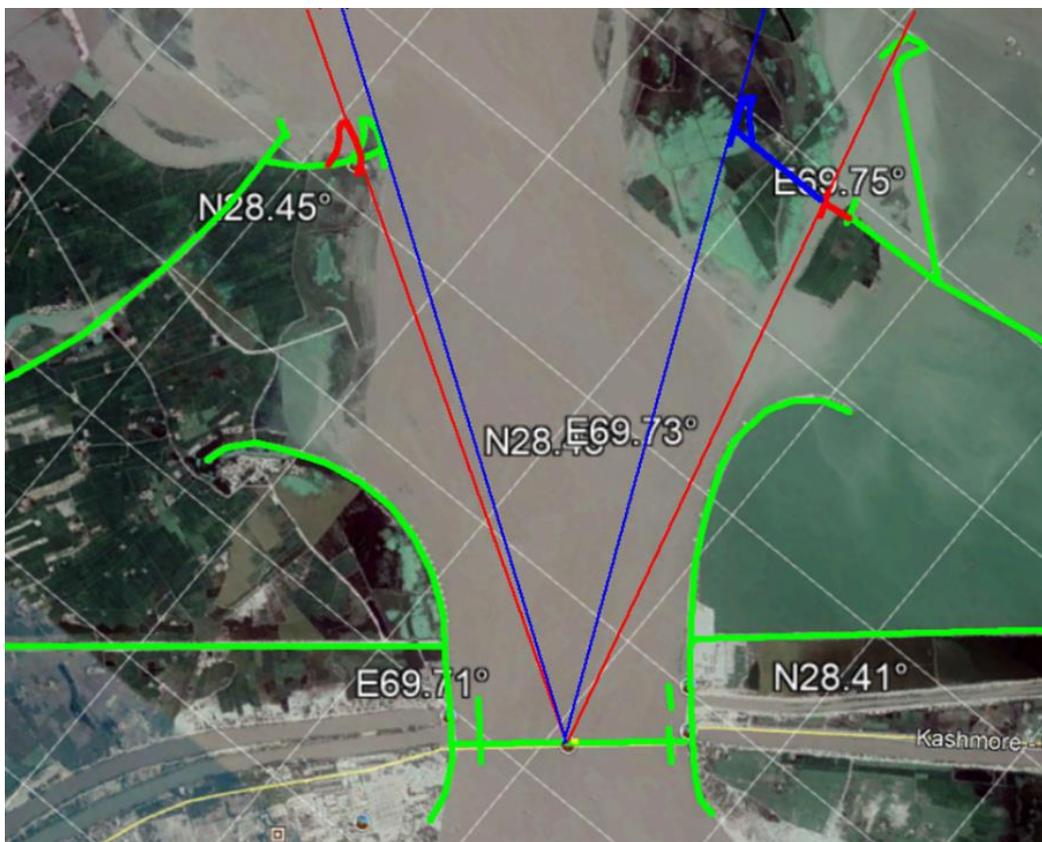
Please refer to Chapter 3 of the 2017 ARAP for details of the administrative arrangements for this project.

The works under the sub-project are as described in Chapter 3, with the following amendments:

- Reduction in the proposed length of the T-spur on the left bank, and realignment of the spur head; and,
- Reduction in the existing length of the existing J-spur on the right bank, and realignment of the spur head.

These changes are shown in Figure 3.1:

**Figure 3.1: Amendments to Works at Guddu Barrage**



Green: existing spurs and banks

Red: proposed works to spur

Blue: Previously proposed extension to left spur which has now been removed from scope of works.

A field assessment was completed to identify potential resettlement impacts resulting from the amendments to the works, and identified the following works which had the potential to result in resettlement impacts:

- Realignment of T-spur head on left bank; and,
- Realignment of J-spur head on right bank.

## 4 Socio-Economic Survey

A detailed socio-economic survey of the sub-project area is provided in Chapter 4 of the 2017 ARAP.

The changes to the works at Guddu Barrage will result in two additional Project Affected Persons (PAPs). Both are local landowners and their primary source of income is from arable agriculture and livestock. These PAPs belong to Mazari tribe and one is a politically influential person in the project area. The impacted land owned by the PAPs is also farmed by the PAPs. They do not rent this land.

Neither PAP is considered vulnerable as defined in the 2017 ARAP, and their incomes are above the poverty line.

Both PAPs own land within the Corridor of Impact (CoI) of the amended works but reside outside the CoI.

## 5 Assessment of Impacts

### Overview of Impacts

During implementation of the amended works to the left and right spurs, clearance over the footprint of the works (defined as the Col) will be required. Field assessments carried out found no residential or commercial structures within the Col. However, this assessment did identify that the Col extends into privately owned land. As a result of the works, this land will need to be permanently acquired, and a single otaq (used to welcome visitors to the community – this is not a residential structure), situated in the Col of the right spur will need to be demolished.

The changes will affect two additional local people. There will be no additional loss of residential or commercial structures as a result of the changes to the works, and neither of the PAPs are considered vulnerable. The permanent acquisition of 22.65 acres of land will be required. The loss of one otaq, one hand pump and one electric motor shall also be incurred. **Error! Reference source not found..**

### Loss of Agricultural Land

The Col extends into 22.65 acres of privately owned land. Of this, 11.86 acres is underwater (referred to as wet land), being situated within a creek connected to the main river, while the remaining 10.79 acres is dry land. Being situated between the marginal bunds of Guddu barrage, this dry land is prone to flooding during the wet season. This land is owned and farmed by the two PAPs detailed above.

The loss of wet land will have a negligible impact as the land cannot be cultivated, and being connected to the main river, this is not used as a fish farm or for any other commercial purpose.

### Loss of Income

The dry land is currently cultivatable but will not be available for cultivation following implementation of the works. As such, the loss of this land represents a permanent loss of income to the two PAPs owning and farming this land. However, as the area of impacted land reflects a small proportion of the total land farmed by each of the them, this impact is minor. The impacted land is farmed by the landowners, and not rented, or sharecropped. As such, only the income of these landowners will be impacted.

If the area is farmed at the time of implementation of the works, the PAPs will also lose any standing crops. This shall result in the loss of any money invested in crops which have been planted but not harvested at the time that the works are implemented.

### Loss of Guest House (Otaq)

*Guest House* in local language it is called Otaq. The impacted otaq is privately owned, and is used to welcome and, if necessary, house visitors from outside the community. No income is earned from the otaq – otaqs facilitate hospitality to outsiders by the community. Without reconstruction of this otaq, the social interactions of the affected household and their surrounding community will be impacted. The otaq also includes a hand pump and electric motor used to supply water.

### Summary of Impacts

A summary of additional impacts resulting from the changes to the works at Guddu Barrage is provided in Table 1. Note, there are only two PAPs – one PAP may be subject to multiple impacts defined in Table 1.

**Table 1: Summary of Additional Impacts Resulting from Changes to Works at Guddu Barrage**

Type of Loss	Application	Definition of Entitled Person	Unit	Realignment of Left Head	Realignment of T-Spur Head	Realignment of Right J-Spur Head	Total
Privately owned structures	Entire loss of structure	Owner of the affected structure	Number of structures (PAP)	- (-)	1 (1)	1 (1)	1 (1)
Hand pump	Entire loss of structure	Owner of affected pump (regardless of land ownership rights)	Number of pumps (PAP)	- (-)	1 (1)	1 (1)	1 (1)
Land (unused) [Wet land]	Permanent loss of land	PAPs with valid title or customary or usufruct rights	Impacted acres (PAP)	6.03 (1)	5.83 (1)	11.86 (2)	11.86 (2)
Land (agricultural – excluding standing crops) [Dry land]	Partial and permanent loss of land with remaining economically viable (greater than 0.5 acres)	PAPs with valid title or customary or usufruct rights	Impacted acres (PAP)	0.62 (1)	10.17 (1)	10.79 (2)	10.79 (2)
Loss of crops	Loss of planted crops that could not be harvested	Owner of affected crop (regardless of land ownership rights)	Impacted acres (PAP)	0.62 (1)	10.17 (1)	10.79 (2)	10.79 (2)

## 6 Compensation and Resettlement Assistance

This compensation and resettlement assistance has been prepared on the basis of the findings above and by adopting the legal and policy framework of the RPF for the project, Government of Pakistan and the WB policies as reflected in the Entitlement Matrix (refer to Chapter 2 of the 2017 ARAP for details).

This section details the applicable entitlements, grouped by the type of loss in order to remain consistent with the Entitlement Matrix.

### 6.1 Type of Loss: Structures and hand pumps

#### 6.1.1 Entitlement: Cash Compensation

##### Entitled Person: Owner of Affected Structure

Owners of structures which are to be removed from the Col are eligible for cash compensation for the entirety of each affected structure at replacement value. A valuation survey was undertaken in 2017 to calculate the unit rate for compensation for loss of structures and related assets (see Chapter 7 of the 2017 ARAP). For the purposes of this Addendum, these rates have been inflated to 2020 values<sup>3</sup>.

Full details of affected structures and compensation due are provided in Table 2.

**Table 2: Details of affected structures and compensation**

PAP Reference	Name of Structure	Type of Structure	Type of Construction	Unit	Quantity	Unit Rate (PKR)	Total Compensation (PKR)
PAP 2	Otaq (Guest House)	Rooms	Pacca*	feet	3920	1,125	4,410,000
		Boundary Wall	Pacca	Feet length	630	1,316	829,080
		Hand Pump		Number	1	9,680	9,680
		Electric Motor		Number	1	10,000	10,000
<b>Total:</b>							<b>5,258,760</b>

\*Guest House has 12 feet deep plinth it is "A" category house

#### 6.1.2 Entitlement: Transport Allowance

##### Entitled Person: Owner of Affected Structure

In accordance with the entitlement matrix provided in the RPF, the affected household is eligible for a transport allowance for moving their impacted materials to a new location. An allowance of PKR 7,260 shall be paid to PAP 2 to cover the cost to shift their belongings from the existing Otaq to the new location where they propose to rebuild their Otaq. The value of the allowance is based on two tractor trolleys to shift belongings within five km of the existing location. The allowance is based on the 2017 valuation (see Chapter 7 of the 2017 ARAP), inflated to 2020 values<sup>3</sup>.

<sup>3</sup>21% inflation from 2017 to 2020 based on World Bank DataBank 'Inflation, consumer prices (annual %)' - <http://databank.worldbank.org/home>

## 6.2 Type of Loss: Land (agricultural – excluding standing crops)

### 6.2.1 Entitlement: Cash Compensation

#### Entitled Person: Landowner

Acquisition of a total of 22.65 acres of privately owned land is required. The cost of permanent land acquisition will be borne by the Irrigation Department, and the PMO will be responsible for land acquisition in accordance with the Land Acquisition Act.

The land compensation cost per acre has been collected from the local Revenue Department as shown in Appendix A. Two rates of compensation have been provided, one for wet land and one for dry land. The rate includes a 15% allowance over and above these rates.

Full details of estimated land acquisition costs are provided in Table 3.

**Table 3: Estimated Land Acquisition Costs**

PAP Reference	Total (Acre)	Area Type of Land	Area (Acre)	Cost Per Acre (PKR)	Estimated Land Acquisition Cost (PKR)
PAP 1	6.65	Wet Land	6.03	660,000	3,979,800
		Dry Land	0.62	1,320,000	818,400
<b>Sub-Total:</b>					<b>4,798,200</b>
PAP 2	16.00	Wet Land	5.83	660,000	3,847,800
		Dry Land	10.17	1,320,000	13,424,400
<b>Sub-Total:</b>					<b>17,272,200</b>
<b>Total: (PAP 1 and PAP 2)</b>					<b>22,070,400</b>
<b>15% Allowance</b>					<b>3,310,560</b>
<b>Grand Total:</b>					<b>25,380,960</b>

## 6.3 Type of Loss: Crops

### 6.3.1 Entitlement: Cash Compensation

#### Entitled Person: Owner of Affected Crops

In accordance with the Land Acquisition Act and the Entitlement Matrix, compensation is required for the loss of standing crops. Details of this compensation are provided in **Table 4**.

The compensation rate has been calculated based on the value average yield and value of cultivated crops. This information was collected from within the sub-project area, and is presented in the table below.

**Table 4: Yield price and total value of affected crop/acre**

SR.No	Name of crop	Area under crop	Average yield (40kg/Acre)	Price Rs. 40kg 2020	Total Value of Crop
PAP 1	Rice	0.62	62	1,310	50,356
PAP 2	Rice	9.67	62	1,310	785,397
<b>Total Crop Compensation Cost</b>					<b>835,753</b>

## 7 Consultation

To comply with World Bank requirements and policies ARAP must be prepared through a process of public consultation with all affected parties.

Consultation were carried out at Village Muhammad Afzal Mazari and Village Shamsheer Khan Mazari.

### 7.1 Consultation with PAP 1

PAP 1 owns about 50 acres of land at this location. He grows rice during Kharif season (May to September) while during Rabi season his land remains under water (flooded). The results of the consultation are summarised as follows:

- PAP 1 requested land compensation as per market rates of the area.
- He said land compensation may be given prior to construction work start.
- He said that he will be happy to get land in lieu of his land at nearby location if available.
- He said revenue department always pay less cost of the land.
- He said he will not accept the land assessment by the Irrigation department (PMO).
- He said project is responsible for the land documentation.
- He will provide CNIC and land documents.
- He said that land compensation shall be made through cross cheque.
- PAP 1 will freely allow possession of the land, following payment.

**Figure 7.1: Consultations at Muhammed Afzal Mazari Village**



### 7.2 Consultation with PAP 2

PAP 2 is a progressive landlord and political personality of the area. Views expressed during the consultation are summarised as follows:

- Consultants are responsible for the payment of the land and otaq (guest house) which will be fully damaged due to project works.

- The compensation for land and otaq should be arrange via the consultants, PAP was apprehensive to deal with the Irrigation / PMO department.
- Consultant shall arrange full payment of the land and otaq. Payment in parts will not be acceptable.
- Construction work will be allowed after receiving full payment of land and otaq.
- Payment shall be made through cross cheque.
- Work will be allowed once cheque is honoured.
- The Project Consultants should be fully responsible for the preparation of land document from Revenue department.
- PAP shall provide CNIC and land registration documents.

**Figure 7.2: Consultations at Shamsheer Khan Mazari Village**



The concerns of PAPs were discussed and addressed during the consultations. It was clarified that the rates will include 15% compulsory acquisition surcharge over and above the rates. The payments will be made through cross cheques and will be completed before taking possession of the land and start of any civil works. Payment of land, structures and crops will be disbursed by the deputy commissioner and a committee will be formed including representation from consultants for disbursement of other allowances by the project to PAPs. The project will facilitate the PAPs in documentation.

## 8 Implementation

The institutional arrangements for implementation are described in Chapter 8 of the 2017 ARAP, including grievance redress mechanisms. Discourse of this Addendum (see Section 2), land acquisition procedures, and compensation against all entitlements will be commenced by the PMO immediately following approval of this Addendum.

Internal and external monitoring of implementation of this Addendum will be undertaken as described in Chapter 8 of the 2017 ARAP.

The budget for implementation of this Addendum is provided in Table 5.

**Table 5: Implementation Budget**

Loss	Application	Entitled Person	Entitlement	Unit	Quantity	Unit (PKR)	Cost	Cost (PKR)
Privately owned structure	Entire loss	Owner of structure	Compensation for replacement structure	Affected household	1	Varies (refer to Table 2Error! Reference source not found.)		5,258,760
			Standard transport allowance	Affected household	1	7,260	7,260	
Private Land	Entire loss	Owner of Land	Compensation for lost land	Affected household	2	Varies (refer to Table 3)		25,380,960
Crop Compensation	Entire loss	Owner of Land	Compensation for standing crop	Affected household	2	Varies (refer to Table 4)		835,753
<b>Total Cost</b>								<b>31,482,733</b>
<b>10% Contingency</b>								<b>3,148,273</b>
<b>Grand Total</b>			PKR:					<b>34,631,006</b>
			USD (Rate 160 dated 18 <sup>th</sup> December 2020):					<b>216,444</b>

## 9 Conclusion

The Sindh Irrigation Department, being the implementing agency for the Rehabilitation of Guddu Barrage under the Sindh Barrages Improvement Project, will disclose and implement this Addendum to the Abbreviated Resettlement Action Plan for the Guddu Barrage Rehabilitation Project after this document has been reviewed and cleared from World Bank in accordance with World Bank Operational Policy 4.12 and the national and provincial laws and policies including the Land Acquisition Act of 1894.

# Appendices

A. Per Acre Cost of the Land Tehsil Sadiqabad

14

# A. Per Acre Cost of the Land Tehsil Sadiqabad

Figure A.1: Per Acre Cost of the Land Tehsil Sadiqabad

Valuation Table For the Year 2019-20  
Tehsil Sadiqabad

STRUCTURE NO.	DISTRICT	TEHSIL	QANONGI	MOUZA	CLASSIFICATION	LOCATION	SQUARE NO.	KILLA NO.	DC RATE	U/M	STRUCTURE RATE (RS. FEET)
							332/14,332/15,332/16,333/13,333/14,333/15,333/16,333/17,333/18,333/19,333/20,333/21,333/22,333/23,333/24,333/25,333/26,333/27,333/28,333/29,333/30,333/31,333/32,333/33,333/34,333/35,333/36,333/37,333/38,333/39,334/1,334/2,334/3,334/4,334/5,334/6,334/7,334/8,334/9,335/1,335/2,335/3,335/4,335/5,335/6,335/7,335/8,335/9,335/10,335/11,335/12,335/13,335/14,335/15,335/16,335/17,335/18,335/19,335/20,335/21,335/22,335/23,335/24,335/25,335/26,335/27,335/28,335/29,335/30,335/31,335/32,335/33,335/34,335/35,335/36,335/37,335/38,335/39,335/40,335/41,335/42,335/43,335/44,335/45,335/46,335/47,335/48,335/49,335/50,335/51,335/52,335/53,335/54,335/55,335/56,335/57,335/58,335/59,335/60,335/61,335/62,335/63,335/64,335/65,335/66,335/67,335/68,335/69,335/70,335/71,335/72,335/73,335/74,335/75,335/76,335/77,335/78,335/79,335/80,335/81,335/82,335/83,335/84,335/85,335/86,335/87,335/88,335/89,335/90,335/91,335/92,335/93,335/94,335/95,335/96,335/97,335/98,335/99,335/100		1,320,000	Acres	
							332/9	16-25	1,320,000	Acres	
							333/10	4-7,14-25,1724	1,320,000	Acres	
							333/11	4-6,15-16	1,320,000	Acres	
							333/12	1-8,13-25,1823	1,320,000	Acres	
							334/13	4-7,15-16,25	1,320,000	Acres	
							333/10	18-25	1,320,000	Acres	
							333/12	15,17,22-25	1,320,000	Acres	
							333/6	3,11,17,25	1,320,000	Acres	
							335/10	2-5	1,320,000	Acres	
							335/14	1-10,15	1,320,000	Acres	
							335/25	2-22	1,320,000	Acres	
							332/5	1-2,9-12,19-21	1,320,000	Acres	
							332/3,332/4,333/1	1-2,9-10,19-22	1,320,000	Acres	
							333/11	21	1,320,000	Acres	
							333/12	6-12,15,25	1,320,000	Acres	
							335/11	1-9	1,320,000	Acres	
							335/15	1-9	1,320,000	Acres	
							335/7	1-18	1,320,000	Acres	
							335/7	6-5	1,320,000	Acres	
							332/16	5,7,14,18,22,25	16,500	Marla	605
							332/10	5,7,14,19,24,25	16,500	Marla	605
							332/11	5,7,14,16,23,25	16,500	Marla	605
							332/12	3-8,13-18	16,500	Marla	605
							331/13,331/16,331/13,331/7	2-25	16,500	Marla	605

Assistant Commissioner

District Collector S.Y.R.

